Alerts

This chapter contains information on the following topics:

Understanding Alerts

RTMT, which supports alert defining, setting, and viewing, contains preconfigured and user-defined alerts. Although you can perform configuration tasks for both types, you cannot delete preconfigured alerts (whereas you can add and delete user-defined alerts). The Alert menu comprises the following menu options:

- Alert Central—This option comprises the current status and history of every alert in the Cisco CallManager cluster.

Note You can also access Alert Central by using the Alert tab in the left controlling center in the RTMT monitoring pane.

- Alert/Properties—This menu option allows you to set alerts and alert properties.
- Remove Alert—This menu category allows you to remove an alert.
- Enable Alert—With this menu category, you can enable alerts.
- Disable Alert—You can disable an alert with this category.
- Suspend cluster/node Alerts—This menu category allows you to temporarily suspend alerts on a particular Cisco CallManager node or on the entire cluster.
- Clear Alerts—This menu category allows you to reset an alert (change the color of an alert item from red to black) to signal that an alert has been taken care of. After an alert has been raised, its color will automatically change to red in RTMT and will stay that way until you manually clear the alert.
- Clear All—This menu category allows you to clear all alerts.
- Alert Events Detail—This menu category provides detailed information on alert events.

- Config Email Server—In this category, you can configure your e-mail server to enable alerts.
- Config Alert Action—This category allows you to set actions to take for specific alerts; you can configure the actions to send the alerts to desired e-mail recipients.

In RTMT you can configure alert notification for perfmon counter value thresholds, for schedule for alert checking, and for status change of device (for example, port is out of service).

The Tools tab below the Quick Launch Channel includes the Alert Central category. Alert Central provides both the current status and the history of all the alerts in the Cisco CallManager cluster. To monitor Cisco CallManager alerts, use the Tools tab in conjunction with the Alert menu option under the Tools menu.

Preconfigured Alerts

RTMT comprises a set of preconfigured alerts. You cannot delete these alerts; however, you can enable or disable them in Alert Central.

The following list comprises the preconfigured alerts in RTMT:

- BeginThrottlingCallListBLFSubscriptions
- CallProcessingNodeCpuPegging
- CDRAgentSendFileFailed
- CDRFileDeliveryFailed
- CDRHighWaterMarkExceeded
- CDRMaximumDiskSpaceExceeded
- CodeYellow
- CriticalServiceDown
- DBReplicationFailure
- ExcessiveVoiceQualityReports
- LogFileSearchStringFound
- LogPartitionHighWaterMarkExceeded
- LogPartitionLowWaterMarkExceeded
- LowActivePartitionAvailableDiskSpace
- LowAttendantConsoleServerHeartbeatRate
- LowAvailableVirtualMemory
- LowCallManagerHeartbeatRate
- LowInactivePartitionAvailableDiskSpace
- LowSwapPartitionAvailableDiskSpace
- LowTFTPServerHeartbeatRate
- MaliciousCallTrace
- MediaListExhausted
- MgcpDChannelOutOfService
- NonCallProcessingNodeCpuPegging

- NumberOfRegisteredGatewaysDecreased
- NumberOfRegisteredGatewaysIncreased
- NumberOfRegisteredMediaDevicesDecreased
- NumberOfRegisteredMediaDevicesIncreased
- NumberOfRegisteredPhonesDropped
- RouteListExhausted
- ThreadCounterUpdateStopped

Alert Customization

You can configure both preconfigured and user-defined alerts in RTMT; however, you cannot delete preconfigured alerts. You can also disable both preconfigured and user-defined alerts in RTMT. You can add and delete user-defined alerts in the performance-monitoring window.

Table 7-1 provides a list of fields that you will use to configure each alert; users can configure preconfigured fields, unless otherwise noted.

Table 7-1 Alert Customization

Field	Description	Comment
Alert Name	High-level name of the monitoring item with which RTMT associates an alert	Descriptive name. For preconfigured alerts, you cannot change this field. See the "Enabling Trace Download" section on page 7-6.
Description	Description of the alert	You cannot edit this field for preconfigured alerts. See the "Enabling Trace Download" section on page 7-6.
Perfmon Counters	List of source perfmon counters	For preconfigured alerts, you cannot change this field.
Value Threshold	Condition to raise alert (value is...)	Specify up < - > down, less than #, %, rate greater than #, %, rate.
Evaluation Method	Method used to check the threshold condition	Specify value to be evaluated as absolute, delta (present - previous), or % delta.
Duration Threshold	Condition to raise alert (how long value threshold has to persist before raising alert)	Options include right away and specify at least X minutes.
Number of Events Threshold	Raise alert only when a configurable number of events exceed a configurable time interval (in minutes).	For ExcessiveVoiceQualityReports, the default thresholds equal 10 to 60 minutes. For RouteListExhausted and MediaListExhausted, the defaults equal 0 to 60 minutes.

Table 7-1 Alert Customization (continued)

Field	Description	Comment
Node IDs	Cluster or list of nodes to monitor	Cisco CallManager nodes, Cisco TFTP node, or first node. **Note** When you deactivate both Cisco CallManager and Cisco TFTP services of a node, the system considers that node as removed from the currently monitored node list. When you reactivate both Cisco CallManager and Cisco TFTP services, that node gets added back, and its settings get restored to default values.
Alert Action ID	ID of alert action to take (System always logs alerts no matter what the alert action.)	Alert action gets defined first (see the "Alert Action Configuration" section on page 7-5). If this field is blank, that indicates that e-mail is disabled.
Disabled	Alert disabled	Options include enabled or disabled.
Clear Alert	Resets alert (change the color of an alert item from red to black) to signal that the alert has been resolved	After an alert has been raised, its color will automatically change to red and stay that way until you manually clear the alert. Use Clear All to clear all alerts.
In Safe Range	Indicates whether an alert threshold condition has been met (not configurable)	This field does not apply to MaliciousCall and Registered YYY types of alerts. For DChannel OOS alert, this field remains YES only when you no longer have any outstanding OOS devices. The Code Yellow alert will be back in safe range only when you receive a CodeYellowExit event from Cisco CallManager.
Alert Details	Displays the detail of an alert (not configurable)	For VoiceQualityReports, RouteListExhausted, and MediaListExhausted, up to 30 current event details display in the current monitoring interval if an alert has been raised in the current interval. Otherwise, the previous 30 event details in the previous interval displays. For DChannel OOS alert, the list of outstanding OOS devices at the time the alert was raised displays.

Table 7-1 Alert Customization (continued)

Field	Description	Comment
Alert Generation Rate	How often to generate alert when alert condition persists	Specify every X minutes. (Raise alert once every X minutes if condition persists.) Specify every X minutes up to Y times. (Raise alert Y times every X minutes if condition persists.)
User Provide Text	Administrator to append text on top of predefined alert text	N/A
Severity	For viewing purposes (for example, show only Sev. 1 alerts)	Specify defaults that are provided for predefined (for example, Error, Warning, Information) alerts.
Collection Polling Rate	Same rate for both preconfigured and user-defined alerts	Although not configurable through RTMT Alert Central, you can customize this through Cisco CallManager Administration in Service Parameters.

Alert Action Configuration

In RTMT, you can configure alert actions for every alert that is generated and have the alert action sent to e-mail recipients that you specify in the alert action list.

Table 7-2 provides a list of fields that you will use to configure alert actions. Users can configure all fields, unless otherwise marked.

Table 7-2 Alert Action Configuration

Field	Description	Comment
Alert Action ID	ID of alert action to take	Specify descriptive name.
Mail Recipients	List of e-mail addresses. You can selectively enable/disable an individual e-mail in the list.	N/A
Global Alert Action Flag	Flag to effectively disable all e-mails	If you disable this flag, no e-mails get sent out, even though alerts occur.

Enabling Trace Download

Some preconfigured alerts will allow you to initiate a trace download based on the occurrence of an event. You can automatically capture traces when a particular event occurs by checking the Enable TCT Download check box in Set Alert/Properties for the following alerts:

- CriticalServiceDown
- CodeYellow

Caution Enabling TCT Download may affect services on the server. Configuring a high number of downloads will adversely impact the quality of services on the server.

Understanding Alert Logs

The alert log stores the alert, which is also stored in memory. The memory gets cleared at a constant interval, leaving the last 30 minutes of data in the memory. When the service starts/restarts, the last 30 minutes of the alert data load into the memory by the system reading from the alert logs that exist in all servers in the cluster. The alert data in the memory gets sent to the RTMT clients on request.

Upon RTMT startup, RTMT shows all logs that occurred in the last 30 minutes in the Alert Central log history. Alert log periodically gets updated, and new logs get inserted into the log history window. After the number of logs reaches 100, RTMT removes the oldest 40 logs.

The following file name format for the alert log applies: AlertLog_MM_DD_YYYY_hh_mm.csv.

The alert log includes the following attributes:

- Time Stamp—Time when RTMT logs the data
- Alert Name—Descriptive name of the alert
- Node ID—Node name for where RTMT raised the alert
- Alert Message—Detailed description about the alert
- Monitored Object Name—Name of the object monitored
- Severity—Severity of the alert
- PollValue—Value of the monitored object where the alert condition occurred
- Action—Alert action taken

The first line of each log file comprises the header. Details of each alert gets written in a single line, separated by a comma.

Where to Find More Information

Related Topics

- Real-Time Monitoring Configuration, *Cisco CallManager Serviceability Administration Guide*
- Alert Configuration in RTMT, *Cisco CallManager Serviceability Administration Guide*