



## Administrative Tools Overview

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This section provides an overview of the following tools for Cisco CallManager administrators:

- [Bulk Administration Tool \(BAT\), page 43-1](#)
- [CDR Analysis and Reporting \(CAR\), page 43-2](#)
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### Bulk Administration Tool (BAT)

The Bulk Administration Tool (BAT), a plug-in application to Cisco CallManager, lets you add, update, or delete a large number of phones, users, user device profiles, Cisco IPMA managers and assistants, Cisco VG200 gateways and ports, and Cisco Catalyst 6000 24 Port FXS analog interface modules to the Cisco CallManager database. Where this was previously a manual operation, BAT helps you automate the process and achieve much faster add, update, and delete operations.

You can install and access BAT from Cisco CallManager Administration by using the **Application** menu.

For more information, refer to the *Bulk Administration Tool Guide for Cisco CallManager*.

# Cisco CallManager Serviceability

Administrators can use the Cisco CallManager Serviceability web-based tool to troubleshoot problems with the Cisco CallManager system. Cisco CallManager Serviceability provides the following services:

- Alarms—Saves Cisco CallManager services alarms and events for troubleshooting and provides alarm message definitions.
- Trace—Saves Cisco CallManager services trace information to various log files for troubleshooting. Administrators can configure, collect, and analyze trace information.
- Real-Time Monitoring Tool—Monitors real-time behavior of the components in a Cisco CallManager cluster.
- Control Center—Views status of Cisco CallManager services. Administrators use Control Center to start and stop services.
- Service Activation—Activate or deactivate multiple services and to choose default services to activate.

To access Serviceability from the Cisco CallManager Administration window, choose **Application > Cisco CallManager Serviceability** from the menu bar.

For more information, refer to the *Cisco CallManager Serviceability Administration Guide* and the *Cisco CallManager Serviceability System Guide*.

## CDR Analysis and Reporting (CAR)

CAR, a web-based reporting application that is included with Cisco CallManager Serviceability, generates the following reports that provide information regarding voice quality and generates reports on the gateway performance.

- Quality of service
- Traffic details
- User call volume and details
- Basic billing details
- Gateway information
- Call detail records

The Cisco CallManager records information regarding each call in call detail records (CDRs) and call management records (CMRs). The CAR database stores CDRs and CMRs that serve as the basic information source for CAR.

Users can only access CAR through a secured login from the Cisco CallManager Serviceability Tools menu. The same user ID and password that are used for CAR access and the ones that are used for the user profile that are set for Cisco CallManager apply for both places.

To view the reports, you must use Adobe Acrobat Reader, which you can download and install from the CAR main window.

For more information, refer to the *Cisco CallManager Serviceability Administration Guide* and the *Cisco CallManager Serviceability System Guide*.

## Remote Network Management

Network management tools, if properly deployed, can provide the network administrator with a complete view into any enterprise network. With the advent of converged networks, be sure to have network management systems enable the following capabilities:

- Network discovery and topology maps
- Inventory control and configuration management of networked nodes
- Report generation, system logging, and analysis of the respective data

Cisco CallManager remote serviceability tools and CiscoWorks2000 provide the preceding capabilities and enable visibility into the health and availability of the Cisco AVVID network. Considerable management features that were added, starting with Cisco CallManager Release 3.0, permit visibility into the operation and reporting capability of a Cisco AVVID network. [Table 35-1](#) lists the features that are provided for network management applications to export data and, particularly for CiscoWorks2000, to provide reporting, proactive management, and debugging capabilities.

**Table 43-1 Remote Network Management Tools for Cisco CallManager**

<b>Tool</b>	<b>Description</b>
Simple Network Management Protocol (SNMP)	Three Management Information Bases (MIBs) that are included with Cisco CallManager permit a network management system to extract appropriate information.
Cisco Discovery Protocol (CDP) Support (CDP MIB)	CDP discovers Cisco devices in a network. CDP enables discovery of Cisco CallManager servers and management of those servers by CiscoWorks2000.
System Log Management	Cisco Syslog Analysis streamlines the management of open, distributed systems by providing a common administrative interface for all log messages that are received from the application.
Path Analysis Interface	Path Analysis Interface traces connectivity between two specified points on a network. It analyzes physical and logical paths. Make sure that call detail records are enabled.

For more information on remote network management, refer to the *Cisco CallManager Serviceability Administration Guide*.

## Call Detail Records

When CDR collection is enabled through the CDR Enabled Flag Cisco CallManager service parameter, Cisco CallManager writes call detail records (CDRs) to flat files on the subscriber servers as calls are completed. When CDR Diagnostic collection is enabled through the Call Diagnostics Enabled Cisco CallManager service parameter, Cisco CallManager writes call detail diagnostic records to flat files on the subscriber servers as calls are completed. The Cisco Database Layer Monitor service periodically moves the CDR files from the subscriber to the publisher server (or configured server), and the Cisco CDR Insert Service inserts the records into the configured CDR database.

**Note**

The Cisco CDR Insert service does not insert a record if the CDR Format enterprise parameter has a value of ‘CDR will be kept in flat files.’ If the service is disabled, Cisco CDR Insert does not delete the CDR files.

Enable and configure CDR collection through service and enterprise parameters that are set in Cisco CallManager Administration. You must enable CDR collection on each Cisco CallManager in the cluster for which you want to generate records (see the [“CDR-Related Service and Enterprise Parameters” section on page 43-5](#)).

## CDR-Related Service and Enterprise Parameters

The following service parameters apply to CDRs:

- **Max CDR Records**—Cisco Database Layer Monitor service parameter that controls the maximum number of CDRs on the system. When this limit is exceeded, the oldest CDRs automatically get removed, along with the related CMR records, once a day. The default specifies 1.5 million records.
- **CDR Enabled Flag**—Cisco CallManager service parameter that controls whether CDRs are generated. Set this parameter on each Cisco CallManager in the cluster. You do not need to restart the Cisco CallManager for the change to take effect.
- **CDR Log Calls With Zero Duration Flag**—Cisco CallManager service parameter that controls whether calls with zero duration are logged in CDRs. The default specifies False (zero duration calls not logged).
- **Call Diagnostics Enabled**—Cisco CallManager service parameter that controls whether call diagnostic records containing QoS information about calls are generated. The default specifies False (diagnostics not generated).

The following enterprise parameters apply to CDRs:

- **CDR File Time Interval**—The parameter that determines how many seconds to write to a CDR file before Cisco CallManager closes the CDR file and opens a new one.
- **CDR Format**—The parameter that determines whether the files get inserted into the database. The default value specifies Database.

- CDR UNC Path—The central collection point for CDR files. The value should not be empty or invalid, or Cisco Database Layer Monitor will not move the CDR files to the primary CDR server. The install sets this parameter.
- Cluster ID—This parameter provides a unique identifier for the cluster. This parameter gets used in CDR records, so collections of CDR records from multiple clusters can be traced to the sources. The default specifies StandAloneCluster.
- Local CDR Path—The directory for local CDR files that are written by Cisco CallManager. The value should not be empty or invalid, or Cisco CallManager cannot write CDRs.
- Off Cluster CDR Connection String—This parameter specifies the optional DSN to use when you do not want CDRs inserted into the CDR database on the publisher. This parameter must point to an ODBC database with matching CDR database schema. The DSN should include any necessary user and password information. You do not need to run the Cisco CallManager installation process on the ODBC database.

## Removing CDR Records

The Cisco CallManager application relies on post-processing applications such as CAR or other third-party packages to analyze CDR data. The administrator should perform the removal of the CDR data when all post-processing applications finish with the data. Because this involves modifying the database, use the SQL user CiscoCCMCDR.

If CDR records accumulate to a configured maximum (as set by the Max CDR Records service parameter, which defaults to 1.5 million records), the oldest CDR records get removed along with related CMR records once a day. You can remove CDR records by using CAR. For more information on manually purging records with CAR, refer to the *Cisco CallManager Serviceability Administration Guide*. When removing CDR data after analysis, be sure to remove all related CMR records also.

You can also remove CDR records using the following SQL commands:

```
USE CDR
GO
TRUNCATE TABLE CallDetailRecord
GO
```

```
TRUNCATE TABLE CallDetailRecordDiagnostic  
GO
```

**Caution**

Do not use the SQL delete command to remove CDRs. Using the SQL delete command causes the CPU usage to surge on the SQL server and causes the SQL server transaction log to overflow and eventually fail.

**Tip**

In large systems, you should remove CDR and CMR records more often than once a day or week. Queries to remove records can consume CPU time and transaction log space relative to the size of the table: the smaller the table, the quicker the query. Large queries on a live database can adversely affect call processing.

## Where to Find More Information

**Related Topics**

- [Cisco TFTP, page 9-1](#)
- [Cisco CallManager Attendant Console, page 33-1](#)
- [Understanding Cisco CallManager Voice Gateways, page 35-1](#)
- [Cisco IP Phones, page 39-1](#)
- [Call Admission Control, page 8-1](#)
- [System Configuration Checklist, page 5-15](#)
- [Device Defaults Configuration, Cisco CallManager Administration Guide](#)
- [Device Pool Configuration, Cisco CallManager Administration Guide](#)
- [Gateway Configuration, Cisco CallManager Administration Guide](#)
- [Cisco IP Phone Configuration, Cisco CallManager Administration Guide](#)
- [Cisco CallManager Group Configuration, Cisco CallManager Administration Guide](#)

**Additional Cisco Documentation**

- *Bulk Administration Tool Guide for Cisco CallManager*
- *Cisco CallManager Serviceability Administration Guide*
- *Cisco CallManager Serviceability System Guide*