



# Call Management Records

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This chapter describes the format and logic of the call management records (CMRs) that the Unified Communications Manager system generates, and how to access the CMR files.

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## Call Management Records Overview

The Unified Communications Manager system generates call management records (CMRs). You can use this information for post-processing activities such as generating billing records and network analysis.

When you install your system, CMRs remain disabled by default, you can enable or disable CMRs at any time that the system is in operation. You do not need to restart Unified Communications Manager for the change to take the effect. The system responds to all changes within a few seconds. The system enables CMR or diagnostic data separately from CDR data.

## CMR Processing

The CMR records store information about the quality of the streamed audio and video of the call.

When Unified Communications Manager places or receives a call, the system generates a CDR record when the call terminates. The system writes the CDR to a flat file (text file). Inside the Unified Communications Manager, the call control process generates CDR records. The system writes records when significant changes occur to a given call, such as ending the call, transferring the call, redirecting the call, splitting the call, joining a call, and so forth.

When CMR records are enabled, the number of records that are written varies by type of call and the call scenario. When Diagnostics are enabled, the device generates CMR records for each call. The system writes one CMR record for each IP phone that is involved in the call or for each Media Gateway Control Protocol (MGCP) gateway. The system sends these records to EnvProcessCdr where they get written to flat files.



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**Note** For Hold and Resume calls on SCCP devices, multiple CMR Records are generated based on the number of times the call is put on hold.

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The Unified Communications Manager generates CMR records but does not perform any post processing on the records. The system writes the records to comma-delimited flat files and periodically passes them to the CDR Repository. The CMR files represent a specific filename format within the flat file.

### Filename Format

The following example shows the full format of the filename:

**tag\_clusterId\_nodeId\_datetime\_seqNumber**

- tag—Identifies the type of file, either CDR or CMR.
- clusterId—Identifies the cluster or server where the Unified Communications Manager database exists.
- nodeId—Identifies the node.
- datetime—Specifies UTC time in yyyyymmddhhmm format.
- seqnumber—Specifies sequence number.

An example of the filename follows:

- cmr\_Cluster1\_02\_200404061011\_6125

### Flat File Format

The CMR flat files have the following format:

- Line 1—List of field names in comma separated format.
- Line 2—List of field types in comma separated format.
- Line 3—Data in comma separated format.
- Line 4—Data in comma separated format.

The following example shows a flat file:

```
Line1-"cmrRecordType", "globalCallID_callManagerId", "globalCallID_callId", "origLegCallIdentifier", ...
Line2-INTEGER, INTEGER, INTEGER, INTEGER, ...
Line3-1, 1, 388289, 17586046, ...
Line4-1, 1, 388293, 17586054, ...
```

## Set Up CMRs

You can configure CMRs on the Service Parameters Configuration window in Cisco Unified CM Administration.

1. To access the **Service Parameters Configuration** window, open Cisco Unified CM Administration and choose **System > Service Parameters**.
2. Choose **Advanced** button.
3. Select the **Call Diagnostics Enabled** parameter.

This parameter determines whether the system generates CMRs, also called call diagnostic records. Valid values specify Disabled (do not generate CMRs), Enabled Only When CDR Enabled Flag is True (generate

CMRs only when the CDR Enabled Flag service parameter is set to True), or Enabled Regardless of CDR Enabled Flag (generates CMRs without regard to the setting in the CDR Enabled Flag service parameter). This represents a required field. The default value specifies Disabled.

### Feature Limitations

This feature is not supported for SME call flows:

- On receiving call statistics from CUBE/IOS GW on SME, Unified Communications Manager generates CMR (provided CMR is enabled) for the trunk side, but it won't be able to forward call statistics to other nodes in outgoing BYE or 200OK for BYE.
- Sample Call flow:

**Phone1 > CUBE/IOS GW > SME > CUCM1 > Phone2**

For the above call scenario, SME generates the CMR for trunk side pointing to CUBE. These statistics are not forwarded to a leaf node. For Phone2, CMR is recorded on a leaf node.

## CPU Utilization

Cisco has performed basic testing to measure CPU utilization when CDRs and/or CMRs are enabled. The CPU utilization testing was measured on subscribers and was not measured on the publishers. Your actual results can vary because of the CDR Loader settings and the CDR Management settings for external billing servers. The following table displays the results of these tests.



**Note** These tests were performed with Unified Communications Manager Release 8.0(1).

*Table 1: CDR and CMR CPU Utilization*

CDRs and CMRs Enabled/Disabled	Average % Increase in Cisco Unified CM CPU Utilization	Average % Increase in Total CPU Utilization	% Increase in Cisco Unified CM CPU	% Increase in Total CPU
CDRs disabled, CMRs disabled	6.17	11.15	-	-
CDRs enabled, CMRs disabled	6.99	12.10	13.18	8.57
CDRs disabled, CMRs enabled	6.38	11.24	3.43	0.86
CDRs enabled, CMRs enabled	7.71	13.04	24.92	17.02

