



CHAPTER 4

Monitoring Predefined System Objects

RTMT provides a set of default monitoring objects that assist you in monitoring the health of the system. Default objects include performance counters or critical event status for the system and other supported services.

The system logs data every 5 minutes for predefined system counters.

This chapter contains information on the following topics:

- [Predefined System Objects Overview, page 4-1](#)
- [Viewing the System Summary, page 4-3](#)
- [Monitoring Server Status, page 4-3](#)
- [Understanding Server Logs, page 4-4](#)
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Predefined System Objects Overview

RTMT displays information on predefined system objects in the monitoring pane.



Tip

The polling rate in each precanned monitoring window remains fixed, and the default value specifies 30 seconds. If the collecting rate for the AMC (Alert Manager and Collector) service parameter changes, the polling rate in the precanned window also updates. In addition, the local time of the RTMT client application and not the backend server time, provides the basis for the time stamp in each chart.

For more information on service parameters, refer to *Cisco Unified Communications Manager Administration Guide* or *Cisco Unity Connection System Administration Guide*.

[Table 4-1](#) provides information on the predefined objects that RTMT monitors.



Tip

To zoom in on the monitor of a predefined object, click and drag the left mouse button over the area of the chart in which you are interested. Release the left mouse button when you have the selected area. RTMT updates the monitored view. To zoom out and reset the monitor to the initial default view, press the “R” key.

Table 4-1 **System Categories**

Category	Description
System Summary	Displays information on Virtual Memory usage, CPU usage, Common Partition Usage, and the alert history log. To display information on predefined system objects, choose System > System Summary.
Server	CPU and Memory—Displays information on CPU usage and Virtual memory usage for the server. To display information on CPU and Virtual memory usage, choose System > Server > CPU and Memory. To monitor CPU and memory usage for specific server, choose the server from the host drop-down list box. Process—Displays information on the processes that are running on the server. To display information on processes running on the system, choose System > Server > Process. To monitor process usage for specific server, choose the server from the Host drop-down list box. Disk Usage—Displays information on disk usage on the server. To display information on disk usage on the system, choose System > Server > Disk Usage. To monitor disk usage for specific server, choose the server from the host drop-down list box. Critical Services—Displays the name of the critical service, the status (whether the service is up, down, activated, stopped by the administrator, starting, stopping, or in an unknown state), and the elapsed time during which the services have existed in a particular state for the server or for a particular server in a cluster (if applicable). To display information on critical services, choose System > Server > Critical Services, then click the applicable tab: – To display system critical services, click the System tab. – To display Cisco Unified Communications Manager critical services, click the CallManager tab. – To display Cisco Unity Connection critical services, click the Cisco Unity Connection tab. – To monitor critical services for specific server on the tab, choose the server from the host drop-down list box and click the critical services tab in which you are interested. If the critical service status indicates that the administrator stopped the service, the administrator performed a task that intentionally stopped the service; for example, the service stopped because the administrator backed up or restored Cisco Unified Communications Manager, performed an upgrade, stopped the service in Cisco Unified CallManager Serviceability or the Command Line Interface (CLI), and so on. If the critical service status displays as unknown state, the system cannot determine the state of the service. For more information on the critical service states, refer to Monitoring Server Status, page 4-3.

Additional Information

See the [“Related Topics”](#) section on page 4-5.

Viewing the System Summary

The system summary in RTMT allows you to monitor important common information in a single monitoring pane. In system summary, you can view information on the following predefined object:

- Virtual Memory usage
- CPU usage
- Common Partition Usage
- Alert History Log

For more information about the data these monitors provide, see [“Monitoring Server Status” section on page 4-3](#).

For more information about the Alert History Log, see [Understanding Alerts, page 9-1](#).

Additional Information

See the [“Related Topics” section on page 4-5](#).

Monitoring Server Status

The Servers category monitors CPU and memory usage, processes, disk space usage, and critical services for the different applications on the server.

The CPU and Memory monitor provide information about the CPU usage and Virtual memory usage on each server. For each CPU on a server, the information includes the percentage of time that each processor spends executing processes in different modes and operations (User, Nice, System, Idle, IRQ, SoftIRQ, and IOWait). The percentage of CPU equals the total time that is spent executing in all the different modes and operations excluding the Idle time. For memory, the information includes the Total, Used, Free, Shared, Buffers, Cached, Total Swap, Used Swap, and Free Swap memory in Kbytes, and the percentage of Virtual Memory in Use.

The Processes monitor provides information about the processes that are running on the system. RTMT displays the following information for each process—process ID (PID), CPU percentage, Status, Shared Memory (KB), Nice (level), VmRSS (KB), VmSize (KB), VmData (KB), Thread Count, Page Fault Count, and Data Stack Size (KB).

The disk usage monitoring category charts the percentage of disk usage for the common and swap partitions. It also displays the percentage of disk usage for each partition (Active, Boot, Common, Inactive, Swap, SharedMemory, Spare) in each host.



Note

If more than one logical disk drive is available in your system, the system stores CTI Manager traces in the ‘spare’ partition on the first logical disk and CiscoCallManager traces on the second logical disk. RTMT monitors the disk usage for the ‘spare’ partition in the Disk Usage window.

The Critical Services monitoring category provides the name of the critical service, the status (whether the service is up, down, activated, stopped by the administrator, starting, stopping, or in an unknown state), and the elapsed time during which the services are up and running on the system.

For a specific description of each state, see [Table 4-2](#).

Table 4-2 **Status of Critical Services**

Status of Critical Service	Description
starting	The service currently exists in start mode, as indicated in the Critical Services pane and in Control Center in Cisco Unified CallManager Serviceability.
up	The service currently runs, as indicated in the Critical Services pane and in Control Center in Cisco Unified CallManager Serviceability.
stopping	The service currently remains stopped, as indicated in the Critical Services pane and in Control Center in Cisco Unified CallManager Serviceability.
down	The service stopped running unexpectedly; that is, you did not perform a task that stopped the service. The Critical Services pane indicates that the service is down. The CriticalServiceDown alert gets generated when the service status equals down.
stopped by Admin	You performed a task that intentionally stopped the service; for example, the service stopped because you backed up or restored Cisco Unified CallManager, performed an upgrade, stopped the service in Cisco Unified CallManager Serviceability or the Command Line Interface (CLI), and so on. The Critical Services pane indicates the status.
not activated	The service does not exist in a currently activated status, as indicated in the Critical Services pane and in Service Activation in Cisco Unified CallManager Serviceability.
unknown state	The system cannot determine the state of the service, as indicated in the Critical Services pane.

Additional Information

See the [“Related Topics”](#) section on page 4-5.

Understanding Server Logs

Every 5 minutes, the server data gets logged into the file as a single record. The system logs the data every 5 minutes for the following counters, based on the following calculation:

- **cpuUsage**—Average of all the values that were collected in the last 5 minutes
- **MemoryInUse**—Average of all the values that were collected in the last 5 minutes
- **DiskSpaceInUse**—Average of all the values that were collected in the last 5 minutes for the active partition

The Cisco AMC service logs the server data in csv format. The header of the log comprises the time zone information and a set of columns with the previous counters for a server. These sets of columns repeat for every server in a cluster, if applicable.

The following file name format of the server log applies: ServerLog_MM_DD_YYYY_hh_mm.csv. The first line of each log file comprises the header.

To download the server logs for viewing on your local computer, refer to [Working with Trace and Log Central, page 11-1](#).

Additional Information

See the [“Where to Find More Information”](#) section on page 4-5.

Where to Find More Information

Related Topics

- [Predefined System Objects Overview, page 4-1](#)
- [Viewing the System Summary, page 4-3](#)
- [Monitoring Server Status, page 4-3](#)
- [Understanding Server Logs, page 4-4](#)

