Configuring Cisco MGC Report Files

This appendix contains descriptions of the Cisco Media Gateway Controller (MGC) log files and the associated procedures for setting up the data dumper that controls how files are handled for three of those those log file types. You can use these log records to obtain statistical information about the calls processed by the system and network events, such as delays or service-affecting conditions.

Understanding Logging Files

A log message consists of several fields. Refer to the *Cisco Media Gateway Controller Software Release 7 Messages Reference Guide* for detailed information on specific fields and valid values in log files.

Table A-1 lists the log file types for the Cisco MGC software. The Cisco MGC creates these log files and stores them in the /$BASEDIR/var/log directory, unless otherwise noted.

Table A-1 Log File Types

Log File Type	Active Name	Archived Name	Description
System	platform.log	platform_yyyymmddhhmmss.log	Contains log messages of varying severity created by system
Command	mml.log	MML_yyyymmddhhmmss.log	Man-Machine Language (MML) command category log messages
Alarms	alm.csv	alm_yyyymmddhhmmss_seq#.csv	Alarm category log messages. Archived files are stored in the $BASEDIR/var/spool directory.
Measurements	meas.csv	meas_yyyymmddhhmmss.csv	Measurement category log messages. Archived files are stored in the $BASEDIR/var/spool directory.
Call detail records (CDRs)	cdr.bin	cdr_yyyymmddhhmmss_seq#.bin	CDRs rotated on a regular basis. Archived files are stored in the $BASEDIR/var/spool directory. **Note** CDRs can be stored in .csv format, if the TLV converter is enabled. Refer to the *Cisco Media Gateway Controller Software Release 7 Installation and Configuration Guide* for information on configuring the TLV converter.

Note The time stamps used on the archived file names (*yyyymmddhhmmss*) are in local time.

Configuring the Data Dumper

The Cisco MGC software contains a function called the data dumper that controls the destinations for active and archived log files for CDRs, measurements, and alarms, and controls when the active files are archived. The data dumper runs automatically and works correctly with a default configuration. However, you can customize the dumper settings by editing the dmprSink.dat file. Here is an example of the contents of the dmprSink.dat file:

```
"callDetail" bin "cdr" "../var/log" "../var/spool" 1000 0 15
"measReport" csv "meas" "../var/log" "../var/spool" 500 0 15
"almState" csv "alm" "../var/log" "../var/spool" 500 0 15
```

The contents of the file displays the log file setup data for each of these three log file types. There are eight fields for each log file type in the file. The last three fields in each line can be modified to administer log file creation for these three log file types.

Caution Do *not* modify any of the first five fields in each line.

The first field in each line identifies the log file type, such as *callDetail* for the CDR log files. The second field in each line identifies the storage format used in the log files. The storage format is either *bin* for binary, or *csv* for comma-separated-value. The third field identifies the file name used to identify the file type, such as *meas* for system measurements. The fourth field identifies the directory in which the active log files are stored, and the fifth field identifies the directory in which the archived log files are stored.

Table A-2 describes the last three fields in each line, which you can be modify, depending on your needs.

Note At least one of the last three fields in each line *must* be set to a value other than zero (0) for logging to function properly.

Table A-2 Dumper Sink Log File Parameters

Field Number	Default Value	Description
6	1000	Defines the maximum number of records a file can contain before it is flushed or moved to the spool directory. If this value is set to 0, the number of records is unlimited. You can improve system performance by increasing the value of this field to a larger value, such as 50000. This results in fewer log files being generated during periods of high call volume. **Note** In the case of CDRs, the value in this field refers to the maximum number of call detail blocks (CDBs), which make up CDRs. Multiple CDBs can be created for each call. For more information on individual CDBs, refer to the *Cisco Media Gateway Controller Release 7 Billing Interface Guide*.
7	0	Defines the maximum size of the log file in bytes before it is moved to the spool directory. If this value is set to 0, the size of the file is limited only by the disk space available.
8	15	Defines the maximum time, in minutes, the file is allowed to remain open, before it is flushed or moved to the spool directory. If there is no data in the file, it is not flushed when the time limit expires. If this value is set to 0, there is no time limit.

To configure the dmprSink.dat file fields, use this procedure:

Step 1 Log in to the active Cisco MGC and change to the /opt/CiscoMGC/etc directory by entering the following UNIX command:

```
cd /opt/CiscoMGC/etc
```

Step 2 Use a text editor, such as vi, to open and edit the dmprSink.dat file fields you want to change.

Note If you are going to use the BAMS to collect CDRs, proceed to the "Configuring the Data Dumper to Support BAMS" section on page A-5, for information on how to configure the data dumper to support BAMS.

Step 3 Save your changes and exit the text editor.

Step 4 Change to the /opt/CiscoMGC/etc/active_link directory by entering the following UNIX command:

```
cd /opt/CiscoMGC/etc/active_link/
```

Step 5 Repeat steps 2 and 3 for the version of dmprSink.dat stored in this directory.

Step 6 If your system uses a continuous service configuration (active and standby Cisco MGC hosts), perform steps 9, 10, and 11 to update the settings on the standby Cisco MGC and load the new dmprSink.dat settings.

If your system uses a simplex configuration (a single Cisco MGC host), perform steps 7 and 8 to load the new dmprSink.dat settings.

Step 7 Stop the Cisco MGC software using the procedure described in the "Shutting Down the Cisco MGC Software Manually" section on page 2-4.

Caution Stopping the Cisco MGC software should only be performed while in contact with Cisco Technical Assistance Center (TAC) personnel. Refer to the "Obtaining Technical Assistance" section on page xviii for information on contacting the Cisco TAC.

Step 8 Restart the Cisco MGC software using the procedure described in the "Starting up the Cisco MGC software manually" section on page 2-2. The procedure is complete.

Step 9 Repeat steps 1 through 5 on your standby Cisco MGC.

Step 10 Log on to the active Cisco MGC, start an MML session and perform a manual switchover as described in the "Performing a Manual Switchover" section on page 3-80.

Step 11 Once the manual switchover is complete, repeat Step 10 on the newly active Cisco MGC. The procedure is complete.

Configuring the Data Dumper to Support BAMS

If your system is going to be using the Billing and Measurements Server (BAMS) to retrieve CDRs from the Cisco MGC, perform the following procedure to configure the data dumper to support the BAMS:

Step 1 Log into the active Cisco MGC and change to the /opt/CiscoMGC/etc directory by entering the following UNIX command:

```
cd /opt/CiscoMGC/etc
```

Step 2 Use a text editor, such as vi, to open the dmprSink.dat file.

Step 3 In the callDetail line of the file, find the following directory path:

```
"../var/spool"
```

Step 4 Modify that directory path to point to the /opt/CiscoMGC/var/bam directory, as shown below:

```
"../var/bam"
```

Step 5 Save your changes and exit the text editor.

Step 6 Change to the /opt/CiscoMGC/etc/active_link directory by entering the following UNIX command:

```
cd /opt/CiscoMGC/etc/active_link/
```

Step 7 Repeat steps 2 through 5 for the version of dmprSink.dat stored in this directory.

Step 8 If your system uses a continuous service configuration (active and standby Cisco MGC hosts), perform steps 11, 12, and 13 to update the settings on the standby Cisco MGC and load the new dmprSink.dat settings.

If your system uses a simplex configuration (a single Cisco MGC host), perform steps 9 and 10 to load the new dmprSink.dat settings.

Step 9 Stop the Cisco MGC software using the procedure described in the "Shutting Down the Cisco MGC Software Manually" section on page 2-4.

Caution Stopping the Cisco MGC software should only be performed while in contact with Cisco Technical Assistance Center (TAC) personnel. Refer to the "Obtaining Technical Assistance" section on page xviii for information on contacting the Cisco TAC.

Step 10 Restart the Cisco MGC software using the procedure described in the "Starting up the Cisco MGC software manually" section on page 2-2. The procedure is complete.

Step 11 Repeat steps 1 through 7 on your standby Cisco MGC.

Step 12 Log on to the active Cisco MGC, start an MML session and perform a manual switchover as described in the "Performing a Manual Switchover" section on page 3-80.

Step 13 Once the manual switchover is complete, repeat Step 10 on the newly active Cisco MGC. The procedure is complete.

Understanding the Format of Log Files Archived Using Data Dumper

Three log file types are archived in the $BASEDIR/var/spool directory using the data dumper: alarms, measurements, and CDRs. The archive files for alarms and measurements are stored as ASCII text files, and the format of these files is discussed in this section. CDRs are stored as binary files and are not discussed here. The elements of CDR files are discussed in the *Cisco Media Gateway Controller Software Release 7 Billing Interface Guide*.

Here is an example of the appearance of the content of an archived alarm file:

```
0,1012522984,761,1,0,"Failover daemon in INIT state","FOD-01","unknown"
0,1012522989,880,1,0,"Failover daemon in SLAVE state","FOD-01","unknown"
0,1012522991,893,1,1,"Warm Start Initiated","IOCM-01","IosChanMgr"
0,1012522992,932,0,0,"Excessive bit error ratio detected from frame alignment
signal","enif1","IosChanMgr"
0,1012522992,936,0,0,"Excessive bit error ratio detected from frame alignment
signal","enif2","IosChanMgr"
0,1012522992,939,0,0,"Reset Config Failed","dpc1","IosChanMgr"
0,1012522992,939,1,2,"Point Code Unavailable","dpc1","IosChanMgr"
0,1012522992,958,0,0,"Reset Config Failed","dpc2","IosChanMgr"
0,1012522992,958,1,2,"Point Code Unavailable","dpc2","IosChanMgr"
0,1012522992,975,0,0,"Reset Config Failed","dpc-11","IosChanMgr"
0,1012522992,975,1,2,"Point Code Unavailable","dpc-11","IosChanMgr"
0,1012522993,37,0,0,"Reset Config Failed","dpc-12","IosChanMgr"
0,1012522993,38,1,2,"Point Code Unavailable","dpc-12","IosChanMgr"
0,1012522993,83,0,0,"Reset Config Failed","dpc-13","IosChanMgr"
0,1012522993,83,1,2,"Point Code Unavailable","dpc-13","IosChanMgr"
0,1012522993,99,0,0,"Reset Config Failed","dpc-14","IosChanMgr"
0,1012522993,123,1,2,"Point Code Unavailable","dpc-14","IosChanMgr"
0,1012522993,139,0,0,"Reset Config Failed","dpc-15","IosChanMgr"
0,1012522993,139,1,2,"Point Code Unavailable","dpc-15","IosChanMgr"
0,1012522993,155,0,0,"Reset Config Failed","dpc-16","IosChanMgr"
0,1012522993,156,1,2,"Point Code Unavailable","dpc-16","IosChanMgr"
```

Each field is separated by a comma. The content of each field is described in Table A-3.

Table A-3 Archived Alarm File Fields

Field Name	Data Type	Maximum Length	Comments
Release level	Integer	3	Format of records (should be set to 0)
Timestamp (seconds)	Integer	10	Indicates the time, in seconds, since the start of the UNIX internal timer, time of epoch.
Timestamp (milliseconds)	Integer	5	Indicates the time, in milliseconds, since the start of the UNIX internal timer, time of epoch.
State	Integer	1	Used for informational alarms, either 0 for reset or 1 for set.
Severity	Integer	1	Indicates the severity of the alarm, using four levels: • 0—Informational • 1—Minor • 2—Major • 3—Critical

Table A-3 Archived Alarm File Fields (continued)

Field Name	Data Type	Maximum Length	Comments
Alarm category	String	80	Text that describes the nature of the alarm. For a list and description of the available alarms, refer to the *Cisco Media Gateway Controller Software Release 7 System Messages Guide*.
Component name	String	32	Identifies the component associated with the alarm. Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide* for more information on components.
Originator	String	32	Identifies the service that set or cleared this alarm.

Here is an example of the appearance of the content of an archived measurement file:

```
0,1012013100,900,0,"messages","SP: cInit out","ss7svc11"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss3-118"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss3-119"
0,1012013100,900,0,"messages","SP: cInit out","ss7svc5"
0,1012013100,900,0,"messages","SP: cInit out","ss7svc8"
0,1012013100,900,0,"messages","SP: cInit out","ss7svc9"
0,1012013100,900,0,"messages","SP: cInit out","ss7svc10"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-2"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","tg-4166"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-3"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","tg-4165"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-4"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-5"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","tg-4164"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","tg-4162"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-6"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","tg-4163"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-7"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-8"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-9"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-10"
0,1012013100,900,0,"occurrances","ACC: CALL REJ","hcss4-11"
0,1012013100,300,0,"occurrances","ISUP: CHAN MATE UNAVAILABLE","ss7svc4"
```

Each field is separated by a comma. The content of each field is described in Table A-4.

Table A-4 Archived Measurement File Fields

Field Name	Data Type	Maximum Length	Comments
Release level	Integer	3	Format of records (should be set to 0).
Timestamp (seconds)	Integer	10	Indicates the time, in seconds, since the start of the UNIX internal timer, time of epoch.
Time interval (seconds)	Integer	5	Duration of the collection interval.
Measurement value	Integer	10	Value of the measurement.
Measurement units	String	32	Units for which the measurement is recorded.

Table A-4 Archived Measurement File Fields (continued)

Field Name	Data Type	Maximum Length	Comments
Measurement category	String	32	Text that describes the nature of the measurement. For a list and description of the available measurement, refer to Appendix D, "Cisco Media Gateway Controller Measurements."
Component name	String	32	Identifies the component associated with the alarm. Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide* for more information on components.