RTView Enterprise Monitor® User's Guide

Version 3.3



RTView Enterprise Monitor®

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Glossary

Preface

Welcome to the *RTView Enterprise Monitor* [®] *User's Guide*. Read this preface for an overview of the information provided in this guide and the documentation conventions used throughout, additional reading, and contact information. This preface includes the following sections:

- "About This Guide" on page 1
- "Additional Resources" on page 2
- "Contacting SL" on page 2

About This Guide

The *RTView Enterprise Monitor® User's Guide* describes how to install, configure and use RTView Enterprise Monitor.

Audience

This guide is written for database and network administrators who are familiar with administering and managing databases.

Document Conventions

Convention	Meaning
italics	Within text, new terms and emphasized words appear in italic typeface.
boldface	Within text, directory paths, file names, commands and GUI controls appear in bold typeface.
Courier	Code examples appear in Courier font: amnesiac > enable amnesiac # configure terminal
< >	Values that you specify appear in angle brackets: interface <ipaddress></ipaddress>

This guide uses the following standard set of typographical conventions.

Additional Resources

This section describes resources that supplement the information in this guide. It includes the following information:

- "Release Notes" on page 2
- "SL Documentation" on page 2

Release Notes

The following online file supplements the information in this user guide. It is available on the SL Technical Support site at http://www.sl.com/services/techsupport.shtml.

Examine the online release notes before you begin the installation and configuration process. They contain important information about this release of RTView Enterprise Monitor.

SL Documentation

For a complete list and the most current version of SL documentation, visit the SL Support Web site located at http://www.sl.com/services/support_rtviewdocs.shtml.

Support Knowledge Base

The SL Knowledge Base is a database of known issues, how-to documents, system requirements, and common error messages. You can browse titles or search for keywords and strings. To access the SL Knowledge Base, log in to the SL Support site located at http://www.sl.com/services/techsupport.shtml.

Contacting SL

This section describes how to contact departments within SL.

Internet

You can learn about SL products at http://www.sl.com.

Technical Support

If you have problems installing, using, or replacing SL products, contact SL Support or your channel partner who provides support. To contact SL Support, open a trouble ticket by calling 415 927 8400 in the United States and Canada or +1 415 927 8400 outside the United States.

You can also go to http://www.sl.com/services/techsupport.shtml

CHAPTER 1 Introduction to RTView Enterprise Monitor

This section describes RTView Enterprise Monitor®. This section includes:

- "Overview" on page 3
- "Architecture" on page 5
- "System Requirements" on page 7
- "Installation" on page 8
- "Upgrading the Monitor" on page 9

Overview

RTView Enterprise Monitor® is a monitoring platform that provides single-pane-of-glass visibility of aggregated real-time and historical information about the performance of complex multi-tier applications, including custom-built applications. RTView Enterprise Monitor has the ability to drill-down to the software-component level to help you determine the root cause of issues affecting application performance.

RTView Enterprise Monitor enables application support teams to:

- Provide a single, real-time interface to the end-to-end performance of complex or distributed applications.
- Provide early warning of issues and automate corrective actions tied to alerts, to reduce the number of trouble tickets.
- Leverage historical trends to anticipate possible application degradation and enable preventive care.
- Quickly pinpoint the root cause of issues and initiate repair.
- Reduce costs and minimize lost revenue related to system downtime and degradation.
- Improve performance against SLAs, customer expectations and brand promises.
- Improve business decisions that are tied to application performance.
- Lower the total cost of managing applications.

The following figure illustrates the RTView Enterprise Monitor components that are the subject of this section.



The RTView Enterprise Monitor platform can gather information using agents, or in an agentless manner, from a variety of critical sources. The information helps you determine whether the components of your multi-tiered application are performing correctly. Key performance data can come from an application server, Web server, messaging middleware, databases, application log files or instrumentation, as well as from other monitoring tools that report infrastructure metrics, and other key dimensions of application performance such as end user experience or transaction performance.

The following figure illustrates the many types of critical sources for which RTView Enterprise Monitor gathers key performance data.

After you install the RTView Enterprise Monitor platform, you can then install various Solution Packages which configure the interface for the metrics of interest. For example, you might have a package for monitoring application servers that are part of your deployed application. When you install the Solution Package for that application server, RTView Enterprise Monitor automatically:

- Gathers the important performance metrics for that server.
- Manages the historical archiving of those metrics.
- Provides pre-defined alerts that notify you of critical conditions.
- Provides views of the pertinent application data that help you analyze problems with that application server if one is indicated by an alert.

Architecture

The following figure illustrates the main components of the RTView Enterprise Monitor platform (in the upper panel) and installed Solution Packages (in the lower panel) which are gathering and processing performance metrics. The diagram below is actually a real-time system architecture diagram which is accessible from the RTView Enterprise Monitor user interface. Each rectangle is a Java server process running in a JVM which can be configured to run on the same host or on separate hosts. The boxes are green when the process is running and red when stopped. Each server process can be configured for high availability by providing a backup server with failover and failback options.



RTView EM Platform

The RTView Enterprise Monitor platform consists of a client (desktop Viewer or browser Display Server), the Configuration Server and the Alert Server. This documentation also refers to the Configuration Server and the Alert Server as the Central Servers.

- **Display Viewer**: The Viewer is a Java application which can be installed on desktops and provides the same user interface as the browser-based version.
- Display Server: The Display Server is a Java process which must be running to support browser-based access. This configuration also requires an application server. Tomcat is most commonly used in RTView Enterprise Monitor, however other application servers are supported. The selected application server must then run the RTView servlet which handles client requests and receives updates from the Display Server. The Display Server receives requests from the servlet and accesses the Central and Solution Package Data Collection Servers for the data. The Display Server is then responsible for the generation of the HTML, AJAX and Flash-enabled Web pages which display the real-time information. The Display Server also supports clients which are not Flash-enabled.
- The RTView servlet and Display Server are also responsible for user and role-based entitlements.
- Configuration Server: This server process can act as the proxy for all database connections to the system and maintains information relevant to the Service Data Model, System Configuration information, and alert configuration. The Service Data Model consists of a list of all CI's (Configuration Items relevant to the performance of a Service) and the Services which they affect. It also contains the four-level structure of the organization: Owners, Areas, Groups, and Services. All this information can be in one or more databases, or be generated dynamically from the data.
- Alert Server: This server process maintains an internal cache of aggregated alerts and their current state. It performs the correlation and propagation of alerts to the items in the Service Data Model which are affected by an alert. It also serves as a directory map and directs requests from clients to the appropriate Solution Package when a user requests detailed performance metrics produced from those Packages.

Solution Packages

RTView Enterprise Monitor has a variety of Solution Packages which can be installed to gather metrics from infrastructure, middleware, instrumented applications, JVM, log files, and third party monitoring products. Several Solution Packages are available with the platform. RTView Enterprise Monitor also provides a means for creating Custom Solution Packages--which can be configured without programming--to gather most any piece of performance information with a wide array of built-in data adapters. Users can construct their own Custom Solution Packages, or SL support has many templates for Custom Solution Packages that can be delivered to users or customized as a service.

A Solution Package provides these main pieces of functionality to the RTView Enterprise Monitor platform:

- Data Access: The Solution Package gathers the performance metrics relevant to the technology being monitored. The data may be gathered by either synchronous or asynchronous direct connections to a technology, or by receiving information from RTView agents deployed on the hosts of the monitored technology.
- **Data Caching**: Performance metrics are stored in in-memory data caches to supply quick access to the most current performance metrics.
- Data History: Long-term performance metrics can be stored in a JDBC-enabled relational database. The Solution Package allows for the configuration of the rules for data compaction and management of long-term data persistence.
- Alert Event Access: If the Solution Package is connecting to another monitoring system, it can gather alert events from that system, bring those events into the RTView Enterprise Monitor platform and allow alert management to be performed in the RTView Enterprise Monitor platform. Optionally, the Solution Package can be configured to synchronize alert states between the two systems.
- Alert Rules Engine: The Solution Package can be configured with alert rule definitions which are processed real-time on the Solution Package Data Servers. Dynamic updates to these alert rule definitions, such as changing alert rule thresholds or policies, can be managed through the RTView Enterprise Monitor "Alert Administration" interface. When alerts are activated by these alert rule definitions, they are sent to the RTView Enterprise Monitor Alert Server to be aggregated with other Solution Package alerts.
- Data Viewing: Each Solution Package comes with designated displays which can be accessed by the RTView Enterprise Monitor platform to show the performance metrics in summary and drill-down views.
- Solution Package Servers: Each Solution Package involves two servers. These servers
 are typically installed at locations where access to the technology performance data is
 optimal.
- Data Server: After the Solution Package has been configured, this Java process is run to begin accessing the data, storing data to internal memory caches, running the alert rules and providing data to the Historian process.
- **Data Historian**: The process manages the storage of information into a relational database and runs the rules relevant to managing this persisted data.

System Requirements

Please refer to the **README_sysreq.txt** file from your product installation. A copy of this file is also available on the product download page.

Installation

This section describes how to download and install RTView Enterprise Monitor.

The SL Download Center provides access to either the full RTView Enterprise Monitor suite, or the RTView Enterprise Monitor platform only with separately downloaded RTView Enterprise Monitor Solution Packages. The following are delivered as **.zip** files:

- rtvapm_full_<version>_<date>.zip is the full RTView Enterprise Monitor platform, which includes all available RTView Enterprise Monitor Solution Packages.
- rtvapm_std_<version>_<date>.zip is the standard RTView Enterprise Monitor platform only. After installing the RTView Enterprise Monitor platform, you can download and install licensed Packages of your choice at any time.
- rtvapm_<packagename>_<version>_<date>.zip are the RTView Enterprise Monitor Solution Packages (such as the EMS Monitor Solution Package). After installing the RTView Enterprise Monitor platform, you can download and install licensed Packages of your choice at any time.

RTView EM Platform

To install the RTView Enterprise Monitor platform, download the archive and extract the file.

If you currently have any version of RTView installed, you must install the RTView Enterprise Monitor platform into a directory separate from any existing RTView installations. The same zip archives provided in the download can be used on any supported platform. Any subsequent Packages that are used with the platform are also provided in a **.zip** file which should be extracted into this same directory.

Windows

On Windows systems, using the extraction wizard of some compression utilities might result in an extra top-level directory level based on the name of the **.zip** file. The additional directory is not needed because the **.zip** files already contain the **rtvapm** top-level directory. This extra directory should be removed before you click **Next** to perform the final decompression.

UNIX/Linux

To convert text files on UNIX/Linux systems to the native format, use the **-a** option with unzip to properly extract text files. Then, to fix execution permissions for all ***.sh** scripts, go to the **rtvapm** directory and execute:

../rtvapm_init.sh

Multi-Machine Installations

If you are using more than one host machine for your RTView Enterprise Monitor setup, extract and install the standard platform and the required Solution Package(s) on each host. For example, if you are using a separate machine for the Central Servers, the Display Server and the Data Collection Server, install the standard platform and the required Solution Package(s) three times, one on each of these machines.

Documentation

To access online help for any of the Monitor displays select the help (?) button in the top right corner.

Application Server

If you plan to deploy through a Web-browser, you must install the Application Server of your choice. If you are not using Apache Tomcat, refer to the vendor Application Server documentation for deployment instructions.

Solution Packages

After you download and install the standard RTView Enterprise Monitor platform on the required machine, install the needed Solution Packages to execute the Data Collection Server process that will gather the monitoring data. The full RTView Enterprise Monitor platform contains all the available Solution Packages.

Each installed Solution Package creates a separate directory in the RTView Enterprise Monitor installation directory (**rtvapm**). For example, installing the TIBCO EMS monitor Package creates the **emsmon** directory (**rtvapm/emsmon**). See the **README.txt** file, located in the root directory of each Solution Package, for instructions about configuring and working with the Solution Package. Property file examples are available in the **projects/sample** directory of each Solution Package.

Upgrading the Monitor

This section describes the steps necessary to upgrade existing RTView Enterprise Monitor applications. It is organized by version. To upgrade your application, follow the steps for each version between the version you are upgrading from and the version you are upgrading to. Note that this section does not include upgrade information for Solution Packages. This section includes:

- "EM 3.3" on page 9
- "EM 3.2" on page 9
- "EM 3.1" on page 10
- "EM 3.0" on page 11
- "EM 2.3" on page 13
- "EM 2.0" on page 13
- "EM 1.5.0.0" on page 14
- "EM 1.3.0.0" on page 15

EM 3.3

Users upgrading projects from versions previous to EM 3.2 should remove the **rtv_appmon_panels.xml** file from their project directory if they want to use the tab framework that was introduced in EM 3.0.

EM 3.2

There are no upgrade steps required when upgrading from EM 3.1 to EM 3.2.

EM 3.1

Refer to the following instructions as appropriate. If you:

- "Created an EM project using a previous release"
- "Created a custom Solution Package"
- "Are not using standard RTView Enterprise Monitor run scripts"

Created an EM project using a previous release

No changes are required to projects created in previous versions. However, we strongly encourage you to modify your **central.properties** and **rtview.properties** files for each Solution Package you are using with the following changes (described below). This will make it easier for you to merge changes to the **central.properties** file in future releases. See the current **central.properties** file for an example of how each Solution Package section should look after you make these changes.

 For each Solution Package you are using, remove the following properties from central.properties (where pck is the name of the package and PCK-LOCAL is the name of the Data Server hosting that Solution Package):

sl.rtview.cmd_line=-rtvapm_packages:pck sl.rtview.cp=%RTVAPM_HOME%/pck/lib/rtvapm_pck.jar

CI Type Defs

ConfigCollector.sl.rtview.xml.xmlsource=rtvconfig.pck.xml 0 rtvconfig.pck.xml 0 1 ConfigCollector.sl.rtview.cache.config=rtv_config_cache_source_xml.rtv \$package:pck

Navigation

uiprocess.sl.rtview.xml.xmlsource=pck_navtree.xml 0 pck_navtree.xml 0 1 uiprocess.sl.rtview.xml.xmlsource=pck.navinfo.xml 0 pck.navinfo.xml 0 1 uiprocess.sl.rtview.cache.config=rtv_tabtree_cache_source_comp.rtv \$package:pck

AlertAggregator.sl.rtview.cache.config=rtv_alerts_source.rtv \$rtvDataServer:PCK-LOCAL AlertAggregator.sl.rtview.cache.config=rtv_cistats_source.rtv \$rtvDataServer:PCK-LOCAL lertAggregator.sl.rtview.cache.config=rtv_cimap_source.rtv \$ciType:XYZ \$rtvDataServer:PCK-LOCAL

2. For each Solution Package you are using, add the following property to **central.properties** (where **pck** is the name of the package and **PCK-LOCAL** is the name of the Data Server hosting that Solution Package):

AlertAggregator.sl.rtvapm.cisource=dataserver=PCK-LOCAL packages=pck

NOTE: You can only have one **cisource** line per Data Server. If a single Data Server is hosting multiple Solution Packages, you can specify a comma-separated list of Solution Packages. If you do not want to include all CI Types for a package on a Data Server, use the **types** syntax instead of Solution Packages. See the **sl.rtvapm.cisource** property in Appendix B, "RTView EM Properties" section for details about **cisource** property syntax.

3. For each Solution Package, add the following property to the **rtview.properties** file (where **pck** is the name of the Solution Package):

rtvapm_reference=pck

Created a custom Solution Package

No changes are required unless you upgraded your project as described above. However, we encourage you to use the new properties file scheme to make it easier to merge changes to the **central.properties** file in future releases. Add a new file to the **conf** directory in your custom Solution Package named **rtvapm.pck.ref.properties** (where **pck** is the name of your Solution Package). Add the following lines to your new properties file (filling in your package name for **pck**). Also upgrade your project as listed above.

sl.rtview.cmd_line=-rtvapm_packages:pck sl.rtview.cp=%RTVAPM_HOME%/pck/lib/rtvapm_pck.jar

CI Type Defs ConfigCollector.sl.rtview.xml.xmlsource=rtvconfig.pck.xml 0 rtvconfig.pck.xml 0 1 ConfigCollector.sl.rtview.cache.config=rtv_config_cache_source_xml.rtv \$package:pck

Navigation uiprocess.sl.rtview.xml.xmlsource=pck_navtree.xml 0 pck_navtree.xml 0 1 uiprocess.sl.rtview.xml.xmlsource=pck.navinfo.xml 0 pck.navinfo.xml 0 1 uiprocess.sl.rtview.cache.config=rtv_tabtree_cache_source_comp.rtv \$package:pck

Are not using standard RTView Enterprise Monitor run scripts

If you are not using the standard RTView Enterprise Monitor run scripts, no changes are required if you did not upgrade your project as described above. However, we encourage you to upgrade your project to make it easier to merge changes to the **central.properties** file in the future. Look at the changes in **common\bin\rtvapm_common.bat/sh** and apply the same changes to your custom scripts. These scripts have been enhanced to look for **rtvapm_reference** in the **rtview.properties** file and, for all found, to add the **RTVAPM_HOME\pck\conf\rtvapm.pck.ref.properties** file to the command line.

EM 3.0

Users upgrading projects that were created prior to EM 3.0.x must to do the following to get the new navigation framework:

- 1. Merge the following properties from the new **emsample/servers/central/ central.properties** into your central.properties file:
- Everything in the NAVIGATION section:

NAVIGATION

list of solution packages to include on the components tab in the order they should be shown within each Tech/Vendor

uiprocess.sl.rtview.sub=\$rtvPackages:wls,wsm,jbossmon,tomcat,bwmon,bw6mon,emsmon, tasmon,tbemon,ocmon,mqmon,oramon,db2mon,hawkmon,jvm,rtvprocs,hostbase,vmwmon, acwmon,solmon,uxmon

list of Technologies in the order they should be shown uiprocess.sl.rtview.sub=\$rtvTechs:'Application / Web Servers,Middleware,Databases,Processes,Hosts / VMs,Connectors,Other'

list of Vendors in the order they should be shown uiprocess.sl.rtview.sub=\$rtvVendors: 'TIBCO,Oracle,IBM,Open Source,Other' # CUSTOM tab

uiprocess.sl.rtview.xml.xmlsource=custom_views_navtree.xml 0 custom_views_navtree.xml 0 1

uiprocess.sl.rtview.cache.config=rtv_tabtree_cache_source.rtv

\$rtvNavTreeFilename:custom_views_navtree.xml \$rtvNavTabName:Custom

• Everything under Navigation in the Solution Package sections for each Solution Package you are using. For example, this is the Navigation section for emsmon:

Navigation

uiprocess.sl.rtview.xml.xmlsource=emsmon_navtree.xml 0 emsmon_navtree.xml 0 1 uiprocess.sl.rtview.xml.xmlsource=emsmon.navinfo.xml 0 emsmon.navinfo.xml 0 1 uiprocess.sl.rtview.cache.config=rtv_tabtree_cache_source_comp.rtv \$package:emsmon

- 2. Copy the following files from the new **emsample/servers/central** directory to your project directory:
- custom_view.rtv
- custom_views_dir.rtv
- rtv_custom.xml
- custom_views_acc.rtv
- custom_views_navtree.xml
- rtv_appmon_panels.xml
- 3. Copy all make_rtvdisplay_war.* files from the new emsample/webapps directory to your project webapps directory, run make_all_wars to rebuild the war file and redeploy emsample.war to your application server.
- 4. If you have added custom nodes to rtv_appmon_navtree.xml in your projects, replace the nodes in custom_views_navtree.xml with your custom nodes. Your custom nodes will show up on the CUSTOM tab in the new navigation framework. See "Modifying the CUSTOM Tab" on page 69 for details about configuring the CUSTOM tab.

Users upgrading custom Solution Packages created prior to EM 3.0.x must do the following in order to include their Solution Package displays on the Components tab:

- Create a new XML file named <package>.navinfo.xml file where <package> is the same prefix you used in your navtree.xml file. This file defines the Heading, Technology and Vendor to use in the Components tree. See the RTVAPM_HOME/projects/ emsample/custom/src/rtfiles/custom.navinfo.xml for an example of how to use it.
- 2. If your Solution Package does not contain a navinfo.xml, create named <package>_navinfo.xml with the Solution Package nodes you previously added to emsample/servers/central/rtv_appmon_navtree.xml.
- **3.** Add your Solution Package package name to this line in **central.properties** (the same value as **<package>** in Steps 1 and 2:

list of solution packages to include on the components tab in the order they should be shown within each Tech/Vendor

uiprocess.sl.rtview.sub=\$rtvPackages:wls,wsm,jbossmon,tomcat,bwmon,bw6mon,emsmon, tasmon,tbemon,ocmon,mqmon,oramon,db2mon,hawkmon,jvm,rtvprocs,hostbase,vmwmon, acwmon,solmon,uxmon **4.** If the **navinfo.xml** file created in Step 2 contains a Technology or Vendor that is not already in the following properties in **central.properties**, add them:

list of Technologies in the order they should be shown uiprocess.sl.rtview.sub=\$rtvTechs:'Application / Web Servers,Middleware,Databases,Processes,Hosts / VMs,Connectors,Other'

list of Vendors in the order they should be shown uiprocess.sl.rtview.sub=\$rtvVendors:'TIBCO,Oracle,IBM,Open Source,Other'

See "Creating Custom Solution Packages" on page 257 for more information.

EM 2.3

The size of the CIName column was increased from 50 to 255 characters to account for large CI Names being included in the CMDB database table.

Follow the alter table sql sentence to apply to your supported DB platform(s).

DB2:

ALTER TABLE "RTVCMDB" ALTER COLUMN "CIName" SET DATA TYPE VARCHAR(255);

Oracle:

ALTER TABLE "RTVCMDB" MODIFY "CIName" VARCHAR2(255) NOT NULL;

SQL Server:

ALTER TABLE [RTVCMDB] ALTER COLUMN [CIName] VARCHAR(255)

MySQL:

ALTER TABLE "RTVCMDB" MODIFY "CIName" VARCHAR(255);

SyBase:

ALTER TABLE "RTVCMDB" MODIFY "CIName" VARCHAR(255) NOT NULL

EM 2.0

Key Metrics

Key Metrics (KM) is a new feature added in RTView Enterprise Monitor 2.0.0 that allows users to see how close a metric is approaching its threshold over a period of time. This allows you to both proactively anticipate performance problems BEFORE the alert threshold is crossed as well analyze the circumstances that led up to error conditions AFTER you got an alert. For details, see "Key Metrics Views" on page 137.

When upgrading from previous releases, perform the following steps to add KM to your project:

1. Add the following to the **rtview.properties** file in your central directory (In **emsample**, **servers\central\rtview.properties**):

Include km package

rtvapm_package=km

2. Add the following to your navigation tree (in **emsample**, **servers\central\rtv_appmon_navtree.xml**):

<node label="Key Metrics Views" mode="" display="rtv_dir_km">

<node label="Service KM Heatmap" mode="" display="rtv_km_current_heatmap"/>

- <node label="Service KM Table" mode="" display="rtv_km_current_table"/>
- <node label="Service KM History" mode="" display="rtv_km_history_heatmap_sh"/>

<node label="Service KM History (Alt)" mode="" display="rtv_km_history_heatmap"/>

</node>

EM 1.5.0.0

Metric Explorer

The Metric Explorer (MX) is a new feature added in RTView EM 1.5.0 that allows end-users to create custom dashboards. For details, see "Metric Explorer" on page 171. To add MX to your existing application, perform the following steps:

- 1. Add the following to the **rtview.properties** file, located in the directory where you are running the Central RTView Enterprise Monitor servers: **rtvapm_package=mx**
- **2.** Add the following to your navigation tree:

```
<node label="Metric Explorer" mode="" display="mx_dir">
  <node label="Metric Explorer" mode="" display="rtv_mx_view"/>
</node>
```

3. Add the RTVMX database as described in Steps 2 and 4 in "Configure Databases of the Central Servers" on page 38.

EM 1.3.0.0

Alert Notifications

In previous releases, alert notifications were executed in the Solution Package Data Servers, but now notifications are done centrally. In order to support this, the following properties from **rtvapm\common\conf\rtvapm.properties** have been removed or replaced. If you have modified any of these properties in **rtvapm\common\conf\rtvapm.properties** or overridden them in your properties file, you will need to make the following modifications:

- sl.rtview.alert.alertcommand use sl.rtview.notifiercommandnew instead. Also set the same value on the sl.rtview.notifiercommandfirstsevchange property if you want to receive a notification the first time the severity changes on an alert. If you do not want to receive notifications the first time the severity changes on an alert, set sl.rtview.notifiercommandfirstsevchange to a blank value.
- **sl.rtview.alert.renotficationcommand** This property is no longer supported.
- **sl.rtview.alert.renotificationmode** This property is no longer supported.
- **sl.rtview.alert.renotficationtime** This property is no longer supported.
- sl.rtview.alert.renotifyonsevchangedmode This property is no longer supported. This property previously defaulted to 1. If you set it to 0, set the sl.rtview.notifiercommandfirstsevchange to a blank value. If you set it to 1, set the sl.rtview.alert.notifiercommandfirstsevchange to the same value as sl.rtview.notifiercommandnew. With this configuration, you will get a notification the first time the Severity changes. If you want to be notified every time the Severity changes, use the sl.rtview.alert.notifiercommandchanged property and set sl.rtview.alert.notifiercolumns to Severity.
- sl.rtview.alert.commentcommand This property is no longer supported. To receive notifications when the comment changes, set the sl.rtview.alert.notifiercommandchanged to the value you previously used for the commentcommand property. Set the sl.rtview.alert.notifiercolumns property to Comments.
- sl.rtview.alert.alertclearedcommand This property is no longer supported. Use the sl.rtview.alert.notifiercommandcleared property instead.

CHAPTER 2 Configuration and Deployment

This section describes how to configure RTView Enterprise Monitor. This section includes:

- "Overview" on page 17
- "Configure Central Servers" on page 20
- "Configure Solution Package" on page 25
- "Configure Service Data Model" on page 29
- "Configure Databases of the Central Servers" on page 38
- "Configure the Historian Database" on page 42
- "Configure User and Role Management" on page 44
- "Configure High Availability" on page 48

Overview

This section summarizes how you configure RTView Enterprise Monitor. This section includes:

"Basic Steps" on page 19

You configure RTView Enterprise Monitor by modifying a series of properties. Typically, you edit properties in property (**.properties**) files. Properties can also be set from an initialized command window or used as substitutions. The configuration instructions in this section assume you are modifying properties in property files, which we recommend. For details about properties and substitutions, see "RTView EM Properties" on page 303.

The following figure illustrates the main functional RTView Enterprise Monitor components. In this figure, the components are situated where they might reside when multiple machines are used in a production environment. Lines connecting the rectangles indicate the components are connected in a production environment. Green indicates the component is a subject of the current configuration steps, white indicates the component is not.

For example, this Configuration section does not address the application server, nor the Monitored Instance, therefore they are white. Both the Web Browser and Desktop Deployment components are shown.



Note that:

- For best performance in a production environment, the Data Collection Server resides close to the data sources (Monitored Instances).
- The term server refers to a Java process (not a physical machine).
- The Web Browser Deployment requires an application server and a Display Server.

Basic Steps

Some of the configuration steps described here are required (where noted) and others are optional. NOTE: These instructions are based on the project directory (which contains a copy of the **emsample** directory) you create when you "Configure Central Servers".

- Step 1 (required): "Configure Central Servers". This section describes how to configure the Central Servers, including the creation of your project directory. At the conclusion of these steps you will have access to RTView Enterprise Monitor displays via Web browser. The displays will contain JVM monitoring data for RTView Enterprise Monitor processes, gathered by the RTVMGR Solution Package that comes with RTView Enterprise Monitor. The displays will not yet contain monitoring data for other Solution Packages. This Step is required.
- Step 2 (required): "Configure Solution Package". This section describes how to configure a Solution Package for RTView Enterprise Monitor. At the conclusion of these steps your Solution Package-specific displays will contain monitoring data from the Solution Package. This Step is required.
- Step 3 (optional): "Configure Service Data Model". This section describes how to configure the RTView Enterprise Monitor Service Data Model. At the conclusion of these steps you will have a "single-pane-of-glass" view in which data from your Solution Packages are visible in all relevant RTView Enterprise Monitor displays. This Step is optional. NOTE: These instructions describe configuration on a single machine. This is suitable only for evaluation purposes. If you use more than one machine for your RTView Enterprise Monitor setup, you must install the standard platform plus the required Solution Package(s) on each host, and assign their port names in corresponding properties files. This Step is optional.
- Step 4 (optional): "Configure Databases of the Central Servers". This section describes how to setup a production database. At the conclusion of these steps your RTView Enterprise Monitor deployment will use the production database rather than the default HSQLDB database. This Step is optional. NOTE: These instructions describe configuration on a single machine. This is suitable only for evaluation purposes. If you use more than one machine for your RTView Enterprise Monitor setup, you must install the standard platform plus the required Solution Package(s) on each host, and assign their port names in corresponding properties files. This Step is optional.
- Step 5 (optional): "Configure the Historian Database". This section describes how to setup a production database for historical data. At the conclusion of these steps your RTView Enterprise Monitor deployment will use the production database for historical data rather than the default HSQLDB database. This Step is optional.
- Step 6 (optional): "Configure User and Role Management". This section describes how to setup user access control for RTView Enterprise Monitor. At the conclusion of these steps defined roles will determine user access to your RTView Enterprise Monitor deployment. This Step is optional.
- Step 7 (optional): "Configure High Availability". This section describes how to configure high availability for RTView Enterprise Monitor. At the conclusion of these steps your HA configuration will prevent the loss of data and alerts in the event of a failover. This Step is optional.
- Step 8 (optional): "Configure Alerts". This section describes how to configure alert behavior such as alert notification, as well as the RTVRULES Solution Package. This Step is optional.
- **Step 9 (optional):** "Configure the RTView EM User Interface". This section describes how to configure the RTView Enterprise Monitor user interface. This Step is optional.

Configure Central Servers

This section describes how to configure the Central Servers. These instructions assume you installed the *full* RTView Enterprise Monitor platform. When you have finished this part of the RTView Enterprise Monitor Configuration, the client will have access to RTView Enterprise Monitor displays via Web browser. The displays will contain JVM monitoring data for RTView Enterprise Monitor processes, gathered by the RTVMGR Solution Package that comes with RTView Enterprise Monitor. The displays will not yet contain monitoring data for other Solution Packages. This Step is required.

The following figure illustrates the RTView Enterprise Monitor components that are the subject of this section.



To configure the Central Servers you create project directories and deploy a Web browser RTView Enterprise Monitor deployment.

At this point you have:

- Verified "System Requirements"
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform

To configure the Central Servers:

1. Create a project directory. NOTE: This document assumes you create the directory structure described here.

Important: The contents of the **rtvapm** directory must not be modified as it gets overwritten when a new version of RTView Enterprise Monitor is installed, which would result in a loss of work. For this reason, before making any changes to the configuration files, we recommend that you create a copy of the RTView Enterprise Monitor files outside the RTView Enterprise Monitor installation folder as instructed here.

Parallel to the **rtvapm** directory, create a project directory named **rtvapm_projects**.

Copy the **emsample** folder, located in the **rtvapm/projects** folder, to the **rtvapm_projects** folder you just created.

Note: To preserve permissions, UNIX/Linux users should copy using the **-rp** option. For example:

cp -rp rtvapm/projects/emsample rtvapm_projects

Verify you have the following RTView Enterprise Monitor directory structure:



Note: rtvapm_projects/emsample is the directory from which you use RTView Enterprise Monitor. In this documentation, we refer to **rtvapm_projects/emsample** as your project directory.

2. If you plan to create custom Solution Packages, open the **central.properties** file, located in the **emsample\servers\central directory**, and uncomment the following line in the **Configure RtvConfig Source** section:

#ConfigCollector.sl.rtview.cache.config=rtv_config_cache_source_db.rtv

3. Initialize a command line window or terminal window on the host by performing the following steps:

Note: To start any RTView process within RTView Enterprise Monitor (Data Server, Display Server, Historian, Viewer and so forth), you first initialize a command line or terminal window on the host by executing the **rtvapm_init** script from the RTView Enterprise Monitor installation directory (**rtvapm**) directory and the **rtvapm_user_init** script from the your project directory.

Windows

Go to your RTView Enterprise Monitor installation directory (rtvapm) and type:

rtvapm_init cd ..\rtvapm_projects\emsample rtvapm_user_init

UNIX

The script used to initialize a terminal window depends on whether you are in csh or rsh (for example, Linux, Mac OS X). UNIX scripts are Bourne shell compatible. With a Bourne shell, open a terminal window.

Go to your RTView Enterprise Monitor installation directory (**rtvapm**) and type:

./rtvapm_init.sh/emsamplecd ../rtvapm_projects./rtvapm_user_init.sh

- **4.** Copy the **.war** files located in your project directory**/webapps** directory and deploy them to your Application Server.
- 5. Start the Application Server.
- 6. By default, all Solution Packages are included in the Components tab. To remove undesired Solution Package references from the EM navigation tree, modify the uiprocess.sl.rtview.sub=\$rtvPackages property in central.properties and remove the Solution Packages you do not want to see in the Components tab. For example, the following removes the EMS Monitor Solution Package:

list of solution packages to include on the components tab in the order they should be shown within each Tech/Vendor

#uiprocess.sl.rtview.sub=\$rtvPackages:wls,wsm,jbossmon,tomcat,bwmon,bw6mon,emsmon,tasm
on,tbemon,ocmon,mqmon,oramon,db2mon,hawkmon,jvm,rtvprocs,hostbase,vmwmon,acwmon,solmon
,uxmon

uiprocess.sl.rtview.sub=\$rtvPackages:wls,wsm,jbossmon,tomcat,bwmon,bw6mon,tasmon,tbemo n,ocmon,mqmon,oramon,db2mon,hawkmon,jvm,rtvprocs,hostbase,vmwmon,acwmon,solmon,uxmon

The Solution Packages in the **Components** tab are grouped by technology and by vendor. To remove a whole technology group, remove it from the **uiprocess.sl.rtview.sub=*rtvTechs** property in **central.properties**. For example, the following removes the Middleware technology:

list of Technologies in the order they should be shown #uiprocess.sl.rtview.sub=\$rtvTechs:'Application / Web Servers,Middleware,Databases,Processes,Hosts / VMs,Connectors,Other' uiprocess.sl.rtview.sub=\$rtvTechs:'Application / Web Servers,Databases,Processes,Hosts / VMs,Connectors,Other'

To remove a vendor, remove it from the **uiprocess.sl.rtview.sub=\$rtvVendors** property in **central.properties**. For example, the following removes TIBCO from the list of vendors:

list of Vendors in the order they should be shown uiprocess.sl.rtview.sub=\$rtvVendors:'TIBCO,Oracle,IBM,Open Source,Other' uiprocess.sl.rtview.sub=\$rtvVendors:'Oracle,IBM,Open Source,Other'

7. Change directory (**cd**) to your project directory/servers directory. Execute the following scripts to start and run RTView Enterprise Monitor processes locally:

Note: Errors and messages for the Alert Server and Configuration Server processes are written to the **alerts_dataserver.log** file and the **config_dataserver.log** file, located in your project directory/ **servers/central/logs** directory.

Windows

start_rtv all To start the Central Server database, Configuration Server, Alert Server, Display Server and Alert Historian. For details about the **start_rtv.bat** script, see start_rtv.bat.

UNIX

start_rtv.sh all To start the Central Server database, Configuration Server, Alert Server, Display Server and Alert Historian. For details about the **start_rtv.sh** script, see start_rtv.bat.

Note: By default, the HSQLDB database for Alerts, Alert History and Configuration is located in your project directory/**DATA** directory. When the default database scripts (**rundb**) are run for the first time, the HSQLDB database reads from the Alerts, Alert History and Configuration databases and provides the information to the Configuration Server.

8. Access the Monitor by pointing a browser to:

http://YourServerName:port/appname

For example: http://localhost:8068/emsample The RTView Enterprise Monitor Login dialog opens.

9. Login using:

User: **admin** Password: **admin**

The RTView Enterprise Monitor main display, **All Management Areas** - "Area Heatmap", opens. The **All Management Areas** - "Area Heatmap" is populated with JVM data from the RTView Enterprise Monitor servers (collected by the RTView Manager Solution Package which monitors RTView applications) and the default CMDB database structure. By default, a single Owner is in the heatmap, **Infrastructure**.



10.Verify your setup by opening the **Architecture -** "System Overview" display using the navigation tree (in the left panel) and confirming that the following objects in the display topology are green (indicating the process is running): the Configuration Server, Alert

Server, Display Server, as well as each Data Server that has a corresponding Solution Package installed.



11.Open the "rtvservers.dat" file, located in your project directory/servers directory, in a text editor and comment out uninstalled Solution Packages (shown in red in the Architecture - "System Overview" display). For example, to comment out the WebLogic Solution Package Data Server, we enter # as follows:

```
### WLM
#
#wlm ./wlm dataserver rundata
#wlm ./wlm historian runhist -ds
```

Save the file.

12.Open the **central.properties** file, located in your project directory/**servers/central** directory, in a text editor and comment out the lines for the Solution Package. For example, to comment out the WebLogic Solution Package Data Server, we enter **#** as follows:

Save the file.

13.Open the **rtview.properties** file, located in your **project directory/servers/central** directory, in a text editor and comment out the line for the Solution Package. For example, to comment out the WebLogic Solution Package Data Server, we enter **#** as follows:

#rtvapm_reference=wlm

To summarize the current state of your RTView Enterprise Monitor deployment, the:

- RTVMGR-LOCAL Data Server is green and receiving JVM monitoring data from RTView Enterprise Monitor processes, as indicated by the non-zero value in the **CI Metrics** field.
- Data Servers that are green indicate they are running. However, they are not yet receiving monitoring data, as indicated by the zero (0) value in the **CI Metrics** field. When you connect these Data Servers to their respective Monitored Instances, the **CI Metrics** fields will change to positive numbers.
- Administration "Alert Administration" display (as shown in the following figure) contains default alerts for all installed Solution Packages. The alerts are not yet enabled. Alerts are activated after you connect RTView Enterprise Monitor to your production Data Servers and enable the alerts.

←		Alert Admin	nistration	12-Oct	-2015 09:26 📫	Data OK 💠 🕜
Alert Filter:	Clear				🕐 Alert S	ettings Conn Ok
	Alert	■ Warning Level	Alarm ₌ Level	Duration =	Alert : Enabled	Override = Count
AcwInstanceCpul	High	70	80	60	r	-1
AcwInstanceDisk	ReadBytesHigh	10000	20000	35		-1^
AcwInstanceDisk	ReadOpsHigh	100	200	30		-1
AcwInstanceDisk\	WriteBytesHigh	1000000	2000000	30		-1
AcwInstanceDisk	WriteOpsHigh	100	300	30		-1
AcwInstanceNetw	vorkReadBytesHigh	1000000	20000	30		-1
AcwInstanceNetw	vorkWriteBytesHigh	10000	20000	30		-1
AmxServiceHitRa	teHigh	160	200	60	r	C
AmxServiceNode	FaultRateHigh	200	400	30		C
AmxServiceNode	HitRateHigh	75	100	60	r	C
AmxServiceNode	MovingAvgHitRateHigh	200	400	30		C
AmxServiceNode	MovingAvgResponseTimeHigh	200	400	30		C
AmxServiceNode	ResponseTimeHigh	5	6	30		C
AmxServiceResp	onseTimeHigh	5	6	60		C
BirdExpired		NaN	NaN	0		-1
BirdTooHigh		1600	2001	0		-1
Bw6AppNodeCpu	IUsedHigh	50	80	30		C
		<				>
He Pag	le 1 of 3 🕞 🕨				1 - 200	0 of 402 items
		Settings for Sel	ected Alert			
Name:	<select alert="" from="" one="" t<="" table="" td="" the=""><td>to edit></td><td>Warning Level:</td><td>D</td><td>uration (Secs.)</td><td>:</td></select>	to edit>	Warning Level:	D	uration (Secs.)	:
Description:			Alarm Level:		Enabled	
_ sourpron [. Marin Lovon		Sav	e Settings

NOTE: LINUX users might see inconsistently aligned labels in displays. To resolve, set the client browser to download the fonts used by the server. Open the **rtvapm/common/ conf/rtvapm.properties** file on the Display Server host machine and uncomment the following two lines:

#sl.rtview.cp=%RTV_HOME%/lib/rtvfonts.jar

#sl.rtview.global=rtv_fonts.rtv

This completes validation of your Web Deployment.

Proceed to "Configure Solution Package" on page 25.

Configure Solution Package

This section describes how to configure a Solution Package for RTView Enterprise Monitor. When you have finished this part of the RTView Enterprise Monitor configuration, your Solution Package-specific displays will contain monitoring data from the Solution Package Data Collection Server. This Step is required. The following figure illustrates the RTView Enterprise Monitor component that is the subject of this section: the Solution Package.



To configure a Solution Package you connect the RTView Enterprise Monitor Central Servers to the Data Collection Server.

At this point you have:

- Verified "System Requirements".
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform.
- Completed instructions in "Configure Central Servers".
- Configured a local RTView Enterprise Monitor deployment and Web Browser RTView Enterprise Monitor deployment. That is, displays such as the All Management Areas -"Area Heatmap" are populated with JVM data from RTView Enterprise Monitor servers and the CMDB database (which has only the default Owner, Infrastructure).

To configure the Solution Package:

- 1. Connect the Data Server for the Solution Package. In an initialized command window, change directory (cd) to your project directory/servers directory.
- **2.** Execute the following script to stop the Solution Package Data Server:

Windows

stop_rtv <packagename>

where **packagename** is the Solution Package data key. For example:

stop_rtv wim stops a WebLogic Data Server.

UNIX

stop_rtv.sh <packagename>

where **packagename** is the Solution Package data key. For example:

stop_rtv.sh wlm stops a WebLogic Data Server.

In the **Architecture** - "System Overview" display the Solution Package Data Server turns red after a few seconds.

BWMON-LOCAL	CUSTOM-LOCAL	EMSMON-LOCAL	GFMON-LOCAL	MISCMON-LOCAL
Alerts 0	Alerts 0	Alerts 0	Alerts 0	Alerts 0
CI Metrics 0	CI Metrics 0	CI Metrics 0	CI Metrics 0	CI Metrics 0
MQMON-LOCAL	OCMOH-LOCAL	RTVMGR-LOCAL	RTVRULES	WLM-LOCAL
Alerts 0	Alerts 0	Alerts 0	Alerts 0	Alerts 0
	CI Mutrices 0	Ci Mehior 28	Citateles 1	CI Mutuing 0

- **3.** Change directory (**cd**) to your Solution Package project directory/servers/<Solution Package> directory and locate the sample.properties file.
- 4. Make a copy of the **sample.properties** file, in the same directory, and name it **mysystem.properties**.
- **5.** Open the **mysystem.properties** file in a text editor and refer to the **README.txt** file in your Solution Package directory for information about configuring properties for your Solution Package.
- 6. Navigate to the project directory/servers directory and open the "rtvservers.dat" file in a text editor. Locate the section for your Solution Package Data Server. For example, the WebLogic Data Server entry, by default, is the following:

```
### WLM
#
wlm ./wlm dataserver rundata
#wlm ./wlm historian runhist -ds
```

7. Make the following entry to point RTView Enterprise Monitor to the **mysystem.properties** file you just created:

-properties:mysystem

For example, for the WebLogic Data Server we enter:

WLM

#

wlm ./wlm dataserver rundata -properties:mysystem

#wlm ./wlm historian runhist -ds

Save the file.

8. In the command line window (from the project directory/servers directory), start the Solution Package Data Server by typing:

Windows

start_rtv <packagename>

where **packagename** is the Solution Package data key. For example:

start_rtv wlm starts a WebLogic Data Server.

UNIX

start_rtv.sh <packagename>

where **packagename** is the Solution Package data key. For example:

start_rtv.sh wlm starts a WebLogic Data Server.

In the **Architecture -** "System Overview" display the Solution Package Data Server turns green after a few seconds and subsequently receives monitoring data, as indicated by the positive value in the **CI Metrics** field (this can take up to a minute).

9. Open the **Administration** - "Alert Administration" display and locate alerts for the Solution Package Data Server. The alert prefix corresponds to the Solution Package name. For example, the WebLogic alert prefix is **WIs**.

a. Identify an alert for your Solution Package that is likely to activate and set the alert
Warning Level to zero (0) and the Alarm Level to ten (10). This ensures the alert
thresholds are exceeded and you can verify your Solution Package configuration. For
example, for WebLogic we set the WIsThreadsTotalHigh alert Warning Level to zero
(0) and the Alarm Level to ten (10). Keep in mind that eventually your alert thresholds
should be changed to more meaningful values within your system.

b. Select **Enabled** to enable the alert.

c. Click Save Settings and OK.



d. Open the **Alert Views** - "RTView Alerts Table" display and verify you see warning alerts for the alert you just modified and enabled. For example, when the WebLogic thread count goes above zero (**0**) and above zero (**10**) the **WIsThreadsTotalHigh** warning and alarm alerts, respectively, are activated and visible in the **Alert Views** - "RTView Alerts Table" display.

e. Open the **All Servers Heatmap** display for your Solution Package. For example, for WebLogic we open the **WebLogic - All Servers Heatmap** display. The heatmap contains monitored data for your Solution Package, including the status for the alert you just lowered the threshold on and enabled.



10.Repeat the previous steps for each installed Solution Package.
This completes your Solution Package configuration. Solution Package-specific displays contain monitoring data from your environment. For example, if you just configured the WebLogic Solution Package, displays such as the **Oracle WebLogic Servers All Servers Heatmap** are populated with data from your WebLogic servers. You do not yet see the data in displays such as the **All Management Areas -** "Area Heatmap" as the Service Data Model (CMDB) is not yet configured.

Proceed to "Configure Service Data Model" on page 29.

Configure Service Data Model

This section describes the RTView Enterprise Monitor Service Data Model (also referred to as the CMDB), and its configuration. The CMDB is a database containing the hierarchical map of associations between all Configuration Items (CIs), Services, Groups, Areas and Owners in your system. When you have finished this part of the RTView Enterprise Monitor configuration you will have a "single-pane-of-glass" view in which data from all your Solution Packages are visible in all relevant RTView Enterprise Monitor displays. When the CMDB is not configured, Solution Package data is only visible in displays that are specifically for that Solution Package.

Configuration of the Service Data Model is optional.

The following figure illustrates the RTView Enterprise Monitor component that is the subject of this section: the CMDB database.



To configure the Service Data Model you determine how the structure of your organization fits into the CMDB hierarchy, then use the **Administration -** "CMDB Admin" display to configure the CI-to-Services mapping.

This section includes:

- "Introduction to the CMDB": Describes the CMDB structure, and provides examples of how an organization's established structure can be applied to the CMDB.
- "Configuration Steps": Step-by-step CMDB configuration instructions.

Introduction to the CMDB

The Service Data Model, or CMDB, is an RTView Enterprise Monitor database that contains the map of all Configuration Items (CIs) in your system to each hierarchical level in the CMDB. The CMDB has four hierarchical levels which suits the monitoring needs of most organizations. The four levels are, from the highest level (Owner) to the lowest level (Service):

- Owner
- Area
- Group
- Service

When you configure your CMDB you associate each CI in your system with a Service, each Service with a Group, each Group with an Area and each Area with an Owner. These associations form the map that enables aggregation of data in RTView Enterprise Monitor displays. When you make any changes to Owners, Areas, Groups or Services the associated levels are automatically updated. For example, when you move a Group from one Area to another, all Services associated with that Group move with it, and the RTView Enterprise Monitor displays are updated.

By default, the CMDB contains a single Owner named Infrastructure. When you configure the CMDB you map each CI in your system to one or more Services, each Service to a Group, each Group to an Area and each Area to an Owner. There is no limit on the number of associations the four levels can have. The names of the CMDB levels cannot be modified. The following figure illustrates the four hierarchical levels of the CMDB.



Infrastructure is only for the internal RTView Manager Solution Package, which monitors RTView Enterprise Monitor. Infrastructure must not be modified.

EM-SERVICE CI Type

You can also associate Services with other Services using the EM-SERVICE CI Type. The EM-SERVICE CI Type enables you to use the alerts provided by the RTVRULES Solution Package. For details, see "Configure the RTVRULES Solution Package".

Defining the CMDB

When you configure the Service Data Model you use the existing structure of your organization to do so. If your organization does not have an established structure, you need to define one relevant to your system. The manner in which you adapt your system hierarchy to the CMDB levels depends on the monitoring needs of your organization. You design the CMDB by identifying the four hierarchical levels in your organization that coincide with the four-level hierarchy in the CMDB. For example, you might:

- **1.** Determine the Owners: Note the person or persons responsible for alerts in your organization. You might have only one Owner.
- 2. Determine the Areas for each Owner: The Areas are relevant to the Owner accountable for resources in the Areas. Areas might be based on departments in the organization (such as Development, Sales, HR, and so forth).
- **3.** Determine the Groups for each Area: Groups might be comprised of, for example, the types of resources used in the Areas (such as Servers, Middleware and Processes).
- **4.** Determine the Services for each Group: Services might be comprised of a variety of applications that are used by a given Group.

After you determine how to adapt your organization to the four levels of the CMDB, use the **Administration -** "CMDB Admin" display to map each CI to a Service, Group, Area and Owner. The name of the CI can indicate which Service you want to associate the CI with.

The CMDB automatically classifies the CIs in your system into CI Types. This classification is based on a preconfigured schema that is internal to RTView Enterprise Monitor. CI Types are determined by the role of a given CI, and the name of the CI Type describes the role. For example, a BusinessWorks application process is a BW-PROCESS CI Type, a BusinessWorks server is a BW-SERVER CI Type and an Oracle database is an ORACLE CI Type.

After you configure a Service Data Model, the automatically generated Infrastructure Service Data Model looks for matching CI's in your Service Data Model in order to set the Environment. For each CI in the automatically generated Infrastructure Service Data Model, if a matching CI is found in your Service Data Model, the Environment from your Service Data Model is used for the Infrastructure CI. If the CI is found in your Service Data Model multiple times with multiple Environments, it is added multiple times to the Infrastructure CMDB--once for each Environment in your Service Data Model for that CI. If no matching CI is found in your Service Data Model for that CI. If no matching CI is found in your Service Data Model for that CI. If no matching CI is found in your Service Data Model, the Environment in the Infrastructure Service Data Model is set to PRODUCTION by default. You can override the default Environment by specifying a different environment in the **rtv_cmdb_source_default.rtv** line in your properties file.

Small Company Example

Typically, small companies have a single Owner. The following figure illustrates a portion of a CMDB structure in which a single Owner is accountable for three Areas (Development, Sales and HR). The Development Area has three Groups associated with it (Servers, Middleware and Processes). The items in green indicate the parts of the branch (jPeters / Development / Middleware) we configure as examples in the "Configuration Steps".



To prepare for configuring the CMDB we might list the hierarchical associations as follows:

Owner	Area	Group	Service
iPeters			

Development

Middleware WebLogic GlassFish

We then use this list to associate each CI in our system with a Service, Group, Area and Owner. To see a large company example, see "Large Company Example".

Configuration Steps

This section describes how to configure the CMDB using the **Administration** - "CMDB Admin" display and uses the "Small Company Example" to illustrate. This section assumes you have determined a structure for your CMDB configuration. For details about the CMDB structure, see "Introduction to the CMDB" on page 30. To configure the CMDB you associate each CI in your system with a Service, Group, Area and Owner. After you configure the CMDB all relevant RTView Enterprise Monitor displays will contain monitoring data from your Solution Packages. Configuration of the Service Data Model is optional. There are several ways to create the CMDB:

- Manually, using the Administration "CMDB Admin" display.
- Import an existing structure from a spreadsheet or database.
- If the data is available to the Configuration Server, you can read it dynamically by populating the structure from the raw data.
- Any combination of the above.

At this point you have:

- Verified "System Requirements"
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform
- Completed instructions in "Configure Central Servers"
- Completed instructions in "Configure Solution Package". You have configured a local RTView Enterprise Monitor deployment and Web Browser RTView Enterprise Monitor deployment. That is, displays such as the **All Management Areas -** "Area Heatmap" are populated with JVM data from RTView Enterprise Monitor servers and the CMDB database (which has only the default Owner, Infrastructure).
- Solution Package-specific displays showing monitoring data from your environment. You do not yet see Solution Package data in displays such as the All Management Areas "Area Heatmap".
- An Administration "CMDB Admin" display with undefined levels and a Selected CI Type drop-down menu populated with CI Types available from your system, as shown in the following figure.



To configure the CMDB:

- 1. Open the Administration / "CMDB Admin" display.
- Select a CI Type to configure from the Selected CI Type drop-down menu, located above the lower table. The Selected CI Type drop-down menu is populated with installed and configured Solution Packages in your system.

For example, to configure the **jPeters / Development / Middleware / WebLogic** branch as an example from the "Small Company Example" we select **WLS**.

Connection	Location	CIName	DataServerNar
examplesServer	examplesServer	examplesServer;examplesServer	WLM-LOCAL
TestDomain	AdminServer	TestDomain;AdminServer	WLM-LOCAL
TestDomain	ManagedServer1	TestDomain;ManagedServer1	WLM-LOCAL
TestDomain	ManagedServer2	TestDomain;ManagedServer2	WLM-LOCAL

The **Available Components** table populates with CIs for WebLogic.

3. Select one or more CIs from the **Available Components** table and click **Add CI To....** NOTE: To determine which CIs to associate with a Service, refer to the CIName column. The **CIName** column contains descriptive information entered by your administrator about the CI.

Add Cl into a Service			
CIType:	WLS		
CIName:	Amazon;e2crtvofmwlbkr02		
Owner:		!	
Area:		!	
Group:		!	Add Cl
Service:			Close

The Add CI into a Service dialog opens.

4. Associate your selected CIs with a Service by entering the Owner, Area, Group and Service. Refer to your defined CMDB structure to determine appropriate entries. For example, to configure the **jPeters / Development / Middleware / WebLogic** branch from our "Small Company Example", we enter:

Owner:	jPeters
Area:	Development
Group:	Middleware
Service:	WebLogic

5. Click Add CI and OK.

Owner:	jPeters 🔹	Ma	nage ce: l	RTV_CMDB	
Area:	Development 💌	Mana	ge Area		
Group:	Middleware	Mar	lage	Undets Online like like a	
Service:	WebLogic	Mar	nage	Update Criticality like s	elected Ci
CI List for Se	elected Service - select a CI to see detail and to edit:	08	ACE ENVIRONC		
CIType	CIName	Criticality	Region:		•
WLS	TestDomain;AdminServer		Criticality		
	N		Criticulity		
	LS ²		SiteName:		•
			City:		•
			Country:		•
			OSType:		
•	III	F		Update	Delete

The CIs appear in the **CI List for Selected Service** table and are now associated with the new Service. The four levels are saved in the CMDB and populate the **Owner**, **Area**, **Group** and **Service** drop-down menus in the **Administration -** "CMDB Admin" display, as well as other displays.

- 6. Specify the rank of importance for a CI using the Criticality drop-down menu, where A is the highest importance and E is the lowest. Criticality is used to calculate the value for Alert Impact. For our "Small Company Example", we set the Criticality to E.
- 7. Select the environment for the CI using the **Environ** drop-down menu:

Production

DR (Disaster Recovery)

UAT (Testing)

Development

Click **Update** to save the entries.

8. Optionally, enter the following for a CI using the remaining drop-down menus:

Region	Optionally, enter a geographic region in which the CI resides.
SiteName:	Optionally, enter a site name in which the CI resides.
City:	Optionally, enter a city in which the CI resides.
Country:	Optionally, enter country in which the CI resides.
OSType :	Optionally, enter the operating system on the CI.

Click **Update** to save the entries.

- 9. Associate more CIs to this Service by selecting them and clicking Add CI. The CIs appear in the CI List for Selected Service table and the CIs are now associated with the Service. Use the Selected CI Type drop-down menu to associate a different CI Type. NOTE: To modify settings (Criticality, Environ, etc.) for a CI, select the CI, change the settings and click Update. To remove a CI from a Service, select the CI and click Delete.
- 10.Add a new Service by selecting a CI and clicking Add CI To.... Use the Selected CI Type drop-down menu to locate the relevant list of CIs. For example, for our "Small Company Example" to add the GlassFish Service and associate GFS CIs, we select GFS from the Selected CI Type drop-down menu, select a CI from the Available Components table and click Add CI To....

The Add CI into a Service dialog opens.

Add Cl into a Service		
CIType:	WLS	
CIName:	TestDomain;AdminServer	
Owner:	iPeters	
Area:	Development	
Group:	Middleware	Add CI
Service:	WebLogic	Close

11.Make the appropriate entries and click Add CI and OK. For example, for our "Small Company Example" we make the following entries for the jPeters / Development / Middleware / GlassFish branch.

Owner:	jPeters
--------	---------

Area: Development

Group: Middleware

Service: GlassFish

The CI appears in the **CI List for Selected Service** table and the GlassFish Service is in the CMDB.

- 12.Specify the rank of importance for the CI using the Criticality drop-down menu, where A is the highest importance and E is the lowest. For our "Small Company Example", we set the Criticality to A.
- **13.**Select the environment for the CI using the Environ drop-down menu:

Production

DR (Disaster Recovery)

UAT (Testing)

Development

Click **Update** to save the entries.

14.Optionally, enter the following for the CI using the remaining drop-down menus:

Region: Optionally, enter a geographic region in which the CI resi

SiteName: Optionally, enter a site name in which the CI resides.

- **City:** Optionally, enter a city in which the CI resides.
- **Country:** Optionally, enter country in which the CI resides.

OSType: Optionally, enter the operating system on the CI.

Click **Update** to save the entries.

15.Add more CIs to this Service by selecting a CI and clicking Add CI. The CIs appear in the CI List for Selected Service table and the CI is now associated with the Service. Modify settings (Criticality, Environ, etc.) for a CI as needed and click Update.

16.Click Close to close the Add CI into a Service dialog.

17.Open a display, such as the **Group / Service Heatmap**, to view your entries integrated into the RTView Enterprise Monitor display.



Continuing with our "Small Company Example", we see the **jPeters** branch we configured in the display which has two Services in the Middleware Group:

Owner:	jPeters
Area:	Development
Group:	Middleware
Service:	WebLogic GlassFish

Note: There are two rectangles in the heatmap, one for each Service. Part of the heatmap is red, indicating the **WIsThreadsTotalHigh** alert state, which is the alert we adjusted thresholds for and enabled in the previous "Configure Solution Package" instructions. Recall that we set the **Criticality** level for a CI associated with the GlassFish Service to **A** (the highest rank of importance). For this reason the rectangle representing the GlassFish Service is red. The WebLogic rectangle is not red because we set the **Criticality** to **E** (the lowest rank of importance).

18.To enable alerts, open the **Administration** - "Alert Administration" display and locate alerts for your installed Solution Package Data Server.

Select the alerts you wish to enable for the Solution Package, optionally modify the alert **Warning Level** and **Alarm Level**, then select **Enabled**.

Click Save Settings and Yes.

19.Repeat previous steps as needed until all CIs are associated with a Service.

This completes your Service Data Model configuration. Solution Package data is visible in all relevant displays. You now have a "single-pane-of-glass" view in which data for all Solution Packages are visible in all RTView Enterprise Monitor displays. For details about using the CMDB display, see "CMDB Admin" on page 225.

Proceed to "Configure Databases of the Central Servers" on page 38.

Large Company Example

Typically, large companies have several owners that are in charge of several Areas. This example illustrates a single branch of the CMDB--the branch belonging to the IT manager: jSmith. For that branch of the CMDB, the company defines the following structure:

Owners:	jSmith rJones tSchmidt bRoberts	There are four managers in the company and they are the members of the CMDB Owner level. The IT manager is jSmith.
Area:	IT Core IT SVCS	There are two CMDB Areas associated with jSmith. The two Areas are based on expertise-based subdivisions of personnel in the company: IT Core and IT SVCS.

Group:	Core Apps SMS Core Apps WEB	There are three CMDB Groups associated with the IT Core branch. The three Groups are based on the three subdivisions of personnel in the IT Core Department: Core Apps SMS, Core Oracle and Core Apps WEB.
	Core Oracle	The other Areas in the company might have different Groups.
		This example continues with the Core Oracle branch belonging to jSmith. This example does not describe the Core Apps SMS and Core Apps WEB branches belonging to jSmith.
Service:	R&D Production Web Stores	There are three CMDB Services associated with the Core Oracle Group. The three Services are based on the infrastructure Services that the company provides to its customers: R&D, Production and Web Stores. The other Groups in the company might have different Services.

NOTE: This example does not illustrate CIs associated with Services.

Configure Databases of the Central Servers

The Central Servers require the following databases: ALERTDEFS, RTVCMDB, RTVCONFIG and RTVHISTORY, each of which contain several tables. RTView Enterprise Monitor is delivered with a default memory resident HSQLDB database, which is suitable for evaluation purposes. However in production deployments, it is recommended that a supported database engine be used that is accessible via JDBC. This section describes how to setup an alternate database and, if needed, how to manually create the database tables (which requires table-creation permission in your database engine).

The following figure illustrates the RTView Enterprise Monitor components that are the subject of this section.



At this point you have:

- Verified "System Requirements"
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform
- Completed instructions in "Configure Central Servers"
- Completed instructions in "Configure Solution Package". You have configured a local RTView Enterprise Monitor deployment and Web Browser RTView Enterprise Monitor deployment. That is, displays such as the **All Management Areas -** "Area Heatmap" are populated with JVM data from RTView Enterprise Monitor servers and the CMDB database (which has only the default Owner, Infrastructure).
- Have Solution Package-specific displays showing monitoring data from your environment. You do not yet see Solution Package data in displays such as the **All Management Areas** "Area Heatmap".
- Completed instructions in "Configure Service Data Model".

To configure the databases of the Central Servers:

Note: Use the templates provided in the **database.properties** file, located in the your **rtvapm/common/dbconfig** directory, to make edits described in the following steps.

- Choose and install a database of your choice. Supported databases are Oracle, Sybase, DB2, Microsoft SQL Server and MySQL.
- **2.** Open the **central.properties** file (located in your project directory/servers/central directory) in a text editor and make the following edits:

a. Under the **ConfigCollector properties** section there is a subsection for each database connection (the subsections are **Define the ALERTDEFS Database**, **Define the RTVCONFIG Database**, and **Define the CMDB Database**). Comment out the existing (default) entries and add the required connection information. For example, for an Oracle database you make the following edits:

```
# _____
# ConfigCollector properties
# Define the ALERTDEFS Database
# Contains all Alert Threshold settings and overrides
#ConfigCollector.sl.rtview.sql.sqldb=ALERTDEFS sa - jdbc:hsqldb:hsql://localhost:9099/
alertdefs org.hsqldb.jdbcDriver - false false
ConfigCollector.sl.rtview.sql.sqldb=ALERTDEFS myusername mypassword
jdbc:oracle:thin:@myhost:9099:myinstance oracle.jdbc.driver.OracleDriver - false false
...
# Define the RTVCONFIG Database
# Contains all CI Type definitions
#ConfigCollector.sl.rtview.sql.sqldb=RTVCONFIG sa - jdbc:hsqldb:hsql://localhost:9099/
rtvconfig org.hsgldb.jdbcDriver - false false
ConfigCollector.sl.rtview.sql.sqldb=RTVCONFIG myusername mypassword
jdbc:oracle:thin:@myhost:9099:myinstance oracle.jdbc.driver.OracleDriver - false false
# Define the Default CMDB Database
# This is the database that is accessed and modified by the EM CMDB Admin page
#ConfigCollector.sl.rtview.sql.sqldb=RTVCMDB sa - jdbc:hsqldb:hsql://localhost:9099/rtvcmdb
org.hsqldb.jdbcDriver - false true
ConfigCollector.sl.rtview.sql.sqldb=RTVCMDB myusername mypassword
jdbc:oracle:thin:@myhost:9099:myinstance oracle.jdbc.driver.OracleDriver - false false
```

b. In the **RTVHISTORY Database Connection** subsection under the **ALERT MODULE PROPERTIES** section, make the same edits as in the previous step. Using our prior example:

```
# Historian
#AlertHistorian.sl.rtview.historian.driver=org.hsqldb.jdbcDriver
#AlertHistorian.sl.rtview.historian.url=jdbc:hsqldb:hsql://localhost:9099/rtvhistory
#AlertHistorian.sl.rtview.historian.username=sa
#AlertHistorian.sl.rtview.historian.gassword=
AlertHistorian.sl.rtview.historian.driver=oracle.jdbc.driver.OracleDriver
AlertHistorian.sl.rtview.historian.url=jdbc:oracle:thin:@myhost:9099:myinstance
AlertHistorian.sl.rtview.historian.username=myusername
AlertHistorian.sl.rtview.historian.password=mypassword
# RTVHISTORY Database Connection
#collector.sl.rtview.sql.sqldb=RTVHISTORY sa - jdbc:hsqldb:hsql://localhost:9099/rtvhistory
org.hsqldb.jdbcDriver - false true
collector.sl.rtview.sql.sqldb=RTVHISTORY myusername mypassword
jdbc:oracle:thin:@myhost:9099:myinstance oracle.jdbc.driver.OracleDriver - false false
```

c. Add a section for MX with the following property and make the same edits as the previous steps. Using our prior example:

```
# MX
# Database for saved metric explorer views
# ConfigCollector.sl.rtview.sql.sqldb=RTVMX sa - jdbc:hsqldb:hsql://localhost:9099/rtvmx
org.hsqldb.jdbcDriver - false true
ConfigCollector.sl.rtview.sql.sqldb=RTVMX myusername mypassword
jdbc:oracle:thin:@myhost:9099:myinstance oracle.jdbc.driver.OracleDriver - false false
```

d. Edit the properties relative to each of the database connections you just edited in the previous steps by replacing the following as appropriate:

myusername	User name to enter into this database when making a connection.
myhost	Full URL to use when connecting to this database using the specified JDBC driver.
myinstance	Instance name of your database.
mypassword	Password to enter into this database when making a connection. If there is no password, use "-".
	If you need to use an encrypted password, rather than expose server passwords, use the "encode_string" utility as follows:
	In an initialized command window, execute the following script where mypassword is your plain text password. For example: encode_string sql mypassword. You then receive an encrypted password for copying and pasting into the password field. For example: encrypted value: 013430135501346013310134901353013450134801334

3. Save the file.

ALERTDEFS

4. Manually create the tables needed for each database connection. To create tables for your database, use the **.sql** template files provided for each supported database platform, located in your project directory/dbconfig directory:

create_common_alertdefs_tables_<db>.sql RTVCONFIG, RTVCMDB, RTVHISTORY create_<rtvcmbd|rtvconfig|rtvhistory>_tables_<db>.sql

RTVMX Templates for RTVMX tables are located in the **RTVAPM_HOME/mx/dbconfig** directory: create_rtvmx_tables_<db>.sql where <db> ={db2, mysgl, oracle, sglserver, sybase}

Note: The standard SQL syntax is provided for each database, but requirements can vary depending on database configuration. If you require assistance, consult with your database administrator.

The most effective method to load the **.sql** files to create the database tables depends on your database and how the database is configured. Some possible mechanisms are:

- Interactive SQL Tool: Some database applications provide an interface where you can directly type SQL commands. Copy/paste the contents of the appropriate .sql file into this tool.
- Import Interface: Some database applications allow you to specify a .sql file containing SQL commands. You can use the .sql file for this purpose.

NOTE: Before loading the **.sql** file, create the database and declare the database name in the command line of your SQL client. For example, on MySQL 5.5 Command Line Client, to create the tables for the Alert Settings you should first create the database:

create database myDBName;

before loading the **.sql** file: mysql -u myusername -pmypassword myDBName < create_common_alertdefs_tables_mysql.sql;

In some cases it might also be necessary to split each of the table creation statements in the **.sql** file into individual files.

Third Party Application: If your database does not have either of the above two capabilities, a third party tool can be used to enter SQL commands or import .sql files. Third party tools are available for connecting to a variety of databases (RazorSQL, SQLMaestro, Toad, for example).

You have finished configuring the databases on the Central Servers.

Configure the Historian Database

This section describes how to configure the Historian database. RTView Enterprise Monitor is delivered with HSQLDB as the default database. To use the Historian database you deploy an alternate database that is accessible via JDBC, configure the database connection by editing a configuration file and enable the Historian database. In RTView Enterprise Monitor, the Historian, by default, is configured so that almost all Data Servers share the same database.



At this point you have:

- Verified "System Requirements".
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform.
- Completed instructions in "Configure Central Servers".
- Completed instructions in "Configure Solution Package" (you have configured a local RTView Enterprise Monitor deployment and Web Browser RTView Enterprise Monitor deployment. That is, displays such as the **All Management Areas -** "Area Heatmap" are populated with JVM data from RTView Enterprise Monitor servers and the CMDB database).
- Have Solution Package-specific displays showing monitoring data from your environment (you do not yet see Solution Package data in displays such as the All Management Areas - "Area Heatmap").
- Completed instructions in "Configure Service Data Model".
- Completed instructions in "Configure Databases of the Central Servers" (you have configured the Central Server Database for your production environment).

To configure the Historian database:

- 1. Perform the steps described in "Configure Databases of the Central Servers" on page 38 to setup the Alert Historian using the following Historian-specific instructions:
- 2. Edit the emcommon.properties file (rather than the central.properties file), located in your project directory/conf directory. In the emcommon.properties file under the

HISTORY CONFIGURATION, Define the RTVHISTORY DB section, uncomment and modify the following entries as appropriate for your environment:

collector.sl.rtview.sql.sqldb=

Add the required connection information. For example, for an Oracle database you make the following edits:

ConfigCollector.sl.rtview.sql.sqldb=RTVHISTORY myusername mypassword jdbc:oracle:thin:@myhost:9099:myinstance oracle.jdbc.driver.OracleDriver - false false

historian.sl.rtview.historian.driver=

Driver of your database. For example: historian.sl.rtview.historian.driver=oracle.jdbc.driver.OracleDriver

historian.sl.rtview.historian.url=

Full URL to use when connecting to this database using the specified JDBC driver.

historian.sl.rtview.historian.username=

User name to enter into this database when making a connection.

historian.sl.rtview.historian.password=

Password to enter into this database when making a connection. If there is no password, use "-". See Encrypt Password to use an encrypted password.

Note: These instructions assume that the Historian database connection is shared by all Data Servers. However, this configuration might not be suitable for your system needs and architecture.

 Create database tables using the .sql template files provided for each supported database platform, located in your project directory/dbconfig directory of each installed Solution Package:

create_<package>_tables_<db>.sql

where <package> ={emsmon, bwmon, ocmon, wlm, etc.} and <db> ={db2, mysql, oracle, sqlserver, sybase}

Note: For details about improving database performance and Historian response time, see the - charlimit property and the -index_history_tables property.

Proceed to "Configure User and Role Management" on page 44.

Configure User and Role Management

This section describes how to configure RTView Enterprise Monitor user and role Management. Use Role Management to permit and deny access to displays as well as some functionality in certain displays based on the logged in user or role. The alert, CMDB administration and other administration views check the role of the logged in user to prevent users that are not the admin or super role from saving settings. The RTView Alert Table checks the role of the logged in user to hide buttons based on the role of the logged in user. You can also set substitions on your users and roles to filter what portion of the CMDB is visible in the **Service Tree**, **Service Views** and **Alerts** tabs as well as the **CMDB Administration** view.

The following figure illustrates the RTView Enterprise Monitor components that are the subject of this section.



To configure Role Management you define your users and user roles by editing the users.xml and roles.xml files, located in your project directory/servers/central directory. In the **users.xml** file you specify each user name, the associated encrypted password, role and optional substitutions to filter what portion of the CMDB is visible for that user. In the **roles.xml** file you specify, per role, the included and excluded displays, and optional substitutions to define what portion of the CMDB is visible for that role. There is no limit to the number of roles and users you can add to the files. By default, all substitutions are set to ***** (asterisk), which specifies no role restrictions under your project directory.

For details on **users.xml** and **roles.xml** syntax, see Role Based Security/Configuration in the *RTView Core ® User's Guide* at http://www.sl.com/services/docs.shtml. If you want to integrate RTView Enterprise Monitor with LDAP or other user and security management systems, see Custom Security Managers in the *RTView Core ® User's Guide*.

Substitutions for User and Role Management

The following substitutions can be set per user or per role and will limit the CMDB entries shown in the Service Tree, Service Views and Alerts tabs. For example, if your application has three Owners: Owner 1, Owner 2, and Owner 3, and you specify **\$rtvOwnerMask=Owner** 1 for a role, users that login with that role will only see the services under Owner 1 in the **SERVICE TREE**, **SERVICE VIEWS** and **ALERTS** tabs, and only see alerts related to services under Owner 1 in the **ALERTS** tab. If a substitution is set for both the user and role, the role value will take precident. To specify multiple values, separate them with commas. To specify all values, use ***** or just do not include the substitution in your user and role settings.

<pre>\$rtvOwnerMask:</pre>	Set this to filter the Owners a user or role will see in the Service Tree, Service Views and Alerts tabs. For example,
\$rtvAreaMask:	Set this to filter the Areas a user or role will see in the Service Tree, Service Views and Alerts tabs. For example,
\$rtvGroupMask:	Set this to filter the Groups a user or role will see in the Service Tree, Service Views and Alerts tabs. For example,
<pre>\$rtvServiceMask:</pre>	Set this to filter the Services a user or role will see in the Service Tree, Service Views and Alerts tabs. For example,
<pre>\$rtvManageableCompID:</pre>	Set this to limit the alerts that can be closed by a user or role to alerts where the Primary Service value matches one of the items in the list.

Also by default, there are five defined and implemented roles: **read**, **event**, **full**, **admin** and **super**. Only the **admin** and **super** roles have access to all features in all displays. The following table summarizes the functionality that is accessible per role:

Role Permission

read Access to all displays and functionality except administrator functions.

admin/ Access to all displays and functionality including all actions on "RTView Alerts Table", write access in the "Alert Administration" and write access "CMDB Admin" views.

full/ Access to all displays. Access to all actions on "RTView Alerts Table".

event

At this point you have:

- Verified "System Requirements".
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform.
- Completed instructions in "Configure Central Servers".
- Completed instructions in "Configure Solution Package" (you have configured a local RTView Enterprise Monitor deployment and Web Browser RTView Enterprise Monitor deployment. That is, displays such as the **All Management Areas -** "Area Heatmap" are populated with JVM data from RTView Enterprise Monitor servers and the CMDB database).
- Have Solution Package-specific displays showing monitoring data from your environment (you do not yet see Solution Package data in displays such as the All Management Areas - "Area Heatmap").
- Completed instructions in "Configure Service Data Model".
- Completed instructions in "Configure Databases of the Central Servers" (you have configured the Central Server Database for your production environment).

To configure role management:

1. Open the **roles.xml** file, located in your project directory/servers/central directory, in a text editor. By default, the **read**, **admin** and **super** roles are defined as follows:

```
<?xml version="1.0"?>
<roles xmlns="www.sl.com" >
       <role>
              <name>read</name>
              <displays>
                    <include>ALL</include>
              </displays>
       </role>
       <role>
              <name>admin</name>
              <displays>
                    <include>ALL</include>
              </displays>
       </role>
       <role>
              <name>super</name>
              <displays>
                    <include>ALL</include>
              </displays>
       </role>
</roles>
```

2. Create new roles. For each role, optionally specify the included and excluded displays, as well as the values for the substitutions that define the visible part of the CMDB and actionable alerts (as described above). For example, the following illustrates a role named **ITmanager** that has no administrator permissions and *does* have access to all owners within the two IT areas of the company:

```
<role>
<role>
<role>
<displays>
<include>ALL</include>
</displays>
</displays>
<sub name="$rtvrole" value="read" />
</displays>
</displays
```

- 3. Save the file.
- **4.** Open the **users.xml** file, located in the your project directory/servers/central directory, in a text editor. By default, there are three users defined, **super**, **admin** and **demo**:

```
<?xml version="1.0"?>
<users xmlns="www.sl.com" >
       <user>
             <name>super</name>
             <password>0133401351013460133501348</password>
             <role>super</role>
       </user>
       <user>
             <name>admin</name>
             <password>0133101334013430133901344/password>
             <role>admin</role>
       </user>
       <user>
             <name>demo</name>
             <password>01334013350134301345/password>
             <role>read</role>
       </user>
</users>
```

5. Add the new role you just created to this file and optionally add values for the substitutions that define the visible part of the CMDB and actionable alerts (as described above). For example:

```
<?xml version="1.0"?>
<users xmlns="www.sl.com" >
      <user>
             <name>super</name>
             <password>0133401351013460133501348</password>
             <role>super</role>
       </user>
       <user>
             <name>admin</name>
             <password>0133101334013430133901344/password>
             <role>admin</role>
       </user>
       <user>
             <name>demo</name>
             <password>01334013350134301345/password>
             <role>read</role>
       </user>
       <user>
             <name>Johnson</name>
             <password>0133801335013420134201345/password>
             <role>ITmanager</role>
       </user>
</users>
```

6. Save the file.

- **7.** Add as many users to the **users.xml** file as needed. NOTE: Use the encode_string utility to *Encrypt Password*.
- 8. Save the file.
- **9.** Restart the Display Server, if you are using the Thin Client, and/or the Viewer if you have installations that are working locally.

You have finished configuring RTView Enterprise Monitor Role Management.

Configure High Availability

This section describes how to configure High Availability (HA) for RTView Enterprise Monitor. HA prevents the loss of data and alerts during failover.

HA requires two host machines, a Primary Host and a Backup Host. You configure HA by editing configuration files and defining two environment variables on each host (PRIMARYHOST and BACKUPHOST) with their IP addresses. It is required that identical versions of RTView Enterprise Monitor be installed on the hosts.

The following figure illustrates the RTView Enterprise Monitor components that are the subject of this section.



To configure HA you setup the Primary and Backup Hosts, verify your setup, test the failover process to the Backup Host and verify the Primary Host is restored to the primary server for the pair.

At this point you have:

- Verified "System Requirements".
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform.
- Completed instructions in "Configure Central Servers".
- Completed instructions in "Configure Solution Package" (you have configured a local RTView Enterprise Monitor deployment and Web Browser RTView Enterprise Monitor deployment. That is, displays such as the **All Management Areas -** "Area Heatmap" are populated with JVM data from RTView Enterprise Monitor servers and the CMDB database).
- Have Solution Package-specific displays showing monitoring data from your environment (you do not yet see Solution Package data in displays such as the All Management Areas - "Area Heatmap").
- Completed instructions in "Configure Service Data Model".
- Completed instructions in "Configure Databases of the Central Servers" (you have configured the Central Server Database for your production environment).

To setup HA on the Primary and Backup Hosts:

- **1.** Configure "Alert Notification Persistence" on the Primary and Backup Host.
- **2.** On each of the hosts in the HA pair, define two environment variables: PRIMARYHOST and BACKUPHOST, which are loaded by the property files on both Windows and UNIX.
- **3.** On the Primary Host, rename the following files as described:

a. Rename the **rtvservers.dat** file, located in your project directory/servers directory, to **rtvservers.dat.keep**.

b. Rename the **rtvservers-ha.dat** file, located in your project directory/servers directory, to **rtvservers.dat**.

- **4.** Open the **emcommon.properties** file, located in your project directory**/conf** directory, in a text editor and make the following edits under **ALERT CONFIGURATION**:
 - a. Uncomment the following lines:

ConfigClient.sl.rtview.sql.sqldb=ALERTDEFS - - - ___none - - ConfigClient.sl.rtview.sub=\$rtvConfigDataServer:CONFIG_SERVER ConfigClient.sl.rtview.alert.ssadataserver=CONFIG_SERVER ConfigClient.sl.rtview.alert.actionauditdataserver=CONFIG_SERVER ConfigClient.sl.rtview.alert.persistDataServer=CONFIG_SERVER

- b. Change alert persistence from false to true: collector.sl.rtview.alert.persistAlerts=**true**
- c. Save and exit the file.
- **5.** From the Primary Host, copy the following files to the Backup Host as described:

a. Copy the **rtvservers.dat** file, located in your project directory/servers directory, to the Backup Host project directory/servers directory.

b. Copy the **emcommon.properties** file, located in your project directory/**conf** directory, to the Backup Host project directory/**conf** directory.

6. On the Backup Host, in an initialized command window change directory (cd) to your project directory/servers directory.

7. Create a script file (for example, **start_backup_servers.bat**) to execute the following scripts which start all RTView Enterprise Monitor processes:

Windows

start_rtv central-backup start_rtv rtvrules-backup start_rtv rtvmgr-backup start_rtv <packagename>-backup dataserver

where **packagename** is the name of the Solution Package to execute under HA. Add one line for each of the Solution Packages that the Backup Host must execute.

UNIX

star_rtv.sh central-backup start_rtv.sh rtvrules-backup start_rtv.sh rtvmgr-backup start_rtv.sh <packagename>-backup dataserver

where **packagename** is the name of the Solution Package to execute under HA. Add one line for each of the Solution Packages that the Backup Host must execute.

8. Test your HA setup:

a. On the Primary Host, in an initialized command window change directory (cd) to your project directory/servers directory and start all RTView Enterprise Monitor processes by typing:

Windows start_rtv all UNIX start rtv.sh all

b. On the Backup Host, in an initialized command window change directory (**cd**) to your project directory/servers directory and execute the script you created in the previous step. For example, if you created the file start_backup_servers.bat previously, type: start_backup_servers.bat.

c. On the Primary Host, start the Viewer by typing:

Windows start_rtv viewer UNIX start_rtv.sh viewer

Note: You can also start RTView Enterprise Monitor in the Thin Client.

- **9.** In the Monitor, open the **JVM Process Views** "All JVMs Heatmap" display and verify that all JVMs on both hosts are running. If all JVMs on both hosts are running, continue to next step. If not, review previous configuration steps.
- **10.**Verify that all RTView Enterprise Monitor processes are running on the Primary Host. Depending on the type of process, there are different ways to verify:

a. Back-End Servers: Open the **Architecture** - "System Overview" display and mouseover the rectangle associated with the servers to view the IP address of the host.

Note: To view all data for all available Data Servers, open the **RTView Servers** - "Data Servers" display and choose Connection (in the upper combo box). The **Connection String** column in the **Connection Status** table shows host names.

b. Central Servers (Configuration Server and Alert Server and Directory): Open the **Architecture** - "System Overview" display, then double-click in the **Configuration Server or Alert Server and Directory** object to open the **RTView Servers** - "Data Servers" display. See the **Connection Status** table **Connection String** column to view the host name.

c. Historian Servers: Open the **RTView Servers** - "Historian Servers" display, select the Source and Connection of your Historian from the drop-down menus and verify the **Primary Server** light is green.

11.Test failover to the Backup Host:

a. Stop the Primary Host by either executing the **stop_rtv all** script (or the **stop_rtv.sh all** script for UNIX) on the Primary Host or shutting it down (briefly).

b. In the **JVM Process Views** - "All JVMs Heatmap" display, verify that all JVMs on the Primary Host are shown as inactive.

c. Verify the Backup Host is currently acting as the Primary Host by repeating Steps 9 and 10.

12.Verify the Primary Host takes over as the Primary Host:

a. Stop the Backup Host by either executing the **stop_rtv all** script (or the **stop_rtv.sh all** script for UNIX) on the Backup Host or shutting it down (briefly).

b. On the Primary Host, in an initialized command window change directory (**cd**) to your project directory/servers directory and start all RTView Enterprise Monitor processes by typing:

```
Windows
start_rtv all
UNIX
start_rtv.sh all
```

c. On the Primary Host, start the Viewer by typing:

```
Windows
start_rtv viewer
UNIX
start_rtv.sh viewer
```

d. Repeat Steps 9 and 10 to verify that all RTView Enterprise Monitor processes are running on the Primary Host.

You have finished configuring High Availability.

CHAPTER 3 Configure Alerts

This section describes how to configure alert notification, the RTVRULES Solution Package, as well as other optional alert behavior and features. This section includes:

- "Overview" on page 53
- "Configure Alert Notification" on page 54: This section describes how to configure alerts to execute an automated action.
- "Configure the RTVRULES Solution Package" on page 61: This section describes how to configure the RTVRULES Solution Package.
- "Configure Dual Write for Distributed Alert Server" on page 62: Create custom filters and a Custom Filter drop-down menu for the Alert Views - "RTView Alerts Table" display.
- "Configure Alert Groups" on page 64: Create groups of alerts that you can then use to filter the displays in the following views: "All Management Areas", "Multi Area Service Views", "Single Area Service Views" and "Component Views".
- "Configure Alert Filters" on page 65: Create custom filters and a Custom Filter dropdown menu for the Alert Views - "RTView Alerts Table" display.

These configurations are optional.

For details about configuring alert thresholds, see **Administration -** "Alert Administration".

Overview

The following figure illustrates the RTView Enterprise Monitor components that are the subject of this section.



This section does not describe how to adjust alert thresholds. For details about configuring alert thresholds, see **Administration -** "Alert Administration".

You track and manage alerts in your RTView Enterprise Monitor system using the **Alert Views** - "RTView Alerts Table" display, track the history of alerts using the **Alert Views** - "Alert History Table" display, and set alert thresholds using the **Administration** - "Alert Administration" display. You can also view the audit trail of managed alerts in the "RTView Alerts Table" and threshold settings in the **Administration** - "Alert Administration" display by looking at the **Administration** - "Alert Action Audit Trail" and the **Administration** - "Alert Admin Audit" displays.

Configure Alert Notification

This section describes how to configure alert notification on the Central Server. RTView Enterprise Monitor provides alerts concerning conditions in your Solution Packages through RTView alerts. This section describes how to configure the alerts to execute an automated action (such as sending an email alert). These actions are generated on the Central Alert Server.

By default, alerts execute a **.bat** script. The script, by default, is not configured to execute an automated action. However, you can uncomment a line in the script that prints alert data to standard output. Or, you can modify the script to execute an automated action.

If you are upgrading from RTView Enterprise Monitor 1.2 or earlier, see the Upgrade Notes for "Alert Notifications" on page 15.

This section includes:

- "Configure Central Alert Notification" on page 54
- "Configure Optional Backend Server Notification" on page 60

At this point you have:

- Verified "System Requirements"
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform
- Completed instructions in "Configure Central Servers"

Configure Central Alert Notification

This section describes how to configure alert notification on the Central Alert Server.

This section includes:

- "Additional Optional Properties" on page 59
- "Alert Notification Persistence" on page 60

Note: These instructions assume you use the project directory. When you uncomment the line in the script that prints alert data to standard output, both the scripts and the Java command handler output alert information to standard output. The alert output appears in the Data Server log file, or in the command window or shell in which the Data Server was started. The following is a sample output from the alert command script:

----- Alert command script executed: DOMAINNAME=EM-PACKAGE,

```
ALERTNAME=OcObjectCountDeltaUpCache, ALERTINDEX=sim19097~DistributedCache1~near-
product-1-3, ALERTID=1075, ALERTSEVERITY=2, ALERTTEXT=High Alert Limit exceeded current
```

value: 3054.0 limit: 2.0

There are two options for configuring RTView Enterprise Monitor alert notification on the Central Server:

- "Using a Batch File or Shell Script" on page 55: This technique requires switching to an OS-specific set of alert definitions that execute the appropriate file type. A sample batch file and a sample shell script are provided which can be customized as needed.
- "Using the Java Command Handler" on page 57: The Java source for the RTView Enterprise Monitor Java command handler is provided to facilitate customization.

Using a Batch File or Shell Script

A sample batch file, my_alert_actions.bat, and a sample shell script,

my_alert_actions.sh, which are located in the **rtvapm/common/bin** directory, are provided as templates that you can modify as needed. Use the appropriate file for the platform that hosts the Central Alert Server. By default, both scripts send alert information to standard output.

To uncomment the line in the script so that alert data prints to standard output, see:

- "To configure Using Windows Batch File" (next)
- "To configure Using UNIX/Linux Shell Script"

To configure Using Windows Batch File

- 1. Copy the my_alert_actions.bat file, located in the rtvapm/common/bin directory, into your project directory/servers/central directory.
- 2. Open the **rtvapm.properties** file, located in the **rtvapm/common/conf** directory, in a text editor.
- **3.** Verify the following properties are set as shown:

```
# command to execute for new alerts
sl.rtview.alert.notifiercommandnew=system cmd '$alertActionScript.$scriptEnding
$domainName +$alertName+ "+$alertIndex+" +$alertID+ +$alertSeverity+ +$alertText'
# command to execute on the first severity change
sl.rtview.alert.notifiercommandfirstsevchange=system cmd
'$alertActionScript.$scriptEnding $domainName +$alertName+ "+$alertIndex+" +$alertID+
+$alertSeverity+ +$alertText'
# Substitutions to define the script executed by the above command
sl.rtview.sub=$scriptEnding:bat
sl.rtview.sub=$alertActionScript:my_alert_actions
```

- **4.** Open the **my_alert_actions.bat** file, located in your project directory/servers/central directory, and uncomment the echo line (near the end of the file) to print alert information to standard output. Or, you can modify the script to execute an automated action (such as sending an email alert).
- **5.** Open the **emcommon.properties** file, located in your **project directory/conf** directory, and verify the following are set as shown:

sl.rtview.alert.notifierenabled=false
AlertAggregator.sl.rtview.alert.notifierenabled=true

6. Restart the Central Alert Server.

To configure Using UNIX/Linux Shell Script

- 1. Copy the my_alert_actions.sh file, located in the rtvapm/common/bin directory, into your project directory/servers/central directory.
- 2. Open the **rtvapm.properties** file, located in the **rtvapm/common/conf** directory, in a text editor.
- **3.** Verify the following properties are set as shown:

```
# command to execute for new alerts
sl.rtview.alert.notifiercommandnew=system cmd '$alertActionScript.$scriptEnding
$domainName +$alertName+ "+$alertIndex+" +$alertID+ +$alertSeverity+ +$alertText'
# command to execute on the first severity change
sl.rtview.alert.notifiercommandfirstsevchange=system cmd
'$alertActionScript.$scriptEnding $domainName +$alertName+ "+$alertIndex+" +$alertID+
+$alertSeverity+ +$alertText'
# Substitutions to define the script executed by the above command
sl.rtview.sub=$scriptEnding:bat
sl.rtview.sub=$alertActionScript:my_alert_actions
```

4. Open the **rtview.properties** file, located in your project directory/**servers/central** directory, and copy/paste the following into it:

```
sl.rtview.sub=$scriptEnding:bat
sl.rtview.sub=$alertActionScript:my_alert_actions
```

- 5. Change the bat suffix to sh and my_alert_actions to ./my_alert_actions.
- 6. Save the rtview.properties file.
- 7. Open the **my_alert_actions.sh** file, located in your **project directory/servers/central** directory, and uncomment the echo line (near the end of the file) to print alert information to standard out. Or, you can modify the script to execute an automated action (such as sending an email alert).
- **8.** Open the **emcommon.properties** file, located in your **project directory/conf** directory, and verify the following are set as shown:

sl.rtview.alert.notifierenabled=false
AlertAggregator.sl.rtview.alert.notifierenabled=true

9. Restart the Central Alert Server.

Batch File or Shell Script Substitutions

The default **my_alert_actions** scripts use the substitutions described in the table below. When you customize the script, you can use a use substitution to get any of the columns in the **Alert Table**. To do this, modify the **sl.rtview.alert.notifiercommandnew** and **sl.rtview.alert.notifiercommandfirstsevchange** properties from Step 3 (above) to replace the default substitutions with the substitutions you want to use. You must make corresponding modifications to your script to use modified substitution values. The substitution names map to the names of the columns in the **Alert Table**. Convert the column name to camel case and if it does not start with Alert, prepend alert to it. For example, to use the value of the **Alert Name** column, use **\$alertName**. To use the value of the **ID** column, use **\$alertID**. To use the value of the **Row Update Time** column, use **\$alertRowUpdateTime**. The following table contains the substitutions used by the default **my_alert_actions** scripts:

Substitution	Description	Values
\$alertId	This substitution specifies the unique ID for the alert. For example: alertId = 1004	Text or Numeric
\$alertIndex	This substitution specifies which source triggered the alert. With tabular objects, the first column of data is typically the Index column. The value in the Index column is a name that uniquely identifies each table row. The alertIndex uses the Index column name.	Text or Numeric
	For example, if the CapactityLimitAllCaches alert is configured to monitor all of your caches, and to trigger when any of the caches exceed the specified capacity threshold, the alertIndex indicates specifically which cache triggered the alert.	
	With scalar objects, which do not have a table and therefore do not have a column (the useTabularDataFlag property is False), the alertIndex is blank.	
	For example: alertIndex = MyCache01	
\$alertName	This substitution specifies the name of the alert. For example: alertName = CapacityLimitAllCaches	Values vary.
\$alertSeverity	 This substitution specifies the severity level of the alert. 0: The alert limit has not been exceeded therefore the alert is not activated. 1: The alert warning limit has been exceeded. 2: The alert alarm limit has been exceeded. For example: alertSeverity = 1 	Numeric
\$alertText	This substitution specifies the text that is displayed when the alert executes. For example: alertText = High Warning Limit exceeded, current value: 0.9452 limit: 0.8	Text
\$alertTime	This value is the time the alert was initially generated.	Text

Using the Java Command Handler

- **1.** Open the **custom_handlers.properties** file, located in the **rtvapm\common\conf** directory, in a text editor.
- 2. Locate the following text in the **custom_handlers.properties** file and select it for copying:

```
#sl.rtview.alert.notifiercommandnew=system cust
'my_alert_notification.$domainName.$alertNotifyType.$alertNotifyCol' $alertNotifyTable
#sl.rtview.alert.notifiercommandfirstsevchange=system cust
'my_alert_notification.$domainName.$alertNotifyType.$alertNotifyCol' $alertNotifyTable
```

- **3.** Open the **rtview.properties** file, located in your project directory/servers/central directory, and paste the selected text into it.
- 4. In the **rtview.properties** file, uncomment the line to enable the Java command handler.
- 5. Verify that the **rtvapm_custom.jar** file is built per the "**Customizing the Java Command Handler**" on page 58 instructions.
- 6. Open the **custom_handler.properties** file and verify that the following line is the correct path to the **rtvapm_custom.jar**. If it is not the correct path, copy the line into the **rtview.properties** file in your **project directory/servers/central** directory and edit the path as needed:
- sl.rtview.cp=%RTVAPM_USER_HOME%/custom/lib/rtvapm_custom.jar
- 7. Save the **rtview.properties** file.
- **8.** Restart the Central Alert Server using the following command line argument:

Windows -properties:%RTVAPM_HOME%/common/conf/custom_handlers UNIX -properties:\$RTVAPM_HOME/common/conf/custom_handlers

Customizing the Java Command Handler

The source for the RTView Enterprise Monitor Java handler is provided in the **RtvApmCommandHandler.java** file, located in your project directory**\custom\src\com\sl\rtvapm\custom** directory. By default, the handler prints the alert data to standard output. To change this behavior perform the following steps:

- 1. Open the RtvApmCommandHandler.java file.
- 2. Modify the **OutputAlertString** method as needed. You can replace this method with your own if you modify the **invokeCommand** method to call it, and your method accepts the same arguments as **OutputAlertString**.
- 3. Save the RtvApmCommandHandler.java file.
- 4. Compile RtvApmCommandHandler.java and rebuild rtvapm_custom.jar using the supplied script (make_classes.bat or make_classes.sh) in your project directory/custom/src directory.
- **5.** Restart the Central Alert Server using the following command line argument:

Windows -properties:%RTVAPM_HOME%/common/conf/custom_handlers UNIX -properties:\$RTVAPM_HOME/common/conf/custom_handlers

Java Command Handler Substitutions

When you customize the Java Command Handler, there is no need to modify the **sl.rtview.alert.notifiercommandnew** and

sl.rtview.alert.notifiercommandfirstsevchange properties in the

custom_handlers.properties file. The entire **Alert Table** row is passed into the Java Command Handler for each alert that notifies so that all information regarding those alerts is available. The following substitutions are used:

Argument	Description
\$alertNotifyType	This substitution specifies to show the value of the notification type so you can use the same command for all notifications. Values are NEW_ALERT , CLEARED_ALERT , FIRST_SEV_CHANGE or COLUMN_CHANGED .
\$alertNotifyCol	This substitution only applies when the notifyType is COLUMN_CHANGED . Specifies to use a semi-colon delimited list of column names that changed from the alertNotifierColumns .
<pre>\$alertNotifyTable</pre>	This substitution specifies the row in the alert table that corresponds to this notification into the command.

Additional Optional Properties

- sl.rtview.alert.notifiercommandcleared Set this to the command to execute when an alert is cleared. By default, no command is configured. To execute a script, copy the notifiercommandnew line and replace \$alertActionScript with the name of the script you want to execute. To execute a custom java command, see the example in common\conf\custom_handlers.properties.
- sl.rtview.alert.notifiercommandchanged Set this to the command to execute when a column in the Alert Table changes. To execute a script, copy the notifiercommandnew line and replace \$alertActionScript with the name of the script you want to execute. To execute a custom java command, see the example in common\conf\custom_handlers.properties. This must be used in conjunction with the sl.rtview.alert.notifiercolumns property
- sl.rtview.notifiercolumns Set this to the name of one or more columns to execute the sl.rtview.alert.notifiercommandchanged notification when they change. For multiple columns, use a semi-colon delimited list. Note that this should be limited to the minimum number of necessary columns, preferably less than 5, as a large number of columns increases the persistence load on the Central Alert Server.
- sl.rtview.alert.notifiertimetrace Set this to debug Alert Server performance issues related to notification. This property enables you to see how many notifications are being generated and how long it takes to execute them. To enable tracing, add this to your properties file: sl.rtview.alert.notifiertimetrace=1. A value of 1 outputs a trace similar to the following for all notifications:

notify: 14 alerts, queue time=1, processing time=0, cmd process time=6, cmd execute time=179, total time=186 $\,$

And outputs a trace similar to the following for timer renotifications:

renotify: 14 alerts, processing time=0, query time=0, cmd process time=0, cmd execute time=159, total time=159 $\,$

A value of **2** outputs additional information for renotifications:

renotify: 14 alerts, processing time=0, query time=1, cmd process time=0(subTime=0, alertStrTime=0, setupTime=0, attachRowTime=0), cmd execute time=143, total time=144

sl.rtview.alert.notifierrenottime and sl.rtview.alert.notifiercommandrenot - Used together, these two properties set renotification on all open and unacknowledged alerts.
 sl.rtview.alert.notifierrenottime specifies the rate (in seconds) to renotify, which must be a value greater than 30. If it is set to a value greater than 0 and less than 30, the value of 30 is used. sl.rtview.alert.notifiercommandrenot specifies the command to execute for renotifications. If sl.rtview.alert.notifierrenottime is set to a value greater than 0 and sl.rtview.alert.notifiercommandrenot is blank, the command specified in sl.rtview.alert.notifiercommandrenot is blank, the command specified in sl.rtview.alert.notifiercommandnew is used. Commented-out examples of these properties are available in common\conf\rtvapm.properties, common\conf\custom_handler.properties and in the custom command handler.

Alert Notification Persistence

To prevent duplication and missed notifications after restart or failover, you must configure the Central Alert Server for alert persistence and also add the following tables to your ALERTDEFS database:

- ALERT_PERSIST_TABLE_CENTRAL
- ALERT_NOTIF_PERSIST_TABLE: Notification information is persisted to this table.

The schemas for both tables are in **%RTVAPM_HOME%\common\dbconfig**. For ALERT_PERSIST_TABLE_CENTRAL, use the same schema as ALERT_PERSIST_TABLE. To enable notification persistence, override the following property in the **emcommon.properties** file, located in the **projects\emsample\conf** directory: **AlertAggregator.sl.rtview.alert.persistAlerts=true**

Note: An example of Alert Persistence is available in the **emsample** directory. This example requires a database connection to one of our recommended database engines and the following setting in **projects\emsample\conf\emcommon.properties** must be set to **true**: **collector.sl.rtview.alert.persistAlerts=false**. This feature should be set and tested before configuring HA.

The **notifiercommandfirstsevchange** notification is not persisted and executes the first time the severity changes on an unacknowledged alert each time the Central Alert Server starts. This means that a notification is executed the first time it changes on a new alert, and again the first time it changes after the Central Alert Server is restarted or fails over.

Notification information is persisted to the ALERT_NOTIF_PERSIST_TABLE for each notification that is executed. In order to optimize performance of the Central Alert Server, limit the number of columns specified in the **sl.rtview.alert.notifiercolumns** property to the minimum number of necessary columns, preferably less than **5**. The more columns you notify on, the greater the number of notifications that are written to the database.

Configure Optional Backend Server Notification

The above sections describe configuring the Central Alert Server to execute all notifications. You may also configure any of the Solution Package Data Servers to notify on only the alerts in that server. To enable notification on a Solution Package Data Server, add the following property to the properties file for that Data Server: **sl.rtview.alert.notifierenabled=true**

This can be done in addition to the Central Alert Server notification. To disable the Central Alert Server notification, set the following property in **emcommon.properties** to false: **AlertAggregator.sl.rtview.alert.notifierenabled=true**

Configure the RTVRULES Solution Package

This section describes how to configure the RTVRULES Solution Package, located in your project directory/servers/rtvrules directory.

The RTVRULES Solution Package is designed to reduce the number of escalated, low-level alerts to upper management tiers. This enables you to, for example, set a time frame for IT to resolve an alert before the alert is escalated.

To configure this behavior, you use the "EM-SERVICE CI Type" in the **Administration** - "CMDB Admin" display to establish dependencies among Services, then use the Duration attribute in the **Administration** - "Alert Administration" display to delay the execution of the following alerts:

- **RtvEmServiceAlert**: This discrete alert is generated when a Service has one or more alerts on any associated CIs.
- **RtvEmServiceAlertImpactHigh**: This limits alert is generated when a Service has an Alert Impact value that exceeds the specified threshold on any associated CI.

Note: Unexpected behavior can arise if loops in the relationships among Services are created.

The following figure illustrates the RTView Enterprise Monitor components that are the subject of this section.



At this point you have:

- Verified "System Requirements".
- Completed instructions in "Installation" for the *full* RTView Enterprise Monitor platform.
- Completed instructions in "Configure Central Servers".
- Completed instructions in "Configure Solution Package" (you have configured a local RTView Enterprise Monitor deployment and Web Browser RTView Enterprise Monitor deployment. That is, displays such as the **All Management Areas -** "Area Heatmap" are populated with JVM data from RTView Enterprise Monitor servers and the CMDB database).
- Have Solution Package-specific displays showing monitoring data from your environment (you do not yet see Solution Package data in displays such as the All Management Areas - "Area Heatmap").
- Completed instructions in "Configure Service Data Model".
- Completed instructions in "Configure Databases of the Central Servers" (you have configured the Central Server Database for your production environment).

To configure the RTVRULES Solution Package:

- 1. If relationships are not yet established among Services, define these relationships using the new CI Type in the **Administration** "CMDB Admin" display. For details, see Configure the Service Data Model, "EM-SERVICE CI Type" on page 30.
- 2. In an initialized command window, change directory (cd) to the your project directory/ servers directory.
- **3.** Start the RTView Enterprise Monitor Servers by typing:

start_rtv all

Note: This starts the databases, Configuration Server, Display Server, RTVMGR, RTVRULES, Alert Server and Directory Servers.

4. Start the Viewer by typing:

start_rtv viewer

5. In the Monitor, open the **Administration** - "Alert Administration" display and enable the **RtvEmServiceAlert** and **RtvEmServiceAlertImpactHigh** alerts.

You have finished configuring the RTVRULES Solution Package.

Configure Dual Write for Distributed Alert Server

Dual write is for distributed Alert Server deployments in which the Data Server hosting alerts is on a different system from the Central Alert Server and client. This configuration mitigates the delays with **Alert Table** updates which occur in this type of deployment. However, this setup also causes the data in the **Alert Table** to be temporarily out of sync with the master alert data. Consider the limitations of this feature before using it.

By default, this feature is disabled.

Default Behavior

When a user clicks the **Own**, **Suppress**, **Unsuppress** or **Close** button in the **Alert Table**, the associated command executes on the selected alert in the Data Server that is hosting the alert. The hosting Data Server updates the alerts and pushes the updated alert data to the Central Alert Server. The Central Alert Server then pushes the updated alert data to the client hosting the display and the **Alert Table** gets updated.

Dual Write Enabled Behavior

When dual write is enabled, the command is applied directly to the Central Alert Server alert cache--before the action is executed on the Data Server that is hosting the alert. This reduces the delay between executing the action and seeing the result in the **Alert Table**.

To Enable Dual Write

To enable dual write, include the following property in the properties file for the Display Viewer or Display Server. For example, for the **rtview.properties** file, located in the **projects\emsample\servers\central** directory, we add:

sl.rtview.sub=\$rtvUserEnableAlertDualWrite:1

Limitations

The following limitations apply when dual write is enabled:

- 1. If an alert is cleared, clicking on **Suppress** or **Unsuppress** updates the Central Alert Server cache, but not the actual alert. The suppressed state of an alert cannot change after the alert is cleared.
- 2. Clicking on the **Close** button immediately updates the **Cleared** value in the **Alert Table**, but the **Cleared Reason** value does not update until the server hosting the alert closes the alert and sends an update.
- 3. If the server hosting the alert sends an update between the time you click on one of the buttons listed and the time that server processes the associated action, the value in the table toggles between the new value and the old value. For example, you select an alert and **Suppress** it. At the same time, the alert severity changes in the back-end server. The table initially updates with old severity with **SUP** set to **true**, then updates with the new severity with **Sup** set to **false**, and then updates with the new severity with **Sup** set to **true**. If your Central Alert Server is configured to notify when the **Sup** column changes, you receive notifications for all three of these changes (**true**, **false**, **true**).
- 4. If the server hosting the selected alert is not connected or not enabled when you click Own, Suppress, Unsuppress or Close, the value in the Alert Table updates but that value is not applied to the real alert. When the server hosting the alert connects again, the value reverts to the previous value. This is not likely to occur because the Own, Suppress, Unsuppress or Close buttons are disabled with the server hosting the selected alert is not connected or is not enabled. However, it is possible that you perform the action just as the server hosting the alert is exiting before the buttons are disabled.

Configure Alert Groups

This section describes how to configure Alert Groups. The Alert Group configuration is optional. This feature allows you to associate your alerts with Alert Groups that can then be used to filter the alerts included in the displays under the following navigation tree Views:

- "All Management Areas"
- "Multi Area Service Views"
- "Single Area Service Views"
- "Component Views"
- Alert Views (the "RTView Alerts Table" and "Alert History Table" only)

The filter can also be applied to the navigation tree when RTView Enterprise Monitor is run in alert-viewer mode. If you have configured Alert Groups, the following Alert Group filter dropdown menu appears at the top of each display that supports Alert Group filtering:

Alert Group: All

This drop-down menu contains the defined Alert Groups as well as two pre-defined options:

- All Removes the Alert Group filter and includes all alerts.
- **None** Filters to all alerts that are not included in any Alert Group.

Select an item in the **Alert Group** filter drop-down menu to filter the alerts displayed by that Alert Group. You can set the default Alert Group on an application, per-user or per-role basis. For example, you can organize your alerts into **Infrastructure**, **Performance** and **Availability** and then assign the default Alert Group based on the type of alerts the user is responsible for, enabling them to focus on and prioritize only those alerts.

An Alert Group can contain as many alerts as needed. A single alert can belong to multiple Alert Groups. Since alerts that are not members of an Alert Group are added to the **None** Alert Group, you cannot define an Alert Group named **None**.

These instructions assume you use the your project directory.

To configure Alert Groups

- **1.** Determine your Alert Groups.
- 2. Define an Alert Group by adding a row to the CITYPE_ALERTMAP table in the RTVCONFIG database, where the CITYPE value is GROUP-AlertGroupName and the ALERTNAME value is the name of the alert to include in the Alert Group. The schema for this table is included in dbconfig\create_rtvconfig_*.sql. For example, to define an Alert Group named Availability and add the JvmNotConnected alert to it, you add the following row:

GROUP-Availability -- JvmNotConnected

3. To add additional alert names to the Alert Group, add a row for each alert name. For example, to set three alerts in the **Availability** Alert Group you add the following rows:

GROUP-Availability -- JvmNotConnected GROUP-Availability -- xyzAlertName GROUP-Availability -- 123AlertName

NOTE: A single alert name can belong to multiple Alert Groups.
4. In the properties file used by your Central Configuration server, add the following property:

ConfigCollector.sl.rtview.cache.config=rtv_config_cache_source_db.rtv

NOTE: This property is included in **projects/emsample/servers/central/ central.properties**. It is commented out by default, but must be uncommented in order to use Alert Groups.

- 5. Open the All Management Areas "Area Heatmap" display and verify that the Alert Group drop-down menu appears at the top.
- **6.** Select an Alert Group from the **Alert Group** drop-down menu and verify that only alerts for the selected Alert Group are included in the heatmap.
- 7. Open the **Architecture** "RTView Cache Tables" display, select **CONFIG-SERVER** from the **Data Server** drop-down menu, then select the **RtvAlertGroupMap** cache table from the upper table. This cache lists all defined Alert Groups.
- 8. Verify the list of defined Alert Groups and their alert name members in the RtvAlertGroupMap table. NOTE: The table includes the None Alert Group, which is defined, by default, to include all alerts that are not members of a user-defined Alert Group.
- 9. Optionally, specify the default Alert Group filter. To add an application default, set the \$rtvAlertGroupFilter substitution to the name your default Alert Group filter in the properties file used by your Viewer application. For example, to set the default Alert Group filter to Availability, enter: sl.rtview.sub=\$rtvAlertGroupFilter:Availability

In the **projects\emsample** project, you would add this property to **emsample\servers\central\rtview.properties**.

To add a per-role or per-user default, set the **\$rtvAlertGroupFilter** substitution value in your **users.xml** or **roles.xml** file. For example, to set the default Alert Group filter to **Availability**, enter: **sub name="\$rtvAlertGroupFilter" value="Availability"**

For details about the **users.xml** or **roles.xml** files, see "Configure User and Role Management" on page 44.

For details about configuring Alert Groups for custom displays, see the Chapter 6, "Creating Custom Solution Packages" .

Configure Alert Filters

This section describes how to configure the **Custom Filter** drop-down menu which is used for creating custom, user-defined filters in the **Alert Views** - "RTView Alerts Table" display. This configuration is optional.

When custom filters are defined for the logged in user, a **Custom Filter** drop-down menu is added to the **Alert Views** - "RTView Alerts Table" display (in the upper right portion of the display).

Currer	nt 🗸	Admin				Alerts Table			09-Oct-2015 16:06 💠 Data OK 💠 🕜
Field Filter:							V Clear	All Open	Closed Of Alert Settings Conn OK
Search Text:							RegEx	Owner Filter: All	✓ Custom Filter: ✓
CMDB Filter: Ov	vner = Infrastructure	Area = * G	roup = *	Service = * E	inv = *				Clear CMDB Filter
Total 2064/2064 Critical 🗹 1987/1987 Warning 🗹 77/77 Suppressed 🗌 0								Qwn Suppress UnSuppress Close	
First Occ	Last Occ	Count	Sup	Owner	Alert Name	Primary Service	CI		
10/09/15 16:06:29	10/09/15 16:06:29	1			BwActivityErrorRateHigh	BW-PROCESS	SLHOST6(domain6);d	High Alert Limit exceeded, curr	ent value: 0.032257023966968806 limit: 0.02
10/09/15 16:06:27	10/09/15 16:06:27	1			BwActivityErrorRateHigh	BW-PROCESS	SLHOST6(domain6);d	High Alert Limit exceeded, curre	ent value: 0.03466204506065858 limit: 0.02

The **Custom Filter** drop-down menu is a predefined list of standard filters that are applied to the **Alert Views** - "RTView Alerts Table". All filters that are supported by the controls at the top of the **Alert Views** - "RTView Alerts Table" display can be used to define the **Custom Filter** drop-down menu.

When you select a custom filter, the filter controls at the top of the display then reflect that custom filter's settings, as well as the data in the table. For example, let us say you define a custom filter named **All Suppressed Jvm Critical Alerts** that filters the table to show only **Suppressed** and **Critical** alerts with **Jvm** in the **Alert Name** field. When you select this custom filter the **Field Filter** is then set to **Alert Name**, the **Search Text** field is then set to **Jvm**, the **Warning** check-box is then deselected and the **Suppressed** check-boxes is selected, and the table is then filtered accordingly. If the filter fields change such that the filter no longer matches the selected custom filter, the custom filter selection is cleared.

The **Custom Filter** drop-down menu contains all filter options that are specified for the logged in user. The **Custom Filter** drop-down menu only appears in the **Alert Views** - "RTView Alerts Table" display if at least one custom filter is defined for that user.

You configure the **Custom Filter** drop-down menu by creating one or more custom filters. To create the filter you add a table row to the CUSTOM_ALERT_FILTERS table in the ALERTDEFS database. You define the custom filter per user with match criteria for each of the filter controls in the **Alert Views** - "RTView Alerts Table" display. See the schemas in the **RTVAPM_HOME\common\dbconfig** directory for the correct schema to use for your database. The CUSTOM_ALERT_FILTERS table also resides in the database in the **emsample** folder.

Note: The CUSTOM_ALERT_FILTERS table was added to the ALERTDEFS database in version 1.3.0. Users upgrading from previous versions must add this table to the ALERTDEFS database.

To configure Alert Filters

Add a row for each custom filter to the CUSTOM_ALERT_FILTERS table, located in the ALERTDEFS database. The following are the available table columns you can define, all of which are of type String.

Column Name	Value
User	Specifies the name of the user who can use this filter. This must correspond to the value specified for the User in the RTView Enterprise Monitor login.
Кеу	Specifies the name of the filter. This value is used in the Custom Filter drop-down menu.

rtvAlertDynFilter	Specifies the name of the column in the Alerts Table to filter on. This corresponds to the value in the Field Filter drop-down menu in the display. This must be the actual column name, which is sometimes different than the displayed column name. Valid values are blank, Time , Last Update Time , Count , ID , Cleared , Acknowledged , Owner , Alert Name , Primary Service , CIName , CIType , Alert Index , Alert Text , Severity , Source , Cleared Reason , AlertClass , CompID , TicketID , TicketGroup and any other custom columns you added to the RTView Alerts Table . A <blank> value indicates this filter should not be used. NOTE: If you specified an RTView Alerts Table columns list, you can use any values from the RTView Alerts Table columns list.</blank>
rtvAlertDynTextFilter	Specifies the value in the rtvAlertDynFilter column must equal. This corresponds to the Search Text field in the display.
rtvAlertDynTextFilterRegEx	Specifies whether to use Regex for the rtvAlertDynFilter and rtvAlertDynTextFilter filters, where 1 is use to Regex and 0 is NOT to use Regex. This corresponds to the RegEx check-box in the display.
rtvClearedFilter	Specifies to filter on the Cleared column. This corresponds to the All/Open/Closed radio buttons in the display. Valid values are:
	false shows only open alerts
	 true shows only closed alerts
	 * (asterisk) shows both
rtvAckFilter	Specifies to filter on the Suppressed column. This corresponds to the Suppressed check-box in the display. Valid values are:
	 false shows only unsuppressed alerts
	 true shows only suppressed alerts
	* (asterisk) shows both
ownerFilter	Specifies to filter on the Owner column. This corresponds to the Owner Filter drop-down menu in the display. Valid values are:
	 <blank> shows alerts that are not owned as well as the logged in user name (which corresponds to the Owned by Me drop-down menu selection)</blank>
	 * (asterisk) shows owned and not owned alerts
rtvWarningFilter	Specifies to filter on warning alerts. That is, where the alert $\textbf{Severity}$ is equal to $\boldsymbol{1}.$ Valid values are:
	 1 shows warning alerts
	 <blank> does NOT show warning alerts</blank>
rtvCriticalFilter	Specifies to filter on critical alerts. That is, where the alert Severity is equal to 2 or 3 . Valid values are:
	2 shows critical alerts
	3 shows critical alerts
	 <blank> does NOT show critical alerts</blank>
rtvOwnerLoc	Specifies to filter on the CMDB owner. This corresponds to the Owner value in the CMDB Filter field. Valid values are:
	 the name of an owner from your CMDB which shows only alerts for that owner
	 * (asterisk) which does NOT filter by CMDB owner
	 <blank> shows only alerts without an owner</blank>

rtvAreaLoc	Specifies to filter on the CMDB area. This corresponds to the area value in the CMDB Filter field. Valid values are:
	 the name of an area from your CMDB which shows only alerts for that area
	 * (asterisk) which does NOT filter by CMDB area
rtvGroupLoc	Specifies to filter on the CMDB group. This corresponds to the Group value in the CMDB Filter field. Valid values are:
	 the name of a group from your CMDB which shows only alerts for that group
	 * (asterisk) which does NOT filter by CMDB group
rtvServiceLoc	Specifies to filter on the CMDB service. This corresponds to the Service value in the CMDB Filter field. Valid values are:
	• the name of a service from your CMDB which shows only alerts for
	that service
	 * (asterisk) which does NOT filter by CMDB service
rtvEnvironmentLoc	 * (asterisk) which does NOT filter by CMDB service Specifies to filter on the CMDB environment. This corresponds to the Environment value in the CMDB Filter field. Valid values are:
rtvEnvironmentLoc	 * (asterisk) which does NOT filter by CMDB service * (asterisk) which does NOT filter by CMDB service Specifies to filter on the CMDB environment. This corresponds to the Environment value in the CMDB Filter field. Valid values are: the name of an environment from your CMDB which shows only alerts for that environment

CHAPTER 4 Configure the RTView EM User Interface

This section describes how to configure the RTView Enterprise Monitor user interface. These configurations are optional. This section includes:

- "Modifying the CUSTOM Tab" on page 69: Modify, add or remove Monitor tabs and add or remove custom views.
- "Configure RTView Alerts Table Columns" on page 72: Change which columns are shown in the Alerts Table, which column to sort on and whether to sort a column by ascending or descending order.
- "Add Owned By Me to RTView Alerts Table" on page 74: Add a table that only shows alerts for the logged in user to the RTView Alerts Table.

Modifying the CUSTOM Tab

The **CUSTOM** tab is provided as a location for adding user-defined views. The **CUSTOM** tab can be removed or renamed. You can also add additional custom tabs.

Replacing Tab Content

To replace the contents of the **CUSTOM** tab with your custom views:

- 1. Copy your custom view (.rtv) files to the project directory.
- 2. Modify custom_views_navtree.xml to replace the tree contents with your custom views.

Renaming the CUSTOM Tab

To rename the **CUSTOM** tab:

Modify **rtv_custom.xml TabTable** to change the **CUSTOM** label in the **TabLabel** column to your custom tab label. Do NOT change the **Custom** value in the **Group** column.

Removing the CUSTOM Tab

To remove the **CUSTOM** tab:

Modify **rtv_custom.xml** to remove the Custom row from the **TabTable** and **TabTreeSelection** tables.

Adding Tabs

- Choose a Tab ID for your CUSTOM tab. This is not the label, but a unique ID that will be used internally to identify your tab. For this example, we will use MyCustomTab for the Tab ID. You cannot use the following for the Tab ID:
- Custom
- CMDB
- Service
- Alerts
- Components
- **2.** Create a navigation accordion view for your tab in your project directory:
- Copy custom_views_acc.rtv to a new file name. In this example, we copy it to mycustomtab_acc.rtv.
- Open mycustomtab_acc.rtv in the Display Builder:
 - 1. runb_appmon mycustomtab_acc.rtv.
 - 2. Modify the Custom Views label above the navigation accordion.

3. Select the navigation accordion and edit the **selectedValue** property. Change the **Filter** value to your Tab ID (**MyCustomTab** in this example).

4. Open the data attachment in the **navOptionsForFilter** function and change the **Filter** value to your Tab ID (**MyCustomTab** in this example).

5. Save your display and exit the Display Builder.

- **3.** Create a navigation tree for your tab. Note that each node in the tree must be a unique display/substitution value.
- Copy custom_views_navtree.xml to a new filename, mycustomtab_navtree.xml.
- Replace the nodes in **mycustomtab_navtree.xml** with your nodes.
- 4. Add the new navigation tree to central.properties:

MyCustomTab tab

uiprocess.sl.rtview.xml.xmlsource=mycustomtab_navtree.xml 0 mycustomtab_navtree.xml 0 1

uiprocess.sl.rtview.cache.config=rtv_tabtree_cache_source.rtv

\$rtvNavTreeFilename:mycustomtab_navtree.xml \$rtvNavTabName:MyCustomTab

- 5. Add your new tab to **rtv_custom.xml**. In a text file editor, open **rtv_custom.xml** and edit the following:
- Add a new row to the **TabTable** with the label, Tab ID and navigation view you created in Step 2:

```
MyCustomTabLabel
MyCustomTabLabel
MyCustomTab
myCustomTab
```

• Add a new row to the **TabTreeSelection** table with the Tab ID:

MyCustomTab

Configure RTView Alerts Table Columns

RTView Enterprise Monitor allows you to specify which columns to include in the **Alert Views** - "RTView Alerts Table". You can also specify which column to sort on (rather than the **Time** column) and whether to sort a column by ascending or descending order.

This configuration impacts the **RTView Alerts Table** in the following displays and any custom displays that include **rtv_alerts_table_common.rtv**:

- Alert Views "RTView Alerts Table" display (rtv_alerts_table.rtv)
- Service Summary Views "Service By CI Type" display (rtv_service_citype_summary.rtv)
- Service Summary Views "Service Summary" display (rtv_service_summary.rtv)
- Multi Area Service Views "Services CI Type Summary" display (rtv_allareas_allservices_citype_summary.rtv)
- Single Area Service Views Services CI Type Summary display (rtv_area_allservices_citype_summary.rtv) By default, this display is not included in the navigation tree.



By default, the **RTView Alerts Table** (**rtv_alerts_table_common.rtv**) includes the following columns in the following order:

- Time (the column label is **First Occ**)
- Last Update Time (the column label is Last Occ)
- Count
- Alert Index (hidden by default)
- ID (hidden by default)
- Cleared (the column label is **Closed** and is hidden by default)
- Cleared Reason (the column label is **Closed Reason** and is hidden by default)
- Acknowledged (the column label is Sup)
- Owner
- Alert Name
- PrimaryService (the column label is Primary Service)
- CIName (the column label is **CI**)
- Alert Text
- AlertClass
- CompID
- TicketID
- TicketGroup

Changing the Default Columns

To change the default columns, add the following property to the properties file used by your Display Viewer application:

sl.rtview.sub=\$rtvUserAlertTableColumns:'Time:94 Last Update Time:93 Count:50 ID:50 Cleared:40 Cleared Reason:85 Acknowledged:40 Owner:70 Alert Name:134 Alert Index:150 PrimaryService:150 CIName:117 Alert Text:1000 AlertClass:83 CompID:75 TicketID:69 TicketGroup:86'

Replace everything after **\$rtvUserAlertTableColumns:** with the column names and column widths in the order you want. The above example configures the default setup for the columns. The value after **\$rtvUserAlertTableColumns:** must be enclosed in single quotes and use the following syntax:

'colName:colWidth colName2:colWidth2'

Valid column names are Time, Last Update Time, Count, ID, Cleared, Cleared Reason, Acknowledged, Owner, Alert Name, PrimaryService, CIName, CIType, Alert Index, Alert Text, Severity, Source, AlertClass, CompID, TicketID, TicketGroup and any other custom columns you have added to the RTView Alerts Table.

Exposing ID, Cleared, Cleared Reason and Alert Index Columns

The ID, Cleared, Cleared Reason and Alert Index columns are always included, but are hidden by default. To show them, add the following properties to the properties file used by your Display Viewer application: # Show the Closed column in the alert table if set to 1, hide it if set to 0 sl.rtview.sub=\$rtvUserShowCleared:1

Show the Closed Reason column in the alert table if set to 1, hide it if set to 0 sl.rtview.sub=\$rtvUserShowClearedReason:1

Show the ID column in the alert table if set to 1, hide it if set to 0

sl.rtview.sub=\$rtvUserShowId:1

Show the Alert Index column in the alert tables

sl.rtview.sub=\$rtvUserShowAlertIndex:1

If the ID, Cleared and Cleared Reason columns are specified in the **\$rtvUserAlertTableColumns**, the columns are positioned in columns according to that order. If they are not specified in the **\$rtvUserAlertTableColumns**, they are positioned after (to the right of) the columns specified in **\$rtvUserAlertTableColumns**. In **rtv_alerts_table.rtv** (Alert Views - RTView Alerts Table), you can also toggle the visibility of these columns using the check-boxes at the bottom of the display.

Note: The values in **\$rtvUserAlertTableColumns** also populate the **Field Filter** drop-down menu in the **rtv_alerts_table.rtv** (Alert Views->RTView Alerts Table). The **Field Filter** drop-down menu also always contains the ID, Closed and Closed Reason columns whether or not those columns are visible.

Changing the Sort Column and Order

By default, the **RTView Alerts Table** is sorted by the **Time** column in descending order to show new alerts first. You can configure the **RTView Alerts Table** to sort by a different column and by descending order. To configure the columns in this way, include the following in the properties file used by your Display Viewer application and edit accordingly:

Set this to the name of the column on which to sort.

sl.rtview.sub=\$rtvUserAlertTableSortColumn:Time

Set this to 1 to sort ascending or 0 to sort descending

sl.rtview.sub=\$rtvUserAlertTableSortAsc:0

Note: You can also change the column sorted on in the display by clicking the header of the column you want to sort on.

Examples of all of these properties are included in the emsample demo in **%RTVAPM_HOME%\projects\emsample\servers\central\rtview.properties**.

All of the above substitutions can be set on a per-user or per-role basis if the RTView login is enabled and custom users or roles are defined. See the documentation for information on how to define substitution values for custom users and roles.

Add Owned By Me to RTView Alerts Table

RTView Enterprise Monitor allows you to include the **Alerts Owned By Me** table in the lower portion of the **Alert Views -** "RTView Alerts Table" display.

The **Alerts Owned By Me** table shows all open (not cleared) alerts owned by the logged in user. Filters selected in the display do not apply to this table.

🗲 Admin					Alerts Table	09-O	ct-2015 16:27 📫 Data OK 🚦	• 🕜
Field Filter:				-	Clear 🗌 All 🔘 🤇	Open 🔘 Closed	🌔 Alert Settings Cor	nn OK
Search Text:	RedEx Owner Filter: All							
CMDB Filter: Ov	vner = " Area = " G	iroup = " S	iervice	= " Env = PR0	DUCTION		Clear CMDB F	ilter
Total 12	Critical 🗹 11 Warning 🗹 1 Suppressed 🗌 1							
First Occ V	Last Occ	Count	Sup	Owner	Alert Name	Primary Service	ce Cl	
06/20/13 16:06:53	06/20/13 16:06:53	1			EmsServerPendingMsgsH	EMS-SERVER	tcp://192.168.200.172 H	ligh Wi
06/20/13 16:06:53	06/20/13 16:06:53	1			EmsServerPendingMsgsH	EMS-SERVER	tcp://192.168.200.171 H	ligh Al
06/20/13 16:06:53	06/20/13 16:06:53	1			EmsServerPendingMsgsH	EMS-SERVER	tcp://192.168.200.171 H	ligh Al
06/20/13 16:06:53	06/20/13 16:06:53	1			EmsServerPendingMsgsH	EMS-SERVER	tcp://192.168.200.172 H	ligh Al
06/20/13 16:06:52	06/20/13 16:09:07	3		admin	JvmNotConnected	JVM	localhost;BWMON-LO S	ierver o
06/20/13 16:06:52	06/20/13 16:08:47	2			JvmNotConnected	MQ-WLM	localhost;WLM-LOCAL S	erver o
06/20/13 16:06:52	06/20/13 16:08:47	2			JvmNotConnected	MQ-WLM	localhost;MQMON-LO S	erver o
06/20/13 16:06:52	06/20/13 16:09:07	3		admin	JvmNotConnected	WSM-PROD	localhost;WSM-LOCAL S	erver o
06/20/13 16:06:52	06/20/13 16:08:47	2			JvmNotConnected	CUSTOM-DEV	localhost;CUSTOM-L S	erver o
06/20/13 16:06:52	06/20/13 16:08:47	2			JvmNotConnected	OCMON-PROD	localhost;OCMON-LO S	erver o
06/20/13 16:06:52	06/20/13 16:08:47	2			JvmNotConnected	JVM	localhost;TOMCAT S	erver o
06/20/13 16:06:52	06/20/13 16:08:47	2			JvmNotConnected	MISCMON-PROD	localhost;MISCMON-L S	erver o
1	III							Þ
				A	erts Owned by Me			
First Occ V	Last Occ	Count	Sup	Owner	Alert Name	Primary Service	ce CI	
06/20/13 16:06:53	06/20/13 16:09:08	6	~	admin	EmsServerPendingMsgsH	EMS-SERVER	tcp://SLPRO29:7222 H	ligh Al
06/20/13 16:06:52	06/20/13 16:09:07	3		admin	JvmNotConnected	JVM	localhost;BWMON-LO S	erver o
06/20/13 16:06:52	06/20/13 16:09:07	3		admin	JvmNotConnected	WSM-PROD	localhost;WSM-LOCAL S	erver o
4								•
Columns 🔲 ld	olumns 🔲 ld 🔄 Closed 📄 Closed Reason 🛛 🛛 🖉 🖉 🖉 🖉 🖉 🖉 🖉 🖉 🖉 Details							

By default, the **Alerts Owned By Me** table is hidden. To show this table, add the following line to the **rtview.properties** file in the directory where you run the Display Viewer or Display Server:

sl.rtview.sub=\$rtvUserShowDualTables:1

Note: This property resides in emsample\servers\central\rtview.properties but commented out.

The **Alerts Owned By Me** table can be set on a per-user or per-role basis if the RTView login is enabled and custom users or roles are defined.

For details about how to define substitution values for custom users and roles, see "Configure User and Role Management" on page 44.

CHAPTER 5 Using the Monitor

This section describes how to read and use RTView Enterprise Monitor displays, as well as each display. This section includes:

- "Overview" on page 77
- "All Management Areas" on page 99
- "Multi Area Service Views" on page 103
- "Single Area Service Views" on page 115
- "Service Summary Views" on page 127
- "Key Metrics Views" on page 137
- "Component Views" on page 163
- "Metric Explorer" on page 171
- "JVM Process Views" on page 176
- "Tomcat Servers" on page 190
- "RTView Servers" on page 200
- "Alert Views" on page 207
- "Administration" on page 216
- "CMDB Administration" on page 225
- "Architecture" on page 230
- "Property Views" on page 245

Overview

This section describes how displays are structured and organized, how to read heatmaps, tables and trend graphs, as well as GUI functionality and navigation. This section includes:

- "Navigation Tabs" on page 78
- "Fundamental Structure of Displays" on page 91
- "Heatmaps" on page 92
- "Tables" on page 93
- "Trend Graphs" on page 95
- "Popup Menu" on page 96
- "Title Bar" on page 98

RTView Enterprise Monitor uses visual cues (such as color coding, graphic charts and sizing of shapes) to communicate the current state of all elements in your system. RTView Enterprise Monitor comes with Solution Packages that you can optionally install (such as the GlassFish or Business Works Monitors). The optional Solution Packages are not described in this document.

Navigation Tabs

	ERVICE VIEWS	COMPONENTS	ALERTS	ADMIN CUSTO	эм	RTView Ente	n prise Monitor[®] admin (admin) Log Out
Service Tree	Heatmag	P Alert Group: All	•	All Areas by Own	ner	24-Mar-2016 16:0	1 💠 Data OK + 🕜
Env Filter PRODUCTION	Owner: All Owne	rs 💌	Area Names	Env. PRODUCTION	Metric: Alert	Impact 💌 🛛	6 10
✓ ⊕ Infrastructure				Infrastructure			
✓ ● Middleware							
> COHERENCE							
> O SOLACE							
> () TIBCO-BW							
> O TIBCO-EMS				Owner: Infrastructure			
> O WEBSPHERE				Area: Middleware CI Count: 7,795			
> 🔿 TIBCO-AS	1			Alert Impact: 2 Alert Count: 480			
> O TOMCAT				Alert Severity: 2			
> A WEBLOGIC	4			Criticality: E Crit Level: 1			
✓ ◎ Processes			۲				
> ODOCKER							
> • MM							
✓ Servers							
> O Databases							
> O Hosts							
✓ ◎ Tester							
✓ O Servers							
> O Databases							

There are six different tabs that run along the upper portion of the window:

- "SERVICE TREE Tab": provides a tree structure view of your defined CMDB with 4 levels of hierarchy: Owner>Area>Group>Service. The tree is configurable and should be set up to represent how a support person likes to conceptually think of the vast number of items that are being monitored. Tree contents are filtered by the \$rtvOwnerMask, \$rtvAreaMask, \$rtvGroupMask and \$rtvServiceMask values for the logged in user. For details, see "Substitutions for User and Role Management" on page 45.
- "SERVICE VIEWS Tab": provides an alternate way of accessing the primary RTView Enterprise Monitor displays also found in the SERVICE TREE tab. This tab might be used by power users who are very familiar with their monitoring environment and choose not to visualize the entire service tree.
- "COMPONENTS Tab": provides access to the JVM Process Views, the Tomcat Servers Views, the RTView Servers Views, and any Views included with the Solution Packages that you have installed. This tab organizes the monitoring information by technology or vendor and allows you to view the health state of your technology footprint without logical or service groupings. Specialists that understand in some depth how the technologies are deployed, configured, load-balanced, and scale based on load will gain benefit on the organization of performance metrics by the important functional sub-components of the technology.
- "ALERTS Tab": provides a view of the current active alerts in the system and allows you to manage those alerts by owning them, acknowledging them, and/or suppressing them. Tree contents are filtered by the \$rtvOwnerMask, \$rtvAreaMask, \$rtvGroupMask and \$rtvServiceMask values for the logged in user. For details, see "Substitutions for User and Role Management" on page 45.
- "ADMIN Tab": can be accessed by administrators of RTView Enterprise Monitor, who can
 use this tab during installation to set up proper alert settings, to describe logical and
 service groupings that drive the construction of the Service Tree, and to "monitor the
 monitor" view of the current health state of RTView Enterprise Monitor and how it is
 currently deployed and configured.
- "CUSTOM Tab": provides a location where you can add your own tab and views.

SERVICE TREE Tab

	ERVICE VIEWS COMPONENTS ALERTS ADMIN	N CUSTOM RTView Enterprise Monitor [®] admin (admin) Log Out
Service Tree	Heatmap Alert All All All All Are	eas by Owner 24-Mar-2016 16:02 💠 Data OK 💠 🥝
Env Filter PRODUCTION	Owner: All Owners Area Env: P	RODUCTION 💌 Metric Alert Impact 💌 0 5 💷
♥ ⊕ Infrastructure	h	frastructure
✓ ⊕ Middleware		
COHERENCE		
> O SOLACE		
> 😝 TIBCO-BW		
> 🔿 TIBCO-EMS		
> O WEBSPHERE		
> 🔿 TIBCO-AS		
> O TOMCAT		
> 🛦 WEBLOGIC		
VO Processes		
> ODOCKER		
> O JVM		
✓ O Servers		
> 🗢 Databases		
> O Hosts		
✓ ○ Tester		
✓ O Servers		
> 🔿 Databases		

The **SERVICE TREE** tab provides a tree structure view of your defined CMDB with 4 levels of hierarchy: **Owner>Area>Group>Service** (see "Fundamental Structure of Displays" for more information). This tab is the primary source for understanding the health of your services and for drilling down to analyze issues. The Service Tree, which is configurable, shows user-defined logical groupings of the infrastructure and middleware used to support applications and should be set up to represent how support personnel like to conceptually think of the vast number of items that are being monitored. These groupings could, for example, contain a collection of monitored Configuration Items used to support a specific application or a service, or they could contain Configuration Items relevant to varying technologies located at specific data centers. The Service Tree aggregates the current alert state of any item in a group to indicate which groups have items that need to be investigated, and you can use a variety of visual clues to prioritize and analyze the issues. You can also determine priority using the Alert Impact view in the heatmaps to identify which alert conditions will be the most impactful to your business, and you can then analyze the situation using a variety of tools including:

- Key Metrics: allows you to view the cross-correlation of Configuration Items relevant to a grouping or service and how their performance may affect each other and the services they support.
- **Drill Down CI Summary Views**: provides a way to analyze how a particular Configuration Item has been performing over time.
- **Metric Explorer**: allows you to choose specific metrics to chart when analyzing several critical performance metrics over time.

This tab allows you to filter the navigation tree content by service and environment (see figure below). The environment you select also sets the **Environment** filter on the main panel. Note that changing the **Environment** filter on the main panel does not set the **Environment** filter in the navigation panel.



Alerts

Each level within the Service Tree has a red, yellow, or green icon next to it, which indicate the highest alert level for that particular Owner, Area, Group, or Service. These icons allow you to instantly recognize problem areas within your system and allow you to drill down to quickly find the source of the issue. A red icon \bigcirc indicates that one or more alerts exceeded their ALARM LEVEL threshold, a yellow icon \blacktriangle indicates that one or more alerts exceeded their WARNING LEVEL threshold, and a green icon \heartsuit indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold.

The Owner, Area, and Group automatically display the icon representing the highest level alert for their associated services with red (ALARM LEVEL threshold exceeded) being the most serious, yellow (WARNING LEVEL threshold exceeded) being intermediate, and green meaning everything is functioning normally. For example, if any of the services within a particular **Owner>Area>Group** have one or more alerts that exceeded their ALARM LEVEL threshold and, hence, have a red icon next to it in the tree, then the associated Owner, Area, and Group levels will also have the same red icon. In the example below, you can see that the MQ Broker service has one or more alerts that exceeded their ALARM LEVEL threshold and has a red indicator. As a result, the Owner, Area, and Group also have the red indicator



If the highest alert level for the services within a particular **Owner>Area>Group** is a service that has one or more alerts that exceeded their WARNING LEVEL threshold and, hence, has a yellow icon next to it in the tree, then the associated Owner, Area, and Group levels will also have the same yellow icon. In the example below, you can see that the DB2 database has one or more alerts that exceeded its WARNING LEVEL threshold and has a yellow indicator. Since none of the other services in this particular tree have alerts that exceeded their ALARM LEVEL threshold, then the associated Owner, Area, and Group also have the yellow indicator since the WARNING LEVEL threshold is the highest alert level threshold exceeded.



Available Displays

The following displays are available in the following levels in this tab:

Owner Level (top level)

To access the following displays, select an Owner Level option (**Infrastructure**, for example) to display an Owner level display. Select one of the following options from the drop-down in the upper left-hand corner of the display to view the associated display:

Drop-down Option	Display	Description
Heatmap	"Area Heatmap" on page 99	Heatmap of the most critical alerts for all Areas of your system, with the option to filter by Owner, Environment and alert Metric.
Area	"Area Table" on page 101	Table of data shown in the "Area Heatmap" with the option to filter by Owner and Environment.

Note: When selecting an Owner Level option, the display that opens by default will be the one that was last selected. For example, if Heatmap was the display that was previously selected, Heatmap will display by default again.

Area Level (second level down)

To access the following displays, select an Area Level option (**Middleware** in the example above) to display an Area Level display. Select one of the following options from the drop-down in the upper left-hand corner of the display to view the associated display:

Drop-down Option	Display	Description
By Group	"Group/Service Heatmap" on page 104	Heatmap of alert states for Services by Area, with the option to filter by Area, Group, Environment and alert Metric, and the option to show Group and Service Names.
By Region	"Group/Region Heatmap" on page 106	Heatmap as described for the Group / Service Heatmap (above), with the option to filter by Region and no option to show Service Names.
Table	"Group / Service Table" on page 108	Table of data shown in the "Group/ Service Heatmap".
Ву СІ Туре	"Services CI Type Summary" on page 110	Table that shows the health state of Services per CI Type.
History	"Services History Heatmap" on page 113	Heatmap of alert states, over time, for Services in a selected Area, with the option to filter by Group, Environment and alert Metric.

Note: When selecting an Area Level option, the display that opens by default will be the one that was last selected. For example, if Group/Service Heatmap was the display that was previously selected, Group/Service Heatmap will display by default again.

Group Level (third level down)

To access the following displays, select a Group Level option (IBM-MQ in the example above) to display a Group Level display. Select one of the following options from the drop-down in the upper left-hand corner of the display to view the associated display:

Drop-down Option	Display	Description
By Group	"Single Area: Group/Service Heatmap" on page 116	Heatmap of alert states for Services by Area, with the option to filter by Area, Group, Environment and alert Metric, and the option to show Group and Service Names.
By Region	"Single Area: Region/Service Heatmap" on page 118	Heatmap as described for the Group / Service Heatmap (above), with the option to filter by Region and no option to show Service Names.
Table	"Single Area: Group / Service Table" on page 120	Table of the data shown in the "Single Area: Group/Service Heatmap".
Ву СІ Туре	"Single Area: Services CI Type Summary" on page 122	Table that shows the health state of Services per CI Type.
History	"Single Area: Services History Heatmap" on page 125	Heatmap of alert states, over time, for Services in a selected Area, with the option to filter by Group, Environment and alert Metric.

Note: When selecting a Group Level option, the display that opens by default will be the one that was last selected. For example, if Group/Service Heatmap was the display that was previously selected, Group/Service Heatmap will display by default again.

Service Level (fourth level down)

To access the following displays, select a Service Level option (MQ Broker (DEMOSITE) in the example above) to display a Service Level display. Select one of the following options from the drop-down in the upper left-hand corner of the display to view the associated display:

Drop-down Option	Display	Description
Ву СІ Туре	"Service By CI Type" on page 128	Table of alert states for a Service organized CI Type, with general alert information.
Summary	"Service Summary" on page 131	Table of CIs by Service, with detailed alert information.
Health	"Service Health Heatmap" on page 135	Heatmap of CIs by Service, with the option to filter by Owner, Area, Group, Environment and alert Metric, and show CI Names.
KM Heatmap	"Service KM Heatmap" on page 138	Heatmap of Key Metrics current data for one or more Services in your CMDB hierarchy.
KM Table	"Service KM Table" on page 142	Table of Key Metrics current data for one or more Services.
KM History	"Service KM History" on page 145	History heatmap of Key Metrics historical data for one or more Services.
KM History (Alt)	"Service KM History (Alt)" on page 150	History heatmap of Key Metrics historical data for one or more Services.

Note: When selecting a Service Level option, the display that opens by default will be the one that was last selected. For example, if By CI Type was the display that was previously selected, By CI Type will display by default again.

Select the following button, which is available when you select either **By CI Type** (Service **By CI Type** display) or **Summary** (Service Summary display) from the drop down list, to open the associated display:

Button	Display	Description
MX	"Metric Explorer" on page 172	The Metric Explorer (MX) is a tool for creating and viewing custom dashboards, referred to as MX Views.

SERVICE VIEWS Tab

SL SERVICE TREE	SERVICE VIEWS	COMPONENTS	ALERTS	ADMIN	CUSTOM			RTView®Enterprise Monito admin (admin) Log G
Service Views	Heatmap	~				All Areas by Owner		07-Oct-2015 09:45 💠 Data OK 💠 🌘
	Owner: Infrastructure	✓ □ ^{Area} Nam	es				Env: QA	V Metric: Alert Impact V 0 5 10
✓All Management Areas						Infrastructure		
Area Heatmap								
Area Table								
> Multi Area Service Views								
> Single Area Service Views								
> Service Summary Views								
> Key Metrics Views								
> Component Views								
> Metric Explorer								

The **SERVICE VIEWS** tab is a simplified version of the **SERVICE TREE** tab that uses drop down navigation to access displays without the complexity of the service tree. This tab contains the following Views:

- "All Management Areas" on page 99: Displays in this View show the health of your entire system using aggregated data from all Areas. Use these displays to quickly identify critical conditions across all Areas in your system, then drill-down to investigate in lower-level displays.
- "Multi Area Service Views" on page 103: Displays in this View show the health of Services for one or more Groups. Use these displays to identify critical conditions across all Areas or a single Area. Drill-down to investigate in lower-level displays.
- "Single Area Service Views" on page 115: Displays in this View show the health of Services for one or more Groups. Use these displays to identify critical conditions across a single Area. Drill-down to investigate in lower-level displays.
- "Service Summary Views" on page 127: Displays in this View show the health of CI Types. Use these displays for a closer view of a critical condition, including alert details.
- "Component Views" on page 163: Displays in this View show all CI details and drill-down to displays that are relevant to the CI Type.
- "Key Metrics Views" on page 137: The Key Metrics (KM) feature shows how close a metric is approaching its threshold (rather than your ACTIVE alerts and their impact on the overall application or service), enabling you to anticipate performance problems BEFORE the alert threshold is crossed and analyze the circumstances that led up to error conditions.
- "Metric Explorer" on page 171: The Metric Explorer (MX) is a tool that allows end-users to quickly create custom dashboards for metrics they specifically want to analyze.

COMPONENTS Tab

The **COMPONENTS** tab organizes the monitoring information by technology or vendor and allows you to view the health state of your technology footprint without logical or service groupings. This tab also contains deep summaries and drill-downs to the subcomponents that comprise a particular technology. By default, this tab provides access to the **JVM Process** Views, the **Tomcat Servers** Views, the **RTView Servers** Views, and any Views included with the Solution Packages that you have installed. The following views are available via this tab:

- "JVM Process Views" on page 176: Displays in this View show performance data for monitored Java Virtual Machine (JVM) Processes. Use these displays to monitor performance of your JVMs.
- "Tomcat Servers" on page 190: Displays in this View show performance data for monitored Tomcat applications. Use these displays to monitor Tomcat connections and performance of your Web applications and modules.
- "RTView Servers" on page 200: Displays in this View show data gathered by RTView and performance metrics for your RTView Servers.

Refer to the documentation specific to the Solution Packages you have installed for more information on their displays.

There are two different ways to view the available displays: By Technology and By Vendor.

By Technology Button

The **By Technology** button lists the available displays by the type of technology (Application/ Web Servers, Middleware, Databases, Processes, Hosts/VMs, Connectors, Other).

		PONENT	S ALERT	s .	ADMIN CUSTO	М				F	RTView®Ente	admin (admin) Log Out
By Technology By Vendor	🗲 Heatmap						All JV	Ms - Table Viev	N		23-Sep-2015 17:0	/2 💠 Data OK 💠 🕜
> Application / Web Servers	JVM Count: 51	Show Ina	ctive									
h Middlessee							All J	MX Connections				
> Middleware	Connection	Expired	Connected	Alert	Host	Port	CPU %	Max Heap	Mem Used %	Display Name	URL	RtvAppTy
> Databasas	ALERT_SERVER		0	0	localhost	10023	18.6	492,896,256	55.7			3 local ^
Databases	ALERTHISTORIAN		0	0	localhost	10025	0.6	477,233,152	4.1			1 local
- Drososoo	AMXMON-HISTORIAN		0	0	localhost	3367		0				0 local
✓Frocesses	AMXMON-SLHOST-WIN3		۲	0	192.168.200.133	6368	2.0	954,466,304	37.8			3 local
A NAA Drospono	AMXMON-SLHOST-WIN4		۲	0	192.168.200.134	6368	2.0	954,466,304	31.7			3 local
✓JVM Processes	BW6MON-SLHOST-WIN3		۲	0	192.168.200.133	3368	0.9	954,466,304	20.2			3 local
	BW6MON-SLHOST-WIN4		۲	0	192.168.200.134	3368	1.0	954,466,304	20.2			3 local
✓All JVMs	BWMON-HISTORIAN		0	0	localhost	3367		0				0 local
	BWMONITOR-WIN-8		0	0	192.168.200.138	3368		0				0 local
All JVMs Heatmap	CONFIG_SERVER		۲	0	localhost	10013	2.4	477,233,152	34.9			3 local
	DISPLAYSERVER		۲	0	localhost	10024	4.0	477,233,152	62.9			5 local
All JVMs Table	DISPLAYSERVER_DARK		۲	0	localhost	10124	2.5	477,233,152	29.9			5 local
	EMSMON-HISTORIAN		0	0	localhost	3167		0				0 local
Single JVM	EMSMONITOR-WIN-8		۲	0	192.168.200.138	3168	1.3	954,466,304	28.6			3 local
	EMSMON-SLHOST-WIN3		0	0	192.168.200.133	3168	1.9	954,466,304	17.1			3 local
>RTView Processes	EMSMON-SLHOST-WIN4		۲	0	192.168.200.134	3168	1.6	954,466,304	20.4			3 local
	local		۲	0			1.8	954,466,304	12.8		local	3 local
> Hosts / VMs	MISCMON-HISTORIAN		0	Õ	localhost	3967		0				0 local
	MISCMON-SLHOST-WIN3		0	Õ	192.168.200.133	3968	13.0	1,071,316,992	95.4			3 local
> Connectors	MISCMON-SLHOST-WIN4		0	Õ	192.168.200.134	3968	5.3	985,661,440	64.4			3 local
	MQMON-64-OL7-3		0	Õ	192.168.200.73	3468	4.2	1,037,959,168	9.4			3 local
> Other	MQMON-HISTORIAN		0	0	localhost	3467		0				0 local
	MQMON-SLHOST-WIN3		0	0	192.168.200.133	3468	3.7	954,466,304	35.6			3 local
	OCMON-64-OL7-1		0	0	192.168.200.71	9911		0				0 local
	OCMON-64-OL7-4		0	0	192.168.200.74	9911	0.4	954,728,448	1.6			3 local
	OCMONITOR-WIN-8		Õ	0	192.168.200.138	9911		0				0 local
	OCMON-SLHOST-WIN3		0	0	192.168.200.133	9911	3.8	954,466,304	27.6			3 local
	OCMON-SLHOST-WIN7		Õ	0	192.168.200.137	9911		0				0 local
	RTVMGR-HISTORIAN		Ó	Ő	localhost	3067		0				0 local
	RTVMGR-SLHOST-WIN3		Ó	Ő	192.168.200.133	3068	1.7	954,466,304	10.9			3 local
	RTVMGR-SLHOST-WIN4		Ó	Ő	192.168.200.134	3068	1.8	954,466,304	12.8			3 local
	RTVRULES		õ	Õ	192.168.200.134	3868	0.5	715,849,728	10.2			3 local
	RTVRULES-SLHOST-WIN3		Õ	0	192.168.200.133	3868	0.5	715,849,728	18.1			3 local V
	SOLMON-64-OL7-6		Ó	Ő	192.168.200.76	4168	1.5	954,728,448	47.7			3 local
	<											>

By Vendor Button

The **By Vendor** button lists the displays by vendor name (for example: TIBCO, Oracle, and IBM).

		COMPONENT	S ALERTS	ADMIN CUSTOM		RTView Enterprise Monitor® demo (read) Log Out
By Technology By Vendor	Curr	ent Aler Grou	ID: All	 Alerts Table 	11	-Apr-2016 16:03 🛛 💠 Data OK 💠 💡
✓Application / Web Servers	Field Filter:			Clear	All Open Closed	🌒 Alert Settings Conn Ol
> Oracle WebLogic	CMDB Filter:	Owner = Infrastructure	Area = Middleware	Group = * Service = * Env = *		Clear CMDB Filter
> IBM WebSphere	Total 243	/ 243 Critical	✓ 243 / 243	Warning Volume Alert Name	pressed 0	CI
N IRees	FIFST OCC	Last Ucc	Count Sup	Owner Alert Name	Primary Service	
JDUSS	04/11/16 16:03:	35 04/11/16 16:03:35	1	BwEngineCpuUsedHigh	BW-ENGINE	SLHOS I 6(domain6);dor High Alert Lim
N.T	04/11/16 16:03:	33 04/11/16 16:03:33		BwErigineOpd0sedHigh	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
> Iomcat	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lim
Node.js Servers	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
Middleware	04/11/16 16:03:3	33 04/11/16 16:03:33	1	BwActivityExecutionTime	Hi BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
> Databases	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
Processos	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
Flucesses	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
> Hosts / VMs	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
	04/11/16 18:03:	33 04/11/16 16:03:33		BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lim
Connectors	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecution Lime	HI BW-PROCESS	SLHOS 16(domain6);dor High Alert Lim
	04/11/10 10:03:	33 04/11/10 10:03:33		BwActivityExecution Time	HIBW-PROCESS	SLHOST 6(domain6);dor High Alert Lim
Other	04/11/16 16:03:	04/11/10 10:03:33		BwActivityExecutionTime	LI DW DROCESS	SLHOST6(domain6);doi High Alert Lin
	04/11/16 16:03:	33 04/11/18 18:03:33	1	BwActivityExecutionTime	HI BW PROCESS	SLHOST6(domain6);doi High Alert Lin
	04/11/16 16:03:1	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);doi High Alert Lin
	04/11/16 16:03:	33 04/11/18 18:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);doi High Alert Lin
	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);doi High Alert Lin
	04/11/16 16:03:	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
	04/11/16 16:03:3	33 04/11/16 16:03:33	1	BwActivityExecutionTime	HI BW-PROCESS	SLHOST6(domain6);dor High Alert Lin
	•	111				•
	Columns: 📄	ld 🔲 Closed 📃 Clos	ed Reason 📃 Aler	tindex	Go To Cl	Options <u>D</u> etails

RTView Enterprise Monitor SERVICE TREE SERVICE VIEWS COMPONENTS ALERTS ADMIN CUSTOM SĽ Alert Group: All Alerts 4 Current • Alerts Table 11-Apr-2016 16:00 🔹 Data OK 🛛 🔶 🕜 Service Filter 0 ield Filter: Clear (AII Open OClos Alert Settings Conn OK Env Filter PRODUCTION • arch Text: RegExOwner Filter: ▼ All ✓ ● Infrastructure MDB Filter: Owner = Infrastructure | Area = Middleware | Group = * | Service = * | Env = * Clear CMDB Filter > COHERENCE Total 197 / 197 Critical V 197 / 197 Warning 🗾 0/0 Suppressed 0 > SOLACE Last Occ Alert Name First Occ Count Sup Owner Primary Service CI > TIBCO-AS > 🚯 TIBCO-BW > TIBCO-EMS ✓ ♥ Processes > 🔿 JVM ✓ ♥ Servers > C Hosts Go To Cl Columns: 🗾 Id 📰 Closed 📰 Closed Reason 📰 Alert Index Options Details

ALERTS Tab

The **ALERTS** tab provides a view of the current active alerts in the system and allows you to manage those alerts by owning them, acknowledging them, and/or suppressing them. You can navigate and filter the alert list by using the service tree to focus on alerts by logical or service groupings. This tab is customizable and can be interfaced with an existing trouble ticket system so that alerts that require an action can be tracked and managed by those systems.

This tab allows you to filter the navigation tree content by service and environment (see figure below). The environment you select also sets the **Environment** filter on the main panel. Note that changing the **Environment** filter on the main panel does not set the **Environment** filter in the navigation panel.

Service Tree	e	
Service Filter		୍ଦ୍
Env Filter	DEMOSITE 💌	

Alert Icons

Each level within the Alerts tab service tree has a red, yellow, or green icon next to it, which indicate the highest alert level for that particular Owner, Area, Group, or Service. These icons allow you to instantly recognize problem areas within your system and allow you to drill down to quickly find the source of the issue. A red icon \bigoplus indicates that one or more alerts exceeded their ALARM LEVEL threshold, a yellow icon \bigoplus indicates that one or more alerts exceeded their WARNING LEVEL threshold, and a green icon \bigoplus indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold.

The Owner, Area, and Group automatically display the icon representing the highest level alert for their associated services with red (ALARM LEVEL threshold exceeded) being the most serious, yellow (WARNING LEVEL threshold exceeded) being intermediate, and green meaning everything is functioning normally. For example, if any of the services within a particular **Owner>Area>Group** have one or more alerts that exceeded their ALARM LEVEL threshold and, hence, have a red icon next to it in the tree, then the associated Owner, Area, and Group levels will also have the same red icon. In the example below, you can see that the MQ Broker service has one or more alerts that exceeded their ALARM LEVEL threshold and has a red indicator. As a result, the Owner, Area, and Group also have the red indicator



If the highest alert level for the services within a particular **Owner>Area>Group** is a service that has one or more alerts that exceeded their WARNING LEVEL threshold and, hence, has a yellow icon next to it in the tree, then the associated Owner, Area, and Group levels will also have the same yellow icon. In the example below, you can see that the DB2 database has one or more alerts that exceeded its WARNING LEVEL threshold and has a yellow indicator. Since none of the other services in this particular tree have alerts that exceeded their ALARM LEVEL threshold, then the associated Owner, Area, and Group also have the yellow indicator since the WARNING LEVEL threshold is the highest alert level threshold exceeded.



Available Displays

To access the following displays, select one of the following options from the drop-down in the upper left-hand corner of the display to view the associated display:

Drop-down Option	Display	Description
Current	"RTView Alerts Table" on page 207	This display allows you to track and manage all alerts that have occurred in the system, as well as to add comments, acknowledge, or assign Owners to alerts.
History	"Alert History Table" on page 212	This display allows you to track the history of any alert that has occurred in your RTView Enterprise Monitor system.

Note: When selecting an option at any level, the display that opens by default will be the one that was last selected. For example, if History was the display that was previously selected, History will display by default again.

When you select an option at any of the **Owner>Area>Group>Services** levels in the **RTView Alerts Table** display, the display automatically filters the list of alerts based on the level you selected. For example, if you were to select the IBM-MQ option at the Group level, then the filter will be set to Owner=Infrastructure, Area=Middleware, Group=IBM-MQ (the option at the level you selected), and Service and Environment will be set to * (or all services and environments for that particular Group).

SL SERVICE TREE S	ERVICE VIEWS	COMPONE	ENTS ALER	TS AD	MIN CUSTOM			
Alerts Service Filter * Q	Curren	t 🗸	Admin			Alert	s Table	
Env Filter PRODUCTION	Field Filter:					Clear All Open Clo		
 ♥ Infrastructure ♥ Middleware 	CMDB Filter: Dwner = Infrastructure Area = Middleware Group = IBM-MQ Service = * Env = *							
∀ ⊕IBM-MQ	Total 10/1	0 Critical	8/8	Warning	✓ 2/2 Supp	ressed 0		
MQ-BROKER (DEMOSITE)	First Occ	Last Occ	Count Sup	Owner	Alert Name	Primary Service	CI	
MQ-QUEUE (DEMOSITE)	10/09/15 08:15:32	10/09/15 08:15:32	1		MqBrokerQueueDepthHigh	MQ	vmrh5-1	High Alert Limit exceeded, current value: 5927.0 limit: 4000.0

If you were to select the Middleware option at the Area level, then the filter will be set to Owner=Infrastructure, Area=Middleware (the option at the level you selected), and Group and Service and Environment will be set to * (or all groups, services, and environments for that particular Area).



If you were to select the Middleware option at the Area level, then the filter will be set to Owner=Infrastructure, Area=Middleware, Group=IBM-MQ, Service=MQ-BROKER, and Environment=DEMOSITE (the option at the level you selected).

SEC SERVICE TREE S		S ALERTS A	ADMIN CUSTOM			
Alerts Service Filter * Q	Current V Adm	nin		Alerts	Table	
Env Filter PRODUCTION	Field Filter:	1				Clear All Open Clo RegEx Owner Filter: All
∨ 0 Middleware	CMDB Filter: Owner = Infrastructure Area	= Middleware Group = IBI	M-MQ Service = MQ-BROKER E	inv = DEMOSITE		
₩0 IBM-MQ	Total 2/2 Critical	2/2 Warnii	ng 🖌 0/0 Suppi	essed 0	<u></u>	
MQ-BROKER (DEMOSITE) MO-OUEUE (DEMOSITE)	10/09/15 06:15:32 10/09/15 06:15:32	1 Owner	MqBrokerQueueDepthHigh	MQ Service	vmrh5-1	High Alert Limit exceeded, current value: 5927.0 limit: 4000.0
•	10/00/15 08:15:32 10/00/15 08:15:32	1	McBrokerQueueDenthHigh	MO	vmrb5-2	High Alert Limit exceeded, current value: 17310 0 limit: 4000 0

Available Display via a Button

If you select the **Current** option from the drop down list, the following button is available on the **RTView Alerts Table** display. Select the following button to open the associated display:

Button	Display	Description
Admin	"Alert Administration" on page 216	This display allows you to set global or override alert thresholds.

ADMIN Tab

	SERVICE VIEWS	COMPONENTS	ALERTS		STOM					RT	"View [®] Enterprise Monitor [™] admin (admin) Log Out	
Administration	<				Alert Administration					23-Sep-2015 17:05 💠 Data OK 💠 🕜		
✓Alert Administration	Alert Filter:	Clea	ar						🅐 Alert Settings Conn OK			
Alert Administration	Alert			Warnin Level	Warning Level		Alarm Level		E	Alert nabled	Override Count	
Alert Admin Audit	AcwInstanceCpuH	gh			50	j0 75	75		30	r	0	
	AcwInstanceDiskR	eadBytesHigh			100000	20	00000		30	r	0	
Alert Action Audit	AcwInstanceDiskR	eadOpsHigh			100		200		30	r	0	
	AcwInstanceDiskW	riteBytesHigh			100000	20	00000		30	r	0	
CMDB Administration	AcwInstanceDiskW	riteOpsHigh			100		200		30	r	0	
, on bb / tanin bi a a on	AcwinstanceNetwo	rkReadBytesHigh			100000	20	00000		30	r	0	
Architecture	AcwinstanceNetwo	rkWriteBytesHigh			100000	20	00000		30	r	0	
Architecture	AmxServiceHitRate	High			200		400		30	r	0	
	AmxServiceNodeF	aultRateHigh			200		400		30	r	0	
	AmxServiceNodeH	itRateHigh			200		400		30	r	0	
	AmxServiceNodeN	ovingAvgHitRateHigh			200		400		30	r	0	
	AmxServiceNodeN	ovingAvgResponseTim	eHigh		200		400		30	×		
	AmxServiceNodeR	esponseTimeHigh			200		400		30	r	0	
	AmxServiceRespon	nseTimeHigh			200		400		30	¥		
	Bw6AppNodeCpuL	lsedHigh			50		80		30	0		
	Bw6AppNodeMem	UsedHigh			50		80		30		0	
	Bw6AppProcessCr	eatedRateHigh			50		80		30	¥		
	Bw6AppProcessEl	apsedTimeHigh			100		200	30			0	
	Bw6AppProcessEx	ecutionTimeHigh			50		80		30		0	
	Bw6AppProcessFa	iledRateHigh			50		80		30		0	
	Bw6ProcessActivit	/ErrorRateHigh			100		200		30		0	
	Bw6ProcessCreate	dRateHigh			50		80		30		0	
	Bw6ProcessElapse	dTimeHigh			100		200		30		0	
	Bw6ProcessExecu	tionTimeHigh			50		80		30		0	
	Bw6ProcessFailed	RateHigh			50		80		30		• •	
	Bw6ProcessSuspe	ndRateHigh			50		80		30		0	
						Settings for Select	ed Alert					
	Name: <select alert="" e<="" from="" one="" table="" td="" the="" to=""><td>edit></td><td></td><td></td><td></td><td></td><td>Warning Level:</td><td></td><td>Duration (Secs.):</td></select>			edit>					Warning Level:		Duration (Secs.):	
	Description:								Alarm Level:		Enabled:	
											Save Settings	

The **ADMIN** tab can only be accessed by administrators of RTView Enterprise Monitor, who can use this tab during installation to set up proper alert settings, to describe logical and service groupings that drive the construction of the Service Tree, and to "monitor the monitor" view of the current health state of RTView Enterprise Monitor and how it is currently deployed. This tab provides access to the **Alert Administration**, **CMDB Administration**, and **Architecture** Views. See the following sections for more information:

- "Administration" on page 216: Displays in this View allow you to set alert thresholds, track alert management, and modify your Service Data Model.
- "CMDB Administration" on page 225: Use this display to setup, view, or modify your Service Data Model (CMDB), including: adding, renaming, deleting or merging your CMDB hierarchical elements (Owners, Areas, Groups or Services), associating CIs with Services and assigning or modifying CI attributes (such as Criticality).
- "Architecture" on page 230: Displays in this View show RTView Enterprise Monitor system information such as a topological view of your components and their connection state, configuration definitions and mapping, and performance metrics for your Cache Tables and Data Servers.

CUSTOM Tab

	SERVICE VIEWS COMPONENTS ALERTS ADMIN CUSTOM	RTView [®] Enterprise Monitor [™] admin (admin) ag Out					
Custom Views	← Custom View	22-Sep-2015 08:45 💸 Data OK 💠 🕜					
← Custom Views	The CUSTOM tab can be modified or removed. It is provided as a location for adding user-defined views.						
Custom View	Custom View To replace the views on the CUSTOM tabe with your custom views: 1 Copy your custom view (ny) files to the project directory. 2 Modify custom, views, markees with or project and the view contents with your custom views.						
	To change the CUSTOM tab label: 1. Modify rtv_custom.xml to change CUSTOM in the TabLabel column to your tab label in the TabTable table. Do NOT change the Custom value in the Group column.						
	To remove the CUSTOM tab: 1. Modify rtv_custom.xml to remove the Custom row from the TabTable and TabTreeSelection tables.						
	See the documentation for information on creating additional custom tabs.						
	1						
	1						

The **CUSTOM** tab provides a location where you can add your own custom tab and views. See the following section for more information:

"Modifying the CUSTOM Tab" on page 69

Fundamental Structure of Displays

To interpret RTView Enterprise Monitor displays it is helpful to understand the Service Data Model. The Service Data Model, also referred to as the CMDB, is a database that forms the fundamental structure of all RTView Enterprise Monitor displays, and enables data aggregation and filtering.

The Service Data Model has a four level hierarchy which is, from the highest level (Owner) to the lowest level (Service):

- Owner
- Area
- Group
- Service

The Service Data Model maps all the Configuration Items (CIs) in your RTView Enterprise Monitor system to one or more Services (CIs are items being monitored by RTView Enterprise Monitor--servers, processes and so forth--anything that can be configured). Each Service is mapped to a Group, each Group to an Area and each Area to an Owner. Displays are organized and populated with data according to this hierarchy. This mapping enables RTView Enterprise Monitor to aggregate data for several hundreds of CIs, and allows objects (heatmaps, tables and so forth) to filter data shown according to user selections.

For details about the configuring the Service Data Model, see the Configure Service Data Model section.

Heatmaps

Heatmaps organize CIs (according to the Service Data Model) into rectangles and use color to highlight the most critical value in each. Heatmaps enable you to view various alert metrics in the same heatmap using drop-down menus. Each Metric has a color gradient bar that maps relative values to colors. In most heatmaps, the rectangle size represents the number of CIs in the rectangle; a larger size is a larger value. Heatmaps include drop-down menus to filter data by Owner, Area, Group, Service, Region and Environment. The filtering options vary among heatmaps.

For example, the **All Management Areas** - "Area Heatmap" (shown in the following figure) illustrates a typical RTView Enterprise Monitor heatmap. The heatmap contains a **Metric** dropdown menu with options to show **Alert Impact**, **Alert Severity**, **Alert Count** and **Criticality** (menu options vary according to the data populating the heatmap). **Alert Impact** is selected and its corresponding color gradient bar **Count** is shown. Each rectangle represents all CIs in an Area. The red rectangle in the heatmap indicates that one or more CIs in that Area currently has an alert in an alarm state. The yellow rectangles in the heatmap indicate that one or more CIs in those Areas currently have an alert in a warning state. A green rectangle would indicate that no alert is in a warning or alarm state in an Area.

Continuing with our example, there are two filtering options. You can choose to show all Owners or a single Owner, and all Environments or a single Environment. Each rectangle represents an Area. The rectangle size represents the number of CIs in the rectangle; a larger size is a larger value. Use the check-boxes \checkmark to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. The following figure illustrates the mouse-over feature in which we see all the **Metric** drop-down values.

÷	Heatma	×		All Areas by Owner		25-Sej	o-2015 09:49	💠 Data OK 🔶 🕜
Owner	Infrastru	ture:	✓ □ Area Names	Env: PROD	DUCTION	Metric: Alert Impact	✓ 0	5 10
				Infrastructure				
				Owner: Infrastructure Areas Middleware (M) (Cloout 5,555 Areas March 1998) Alet Severity 2 Criticality: E Criticality: E O				

In most heatmaps, you can also drill-down to more detail by clicking a rectangle in the heatmap. Or, click Open New Window \bullet and then drill-down. The drill-down opens a display that contains relevant and more detailed data.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Metric:

Choose the type of metric to show in the heatmap. Each metric has its own gradient bar that maps relative values to colors:

Alert Impact	The product of the maximum Alert Severity of alerts in the heatmap rectangle multiplied by the maximum Criticality of alerts in the heatmap rectangle. Values range from 0 - 10 , as indicated in the color gradient bar , where 10 is the highest Alert Impact.
Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient • • • • • • • • • •
	 Yellow indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of 1. Green indicates that no metrics have reached their alert thresholds. Metrics that have not exceeded their specified thresholds have an Alert Severity value of 0.
Alert Count	The total number of critical and warning alerts in the heatmap rectangle. The color gradient bar , populated by the current heatmap, shows the value/color mapping. The numerical values in the gradient bar range from 0 to the maximum count of alerts in the heatmap. The middle value in the gradient bar indicates the average alert count.
Criticality	The maximum level of Criticality (rank of importance) in the heatmap rectangle. Values range from 1 to 5, as indicated in the color gradient bar, where 5 is the highest Criticality. Criticality is specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views - "CI / Service Table" display, which range from A to E , where A is the highest Criticality (level 5 maps to a Criticality of A and level 1 maps to a Criticality of E with equally spaced intermediate values).

Mouse-over

The mouse-over functionality provides additional detailed data in an over imposed pop-up window when you mouse-over a heatmap. The following figure illustrates mouse-over functionality in a heatmap object. In this example, when you mouse-over a host, details are shown such as **CI Count**, **Alert Impact**, **Alert Severity**, and **Criticality**.



Tables

Tables organize CIs (according to the Service Data Model) into columns and rows of data. Tables contain the same data that is shown in the heatmap in the same View, providing a text and numeric perspective of the data shown in that heatmap, and additional data not included the heatmap.

🗲 🛧 Table 💌				Serv	ices in A	Area B	y Group	<u> </u>	24-Sep-201	5 11:35 💠 Data OK 💠 🕜	
Owner: Infrastructure	Area:	Middlewa	re		•				Cls: 12	Env: QA	
Group: All Service Groups Service/Region Count: 6											
Service	Region	Alert Severity	Alert Count	Alert Impact	Service Criticality	CI Count	Environment	Group			
TBE-CLUSTER	AMER	0	1	2	E	2	QA	TIBCO-BE			
EMS-QUEUE	AMER	0	6	2	E	2	QA	TIBCO-EMS			
EMS-SERVER	AMER	Õ	2	2	E	1	QA	TIBCO-EMS			
EMS-TOPIC	AMER	0	8	2	E	4	QA	TIBCO-EMS			
TOMCAT	AMER	0	0	0	E	1	QA	TOMCAT			
TOMCAT-APP	AMER	0	0	0	E	2	QA	TOMCAT			

For details about the Service Data Model, see the Configure Service Data Model section.

Table rows sometimes use color to indicate the current most critical alert state for all CIs associated with the row. For example, the figure above illustrates a table in which each row is a different Service. The **CI Count** column indicates the number of CIs associated with the Service. The first row in the table is the **OC-CLUSTER** Service. The **CI Count** column indicates the Service has four CIs. The yellow row color indicates that one or more alerts exceeded their warning threshold for one or more CIs associated with the Service.

Continuing with the above example, the second row in the table is the **TRANSACTION** Service. The **CI Count** column indicates has one CI associated with the Service. The red row color indicates that one or more alerts exceeded their critical threshold for the CI associated with the Service (in this case there is a single CI).

The row color coding is as follows:

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table

row.

• Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Sorting

You can sort the rows of a table for any defined columns. To do so, you click on the column title. A symbol appears when sorting in ascending order, and the inverted symbol when sorting in descending order.

The following figure illustrates the Sort option for table columns. In this example, the **Severity Level** column is sorted in descending order (from high to low values).

СПуре	CIName	Severity 🛫	AlertCount	Alertimpact	*
JVM	localhost;GLASSFISH_SERVER_8	C	1	10	=
JVM	localhost/MYDEMO_DATASERVER	0 7	1	8	
JVM	localhost,MYDEMO_DISPLAYSERVER	0	1	8	
JVM	sldemos.com;213415_RTVDB	0	1	10	
JVM	localhost,8WM-DB-1	0	1	5	
WAS	SLHOST12Node01Cell;SLHOST12Node01;server1	0	1	5	
JVM	localhost,RTVMGR_DATABASE	0	1	5	
JVM	localhostRTVMGR_DATASERVER	0	0	0	
JVM	localhost;WLM_DATABASE	0	0	0	
EMS	tcp://SLHOST10.7021	0	0	0	
EMS	tcp://SLHOST10:7020	0	0	0	
WLS	TestDomain;ManagedServer2	0	0	0	*

Trend Graphs

Trend graphs enable you to view and compare various important metrics over time, such as server memory utilization, server throughput, the number of clients being served by the server, or the total amount of data sent to clients. You can use trend graphs to assess utilization and performance trends.

For example, the following figure illustrates a typical trend graph. In this example, metrics for **Pending Messages**, **Incoming Messages** and **Outgoing Messages** are traced.



By default, the time range end point is the current time. To change the time range for the trend graph click Open Calendar , choose the date and time, then click **OK**. Or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM:ss**. For example, **Apr 26, 2012 5:01 PM**. Click **Apply**. Use the Navigation Arrows **C** to move forward or backward one time period (the time period selected from the **Time Range** drop-down menu). Click **Restore to Now** to reset the time range end point to the current time.

Mouse-over

The mouse-over functionality provides additional detailed data in an over imposed pop-up window when you mouse-over trend graphs. The above figure illustrates mouse-over functionality. In this example, when you mouse-over a single dot, or data point, in the **Out Msgs / sec** trend graph, a pop-up window shows data for that data point. In this case, the X-axis value is **13:15:29 hours on September 6th**, and the Y-axis value is **22 Outbound messages per second**.

Log Scale

Typically, trend graphs provide the Log Scale option. Log Scale enables you to see usage correlations for data with a wide range of values. For example, if a minority of your data is on a scale of tens, and a majority of your data is on a scale of thousands, the minority of your data is typically not visible in non-log scale graphs. Log Scale makes data on both scales visible by applying logarithmic values rather than actual values to the data.

Time Range



To change the time range click the Open Calendar button \square , choose the date and time, then click **OK**. Or, enter the date and time in the text field using the following format: **MMM dd**, **YYYY HH:MM:ss** (for example, Aug 21, 2011 12:24 PM) and click **Apply**. Use the Navigation Arrows \triangleleft to move forward or backward one time period (the time period selected from the Time Range drop-down menu). Click **Restore to Now** to reset the time range end point to the current time.

Popup Menu

Typically, you can right-click on displays to open a popup menu. By default, options include **Refresh**, **Back**, **Next**, **Execute Command**, **Drill Down**, **Export Table to Excel**, **Export Table to HTML**, **Export PDF**, **Status** and **Log Off**. The following figure illustrates the popup menu in a heatmap.

Refresh	
Back	
Next	
Execute Command	
Drill Down	
Export Table to Excel	
Export Table to HTML	
Export PDF	
Status	
Log Off	

Export PDF Report

You can quickly export reports for displays, or for tables and grid objects in a display, to a PDF file.

To generate a report for a display:

Right-click on the display and select **Export PDF**. The **Export to PDF** dialog opens.

Export Type Report Display									
Margins									
Left 1.0 Right 1.0									
Top 1.0 Bottom 1.0									
OK Cancel									

Set the margins and choose the **Export Type**:

- Report: Generates an image of the display on the first page, followed by at least one page for each table or object grid in the display. As many pages as are necessary to show all the data in each table or object grid are included in the report. This enables you to view all data in a table or object grid that you otherwise must use a scrollbar to see. If there are no tables or object grids in your display, you only get a image of the display.
- Display: Generates an image of the display in PDF format. Choose the page orientation (Portrait or Landscape), set the page margins and click OK. The report opens in a new window.

To generate a report for a table or grid object in a display:

Right-click on the table or grid object and choose **Export PDF**, **Export Table to Excel** or **Export Table to HTML**.



Title Bar

Displays share the same top layer in the title bar, as shown below.

← Heatmap ✓	All Areas by Owner	25-Sep-2015 10:30 📢 Data OK 💠 🍞
Owner: APPLICATIONS	Env: PRC	DUCTION V Metric: Alert Impact V 0 5 10

The following table describes the functionality in the display title bar.

÷	Opens the previously open display.
•	Opens the display that is up one level.
Table	Navigates to a display that is most commonly accessed from the current display. The target display differs among displays.
CMDB 💌	Navigates to displays that are most commonly accessed from the current display. The drop-down menu options differ among displays.
	Opens the Alerts Table display in a new window.
19-Feb-2014 16:50	The current date and time. If the time is incorrect, this might indicate that RTView stopped running. When the date and time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data.
🔯 Data OK	The data connection state. Red indicates the data source is disconnected (for example, if the Data Server is not receiving data, or if the Display Server does not receive data from the Data Server, this will be red). Green indicates the data source is connected. When the date and time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data.
+	Opens an instance of the same display in a new window. Each window operates independently, allowing you to switch views, navigate to other displays in RTView EM, and compare server performance data. For illustration, see Multiple Windows .
0	Opens the online help page for the current display.
Cls: 3,047	The number of items (for example, CIs or Areas) in the display.
Area Count: 9	

Multiple Windows

The following illustrates the usage of the Open New Window 🕈 to open multiple windows.

←	Heatmap 🗸						All Are	as by O	wner					1	25-Sep-2015	10:43 娕 D	ata OK 🔶 🎸
Owner:	APPLICATIONS	4	~			A	II Servi	ces Stat	us Hi	story	25	-Sep-2015 1	10:43 📫 Da	ta OK 🔶	0	0	5 10
		Owner	APPLICATIONS	(1	Summa	ry	✓ MX			Single S	Service	Summa	iry	25-	Sep-2015 10:	47 💠 Data	ок 🔶 🕜
		Group	All Service Groups	Owner	APPLIC	ATIONS		~	Area	a: SECURITY			~		Er	nv: PRODU	CTION 🗸
		s	tatus History for Serv	Group	IRIS-SO	UTH				✓ Serv	ice: IRI	S-SCAN-DI	w		~]	
				Servio	e Name:	IRIS-S	CAN-DF	w								CI Count:	10
				Max	Criticality:	С	м	ax Severity:	۲	Max Impact:	0						
				CI Ta	ble for Se	elected	Enviro	nment		CI Type Filter	: All CI	Types	\checkmark				Go to CI
				1	CIType	Ξ		(CIName	e	Ξ	Quality	Severity :	Alerts =	Criticality	Impacts	Region =
				EMS-Q	UEUE	tcp	//VMIRI	31034:7222	SCAN	V-QUEUE				0	C	0	AMER
				EMS-0	UEUE	ten	///MIRI	31034.7222	PEPC	RT-OUEUE				0	č	0	AMER
				EMS-S	FRVER	tcp	///MIRI	31034:7222)					0	C	0	AMER
				.IVM		loc	alhost VI	/IRIS1034-	SCAN-	IVM-DEW				0	C	0	AMER
				VMWA	RE-HOST	VSt	phereS e	sxi-1 south	00/01			- X		0	č	0	AMER
				VMWA	RE-VM	vSt	phereS:V	MIRIS1034				ŏ	ŏ	0	c	0	AMER
				WLS		Do	main-SO	UTH;WLS-	SERVE	R-DFW		õ	ŏ	0	С	0	AMER
				WLS-A	PP	Do	main-SO	UTH;WLS-	SERVE	R-DFW;control		õ	ŏ	0	С	0	AMER
				WLS-A	PP	Do	main-SO	UTH;WLS-	SERVE	ER-DFW;scanne	er	Õ	Õ	0	С	0	AMER
							<i>c</i>										>
				Selec	ted CI: *		1	*					А	1	1		
				Firs	t Occ 🗉	Last	Occ 🗉	Count	Sup≞	Owner 🗉	Alert	Name	E Prin	nary Servi	ce =	CI	E
			<														
		10:38:1 25-Sep	5 10:38:45 10:39:15 25-Sep 25-Sep														
				<													>

All Management Areas

These displays present the highest-level summary views of alert states for your entire system. Aggregated data is organized by Owners and shows all Areas, while highlighting the most critical alert states using color. Data can be filtered by Owner, Area, Environment and alert Metric. Data is filtered by the \$rtvOwnerMask and \$rtvAreaMask values for the logged in user. For details, see "Configure User and Role Management" on page 44.

Use these displays to monitor critical alerts anywhere in your system, and investigate those alerts in lower-level displays. Because these displays immediately show you any critical alert in your system, users typically keep one of these displays open for quick monitoring. Click an Area in the display to drill-down and view the selected Area in the **Multi Area Service Views** displays.

The **All Management Areas** displays present the same aggregated data in tabular and heatmap formats. Displays in this View are:

- "Area Heatmap" on page 99: Heatmap of the most critical alerts for all Areas of your system, with the option to filter by Owner, Environment and alert Metric.
- "Area Table" on page 101: Table of data shown in the All Management Areas "Area Heatmap" with the option to filter by Owner and Environment.

Area Heatmap

View the most critical alert state for all monitored instances throughout your system. Consider keeping this display open to monitor conditions in your system. The heatmap organizes monitored instances by one or all Owners for all Areas, and uses color to show the most critical alert state in each. Each rectangle in the heatmap represents a management Area (for example, Applications, Demo Systems and so forth), which are also grouped by Owner. The rectangle size represents the number of CIs in the rectangle; a larger size is a larger value.

Use the available drop-down menus or right-click to filter data shown in the display. Use the check-boxes \textcircled to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. By default, this display shows all Owners, all Environments and the Alert Impact.

Drill-down and investigate by clicking a rectangle in the heatmap to view details for the selected Area in the display that was last selected under **Multi Area Service Views**. For example, if the last selected display under **Multi Area Service Views** was "Group / Service Table", then clicking an Area in the heatmap results in displaying details in the **Group/**Service Table display.

←	Heatmap	•		4	All Areas by	y Owner		24-	Sep-2015 11	:39 💠 Data	ок 💠 🕜
Owner:	All Owners		Area Names			Env:	QA	 Metric: Alert Imp 	act 🔻	0 5	10
			Jerelyn Parker					Infrastructure			

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays <u>commonly</u> accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.
Metric:

Choose the type of metric to show in the heatmap. Each metric has its own gradient bar that maps relative values to colors:

Alert Impact	The product of the maximum Alert Severity of alerts in the heatmap rectangle multiplied by the maximum Criticality of alerts in the heatmap rectangle. Values range from 0 - 10 , as indicated in the color gradient bar , where 10 is the highest Alert Impact.
Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient • • • • • • • • • •
	 Yellow indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of 1. Green indicates that no metrics have reached their alert thresholds. Metrics that
	have not exceeded their specified thresholds have an Alert Severity value of 0 .
Alert Count	The total number of critical and warning alerts in the heatmap rectangle. The color gradient bar, populated by the current heatmap, shows the value/color mapping. The numerical values in the gradient bar range from 0 to the maximum count of alerts in the heatmap. The middle value in the gradient bar indicates the average alert count.
Criticality	The maximum level of Criticality (rank of importance) in the heatmap rectangle. Values range from 1 to 5, as indicated in the color gradient example bar, where 5 is the highest Criticality.
	Criticality is specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views - "CI / Service Table" display, which range from A to E , where A is the highest Criticality (level 5 maps to a Criticality of A and level 1 maps to a Criticality of E with equally spaced intermediate values).

Area Table

View data from the **All Management Areas -** "Area Heatmap" in a tabular format: all alert states (alert Impact, Severity, Count, Criticality and CI Count) for all Areas, Owners and Environments. Each row in the table is a different Area (for example, **Applications**, **Demo Systems** and so forth). Use this display to check the status of your systems by Area, Owner and Environment, and to compare detailed metrics across all Areas in your organization.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data. Drill-down and investigate by clicking a row in the table to view details for the selected Area in the display that was last selected under **Multi Area Service Views**. For example, if the last selected display under **Multi Area Service Views** was "Group / Service Table", then clicking an Area in the heatmap results in displaying details in the **Group/Service Table** display.

🗲 Table 💌		All Areas	by Owner		24-Sep-2015 11:38	s 💠 Data OK 💠 🕜
Owner: All Owners				Env: Q	A 🔻 A	rea Count: 5
Owner	Area	Severity	Alert Count	Max Alert Impact	Criticality	CI Count
Infrastructure	Middleware	0	17	2	E	12
Infrastructure	Processes	Õ	59	2	E	36
Infrastructure	Servers	Õ	18	2	E	16
Jerelyn Parker	Backends	Õ	27	10		29
Jerelyn Parker	Systems	Õ	111	10		112

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

CIS: 3,047 The number of items in the display.

✿ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Area The current number of Areas shown in the table.

(Table)

Èach row in the able is a different Area.

Owner	The name of	the person of	r Group the Area	is designated to.
-------	-------------	---------------	------------------	-------------------

- **Area** The name of the Area where the alert data originated.
- **Severity** The maximum level of alerts in the Area. Values range from **0** to **2**, where **2** is the greatest Severity:
 - One or more alerts exceeded their ALARM LEVEL threshold in the Area.
 - One or more alerts exceeded their WARNING LEVEL threshold in the Area.
 - No alert thresholds have been exceeded in the Area.
- **Criticality** The Criticality (rank of importance) specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views / CI Service Table display, which range from A to E, where A is the highest Criticality. This value is used to determine the value for Alert Impact.
- Max AlertThe highest value that Alert Impact has had for the Area.ImpactThe total number of critical and warning alerts for the Area.
- **CI Count** The total number of configurable items associated with the Area.

Multi Area Service Views

Count

These displays present aggregated data of alert states for all Services for all Areas. Data can be filtered by Area, Group, Environment, and alert Metric. Data is filtered by the \$rtvOwnerMask, \$rtvAreaMask and \$rtvGroupMask values for the logged in user. For details, see "Configure User and Role Management" on page 44.

Use these displays, for example, to isolate the Area and Environment in which a critical alert is occurring. If you see a critical alert, get information by comparing alert metrics (such as how many other items are potentially affected). These displays drill-down to the **Service Summary Views -** "Service By CI Type" display. The **Multi Area Service Views** displays present data in tabular and heatmap formats. Displays in this View are:

- "Group/Service Heatmap" on page 104: Heatmap of alert states for Services by Area, with the option to filter by Area, Group, Environment and alert Metric, and the option to show Group and Service Names.
- "Group/Region Heatmap" on page 106: Heatmap as described for the Group / Service Heatmap (above), with the option to filter by Region and no option to show Service Names.
- "Group / Service Table" on page 108: Table of **Group/Service Heatmap** data.
- "Services CI Type Summary" on page 110: Table that shows the health state of Services per CI Type.
- "Services History Heatmap" on page 113: Heatmap of alert states, over time, for Services in a selected Area, with the option to filter by Group, Environment and alert Metric.

Group/Service Heatmap

View heatmap of alert states for Services in one or all Areas, filter by Group or Environment, and optionally show Service Names. The heatmap organizes Services by one or all Areas. Each rectangle in the heatmap represents a Service (for example, Applications, Demo Systems and so forth), which are grouped by Area. The rectangle size represents the number of CIs in the Service; a larger size is a larger value.

Use the available drop-down menus or right-click to filter data shown in the display. Use the check-boxes ✓ to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. Drill-down and investigate by clicking a rectangle in the heatmap to view details in the last display that was viewed under either the **Service Summary Views** or **Key Metrics Views**. For example, if the last selected display was the "Service Summary" display under "Single Area Service Views" and you clicked on a rectangle in the **Group / Service Heatmap**, the details would display in the **Service Summary** display. If the last selected display was the "Service KM Table" display under "Key Metrics Views", then clicking a rectangle in the **Group / Service Heatmap** displays the details in the **Group / Service KM Table**.

🗲 🛧 By Group 💌		Services in Area B	y Group 🔥 👔	4-Sep-2015	i 11:37 💠 Data OK	+ 0
Owner: Infrastructure	Area: Middleware	•	C	s: 12	Env: QA	•
Group: All Service Groups	Service Names		Metric: Alert Im	oact 💌	0 5	10
TIB	CO-EMS		TOMCAT		TIBCO-BE	
		Group: TIBCO-EMS Service: INF-QUEUE Environment: QA CI Count: 2 Alert Count: 6 Alert Saventy: 2 Critically: E Critically: E Critically: 1 ♥				

Indicators and functionality might include the following:

 ← ● Open the previous and upper display. CMDB ● and Table navigate to displays commonly accessed from this display. 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3,047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
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Note: The "Up" Arrow (¹) opens the most recently viewed display under "All Management Areas". For example, if the last viewed display under **All Management Areas** was **Area Table**, then clicking ¹ opens the "Area Table" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Metric:

Choose the type of metric to show in the heatmap. Each metric has its own gradient bar that maps relative values to colors:

Alert Impact	The product of the maximum Alert Severity of alerts in the heatmap rectangle multiplied by the maximum Criticality of alerts in the heatmap rectangle. Values range from 0 - 10 , as indicated in the color gradient bar , where 10 is the highest Alert Impact.
Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient equal bar , where 2 is the highest Alert Severity.
	Red indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified ALARM LEVEL threshold have an Alert Severity value of 2.
	Yellow indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of 1.

• Green indicates that no metrics have reached their alert thresholds. Metrics that have not exceeded their specified thresholds have an Alert Severity value of **0**.

Alert Count	The total number of critical and warning alerts in the heatmap rectangle. The color gradient gradient bar, populated by the current heatmap, shows the value/color mapping. The numerical values in the gradient bar range from 0 to the maximum count of alerts in the heatmap. The middle value in the gradient bar indicates the average alert count.
Criticality	The maximum level of Criticality (rank of importance) in the heatmap rectangle. Values range from 1 to 5, as indicated in the color gradient example bar, where 5 is the highest Criticality.
	Criticality is specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views - "CI / Service Table" display, which range from A to E , where A is the highest Criticality (level 5 maps to a Criticality of A and level 1 maps to a Criticality of E with equally spaced intermediate values).

Group/Region Heatmap

View heatmap of alert states for one or all Services, Areas, Environment or Regions, and optionally show Service Names. The heatmap organizes CIs by one or all Groups. Each rectangle in the heatmap represents a Group, which are grouped by Area. The rectangle size represents the number of CIs in the Service; a larger size is a larger value.

Use the available drop-down menus or right-click to filter data shown in the display. Use the check-boxes ✓ to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. Drill-down and investigate by clicking a rectangle in the heatmap to view details in the last display that was viewed under either the **Service Summary Views** or **Key Metrics Views**. For example, if the last selected display was the "Service Summary" display under "Single Area Service Views" and you clicked on a rectangle in the **Group / Region Heatmap**, the details would display in the **Service Summary** display. If the last selected display was the "Service KM Table" display under "Key Metrics Views", then clicking a rectangle in the **Group / Region Heatmap** displays the details in the **Service KM Table**.



Indicators and functionality might include the following:

 ← ↑ Open the previous and upper display. CMDB ● and Table navigate to displays commonly accessed from this display. 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3,047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
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Note: The "Up" Arrow (↑) opens the most recently viewed display under "All Management Areas". For example, if the last viewed display under **All Management Areas** was **Area Table**, then clicking opens the "Area Table" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Metric:

Choose the type of metric to show in the heatmap. Each metric has its own gradient bar that maps relative values to colors:

Alert Impact	The product of the maximum Alert Severity of alerts in the heatmap rectangle multiplied by the maximum Criticality of alerts in the heatmap rectangle. Values range from 0 - 10 , as indicated in the color gradient bar , where 10 is the highest Alert Impact.
Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient equal bar , where 2 is the highest Alert Severity.
	Red indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified ALARM LEVEL threshold have an Alert Severity value of 2.
	Yellow indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of 1.

• Green indicates that no metrics have reached their alert thresholds. Metrics that have not exceeded their specified thresholds have an Alert Severity value of **0**.

Alert Count	The total number of critical and warning alerts in the heatmap rectangle. The color gradient gradient bar, populated by the current heatmap, shows the value/color mapping. The numerical values in the gradient bar range from 0 to the maximum count of alerts in the heatmap. The middle value in the gradient bar indicates the average alert count.
Criticality	The maximum level of Criticality (rank of importance) in the heatmap rectangle. Values range from 1 to 5, as indicated in the color gradient example bar, where 5 is the highest Criticality.
	Criticality is specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views - "CI / Service Table" display, which range from A to E , where A is the highest Criticality (level 5 maps to a Criticality of A and level 1 maps to a Criticality of E with equally spaced intermediate values).

Group / Service Table

This table displays data shown in the **Group/Service** and **Group/Region** heatmaps. View Service metrics (Impact, Severity, Count and Criticality, and CI Count) for one or all Areas, Owners, Groups and Environments, and compare detailed metrics across all Areas in your organization. The table lists Services by Owner and Area. Each row in the table is a different Service. The color of the circle in the **Alert Severity** column represents the most critical alert state for that Service.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data. Drill-down and investigate by clicking a row in the table to view details in the last display that was viewed under either the **Service Summary Views** or **Key Metric Views**. For example, if the last selected display was the "Service Summary" display under "Single Area Service Views" and you clicked on a row in the table, the details would display in the **Service Summary** display. If the last selected display was the "Service KM Table" display under "Key Metrics Views", then clicking a row in the table displays the details in the **Service KM Table**.

🗲 🛧 Table 💽 Services in Area By Group 💧 24-Sep-2015 11:35 🕫 Data OK 💠 🥝										
Owner: Infrastructure	Area: N	liddlewar	e		•]			Cls: 12	Env: QA
Group: All Service Groups	Group: All Service Groups Service/Region Count: 6						æ/Region Count: 6			
Service	Region	Alert Severity	Alert Count	Alert Impact	Service Criticality	CI Count	Environment	Group		
TBE-CLUSTER	AMER	0	1	2	E	2	QA	TIBCO-BE		
EMS-QUEUE	AMER	0	6	2	E	2	QA	TIBCO-EMS		
EMS-SERVER	AMER	0	2	2	E	1	QA	TIBCO-EMS		
EMS-TOPIC	AMER	0	8	2	E	4	QA	TIBCO-EMS		
TOMCAT	AMER	0	0	0	E	1	QA	TOMCAT		
TOMCAT-APP AMER 0		0	0	E	2	QA	TOMCAT			
TOMCAT-APP AMER O 0 0 E 2 QA TOMCAT										

Indicators and functionality might include the following:

◆ ↑ Open the previous and upper display. CMDB ▼ and Table navigate to displays commonly accessed from this display. 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3,047 The number of items in the display.	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
---	---

Note: The "Up" Arrow ([↑]) opens the most recently viewed display under "All Management Areas". For example, if the last viewed display under **All Management Areas** was **Area Table**, then clicking [↑] opens the "Area Table" display.

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

• Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Service/	The total number of Services listed in the table. This value is determined by the
Region Count	selections made from display drop-down menus.

- **Area** The name of the Area where the alert data originated.
- **Service** The name of the Service where the alert data originated.
- **Region** The name of the Region to which the Service applies.

Severity	The maximum level of alerts in the row. Values range from 0 to 2 , where 2 is the greatest Severity:
	One or more alerts exceeded their ALARM LEVEL threshold in the Service.
	One or more alerts exceeded their WARNING LEVEL threshold in the Service.
	No alert thresholds have been exceeded in the Service.
Alert Count	The total number of critical and warning alerts for the Service.
Alert Impact	The maximum of the products of maximum Alert Severity multiplied by the Criticality of all CIs for the Service. Values range from ${\bf 0}$ - ${\bf 10}$, where ${\bf 10}$ is the highest Alert Impact.
Service Criticality	The Criticality (rank of importance) specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views / CI Service Table display, which range from A to E, where A is the highest Criticality.
CI Count	The total number of configurable items associated with the Area.
Environment	The name of the Environment to which the Service applies.
Group	The name of the Environment to which the Service applies.
CI Count	The name of the Group to which the Service applies.

Services CI Type Summary

This display lists the health state of Services by CI Type and allows you to manage alerts. In the upper table, each column is a CI Type and each row is a Service. Select a row in the table to view details in the lower table.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data.

Owner Infrastructure Area: All Areas	Cls: 80 Only Servic	Env: QA	~		
Group: All Service Groups	Only Servic				
		e/Region Count	: 12		
Service All JVM AMX AMX AMX BW BW BW EMS EMS EMS Act	ve Tomcat	Tomcat	Oracle		
ORACLE 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	<u> </u>		
HOST 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0		
VMWARE-HOST 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0		
VMWARE-VM 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0		
2 0 0 0 0 0 0 0 M M M	0	0	0		
SOLACE-BRIDGE 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0		
TBE-CLUSTER 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0		
EMS-QUEUE 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0		
EMS-SERVER 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0		
EMS-TOPIC 0 0 0 0 0 0 0 0 0 0 0 0	0	0	0		
Service: ORACLE CI Type:* Image: Oracle in the service in the servi					
First Occ Last Occ Count Sup Owner Alert Name Primary Service CI		A	lert Text		
10/06/15 11:05:16 10/07/15 06:18: 580 OralinstanceNumActive Oracle testBedOracle11g High Alert Limit exceeded, current value: 25.0 limit: 15.0					
10/06/15 11:05:16 [10/07/15 06:19:					
todo frito, for todo for an and todo for a second sec					
08/31/15 10.28.05 10/07/15 06:18 5573 Orale testBedOracle11g High Alert Limit exceeded, current value: 19754.0275 limit: 15/	0.0				
			>		

Indicators and functionality might include the following:

 ← Open the previous and upper display. CMDB → and Table navigate to displays commonly accessed from this display. 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. CIS: 3,047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
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Note: The "Up" Arrow ([↑]) opens the most recently viewed display under "All Management Areas". For example, if the last viewed display under **All Management Areas** was **Area Table**, then clicking [↑] opens the "Area Table" display.

For each Service in a selected Group, the round indicator shows the current maximum Alert Severity of all the CIs associated with each CI Type.

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

The cell background color indicates the current maximum Alert Impact of all the CIs associated with the Service and CI Type. The Alert Impact is calculated for each CI, which is the product of the CI Criticality times the current maximum Alert Severity. Background colors range from green to red, green being the lowest possible alert impact and red the highest possible value.

For example, in the following figure the first five Services in the list have an alert condition due to a BW Engine problem, and additionally the **INVENTORY MANAGER** Service has a TIBCO EMS Server problem. The **All CI Types** column shows the global highest level for all CI Types.

Service Name	All CI Types	User Experience	JVM	BW Server	BW Engine	TibcoEMS Server	TibcoEMS Topic	Torncat
ACCOUNTING	0	0	0	۲	0	0	0	0
COMPLIANCE	Ô	0	0	Ô	0	0	0	Õ
INVENTORY MANAGER	0	0	0	0	0	0	0	Ô
ORDER PROCESSING	Ô	0	0	0	0	0	0	0
REPORTING	Ô	۲	0	0	0	0	0	0
TUCON-EXCHANGE	Ô	0	0	0	0	۲	0	0

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Valid CI TypesCheck to only show CI Type columns that contain data in the table, uncheck to include columns that are empty. Including empty table columns can be helpful when you are comparing Services (using the Group drop-down menu) because the table columns retain their order.

Service/	The total number	of Services	currently	listed in the	e table.
Dogion					

vc	У	101	•
Со	u	nt	

- Service The name of the Service. Name
- All CI The circular indicator shows the current maximum Alert Severity of all the CIs associated with the CI Type, and the cell background color shows the current maximum Alert Impact of all the CIs-across all CI Types-- associated with the Service.
- **Service** Shows the Service selected in the upper table.

CT Tyne	Shows the CL	Type selected in	the unner table
CITYPE	Shows the CI	Type selected in	the upper table.

Alerts Table

This table lists all open, unsuppressed alerts associated with the selection in the upper table. Each row in the table is a different active alert. Select one or more rows, right-click to open the **Alert** popup menu and choose an action to perform on the alert(s): **Details**, **Own**, **Suppress**, **Close**, **Annotate** or **Options**. Use the sort **b** button to order column data. The row color indicates the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.

O Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

• Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Gray indicates that the alert engine that is hosting the alert is not connected, not enabled or not initialized. When you select a gray row the Own, Suppress, Unsuppress, Close, Annotate, Options and Details buttons are disabled.

M Opens the **Alerts Table** display in a new window.

- **Own** Click to assign an Owner for the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Suppress** Click to suppress the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Close** Click to close the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Details** Select an alert, right-click and choose **Alert/Details** to open the **Alert Detail** window and view alert details. Or, double-click an alert to open the **Alert Detai**l window.
- Annotate Select one or more alerts, right-click and choose Alert/Annotate to open the Set Owner and Comments dialog and enter comments or change alert owner.
- **Options** Select an alert, right-click and choose **Alert/Options** to open the **Alert Options** dialog. This dialog is provided for customizing your own alert options.

First Occ	The date and time the alert first occurred.				
Last Occ	ne date and time the alert last occurred.				
Count	e number of times the alert was generated.				
Sup	When checked, the alert has been suppressed by a user.				
Owner	The named owner assigned by the administrator.				
Alert Name	The name of the alert.				
Primary Service	The name of the Service with which the alert is associated.				
CI	The CI alert source.				
Alert Text	Description of the alert.				
AlertClass	An optional alert field which can be used when integrating with other alerting systems.				
CompID	An optional alert field which can be used when integrating with other alerting systems.				
TicketID	An optional alert field which can be used when integrating with other alerting systems.				
TicketGroup	An optional alert field which can be used when integrating with other alerting systems.				

Services History Heatmap

View history heatmap of alert states, over time, for Services in one Area, filtered by Group and Environment.

The history heatmap displays Services from one or more Groups and Environments of a given Owner and Area. Each row in the heatmap represents a different Service. The row color shows the Alert Impact or Alert Severity of a Service across time. Use the available drop-down menus or right-click to filter data shown in the display. Mouseover each row to see the time of alert state changes for particular Service occurred. For example, you can see at what time an alert state changed from green to red. Use the checkboxes in the heatmap to view details in the heatmap. Drill-down and investigate by clicking a row in the heatmap to view details in the last display that was viewed under either the **Service Summary Views** or **Key Metric Views**. For example, if the last selected display was the "Service Summary" display under "Single Area Service Views" and you clicked on a row in the **Services History Heatmap**, the details would display in the **Service Summary** display. If the last selected display was the "Service KM Table" display under "Key Metrics Views", then clicking a row in the **Services History Heatmap** displays the details in the **Service KM Table**.



Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▲ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Note: The "Up" Arrow ([↑]) opens the most recently viewed display under "All Management Areas". For example, if the last viewed display under **All Management Areas** was **Area Table**, then clicking opens the "Area Table" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Color Code:

Row color indicates the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the row.

Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the row.

TimeSelect a time range from the drop down menu varying from 2 Minutes to Last 7 Days, orRangedisplay All Data. By default, the time range end point is the current time.



To change the time range for the graph, click Open Calendar <a>[] , choose the date and time, then click **OK**. Or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, **Aug 21, 2011 12:24 PM**.

Use the navigation arrows \square to move forward or backward one time period. NOTE: The time period is determined by your selection from the Time Range drop-down menu. Click Restore to Now to reset the time range end point to the current time.

Single Area Service Views

These displays present aggregated data of alert states for all Services for a specific Area. Data can be filtered by Area, Group, Environment, and alert Metric. Data is filtered by the \$rtvOwnerMask, \$rtvAreaMask and \$rtvGroupMask values for the logged in user. For details, see "Configure User and Role Management" on page 44.

Use these displays, for example, to isolate the Area and Environment in which a critical alert is occurring. If you see a critical alert, get information by comparing alert metrics (such as how many other items are potentially affected). These displays drill-down to the **Service Summary Views -** "Service By CI Type" display. The **Single Area Service Views** displays present data in tabular and heatmap formats. Displays in this View are:

- "Single Area: Group/Service Heatmap" on page 116: Heatmap of alert states for Services by Area, with the option to filter by Area, Group, Environment and alert Metric, and the option to show Group and Service Names.
- "Single Area: Region/Service Heatmap" on page 118: Heatmap as described for the Group / Service Heatmap (above), with the option to filter by Region and no option to show Service Names.
- "Single Area: Group / Service Table" on page 120: Table view of Group/Service Heatmap data.
- "Single Area: Services CI Type Summary" on page 122: Table that shows the health state of Services per CI Type.
- "Single Area: Services History Heatmap" on page 125: Heatmap of alert states, over time, for Services in a selected Area, with the option to filter by Group, Environment and alert Metric.

Single Area: Group/Service Heatmap

View heatmap of alert states for Services in one Area, filter by Group or Environment, and optionally show Service Names. Each rectangle in the heatmap represents a Service (for example, Applications, Demo Systems and so forth), which are grouped by Area. The rectangle size represents the number of CIs in the Service; a larger size is a larger value.

Use the available drop-down menus or right-click to filter data shown in the display. Use the check-boxes \checkmark to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. Drill-down and investigate by clicking a rectangle in the heatmap to view details in the last display that was viewed under either the **Service Summary Views** or **Key Metrics Views**. For example, if the last selected display was the "Service Summary" display under "Single Area Service Views" and you clicked on a rectangle in the **Group / Service Heatmap**, the details would display in the **Service Summary** display. If the last selected display was the "Service KM Table" display under "Key Metrics Views", then clicking a rectangle in the **Group / Service Heatmap** displays the details in the **Service KM Table**.

🗲 🛧 By Group 🔽	Services in Area By Group	🛕 06-Oct-2015 14:39 💠 Data OK 💠 🍞
Owner: Infrastructure Area: Middleware	~	Cls: 28 Env: QA
Group: All Service Groups		Metric: Alert Impact 🔽 0 5 19
SOLACE	TIBCO-EMS	TOMCAT
	Group: TECO-BES Service ISBS-TD97C Environment: DA C Count: 4 Alert Impact: 2 Alert Seventy: 2 Critelarity: E Criteveh: 1	
		TIBCO-BE

Indicators and functionality might include the following:

 ← ↑ Open the previous and upper display. CMDB → and Table navigate to displays commonly accessed from this display. 19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3,047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
--	--

Note: The "Up" Arrow (¹) opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Group/Region Heatmap**, then clicking ¹ opens the "Group/Region Heatmap" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Metric:

Choose the type of metric to show in the heatmap. Each metric has its own gradient bar that maps relative values to colors:

Alert Impact	The product of the maximum Alert Severity of alerts in the heatmap rectangle multiplied by the maximum Criticality of alerts in the heatmap rectangle. Values range from 0 - 10 , as indicated in the color gradient bar , where 10 is the highest Alert Impact.
Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient • • • • • • • • • •
	Yellow indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of 1.

• Green indicates that no metrics have reached their alert thresholds. Metrics that have not exceeded their specified thresholds have an Alert Severity value of **0**.

Alert Count	The total number of critical and warning alerts in the heatmap rectangle. The color gradient ••••••••••••••••••••••••••••••••••••
Criticality	The maximum level of Criticality (rank of importance) in the heatmap rectangle. Values range from 1 to 5, as indicated in the color gradient example bar, where 5 is the highest Criticality.
	Criticality is specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views - "CI / Service Table" display, which range from A to E , where A is the highest Criticality (level 5 maps to a Criticality of A and level 1 maps to a Criticality of E with equally spaced intermediate values).

Single Area: Region/Service Heatmap

View heatmap of alert states for one Owner, one specific Area, one or all Service Groups, and one or all Regions. You can also optionally show Service Group Names. The heatmap organizes CIs by one or all Groups. Each rectangle in the heatmap represents a Group, which is grouped by Area. The rectangle size represents the number of CIs in the Service; a larger size is a larger value.

Use the available drop-down menus or right-click to filter data shown in the display. Use the check-boxes \checkmark to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. Drill-down and investigate by clicking a rectangle in the heatmap to view details in the last display that was viewed under either the **Service Summary Views** or **Key Metrics Views**. For example, if the last selected display was the "Service Summary" display under "Single Area Service Views" and you clicked on a rectangle in the **Group / Region Heatmap**, the details would display in the **Service Summary** display. If the last selected display was the "Service KM Table" display under "Key Metrics Views", then clicking a rectangle in the **Group / Region Heatmap** displays the details in the **Service KM Table**.

🗲 🛧 By Region 🔽		Services in Area By Region	💧 06-Oct-2015 14:41 💠 Data OK 💠 💡
Owner: Infrastructure	Area: Middleware	\checkmark	CIs: 28 Env: QA
Group: All Service Groups	Region: ALL Group Names		Metric: Alert Impact 🔽 0 5 10
		AMER	
	Group: TIBCO-EMS Service: EMS-QUEUE Environmest: QA Clarit Impact: 2 Alert Timpact: 2 Alert Severty: 2 Max: CriteBilly: 5 Max: CriteBilly: 5 Max: Grieburg: 1		

Т

Title Bar:

Indicators and functionality might include the following:

 Open the previous and upper display. CMDB and Table navigate to displays commonly accessed from this display. 	◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is					
19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView	not receiving data from the Data Server). Green indicates the data source is connected.					
stopped running. When the time is correct and the Data OK indicator is green, this is a strong	Open the Alert Views - RTView Alerts Table display.					
indication that the platform is receiving current and valid data.	Open an instance of this display in a new window.					
Cis: 3,047 The number of items in the display.	• Open the online help page for this display.					

The "Up" Arrow (^) opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under Multi Area Service Views was Group/Region Heatmap, then clicking ^ opens the "Group/Region Heatmap" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Metric:

Choose the type of metric to show in the heatmap. Each metric has its own gradient bar that maps relative values to colors:

Alert Impact	The product of the maximum Alert Severity of alerts in the heatmap rectangle multiplied by the maximum Criticality of alerts in the heatmap rectangle. Values range from 0 - 10 , as indicated in the color gradient bar , where 10 is the highest Alert Impact.
Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient equivalent bar, where 2 is the highest Alert Severity.
	• Red indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified ALARM LEVEL threshold have an Alert Severity value of 2 .

O Yellow indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of **1**.

• Green indicates that no metrics have reached their alert thresholds. Metrics that have not exceeded their specified thresholds have an Alert Severity value of **0**.

Alert Count	The total number of critical and warning alerts in the heatmap rectangle. The color gradient ••••••••••••••••••••••••••••••••••••
Criticality	The maximum level of Criticality (rank of importance) in the heatmap rectangle. Values range from 1 to 5, as indicated in the color gradient example bar, where 5 is the highest Criticality.
	Criticality is specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views - "CI / Service Table" display, which range from A to E , where A is the highest Criticality (level 5 maps to a Criticality of A and level 1 maps to a Criticality of E with equally spaced intermediate values).

Single Area: Group / Service Table

This table displays data shown in the **Group/Service** and **Region/Service** heatmaps. View Service metrics (Impact, Severity, Count and Criticality, and CI Count) for a specific Area, for one or all Owners, Groups, and Environments. The table lists Services by Owner and Area. Each row in the table is a different Service. The color of the circle in the **Alert Severity** column represents the most critical alert state for that Service.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data. Drill-down and investigate by clicking a row in the table to view details in the last display that was viewed under either the **Service Summary Views** or **Key Metric Views**. For example, if the last selected display was the "Service Summary" display under "Single Area Service Views" and you clicked on a row in the table, the details would display in the **Service Summary** display. If the last selected display was the "Service KM Table" display under "Key Metrics Views", then clicking a row in the table displays the details in the **Service KM Table**.

🗲 🛧 Table 🗸	Services in Area By Group 💧 06-Oct-2015 14:43 💠 Data OK 💠 🤪								
Owner: Infrastructure	Area: Middleware V Cis: 28 Env: QA V								
Group: All Service Groups	All Service Groups Service/Region Count: 7								
Service	Region Seve	ert Alert erity Count	Alert Impact	Service Criticality	CI Count	Environment	Group		
SOLACE-BRIDGE	AMER	0	0	E	16	QA	SOLACE		
TBE-CLUSTER	AMER	1	1	E	2	QA	TIBCO-BE		
EMS-QUEUE	AMER (6	2	E	2	QA	TIBCO-EMS		
EMS-SERVER	AMER	2	2	E	1	QA	TIBCO-EMS		
EMS-TOPIC	AMER	8	2	E	4	QA	TIBCO-EMS		
TOMCAT	AMER	0	0	E	1	QA	TOMCAT		
TOMCAT-APP	AMER (0	0	E	2	QA	TOMCAT		

Indicators and functionality might include the following:

 ← ● Open the previous and upper display. CMDB ● and Table navigate to displays commonly accessed from this display. 19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3,047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
--	---

Note: The "Up" Arrow () opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Group/Region Heatmap**, then clicking opens the "Group/Region Heatmap" display.

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table

row. Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Service/	The total number of Services listed in the table. This value is determined by the
Region Count	selections made from display drop-down menus.

- Area The name of the Area where the alert data originated.
- **Service** The name of the Service where the alert data originated.
- **Region** The name of the Region to which the Service applies.

Severity	The maximum level of alerts in the row. Values range from 0 to 2 , where 2 is the greatest Severity:
	One or more alerts exceeded their ALARM LEVEL threshold in the Service.
	One or more alerts exceeded their WARNING LEVEL threshold in the Service.
	No alert thresholds have been exceeded in the Service.
Alert Count	The total number of critical and warning alerts for the Service.
Alert Impact	The maximum of the products of maximum Alert Severity multiplied by the Criticality of all CIs for the Service. Values range from ${\bf 0}$ - ${\bf 10}$, where ${\bf 10}$ is the highest Alert Impact.
Service Criticality	The Criticality (rank of importance) specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views / CI Service Table display, which range from A to E, where A is the highest Criticality.
CI Count	The total number of configurable items associated with the Area.
Environment	The name of the Environment to which the Service applies.
Group	The name of the Environment to which the Service applies.
CI Count	The name of the Group to which the Service applies.

Single Area: Services CI Type Summary

This display lists the health state of Services by CI Type and allows you to manage alerts. In the upper table, each column is a CI Type and each row is a Service. Select a row in the table to view details in the lower table.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data.

🗲 🛧 By CI Type 🔍					S	ervice H	ealth By CI T	/pe				4	06-Oct-20	015 14:44 💠 Data OK 🔶 🕜
Owner: Infrastructure	✓ Area:	Middleware		~									Cls: 28	Env: QA
Group: All Service Groups							□Val	id CI Types O	nly Serv	rice/Region Count: 7				
Service Name	All CI Types	AMX Node	AMX Service	AMX ServiceNod	BW Server	BW Engine	BW Proc	EMS Server	EMS Topic	EMS Queue	Active Spaces	Tomcat	Tomcat App	ServiceGroup
SOLACE-BRIDGE	0	0	0	0	0	0	0	0	0	0	0	0	0	SOLACE
TBE-CLUSTER	Õ	0	0	0	0	0	0	0	0	0	0	0	0	TIBCO-BE
EMS-QUEUE	0	0	0	0	0	0	0	0	0		0	0	0	TIBCO-EMS
EMS-SERVER	õ	0	0	0	0	0	0	0	0	0	0	0	0	TIBCO-EMS
EMS-TOPIC	õ	0	0	0	0	0	0	0		0	0	0	0	TIBCO-EMS
TOMCAT	Õ	0	0	0	0	0	0	0	0	0	0		0	TOMCAT
TOMCAT-APP	Õ	0	0	0	0	0	0	0	0	0	0	0	0	TOMCAT
-														
<														>
Service: EMS-QUEUE			CI Type: *										▲	<u>O</u> wn <u>Suppress</u> <u>C</u> lose
First Occ Last Occ Cou	nt Sup	Owner	Alert Name	e F	rimary Serv	ice	CI							Alert Text
10/06/15 06:18:02 10/06/15 06:18:	1	En	nsQueueProvide	ridle EMS		to	p://192.168.200.13	High Ale	rt Limit exceede	d, current value	e: 97.0 limit: 80	.0		
10/06/15 06:18:02 10/06/15 06:18:		En	nsQueueProvider	ridle EMS		to	p://192.168.200.13	High Ale	rt Limit exceede	d, current value	e: 97.0 limit: 80	.0		
10/06/15 06:16:48 10/06/15 06:16:	1	En	nsQueuesProduc	EMS		to	:p://192.168.200.13	Low Aler	t Limit exceeded	a, current value	: 0.0 limit: 5.0			
10/06/15 06:16:48 10/06/15 06:16:	1 -	En	nsQueuesConsu	mer EMS		te	p://192.168.200.13	L ow Aler	t Limit exceeder	d, current value	: 0.0 limit: 5.0			
10/06/15 06:16:48 10/06/15 06:16:	1	En	nsQueuesConsu	mer EMS		to	p://192.168.200.13	Low Aler	t Limit exceeder	d, current value	: 0.0 limit: 5.0			

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. CMDB ▼ and Table navigate to displays commonly accessed from this display. 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data.	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window.
and valid data.	• Open an instance of this display in a new window.
^{CIs:} 3,047 The number of items in the display.	Open the online help page for this display.

Note: The "Up" Arrow (**^**) opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Group/Region Heatmap**, then clicking **^** opens the "Group/Region Heatmap" display.

For each Service in a selected Group, the round indicator shows the current maximum Alert Severity of all the CIs associated with each CI Type.

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

The cell background color indicates the current maximum Alert Impact of all the CIs associated with the Service and CI Type. The Alert Impact is calculated for each CI, which is the product of the CI Criticality times the current maximum Alert Severity. Background colors range from green to red, green being the lowest possible alert impact and red the highest possible value.

For example, in the following figure the first five Services in the list have an alert condition due to a BW Engine problem, and additionally the **INVENTORY MANAGER** Service has a TIBCO EMS Server problem. The **All CI Types** column shows the global highest level for all CI Types.

Service Name	All CI Types	User Experience	JVM	BW Server	BW Engine	TibcoEMS Server	TibcoEMS Topic	Torncat
ACCOUNTING	0	0	0	۲	0	۲	0	0
COMPLIANCE	0	0	0	۲	0	0	0	0
INVENTORY MANAGER	Ó	0	0	۲	0	0	0	Ô
ORDER PROCESSING	Ô	0	0	۲	0	0	0	0
REPORTING	Ô	۲	0	۲	0	0	0	۲
TUCON-EXCHANGE	0	0	0	0	0	0	0	0

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Service/	The total	number	of	Services	currently	listed	in	the	table.
----------	-----------	--------	----	----------	-----------	--------	----	-----	--------

NС	У	101	ł
Со	u	nt	

- Service The name of the Service. Name
- All CI Types The circular indicator shows the current maximum Alert Severity of all the CIs associated with the CI Type, and the cell background color shows the current maximum Alert Impact of all the CIs--across all CI Types-- associated with the Service.
- **Service** Shows the Service selected in the upper table.

CT Type	Shows the CL	Type selected in	the unner table
сітуре	Shows the CI	Type selected in	the upper table.

Alerts Table

This table lists all open, unsuppressed alerts associated with the selection in the upper table. Each row in the table is a different active alert. Select one or more rows, right-click to open the **Alert** popup menu and choose an action to perform on the alert(s): **Details**, **Own**, **Suppress**, **Close**, **Annotate** or **Options**. Use the sort **b** button to order column data. The row color indicates the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.

O Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

• Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Gray indicates that the alert engine that is hosting the alert is not connected, not enabled or not initialized. When you select a gray row the Own, Suppress, Unsuppress, Close, Annotate, Options and Details buttons are disabled.

M Opens the **Alerts Table** display in a new window.

- **Own** Click to assign an Owner for the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Suppress** Click to suppress the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Close** Click to close the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Details** Select an alert, right-click and choose **Alert/Details** to open the **Alert Detail** window and view alert details. Or, double-click an alert to open the **Alert Detai**l window.
- Annotate Select one or more alerts, right-click and choose Alert/Annotate to open the Set Owner and Comments dialog and enter comments or change alert owner.
- **Options** Select an alert, right-click and choose **Alert/Options** to open the **Alert Options** dialog. This dialog is provided for customizing your own alert options.

First Occ	The date and time the alert first occurred.
Last Occ	The date and time the alert last occurred.
Count	The number of times the alert was generated.
Sup	When checked, the alert has been suppressed by a user.
Owner	The named owner assigned by the administrator.
Alert Name	The name of the alert.
Primary Service	The name of the Service with which the alert is associated.
CI	The CI alert source.
Alert Text	Description of the alert.
AlertClass	An optional alert field which can be used when integrating with other alerting systems.
CompID	An optional alert field which can be used when integrating with other alerting systems.
TicketID	An optional alert field which can be used when integrating with other

Single Area: Services History Heatmap

View history heatmap of alert states, over time, for Services in one Area, filtered by Group and Environment.

The history heatmap displays Services from one or more Groups and Environments of a given Owner and Area. Each row in the heatmap represents a different Service. The row color shows the Alert Impact or Alert Severity of a Service across time. Use the available drop-down menus or right-click to filter data shown in the display. Mouseover each row to see the time of alert state changes for particular Service occurred. For example, you can see at what time an alert state changed from green to red. Use the checkboxes ✓ to include or exclude labels in the heatmap. Drill-down and investigate by clicking a row in the heatmap to view details in the last display that was viewed under either the **Service Summary Views** or **Key Metric Views**. For example, if the last selected display was the "Service Summary" display under "Single Area Service Views" and you clicked on a row in the **Services History Heatmap**, the details would display in the **Service Summary** display. If the last selected display was the "Service KM Table" display under "Key Metrics Views", then clicking a row in the **Services History Heatmap** displays the details in the **Service KM Table**.



Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Note: The "Up" Arrow (¹) opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Group/Region Heatmap**, then clicking ¹ opens the "Group/Region Heatmap" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Color Code:

Row color indicates the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the row.

Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the row.

TimeSelect a time range from the drop down menu varying from 2 Minutes to Last 7 Days, orRangedisplay All Data. By default, the time range end point is the current time.



To change the time range for the graph, click Open Calendar \square , choose the date and time, then click **OK**. Or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, **Aug 21, 2011 12:24 PM**.

Use the navigation arrows \square to move forward or backward one time period. NOTE: The time period is determined by your selection from the Time Range drop-down menu. Click Restore to Now to reset the time range end point to the current time.

Service Summary Views

These displays present alert states at the component-level by Service in tabular and heatmap formats, while highlighting the most critical alert state. Data can be filtered by Owner, Area, Group, Service or Environment. Data is filtered by the \$rtvOwnerMask, \$rtvAreaMask, \$rtvGroupMask and \$rtvServiceMask values for the logged in user. For details, see "Configure User and Role Management" on page 44.

Use these displays to get alert details and detailed status information for a particular Service, such as a list of all the CI Types relevant to a Service and the quality of the performance metrics for each CI. Displays in this View are:

- "Service By CI Type" on page 128: Table of alert states for a Service organized CI Type, with general alert information.
- "Service Summary" on page 131: Table of CIs by Service, with detailed alert information.
- "Service Health Heatmap" on page 135: Heatmap of CIs by Service, with the option to filter by Owner, Area, Group, Environment and alert Metric, and show CI Names.

Service By CI Type

View alert states for a Service organized CI Type and manage alerts. See the CI Count for a Service and obtain alert statistics for CI Types such as Alert Severity and Alert Count. Use this display to summarize alerts occurring for a Service and determine which component types are malfunctioning. View a list of all active alerts associated with the CI Type.

The upper table lists all CI Types for the selected Service with alert details such as the highest Alert Severity. Each row is a CI Type. The color of each row represents the maximum Alert Impact for the row. Select a row that has an active alert (the Alert Severity is red or yellow) to view the active alerts in the lower table. Double-click a row to view a detailed list of CIs associated with the CI Type in the **Service Summary** display. In the lower table, each row is a different alert for a CI that is associated with the CI Type selected from the upper table.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data.

🗲 🛧 🛛 By CI Type 📑	All	~			Single by C	Servi	ice Summary onent Type			24-Sep-20)15 11:30	💠 Data OK	+ 0	
Owner: Jerelyn Parker Area: Systems							•					Env	QA	•
Group: Databases			[▼ Se	ervice: All				•					
Service Name: *													CI Count: 11	
Criticality:	Ma	ax Severity	е м	ax Impact:	10	All Cls								
СІТуре		CI Count		Aler Sever	rt rity	Alert Count		Max Criticality	Alert Impact		Quality		Quality Count	
ORAC	LE	1		0)	5		В	8		۲		all	
VMWARE-HO	ST	5		Õ)	25			10		0		all	
VMWARE-V	VM	5		Õ		3			8		۲		all	
Selected CIType: *		All C	CI Types								<u> </u>	<u>O</u> wn	Suppress	Close
First Occ Last 0	Dec	Count	Sup	Owner	Alert Na	me	P	rimary Service	CI					
09/24/15 11:30:48 09/24/15 1	1:30:46	1		V	/mwVmInPktDr	opLossHig	Latest	Releases	vSphere2;2008S-S	SLHC High	Warning Limit	exceeded	, current value	: 1.0
09/24/15 11:30:46 09/24/15 1	1:30:46	1		V	/mwHostCpuUt	tilizationHig	MySQ	L	vSphere2;slesxi-1	.side High	NVarning Limit	exceeded	, current value	: 50.1 =
09/24/10 11:30:23 09/24/15 1	1:30:23	1		V	/mwHostInByte	25Migh adWiah	IRoss	L	Vopnere2;slesxi-1	NLSI Lia	Naming Limit	exceeded	, current value	517
09/24/15 11:30:16 09/24/15 1	1:30:16	1		J	IvmMemoryUs	edHiah	Localh	ost	localhost:local	Hiał	Warning Limit	exceeded	, current value	50.
09/24/15 11:21:29 09/24/15 1	1:30:03	35		J	IvmMemoryUs	edHigh	JBoss		localhost;MISCMC	N-SI High	Warning Limit	exceeded	, current value	: 73.1
•		III												•

Indicators and functionality might include the following:

 ← Open the previous and upper display. CMDB → and Table navigate to displays commonly accessed from this display. 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3.047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
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Note: The "Up" Arrow () opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Services CI Type Summary**, then clicking) opens the "Services CI Type Summary" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Service Name	The name of the selected Service.
CI Count	The total number of configurable items associated with the selected Service.
PROD	The number of CI instances associated with the Service in production environments.
DEV	The number of CI instances associated with the Service in development environments.
DR	The number of CI instances associated with the Service in the DR environment.
UAT	The number of CI instances associated with the Service in the UAT environment.
Criticality	The Criticality (rank of importance) specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views / CI Service Table display, which range from \bf{A} to \bf{E} , where \bf{A} is the highest Criticality. This value is used to determine the value for Alert Impact.
Max Severity	 The highest Alert Severity value of any CI associated with the selected Service. Values range from 0 to 2, where 2 is the greatest Severity: One or more alerts exceeded their ALARM LEVEL threshold in the Service. One or more alerts exceeded their WARNING LEVEL threshold in the Service. No alert thresholds have been exceeded in the Service.

The highest Alert Impact value of any CI associated with the selected Service. Max

Impact

Opens the Service Summary display. All CIs

(CI Type Table) This table lists all CI Types for the selected Service. Each row in the table is a CI Type. Click a row to drill-dow view details in the lower table about alerts associated with the CI Type. Double-click a row to drill-down to Service Summary display describing alert details relevant to this CI Type.

	CIType	The type of CI.
	CI Count	The total number of configurable items associated with the CI Type.
	Alert Severity	 The highest Alert Severity value of any CI associated with the selected Service. Values range from 0 to 2, where 2 is the greatest Severity: One or more alerts exceeded their ALARM LEVEL threshold. One or more alerts exceeded their WARNING LEVEL threshold. No alert thresholds have been exceeded.
	Alert Count	The total number of active alerts for the CIs associated with the CI Type.
	Quality	Shows whether performance metrics are being received from the CIs associated with the CI Type.
		One or more performance metrics are not being received from the CIs associated with the CI Type.
		All performance metrics are being received from he CIs associated with the CI Type.
	Quality Count	Shows the number of CIs for that CI Type that have a known state. It displays all when that number is the total count of CI's.
		One or more performance metrics are not being received from the CIs associated with the CI Type.
		All performance metrics are being received from he CIs associated with the CI Type.
Selected CI Type	Shows the C	I Type selected in the upper table.
All CI	Shows all act	tive alerts for all CIs associated with the CI Type selected.

Types

Alerts Table

This table lists all open, unsuppressed alerts associated with the selection in the upper table. Each row in the table is a different active alert. Select one or more rows, right-click to open the **Alert** popup menu and choose an action to perform on the alert(s): **Details**, **Own**, **Suppress**, **Close**, Annotate or Options. Use the sort button to order column data. The row color indicates the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.

Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Gray indicates that the alert engine that is hosting the alert is not connected, not enabled or not initialized. When you select a gray row the **Own**, **Suppress**, **Unsuppress**, **Close**, **Annotate**, **Options** and **Details** buttons are disabled.

Opens the **Alerts Table** display in a new window.

Click to assign an Owner for the selected alert(s). This button is only visible to users Own with Administrator privileges. This button is disabled when you select a gray row.

_

Suppress	Click to suppre Administrator p	ss the selected alert(s). This button is only visible to users with privileges. This button is disabled when you select a gray row.
Close	Click to close th privileges. This	ne selected alert(s). This button is only visible to users with Administrator button is disabled when you select a gray row.
Details	Select an alert, and view alert	right-click and choose Alert/Details to open the Alert Detai l window details. Or, double-click an alert to open the Alert Detai l window.
Annotate	Select one or n Owner and Co	nore alerts, right-click and choose Alert/Annotate to open the Set Demonstrate dialog and enter comments or change alert owner.
Options	Select an alert, This dialog is p	right-click and choose Alert/Options to open the Alert Options dialog. rovided for customizing your own alert options.
	First Occ	The date and time the alert first occurred.
	Last Occ	The date and time the alert last occurred.
	Count	The number of times the alert was generated.
	Sup	When checked, the alert has been suppressed by a user.
	Owner	The named owner assigned by the administrator.
	Alert Name	The name of the alert.
	Primary Service	The name of the Service with which the alert is associated.
	CI	The CI alert source.
	Alert Text	Description of the alert.
	AlertClass	An optional alert field which can be used when integrating with other alerting systems.
	CompID	An optional alert field which can be used when integrating with other alerting systems.
	TicketID	An optional alert field which can be used when integrating with other alerting systems.
	TicketGroup	An optional alert field which can be used when integrating with other alerting systems.

Service Summary

View alert states at the component-level per Service, manage alerts, obtain component details such as the number of active alerts for the component, which operating system the component uses and the Data Server associated with the component.

Use this display to monitor a Service in a specific Group or Environment anywhere in your organization, and determine whether a component is malfunctioning.

The table lists all components for a selected Service. Each row in the table is a different CI (configurable item or component). Each CI can have multiple alerts. Click a row to view details in the lower table about any alerts associated with the CI.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data. Double-click a row to drill-down to a summary page describing information relevant to this CI. This action can also be performed by selecting (a single click) on a row and selecting the **Go to CI** button.

🗲 🛧 Summary 💌 MX All 🔍 Single Service Summary 24-Sep-2015 11:29 💠 Data OK 💠 🥝															
Owner: Jerelyn Pa	rker	-	Area	a: Systems	i									Env: QA	•
Group: Databases				▼ 8	Service: All										
Service Name: * CI Count: 11															
Max Criticality:	Ma	ax Severi	ty🕐	Max Impac	t: 10										
CI Table for Sele	cted Enviro	nment		CI Type Fi	Iter: All Cl	Types									Go to CI
CIType			CINam	e		Quality	Severity	Alerts	Criticality	Impact	Regi	on Er	nvironment	SiteName	2
ORACLE	testBedOrac	de11g				0	0	5	В	8			QA	Headquarters	
VMWARE-HOST	vSphere2;sl	esxi-1.sld	emos-h	q.local		0	0	3	В	8			QA		
VMWARE-HOST	vSphere2;sl	esxi-1.sld	emos-h	q.local		0	0	3	В	8			QA		
VMWARE-HOST	vSphere2;sl	esxi-1.sld	emos-h	q.local		0	0	3		10			QA		
VMWARE-HOST	vSphere2;sl	esxi-1.sld	emos-h	q.local		0	0	3	В	8			QA	Headquarters	
VMWARE-HOST	vSphere2;sl	esxi-1.sld	emos-h	q.local		0	0	3	В	8			QA		
VMWARE-VM	vSphere2;2	008S-WIN	112				0	1	В	8			QA	Headquarters	
VMWARE-VM	vSphere2;2	008S-SLH	HOST-W	/IN5		0	0	1		5			QA		
VMWARE-VM	vSphere2;2	008S-WIN	114			0	0	1	В	4			QA		
VMWARE-VM	vSphere2;2	008S-WIN	113			0	0	0	В	0			QA		
VMWARE-VM	vSphere2:2	008S-WIN	115		ĺ			0	В	0	1		QA	1	
•				111											Þ
Selected CI: *	1	*										All	<u> </u>	vn <u>S</u> uppress	<u>C</u> lose
First Occ	Last Occ	Count	Sup	Owner	Alert	Name	Prim	ary Serv	ice	CI					
09/24/15 11:29:27 09/2	24/15 11:29:27	1			JvmMemory	UsedHigh	Localhost		loc	alhost;ALER1	LSER	High Warr	ning Limit exce	eded, current va	lue: 52.
09/24/15 11:24:04 09/2	24/15 11:29:25	24			JvmMemory	UsedHigh	JBoss		loc	alhost;MISCM	ION-SI	High Alert	Limit exceede	d, current value:	76.462
09/24/15 11:21:29 09/2	3/24/15 11:29:16 31 JvmMemor					/UsedHigh	JBoss		loc	alhost;MISCM	ION-SI	High Warr	ning Limit exce	eded, current va	lue: 72.
09/24/15 11:15:10 09/2	24/15 11:29:29	78			JvmMemory	UsedHigh	Localhost		loc	alhost;local		High Alert	Limit exceede	d, current value:	77.4934
09/24/15 10:45:29 09/2	24/15 10:47:54	12			JvmMemory	/UsedHigh	JBoss		loc	alhost;MISCN	ION-SI	High Alert	Limit exceede	ed, current value:	81.242
09/24/15 10:30:15 09/2	24/15 10:30:15	1			HostMemory	/UsedHigh	Beta		QA	TB;SLHOST-	WIN3	High Warr	ning Limit exce	eded, current va	lue: 75.(
•		111													•

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> → and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data ○K The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Note: The "Up" Arrow (1) opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Services CI Type Summary**, then clicking 1) opens the "Services CI Type Summary" display.

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Filter By:

Use the available drop-down menus to filter data shown in the table. The display might include these filtering options:

Owner: Choose an Owner to see metrics in the heatmap for Areas associated with that Owner.

Area: Choose an Area to see metrics in the heatmap for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics in the heatmap for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics in the heatmap for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics in the heatmap for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Service Name	The name of the selected Service.	
Criticality	The Criticality (rank of importance) specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views / CI Service Table display, which range from \bf{A} to \bf{E} , where \bf{A} is the highest Criticality. This value is used to determine the value for Alert Impact.	
CI Count	The total number of configurable items associated with the selected Service.	
PROD	The number of CI instances associated with the Service in production environments.	
DEV	The number of CI instances associated with the Service in development environments.	
DR	The number of CI instances associated with the Service in the DR environment.	
UAT	The number of CI instances associated with the Service in the UAT environment.	
CI Table for Selected Environment		

This table lists all CIs for the selected Environment. Each row in the table is a CI. Each CI can have multiple alerts. Click a row to view details about any alerts associated with the CI in the lower table. Double-click a row to drill-down to a summary page describing information relevant to this CI. This action can also be performed by selecting (a single click) on a row and selecting the **Go to CI** button.

CI Type Filter	Select a CI Type to display in the table or select All CI Types.
Go to CI	Drill-down to a summary page describing information relevant to this CI.
СІТуре	The type of CI.
Quality	 Shows whether performance metrics are being received from the CI: Performance metrics are not being received from the CI. Performance metrics are being received from the CI.
Severity	 Shows the most critical alert state for the selected CI: One or more alerts exceeded their ALARM LEVEL threshold. One or more alerts exceeded their WARNING LEVEL threshold. No alert thresholds have been exceeded.
Alerts	The number of currently active alerts for the selected CI.
Region	The name of the Region for the CI.
SiteName	The name of the Site for the CI.
OSType	The operating system currently running on the CI.

City The name of the City for the CI.

Country The name of the Country for the CI.

Data The name of the Data Server with which the CI is associated.

Server

Selected Shows the CI Type selected in the upper table.

CI

All Shows all active alerts for all CIs associated with the CI Type selected.

Alerts Table

This table lists all open, unsuppressed alerts associated with the selection in the upper table. Each row in the table is a different active alert. Select one or more rows, right-click to open the **Alert** popup menu and choose an action to perform on the alert(s): **Details**, **Own**, **Suppress**, **Close**, **Annotate** or **Options**. Use the sort **b** button to order column data. The row color indicates the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.

O Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Gray indicates that the alert engine that is hosting the alert is not connected, not enabled or not initialized. When you select a gray row the **Own**, **Suppress**, **Unsuppress**, **Close**, **Annotate**, **Options** and **Details** buttons are disabled.

Opens the **Alerts Table** display in a new window.

- **Own** Click to assign an Owner for the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Suppress** Click to suppress the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Close** Click to close the selected alert(s). This button is only visible to users with Administrator privileges. This button is disabled when you select a gray row.
- **Details** Select an alert, right-click and choose **Alert/Details** to open the **Alert Detai**l window and view alert details. Or, double-click an alert to open the **Alert Detai**l window.
- Annotate Select one or more alerts, right-click and choose Alert/Annotate to open the Set Owner and Comments dialog and enter comments or change alert owner.
- **Options** Select an alert, right-click and choose **Alert/Options** to open the **Alert Options** dialog. This dialog is provided for customizing your own alert options.

First Occ	The date and time the alert first occurred.
Last Occ	The date and time the alert last occurred.
Count	The number of times the alert was generated.
Sup	When checked, the alert has been suppressed by a user.
Owner	The named owner assigned by the administrator.
Alert Name	The name of the alert.
Primary Service	The name of the Service with which the alert is associated.
CI	The CI alert source.
Alert Text	Description of the alert.
AlertClass	An optional alert field which can be used when integrating with other alerting systems.
CompID	An optional alert field which can be used when integrating with other alerting systems.
TicketID	An optional alert field which can be used when integrating with other alerting systems.
TicketGroup	An optional alert field which can be used when integrating with other alerting systems.

Service Health Heatmap

View heatmap of alert states for CIs associated with a Service. The heatmap organizes CIs by the Service selected. Each rectangle in the heatmap represents a CI (for example, **localhost-14**). Each Metric (selected from the drop-down menu) has a color gradient bar that maps relative values to colors.

Use the available drop-down menus or right-click to filter data shown in the display. Use the check-boxes \square to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. By default, this display shows Alert Impact.



Title Bar:

Indicators and functionality might include the following:

• Open the previous and upper display. <u>CMDB</u> and <u>Table</u> navigate to displays commonly accessed from this display. <u>19-Feb-201416:50</u> The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Note: The "Up" Arrow () opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Services CI Type Summary**, then clicking opens the "Services CI Type Summary" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.
Metric:

Choose the type of metric to show in the heatmap. Each metric has its own gradient bar that maps relative values to colors:

Alert Impact	The product of the maximum Alert Severity of alerts in the heatmap rectangle multiplied by the maximum Criticality of alerts in the heatmap rectangle. Values range from $0 - 10$, as indicated in the color gradient alerts bar, where 10 is the highest Alert Impact.
Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient • • • • • • • • • •
	 Yellow indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of 1. Green indicates that no metrics have reached their alert thresholds. Metrics that have not exceeded their specified thresholds have an Alert Severity value of 0.
Alert Count	The total number of critical and warning alerts in the heatmap rectangle. The color gradient \bullet shows the value/color mapping. The numerical values in the gradient bar range from 0 to the maximum count of alerts in the heatmap. The middle value in the gradient bar indicates the average alert count.
Criticality	The maximum level of Criticality (rank of importance) in the heatmap rectangle. Values range from 1 to 5, as indicated in the color gradient ••••••••••••••••••••••••••••••••••••

Key Metrics Views

The Key Metrics (KM) feature is an entirely new way of looking at and interpreting application health and performance data.

In contrast to the traditional Alert Impact view showing your ACTIVE alerts and their impact on the overall application or service, the Key Metrics view shows how close a metric is approaching its threshold over a period of time – both before and after the alert threshold is reached.

This allows you to both proactively anticipate performance problems BEFORE the alert threshold is crossed as well analyze the circumstances that led up to error conditions AFTER you got an alert. Armed with this knowledge, you can avert disasters before they happen and resolve problems faster after they happen.

RTView does this by correlating the most valuable key metrics over multiple components within a service and displaying them in context with both real-time and historical data. This is valuable because health problems in one component may be caused by performance problems in another and only by viewing each of these metrics in context with one another over a period of time are you able to visually link the relationship between troubled components.

It is important to note that your Alert Impact heatmaps may look very different from your Key Metrics heatmaps given that KM will indicate potential threats BEFORE they show up as alerts.

Data is filtered by the \$rtvOwnerMask, \$rtvAreaMask, \$rtvGroupMask and \$rtvServiceMask values for the logged in user. For details, see "Configure User and Role Management" on page 44.

Dependencies

The KM package is dependent on the Metric Explorer package. Both must be included in your project in order for KM to work. If you are upgrading from a version previous to 1.5.0 and have not added Metric Explorer to your project, see the *RTView Enterprise Monitor® User's Guide* **Upgrade Notes** section for information about including it.

Displays in this View are:

- "Service KM Heatmap" on page 138: Heatmap of Key Metrics current data for one or more Services in your CMDB hierarchy.
- "Service KM Table" on page 142: Table of Key Metrics current data for one or more Services.
- "Service KM History" on page 145: History heatmap of Key Metrics historical data for one or more Services.
- "Service KM History (Alt)" on page 150: History heatmap of Key Metrics historical data for one or more Services.

This section also includes:

 "Available KM Metrics and Alerts" on page 154: List and descriptions of available key metrics.

Service KM Heatmap

View Key Metrics current data for one or more Services in your CMDB hierarchy in a heatmap. The **Service KM Heatmap** provides one view of all your Services and whether they are approaching an alert condition.

The most important overview of your Services is the Alert Impact View. The Alert Impact View lets you know what is a problem NOW. The **Service KM Heatmap** gives you a proactive view of which Services might be approaching a serious problem so that you can take action before they become critical. First look at the Alert Impact View to address current issues, then move to the **Service KM Heatmap** for proactive analysis.

The colors in the display are determined by the **Threshold %** and **Quality** values. As shown in the color gradient bar **10 50 Fr**, a rectangle is green when the value is close to **0** changing to yellow, orange and red as the value gets closer to **100**. Values at or over **100** are shown as red.

- Red indicates the value is at or over 100.
- Yellow indicates the value is between **0** and **100**.
- Green indicates the value is close to 0.
- Teal indicates no KMs are defined for the CI Type.

Grey indicates KMs are defined for the CI Type but no data was returned when the metric was queried.

Select **Group By Service** to include the **Group** and **Service** labels in the display. Select **Expand Metrics** to include the **Metric Name**, **Metric Value** and **Threshold** labels in the display.

For details about the Key Metrics feature, see "Key Metrics Views" on page 137.

Use the available drop-down menus or right-click to filter data shown in the display. Drill-down and investigate by double-clicking a rectangle in the display to view details in the corresponding display.



Title Bar:

Indicators and functionality might include the following:

← Open the previous and upper display. and Table navigate to displays CMDB commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3,047

The number of items in the display.

Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

÷ Open an instance of this display in a new window.

Open the online help page for this display.

Note: The "Up" Arrow (**^**) opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under Multi Area Service Views was Services CI Type **Summary**, then clicking ¹ opens the "Services CI Type Summary" display.

Filter Bv:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

You can also filter KMs by **CI Name**, **CI Type** and **Metric Name**. To modify the **CI Name**, **CI Type** or **Metric Name** filter, right-click on an item in the display and select **CI Name**, **CI Type** or **Metric Name** from **Add To Filter** or **Remove From Filter**, then click **Apply Filter**. The **Filter:** field shows filter parameters and is highlighted in blue after it is applied. Click Clear to clear the filter.

Note: The **Metric Name** filter is only editable or applied when the **Expand Metrics** checkbox is selected.

Fields and Data

This display includes:

Show CIs with KMs only (x)	When selected, hides any CIs that do not have KMs defined. The number following the label (\mathbf{x}) is the number of CIs with KMs defined.
Group By Service	When selected, includes the Service Group and Service Name in the KM data. CIs that are included in multiple Services will appear multiple times, once for each Service they are associated with.
Group Names	When selected, includes the Group Name in the display. Only available if Group By Service is selected.
Service Names	When selected, includes both the Group Name and Service Name in the display. Only available if Group By Service is selected.
CI Types	When selected, includes the CI Type in the display. If Group By Service is selected, this is shown in addition to the Group Name and Service Name .
Expand Metrics	When selected, shows one element (for example, a table row, status history row or heatmap cell) per KM per CI. When not selected, shows one element per CI with the aggregated value of all KMs for that CI. KMs are aggregated by taking the maximum Threshold % and the minimum Quality value for the CI.
No Data No KM	The No Data No KM indicates the Quality value for the data. If no KMs are defined for the CI Type, the Quality is set to 0 and the color is shown as teal. If KMs are defined for the CI Type, but no data was returned when the metric was queried, the Quality is set to -1 and the color is shown as gray. If data was received for the metric, the Quality is set to 1 and the color is set based on the Threshold % value as described above. If the If the Expand Metrics checkbox is selected, this is the Quality of a single KM. If the Expand Metrics checkbox is not selected, this is the lowest Quality for all of the KMs on the CI.
6 5 7	The gradient bar is the legend for the display colors, which are determined by the Threshold % and Quality values. A row is green when the value is close to 0 changing to yellow, orange and red as the value gets closer to 100 . Values at or over 100 are shown as red.
	Red indicates the value is at or over 100.
	Yellow indicates the value is between 0 and 100.
	Green indicates the value is close to 0 .
	Teal indicates no KMs are defined for the CI Type.
	Grey indicates KMs are defined for the CI Type but no data was returned when the metric was queried.
Constant Group Size	When selected, Groups are equally sized in the display. When not selected, Groups are sized according to the number of elements in the Group (a Group containing the most elements is rendered with the largest rectangle).

Filter: Shows the current filter parameters and is highlighted in blue when the filter is applied. By default, all data is shown:

CI Name=* | CI Type=* | Metric Name(disabled)=*

To modify the filter of KMs displayed, right-click on an item in the table and select **CI Name**, **CI Type** or **Metric Name** from **Add To Filter** or **Remove From Filter**, then click **Apply Filter**. Click Clear **X** to clear the filter.

- Clears the filter parameters.
- Applies the filter parameters.

Include When selected, includes Detail Level KMs in the display. When not selected, only includes high level KMs. The number following the label (x) is the number of detail level metrics available for the currently displayed KMs.

Mouseover

See the following details via mouseover:

- **Group** The Group name. For displays showing current KM data, this column is only included if the **Group By Service** checkbox is selected. The table shows one row per Group that a CI is associated with.
- Service The Service name. For displays showing current KM data, this column is only included if the **Group By Service** checkbox is selected. The table shows one row Service that a CI is associated with.
- CI Type The CI Type.
- CI Name The CI Name.
- Metric Name The name of the metric. This is only included if the Expand Metrics checkbox is selected. It is the user-friendly metric name, which corresponds to a numeric column in one of the caches associated with the CI Type. To see which cache column provides data for this metric, navigate to Architecture "RTView KM Defs". In the table, look in the CITYPE and SELECTOR columns to find the row for your metric. The CACHENAME column lists the name of the cache containing the metric and the METRICNAME column contains the name of the cache column.
- Metric Value The value of the metric. This is only included if the Expand Metrics checkbox is selected.
- Threshold The Alarm Level value for the alert associated with the metric. This column is only included if the **Expand Metrics** checkbox is selected. To see which alert is associated with this metric, navigate to **Architecture** "RTView KM Defs". In the table, look in the **CITYPE** and **SELECTOR** columns to find the row for your metric. The **AlertName** column lists the name of the alert associated with the metric. NOTE: When looking up the alert threshold for a KM, RTView Enterprise Monitor first looks to see if there is an alert override on the alert where the **AlertIndex** exactly matches the CIName (ignoring the ~ and ; delimiters). If an exact match is found, the override **Alarm Level** is used. If no exact match is found, the **Default Alarm Level** for the alert is used. Note that some alert overrides only contain a partial index and are not used for KM thresholds.
- Threshold % The percent of the Metric Value against the Threshold. If the Expand Metrics checkbox is selected, this is the Threshold % of a single KM. If the Expand Metrics checkbox is not selected, this is the highest Threshold % for all of the KMs on the CI. Depending on the KM, different scales are applied. By default, no scale is applied, but values are limited to 0-10000. For memory metrics, an exponential scale is applied to the Threshold % so that lower values are diminished. For metrics where the alert is a low alert (an alert that executes when the value goes below the threshold), an inverse scale is applied. The colors in the KM displays are based on this value going from green when the value is close to 0 changing to yellow to orange to red as the value gets closer to 100. Values at or over 100 are shown as red to solve the CalcMode is used for this metric, navigate to Architecture "RTView KM Defs". In the table, look in the CITYPE and SELECTOR columns to find the row for your metric. The CalcMode column lists the type of scale that is applied to the metric. If blank, no scale is applied.

Quality	Indicates the quality of the data. If the Expand Metrics checkbox is selected, the value is for a single KM on the CI. If the Expand Metrics checkbox is not selected, the value is for all the KMs on the CI, and shows the lowest Quality of those KMs. Possible values are:
	0 = No KMs are defined for the CI Type (the color is shown as teal).
	-1 = KMs are defined for the CI Type, but no data was returned when the metric was queried (the color is shown as gray).
	1 = Data was received for the metric (the color is set based on the Threshold % value).
Time	The time stamp of the data.

Service KM Table

View Key Metrics current data for one or more Services in your CMDB hierarchy in a table.

The **Service KM Table** shows the same information as the "Service KM Heatmap". Use this display if, for example, you prefer to sort by **Service** or **Threshold %** to identify the Service for which you want to perform proactive health analysis.

The colors of the table rows are determined by the **Threshold %** and **Quality** values. As shown in the color gradient bar **••• ••• ••• •••**, a row is green when the value is close to **0** changing to yellow, orange and red as the value gets closer to **100**. Values at or over **100** are shown as red.

- Red indicates the value is at or over 100.
- Yellow indicates the value is between **0** and **100**.
- Green indicates the value is close to 0.
- Teal indicates no KMs are defined for the CI Type.

Grey indicates KMs are defined for the CI Type but no data was returned when the metric was queried.

Select **Group By Service** to include the **Group** and **Service** columns in the table. Select **Expand Metrics** to include the **Metric Name**, **Metric Value** and **Threshold** columns in the table.

Note: The **CIs** label shows the number of CIs in the table. However, if the CI is associated with multiple Services it is only counted once.

For details about the Key Metrics feature, see "Key Metrics Views" on page 137.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data. Drill-down and investigate by double-clicking a row in the table to view details in the corresponding display.

(1	KM Table	\checkmark		Key Metrics - Curr	rent	25-Sep-2015 14:12 💠 Data OK 💠 💡
Owner:	APPLICATIO	ons 🗸	Area: SECURITY	\checkmark		Cls: 55 Env: PRODUCTION V
Group:	IRIS-COMM	ION	Service:	All Services	-	Show CIs with KMs only (55)
Gro Sen	up By vice				Expand No Data Metrics No KM 0 50	460
Filter:	CI Name=*	CI Type=* Metric Name	e(disabled)=*		X	Apply Filter Include Detail Level Metrics (3)
	Group	Service	E CI Type	E CI Name	E Threshold % E	Quality = Time =
IRIS-CC	MMON	SCAN-CHECK-1	VMWARE-HOST	vSphereW;esxi-1.west	42.0	1 25-Sep-2015 14:12:31
IRIS-CC	DMMON	SCAN-CHECK-1	VMWARE-VM	vSphereW;VMIRIS1051	68.8	1 25-Sep-2015 14:12:31 🔨
IRIS-CC	DMMON	SCAN-CHECK-1	EMS-QUEUE	tcp://VMIRIS1001:7222;SCAN-QUEUE	22.2	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	EMS-QUEUE	tcp://VMIRIS1002:7222;SCAN-QUEUE	44.4	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	EMS-QUEUE	tcp://VMIRIS1003:7222;SCAN-QUEUE	0.0	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	EMS-QUEUE	tcp:///MIRIS1004:7222;SCAN-QUEUE	0.0	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	BW-ENGINE	VMIRIS1051;BW-SCAN-CHECK-SFO	23.6	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	BW-ENGINE	VMIRIS1051;BW-SCAN-CHECK-LAX	47.2	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	BW-ENGINE	VMIRIS1051;BW-SCAN-CHECK-SEA	18.7	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	BW-ENGINE	VMIRIS1051;BW-SCAN-CHECK-PDX	18.7	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	EMS-SERVER	tcp://VMIRIS1051:7222	0.0	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	EMS-QUEUE	tcp://VMIRIS1051:7222;CHECK-QUEUE	0.0	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-1	ORACLE	SCAN-DB	28.6	1 25-Sep-2015 14:12:31
IRIS-CC	MMON	SCAN-CHECK-2	VMWARE-HOST	vSphereE;esxi-1.east	68.1	1 25-Sep-2015 14:12:31 🗸
IRIS-CC	MMON	SCAN-CHECK-2	VMWARE-VM	vSphersE;VMIRIS1061	125.0	1 25-Sep-2015 14:12:31

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Cls: 3,047 The number of items in the display.

Note: The "Up" Arrow () opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Services CI Type Summary**, then clicking opens the "Services CI Type Summary" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

You can also filter KMs by **CI Name**, **CI Type** and **Metric Name**. To modify the **CI Name**, **CI** Type or Metric Name filter, right-click on an item in the display and select CI Name, CI Type or Metric Name from Add To Filter or Remove From Filter, then click Apply Filter 🗸 The Filter: field shows filter parameters and is highlighted in blue after it is applied. Click Clear x to clear the filter.

Note: The Metric Name filter is only editable or applied when the Expand Metrics checkbox is selected.

Fields and Data

This display includes:

Show CIs with KMs only (x)	When selected, hides any CIs that do not have KMs defined. The number following the label (\mathbf{x}) is the number of CIs with KMs defined.				
Group By Service	When selected, includes the Service Group and Service Name in the KM data. CIs that are included in multiple Services will appear multiple times, once for each Service they are associated with.				
Expand Metrics	When selected, shows one element (for example, a table row, status history row or heatmap cell) per KM per CI. When not selected, shows one element per CI with the aggregated value of all KMs for that CI. KMs are aggregated by taking the maximum Threshold % and the minimum Quality value for the CI.				
No Data No KM	The No Data No KM indicates the Quality value for the data. If no KMs are defined for the CI Type, the Quality is set to 0 and the color is shown as teal. If KMs are defined for the CI Type, but no data was returned when the metric was queried, the Quality is set to -1 and the color is shown as gray. If data was received for the metric, the Quality is set to 1 and the color is set based on the Threshold % value as described above. If the If the Expand Metrics checkbox is selected, this is the Quality of a single KM. If the Expand Metrics checkbox is not selected, this is the lowest Quality for all of the KMs on the CI.				
0 S 11	The gradient bar is the legend for the table row colors, which are determined by the Threshold % and Quality values. A row is green when the value is close to 0 changing to yellow, orange and red as the value gets closer to 100 . Values at or over 100 are shown as red.				
	Red indicates the value is at or over 100.				
	Yellow indicates the value is between 0 and 100.				
	Green indicates the value is close to 0.				
	Teal indicates no KMs are defined for the CI Type.				
	igodow Grey indicates KMs are defined for the CI Type but no data was returned when the metric was queried.				
Filter:	Shows the current filter parameters and is highlighted in blue when the filter is applied.				
	By default, all data is shown:				
	CI Name=* CI Type=* Metric Name(disabled)=*				
	To modify the filter of KMs displayed, right-click on an item in the table and select CI Name , CI Type or Metric Name from Add To Filter or Remove From Filter , then click Apply Filter . Click Clear K to clear the filter.				
	Clears the filter parameters.				
	Applies the filter parameters.				
Include Detail Level	When selected, includes Detail Level KMs in the display. When not selected, only includes high level KMs. The number following the label (x) is the number of detail level				

metrics available for the currently displayed KMs. Metrics (##)

- **Group** The Group name. For displays showing current KM data, this column is only included if the **Group By Service** checkbox is selected. The table shows one row per Group that a CI is associated with.
- Service The Service name. For displays showing current KM data, this column is only included if the **Group By Service** checkbox is selected. The table shows one row Service that a CI is associated with.
- **CI Type** The CI Type.
- **CI Name** The CI Name.
- Metric Name The name of the metric. This column is only included if the **Expand Metrics** checkbox is selected. It is the user-friendly metric name, which corresponds to a numeric column in one of the caches associated with the CI Type. To see which cache column provides data for this metric, navigate to **Architecture -** "RTView KM Defs". In the table, look in the **CITYPE** and **SELECTOR** columns to find the row for your metric. The **CACHENAME** column lists the name of the cache containing the metric and the **METRICNAME** column contains the name of the cache column.

Metric Value The value of the metric. This column is only included if the **Expand Metrics** checkbox is selected.

- **Threshold** The **Alarm Level** value for the alert associated with the metric. This column is only included if the **Expand Metrics** checkbox is selected. To see which alert is associated with this metric, navigate to **Architecture -** "RTView KM Defs". In the table, look in the **CITYPE** and **SELECTOR** columns to find the row for your metric. The **AlertName** column lists the name of the alert associated with the metric. NOTE: When looking up the alert threshold for a KM, RTView Enterprise Monitor first looks to see if there is an alert override on the alert where the **AlertIndex** exactly matches the CIName (ignoring the ~ and ; delimiters). If an exact match is found, the override **Alarm Level** is used. If no exact match is found, the **Default Alarm Level** for the alert is used. Note that some alert overrides only contain a partial index and are not used for KM thresholds.
- Threshold % The percent of the Metric Value against the Threshold. If the Expand Metrics checkbox is selected, this is the Threshold % of a single KM. If the Expand Metrics checkbox is not selected, this is the highest Threshold % for all of the KMs on the CI. Depending on the KM, different scales are applied. By default, no scale is applied, but values are limited to 0-10000. For memory metrics, an exponential scale is applied to the Threshold % so that lower values are diminished. For metrics where the alert is a low alert (an alert that executes when the value goes below the threshold), an inverse scale is applied. The colors in the KM displays are based on this value going from green when the value is close to 0 changing to yellow to orange to red as the value gets closer to 100. Values at or over 100 are shown as red increment. To see which CalcMode is used for this metric, navigate to Architecture "RIView KM Defs". In the table, look in the CITYPE and SELECTOR columns to find the row for your metric. The CalcMode column lists the type of scale that is applied to the metric. If blank, no scale is applied.
 Quality Indicates the quality of the data. If the Expand Metrics checkbox is not selected, the value is for a single KM on the CI. and shows the lowest Quality of those KMs. Possible values are:
 0 = No KMs are defined for the CI Type, but no data was returned when the metric was queried (the color is shown as gray).

 $\mathbf{1}$ = Data was received for the metric (the color is set based on the **Threshold %** value).

Time The time stamp of the data.

Service KM History

View history heatmap of Key Metric data, over time, for a selected Group and Service.

This is the most important view for analyzing the correlation between a variety of Key Metrics over time that are related to a Service. You would navigate to this view if:

- you have identified a Service in the Alert Impact View that is having degradation right now. You can select the Service and navigate to the Service KM History display to determine if there are various factors causing the degradation.
- you have looked at the "Service KM Heatmap" or the "Service KM Table" and identified a Service that is about to become degraded. You can navigate to the Service KM History display to proactively analyze the Service before issues arise.

Each row in the history heatmap represents a different CI, unless the **Expand Metrics** checkbox is selected, in which case it represents a metric on a CI. The row color shows the **Threshold %** and **Quality** values.

The **Threshold %** value is rounded up to the closest **10** unless the **Quality** is less than **1**, in which case it shows the **Quality**. As shown in the color gradient bar **10**, the color is green when the value is close to **0** changing to yellow, orange and red as the value gets closer to **100**. Values at or over **100** are shown as red.

- Red indicates the value is at or over 100.
- Yellow indicates the value is between **0** and **100**.
- Green indicates the value is close to 0.
- Teal indicates no KMs are defined for the CI Type.

 $\hfill \bigcirc$ Grey indicates KMs are defined for the CI Type but no data was returned when the metric was queried.

CIs associated with multiple Services are shown once for the first **Group** and **Service** they were associated with, and labeled **+ x more**, where **x** is the number of additional **Groups** and **Services** the CI is associated with.

Select **Expand Metrics** to show each Key Metric in its own row and include the **Metric Name**, **Metric Value** and **Threshold** labels in the mouseover popup window.

For details about the Key Metrics feature, see "Key Metrics Views" on page 137.

Use the available drop-down menus or right-click to filter data shown in the display. Drill-down and investigate by double-clicking a row to view details in the corresponding display.



Title Bar:

Indicators and functionality might include the following:

 CMDB ▼ and Table navigate to display. CMDB ▼ and Table navigate to displays commonly accessed from this display. 19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Clis: 3.047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
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Note: The "Up" Arrow () opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Services CI Type Summary**, then clicking opens the "Services CI Type Summary" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

You can also filter KMs by CI Name, CI Type and Metric Name. To modify the **CI Name**, **CI Type** or **Metric Name** filter, right-click on an item and select **CI Name**, **CI Type** or **Metric Name** from **Add To Filter** or **Remove From Filter**, then click **Apply Filter**. The **Filter**: field shows filter parameters and is highlighted in blue after it is applied. Click Clear **x** to clear the filter.

Note: The **Metric Name** filter is only editable or applied when the **Expand Metrics** checkbox is selected.

Fields and Data

This display includes:

Show CIs with KMs only (x)	When selected, hides any CIs that do not have KMs defined. The number following the label (\mathbf{x}) is the number of CIs with KMs defined.
Expand Metrics	When selected, shows one element (for example, a table row, status history row or heatmap cell) per KM per CI. When not selected, shows one element per CI with the aggregated value of all KMs for that CI. KMs are aggregated by taking the maximum Threshold % and the minimum Quality value for the CI.

No Data No KM	The No Data No KM is the legend for the display colors if the Quality value for the data is less than 1 . If no KMs are defined for the CI Type , the Quality is set to 0 and the color is shown as teal. If KMs are defined for the CI Type, but no data was returned when the metric was queried, the Quality is set to -1 and the color is shown as gray. If data was received for the metric, the Quality is set to 1 and the color is set based on the Threshold % value as described above. If the If the Expand Metrics checkbox is not selected, this is the Quality for all of the KMs on the CI.
0 5 5	The gradient bar is the legend for the display colors, which are determined by the Threshold % and Quality values. A row is green when the value is close to 0 changing to yellow, orange and red as the value gets closer to 100 . Values at or over 100 are shown as red.
	Red indicates the value is at or over 100.
	Yellow indicates the value is between 0 and 100.
	Green indicates the value is close to 0 .
	Teal indicates no KMs are defined for the CI Type.
	metric was queried.
Time Range	Select a time range from the drop down menu varying from 2 Minutes to Last 7 Days , or display All Data . To specify a time range, click Calendar
	Select or Enter Date and Time:
	Restore to Now
	Ok Apply Cancel
	By default, the time range end point is the current time. To change the time range end point, click Calendar and select a date and time from the calendar or enter the date and time in the text field using the following format: MMM dd, YYYY HH:MM . For example, Aug 21, 2011 12:24 PM .
	Use the navigation arrows I to move forward or backward one time period. NOTE: The time period is determined by your selection from the Time Range drop-down menu.
	Click Restore to Now to reset the time range end point to the current time.
	Note: To limit the memory used by the KM history displays, the available time ranges are limited by the number of CIs in the selected Group and Service . This limit can be modified using the strtkmHistoryRowLimit substitution. The
	queried by a history display and this number is used to determine the available time ranges. The default value is 35000 . To change the limit (and the maximum amount of memory used by KM history display), set the following property to a different value: sl.rtview.sub=\$rtvKmHistoryRowLimit:35000 .
Filter:	Shows the current filter parameters and is highlighted in blue when the filter is applied.
	By default, all data is shown:
	CI Name=* CI Type=* Metric Name(disabled)=*
	Name, CI Type or Metric Name from Add To Filter or Remove From Filter, then click Apply Filter \checkmark . Click Clear 🐹 to clear the filter.
	Clears the filter parameters.
	 Applies the filter parameters.
Include Detail Level Metrics (##)	When selected, includes Detail Level KMs in the display. When not selected, only includes high level KMs. The number following the label (x) is the number of detail level metrics available for the currently displayed KMs.

Mouseover

See the following details via mouseover:

- **Group** The **Group** name. For CIs that are associated with multiple Groups, the name of the first **Group** the CI was associated with is shown and labeled **+ x more**, where **x** is the number of additional **Groups** the CI is associated with.
- Service The Service name. For CIs that are associated with multiple Services, the name of the first Service the CI was associated with is shown and labeled **+ x more**, where **x** is the number of additional Services the CI is associated with.
- **CI Type** The CI Type.
- **CI Name** The CI Name.
- Metric Name The name of the metric. This is only included if the Expand Metrics checkbox is selected. It is the user-friendly metric name, which corresponds to a numeric column in one of the caches associated with the CI Type. To see which cache column provides data for this metric, navigate to Architecture "RTView KM Defs". In the table, look in the CITYPE and SELECTOR columns to find the row for your metric. The CACHENAME column lists the name of the cache containing the metric and the METRICNAME column contains the name of the cache column.
- Metric Value The value of the metric. This is only included if the Expand Metrics checkbox is selected.
- Threshold The Alarm Level value for the alert associated with the metric. This column is only included if the **Expand Metrics** checkbox is selected. To see which alert is associated with this metric, navigate to **Architecture -** "RTView KM Defs". In the table, look in the **CITYPE** and **SELECTOR** columns to find the row for your metric. The **AlertName** column lists the name of the alert associated with the metric. NOTE: When looking up the alert threshold for a KM, RTView Enterprise Monitor first looks to see if there is an alert override on the alert where the **AlertIndex** exactly matches the CIName (ignoring the ~ and ; delimiters). If an exact match is found, the override **Alarm Level** is used. If no exact match is found, the **Default Alarm Level** for the alert is used. Note that some alert overrides only contain a partial index and are not used for KM thresholds.
- **Threshold %** The percent of the **Metric Value** against the **Threshold**. If the **Expand Metrics** checkbox is selected, this is the **Threshold %** of a single KM. If the **Expand Metrics** checkbox is not selected, this is the highest **Threshold %** for all of the KMs on the CI.

Depending on the KM, different scales are applied. By default, no scale is applied, but values are limited to **0-10000**. For memory metrics, an exponential scale is applied to the **Threshold %** so that lower values are diminished. For metrics where the alert is a low alert (an alert that executes when the value goes below the threshold), an inverse scale is applied. The colors in the KM displays are based on this value going from green when the value is close to **0** changing to yellow to orange to red as the value gets closer to **100**. Values at or over **100** are shown as red **CalcMode** is used for this metric, navigate to **Architecture -** "RTView KM Defs". In the table, look in the **CITYPE** and **SELECTOR** columns to find the row for your metric. The **CalcMode** column lists the type of scale that is applied to the metric. If blank, no scale is applied.

- Quality Indicates the quality of the data. If the **Expand Metrics** checkbox is selected, the value is for a single KM on the CI. If the **Expand Metrics** checkbox is not selected, the value is for all the KMs on the CI, and shows the lowest **Quality** of those KMs. Possible values are:
 - **0** = No KMs are defined for the CI Type (the color is shown as teal).

-1 = KMs are defined for the CI Type, but no data was returned when the metric was queried (the color is shown as gray).

 $\mathbf{1}$ = Data was received for the metric (the color is set based on the **Threshold %** value).

Time The time stamp of the data.

Size Legend To Labels When selected, the width of the legend is set to the widest label. When not selected, the width of the legend is set to 20% of the available space and labels that are too wide are clipped.

Service KM History (Alt)

View history heatmap of Key Metric data, over time, for a selected Group and Service. This display shows the same data as the "Service KM History" display but contains fewer labels. Each row in the history heatmap represents a different CI, unless the **Expand Metrics** checkbox is selected, in which case it represents a metric on a CI. The row color shows the **Threshold %** and **Quality** values.

As shown in the color gradient bar **10 50 10**, the color is green when the value is close to **0** changing to yellow, orange and red as the value gets closer to **100**. Values at or over **100** are shown as red.

- Red indicates the value is at or over 100.
- Yellow indicates the value is between 0 and 100.
- Green indicates the value is close to 0.
- Teal indicates no KMs are defined for the CI Type.
- $\hfill \bigcirc$ Grey indicates KMs are defined for the CI Type but no data was returned when the metric was queried.

CIs associated with multiple Services are shown once for the first **Group** and **Service** they were associated with, and labeled **+ x more**, where **x** is the number of additional **Groups** and **Services** the CI is associated with.

Select **Expand Metrics** to show each Key Metric in its own row and include the **Metric Name**, **Metric Value** and **Threshold** labels in the mouseover popup window.

For details about the Key Metrics feature, see "Key Metrics Views" on page 137.

Use the available drop-down menus or right-click to filter data shown in the display. Drill-down and investigate by double-clicking a row to view details in the corresponding display.

(1	KM History(Alt)			Key Metrics - History		25-Sep-2018	5 14:17 💠 Data OK 💠 🕜
Owner:	APPLICATIONS	Area: SECU	RITY 🗸]		Cls: 13	Env: PRODUCTION
Group:	IRIS-COMMON	\sim	Service: SCAN-CHECK-1	~			Show CIs with KMs only (13)
C					Expand No Data 0 Metrics No KM	50 100 Time Rang	ge: 5 Mins 🗸
ad Filter:	CI Name=* CI Type=* Metric	c Name(disabled)=*				Apply Filter	Level Metrics (3)
e stri							
- O							
rvice							
od Se							
electe							
for se							
CI's							
AII							
09	9/25/15 14:09:00						09/25/15 14:17:00

Title Bar:

Indicators and functionality might include the following:

 CMDB ▼ and Table navigate to display. CMDB ▼ and Table navigate to displays commonly accessed from this display. 19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Clis: 3.047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
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Note: The "Up" Arrow () opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Services CI Type Summary**, then clicking opens the "Services CI Type Summary" display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

You can also filter KMs by CI Name, CI Type and Metric Name. To modify the **CI Name**, **CI Type** or **Metric Name** filter, right-click on an item and select **CI Name**, **CI Type** or **Metric Name** from **Add To Filter** or **Remove From Filter**, then click **Apply Filter**. The **Filter**: field shows filter parameters and is highlighted in blue after it is applied. Click Clear **x** to clear the filter.

Note: The **Metric Name** filter is only editable or applied when the **Expand Metrics** checkbox is selected.

Fields and Data

This display includes:

Show CIs with KMs only (x)	When selected, hides any CIs that do not have KMs defined. The number following the label (\mathbf{x}) is the number of CIs with KMs defined.
Expand Metrics	When selected, shows one element (for example, a table row, status history row or heatmap cell) per KM per CI. When not selected, shows one element per CI with the aggregated value of all KMs for that CI. KMs are aggregated by taking the maximum Threshold % and the minimum Quality value for the CI.

No Data No KM	The No Data No KM is the legend for the display colors if the Quality value for the data is less than 1 . If no KMs are defined for the CI Type , the Quality is set to 0 and the color is shown as teal. If KMs are defined for the CI Type, but no data was returned when the metric was queried, the Quality is set to -1 and the color is shown as gray. If data was received for the metric, the Quality is set to 1 and the color is set based on the Threshold % value as described above. If the If the Expand Metrics checkbox is selected, this is the Quality for all of the KMs on the CI.
0 6 13	The gradient bar is the legend for the display colors, which are determined by the Threshold % and Quality values. A row is green when the value is close to 0 changing to yellow, orange and red as the value gets closer to 100 . Values at or over 100 are shown as red.
	Red indicates the value is at or over 100.
	Yellow indicates the value is between 0 and 100.
	Green indicates the value is close to 0 .
	Teal indicates no KMs are defined for the CI Type.
	• Grey indicates KMs are defined for the CI Type but no data was returned when the metric was queried.
Time Range	Select a time range from the drop down menu varying from 2 Minutes to Last 7 Days , or display All Data . To specify a time range, click Calendar
	Select or Enter Date and Time:
	Restore to Now
	Ok Apply Cancel
	By default, the time range end point is the current time. To change the time range end point, click Calendar and select a date and time from the calendar or enter the date and time in the text field using the following format: MMM dd, YYYY HH:MM . For example, Aug 21, 2011 12:24 PM .
	Use the navigation arrows I to move forward or backward one time period. NOTE: The time period is determined by your selection from the Time Range drop-down menu.
	Click Restore to Now to reset the time range end point to the current time.
	Note: To limit the memory used by the KM history displays, the available time ranges are limited by the number of CIs in the selected Group and Service . This limit can be modified using the \$rtvKmHistoryRowLimit substitution. The \$rtvKmHistoryRowLimit substitution sets the maximum number of rows that can be
	queried by a history display and this number is used to determine the available time ranges. The default value is 35000 . To change the limit (and the maximum amount of memory used by KM history display), set the following property to a different value: sl.rtview.sub=\$rtvKmHistoryRowLimit:35000 .
Filter:	Shows the current filter parameters and is highlighted in blue when the filter is applied.
	By default, all data is shown:
	CI Name=* CI Type=* Metric Name(disabled)=*
	Name , CI Type or Metric Name from Add To Filter or Remove From Filter , then click Apply Filter V . Click Clear X to clear the filter.
	Clears the filter parameters.
	Applies the filter parameters.
Include Detail Level Metrics (##)	When selected, includes Detail Level KMs in the display. When not selected, only includes high level KMs. The number following the label (x) is the number of detail level metrics available for the currently displayed KMs.

Mouseover

See the following details via mouseover:

- **Group** The **Group** name. For CIs that are associated with multiple Groups, the name of the first **Group** the CI was associated with is shown and labeled **+ x more**, where **x** is the number of additional **Groups** the CI is associated with.
- Service The Service name. For CIs that are associated with multiple Services, the name of the first Service the CI was associated with is shown and labeled **+ x more**, where **x** is the number of additional Services the CI is associated with.
- **CI Type** The CI Type.
- **CI Name** The CI Name.
- Metric Name The name of the metric. This is only included if the Expand Metrics checkbox is selected. It is the user-friendly metric name, which corresponds to a numeric column in one of the caches associated with the CI Type. To see which cache column provides data for this metric, navigate to Architecture "RTView KM Defs". In the table, look in the CITYPE and SELECTOR columns to find the row for your metric. The CACHENAME column lists the name of the cache containing the metric and the METRICNAME column contains the name of the cache column.
- Metric Value The value of the metric. This is only included if the Expand Metrics checkbox is selected.
- Threshold The Alarm Level value for the alert associated with the metric. This column is only included if the **Expand Metrics** checkbox is selected. To see which alert is associated with this metric, navigate to **Architecture -** "RTView KM Defs". In the table, look in the **CITYPE** and **SELECTOR** columns to find the row for your metric. The **AlertName** column lists the name of the alert associated with the metric. NOTE: When looking up the alert threshold for a KM, RTView Enterprise Monitor first looks to see if there is an alert override on the alert where the **AlertIndex** exactly matches the CIName (ignoring the ~ and ; delimiters). If an exact match is found, the override **Alarm Level** is used. If no exact match is found, the **Default Alarm Level** for the alert is used. Note that some alert overrides only contain a partial index and are not used for KM thresholds.
- Threshold % The percent of the Metric Value against the Threshold. If the Expand Metrics checkbox is selected, this is the Threshold % of a single KM. If the Expand Metrics checkbox is not selected, this is the highest Threshold % for all of the KMs on the CI.

Depending on the KM, different scales are applied. By default, no scale is applied, but values are limited to **0-10000**. For memory metrics, an exponential scale is applied to the **Threshold %** so that lower values are diminished. For metrics where the alert is a low alert (an alert that executes when the value goes below the threshold), an inverse scale is applied. The colors in the KM displays are based on this value going from green when the value is close to **0** changing to yellow to orange to red as the value gets closer to **100**. Values at or over **100** are shown as red **CalcMode** is used for this metric, navigate to **Architecture -** "RTView KM Defs". In the table, look in the **CITYPE** and **SELECTOR** columns to find the row for your metric. The **CalcMode** column lists the type of scale that is applied to the metric. If blank, no scale is applied.

Quality Indicates the quality of the data. If the **Expand Metrics** checkbox is selected, the value is for a single KM on the CI. If the **Expand Metrics** checkbox is not selected, the value is for all the KMs on the CI, and shows the lowest **Quality** of those KMs. Possible values are:

0 = No KMs are defined for the CI Type (the color is shown as teal).

-1 = KMs are defined for the CI Type, but no data was returned when the metric was queried (the color is shown as gray).

 $\mathbf{1}$ = Data was received for the metric (the color is set based on the **Threshold %** value).

Time The time stamp of the data.

Available KM Metrics and Alerts

This section lists available Key Metrics and their associated alerts.

- "Amazon AWS"
- "Custom Solution Package"
- "Host Agent"
- "IBM DB2"
- "IBM MQ"
- "IBM WebSphere"
- "JBoss"
- "Oracle Coherence"
- "Oracle Database"
- "Oracle WebLogic"
- "RTVMGR"

- "RTVRULES"
- "Solace"
- "TIBCO ActiveSpaces"
- "TIBCO BusinessWorks (Version 5) Monitor"
- "TIBCO BusinessWorks (Version 6) Monitor"
- "TIBCO EMS"
- "UX"
- "VMWare vSphere"

Amazon AWS

The following KMs are available with the Solution Package for Amazon AWS. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.).

СІ Туре	Cache	Selector	Metric / Alert
ACW	AwsEc2Instan ceStats	Instance CPU Usage	CPUUtilization / AcwInstanceCpuHigh

Custom Solution Package

The following KMs are available with the Custom Solution Package which comes with RTView EM. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.)

СІ Туре	Cache	Selector	Metric / Alert
CUSTOM	CustomBirdData	Bird Too High	Y / CustomBirdTooHigh

Host Agent

The following KMs are available with the Solution Package for RTView Host Agent. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.)

СІ Туре	Cache	Selector	Metric / Alert
HOST	HostStats	% CPU Utilization	usedPerCentCpu / HostCpuPercentHigh
HOST	HostStats	% Memory Used	MemUsedPerCent / HostMemoryUsedHigh

IBM DB2

The following KMs are available with the Solution Package for IBM DB2. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.)

СІ Туре	Cache	Selector	Metric / Alert
DB2	Db2ResponseTime	Response Time	ResponseTimeMilliSec / Db2ResponseTimeHigh

IBM MQ

The following KMs are available with the Solution Package for IBM WebSphere MQ. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.)

СІ Туре	Cache	Selector	Metric / Alert
MQ- BROKER	MqBrokers	Queue Depth	Current queue depth / MqBrokerQueueDepthHigh
MQ-QUEUE	MqQueues	Queue Depth	Current queue depth / MqQueueDepthHigh

IBM WebSphere

The following KMs are available with the Solution Package for IBM WebSphere. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.)

CI Type	Cache	Selector	Metric / Alert
WAS	WasServerStats	Live Session Count	LiveCount / WasLiveSessionCountHigh
WAS	WasServerStats	WAS CPU %	ProcessCpuUsage / WasJvmCpuHigh
WAS	WasServerStats	Memory Used %	usedMemoryPercent / WasMemoryUsedPercentHigh
WAS- APP	WasServletTotal sByApp	Response Time	responseTime / WasServletResponseTimeHigh
WAS- APP	WasServletTotal sByApp	Requests / sec	DeltatotalRequests / WasServletRequestRateHigh

JBoss

The following KMs are available with the Solution Package for JBoss. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.)

CI Type	Cache	Selector	Metric / Alert
JBOSS-	JbossDeployme	Active	activeSessions / JbossAppActiveSessionsHigh
APP	nts	Sessions	

JBOSS-	JbossServerStat	% Process	ProcessCpuLoadPercent /
SERVER	s	CPU	JbossServerProcessCpuLoadHigh
JBOSS- SERVER	JbossDeployme ntTotals	Active Sessions	activeSessions / JbossServerActiveSessionsHigh The level of this Key Metric is 1 . (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)

Oracle Coherence

The following KMs are available with the Solution Package for Oracle Coherence. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.) For alert definitions, see *RTView® Oracle® Coherence Monitor User's Guide*.

CI Type	Cache	Selector	Metric / Alert
OC- CACHE	OcCacheTotals	Rate Cache Misses	RateCacheMisses / OcCacheRateCacheMissesHigh This metric is the rate of cache misses against a given tier of a given cache for a given service in a given (Coherence) cluster. The tier can be front, where appropriate, or back. Caches and services are named, and (Coherence) clusters are represented by their named monitoring connection.
OC- CACHE	OcCacheTotals	Rate Store Reads	RateStoreReads / OcCacheRateStoreReadsHigh The level of this Key Metric is 1. (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.) This metric is the rate of store reads (load operations) against a given tier of a given cache for a given service in a given (Coherence) cluster. The tier can be front, where appropriate, or back. Caches and services are named, and (Coherence) clusters are represented by their named monitoring connection.
OC- CACHE	OcCacheTotals	Rate Store Writes	RateStoreWrites / OcCacheRateStoreWritesHigh The level of this Key Metric is 1. (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.) This metric is the rate of store writes (store and erase operations) against a given tier of a given cache for a given service in a given (coherence) cluster. The tier can be front, where appropriate, or back. Caches and services are named, and (coherence) clusters are represented by their named monitoring connection.
OC- CACHE	OcCacheTotals	Queue Size	QueueSizePos / OcCacheQueueSizeHigh This metric is the cache send queue size for a given tier of a given cache for a given service in a given (coherence) cluster. The tier can be front, where appropriate, or back. Caches and services are named, and (coherence) clusters are represented by their named monitoring connection.
OC- CACHE	OcCacheTotals	Rate Cache Puts	RateTotalPuts / OcCacheRateTotalPutsHigh This metric is the rate of cache puts against a given tier of a given cache for a given service in a given (coherence) cluster. The tier can be front, where appropriate, or back. Caches and services are named, and (coherence) clusters are represented by their named monitoring connection.

OC-	OcCacheTotals	Rate Cache	RateTotalGets / OcCacheRateTotalGetsHigh
CACHE		Gets	This metric is the rate of cache gets against a given tier of a given cache for a given service in a given (coherence) cluster. The tier can be front, where appropriate, or back. Caches and services are named, and (coherence) clusters are represented by their named monitoring connection.
OC-	OcCacheTotals	Rate Store	RateStoreReads / OcCacheRateStoreReadsHigh
CACHE		Reads	The level of this Key Metric is 1 . (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
OC-	OcCacheTotals	Rate Store	RateStoreWrites / OcCacheRateStoreWritesHigh
CACHE		Writes	The level of this Key Metric is 1 . (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
OC-	OcPacketStats	Packet Loss	SentFailureRate / OcBadCommunicationCluster
CLUSTER			This metric is the (network/packet) sent failure rate averaged across all of the nodes of a cluster.
OC-	OcNodeTotals	CPU Used %	AvgCpuPercent / OcClusterNodesCPUHigh
CLUSTER NODES			This metric is the average CPU usage of all the nodes of a given storage class in a cluster. The storage class is represented by the StorageEnabled index column, which can be true or false . Thus metrics for storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = true , and non storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = false . This metric is shown as a trace in the Cluster - Memory/Network Health display. The metric is labeled Avg. CPU% and is displayed (for storage enabled nodes) in the Storage Nodes trend grouping and (for non storage enabled nodes) in the Process Nodes trend grouping.
OC-	OcNodeTotals	Packet Rx	RcvdFailureRate100 / OcclusterNodesRcvdFailureRateHigh
NODES		LUSS	This metric is the (network/packet) received failure rate averaged across all of the nodes of a given storage class in a cluster. The storage class is the StorageEnabled index column, which can be true or false . Metrics for storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = true , and non storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = true , and non
OC-	OcNodeTotals	Memory	MemoryUsedPct100 / OcClusterNodesMemHigh
CLUSTER NODES		Used %	This metric is the memory used percentage averaged across all of the nodes of a given storage class in a cluster. The storage class is the StorageEnabled index column, which can be true or false . Metrics for storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = true , and non storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = true , and non storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = false .
OC-	OcNodeTotals	Packet Tx Loss	SentFailureRate100 / OcclusterNodesSentFailureRateHigh
NODES			This metric is the (network/packet) sent failure rate averaged across all of the nodes of a given storage class in a cluster. The storage class is the StorageEnabled index column, which can be true or false . Metrics for storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = true , and non storage enabled nodes in a cluster are aggregated into a cache row where StorageEnabled = true , and non

Oracle Database

The following KMs are available with the Solution Package for Oracle Database. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.)

CI Type	Cache	Selector	Metric / Alert
ORACLE	OraDatabaseA vailability	Response Time	ResponseTimeMilliSec / OraDatabaseResponseTimeHigh

Oracle WebLogic

The following KMs are available with the Solution Package for Oracle WebLogic. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
WLS	WIsJvmStats	JVM CPU %	JvmProcessorLoad / WIsServerCpuHigh
WLS	WIsJvmStats	JVM Memory %	MemoryUsedPercent / WIsServerMemoryUsageHigh
WLS	WIsThreadPool Runtime	Hogging Threads	HoggingThreadCount / WlsHoggingThreadsHigh
WLS	WIsServerRun time	Open Sockets	OpenSocketsCurrentCount / WIsOpenSocketsHigh The level of this Key Metric is 1 . (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
WLS	WIsThreadPool Runtime	Thread Total Count	ExecuteThreadTotalCount / WIsThreadsTotalHigh The level of this Key Metric is 1 . (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
WLS- APP	WIsSessionSta ts	Open Sessions	OpenSessionsCurrentCount / WIsAppOpenSessionsHigh
WLS- JMS- DEST	WIsJmsDestin ationTotals	Messages Pending	MessagesPendingCount/ WIsJmsDestinationMessagesPendingHigh
WLS- JMS- SERVER	WlsJmsServer Runtime	Messages Pending	MessagesPendingCount/ WlsJmsMessagesPendingHigh

RTVMGR

The following KMs are available with the RTVMGR Solution Package which comes with RTView EM. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
JVM	JvmOperatingSy stem	Cpu %	CpuPercent / JvmCpuPercentHigh

JVM	JvmMemory	Memory %	MemoryUsedPercent / JvmMemoryUsedHigh
JVM	JvmThreading	Thread	ThreadCount / JvmThreadCountHigh
			The level of this Key Metric is 1 . (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
ТОМСАТ	TomcatWebMod uleTotals	Active Sessions	activeSessions / TomcatActiveSessionsHigh
ТОМСАТ	TomcatWebMod uleTotals	Accesses / sec	RateaccessCount / TomcatAccessRateHigh
TOMCAT- APP	TomcatWebMod uleStats	Active Sessions	activeSessions / TomcatAppActiveSessionsHigh
TOMCAT- APP	TomcatWebMod uleStats	Accesses / sec	RateaccessCount / TomcatAppAccessRateHigh

RTVRULES

The following KMs are available with the RTVRULES Solution Package which comes with RTView EM. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
EM-	RtvCmdbServic	Alert	AlertImpact / RtvEmServiceAlertImpactHigh
SERVICE	eStats_local	Impact	

Solace

The following KMs are available with the Solution Package for Solace. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
SOLACE- MSGROU TER	SolAppliances	# Msgs Spooled	num-messages-spooled / SolMsgRouterPendingMsgsHigh
SOLACE- VPN	SolVpns	Connectio ns	connections / SolVpnConnectionCountHigh

TIBCO ActiveMatrix

The following KMs are available with the Solution Package for TIBCO ActiveMatrix. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
AMX-	AmxServic	Service Hits/	Hits Per Minute / AmxServiceHitRateHigh
SERVICE	eTotals	Min	

AMX- SERVICE	AmxServic eTotals	Service Response Time	Avg. Response Time / AmxServiceResponseTimeHigh
AMX- SERVICE NODE	AmxServic es	Node Hits/ Min	Hits Per Minute / AmxServiceNodeHitRateHigh
AMX- SERVICE NODE	AmxServic es	Node Response Time	Avg. Response Time / AmxServiceNodeResponseTimeHigh

TIBCO ActiveSpaces

The following KMs are available with the Solution Package for TIBCO ActiveSpaces. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
TAS- MEMBER BYSPACE	TasSeeders	Space Util by Seeder	spaceUtilPerSeeder / TasMemberSeederCapacity
TAS- SPACE	TasSpaceSta tistics	Gets/sec	RateGets / TasSpaceGetRateHigh
TAS- SPACE	TasSpaceSta tistics	Puts/sec	RatePuts / TasSpacePutRateHigh

TIBCO BusinessEvents

The following KMs are available with the Solution Package for TIBCO BusinessEvents. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
TBE- CLUSTER	TbeCluster Summary	Received Events Rate	Received Events Rate / TbeClusterEventsRecvdRateHigh
TBE- CLUSTER	TbeCluster Summary	Rules Fired Rate	totalRateTotalNumberRulesFired / TbeClusterRuleFiringRateHigh
TBE- CLUSTER	TbeCluster Summary	Concept Cache Ops Rate	totalConceptOperationRate / TbeClusterConceptOpRateHigh
TBE- CLUSTER	TbeCluster Summary	Backing Store Ops Rate	totalBkngStoreOpsPerSec / TbeClusterBkngStoreOpRateHigh

TIBCO BusinessWorks (Version 5) Monitor

The following KMs are available with the Solution Package for TIBCO BusinessWorks version 5. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
BW- ENGINE	BwEngines	CPU Used %	CPU % / BwEngineCpuUsedHigh
BW- ENGINE	BwEngines	Memory Used %	PercentUsed / BwEngineMemUsedHigh
BW- PROCESS	BwProcesses	AverageElapsed	Process Avg Elapsed Time / BwProcessAvgElapsedTimeHigh
BW- PROCESS	BwProcesses	RateCreated / sec	Processes Created/sec / BwProcessCreatedRateHigh
BW- PROCESS	BwProcesses	TotalCpuPercent	Process Total CPU Percent / BwProcessTotalCpuPercentHigh
BW- PROCESS	BwProcesses	Process Exec Time / sec	RateTotalExecution / BwProcessExecutionTimeHigh
BW- SERVER	BwServers	CPU Used %	CPU Usage % / BwServerCpuUsedHigh

TIBCO BusinessWorks (Version 6) Monitor

The following KMs are available with the Solution Package for TIBCO BusinessWorks version 6. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
BW6- APPNODE	Bw6AppNode s	CPU Used %	Used CPU Percentage / Bw6AppNodeCpuUsedHigh
BW6- APPNODE	Bw6AppNode s	Mem Used %	Used Memory Percentage / Bw6AppNodeMemUsedHigh
BW6-APP	Bw6ProcessTo talsByApp	App Created / sec	RateCreated / Bw6AppProcessCreatedRateHigh
BW6-APP	Bw6ProcessTo talsByApp	App Exec Time / sec	RateTotal Execution / Bw6AppProcessExecutionTimeHigh
BW6- PROCESS	Bw6Processes	Process Created / sec	RateCreated / Bw6ProcessCreatedRateHigh
BW6- PROCESS	Bw6Processes	Process Exec Time / sec	RateTotal Execution / Bw6ProcessExecutionTimeHigh

TIBCO EMS

The following KMs are available with the Solution Package for TIBCO EMS. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
EMS- QUEUE	EmsQueues	Pending Msgs	pendingMessageCount / EmsQueuesPendingMsgsHigh
EMS- QUEUE	EmsQueues	In Msgs / sec	inboundMessageRate / EmsQueuesInMsgRateHigh
EMS- QUEUE	EmsQueues	Out Msgs / sec	outboundMessageRate / EmsQueuesOutMsgRateHigh
EMS- QUEUE	EmsQueues	Consume rs	consumerCount / EmsQueuesConsumerCountHigh The level of this Key Metric is 1 . (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
EMS- SERVER	EmsServerl nfo	Pending Msgs	pendingMessageCount / EmsServerPendingMsgsHigh
EMS- SERVER	EmsServerl nfo	In Msgs / sec	inboundMessageRate / EmsServerInMsgRateHigh
EMS- SERVER	EmsServerl nfo	Out Msgs / sec	outboundMessageRate / EmsServerOutMsgRateHigh
EMS- SERVER	EmsServerI nfo	Msg Mem %	messageMemoryPct / EmsServerMemUsedHigh The level of this Key Metric is 1. (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
EMS- SERVER	EmsServerI nfo	Connecti ons	<pre>connectionCount / EmsServerConnectionCountHigh The level of this Key Metric is 1. (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)</pre>
EMS- SERVER	EmsServerI nfo	Async DB Size	asyncDBSize / EmsServerAsyncDBSyzeHigh The level of this Key Metric is 1. (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
EMS- SERVER	EmsServerI nfo	Sync DB Size	<pre>syncDBSize / EmsServerSyncDBSizeHigh The level of this Key Metric is 1. (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)</pre>
EMS- TOPIC	EmsTopics	Pending Msgs	pendingMessageCount / EmsTopicsPendingMsgsHigh
EMS- TOPIC	EmsTopics	In Msgs / sec	inboundMessageRate / EmsTopicsInMsgRateHigh
EMS- TOPIC	EmsTopics	Out Msgs / sec	outboundMessageRate / EmsTopicsOutMsgRateHigh

EMS- TOPIC	EmsTopics	Consume rs	consumerCount / EmsTopicsConsumerCountHigh The level of this Key Metric is 1. (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)
EMS- TOPIC	EmsTopics	Subscribe rs	<pre>subscriberCount / EmsTopicsSubscriberCountHigh The level of this Key Metric is 1. (Level 0 KMs are always displayed. Level 1 KMs are displayed if the Include Detail Level Metrics checkbox is checked.)</pre>

UX

The following KMs are available with the Solution Package for UX. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
UX-URL	UXURLData	Response Time	MostRecentTime / UXURLResponseSlow

VMWare vSphere

The following KMs are available with the Solution Package for VMWare vSphere. The level of the Key Metric is **0** except where noted. Level **0** KMs are always shown in displays. Level **1** KMs are displayed if the **Include Detail Level Metrics** checkbox is selected.

СІ Туре	Cache	Selector	Metric / Alert
VMWARE	VmwHostSyste	CPU	cpu.usage.average / VmwHostCpuUtilizationHigh
-HOST	ms	Usage	
VMWARE	VmwHostSyste	Memory	mem.usage.average / VmwHostMemoryUsageHigh
-HOST	ms	Usage	
VMWARE	VmwVirtualMac	CPU	cpu.usage.average / VmwVmCpuUtilizationHigh
-VM	hines	Usage	
VMWARE	VmwVirtualMac	Memory	mem.usage.average / VmwVmMemoryUsageHigh
-VM	hines	Usage	

Component Views

These displays present the lowest level view of CMDB contents--the component level. In these displays, alert states for components are shown by Service and Area in tabular and heatmap formats, while highlighting the most critical alert state for each component. Data can be filtered by Areas, Services, Groups, Regions and Environment. Data is filtered by the \$rtvOwnerMask, \$rtvAreaMask, \$rtvGroupMask and \$rtvServiceMask values for the logged in user. For details, see "Configure User and Role Management" on page 44.

Use these displays to determine whether a component is malfunctioning. Displays in this View are:

- "CI / Service Tree View" on page 164: Table of CMDB contents for all component-level details by Service for all Owners, Areas, Groups, Regions and Environments (without the option to filter).
- "CI / Service Table" on page 166: Table of CMDB contents for all component-level details by Service for all Owners, Areas, Groups, Regions and Environments (without the option to filter).
- "CI / Type Heatmap" on page 168: Heatmap of CMDB contents organized by CIType, with the option to filter by Owner, Area, Group, Environment and alert Metric, and show CI Names.
- "CI / Type Table" on page 169: Table of CMDB contents for all component-level details for all Areas, Services, Groups, Regions and Environments, with the option to filter by Owner and one or all Areas, Groups and Environments.

CI / Service Tree View

View the contents of the CMDB hierarchically ordered in a navigation tree. Each row in the table is a different CI (for example, **localhost;RTVMGR_DATASERVER**).

Make a selection from the **Owner** drop-down menu, then use the navigation tree to filter data in the **Service CI Table**. The navigation tree, which provides a visual of the CMDB hierarchy, provides further filtering to the **Area**, **Group**, and **Environment** drop-down menus. Click Sort to order column data.

🗲 Tree 💌		Service Components			24-Se	p-2015 11:24 🗳 Dat	a OK 🔶	?
Owner Infrastructure	Area All Areas	▼						
Group All Service Groups	Env QA	T						
					Nur	mbor of Component	C 5 497	
Contrastructure	Service CI Table	e - Current Status			Nul	inder of Component	5. 0,407	_
E Middleware	CIType	CIName	Severity	Alerts	Criticality	Environment	Regi	
	MQ-BROKER	vmrh5-1	(1	E	DEMOSITE	AMER	=
	MQ-BROKER	vmrh5-2	0	1	E	DEMOSITE	AMER	
TOMCAT	MQ-BROKER	vmrh5-3	(O	0	E	DEMOSITE	AMER	_
SOLACE	MQ-QUEUE	vmrh5-1;TEST_Q_01	<u> </u>	2	E	DEMOSITE	AMER	
TI CTIBCO-BW	MQ-QUEUE	vmrh5-1;TEST_Q_02	(O	0	E	DEMOSITE	AMER	_
	MQ-QUEUE	vmrh5-1;TEST_Q_03	(<u>)</u>	0	E	DEMOSITE	AMER	_
	MQ-QUEUE	vmrh5-1;TEST_Q_04	(O	0	E	DEMOSITE	AMER	_
E CO-BE	MQ-QUEUE	vmrh5-1;TEST_Q_05	(O	0	E	DEMOSITE	AMER	
TIBCO-EMS	MQ-QUEUE	vmrh5-1;TEST_Q_06		0	E	DEMOSITE	AMER	_
Processes	MQ-QUEUE	vmrh5-1;TEST_Q_07	(C)	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-1;TEST_Q_08	(O	0	E	DEMOSITE	AMER	_
	MQ-QUEUE	vmrh5-1;TEST_Q_09	(O	0	E	DEMOSITE	AMER	
E C Servers	MQ-QUEUE	vmrh5-1;TEST_Q_10		0	E	DEMOSITE	AMER	_
🗉 🌔 Hosts	MQ-QUEUE	vmrh5-2;TEST_Q_01	<u> </u>	2	E	DEMOSITE	AMER	
Contabases	MQ-QUEUE	vmrh5-2;TEST_Q_02	0	2	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-2;TEST_Q_03	(Č)	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-2;TEST_Q_04		0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-2;TEST_Q_05	0	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-2;TEST_Q_06	6	2	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-2;TEST_Q_07		0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-2;TEST_Q_08	0	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-2;TEST_Q_09	0	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-2;TEST_Q_10	0	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-3;TEST_Q_01	0	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-3;TEST_Q_02	0	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-3;TEST_Q_03	0	0	E	DEMOSITE	AMER	
	MQ-QUEUE	vmrh5-3;TEST Q 04		0	E	DEMOSITE	AMER	
	•	III					•	

Title Bar:

Indicators and functionality might include the following:

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Number of Components	The total number of CIs currently in the table.
СІТуре	The type of CI.
CIName	The name or address of the CI.
Severity	 The maximum level of alerts for the CI. Values range from 0 to 2, where 2 is the greatest Alert Severity: One or more alerts exceeded their ALARM LEVEL threshold. One or more alerts exceeded their WARNING LEVEL threshold. No alert thresholds have been exceeded.
Criticality	The Criticality (rank of importance) specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views / CI Service Table display, which range from A to E, where A is the highest Criticality. This value is used to determine the value for Alert Impact.
Environment	The Environment for the CI.
Region	The name of the Region for the CI.

City	The name of the City for the CI.
Country	The name of the Country for the CI.
SiteName	The name of the Site for the CI.
OSType	The operating system currently running on the CI.
City	The name of the City for the CI.
Country	The name of the Country for the CI.

CI / Service Table

View the contents of the CMDB, without filtering, in a tabular format. Each row in the able is a different CI (for example, **localhost;RTVMGR_DATASERVER**).

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data.

CMDB	T	A	II Components By Service CMDB		24-Sep-2015 11:22 💠 Data OK	•	0
		Ser	vice CI Table - Current Values		Number of Rows: 5,	784	
Owner	Area	ServiceGroup	ServiceName	CIType	CIName	Se	
Jerelyn Parker	Backends	IBM	MQ	MQ-BROKER	vmrh5-1		-
Jerelyn Parker	Backends	IBM	MQ	MQ-BROKER	vmrh5-2		Ξ
Jerelyn Parker	Backends	IBM	MQ	MQ-BROKER	vmrh5-3		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_01		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_02		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_03		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_04		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_05		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_06		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_07		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_08		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_09		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-1;TEST_Q_10		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_01		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_02		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_03		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_04		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_05		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_06		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_07		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_08		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_09		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-2;TEST_Q_10		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-3;TEST_Q_01		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-3;TEST_Q_02		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-3;TEST_Q_03		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-3;TEST_Q_04		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-3;TEST_Q_05		
Jerelyn Parker	Backends	IBM	MQ	MQ-QUEUE	vmrh5-3;TEST_Q_06		Ψ.
•						•	

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> → and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

- Open an instance of this display in a new window.
- Open the online help page for this display.

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table

row.

Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

Number of Rows	The current total	number of	rows in the ta	ble.

Service CI Table

The Owner the CI is associated with.
The Area the CI is associated with.
The Group the CI is associated with.
The Service the CI is associated with.
The type of CI.
The name or address of the CI.
 The maximum level of alerts for the CI. Values range from 0 to 2, where 2 is the greatest Alert Severity: One or more alerts exceeded their ALARM LEVEL threshold. One or more alerts exceeded their WARNING LEVEL threshold. No alert thresholds have been exceeded.
The Criticality (rank of importance) specified in the Service Data Model (CMDB) by your administrator. Criticality values are listed in the Component Views - CI Service Table display, which range from A to E , where A is the highest Criticality. This value is used to determine the value for Alert Impact.
The Environment for the CI.
The name of the City for the CI.
The name of the Country for the CI.
The name of the Region for the CI.
The name of the Site for the CI.

CI / Type Heatmap

View heatmap of alert states for CIs in all or one Area, Group or Environment. The heatmap organizes CIs by CI Type, and uses color to show the most critical alert state for each. Each rectangle in the heatmap represents a CI (for example, **localhost;RTVMGR_DATASERVER**).

Use the available drop-down menus or right-click to filter data shown in the display. Use the check-boxes ☑ to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. Double-click (or right-click and select **Drill Down**) a rectangle in the heatmap to view details relevant to the CI Type. By default, this display shows all Areas, Groups, and Environments and alert Impact.



Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

- + Open an instance of this display in a new window.
- Open the online help page for this display.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Metric:

Choose the type of metric to show in the heatmap. Each metric has its own gradient bar that maps relative values to colors:

Alert Impact	The product of the maximum Alert Severity of alerts in the heatmap rectangle multiplied by the maximum Criticality of alerts in the heatmap rectangle. Values range from 0 - 10 , as indicated in the color gradient bar , where 10 is the highest Alert Impact.
Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient • • • • • • • • • •
	 Yellow indicates that one or more metrics have reached their alarm threshold. Metrics that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of 1. Green indicates that no metrics have reached their alert thresholds. Metrics that have not exceeded their specified thresholds have an Alert Severity value of 0.
Alert Count	The total number of critical and warning alerts in the heatmap rectangle. The color gradient bar, populated by the current heatmap, shows the value/color mapping. The numerical values in the gradient bar range from 0 to the maximum count of alerts in the heatmap. The middle value in the gradient bar indicates the average alert count.
Criticality	The maximum level of Criticality (rank of importance) in the heatmap rectangle. Values range from 1 to 5, as indicated in the color gradient • • • • • • • • • •

CI / Type Table

View tabular list of all CIs by CIType, as well as their alert metrics (Impact, Severity and Count, for one or all Areas, Groups or Environments). Each row in the table is a different CI (for example, **localhost;RTVMGR_DATASERVER**). The row color represents the most critical alert state for the CI.

Use the available drop-down menus or right-click to filter data shown in the display. Click Sort to order column data.

< Table	All Components By Type	;	24-Sep-2015 11	:16 💠 Data OK 🕯	• 0
Owner: Infrastruc	ture 💽 Area: All Areas	-	Cls: 64	Env: QA	•
Group: All Servic	e Groups				
CIType	CIName	Severity	AlertCount	AlertImpact	
EMS-QUEUE	tcp://192.168.200.132:7222;queue.sample	0	3	2	
EMS-QUEUE	tcp://192.168.200.132:7222;sample	0	3	2	
EMS-SERVER	tcp://192.168.200.132:7222	0	2	2	
EMS-TOPIC	tcp://192.168.200.132:7222;sample	0	2	2	
EMS-TOPIC	tcp://192.168.200.132:7222;topic.sample	0	2	2	=
EMS-TOPIC	top://192.168.200.132:7222;topic.sample.exported	0	2	2	
EMS-TOPIC	top://192.168.200.132:7222;topic.sample.imported	0	2	2	
HOST	QATB;SLHOST-WIN3	0	2	2	
HOST	QATB;SLHOST-WIN4 0 1 1			1	
JVM	localhost;ALERTHISTORIAN O 1			1	
JVM	localhost;ALERT_SERVER	0	3	2	
JVM	localhost;AMXMON-HISTORIAN	0	1	2	
JVM	localhost;AMXMON-SLHOST-WIN3	0	2	1	
JVM	localhost;AMXMON-SLHOST-WIN4	0	2	1	
JVM	localhost;BWMON-HISTORIAN	0	1	2	
JVM	localhost;BWMONITOR-WIN-8	0	1	2	
JVM	localhost;CONFIG_SERVER	0	2	1	
JVM	localhost;DISPLAYSERVER C 2 1				
JVM	localhost;DISPLAYSERVER_DARKSTYLES 0 2 1				
JVM	localhost;EMSMON-HISTORIAN	0	1	2	
JVM	localhost;EMSMON-SLHOST-WIN3	6	2	2	
JVM	localhost;EMSMON-SLHOST-WIN4	0	2	1	
JVM	localhost;EMSMONITOR-WIN-8	<u>()</u>	2	2	
JVM	localhost;MISCMON-HISTORIAN	0	1	2	<u> </u>

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> → and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

+ Open an instance of this display in a new window.

Open the online help page for this display.

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

• Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Filter By:

The following filtering options are typically included:

Owner: Choose an Owner to see metrics for Areas associated with that Owner.

Area: Choose an Area to see metrics for Groups associated with that Area and Owner.

Group: Choose a Group to see metrics for Services associated with that Group, Area and Owner.

Service: Choose a Service to see metrics for Environments associated with that Service, Group, Area and Owner.

Env: Choose an Environment to see metrics for Environments associated with that Service, Group, Area and Owner.

Fields and Data

This display includes:

CI Count The total number of CIs listed in the table. This value is determined by the selections made from display drop-down menus. The totals number for each Environment are also shown.

CI Table

This table lists all CIs for the selected Group. Each row in the table is a CI. Each CI can have multiple alerts. Click a CI to view alerts for the CI in the lower table.

The type of CI.
The name or address of the CI.
 The maximum level of alerts for the CI. Values range from 0 to 2, where 2 is the greatest Alert Severity: One or more alerts exceeded their ALARM LEVEL threshold. One or more alerts exceeded their WARNING LEVEL threshold. No alert thresholds have been exceeded.
The total number of critical and warning alerts for the CI.
The product of the maximum Alert Severity multiplied by the maximum Criticality of alerts. Values range from ${\bf 0}$ - ${\bf 10},$ where ${\bf 10}$ is the highest Alert Impact.

Metric Explorer

The Metric Explorer (MX) is a tool for creating and viewing custom dashboards, referred to as *MX Views*. An MX View contains a trend graph with up to five traces which you can configure to show numeric metrics from any EM Solution Package. While EM provides out-of-the-box Views of metric data, there might not be a single display that shows all the metrics that are critical to a single application. MX allows end-users to create Views containing the metrics that are important to them. The MX Views your end-users create are accessed from the MX **View** drop-down menu (rather than the navigation tree as RTView Enterprise Monitor Views are). Data is filtered by the \$rtvOwnerMask, \$rtvAreaMask, \$rtvGroupMask and \$rtvServiceMask values for the logged in user. For details, see "Configure User and Role Management" on page 44.

Displays in this View are:

"Metric Explorer" on page 172:

Note: The Metric Explorer was added in RTView Enterprise Monitor version 1.5.0. For instructions about adding the Metric Explorer to applications created with versions older than 1.5.0, see the RTView Enterprise Monitor Upgrade Notes.

Metric Explorer

View your previously created MX Views. Select an MX View from the **View** drop-down menu. The contents of the **View** drop-down menu depend on whether you choose **My Views** or **Shared Views**. Choose **My Views** to see public and private MX Views owned by you. Choose **Shared Views** to see public MX Views owned by you and other users. A public MX View is an MX View where the creator chose the **Share View with Others** option. The creator of the MX View is the owner.

Each MX View has options to apply Log Scale, Base at Zero and Time Range to your graphs.

To create or edit an MX View click Edit *I* to open the edit pane. For details, see "**Creating MX Views**" on page 173.



Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

- Open an instance of this display in a new window.
- Open the online help page for this display.

Fields and Data

Options include:

Open the edit pane.
View Select an MX View from the View drop-down menu.

My Views Choose My Views to see public and private MX Views owned by you in the View dropdown menu.

Shared
ViewChoose Shared Views to see public MX Views owned by you and other users. A public
MX View is an MX View where the creator chose the Share View with Others option.
The creator of the MX View is the owner.

- **Log Scale** Select to enable a logarithmic scale. Use Log Scale to see usage correlations for data with a wide range of values. For example, if a minority of your data is on a scale of tens, and a majority of your data is on a scale of thousands, the minority of your data is typically not visible in non-log scale graphs. Log Scale makes data on both scales visible by applying logarithmic values rather than actual values to the data.
- Base at Use zero as the Y axis minimum for all graph traces. Zero
- **Time Range** Select a time range from the drop down menu varying from **2 Minutes** to **Last 7 Days**, or display **All Data**. To specify a time range, click Calendar ___.



By default, the time range end point is the current time. To change the time range end point, click Calendar _____ and select a date and time from the calendar or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, **Aug 21, 2011 12:24 PM**.

Use the navigation arrows **I b** to move forward or backward one time period. NOTE: The time period is determined by your selection from the **Time Range** drop-down menu.

Click Restore to Now to reset the time range end point to the current time.

Creating MX Views

Click Edit 🗾 to open the edit pane. If an MX View is already selected, click New 🚹 to start a new MX View.



Select the Service containing the metric you want to see from the **Metrics Options/Service Tree**. The **Service Tree** is filtered by the environment in the **Env** menu. If necessary select the environment containing your Service. When you select a Service, all available metrics for that Service are listed in the **Metric Tree**. Because the metric will be displayed in a trend graph, only numeric metrics with history are listed in the **Metric Tree**. Select the metric you want to see from the **Metrics Options/Metric Tree** and click **Add Metric**. The metric is added to the **Selected Metrics** list and the MX View preview (in the right panel). Add up to five metrics to your MX View.

To change the order in which the metrics are displayed in the graph use the Up ↑ and Down ↓ arrows. To remove a metric, select it in the **Selected Metrics** and click Trash 👼. To add a label to your metric, select it in the **Selected Metrics** list and enter your label text in the **Label** field. Click Apply 🖌 to apply the label, or Cancel 🔀 to cancel the label.

Click **Save** and enter a descriptive MX View name. Click **Share View with Others** to make your MX View public, otherwise, the MX View is only available to you. Click Confirm \checkmark to write the MX View to the database. Click Cancel 📧 to return to edit mode. Click **Done** to return to the **Metric Explorer** page. The MX View you created is added to the **View** drop-down menu.

To create a new MX View with the Service already selected, select a Service from a **Service Summary Views** display and click MX MX (or the table context menu). This opens the MX edit pane with the Service already selected in the MX edit pane **Service Tree**. If you selected a CI Type or CI, these are also already selected in the MX edit pane **Metric Tree**. This spares you from having to search for the Service, CI Type or CI in the **Service** and **Metrics Trees**. The displays from which you can use this feature are:

- Service Summary Views "Service By CI Type" on page 128
- Service Summary Views "Service Summary" on page 131

Editing MX Views

In the Metric Explorer, select the MX View you want to edit and click Edit \checkmark . The edit pane opens with the selected MX View in edit mode. To delete the MX View click Trash \boxed{m} . To save your MX View under a new name, click **Save As**. Add, remove, reorder or label metrics as described in the "**Creating MX Views**" section (above). Select a metric in the **Selected Metrics** list and click on **Search** to update the selection in the **Service Tree** and **Metric Tree** to the values used when that metric was added to the MX View. This is useful when you want to see which Service contains a metric so you can add more metrics from the same Service.

When you are finished editing your metric, you can click **Cancel** to cancel your changes or **Save** to save your changes. To edit another MX View, select it from the **View** drop-down menu. Click **Done** to return to the Metric Explorer page.

Note: When you edit an MX View you do not own a copy of the MX View is automatically created and you are prompted to enter a name for the MX View when you save it.

View Options

+	Create a new MX View.
	Delete the selected MX View.
Save	Save the selected MX View. If this is an existing MX View, the save is done immediately. If this is a new MX View, the Name field becomes available and you must enter a name and click Confirm Save to save your MX View.

Save As	Save the selected MX View under a new name. The Name field becomes available and you must enter a name and click Confirm Save to save your MX View.
Done	Close the edit pane. This option is available when you do not have unsaved changes.
Cancel	Cancel your edits.
Name	Enter a name for your MX View. This field is available when saving a new MX View or after you click Save As .
\checkmark	Confirm that you want to save your MX View after you enter a name. This option is available when saving a new MX View or after you click Save As .
×	Cancel the save. This is available when saving a new MX View or after you click Save As .
Share View	Select to make your MX View public. Public MX Views are available to all users in the View drop-down menu when the Shared Views option is selected. Deselect to make this MX View only available to you.

Metric Optio	ons
Env	Select an Environment to filter the items in the Service Tree.
Service Tree	The CMDB service model (Owner, Area, Group, Service). Select a Service to populate the Metric Tree with metrics for that Service. The Services in the Service Tree are filtered by the following login substitutions: \$rtvOwnerMask , \$rtvAreaMask , \$rtvGroupMask and \$rtvServiceMask . For details, see the Configure Role Management section.
Metric Tree	The available metrics for the selected service. The tree hierarchy is CI Type, CI name, Metric (cache: metric). The tree only contains numeric metrics with history.
Add Metric	Add the selected metric to the MX View. When a metric is added to the MX View, it appears in the graph.
Selected Metrics	The list of metrics for this MX View.
†	Move the metric up in the list of selected metrics.
ŧ	Move the metric down in the list of selected metrics.
م	Set the selection in the Service and Metric trees to the values used when you added the selected metric to the MX View. NOTE: If your CMDB has changed such that the Service you used to add this metric no longer exists, the search button will fail
Ô	Delete the selected metric from the MX View.
Label	Enter a label to use for the selected metric. This label is not applied until you click on the confirm label button. This label is used in the graph legend.
✓	Confirm the label you entered for the selected metric.
×	Discard the label you entered for the selected metric (revert back to the previously applied value).

Limitations

- The Search o button fails without an error if the Service that was selected when you initially added the metric is no longer in your CMDB. To fix this, delete the metric and add it again from a Service that is currently in your CMDB. NOTE: The missing Service only makes the Search button fail. It does not cause any problems with viewing the metric.
- When you try to add a metric to an MX View that already contains that metric, it will not be added again. In the Viewer, an error message will come up saying that the metric is already in the MX View. In the Thin Client, no error is shown.
- MX Views are limited to five metrics. After a view contains five metrics, the Add Metric button is disabled.
- There is no indicator that shows if the MX database or Central Configuration Server are off-line in the MX configuration display. Any changes you save when either the MX database or Central Configuration Server are off line will be lost.
- When you save an MX View, RTView writes to both the View Table and the Metrics Table to the database even if only one or the other changed.
- When you save an MX View, the MX Configuration UI temporarily reverts back to the previous version of the MX View for one update, then updates with the latest changes.
- By default, MX attaches to the history_combo table for the metric history. If the cache is not configured with a history_combo table, the Metric Explorer will instead make a one-time attachment to the history table. In this case, toggling the Log Scale check-box will cause all points plotted after the initial history query to be lost. On the next update of current data a straight line will be drawn from the last history point to the new current data point.

JVM Process Views

These displays present performance data for monitored Java Virtual Machine (JVM) Processes. Use these displays to examine the performance and resource use of JVMs in summary and detail. Any JVM that is enabled for monitoring can be included in these displays. The displays include summary overviews and detail pages with historical trends.

You can set alert thresholds on performance and resource metrics for your JVMs, including **CPU Percent**, **Memory Used** and **Gc Duty cycle**. Alerts are shown in the "All JVMs Heatmap" display. Use the detailed JVM displays to investigate further; for example a **Memory Used** alarm might take you to the "JVM Summary" display to get historical memory use, or a **Gc Duty Cycle** alarm might take you to the "JVM GC Trends" display. Displays in this View are:

- "All JVMs Heatmap" on page 177: Heatmap of alert states for all JVM connections
- "All JVMs Table" on page 178: Table of connection details for all JVM connections.
- "JVM Summary" on page 180: Table of connection details for a single JVM as well as performance trend graphs.
- "JVM System Properties" on page 184: Table of system details for a single JVM.
- "JVM Memory Pool Trends" on page 185: Trend graphs of memory pool utilization.
- "JVM GC Trends" on page 188: Trend graphs of garbage collection memory utilization.

All JVMs Heatmap

View the most critical alert state for all monitored JVM connections, as well as CPU and memory utilization. The heatmap organizes JVM connections by source and host, and uses color to show the most critical Metric value for each JVM connection associated with that source. Each rectangle in the heatmap represents a JVM connection. The rectangle size represents the amount of memory reserved for that process; a larger size is a larger value. Each Metric (selected from the drop-down menu) has a color gradient bar that maps relative values to colors.

Use the check-boxes \checkmark to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. Drill-down and investigate by clicking a rectangle in the heatmap to view details for the selected connection in the "JVM Summary" display.



Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display.
 CMDB ▼ and Table navigate to displays commonly accessed from this display.
 19-Feb-201416:50 The current date and time. When the

time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

- Open an instance of this display in a new window.
- Open the online help page for this display.

Fields and Data

This display includes:

- **JVM Count** The number of JVM connections shown in the display.
- Show Check the Show Inactive box to include inactive connections. Inactive

Metric

Select the Metric to display in the heatmap. Each Metric has a color gradient bar that maps relative values to colors.

Alert Severity	The maximum level of alerts in the heatmap rectangle. Values range from 0 - 2 , as indicated in the color gradient bar , where 2 is the highest Alert Severity.
	Red indicates that one or more alerts have reached their alarm threshold. Alerts that have exceeded their specified ALARM LEVEL threshold have an Alert Severity value of 2.
	Yellow indicates that one or more alerts have reached their alarm threshold. Alerts that have exceeded their specified WARNING LEVEL threshold have an Alert Severity value of 1.
	Green indicates that no alerts have reached their alert thresholds. Alerts that have not exceeded their specified thresholds have an Alert Severity value of 0 .
CPU %	The total percent (%) CPU utilization for the rectangle. The color gradient bar values range from 0 to the maximum percent (%) CPU utilization in the heatmap.
Memory %	The total percent (%) memory utilization for the rectangle. The color gradient stated bar values range from 0 to the maximum percent (%) memory utilization in the heatmap.

All JVMs Table

View JVM connection details, the most critical alert state for each JVM connection, as well as CPU and memory utilization in a tabular format. Each row in the table is a different connection. Check the **Show Inactive** box to include inactive connections. The row color for inactive connections is dark red.

Click Sort to order column data. Drill-down and investigate by clicking a row in the table to view details for the selected connection in the "JVM Summary" display.

← Heatmap All JVMs - Table View 23-Sep-2015 16:45 ♀ Data OK ②									
JVM Count: 51	/ Show In	active							
				All JMX Connection	ons				
Connection	Expired	Connected	Alert	Host	Port	CPU %	Max Heap	Mem Used %	
ALERT_SERVER	V	0	0	localhost	10023	19.7	499,974,144	35.4	
ALERTHISTORIAN	V	0	0	localhost	10025	0.7	477,233,152	4.1	
AMXMON-HISTORIAN	V	0	0	localhost	3367		0	÷	
AMXMON-SLHOST-WIN3	V	Ô	0	192.168.200.133	6368	1.5	954,466,304	29.9	
AMXMON-SLHOST-WIN4	V	0	0	192.168.200.134	6368	2.1	954,466,304	13.3	
BW6MON-SLHOST-WIN3	~	Õ	0	192.168.200.133	3368	0.8	954,466,304	32.0	
BW6MON-SLHOST-WIN4	V	Õ	0	192.168.200.134	3368	1.2	954,466,304	17.2	
BWMON-HISTORIAN	V	0	0	localhost	3367	•	0	\$	
BWMONITOR-WIN-8	V	0	0	192.168.200.138	3368	•	0	÷	
CONFIG_SERVER	~	Õ	0	localhost	10013	2.9	477,233,152	51.5	
DISPLAYSERVER	V	Õ	0	localhost	10024	4.8	477,233,152	46.8	
DISPLAYSERVER_DARKST	V	Ô	0	localhost	10124	2.9	477,233,152	25.8	
EMSMON-HISTORIAN	V	0	0	localhost	3167	•	0	÷	
EMSMONITOR-WIN-8	V	Ô	0	192.168.200.138	3168	1.3	954,466,304	53.4	
EMSMON-SLHOST-WIN3	V	0	0	192.168.200.133	3168	1.4	954,466,304	28.7	
EMSMON-SLHOST-WIN4	V	0	0	192.168.200.134	3168	2.1	954,466,304	28.2	
local	V	0	0			0.9	954,466,304	21.1	
MISCMON-HISTORIAN	V	0	0	localhost	3967		0	÷	
MISCMON-SLHOST-WIN3	~	0	0	192.168.200.133	3968	22.1	1,070,465,024	92.5	
MISCMON-SLHOST-WIN4	V	0	0	192.168.200.134	3968	5.9	997,785,600	90.4	
MQMON-84-OL7-3	V	0	0	192.168.200.73	3468	4.0	1,037,959,168	13.0	
MQMON-HISTORIAN	V	0	0	localhost	3467		0	÷	
MQMON-SLHOST-WIN3	V	0	0	192.168.200.133	3468	2.2	954,466,304	10.3	
OCMON-64-OL7-1	V	0	0	192.168.200.71	9911		0	÷	
OCMON-84-OL7-4	V	0	0	192.168.200.74	9911	0.4	954,728,448	4.7	
OCMONITOR-WIN-8	V	0	0	192.168.200.138	9911		0	÷	
OCMON-SLHOST-WIN3	~	0	0	192.168.200.133	9911	1.6	954,466,304	18.5	-
•	III		-					•	-

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> → and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

• Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Fields and Data

This display includes:

JVM The number of JVM connections shown in the display. **Count**

RTView Enterprise Monitor® v3.3 User's Guide

Show	Check to include inactive connections.
Inactive	

All JMX Connections

Connection	The name of the JVM connection.
Expired	When checked, this connection is expired due to inactivity.
Connected	The data connection state: Disconnected. Connected.
Alert	 The maximum level of alerts associated with the connection. Values range from 0 to 2, where 2 is the greatest Alert Severity. One or more alerts associated with the connection exceeded their ALARM LEVEL threshold.
	 One or more alerts associated with the connection exceeded their WARNING LEVEL threshold. No alerts associated with the connection have exceeded their thresholds.
Host	The name of the host for this connection.
CPU %	The amount of CPU, in percent (%) used by this connection.
Мах Неар	The maximum amount of heap, in kilobytes, allocated to this connection.
Mem % Used	The amount of JVM memory, in percent (%) used by this connection.
RtvAppType	The type of RTView application, where: 1 is for the Historian, 3 is for the Data Server; 5 is for the Display Server, and 0 is a non-RTView application.
Source	The Data Server that sent this value.
time_stamp	The date and time this row of data was last updated.

JVM Summary

Track JVM memory and CPU usage, get JVM system information, application performance metrics, and input arguments for a single connection. Verify whether the memory usage has reached a plateau. Or, if usage is getting close to the limit, determine whether to allocate more memory.

Use the available drop-down menus or right-click to filter data shown in the display.

+	Single Connection - JVM Summary 2							🔊 Data OK 💠 🕜
Source: localhost	Connection: VMIRIS1051-BW-S	CAN-CHECK-SF(
Operating System 📀 Connected 🗌 Expired	Runtime Process Name: 1	234@VMIRIS1051						
Operating System: Windows 7	Start Time: 5/5/14 12:11 AM	Live Threads:	0 Ma:	(Heap Mb: 1.0)24.0			
OS Version: 6.1	Un Time: 508d 15:57	Daemon Threads:	0 Com	mitted Mb: 30	5.4			
Architecture: x86		Dach Threads	0	Used Mby 201	5.4			
Available Processors: 8	JVWICPU %. 24.8	Peak Threads.	0	Used MD, 30	0.4			
Class Name:								
Arguments:								More Arguments
JVM CPU, Memory, Thread Trends					Log Scale	✓ Base at Zero	Time Range: 5 Mins	✓ …
25								IVM CPU %
1250					i			Max Heap Mb
20								Cur Heap Mb
16:05:00 16:05:30 1	6:06:00 16:06:30	16:07:00 1	6:07:30	16:08:00	16:08:30	16:09:00	16:09:30	Used Heap Mb
4	03/23	03/23	05/25	03/25	09/25	35/25	03725 Ⅲ →	Live Threads

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.	✿ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is			
19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView	indicates the data source is connected.			
stopped running. When the time is correct and the	Open the Alert Views - RTView Alerts Table			
Data OK indicator is green, this is a strong	display.			
indication that the platform is receiving current	• Open an instance of this display in a new window.			
and valid data.				
Cls: 3,047 The number of items in the display.	Open the online help page for this display.			

Fields and Data

This display includes:

Source	Select the type of connection to the RTView Server.				
Connection	Select an RTVie RTView Server	Select an RTView Server from the drop-down menu. Names can be modified in the RTView Server configuration properties file.			
Operating Sy Displays data p	stem pertaining to the	operating system running on the host on which the JVM resides.			
	Connected	The data connection state: Disconnected. Connected.			
	Expired	When checked, this server is expired due to inactivity.			
	Operating System	The name of the operating system running on the host on which the JVM resides.			

- **OS Version** The operating system version.
- Architecture The ISA used by the processor.

Available The total number of processors available to the JVM. Processors

Runtime

	Process Name	Name of the process.
	Start Time	The date and time that the application started running.
	Up Time	The amount of time the application has been running, in the following format:
		0d 00:00
		<days>d <hours>:<minutes>:<seconds></seconds></minutes></hours></days>
		For example:
		100 08:41:38
	JVM CPU %	The amount of CPU usage by the JVM, in percent.
	Live Threads	The total number of live threads.
	Daemon Threads	The total number of live daemon threads.
	Peak Threads	The total number of peak live threads since the JVM started or the peak was reset.
	Max Heap Mb	The maximum amount of memory used for memory management by the application in the time range specified. This value may change or be undefined.
		NOTE: A memory allocation can fail if the JVM attempts to set the Used memory allocation to a value greater than the Committed memory allocation, even if the amount for Used memory is less than or equal to the <i>Maximum</i> memory allocation (for example, when the system is low on virtual memory).
	Committed Mb	The amount of memory, in megabytes, guaranteed to be available for use by the JVM. The amount of committed memory can be a fixed or variable size. If set to be a variable size, the amount of committed memory can change over time, as the JVM may release memory to the system. This means that the amount allocated for Committed memory could be less than the amount initially allocated. Committed memory will always be greater than or equal to the amount allocated for Used memory.
	Used Mb	The amount of memory currently used by the application. Memory used includes the memory occupied by all objects including both reachable and unreachable objects.
Class Name	Class name use	d for JVM.

The arguments used to start the application. Arguments

Additional arguments used to start the application. More

Arguments

JVM CPU, Memory, Thread Trends Shows JVM metrics for the selected server.

- **Log Scale** Enable to use a logarithmic scale for the Y axis. Use Log Scale to see usage correlations for data with a wide range of values. For example, if a minority of your data is on a scale of tens, and a majority of your data is on a scale of thousands, the minority of your data is typically not visible in non-log scale graphs. Log Scale makes data on both scales visible by applying logarithmic values rather than actual values to the data.
- **Base at Zero** Use zero as the Y axis minimum for all graph traces.

Time Range Select a time range from the drop down menu varying from **2 Minutes** to **Last 7 Days**, or display **All Data**. To specify a time range, click Calendar [-].

Select or Enter Date and Time:
Restore to Now
Ok Apply Cancel

By default, the time range end point is the current time. To change the time range end point, click Calendar _____ and select a date and time from the calendar or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, **Aug 21, 2011 12:24 PM**.

Use the navigation arrows \Box to move forward or backward one time period. NOTE: The time period is determined by your selection from the **Time Range** drop-down menu.

Click **Restore to Now** to reset the time range end point to the current time.

- **JVM CPU %** Traces the amount of memory, in percent, used by the JVM in the time range specified.
- Max Heap Mb
 Traces the maximum amount of memory used for memory management by the application in the time range specified. This value may change or be undefined.
 NOTE: A memory allocation can fail if the JVM attempts to set the Used memory allocation to a value greater than the Committed memory allocation, even if the amount for Used memory is less than or equal to the Maximum memory allocation (for example, when the system is low on virtual memory).
 Cur Heap Mb
 Traces the current amount of memory, in megabytes, used for memory management by the application in the time range specified.
 Used Heap Mb
- **Live Threads** Traces the total number of currently active threads in the time range specified.

JVM System Properties

Track JVM input arguments and system properties for a single connection. Use the available drop-down menus or right-click to filter data shown in the display.

←		Single Connection - JVM System Properties	25-Sep-2015 16:11 💠 Data OK 💠 🍞
Source: localhost	Connection: DISF	PLAYSERVER_DARKSTYLES	
Connected		JVM Arguments	Java Version: 1.6.0_35-b10
-DPROCESS_NAME=displayserver -DRTV_HOME=C:\TestBed\rtvapm\r -DRTV_DEMOSERVER=C:\TestBed	tview Artvapm\rtview\servers\apache-tomcat	-6.0.18-sl	^
-Xmx256m -Xms128m -Dcom.sl.rtview.customRtvAppMana	gerClassName=com.sl.gmsjrtvutils.Rtv	/ApmAppManager	~
-		Command-Line Arguments	
		System Properties	
	Property		Value
awt.toolkit		sun.awt.windows.WToolkit	^
com.sl.rtview.customRtvAppManage	rClassName	com.sl.gmsjrtvutils.RtvApmAppManager	
		C:\TestBed\rtyapm/common/conf/sl log4i pro	norties
com.sl.rtview.log4jFile			peries
com.sl.rtview.log4jFile com.sl.rtview.RTVLog4jLevel		info	pones
com.sl.rtview.log4jFile com.sl.rtview.RTVLog4jLevel com.sl.rtview.showLogCategory		info true	v

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. CMDB ▼ and Table navigate to displays commonly accessed from this display.

19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

✿ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Cis: 3,047 The number of items in the display.

Fields and Data

This display includes:

Source	Select the type of connection to the RTView Server.
Connection	Select an RTView Server from the drop-down menu. Names can be modified in the RTView Server configuration properties file.
Connected	The data connection state: Disconnected. Connected.
Java Version	The Java version running on the selected server.
JVM Arguments	The JVM arguments in the RuntimeMXBean InputArguments attribute.
Command Line Arguments	Arguments used to start the application.

System Properties

This table lists and describes system property settings.

Property Name of the property.

Current value of the property. Value

JVM Memory Pool Trends

Track JVM heap and non-heap memory usage for a single connection. Use the available dropdown menus or right-click to filter data shown in the display.



Title Bar:

Indicators and functionality might include the following:

← Open the previous and upper display. CMDB and Table navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3,047

The number of items in the display.

✿ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

÷ Open an instance of this display in a new window.

0 Open the online help page for this display.

Fields and Data

This display includes:

Select the type of connection to the RTView Server. Source

Select an RTView Server from the drop-down menu. Names can be modified in the Connection RTView Server configuration properties file.

Connected The data connection state:

- Disconnected.
- Connected.

Base at Use zero as the Y axis minimum for all graph traces.

Zero

Time Range Select a time range from the drop down menu varying from **2 Minutes** to **Last 7 Days**, or display **All Data**. To specify a time range, click Calendar .



By default, the time range end point is the current time. To change the time range end point, click Calendar _____ and select a date and time from the calendar or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, **Aug 21, 2011 12:24 PM**.

Use the navigation arrows **I i** to move forward or backward one time period. NOTE: The time period is determined by your selection from the **Time Range** drop-down menu.

Click **Restore to Now** to reset the time range end point to the current time.

Heap Memory

Maximum	The maximum amount of memory used, in megabytes, for memory management by the application in the time range specified. This value may change or be undefined.
	NOTE: A memory allocation can fail if the JVM attempts to set the Used memory allocation to a value greater than the Committed memory allocation, even if the amount for Used memory is less than or equal to the Maximum memory allocation (for example, when the system is low on virtual memory).
Committed	The amount of memory, in megabytes, guaranteed to be available for use by the JVM. The amount of committed memory can be a fixed or variable size. If set to be a variable size, the amount of committed memory can change over time, as the JVM may release memory to the system. This means that the amount allocated for Committed memory could be less than the amount initially allocated. Committed memory will always be greater than or equal to the amount allocated for Used memory.
Used	The amount of memory, in megabytes, currently used by the application. Memory used includes the memory occupied by all objects including both reachable and unreachable objects.
Peak Tenured Used	The amount of memory, in megabytes, used by tenured JVM objects in the time range specified. Tenured refers to JVM objects contained in a pool that holds objects that have avoided garbage collection and reside in the survivor space. Peak tenured refers to the maximum value of the tenured memory over a specified period of time.
Eden Space	Traces the amount of memory used by the JVM eden pool in the time range specified. Eden refers to the JVM eden pool, which is used to initially allocate memory for most objects.
Survivor Space	Traces the amount of memory used by the JVM survivor pool in the time range specified. The JVM survivor pool holds objects that survive the eden space garbage collection.

	Tenured Gen	Traces the amount of memory used by tenured JVM objects in the time range specified. Tenured refers to JVM objects contained in a pool that holds objects that have avoided garbage collection and reside in the survivor space. Peak tenured refers to the maximum value of the tenured memory over a specified period of time.
Non-Heap Me	emory	
	Maximum	The maximum amount of memory, in megabytes, used for JVM non-heap memory management by the application in the time range specified.
	Committed	The amount of memory, in megabytes, guaranteed to be available for use by JVM non-heap memory management. The amount of committed memory can be a fixed or variable size. If set to be a variable size, it can change over time, as the JVM may release memory to the system. This means that the amount allocated for Committed memory could be less than the amount initially allocated. Committed memory will always be greater than or equal to the amount allocated for Used memory.
	Used	The amount of memory, in megabytes, currently used by the application. Memory used includes the memory occupied by all objects including both reachable and unreachable objects.
	Objects Pending Finalization	The value of the MemoryMXBean ObjectPendingFinalizationCount attribute.
	Verbose	The value of the MemoryMXBean Verbose attribute.
	Code Cache	Traces the amount of non-heap memory used in the JVM for compilation and storage of native code.
	Perm Gen	Traces the amount of memory used by the pool containing reflective data of the virtual machine, such as class and method objects. With JVMs that use class data sharing, this generation is divided into read-only and read- write areas.
Operations		
	Run Garbage Collector	Performs garbage collection on the selected server.
	Reset Peak Usage	Clears peak usage on the selected server.

JVM GC Trends

Track JVM garbage collection memory usage for a single connection. Use the available dropdown menus or right-click to filter data shown in the display.



Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data

This display includes:

Source	Select the type of connection to the RTView Server.
Connection	Select an RTView Server from the drop-down menu. Names can be modified in the RTView Server configuration properties file.
Garbage Collector	Select a garbage collection method: Copy or MarkSweepCompact .
Max	Shows the maximum amount of memory used for JVM garbage collection in the time range specified.

Committed Shows the amount of memory guaranteed to be available for use by JVM non-heap memory management. The amount of committed memory can be a fixed or variable size. If set to be a variable size, it can change over time, as the JVM may release memory to the system. This means that the amount allocated for **Committed** memory could be less than the amount initially allocated. **Committed** memory will always be greater than or equal to the amount allocated for **Used** memory.

Use zero as the Y axis minimum for all graph traces. Base at

Zero

Select a time range from the drop down menu varying from 2 Minutes to Last 7 Days, Time Range or display All Data. To specify a time range, click Calendar



By default, the time range end point is the current time. To change the time range end point, click Calendar _____ and select a date and time from the calendar or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, Aug 21, 2011 12:24 PM.

Use the navigation arrows 🚺 🔰 to move forward or backward one time period. NOTE: The time period is determined by your selection from the Time Range drop-down menu.

Click **Restore to Now** to reset the time range end point to the current time.

Memory Usage (in MB) Before and After Garbage Collection

Traces the maximum amount of memory used by garbage collection Maximum in the time range specified. This value may change or be undefined. NOTE: A memory allocation can fail if the JVM attempts to set the **Used** memory allocation to a value greater than the **Committed** memory allocation, even if the amount for **Used** memory is less than or equal to the **Maximum** memory allocation (for example, when the system is low on virtual memory). Traces the amount of memory guaranteed to be available for use by Committed the JVM. The amount of committed memory can be a fixed or variable size. If set to be a variable size, the amount of committed memory can change over time, as the JVM may release memory to the system. This means that the amount allocated for **Committed** memory could be less than the amount initially allocated. **Committed** memory will always be greater than or equal to the amount allocated for **Used** memory. Used - Before Traces the amount of memory used before the last garbage collection. Traces the amount of memory used after the last garbage **Used - After** collection. The duration, in seconds, of garbage collection. Duration **Duty Cycle** The percentage of time that the application spends in garbage collection.

Tomcat Servers

These displays present performance data for monitored Tomcat Application Servers. Use these displays to examine the state and performance of your Tomcat servers as well as all installed web modules. The server displays include summary overviews and detail pages with historical trends. Displays in this View are:

- "All Servers Table" on page 190: Table of connection details and performance metrics for all Tomcat connections.
- "Server Summary" on page 192: Performance metrics for one Tomcat Server, including current and historic performance metrics.
- "All Apps Heatmap" on page 195: Heatmap of performance metrics for all Web modules for one Tomcat Server.
- "App Summary" on page 197: Table and trend graphs of performance metrics for Web modules.

All Servers Table

View Tomcat Server details per connection such as the total number of sessions, bytes sent/ received, and processing time. Each row in the table is a different Tomcat Server. The row color for inactive connections is dark red.

Use this display to see summary information for your Tomcat servers, including session counts, access and request rates, cache hit rates, and data transmission metrics.

Drill-down and investigate by clicking a row in the table to view details for the selected connection in the "Service Summary" display.

<		All Tomcat Servers - Table 23-Sep-2015 16:34 💠 Data OK 💠 🍘				к 🔶 🕜		
Tomcat Count: 1	Tomcat Count: 1 All Tomcat Servers							
Connection	Source	Sessions	Sessions Total	Sessions Expired	Accesses	Accesses Total	Bytes Rovd	Bytes Roy Total
TOMCAT	localhost	4	17	13	1.4	30,302	603.1	433,851,9
•	111							

Title Bar: Indicators and functionality might include the following:

← ↑ Open the previous and upper display. CMDB ▼ and Table navigate to displays commonly accessed from this display.			
19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView	not receiving data from the Data Server). Green indicates the data source is connected.		
stopped running. When the time is correct and the	Open the Alert Views - RTView Alerts Table		
Data OK indicator is green, this is a strong	display.		
indication that the platform is receiving current and valid data.	• Open an instance of this display in a new window.		
Cis: 3,047 The number of items in the display.	Open the online help page for this display.		

Fields and Data This display includes:

Tomcat Count	The number of Tomcat connections in the table.
Connection	The name of the Tomcat connection.
Source	The host where the Tomcat Server is running.
Sessions Active	The number of currently active client sessions.
Sessions Total	The total number of client sessions since the server was started.
Sessions Expired	The total number of client sessions that expired since the server was started.
Accesses per sec	The number of times pages are accessed, per second.
Accesses Total	The total number of times pages have been accessed since the server was started.
Bytes Rcvd per sec	The number of bytes received per second.
Bytes Rcvd Total	The total number of bytes received since the server was started.
Bytes Sent per sec	The number of bytes sent per second.
Bytes Sent Total	The total number of bytes sent since the server was started.
Cache Hit Rate	The number of times the cache is accessed, per second.
Requests per sec	The number of requests received, per second.
Requests Total	The total number of requests received since the server was started.
Process Time	The average amount of time, in milliseconds, to process requests.
Error Count	The number of errors that have occurred since the server was started.

appBase	The directory in which Tomcat is installed.
Display Name	The name of the currently open display.
Expired	When checked, this connection is expired due to inactivity.
time_stamp	The date and time this row of data was last updated. Format: MM/DD/YY HH:MM:SS <month>/ <day>/<year> <hours>:<minutes>:<seconds></seconds></minutes></hours></year></day></month>

Server Summary

Track the performance of one Tomcat Server and get Tomcat hosting and connection details. You can drill down to this display from the Servers table for detailed information and historical trends for a specific server. he trends include Active Sessions, Requests per Sec, and Process Time.



Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ■ and <u>Table</u> navigate to displays <u>commonly</u> accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data This display includes:

Source	Select the host where the Tomcat Server is running.			
Connection	Select a Tomcat Server from the drop-down menu.			
Connected	The Tomcat Server Disconnected. Connected.	r connection state:		
Expired	When checked, thi	s server is expired due to inactivity.		
Host Name	The name of the h	ost where the application resides.		
App Base	The directory in w	hich Tomcat modules are installed.		
Auto Deploy	When checked, inc enabled.	en checked, indicates that the Tomcat option, automatic application deployment, is abled.		
	NOTE: This Tomca located in the Tom	E: This Tomcat option is set using the autoDeploy property in the server.xml file, red in the Tomcat conf directory. autoDeploy=true enables the option.		
Deploy On Startup	When checked, inc enabled.	hen checked, indicates that the option to deploy the application on Tomcat startup is nabled.		
·	NOTE: This Tomcat option is set using the deployOnStartup property in the server.xml file, located in the Tomcat conf directory. When enabled (deployOnStartup=true), applications from the host are automatically deployed.			
Connectors This table show	ows Tomcat application connection information.			
	Protocol	The protocol used by the Tomcat application on the host.		
	Port	The port number used by the Tomcat application on the host.		
	RedirectPort	The redirect port number used by the Tomcat application on the host.		

When checked, specifies that the Tomcat application uses a secure connection on the host. Secure

Current Statistics / Totals

Active Sessions	The number of clients currently in session with the servlet.
Sessions	The total number of client sessions since the server was started.
Page Access / sec	The number of times pages are accessed, per second.
Accesses	The total number of page accesses since the server was started.
Cache Hits / sec	The number of times the cache is accessed, per second.
Requests / sec	The number of requests received, per second.
Requests	The total number of requests since the server was started.
Bytes Rcvd / sec	The number of bytes received, per second.
Bytes Rcvd (Kb)	The number of kilobytes received since the server was started.
Bytes Sent / sec	The number of bytes sent, per second.
Bytes Sent (Kb)	The total number of kilobytes sent since the server was started.
Process Time	The amount of time, in milliseconds, for the servlet to process client requests.

Session / Request / Process Trends Shows metrics for the selected server.

Log Scale Select to enable a logarithmic scale. Use Log Scale to see usage correlations for data with a wide range of values. For example, if a minority of your data is on a scale of tens, and a majority of your data is on a scale of thousands, the minority of your data is typically not visible in non-log scale graphs. Log Scale makes data on both scales visible by applying logarithmic values rather than actual values to the data.

Base at Zero Use zero as the Y axis minimum for all graph traces.

Time Range Select a time range from the drop down menu varying from 2 **Minutes** to **Last 7 Days**, or display **All Data**. To specify a time range, click Calendar ____.

Select or Enter Date and Time:
Restore to Now
Ok Apply Cancel

By default, the time range end point is the current time. To change the time range end point, click Calendar _____ and select a date and time from the calendar or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, **Aug 21, 2011 12:24 PM**.

Use the navigation arrows **I** to move forward or backward one time period. NOTE: The time period is determined by your selection from the **Time Range** drop-down menu.

Click **Restore to Now** to reset the time range end point to the current time.

- Active Sessions Traces the number of currently active client sessions.
- **Requests /sec** Traces the number of requests received, per second.

Process Time Traces the average amount of time, in milliseconds, to process requests.

All Apps Heatmap

View performance metrics for all monitored Tomcat Web modules for one Tomcat Server. The heatmap organizes Tomcat Web modules by server, and uses color to show the most critical Metric value for each Tomcat connection associated with the selected source. Each rectangle in the heatmap represents a Web module. In this heatmap, the rectangle size is the same for all Web modules. Each Metric (selected from the drop-down menu) has a color gradient bar that maps relative values to colors.

Use this display to see at-a-glance the health of all your web applications. You can select the heatmap color metric from a list including active sessions, access rate, and total access count.

Use the available drop-down menus or right-click to filter data shown in the display. Use the check-boxes ^I to include or exclude labels in the heatmap. Move your mouse over a rectangle to see additional information. Drill-down and investigate by clicking a rectangle in the heatmap to view details for the selected Web module in the "App Summary" display.

Tomcat Summary	Tomcat Ap	plications - Activity He	eatmap 23-Sep-2015 16:3	10 💠 Data OK 💠 🕜
Source: localhost	Con	nection: TOMCAT	•	
Application Count: 14	Select Metric: Ac	tive Sessions 🔍 🗸	Log Scale (Activity)	50 100
Арр	lication Activity Heatmap	organized by WebModule	where Color = Metric	
/docs	/emsample_config_rtvdata	/emsmon	/gfmon_rtvdata	/gfmon_rtvquery
/emsample	/emsample_dark	/gfmon		
			(manager	hurm
			Allahagei	/₩3///
/emsample_alert_rtvdata	/emsample_rtvdata	/gfmon_rtvagent		
			/wim	

Title Bar:

Indicators and functionality might include the following:

← Open the previous and upper display.
 CMDB ▼ and Table navigate to displays commonly accessed from this display.
 19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

✿ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

- Open an instance of this display in a new window.
- Open the online help page for this display.

Fields and Data

This display includes:

Source Select the host where the Tomcat Server is running.

Connection Select a Tomcat Server from the drop-down menu.

Application Count	The number of Tomcat applications in the heatmap.
Log Scale (Activity)	Select to enable a logarithmic scale. Use Log Scale to see usage correlations for data with a wide range of values. For example, if a minority of your data is on a scale of tens, and a majority of your data is on a scale of thousands, the minority of your data is typically not visible in non-log scale graphs. Log Scale makes data on both scales visible by applying logarithmic values rather than actual values to the data.
Select Metric	Select the metric to display in the heatmap. Each Metric has a color gradient bar that maps relative values to colors.

App Summary

Track the performance of all web application modules in a server and view utilization details. The table summarizes the sessions, accesses, cache hit and so forth, for all installed web modules. Each row in the table is a different web application module. The row color for inactive modules is dark red. Select a web application module to view metrics in the trend graph.

Use this data to verify response times of your Web application modules.

Use the available drop-down menus or right-click to filter data shown in the display.

🗲 Tomcat Heatmap		Tome	at Module	es - Sumn	nary	23-Sep-2015 1	6:28 💠 Dat	а ОК 🔶	?
Source: localhost		▼ Conne	ection: TOM	CAT		-			
Web Module: /emsample			r						
		Web	Modules S	ummary					
Web Module	Active Sessions	Expired Sessions	Total Sessions	Process Time	Accesses per sec	Total Accesses	Cache Hit Rate	Total Cache H	-
/emsample	4	13	17	168.8	1.9	29,740	1.6	24,3	
/gfmon_rtvquery	0	0	0	0.0	0.0	7	0.0		Ξ
/gfmon_rtvdata	0	0	0	0.0	0.0	7	0.0		
/emsample_config_rtvdata	0	0	0	0.0	0.0	7	0.0		
/emsmon	0	0	0	0.0	0.0	7	0.0		
/emsample_rtvdata	0	0	0	0.0	0.0	7	0.0		
/emsample_dark	0	0	0	0.0	0.0	7	0.0		
/docs	0	0	0	0.0	0.0	7	0.0		Ŧ
/emsemble elect rtvdete	0	0	0		0.0	7	0.0		
•	111			-				- P	
Session / Data / Latency T	rends: /ems	ample	Log Scal	e 🗸 Bas	e at Zero	Time Range:	5 Mins	•	
10 .									
							A 📃 🗛	ctive Sessio	ns
								ccesses / s	•c
10									
10								ocess mine	·)
				_					
0		16:27:08	09/23						
400		Active	Sessions :	4.0					
0		Acces	ses / sec :	1.9					
16:24:00 16	:25:00	Proces	s Time : 16	B18:27:00	16	:28:00			
09/23 0	9/23	09/23		09.23	C	09/23			
4							÷.		

Title Bar: Indicators and functionality might include the following:

Fields and Data This display includes:

Source	Select the host where the Tomcat Server is running.
Connection	Select a Tomcat Server from the drop-down menu. This menu is populated by the selected Source.
Web Module	Select a Web module from the drop-down menu. This menu is populated by the selected Connection. The Web Module you select populates the trend graphs.

Web Module Summary

Web Module	The name of the Web module.
Sessions Active	The number of currently active client sessions.
Sessions Total	The total number of client sessions since the application was started.
Sessions Expired	The total number of client sessions that expired since the application was started.
Accesses per sec	The number of times pages are accessed, per second.
Accesses Total	The total number of times pages have been accessed since the application was started.
Bytes Rcvd per sec	The number of bytes received per second.
Bytes Rcvd Total	The total number of bytes received since the application was started.
Bytes Sent per sec	The number of bytes sent per second.
Bytes Sent Total	The total number of bytes sent since the application was started.
Cache Hit Rate	The number of times the cache is accessed, per second.
Requests per sec	The number of requests received, per second.
Requests Total	The total number of requests received since the application was started.

Process Time	The average amount of time, in milliseconds, to process requests.
Error Count	The number of errors occurred since the application was started.
appBase	The directory in which Tomcat is installed.
Expired	When checked, this connection is expired due to inactivity.
time_stamp	The date and time this row of data was last updated. Format: MM/DD/YY HH:MM:SS <month>/ <day>/<year> <hours>:<minutes>:<seconds></seconds></minutes></hours></year></day></month>

Session/Data/Latency Trends

Shows metrics for the selected Web module. The Web module can be selected from the **Web Module** drop-down menu or the **Web Modules Summary** table.

- **Log Scale** Select to enable a logarithmic scale. Use Log Scale to see usage correlations for data with a wide range of values. For example, if a minority of your data is on a scale of tens, and a majority of your data is on a scale of thousands, the minority of your data is typically not visible in non-log scale graphs. Log Scale makes data on both scales visible by applying logarithmic values rather than actual values to the data.
- **Base at Zero** Use zero as the Y axis minimum for all graph traces.
- **Time Range** Select a time range from the drop down menu varying from **2 Minutes** to **Last 7 Days**, or display **All Data**. To specify a time range, click Calendar ____.



By default, the time range end point is the current time. To change the time range end point, click Calendar _____ and select a date and time from the calendar or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, **Aug 21, 2011 12:24 PM**.

Use the navigation arrows \Box to move forward or backward one time period. NOTE: The time period is determined by your selection from the **Time Range** drop-down menu.

Click **Restore to Now** to reset the time range end point to the current time.

Active Traces the number of currently active client sessions.

Sessions

sec

Accesses / Traces the number of times pages are accessed, per second.

Process
TimeTraces the average amount of time, in milliseconds, to process
requests.

RTView Servers

These displays present performance data for all RTView Servers.

RTView Servers displays are available when you install the RTVMGR Solution Package. The RTVMGR Solution Package is provided with RTView Enterprise Monitor. Displays in this View are:

- "Data Servers" on page 200: Shows metrics for RTView Data Servers.
- "Display Servers" on page 202: Shows metrics for RTView Display Servers.
- "Historian Servers" on page 204: Shows metrics for RTView Historian Servers.
- "Version Info" on page 205: Shows the version information of each jar used in each connected RTView application.

Data Servers

Track data transfer metrics for RTView Data Servers, client count and throughput trends. Use the available drop-down menus or right-click to filter data shown in the display.



Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display. <u>19-Feb-201416:50</u> The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table
display.

- Open an instance of this display in a new window.
- Open the online help page for this display.
- Source Select the type of connection to the RTView Server.
- **Connection** Select an RTView Server from the drop-down menu. Names can be modified in the RTView Server configuration properties file.
- **Connection** The connection selected from the **Connection** drop-down menu.

Number of Clients	The number of clients currently server on this Data Server.
Connected	The Data Server connection state: Disconnected. Connected.
Serving Data	 The Data Server is not currently serving data. The Data Server is currently serving data.
Expired	This server has been marked as expired after no activity.
Function Stats	Opens the RTView Function Stats display which shows detailed performance statistics for RTView functions in the selected Data Server. This button is only enabled if the RTVMGR has a JMX connection defined for the selected Data Server.
Cliente	

Clients

This table describes all clients on the selected server.

Address	The client IP address.	
Client ID	The unique client identifier.	
Duration	The amount of time for this client session. Format: dd HH:MM:SS <days> <hours>:<minutes>:<seconds> For example: 10d 08:41:38</seconds></minutes></hours></days>	
Host	The client host name.	
Last Data Sent	The amount of data, in bytes, last sent to the client.	
Delta	The amount of data, in bytes, sent since the last update.	
Total	The total amount of data, in bytes, sent to the client.	
TIME_STAMP	The date and time this row of data was last updated.	

Client Count / Data Throughput Trends

Shows throughput metrics for all clients on the selected server.

- Enable to use a logarithmic scale for the Y axis. Use Log Scale to see usage correlations for data with a wide range of values. For example, if a minority of your data is on a scale of tens, and a majority of your data is on a scale of thousands, the minority of your data is typically not visible in non-log scale graphs. Log Scale makes data on both scales visible by applying logarithmic values rather than actual values to the data. Log Scale
- Use zero as the Y axis minimum for all graph traces. **Base at Zero**

Time Range	Select a time range from the drop down menu varying from 2 Minutes to Last 7 Days , or display All Data . To specify a time range, click Calendar		
	Select or Enter Date and Time:		
	Restore to Now		
	Ok Apply Cancel		
	By default, the time range end point is the current time. To change the time range end point, click Calendar and select a date and time from the calendar or enter the date and time in the text field using the following format: MMM dd, YYYY HH:MM . For example, Aug 21, 2011 12:24 PM .		
	Use the navigation arrows I b to move forward or backward one time period. NOTE: The time period is determined by your selection from the Time Range drop-down menu.		
	Click Restore to Now to reset the time range end point to the current time.		
Number of Clients	Traces the number of clients being served by the Data Server.		
Data Sent	Traces the total amount of data, in Kilobytes, sent to all clients.		

Display Servers

Track display utilization metrics for RTView Display Servers.

Use the available drop-down menus or right-click to filter data shown in the display.

✓ JVM	RTView Disp	olay Server 25-Sep-2015 15:56 💠 Data OK 💠 🍞
Source: localhost	Connection: DISPLAYSERVER_DARKSTYLES	
	Connected 🗌 Expired	Function Stats
Display Timeout (seconds): 60	Number of Active Displays: 0	
Image Quality (0 - 100): 75	Maximum Number of Active Displays: 80	3
	Sessions with Active Displays: 3	
Display Data	Active Di	isplays
Display Name =	ession = Pa	Substitutions E Last
rtv_cache_tables.rtv t	b8cb7a1c7 56 \$rtvNameFilter:* \$rtvUserAlertTableSortAsc:0 \$demoG	roupMaskName:" \$rtvAlertTableFilteredFctn:rtvAlertsTableFiltered1NotAckdNotCleared \$rtvAre0 00:00:1
rtv_server_summary_display.rtv	5b6e0439 a2 \$multipleAlertSources:" \$metricLabelToEdit:" \$rtvCritic	alFilter:2,3 \$jvmRowExpirationTimeForDelete:3600 \$metricNodeID:" \$rtvDdSuffix:" \$selectedD(0 00:00:0 ^
rtv_nav_comp_acc.rtv 3	5b6e0439 43 \$mqBroker:" \$rtvDisplayGroup:Service \$mqChannelFil	ter:* \$application:* \$rtvCurrentTabID:Components \$mqQueueManager:" \$rtvService:SCAN-CH 0 00:00:1
rtv_appmon_tab_title.rtv 3	5b6e0439 be \$mqBroker:" \$rtvDisplayGroup:Service \$application:* \$	srtvCurrentTabID:Components \$mqChannelFilter:* \$mqQueueManager:" \$rtvService:SCAN-CH 0 00:00:1 V
rtv appmon title.rtv	84580dfa6{26\$mqBroker:" \$rtvDisplayGroup:Owner \$application:* \$r	tvCurrentTabID:CMDB \$mgChannelFilter:* \$mgQueueManager:" \$rtvService:* \$wasCell:" \$rtvA0 00:00:0

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. CMDB ▼ and Table navigate to displays commonly accessed from this display.	^{Obta OK} The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is
19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView	not receiving data from the Data Server). Green indicates the data source is connected.
stopped running. When the time is correct and the Data OK indicator is green, this is a strong	Open the Alert Views - RTView Alerts Table display.
indication that the platform is receiving current and valid data.	• Open an instance of this display in a new window.
Cis: 3,047 The number of items in the display.	Open the online help page for this display.

Fields and Data This display includes:

Source	Select the type of connection to the RTView Server.
Connection	Select an RTView Server from the drop-down menu. Names can be modified in the RTView Server configuration properties file.
Connected	The Display Server connection state: Disconnected. Connected.
Expired	This server has been marked as expired after no activity.
Function Stats	Opens the RTView Function Stats display which shows detailed performance statistics for RTView functions in the selected Display Server. This button is only enabled if the RTVMGR has a JMX connection defined for the selected Display Server.
Display Timeout (seconds)	The amount of time, in seconds, that a display can be kept in memory after the Display Servlet has stopped requesting it. The default is 60 seconds (to allow faster load time when switching between displays).
Image Quality (0- 100)	A value between 0 and 100 , which controls the quality of the generated images. If the value is 100 , the Display Server outputs the highest quality image with the lowest compression. If the value is 0 , the Display Server outputs the lowest quality image using the highest compression. The default is 75 .
Number of Active Displays	The total number of displays currently being viewed by a user.
Maximum Number of Active Displays	The maximum number of displays kept in memory. The default is 20 (to optimize memory used by the Display Server).
Sessions with Active Displays	Number of clients accessing the Display Server.

Display Data / Active Displays

Display Name	The name of the currently open display.
Session	A unique string identifier assigned to each session.
Panel ID	A unique string identifier assigned to each panel. The Display Server loads each display requested by each client into a panel. This ID can be useful in troubleshooting.
Substitutions	Lists the substitutions used for the display.
Last Ref	The amount of time that has elapsed since the display was last requested by a client.
ID	The client ID.
Preloaded	When checked, indicates that the display (.rtv) file is configured in the DISPLAYSERVER.ini file to be preloaded. The history_config option is used to configure display preloading. Preloading a display makes data immediately available. Preloaded displays are not unloaded unless the Display Server is restarted or the display cache is cleared via JMX. This option can be used multiple times to specify multiple displays to preload.

Historian Servers

Track the status of RTView Historian Servers and data configuration file usage. View the caches that are archived by the Historian application, substitution variables associated with the history cache configuration file, as well as the history cache status. You can also stop and start the Historian, and purge data.

Use the available drop-down menus or right-click to filter data shown in the display.

← JVM		RTView Historian	25-Sep-2015 16:30 💠 Data OK 💠 😮
Source: localhost	✓ Connection:	\checkmark	
Connected to Database	() Storing Data	Connected 🗌 Expired	
Primary Server			
Number of Data Configuration F	iles:		
-Historian			
		Data Configuration Files	
			· · · · · · · · · · · · · · · · · · ·

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> → and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

♦ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data

This display includes:

Source	Select the type of connection to the RTView Server.			
Connection	Select an RTView Se RTView Server confi	erver from the drop-down menu. Names can be modified in the guration properties file.		
Connected	The Historian Server Disconnected. Connected.	connection state:		
Expired	This server has been	n marked as expired after no activity.		
Connected to Database	The Historian Serve Disconnected. Connected.	r database connection state:		
Primary Server	When green, indicat the primary group n member with the hid indicates that the Hi The Historian Server The Historian Server This Historian is the server	es that this Historian, when used within a group of Historians, is nember. If the primary member fails or shuts down, the standby ghest priority becomes the primary group member. When red, storian is a secondary server. If member state: The primary group member.		
Number of Data Configuration Files	The number of confi	guration files that are used by the history cache.		
Historian / Dat	Historian / Data Configuration Files			
	File Name	The name of the history cache configuration file.		

Substitutions	Lists the substitutions specified in the history cache configuration file.
---------------	--

Version Info

This display provides detailed version information for all of the connected RTView applications. You can view specific applications by filtering data using the **Source**, **Connection**, **Filter Field**, and **Filter Value** fields at the top of the display. This display provides valuable information about the version of each jar that is used in each connected RTView application that can be used to help Technical Support when issues arise. All RTView applications use multiple jars and this display lists the version information for each jar in the application. The **ApplicationConfiguration** column shows the version of the jar that contains the main class for the application which is also the version that is printed to the console at startup. The **JarConfiguration** shows the version of the jar specified in the **JarName** field. When **ApplicationConfiguration** and **JarConfiguration** do not match, it indicates that the application is using jars from multiple releases of RTView or that the application is using a patched jar. Rows in the table where the **JarConfiguration** does not match the **ApplicationConfiguration** are highlighted in teal.

Note: RTView applications running versions previous to this enhancement will only have one row in the table and will display "version info not supported in this version" in the **ApplicationConfiguration** column.

←			1	RTView Application Versions	25-Sep-2015 14	:41 < Data OK 💠 🌔
Source:	All Sources	✓ Filter	Field:	Clear		
Connection	All Connections	✓ Filter \	/alue:	RegEx Not Equa	I	
		Rows where t	Detailed Ver he JarConfiguration	sion for All Connected RTView Applications does not match ApplicationConfiguration are	highlighted in teal	
Source =	Connection	ApplicationName =	JarName	ApplicationConfiguration =	JarConfiguration	∃ JarVersionNumb
VIN3	SLMON-DISP-5	RTView Display Server	gmsjagentds.jar	APM.3.0.0.0 20150910 000.19559-alpha 119	APM.3.0.0.0 20150910 000.19559-alpha 119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjalertds.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjcacheds.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjcmdbds.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjext.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjflash.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjjmxds.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjlog4jds.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjmodels.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjolapds.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjpipeds.jar	APM.3.0.0.0 20150910 000.19559-alpha 119	APM.3.0.0.0 20150910 000.19559-alpha 119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjrrdds.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
VIN3	SLMON-DISP-5	RTView Display Server	gmsjrtvhistorian.jar	APM.3.0.0.0_20150910_000.19559-alpha_119	APM.3.0.0.0_20150910_000.19559-alpha_119	3.0.0.0
	SLMON-DISP-5	RTView Disnlay Server	omsirtvouerv iar	APM 3.0.0.0.20150910_000_19559-alpha_119	APM 3.0.0.0. 20150910_000.19559-alpha_119	3000
	Page 1 of 8	н		,		1 - 200 of 1581 items

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data

This display includes:

Source Select a filter value for the Source column.	
---	--

Connection Select a filter value for the **Connection** column.

Filter FieldSelect a table column from the drop-down menu to perform a search in:
ApplicationName, JarName, ApplicationConfiguration, JarConfiguration,
JarVersionNumber,JarVersionDate, JarReleaseDate, and JarMicroVersion.Filters limit display content and drop-down menu selections to only those items
that pass through the selected filter's criteria. If no items match the filter, you
might have zero search results (an empty table). Double-clicking on a specific field
in the table will populate this field with the selected field's content. For example,
double-clicking on the DataServerName field in one of the rows displays the
entire field's content into this field.

Clear	Clears entries in the Filter Field display list, Filter Value field, and Not Equal check box.
Filter Value	Enter the (case-sensitive) string to search for in the selected Filter Field.
RegEx	Select this check box to use the Filter Value as a regular expression when filtering. When selected, the Not Equal check box displays.
Not Equal	Works in conjunction with the RegEx field. Selecting this check box searches for values in the specified Filter Field that are NOT equal to the value defined in the Filter Value field. For example, if the Filter Field specified is JarMicroVersion , the Filter Value is specified as 317 , and this check box is selected, then only those rows containing JarMicroVersion fields NOT EQUAL to 317 will display. This field is only enabled when the RegEx check box is checked.
Source	The name of the source of the RTVMGR.
Connection	Lists the name of the JMX connection to the RTView application.
Application Name	Lists the name of the application.
JarName	Lists the name of the jar used in the connected application.
Application Configuration	Lists the configuration string of the application. This string contains the main application version that corresponds to the version information printed to the console at startup.
JarConfiguration	Lists the configuration string for the jar.
JarVersionNumber	Lists the version number for the jar.
JarVersionDate	Lists the version date for the jar.
JarReleaseType	Lists the release type for the jar.
JarMicroVersion	Lists the micro version for the jar.
Expired	When checked, this connection is expired due to inactivity.
time_stamp	The time at which the information in the current row was last received.
DataServerName	The name of the RTVMGR Data Server connection.

Alert Views

These displays present detailed information about all alerts that have occurred in your RTView Enterprise Monitor system (all Owners and all Areas). The type of alerts that appear in these displays depends on the Solution Packages installed on your RTView Enterprise Monitor system. Displays in this View are:

- "RTView Alerts Table" on page 207: Shows current alert data. Use this time-ordered tabular view to track, manage and assign alerts.
- "Alert History Table" on page 212: Shows historical alert data. Use this time-ordered tabular view to track alert status changes.

RTView Alerts Table

Use this display to track and manage all alerts that have occurred in the system, add comments, acknowledge or assign Owners to alerts.

The color coded navigation tree shows the contents of the CMDB hierarchically ordered. Choose a node to filter alerts shown in the table. The **Alerts Table** only shows alerts associated with the node you select. A green indicator means the node has no associated alerts. A red indicator means the node has one or more associated alerts.

Service name labels are appended with the Environment and number of alerts. For example, the following illustrates that the **TBE** Service currently has no (**0**) associated alerts in the **PRODUCTION** Environment.

✓ ♥ TIBCO-AS ♥ TAS-MEMBER (PRODUCTION)

Each row in the table is a different active alert. Select one or more rows, right-click and choose **Alert** to see all actions that you can perform on the selected alert(s). Choose **Alert / Set Filter Field** to apply the selected cell data to the **Field Filter** and **Search Text** fields. Or enter filter criteria directly in the **Field Filter** and **Search Text** fields. Click **Clear** to clear the **Field Filter** and **Search Text** fields.

Click a column heading to sort the table on that column data.

Optionally, you can use the **\$rtvUserShowDualTables** substitution to add a table that lists alerts owned by the logged in user.


Title Bar:

Indicators and functionality might include the following:

 ← ● Open the previous and upper display. CMDB ● and Table navigate to displays commonly accessed from this display. 19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Clis: 3,047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
_	

The row color indicates the following:

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

• Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

Gray indicates that the alert engine that is hosting the alert is not connected, not enabled or not initialized. When you select a gray row the **Own**, **Suppress**, **Unsuppress**, **Close**, **Annotate**, **Options** and **Details** options are disabled.

Alerts Available with RTView Enterprise Monitor

If the RTVMGR Solution Package and the RTVRULES Solution Package (which come with RTView Enterprise Monitor) are installed on your system you might see the following alert types for RTView Servers (Data Servers, Display Servers and Historian Servers).

RTVMGR Solution Package Alert Types

JvmCpuPercentHigh	The percent JVM CPU usage exceeded the specified threshold.
JvJvmGcDutyCycleHigh	The JVM garbage collection contains an item that exceeded the specified duty cycle threshold (the percent of time spent in Garbage Collection).
JvmMemoryUsedAfterGCHigh	The percentage of the memory used after garbage collection exceeded the specified threshold.
JvmMemoryUsedHigh	The percent JVM memory used exceeded the specified threshold.
JvmNotConnected	The JVM is not connected.
JvmStaleData	The JVM stopped receiving data.
TomcatAccessRateHigh	The Access Rate of a Tomcat application deployed on a Tomcat server exceeded the specified threshold.
TomcatActiveSessionsHigh	The number of active Tomcat Server sessions exceeded the specified threshold.
TomcatAppAccessRateHigh	The application deployed on a Tomcat Server exceeded the specified threshold.
TomcatAppActiveSessionsHigh	The number of active Tomcat application sessions exceeded the specified threshold.

RTVRULES Solution Package Alert Types

RtvEmServiceAlert	This discrete alert is generated when a Service has one or more alerts on any associated CIs.
RtvEmServiceAlertImpactHigh	This limits alert is generated when a Service has an Alert Impact value that exceeds the specified threshold on any associated CI.

Fields and Data This display includ

s display include	es:		
Field Filter	Select a table column from the drop-down menu to perform a search in: Alert Name, Alert Text, Alert Class, Service, CI, Closed Reason, Closed, CompId, Count, First Occ, ID, Last Occ, Owner, Primary Service, Sup, TicketGroup, TicketID.		
	Filters limit dis pass through t zero search re	play content and drop-down menu selections to only those items that he selected filter's criteria. If no items match the filter, you might have sults (an empty table).	
Clear	Clears the Fiel	d Filter and Search Text entries.	
Search Text	Enter the (case	e-sensitive) string to search for in the selected Field Filter.	
CMDB Filter	Shows the sele all components	ected Owner, Area, Group, Service and Environment filters. By default, s of the CMDB (*) are included in the search.	
	These CMDB Filter fields are populated when you click Open Alerts Table A, which is accessible from the Multi Area Service Views displays, to open the Alerts Table in a new window. The filters selected in the All Management Areas and Multi Area Service Views displays are applied to the Alerts Table (that opens in the new window). NOTE: When you use the navigation tree (in the left panel) to open the Alerts Table display, the Environment filter is applied to the display if it has a value other than * (asterisk).		
Clear CMDB Filter	Clears all of th Environment	e values in the CMDB Filter (Owner , Area , Group , Service and filters). NOTE: This action is not applied to any other display.	
RegEx	Toggles the Se	arch Text field to accept Regular Expressions for filtering.	
All	Click to show a	all alerts in the table: Open and Closed alerts.	
Open	Click to only sh	now Open alerts in the table.	
Closed	Click to only st	now Closed alerts in the table.	
Owner Filter	Select the alert Owner to show alerts for in the table.		
	All	Shows alerts for all Owners in the table: Not Owned and Owned By Me alerts.	
	Not Owned	Shows only alerts without Owners in the table.	
	Owned By Me	Shows only alerts for the current user in the table.	
Alert Settings Conn OK	The Alert Serve Disconnecte Connected.	er connection state: ed.	
Total	X/Y where X i Y is the number	s the total number of alerts in the table with all selected filters applied. er of alerts in the table with only the CMDB and Cleared filters applied.	
Critical	Check to show check Critical X/Y where X i	alerts in the table that are currently in a critical state. NOTE: You must to see alerts that are in a critical state. s the total number of critical alerts in the table with all selected filters	
	applied. Y is the filters applied.	he number of alerts in the table with only the CMDB Filter and Cleared	

Warning	Check to show alerts in the table that are currently in a warning state. NOTE: You must check Warning to see alerts that are in a warning state.
	X/Y where X is the total number of warning alerts in the table with all selected filters applied. Y is the number of alerts in the table with only the CMDB and Cleared filters applied.
Suppressed	Check to show alerts in the table that are suppressed. The Suppressed count is not impacted by the Critical and Warning filters. It is impacted only by the CMDB Filter and the Owner Filter . NOTE: You must check Suppressed to see Suppressed alerts in the table.
Own	Click to assign an Owner for the alert. This option is only visible when logged in as one of the following roles: event, full, admin, super. This option is disabled when you select a gray row. For details, see "Configure User and Role Management" on page 44.
Suppress	Click to suppress the alert. This option is only visible when logged in as one of the following roles: event, full, admin, super. This option is disabled when you select a gray row. For details, see "Configure User and Role Management" on page 44.
UnSuppress	Click to unsuppress the alert. This option is only visible when logged in as one of the following roles: event, full, admin, super. This option is disabled when you select a gray row or when you select a row. For details, see "Configure User and Role Management" on page 44.
Close	Click to close the alert. This option is only visible to users with Administrator privileges. This option is disabled when you select a gray row or you select a row where the Primary Service is not in the \$rtvManageableCompID list for the logged in user. For details, see "Configure User and Role Management" on page 44.

Alerts Table This table lists all active alerts for the current filters. The table is empty unless you check **Critical**, **Warning**, or both. Filter the list using the search fields and drop-down menus (in the upper portion of the display). To view details about an alert, select an alert and click **Details** (in the bottom right portion of the display) to open the **Alert Detail** dialog. To view details about the CI source of the alert, select an alert and click **Go To CI** (in the bottom right portion of the display) to open its Summary display. display.

	First Occ	The date and time the alert first occurred.
	Last Occ	The date and time the alert last occurred.
	Count	The number of times the alert was generated.
	Sup	When checked, the alert has been suppressed by a user.
	Owner	The named owner assigned by the administrator.
	Alert Name	The name of the alert.
	Primary Service	The name of the Service with which the alert is associated.
	CI	The CI alert source.
	Alert Text	Description of the alert.
	AlertClass	An optional alert field which can be used when integrating with other alerting systems.
	CompID	An optional alert field which can be used when integrating with other alerting systems.
	TicketID	An optional alert field which can be used when integrating with other alerting systems.
	TicketGroup	An optional alert field which can be used when integrating with other alerting systems.
Columns	Id	When checked, shows the ID column in the table.

	Closed	When checked, shows the Closed column in the table.
	Closed Reason	When checked, shows the Closed Reason column in the table.
	Alert Index	When checked, shows the Alert Index column in the table.
Go To CI	Select an alert t selected CI in th	from the Alerts Table , then click Go To CI to view details for the ne Summary display.
Annotate	Select one or m Owner and Co option is only v super. This option where the Prima user. For details	ore alerts from the Alerts Table , then click Annotate to open the Set mments dialog and enter comments or change alert owner. This isible when logged in as one of the following roles: event, full, admin, on is disabled when you select a gray row or when you select a row ary Service is not in the \$rtvManageableCompID list for the logged in s, see "Configure User and Role Management" on page 44.
	ID	Lists the alert IDs, separated by semicolons, for the alerts selected from the Alert Table .
	Source	Lists the name of the back-end Data Server reporting the alert, separated by semicolons.
	Enter Owner	Enter the name of the owner for one or more alerts, click Set Owner of One Alert to assign the Owner, then click Close . By default, this field displays the current user name.
	Enter Comment	Enter a comment for one or more alerts, click Add Comment on One Alert to apply the Comment, then click Close . By default, this field displays previously entered comments. The text appears in the Comments field for the alert.
	Set Owner	Applies the name of the alert owner in the Enter Owner field for one or more alerts.
	Add Comment	Applies the comment in the Enter Comment field for one or more alerts.
	Clear Comments	Removes all comments for one or more alerts.
	Close	Closes the dialog.
Options	Select a single a Options dialog option is disable	alert from the Alerts Table , then click Options to open the Alert . . This dialog is provided for customizing your own alert options. This ed when you select a gray row or more than one row.
Details	Select a single a Detai l window row or more that	alert from the Alerts Table , then click Details to open the Alert and view alert details. This option is disabled when you select a gray an one row.

Alert History Table

Use this display to track the history of any alert that has occurred in your RTView Enterprise Monitor system. There is one row in the table for each update to each alert. The table is limited to **20,000** rows. If there are more than **20,000** rows in the selected time range, the newest **20,000** rows are shown.

The color coded navigation tree shows the contents of the CMDB hierarchically ordered. Choose a node to filter alerts shown in the table. The **Alert History Table** only shows alerts associated with the node you select. A green indicator means the node has no associated alerts. A red indicator means the node has one or more associated alerts. Service name labels are appended with the Environment. For example, the following illustrates that the **TAS-MEMBER** Service currently has no alerts in the **PRODUCTION** Environment.

TIBCO-AS
 TAS-MEMBER (PRODUCTION)

To filter the table, select a table column from the **Field Filter** drop-down menu. In the **Search Text** field, enter the (case-sensitive) string to search for in the selected **Field Filter**, then click **<Enter>**. Click **Clear** to clear the **Field Filter** and **Search Text** fields.

The **Count** label shows two values: the filtered row count / the total row count.

Click a column heading to sort the table by the column data.



Title Bar:

Cls: 3,047

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table
display.

Open an instance of this display in a new window.

Open the online help page for this display.

Note: The **Count** field in the title bar of this display shows two values: the filtered row count and the

unfiltered row count.

The row color indicates the most critical alert state for the row, as follows:

Row Color Code:

Tables with colored rows indicate the following:

Red indicates that one or more alerts exceeded their ALARM LEVEL threshold in the table row.
 Yellow indicates that one or more alerts exceeded their WARNING LEVEL threshold in the table row.

• Green indicates that no alerts exceeded their WARNING or ALARM LEVEL threshold in the table row.

If the RTVMGR Solution Package and the RTVRULES Solution Package (which come with RTView Enterprise Monitor) are installed on your system you might see the following alert types for RTView Servers (Data Servers, Display Servers and Historian Servers):

RTVMGR Solution Package Alert Types

JvmCpuPercentHigh	The percent JVM CPU usage exceeded the specified threshold.
JvJvmGcDutyCycleHigh	The JVM garbage collection contains an item that exceeded the specified duty cycle threshold (the percent of time spent in Garbage Collection).
JvmMemoryUsedAfterGCHigh	The percentage of the memory used after garbage collection exceeded the specified threshold.
JvmMemoryUsedHigh	The percent JVM memory used exceeded the specified threshold.
JvmNotConnected	The JVM is not connected.
JvmStaleData	The JVM stopped receiving data.
TomcatAccessRateHigh	The Access Rate of a Tomcat application deployed on a Tomcat server exceeded the specified threshold.
TomcatActiveSessionsHigh	The number of active Tomcat Server sessions exceeded the specified threshold.
TomcatAppAccessRateHigh	The application deployed on a Tomcat Server exceeded the specified threshold.
TomcatAppActiveSessionsHigh	The number of active Tomcat application sessions exceeded the specified threshold.
RTVRULES Solution Package Alert	Гурез

RtvEmServiceAlert	This discrete alert is generated when a Service has one or more alerts on any associated CIs.
RtvEmServiceAlertImpactHigh	This limits alert is generated when a Service has an Alert Impact value that exceeds the specified threshold on any associated CI.

Fields and Data

This display includes:

Field Filter	Select a table column from the drop-down menu to perform a search in: Alert Name, Alert Text, Cleared Reason, Clr, ID, Owner, Sev, Source, Sup, ID or Time.		
	Filters limit display content and drop-down menu selections to only those items that pass through the selected filter's criteria. If no items match the filter, you might have zero search results (an empty table).		
Clear	Clears entries in the Alert Name Filter field and all table data.		
Search	Enter the (case-sensitive) string to search for in the selected Field Filter.		

Search Text **RegEx** Toggles the **Search Text** field to accept Regular Expressions for filtering.

Sort by When checked, table rows are sorted by the **Time** and **ID** columns. **ID** + **Time**



By default, the time range end point is the current time. To change the time range end point, click Calendar _____ and select a date and time from the calendar or enter the date and time in the text field using the following format: **MMM dd, YYYY HH:MM**. For example, **Aug 21, 2011 12:24 PM**.

Use the navigation arrows **I** to move forward or backward one time period. NOTE: The time period is determined by your selection from the **Time Range** drop-down menu.

Click **Restore to Now** to reset the time range end point to the current time.

Alerts Table

This table lists all alerts for all Owners and all Areas that have occurred in your RTView Enterprise Monitor system. Filter the list by alert names using the **Alert Name Filter** drop-down menu.

Time	The date and time the alert first occurred.
ID	The unique string identifier for the alert.
Clear	When checked, the alert has been cleared by a user.
Sup	When checked, the alert has been suppressed by a user.
Owner	The named owner assigned by the administrator.
Alert Name	The name of the alert.
Alert Index	Lists the Alert Indexes, separated by tildes (\sim), for the alert.
Alert Text	Descriptive text about the alert.
Cleared Reason	DATA UPDATE : The metric returned to normal thresholds. MANUAL : A user cleared or closed the alert manually.
Sev	The severity level of the alert.
Source	The name of the back-end Data Server reporting the alert.

Administration

These displays enable you to set alert thresholds, and observe how alerts are managed. Displays in this View are:

- "Alert Administration" on page 216: Displays active alerts and provides interface to modify and manage alerts.
- "Alert Admin Audit" on page 222: Track modifications of alerts throughout your system, such as alert threshold modifications.
- "Alert Action Audit Trail" on page 224: Track alert management throughout your system, including the name of the user who performed the action, the time the action was performed and what the action was.

Alert Administration

Set global or override alert thresholds. Alert settings are global by default. Only users logged in with the admin or super roles can save changes to alert thresholds. For details, see "Configure User and Role Management" on page 44.

The table describes the global settings for all alerts on the system. To filter the alerts listed in the table, enter a string in the **Alert Filter** field and press **<enter>** or click elsewhere in the display. Filters are case sensitive and no wildcard characters are needed for partial strings. For example, if you enter Server in the **Alert Filter** field, it filters the table to show only alerts with **Server** in the name. Choose **Clear** to clear the filter.

Global Thresholds

To set a global alert, select an alert from the **Active Alert Table**. The name of the selected alert populates the **Settings for Selected Alert Name** field. Edit the **Settings for Selected Alert** and click **Save Settings** when finished.

The manner in which global alerts are applied depends on the Solution Package. For example, the EMS Monitor Solution Package has queue alerts, topic alerts and server alerts. When a queue alert is applied globally, it is applied to all queues on all servers. Likewise, a server alert applies to all servers, and a topic alert applies to all topics on all servers.

Override Thresholds

Setting override alerts allows you to set thresholds for a single resource (for example, a single server). Override alerts are useful if the majority of your alerts require the same threshold setting, but there are other alerts that require a different threshold setting. For example, you might not usually be concerned with execution time at a process level, but perhaps certain processes are critical. In this case, you can apply alert thresholds to each process individually.

To apply an individual alert you Index the Monitored Instance or resource (such as a message queue, in the case of the EMS Monitor package). The Index Types available are determined by the Solution Package installed. For example, with the EMS Monitor package you can set an alert for a specific topic on a specific server--the PerServerTopic Index option--rather than for all topics on all servers.

For information about setting override alerts, see "Tabular Alert Administration" on page 219.

Note: To filter the alerts shown in the **Administration -** "Alert Administration" display by Solution Package, use the **\$rtvAlertPackageMask** substitution.

<	Alert Administration 23-Sep-2015 16:15 💠 Data OK 💠			Data OK 💠 🕜	
Alert Filter Clear				📀 Alert S	Settings Conn Ok
Alert	Warning Level	Alarm Level	Duration	Alert Enabled	Override 🔺
AcwInstanceCpuHigh	50	75	30	V	
AcwInstanceDiskReadBytesHigh	100000	200000	30	V	(
AcwInstanceDiskReadOpsHigh	100	200	30	r	(
AcwInstanceDiskWriteBytesHigh	100000	200000	30	V	(
AcwInstanceDiskWriteOpsHigh	100	200	30	r	(
AcwInstanceNetworkReadBytesHigh	100000	200000	30	V	(
AcwInstanceNetworkWriteBytesHigh	100000	200000	30	r	(
AmxServiceHitRateHigh	200	400	30	V	(
AmxServiceNodeFaultRateHigh	200	400	30	r	(
AmxServiceNodeHitRateHigh	200	400	30	V	(
AmxServiceNodeMovingAvgHitRateHigh	200	400	30	r	(
AmxServiceNodeMovingAvgResponseTimeHigh	200	400	30	V	(
AmxServiceNodeResponseTimeHigh	200	400	30	r	(
AmxServiceResponseTimeHigh	200	400	30	V	(
Bw6AppNodeCpuUsedHigh	50	80	30		(
Bw6AppNodeMemUsedHigh	50	80	30		(
Bw6AppProcessCreatedRateHigh	50	80	30	r	(_
Bw6AppProcessElapsedTimeHigh	100	200	30		(
	Settings for Sel	ected Alert			
Name: AcwInstanceDiskWriteOpsHigh	W	arning Level:	100.0 Du	uration (Secs	.): 30
Description: Number of disk write operations in	current ir	Alarm Level:	200.0	Enabled	i: 🗸
Tabular Alert Options Save Settings					
The Warning Level, Alert Level and Alarm Enabled	d values on this s	creen can be ov	verridden for ea	ch alert i Ove	rride Settings
,					

Title Bar:

Indicators and functionality might include the following:

• Open the previous and upper display. <u>CMDB</u> and <u>Table</u> navigate to displays commonly accessed from this display. <u>19-Feb-2014 16:50</u> The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data

This display includes:

Alert Enter the (case-sensitive) string to filter the table by the **Alert** table column value. NOTE: Partial strings can be used without wildcard characters. Press **<enter>** or click elsewhere in the display to apply the filter.

Clear Clears the Alert Filter entry.

Alert The Alert Server connection state:

Settings 😑 Disconnected.

Connected.

Active Alert Table

This table describes the global settings for all alerts on the system. Select an alert. The name of the selected alert populates the **Settings for Selected Alert Name** field (in the lower panel). Edit **Settings for Selected Alert** fields and click **Save Settings** when finished.

NOTE: To filter the alerts shown in the table by Solution Package, use the **\$rtvAlertPackageMask** substitution.

- Alert The name of the alert.
- **Warning** The global warning threshold for the selected alert. When the specified value is exceeded a warning is executed.
- **Alarm Level** The global alarm threshold for the selected alert. When the specified value is exceeded an alarm is executed.
- **Duration** (Secs) The amount of time (in seconds) that the value must be above the specified Warning Level or Alarm Level threshold before an alert is executed. **0** is for immediate execution.
- Alert When checked, the alert is enabled globally.
- **Override** The number of times thresholds for this alert have been defined individually in the **Tabular Alert Administration** display.

Settings for Selected Alert

To view or edit Global settings, select an alert from the **Active Alert Table**. Edit the **Settings for Selected Alert** fields and click **Save Settings** when finished.

To set override alerts, click on **Override Settings** to open the **Tabular Alert Administration** display.

The name of the alert selected in the Active Alert Table. Name Description of the selected alert. Click Calendar - for more detail. Description Set the Global warning threshold for the selected alert. When the specified Warning value is exceeded a warning is executed. To set the warning to occur sooner, reduce the Warning Level value. To set the warning to occur later, Level increase the Warning Level value. NOTE: For low value-based alerts (such as **EmsQueuesConsumerCountLow**), to set the warning to occur sooner, increase the Warning Level value. To set the warning to occur later, reduce the Warning Level value. Alarm Level Set the Global alarm threshold for the selected alert. When the specified value is exceeded an alarm is executed. To set the alarm to occur sooner, reduce the Alarm Level value. To set the warning to occur later, increase the Alarm Level value. NOTE: For low value-based alerts (such as EmsQueuesConsumerCountLow), to set the alarm to occur sooner, increase the Alarm Level value. To set the alarm to occur later, reduce the Alarm Level value.

Duration	Set the amount of time (in seconds) that the value must be above the specified Warning Level or Alarm Level threshold before an alert is executed. 0 is for immediate execution. This setting is global.
Enabled	Check to enable alert globally.
Save Settings	Click to apply alert settings.
Override Settings	Click to open the Tabular Alert Administration display to set override alerts on the selected alert.

Tabular Alert Administration

Set override alerts (override global alert settings). This display opens when you select an alert in the Alert Administration display and then select Override Settings.

For step-by-step instructions setting thresholds for individual alerts, see **Setting Override** Alerts..

(Tabular Alert Administratio	23-S	ep-2015 16:12	< Data	ок 🔶 🕜
		Override Set	tings For Alert: AcwInstanceDisk	kWriteOpsHig	h 🌍 /	Mert Setting	gs Conn OK
Index Ty	ype		Index	Override Settings	Warning Level	Alarm Level	Alert Enabled
Index Type:	PerInst	tance 💌					
Index:				Add	Remove	Save	Settings
		Unassigned In	dexes		Alert S	ettings	
				War	ning Level:		
				A	arm Level		
					A Over	lert Enab ride Setti	led:
						Back	to Alerts

Fields and Data

Alert Settings

Conn ŎK

This display includes:

The connection state.

No servers are found.

One or more servers are delivering data.

Override Settings For Alert:(name) This table lists and describes alerts that have override settings for the selected alert. Select a row to edit alert thresholds. The selected item appears in the Index field. Edit settings in the Alert Settings fields, then click Save Settings.

	Index Type	 Select the type of alert index to show in the Values table. Options in this drop-down menu are populated by the type of alert selected, which are determined by the Package installed. For example, with the EMS Monitor package the following Index Types are available: PerServer: Alert settings are applied to a specific server.
		 PerQueue: Alert settings are applied to the queue on each server that has the queue defined.
		 PerServerQueue: Alert settings are applied to a single queue on a specific server.
		• PerTopic: Alert settings are applied to the topic on each server that has the topic defined.
		• PerServerTopic: Alert settings are applied to a single topic on a specific server.
	Index	The value of the index column.
	Override Settings	When checked, the override settings are applied.
	Alert Enabled	When checked, the alert is enabled.
Index Type	Select the i to a queue server. NOT selected fro Package ins	ndex type. The index type specifies how to apply alert settings. For example, (topic or JVM, and so forth) across all servers, or to a queue on a single TE: Options in this drop-down menu are populated by the type of alert om the Alert Administration display. Index Types available depend on the stalled.
Index	The selecte the Unassi	d index column to be edited. This field is populated by the selection made in gned Indexes table.
Unassigned Indexes	This table I down list. S the Index	ists all possible indexes corresponding to the Index Type chosen in the drop- Select a row to apply individual alert thresholds. The selected item appears in field. Edit settings in the Alert Settings fields, then click Add .
Add	Click to add	d changes made in Alert Settings, then click OK to confirm.
Remove	Click to ren confirm.	nove an alert selected in the Index Alert Settings table, then click OK to
Save Settings	Click to sav	ve changes made to alert settings.

Alert Settings Select a topic, server or queue from the **Unassigned Indexes** table and edit the following settings.

Warning Level	Set the warning threshold for the selected alert. When the specified value is exceeded a warning is executed. To set the warning to occur sooner, reduce the Warning Level value. To set the warning to occur later, increase the Warning Level value.
	NOTE: For low value-based alerts (such as EmsQueuesConsumerCountLow), to set the warning to occur sooner, increase the Warning Level value. To set the warning to occur later, reduce the Warning Level value. Click Save Settings to save settings.
Alarm Level	Set the alarm threshold for the selected alert. When the specified value is exceeded an alarm is executed. To set the alarm to occur sooner, reduce the Alarm Level value. To set the warning to occur later, increase the Alarm Level value. NOTE: For low value-based alerts (such as EmsQueuesConsumerCountLow), to set the alarm to occur sooner, increase the Alarm Level value. To set the alarm to occur later, reduce the Alarm Level value. Click Save Settings to save settings.

Alert Check to enable the alert, then click Save Settings. Enabled

Override Check to enable override global setting, then click **Save Settings**. **Settings**

Back to Returns to the Administration - Alert Administration display. Alerts

Setting Override Alerts

Perform the following steps to set an override alert. Index Types available depend on the Solution Package installed. In this example, we use the EMS Monitor Package to illustrate.

Note: To turn on an alert, both Alert Enabled and Levels Enabled must be selected.

To turn on/off, change threshold settings, enable/disable or remove an alert on a single resource:

- **1.** In the Alert Administration display, select a tabular alert in the Active Alert Table and click Override Settings. The Tabular Alert Administration display opens.
- 2. In the **Tabular Alert Administration** display, select the Index type from the **Index Type** drop-down menu (options are populated by the type of alert you previously selected). For example, with the EMS Monitor package, select PerServerQueue, PerServerTopic or PerServer. NOTE: If you select PerServerQueue or PerServerTopic, the alert settings are applied to the queue or topic on a single server.
- **3.** In the **Unassigned Indexes** table, select the item you want to apply an override alert setting to, click **Add** and **OK** in the confirmation dialog. After a few moments the override setting appears in the **AlertLevels** table.
- 4. Select the item in the AlertLevels table.
- **5.** In the Alert Settings panel (lower right), if needed, modify the Warning Level and Alarm Level settings.
- 6. In the Alert Settings panel, set the following as appropriate.
- To turn on the alert for this index with the given thresholds:

Alert Enabled Select this option.

Override Settings Select this option.

NOTE: To turn on an alert, both **Alert Enabled** and **Override Settings** must be selected.

 To turn off the alert for only this index (global alert thresholds will no longer apply to this index):

Alert Enabled Deselect this option.

Override Settings Select this option.

 To no longer evaluate this indexed alert and revert to global settings (or, optionally, Remove it if it is never to be used again): Alert Enabled Not used.

Override Settings Deselect this option.

7. Click **Save Settings**. In a few moments the modifications are updated and a new record appears in the **AlertLevels** table. For example, in the following figure, the EmsServerConnectionCountHigh alert has a new override applied. New overrides increment the alert **Override Count** in the **ALERTLEVELS** table..

Alert	Warning Level	Alarm Level	Duration	Alert Enabled	Override Count	•
Ema Quay a Draducar Countl ligh	60	00	20	<u> </u>		글
EmsQueuesProducerCountHigh	00	80	30			U
EmsQueuesProducerCountLow	15	5	30			0
EmsServerAsyncDBSizeHigh	50	100	30			0
EmsServerConnectionCountHigh	60	80	30			1
EmsServerInMsgRateHigh	60	80	30			0 =
EmsServerMemUsedHigh	60	80	30			0

Alert Admin Audit

View alert management details such as alert threshold modifications.

Each table row is a single modification made to an alert. To view modifications for a single alert in a group, click Sort **a** to order the **ALERTNAME** column.

+	Alert Administration Audit Trail 23-Sep-2015 16:08 💠 Data OF						
					🌔 Aı	udit Conn OK	
TIME_STAMP	USER	ACTION	ALERTNAME	INDEXTYPE	ALERTINDEX	WARNINGLE	VE 🔺
09/20/15 15:27:45	admin	UPDATED	BwActivityErrorRateHigh	Default	Default		D.C
09/20/15 15:16:15	admin	UPDATED	BwActivityExecutionTimeHig	Default	Default		0.0 =
09/20/15 15:16:00	admin	UPDATED	BwActivityErrorRateHigh	Default	Default		8
09/19/15 10:35:32	admin	UPDATED	BwProcessElapsedTimeHigh	Default	Default		8
09/19/15 10:35:20	admin	UPDATED	BwProcessElapsedTimeHigh	Default	Default		D.C
09/19/15 10:35:07	admin	UPDATED	BwProcessAbortRateHigh	Default	Default		3
09/19/15 10:34:56	admin	UPDATED	BwProcessAbortRateHigh	Default	Default		D.C
09/19/15 10:34:43	admin	UPDATED	BwEngineCpuUsedHigh	Default	Default		3
09/19/15 10:34:32	admin	UPDATED	BwEngineCpuUsedHigh	Default	Default		D.C
09/19/15 10:34:12	admin	UPDATED	BwEngineMemUsedHigh	Default	Default		3
09/19/15 10:34:00	admin	UPDATED	BwEngineMemUsedHigh	Default	Default		D.C
09/19/15 10:33:47	admin	UPDATED	BwEngineCpuUsedHigh	Default	Default		3
09/19/15 10:33:36	admin	UPDATED	BwEngineCpuUsedHigh	Default	Default		D.C
09/19/15 10:33:21	admin	UPDATED	BwActivityExecutionTimeHig	Default	Default		3
09/19/15 10:33:06	admin	UPDATED	BwActivityExecutionTimeHig	Default	Default		D.C
09/19/15 10:32:50	admin	UPDATED	BwActivityErrorRateHigh	Default	Default		3
09/19/15 10:32:19	admin	UPDATED	BwActivityErrorRateHigh	Default	Default		D.C
09/19/15 09:42:07	admin	UPDATED	BwEngineCpuUsedHigh	Default	Default		3
09/19/15 09:41:42	admin	UPDATED	BwActivityExecutionTimeHig	Default	Default		8
09/19/15 09:41:30	admin	UPDATED	BwActivityExecutionTimeHig	Default	Default		D.C
09/19/15 09:40:59	admin	UPDATED	BwActivityErrorRateHigh	Default	Default		5
09/19/15 09:40:30	admin	UPDATED	BwActivityErrorRateHigh	Default	Default	1	D.C
09/19/15 09:39:30	admin	UPDATED	BwActivityExecutionTimeHig	Default	Default		8
09/19/15 09:39:09	admin	UPDATED	BwActivityExecutionTimeHig	Default	Default		5
09/19/15 09:34:23	admin	UPDATED	BwActivityExecutionTimeHig	Default	Default		D.C
09/19/15 09:34:07	admin	UPDATED	BwActivityErrorRateHigh	Default	Default		5
•						1	•

Title Bar: Indicators and functionality might include the following:

 ← ↑ Open the previous and upper display. CMDB → and Table navigate to displays commonly accessed from this display. 19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data. Cls: 3,047 The number of items in the display. 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display. Open an instance of this display in a new window. Open the online help page for this display.
--	---

Fields and Data This display includes:

Audit Conn OK	The Alert Server connection state. Disconnected. Connected.
TIME_STAMP	The date and time of the modification.
USER	The user name of the administrator who made the modification.
ACTION	The type of modification made to the alert, such as UPDATED .
ALERTNAME	The name of the alert modified.
INDEXTYPE	The type of alert Index.
	Index Type refers to the manner in which alert settings are applied and vary among Packages. For example, JVMs have a PerJvm Index Type. the EMS Monitor package PerServer, PerTopic and PerQueue Index Types, which apply alerts to servers, topics and queues, respectively.
ALERTINDEX	The index of the alert which identifies its source.
WARNINGLEVEL	The warning threshold value for the alert at the time this modification was made, as indicated in the TIME_STAMP column.
	The warning level is a threshold that, when exceeded, a warning is executed.
ALARMLEVEL	The alarm threshold value for the alert at the time this modification was made, as indicated in the TIME_STAMP column.
	The alarm level is a threshold that, when exceeded, an alarm is executed.
DURATION	The duration value for the alert at the time this modification was made, as indicated in the TIME_STAMP column.
	The alert duration is the amount of time (in seconds) that a value must be above the specified Warning Level or Alarm Level threshold before an alert is executed. 0 is for immediate execution.
ENABLED	When checked, indicates the alert was enabled at the time this modification was made, as indicated in the TIME_STAMP column.

Alert Action Audit Trail

The **Alert Action Audit Trail** display shows all user actions concerning alert management, including the name of the user who performed the action, the time the action was performed and what the action was. This display can help managers of the RTView Enterprise Monitor solution determine how and when user interactions have impacted the alert system and help manage users so that best practices for alert handling are maintained.

		Alert Alert	on Auunt Ira	1	13-Oct-2015 11:03 🐼 Data OK 🍚 👔
					🕐 Action Audit Conn OK
TIME_STAMP	USER ACTION_TYPE	ACTION	TARGET	VALUE	ALERT_NAME
10/01/15 16:56:29 admir	n Event Management	Set Owner	2764	admin	EmsServerRouteState
10/01/15 16:56:29 admir	n Event Management	Set Owner	2562	admin	EmsQueueProviderIdleT.
10/01/15 16:56:29 admir	n Event Management	Set Owner	2385	admin	EmsQueueProviderIdleT.
10/01/15 16:56:29 admir	n Event Management	Set Owner	2339	admin	EmsTopicsProducerCou.
10/01/15 16:56:29 admir	n Event Management	Set Owner	2304	admin	EmsTopicsProducerCou.
10/01/15 16:56:29 admir	n Event Management	Set Owner	2256	admin	EmsTopicsProducerCou.
10/01/15 16:56:29 admir	n Event Management	Set Owner	2096	admin	EmsTopicsProducerCou.
10/01/15 16:56:29 admir	n Event Management	Set Owner	2039	admin	EmsTopicsConsumerCo.
10/01/15 16:56:29 admir	n Event Management	Set Owner	2004	admin	EmsTopicsConsumerCo.
10/01/15 16:56:29 admir	n Event Management	Set Owner	1956	admin	EmsTopicsConsumerCo.
10/01/15 16:56:29 admir	n Event Management	Set Owner	1796	admin	EmsTopicsConsumerCo.
10/01/15 16:56:29 admir	n Event Management	Set Owner	1761	admin	EmsServerAsyncDBSize.
10/01/15 16:56:29 admir	n Event Management	Set Owner	1732	admin	EmsQueuesProducerCo.
10/01/15 16:56:29 admir	n Event Management	Set Owner	1375	admin	EmsQueuesProducerCo.
10/01/15 16:56:29 admir	n Event Management	Set Owner	1358	admin	EmsQueuesConsumerC.
10/01/15 16:56:29 admir	n Event Management	Set Owner	1001	admin	EmsQueuesConsumerC.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2764		EmsServerRouteState
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2562		EmsQueueProviderIdleT.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2385		EmsQueueProviderIdleT.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2339		EmsTopicsProducerCou.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2304		EmsTopicsProducerCou.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2256		EmsTopicsProducerCou.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2096		EmsTopicsProducerCou.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2039		EmsTopicsConsumerCo.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	2004		EmsTopicsConsumerCo.
10/01/15 16:56:29 admir	n Event Management	Clear Alert	1956		EmsTopicsConsumerCo.

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data

This display includes:

Action Audit Conn OK	 The Alert Action database connection availability. The connection to the Alert Action database is not available. The connection to the Alert Action database is available.
Time_Stamp	The time the action was performed.
User	The log in name of the user who performed the action.
Action_Type	The type of action which was performed.
Action	The action which was performed.
Target	The alert ID on which the action was performed.

Value	Any value associated with the alert action.
Alert_Name	The name of the alert on which the action was performed.
Alert_Index	The index of the alert which identifies its source.

CMDB Administration

This display allows you to modify your Service Data Model.

• "CMDB Admin" on page 225: View or modify your Service Data Model.

CMDB Admin

Use this display to setup, view or modify your Service Data Model (CMDB), including: adding, renaming, deleting or merging your CMDB hierarchical elements (Owners, Areas, Groups or Services), associating CIs with Services and assigning or modifying CI attributes (such as Criticality). Only users logged in with the admin or super roles can apply changes in this display. For details, see "Configure User and Role Management" on page 44.

The **CI List for Selected Service** (upper) table lists the CIs that are associated with the Service selected (from the **Service** drop-down menu).

The **Available Components** (lower) table is not part of the CMDB. The **Available Components** table lists all available CIs for the CI Type (selected from the **Selected CI Type** drop-down menu) that are in your RTView Enterprise Monitor system--whether or not they are in the CMDB. Filter this list using the **CIName Filter** field.

You add CIs to the CMDB by associating them with an Owner, Area, Group, and Service. To do so, select the CI Type from the **Selected CI Type** drop-down menu, choose one or more CIs from the **Available Components** table, then click **Add CI**.

It is not necessary to restart the Configuration Server after making changes to the Service Data Model using the **CMDB Admin** display.

Creating a new Service, Group, Area or Owner:

Select the CI Type from the **Selected CI Type** drop-down menu, choose one or more CIs from the **Available Components** table, then click **Add CI To...** Assign a new or existing Owner, Area, Group or Service, review your entries and click **OK**. Your changes are visible in drop-down menus and displays.

Associating CIs with a Service:

This option is useful when you want to define which CIs are to be monitored for Services. CIs can be associated with more than one Service, Group, Area or Owner. Select the Owner, Area, Group and Service to which you want to associate one or more CIs using the drop-down menus. The **CI List Table** (the upper table) populates with all CIs already associated with the Owner, Area, Group and Service you select. Select the CI Type of the CI(s) you want to associate. The **Available Components** table (the lower table) populates with all CIs that are categorized as that CI Type. Select one or more CIs in the **Available Components** table, set the Criticality and other optional assignments using the drop-down menus (on the right). Click **Add CI** to associate the CI(s) with the Service. A row is added for each associated CI to the **CI List Table**. Your changes are visible in the drop-down menus and displays.

Renaming a Service, Group, Area or Owner:

This option is useful when, for example, a *new* Owner is replacing a retiring Owner, a name is misspelled or a more relevant name is required. Select the relevant Owner, Area, Group or Service using the drop-down menus, then click the corresponding **Manage** (Owner, Area, Group or Service) option for what you are renaming. The **Manage** (Owner, Area, Group or Service) dialog opens. In the **Manage** (Owner, Area, Group or Service) dialog opens. In the **Manage** (Owner, Area, Group or Service) dialog, type the new name in the **New Name** field, click **Rename** and **OK**. Your changes are visible in the drop-down menus and displays.

Deleting a Service, Group, Area or Owner:

This option is useful when, for example, an Owner, Area, Group or Service and all the CIs associated with it are not relevant in your RTView Enterprise Monitor system. When you delete a Service, Group, Area or Owner everything underneath it (lower CMDB levels and associated CIs) is also removed from the CMDB database and displays. Select the relevant Owner, Area, Group or Service using the drop-down menus, then click the corresponding **Manage (Owner, Area, Group** or **Service)** option for what you are deleting. The **Manage (Owner, Area, Group** or **Service)** dialog opens. In the **Manage (Owner, Area, Group** or **Service)** dialog opens. In the **Manage (Owner, Area, Group** or **Service)** dialog opens. In the drop-down menus and displays.

Important: There is no option to undo a deletion from the CMDB. To restore a deletion you must recreate the Owner, Area, Group or Service and the CIs must be re-associated.

Moving a Service, Group or Area:

This option is useful when, for example, an Area belongs under a different Owner, a Group belongs under a different Area or a Service belongs under a different Group. When you move a Service, Group or Area (Owners cannot be moved) everything underneath it (lower CMDB levels and associated CIs) moves with it. Select the Area, Group or Service you want to move using the drop-down menus, then click the relevant **Manage** (Area, Group or Service) option for what you are moving. The **Manage** (Area, Group or Service) dialog opens. In the **Manage** (Area, Group or Service) dialog, select the new Owner, Area, Group or Service to move to from the **New** (Area, Group or Service) drop-down menus, click **Move** and **OK**. Your changes are visible in the drop-down menus and displays.

Merging Services, Groups, Areas or Owners:

This option is useful when, for example, an *existing* Owner is taking over for a retiring Owner. When you merge a Service, Group, Area or Owner its name changes to that of the target Service, Group, Area or Owner, and everything underneath it (lower CMDB levels and associated CIs) goes with it. Select the Area, Group or Service you want to merge using the drop-down menus, then click the relevant **Manage** (Area, Group or Service) option for what you are merging. The **Manage** (Area, Group or Service) dialog opens. In the **Manage** (Area, Group or Service) dialog, select an existing Owner, Area, Group or Service to merge to in the **New Name** field, click **Merge** and **OK**. Your changes are visible in the drop-down menus and displays.

Deleting a CI:

Select a CI from the **CI List Table**, click **Delete** and **OK**. The CI is removed from the CMDB database and displays. Your changes are visible in the drop-down menus and displays.

Applying Criticality value to multiple CIs:

In the **CI List Table** select a CI that has the Criticality value you want to apply to all CIs in the **CI List Table**, click **Update Criticality like selected CI** and **OK**. The **Criticality** column for all CIs is updated. Your changes are visible in the drop-down menus and displays.

Changing CI attributes

In the CI List Table select the CI you want to modify attributes for, use the Environment, Region, SiteName, Criticality, City, Country and OSType drop-down menus to apply attributes, then click Update and OK. The CI List Table is updated. Your changes are visible in the drop-down menus and displays.

By default, the Owner named **Infrastructure** is created. **Infrastructure** organizes all available CIs collected through all Data Servers configured under RTView EM by technology. This default organization can be disabled if needed.

+			C	:MDB -	Administra	tion		24-Sep	2015 11:	:45 💠 Data OK 💠 (0
Owner:	Jerely	n Parker	•		Manage Own	her	5	Source: RTV	CMDB		
Area:	System	15	•		Manage Are	а					
Group:	Databa	ises	•		Manage Gro	up		Unda	te Critic	ality like selected CL	
Service:	IBM DE	32	•		Manage Serv	ice		0000		any me sereace of	-1
CI List for Se	elected	Service - select a CI to se	e detail and to e	dit:				Environ	DEMO	SITE	•
СІТур	e	CIN	ame		Criticality	Region	Env	Region:			•
VMWARE-H	OST	vSphere2;slesxi-1.sldemo	s-hq.local		В		QA	Criticality:	A		-
VMWARE-V	M	vSphere2;2008S-WIN14			B		QA	0.1 N			51
								SiteName:	Headq	uarters	
								City:			•
								Country:		•	•
								O SType:		•	-
•		111					•	Up	date	Delete	
Selected C	Type:	MQ-QUEUE	CIName Filter:				Reg	ex Ad	d Cl	Add CI To	
Available (Compo	nents (Cls):									_
conn		Name				C	IName			Data Serve	n.
vmrh5-1	TEST	_Q_01		Y	vmrh5-1;TEST_	<u>Q_01</u>				MQMON-64-OL7-	E
vmrh5-1	TEST	0.03			vmrh5-1;TEST_ vmrh5-1:TEST	0.03				MOMON-64-OL7-3	_
vmrh5-1	TEST	Q 04			vmrh5-1;TEST	Q 04				MQMON-64-OL7-3	
vmrh5-1	TEST	Q_05		1	vmrh5-1;TEST	Q_05				MQMON-84-OL7-	-
•				111						•	

Title Bar:

Indicators and functionality might include the following:

✿ Data OK The data connection state. Red indicates the ← Open the previous and upper display. and <u>Table</u> navigate to displays data source is disconnected (for example, the Data CMDB commonly accessed from this display. Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green 19-Feb-2014 16:50 The current date and time. When the indicates the data source is connected. time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Open the Alert Views - RTView Alerts Table Data OK indicator is green, this is a strong display. indication that the platform is receiving current ÷ Open an instance of this display in a new window. and valid data.

Cls: 3,047 The number of items in the display.

0 Open the online help page for this display.

Fields and Data

This display includes:

Select an Owner to filter by. The Owner selected populates the Area, Group and Service Owner drop-down menus.

	Manage Owner	Opens a dialog that enables you to Delete , Rename or Merge the Owner.
		Delete removes the Owner from the CMDB database as well as all CMDB data and CIs associated with the Owner.
		Rename Changes all records for the Owner to a new name. Rename is disabled when the name you are typing in the text box already exists in the CMDB.
		Merge Changes all records for the Owner to a different, already existing name in the CMDB. Merge is enabled when the name you are typing in the text box already exists in the CMDB.
		NOTE: You cannot move Owners.
Area	Select an Area to menus.	o filter by. The Area selected populates the Group and Service drop-down
	Manage Area	Opens a dialog that enables you to Delete , Rename or Merge the Area.
	-	Delete removes the Area from the CMDB database as well as all CMDB data and CIs associated with the Area.
		Rename Changes all records for the Area to a new name. Rename is disabled when the name you are typing in the text box already exists in the CMDB.
		Merge Changes all records for the Area to a different, already existing name in the CMDB. Merge is enabled when the name you are typing in the text box already exists in the CMDB.
		Move Changes all records for the Area to a different, already existing name in the CMDB that you choose from the New Area drop-down menu.
Group	Select a Group t	o filter by. The Group selected populates the Service drop-down menu.
	Manage Group	Opens a dialog that enables you to Delete , Rename or Merge the Group.
		Delete removes the Group from the CMDB database as well as all CMDB data and CIs associated with the Group.
		Rename Changes all records for the Group to a new name. Rename is disabled when the name you are typing in the text box already exists in the CMDB.
		Merge Changes all records for the Group to a different, already existing name in the CMDB. Merge is enabled when the name you are typing in the text box already exists in the CMDB.
		Move Changes all records for the Group to a different, already existing name in the CMDB that you choose from the New Group drop-down menu.
Service	Select a Service	to edit, then click Update .
	Manage Service	Opens a dialog that enables you to Delete , Rename or Merge the Service.
		Delete removes the Service from the CMDB database as well as all CMDB data and CIs associated with the Service.
		Rename Changes all records for the Service to a new name. Rename is disabled when the name you are typing in the text box already exists in the CMDB.
		Merge Changes all records for the Service to a different, already existing name in the CMDB. Merge is enabled when the name you are typing in the text box already exists in the CMDB.
		Move Changes all records for the Service to a different, already existing name in the CMDB that you choose from the New Service drop-down menu.

CIType

CI List Table

This table lists all CIs associated with the selected Service. Each table row is a different CI. Select a CI to see its attributes in the drop-down menus at the right of the table. Use the **OSType**, **Region**, SiteName, Criticality, City and Country drop-down assign attributes, then click Update. To associate CIs with the Service, select one or more CIs from the Available Components table, then click Add CI (to associate the CI(s) with the selected Service.) or Add CI To... (to create a new Service and associate the CI(s) with it).

The type of CI. For example, server or application.

	CIName	A unique identifier for the CI.
	Criticality	The importance level of the CI in your organization. Values range from A to E , where A is the highest Criticality and E is the lowest Criticality (with equally spaced intermediate values). This value is used to calculate the Alert Impact (maximum Alert Severity multiplied by the maximum Criticality equals Alert Impact).
		Criticality values are listed in the Component Views - CI Service Table display. Criticality values are also shown in heatmaps and tables.
	Region	The name of the Region for the CI.
	Environment	The name of the Environment for the CI.
	SiteName	The name of the Site for the CI.
	OSType	The operating system on the CI.
	City	The name of the City for the CI.
	Country	The name of the Country for the CI.
Update Criticality like selected CI	Updates the Cri selected CI leve	ticality attribute assigned to all CIs in the CI List table to match the el.
Environ	Select or type the select or type the select of the select	he Environment for the CI selected in the CI List Table , or the CI selected e Components and added into the CI List Table .
Region	Select or type the select or type the select or type the select of the s	he region for the CI selected in the CI List Table , or the CI selected in the ponents and added into the CI List Table .
SiteName	Select or type the Available (he site name for the CI selected in the CI List Table , or the CI selected in Components and added into the CI List Table.
Criticality	Specify the imp a CI and set the lowest Criticality Alert Impact (m Impact).	ortance level of a Service or a CI for your organization. Select a Service or criticality value from A to E , where A is the highest Criticality and E is the y (with equally spaced intermediate values). This value is used to calculate aximum Alert Severity multiplied by the maximum Criticality equals Alert
	Criticality values Criticality values	s are listed in the Component Views - CI Service Table display. s are also shown in heatmaps and tables.
Country	Select or type t the Available (he country for the CI selected in the CI List Table , or the CI selected in Components and added into the CI List Table .
ОЅТуре	Select or type t selected in the	he operating system for the CI selected in the CI List Table , or the CI Available Components and added into the CI List Table .
Update	Updates the CI menus (on the	selected in the CI List Table with attributes selected from the drop-down right).
	Dever ever alle	

Delete Removes the selected CI from the CMDB database.

Available Components Table

This table lists all available CIs in your RTView Enterprise Monitor system whether they are in the CMDB or not. Each row in the table is a different CI (for example, a server or a process). Select one or more CIs to associate with the currently selected Service, then click **Add CI** (to associate the CI(s) with the selected Service.) or Add CI To ... (to create a new Service and associate the CI(s) with it).

- **Selected CI Type** Select the type of CI to include in the **Available Components** table. All CIs of this type are listed. A CI can be associated with multiple Services.
- **CIName** Enter a string to filter the list of available components. **Filter**
- **Regex** Check to enable Regex filtering.
- Add CI Associates the CI selected in the Available Components table with the selected Service, and applies the attributes selected from the drop-down menus (on the right) to the CI. To associate a CI with the currently selected Service, select a CI from the Available Components table, use the drop down menus on the right.

Available Components table, use the drop-down menus on the right (Environ, Region, SiteName, etc.) to modify attributes for the CI, click Add CI and then click Update. The CI appears in the CI List Table.

Add CI To... Creates a new Service and associates the selected CI with it. To create a new Service and associate a CI with it, select a CI from the Available Components table, use the drop-down menus on the right (Environ, Region, SiteName, etc.) to modify attributes for the CI, click Add CI To..., enter the name of the new Service, then click Update. The new Service is added to the list of Services and the CI appears in the CI List Table.

Architecture

These displays provide a view of RTView Enterprise Monitor component connectivity, mapping between component types, and component level connection and performance information. The Architecture displays are provided with RTView Enterprise Monitor. Displays in this View are:

- "System Overview" on page 231 Topology map of the main RTView Enterprise Monitor components. Objects are color-coded to show component status.
- "RTView Data Servers" on page 233: Configuration and connection details for RTView Data Servers.
- "Data Server Summary" on page 235: Connection and query statistics for RTView Data Servers.
- "RTView History Table Statistics" on page 237: Performance of historical data being stored from caches with history.
- "RTView Cache Tables" on page 238: Configuration and alert details for RTView Cache Tables.
- "RTView CI Stats Tables" on page 239: Alert details for RTView Cache Tables by CI.
- "RTView CI Type Defs" on page 241: CI Type definitions, cache map and alert map by CI Type.
- "RTView KM Defs" on page 243: Key Metrics definitions for all CI Types.
- "About" on page 244: This display shows details about the RTView Enterprise Monitor version and data sources available to your system.

System Overview

View the topology of the central RTView Enterprise Monitor monitoring components and their current connection state. Each object represents a component which are color-coded to indicate component status. Red indicates the component stopped running. Green indicates the component is running.



Title Bar:

Indicators and functionality might include the following:

💠 Data OK The data connection state. Red indicates the ← Open the previous and upper display. data source is disconnected (for example, the Data CMDB and Table navigate to displays commonly accessed from this display. Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green 19-Feb-2014 16:50 The current date and time. When the indicates the data source is connected. time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Open the Alert Views - RTView Alerts Table $|\Delta|$ Data OK indicator is green, this is a strong display. indication that the platform is receiving current ÷ Open an instance of this display in a new window. and valid data. 0 Open the online help page for this display. Cls: 3,047 The number of items in the display.

Fields and Data

This display includes:

Config Server

The Configuration Server provides configurations to all central RTView Enterprise Monitor components.

- **CMDB** The number of CIs in the CMDB.
- **CITYPE DEFS** The current number of CITYPE definitions.
- **ALERTDEFS** The current number of alert settings and override definitions.

Alert Server and Directory

The Alert and Directory Server centralizes access to all alerts sent by remote Data Servers, and maintains a directory table of CI locations. The CI location is the name of the source Data Server.

- Alerts By The number of Services in the CMDB that currently have at least one associated alert.
- Alerts By CI The number of CIs in the CMDB that currently have at least one associated alert.
- **RtvAlertTable** The number of currently active alerts in the system.
- **CacheMap** The number of entries currently in the directory table.

Display Server

The Display Server generates HTML displays for browser clients.

Sessions The current number of users connected to the Display Server.

Browser The browser clients are represented in the topology as a single object. No data is shown for browser clients.

Data Servers

This panel in the topology shows all Data Servers.

- Alerts The number of currently activated alerts for the Data Server.
- **CI Metrics** The count of CI metrics that the remote Data Server is sending.

RTView Data Servers

View Data Server connection status and detailed client connection information.

+	RTView Data Server Tables 23-Sep-2015 14:22 💠 Data OK 💠 🏈						• 🕜			
	Local Connections to DataServer									
	Name	Connected	Status	s Connection String				v Cnt	Receive	a Te
ALERT_SE	RVER	2	OK	192.168.200.134:10028				5,111	9/23/15 1	4
AMXMON-S	SLHOST-WIN4	Ľ	OK	192.168.200).134:6378			52	9/23/15 1	3
BW6MON-S	SLHOST-WIN4	Ľ	OK	192.168.200).134:3378			5	9/23/15 1	3 E
CONFIG_S	ERVER	Ľ	OK	192.168.200).134:10018			133	9/23/15 1	4
EMSMON-S	SLHOST-WIN4	Ľ	OK	192.168.200).134:3178			5	9/23/15 1	3
MISCMON-	SLHOST-WIN4	Ľ	OK	192.168.200).134:3978			112	9/23/15 1	11
MQMON-64	4-OL7-3	Ľ	OK	192.168.200).73:3478			3	9/23/15 1	11
OCMON-64	-OL7-1		no conne	192.168.200).71:3381			0	12/31/69 1	6
OCMON-64	-OL7-4	r	OK	192.168.200).74:3381			3	9/23/151	11
OCMON-SL	HOST-WIN7		no conne	ned 192.168.200.137:3381				0	12/31/69 1	6
RTVMGR-S	LHOST-WIN4	2	OK	192.168.200.134:3078				33 9/23/15 13		
•			111						•	
				DataServe	r Manager					
NumberOfClients		Serv	ServingData		ConnectionRequest	Count	Connec	tionRe	questFailed	Coun
5			✓ 5							
				DataSanu	or Cliente					
				DataServ	er Cilents					
Client ID	Address	Host	Pr	ocess Name	PID	Last Da	ta Sent	Total	Data Sent	Du
3	192.168.200.134	SLHOST-WIN4	da	taserverd	55364@SLHOST-WIN	14	5,258	3 93,963,548 0 (0 04:
4	127.0.0.1	127.0.0.1		toriand	15868@SLHOST-WIN	14	2,722		37,981,383	0 04:
1	192.168.200.134	34 SLHOST-WIN4		playserver	27116@SLHOST-WIN	14	190,604	6	16,260,790	0 04:
2	127.0.0.1	127.0.0.1		Jataserverd 10564@SLHOST-WIN4		14	17,287 1		26,666,689	0 04:
5 [192.168.200.134SLHOST-WIN4			dis	playserver	55200@SLHOST-WIN	14	5,258		73,499,814	0 04:
•				111						•

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> → and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data

This display includes:

Local Connections to Data Server

This table lists all Data Servers and detailed connection information. Select a Data Server to view further details (in the lower tables).

Name The Data Server name.

Connected When checked, the connection is currently connected.

Status	The Data Server connection status.
Connection String	The host name and port number for TCP connections, or the URL for servlet connections.
Rcv Cnt	The number of data updates received from that Data Server.
ReceiveTime	The time that data was last received.
Config	The RTView version running on the Data Server.

Data Server Manager

This table shows connection information for the Data Server selected from the **Local Connections to Data Server** table.

NumberOf Clients	The number of clients currently connected to the Data Server.
ServingData	When checked, the Data Server is currently serving data.
Connection Request Count	The number of client requests to connect to the Data Server.
Connection Request FailedCount	The number of client requests to connect to the Data Server that were unable to connect.

Data Server Clients

This table shows information for clients connected to the Data Server selected from the **Local Connections to Data Server** table.

ClientID	A unique string identifier for the client.
Address	The client IP address.
Duration	The client session length of time.
Host	The address of the client host.
Last Data Sent	The amount of data, in bytes, the Data Server last sent to the client.
Total Data Sent	The total amount of data, in bytes, the Data Server has sent to the client.

Data Server Summary

View Data Server connection status, cache table sizes and database query metrics. Use the available drop-down menus or right-click to filter data shown in the display.

(• •				RTV	iew Data	a Server - Su	immary	23-Sep-2015 14	4:20 💠 Da	ata OK 🚽	• 🕜
Data Server:	<defaul< td=""><td>t></td><td></td><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></defaul<>	t>		•							
			Conn	ection Sta	tus			RTVie	w Cache T	ables	
· · · ·		C	onnectio	n f	Receive	Receive	0.5	CacheTa	ible	Rows	
Connected	Status		String		Count Tir		Config	RtvAlertTablel	.ocal	19,909	É
								RtvMxCacheD	efsWithCo	1,429	É
								RtvTabTreeCa	che	488	Ê
								RtvMxCache	eDefsRaw	234	4
						Alert T	able Man	RtvMxCacheD	efs	163	5
						Alert I	able view	RtvCmdbServi	ceTable_	50	ΕΞ
								RtvMxCacheIn	foByServ	5	<u>t</u>
						Aler	t Admin	RtvDataServer	Connecti	20	<u>(</u>
								RtvCmdbGrou	pTable_I	17	1
								RtvCmdbArea	Table_loo		<u>t</u>
								RtvCmdbOwne	erTable_l		
						Histor	ry Tables	JmxStatsTotal:	5		
								RtvAlertMapBy	/CI		
								RtvAlertSource	Stats		
								RtvAlertStatsB			÷
								RIVAIenolaise	yciAndAi		
	1		D	atabase Qi	ieries (runr	iing on selected	Data Server)	1		
Database	Conn	Count	Active	ExecTime	Rows	Run	Time	Status			
ALERTDEFS	Ľ	0		Nat	1 0						
PROPDB	~	0		Nat	1 0						
RIVCMDB		0		Nat	0						
RTVCONFIG		0		Nat	0 1					_	
RIVHISTORY		0		Nar	• U						
•			111								•

Title Bar:

Indicators and functionality might include the following:

÷ Open the previous and upper display. CMDB ▼ and Table navigate to displays commonly accessed from this display. 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current

and valid data.

Cls: 3,047 The number of items in the display.

✿ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

- ÷ Open an instance of this display in a new window.
- 0 Open the online help page for this display.

Fields and Data

This display includes:

Select a Data Server from the drop-down menu to view details for in the display. Data Server

Connection Status

This table shows connection details for the selected Data Server.

Connected	When checked, the Data Server is currently connected.
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Status The Data Server connection status.

Connection The host name and port number for TCP connections, or the URL for servlet connections.

Rcv Cnt The number of data updates received from that Data Server.

ReceiveTime The time that data was last received.

Config The RTView version running on the Data Server.

Alert Select to view or manage current alerts for the selected Data Server in the **RTView Alerts Table** display.

View

Alert Select to view or manage alert thresholds for the selected Data Server in the Alert Administration display.

History Select to view database table statistics for each cache for the selected Data Server in the "RTView History Table Statistics" display.

RTView Cache Tables

This table lists Cache Tables and their size, in number of rows, for the selected Data Server. Select a Cache Table to view details in the **RTView Cache Tables** display.

Use this data for debugging. This display is typically used for troubleshooting with SL Technical Support.

CacheTable	The name of the Cache Table.

Rows The current number of rows in the Cache Table.

Database Queries

This table lists the databases and query details for the selected Data Server. Each table row describes a different query.

The name of the database.
When checked, the database is currently connected.
The number of query requests from current Data Server.
When checked, the query is currently running.
The amount of time, in milliseconds, to execute the query.
The number of rows the query created.
The time the query was executed.
The latest result status of the query.
The query that was executed.

RTView History Table Statistics

This display opens when you click **History Tables** from the **Architecture -** "Data Server Summary" display. View information about the performance of historical data being stored from caches with history. Use this display to verify your tables are growing as expected by:

- seeing how many rows are in the database table (**Row Count**).
- seeing how many rows are added at each update period (**Delta**).
- verifying that the range of the data stored in the table is consistent with defined compaction rules and that behavior is as expected. To do this, compare the time of **First Entry** and **Last Entry** and verify the dates match the defined compaction interval (for example, **2 weeks** by default). For this verification, you must first confirm the historian has been operating for at least the defined compaction time interval, otherwise the range of data will be shorter.

DataServer: EMSMON-SLDEMOS	RT\	/iew History	Table St	atistics 10-Dec-	2014 07:14 🛭 🔯 Data Ol	< 🔶 🕜
Cache Name / DB Table Name	Row Count	Delta	Distinct	First Entry	Last Entry	Current
EmsAdmStats EMS_ADMSTATS	8,337	1	0	18-Sep-2014 01:15:00	10-Dec-2014 07:16:00	۲
EmsDurables EMS_DURABLES	395,397	53	53	18-Sep-2014 01:15:00	10-Dec-2014 07:15:00	۲
EmsQueueTotalsByServer EMS_QUEUETOTALS	181,236	181,236	24	18-Sep-2014 01:15:00	10-Dec-2014 05:25:00	۲
EmsQueues EMS_QUEUES	3,958,595	296	665	15-Sep-2014 02:00:00	10-Dec-2014 07:16:00	۲
EmsRouteCountsByServer EMS_ROUTECOUNTS	124,790	15	16	18-Sep-2014 01:15:00	10-Dec-2014 07:16:00	۲
EmsRoutes EMS_ROUTES	208,014	25	26	18-Sep-2014 01:15:00	10-Dec-2014 07:16:00	۲
EmsServerInfo EMS_SERVERINFO	199,807	24	25	18-Sep-2014 01:15:00	10-Dec-2014 07:16:00	۲
EmsTopicTotalsByServer EMS_TOPICTOTALS	183,187	22	23	18-Sep-2014 01:15:00	10-Dec-2014 07:16:00	۲
EmsTopics EMS_TOPICS	7,132,737	621	37,369	18-Sep-2014 01:15:00	10-Dec-2014 07:16:00	۲
JvmMemory JVM_MEMORY	20,737	0	13	27-Nov-2014 00:15:00	10-Dec-2014 07:13:00	۲
JvmOperatingSystem JVM_OPERATINGSYSTEM	20,214	17	13	27-Nov-2014 00:15:00	10-Dec-2014 07:21:00	۲

Fields and Data

This display includes:

Cache Name / DB Table Name	The name of the cache and the name of the database table. Mouse-over to see the Index columns for the cache.
Row Count	The number of rows in the table.
Delta	The number of rows added since the last update.
Distinct	The number of distinct indexes in the table.
First Entry	The time stamp of the oldest entry written to the table.
Last Entry	The time stamp of the most recent entry written to the table.
Current	 The current writing state of the table. (Time ≥ 10m) The writing latency is equal to or greater than ten minutes. (Time ≥ 4m and < 10m) The writing latency is equal to or greater than four minutes and less than ten minutes. (Time < 4m) The writing latency is less than four minutes.

RTView Cache Tables

View Data Server Cache table sizes and contents. Select a cache table in the upper table and view its contents in the lower table. Use the available drop-down menus or right-click to filter data shown in the display.

<			RTV	iew (Cach	e Tables	23	-Sep-2015 14	:16 📫 Data Ol	< 🕂 😮	
Data Server: <de< td=""><td>fault></td><td>•</td><td>RTV</td><td>'iew C</td><td>ache</td><td>Tables</td><td>Max Ro</td><td>ows:<mark>4000</mark></td><td>Histo</td><td>ry Tables</td></de<>	fault>	•	RTV	'iew C	ache	Tables	Max Ro	ows: <mark>4000</mark>	Histo	ry Tables	
Ca	acheTable		TableTyp	e		Rows	Colu	imns	Memory	Memory 🔺	
RtvMxCacheDefs	Raw		current			234		9	19	190,222	
JmxStatsTotals			current			1		4		44'	
RtvAlertMapByCl			current			0		5		464	
RtvAlertSourceStats	3		current			0		0		(=	
RtvAlertStatsByCate	egoryIndex		current			0		7		673	
RtvAlertStatsByCl			current			0		5		471	
RtvAlertStatsByCIAr	ndAlertGroup		current			0		6		569	
RtvAlertStatsByPad	kageIndex		current			0		6		583	
RtvAlertTable			current			0		29		2,676	
RtvAlertTableLocal			current		19,906	38		36,159,370			
RtvCacheMapByCl			current		0	5		471			
RtvCacheMapByCl1	Гуре		current 0			0		(🔻			
			Rtv	vAlert	Table	Local			Rows: 19	9906	
time_stamp	Time	Alert Name	Alert Index	Sev	erity	Alert Text	Cleared	Acknowle	dg ID	Last 🔺	
09/23/15 14:16:19	Sep 23, 201	HawkAlert	SLHOST5(do		1	Server Proce			1044	Sep _	
09/23/15 14:16:19	Sep 23, 201	HawkAlert	SLHOST5(do		1	Service Print			1043	Sep 🗄	
09/23/15 14:16:19	Sep 23, 201	HawkAlert	SLHOST5(do		1	System Uptin			1042	Sep	
09/23/15 14:16:19	Sep 23, 201	HawkAlert	SLHOST5(do		2	Received fro			1041	Sep	
09/23/15 14:16:19	Sep 23, 201	HawkAlert	SLHOST6(do		2	Received fro			1045	Sep	
09/23/15 14:16:19	Sep 23, 201	BwEngineSt	SLHOST5(do		2	Engine has s			1051	Sep	
09/23/15 14:16:19	Sep 23, 201	BwEngineSte	SLHOST5(do		2	Engine has s			1050	Sep	
09/23/15 14:16:19	Sep 23, 201	BwEngineSt	SLHOST5(do		2	Engine has s			1049	Sep	
09/23/15 14:16:19	Sep 23, 201	BwEngineSte	SLHOST5(do		2	Engine has s			1048	Sep	
09/23/15 14:16:19	Sep 23, 201	BwEngineSt	SLHOST5(do		2	Engine has s			1047	Sep	
09/23/15 14:16:19	Sep 23, 201	HostMemory	myHawkDom		1	High Warning			1046	Sep 🔻	
 ■ 							_			•	

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data

This display includes:

Data Select a Data Server from the drop-down menu to view details for in the display. **Server**

Enter the maximum number of rows to include in the lower table, then click Enter. Max

Rows

Select to include all defined history tables in the RTView Cache Tables list. History Tables

RTView Cache Tables

This table lists cache tables for the selected Data Server. Select a cache table to view details in the lower table.

CacheTable	The name of the cache table.				
TableType	The type of cache table.				
	current	This table is a current table which shows the current values for each index.			
	current_condensed	This table is a current table with primary compaction configured.			
	history	This table is a history table.			
	history_condensed	This table is a history table with primary compaction configured.			
	history_combo	This table is a history table with primary compaction configured, and which is also configured to store rows of recent raw data followed by rows of older condensed data.			
Rows	The number of rows currently in the table.				
Columns	The number of columns currently in the table.				
Memory	The amount of space, i	n bytes, used by the table.			

(Lower Table) This table shows the contents of the selected cache table. Available columns vary by cache. For example, a JVM cache table might provide **BootClassPath** and **InputArgument** columns, and a Tomcat cache might provide **RateAccess** and **cacheMaxSize** columns.

The number of rows currently in the table. Rows

RTView CI Stats Tables

View details for components that currently have an active warning or alarm alert.

RTView CI Stats Tables 25-Sep-2015 11:34							11:34 📫 Data O	к 🔶 🚱	
				Alert Stats By Cl					
time_stamp	=	CITYPE	=	CINAME	Ξ	MaxSeverity	=	AlertCount	Ξ
09/25/15 11:13:33	B	W-ENGINE	sl	npux11(slmon);domainslmon.BWApp-7.Procs			1		1
09/25/15 11:13:33	B	W-ENGINE	sla	apm(slapm);domainslapm.BWApp-5.Procs			2		1 🔨
09/25/15 11:13:33	B	W-ENGINE	sh	/mrh2(slapm);domainslapm.BWEngine.Process Archive			2		1
09/25/15 11:13:33	B	W-ENGINE	sle	el4-64(slmon);domainslmon.BWApp-4.Procs			2		1
09/25/15 11:13:33	B	W-ENGINE	sla	apm(slapm);domainslapm.BW Engine.Process Archive			2		1
09/25/15 11:13:33	B	W-ENGINE	sla	apm(slapm);domainslapm.BWApp Space.Procs-1			2		1
09/25/15 11:13:33	B	W-ENGINE	sle	el4-64(slmon);domainslmon.BWApp-5.Procs			1		1~
09/25/15 11:13:33	B	W-ENGINE	sle	el4-64(slmon);domainslmon.BWApp-10.Procs			1		1
<									>
				Cache Man By ClTune					
time stamp	=	CITYPE	=	CACHENAME	=		Source		=
09/25/15 09:33:53		ACW		AwsEc2InstanceStats	MIS	SCMON-DATA-1			
09/25/15 01:32:30		BW-ENGINE		BwEngines	Z-S	Z-SIMDATA-1			^
09/25/15 06:02:09		BW-ENGINE		BwEngines		BWMON-SLDEMOS			
09/25/15 01:32:30		BW-PROCESS		BwProcesses	Z-S	IMDATA-1			
09/25/15 06:02:09		BW-PROCESS		BwProcesses	BW	MON-SLDEMOS			
09/25/15 01:32:30		BW-SERVER		BwServers	7-9	IMDATA-1			~
09/25/15 06:02:09		BW-SERVER		BwServers	BW	MON-SI DEMOS			
<									>
CI Type Filter: All CI Typ	es	\checkmark		Cache Man By Cl				Count: 2	475
time stamp	-	CITypo		Cilliamo		- Data Sonyor	lamo -	Expired	-

Title Bar:

Indicators and functionality might include the following:

 ← ↑ Open the previous and upper display. CMDB ▼ and Table navigate to displays commonly accessed from this display. 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong 	 Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected. Open the Alert Views - RTView Alerts Table display.
indication that the platform is receiving current and valid data. CIS: 3,047 The number of items in the display.	 Open an instance of this display in a new window. Open the online help page for this display.

Fields and Data

This display includes:

Alert Stats By CI This table provides summary alert details for all CIs that currently have active warning or alarm alerts.

time_stamp	The date and time this table row of data was last updated. Format: MM/DD/YY HH:MM:SS <month>/ <day>/<year> <hours>:<minutes>:<seconds></seconds></minutes></hours></year></day></month>
СІТуре	The component type.
CIName	The name of the component.
MaxSeverity	The most critical alert state of all current alerts for this component.
AlertCount	The number of current warning and alarm alerts for this component.
Cache Map By CIT This table provides r	ype napping of all component types to caches.
time_stamp	The date and time this table row of data was last updated. Format: MM/DD/YY HH:MM:SS <month>/ <day>/<year> <hours>:<minutes>:<seconds></seconds></minutes></hours></year></day></month>
СІТуре	The component type.
CACHENAME	The name of the cache associated with the component type.
Source	The name of the Data Server alert sending data for that component type
Cache Map By CI This table provides t	he location of all CIs.
CI Type Filter:	Select the CI Type to filter by in this table, or select All CI Types.

The number of CIs currently in this table. Count

time_stamp	The date and time this table row of data was last updated. Format:					
	MM/DD/YY HH:MM:SS <month>/ <day>/<year> <hours>:<minutes>:<seconds></seconds></minutes></hours></year></day></month>					
СІТуре	The component type.					
CIName	The name of the component.					
DataServerN ame	The name of the Data Server which sent this CI.					
Expired	When checked, data has not been received for 45 seconds. After 3600 seconds it is deleted from the table.					

RTView CI Type Defs

This display provides component type definitions and shows the mapping of component types to caches as well as component types to alerts.

<				RTView CI Type Definitio	ns	13-0	Oct-2015 11:08 💠 Data O	к 🔶 🕜
				CI Type Definitions				
CITYPE	INDEXMAP	INDEXNAMES		RTVDISPLAY	CIVARMAP		DEFAULTQUALITY	NO
ACW	1	Dimension		acw_instance_summary	\$awsEc2InstanceId		1	Infrastr 🔨
AMX-HOST	1	AMX Host		amx_host_summary	\$amxHost		1	Infrastr
AMX-NODE	1;2	AMX Host;Node		amx_node_summary	\$amxHost;\$amxNode		1	Infrastr
AMX-SERVICE	1;2	Application;Service		amx_service_summary	\$amxApplication;\$amxSe	ervice	1	Infrastr
AMX-SERVICENOD	E 1;2;3;4	AMX Host;Node;Application;	Ser	amx_servicenode_summary	\$amxHost;\$amxNode;\$a	mxApp	1	Infrastr
BW6-APP	1;2;3	Domain;AppSpace;Applicatio	n	bw6_app_summary	\$bw6domain;\$bw6appsp	ace;\$b	1	Infrastr
BW6-APPNODE	1;2;3	Domain;AppSpace;AppNode		bw6_appnode_summary	\$bw6domain;\$bw6appsp	ace;\$b	1	Infrastr
BW6-PROCESS	1;2;3;4;5	Domain;AppSpace;AppNode;	;Ap	. bw6_process_summary	\$bw6domain;\$bw6appsp	ace;\$b	1	Infrastr 🗸
BW-ENGINE	1;2	AgentName;MicroAgentName	е	bw_engine_summary	\$bwserver;\$bwengine		1	Infrastr
<								>
	Cache Map By CIType Alert Map By CIType							
CITYPE	C	ACHENAME		CITYPE		ALERT	NAME	
ACW	AwsEc2InstanceS	tats		ACW	AcwInstanceCpuHigh			^
AMX-NODE	AmxNodes			ACW	AcwInstanceDiskRead	BytesHigh		
AMX-SERVICE	AmxServiceTotals		11	ACW	AcwInstanceDiskRead	OpsHigh		
AMX-SERVICEN	AmxServices		1	ACW	AcwInstanceDiskWrite	BytesHigh		
BW6-APP	Bw6Apps		t I	ACW	AcwInstanceDiskWrite	OpsHigh		
BW6-APP	Bw6ProcessTotals	sByApp	t I	ACW	AcwInstanceNetworkRe	eadBytesHig	gh	
BW6-APPNODE	Bw6AppNodes		ΤI	ACW	AcwInstanceNetworkW	riteBytesHig	gh	
BW6-PROCESS	Bw6Processes		ΤI	AMX-SERVICE	AmxServiceNodeHitRa	teHigh		
BW-ENGINE	BwEngines		ΤI	AMX-SERVICE	AmxServiceNodeRespo	onseTimeHi	igh	
BW-PROCESS	BwProcesses		ΤI	AMX-SERVICE	AmxServiceNodeFaultF	RateHigh		
BW-SERVER	BwServers		ΤI	AMX-SERVICE	AmxServiceHitRateHig	h		
DB2	Db2DbSummary		Ι	AMX-SERVICE	AmxServiceResponseT	imeHigh		
DB2	Db2ResponseTim	e	I	AMX-SERVICE	AmxServiceFaultRateHigh			
EM-SERVICE	RtvCmdbServiceT	able_local		AMX-SERVICE	AmxServiceNodeNotRunning			
EM-SERVICE	RtvCmdbServiceS	stats_local	ľ	BW6-APP	Bw6AppProcessCreate	dRateHigh		•

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ■ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

✿ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

- Open an instance of this display in a new window.
- Open the online help page for this display.

Fields and Data

This display includes:

CI Type Definitions This table provides definitions for all CI Types.

СІТуре	The component type.
INDEXMAP	Number of indexes and the order in which they are used to form the CI Name.
INDEXNAMES	Semicolon-separated list of the index columns.
RTVDISPLAY	The name of the RTView display to drill-down to from the Alerts Table to see summary data for this CI Type. This is the target of the Go To CI button in the Alerts Table and in the Service Summary display.
CIVARMAP	The names of substitutions that must be set to drill-down to the display.
DEFAULTQUALITY	A flag indicating whether the lack of data is considered an error condition or not.
OWNER	The Owner the CIType is associated with, when the CMDB is populated automatically from CIs of this type.
AREA	The Area the CIType is associated with.
SERVICEGROUP	The SERVICEGROUP the CIType is associated with, when the CMDB is populated automatically from CIs of this type.
A Man By CIType	

Cache Map By CIType This table provides mapping of component types to caches for all component types.

CACHENAME The name of the cache associated with the component type.

Alert Map By CIType This table provides mapping of component types to alerts.

	The type of CI.
CITYPC	

ALERTNAME The name of the alert.

RTView KM Defs

This display shows the Key Metrics definitions for all CI Types. For details, see "Available KM Metrics and Alerts" on page 154.

+	RT	View Key Metrics D	efinitions 23-Sep-201	5 14:11 💠 Data OK 💠 🕜
CITYPE	CACHENAME	SELECTOR	METRICNAME	AlertName
ACW	AwsEc2InstanceStats	Instance CPU Usage	CPUUtilization	AcwInstanceCpuHigh
AMX-SERVICE	AmxServiceTotals	Service Hits/Min	Hits Per Minute	AmxServiceHitRateHigh
AMX-SERVICE	AmxServiceTotals	Service Response Time	Avg. Response Time	AmxServiceResponseTir 🗄
AMX-SERVICENODE	AmxServices	Node Hits/Min	Hits Per Minute	AmxServiceNodeHitRate
AMX-SERVICENODE	AmxServices	Node Response Time	Avg. Response Time	AmxServiceNodeRespor
BW6-APP	Bw6ProcessTotalsByApp	App Created / sec	RateCreated	Bw6AppProcessCreatedF
BW6-APP	Bw6ProcessTotalsByApp	App Exec Time / sec	RateTotal Execution	Bw6AppProcessExecutio
BW6-APPNODE	Bw6AppNodes	CPU Used %	Used CPU Percentage	Bw6AppNodeCpuUsedH
BW6-APPNODE	Bw6AppNodes	Mem Used %	Used Memory Percentage	Bw6AppNodeMemUsedł
BW6-PROCESS	Bw6Processes	Process Created / sec	RateCreated	Bw6ProcessCreatedRate
BW6-PROCESS	Bw6Processes	Process Exec Time / sec	RateTotal Execution	Bw6ProcessExecutionTil
BW-ENGINE	BwEngines	CPU Used %	CPU %	BwEngineCpuUsedHigh
BW-ENGINE	BwEngines	Memory Used %	PercentUsed	BwEngineMemUsedHigł
BW-PROCESS	BwProcesses	Process Exec Time / sec	RateTotalExecution	BwProcessExecutionTim
BW-SERVER	BwServers	CPU Used %	CPU Usage %	BwServerCpuUsedHigh
DB2	Db2ResponseTime	Response Time	ResponseTimeMilliSec	Db2ResponseTimeHigh
EM-SERVICE	RtvCmdbServiceStats_local	Alert Impact	AlertImpact	RtvEmServiceAlertImpa
EMS-QUEUE	EmsQueues	Pending Msgs	pendingMessageCount	EmsQueuesPendingMsg
EMS-QUEUE	EmsQueues	In Msgs / sec	inboundMessageRate	EmsQueuesInMsgRateH
EMS-QUEUE	EmsQueues	Out Msgs / sec	outboundMessageRate	EmsQueuesOutMsgRate 🔻
	EmeQuation	Concumor	asseumerCount	

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> → and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

CIs: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Fields and Data

This display includes:

RTView Key Metrics Definitions

This table provides Key Metrics definitions for all CI Types.

СІТуре	The component type.
CACHENAME	The name of the cache that contains the Key Metric.
SELECTOR	The name used for this Key Metric in the Metric Name column of Key Metric displays.
METRICNAME	The name of the cache column that contains this Key Metric.
ALERTNAME	The name of the alert associated with this Key Metric. When blank, the Key Metric is not configured for inclusion in Key Metric displays.

CalcMode	 The calculation used for the Threshold % value. The base value is calculated as the percent of the Key Metric value between 0 and the ALARMLEVEL of the associated alert. If the CalcMode is blank, this value is used. If the CalcMode is: exp, the value is adjusted so that lower values are diminished. Typically, this is used for memory metrics.
	 inverse, the value is calculated in reverse of the standard thresholds. This is used when the associated alert is a low threshold alert.
	 invpct, the value is calculated in reverse of the standard threshold and is assumed to be percent and therefore a value between 0 and 100. This is used when the associated alert is a low threshold alert against a percent.
	log, a logarithmic algorithm is applied.
Level	The Key Metric level. Level 0 KMs are always displayed. Level 1 KMs are displayed is Show More Metrics is selected.

About

Get RTView Enterprise Monitor version and configuration information including a list of all available data sources. For more detailed version information, click **Version Info For All Connected RTView Apps** to open the "Version Info" display.

÷		23-Mar-2016 15:47 💠 Data OK 💠 🕜
	RTView(R) Display Server - RTView Enterprise Monitor(R) Version: 3.3.0.0 ALPHA Configuration: APM.3.3.0.0_20160323_000.21116-alpha_114 Build Number: 000.21116 Detailed Version Info For All Connected RTView Apps Available Data Sources: Alert Cache Datasource CMDB JMX LOG4J OLAP Round Robin Database RbAgent RbPipe SPLUNK SQL WMI XML	
Property Views

These displays show how your Monitor properties are configured and the values for all connected RTView processes. The displays are located under the **ADMIN** tab. Displays in this View are:

- "Properties Configuration" on page 245: Table of properties configuration settings, per connection.
- "System Properties" on page 247: Table of system properties for RTView processes, per connection.
- "Applied Properties" on page 249: Table of all properties that were applied to RTView processes, per connection.
- "All Properties" on page 251: Table of all properties that were read from the properties files and database regardless of whether or not the RTView process uses them.
- "Properties Descriptions" on page 253: Table of all properties that are supported by RTView processes, per connection.

Properties Configuration

This display shows properties configuration information. The **Last Property Read Time** shows the last time that properties were read for the RTView process specified by the selected **Connection**.



Select the **Source** of the connection to the RTView process for which you want to see property information. Options are:

- Data Server: If the RTView process is a Data Server and the Thin Client has a defined Data Server connection for it, choose this option and select the name of the Data Server in the Connection field.
- Local JMX Connection: Select this option if the Thin Client has a defined JMX Connection to the RTView process.
- RTVMGR JMX Connection: Select this option if the RTVMGR has a defined JMX Connection to the RTView process.

Select the **Connection** to the RTView process for which you want to see property information. Options available depend on your setup. For example, **RTVMGR** is only visible when the **Source** is **RTVMGR JMX Connection** and you have multiple RTVMGRs. You can then select an RTVMGR that has a defined JMX Connection to the RTView process for which you want to see property information.

The **Property Files** table shows all of the properties files that were read by the RTView process specified by the selected **Connection** in the order they were read. The **Property Filters** table shows all filters that are applied to the properties. **Property Groups** shows all property groups that are applied to the properties. **Property Groups** are only used when reading properties from a database.

Click **Update Props** to have the RTView process specified by the selected **Connection** reread all properties files and database properties. Note that most non-connection properties do NOT support updates. See the "Properties Descriptions" on page 253 display to find out if a specific property supports updates.

Right-click/**Export** to create a PDF image of the display. Click Sort **I** to order column data.

+	Property Configuration	23-Mar-	2016 15:06 💠 Data OK 💠 🕜
Source: Data Server Connection: ALER	T_SERVER		Update Props
Last Property Read Time: Mar 23, 2016 10:53:12 AM Prope	rty Files		Property Filters
Files 🚽			Filters
rtview			dataserver.
emcommon			collector.
central			ConfigClient.
C:\TestBedirtvapm			AlertCollector.
odemon\confvtvapm.nodemon.ref			AlertAggregator.
C:\TestBedirtvapm\wsm\conflutvapm.wsm.ref			AllDataClient.
C:\TestBedirtvapm\wim\confirtvapm.wim.ref			AlertServer.
C:\TestBedirtyapmivmwmon\confirtyapm.vmwmon.ref			
C:\TestBedirtyapm\uxmon\confirtyapm.uxmon.ref			
C/TestBed/ttyapm/tbemon/confittyapm.tbemon.ref			
C:\TestBedirtvapm\tasmon\confirtvapm.tasmon.ref			
C:\TestBedirtvapm\syslog\confirtvapm.syslog.ref			D
C:\TestBedirtvapm\solmon\confirtvapm.solmon.ref			Property Groups (Database Only)
C:\TestBedirtvapm\rtvmgr\confvtvapm.rtvmgr.ref			Groups
C:\TestBedirtvapm\oramon\confirtvapm.oramon.ref			Groups 🗸
C:\TestBedirtvapm\ocmon\confirtvapm.ocmon.ref			
C:\TestBedirtvapm\mx\confirtvapm.mx			
C:\TestBedirtvapm\mgmon\confirtvapm.mgmon.ref			
CiTeetBedithoppimengemeniconfithopm mengemen ref			

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display.
 CMDB ▼ and Table navigate to displays commonly accessed from this display.
 19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the Data OK indicator is green, this is a strong indication that the platform is receiving current and valid data.

^{Cls: 3,047} The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

▲ Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Note: The "Up" Arrow () opens the most recently viewed display under "Multi Area Service Views". For example, if the last viewed display under **Multi Area Service Views** was **Services CI Type Summary**, then clicking) opens the "Services CI Type Summary" display.

Filter By:

- **Source:** Select the **Source** of the connection to the RTView process for which you want to see property information.
- **Connection:** Select the **Connection** to the RTView process for which you want to see property information.

Fields and Data

This display includes:

Update Props	Click to have the RTView process specified by the selected Connection re-read all properties files and database properties. Note that most non-connection properties do NOT support updates. Use the "Properties Descriptions" on page 253 display to see if a specific property supports updates.
Last Property Read Time	The last time that properties were read for the RTView process specified by the selected Connection .
Property Files (table)	List of all properties files that were read by the RTView process specified by the selected Connection in the order they were read.
Property Filters (table)	List of all filters that are applied to the properties.
Property Groups	List of all property groups that are applied to the properties. Property Groups are only used when reading properties from a database.

System Properties

This display shows the System properties for the RTView process specified by the selected Connection.

Select the **Source** of the connection to the RTView process for which you want to see property information. Options are:

- Data Server: If the RTView process is a Data Server and the Thin Client has a defined Data Server connection for it, choose this option and select the name of the Data Server in the Connection field.
- Local JMX Connection: Select this option if the Thin Client has a defined JMX Connection to the RTView process.
- RTVMGR JMX Connection: Select this option if the RTVMGR has a defined JMX Connection to the RTView process.

Select the **Connection** to the RTView process for which you want to see property information. Options available depend on your setup. For example, **RTVMGR** is only visible when the **Source** is **RTVMGR JMX Connection** and you have multiple RTVMGRs. You can then select an RTVMGR that has a defined JMX Connection to the RTView process for which you want to see property information.

Click **Update Props** to have the RTView process specified by the selected Connection re-read all properties files and database properties. Note that most non-connection properties do NOT support updates. See the "Properties Descriptions" on page 253 display to find out if a specific property supports updates.

Right-click/**Export** to create a PDF image of the display. Click Sort **I** to order column data.

<	System Properties	23-Mar-2016 15:16 💠 Data OK 💠 🥝
Source: Data Server Connection: ALE	RT_SERVER	Update Props
	System Properties	
Property		Value 🔺
awt.toolkit	sun.awt.windows.WToolkit	
com.sl.rtview.customRtvAppManagerClassName	com.sl.gmsjrtvutils.RtvApmAppManager	
com.sl.rtview.log4jFile	C:\TestBed\rtvapm/common/conf/sl.log4j.properties	
com.sl.rtview.RTVLog4jLevel	info	
com.sl.rtview.showLogCategory	true	E
com.sl.rtview.useLog4j	true	
com.sun.management.jmxremote.authenticate	false	
com.sun.management.jmxremote.port	10023	
com.sun.management.jmxremote.ssl	false	
file.encoding	Cp1252	
file.encoding.pkg	sun.io	
file.separator	1	
java.awt.graphicsenv	sun.awt.Win32GraphicsEnvironment	
java.awt.printerjob	sun.awt.windows.WPrinterJob	
java.class.path	.;./myclasses.jar;C:\TestBedVjdbc/jtds12.jar;C:\TestBed\	emsample/custom/lib/rtvapm_custor
java.class.version	50.0	
java.endorsed.dirs	c:\Program Files\Java\jdk1.6.0_35\jre\lib\endorsed	
ing encification name	Java Blatform ADI Operification	×
< III		+

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ▼ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-2014 16:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Filter By:

Source:	Select the Source of the connection to the RTView process for which you want
	to see property information.
Connection:	Select the Connection to the RTView process for which you want to see

property information.

Fields and Data

This display includes:

Update Props	Click to have the RTView process specified by the selected Connection re-read all properties files and database properties. Note that most non-connection properties do NOT support updates. Use the "Properties Descriptions" on page 253 display to see if a specific property supports updates.
System Properties (table)	List of all system properties for the RTView process specified by the selected Connection .
Property	The name of the property.
Value	The property setting.

Applied Properties

This display shows all properties that were applied to the RTView process specified by the selected **Connection**.

There are several reasons a property specified in a properties file might not be applied to an RTView process:

- the filter doesn't match.
- it was overridden in another property file.
- it was specified in a file that is not used by the RTView process.
- it was a property that is not supported in that RTView process (ex, a builder specific property would not be applied to a data server process).

You can filter the **Applied Properties** table using the **Filter Column** and **Field Value** fields. The **Clear Filter** button clears the filter. Double-click on a row in the table to drill down to the "All Properties" display filtered by the **Property Name** for that row.

NOTE: The double-click feature is not supported on IPad. IPad users can access the "All Properties" display from the navigation tree.

Select the **Source** of the connection to the RTView process for which you want to see property information. Options are:

- Data Server: If the RTView process is a Data Server and the Thin Client has a defined Data Server connection for it, choose this option and select the name of the Data Server in the Connection field.
- Local JMX Connection: Select this option if the Thin Client has a defined JMX Connection to the RTView process.
- RTVMGR JMX Connection: Select this option if the RTVMGR has a defined JMX Connection to the RTView process.

Select the **Connection** to the RTView process for which you want to see property information. Options available depend on your setup. For example, **RTVMGR** is only visible when the **Source** is **RTVMGR JMX Connection** and you have multiple RTVMGRs. You can then select an RTVMGR that has a defined JMX Connection to the RTView process for which you want to see property information.

Click **Update Props** to have the RTView process specified by the selected Connection re-read all properties files and database properties. Note that most non-connection properties do NOT support updates. See the "Properties Descriptions" on page 253 display to find out if a specific property supports updates.

Right-click/**Export** to create a PDF image of the display. Click Sort **I** to order column data.

← Applied Properties			Applied Properties	23-Mar-2016 15:21 💠 Data OK 💠 🕜			
Source: Data Serv	er	 Connect 	tion: ALERT_SERVER	Update Pro	ps		
Filter Column: None	e	T Fi	Iter Value:	Clear Filte	er		
			Applied Properties				
Apply Time	Action	Success	File Name	Property Name			
03/23/2016 10:53:12	ADDED		C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.dataserver.socket	11		
03/23/2016 10:53:12	ADDED		central	sl.rtview.dataserver.port	1		
03/23/2016 10:53:12	ADDED	V	C:\TestBedirtvapm\appmon\confirtvapm.appmon sl.rtview.global				
03/23/2016 10:53:12	ADDED	2	C:\TestBedirtvapm\appmon\confirtvapm.appmon	sl.rtview.global			
03/23/2016 10:53:12	ADDED	×	C:\TestBed\rtvapm\appmon\conf\rtvapm.appmon	sl.rtview.sub			
03/23/2016 10:53:12	ADDED	r	C:\TestBedirtvapm\appmon\conf\rtvapm.appmon	sl.rtview.sub			
03/23/2016 10:53:12	ADDED	2	C:\TestBed\rtvapm\appmon\conf\rtvapm.appmon	sl.nview.sub			
03/23/2016 10:53:12	ADDED	2	C:\TestBedirtvapm\appmon\confirtvapm.appmon	sl.rtview.sub			
03/23/2016 10:53:12	ADDED	2	C:\TestBed\rtvapm\appmon\conf\rtvapm.appmon	sl.rtview.sub			
03/23/2016 10:53:12	ADDED	2	C:\TestBed\rtvapm\appmon\conf\rtvapm.appmon	sl.ntview.sub			
03/23/2016 10:53:12	3/2016 10:53:12 ADDED C:\TestBedV		C:\TestBedirtvapm\appmon\confirtvapm.appmon	sl.nview.sub			
03/23/2016 10:53:12	ADDED	2	C:\TestBedirtvapm\appmon\confirtvapm.appmon sl.rtview.sub		_		
03/23/2016 10:53:12	ADDED	C:\TestBedirtvapm\appmon\conftrtvapm.appmon sl.rtview.sub					
03/23/2016 10:53:12	ADDED	2	C:\TestBedirtvapm\appmon\confvtvapm.appmon	sl.rtview.sub	_		
4					•		

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ■ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

◆ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Filter By:

	Source:	Select the Source of the connection to the RTView process for which you want to see property information.
	Connection:	Select the Connection to the RTView process for which you want to see property information.
Fields and D This display i	Data ncludes:	
	Update Props	Click to have the RTView process specified by the selected Connection re-read all properties files and database properties. Note that most non-connection properties do NOT support updates. Use the "Properties Descriptions" on page 253 display to see if a specific property supports updates.
	Filter Column:	Select a column to filter the Applied Properties table.
	Filter Value:	Enter a string to filter the Applied Properties table.
	Clear Filter	Clears the filter.
Applied Properties (table)	Apply Time	The last time this property was applied.

Action	Describes what occurred at Apply Time .
	ADDED: Property was added.
	REMOVED: Property was removed.
	CHANGED: Property was modified.
Success	When the box is checked the Action was successful.
File Name	The source of this property. For properties read from a database this value is database .
Property Name	The name of the property after the property filter has been applied.
Property Value	The value of the property.
Handler	The RTView Handler that uses this property.

All Properties

This display shows all properties that were read from the properties files and database regardless of whether or not the RTView process uses them. There are several reasons a property specified in a properties file might not be applied to an RTView process:

- the filter doesn't match.
- it was overridden in another property file.
- it was specified in a file that is not used by the RTView process.
- it was a property that is not supported in that RTView process (ex, a builder specific property would not be applied to a data server process).

You can filter the **All Properties** table using the **Filter Column** and **Field Value** fields. The **Clear Filter** button clears the filter. Double-click on a row in the table to drill down to the "All Properties" display filtered by the **Property Name** for that row.

Select the **Source** of the connection to the RTView process for which you want to see property information. Options are:

- Data Server: If the RTView process is a Data Server and the Thin Client has a defined Data Server connection for it, choose this option and select the name of the Data Server in the Connection field.
- Local JMX Connection: Select this option if the Thin Client has a defined JMX Connection to the RTView process.
- RTVMGR JMX Connection: Select this option if the RTVMGR has a defined JMX Connection to the RTView process.

Select the **Connection** to the RTView process for which you want to see property information. Options available depend on your setup. For example, **RTVMGR** is only visible when the **Source** is **RTVMGR JMX Connection** and you have multiple RTVMGRs. You can then select an RTVMGR that has a defined JMX Connection to the RTView process for which you want to see property information.

Click **Update Props** to have the RTView process specified by the selected **Connection** reread all properties files and database properties. Note that most non-connection properties do NOT support updates. See the "Properties Descriptions" on page 253 display to find out if a specific property supports updates.

÷			All Properties	23-Mar-2016 15:37 🗳 Data OK 💠	2	
So	Source: Data Server Connection: ALERT_SERVER Upda					
Filt	er C	olumn: None 💌 Filte	r Value:	Clear Filter		
			All Properties			
Ord	er	File Name	Property Name	Property Value	*	
	0 0	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.cp	C:\TestBed\rtvapm\rtview/lib/rtvssa.jar	=	
	1 0	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.cp	C:\TestBedivtvapm/common/lib/rtvapm_common.jar	-	
	20	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.cp	C:\TestBed/rtvapm/common/lib/gmsjrtvutils.jar		
	3 0	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.cp	C:\TestBed/rtvapm\rtview/lib/rtvdebug.jar		
	4 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.jvm	-Xmx256m		
	5 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.jvm	-Xms128m		
	6 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.cmd_line	-notibco		
	70	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.stylesheet	rtv_darkstyles,rtv_flat,rtv_html5		
	8 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.sql.dbretry	40000		
	9 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.global	rtv_global_vars.rtv		
	10 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.global	rtv_global_trendrange.rtv		
	11 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.xml.xmlsource	rtv_constants.xml 0 rtv_constants.xml 0 1		
	12 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.jmx.jmxconn	local 'URL:local' false		
	13 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.dsenable	jmx		
1	14 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.jmx.jmx_metrics_period	10000		
	15 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.jmx.jmx_minreconnecttime	30		
	16 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.jmx.jmx_mbeans_change_dyn	false		
	17 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.jmx.jmxdsShowConnectionOnl	true		
	18 C	C:\TestBed\rtvapm\common\conf\rtvapm	sl.rtview.jvm	-Dcom.sl.rtview.customRtvAppManagerClassName=com.	٣	
•				•		

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> ■ and <u>Table</u> navigate to displays commonly accessed from this display.

19-Feb-201416:50 The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

Cls: 3,047 The number of items in the display.

✿ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Order	The order in which this property was read. For properties that support a single value that are specified multiple times, the one with the highest Order value will be applied.
File Name	The source of this property. It will be database for properties read from a database.
Property Name	The name of the property after the property filter has been applied.
Property Value	The value of the property.
Original Property Name	The name of the property before the property filter was applied. This will match the literal property string in your properties file.

Filter By:

	Source:	Select the Source of the connection to the RTView process for which you want to see property information.
	Connection:	Select the Connection to the RTView process for which you want to see property information.
Fields and Da This display ind	i ta cludes:	
	Update Props	Click to have the RTView process specified by the selected Connection re-read all properties files and database properties. Note that most non-connection properties do NOT support updates. Use the "Properties Descriptions" on page 253 display to see if a specific property supports updates.
	Filter Column:	Select a column to filter the Applied Properties table.
	Filter Value:	Enter a string to filter the Applied Properties table.
	Clear Filter	Clears the filter.
All Properties (table)	Order	The order in which this property was read. For properties that support a single value that are specified multiple times, the one with the highest Order value will be applied.
	File Name	The source of this property. It will be database for properties read from a database.
	Property Name	The name of the property after the property filter has been applied.
	Property Value	The value of the property.
	Original Property Name	The name of the property before the property filter was applied. This will match the literal property string in your properties file.

Properties Descriptions

This display shows one row for each property that is supported for the RTView process specified by the selected Connection.

Select the **Source** of the connection to the RTView process for which you want to see property information. Options are:

- **Data Server:** If the RTView process is a Data Server and the Thin Client has a defined Data Server connection for it, choose this option and select the name of the Data Server in the Connection field.
- Local JMX Connection: Select this option if the Thin Client has a defined JMX Connection to the RTView process.
- RTVMGR JMX Connection: Select this option if the RTVMGR has a defined JMX Connection to the RTView process.

Select the **Connection** to the RTView process for which you want to see property information. Options available depend on your setup. For example, **RTVMGR** is only visible when the **Source** is **RTVMGR JMX Connection** and you have multiple RTVMGRs. You can then select an RTVMGR that has a defined JMX Connection to the RTView process for which you want to see property information.

+		Property	/ Descriptions		23-Mar-2016 15:39 💠 Data OK + 🕜
Source: Data Server Conne	ection: ALER	T_SERVER	•		Update Props
		Propert	y Descriptions		
Property	Multi	Updates	Handler	Deprecated	Depric: 🔺
sl.rtview.alert.actionauditdataserver			Alert Data Source		
sl.rtview.alert.actionauditdb			Alert Data Source		5
sl.rtview.alert.actionaudittable			Alert Data Source		
sl.rtview.alert.alertclearedcommand			Alert Data Source		
sl.rtview.alert.alertcleartime			Alert Data Source		
sl.rtview.alert.alertcommand			Alert Data Source		
sl.rtview.alert.alertinitdelay			Alert Data Source		
sl.rtview.alert.cleansettingstable			Alert Data Source		
sl.rtview.alert.commentcommand			Alert Data Source		
sl.rtview.alert.commentlimit			Alert Data Source		
sl.rtview.alert.config	V		Alert Data Source		
sl.rtview.alert.createDbTables			Alert Data Source		
sl.rtview.alert.customAlertActionHandlerClassN			Alert Data Source		
sl.rtview.alert.custom_alertdef_prop	r		Alert Data Source		
sl.rtview.alert.custom_event_attr	2		Alert Data Source		
sl.rtview.alert.enableactionaudit			Alert Data Source		
sl.rtview.alert.enablebuffer			Alert Data Source		
sl.rtview.alert.enabled			Alert Data Source		
sl.rtview.alert.enablessa			Alert Data Source		
sl.rtview.alert.exitOnPersistInitFailed			Alert Data Source		
sl.rtview.alert.history			Alert Data Source		
sl.rtview.alert.lutupdatesnewdata			Alert Data Source		T
•					•

Title Bar:

Indicators and functionality might include the following:

← ↑ Open the previous and upper display. <u>CMDB</u> → and <u>Table</u> navigate to displays commonly accessed from this display. <u>19-Feb-201416:50</u> The current date and time. When the time is incorrect, this might indicate that RTView stopped running. When the time is correct and the **Data OK** indicator is green, this is a strong indication that the platform is receiving current and valid data.

CIS: 3,047 The number of items in the display.

♥ Data OK The data connection state. Red indicates the data source is disconnected (for example, the Data Server is not receiving data, or the Display Server is not receiving data from the Data Server). Green indicates the data source is connected.

Open the Alert Views - RTView Alerts Table display.

Open an instance of this display in a new window.

Open the online help page for this display.

Filter By:

Source:

Select the **Source** of the connection to the RTView process for which you want to see property information.

Connection:

Select the **Connection** to the RTView process for which you want to see property information.

Fields and Data This display includes:

	Update Props	Click to have the RTView process specified by the selected Connection re-read all properties files and database properties. Note that most non-connection properties do NOT support updates. Use the "Properties Descriptions" on page 253 display to see if a specific property supports updates.
All Properties (table)	Property	The name of the property
	Multi	Box is checked if this property supports multiple values.
	Updates	Box is checked if this property supports updates.
	Handler	The name of the RTView Handler that uses this property.
	Deprecated	Box is checked if this property is deprecated.
	Deprecation Info	If the property is deprecated, this lists the currently supported property to use instead.

CHAPTER 6 Creating Custom Solution Packages

This section describes how to create a custom Solution Package (CSP) using the custom Solution Package example (located in the **rtvapm_projects\emsample\custom** directory) as a template.

While RTView Enterprise Monitor comes with a broad set of Solution Packages for monitoring middleware and IT infrastructure software, the creation of your own CSPs enables you to enrich that set by monitoring your custom data sources.

To create your CSP perform the following steps in the order provided:

- Step 1: See "The Custom SP Example" on page 257. This section explains how to start the Custom SP example and illustrates concepts and configuration details that are essential for creating your own SP.
- Step 2: See "Create Mycustom SP" on page 273. This section provides step-by-step instructions for creating a new customized SP. To create Mycustom SP you rename the "custom" directory to "mycustom" and modify its files.

The Custom SP Example

The Custom SP example is found in the **rtvapm/projects/emsample/custom** directory. It shows the fundamental elements that make up a standard RTView Enterprise Monitor Solution Package. The Custom SP example displays data from two separate custom JMX data sources that simulate birds in flight. The initial display shows a table containing all birds with the data associated with them. By clicking on a particular row, it allows the user to drill-down to a more detailed display that shows further data for the selected bird. The creation of SPs requires use of the RTView Display Builder, which is included in the RTView Enterprise Monitor bundle and can be found in the directory **rtvapm/rtview**. Please refer to the *RTView Core B User's Guide* available at http://www.sl.com/services/docs.shtml, and select the navigation item titled **Building Displays** on how to run and work with the Builder.

This section includes:

- "Start the Custom SP Example": Instructions for starting the Custom SP (next).
- "Custom SP Caches": Describes the Custom SP cache configuration.
- "Custom SP Alerts": Describes the Custom SP alert configuration.
- "Custom SP Displays": Describes the Custom SP display configuration.
- "Custom SP Properties Files": Describes the Custom SP configuration files.

Start the Custom SP Example

Note: This example only works under Windows.

Windows:

1. In an initialized command window **cd** to the location of the Custom SP files:

cd projects/emsample/custom/src/rtfiles

2. Start the JMX simulation apps. In the command window run the first JMX application simulator:

type start run_samplejmxapp



- Run the second JMX application simulator: type start run_samplejmxapp2
- Start the Database, Data Server, and Historian: type start_rtv all all -properties:sample
- 5. Run the RTView Viewer:

type start runv -ds

All Bird Views	All Birds - Table 09-Oct-2015 16:31 💠 Data OK 💠 😮										
All Birds Heatmap											
All Birds Table		All Birds Table									
Single Bird Views	Connection	Bird Name	Level	Count	Color	Angle	FlapMode	x	Y	Expired	time_stamp
Alort Viewe	samplejmxapp	hawk_1	۲	0	gray	30	~	398	276		12/10/14 10:40:
Aleit views	samplejmxapp	hawk_2	0	0	gray	30	2	1,568	312		12/10/14 10:40:
Administration	samplejmxapp	gull_1	0	1	orange	45		1,074	2,150		12/10/14 10:40:
	samplejmxapp	hawk_3	0	0	gray	30		-100	400		12/10/14 10:40:
	samplejmxapp	hawk_4	0	1	gray	30	~	1,650	2,500		12/10/14 10:40:
	samplejmxapp	gull_2	0	1	orange	45		2,750	1,650		12/10/14 10:40:

If prompted for a user name and a password, use admin for the user name and admin for the password.

The Custom SP consists of the following files:

- **custom_bird_cache.rtv** Contains the cache definition object holding the monitored data used throughout the Custom SP.
- custom_bird_current_include.rtv Include file containing a function to extract all current data from the cache.
- custom_bird_current1_include.rtv Include file containing a function to extract all data from one single item from the cache (the selected bird).
- **custom_bird_history1_include.rtv** Include file containing a function to show historical data from one single item from the cache (the selected bird).
- **custom_shared_vars.rtv** Include file containing the drill-down substitutions that are used in the Custom SP.
- **custom_alertdefs.rtv** Contains the alert definition objects to handle alert conditions in the package.
- custom_alertstats_current_include.rtv Include file containing the functions to obtain the current alerts of the Custom SP from the RTView Enterprise Monitor platform.
- **custom_allbirds_table.rtv** Contains a table object to display all current data in the CustomBirdData cache which collects data from all running data sources.
- **custom_bird_summary.rtv** Contains graphical objects to display data from an individual index from the cache (the selected bird).
- rtview.properties Contains the default database configuration settings of the Custom SP.
- **sample.properties**: Contains JMX settings needed to run the Custom SP.
- run_samplejmxapp.bat A script to run the sample JMX data source on port 9995. This is exclusively a Windows example. No UNIX script is available.
- run_samplejmxapp2.bat A script to run the sample JMX data source on port 9996. This is exclusively a Windows example. No UNIX script is available.
- server.properties Contains the port, database names, and directory location for HSQLDB.
- **custom_navtree.xml** XML file to define the menu options to show in the navigation tree of the Custom SP.
- custom.navinfo.xml Contains the Heading, Technology, and Vendor information for including the contents of the custom_navtree.xml in the Components tab.
- **custom_panels.xml** XML file used to define the arrangement of each graphical component. This file declares that the title will be in the upper part of the display, the navigation tree on the left side and a slightly squared area to show the displays on the right of the navigation tree and below the title.

Proceed to "Custom SP - Caches," next.

Custom SP - Caches

Here you learn how to:

- Create and set up caches
- Create cache filtering functions to be used in displays
- Increase performance by using caches appropriately

Caches provide a holding area to store real time data that can be collected synchronously or asynchronously. Caches maintain several tables to store current data and past data independently. Depending on the settings of the cache, these tables store and process data differently. We will use the Custom SP to illustrate the most relevant cache attributes.

For more information about caches, please refer to the *RTView Core User's Guide* at http://www.sl.com/services/docs.shtml and select the navigation item titled **Caches**.

There are two basic steps to create a cache:

- 1. Create cache
- 2. Create functions to filter the cache data

The cache in the Custom SP is called CustomBirdData. The cache definition file itself (**custom_bird_cache.rtv**) is where we link to the raw data coming in. In the cache definition object contained in this file, the behavior of the cache will be fully specified. In this object there are attributes to define which data the cache will attach to, how much historical data the cache will maintain, how the incoming data should be time stamped, and the way the data in the cache should be expired. For example, in the Custom SP, the cache definition file has the functions **customBirdDataRaw1** and **customBirdDataRaw2**, which are functions of type **Reference**. These functions receive data from the two JMX data sources (SampleJmxApp and SampleJmxApp2). The data being collected is then joined in the function **customBirdDataJoined**, which is the function attached to the **valueTable** attribute of the

cache definition object. The following diagram illustrates the input functions to the cache and the joining of them to feed the cache.



There are performance and maintenance reasons to standardize the way the data is extracted from the cache. Therefore, it is recommended that filtering functions are created to retrieve the data from the cache which will then be used in the displays. These functions usually select the current or the history tables from the cache on different include files. In the Custom SP, the file **custom_bird_current_include.rtv** has the function **customBirdDataCurrent**, which filters the current table of the cache. This file will be the include file used in the display file **custom_allbirds_table.rtv** to get all current data from the cache by attaching the function **customBirdDataCurrent** to the **valueTable** attribute of the table object. Finally, to select the current and past data out of one item from the cache, the include files **custom_bird_current1_include.rtv** and **custom_bird_history1_include.rtv** are used. In the display file **custom_bird_summary.rtv** these two files are included to show all available data of one selected index (in this case one single bird). This selection is performed in the **custom_allbirds_table.rtv** file when the user selects one bird by clicking in one row of the table. Please refer to Appendix D, "Custom Solution Packages - Best Practices" for function naming conventions.

Please refer to the *RTView Core* [®] User's Guide at http://www.sl.com/services/docs.shtml and click on the navigation item titled Functions for more information about functions in general.

Custom SP - Steps to Create Caches

1. In the **custom_bird_cache.rtv** file, the cache CustomBirdData is defined. Refer to Appendix D, "Custom Solution Packages - Best Practices" for more information about cache naming conventions.

2. The data from the cache comes from two functions that collect raw data from JMX. The first function (customBirdDataRaw1) collects Color and Angle while the second (customBirdDataRaw2) collects FlapMode, X and Y metrics. The function customBirdDataJoined compounds the data collected by the previous two functions to be the feeding function of the CustomBirdData cache.

Edit Function						
Function Name:	customBirdDataJoined					
Function Type:	Join					
Left Table:	function customBirdDataRaw1 *					
Right Table:	function customBridDataRaw2 *					
Left Column Name:	Connection;Name					
Right Column Name:	Connection;Name					
Column Include Mode:	1					
Description:						
The Join function performs an inner join of the Left Table and the Right Table on the columns specified in the Left Column Name and the Right Column Name fields.						
ОК	Apply Cancel Help					

3. To see all caches, first select **Tools->Cache** from the main window in the RTView Builder. A sub-window with the available caches will be shown. By selecting the CustomBirdData cache, the list of attributes of the cache will appear on the right panel. The following illustration shows the complete set of attributes of this cache, which will be described next.

3a. Cache - The name of the cache (**cacheName** attribute) is CustomBirdData. The indexes of the cache (**indexColumnNames** attribute) are semicolon-separated. In our case, there are two indexes: **Connection** and **Name**. The **time stamp** column (**timestampColumnName** attribute) is **time_stamp**.

Object Class N	ame: obj_cache_table
即 1 *** ***	
? Cache	
cacheName	CustomBirdData
description	
indexColumnNames	Connection;Name
timestampColumnName	time_stamp
updateListenersImmedFlag	×
? Cache Current Table	
maxNumberOfCurrentRows	
rowExpirationMode	Mark
rowExpirationTime	localScustomRowExpirationTime
rowExpiredColumnName	Expired
rowExpiredIndexColumns	
rowsToDeleteTable	
9 Cache History Table	
allowDuplicatesInHistoryFlag	
historyColumnNames	Angle:X:Y;
historyTimeSpan	
initialTable	
maxNumberOfHistoryRows	local\$customMaxNumberOfHistoryRows
maxNumberOfRowsPerindex	
9 Data	
queryServerName	
resetTrigger	
schemaTable	
schemaTableStrictFlag	
valueTable	function customBirdDataJoined Connection;Name
valueTableCount	1
9 Data Compaction : Primary (in-memory)	
condenseRowsCombineHistoryFlag	
condenseRowsFlag	×
condenseRowsGroupBy	Angle:average (X:average (Y:average
condenseRowsInterval	local\$customCondenseRowsInterval
condenseRowsRawDataTimeSpan	local\$customCondenseRowsRawDataTimeSp
9 Data Compaction : Secondary (Historian)	
compactionGroupBy	Angle:average (X:average (Y:average
compactionRules	local\$customCompactionRules
compactionType	aggregate
9 Historian	
currentTableName	
databaseName	\$RTVHISTORY_DB
historyTableName	SCUSTOM_BIRD_TABLE
quoteColumnNamesFlag	
substitutions:	

3b. Cache Current Table - The way data is expired from the cache is defined in this section. In our case, the expiration mode of the rows in the current table of the cache (**rowExpirationMode** attribute) is **Mark**, which implies that expired columns will have a column set to **TRUE**, indicating the row expired. The name of the column is defined in the **rowExpirationColumnName** attribute, which is in this case **Expired**. And the time interval to determine whether a row has expired is defined in the **rowExpirationTime** attribute, which is **35s** in this cache. Therefore, if the difference between the current time and the time stamp of a row in the cache is greater than **35s**, then the **Expired** column will be set to **TRUE**, which means the data is obsolete. Otherwise, the **Expired** column will be set to **FALSE**, meaning that the data should be considered updated. 3c. Cache History Table - The data kept historically is defined in this section. The names of the columns to keep history (**historyColumnNames** attribute) are semicolon-separated and set to **Angle**, **X** and **Y**. The maximum number of rows of the history table (**maxNumberOfHistoryRows** attribute) is set to **50,000** rows.

3d. Data - This section defines the data source attachments feeding the cache. There will be as many attachments (valueTable attribute) as defined in the **valueTableCount** attribute. In this cache, there is only one feeding source: the **birdDataJoined** function.

Attach To Function Data						
Property Name:	valueTable					
Function Name:	customBird	IDataJoined		•		
Column(s):	Connection	;Name;Color;A	ngle;FlapMode;X	(;Y; 🔻		
Filter:						
Filter Column:				-		
Filter Value:						
Description:						
To create	or edit a func	tion, select Fu	nctions from the	• Tools menu.		
ОК	Apply	Reset	Clear	Cancel		

3e. Data Compaction: Primary (in-memory) - This section defines the rules to condense cache data in memory. In this cache, all data kept in history will be aggregated by averaging rows every 60s (**condenseRowsInterval** attribute) after 5 minutes of keeping raw data in the cache (**300s** in the **condenseRowsDataTimeSpan** attribute) have passed.

3f. Data Compaction: Secondary (Historian) - This section defines the rules to condense historical data in the data base. The columns kept in history will be aggregated by averaging rows with the following rule **1h** -;**1w 5m**;**1M 1h**, which means the data from 1 hour will not be aggregated (**1h** - rule), the data over a period of 1 week will be aggregated every 5 minutes (**1w 5m** rule), and the data over a period of 1 month old will be aggregated every hour (**1M 1h** rule).

3g. Historian - The name of the data base (**databaseName** attribute) and the table name (**historyTableName** attribute) that stores the cache historical data are defined here.

Proceed to "Custom SP - Alerts," next.

Custom SP - Alerts

This section describes the alert creation of the Custom SP. The RTView Enterprise Monitor Alert Engine can monitor alert conditions and perform automated actions from any available RTView data source. Alert definition includes the setting of alerting and warning thresholds, notification policies, and optionally perform automated actions, such as email, system commands, executing a SQL statement or sending JMS messages. For more information about alerts, please refer to Using the Monitor - "Alert Views" on page 207, and the *RTView Core ® User's Guide* at http://www.sl.com/services/docs.shtml and select the navigation item titled **Alerts**.

Alerts

There are two basic steps to create an alert:

- 1. Create alert
- 2. Create functions to filter available alert data

There are two alerts in the Custom SP, which are named **CustomBirdExpired** and **CustomBirdTooHigh**. The alert definition file itself (**custom_alertdefs.rtv**) is where we set the attributes of the alerts. In the alert definition objects contained in this file, the behaviour of the alerts will be fully specified. In these objects, there are attributes to define which data the alert will be attached to, the type of the alert, the thresholds of the incoming data, and the way the data is indexed. For example, in the Custom SP, there is one alert of type discrete (**CustomBirdExpired**) and other of type interval (**CustomBirdTooHigh**).

There are four types of alerts under RTView Enterprise Monitor: discrete, interval, multi-state, and event. The status of each alert is driven by the metric Severity, which is maintained by the RTView Enterprise Monitor Alert Engine. To determine in real time the number of alerts that are raised, the RTView Enterprise Monitor Alert Engine maintains a group of internal caches that one needs to work with. Similarly to custom caches, the way to work with these caches is by creating an alert include file that will extract from the current table of the caches the rows associated with the package. To do so, each alert must define in the Package attribute of the alert definition object the name of the package associated with.

In the Custom SP, this attribute is set to **Custom**. The file **custom_alertstats_include.rtv** contains the necessary filtering functions to obtain the current alerts of the package. This file will be included in the displays requiring to visualize alert information.

About Alerts

Alerts in the Custom SP are handled primarily in two files, those being **custom_alertdefs.rtv** and **custom_alertstats_current_include.rtv**. The include file

custom_alertstats_current_include.rtv contains the filtering functions to get only the alerts associated to this package. Some of these functions will be used in the display files **custom_allbirds_table.rtv** and **custom_bird_summary.rtv** to show alert information. These alerts are attached to the function **customBirdDataCurrent** which is included from the file **custom_bird_current_include.rtv**. The indexes of both alerts are Connection and Name and the metrics associated with them are **Expired** and **Y**, respectively.

The file **custom_alertstats_current_include.rtv** contains functions that extract data from the RTView Enterprise Monitor internal caches RtvAlertStatsByPackageIndex and RtvAlertStatsByCategoryIndex of the Alert Server. The RtvAlertStatsByPackageIndex cache provides condensed information of the uncleared and unacknowledged alerts per Package while the RtvAlertStatsByCategoryIndex cache provides condensed information of the uncleared and unacknowledged alerts per Package uncleared and unacknowledged alerts per Category. The functions are:

 customAlertStatsByPackageCurrent: filters from the RtvAlertStatsByPackageIndex cache all alerts containing in the Package attribute of the alerts the prefix Custom.

🕰 Attach To Cache Data 🛛 🕅							
Property Nan	ne: t_arg1						
Cac	he: RtvAlert	StatsByPackage	Index	-			
Tal	ole: current			-			
Column	(s): Alert Ind	ex Values;Alert(Count;Max Sever	ity; 🔻			
Filter Rov	ws: Off	○ Off ⑧ Basic ○ Advanced					
Filter Colur	nn: Package)		-			
Filter Val	Filter Value: Custom						
Update On	Update Once:						
		Data Serv	er: \$rtvAlertDat	ta Server 💌			
ОК	Apply	Reset	Clear	Cancel			

 customAlertStatsByCategoryCurrent: filters from the RtvAlertStatsByCategoryIndex cache all alerts containing in the Category attribute of the alerts the prefix Bird.

🚅 Attach To Cache Data 🛛 🕅							
Property Name:	t_arg1						
Cache:	RtvAler	tStatsByCate	goryIndex	-			
Table:	current	t		-			
Column(s):	s): Index Values;AlertCount;Max Severity; 💌						
Filter Rows:	⊖ Off	Basic (Advanced				
Filter Column:	Catego	ry		-			
Filter Value:	Bird						
Update Once:							
		Data Server:	\$rtvAlertData	Server 💌			
ОК А	pply	Reset	Clear	Cancel			

 customAlertSertSeverityByBird: aggregates the Maximum Severity and the Alert Count of all alerts provided for the customAlertStatsByCategoryCurrent function per set of indexes (one instance of \$customConn and \$customBird substitutions).

Custom SP - Steps to Create Alerts

1. In the custom_alertdefs.rtv file, the alerts CustomBirdExpired and

CustomBirdTooHigh are defined. Refer to Appendix D, "Custom Solution Packages - Best Practices" for more information about cache naming conventions.

Alerts						
Name BirdExpired	Type A Discrete	Command	Enabled			
BirdTooHigh	Limits					
Add or select	an alert in	l the table ar	nd edit it i			
	Ad	d				
	Co	ру				
	Rem	ove				
Show Filters						
. .	III. [A. .			

2. The data triggering the alerts comes from the function **customBirdDataCurrent** that is included from the **custom_bird_current_include.rtv** file. To see all alert attributes, first select **Tools->Alerts** from the main window in the RTView Builder. A sub-window with the available alerts will be shown. By selecting one of the alerts, the list of attributes of the alert will appear on the right panel.

3a. Alert - The name of the alert (**alertName** attribute) is **CustomBirdExpired**. This is a **Discrete** alert. The type of the alert is defined when adding the alert by clicking on the **Add** button. An edit box to enter the name of the alert and a combo box with the four available possibilities will be shown. Discrete alerts should have the **valueMediumAlertEnabledFlag** attribute selected.

3b. Custom Properties - The main attributes to define in this section are the **Category** and **Package** attributes. The Package attribute (in this example, **Custom**) is used to identify the alerts from the Custom SP out of the rest of alerts that are handled by the RTView Enterprise Monitor Alert Server, while the **Category** attribute (in this example, **Bird**) provides a way to group incoming alerts. In the Custom SP both alerts refer to the same element and set of indexes. Therefore they share the same **Category** value: **Bird**.

3c. Data - The indexes of the alert and the metric triggering alerts are defined in this section. The **indexColumnNames** are for one single bird, which is defined by **Connection** and **Name**. And the **valueTable** attribute is attached to the **customBirdDataCurrent** function with the index columns and the metric to be alerting against (**Expired** metric). Due the input data is tabular, the **useTabularDataFlag** is checked.

Object Properties Object Class Na	마=: obi alert discrete
문 소 바 반	ine. ouj_uier(_uiscrete
9 Alert	
alertClearedCommand	
alertCommand	
alertDelayTime	0
alertName	CustomBirdExpired
commentAddedCommand	
description	
nonRepetitionTime	0
reNotificationCommand	
reNotificationMode	Use Global Setting
reNotificationTime	0
valueHighAlert	high
valueHighAlertCommandText	
valueHighAlertEnabledFlag	
valueHighAlertText	
valueLowAlert	low
valueLowAlertCommandText	
valueLowAlertEnabledFlag	
valueLowAlertText	
valueMediumAlert	true
valueMediumAlertCommandText	
valueMediumAlertEnabledFlag	×
valueMediumAlertText	
? Custom Properties	
Category	Bird
DrillDownSuffix	
DrillUpSuffix	
Package	Custom
Source	
customPropertyMap	
9 Data	
indexColumnNames	Connection;Name
indexTypes	
timeColumnName	
useTabularDataFlag	×
valueTable	function customBirdDataCurrent Conne
? Interaction	
enabledFlag	
rowEnabledTable	

3d. Interaction - This section defines the associated interaction when the alert has been triggered. In the Custom SP, there has no interaction been defined, therefore the attributes of this section are empty.

4a. Alert - The name of the alert (alertName attribute) is **CustomBirdTooHigh**. This is a Limits alert. The alerts of type Limits should have the **valueHighAlertEnabledFlag**/ **valueLowAlertEnabledFlag** attributes and the **valueHighWarningEnabledFlag**/ **valueLowWarningEnabledFlag** attributes checked when high/low thresholds are the limits triggering the alert. In this case, it is a high threshold alert, therefore the

valueHighalertEnabledFlag and the valueHighWarningEnabledFlag attributes are checked with the values of the default thresholds (the valueHighAlert attribute which is set to 2000 and the valueHighWarning attribute set to 1600). Therefore, these settings imply that one alert will be triggered (Severity of 2) each time the Y metric of a bird reaches 2000 while one warning will be triggered (Severity of 1) each time the Y metric of a given bird reaches 1600.

bject Properties	Gr 4
Object Class N	ame: obj_alert_limits
[] 숲↓ ※\$ 전\$	
alertDelayTime	0
alertName	CustomBirdTooHigh
commentAddedCommand	
description	
nonRepetitionTime	0
reNotificationCommand	
reNotificationMode	Use Global Setting
reNotificationTime	-1
reNotifyOnSevChangeMode	Use Global Setting
skipDuplicateAlertsFlag	×
valueCommandFormat	
valueDeadband	0.0
valueHighAlert	2000
valueHighAlertCommandText	
valueHighAlertEnabledFlag	ĸ
valueHighAlertText	
valueHighWarning	1600
valueHighWarningCommandText	
valueHighWarningEnabledFlag	×
valueHighWarningText	
valueLowAlert	5
valueLowAlertCommandText	
valueLowAlertEnabledFlag	
valueLowAlertText	
valueLowWarning	15
valueLowWarningCommandText	
valueLowWarningEnabledFlag	
valueLowWarningText	
Custom Properties	
Category	Bird
DrillDownSuffix	
DrillUpSuffix	
Package	Custom
Source	
customPropertyMap	
Data	
indexColumnNames	Connection;Name
indexTypes	PerBird:Connection,Name
timeColumnName	
useTabularDataFlag	~
valueTable	function customBirdDataCurrent Con
Interaction	
enabledFlag	
rowEnabledTable	_

4b. Custom Properties - Same as in 3b.

4c. Data - Same as in 3c except that the metric triggering the alert is the high of the bird (the \mathbf{Y} column).

4d. Interaction - Same as in 3d.

Proceed to "Custom SP - Displays," next.

Custom SP - Displays

This section describes the creation of the displays contained in the Custom SP. These are the **custom_allbirds_table.rtv** and the **custom_bird_summary.rtv**, which have been created to monitor the JMX data related with the birds in flight. These are the displays a user will interact with to monitor alarm status and drill-down to detailed displays to review specific metrics.

There are two general groups of displays: Those presenting data of a set of elements and the ones presenting the information about a single element. In general, due to performance and maintenance reasons, the displays presenting data of a set of elements will show current data, while the displays specifics to a single element should show historical data.

As with caches and alerts in RTView Enterprise Monitor, displays are created using the RTView Display Builder. For more information about the creation of displays, please refer to the *RTView Core ® User's Guide* at http://www.sl.com/services/docs.shtml and select the navigation item titled **Building Displays**.

Creating Displays

There are many ways to interact with data using graphical objects. The most widely used are tables, combo and check boxes, edit boxes, and trend graphs. And the drill-down mechanism to obtain more detailed data of a selected item by clicking in the graphical object containing it. Please refer to the *RTView Core ® User's Guide* at http://www.sl.com/services/docs.shtml and select the navigation item titled **Building Displays->Drill Down Displays** for further information.

The standard way to present the data of a set of elements is with a table (as in the **custom_allbirds_table.rtv**). By clicking in a row of the table, one will drill-down to the detailed data of the chosen element (in the Custom SP, one navigates from the **custom_allbirds_table.rtv** to **custom_bird_summary.rtv**), which shows specific data of the selected element. Following the standards described in "Custom Solution Packages - Best Practices", these displays are including the files containing the cache filtering functions instead of using directly the BirdData cache.

To Create Displays

1. In the **custom_allbirds_table.rtv**, the main object is the table showing the data from each bird flying in the system in a different row. This table is the main entry point of the Custom SP.

	All Birds - Table							Dec-2014	13:15 🗳	Data OK 💠 🕜
	All Birds Table									
	Bird Name	Alert Level	Alert Count	Color	Angle	FlapMode	х	Y	Expired	time_stamp
samplejmxapp	hawk_1	0	1	gray	30	V	848	1,176		12/10/14 13:15:
samplejmxapp	hawk_2	0	1	gray	30	~	2,018	2,412		12/10/14 13:15:
samplejmxapp	gull_1	0	0	orange	45	~	1,524	500		12/10/14 13:15:
samplejmxapp	hawk_3	0	1	gray	30	~	-50	1,100		12/10/14 13:15:
samplejmxapp	hawk_4	۲	0	gray	30	V	1,200	400		12/10/14 13:15:
samplejmxapp	gull_2	0	0	orange	45	2	2,300	0		12/10/14 13:15:

The data shown in the table comes from the function **customBirdDataCurrent**, which is included in the **custom_bird_current_include.rtv** file. This function is attached to the **valueTable** attribute of the table object and the columns to be shown in the table are **Connection**, **Name**, **Color**, **Angle**, **FlapMode**, **X**, **Y**, **Expired**, and **time_stamp**. By clicking on one row of the table, one drills down to the detailed display of the selected bird. The user interaction is defined in the **Section Interaction** of the **Object Properties** of the table. In the **drillDownTarget** attribute, the file **custom_bird_summary.rtv** is defined, which implies this will be the end display of the user interaction. The drill down substitutions to select the chosen bird are set in the **drillDownColumnSubs**. In this case, the two indexes (**Connection** and **Name**) with their associated substitutions (**\$customConn** and **\$customBird**).

Ŷ	Interaction					
	clearSelection	0				
	columnResizeEnabledFlag	v				
	command					
	commandCloseWindowOnSuccess					
	commandConfirm					
	commandConfirmText					
	drillDownColumnSubs	<pre>\$customConn:Connection \$customBird:Name</pre>				
	drillDownSelectMode	Element Only				
	drillDownTarget	\$. custom_bird_summary.rtv				
	editDataEnabledFlag					
	menultemGroup					
	multiSelectFlag					
	rightClickActionFlag					
	rowHighlightEnabledFlag					
	scrollToSelectionFlag					
	scrollbarMode	As Needed				
	tabIndex	0				

2. To keep common look-&-feel, a general display was included (**custom_common_1.rtv**). This is included in the **custom_allbirds_table.rtv** file to provide the standard to determine whether the data is available, provide a help button, date and time. This common file just contains an include file to one RTView Enterprise Monitor common file (**rtv_common_1.rtv**) to get its upper heading. This file has been used across all RTView Enterprise Monitor and Solution Package displays and it is recommended to use it on custom displays to maintain the same appearance.

3. It is possible to navigate to the **custom_bird_summary.rtv** display file in two different ways: From the navigation tree by clicking in the **Bird Summary** tab, or by drilling-down from the **custom_allbirds_table.rtv** file. This display shows data for the selected bird, which can be changed in the combo boxes **Connection** and **Bird** at the upper part of the display.

4. There are several include files in the **custom_bird_summary.rtv** display.

4a. To keep the same upper heading, the **custom_common_1.rtv** file is included.

4b. To have access to alert data, the **custom_alertstats current_include.rtv** is included.

4c. To select different birds from a group of combo boxes, the **custom_common_bird.rtv** is included.

4d. To have access to current data from one single bird, the **custom_bird_current1_include.rtv** is included.

4e. To have access to historical data from one single bird, the **custom_bird_history1_include.rtv** is included.

5. All graphical objects in the **custom_bird_summary.rtv** display are attached to current data except the trend graph object that also has attributes attached to functions extracting historical data. For each trace in the trend graph, there is one attribute attached to the current data (**trace[n]Value** attribute, with **n** being the order of the trace) and another attribute attached to the historical data (**trace[n]ValueTable** attribute). For further information on trend graph creation, please refer to the *RTView Core B User's Guide* at http://www.sl.com/services/docs.shtml and select the navigation item titled **Building Displays->Using the Object Palette->Graphs**.

Proceed to "Custom SP - Properties Files," next.

Custom SP - Properties Files

Properties files are used mainly in Java to store the configurable parameters of an application. They can also be used for storing strings for internationalization and localization; these are known as *Property Resource Bundles*. Each parameter is stored as a pair of strings, one storing the name of the parameter (called the *key*), and the other storing the value. In these files are defined the port number to connect to, the address of a data source, the location of the Data Server and so on. In RTView Enterprise Monitor some properties are cumulative and others override previous or default settings.

rtvapm.[pkg].properties File

(/rtvapm_projects/myemsample/custom/conf/rtvapm.custom.properties): This file declares the all default settings to execute the package:

- The location of the jar file (Package JAR)
- The files containing the cache definitions of the package (Cache Definition Files)
- The file containing the alert definitions of the package
- The default values of the substitutions for cache configuration
- The port numbers for the Data Server, Display Server, and Historian and their JMX ports for monitoring.

(/rtvapm_projects/myemsample/custom/conf/rtvapm.custom.ref.properties):

This file contains the properties needed to integrate with EM. For details about this file, see "Creating the properties file for integration in RTView Enterprise Monitor".

rtview.properties File

(/rtvapm_projects/myemsample/custom/src/rtfiles/rtview.properties): This file contains the minimum set of definitions to connect to databases.

server.properties File

(**/rtvapm_projects/myemsample/custom/src/rtfiles/server.properties**): This file specifies the ports of the two HSQLDB data bases. One for alerts and the other for the historian.

sample.properties File

(/rtvapm_projects/myemsample/custom/src/rtfiles/sample.properties): This file provides an example of how to specify the data connections to run properly the Custom SP. Proceed to "Create Mycustom SP," next.

Create Mycustom SP

Using the Custom SP provided as a starting point, it is possible to create your own Solution Package. We will refer to this as Mycustom SP throughout the documentation. By following the steps in this section, one will get a customized SP that you can use in your own projects. This is an advanced chapter.

The steps involved with creating a customized SP are:

- "Step 1: Create Cache"
- "Step 2: Create Functions to Extract Current and History Data"
- "Step 3: Configure Caches"
- "Step 4: Create Top-Level Displays"
- "Step 5: Define the Alerts to Monitor the Data of Your Solution Package"
- "Step 6: Create the Include File to Define Functions to Filter Alerts"
- "Step 7: Create Low-level Displays with Combo Boxes for Selection"
- "Step 8: Create the Navigation Tree and Display Arrangement"
- "Step 9: Update Build Scripts"
- "Mycustom SP Integration in RTView EM" on page 287

Step 1: Create Cache

Before starting the cache creation, it is necessary to understand how the data from your specific data source is organized and which are the relevant metrics to be monitored. This initial stage of analysis is key to speed up the development time of your customized Solution Package. The very first piece of information one should know from this analysis is the index columns of the data, which will be the indexes of the cache (the **indexColumnNames** attribute of the cache object definition). It is recommended you store all relevant data of your customized Solution Package in caches.

1.1. Create the work directory

The **custom** directory is the starting point for creating your own customized Solution Package. On a location parallel to your **rtvapm** directory (for instance **rtvapm_projects**), copy the projects directory under **rtvapm** (which contains the **emsample** directory). And make a copy of the **custom** directory at the same level for your customized Solution Package.

It will be assumed through this document that your work directory is **rtvapm_projects/ myemsample** and that the directory where you are going to create your new Solution Package is paralel to custom. That is **rtvapm_projects/myemsample/mycustom**.

1.2. Rename the Bird Cache

Using the RTView Builder, open the file **rtvapm_projects/myemsample/mycustom/src/ rtfiles/custom_bird_cache.rtv** and rename the cache CustomBirdData (using the Object Properties window) with an appropriate name for your data.

Best Practice: Cache Naming Convention:

All caches should start with upper case and follow camel-case style, ending with the sufix "Cache". E.g. CustomBirdCache, WIsServerInfoCache

1.3. Rename the custom_bird_cache.rtv file

Rename the file with a meaningful description for the caches defined there. E.g. If you are developing a new WebLogic Solution Package, one possible cache definition file might be **weblogic_server_cache.rtv** which will contain caches associated to data from WebLogic Servers.

Best Practice: Cache Definition File naming convention

All cache files start with the package prefix, separate words with uderscores, and end with the sufix "cache":

[pck]_[dataType]_cache.rtv

where **pck** is the package prefix, and **dataType** is the type of the data being cached.

E.g. custom_bird_cache.rtv

weblogic_server_cache.rtv

Best Practice: File naming convention

All files start with the package prefix and the word separator is underbar ('_'). The main data and the graphical object should need to be also mentioned as follows:

[pkg]_[indexing|reference]_[mainObject|subject]

where **pkg** is the package prefix, indexing refers to the elements in use and **mainObject** refers the main graphical object in use in the display.

E.g.

glassfish_allservers_heatmap.rtv

weblogic_allapps_table.rtv

Note: We recommend [**pck**] being an acronym instead of the full name of the technology. For clarity, in this document we present full names of technologies.

1.4. Declare the cache definition file in the conf properties file

Rename the properties file rtvapm_projects/myemsample/mycustom/conf/ rtvapm.custom.properties to rtvapm_projects/myemsample/mycustom/conf/ rtvapm.mycustom.properties and then edit it to search for cache.config=custom_bird_cache.rtv. Change in that line the string custom_bird_cache.rtv to the new name you chose for the cache definition file of your Solution Package.

Best Practice: Declaration of cache definition files

Cache definition files should be always declared in the properties file under **conf**. This properties file should follow this Naming Convention:

rtvapm.[pckDir].properties, where **pckDir** is the name of the directory where you are creating your customized Solution Package. In this example, the file name should be: **rtvapm.mycustom.properties**.

Note: The properties file loader looks for this specific file naming convention under **conf**. It will not be recogninzed with a different naming convention.

1.5. Configure the cache expiration mode

To continue with the definition of the cache, it is also important to specify the expiration mode of the data in the cache. For further information regarding cache setup, refer to the *RTView Core ® User's Guide* at http://www.sl.com/services/docs.shtml and select the section Caches.

1.6. Configure cache history

Select the metrics that are required to be stored in history and their compaction mechanism. For further information regarding cache setup, refer to the *RTView Core ® User's Guide* at http://www.sl.com/services/docs.shtml and select the section Caches.

Some attributes of caches might need refinement on the end-customer side. For instance, the time when rows are expired might depend on the location of the Data Servers. Some customers might need a higher expiration time in order of avoid expiring rows that are coming at a slower pace. While other end-users can have the reverse problem and need to confirm correct data transfer at a faster pace.

In general, if the cache has been configured to keep data in history, one should need to set up the expiration mode and the history attributes of caches. To do so, one needs to define substitutions that can be modified through a properties file.

There is in general one file per Solution Package that contains the substitutions. For instance, **wls_cache_vars_include.rtv** is the file containing cache substitutions in our WebLogic Monitor, WLM.

Best Practice: Cache Variables File naming convention

[pkg]_cache_vars_include.rtv

where **pkg** is the package prefix.

Note: If you do not have variables initialized to configure history, the Historian might not work properly under all circumstances. Besides, if you need to change the defaults you would need to edit each cache definition file. That operation affects all users and shouldn't be allowed to all types of users.

Having these substitutions isolated in one file provide the information about which are the defaults for the package caches and gives the posibility to change them globally if needed in custom properties files. This is an optional, but highly recommended, best practice.

1.6.1. Add substitutions to configure cache properties

Rename **custom_cache_vars_include.rtv** to a meaningful file name for your customized SP following the naming convention. Then open the file with the Builder and change the prefix **\$custom** with a meaingful prefix for your customized Solution Package. For instance, **\$customCondenseRowsInterval** to **\$mycustomCondenseRowsInterval**, or **\$mysqlCondenseRowsInterval**, if you are creating a new customized MySQL Solution Package.

After this renaming, you should reference this new file in your cache definition file instead of the custom and reference the susbstitutions in the cache attributes of all your caches, which will still contain references to the **\$custom*** substitutions.

1.6.2. Provide properties to customize cache attributes

Edit to rtvapm_projects/myemsample/mycustom/conf/

rtvapm.mycustom.properties file and find "Configure Database Tables here" section. Replace the names of the substitution **\$CUSTOM_BIRD_TABLE** with one appropriate to your Solution Package. For instance, **\$MYCUSTOM_[yourData]_TABLE**

Best Practice: Naming convention for database tables

Keep the standardized substitution and value of the database name for history

sl.rtview.sub=\$RTVHISTORY_DB:RTVHISTORY

Name the substitutions and values for the database tables as follows

sl.rtview.sub=\$[PCK]_[DATATYPE]_TABLE:[PCK]_[DATATYPE]

E.g.

sl.rtview.sub=\$RTVHISTORY_DB:RTVHISTORY

sl.rtview.sub=\$BW_SERVERS_TABLE:BW_SERVERS

1.7. Use the appropriate feeding function for the cache

Attach to the valueTable attribute of the cache the appropriate feeding function associated to your data source. For further information regarding cache setup, refer to the *RTView Core*® *User's Guide* at http://www.sl.com/services/docs.shtml and select the section Caches.

1.8. Verify your setup

To verify your work so far, the new Solution Package should run similarly to the original Custom SP but no bird data should be seen at this point in the displays.

Step 2: Create Functions to Extract Current and History Data

To improve performance, the best option is to provide functions for current and history in files with similar naming conventions. Due current data is used differently from historica data, the functions extracting each types should be kept in separate files. Moreover, because current data can be extracted for all instances of a cache or filtered, it is recommended to separate into different files the current data for all items in a cache and the current data for one single item. For each cache definition file, we recommend creating the following three include files:

- Current Include File: To get the data from the current table of the caches.
- Current1 Include File: To get the data from the current table of the caches filtered for one set of indexes.
- History1 Include File: To get the historical data of the caches filtered for one set of indexes.

2.1. Creation of the Current Include File

This file contains one function per cache with the following.

Best Practice: File naming convention of current include files

[pck]_[dataType]_current_include.rtv

E.g. wls_server_current_include.rtv

Note: For performance reasons, in displays it is not recommended that you refer directly to caches. Instead you should include ***current_include** files containing exclusively the set of functions that will be regularly used.

2.1.1. Rename current file

Rename the **custom_bird_current_include.rtv** file with an appropriate name for your customized Solution Package. Open the file in the RTView Builder, rename the cache filtering function (customBirdDataCurrent) and attach it to the cache that you created in the previous step. If the cache name cannot be seen in the drop down, this indicates that the RTView Builder cannot reach the cache configuration file. Please go back to "Step 1: Create Cache" on page 273 and double check your changes. When renaming the function you will be asked if you would like to update existing data attachments for the function to use the new name. Answer **Yes** to this question.

Edit Function				×	
Function Name:	customBirdDataCurrent V Public				
Function Type:	Reference				
Table:	cache xml? <cache>CustomBirdData</cache> <table>current</table> <cols>*</cols>				
Description:					
The Reference function makes a reference to the specified Table without copying the contents.					
ОК		Apply	Cancel	Help	

Best Practice: Function naming convention for current functions

[pck][DataType]Current

where **pck** is the Package prefix and **DataType** is the type of the data cached.

E.g. gfsServerCurrent

```
customBirdDataCurrent
```

Note: Functions start with lowercase and caches with uppercase.

Step 2.2. Creation of Current1 Include File

Current 1 (one) Include Files are the files in which we use the shared variables of the Solution Package to filter one item out of the cache. This file contains one function per cache with the following.

Best Practice: File naming convention for current 1 include files

[pck]_[dataType]_current1[initial]_include.rtv

where **pck** is the Package Prefix, **dataType** is the name of the data cached, and **initial** is the first letter of the dataType.

E.g. **wls_server_current1s_include.rtv**, or **custom_bird_current1_include.rtv** where

pck=wls, dataType=server, and initial=[s | blank]

Note: Notice that the files ***current1*** and **history1*** need filtering variables for selection. It is recommended that these filtering variables are located in a ***shared*** file and included in the

common1 file. For instance, in the Custom SP the custom_shared_vars.rtv contains **\$customBird** and **\$customConn**, which are the filtering or drill-down substitutions used throughout all files in that SP.

Step 2.2. Rename current 1 file

Rename the **custom_bird_current1_include.rtv** file with an appropriate name for your customized Solution Package.

Step 2.3 Create the *shared_vars.rtv file for your SP

Rename the **custom_shared_vars.rtv** file with an appropriate file name for your Solution Package. Using the RTView Builder, rename the drill-down substitutions that you will use in your Solution Package. These substitutions will be used throughout displays and include files.

Best Practice: File naming convention of files containing the SP drilling-down substitutions

[pck]_shared_vars.rtv, e.g. custom_shared_vars.rtv

Best Practice: Substitution naming convention

Camel-case naming starting with lower case that should start with the prefix of the Solution Package followed by the name of the metric or column name of the index.

\$[pck][MetricName]

E.g. \$wlsServer, \$customBird

2.4. Replace the include file

In the **custom_alertstats_current_include.rtv** file, replace the include file with the one you have created in the previous step. The variables in this file will be used to extract the alerts of your SP from the RTView Enterprise Monitor Alert Engine. This step will be described later in this document.

🕶 Include Files				
custom_shared_vars.rtv				
Add Remove				
OK Apply Cancel				

2.5. Rename the custom_bird_current1_include.rtv file

Rename the **custom_bird_current1_include.rtv** file with an appropriate file name for your Solution Package. Using the RTView Builder, rename the cache filtering function **customBirdDataCurrentForBird** and attach it to the cache. Use filtering substitutions (variables used to filter one item from a set of data - in the **custom_shared_vars.rtv** file these are called **\$customConn** and **\$customBird**) to select one item from your data source and attach it to the current table. This is done under **Filter Value** in the **Attach to Cache Data** dialog.

Edit Function	X	
Function Name:	myCSPDataCurrentForItem	
Function Type:	Reference	
Table:	tion;Name <fval>\$connection;\$Item</fval>	
Description:		
The Reference function makes a reference to the specified Table without copying the contents.		
ок	Apply Cancel Help	

2.6. Creation of the History 1 Include File

To get the historical data of a given set of indexes, we use this type of files, which should contain one function per cache that requires filtering to one single item.

Best Practice: File naming convention of History 1 include files

[pck]_[dataType]_history1[initial]_include.rtv E.g. wls_server_history1s_include.rtv

custom_bird_history1_include.rtv

Note: If there is no confusion, you can omit the initial in all ***1_include** files.

Best Practice: Naming convention for History 1 functions

[pck]HistoryFor[ItemName]

E.g. wlsHistoryForServer

customBirdDataHistoryForBird

Attach To Cache Data				
Property Name:	t_arg1			
Cache:	CustomBirdData 💌			
Table:	history_combo			
Column(s):	* 🗶			
Filter Rows:	○ Off			
Filter Column:	Connection;Name 🔻			
Filter Value:	\$customConn;\$customBird			
Update: 🔾 Once 💿 On Condense 🔾 Always				
Data Server: \$rtvDataServer				
ОК А	pply Reset Clear Cancel			

Step 3: Configure Caches

In the file **rtvapm.mycustom.properties** contained in the **/rtvapm_projects/ myemsample/mycustom/conf** directory, each cache file should be declared. The configuration line for each file is as follows:

collector.sl.rtview.cache.config=[pck]_[datatype]_cache.rtv

${\sf E.g.}\ \textbf{collector.sl.rtview.cache.config=custom_bird_cache.rtv}$

collector.sl.rtview.cache.config=bw_server_cache.rtv

Step 3.1. Declare the cache definition files

In the /rtvapm_projects/myemsample/mycustom/conf/

rtvapm.mycustom.properties file, for each cache definition file, modify the

custom_bird_cache line by renaming it to the appropriate file name containing the caches for your SP. If you have two or more cache definition files, you should add one line per cache definition file.

Step 3.2. Define the substitutions used in the cache definition files.

In several attributes from caches we used substitutions to define their value. Here, one should define all substitutions as well as the name of the tables for historical data. There are several ways to keep history of a cache - please refer to the *RTView Core ® User's Guide* at http://www.sl.com/services/docs.shtml and select **Caches** for further information. For each cache with history being configured (either with history number of rows > 0 and /or compaction attributes not empty), it is necessary to declare the table name to keep history. Any default settings in the conf directory can be overwritten if necessary in the sample.properties file in the */rtvapm_projects/myemsample/mycustom/src/rtfiles* directory. In general, data connections and all customized properties are defined here.
Step 3.2. Create substitutions

Create substitutions to define the table names to store historic data if you have defined caches with history, then create one substitution to store the table name and attach it to the **historyTableName** attribute of the Historian section of the Cache Definition Object. To do so, you should follow these steps:

3.2.1. Open the file with the cache definition in the RTView Builder. E.g. **custom_bird_cache.rtv**

3.2.2. From the main menu select **Tools->Caches** and click on the cache with history being set. E.g. **CustomBirdData**

3.2.3. Go to the Historian section of the Object Properties of the cache and replace the name of the substitution in the **historyTableName** attribute. The naming convention for this substitution follows:

Best Practice: Naming convention of historian tables should:

- Create a substitution to use in the cache object \$[PCK]_[DATATYPE]_TABLE
- Assign the substitution to a value identical to the substitution name removing the last suffix

3.2.4. For each of your caches with history being setup, go to the **/rtvapm_projects/ myemsample/mycustom/conf** directory and replace with the name of the substitution you chose in the **rtvapm.mycustom.properties** file. Each cache must have a specific substitution with an unique table name. E.g. the configuration line:

sl.rtview.sub=\$CUSTOM_BIRD_TABLE:CUSTOM_BIRD

could be changed to:

collector.sl.rtview.sub=\$MYCUSTOM_TYPE1_TABLE:MYCSP_TYPE1

The string after the colon is the name of the table.

3.2.5. If you want to replace the **databaseName** attribute, then repeat the four previous steps with the corresponding substitution and database name. For all caches the databaseName attribute should use the same substitution. This step is optional.

For instance, you can replace

sl.rtview.sub=\$CUSTOMHISTORY_DB:RTVHISTORY

by

sl.rtview.sub=\$[PCK]HISTORY_DB:RTVHISTORY

and use the substitution **\$[PCK]HISTORY_DB**, where **PCK** is the prefix of your SP in upper cases for all **databaseName** attributes in all your caches configured to keep historical data.

Note: It is recommended you keep the value of the **databaseName** as it is used in the **rtview.properties** configuration file (**\$RTVHISTORY:RTVHISTORY**). Otherwise, you should change it to the new value in this file and also in the properties files you have to configure history.

Step 4: Create Top-Level Displays

In general, these displays will show the current data of the chosen collection. For instance, in the Custom SP, the file **custom_allbirds_table.rtv** should be regarded as the top-level display of the package. Therefore, these displays should include the associated ***current_include.rtv** file. The standard top-level displays are grouped on heatmaps, grids, and tables.

Best Practice: File naming convention for top-level displays

[pck]_[mydata]_heatmap.rtv, e.g. bw_allservers_heatmap.rtv

[pck]_[mydata]_table.rtv, e.g. wls_allapps_table.rtv

[pck]_[myData]_grid.rtv, e.g. wls_allservers_grid.rtv

To individually drill-down to a selected item from the display, declare the drill-down substitutions and the target display in the Interaction section of the table/heatmap/grid graphical object. See the "Custom SP - Displays" for a description on how this is done in the Custom SP.

Step 4.1. Rename custom_allbirds_table.rtv

Rename the file **custom_allbirds_table.rtv** with an appropriate name for your Solution Package. Open the renamed file in the RTView Builder and replace the include file with the new one you renamed in Section 2.1. (It is the file equivalent to the

custom_bird_current_include.rtv file). In following sections, the common file will be changed. Then, select the table graphical object by clicking on it and go to the **valueTable** attribute to attach the new current function from your include file.

Step 5: Define the Alerts to Monitor the Data of Your Solution Package

Once you have designed the alerting scenarios for your Solution Package, you define them in an alert definition file. The file naming convention of this file is:

Best Practice: Naming convention of Alert Definition Files

[pck]_alertdefs.rtv

5.1 Rename custom_alertdefs.rtv

Rename the **custom_alertdefs.rtv** file with an appropriate name for your Solution Package. In the include file window, add the necessary current include files to get the metrics that will be used in the alert definition objects (originally **custom_bird_current_include.rtv**). For each alert, specify the **Category** attribute and the **Package** attribute of the alert. These two attributes filter the alerts from the RTView Enterprise Monitor Alert Engine. The Package should be the same across alerts and **Category** should depend on the alert indexes. Finally, declare the indexes and the **valueTable** attribute of the alert. Please, review the previous chapter "Custom SP - Alerts" on page 264 for a rapid overview of the creation of alerts. Also see to the Alerts section in the *RTView Core® User's Guide* for further information.

5.2. In the rtvapm_projects/myemsample/mycustom/conf/

rtvapm.mycustom.properties file change the right string of the configuration line

collector.sl.rtview.alert.config=custom_alertdefs.rtv

with the name of the newly created alert definition file in Step 5.1.

Step 6: Create the Include File to Define Functions to Filter Alerts

This file uses the caches of the RTView Enterprise Monitor Alert Engine to extract the alerts that are from the package.

Best Practice: Naming convention of the include file to filter alerts

[pck]_alertstats_current_include.rtv, e.g. wls_alertstats_current_include.rtv, custom_alertstats_include.

6.1 Rename the custom_alertstats_current_include.rtv file

Rename the **custom_alertstats_current_include.rtv** file with an appropriate name for your Solution Package. Afterwards, open this file with RTView Builder and rename the functions in this file with appropriate names.

6.1.1 The function **customAlertSeverityByBird** should be renamed to **[pck]AlertSeverityBy[Item]**. It extracts the alert information from the RTView EM internal cache RtvAlertStatsByCategoryIndex.

6.1.2 The function **customAlertStatsByPackageCurrent** should be renamed to **[pck]AlertStatsByPackageCurrent**. It extracts the information from the RTView Enterprise Monitor internal cache RtvAlertStatsByPackageIndex. This function provides the **AlertCount** and **MaxSeverity** of the alerts coming from the package. Double-clicking in the **Table Field** of the **Edit Function Window**, replace the **Filter Value** with the name of your Solution Package. (See next figure.)

6.2. Rename the custom_alertstats_current_include.rtv file

Rename the **custom_alertstats_current_include.rtv** filecwith an appropriate name for your Solution Package. Rename the functions in this file with appropriate names.

6.2.1 The function customAlertSeverityByBird should be renamed to

[pck]AlertSeverityBy[Item]. It extracts the alert information from the RTView Enterprise Monitor internal cache RtvAlertStatsByCategoryIndex.

6.2.2. The function **customAlertStatsByPackageCurrent** should be renamed to **[pck]AlertStatsByPackageCurrent**. It extracts the information from the RTView Enterprise Monitor internal cache RtvAlertStatsByPackageIndex. This function provides the **AlertCount** and **MaxSeverity** of the alerts coming from the package. Double-clicking in the **Table Field** of the **Edit Function Window**, replace the **Filter Value** with the name of your Solution Package.

6.2.3 The function **customAlertStatsByCategoryCurrent** should be renamed to **[pck]AlertStatsByCategoryCurrent**. It extracts the information from the RTView Enterprise Monitor internal cache RtvAlertStatsByCategoryIndex. This function provides the **AlertCount** and **MaxSeverity** of the alerts coming from the package. Double-clicking in the **Table Field** of the **Edit Function Window**, replace the **Filter Value** with the name of your **Category**. (See next figure.)

Important: Notice that Categories can share the same indexes and more sophisticated mechanisms to extract in isolation these alerts might be needed.

Edit Function	on 💌
Function Nat	me: rtvAlertStatsForItems 🗹 Public
Function Ty	pe: Reference
Tal	ble: ; <fcol>Package</fcol> <fval>Item</fval>
Descripti	ion:
The Reference function makes a reference to the specified Table without copying the contents.	
ок	Apply Cancel Help

These changes should be done for each Category you are alerting on. For instance, if you are monitoring IT infrastructure, your Categories could be arranged into hosts, servers of a given technology, applications, and servlets. Therefore, if you want to alert on each of these sets, then you need to create new functions to filter against their corresponding indexes. That is, you need to have the following functions:

- [pck]AllAlertStatsCurrent
- [pck]AlertStatsForHost
- [pck]AlertStatsForServer
- [pck]AlertStatsForApplication
- [pck]AlertStatsForServlet

You decide the alerting levels in your Solution Package, but keep in mind that each level needs a different Category in the alert definition object of each alert. Otherwise, there is no way to extract the desired levels for alerts.

Step 7: Create Low-level Displays with Combo Boxes for Selection

To standardize across all low-level displays, create ***common*** files for each index of the data and show the index selection on validated (non-empty) combo boxes.

Best Practice: File naming convention for common1 files

[pck]_common_1.rtv

E.g. wls_common_1.rtv

The ***common_1.rtv** file contains the variables and substitutions to manage data through each display of the package. This file needs to be included on all displays to provide the substitutions to manage data and to show the upper header for a similar look-&-feel across displays.

7.1 Rename the custom_bird_summary.rtv file

Rename the **custom_bird_summary.rtv** file with an appropriate file name for your Solution Package. Attach each of the objects associated with current data to the specific attribute of the filtered function in your **[mycustom]_current1_include.rtv** file.

Rename **custom_common_1.rtv** following the above naming convention. And also rename the **custom_common_bird.rtv** with an appropriate name for your Solution Package. The naming convention follows:

Best Practice: File naming convention for drill-down common files

[pck]_common_[type].rtv,

e.g. custom_common_bird.rtv

7.2. Replace the include file

Open the previous file (originally **custom_common_bird.rtv**) in the RTView Builder and replace the include file with the corresponding ***current_include** file created in Step 2.1. Rename the function **connectionList** with an appropriate name for the first metric in your Solution Package. Double-clicking in this function, replace the **Selector Table** field in the **Edit Function Window** with the corresponding function and metric. Finally, rename the **validateConnection** function with an appropriate name for your Solution Package and change the **Substitution String** to the associated substitution and the **Default Value** to the function previously created. Repeat this step for each of the indexes in your data and add as many combo boxes as you need.

Best Practice: File naming convention for summary displays and arrangement

[mycsp]_[myData]_summary.rtv

E.g. wls_jmsserver_summary.rtv

custom_bird_summary.rtv

The summary-level displays will show the historical data in the form of trend graphs. Usually, the upper part of the display will contain current data and historic data will be arranged on trend graphs in the lower part of the display. To do so, the corresponding ***history1*** files need to be included and attached to the **ValueTable** field of each trend.

7.3. Add a history file

Open your summary display in the RTView Builder (the one renamed in Step 7.1). In the include file window, remove the **custom_bird_history1_include.rtv** file and add the appropriate history file for your Solution Package. Now you can modify the trend graph on the bottom part of the display. By clicking in the trend graph, select graphical objects and in the Trace section of the Object Properties define the number of traces to be seen. On each trace, attach the **[pck]CurrentFor[Type]** function to the **trace[N]Value** attribute and the **[pck]HistoryFor[Type]** function to the **trace[N]ValueTable** attribute. For correct behavior, define as the first column the **time_stamp** and the metric you want to trend as the second column.

7.4. Rename alert include file in the summary display

In the **Tools->Include Files** window replace the alert include file with the appropriate one for your Solution Package. Then, click on the table graphical object, titled **Current Alerts for this Bird**, and change the title with a string appropriate for your summary display. Also, you should replace the function attached to the **valueTable** attribute of the table and the alert function in the function chain that joins the metrics and alerts to the corresponding function in the alert include file.

7.5. Update drill-down to new summary display

We will conclude here the creation of the drill-down mechanism in the top-level display that you created in Step 4.1. Open this file (originally **custom_allbirds_table.rtv**) in the RTView Builder and select the table object with one click over it. Go to the section Interaction in the Object Properties and set the **drillDownTarget** to be the file that you created in Step 7.1 and the **drillDownColumnSubs** attributes to the drill-down substitutions that are appropriate for your Solution Package. To double check that drilling down operation has been defined correctly, select **Preview Mode** in the tool bar of the RTView Builder and double click on one of the rows of the table. This action would produce the switching to the low-level display that you created in Step 7.1 with the indexes of the selected row. If this is not the case, please review the previous steps.

Step 8: Create the Navigation Tree and Display Arrangement

The navigation tree (***navtree.rtv** file) defines the organization and nesting of the displays, and the ***panels.xml** file defines the arrangement of the title, the menu, and the displays in the screen. The ***navinfo.xml** file defines the Heading, Technology, and Vendor information used to include the navigation tree in EM.

The standard arrangement sets the title in the upper part of the screen, with a small left-sided rectangle to allocate the menu. On the right of the navigation tree (or display menu), the selected display from the menu will be shown. The naming conventions for these files are:

[pck]_navtree.rtv

[pck]_panels.xml

[pck].navinfo.xml

This step is needed in order to integrate displays from your Solution Package into the **Components** navigation tree of the RTView EM application. See "Mycustom SP - Integration in RTView EM" on page 287 for more information on how to include custom displays in RTView Enterprise Monitor.

8.1. Rename the custom_navtree.xml file

Rename the **custom_navtree.xml** file with an appropriate file name for your Solution Package. Provide relevant labels for your displays and associate them with their file names.

8.2. Rename the custom_panels.xml file

Rename the **custom_panels.xml** file with an appropriate file name for your Solution Package. Open this file with a text editor and replace the file name of the navigation tree with the file you created in Step 8.1. Finally, set the display that will be shown in the main display at startup by replacing the **custom_allbirds_table.rtv** file with the main display file you chose. This is only needed if your Solution Package will be executed independently of RTView EM.

8.3. Rename the custom.navinfo.xml file

Rename the **custom.navinfo.xml** file with an appropriate file name for your Solution Package. This should use the same **pck** name as the **navtree.xml** file.

Step 9: Update Build Scripts

This step is needed to adjust the renamed files from previous sections and declare the directory in which your Solution Package has been developed. With the script:

- make_all.bat / .sh: All script files below will be called and executed.
- make_classes.bat / .sh: If there is any custom code needed, it will be updated with this script.
- make_jar.bat / .sh: Generates the jar file.
- make_project.bat / .sh: To isolate code from the installation deliverable. The code of your Solution Package resides in the mycustom/src/rtfiles directory and the deliverable directory is in mycustom/projects/sample. This separation allows customers distribute their own jar files similarly like RTView Enterprise Monitor distributes their Solution Packages.

In an initialized command window, rebuild the package by executing the **make_all.bat/.sh** script.

Best Practice: Separation of development and deliverable directories

For development you should execute and work in **src\rtfiles**. Users of the package should work in **projects\sample**. These scripts allow the creation of the needed jars and files for this. Final tests should be always executed in the **projects\sample** directory and in the thin client to verify correct building/functioning of the Solution Package.

Mycustom SP - Integration in RTView EM

This section describes the integration of your Solution Package in RTView Enterprise Monitor. There are several steps involved:

- "Defining CI Types and their cache mappings, alert mappings and Key Metrics"
- "Creating the properties file for integration in RTView Enterprise Monitor"
- "Configuring the Mycustom SP Data Server"
- "Adding the Mycustom SP displays into the navigation tree"
- "Connecting alerts to the RTView EM Alert Server"

Defining CI Types and their cache mappings, alert mappings and Key Metrics

In the file **rtvconfig.mycustom.xml** located under the **rtvapm/projects/myemsample/ mycustom/src/rtfiles** directory, you'll find the following sections:

a) CITYPE_DEFS. The definitions of the CIs for your customized SP. For further information go to "Configure Service Data Model" on page 29.

b) CITYPE_CACHEMAP. The mapping of CIs and caches

c) CITYPE_ALERTMAP. The mapping of CIs and alerts.

d) CITYPE_KEY_METRICS. The Key Metrics. For details about Key Metrics, see "Key Metrics Views" on page 137.

Step 1. CITYPE_DEFS definition

You need to define here for each of the CIs used in your Solution Package the following information:

- CITYPE: name of the CI
- INDEXMAP: semicolon separated string of numbers: 1;2;...;n, where n is the number of indexes of the associated cache
- INDEXNAMES: semicolon separated string of the metrics that define the indexes of the cache
- RTVDISPLAY: main display of the CI
- CIVARMAP: semicolon separated string of the substitutions used to select individual CIs
- DEFAULTQUALITY: If set to 1 it grays out the CI row in the Service Summary display and generates a bad quality alert if there is no data for that entry. If 0, then no bad quality alerts are generated if there is no data for that CI.
- OWNER: first level of the automatically populated CMDB. Keep the same owner name. For details, see "Introduction to the CMDB" on page 30.
- AREA: second level of the automatically populated CMDB.
- SERVICEGROUP: third level of the automatically populated CMDB.

Step 2. CITYPE_CACHEMAP

You need to define here the mapping between CI and the main cache that define the CIs in your customized SP.

Step 3. CITYPE_ALERTMAP

You need to define here the mapping between CI and the alerts defined in your customized SP.

Step 4. CITYPE_KEY_METRICS. For details about Key Metrics, see "Key Metrics Views" on page 137.

This table defines your Key Metrics. A Key Metric can be any column from any cache that is associated with the CITYPE in the CITYPE_CACHEMAP table as long as it meets the following criteria:

- It must be a numeric value.
- It must be included in the history_combo cache table. If the cache does not support a
 history combo table, the metric will work on the KM current displays, but not the KM
 history displays.
- It must have an alert associated with it where the threshold is compared to the raw metric value (not to a calculated value). This alert must be specified in the AlertName field (described below).

Each CI Type can have multiple Key Metrics defined. These should be the primary indicators for the health state or activity level on each CI Type. For example, the KMs for hosts are **CPU** and **Memory Utilization Percent**. For an EMS Server or queue, the KMs are the **input rate**, **output rate** and **pending message** counts. For an application server or servlet, the KMs are the **current sessions**, the **number of invocations** and **response time**.

The CITYPE_KEY_METRICS table must contain the following columns:

- **CITYPE** (string) The CI Type. This must be a CI Type defined in the CITYPE_DEFS table.
- **CACHENAME** (string) The name of the cache that contains the metric. This must be a cache that is associated with the CITYPE in the CITYPE_CACHEMAP table.
- SELECTOR (string) This is the user friendly name displayed in the Metric Name column of the KM data.
- METRICNAME (string) The name of the cache column. Note that this name is not displayed anywhere, it is only used to construct the data attachment to the cache. The SELECTOR is the name that is displays in the Metric Name column.
- AlertName (string) The name of the alert that executes based on the metric. This alert must execute on the raw metric value, not a calculated value. If this field is blank, this KM will not be included in the KM displays.
- CalcMode (string) This field is optional. If specified, the Threshold % Scaled value is calculated based on the following values:

exp – This is an exponential scale that adjusts the value so that lower values are diminished. It should be used for all memory metrics.

inverse – This should be used for all metrics where the alert is a low alert (an alert that executes when the value goes below the threshold). It applies an inverse scale so that value is calculated in reverse of the standard thresholds.

log – This is a logarithmic scale.

- Level (int) This should be set to 0 or 1. Level 0 KMs are always included in the KM displays. Level 1 metrics are only included if the Include Detail Level Metric checkbox is selected.
- MaxValueIfNoAlert (string) This is not currently used.
- AutoScaleIfNoAlert (int) This is not currently used.
- MinColor (int) This is not currently used.
- MaxColor (int) This is not currently used.
- **ColorCount** (int) This is not currently used.

Creating the properties file for integration in RTView Enterprise Monitor

Create a new file named **rtvapm.<pkg>.ref.properties** under the **mycustom\conf directory** replacing **<pck>** with the name of your package. This will contain classpath, navigation and citype information for use in RTView Enterprise Monitor:

```
#
# PACKAGE JARS
#
sl.rtview.cp=%RTVAPM_HOME%/<pck>/lib/rtvapm_pck.jar
#
# CITYPES
#
ConfigCollector.sl.rtview.xml.xmlsource=rtvconfig.<pck>.xml 0 rtvconfig.<pck>.xml 0 1
ConfigCollector.sl.rtview.cache.config=rtv_config_cache_source_xml.rtv $package:<pck>
# Navigation
uiprocess.sl.rtview.xml.xmlsource=<pck>_navtree.xml 0 <pck>_navtree.xml 0 1
uiprocess.sl.rtview.cache.config=rtv_tabtree_cache_source_comp.rtv $package:<pck>
```

Configuring the Mycustom SP Data Server

The Mycustom SP Data Server is configured in the CUSTOM section near the end of the **central.properties** file in the **rtvapm_projects/myemsample/servers/central** directory. In this section, the Data Server name and its port number are defined as well as the JMX connection parameters to monitor. Also, the **cisource** property is defined which tells EM which Solution Package is hosted on this Data Server and causes the mapping of the CI Types. See the **sl.rtvapm.cisource** property in Appendix B, "RTView EM Properties" section for details about **cisource** property syntax.

Adding the Mycustom SP displays into the navigation tree

In **rtvapm_projects/myemsample/servers/central/rtview.properties**, add this line replacing **<pck>** with your Solution Package name:

rtvapm_reference=<pck>

In **rtvapm_projects/myemsample/servers/central/central.properties**, add your package to the \$rtvPackages property.

Connecting alerts to the RTView EM Alert Server

Open the **rtview.properties** file (located in the **rtvapm_projects/myemsample/ mycustom/src/rtfiles** directory) in a text editor and make the following edits:

• In the Define the ALERTDEFS DB Properties Section, comment out the following line:

sl.rtview.sql.sqldb=ALERTDEFS sa - jdbc:hsqldb:hsql://localhost:9102/alertdefs
org.hsqldb.jdbcDriver - false true

You now verify that monitoring data gathered by your Solution Package is being correctly integrated with RTView Enterprise Monitor.

APPENDIX A RTView EM Scripts

This section describes scripts that are available for RTView Enterprise Monitor and the **rtvservers.dat** configuration file. This section includes:

- "Scripts" on page 291
- "rtvservers.dat" on page 300

Scripts

The following scripts are available when used from an initialized command window. We recommend that all scripts be executed from your project directory. The scripts can be executed from a Windows Command Prompt or UNIX terminal window. On Windows, you can type the commands as described in the following section; on UNIX systems you must add **.sh** to each command. For example, **rundata.sh**. These instructions assume that a POSIX-compliant shell is used (for example, bash, ksh, or sh).

Script Name	Description
dos2unix.sh	Converts a text file from a DOS format to a Unix format. This script takes one argument, a filename, and replaces the original file with the converted version. This script is not available as .bat script.
	Location:
	rtvapm/common/bin
my_alert_actions.bat	Sample script to define actions for alerts.
	Location:
	rtvapm/common/bin
rtvapm_init.bat	Initializes a command window.
	Format:
	rtvapm_init.bat
	Location:
	project directory
rtvapm_ports.bat	Outputs a list with all ports in the RTView Enterprise Monitor installation.
	Format:
	rtvapmports.bat > [outputFile]
	outputFile – Text file name.
	Location:
	rtvapm/common/bin

Note: On some systems sh might not be POSIX-compliant.

rtvapm_user_init.bat	Initializes a user command window.
	Format:
	rtvapm_user_init.bat
	Location:
	project directory
runa.bat	Executes RTView Analyzer to extract the function chain of the chosen cache definition file. It returns a .pdf file with a graph of the function chain of all caches in the file. The two scripts have the same functionality.
	Format:
	runa.bat [cacheDefFile].rtv
	cacheDefFile - Cache definition file name.
	Location:
	rtvapm/common/bin
runb.bat	Starts the Display Builder. The two scripts have the same functionality. Format:
	runb.bat [-ds] [-bg]
	-ds - To use the currently running Data Server.
	-bg - Runs the Display Builder as a background process.
	Location:
	rtvapm/common/bin
	-listversions
	Lists the versions of each RTView jar in the classpath.
	Example:
	runb -listversions
	Once the viewer has started fully, you should see versions for all "gmsj*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt:
	VERSION INFORMATION:
	gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015)
	rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015)

rundata.bat	Starts the Data Server. We recommend that you use the start_rtv.bat script.
	Format:
	rundata [-properties]:[Property File Name]
	-properties - specifies to apply a specific property file.
	Property File Name - the name of the properties file to apply.
	Location:
	rtvapm/common/bin
	Example:
	rundata -properties:mysystem.properties
	-listversions
	Lists the versions of each RTView jar in the classpath.
	Example:
	rundata -listversions
	Once the viewer has started fully, you should see versions for all "gmsj*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt:
	VERSION INFORMATION:
	gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015)
	rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)
	rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015)
rundb.bat	Starts the HSQLDB database. We recommend that you use the start_rtv.bat script.
	Location:
	rtvapm/common/bin
rundisp.bat	Starts the Display Server. We recommend that you use the start_rtv.bat script.
	Location:
	rtvapm/common/bin

-listversions

Lists the versions of each RTView jar in the classpath.

Example:

rundisp -listversions

Once the viewer has started fully, you should see versions for all "gmsj*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt: VERSION INFORMATION:

gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015)

runhist.bat

Starts the Historian. We recommend that you use the start_rtv.bat script. Location:

rtvapm/common/bin

-listversions

Lists the versions of each RTView jar in the classpath.

Example:

runhist -listversions

Once the viewer has started fully, you should see versions for all "gmsj*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt:

VERSION INFORMATION:

gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015)

strip. Location: rtvapm/common/bin -listversions Lists the versions of each RTView jar in the classpath. Example: runv -listversions Once the viewer has started fully, you should see versions for all "gmsj". Jar" and "rtvapm_*. Jar" files. Output should resemble the following excerpt: VERSION INFORMATION: gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) rtvapm_gers.catt configuration file. For details about rtvservers.dat; see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat configuration or a single process in an RTView Enterprise Monitor configurations, a single RTview Enterprise Monitor configuration or a single process
start_rtvapm/common/bin -listversions Lists the versions of each RTView jar in the classpath. Example: runv -listversions Once the viewer has started fully, you should see versions for all "gms]*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt: VERSION INFORMATION: gmsjirtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjirtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjirtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_dtemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015) rtvapm_dtemon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gtmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_germon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) starts processes in an RTView Enterprise Monitor configuration as specified in the troservers.dat configuration file. For details about truservers.dat; see "truservers.dat" on page 300. An RTView Enterprise Monitor configuration and a Central Server, a Displ
-listversions Lists the versions of each RTView jar in the classpath. Example: runv -listversions Once the viewer has started fully, you should see versions for all "gmsj*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt: VERSION INFORMATION: gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_themon: TBE 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_dfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) start_rtwonty due and the start processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration set of the details about rtvservers.dat, see "start_rtv script. You can stop the viewer cannot be stopped using the stop_rtv script. You can stop the Viewer cannot be stopped using the stop_rtv script. You ca
-instversions Lists the versions of each RTView jar in the classpath. Example: runv -listversions Once the viewer has started fully, you should see versions for all "gmsj*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt: VERSION INFORMATION: gmsjroteiex: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) group: rtvapm_themon: TBE 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_toemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_ensmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) starts processes in an RTView Enterprise Monitor configuration as specified in the tvservers.dat configuration file. For details about tvservers.dat ; see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database.
Example: runv -listversions Once the viewer has started fully, you should see versions for all "gmsj*,jar" and "rtvapm_*,jar" files. Output should resemble the following excerpt: VERSION INFORMATION: gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gerson: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gerson: APM 2.1.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) rtvapm_gerson: APM 2.1.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) rtvapm_gerson: APM 2.1.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) rtvapm_gerson: APM 2.1.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) rtvapm_gerson: APM 2.1.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) starts processes in an RTView Enterprise Monitor configuration as spe
runv -listversions Once the viewer has started fully, you should see versions for all "gmsj*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt: VERSION INFORMATION: gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvireport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015) rtvapm_demon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gemon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gemon: APM 2.1.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) start_rtv.bat Starts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv.bat Starts processes in an RTView Enterprise Monitor configuration configurations, a single RTView Enterprise Monitor configuration or a single process in an RTView Enterprise Monitor configuration or a single process in an RTView Enterpr
Once the viewer has started fully, you should see versions for all "gms]* jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt: VERSION INFORMATION: gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) start_rtv.bat Starts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration or a single process in
 VERSION INFORMATION: gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjetvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) start_rtv.bat Starts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration or a single process in an RTView Enterprise Monitor configuration. If the Display Viewer is start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration or a single process in an RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015)rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)start_rtv.batStarts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file.For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015)rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)start_rtv.batStarts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration and a Central Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) start_rtv.bat Starts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration as Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015) rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015) rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015) start_rtv.bat Starts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window. To use additional arguments you must either specify a configuration (to page 300).
rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015)rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015)start_rtv.batStarts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by
rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015)start_rtv.batStarts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015)start_rtv.batStarts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file. For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configuration or a single process in an RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer by closing its window.To use additional arguments you must either specify a configuration (to
start_rtv.batStarts processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file.For details about rtvservers.dat, see "rtvservers.dat" on page 300.An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database.start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configuration or a single process in an RTView Enterprise Monitor configuration.If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.To use additional arguments you must either specify a configuration (to
 For details about rtvservers.dat, see "rtvservers.dat" on page 300. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. start_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration or a single process in an RTView Enterprise Monitor configuration. If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
To use additional arguments you must either specify a configuration (to
apply the argument to all servers in a configuration) or all (to apply the argument to all configurations).
-console (or -c) - Start the processes with a command window (which is useful for testing).
When used without arguments, this script returns usage information and a list of available configurations. For example, start_rtv returns:
Usage: start_rtv config or 'all' [server or 'all'] [args]
Available configs:
detault dataserver
historian
displayserver
database
dataserver
Location:
rtvapm/common/bin

all

Starts all RTView Enterprise Monitor configurations specified in the **rtvservers.dat** file.

all applies the action to all RTView Enterprise Monitor configurations specified in the **rtvservers.dat** file (and corresponding servers or clients specified in each configuration). NOTE: When multiple configurations are specified in the **rtvservers.dat** file and they have different project settings directory locations, the **all** argument processes all the configurations. However, if the configurations have the same project settings directory locations, the **all** argument processes only the first configuration as the others are considered alternative configurations.

Example:

start_rtv.bat all

[Configuration Name]

Starts a single RTView Enterprise Monitor configuration specified in the **rtvservers.dat** file:

start_rtv.bat [Configuration Name]

Configuration Name is the RTView Enterprise Monitor configuration name specified in the **rtvservers.dat** file. The action applies to all servers or clients specified in the configuration.

Example:

start_rtv.bat web_deployment

[Server Name]

Starts a single process in an RTView Enterprise Monitor configuration specified in the **rtvservers.dat** file:

start_rtv.bat [Configuration Name] [Server Name]

Server Name is the name of a server or client member in the configuration. For example, **dataserver**, **displayserver**, **historian** and **database**. The action applies only to that server or client in the configuration. Example:

start_rtv.bat web_deployment dataserver

-listversions

Lists the versions of each RTView jar in the classpath.

Example:

start_rtv all all -listversions

Once the viewer has started fully, you should see versions for all "gmsj*.jar" and "rtvapm_*.jar" files. Output should resemble the following excerpt:

VERSION INFORMATION:

gmsjrtview: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjmodels: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjrtvreport: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

gmsjext: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_tbemon: TBE 2.1.0.0 ALPHA, 11 March 2015 (TBE 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_gfmon: APM 2.1.0.0 ALPHA, 11 March 2015 (APM 2.1.0.0 ALPHA, 11 March 2015)

rtvapm_emsmon: EMM 6.4.0.0 ALPHA, 11 March 2015 (EMM 6.4.0.0 ALPHA, 11 March 2015)

status_rtv.bat	Returns the status of all RTView Enterprise Monitor configurations specified in the rtvservers.dat configuration file.
	For details about rtvservers.dat , see "rtvservers.dat" on page 300.
	This action uses defined JMX ports. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. status_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration or a single process in an RTView Enterprise Monitor configuration.
	To use additional arguments you must either specify a configuration (to apply the argument to all servers in a configuration) or all (to apply the argument to all configurations).
	-console (or -c) - Start the processes with a command window (which is useful for testing).
	This command returns status information upon execution. For example:
	Status default:
	dataserver: Running PID 4696 Uptime 000:00:01:47 CPU 00:00:02 Heap 0.7% Clients 2
	displayserver: Running PID 6340 Uptime 000:00:01:45 CPU 00:00:01
	Heap 1.0% Displays 0
	historian: Running PID 6108 Uptime 000:00:01:42 CPU 00:00:01 Heap
	1.3% Connected true
	database: Running PID 6848 Uptime 000:00:01:39 CPU 00:00:00 Heap 0.4%
	In the above example, note that the Data Server reports two clients, the Display Server and the Historian. Both the Display Server and the Historian were started with the -ds argument, which connects them to the Data Server. Note also that the Historian reports that it is connected to the database.
	In the following example, status_rtv reports that a configured port is in use but the process using the port does not appear to belong to RTView Enterprise Monitor:
	dataserver: Data port xxx in use by PID yyy
	displayserver: JMX port xxx in use by PID yyy
	When used without arguments, returns usage information and a list of available configurations. For example, status_rtv returns:
	Usage: status_rtv config [server] or 'all' Available configs: default Location
	rtvapm/common/bin
	Returns the status of all RTView Enterprise Monitor configurations specified in the rtvservers.dat file. NOTE: When multiple configurations are specified in the rtvservers.dat file and they have different project settings directory locations, the all argument processes all the configurations. However, if the configurations have the same project settings directory locations, the all argument processes only the first configuration as the others are considered alternative configurations.
	5

Example:

status_rtv.bat all

[Configuration Name]

Returns the status of a single RTView Enterprise Monitor configuration specified in the ${\bf rtvservers.dat}$ file:

status_rtv.bat [Configuration Name]

Configuration Name is the RTView Enterprise Monitor configuration name specified in the **rtvservers.dat** file. The action applies to all servers or clients specified in the configuration.

Example:

status_rtv.bat web_deployment

[Server Name]

Returns the status of a single process in an RTView Enterprise Monitor configuration specified in the **rtvservers.dat** file:

status_rtv.bat [Configuration Name] [Server Name]

Server Name is the name of a server or client member in the configuration. For example, **dataserver**, **displayserver**, **historian** and **database**. The action applies only to that server or client in the configuration. Example:

status_rtv.bat web_deployment dataserver

stop_rtv.bat	Stops processes in an RTView Enterprise Monitor configuration as specified in the rtvservers.dat configuration file.
	For details about rtvservers.dat , see "rtvservers.dat" on page 300.
	This action uses defined JMX ports. An RTView Enterprise Monitor configuration might include a Data Server, a Display Server or Viewer, an Historian and a Central Server Database. stop_rtv only attempts to start processes it detects are not running. The action can be applied to all RTView Enterprise Monitor configurations, a single RTView Enterprise Monitor configuration or a single process in an RTView Enterprise Monitor configuration.
	To use additional arguments you must either specify a configuration (to apply the argument to all servers in a configuration) or all (to apply the argument to all configurations).
	-console (or -c) - Start the processes with a command window (which is useful for testing).
	If the Display Viewer is started using the start_rtv script, the Viewer cannot be stopped using the stop_rtv script. You can stop the Viewer by closing its window.
	NOTE: The HSQLDB server (if used) runs with a command window on Windows and cannot be stopped using the stop_rtv command. You can stop the HSQLDB server by typing Ctrl-C in its command window.
	This command returns status information upon execution. For example:
	Stop default:
	dataserver: Stopped PID 4696 via JMX port 3368 If no JMX port is configured the stop_rtv command reports the following:
	dataserver: No JMX port configured; must kill PID xxx by system
	command. If the port is in use but the PID is not available (HP-UX, some Linux systems) then the stop_rtv and status_rtv command will report the PID as "???", for example:
	dataserver: Running PID ??? Uptime 000:00:00:37 CPU 00:00:01 Heap 1.3% Clients 1
	dataserver: Stopped PID ??? via JMX port 3368 NOTE: On Windows the HSQLDB server (if used) runs with a command window and cannot be stopped via the stop_rtv command. To stop the HSQLDB server, execute Ctrl+C in its command window.
	-console (or -c) - Start the processes with a command window (which is useful for testing).
	When used without arguments, returns usage information and a list of available configurations. For example, stop_rtv returns:
	Usage: stop_rtv config [server] or 'all' Available configs: default
	Location:
	all
	Stops all RTView Enterprise Monitor configurations specified in the rtvservers.dat file. all applies the action to all RTView Enterprise Monitor configurations specified in the rtvservers.dat file (and corresponding servers or clients specified in each configuration). NOTE: When multiple configurations are specified in the rtvservers.dat file and they have different project settings directory locations, the all argument processes all the configurations. However, if the configurations have the same project settings directory locations, the all argument processes only the first
	configuration as the others are considered alternative configurations.

Example:

stop_rtv.bat all

	[Configuration Name]
	Stops a single RTView Enterprise Monitor configuration specified in the rtvservers.dat file:
	stop_rtv.bat [Configuration Name]
	Configuration Name is the RTView Enterprise Monitor configuration name specified in the rtvservers.dat file. The action applies to all servers or clients specified in the configuration.
	Example:
	stop_rtv.bat web_deployment
	[Server Name]
	Stops a single process in an RTView Enterprise Monitor configuration specified in the rtvservers.dat file:
	stop_rtv.bat [Configuration Name] [Server Name]
	Server Name is the name of a server or client member in the configuration. For example, dataserver , displayserver , historian and database . The action applies only to that server or client in the configuration.
	Example:
	stop_rtv.bat web_deployment dataserver
update_wars.bat	Script to regenerate war files when the configuration of the Solution Package has changed.
	Location:
	rtvapm/ <package_name>/projects/sample</package_name>

rtvservers.dat

This section describes the **rtvservers.dat** configuration file which is used to manage your RTView Enterprise Monitor deployment and RTView Enterprise Monitor processes. This section includes:

- "Single Configuration File" on page 300
- "Multiple Configuration File" on page 301

The **rtvservers.dat** text file, located in your project directory/**servers** directory, contains one or more RTView Enterprise Monitor configurations. An RTView Enterprise Monitor configuration might include any of the following: Data Server, Historian, HSQLDB database, and either a Display Server (for a Web Deployment) or a Display Viewer (for a Desktop Deployment). The **rtvservers.dat** file is used when the following scripts are executed:

- start_rtv Starts RTView Enterprise Monitor processes specified in the rtvservers.dat file.
- stop_rtv Stops the RTView Enterprise Monitor processes specified in the rtvservers.dat file.
- status_rtv Returns status information for RTView Enterprise Monitor processes specified in the rtvservers.dat file.

Single Configuration File

The following **rtvservers.dat** file contains a single RTView Enterprise Monitor configuration, named **default**, for a Web deployment.

default . dataserver rundata

default . historian runhist -ds

default . displayserver rundisp -ds

default . database rundb

NOTE: The last line in the **rtvservers.dat** file must end with a new line, or be followed by a blank line.

In this example, to start the **default** configuration type: start_rtv default or start_rtv all. To start a single server in the configuration, type start_rtv <Configuration Name> <Server Name>. For example: start_rtv default displayserver.

Each line has the following format consisting of four fields:

<Configuration Name> <Project Settings Directory Location> <Property Filter Identifying the Server> <Command>

<configuration name=""></configuration>	The name of the RTView Enterprise Monitor configuration (default in this example).
<project settings<br="">Directory Location></project>	The RTView Enterprise Monitor project settings directory location, relative to the location of the rtvservers.dat file (., the current directory, in this example).
<property filter<br="">Identifying the Server></property>	The property filter that identifies the server, which is the property filter under which the server's JMX port is defined. By default, this is the server name, such as dataserver , displayserver and historian .
<command/>	 The script used to start the process. Valid values are: rundata: Starts the Data Server. runhist: Starts the Historian. rundisp: Starts the Display Server. rundb: Starts the HSQLDB Database. runv: Starts the Display Viewer.

Multiple Configuration File

When multiple configurations are specified in the **rtvservers.dat** file and they have different project settings directory locations, the **all** argument processes all the configurations. However, if the configurations have the same project settings directory locations, the all argument processes only the first configuration as the others are considered alternative configurations. Alternative configurations allow you to alternate between two configurations for a single RTView Enterprise Monitor deployment.

For example, the following **rtvservers.dat** file contains two configurations, **bwmon** and **emsmon**. Note that the project settings directory locations differ (**./bwmon** and **./emsmon**, respectively).

bwmon ./bwmon dataserver rundata

bwmon ./bwmon historian runhist -ds

bwmon ./bwmon displayserver rundisp -ds

emsmon ./emsmon dataserver rundata

emsmon ./emsmon historian runhist -ds

emsmon ./emsmon displayserver rundisp -ds

Because the project settings directory locations differ, you can use type **start_rtv all** to start both configurations. To start only the bwmon configuration, type: **start_rtv bwmon**. To start a single server in the **bwmon** configuration, type **start_rtv <Configuration Name> <Server Name>**. For example: **start_rtv bwmon displayserver**.

The following illustrates an **rtvservers.dat** file with an alternate configuration: **desktop** is for a Desktop Deployment and **browser** is for a Browser Deployment. Note that the project settings directory locations are the same (**./bwmon** for both). This **rtvservers.dat** file allows you to switch between a Web Browser and a Desktop Deployment.

desktop ./bwmon dataserver rundata

desktop ./bwmon historian runhist -ds

desktop ./bwmon viewer runv -ds

browser ./bwmon dataserver rundata

browser ./bwmon historian runhist -ds

browser ./bwmon displayserver rundisp -ds

When the **rtvservers.dat** file contains an alternate configuration as this example does, the **all** argument processes *only the first* configuration, in this case, the **desktop** configuration. To process the second configuration type: **start_rtv browser**.

APPENDIX B RTView EM Properties

This section describes properties that are available for RTView Enterprise Monitor and how to configure them. This section includes:

- "Overview" on page 303
- "Property Format" on page 304: Describes property format, filters and naming conventions.
- "General Properties" on page 305: Describes properties for modifying display behavior, such as drill-down targets.
- "Substitutions" on page 311: Describes substitutions available for modifying display behavior.

Overview

RTView Enterprise Monitor configuration is specified using a series of properties. Properties can be specified in the command line, in properties files, or in a properties database. However, the most convenient way from a maintenance perspective is to create your own properties files, or edit the properties files in your project directory (the directory you created per instructions in "Configure Central Servers"). You can override certain RTView Enterprise Monitor default settings by editing properties. There are several property files that you might edit to configure or optimize your RTView Enterprise Monitor deployment. Typically, to apply property settings:

- to a single Solution Package, modify properties in the Solution Package directory: project directory/servers/<package_name> (in which the Solution Package-specific rtview.properties file resides, as well as other Solution Package-specific property files).
- globally to Solution Packages, modify properties up one level, in the directory: project directory/servers.
- to RTView Enterprise Monitor processes, modify properties in the directory: project directory/servers/central (in which the rtview.properties file and the central.properties file reside); and the project directory/conf directory, (in which the emcommon.properties file resides).
- global alert notification (across all Solution Packages), modify properties in rtvapm.properties.

NOTE: The property file locations differ for custom deployments.

Set properties using command line options in an initialized command window. Options specified on the command line are applied last, therefore command line arguments override values saved in configuration files (such as **.properties** files). Also, in many cases the command-line option cannot be used as a property, or vice versa. For these reasons, we recommend that you use properties rather than command line options. To specify a property in the command line:

- Add a dash (-) at the beginning.
- Remove the prefix (sl.rtview.).
- Remove the "Property Filters" prefix if present (for example, displayserver.). For details, see "Property Filters" on page 304.
- Replace the colon (:) with an equals sign (=).

For example, the property **myprefix.sl.rtview.someflag=true** is **-someflag:true** as a command line option. If a command line argument contains a space or a semicolon, the entire argument must be enclosed in quotes (e.g.: **"-sub:\$data:my Data"**).

Property Format

This section describes the format for RTView Enterprise Monitor properties. All RTView Enterprise Monitor properties have the prefix **sl.rtview** which is followed by a property name = value pair: **sl.rtview.<property_name>=:<value>**. For example, to specify the Data Server port number globally: **sl.rtview.dataserver.port=3278**

Property Filters

Filters are available to apply limit the scope to which a property is applied. Filters precede the **sl.rtview** property prefix followed by a period (.):

<property_filter>.sl.rtview.<property_name>=:<value>.

For example, to specify the Data Server port number to only proxy clients, we use the **proxyclient** filter: **proxyclient.sl.rtview.dataserver.port=3278**

The following RTView Enterprise Monitor property filters are predefined and apply automatically depending on what tool is being executed:

Filter	Description
builder	Applies the property to the Display Builder. For example: builder.sl.rtview.stylesheet
collector	Applies the property to the Data Collection Server. For example: collector.sl.rtview.jmx.jmx_metrics_period=15000
dataserver	Applies the property to the Data Server. For example: dataserver.sl.rtview.dataserver.socket=true
displayserver	Applies the property to the Display Server. For example: displayserver.sl.rtview.displayserver.port=3079
historian	Applies the property to the Historian. For example: historian.sl.rtview.historian.driver=org.hsqldb.jdbcDriver
proxyclient	Applies the property to the proxy client. For example: proxyclient.sl.rtview.dataserver.port=2078

rtvanalyzer	Applies the property to the RTView Analyzer. For example: rtvanalyzer.sl.rtview.stylesheet=rtv_default,rtv_flat
viewer	Applies the property to the Display Viewer. For example: viewer.sl.rtview.panelconfig=custom_panels.xml

You can define your own property filters and use them as prefixes in your properties files. To select a property filter on the command line use the **-propfilter** argument. For example, to apply the **AlertCollector** filter: **-propfilter:AlertCollector**

General Properties

The following properties are available for RTView Enterprise Monitor.

Name	Description
sl.rtview.cache.config	Specifies a cache definition file. To load several cache definition files this property can be specified multiple times. New properties do not override previous values, they instead add one more file to the list.
	Example:
	collector.sl.rtview.cache.config=bird_cache.rtv
sl.rtvapm.cisource	For use in RTView EM. Specifies one or more Solution Packages that are hosted on a Data Server. You can only have one cisource property per Data Server. The cisource property supports the following parameters:
	dataserver - The name of the Data Server connection.
	packages - A comma-separated list of Solution Packages that are hosted on the Data Server. All CI Types will be mapped for each Solution Package specified. This parameter is ignored if the types parameter is specified.
	types - A comma-separated list of CI Types that are hosted on the Data Server. Use this when you do not want to map all CI Types for the Solution Packages that are hosted on the Data Server
	This property supports updates. However, removing or editing a cisource property does not remove mapping that were previously added to the RTView CI Stats tables.
	Example:
	sl.rtvapm.cisource=dataserver=EMSMON-LOCAL packages=emsmon
sl.rtview.cmd_line	Specifies options on the command line. When a new instance of this property is specified, the pre-existing values are not overridden. New properties concatenate its value to the command line. You can specify any valid command line option with a few exceptions. For example, you cannot add a new properties file with -properties , or add a property filter with -propfilter from within a property file.
	Example:
	displayserver.sl.rtview.cmd_line=-logfile:displayserver.log

	log4j
	Specifies to use Log4j as the default log engine for RTView Enterprise Monitor processes (the Data Server, Historian, Viewer and Display Server). To set Log4j as the default, edit the rtvapm.properties file, located in your project directory/ conf directory and the central.properties file, located in your project directory/servers/ central directory as follows:
	Uncomment the following lines in both files:
	<pre>#sl.rtview.cmd_line=-logfile:</pre>
	<pre>#sl.rtview.cmd_line=-logdir: #sl.rtview.jvm=-Dcom.sl.rtview.useLog4j=true On UNIX, comment out the command line for Windows:</pre>
	<pre>#sl.rtview.cmd_line=-log4jprops:%RTVAPM_HOME%/common/conf/ sl.log4j.properties And uncomment the command line for UNIX:</pre>
	sl.rtview.cmd_line=-log4jprops:\$RTVAPM_HOME/common/conf/
	<pre>sl.log4j.properties Open the log file, located in your project directory/conf directory, and verify the file content is similar to the following:</pre>
	10:18:35,342 INFO rtv_file - [rtview] Log4j is being used with project directory/conf/sl.log4j.properties as the configuration file.
	NOTE: To verify whether Log4j is currently the default log engine, execute a start script (for example, start_rtv). If Log4j is not you see content similar to the following in the log file:
	2013-06-12 10:05:13.968 [rtview] Logging redirected for System.out and System.err. Log4j is not in use.
sl.rtview.dataserver	Specifies the default Data Server to connect to. This setting must match the Data Server port setting specified for the dataserver.sl.rtview.dataserver.port property. The default is //localhost:3278 .
	Example:
	dataclient.sl.rtview.dataserver=//localhost:3278
	This property can also specify a named Data Server to connect to. The port used must match the port specified in the Data Server we are to connect to.
	Example:
	sl.rtview.dataserver=name=MISCMON-LOCAL;connect=// localhost:10123
sl.rtview.dataserver.p ort	Specifies the Data Server port for client connections. This setting must match the data client connection port setting specified for the dataclient.sl.rtview.dataserver property. The default is 3278 . Example:
	dataciient.si.rtview.dataserver=3278

sl.rtview.displayserver .cellsperexport	Specify to limit the number of table cells included in HTML/Excel exports requested by the Thin Client. This option avoids out-of-memory exceptions and timeouts when exporting tables with many rows. The default is 40000 . This option is typically used in conjunction with the cellsperpage option, and has the following behavior:
	Note: If the cellsperexport option is not specified, or if a value of less than a 1000 is specified, the Display Server attempts to export all rows for all tables, regardless of the table size.
	If a table contains fewer cells than the cellsperexport setting, the Display Server exports all rows for that table.
	The exported HTM/Excel table starts with the same first row (or near it) that is visible in the Thin Client. That is, if you scroll to row 900 in the Thin Client and perform an HTML/Excel export, the exported table will begin near line 900.
	If the rows included in an export to HTML/Excel are limited by the cellsperexport option, the first row in the exported file is the same as the first row currently visible in the Thin Client.
	An export to HTML/Excel requires less CPU and memory than an export to PDF (see cellsperreport), therefore the value of the cellsperexport option is typically larger than the value of the cellsperreport option. For example, if an export to HTML/Excel was performed on a table with 5 columns and 100,000 rows, and the option cellsperexport 30000 was specified when the Display Server was launched, 6000 rows (30000/5) would be included in an exported HTML/Excel file for that table. If the cellsperreport 5000 option was specified, an export to PDF would include 1000 rows from the table.
	Note: This option is not recognized by the Builder or the Viewer.

sl.rtview.displayserver .cellsperpage	Specify server-side table paging and sorting mode, also referred to as paging mode, for the Thin Client. Paging mode improves the performance of displays containing table objects with many rows. In paging mode, the Display Server sends a specified maximum number of table data rows at a time to the Thin Client, rather than sending all table data rows at once. This option avoids out-of-memory exceptions, timeouts, and sluggish performance that can otherwise occur from processing and transmitting all of the rows at once. This option is typically used in conjunction with the cellspertexport and cellsperreport options. The default is 20000 .
	The page of rows sent from the Display Server to the Thin Client includes all of the rows currently visible in the Thin Client plus additional rows above and/or below the visible rows. If the user scrolls beyond the rows contained in the current page or clicks on a column header to change the sorting order, the Display Server sends another page of rows in response.
	The number of cells in a table is equal to the number of rows multiplied by the number of columns. For example, if cellsperpage = 10000, and the display contains a table with 5 columns, the Display Server uses a page size of 2000 rows for the table. This means the Display Server sends a maximum of 2000 table rows to the Thin Client at a time. If the table contains 40,000 rows the Display Server sends rows 1 through 2000 to the Thin Client when a user opens the display. If the user then scrolls to the bottom of the table, the Display Server sends rows 38,001 through 40,000 to the Thin Client. Similarly, if the user clicks on a column header to sort by that column, the Display Server sorts the table and sends the first 2000 sorted rows to the Thin Client. After the user scrolls or sorts a table in paging mode, the Thin Client displays '' in each cell and an hourglass cursor appears over the table while it waits to receive the new page from the Display Server. The cellsperpage option also has the following behavior:
	A smaller value for cellsperpage reduces the memory requirements for processing large tables in the Display Server, Application Server, and browser. A larger value smooths scrolling in the Thin Client because it increases the number of rows through which the Thin Client can scroll before it needs to request another page from the Display Server.
	If the cellsperpage option is not specified, or if a value less than 1000 is specified, paging mode is disabled and the Display Server sends all data rows to the Thin Client for all tables regardless of the table size.
	If a table contains fewer cells than the cellsperpage setting, the Display Server sends all rows for that table.
sl.rtview.displayserver .cellsperreport	Specify to limit the number of table cells included in PDF exports requested by the Thin Client. This option avoids out-of-memory exceptions and timeouts when exporting tables with many rows. The default is 20000 . This option is typically used in conjunction with the cellsperpage option, and has the following behavior:
	If the cellsperexport option is not specified, or if a value of less than a 1000 is specified, the Display Server attempts to export all rows for all tables, regardless of the table size.
	If a table contains fewer cells than the cellsperreport setting, the Display Server exports all rows for that table.
	In an exported PDF file, the scroll position of the Thin Client has no effect on the starting row in the PDF file, nor any effect on the rows that are included in the PDF report.
	An export to PDF requires more CPU and memory than an export to HTML/Excel (see cellsperexport), therefore the value of the cellspereport option is typically smaller than the value of the cellsperexport option. For example, if an export to HTML/Excel was performed on a table with 5 columns and 100,000 rows, and the option cellsperexport 30000 was specified when the Display Server was launched, 6000 rows (30000/5) would be included in an exported HTML/Excel file for that table. If the cellsperreport 5000 option was specified, an export to PDF would include 1000 rows from the table.
sl.rtview.dsenable	Specifies the data source to enable. Example: proxyclient.sl.rtview.dsenable=cache

sl.rtview.historian.cha rlimit	Specifies the maximum number of characters per table column for the Historian (RTVHISTORY) database. The default is 255 .				
	historian.sl.rtview.historian.charlimit=255				
sl.rtview.historian.co mpactiontimerinterval	Specifies how often, in seconds, the aggregation engine checks for data to aggregate in the Historian (RTVHISTORY) database. The default is 5 . Data aggregation reduces the amount of aged data stored in the Historian cache table. Example:				
sl.rtview.historian.co mpactionverbose	 Specifies for the Historian (RTVHISTORY) database whether and how to output to the console. The default is 0. There are three options: 0 - No information is output to the console. 1 - Summary information is output to the console. 2 - Debug-level information is output to the console. Example: 				
	historian.sl.rtview.historian.compactionverbose=0				
sl.rtview.historian.driv er	Specifies the Historian (RTVHISTORY) database. Not enabled, by default. Use this property to change the default HSQLDB database (used for evaluation purposes) to a production Historian database. Example:				
	sl.rtview.historian.driver=org.hsqldb.jdbcDriver				
	NOTE: To enable the database, uncomment this property in the emcommon.properties file.				
sl.rtview.historian.ind ex_history_tables	Specifies whether to add indexes when creating tables in the Historian (RTVHISTORY) database. true adds indexes and false does not add indexes. The default is true .				
	Example:				
	historian.sl.rtview.historian.index_history_tables=true				
sl.rtview.historian.nor eset	Specifies whether to clear the Historian (RTVHISTORY) database tables before storing new data. true does not clear the tables and false does clear the tables. The default is true .				
	Example:				
sl.rtview.historian.pas sword	Specifies the password for accessing the Historian (RTVHISTORY) database. When no characters are entered (for example, historian.sl.rtview.historian.password=) the password is blank, which is also a valid password. Valid values are according to the database engine.				
	historian.sl.rtview.historian.password=99thPassword				
sl.rtview.historian.url	Specifies the Historian (RTVHISTORY) database URL. Not enabled, by default. Use this property to change the default HSQLDB database (used for evaluation purposes) to a production database.				
	Example: sl rtvjew historian url=idbc:bsaldb:bsal://localbost:9099/				
	rtvhistory				
	NOTE: To enable the database, uncomment this property in the emcommon.properties file.				

si.rtview.nistorian.use rname	Specifies the Historian (RTVHISTORY) database user login password. Not enabled, by default. Valid values are according to the database engine.			
	Example: sl rtview historian username=sa			
sl.rtview.historian.ver bose	Specifies whether to print a line to the console for each record that is stored in the Historian (RTVHISTORY) database. true prints a line for each record and false does not. The default is false .			
	Example:			
	historian.sl.rtview.historian.verbose=false			
sl.rtview.jmx.jmx_mb eans_change_dynamic ally	Specifies whether to assume the JMX MBean attribute structure does not change dynamically. true specifies to not assume dynamic change. false specifies to assume dynamic change. The default is false .			
	Example:			
	sl.rtview.jmx.jmx_mbeans_change_dynamically=false			
sl.rtview.jmx.jmx_met rics_period	Specifies how often, in milliseconds, JMX MBean methods are executed. Default is 10000 .			
	NOTE: Because the MBean Method Execution Interval is superseded by the General Update Period, the amount of time elapsed between method executions may be longer than the value entered. For example, if the General Update Period is 2000 milliseconds and the MBean Method Execution Interval is 5000 milliseconds, MBean methods will be executed every six seconds.			
	Example:			
	sl.rtview.jmx.jmx_metrics_period=10000			
sl.rtview.jmx.jmx_min reconnecttime	Specifies the amount of time that elapses, in seconds, before JMX attempts to reconnect. Default is 30 .			
	Example.			
	sl.rtview.imx.imx_minreconnecttime=30			
	sl.rtview.jmx.jmx_minreconnecttime=30			
sl.rtview.jmx.jmxconn	sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false . Specify the connection name, host, port, user name and password.			
sl.rtview.jmx.jmxconn	sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples	<pre>sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true.</pre>			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples	sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example:			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples	sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example: sl.rtview.jmx.jmxdsShowConnectionOnlyOnMultiples=true			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples sl.rtview.jvm	 sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example: sl.rtview.jmx.jmxdsShowConnectionOnlyOnMultiples=true Specifies command line options for the Java Virtual Machine. For example, to allocate additional heap memory. 			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples sl.rtview.jvm	<pre>sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example: sl.rtview.jmx.jmxdsShowConnectionOnlyOnMultiples=true Specifies command line options for the Java Virtual Machine. For example, to allocate additional heap memory. Examples:</pre>			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples sl.rtview.jvm	<pre>sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example: sl.rtview.jmx.jmxdsShowConnectionOnlyOnMultiples=true Specifies command line options for the Java Virtual Machine. For example, to allocate additional heap memory. Examples: displayserver.sl.rtview.jvm=-Djava.awt.headless=true</pre>			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples sl.rtview.jvm	<pre>sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example: sl.rtview.jmx.jmxdsShowConnectionOnlyOnMultiples=true Specifies command line options for the Java Virtual Machine. For example, to allocate additional heap memory. Examples: displayserver.sl.rtview.jvm=-Djava.awt.headless=true dataserver.sl.rtview.jvm=-Xmx768m</pre>			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples sl.rtview.jvm	<pre>sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example: sl.rtview.jmx.jmxdsShowConnectionOnlyOnMultiples=true Specifies command line options for the Java Virtual Machine. For example, to allocate additional heap memory. Examples: displayserver.sl.rtview.jvm=-Djava.awt.headless=true dataserver.sl.rtview.jvm=-Xmx768m dataserver.sl.rtview.jvm=-Xms128m</pre>			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples sl.rtview.jvm	<pre>sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example: sl.rtview.jmx.jmxdsShowConnectionOnlyOnMultiples=true Specifies command line options for the Java Virtual Machine. For example, to allocate additional heap memory. Examples: displayserver.sl.rtview.jvm=-Djava.awt.headless=true dataserver.sl.rtview.jvm=-Xmx768m dataserver.sl.rtview.jvm=-Xms128m Specifies the amount of time, in seconds, between attempts to reconnect to the database. The default is 40000.</pre>			
sl.rtview.jmx.jmxconn sl.rtview.jmx.jmxdsSh owConnectionOnlyOn Multiples sl.rtview.jvm	<pre>sl.rtview.jmx.jmx_minreconnecttime=30 Specifies the JMX data connection. The default is local 'URL:local' false. Specify the connection name, host, port, user name and password. Example: -jmxconn:Myconnection host1 9998 Specifies whether to add a JMX Connection column when an asterisk (*) is used to reference multiple connections. true specifies to add a JMX Connection column. false specifies to not add a JMX Connection column. The default is true. Example: sl.rtview.jmx.jmxdsShowConnectionOnlyOnMultiples=true Specifies command line options for the Java Virtual Machine. For example, to allocate additional heap memory. Examples: displayserver.sl.rtview.jvm=-Djava.awt.headless=true dataserver.sl.rtview.jvm=-Xmx768m dataserver.sl.rtview.jvm=-Xms128m Specifies the amount of time, in seconds, between attempts to reconnect to the database. The default is 40000. Example: </pre>			

sl.rtview.stylesheet	Specifies a list of RTView Style definition files that determine the appearance of RTView displays (text sizes, fonts, colors and so forth). The default is rtv_darkstyles,rtv_flat . Example: sl.rtview.stylesheet=rtv_darkstyles,rtv_flat
sl.rtview.sub	Specifies to use a substitution. For details, see "Substitutions" on page 311.
	Example:
	sl.rtview.sub=\$rtvAlertMaxNumberOfHistoryRows:50000

Substitutions

The following substitutions can be set to modify your RTView Enterprise Monitor configuration and RTView Enterprise Monitor display behavior. There are different ways you can set a substitution, but the preferred way is to use the sl.rtview.sub property.

Substitution	Description
\$alertActionScript	Specifies the name of the script to execute for an alert command, without the extension. This name is combined with the value of \$scriptEnding to form the complete name of the script.
	Example: sl.rtview.sub=-\$alertActionScript:my_alert_actions
\$domainName	Specifies a domain name to be used by the alert commands. Use this substitution on any Data Server that generates alerts to identify the source of the alert. Usually each Solution Package defines its own domain name.
	Example: sl.rtview.sub=\$domainName:mydomainname
\$jmxdataserver	Specifies the name of the JMX Data Server. The default is ProxyDataServer .
	Example: proxyclient.sl.rtview.sub=\$jmxdataserver:ProxyDataServer
\$proxydataserver	Specifies the name of the proxy Data Server. The default is ProxyDataServer .
	proxyclient.si.rtview.sub=\$proxydataserver:ProxyDataServer
\$RTV_ALERTS_CURR ENT_TABLE	Specifies the name of the current alerts database table. The default is RTV_ALERTS_CURRENT . Use this substitution in conjunction with the RTV_ALERTS_TABLE substitution to turn on alert history.
	Example:
	sl.rtview.sub=\$RTV_ALERTS_CURRENT_TABLE:RTV_ALERTS_CUR RENT
\$RTV_ALERTS_TABLE	Specifies the name of the alert database table. The default is RTV_ALERTS . Use this substitution in conjunction with the \$RTV_ALERTS_CURRENT_TABLE substitution to turn on alert history.
	sl.rtview.sub=\$RTV_ALERTS_TABLE:RTV_ALERTS

\$RTV_JMXSTATSTOT	Specifies the JMX table name. The default is RTV_JMXSTATSTOTAL			
ALS_TABLE	Example: sl.rtview.sub=\$RTV_JMXSTATSTOTALS_TABLE:RTV_JMXSTATSTO TALS			
<pre>\$rtvAlertHistoryColu mnNames</pre>	Specifies to add columns to the alert history table. Provide column names in a semicolon (;) delimited list. The default is ;Comments.			
	Example: sl.rtview.sub=\$rtvAlertHistoryColumnNames:;Comments			
\$rtvAlertMaxNumber OfHistoryRows	Specifies the maximum number of rows to store in the alerts cache. The default is 50000 .			
	Example: sl.rtview.sub=\$rtvAlertMaxNumberOfHistoryRows:50000			
\$rtvAlertPackageMas k	Specifies a regular expression to only show alerts in the Alert Administration display for Packages that match the specified mask. Use this substitution to display alerts for one or more Solution Package. The default is ", which specifies to show all alerts in the Alert Administration display.			
	Example to display only WebLogic alerts: sl.rtview.sub=\$rtvAlertPackageMask:Wls			
	Example to display only WebLogic and JVM alerts: sl.rtview.sub=\$rtvAlertPackageMask:^Wls ^Jvm			
	Example: sl.rtview.sub=\$rtvAlertPackageMask:''			
\$RTVCONFIG_CITYPE _ALERTMAP_TABLE	Specifies the alert table name in the CI database. The default is 'CITYPE_ALERTMAP'.			
	Example: sl.rtview.sub=\$RTVCONFIG_CITYPE_ALERTMAP_TABLE:'CITYPE_ ALERTMAP'			
\$RTVCONFIG_CITYPE _CACHEMAP_TABLE	Specifies the CI Type table name in the CI database. The default is 'CITYPE_CACHEMAP'.			
	Example: sl.rtview.sub=\$RTVCONFIG_CITYPE_CACHEMAP_TABLE:'CITYPE_ CACHEMAP'			
\$RTVCONFIG_CITYPE _DEFS_TABLE	Specifies the CI Type definitions table name in the CI database. The default is 'CITYPE_DEFS' .			
	Example: sl.rtview.sub=\$RTVCONFIG_CITYPE_DEFS_TABLE:'CITYPE_DEFS'			
<pre>\$RTVCONFIG_DB</pre>	Specifies the name of the CI database. The default is ".			
	Example: sl.rtview.sub=\$RTVCONFIG_DB:''			
\$rtvDefaultCIEnviron ment	Specifies the default CMDB Environment assigned to CI's in the automatically generated Infrastructure Service Data Model. If not specified PRODUCTION is used. This default Environment is applied to all CI's that are not associated with an Environment in the user-defined Service Data Model.			
	You override the default Environment by specifying a different environment in the rtv_cmdb_source_default.rtv line in your properties file. In the example below, the default Environment is set to DR.			
	Example: ConfigCollector.sl.rtview.cache.config=rtv_cmdb_source_default.r tv \$rtvDefaultCIEnvironment:DR			

\$RTVHISTORY_DB	Specifies the name of the Historian database table. The default is RTVHISTORY . Use this substitution in conjunction with the RTV_ALERTS_TABLE substitution and the RTV_ALERTS_CURRENT_TABLE substitution to configure Historian database tables. Example:
	sl.rtview.sub=\$RTVHISTORY_DB:RTVHISTORY
\$rtvNavAppRightClick ActionFlag	Specifies drill-down behavior for heatmaps and tables. Set to 1 to enable drill-down on a double-click. Set to 0 allow drill-down on a single-click. The default is 0 .
	Example: sl.rtview.sub=\$rtvNavAppRightClickActionFlag:1
\$rtvNavBackEnabledF lag	Specifies whether to make the back button visible in the Display Viewer, Display Server and the Display Builder. 0 specifies to make the back button invisible. 1 specifies to make the back button visible. The default is 1 .
	Example: sl.rtview.sub=\$rtvNavBackEnabledFlag:1
\$rtvShowDataServer Column	Specifies whether to display the Data Server column in Service Summary display, where 1 specifies to show the column and 0 specifies to hide the column. The default is 1 .
	Example: sl.rtview.sub=\$rtvShowDataServerColumn:0
\$rtvUserAlertTableCo lumns	Specifies which columns to include in the Alerts Table . You can also specify which column to sort on (rather than the Time column) and whether to sort a column by ascending or descending order. For details, see "Configure RTView Alerts Table Columns" on page 72.
	sl.rtview.sub=\$rtvUserAlertTableColumns:'Time:94 Last Update Time:93 Count:50 ID:50 Cleared:40 Cleared Reason:85 Acknowledged:40 Owner:70 Alert Name:134 Alert Index:150 PrimaryService:150 CIName:117 Alert Text:1000 AlertClass:83 CompID:75 TicketID:69 TicketGroup:86'
\$rtvUserAlertTableSo rtAsc	Specifies whether to sort a column in ascending or descending order in the Alerts Table, where 1 specifies ascending order and 0 specifies descending order. The default is 0 . By default, columns are sorted in descending order to show new alerts first. For details, see "Changing the Sort Column and Order" on page 74.
	Example: sl.rtview.sub=\$rtvUserAlertTableSortAsc:0
\$rtvUserAlertTableSo rtColumn	Specifies the name of the column to sort on in the Alerts Table. By default, the RTView Alerts Table is sorted by the Time column in descending order to show new alerts first. For details, see "Changing the Sort Column and Order" on page 74.
	Example: sl.rtview.sub=\$rtvUserAlertTableSortColumn:Time
<pre>\$rtvUserEnableAlertD ualWrite</pre>	Mitigates the delays with Alert Table updates which occur in distributed Alert Server deployments. For details, see "Configure Dual Write for Distributed Alert Server" on page 62.
	Example: sl.rtview.sub=\$rtvUserEnableAlertDualWrite:1
<pre>\$rtvUserShowAlertIn dex</pre>	Specifies whether to make the Alert Index column visible by default in the Alerts Table, where 1 specifies to show the column and 0 specifies to hide the column. The default is 0 . For details, see "Exposing ID, Cleared, Cleared Reason and Alert Index Columns" on page 73.
	sl.rtview.sub= \$rtvUserShowAlertIndex:1

\$rtvUserShowCleared	Specifies whether to make the Closed column visible by default in the Alerts Table, where 1 specifies to show the column and 0 specifies to hide the column. The default is 0 . For details, see "Exposing ID, Cleared, Cleared Reason and Alert Index Columns" on page 73.				
	Example: sl.rtview.sub=\$rtvUserShowCleared:1				
\$rtvUserShowCleared Reason	Specifies whether to make the Closed Reason column visible by default in the Alerts Table, where 1 specifies to show the column and 0 specifies to hide the column. The default is 0 . For details, see "Exposing ID, Cleared, Cleared Reason and Alert Index Columns" on page 73.				
	Example: sl.rtview.sub=\$rtvUserShowClearedReason:1				
\$rtvUserShowDualTa bles	Adds a second table at the bottom of the Alerts Table display. This table shows all open (not cleared) alerts owned by the logged in user. Filters in this display do not apply to this table. For details, see "Add Owned By Me to RTView Alerts Table" on page 74.				
	You can specify this substitution per-user or per-role if the RTView login is enabled and custom users or roles are defined. For details, see "Configure User and Role Management" on page 44. By default, this enhanced table is hidden.				
	To show this table, add the following line to the rtview.properties file in the directory where you run the Viewer or Display Server:				
	Example: sl.rtview.sub=\$rtvUserShowDualTables:1				
\$rtvUserShowId	Specifies whether to make the ID column visible by default in the Alerts Table, where 1 specifies to show the column and 0 specifies to hide the column. The default is 0 . For details, see "Exposing ID, Cleared, Cleared Reason and Alert Index Columns" on page 73.				
	Example: sl.rtview.sub=\$rtvUserShowId:1				
\$scriptEnding	Specifies the suffix of the script called for an alert command. Typically, it is set to bat on Windows systems and sh on Linux. The default is bat .				
	Example: sl.rtview.sub=\$scriptEnding:bat				

APPENDIX c Alert Definitions

This section includes:

- "Docker" on page 315
- "MongoDB" on page 316
- "Node.js" on page 317
- "Oracle Coherence Alerts" on page 318
- "RTVMGR and RTVRULES" on page 323
- "Solace Alerts" on page 324
- "TIBCO ActiveMatrix BusinessWorks Alerts" on page 329
- "TIBCO BusinessEvents Alerts" on page 333
- "TIBCO Enterprise Message Service Alerts" on page 335

Docker

The following alerts are available for Docker.

Alert Name	WARN. LEVEL	ALARM LEVEL	DURATION	ENABLED
DocContainerCpuUsageHigh	24	50	30	FALSE
A Docker Container's CPU usage is above the defined threshold.				
Index Type(s): PerContainer				
Metric: cpu.usage				
DocContainerExpired	NaN	NaN	30	FALSE
A Docker Container has expired.				
Index Type(s): PerContainer				
Metric: Expired				
DocContainerNetBytesInHigh	750000	1000000	30	FALSE
A Docker Container's incoming network data rate is above the defined thresholds.				
Index Type(s): PerContainer				
Metric: net.rxbytes.avg				
DocContainerNetBytesOutHigh	750000	1000000	30	FALSE
A Docker Container's outgoing network data rate is above the defined thresholds.				
Index Type(s): PerContainer				
Metric: net.txbytes.avg				

DocEngineCpuUsageHigh A Docker Engine's CPU usage is above the defined thresholds. Index Type(s): PerEngine Metric: cpu.usage	50	75	30	TRUE
DocEngineExpired A Docker Engine has expired. Index Type(s): PerEngine Metric: Expired	NaN	NaN	30	FALSE
DocEngineNetBytesInHigh A Docker Engine's incoming network data rate is above the defined thresholds. Index Type(s): PerEngine Metric: net.rxbytes.avg	750000	1000000	30	TRUE
DocEngineNetBytesOutHigh A Docker Engine's outgoing network data rate is above the defined thresholds. Index Type(s): PerEngine Metric: net.txbytes.avg	750000	1000000	30	TRUE

MongoDB

The following alerts are available for MongoDB.

Alert Name	WARN. LEVEL	ALARM LEVEL	DURATION	ENABLED
MongoCollectionExpired	NaN	NaN	30	FALSE
A collection was not able to be contacted for longer than the normal expiration window.				
Index Type(s): PerCollection				
Metric: Expired				
MongoCollectionNumObjectsHigh	1600	2000	30	FALSE
The number of objects for the collection exceeds a given threshold.				
Index Type(s): PerCollection				
Metric: numberOfObjects				
MongoDatabaseDataSizeHigh	80000	100000	30	FALSE
The database size for the database exceeds a given threshold.				
Index Type(s): PerDatabase				
Metric: dataSize				
MongDatabaseExpired	NaN	NaN	30	FALSE
The database was not able to be contacted for longer than the normal expiration window.				
Index Type(s): PerDatabase				
Metric: Expired				
MongoInstanceExpired	60	80	30	FALSE
---	-----	-----	----	-------
The instance was not able to be contacted for longer than the normal expiration window.				
Index Type(s): PerInstance				
Metric: Expired				
MongoInstanceNotConnected	NaN	NaN	30	FALSE
The instance was not able to be contacted for longer than the normal expiration window.				
Index Type(s): PerInstance				
Metric: connectionStatus				
MongoInstanceOpenCursorsHigh	160	200	30	TRUE
The number of Open Cursors for the Instance exceeds a given threshold.				
Index Type(s): PerInstance				
Metric: openCursors				

Node.js

The following alerts are available for Node.js.

Alert Name	WARN. LEVEL	ALARM LEVEL	DURATION	ENABLED
NodeMasterCpuUsageHigh A master node's CPU usage is above the defined thresholds. Index Type(s): PerConnection Metric: Node Master - CPU %	30	50	30	FALSE
NodeMasterExpired A master node has expired. Index Type(s): PerConnection Metric: Node Master - Expired	NaN	NaN	30	FALSE
NodeMasterRequestRateHighThe request rate of a master node is above the defined thresholds.Index Type(s): PerConnectionMetric: Node Requests - Requests Per Second	1600	2000	30	FALSE
NodeMasterResponseTimeHigh The response time of a URL is above the defined thresholds. Index Type(s): PerConnection Metric: Node Requests - Avg Response Time	5	10	30	FALSE
NodeProcessCpuUsageHigh A worker node's CPU usage is above the defined thresholds. Index Type(s): PerConnection Metric: Node Processes - CPU Used %	5	50	30	TRUE

NodeProcessExpired	NaN	NaN	30	FALSE
A worker node has expired.				
Index Type(s): PerConnection				
Metric: Node Processes - Expired				
NodeProcessMemUsageHigh	90	95	30	TRUE
A master node's memory usage has exceeded the defined limits.				
Index Type(s): PerConnection				
Metric: Node Processes - Memory Used %				

Oracle Coherence Alerts

The following alerts are available with both the solution package and standalone versions for Oracle Coherence.

OcAvailableMemoryLo wCluster	A single alert is executed if the average percent memory used over max memory of all nodes in the cluster exceeds the specified thresholds.
OcAvailableMemoryLo wNode	For each node in the cluster, an alert is executed if the percent memory used over max memory available for that node exceeds the specified thresholds.
OcAvailableMemoryLo wNodeSpike	For each node in the cluster, an alert is executed if the percent memory used exceeds the specified threshold for the percent above average memory used in the previous 24 hours. For example, if the threshold is set to 50% of total memory used, and the average memory consumption on a particular node for the previous 24 hours is 40%, an alert will be executed if current memory usage exceeds 60% of the total. NOTE: The 24 hour time span (86400 seconds) is controlled by the \$AVERAGE_MEMORY_TIME_WINDOW substitution.
	The warning default setting is 115 (percent) of the previous 24 hours and the alarm default setting is 125 (percent) of the previous 24 hours. By default the alert is disabled.
OcBadCommunication Cluster	A single alert is executed if the average communication failure rate of all nodes in the cluster exceeds the specified thresholds.
OcBadCommunication Node	For each node in the cluster, an alert is executed if the communication failure rate for that node exceeds the specified thresholds.
OcBadCommunication NodesInTimeRange	Executes a single warning and a single alert if the percentage of nodes in a cluster exceeds the specified threshold for the BadCommunicationNode alert within a time range specified.
	To specify the time range, modify the \$BAD_COMMUNICATION_NODES_TIME_RANGE
	substitution.
	The default time range setting is 5 minutes (300 seconds), the warning default setting is 40 (percent) and the alarm default setting is 50 (percent).
	By default the alert is enabled.
OcCacheHitPercentage Low	This alert is executed when the current Hit% (total current hits/total current gets) is below the specified threshold for a sampling period and the specified cache(s).

OcCacheQueueSizeHig h	A single alert is executed if the CacheQueueSize for all nodes in the cluster exceeds the specified thresholds. By default the alert is disabled with the following default settings: Warning is 100 (seconds), Alarm is 200 (seconds) and Duration is 60 (seconds).
OcCacheRateCacheMis sesHigh	Executes when the Misses per second exceed the specified threshold and duration. The rate is for a given tier of a cache for a given service in a cluster. The tier can be front, where appropriate, or back. Caches and services are named, and clusters are represented by their named monitoring connection. This alert has PerCluster, PerService, PerCache and overrides. This alert appears in the Other Category when triggered.
	This is a Key Metrics alert that is available with the RTView Enterprise Monitor when the Oracle Coherence Monitor is installed.
	By default the alert is disabled with the following default settings: Warning is 1000 , Alarm is 2000 and Duration is 0 (seconds). Before enabling this alert, you MUST change the default settings to values that are suitable for your environment.
OcCacheRateStoreRea dsHigh	Executes when the cache StoreReads rate per second exceeds the specified thresholds and durations. The rate is for a given tier of a cache for a given service in a cluster. The tier can be front, where appropriate, or back. Caches and services are named, and clusters are represented by their named monitoring connection. This alert has PerCluster, PerService, PerCache and overrides. This alert appears in the Other Category when triggered.
	This is a Key Metrics alert that is available with the RTView Enterprise Monitor when the Oracle Coherence Monitor is installed.
	By default the alert is disabled with the following default settings: Warning is 1000 , Alarm is 5000 and Duration is 0 (seconds). Before enabling this alert, you MUST change the default settings to values that are suitable for your environment.
OcCacheRateStoreWri tesHigh	Executes when the cache StoreWrites rate per second exceeds the specified thresholds and durations. The rate is for a given tier of a cache for a given service in a cluster. The tier can be front, where appropriate, or back. Caches and services are named, and clusters are represented by their named monitoring connection. This alert has PerCluster, PerService, PerCache and overrides. This alert appears in the Other Category when triggered.
	This is a Key Metrics alert that is available with the RTView Enterprise Monitor when the Oracle Coherence Monitor is installed.
	By default the alert is disabled with the following default settings: Warning is 1000 , Alarm is 5000 and Duration is 0 (seconds). Before enabling this alert, you MUST change the default settings to values that are suitable for your environment.
OcCacheRateTotalGets High	Executes when the cache total gets rate per second exceeds the specified thresholds and durations. The rate is for a given tier of a cache for a given service in a cluster. The tier can be front, where appropriate, or back. Caches and services are named, and clusters are represented by their named monitoring connection. This alert has PerCluster, PerService, PerCache and overrides. This alert appears in the Other Category when triggered.
	This is a Key Metrics alert that is available with the RTView Enterprise Monitor when the Oracle Coherence Monitor is installed.
	By default the alert is disabled with the following default settings: Warning is 1000 , Alarm is 5000 and Duration is 0 (seconds). Before enabling this alert, you MUST change the default settings to values that are suitable for your environment.

OcCacheRateTotalPuts High	Executes when the cache DeltaTotalPuts rate per second exceeds the specified thresholds and durations. The rate is for a given tier of a cache for a given service in a cluster. The tier can be front, where appropriate, or back. Caches and services are named, and clusters are represented by their named monitoring connection. This alert has PerCluster, PerService, PerCache and overrides. This alert appears in the Other Category when triggered.
	This is a Key Metrics alert that is available with the RTView Enterprise Monitor when the Oracle Coherence Monitor is installed.
	By default the alert is disabled with the following default settings: Warning is 1000 , Alarm is 5000 and Duration is 0 (seconds). Before enabling this alert, you MUST change the default settings to values that are suitable for your environment.
OcCapacityLimitAllCac hes	An alert is executed if the percent cache used over cache capacity for any cache in the cluster exceeds the specified thresholds. There is one highWarning and one highAlert threshold. For example, if there are 3 caches in a cluster, where:
	cache1 val = 95
	cache2 val = 100 cache3 val = 70
	and the CapacityLimitAllCaches highWarning is 80 and highAlert is 90 , one high alert is executed.
OcCapacityLimitCache	Executes when the average CPU usage for the cluster / storage class exceeds the specified thresholds and durations. This alert has a per cluster and a per (cluster) storage class override. This alert appears in the Other Category when executed.
	This is a Key Metrics alert that is available with the RTView Enterprise Monitor when the Oracle Coherence Monitor is installed.
	By default the alert is disabled with the following default settings: Warning is 95 (percent), Alarm is 95 (percent) and Duration is 60 (seconds).
OcClusterNodesRcvdF ailureRateHigh	Executes when the average network/packet received failure rate for the cluster/storage class exceeds the specified thresholds and durations. The metrics are averaged across all nodes of a storage class in a cluster.
	This is a Key Metrics alert that is available with the RTView Enterprise Monitor when the Oracle Coherence Monitor is installed.
	This alert has a per cluster and a per (cluster) storage class override. Note that this alert appears in the Network Category when executed.
	By default the alert is disabled with the following default settings: Warning is 95 (percent), Alarm is 95 (percent) and Duration is 60 (seconds).
OcClusterNodesSentFa ilureRateHigh	Executes when the average network/packet sent failure rate for the cluster / storage class exceeds the specified thresholds and durations. The metrics are averaged across all nodes of a storage class in a cluster.
	This is a Key Metrics alert that is available with the RTView Enterprise Monitor when the Oracle Coherence Monitor is installed.
	This alert has a per cluster and a per (cluster) storage class override. Note that this alert appears in the Memory Category when executed.
	By default the alert is disabled with the following default settings: Warning is 95 (percent), Alarm is 95 (percent) and Duration is 60 (seconds).
OcDepartedNode	For each node in the cluster, an alert is executed if the time a node is absent from the cluster exceeds the specified thresholds. When the departed node rejoins the cluster, the alert is cleared.

OcDepartedNodesPerc entage	This scalar alert executes a single warning and a single alert if the percentage of nodes departed from the cluster exceeds the specified thresholds within the specified time periods. The percentage is measured against the total number of nodes in the cluster, including both running and departed nodes.
	The time period is set in the rtview.properties file using the \$NODES_DEPARTED_TIME_WINDOW substitution. The time period can also be overridden using the command line interface. For example, the following sets a time window of 300 seconds:
	-sub: \$NODES_DEPARTED_TIME_WINDOW: 300
	The time period default setting is 600 (10 minutes), the warning default setting is 90 (percent) and the alarm default setting is 95 (percent).
	By default the alert is disabled.
OcEndangeredAllCach es	This alert is executed if the StatusHA for the cache service is NODE_SAFE (high warning) or ENDANGERED (high alert).
OcEndangeredCache	For each node in the cluster, an alert is executed if the StatusHA value is ENDANGERED. By default the alert is disabled.
OcExtendConnectionB yteBacklogHigh	This limits alert executes a single warning and a single alert if the OutgoingByteBacklog for a Proxy Extend Connection exceeds the specified thresholds. By default the alert is disabled with the following default settings: Warning is 1000 (bytes), Alert is 5000 (bytes).
OcHATargetFailed	This alert executes when the distributed service target status (HATarget) is not met. The HATarget value is determined using the PartitionAsignment MBean in Coherence Versions 12 and above. In prior Coherence versions, the default value of MACHINE-SAFE is used. The default value can be overridden by setting the substitution variable \$ocmDefaultHATarget to the desired value.
OcHighGCDutyCycleNo de	This scalar alert executes a single warning and a single alert if a node exceeds the specified duty cycle threshold (the percent of time spent in Garbage Collection).
	By default the alert is enabled with the following default settings: Warning is 10 (percent), Alarm is 20 (percent) and Duration is 10 seconds.
OcHighPendingReques tNode	A single alert is executed if the RequestPendingCount amount exceeds the specified threshold. This alert allows for setting the warning level, alarm level and duration.
	By default the alert is disabled.
OcHighTaskBacklogNo de	A single warning and a single alert are executed if the number of backlogged tasks exceeds the specified user threshold. This alert allows for setting the warning level, alarm level and duration.
	The default setting executes a warning if the number of backlogged tasks exceeds 10 , and executes an alert if the number of backlogged tasks exceeds 20 .
	By default the alert is disabled.
OcHighThreadAbando nedNode	A single alert is executed if the Coherence Thread Abandoned Count amount exceeds the specified threshold. This alert allows for setting the warning level, alarm level and duration.
	The default setting executes a warning and an alert if the Thread Abandoned Count amount exceeds 0 . The default duration setting is 60 . By default the alert is enabled.

OcJmxProcessingTime	This alert is executed if the sum of time for JMX queries and all data processing functions exceeds the specified threshold for the jmxsampleperiod property. By default the alert is disabled with the following default settings: Warning is 80 (percent), Alarm is 90 (percent) and Duration is 0 (seconds). NOTE: The OcJmxProcessingTime alert does not support overrides. For
	that alert the Override Count is displayed as -1.
OcLongGCDurationNo de	A single warning and a single alert are executed if any of the last garbage collection times exceed the specified duration.
	The default setting executes a warning if the duration exceeds 1 second, and executes an alert if the duration exceeds 2 seconds.
	It is possible for GC times to exceed the specified duration and NOT execute an alert. This is possible if it occurs between the alert duration time and an alert condition time.
	For example, if your alert duration is 60 seconds, and there is also an alert condition set at 27 seconds into that 60 seconds, the following scenarios could occur (where XX:XX:XX is Hours:Minutes:Seconds):
	Scenario 1:
	12:00:00 GC amount is below the specified threshold. No alert executed.
	12:00:27 GC amount exceeds the specified threshold. Alert ignored for now.
	12:01:00 C amount is below the specified threshold. No alert executed.
	Scenario 2:
	12:00:00 GC amount is below the specified threshold. No alert executed.
	12:00:27 GC amount exceeds the specified threshold. Alert ignored for now.
	12:01:00 GC amount remains above the specified threshold. Alert executed.
	By default the alert is enabled.
OcLowClientNodeCoun t	This alert executes if the total number of nodes being monitored, including storage enabled nodes, client nodes, and management (JMX) nodes, exceeds the specified threshold. When the count returns to above to above the threshold (departed nodes rejoin the cluster), the alert is cleared.
	By default the alert is disabled.
OcLowStorageNodeCo unt	This alert executes if the total number of storage nodes in the cluster exceeds the specified threshold. When the count returns to above to above the threshold (departed nodes rejoin the cluster), the alert is cleared.
	By default the alert is disabled.
OcLowTotalNodeCount	This alert executes if the total number of client nodes being monitored exceeds the specified threshold. When the count returns to above to above the threshold (departed nodes rejoin the cluster), the alert is cleared.
	By default the alert is disabled.
OcMemoryUsedPercen tageAfterGC	This alert is executed if the percent of memory used on a node after garbage collection exceeds the specified threshold. By default the alert is disabled with the following default settings: Warning is 70 (percent), Alarm is 80 (percent) and Duration is 30 (seconds).
OcNodeSafeCache	For each node in the cluster, an alert is executed if the StatusHA value is NODE-SAFE . By default the alert is disabled.
OcNoJmxConnection	This alert is executed if a JMX connection remains disconnected after a specified duration of time. The default duration of time is 60 seconds. By default, this alert is enabled.

OcObjectCountDeltaU pCache	This tabular alert executes a single warning and a single alert for each cache in the cluster if the cache object count delta increases and exceeds the specified threshold. In addition to setting the warning and alarm levels, this alert also allows for setting the duration for each cache. When this alert is selected in the Active Alert Table, the Per Cache Alert Setting box is displayed (rather than the scalar alert box). By default the alert is disabled
OcObjectCountDeltaD ownCache	This tabular alert executes a single warning and a single alert for each cache in the cluster where the cache object count delta decreases and exceeds the specified threshold. In addition to setting the warning and alarm levels, this alert also allows for setting the duration for each cache. When this alert is selected in the Active Alert Table, the Per Cache Alert
	Setting box is displayed (rather than the scalar alert box).
	By default the alert is disabled.
OcProxyNodeByteBac klogHigh	This limits alert executes a single warning and a single alert if the OutgoingByteBacklog for a Proxy Node exceeds the specified threshold. This is often indicates overloaded capacity on an individual proxy node. By default the alert is disabled with the following default settings: Warning is 100 (bytes), Alert is 50 (bytes).
OcSendQueueSize	For each node in the cluster, an alert is executed if the Send Queue for that node exceeds the specified thresholds. By default the alert is disabled with the following default settings: Warning is 100 (seconds), Alarm is 200 (seconds) and Duration is 60 (seconds).
OcStoreFailure	This alert is executed if the number of StoreFailures exceeds the specified threshold. By default the alert is disabled with the following default settings: Warning is 1 (second), Alarm is 10 (seconds) and Duration is 30 (seconds).
OcStoreReadMillisHigh	This alert is executed if the current average read per millisecond (total current StoreReadMillis/total current StoreReads) exceeds the specified threshold for a sampling period and the specified cache(s).

RTVMGR and RTVRULES

If the RTVMGR Solution Package and the RTVRULES Solution Package (which come with RTView Enterprise Monitor) are installed on your system you might see the following alert types for RTView Servers (Data Servers, Display Servers and Historian Servers):

RTVMGR Solution Package Alert Types

JvmCpuPercentHigh	The percent JVM CPU usage exceeded the specified threshold.
JvJvmGcDutyCycleHigh	The JVM garbage collection contains an item that exceeded the specified duty cycle threshold (the percent of time spent in Garbage Collection).
JvmMemoryUsedAfterGCHigh	The percentage of the memory used after garbage collection exceeded the specified threshold.
JvmMemoryUsedHigh	The percent JVM memory used exceeded the specified threshold.
JvmNotConnected	The JVM is not connected.
JvmStaleData	The JVM stopped receiving data.

TomcatAccessRateHigh	The Access Rate of a Tomcat application deployed on a Tomcat server exceeded the specified threshold.			
TomcatActiveSessionsHigh	The number of active Tomcat Server sessions exceeded the specified threshold.			
TomcatAppAccessRateHigh	The application deployed on a Tomcat Server exceeded the specified threshold.			
TomcatAppActiveSessionsHigh	The number of active Tomcat application sessions exceeded the specified threshold.			
RTVRULES Solution Package Alert Types				
RtvEmServiceAlert	This discrete alert is generated when a Service has one or more alerts on any associated CIs.			
RtvEmServiceAlertImpactHigh	This limits alert is generated when a Service has an Alert Impact value that exceeds the specified threshold on any associated CI.			

Solace Alerts

The following alerts are available with both the solution package and standalone versions for Solace.

Alert	Warning Level	Alarm Level	Duration	Enabled
SolMsgRouterActiveDiskUtilHigh The utilization of the active disk partition for the message router is excessive. Index Type: PerAppliance	70	85	30	FALSE
SolMsgRouterByteEgressUtilHigh The egress rate (bytes/sec) utilization (current egress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance	70	85	30	FALSE
SolMsgRouterByteIngressUtilHigh The ingress rate (bytes/sec) utilization (current ingress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance	70	85	30	FALSE
SolMsgRouterConnectionUtilHigh The connection utilization for the message router (current number of connections divided by max allowed) is excessive. Index Type: PerAppliance	70	85	30	FALSE
SolMsgRouterCpuTemperatureHigh CPU temperature margin is above threshold. Index Type: PerApplianceSensor	-30	-15	30	FALSE

SolMsgRouterDelvrdUnAckMsgUtilHigh The delivered unacked messages as a percentage of all messages delivered for the application is excessive. Index Type: PerAppliance	70	85	30	FALSE
SolMsgRouterFailoverDetected The backup message router in a HA pair has assumed control.	1	NaN	30	FALSE
Index Type: PerAppliance				
SolMsgRouterFanSensorCheckFailed The speed measured for one or more fans is below threshold.	5000	2657	30	FALSE
Index Type: PerApplianceSensor				
SolMsgRouterInboundByteRateHigh The number of inbound bytes per second for the message router has reached its max threshold. Index Type: PerAppliance	400000	500000	30	FALSE
SolMsgRouterInboundMsgRateHigh The number of inbound messages per second for the message router has reached its max threshold. Index Type: PerAppliance	400000	500000	30	FALSE
SolMsgRouterIngressFlowUtilHigh The ingress flow utilization (current flows divided by max allowed) for the message router is excessive.	70	85	30	FALSE
Index Type: PerAppliance				
SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive.	70	85	30	FALSE
SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance	70	85	30	FALSE
SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgEgressUtilHigh The message egress rate utilization (current message egress rate divided by max allowed) for the message router is excessive.	70 70	85	30	FALSE
SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgEgressUtilHigh The message egress rate utilization (current message egress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance	70 70	85	30	FALSE
SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgEgressUtilHigh The message egress rate utilization (current message egress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgIngressUtilHigh The message ingress rate utilization (current message ingress rate divided by max allowed) for the message router is excessive.	70 70 70 70	85 85 85	30 30 30	FALSE
SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgEgressUtilHigh The message egress rate utilization (current message egress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgIngressUtilHigh The message ingress rate utilization (current message ingress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance	70 70 70	85	30 30 30	FALSE FALSE FALSE
 SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgEgressUtilHigh The message egress rate utilization (current message egress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgIngressUtilHigh The message ingress rate utilization (current message ingress rate divided by max allowed) for the message ingress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterOutboundByteRateHigh The number of outbound bytes per second for the message router has reached its max threshold. 	70 70 70 70 400000	85 85 500000	30 30 30 30 30	FALSE FALSE FALSE
 SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgEgressUtilHigh The message egress rate utilization (current message egress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgIngressUtilHigh The message ingress rate utilization (current message ingress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterOutboundByteRateHigh The number of outbound bytes per second for the message router has reached its max threshold. Index Type: PerAppliance 	70 70 70 400000	85 85 85 500000	30 30 30 30 30	FALSE FALSE FALSE
 SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgEgressUtilHigh The message egress rate utilization (current message egress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgIngressUtilHigh The message ingress rate utilization (current message ingress rate divided by max allowed) for the message ingress rate divided by max allowed) for the message ingress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterOutboundByteRateHigh The number of outbound bytes per second for the message router has reached its max threshold. Index Type: PerAppliance SolMsgRouterOutboundMsgRateHigh The number of outbound messages per second for the message router has reached its max threshold. 	70 70 70 70 400000 400000	85 85 85 500000 500000	30 30 30 30 30 30	FALSE FALSE FALSE FALSE
 SolMsgRouterMsgCountUtilHigh The message count utilization for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgEgressUtilHigh The message egress rate utilization (current message egress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterMsgIngressUtilHigh The message ingress rate utilization (current message ingress rate divided by max allowed) for the message ingress rate divided by max allowed) for the message router is excessive. Index Type: PerAppliance SolMsgRouterOutboundByteRateHigh The number of outbound bytes per second for the message router has reached its max threshold. Index Type: PerAppliance SolMsgRouterOutboundMsgRateHigh The number of outbound messages per second for the message router has reached its max threshold. Index Type: PerAppliance 	70 70 70 70 400000 400000	85 85 85 500000 500000	30 30 30 30 30 30	FALSE FALSE FALSE FALSE

SolMsgRouterPowerSupplyFailed A power supply has failed.	0	NaN	30	FALSE
Index Type: PerAppliance				
SolMsgRouterSpoolUtilization The amount of spool space used for messages is excessive.	70	85	30	FALSE
Index Type: PerAppliance				
SolMsgRouterStandbyDiskUtilHigh The utilization of the standby disk partition for the message router is excessive.	70	85	30	FALSE
Index Type: PerAppliance				
SolMsgRouterSubscriptionUtilHigh The subscription utilization (current number of subscriptions divided by max allowed) for the message router is excessive.	70	85	30	FALSE
Index Type: PerAppliance				
SolMsgRouterSwapUsedHigh The amount of swap space used by the message router operating system is excessive.	70	85	30	FALSE
This alert executes when a Solace Syslog Warning or Critical message is received. To get Syslog event alerts (in RTView Enterprise Monitor or the standalone Monitor), go to the Alert Administration display and enable the SolMsgRouterSyslog alert.	-	-	-	-
SolMsgRouterTemperatureSensorCheckFailed A chassis temperature measurement is above threshold.	40	45	30	FALSE
Index Type: PerAppliance				
SolMsgRouterTranSessionCntUtilHigh The transacted session count utilization for the message router is excessive.	70	85	30	FALSE
Index Type: PerAppliance				
SolMsgRouterTranSessionResUtilHigh The transacted session resource utilization for the message router is excessive.	70	85	30	FALSE
Index Type: PerAppliance				
SolMsgRouterVoltageSensorCheckFailed A power supply voltage is high or low. Index Type: PerApplianceSesor	NaN	NaN	30	FALSE
SolBridgeInboundByteRateHigh The number of inbound bytes per second across the bridge has reached its maximum.	8000000	1000000	30	FALSE
Index Type: PerBridge				
SolBridgeInboundMsgRateHigh The number of inbound messages per second across the bridge as a whole has reached its maximum. Index Type: PerBridge	40000	50000	30	FALSE

SolBridgeOutboundByteRateHigh The number of outbound bytes per second across the bridge has reached its maximum. Index Type: PerBridge	8000000	10000000	30	FALSE
SolBridgeOutboundMsgRateHigh The number of outbound messages per second across the bridge has reached its maximum. Index Type: PerBridge	40000	50000	30	FALSE
SolClientInboundByteRateHigh The number of outbound bytes per second for the client has reached its maximum. Index Type: PerClient	8000000	10000000	30	FALSE
SolClientInboundMsgRateHigh The number of outbound messages per second for the client as a whole has reached its maximum. Index Type: PerClient	40000	50000	30	FALSE
SolClientOutboundByteRateHigh The number of outbound bytes per second for the client has reached its maximum. Index Type: PerClient	8000000	10000000	30	FALSE
SolClientOutboundMsgRateHigh The number of outbound messages per second for the client as a whole has reached its maximum. Index Type: PerClient	40000	50000	30	FALSE
SolClientSlowSubscriber One or more clients are consuming messages too slowly; endpoints may drop messages! Index Type: PerClient	1	NaN	30	FALSE
SolCspfNeighberDown State is not "OK" for one or more CSPF neighbors. Index Type: PerNeighbor	1	NaN	30	FALSE
SolEndpointPendingMsgsHigh The number of pending messages on a queue has reached its maximum. Index Type: PerEndpoint	8000	10000	30	FALSE
SolEndpointSpoolUsageHigh The endpoint is consuming too much message router memory for storing spooled messages. (Threshold units are megabytes.) Index Type: PerEndpoint	40	50	30	FALSE
SolGuaranteedMsgingHbaLinkDown For Guaranteed Messaging only, the Operational State for each HBA Fibre-Channel should be Online (e.g., not Linkdown). Index Type: PerHbaLink	0	NaN	30	FALSE
SolGuaranteedMsgingMatePortDown For Guaranteed Messaging only, the Mate Link Ports for ADB should have status OK. Index Type: PerADB	0	NaN	30	FALSE

SolGuaranteedMsgingNoMsgSpoolAdActive For Guaranteed Messaging only with Redundancy, at least one message router in an HA pair should show "AD-Active." Index Type: PerPair	0	NaN	30	FALSE
SolInterfaceDown Link-detect = no for one or more enabled network interfaces.	NaN	NaN	30	FALSE
Index Type: PerSolInterface				
SolNABUsageHigh Network Acceleration Blade memory usage is excessive.	60	80	30	FALSE
Index Type: PerNAB				
SolVpnConnectionCountHigh The number of connections to the server has reached its maximum.	60	80	30	FALSE
Index Type: PerVPN				
SolVpnInboundByteRateHigh The number of inbound bytes per second for the vpn has reached its maximum.	8000000	10000000	30	FALSE
Index Type: PerVPN				
SolVpnInboundDiscardRateHigh The number of discarded inbound messages per second for the server is excessive.	1	5	30	FALSE
Index Type: PerVPN				
SolVpnInboundMsgRateHigh The number of inbound messages per second for the vpn as a whole has reached its maximum.	40000	50000	30	FALSE
Index Type: PerVPN				
SolVpnOutboundByteRateHigh The number of outbound bytes per second for the VPN has reached its maximum.	8000000	10000000	30	FALSE
SolVpnOutboundDiscardRateHigh The number of discarded outbound messages per second for the server is excessive. Index Type: PerVPN	1	5	30	FALSE
SolVpnOutboundMsgRateHigh The number of outbound messages per second for the server as a whole has reached its maximum. Index Type: PerVPN	40000	50000	30	FALSE
SolVpnPendingMsgsHigh The total number of pending messages for this destination has reached its maximum. Index Type: PerVPN	8000000	10000000	30	FALSE
SolVpnSubscriptionCountHigh The number of endpoints in this VPN has reached its maximum. Index Type: PerVPN	8000	10000	30	FALSE

TIBCO ActiveMatrix BusinessWorks Alerts

The following alerts are available with both the solution package and standalone versions for TIBCO® ActiveMatrix BusinessWorks[™].

Alert	Warning Level	Alarm Level	Duration	Enabled
Bw6AppNodeCpuUsedHigh BW6 AppNode CPU usage exceeded limit. Index Type: PerAppNode Metric: CPU Usage%	50	80	30	FALSE
Bw6AppNodeMemUsedHigh BW6 AppNode memory usage exceeded limit. Index Type: PerAppNode Metric: Memory Usage%	50	80	30	FALSE
Bw6AppProcessCreatedRateHigh BW6 Process created rate for application exceeded limit. Index Type: PerApp Metric: App Created Rate	50	80	30	FALSE
Bw6AppProcessElapsedTimeHigh BW6 Process delta elapsed time rate of increase for application exceeded limit. Index Type: PerApp Metric: App Elapsed Rate	200	400	30	FALSE
Bw6AppProcessExecutionTimeHigh BW6 Process delta execution time rate of increase for application exceeded limit. Index Type: PerApp Metric: App Execution Rate	200	400	30	FALSE
Bw6AppProcessFailedRateHigh BW6 Process failed rate for application exceeded limit. Index Type: PerApp Metric: App Failed Rate	50	80	30	FALSE
Bw6ProcessActivityErrorRateHigh BW6 Process error rate exceeded limit. Index Type: PerProcess Metric: Process Failed Rate	50	80	30	FALSE
Bw6ProcessCreatedRateHigh BW6 Process error rate exceeded limit. Index Type: PerProcess Metric: Process Failed Rate	50	80	30	FALSE
Bw6ProcessElapsedTimeHigh BW6 Process delta elapsed time rate of increase exceeded limit. Index Type: PerProcess Metric: Delta Exec Rate	200	400	30	FALSE

Bw6ProcessExecutionTimeHigh BW6 Process delta execution time rate of increase exceeded limit.	200	400	30	FALSE
Index Type: PerProcess				
Metric: Delta Time Rate				
Bw6ProcessFailedRateHigh BW6 Process suspended rate exceeded limit.	50	80	30	FALSE
Index Type: PerProcess				
Metric: Suspended Rate				
Bw6ProcessSuspendRateHigh BW6 Process failed rate exceeded limit.	50	80	30	FALSE
Index Type: PerProcess				
Metric: Failed Rate				
BwActivityErrorRateHigh BW5 Activity error rate exceeded limit. The rate is calculated by taking the delta of total error returns in this update period and dividing by the length of the period.	50	80	30	FALSE
Index Type: PerActivity				
Metric: RateErrorCount				
BwActivityExecutionTimeHigh BW5 Activity execution time rate of increase exceeded limit The rate is calculated by taking the delta of total execution time in this update period and dividing by the length of the period.	200	400	30	FALSE
Index Type: Peractivity				
BwEngineCpuUsedHigh BW Engine CPU usage exceeded limit. CPU Usage is the CPU time used by the BW engine expressed as a percentage of the total CPU time available.	50	80	30	FALSE
Index Type: PerEngine				
Metric: CPU Usage%				
BwEngineMemUsedHigh BW Engine memory usage exceeded limit. Memory usage is taken from Memory Used% in the BW Engine table, which is "Percentage of allocated memory currently consumed by this engine from within the JVM." Index Type: PerEngine Metric: PercentUsed	50	80	30	FALSE
BwEngineStopped BW Engine has stopped running. Index Type: PerEngine	NaN	NaN	30	FALSE
Metric: Stopped				
	50	<u>00</u>	20	
BW Process aborted rate exceeded limit. The rate is calculated by taking the delta of total aborts in this update period and dividing by the length of the period.	50	80	30	TALSL
Index Type: PerProcess				
Metric: RateAborted				

BwEngineCpuUsedHigh BW Process aborted rate exceeded limit. The rate is calculated by taking the delta of total aborts in this update period and dividing by the length of the period. Index Type: PerProcess Metric: CPU %	50	80	30	FALSE
BwEngineMemUsedHigh BW Process aborted rate exceeded limit. The rate is calculated by taking the delta of total aborts in this update period and dividing by the length of the period. Index Type: PerProcess Metric: PercentUsed	50	80	30	FALSE
BwProcessAvgElapsedTimeHigh BW Process Average Elapsed Time exceeded limit. This is calculated by taking the elapsed time of all process instances over the interval and dividing by the number of instances completed in the interval. Index Type: PerProcess Metric: Process Avg Elapsed Time	100	200	30	FALSE
BwProcessCreatedRateHigh BW Process creation rate exceeded limit. The rate is calculated by taking the number of process instances created in the interval and dividing by the length of the interval in seconds. Index Type: PerProcess Metric: Processes Created/sec	100	200	30	FALSE
BwProcessTotalCpuPercentHigh BW Process CPU percent utilization exceeded limit. This is the percent CPU used by all process instances executing over the interval. Index Type: PerProcess Metric: Process Total CPU Percent	50	75	30	FALSE
BwProcessElapsedTimeHigh BW Process elapsed time rate of increase exceeded limit. The rate is calculated by taking the delta of total elapsed time in this update period and dividing by the length of the period. Index Type: PerProcess Metric: RateTotalElapsed	50	80	30	FALSE
BwProcessExecutionTimeHigh BW Process execution time rate of increase exceeded limit. The rate is calculated by taking the delta of total execution time in this update period and dividing by the length of the period. Index Type: PerProcess Metric: RateTotalExecution	50	80	30	FALSE
BwProcessSuspendRateHigh BW Process suspended rate exceeded limit. The rate is calculated by taking the delta of total suspends in this update period and dividing by the length of the period. Index Type: PerProcess Metric: RateSuspended	50	80	30	FALSE

BwServerCpuUsedHigh BW Server CPU usage exceeded limit. CPU Usage is the CPU time in use by all processes expressed as a percentage of the total CPU time available.	60	85	30	FALSE
Index Type: PerServer				
Metric: CPU Usage%				
BwServerFreeMemLow BW Server free memory available is below limit. Free memory means available physical (RAM) memory. Index Type: PerServer	15	5	30	FALSE
Metric: Memory Free Mbytes				
BwServerInactive BW Server has become inactive. The period of time specified by the substitution variable \$bwserverExpirationTime has passed since data was last received from the server.	NaN	NaN	30	FALSE
Metric: Expired				
BwServerMemUsedHigh BW Server memory usage exceeded limit. Memory usage is the virtual memory in use expressed as a percentage of the available virtual memory. The meaning of available virtual memory is system-dependent: on Windows it refers to pagefile space; on Unix systems it refers to swap space. Index Type: PerServer	50	80	30	FALSE
Metric: Virtual Memory Used%				
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the	NaN	NaN	-1	TRUE
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the AlertText.	NaN	NaN	-1	TRUE
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the AlertText. Sl.rtview.sub=\$hawkAlertTextFilterOut:AlertText For example, to filter out all Hawk Alerts in which the AlertText contains Source you would enter the following:	NaN	NaN	-1	TRUE
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the AlertText. sl.rtview.sub=\$hawkAlertTextFilterOut:AlertText For example, to filter out all Hawk Alerts in which the AlertText contains Source you would enter the following: sl.rtview.sub=\$hawkAlertTextFilterOut:Source	NaN	NaN	-1	TRUE
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the AlertText. sl.rtview.sub=\$hawkAlertTextFilterOut:AlertText For example, to filter out all Hawk Alerts in which the AlertText contains Source you would enter the following: sl.rtview.sub=\$hawkAlertTextFilterOut:Source The default time to remove cleared Hawk Alerts from the table is 3600 seconds. To adjust this setting, edit the following in sample.properties:	NaN	NaN	-1	TRUE
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the AlertText. sl.rtview.sub=\$hawkAlertTextFilterOut:AlertText For example, to filter out all Hawk Alerts in which the AlertText contains Source you would enter the following: sl.rtview.sub=\$hawkAlertTextFilterOut:Source The default time to remove cleared Hawk Alerts from the table is 3600 seconds. To adjust this setting, edit the following in sample.properties: sl.rtview.sub=\$hawkAlertTextFilterOut:3600	NaN	NaN	-1	TRUE
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the AlertText. sl.rtview.sub=\$hawkAlertTextFilterOut:AlertText For example, to filter out all Hawk Alerts in which the AlertText contains Source you would enter the following: sl.rtview.sub=\$hawkAlertTextFilterOut:Source The default time to remove cleared Hawk Alerts from the table is 3600 seconds. To adjust this setting, edit the following in sample.properties: sl.rtview.sub=\$hawkAlertTextFilterOut:3600 Index Type: PerServer	NaN	NaN	-1	TRUE
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the AlertText. sl.rtview.sub=\$hawkAlertTextFilterOut:AlertText For example, to filter out all Hawk Alerts in which the AlertText contains Source you would enter the following: sl.rtview.sub=\$hawkAlertTextFilterOut:Source The default time to remove cleared Hawk Alerts from the table is 3600 seconds. To adjust this setting, edit the following in sample.properties: sl.rtview.sub=\$hawkAlertTextFilterOut:3600 Index Type: PerServer Metric: Hawk	NaN	NaN	-1	TRUE
Metric: Virtual Memory Used% HawkAlert Display Hawk alerts throughout the Monitor. To enable Hawk Alerts to be included in alert counts and displayed throughout the Monitor, scroll down to HawkAlert in the Active Alert Table and select the Alert Enabled checkbox. It is possible to filter unwanted alerts from the cache data so that those alerts are not included throughout the Monitor. To filter unwanted alerts out of the Hawk cache data, enter the following into the sample.properties file (located in the project directory you created). NOTE: Unwanted alerts are filtered out according to the AlertText. SI.rtview.sub=\$hawkAlertTextFilterOut:AlertText For example, to filter out all Hawk Alerts in which the AlertText contains Source you would enter the following: SI.rtview.sub=\$hawkAlertTextFilterOut:Source The default time to remove cleared Hawk Alerts from the table is 3600 seconds. To adjust this setting, edit the following in sample.properties: SI.rtview.sub=\$hawkAlertTextFilterOut:3600 Index Type: PerServer Metric: Hawk TymeCpuPercentHigh The percentage of CPU that has been reached by the JVM is above the limit. Index Type: PerJVM	NaN	NaN 75	-1	TRUE

JvmGcDutyCycleHigh The duty cycle is out the upper limit. Index Type: PerGC Metric: DutyCycle	50	75	30	FALSE
JvmMemoryUsedHigh The memory used out the upper limit Index Type: PerJVM Metric: MemoryUsedPercent	50	75	30	FALSE
JvmNotConnected The JVM in not connected. Index Type: PerJVM Metric: Connected	NaN	NaN	30	FALSE
JvmStaleData Cut in reception from that JVM. Index Type: PerJVM Metric: Expired	NaN	NaN	30	FALSE

TIBCO BusinessEvents Alerts

The following alerts are available with both the solution package and standalone versions for TIBCO \mbox{B} BusinessEvents \mbox{B} .

TbeBackingStoreEraseRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which entries are erased from the backing store exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .
TbeBackingStoreLoadRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which entries are loaded from the backing store exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .
TbeBackingStoreStoreRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which entries are written to the backing store exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .
TbeClusterMalformed	This alert executes for any cluster where the member count is not equal to the expected cluster size. The expected cluster size is a count of the number of nodes that have the same cluster name, as discovered by reading the cluster MBean for each node in the connection property file. The MemberCount attribute is also read from the same cluster MBean, and is the number of nodes in the (sub)cluster which the current node has joined.
	The condition where these counts differ can occur if there are missing connections in the property file (for example, some nodes are unmonitored). It can also occur if, due to network or other anomalies, some nodes do not join the "main" cluster, but instead form a "sub-cluster" of one or more nodes. This condition is commonly referred to as "split-brain".
TbeDestinationStatusRecvdEven tsRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which events are received from the channel exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .

TbeNodeConceptsGetRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which concepts are received from the cache exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .	
TbeNodeConceptsPutRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which concepts are written to the exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .	_ cache
TbeNodeConceptsRemoveRateHi gh	This alert executes a single warning alert and a single alarm alert if the rate which concepts are removed from the cache exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .	_
TbeNodeConnectionLoss	This discrete alert executes when the JMX Connection to the TIBCO BusinessEvents agent is lost (the TCP connection flag for an engine is false).	_
TbeNodeEventsGetRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which events are received from the cache exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .	
TbeNodeEventsPutRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which events are written to the cache exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .	_
TbeNodeEventsRemoveRateHigh	This alert executes a single warning alert and a single alarm alert if the rate which events are removed from the cache exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .	
TbeObjectTableExtldSize	This alert executes a single warning alert and a single alarm alert if the number of external object IDs exceeds the specified threshold. The warning default threshold is 9000 and the alarm default threshold is 10000 .	
TbeObjectTableSize	This alert executes a single warning alert and a single alarm alert if the number of objects maintained by the cache exceeds the specified threshold. The warning default threshold is 9000 and the alarm default threshold is 10000 .	_
TbeRuleFiringRateHigh	This alert executes a single warning alert and a single alarm alert if the rate at which rules are executing exceeds the specified threshold. The warning default threshold is 80 and the alarm default threshold is 95 .	

TIBCO Enterprise Message Service Alerts

The following alerts are available with both the solution package and standalone versions for TIBCO® Enterprise Message Service[™].

Alert Name	WARN. LEVEL	ALARM LEVEL	DURATION	ENABLED
EmsConsumerStalled Indicates consumers are stalled or are no longer consuming messages (have not received a message within a defined threshold). The server must be running for a minimum time (5 minutes by default) before this alert is triggered. Thresholds are in seconds. Note: This alert does not allow overrides. Index Type(s): PerConsumer: ID/ PerServerConsumer: URL; ID Metric: elapsedSinceLasAckInSec	85	95	30	FALSE
EmsQueueConsumerIdleTimeHigh The idle time of the queue consumer has reached its maximum. This alert is triggered when there is no change in the number of incoming messages for a queue within a specified period of time (in seconds). Index Type(s): PerQueue; PerServerQueue Metric: ConsumerIdleTime	60	80	30	FALSE
EmsQueueInboundDeltaHigh The number of new incoming messages for the EMS Queue has reached its maximum. Index Type(s): PerQueue; PerServerQueue Metric: DeltainboundTotalMessages	60	80	30	FALSE
EmsQueueMsgLatencyHigh The time, in seconds, needed to process all pending messages based on the current outbound message rate exceeded its threshold. This alert does not take into account queues with outbound message rate equals to zero. Index Type(s) : PerServerQueue:URL;name Metric : messageLatency	60	80	30	FALSE
EmsQueueProviderIdleTimeHigh The queue idle time exceeded the specified threshold. A queue is idle when the number of inbound messages remains unchanged. Index Type(s) : PerServerQueue:URL; name Metric : ProviderIdleTime	60	80	30	FALSE
EmsQueuesConsumerCountHigh The number of consumers of a queue exceeded the specified high threshold. Index Type(s): PerServerQueue:URL;name/ PerQueue:name Metric: consumerCount	60	80	30	FALSE

EmsQueuesConsumerCountLow	15	5	30	FALSE
The number of consumers of a queue is below the specified threshold.				
Index Type(s): PerServerQueue:URL;name/ PerQueue:name				
Metric: consumerCount				
EmsQueuesInMsgRateHigh	60	80	30	FALSE
The rate of inbound messages on the queue exceeded the specified threshold.				
Index Type(s): PerServerQueue:URL:name/ PerQueue:name				
Metric: inboundMessageRate				
EmsQueuesOutMsgRateHigh	60	80	30	FALSE
The number of outbound messages on the queue exceeded the specified threshold.				
Index Type(s): PerServerQueue:URL;name				
Metric: outboundMessageRate				
EmsQueuesPendingMsgsHigh	60	80	30	FALSE
The number of pending messages on the queue exceeded the specified threshold.				
Index Type(s): PerServerOueue: name: PerServerOueue: URL: name				
Metric: pendingMessageCount				
EmsQueuesProducerCountHigh	60	80	30	TRUE
The number of producers to a queue exceeded the specified high threshold.				
Index Type(s): PerQueue:name/ PerServerQueue:URL;name				
Metric: producerCount				
EmsQueuesProducerCountLow	15	5	30	TRUE
The number of producers to a queue is below the specified threshold.				
Index Type(s): PerQueue:name/ PerServerQueue:URL;name				
Metric: producerCount				
EmsServerAsyncDBSizeHigh	50	100	30	FALSE
The size of the Async database, in bytes, for the EMS Server reached its maximum.				
Index Type(s): PerServer:URL Metric: asyncDBSize				
EmsServerInboundDeltaHigh	60	80	30	FALSE
The number of new incoming messages for the				
Index Type(s): PerServer				
Metric: DeltainboundMessageCount				
EmsServerSyncDBSizeHigh	50	100	30	FAI SE
The size of the Sync database, in bytes, for the				
EMS Server reached its maximum.				
Index Type(s): PerServer:URL				
Metric: syncDBSize				

EmsServerConnectionCountHigh Alert is triggered when the number of connections to the server reaches the specified threshold. Index Type(s): PerServer:URL Metric: connectionCount	60	80	30	FALSE
EmsServerInMsgRateHigh The number of inbound messages on the server exceeded the specified threshold. Index Type(s): PerServer:URL Metric: inboundMessageRate	2	80	30	FALSE
EmsServerMemUsedHigh The percent memory used on the server exceeded the specified threshold. Index Type(s): PerServer:URL Metric: messageMemoryPct	60	80	30	FALSE
EmsServerNotStarted The server state is empty. The server is not started. Index Type(s): PerServer:URL Metric: NotStarted	NaN	NaN	30	FALSE
EmsServerOutMsgRateHigh The number of outbound messages on the server exceeded the specified threshold. Index Type(s): PerServer:URL Metric: outboundMessageRate	60	80	30	FALSE
EmsServerPendingMsgsHigh The number of pending messages in the server queue exceeded the specified threshold. Index Type(s): PerServer:URL Metric: pendingMessageCount	60	80	30	FALSE
EmsServerPendingMsgSizeHigh The size, in KB, of the pending messages stored on this EMS Server reached its maximum. Index Type(s): PerServer:URL Metric: pendingMessageCount	60	80	30	FALSE
EmsServerRouteState One or more routes on the server are not active. Index Type(s): PerServer:URL Metric: Alert State	NaN	NaN	30	FALSE
EmsServerStaleData The server stopped receiving data. Index Type(s): PerServer:URL Metric: Expired	NaN	NaN	30	FALSE

EmsTopicConsumerIdleTimeHigh	60	80	30	FALSE
The idle time of the topic consumer has reached its maximum. This alert is triggered when there is no change in the number of incoming messages for a topic within a specified period of time (in seconds).				
Index Type(s): PerTopic; PerServerTopic				
Metric: ConsumerIdleTime				
EmsTopicInboundDeltaHigh	60	80	30	FALSE
The number of new incoming messages for the EMS Topic has reached its maximum.				
Index Type(s): PerTopic; PerServerTopic				
Metric: DeltainboundTotalMessages				
EmsTopicMsgLatencyHigh	60	80	30	FALSE
The time, in seconds, needed to process all pending messages based on the current outbound message rate exceeded its threshold. This alert does not take into account topics with outbound messages rates equal to zero.				
Index Type(s): PerServerTopic				
Metric: messageLatency				
EmsTopicProviderIdleTimeHigh	60	80	30	FALSE
The topic idle time exceeded the specified threshold. A topic is idle when the number of inbound messages remains unchanged.				
Metric: ProviderIdleTime				
EmsTopicsConsumerCountHigh	60	80	30	FALSE
The number of consumers for the topic exceeded the specified threshold.				
Index Type(s): PerServerTopic:URL;name				
Metric: consumerCount				
EmsTopicsConsumerCountLow	60	80	30	FALSE
The number of consumers for the topic is below the specified threshold.				
Index Type(s): PerServerTopic				
Metric: consumerCount				
EmsTopicsInMsgRateHigh	60	80	30	FALSE
The number of inbound messages for the topic exceeded the specified threshold.				
Index Type(s): PerServerTopic				
Metric: inboundMessageRate				
EmsTopicsOutMsgRateHigh	60	80	30	TRUE
The rate of outbound messages for the topic exceeded the specified threshold.				
Index Type(s): PerServerTopic				
Metric: outboundMessageRate				

EmsTopicsPendingMsgsHigh	50	75	30	FALSE
The number of pending messages on the queue for the topic exceeded the specified threshold.				
Index Type(s): PerTopic				
Metric: pendingMessageCount				
EmsTopicsProducerCountHigh	60	80	30	TRUE
The number of active producers for this topic exceeded the specified high threshold.				
Index Type(s): PerTopic/PerServerTopic Metric: producerCount				
EmsTopicsProducerCountLow	60	80	30	TRUE
The number of producers for the topic is below the specified threshold.				
Index Type(s): PerTopic/PerServerTopic				
Metric: producerCount				
EmsTopicsSubscriberCountHigh	50	75	30	FALSE
The number of subscribers for the topic exceeded the specified threshold.				
Index Type(s): PerServerTopic				
JvmCpuPercentHigh	30	40	30	FALSE
threshold.				
Index Type(s): PerJVM				
Metric: CpuPercent				
JvmGcDutyCycleHigh	50	75	30	FALSE
The JVM Garbage Collection contains an item that exceeded the specified duty cycle threshold (the percent of time spent in Garbage Collection).				
Index Type(s): PerGC				
Metric: TimeUsedPercent				
JvmMemoryUsedHigh	50	75	30	FALSE
The percent JVM memory used exceeded the specified threshold.				
Index Type(s): PerJVM				
Metric: MemoryUsedPercent				
JvmNotConnected	NaN	NaN	30	FALSE
The JVM is not connected.				
Index Type(s): PerJVM Metric: Connected				
	NeN	NeN	20	
The IVM stopped receiving data			30	FALSE
Index Type(s): PerJVM				
Metric: Expired				
	1	1	1	1

APPENDIX D Custom Solution Packages - Best Practices

This section includes:

- "Overview" on page 341
- "Functions" on page 341: Describes property format, filters and naming conventions.
- "Include Files" on page 342: Describes properties for modifying display behavior, such as drill-down targets.
- "Naming Conventions" on page 342: Describes substitutions available for modifying display behavior.

Overview

There are a number of guidelines and best practices that are good to be aware of when creating a new Solution Package. The goal of these guidelines is twofold:

- Segregation of graphical information from data manipulation.
- Improve efficiency and ease development.

The Demo CSP described in this document follows these Best Practices.

Functions

Although caches can be connected to directly to graphical objects, one reference function to the corresponding table of the cache should be used instead in order to isolate graphical visualization from other data and improve performance. This also provides a convenient interface to the cache should one ever desire to aggregate the cache with data after being stored in the cache. These functions should filter out either the "current" table or the "history-combo" table and the files where they are stored should be named accordingly (i.e. *current?_include or *_history?_include) which is discussed in more detail below. Functions are commented in more detail in the "The Custom SP Example" on page 257 and in the *RTView Core & User's Guide* at http://www.sl.com/services/docs.shtml under the heading "Functions".

Include Files

Separating out graphical components from data handling allows improving efficiency by enclosing distinct types of functionality into different include files (files that will be "included" in other ***.rtv** files). This allows each display to be optimized by only containing the data it needs. Therefore, one function that is used in multiple files will be defined in just one include file, which will be included as many times as needed.

Naming Conventions

To systematically name all elements of a Solution Package, there is a complete set of rules defined. This section includes:

- "File Naming Conventions" on page 342
- "Cache Naming Conventions" on page 344
- "Alert Naming Conventions" on page 345

File Naming Conventions

This section includes:

- "Cache Definition Files" on page 342
- "Alert Definition File" on page 342
- "Include Current Files" on page 343
- "Include History Files" on page 343
- "Display Files" on page 343
- "Common Files" on page 344
- "Navigation Files" on page 344

Cache Definition Files

All files start with a prefix associated with package name and separator is underbar ('_'). That is: **[pkg]_[item]_cache.rtv**

Examples:

gfs_server_cache.rtv, where [pkg] = 'gfs', and [item] = 'server'

wls_servlet_cache.rtv, where [pkg] = 'wls', and [item] = 'servlet'

bird_cache.rtv, where [pkg] = bird, and [item] = empty

Alert Definition File

As a general rule, there is one alert definition file per Solution Package. The name of this file should follow the pattern: **[pkg]_alertdefs.rtv**

Examples:

gfs_alertdefs.rtv

wls_alertdefs.rtv

bird_alertdefs.rtv

Include Current Files

These files contain the functions extracting the current table of the cache. That is: [pkg]_[item]_current_include.rtv

Examples:

gfs_server_current_include.rtv

wls_servlet_current_include.rtv

bird_current_include.rtv

To avoid transfer delays when the amount of data being transferred is large, it is recommended to create one-item current include files. These files use filtering substitutions that will be used to filter the current table. The naming convention for these files is as follows: [pck]_[item]_current1_include.rtv

Examples:

gfs_server_current1_include.rtv

wls_app_current1_include.rtv

bird_current1_include.rtv

Include History Files

These files contain the functions extracting the history and/or history-combo table of the cache. These files are for one item from the table. This improves performance - filtering all data from the history tables for all items is discouraged. These files define a variable that will be used to filter the history-combo table. In general, these files are included to reach the functions providing the past data for trend graphs. The naming convention for these files is as follows: [pck]_[item]_history[1]_include.rtv

Examples:

gfs_server_history1_include.rtv, where pkg = gfs, and item = server

wls_app_history1_include.rtv, where pkg = wls, and item = app

bird_history1_include.rtv, where pkg = item = bird

Display Files

All files start with a prefix associated with package name and separator is underbar ('_'). [pkg]_[indexing|reference]_[mainGraphObject|subject]

Examples:

gfs_allservers_heatmap.rtv, where [pkg] = 'gfs', [indexing] = 'allservers', and [mainGraphObject] = 'heatmap'

wls_allapps_table.rtv, where [pkg] = 'wls', [indexing] = 'allapps', and [mainGraphObject] = 'table'

bird_summary.rtv, where [pkg] = bird, [indexing] = empty, and [subject] = 'summary', which shows a single bird at a time. In the Demo CSP, we have omitted [indexing|reference].

Common Files

To maintain look-and-feel with the same filtering structure across the Solution Package, we use 'common' files. These files contain the standardized filtering mechanism to be used for a group of displays. The naming convention is as follows: [pkg]_common_[group].rtv

Examples:

gfs_common_allservers.rtv, where pkg = 'gfs', and group = 'allservers'

wls_common_server.rtv, where pkg = 'wls', and group = 'server'

bird_common.rtv, where pkg = 'bird'

Navigation Files

To define the displays of the Solution Package and its arrangement, two files, with the following naming conventions, are needed: [pkg]_navtree.xml and [pkg]_panels.xml

Examples:

custom_navtree.xml

custom_panels.xml

Cache Naming Conventions

This section includes:

- "Cache Names" on page 344
- "Include Current Functions" on page 344
- "Include History Functions" on page 345

Cache Names

All cache names are camel case and start with the package prefix. The naming convention is: [Pkg][Item][Totals][By[Grouping]].rtv

Examples:

GfsWebModuleTotalsByApp, where Pkg = 'Gfs', and Grouping = 'App'

WIsSessionStats, where Pkg = 'WIs', and Item = 'SessionStats'

BirdData, where Pkg = Item = 'Bird'

Include Current Functions

These functions extract the current table of the cache. The naming convention is: [cacheName]Current. All function names start with lowercase while cache names start with uppercase.

Examples:

gfsSessionTotalsCurrent, where cacheName = 'gfsSessionTotals'

wIsThreadPoolRuntimeCurrent, where cacheName = 'wIsTheadPoolRuntime'

birdDataCurrent, where cacheName = 'birdData'

When the amount of data being transferred is large, one needs to create the one-item current functions. These functions use a filtering variable that will be used to extract only the necessary data from the current table. The naming convention for these functions is as follows: [cacheName]CurrentFor[Item]

Examples:

gfsServerInfoCurrentForServer, where cacheName = 'gfsServerInfo', and Item = 'Server'

wlsJmsPooledConnectionRuntimeCurrentForServer, where cacheName = 'wlsJmsPooledConnectionRuntime', and Item = 'Server'

Include History Functions

These functions extract the history and/or history-combo table of the cache filtered for one single item. The naming convention is: [cacheName]History[For[Item]].

Examples:

gfsSessionTotalsHistoryForServer, where cacheName = 'gfsSessionTotals', and Item = 'Server'

wlsServletTotalsByAppHistoryForServer, where cacheName = 'wlsServletTotalsByApp', Item = 'Server'

birdDataHistoryForBird, where cacheName = 'birdData', Item = 'Bird'

Alert Naming Conventions

To be uniquely identified, alerts should start with the Solution Package prefix. File name should be camel case starting with uppercase and follow the pattern: [Pkg][Metric][AlertDirection]

Examples:

GfsActiveSessionCountHigh, where Pkg = 'Gfs', Metric = 'ActiveSessionCount', AlertDirection = 'High'

WIsHoggingThreadsHigh, where Pkg = 'WIs', Metric = 'HoggingThreads', and AlertDirection = 'High'

BirdTooHigh, where Pkg = 'Bird', and AlertDirection = 'TooHigh'

APPENDIX E Limitations

iPad Safari Limitations

- In the iPad settings for Safari, JavaScript must be ON and Block Pop-ups must be OFF. As of this writing, the Thin Client has been tested only on iOS 4.3.5 in Safari.
- The iPad does not support Adobe Flash, so the Fx graph objects (obj_fxtrend, obj_fxpie, obj_fxbar) are unavailable. The Thin Client automatically replaces the Fx graph objects with the equivalent non-Fx object (obj_trendgraph02, obj_pie, obj_bargraph). Note that the replacement objects behave the same as the Fx objects in most cases but not in all. In particular, obj_trendgraph02 does not support the sliding cursor object nor the legendPosition property. Custom Fx objects are not supported on the iPad.
- The Thin Client implements scrollbars for table objects and graph objects. However, unlike the scrollbars used on desktop browsers, the scrollbars used on the iPad do not have arrow buttons at each end. This can make it difficult to scroll precisely (for example, row by row) on objects with a large scrolling range.
- At full size, users may find it difficult to touch the intended display object without accidentally touching nearby objects and performing an unwanted drill-down, sort, scroll, and so forth. This is particularly true of table objects that support drill-down and also scrolling, and also in panel layouts that contain the tree navigation control. In those cases, the user may want to zoom the iPad screen before interacting with the Thin Client.
- If the iPad sleeps or auto-locks while a Thin Client display is open in Safari, or if the Safari
 application is minimized by clicking on the iPad's home button, the display is not updated
 until the iPad is awakened and Safari is reopened. In some cases it may be necessary to
 refresh the page from Safari's navigation bar.

Because the iPad uses a touch interface there are differences in the Thin Client appearance and behavior in iOS Safari as compared to the conventional desktop browsers that use a cursor (mouse) interface, such as Firefox and Internet Explorer. These are described below.

- Popup browser windows: An RTView object's drill-down target can be configured to open a display in a new window. In a desktop browser, when the RTView object is clicked the drill-down display is opened in a popup browser window. But in iOS Safari 4.3.5, only one page is visible at a time, so when the RTView object is touched a new page containing the drill-down display opens and fills the screen. The Safari navigation bar can be used to toggle between the currently open pages or close them.
- Mouseover text: When mouseover text and drill-down are both enabled on an RTView object (for example, a bar graph), in iOS Safari the first touch on an element in the object (for example, a bar) displays the mouseover text for that element and the second touch on the same element performs the drill-down.
- Resize Mode and Layout: By default, the Display Server runs with **resizeMode** set to **crop**. In **crop** mode, if a display is larger than the panel that contains it only a portion of the display is visible. In a desktop browser, scrollbars become available to allow the user to scroll to view the entire display. In iOS Safari, scrollbars do not appear but the display can be scrolled by dragging two fingers inside the display. (Dragging one finger scrolls the entire page, not the display).

If the Display Server is run with **resizeMode** set to **scale** or **layout**, the display is resized to fit into the panel that contains it. If a desktop browser is resized after a display is opened, the display is resized accordingly. On the iPad, the Safari browser can only be resized by reorienting the iPad itself, between portrait mode and landscape mode.

The panel layout feature is supported in the Thin Client. However, unlike a desktop browser which resizes to match the layout size, the size of Safari is fixed. So if the Display Server is run with **resizeMode** set to **crop** or **scale** mode, there may be unused space at the edges of the display(s) or, in **crop** mode, the panels and displays may be cropped.

This means that **layout** mode should be used for best results on the iPad. For layout mode to be most effective, displays should use the **anchor** and **dock** object properties. Please see RTView documentation for more information.

 Scrolling: The Thin Client implements scrollbars for table objects and graph objects. The scrollbars are activated by dragging with one finger.

If an RTView display is viewed in **crop** mode and is too large to be displayed entirely in Safari, scrollbars do not appear (as they would in a desktop browser) but the display can be scrolled by dragging with two fingers inside the display.

Scrollbars do not ever appear in a text area control. If the text area contains more text than is visible, use the two finger drag in the text area to scroll the text.

Regardless of the size of a listbox control, it can only display a single item (typically, the selected item). When the listbox is touched, the list of items appear in a popup list. In other words, on iOS Safari the listbox control and the combobox control behave identically.

Context menu: The Thin Client context menu is opened by a right mouse button click in a desktop browser. It is opened in iOS Safari by touching any location on a display and holding that touch for 2 seconds. The menu appears in the top left corner of the display, regardless of where the display is touched. The items **Export Table to Excel**, **Drill Down**, and **Execute Command** are not included on the context menu in Safari. All other items are available. The **Export Table to HTML** item is enabled if a table object is touched (unless the table object's drillDownTarget is configured to open another display). After an **Export to PDF/HTML** is performed, the exported content opens on another page in Safari. From there, the content can either be opened by another application (for example, the iBooks application opens PDF) and emailed, or it can be copied ands pasted into an email.

APPENDIX F Third Party Notice Requirements

This section includes:

- "RTView EM" on page 351
- "RTView Core®" on page 356

RTView EM

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Version 3, 29 June 2007

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**JQuery

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That's all there is to it!

Glossary

Alert Alarm Level. An alert threshold that, when exceeded, executes an alarm alert.

AlertClass. An optional alert field which can be used when integrating with other alerting systems.

Alert Count. The total number of critical and warning alerts.

Alert Duration. The amount of time to wait before executing an alert.

Alert Impact. The product of the maximum Alert Severity multiplied by the maximum Criticality of alerts for a group of resources. Values range from 0 - 10, where 10 is the highest Alert Impact.

Alert Index. The index of the alert which identifies its source.

Alert Index Type. Index Type refers to the manner in which alert settings are applied and vary among Packages. For example, JVMs have a PerJvm Index Type. The EMS Monitor has PerServer, PerTopic and PerQueue Index Types, which apply alerts to servers, topics and queues, respectively.

Alert Server. A server process that maintains an internal cache of aggregated alerts and their current state.

Alert Severity. The maximum level of alerts for a group of resources. Values range from 0 - 2, where 2 is the highest Alert Severity.

Alert Threshold. A value that, when exceeded, executes an alert.

Alert Warning Level. An alert threshold that, when exceeded, executes a warning alert.

Area. The second level in the CMDB hierarchy.

Arguments. Arguments that are used to execute a command. For example, to start an application.

Base at Zero. Uses zero as the Y axis minimum in a graph.

Cache. A temporary storage area for frequently or recently accessed data.

CI. Configurable Item.

CI Type. A classification automatically assigned by the CMDB. CI Types are determined by the role of the CI, and the name of the CI Type describes the role. For example, a BusinessWorks application process is a BW-PROCESS CI Type, a BusinessWorks server is a BW-SERVER CI Type and an Oracle database is an ORACLE CI Type.

CMDB. Central Management Database. The RTView Enterprise Monitor database that contains the mapping of all Configuration Items (CIs) in your system to Services. The CMDB has four hierarchical levels: Owner, Area, Group and Service.

Component. A monitored resource. Also the lowest level in the CMDB hierarchy.

Command Line Arguments. Arguments used to execute commands on a resource.

Configuration Server. A server process that acts as the proxy for all database connections to the system and maintains information relevant to the Service Data Model, System Configuration information, and alert configuration.

Criticality. The rank of importance for a group of resources. Values range from 1 to 5, where 5 is the highest Criticality. Criticality is manually specified in the Service Data Model (CMDB). Criticality values are listed in the Component Views / CI Service Table display, which range from A to E, where A is the highest Criticality (level 5 maps to a Criticality of A and level 1 maps to a Criticality of E with equally spaced intermediate values).

Display Timeout (seconds). The amount of time, in seconds, that a display can be kept in memory after the Display Servlet has stopped requesting it.

Drill-down. A display or object that opens another display containing more detailed data when a user clicks it.

Environment. The fifth level in the CMDB hierarchy.

Expired. The resource is expired due to inactivity.

Filter. To limit display content to only those items that pass through the selected filter's criteria. If no items match the filter, you might have zero search results (an empty table).

Group. The third level in the CMDB hierarchy.

Log Scale. A logarithmic scale which shows usage correlations for data with a wide range of values.

Owner. The top level in the CMDB hierarchy.

RegEx. Toggles the Search Text field to accept Regular Expressions for filtering.

Service. The fourth level in the CMDB hierarchy.

View. A group of displays in the RTView Enterprise Monitor navigation tree.

Viewer. The Viewer is a Java application which can be installed on desktops and provides the same user interface as the browser-based version.