



Cisco CallManager Services

This chapter provides overview information about Cisco CallManager services.

The Cisco CallManager system comprises hardware and software modules. The software modules comprise services. Cisco CallManager Serviceability monitors the services to determine the status of the system. If something is wrong with a service, an alarm gets written to an alarm monitor. After viewing this alarm information, a system administrator can run a trace on the service. Obtain further details through analysis tools such as Trace Analysis or Bulk Trace Analysis.

The tools that monitor Cisco CallManager services include Real-Time Monitoring, Microsoft Performance, and any application that was written by using the Cisco SNMP interface.

The following sections briefly describe the Cisco CallManager services that Serviceability monitors:

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Cisco CallManager Service

The Cisco CallManager service runs on the Cisco IP Telephony Applications Server to provide software-only call processing as well as signaling and call control functionality. You install the Cisco CallManager service from the Cisco CallManager CD.

Cisco Extended Functions Service

The Cisco Extended Functions NT service provides support for some Cisco CallManager features, including the Quality Report Tool (QRT). For more information about individual features, refer to the *Cisco CallManager System Guide* and the *Cisco IP Phone Administration Guide for Cisco CallManager*.

Cisco CDR Insert Service

When you enable call detail record (CDR) collection, Cisco CallManager writes CDRs to flat files on the subscriber databases as calls are made. The Cisco CDR Insert service periodically inserts the records from these files into the publisher centralized SQL database. The Cisco CDR Insert service does not insert a record if the CDR Format enterprise parameter has a value of Flat. For more information on CDRs and related parameters, refer to the *Cisco CallManager System Guide*.

Cisco TFTP

Cisco Trivial File Transfer Protocol (TFTP) builds and serves files consistent with the trivial file transfer protocol, a simplified version of FTP. Cisco TFTP serves embedded component executable, ringer files, and device configuration files.

A configuration file includes a list of Cisco CallManagers to which devices (telephones and gateways) make connections. When a device boots, the component queries a Dynamic Host Configuration Protocol (DHCP) server for its network configuration information. The DHCP server responds with an IP address for the device, a subnet mask, a default gateway, a Domain Name System (DNS) server address, and a TFTP server name or address.

The device requests a configuration file from the TFTP server. The configuration file contains a list of Cisco CallManagers and the TCP port through which the device connects to those Cisco CallManagers.

Cisco Database Layer Monitor Service

The Cisco Database Layer Monitor service monitors aspects of the database layer as well as call detail records (CDR). The database layer comprises a set of dynamic link libraries (DLL) that provide a common access point for applications that need to access the database to add, retrieve, and change data. The Cisco Database Layer Monitor service performs functions such as determining whether the primary server is available during failover, deleting the oldest CDRs when the limit that is defined in the MaxCDRecords parameter is reached, and moving CDRs from a subscriber to the primary database at a given interval, if needed.

Cisco CTL Provider

This Windows 2000 service, which runs with local system account privileges, works with the Cisco CTL Provider Utility, a plugin, to change the security mode for the cluster from nonsecure to mixed mode. When you install the plugin, the Cisco CTL Provider service retrieves a list of all Cisco CallManager and Cisco TFTP servers in the cluster for the CTL file, which contains a list of security tokens, Cisco CallManager and TFTP servers, and CAPFs where signed certificates exist.

Cisco Serviceability Reporter

The Cisco Serviceability Reporter service generates the following daily reports:

- Device Statistics
- Server Statistics
- Service Statistics
- Call Activities
- Alert

This service gets installed on all the Cisco CallManager nodes in the cluster. Reporter generates reports once a day based on logged information. You can access the reports that Reporter generates in Cisco CallManager Serviceability from the Tools menu.

Each summary report comprises different charts that display the statistics for that particular report.

Cisco Serviceability Reporter comprises two service parameters:

- Report Generation Time—Number of minutes after midnight. Reports generate at this time for the last day.
- Report Deletion Age—Number of days that the report must be kept in the disk. The system deletes the reports that are older than the specified age.

See [Chapter 11, “Serviceability Reports Archive,”](#) and [Chapter 14, “Serviceability Reports Archive Configuration,”](#) for more information.

Cisco IP Manager Assistant

The Cisco IP Manager Assistant (Cisco IPMA) feature enables managers and their assistants to work together more effectively. Cisco IPMA supports two modes of operation: proxy line support and shared line support. The Cisco IPMA service supports both proxy line and shared line support in a cluster. Refer to the *Cisco CallManager Features and Services Guide*.

The feature comprises a call-routing service, enhancements to phone capabilities for the manager, and desktop interfaces that are primarily used by the assistant.

The service intercepts calls that are made to managers and routes them to selected assistants, to managers, or to other targets on the basis of preconfigured call filters. The manager can change the call routing dynamically; for example, by pressing a softkey on the phone, the manager can instruct the service to route all calls to the assistant and can receive status on these calls.

Cisco CallManager users comprise managers and assistants. The routing service intercepts manager calls and routes them appropriately. An assistant user handles calls on behalf of a manager. Cisco IPMA comprises features for managers and features for assistants.

Cisco Extension Mobility

The Cisco Extension Mobility service allows you to define login settings such as duration limits on phone configuration for the Cisco CallManager Extension Mobility feature. The Cisco CallManager Extension Mobility feature allows users within a Cisco CallManager cluster to temporarily configure any Cisco IP Phone 7960/7940 as their own by logging in to that phone. After a user logs in, the phone adopts the user's personal phone number(s), speed dials, services links, and other user-specific properties. After logout, the phone adopts the original user profile. For more information on the Cisco CallManager Extension Mobility feature, refer to the *Cisco CallManager System Guide* and the *Cisco CallManager Features and Services Guide*.

Cisco WebDialer

Cisco WebDialer provides click-to-dial functionality. It allows users in a Cisco CallManager cluster to initiate a call to other users inside or outside the cluster by using a web page or a desktop application. Cisco WebDialer provides a web page that enables users to call each other within a cluster. Cisco WebDialer comprises two components: WebDialer servlet and Redirector servlet.

The Redirector servlet provides the ability for third-party applications to use Cisco WebDialer. The Redirector servlet finds the appropriate Cisco CallManager cluster for the WebDialer user and redirects the request to the WebDialer in that cluster. The Redirector functionality only applies for HTTP/HTML-based WebDialer client applications because it is not available for Simple Object Access Protocol (SOAP)-based WebDialer applications.

For more information about Cisco WebDialer, refer to the *Cisco CallManager Features and Services Guide*.

Cisco Messaging Interface Service

The Cisco Messaging Interface allows you to connect a simplified message desk interface (SMDI)-compliant external voice-messaging system with the Cisco CallManager. The CMI service provides the communication between the voice-messaging system and Cisco CallManager. The SMDI defines a way for a phone system to provide a voice-messaging system with the information that is needed to intelligently process incoming calls.

Cisco IP Voice Media Streaming Application Service

The Cisco IP Voice Media Streaming Application provides voice media streaming functionality for the Cisco CallManager for use with MTP, conferencing, and music on hold (MOH). The Cisco IP Voice Media Streaming Application relays messages from the Cisco CallManager to the IP voice media streaming driver. The driver handles the RTP streaming. The MTP and conference bridge components of the Cisco IP Voice Media Streaming Application support G.711 mu-law and a-law codecs. The MOH component supports G.711 mu-law/a-law, G.729a, and wideband codecs.

Cisco Telephony Call Dispatcher Service

Telephony Call Dispatcher (TCD) service provides centralized services for Cisco WebAttendant and Attendant Console clients and pilot points. For Cisco WebAttendant and Attendant Console clients, TCD provides call-control functionality, line state information for any accessible line within the Cisco CallManager domain, and caching of directory information. For pilot points, TCD provides automatic redirection to directory numbers that are listed in hunt groups and failover during a Cisco CallManager failure.

Cisco CTIManager Service

The CTI Manager contains the CTI components that interface with applications. With CTI Manager, applications can access resources and functionality of all Cisco CallManagers in the cluster and have improved failover capability. One or more CTI Managers can be active in a cluster, but only one CTI Manager can exist on an individual server. An application (JTAPI/TAPI) can have simultaneous connections to multiple CTI Managers; however, an application can only use one connection at a time to open a device with media termination.

Cisco MOH Audio Translator Service

The Cisco MOH Audio Translator service converts audio source files into various codecs, so the MOH feature can use them. When you install the Cisco IP Voice Media Streaming Application service, Cisco CallManager automatically installs this service.

Cisco RIS Data Collector

The Real-time Information Server (RIS) maintains real-time Cisco CallManager information and provides an interface through which the Cisco RIS Data Collector service and the SNMP Agent retrieve that information. One RIS exists on each node that contains the Cisco CallManager service. The Cisco RIS Data Collector service provides an interface for applications, such as Cisco CallManager Serviceability and the Cisco CallManager Administration, to retrieve information that is stored in all RIS nodes in the cluster.

Cisco Certificate Authority Proxy Function (CAPF)

Working in conjunction with the CAPF application, the Cisco Certificate Authority Proxy Function (CAPF) service can perform the following tasks, depending on your configuration:

- Issue locally significant certificates to supported Cisco IP Phone models.

- Using SCEP, request certificates from third-party certificate authorities on behalf of supported Cisco IP Phone models.
- Upgrade existing certificates on the phones.
- Retrieve phone certificates for troubleshooting.
- Delete locally significant certificates on the phone.

**Note**

When viewing real-time information in the Cisco CallManager Real-Time Monitoring Tool (RTMT), the Cisco Certificate Authority Proxy Function (CAPF) service will be listed only for the Publisher node and not Subscriber nodes.

Where to Find More Information

Related Topics

- [Understanding Trace, page 8-2](#)
- [Trace, page 8-1](#)
- [Chapter 5, “Trace Configuration,” *Cisco CallManager Serviceability Administration Guide*](#)
- [Chapter 6, “Trace Collection Configuration,” *Cisco CallManager Serviceability Administration Guide*](#)
- [Chapter 7, “Trace Analysis Configuration,” *Cisco CallManager Serviceability Administration Guide*](#)

Additional Cisco Documentation

- *Cisco CallManager System Guide*
- *Cisco CallManager Administration Guide*
- *Cisco CallManager Features and Services Guide*
- Cisco IP Phones and Services:
http://www.cisco.com/univercd/cc/td/doc/product/voice/c_ipphon/english/index.htm
- *Troubleshooting Guide for Cisco CallManager*

■ Where to Find More Information