CHAPTER 1

Understanding Cisco Unified Real-Time Monitoring Tool

Note This document uses the following abbreviations to identify administration differences for these Cisco products:
Unified CM refers to Cisco Unified Communications Manager
Unified CM BE refers to Cisco Unified Communications Manager Business Edition
Connection refers to Cisco Unity Connection

The Cisco Unified Real-Time Monitoring Tool (RTMT), which runs as a client-side application, uses HTTPS and TCP to monitor system performance, device status, device discovery, CTI applications, and voice messaging ports. RTMT can connect directly to devices via HTTPS to troubleshoot system problems.

Note Even when RTMT is not running as an application on your desktop, tasks such as alarm and performance monitoring updates continue to take place on the server in the background.

RTMT allows you to perform the following tasks:

- Monitor a set of predefined management objects that monitor the health of the system.
- Generate various alerts, in the form of e-mails, for objects when values go over/below user-configured thresholds.
- Collect and view traces in various default viewers that exist in RTMT.
- *Unified CM and Unified CM BE only:* Translate Q931 messages.
- View syslog messages in SysLog Viewer.
- Work with performance-monitoring counters.

This chapter contains information on the following topics:

Services, Servlets, and Service Parameters on the Server

To support the RTMT client, several services need to be active and running on the server. RTMT uses the following services/servlets:

- Cisco AMC service—This service starts up automatically after the installation and allows RTMT to retrieve real-time information from the server or from a server in a cluster (if applicable).

Caution *Unified CM clusters only:* You must configure a second server as the failover collector in Cisco Unified Communications Manager Administration, so RTMT can continue to retrieve information if the primary collector fails. Otherwise, RTMT cannot retrieve information if the primary collector has failed.

The following list comprises some Cisco AMC service parameters that are associated with RTMT:

  - Primary Collector
  - Failover Collector
  - Data Collection Enabled
  - Data Collection Polling Rate
  - Server Synchronization Period
  - RMI Registry Port Number
  - RMI Object Port Number
  - *Unified CM and Unified CM BE only:* Alert Manager Enabled
  - *Unified CM BE and Connection only:* AlertMgr Enabled
  - Logger Enabled
  - *Unified CM and Unified CM BE only:* Alarm Enabled
  - *Unified CM BE and Connection only:* PerfMon Log Deletion Age

Note For the latest list of parameters, go to the Service Parameters window of the Cisco Unified CM Administration interface; then, choose Cisco AMC service.

Note For information on these service parameters, see the service parameter Help.

- Cisco Communications Manager servlet (in the Control Center—Network Services window in Cisco Unified Serviceability)—This service, which supports the Cisco Unified Real-Time Monitoring Tool (RTMT), starts up automatically after the installation.
- Cisco RIS Data Collector (in the Control Center—Network Services window in Cisco Unified Serviceability)—The Real-time Information Server (RIS) maintains real-time information such as performance counter statistics, critical alarms generated, and so on. The Cisco RIS Data Collector service provides an interface for applications, such as Cisco Unified Real-Time Monitoring Tool (RTMT), SOAP applications, and AlertMgrCollector (AMC) to retrieve the information that is stored on the server.

- Cisco Tomcat Stats Servlet (in the Control Center—Network Services window in Cisco Unified Serviceability)—The Cisco Tomcat Stats Servlet allows you to monitor the Tomcat perfmon counters by using RTMT or the Command Line Interface. Do not stop this service unless you suspect that this service is using too many resources, such as CPU time.
- Cisco Trace Collection Servlet (in the Control Center—Network Services window in Cisco Unified Serviceability)—The Cisco Trace Collection Servlet, along with the Cisco Trace Collection Service, supports trace collection and allows users to view traces by using the RTMT client. If you stop this service on a server, you cannot collect or view traces on that server.
- Cisco Trace Collection Service (in the Control Center—Network Services window in Cisco Unified Serviceability)—The Cisco Trace Collection Service, along with the Cisco Trace Collection Servlet, supports trace collection and allows users to view traces by using the RTMT client. If you stop this service on a server, you cannot collect or view traces on that server.
- Cisco Log Partition Monitoring Tool (in the Control Center—Network Services window in Cisco Unified Serviceability)—This service, which starts up automatically after the installation, monitors the disk usage of the log partition on a server.
- Cisco SOAP-Real-Time Service APIs (in the Control Center—Network Services window in Cisco Unified Serviceability)—The Cisco SOAP-Real-Time Service APIs, which start up automatically after the installation, allow you to collect real-time information for devices and CTI applications.
- Cisco SOAP-Performance Monitoring APIs (in the Control Center—Network Services window in Cisco Unified Serviceability)—This service, which starts up automatically after the installation, allows you to use performance monitoring counters for various applications through SOAP APIs.
- Cisco RTMT Reporter servlet (in the Control Center—Network Services window in Cisco Unified Serviceability)—This service, which starts up automatically after the installation, allows you to publish reports for RTMT.
- Cisco Serviceability Reporter (in the Control Center—Feature Services window in Cisco Unified Serviceability)—The Cisco Serviceability Reporter service allows you to publish reports for RTMT.

Additional Information

See the "Related Topics" section on page 1-5.

Nonconfigurable Components on the Server (RTMT Collector, Alert Manager, and RTMT Reporter)

RTMT Collector, a component that automatically gets installed with the application, logs preconfigured monitoring objects information while Alert Manager, also automatically installed, logs alert histories into log files. Each preconfigured object belongs to one of several categories: devices, services, servers, call activities, and PPR. Each category uses a separate log file, and alert details also get logged in a separate file.

The system also records important perfmon object values in performance log files.

Tip *Unified CM clusters only:* Although they require no configuration tasks to run, RTMT Collector and Alert Manager support redundancy. If the primary collector or manager fails for any reason, the secondary collector and manager perform the tasks until primary support becomes available. RTMT Collector, Alert Manager, and RTMT Reporter run on the first server to minimize call-processing interruptions.

The locally written log files appear in the primary collector server at cm/log/amc. For Cisco Unified Communications Manager clusters, the log files can exist on more than one server in the cluster because the primary collector changes in failover and fallback scenarios.

You can display log files, except an alert log file, by using the Performance log viewer in RTMT or by using the native Microsoft Performance viewer. For more information on using the Performance log viewer in RTMT, refer to "Where to Find More Information" section on page 6-11. You can view an alert log file by using any text editor.

To download log files to a local machine, you can use the collect files option in Trace and Log Central in RTMT. For more information on downloading log files by using the collect files option, refer to "Collecting Trace Files" section on page 11-3.

Alternatively, from the command line interface (CLI), you can use the file list command to display a list of files and the file get command to download files by SFTP. For more information on using CLI commands, refer to the *Command Line Interface Reference Guide for Cisco Unified Solutions*.

Log files exist in csv format. New log files get created every day at 00:00 hours on the local system. For Cisco Unified Communications Manager clusters, new logs for devices, services, servers, and calls are created when the time zone changes, when a new server is added to the cluster, or during failover/fallback scenarios. The first column of all these logs comprises the time zone information and the number of minutes from the Greenwich Meridian Time (GMT). RTMT Reporter uses these log files as a data source to generate daily summary reports. The report, which is based on the default monitoring objects, generates every 24 hours for the following information:

- Call Activity Status—Number of calls attempted and number of calls completed for each Cisco Unified Communications Manager, each gateway, trunk, and overall cluster (if applicable). Number of channels available, in-service for each gateway.
- Device Status—Number of registered phones, gateways, and trunks per each server and overall cluster (if applicable).
- Server Status—% CPU load,% memory used,% disk space used per server.
- Service Status —*(Unified CM and Unified CM BE only)* For each CTI Manager, number of opened devices and lines. For each TFTP server, number attempted and failed requests.
- Alert Status—Number of alerts per server. For Cisco Unified Communications Manager clusters, number of alerts per severity level for the cluster, including the top 10 alerts in the cluster.
- Performance Protection Report—Trend analysis information on default monitoring objects that allows you to track overall system health. The report includes information for the last 7 days for each server.

Tip The RTMT reports display in English only.

The following service parameters apply to RTMT report generation: RTMT Reporter Designated server, RTMT Report Generation Time, and RTMT Report Deletion Age. For information on these parameters, go to the service parameter Help for your configuration:

Cisco Unified Communications Manager	Choose Cisco Serviceability Reporter in the Service Parameter window in Cisco Unified Communications Manager Administration and click the ? button.

Cisco Unified Communications Manager Business Edition	Choose Cisco Serviceability Reporter in the Service Parameter window in Cisco Unified Communications Manager Administration and click the ? button.
Connection	On the Service Parameters window, in the Service drop-down list box, click a service and click **Help > This Page**.

For more information on the Serviceability reports, see the "Serviceability Reports" chapter in *Cisco Unified Serviceability Administration Guide*.

Additional Information

See the "Related Topics" section on page 1-5.

Where to Find More Information

Related Topics

- Services, Servlets, and Service Parameters on the Server, page 1-2
- Nonconfigurable Components on the Server (RTMT Collector, Alert Manager, and RTMT Reporter), page 1-3