



Administrative Tools Overview

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

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- [CDR Analysis and Reporting \(CAR\), page 37-2](#)
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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, 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 access BAT from Cisco CallManager Administration 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.
- Admin Serviceability 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.

To access Serviceability from the Cisco CallManager Administration window, choose **Applications > 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 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
- 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). CDRs and CMRs serve as the basic information source for CAR and are stored in the CAR database.

Users can only access CAR through a secured login from the Cisco CallManager Serviceability Tools menu. The user ID and password for ART access are the same as the user profile set for Cisco CallManager.

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, it is imperative 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 above capabilities and enable visibility into the health and availability of the Cisco AVVID network. Considerable management features have been added, starting with Cisco CallManager Release 3.0, to permit visibility into the operation and reporting capability of a Cisco AVVID network. [Table 35-1](#) lists the features provided for network management applications to export data and, particularly for CiscoWorks2000, to provide reporting, proactive management, and debugging capabilities.

Table 37-1 Remote Network Management Tools for Cisco CallManager

Tool	Description
Simple Network Management Protocol (SNMP)	Three Management Information Bases (MIBs) 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 received from the application.
Path Analysis Interface	Traces connectivity between two specified points on a network. It analyses physical and logical paths. Call detail records must be enabled.

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

Call Detail Records

When CDR collection is enabled, Cisco CallManager writes call detail records (CDRs) to flat files on the subscriber databases as calls are made. The CDR records are periodically passed from the subscriber databases to the publisher, and the Cisco CDR Insert Service inserts the records into the publisher centralized SQL database.



Note

The Cisco CDR Insert service does not insert a record if the CDRFormat enterprise parameter has a value of Flat. If the service is disabled, Cisco CallManager does not delete the CDR files.

CDR collection is enabled and configured 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 37-5](#)).

CDR-Related Service and Enterprise Parameters

The following tunable service parameters apply to CDRs:

- **MaxCdrRecords**—Cisco TFTP service parameter that controls the maximum number of CDRs on the system. When this limit is exceeded, the oldest CDRs are automatically removed, along with the related CMR records, once a day. The default is 1.5 million records.
- **CdrEnabled**—Cisco CallManager service parameter that controls whether or not 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.
- **CdrLogCallsWithZeroDurationFlag**—Cisco CallManager service parameter controls whether calls with zero duration are logged in CDRs. The default is False (zero duration calls not logged).

The following tunable enterprise parameters apply to CDRs:

- **LocalCDRPath**—the directory for local CDR files written by Cisco CallManager. The value should not be empty or invalid, or Cisco CallManager will not move the CDR files moved to the primary database.
- **PrimaryCDRUNCPath**—the central collection point for CDR files. The value should not be empty or invalid, or Cisco CallManager will not move the CDR files moved to the primary database. This parameter is set by the install.
- **CDRFormat**—the parameter that determines whether the files get inserted into the database. The default value should be Database.

- **CDRFlatFileInterval**—the parameter that determines the number of seconds to write to a CDR file before Cisco CallManager closes the CDR file and opens a new one.
- **PrimaryCDRDSN**—this is an optional parameter that points to the primary CDR server on which to insert CDRs. The machine, to which the parameter points, does not need a Cisco CallManager install, but does need SQL Server and a CDR database. This allows movement of the CDRs off of the Cisco CallManager cluster.



Note If the **PrimaryCDRDSN** parameter is missing, CDRs are written locally at the **PrimaryCDRUNCPath**.

Removing CDR Records

The CallManager application relies on post-processing applications such as ART or other 3rd-party packages to analyze CDR data. The removal of the CDR data should be done by the administrator when all post-processing applications are through with the data. Because this involves modifying the database, the SQL user **CiscoCCMCDR** should be used.

If CDR records accumulate to a configured maximum (as set by the **MaxCdrRecords** service parameter, which defaults to 1.5 million records), then the oldest CDR records are removed along with related CMR records once a day.

When removing CDR data after analysis, be sure to remove all related CMR records also.

**Tip**

You should remove CDR and CMR records more often than once a day or week in large systems. 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.

CDR Database Access

The easiest way to read data from the SQL database is to use ODBC. A good connection string looks like one of the following examples, depending on whether you need to get to the configuration data or CDRs:

```
DRIVER={SQL Server};SERVER=machineX;DATABASE=CCM0300
```

```
DRIVER={SQL Server};SERVER=machineX;DATABASE=CDR
```

Be sure to use the correct database name. Previous versions of the product had the CDR tables in the CCM0300 database. The tables have been moved to the CDR database. Also, you will need access to both the configuration database and CDR database to properly resolve the CDR information.

The machine that is the central collector of the CDR information is the machine serving the primary CCM0300 database. To determine the publisher database (machine and name) currently in use by the cluster, perform the following steps:

1. Choose **Help > About Cisco CallManager**.
2. Click the **Details** button.

The Database field in the Database Information area displays the name of the Cisco CallManager server that is the publisher database for the cluster.

Access to CDR records is controlled through SQL Users. [Table 37-2](#) specifies the UserID and password that should be used when accessing the Cisco CallManager database.

Table 37-2 SQL Users for CDR Access

Database	Tables	SQL UserID	Password	Capability
CDR	CallDetailRecord, CallDetailRecordDiagnostic	CiscoCCMCDR	dipsy	Read/write access to CDR Read access to CCM0300
CCM0300	All	CiscoCCMReader	cowboys	Read only

Where to Find More Information

Related Topics

- [Cisco TFTP](#), page 8-1
- [Understanding Cisco WebAttendant](#), page 31-1
- [Understanding Voice Gateways](#), page 33-1
- [Cisco IP Phones](#), page 34-1
- [Call Admission Control](#), page 7-1
- [System Configuration Checklist](#), page 4-11
- [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*
- [Cisco JTAPI Installation and 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*