



MML Command Overview

This guide describes each of the Man-Machine Language (MML) commands you can use with the Cisco Media Gateway Controller (Cisco MGC). Use MML to configure your Cisco MGC, add components to your system, retrieve information about system components, and perform logging and tracing. For information on using MML commands for provisioning, see the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*. For more information on using MML commands for maintenance and troubleshooting, see the *Cisco Media Gateway Controller Software Release 7 Operations, Maintenance, and Troubleshooting Guide*.

This chapter describes MML command syntax, conventions used with MML commands, and responses expected from MML. It includes the following sections:

- [MML Command Guidelines, page 1-1](#)
- [MML Basics, page 1-2](#)
- [MML on High-Availability Systems, page 1-4](#)
- [MML Command Conventions, page 1-5](#)
- [Wildcards in MML Commands, page 1-5](#)
- [MML Responses, page 1-6](#)

MML Command Guidelines

MML commands use the following syntax:

```
command_name:[target][, target][, target. . .][:Parameter_List][;comments]
```

When entering MML commands, remember the following:

- MML component names must be 16 characters or shorter.
- Command names are not case-sensitive.
- Neither keywords nor value strings need to be enclosed in quotation marks, except where specified in this guide.
- Use only one MML command on each line.
- Anything entered after a semicolon (;) is treated as a comment. This is primarily useful for MML command scripts.
- Do not use punctuation (such as the period character) for target names; for example, do not use test.log as a logging destination.

- Create an ASCII text file for batch processing of provisioning commands. For more information about performing batch provisioning, refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*.

**Timesaver**

MML maintains a history buffer of all MML commands you enter during an MML session. To repeat your last MML command, press the up arrow at the MML prompt to redisplay the command, and press **Enter**. Press the up and down arrow keys to scroll through all commands in the history buffer. To modify and re-enter a command, use the up arrow to display the command and then edit the command using the keyboard. Press **Enter** to execute the command.

While viewing a lengthy response to an MML command, press the spacebar to display the next screen of output text, or press **Enter** to display the next line.

MML Basics

You must start an interactive MML session before you can use MML commands for provisioning, information retrieval, or troubleshooting. As many as 12 MML sessions can be open at a time, but only one provisioning session is permitted.

If an MML provisioning session is inactive for 30 minutes, a warning will be issued by the Cisco Media Gateway Controller. After 5 additional minutes of inactivity, the session will be terminated.

Starting an MML Session

Perform the following steps to start an MML session:

- Step 1** Log in to the Cisco MGC host computer from a terminal.

**Caution**

Do not log in as UNIX root; if you attempt to start an MML session as the root user, the Cisco MGC will perform a core dump, and MML will fail to start.

- Step 2** At a UNIX command prompt, type:

```
MGC% mml
```

The Cisco MGC will respond with the status of your MML session.

If your UNIX prompt looks similar to the following, your session has started successfully, and you can begin entering MML commands.

```
MGC:mml>
```

If another MML session is running, you will receive a message similar to the following:

```
MGC% mml1: Already in use
Failure to run MML, reason=Entry was already present.
```

- Step 3** To start a second MML session, enter the following command:

```
MGC% mml -s 2
```

The Cisco MGC should respond with an MML session prompt.



Note

The MML command **mml -s 2** starts the second MML session, and **mml -s 3** starts the third session. There can be as many as 12 MML sessions open at a time.

Saving an MML Session for Review

To save a provisioning session for later review, perform the following procedure:

-
- Step 1** Create a log file of the provisioning session, cie3, for later review, by entering the following command:
- ```
mml>diaglog:pom-log-session-cie3:start
```
- All MML commands entered will now be logged to the mml.log file located in /opt/CiscoMGC/var/log directory.
- Step 2** Stop logging the provisioning session, cie3, by entering the following command:
- ```
mml>diaglog:pom-log-session-cie3:stop
```
- The log file of the provisioning session can now be reviewed using an ASCII text editor.
- Step 3** Create a new configuration, cie3-prov, by entering the following command:
- ```
mml>prov-sta::srcver="new", dstver="cie3-prov"
```
- 

## Stopping an MML Session

To stop an MML session, enter the **QUIT** command as follows:

```
MGC mml>quit
MGC%
```

## Killing an MML Session

If an MML session cannot be stopped using the **QUIT** command, or if another MML session is running, you can kill it by performing the following steps:

- 
- Step 1** Close MML by entering the **QUIT** command, or telnet to the host server where the MML session is running.
- Step 2** To kill an MML session started by another user, log in as root.
- Step 3** At the UNIX prompt, enter the following command:
- ```
va-purple%ps -ef | grep mml
```

The host server responds with information similar to the following:

```
MGCUSR 17999 17989 0 13:30:44 pts/2 0:00 mml
```

- Step 4** Locate the process entry for the MML session you want to kill, and determine the process number of the session. In the above example, the process number is 17999. Enter the following command:

```
kill -9 xxxxx
```

where: xxxxx is the process number of the MML session.

- Step 5** To kill multiple MML sessions, enter a UNIX kill command for each MML session. Each session will have a unique process number.
-

Killing an Orphan Configuration Session

To kill a nonfunctioning configuration session, enter the **PROV-STP** command at the MML prompt.

Note that this command does not activate the new configuration.

Getting Help

To display a list of all MML commands, enter **HELP** at the MML prompt.

To get help for a specific command, enter **HELP:<COMMAND>** at the MML prompt. The following example shows the help available for **CLR-TCAP-TRANS**:

```
MGC mml> help:clr-tcap-trans
```

```
CLR-TCAP-TRANS -- Clear TCAP Transactions
```

```
Purpose:          This MML command clears all transaction capabilities
                  application part (TCAP) transactions that are older than
                  the specified period.
```

```
Format:         clr-tcap-trans::T=<number>
```

```
Input
```

```
Description:   * number -- The time period, in seconds, after which you
                  want to clear TCAP transactions.
```

```
Example:       The MML command shown in the following example clears all
                  TCAP transactions that are older than 60 seconds:
```

```
mml> CLR-TCAP-TRANS::T=60
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M   RTRV
"TCAP-01:CLRD=0"
;
```

MML on High-Availability Systems

To check the state of a high-availability system, you must be using MML on the active server. Although MML on the standby system will show checkpointed information, the updating is not instantaneous, and it is not obvious which information gets checkpointed and which does not.

To determine which server is active and which is standby, use the **RTRV-NE** command. This will show the immediate condition of the system.

MML Command Conventions

Conventions used in MML commands are described in this section.

Backus-Naur Conventions

MML commands use the Backus-Naur symbols shown in [Table 1-1](#).

Table 1-1 MML Backus-Naur Conventions

Symbol	Description
	A pipe indicates that the preceding symbol or the succeeding symbol may occur, but not both in succession.
[]	These brackets enclose an optional parameter.
{ }	Either the preceding symbol or the succeeding symbol may occur, but not both in succession. There may be more than two symbols and pipes.
< >	This symbol encloses an identifier to be replaced by the user with appropriate data.

Bellcore TL1 Conventions

The structure of MML is based on the Telcordia (Bellcore) TL1 standard (TR-NWT-831, *Operations Application Message - Operations Applications Messages, Issue 3*). Therefore, MML commands can be interpreted and monitored through a network's TL1 interface. The TL1 symbols shown in [Table 1-2](#) are used in MML.

Table 1-2 MML Bellcore TL1 Conventions

Symbol	Description
:	A parameter separator.
::	An empty parameter block.
&	Arguments are grouped together so that one parameter can convey several arguments.
;	End of command (optional). Anything on the same line after this symbol is treated as a comment.

Wildcards in MML Commands

Some MML commands support the use of wildcards. For software Release 7.4 and earlier, wildcards are available only as either postfix or prefix to MML names. The syntax for using wildcards with MML commands is as follows:

```
<MML command name>:<*><part of TID MML name><*>:[optional parameters]
```

For example, there are two ways to retrieve administrative states of trunk groups using wildcards:

- **RTRV-ADMIN-STATE:TG*** retrieves the administrative state of all trunk groups with MML names starting with “TG”.
- **RTRV-ADMIN-STATE:*GP** retrieves the administrative state of all trunk groups with MML names ending with “GP”.

The following commands support wildcards:

- ACK-ALM
- CLR-ALM
- RTRV-ADMIN-STATE
- RTRV-DEST
- RTRV-DCHAN
- RTRV-C7LNK
- RTRV-IPLNK
- RTRV-TC
- SET-ADMIN-STATE
- SET-DEST-STATE

MML Responses

Messages that MML can display are described in this section.

MML Status Messages

After you enter an MML command, the system performs the task you requested and returns a status message. [Table 1-3](#) lists the MML status messages and descriptions.

Table 1-3 MML Status Messages

Status	Meaning	Definition
COMPLD	Completed	MML received a response from the subsystem on which it performed the action. Note A completed response does not always signify successful completion. A completed response can be returned on invalid components, such as alarms.
RTRV	Retrieve	MML is attempting to retrieve the contents specified.
SUCC	Successful	Successful completion.
SWDC	Waiting for dependency	Status message—Waiting for dependent processes to start.
SWDT	Waiting for dependency	Status message—Waiting for dependent processes to stop. This is not an error. Enter the RTRV-SOFTW command to see when the dependent processes have stopped.

MML Error Messages

MML displays error messages if a command cannot be performed. [Table 1-4](#) lists the MML error messages and descriptions.

Table 1-4 MML Error Message Descriptions

Error Code	Meaning	Definition
DENY	Command denied	The command is recognized, but the system does not allow you to perform the requested function.
ICNV	Input command not valid	The MML command is not recognized.
IDNV	Input data not valid	An unknown parameter was entered. Example: <pre>mml> RESET-CIC:dpc2:cic5 Media Gateway Controller 2000-01-03 15:22:48 M RTRV IDNV "dpc2" /* Input, Data Not Valid */ ;</pre>
IIDV	Invalid data parameter	An unknown parameter was entered. An incorrect parameter name has been used in the command, or a value has been entered incorrectly. Note A string value must be surrounded by quotes, and an integer value must not be surrounded by quotes. Example: <pre>mml> RESET-CIC:dpc2:cic5 Media Gateway Controller 2000-01-03 15:22:48 M RTRV IIDV "dpc2" /* Input, Data Not Valid */ ;</pre>
IISP	Input syntax error	Incorrect syntax was used. A semi-colon or comma has been used incorrectly when entering the command. Example: <pre>mml> RESET-CIC:dpc9,cic22 Media Gateway Controller - MGC-01 2000-01-12 M RTRV IISP reset-cic:dpc9, /* Input, Syntax Error */ ;</pre>

Table 1-4 MML Error Message Descriptions (continued)

Error Code	Meaning	Definition
IITA	Invalid target	<p>The requested operation cannot be performed on the network element component, or the component does not exist in the system.</p> <p>Example:</p> <pre>mml> RESET-CIC:dpc9:CIC=10 Media Gateway Controller - MGC-01 2000-01-12 15:19:51 M RTRV IITA "dpc9" /* Input, Invalid Target */ ;</pre>
IPRM	Input parameter missing	An expected parameter cannot be found.
SABT	Status abort	The command did not finish in the time allocated.
SCNF	Status not found	There are problems with the engine.
SNVS	State not in valid state	The requested operation failed because the component is not configured to accept the operation. It is possible that the component is already performing the operation or is already in the desired state.
SNSP	State not supported	This operation is not supported by the component.
SROF	Status requested operation failed	<p>The requested operation failed on the component.</p> <p>Example:</p> <pre>mml> QUERY-CIC:dpc1:CIC=1, rng=1 Media Gateway Controller - MGC-01 2002-04-26 11:35:51 M RTRV SROF "dpc1" /* Range is not allowed*/ ;</pre>