MML Commands

This section describes each of the MML commands, presented in alphabetical order.

ACK-ALM — Acknowledge Alarm

Purpose: This MML command is used to acknowledge that an alarm category on a component is recognized but the alarm is not cleared. If this is the last current alarm of a specific severity, the associated alarm relay is turned off.

Format: ack-alm:<comp>:"<alm cat>"

Input Description:

- `comp` — The component that is generating the alarm. Components are described in the Cisco Media Gateway Controller Software Release 7 Provisioning Guide. Use the RTRV-CFG:COMPONENTS command, described on page 2-34, to retrieve a list of system components.

- `alm cat` — The alarm category, or the text that appears in the body of the alarm. Use the RTRV-ALMS command, described on page 2-32, to retrieve all active alarms.

Note: The alarm category is case sensitive, and it must be in quotation marks.

Example: The command in the following example acknowledges a Config Fail alarm for the I/O channel manager process:

```
ACK-ALM:IOCM-01:"CONFIG FAIL"
```

Comments: The format of alarm category name must be the same as the format of the alarm category name retrieved using the RTRV-ALMS command (which is why the alarm category must be in uppercase).

This command allows wildcarding.
**BLK-CIC— Block a Circuit or a Circuit Range**

**Purpose:** This MML command blocks a circuit or range of circuits from carrying calls.

**Format:**

```
blk-cic:<point code>:CIC=<number>[,RNG=<range>]
```

**Input Description:**

- **point code**—MML component name of a destination point code created with `PROV-ADD:ptcode`.
- **number**—A valid circuit identification code.
- **range**—A number such that `number + range` is a valid circuit identification code (CIC). All circuits between `number` and `number + range` are blocked.

**Example:**

The MML command shown in the following example blocks CIC 5 and the next 10 CICs on the destination point code dpc1:

```
mml> BLK-CIC:dpc1:CIC=5,RNG=10
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M COMPLD
"dpc1"
```

**Comments:** Enter the `RTRV-TC:all` command (or `RTRV-CIC` command) to see whether CICs were blocked.

Blocking a single CIC causes a BLO message to be sent to the destination SSP. Blocking a range of CICs causes a GBL message to be sent to the destination SSP. The range option only can be used to block CICs within a given trunk (T1 or E1).

To unblock a CIC, use the `UNBLK-CIC` command.

**CHG-DPL— Update Customer-Specific Number Manipulation Tables**

**Purpose:** This MML command updates customer-specific number manipulation tables based on the supplied customer group ID (previously called the virtual private network (vnet) ID). This may also be referred to as “reloading a dialing plan.”

**Format:**

```
chg-dpl::CUSTGRPID="<customer group ID>"
```

**Input Description:**

- **customer group id**—The identifier (customer group ID). This is also called the vnet ID. It is a four-character alphanumeric field. It is not validated by MML.

**Example:**

The MML command shown in the following example updates the number tables for a customer with a customer group ID of 1005:

```
mml> CHG-DPL::CUSTGRPID="1005"
Media Gateway Controller 2000-08-03 16:18:40
M COMPLD
"1005"
```


CHG-LOG— Change Log

Comments: This command has been replaced by SET-LOG.

CLR-ALM — Clear Alarm Component Category

Purpose: This MML command clears an alarm category for a component.

Format: clr-alm:<comp>:"<alm cat>"

Input Description:
- comp—The component generating the alarm. Components are described in the Cisco Media Gateway Controller Software Release 7 Provisioning Guide. Use the RTRV-CFG:COMPONENTS command described on page 2-34 to retrieve a list of system components.
- alm cat—The alarm category, or the text that appears in the body of the alarm. For a description of alarm categories, refer to Cisco Media Gateway Controller Software Release 7 Operations, Maintenance, and Troubleshooting Guide.

Example: The MML command shown in the following example clears the PC UNAVAIL alarm on the component stp3:
mml> CLR-ALM:stp3:"PC UNAVAIL"
Media Gateway Controller  - MGC-01 2000-01-12 15:19:51
M COMPLD

Comments: The format of the alarm category must match the format shown in the alarm when it is retrieved with the RTRV-ALMS command. It is case sensitive.
This command allows wildcarding.

CLR-MEAS — Reset a Measurement Category

Purpose: This MML command resets a measurement category of a component.

Format: clr-meas:<comp>:"<meas cat>"
Input Description:

- `comp`—The component being measured. Components are described in the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*. Use the `RTRV-CFG:COMPONENTS` command described on page 2-34 to retrieve a list of system components.

- `meas cat`—Logical identifier that selects the measurement category. For a description of measurement categories, refer to *Cisco Media Gateway Controller Software Release 7 Operations, Maintenance, and Troubleshooting Guide*. To retrieve a current list of measurement categories, use the MML command `RTRV-CFG:MEASCATEGORIES`.

Example: The MML command shown in the following example resets the line-interface-severely-errored seconds measurement category on component stp3:

```
mml> CLR-MEAS:stp3:"LIF: SES"
Media Gateway Controller  - MGC-01 2000-01-12 15:19:51
M  COMPLD
```

**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"
```

**DIAGLOG—Diagnostics Log**

Purpose: This MML command starts and stops event logging into a diagnostics log.

Format: `diaglog:<file name>:START|STOP`

Input Description:

- `file name`—The user-defined name of the log file. Do not use punctuation, such as the period character (.), to create a suffix. The default logging directory is `$BASEDIR/var/log`, where `$BASEDIR` is specified at installation.

- `start|stop`—Instructs the MGC whether to stop or start logging.
Example: The MML command shown in the following example starts logging into the diagnostics log named test:

```
mm1> DIAGLOG:test:start
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M COMPLD
```

Comments: Refer to the Cisco Media Gateway Controller Software Release 7 Messages Reference Guide for more information about log files.

### H—Display History

**Purpose:** This MML command redisplays a command or a series of commands, depending on a specified number or range. If no number is specified, the last command is displayed.

**Format:**

```
h[::<number>[,<number>]]
```

**Input Description:**

- `number`—(First number entered) specifies the first command to redisplay.
- `number`—(Second number entered) specifies a range of commands to display.

**Example:**

The MML command shown in the following example displays the last successful command entered:

```
mm1> H
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
 "RTRV-TC:ALL"
 /* command 1 */
 ;
```

The following command displays the third previous successful command you entered:

```
mm1> H::3
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
 "RTRV-TC:ALL"
 /* command 3 */
 ;
```

The following command displays the second through fifth previous successful commands entered:

```
mm1> H::2,5
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
 "RTRV-SC:ALL"
 /* command 5 */
 "RTRV-SOFTW:ALL"
 /* command 4 */
 "RTRV-TC:ALL"
 /* command 3 */
 "STP-AUD"
 /* command 2 */
 ;
```
HELP— Open the Help File

Purpose: This MML command provides either a list of MML commands, descriptions, and values (if no parameter is given), or a description of a particular command (if the command name is entered as a parameter).

Format: \texttt{help[:<command name>]} 

Example: The MML command shown in the following example displays help for a specific command:

\begin{verbatim}
   mml> HELP:SET-LOG
   Media Gateway Controller - MGC-03 2000-03-20 10:04:28
   M RTRV
   SET-LOG -- Set Logging Levels
   -----------------------------
   Purpose:      This MML command is used to set the logging level of a
   Description:  process or all processes.
   Input  * proc -- The various actively and passively monitored
   * log level -- Sets the logging level for the specified
   processes running on the MGC. Use the RTRV-SOFTW:ALL
   process. Logging levels are as follows:
   command to display all processes.
   - CRIT -- Critical level messages.
   - DEBUG -- Debug-level messages (lowest level).
   - ERR   -- Error condition messages.
   - INFO  -- Informational messages.
   - WARN  -- Warning condition messages.
   - TRACE -- Trace messages.
   Example:      The MML command shown in the following example sets
   the logging level of the ENG-01 process to DEBUG:
   mml> RTRV-LOG:ENG-01
   Media Gateway Controller - MGC-01 2000-01-16 09:38:03
   M RTRV
   "ENG-01:DEBUG"
   ;
   Comments: DSKM-01 and LOG-01, the disk monitor and log server
   processes, respectively, do not make use of log levels and
   therefore do not accept log-level change requests.
   
\end{verbatim}
Example: The MML command shown in the following example displays the help file displayed if no parameter is entered:

```
mml> HELP
M GC-01 - Media Gateway Controller 2000-08-31 14:57:10
M RTRV
Available commands (in alphabetical order):
ack-alm:<comp>:"<alm cat>" Acknowledges an alarm category on a component
blk-cic:<point code>:CIC=<number>[,RNG=<slaves>] Blocks a circuit or a circuit range
chg-dpl::CUSTGRPID="<customer group ID>" Reloads a dialing plan
clr-alm:<comp>:"<alm cat>" Clears an alarm category on a component
clr-meas:<comp>:"<meas cat>" Resets a measurement category on a component
clr-tcap-trans::T=<number> Clears all TCAP transactions older than value of T in seconds
diaglog:<file name>:START|STOP Starts/stops diagnostics log
h[::<number>[,<number>]] Displays a history of commands for a specified backward number or range; the last command by default
help[Math<command name>] Displays the list of MML commands or the help information on a specified command
kill-call:<dest_pc>:cic=cic,confirm Forcefully releases a bearer channel associated with a single call instance.
numan-add:<comp>:custgrpds=<cust group ID>,<param name><param value>,... Adds an element to a dial plan table
numan-dlt:<comp>:custgrpds=<cust group ID> Deletes an element from a dial plan table
numan-ed:<comp>:custgrpds=<cust group ID>,<param name><param value>,... Edits an element in a dial plan table
numan-rtrv:<comp>:custgrpds=<cust group ID> Retrieves an element from a dial plan table
numan-rtrv:<comp>:custgrpds=<cust group ID>,"all" Retrieves all elements from a dial plan table
prov-add:<comp>:name=<MML name>,<param name><param value>,... Adds the component
prov-cpy Commits provisioning data
prov-dlt:<comp>:name=<MML name> Deletes the component
prov-dply Deploys provisioning data
prov-ed:<comp>:name=<MML name>,<param name><param value>,... Modifies the component attributes
```
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prov-exp:<tid>:dirname="<export directory name>"

Exports provisioning data to the given export directory name.
tid can be one of the following:
  all
  config
  signal
  trkgrp
  trunk
  numan
  routing

export directory name can be any directory name, in double quotes, which will be created under the cust_specific directory.

prov-rtrv:<comp>:name=<MML name>

Retrieves the component attributes

prov-rtrv:all

Retrieves all the components

prov-rtrv:session

Retrieves provisioning session information if one exists

prov-rtrv:variants

Retrieves all variants

prov-sta::srcver=<version>,dstver=<version>

Starts a provisioning session

prov-stp

Stops the current provisioning session

prov-stp:<session name>:confirm

Stops the specified provisioning session

prov-sync

Synchronizes provisioning data

prt-call:<sig path>|<trk grp>: [CIC=<number>|SPAN=<number>|BC=<number>]
[,LOG=<logname>][,EVT]

Prints diagnostic information about an active call into the log file

query-cic:<point code>:CIC=<number> [,RNG=<slaves>][,RSLV]

Performs a circuit query for a circuit or a circuit range with an optional RESOLVE parameter

quit

Ends the session

r[::<number>]

Repeats a previously entered command with a specified backward number; the last command by default
 resets a circuit or a circuit range

rtrv-admin-state:<target>:<param>

Retrieves the administrative state of the target;
target can be an MGC or gateway or trunk group or sigPath;
param can be one of the following combinations:
  [span=number] or
  [span=number,]bc=number[,RNG=number]
or
  cic=number[,RNG=number]

rtrv-alms

Displays all active alarms

rtrv-alms::CONT

Displays all active alarms and listens for alarm events until Ctrl-C

rtrv-asn:<aux sig path>

Displays attributes of an ASP

rtrv-aud-gw:<sig path MGCP>

Retrieves result of an auditing process of a gateway

rtrv-aud-gw:all

Retrieves results of auditing processes of all gateways
rtrv-cfg:<cfg table> Displays contents of a configuration
table where table can be:
  alarmCategories | components |
  componentTypes | measCategories |
  services | tables
rtrv-cfg:<cfg table> Displays contents of a configuration
table where table can be:
  alarmCategories | components |
  componentTypes | measCategories |
  services | tables
rtrv-cic:<point code>:CIC=<number>[,RNG=<slaves>] Retrieves bearer channels of a point
code
rtrv-ctr:<comp>:"<meas cat>" Retrieves a measurement of a component
(point code)
rtrv-dest:<point code> Retrieves state of a destination
(signaling path)
rtrv-dest:<sig path> Retrieves state of a destination
(signaling path)
rtrv-dest:all Retrieves state of all destinations:
  point codes and signaling paths
rtrv-lnk-ctr:<C7 link/set> Retrieves all measurements of a link or
  link set
rtrv-lnk-ctr:all Retrieves all measurements of all links
rtrv-log:all Displays logging level of all processes
rtrv-log:<proc> Displays logging level of a process
rtrv-lset:<C7 link set> Displays state of a link set
rtrv-llsn:all Displays state of local SSN
rtrv-mml Displays attributes of the Network
Element
rtrv-ovld Displays overload level and number of
  messages in a queue
rtrv-rssn:all Displays state of remote SSN
rtrv-rte:<point code> Retrieves all SS7 routes for a point
code
rtrv-rte:all Retrieves SS7 routes for all point
codes
rtrv-sc:<sig channel> Displays attributes of a signaling
channel
rtrv-sc:<C7 link set> Displays attributes of a link set
rtrv-sc:all Displays attributes of all signaling
  channels and link sets
rtrv-sc-trc Displays the names of all files
  currently open for the various traces
  in progress
rtrv-software:<proc> Displays status of a process or
  process group
rtrv-software:all Displays status of all known processes
rtrv-sp-ctr:<point code> Retrieves all measurements of a point
code
rtrv-sp-ctr:all Retrieves all measurements of all point
codes
rtrv-spc:<point code> Retrieves route set of a point code
rtrv-spc:all Retrieves route sets of all point codes
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rtrv-ss7-slt:<C7 link>             Retrieves result of an MTP SLT test on a link
rtrv-ss7-srt:<point code>:LSET="<C7 link/set>"  
Retrieves result of an MTP SRT test on a point code
rtrv-tc:<sig path>&<sig path>...  Displays state of bearers per signaling path(s)
rtrv-tc:all                     Displays state of all bearers
rtrv-tc-held:<sig path>&<sig path>...  
Displays state of bearers per signaling path(s) held by gateway
rtrv-tc-held:all          Displays state of all bearers, held by gateway
rtrv-tcap-trans            Displays number of active TCAP transactions

set-admin-state:<target>:<param>,LOCK|UNLOCK|RESET  
Sets the administrative state of the target; target can be an MGC or gateway or trunk group or sigPath; param can be one of the following combinations: [span=number] or [span=number,]bc=number[,RNG=number] or cic=number[,RNG=number]

set-asn-state:<aux sig path>:IS|OOS   Changes service state of an ASP
set-dest-state:<sig path>:IS|OOS...  Changes service state of a signaling path
set-lnk-state:<C7 link/set>:IS|OOS|INH|UNH     
Changes service state of a link or a linkset
set-log:<proc>:<log level>                   Sets logging level for process <proc>
set-log:all:<log level>                      Sets logging level for all processes. logLevel can be:
                                             DEBUG | TRACE | INFO | WARN | ERR | CRIT
set-ssn-state::<SSN>,IS|OOS                 Changes service state of a local SSN
set-sc-state:<C7 IP or TDM SS7 link>:IS|OOS|FOOS  
Changes service state of a SS7 link
set-sc-state:<FAS link>:IS|OOS|FOOS|INH|UNH   
Changes service state of FAS related link
set-spc-state:<point code>:IS|OOS...     
Changes service state of a point code
sta-aud       Changes service state of a point code
sta-aud-gw:<sig path MGCP>    Starts auditing process
sta-aud-gw:all                    Starts auditing processes of a gateway
sta-abn-trc:<sig path>|all:params  
Starts dumping diagnostic info for abnormally terminated calls on entire MGC or a specified signal path or a point code,
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**CONFIRM** - confirms tracing over all or

- signal path or point code
  (not needed when using span or
  trunk - otherwise required)
- log="filename" output file name in
  the ../var/trace directory
- span=x, where x is the span number of
  interest
- trk=y, where y is the trunk number
- tc=c, where c is the traffic channel
  of interest
- rng=b, where b is the range of spans
- prd=n, where n is the period in
  seconds that this trace needs to be
  run for (default is half minutes or
  30 seconds)

**sta-sc-trc:<sig path>|<trkgrp>:params**

Starts tracing on a signal path or a
point code or a trunk group,
optional params are:
- CONFIRM - confirms tracing over a
  signal path or point code or trunk
group (not needed when using span or
  trunk - otherwise required)
- log="filename" output file name in
  the ../var/trace directory
- span=x, where x is the span number of
  interest
- trk=y, where y is the trunk number
- tc=c, where c is the traffic channel
  of interest
- rng=b, where b is the range of spans
- prd=n, where n is the period in
  seconds that this trace needs to be
  run for (default is 30 minutes or
  1800 seconds)

**sta-ss7-slt:<C7 link>**
Starts an MTP SLT test on a link

**sta-ss7-srt:<point code>:LSET="<C7 link/set>"**
Starts an MTP SRT test on a point code

**sta-tcap-trc**
Starts TCAP tracing

**stp-abn-trc:<sig path>|<trkgrp>**
Stops abnormal tracing on a signal path

**stp-abn-trc:all**
Stops abnormal tracing on all signal
paths

**stp-aud**
Stops auditing process

**stp-call:<target>:<param>**
Stops call(s) in progress for the given
target;
target can be an MGC or gateway or
trunk group or sigPath;
param can be one of the following
combinations:
- [span=number,]confirm or
- [span=number,]bc=number,
- [RNG=number,]confirm or
- cic=number,[RNG=number,]confirm

**stp-sc-trc:<sig path>|<trkgrp>**
Stops tracing on a signal path or trunk
group

**stp-sc-trc:all**
Stops tracing on all signal paths
KILL-CALL—Forcefully Release a Hung CIC

Purpose: This MML command resolves a stuck or hung CIC (forcefully releases a bearer channel associated with a single call instance that cannot be returned to the idle state with the reset-cic or stp-call commands.

Note: This command should only be used to resolve stuck CIC problems.

Format:

kill-call:<dest_pc>:cic=<cic>,confirm
kill-call:<dest_mgw>:span=<span>,bc=<bearer channel>,confirm

Input Description:

- *dest_pc*—MML name of the destination point code associated with the stuck cic.
- *dest_mgw*—MML name of the media gateway destination associated with the stuck span and bearer channel.
- *cic*—Number of the affected cic.
- *span*—Number of the affected span.
- *bc*—Number of the affected bearer channel.
- *confirm*—Verify execution of the command.

Refer to the Cisco Media Gateway Controller Software Release 7 Operations, Maintenance, and Troubleshooting Guide for a description of using this command to release a hung or stuck CIC.

Example: The MML command shown in the following example releases a stuck CIC on dpc1:

```
mml> kill-call:dpc1:cic=215,confirm
```

Example: The MML command shown in the following example releases a stuck span and bearer channel:

```
mml> kill-call:nassvc1:span=2, bc=2,confirm
```

Comments: Before using this command, attempt to manually clear the call with the reset-cic and stp-call commands. Refer to the Cisco Media Gateway Controller Software Release 7 Operations, Maintenance, and Troubleshooting Guide for information about resolving a stuck or hung CIC.
NUMAN-ADD

Purpose: This MML command adds an element to a dial plan table.

Format: `numan-add:<comp>:custgrpid="<cust group ID>"`,`<param name>=<param value>`,`...

Input Description:
- `<comp>`—The component being added to the dial plan.
- `custgrpid`—Customer group ID.

Refer to the *Cisco Media Gateway Controller Software Release 7 Dial Plan Guide* for a description of how to use the NUMAN-ADD command for dial plan provisioning and for a description of components, parameter names, parameter descriptions, and parameter values.

Example: The MML command shown in the following example is used in building a digit modification table:
```
mml> numan_add:digmodstring:custgrpid="T001",index=1,digitstring="703484"
```

NUMAN-DLT

Purpose: This MML command deletes an element from a dial plan table.

Format: `numan-dlt:<comp>:custgrpid="<cust group ID>"`

Input Description:
- `<comp>`—The component being deleted from the dial plan.
- `custgrpid`—Customer group ID.

Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide* for a description of components, parameter names, parameter descriptions, and parameter values.

Example: The MML command shown in the following example deletes an element from a dial plan table:
```
mml> numan-dlt:resultset:custgrpid="T001",name="ra4"
```

NUMAN-ED

Purpose: This MML command edits an element in a dial plan table.

Format: `numan-ed:<comp>:custgrpid="<cust group ID>"`,`<param name>=<param value>`,`...

NUMAN-RTRV

Purpose: This MML command retrieves an element or all elements from a dial plan table.

Format:
- `numan-rtrv:dialplan:all`
- `numan-rtrv:<comp>:custgrpid:<cust group ID>`
- `numan-rtrv:<comp>:custgrpid:<cust group ID>,all`

Input Description:
- `<comp>`—The component being deleted from the dial plan.
- `custgrpid`—Customer group ID.

Example: The MML command shown in the following example edits a dial modification table.

```
mml> numan-ed:npi:custgrpid="T001",npiblock=1,setname="ra2"
```

Refer to the Cisco Media Gateway Controller Software Release 7 Dial Plan Guide for a description of components, parameter names, parameter descriptions, and parameter values.
Output Description:

- DIALPLAN custGrpid—Customer group ID(s) for the dial plan.
- ADIGTREE digitString—Digit string being displayed.
- ADIGTREE callSide—Call side: originating or terminating.
- ADIGTREE PointInDigitString—A portion of the digit string that has a result set.
- ADIGTREE ResultSetName—Result set name.
- ADIGTREE ResultName—Result name in the set.
- ADIGTREE ResultType—Result type for the result name.
- ADIGTREE dw(n)—Data word (one through four) for the result.
- ADIGTREE nextResult—Next result name in the result set.
- RESULTTABLE setName—Result set name.
- RESULTTABLE resultName—Result name in the set.
- RESULTTABLE resultType—Result type for the result name.
- RESULTTABLE dw(n)—Data word (one through four) for the result.
- RESULTTABLE nextResult—Next result name in the result set.
- DIGMODSTRING digName—Name of the digit modification string.
- DIGMODSTRING digString—String of digits to modify.
- NOA Index—Nature of address indicator.
- NOA NPIBlock—Value of a configurable numbering plan index.
- NOA resultName—MML name of the result set.
- NPI Index—Index for the numbering plan index.
- NPI blockVal—NPI Block value.
- NPI resultName—NPI result set name.
- CAUSE Index—Cause value.
- CAUSE locationBlock—Location block value
- CAUSE resultName—MML name of the result set.
- LOCATION Index—Location block value.
- LOCATION blockVal—Block value.
- LOCATION resultName—MML name of the result set.
- SERVICE serviceName—MML name of the service
- RESULTSET setName—MML name of the result set.
- RESULTSET resultName—Result name.
- A(or B)WHITE CLI—Calling line identity and whether it exists.
- A(or B)BLACK CLI—Calling line identity and whether it exists.
- PORTTBL digitString—Called number.
- PORTTBL routingNumber—Routing number.
- TERMTBL digitString—Called number.
- TERMTBL routeListName—Route list name.
Example: The MML command shown in the following example retrieves the customer group ID.

```
mml> numan-rtrv:dialplan:*all*
```

Media Gateway Controller   - MGC-01 2000-02-01 13:23:36
M  RTRV
"*session=active:dialplan"
/*
CustGrpId
--------
V123
*/
;

**PROV-ADD— Add Provisioning Component**

**Purpose:** This MML command adds a component to the Cisco MGC configuration.

**Format:**
```
prov-add:<comp>:name="<MML name>",<param name>=<param value>,...
```

**Input Description:**
- `<comp>`—MML component type name for the type of configuration you are creating. The component type must match one of the component types listed in the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*. For Release 7.4(8) and later, `<comp>` can be EXTNODE. If `<comp>` is EXTNODE, then the `<param name>` TYPE must be present and needs to take a set of values (refer to the second example below).
- `name`—MML component name for the new object you are creating (as many as ten characters).
- `param name`—The name of a valid configuration parameter for the specified component type. Parameter names are listed in the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*
- `param value`—The value you want to assign to the parameter. If the parameter value is a string, it should be surrounded by quotation marks.

To define more than one parameter, enter additional `param name=param value` descriptions on the command line.
Example: The MML command shown in the following example adds the origination point code for the MGC configuration:

```mml>
PROV-ADD:ptcode:NAME="opc", DESC="Point code of CP1", netaddr="0.0.1", netind=2
```

Example: The MML Command shown in the following example adds an external node to the MGC configuration:

```mml>
PROV-ADD:extnode:name="toto2",desc="tata",type="MGX8260"
```

Comments: A wide variety of parameters can be provisioned, depending on the component selected. Refer to Cisco Media Gateway Controller Software Release 7 Provisioning Guide for a description of using the PROV commands for provisioning and for a description of components, parameter names, parameter descriptions, and parameter values.

**PROV-CPY—Commit Provisioning Data**

**Purpose:** This MML command copies configuration settings from the current provisioning session to the local host on which the commands are running in a simplex configuration, and this activates the configuration. This command terminates the current provisioning session, if successful, and fails if there is no active provisioning session.

**Note** The difference between the PROV-CPY command and the PROV-DPLY command is that the PROV-DPLY command applies the configuration changes to both hosts in continuous-service Cisco MGC configurations, and the PROV-CPY command applies the configuration changes to only the local MGC host.

**Format:** `prov-cpy`

**Example:** The MML command shown in the following example copies the configuration changes from the current session to the simplex Cisco MGC you are configuring.

```mml>
PROV-CPY
```

**Comments:** Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for a description of using the PROV commands for provisioning and for a description of components, parameter names, parameter descriptions, and parameter values.
PROV-DLT—Delete Components or Parameters

Purpose: This MML command deletes a provisioned component.

Format: 
```
prov-dlt:<comp>:name="<MML name>"
```

Input Description:
- `<comp>`—MML component type name for the type of component you are deleting. The entered parameter must match one of the component types listed in the Cisco Media Gateway Controller Software Release 7 Provisioning Guide.
- `name`—MML component name for the component you are deleting.

Example: The MML command shown in the following example deletes the point code component "opc":
```
mml> PROV-DLT:ptcode:NAME="opc"
```

Comments: Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for a description of using the PROV commands for provisioning and for a description of components, parameter names, parameter descriptions, and parameter values used in provisioning.

PROV-DPLY—Deploy Provisioning Data

Purpose: This MML command copies configuration settings from the current provisioning session to both Cisco MGCs in a continuous-service MGC configuration, and this activates the configuration. This command terminates the current provisioning session, if successful, and fails if there is no active provisioning session.

Note: The difference between the PROV-CPY command and the PROV-DPLY command is that the PROV-DPLY command applies the configuration changes to continuous-service Cisco MGC configurations, whereas the PROV-CPY command applies the configuration changes to the Cisco MGC you are configuring.

Format: 
```
prov-dply
```

Example: The MML command shown in the following example copies the configuration from the current session to both MGCs:
```
mml> PROV-DPLY
```

Comments: Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for a description of using the PROV commands for provisioning and for a description of components, parameter names, parameter descriptions, and parameter values used in provisioning.
PROV-ED—Modify Provisioned Component

Purpose: This MML command modifies a provisioned component.

Note: Only those parameters that need to be modified must be entered.

Format: `prov-ed:<comp>:name="<MML name>",<param name>=<param value>,...`

Input Description:

- `comp`—MML component type name for the type of component you are modifying. The entered parameter must match one of the component types listed in the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*.

- `name`—MML name for the component you are modifying. You cannot change the component name.

- `param name`—The name of each configuration parameter you want to change. The parameter names must be valid for the specified component type. Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide* for a description of components, parameter names, parameter descriptions, and parameter values.

- `param value`—The new value you want to assign to the parameter. If the parameter value is a string, it should be surrounded by quotation marks.

Note: To modify more than one parameter, enter additional `param name=value` descriptions on the command line.

Example: The MML command shown in the following example changes the description of the provisioned point code "opc":

```
  mml> PROV-ED:ptcode:NAME="opc", DESC="Point code for this SSP"
  Media Gateway Controller  - MGX-01 2000-01-12 15:19:51
  M  COMPLD
  "ptcode"
;```

Comments: Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide* for information about using the PROV commands for provisioning and for a description of components, parameter names, parameter descriptions, and parameter values used in provisioning.
Chapter 2  MML Commands

PROV-EXP—Exports Provisioning Data

Purpose: This MML command exports the current configuration of the MGC, in MML command form, to a file or files. This allows for a system to be primed with a cloned configuration from an existing system or to be restored to a baseline configuration. The exported data can be imported using MML's batch feature. (Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for information about creating an MML batch file.)

Format: \texttt{prov-exp:<tid>:dirname="<export directory name>"}

Input Description:
- \texttt{tid}—Types of data. These can be:
  - \texttt{config}—Core configuration data (signaling paths, SS7 nodes), including trunks and trunkgroup definitions.
  - \texttt{routing}—Routing plans.
  - \texttt{numan}—Dial plans.
- \texttt{export directory name}—Name of the directory to which the data is exported. This directory, which must be typed within double quotes, will be created as a subdirectory within the cust_specific directory established at installation.

Example: The MML command shown in the following example saves the following files in the saved config directory:
- config.mml
- export_trunks.dat (optionally created if trunks are defined)
- export_trkgrp.dat (optionally created if trunk groups are defined)
- routing.mml
- \texttt{<custGrpID>}.mml (any number of these depending on number of dialplans defined)

\begin{verbatim}
mm> prov-exp:all:dirname="saved_config"
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M COMPLD
\end{verbatim}

To import all configuration data from the directory saved_config exported by this command, use the UNIX commands shown, in the following order, to execute MML in batch mode:

\begin{verbatim}
mm -b $BASEDIR/etc/custom/saved_config/config.mml
mm -b $BASEDIR/etc/custom/saved_config/routing.mml
mm -b $BASEDIR/etc/custom/saved_config/<CustGrpID>.mml
\end{verbatim}

Comments: This command was introduced in Release 7.4.
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PROV-RTRV— Retrieve Provisioning Information

Purpose: This MML command retrieves information about an existing provisioning session.

Format:

- `prov-rtrv:<comp>:name=<MML name>`
- `prov-rtrv:all`
- `prov-rtrv:<comp>:"all"`
- `prov-rtrv:session`
- `prov-rtrv:variants`

Input Description:
- `all`—Displays all components that have been provisioned. A provisioning session is not required.
- `session`—Displays information about the provisioning session.
- `variants`—Displays a list of the signaling protocols this configuration supports. A provisioning session is not required.
- `comp`—Use this command form when you want to display information about a single component. Enter the MML component type name for the type of component you are displaying. The entered parameter must match one of the component types listed in the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*. Use the `PROV-RTRV:ALL` command to view TID names that may be entered here.
- `name`—MML component name for the component you want to display. Use the `PROV-RTRV:ALL` command to view MML component names that may be entered here.

Output Description: The output of this command varies, depending on the component and format selected.

For `PROV-RTRV:ALL`, the output is the following:
- `SESSION`—DSTVER if session exists; otherwise this is “ACTIVE”
- `NAME`—MML name of component
- `COMPID`—8-digit component ID
- `PARENT NAME`—MML name of parent component
- `TID`—Target identifier of component
- `DESCRIPTION`—Description of the provisioning component

For `PROV-RTRV:<comp>`, the output is as shown below:
- `SESSION`—DSTVER if session exists; otherwise this is “ACTIVE”
- `NAME`—MML name of component

A wide variety of additional output parameters may appear, depending on the component and format selected.
For **PROV-RTRV:SESSION**, the output is the following:

- **SRCVER**—The specific configuration version, as entered in the **PROV-STA** command that created the session.
- **DSTVER**—The specific output version, as entered in the **PROV-STA** command that created the session.

For **PROV-RTRV:VARIANTS**, the output is:

- **MDO File name**—Filename of the message definition object file. The MDO is a file that identifies protocol variants.
- **Protocol family**—Name of the protocol family

Example:
The MML command shown in the following example displays information about the point code “opc”:

```
mml> PROV-RTRV:ptcode:NAME="opc"
MGC-01 - Media Gateway Controller 2000-08-25 16:28:56
M RTRV
   "session=active:ptcode"
   /*
   NAME = opc
   DESC = Own Point Code
   NETADDR = 201.1.100
   NETIND = 2
   */

Example:
The MML command shown in the following example displays information about variants:

```
mml> PROV-RTRV:variants
MGC-01 - Media Gateway Controller 2000-08-25 16:23:43
M RTRV
   "session=0810esprit:variants"
   /*
   MDO File name    Protocol Family
   ---------------  ---------------
   ANSISS7_CLEAR    SS7-ANSI
   ANSISS7_MCI      SS7-ANSI
   ANSISS7_SPRINT   SS7-ANSI
   ANSISS7_STANDARD SS7-ANSI
   ATT_41459        ISDNPRI
   ATT_41459_C2     ISDNPRI
   BELL_1268        ISDNPRI
   BELL_1268_C3     ISDNPRI
   BTNUP_BTNR167    SS7-UK
   BTNUP_IUP        SS7-UK
   BTNUP_NRC        SS7-UK
   DPNSS_BTNR188    DPNSS
   EISUP            EISUP
   ETS_300_102      ISDNPRI
   ETS_300_102_C1   ISDNPRI
   ETS_300_121      ISDNPRI
   ETS_300_172      ISDNPRI
   ETS_300_356      SS7-ITU
   HKTA_2202        SS7-ITU
   ISUPV1_POLI      SS7-ITU
   ISUPV2_CZECH     SS7-ITU
   ISUPV2_FINNISH96 SS7-ITU
```
Chapter 2  MML Commands

PROV-STA—Start Provisioning Session

Purpose: This MML command establishes a provisioning session. The data files are copied from the source version to the destination version. The data files are also locked to prevent other users from making changes.

If there is no active session, you can start a new session. If there is an active session, you can view the active configuration, but you are blocked from performing other actions.

Format: prov-sta::srcver=<version>,dstver=<version>

Comments: Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for a description of using the PROV commands for provisioning and for a description of components, parameter names, parameter descriptions, and parameter values used in provisioning.

If the quotation marks are not used, the following error message is displayed:

/* Input, Invalid Data Parameter */
Input Description:

- `srcver=version`—Selects a specific configuration version as the source for configuration changes. The `srcVersionNumber` variable represents a directory stored in `$BASEDIR/etc/CONFIG_LIB`. In place of the configuration version, you can also enter:
  - `new`—Specifies a new default session configuration; no existing source configuration is used.
  - `active`—Selects the active configuration as the source for configuration changes.

- `dstver=version`—Specifies the output version number and directory for the configuration session results. The `destVersionNumber` variable represents a directory stored in `$BASEDIR/etc/CONFIG_LIB`.

**Note**
A version number is not required within the directory names listed above, but it does help you keep track of different configuration versions.

Example: The MML command shown in the following example starts a provisioning session and creates a new configuration named `ver1`:

```
mml> PROV-STA::SRCVER="new", DSTVER="ver1"
```

Example: The MML command shown in the following example starts a provisioning session, opens the existing configuration named `ver1`, and overwrites that configuration:

```
mml> PROV-STA::SRCVER="ver1", DSTVER="ver1"
```

Example: The MML command shown in the following example starts a provisioning session, opens the existing configuration named `ver1`, and saves the updated configuration as `ver2`:

```
mml> PROV-STA::SRCVER="ver1", DSTVER="ver2"
```

Comments: Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide* for a description of the `PROV` commands for provisioning and for a description of components, parameter names, parameter descriptions, and parameter values.

If the source and destination filenames are the same, the new configuration overwrites the old configuration. It is a good practice to copy an existing configuration instead of overwriting it. This gives you an easy way to return to a known configuration if there are problems with the new configuration. The new configuration should never be the destination session.

If the source configuration specified is `new`, the software does not allow you to overwrite an existing configuration.
PROV-STM— Stop Provisioning Session

Purpose: This MML command terminates either a specified session or the current provisioning session, saves the configuration, and releases the lock on the configuration data files.

Note: This command does not activate the new configuration. Use the PROV-CPY or PROV-DPLY command to activate the configuration.

Format:
```
prov-stp
prov-stp:<session name>:confirm
```

Input Description:
- `session name`—Use the PROV-RTRV;SESSION command to display a provisioning session DSTVER for this parameter.
- `confirm`—If no confirm option is entered, the command is rejected, and you are notified of the potential performance impact of this command.

Example: The MML command shown in the following example terminates the current provisioning session.
```
mml> PROV-STP
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M COMPLD
"PROV-STP"
```

PROV-SYNC— Synchronize Provisioning Data

Purpose: This MML command copies the active configuration from the active Cisco MGC host to the standby Cisco MGC host, ensuring that both Cisco MGC hosts are using the same configuration.

Format:
```
PROV-SYNC
```

Example: The MML command shown in the following example copies the configuration from the active Cisco MGC to the standby Cisco MGC:
```
mml> PROV-SYNC
```

PRT-CALL— Print Call

Purpose: This MML command prints diagnostic information about hung calls to a log file.

Format:
```
ppt-call:<sigpath><ptcode>:CIC<n>|span<n>[bc<n>][LOG<logname>][EVT]
```
Input Description:

Target parameters are as follows:

- **sigPath**—Corresponding MML name for any of the following component types:
  - Signal path of in-band TDM up to MUX and then time switched to TDM media and sent to the Cisco MGC
  - Signal path of in-band TDM signaling up to CU and then encapsulated and sent over IP to the Cisco MGC
  - Signal path of in-band TDM signaling up to NAS and then converted to NI2 and sent to the Cisco MGC over IP (that is, FE box<-sig/tdm->NAS<-NI2/IP-> Cisco MGC)
  - Signal path or route set associated with the SS7 destination PC
  - Signal path for EISUP

- **cic**—A numeric value that identifies the ISUP circuit identification code number.

- **span**—spanId is a 16-bit value that identifies an ISDN/PRI physical cable.

- **bc**—A numeric value that identifies the non-ISUP bearer channel number. BC is used for non-ISUP trunks; otherwise use CIC.

- **log**—The log parameter accepts the name of an ASCII log file to which the output is written. The name given in this parameter is used as a prefix to the actual name of the file, which includes the signal path name and date and time. If no log filename is provided, a default name consisting of the signal path and date and time is created. The extension of these log files is prt and the files are located in the ../var/trace directory.

- **EVT**—Reserved for future use.

Example:
The MML commands shown in the following examples prints information about hung calls to a file:

```mml
mml> prt-call:dms100-pc:cic=124
Media Gateway Controller 2000-06-14 11:02:39
M  COMPLD
"dms100-pc"
;
```

(The output for this prt-call command is the file:

$BASEDIR/var/trace/pc_20000614110239.prt)

Example:
The MML command shown in the following example prints information about hung calls to a file:

```mml
mml> prt-call:bh581-1:span=0,bc=1
Media Gateway Controller 2000-06-14 11:10:22
M  COMPLD
"bh581-1"
;
```

(The output for this prt-call command is the file:

$BASEDIR/var/trace/pc_200006141110239.prt)
Example: The MML command shown in the following example prints information about hung calls to a file:

```mml>
pkt-call: bh581-1: span=0, bc=1, log="bh581-print"
```

(The output for this pkt-call command is the file
$BASEDIR/var/trace/bh581-print_bh581-1_20000614111059.prt)

Comments: This command is available as of Release 7.4(8).
This command allows wildcards on signal paths.

## QUERY-CIC—Execute Circuit Query

**Purpose:** This MML command executes a circuit status query for a circuit or a circuit range.

**Format:**
```
query-cic:<point code>:CIC=<number>[,RNG=<range>][,RSLV]
```

**Input Description:**
- **point code**—MML component name of a point code created with PROV-ADD.
- **number**—A valid circuit identification code (CIC).
- **range**—A number such that `number + range` is a valid CIC. All circuits between `number` and `number + range` are queried.
- **rslv**—If this parameter is on, the system attempts to resolve differences between the Cisco MGC CIC state and the switch CIC state.
Output Description:

- **CIC**—Circuit identification code.
- **PST**—Primary state.
  - **AOOS**—The system has taken it out of service.
  - **INB**—Installed busy (resource has been created but not yet commanded IS or OOS via the SET-SC-STATE command).
  - **IS**—In service.
  - **MOOS**—Manually taken out of service.
  - **OOS**—Out of service.
  - **TRNS**—Transient; the state is currently being changed.
  - **UNK**—Unknown.
- **LPST**—Local primary state (states are same as PST, above).
- **LSST**—Local secondary state.
  - **N/A**—Not available.
  - **UNEQUIPPED**—Unequipped.
  - **IC_BUSY**—Incoming is busy.
  - **IC_BUSY_LOC_BLOC**—Incoming is busy, blocked locally.
  - **IC_BUSY_REM_BLOC**—Incoming is busy, blocked remotely.
  - **IC_BUSY_BOTH_BLOC**—Incoming is busy, blocked both remotely and locally.
  - **OG_BUSY**—Outgoing is busy.
  - **OG_BUSY_LOC_BLOC**—Outgoing is busy, blocked locally.
  - **OG_BUSY_REM_BLOC**—Outgoing is busy, blocked remotely.
  - **OG_BUSY_BOTH_BLOC**—Outgoing is busy, blocked both remotely and locally.
  - **IDLE**—The circuit is idle, available for use.
  - **IDLE_LOC_BLOC**—Idle, blocked locally.
  - **IDLE_REM_BLOC**—Idle, blocked locally.
  - **IDLE_BOTH_BLOC**—Idle, blocked both locally and remotely.
- **RPST**—Remote primary state (states are same as PST, above).
- **RSST**—Remote secondary state (states are same as LSST, above).
Example: The MML command shown in the following example queries CICs 20 through 24 on the destination point code dpc2. In this example, CIC=24 is a case in which the local primary state and secondary state differ.

```mml
mml> QUERY-CIC:dpc2:CIC=20,RNG=4
```

```
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
"dpc2:CIC=20;PST=IS;SST=IDLE"
"dpc2:CIC=21;PST=IS;SST=IDLE"
"dpc2:CIC=22;PST=IS;SST=IDLE"
"dpc2:CIC=23;PST=IS;SST=IDLE"
"dpc2:CIC=24;LPST=OOS;LSST=IDLE_LOC_BLOC,"
"dpc2:RPST=IS;RSST=IDLE"
```

Comments: If the remote states and local states are the same, then only the remote states are shown in the output.

**QUIT— End Session**

Purpose: This MML command ends the MML session.

Format: `QUIT`

Example: `mml> QUIT`

**R— Repeat Previously Entered Command**

Purpose: This MML command repeats a previously entered command.

Format: `r[::<number>]`

Input Description: `number`—The command to repeat. For example, a value of 3 repeats the command issued before the last two commands. The default value is 1, which repeats the last command.

Example: The MML command shown in the following example repeats the last command (this is the same as using the up arrow):

```
mml> R
```

Example: The MML command shown in the following example repeats the third to the last command:

```
mml> R::3
```
**RESET-CIC— Reset a Circuit or a Circuit Range**

**Purpose:** This MML command resets or activates a circuit or a range of circuits.

**Format:**
```
reset-cic:<point code>:CIC=<number>[,RNG=<range>]
```

**Input Description:**
- **point code**—MML component name of a destination point code created with **PROV-ADD**.
- **number**—A valid circuit identification code (CIC).
- **range**—A number such that **number + range** is a valid CIC. All circuits between **number** and **number + range** are reset.

**Example:** The MML command shown in the following example resets CICs 1 to 24 on destination point code dpc2:
```
mml> RESET-CIC:dpc2:CIC=1,RNG=23
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M COMPLD
"dpc2"
```

**RTRV-ADMIN-STATE— Retrieve Administrative State**

**Purpose:** This MML command provides the following summary report:
- Inferred target state:
  - If all circuits are locked, the inferred target administrative state is locked.
  - If at least one circuit is unlocked, the inferred target administrative state is unlocked.
  - If there is a mixture of locked and shutdown, the inferred target administrative state is shut down.
- Number of bearer channels that are in locking state.
- Number of bearer channels that are in unlocked state.
- Number of bearer channels that are in shutdown state.

**Format:**
```
rtrv-admin-state:<mgc>
rtrv-admin-state:<gway>
rtrv-admin-state:<trkGrp>
rtrv-admin-state:<sigPath>
rtrv-admin-state:<sigPath>:span=x
rtrv-admin-state:<sigPath>:span=x,BC=y[,RNG=z]
rtrv-admin-state:<sigPath>:CIC=x[,RNG=y]
```
Input Description: Target parameters are as follows:

- **MGC**—Corresponding MML name of media gateway controller.
- **GWAY**—Corresponding MML name for media gateway. Not all media gateway types are applicable. Supported types are CU, MUX, MGW, and AVM external nodes.
- **trkGrp**—trkGrp is applicable only for time-division multiplexing (TDM). Allow the corresponding MML name for component type "0020".
- **sigPath**—Corresponding MML name for any of the following component types:
  - Signal path of in-band TDM up to MUX and then time switched to TDM media and sent to the Cisco MGC
  - Signal path of in-band TDM signaling up to CU and then encapsulated and sent over IP to the Cisco MGC
  - Signal path of in-band TDM signaling up to NAS and then converted to NI2 and sent to the Cisco MGC over IP (that is, FE box<->sig/tdm->NAS<->NI2/IP-> MGC)
  - Signal path or route set associated with SS7 destination PC
  - Signal path for EISUP
- **span**—A 16-bit value that identifies an ISDN/PRI physical cable.
- **BC**—A numeric value that identifies the non-ISUP bearer channel number. BC is used for non-ISUP trunks; otherwise use CIC.
- **CIC**—A numeric value that identifies the ISUP circuit identification code number.
- **RNG**—The range of either bearer channels or circuit identification codes.

Output Description: Target parameters are as follows:

- **PST**—Primary administrative state:
  - **LOCK**—Locked state.
  - **UNLOCK**—Unlocked state.
  - **SHUTDOWN**—Shutdown state.
- **LOCK**—Number of bearer channels in locked state.
- **UNLOCK**—Number of bearer channels in unlocked state.
- **SHUTDOWN**—Number of bearer channels in shutdown state.

Example: The following example retrieves for dpc1 the primary state (PST=), the number of bearer channels in locked state (LOCK=), the number of bearer channels in unlocked state (UNLOCK=), and the number of bearer channels in shutdown state (SHUTDOWN=).

```
mml> rtrv-admin-state:dpc1
Media Gateway Controller - MGC-03 2000-02-17 14:27:52
M COMPLD 
"dpc1:PST=UNLOCK,LOCK=0,UNLOCK=384,SHUTDOWN=0"
```

Comments: This command was introduced in Release 7.4.

This command allows wildcarding.
RTRV-ALMS—Retrieve Active Alarms

Purpose: This MML command displays all active alarms.

Format:

```
RTRV-ALMS
RTRV-ALMS::CONT
```

Input Description:

CONT—Tells the system to display alarm events until Ctrl-C is pressed.

Output Description:

Refer to the Cisco Media Gateway Controller Software Release 7 Messages Reference Guide for a description of each of the alarms, including recommended actions.

Alarm severity levels (SEV) are as follows:

- Critical (CR)
- Major (MJ)
- Minor (MN)
- Informational

Example: The MML command shown in the following example displays the names of all active alarms:

```
mml> RTRV-ALMS
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
"IOCM-01: 1999-09-30 15:54:05.891," 
"IOCM-01:ALM="Config Fail",SEV=MN"
"FOD-01: 1999-09-30 15:54:01.211," 
"FOD-01:ALM="/FailoverPeerLost",SEV=MJ"
"dpc1: 1999-09-30 15:54:04.223,ALM="/PC UNAVAL",SEV=MJ"
"dpc3: 1999-09-30 15:54:03.382,ALM="/PC UNAVAL",SEV=MJ"
"ls2link2: 1999-09-30 15:54:04.119,ALM="/SC FAIL",SEV=MJ"
"ls3link1: 1999-09-30 15:54:04.121," 
"ls3link1:ALM="/Config Fail",SEV=MN"
"ls3link2: 1999-09-30 15:54:04.131," 
"ls3link2:ALM="/Config Fail",SEV=MN"
"ls3link2: 1999-09-30 15:54:04.132,ALM="/SC FAIL",SEV=MJ"
"ls5link1: 1999-09-30 15:54:04.150," 
"ls5link1:ALM="/Config Fail",SEV=MN"
"ls5link1: 1999-09-30 15:54:04.151,ALM="/SC FAIL",SEV=MJ"
```


Example: The MML command shown in the following example displays the names of active alarms and new alarm events until you press Ctrl-C:

```
mml> RTRV-ALMS::cont
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
"IOCM-01:ALM="Config Fail",SEV=MN"
"FOD-01: 1999-09-30 15:54:01.211,"
"FOD-01:ALM="FailoverPeerLost",SEV=MJ"
"dpc1: 1999-09-30 15:54:04.223,ALM="PC UNAVAIL",SEV=MJ"
"dpc2: 1999-09-30 15:54:04.229,ALM="PC UNAVAIL",SEV=MJ"
"dpc3: 1999-09-30 15:54:03.382,ALM="PC UNAVAIL",SEV=MJ"
"dpc5: 1999-09-30 15:54:04.243,ALM="PC UNAVAIL",SEV=MJ"
"ls3link1: 1999-09-30 15:54:04.121,"
"ls3link1:ALM="Config Fail",SEV=MN"
"ls3link2: 1999-09-30 15:54:04.131,"
"ls3link2:ALM="Config Fail",SEV=MN"
"ls3link2: 1999-09-30 15:54:04.132,ALM="SC FAIL",SEV=MJ"
"ls5link1: 1999-09-30 15:54:04.150,"
"ls5link1:ALM="Config Fail",SEV=MN"
"ls5link1: 1999-09-30 15:54:04.151,ALM="SC FAIL",SEV=MJ"

/* Listening for alarm events... (Ctrl-C to stop) */
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
** "dpc1:ALM="PC UNAVAIL",STATE=CLEARED"
;
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
** "dpc2:ALM="PC UNAVAIL",STATE=CLEARED"
;
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
A "ls1link1:ALM="CHAN BAD TOT 15",STATE=CLEARED"
;
Ctrl-C
"C/* Ctrl-C pressed */
mml>
```

**RTRV-AUD-GW — Retrieve Auditing of MGCP Gateway**

**Purpose:** This MML command retrieves the auditing of an MGCP gateway started by the STA-AUDIT-GW command.

**Format:**
- `rtrv-aud-gw:<sig path MGCP>`
- `rtrv-aud-gw:all`

**Input Description:**
- `sig path MGCP` — Retrieves the auditing of an MGCP signal path created with the PROV-ADD MGC command.
- `all` — Retrieves the auditing of all MGCPs.
**RTRV-CFG—Retrieve Configuration Table**

**Purpose:** This MML command displays the contents of a configuration table.

**Format:**

```
rtrv-cfg:<cfg table>
```

**Input Description:**

- `cfg table`—The configuration table to display. The possible configuration tables can be:
  - Alarm categories (alarmCategories)
  - Components
  - ComponentTypes
  - Measurement categories (measCategories)
  - Services
  - Tables

**Output Description:**

The output of this command consists of the contents of the table requested.
Example:

```
mml> rtrv-cfg:components

Media Gateway Controller - MGW-01 2000-01-12 15:19:51
M RTRV

"MGC-22: KEY=00010001,"
"MGC-22: PARENT=00000000, DESCR=Media Gateway Controller"
"CFGG-01: KEY=00020001,"
"CFGG-01: PARENT=00010001, DESCR=Config Mgr Subsystem"
"ALGG-01: KEY=00020002,"
"ALGG-01: PARENT=00010001, DESCR=Alarm Mgr Subsystem"
"MSGG-01: KEY=00020003,"
"MSGG-01: PARENT=00010001, DESCR=Measurement Mgr Subsystem"
"ENGG-01: KEY=00020004,"
"ENGG-01: PARENT=00010001, DESCR=Engine Subsystem"
"LOGM-01: KEY=00020005,"
"LOGM-01: PARENT=00010001, DESCR=Log Manager Subsystem"
"XEG-01: KEY=00020006,"
"XEG-01: PARENT=00010001,"
"XEG-01: DESCR=Execution Environment Daemons"
"PFMG-01: KEY=00020007,"
"PFMG-01: PARENT=00010001, DESCR=Platform Monitoring"
"FTG-01: KEY=00020008,"
"FTG-01: PARENT=00010001, DESCR=Fault Group"
"SNMPG-01: KEY=00020009,"
"SNMPG-01: PARENT=00010001, DESCR=SNMP Group"
"CFM-01: KEY=00030001,"
"CFM-01: PARENT=00020007, DESCR=Config Manager"
"ALM-01: KEY=00030002,"
"ALM-01: PARENT=00020007, DESCR=Alarm Manager"
"MM-01: KEY=00030003,"
"MM-01: PARENT=00020007, DESCR=Measurement Manager"
"AMDMR-01: KEY=00030004,"
"AMDMR-01: PARENT=00020007, DESCR=Alarm & Measurement Dumper"
"CDRDMR-01: KEY=00030005, PARENT=00020007, DESCR=CDR Dumper"
"DSKM-01: KEY=00030006,"
"DSKM-01: PARENT=00020008, DESCR=Disk Space Monitor"
"MMDB-01: KEY=00030007,"
"MMDB-01: PARENT=00020008, DESCR=TimesTen Database Process"
"FOM-01: KEY=00030008,"
"FOM-01: PARENT=00020008,"
"FOM-01: DESCR=Provisioning Object Manager"
"MEASAGT: KEY=00030009,"
"MEASAGT: PARENT=00020008, DESCR=Measurements SNMP Agent"
"OPERSAGT: KEY=0003000a,"
"OPERSAGT: PARENT=00020008, DESCR=Operational SNMP Agent"
"PROVSAGT: KEY=0003000b,"
"PROVSAGT: PARENT=00020008, DESCR=Provisioning SNMP Agent"
"CMSAlarm: KEY=0003000c,"
"CMSAlarm: PARENT=00020008, DESCR=CMS Alarm Manager"
"Replic-01: KEY=0003000d,"
"Replic-01: PARENT=00020008, DESCR=Replicator Controller"
"ENG-01: KEY=0003000e, PARENT=00020008, DESCR=Engine"
"TCAP-01: KEY=0003000f,"
"TCAP-01: PARENT=00020008, DESCR=TCAP Channel Manager"
"TCAP-01: KEY=00030010,"
"TCAP-01: PARENT=00020008,"
"TCAP-01: DESCR=TCAP and SCCP protocol handler"
"FOIC-ASP: KEY=00030011,"
"FOIC-ASP: PARENT=00020008,"
"FOIC-ASP: DESCR=IOS Channel Controller - ASP"
"FOD-01: KEY=00030012,"
"FOD-01: PARENT=00020008, DESCR=Failover Controller"
```
"IOCC-PRIIP: KEY=00030013,"
"IOCC-PRIIP: PARENT=00020005,"
"IOCC-PRIIP: DESCR=IOS ChannelController - ISDN PRI over IP"
"IOCC-ANSI1: KEY=00030014, PARENT=00020005, DESCR=00130001"
"CPU-01: KEY=00040001, PARENT=00010001, DESCR=CPU 1"
"DISK-01: KEY=00040003, PARENT=00010001, DESCR=Hard Disk #1"
"DISK-02: KEY=00040004, PARENT=00010001, DESCR=Hard Disk #2"
"encard1: KEY=00050001,"
"encard1: PARENT=00010001, DESCR=Ethernet Card 1"
"encard2: KEY=00050002,"
"encard2: PARENT=00010001, DESCR=Ethernet Card 2"
"enetif1: KEY=00060001,"
"enetif1: DESCR=Ethernet Interface for Card 1"
"enetif2: KEY=00060002,"
"enetif2: PARENT=00050002,"
"enetif2: DESCR=Ethernet Interface for Card 2"
"ls01: KEY=00080001,"
"ls01: PARENT=001e0001,"
"ls01: DESCR=Link Set from MGC to STPA"
"ls02: KEY=00080002,"
"ls02: PARENT=001e0002,"
"ls02: DESCR=Link Set from MGC to STPB"
"CPARM: KEY=00090001,"
"CPARM: PARENT=00010001, DESCR=XECfgParm.dat"
"TABLE: KEY=00090002, PARENT=00010001, DESCR=tables.dat"
"CTYPE: KEY=00090003,"
"CTYPE: PARENT=00010001, DESCR=compTypes.dat"
"COMP: KEY=00090004,"
"COMP: PARENT=00010001, DESCR=components.dat"
"ACAT: KEY=00090005,"
"ACAT: PARENT=00010001, DESCR=alarmCats.dat"
"DEPND: KEY=00090006,"
"DEPND: PARENT=00010001, DESCR=dependencies.dat"
"MCAT: KEY=00090007, PARENT=00010001, DESCR=measCats.dat"
"PGRP: KEY=00090008,"
"PGRP: PARENT=00010001, DESCR=procGroups.dat"
"PROC: KEY=00090009,"
"PROC: PARENT=00010001, DESCR=processes.dat"
"SRVC: KEY=0009000a, PARENT=00010001, DESCR=services.dat"
"STOG: KEY=0009000b, PARENT=00010001, DESCR=sigPath.dat"
"DPC: KEY=0009000c, PARENT=00010001, DESCR=dpc.dat"
"ROUTE: KEY=0009000d, PARENT=00010001, DESCR=routes.dat"
"SNMPF: KEY=0009000e, PARENT=00010001, DESCR=snmpmgr.dat"
"ALOG: KEY=000a0001, PARENT=00010001, DESCR=Alarm Log"
"CLOG: KEY=000a0002, PARENT=00010001, DESCR=Command Log"
"MLOG: KEY=000a0003,"
"MLOG: PARENT=00010001, DESCR=Measurement Log"
"DLOG: KEY=000a0004, PARENT=00010001, DESCR=Debug Log"
"FM-01: KEY=000b0001,"
"FM-01: PARENT=00010001, DESCR=Process Manager"
"MML-01: KEY=000c0001, PARENT=00010001, DESCR=MML #1"
"MML-02: KEY=000c0002, PARENT=00010001, DESCR=MML #2"
"MML-03: KEY=000c0003, PARENT=00010001, DESCR=MML #3"
"MML-04: KEY=000c0004, PARENT=00010001, DESCR=MML #4"
"MML-05: KEY=000c0005, PARENT=00010001, DESCR=MML #5"
"MML-06: KEY=000c0006, PARENT=00010001, DESCR=MML #6"
"MML-07: KEY=000c0007, PARENT=00010001, DESCR=MML #7"
"MML-08: KEY=000c0008, PARENT=00010001, DESCR=MML #8"
"MML-09: KEY=000c0009, PARENT=00010001, DESCR=MML #9"
"MML-10: KEY=000c000a, PARENT=00010001, DESCR=MML #10"
"MML-11: KEY=000c000b, PARENT=00010001, DESCR=MML #11"
"MML-12: KEY=000c000c, PARENT=00010001, DESCR=MML #12"
"ASP: KEY=000e0000,"
"ASP: PARENT=00010001, DESCR=ASN connection"
"iplink1: KEY=00100001,"
"iplink1: PARENT=00140001, DESCR=IP Link for NAS1"
"iplink2: KEY=00100002,"
"iplink2: PARENT=00140002, DESCR=IP Link for NAS 2"
"iplink3: KEY=00100003,"
"iplink3: PARENT=00140003, DESCR=IP Link for NAS 3"
"ss7route1: KEY=00110001,"
"ss7route1: PARENT=00010001,"
"ss7route1: DESCR=Route 1 to PSTN Switch A via LS1"
"ss7route2: KEY=00110002,"
"ss7route2: PARENT=00010001,"
"ss7route2: DESC=Route 2 to PSTN Switch A via LS2"
"opc: KEY=00130001,"
"opc: PARENT=00010001, DESCR=Origination Point Code"
"dpc1: KEY=00130002,"
"dpc1: PARENT=00010001, DESCR=DPC of PSTN Switch A"
"signas1: KEY=00140001,"
"signas1: PARENT=00160002, DESCR=Signaling Service for NAS1"
"signas2: KEY=00140002,"
"signas2: PARENT=00160003, DESCR=Signaling Service for NAS2"
"signas3: KEY=00140003,"
"signas3: PARENT=00160004, DESCR=Signaling Service for NAS3"
"ss7sigsvc: KEY=00150001,"
"ss7sigsvc: DESC=SS7 Service to PSTN Switch A"
"nas1: KEY=00160002, PARENT=00010001, DESC=NAS1"
"nas2: KEY=00160003, PARENT=00010001, DESC=NAS2"
"nas3: KEY=00160004, PARENT=00010001, DESC=NAS3"
"switcha: KEY=00160005,"
"switcha: PARENT=00010001, DESC=PSTN Switch A"
"SS7-MGR-01: KEY=00170001, PARENT=00010001, DESC=Manager001"
"c7iplink1: KEY=001d0001,"
"c7iplink1: PARENT=00080001, DESC=Link 1 in Link Set 1"
"c7iplink2: KEY=001d0002,"
"c7iplink2: PARENT=00080001, DESC=Link 2 in Link Set 1"
"c7iplink3: KEY=001d0003,"
"c7iplink3: PARENT=00080002, DESC=Link 1 in Link Set 2"
"c7iplink4: KEY=001d0004,"
"c7iplink4: PARENT=00080002, DESC=Link 2 in Link Set 2"
"apc1: KEY=001e0001, PARENT=00010001, DESC=APC for STPA"
"apc2: KEY=001e0002, PARENT=00010001, DESC=APC for STPB"
"ss7subsys1: KEY=001f0001,"
"ss7subsys1: PARENT=00010001, DESC=Route from STPA to STPB"
"ss7subsys2: KEY=001f0002,"
"ss7subsys2: PARENT=00010001, DESC=Route from STPB to STPA"
"Cust-Files: KEY=00210001,"
"Cust-Files: PARENT=00010001, DESC=Customer specific files"
"SS7-ANSI: KEY=00250001,"
"SS7-ANSI: PARENT=00010001, DESC=SS7-ANSI Protocol Family"
"SS7-ITU: KEY=00260001,"
"SS7-ITU: PARENT=00010001, DESC=SS7-ITU Protocol Family"
"SS7-China: KEY=00270001,"
"SS7-China: PARENT=00010001, DESC=SS7-China Protocol Family"
"SS7-NTT: KEY=00280001,"
"SS7-NTT: PARENT=00010001, DESC=SS7-NTT Protocol Family"
"IDSNPRI: KEY=00290001,"
"IDSNPRI: PARENT=00010001, DESC=IDSNPRI Protocol Family"
"DPNSS: KEY=002a0001,"
"DPNSS: PARENT=00010001, DESC=DPNSS Protocol Family"
"SGCP: KEY=002b0001,"  
"SGCP: PARENT=00010001, DESCR=SGCP Protocol Family"  
"EISUP: KEY=002c0001,"  
"EISUP: PARENT=00010001,"  
"EISUP: DESCR=Extended ISUP Protocol Family"  
"PRIIP: KEY=002f0001,"  
"PRIIP: PARENT=00010001,"  
"PRIIP: DESCR=ISDNPRI over IP Protocol Family"  
"A-MBD: KEY=00300001, PARENT=00010001, DESCR="  
"B-MBD: KEY=00300002, PARENT=00010001, DESCR="  
"A-DSK: KEY=00300003, PARENT=00010001, DESCR="  
"B-DSK: KEY=00300004, PARENT=00010001, DESCR="  
"A-DSK0: KEY=00300005, PARENT=00010001, DESCR="  
"A-DSK1: KEY=00300006, PARENT=00010001, DESCR="  
"A-DSK2: KEY=00300007, PARENT=00010001, DESCR="  
"A-DSK3: KEY=00300008, PARENT=00010001, DESCR="  
"A-DSK4: KEY=00300009, PARENT=00010001, DESCR="  
"A-DSK5: KEY=0030000a, PARENT=00010001, DESCR="  
"B-DSK0: KEY=0030000b, PARENT=00010001, DESCR="  
"B-DSK1: KEY=0030000c, PARENT=00010001, DESCR="  
"B-DSK2: KEY=0030000d, PARENT=00010001, DESCR="  
"B-DSK3: KEY=0030000e, PARENT=00010001, DESCR="  
"B-DSK4: KEY=0030000f, PARENT=00010001, DESCR="  
"B-DSK5: KEY=00300010, PARENT=00010001, DESCR="  
"A-RMM: KEY=00300011, PARENT=00010001, DESCR="  
"B-RMM: KEY=00300012, PARENT=00010001, DESCR="  
"A-PCI0: KEY=00300015, PARENT=00010001, DESCR="  
"A-PCI1: KEY=00300016, PARENT=00010001, DESCR="  
"A-PCI2: KEY=00300017, PARENT=00010001, DESCR="  
"A-PCI3: KEY=00300018, PARENT=00010001, DESCR="  
"A-PCI4: KEY=00300019, PARENT=00010001, DESCR="  
"A-PCI5: KEY=0030001a, PARENT=00010001, DESCR="  
"A-PCI6: KEY=0030001b, PARENT=00010001, DESCR="  
"B-PCI0: KEY=0030001c, PARENT=00010001, DESCR="  
"B-PCI1: KEY=0030001d, PARENT=00010001, DESCR="  
"B-PCI2: KEY=0030001e, PARENT=00010001, DESCR="  
"B-PCI3: KEY=0030001f, PARENT=00010001, DESCR="  
"B-PCI4: KEY=00300020, PARENT=00010001, DESCR="  
"B-PCI5: KEY=00300021, PARENT=00010001, DESCR="  
"B-PCI6: KEY=00300022, PARENT=00010001, DESCR="  
"A-CPU: KEY=00300023, PARENT=00010001, DESCR="  
"A-PSU0: KEY=00300024, PARENT=00010001, DESCR="  
"A-PSU1: KEY=00300025, PARENT=00010001, DESCR="  
"A-PSU2: KEY=00300026, PARENT=00010001, DESCR="  
"B-PSU0: KEY=00300027, PARENT=00010001, DESCR="  
"B-PSU1: KEY=00300028, PARENT=00010001, DESCR="  
"B-PSU2: KEY=00300029, PARENT=00010001, DESCR="  
"B-CPU: KEY=0030002a, PARENT=00010001, DESCR="  
"SS7-UK: KEY=00320001,"  
"SS7-UK: PARENT=00010001, DESCR=BT SS7-ITU Protocol Family"  
"TCAPOverIP: KEY=00360001,"  
"TCAPOverIP: PARENT=00010001,"  
"TCAPOverIP: DESCR=tcap over ip protocol Family"  
"MGCP: KEY=00380001,"  
"MGCP: PARENT=00010001, DESCR=MGCP Protocol Family"  
"BTNUP: KEY=003c0001,"  
"BTNUP: PARENT=00010001,"  
"BTNUP: DESCR=BTNUP SS7-ITU Protocol Variant" ;
Comments: Currently, the cfgTable in this command differs from the cfgTable used in the change configuration command. The following are valid target tables:

- alarmCategories
- components
- componentTypes
- services
- measCategories
- tables
- dfltcfgparms—Default configuration parameters

**RTRV-CIC—Retrieve Bearer Channels**

**Purpose:** This MML command retrieves bearer channel information for one or more circuits that are identified by a destination point code.

**Format:**

```
rtrv-cic:<point code>:CIC=<number>[,RNG=<range>]```

**Input Description:**

- **point code**—MML component name of a point code provisioning component.
- **number**—A valid circuit identification code (CIC).
- **range**—A number such that number + range is a valid CIC. All circuits between number and number + range are displayed.
Output Description:

- `<point code>`—MML component name of a point code provisioning component.
- `CIC`—Circuit identification code.
- `PST`—Primary state.
  - `AOOS`—The system has taken it out of service
  - `INB`—Installed busy (resource has been created but not yet commanded IS or OOS via the SET-SC-STATE command)
  - `IS`—In service
  - `MOOS`—Manually taken out of service
  - `OOS`—Out of service
  - `TRNS`—Transient; the state is currently being changed
  - `UNK`—Unknown
- `Call`—Call state.
  - `IDLE`—Circuit is idle, available for use.
  - `OOS`—Out of service
  - `IS`—In service
- `GW_STAT`—State of the gateway.
  - `CARRIER_FAILURE`—Carrier has failed
  - `GW_HELD`—The call has been held at the gateway
  - `CXN_IS`—The connection is In service
  - `CXN_OOS_ACTIVE`—The connection is out of service on the active system
  - `CXN_OOS_STANDBY`—The connection is out of service on the standby system
• **BLK**—Blocking state.
  - **GATEWAY**—Locally blocked due to a gateway event (for example, RSIP or a group service message.)
  - **LOCAUTO**—Hardware blocking type; the circuit is blocked by an external message generated by a network element outside the MGW.
  - **LOCMAN**—Blocked manually by MML. This is removable by the **UNBLK-CIC** or **RESET-CIC** command.
  - **LOCUNK**—Locally blocked for unknown reasons. (This indicates a potential software problem whereby a circuit has become blocked but the software did not track the cause of the blocking.)
  - **NONE**—There is no block on the CIC. DS0 is available for use.
  - **REMAUTO**—Remotely auto blocked.
  - **REMMAN**—Remotely blocked.

Example: The MML command shown in the following example retrieves bearer channel information for CICs 276 through 281 on destination point code dpc4:

```mml>
RTRV-CIC;dpc4:cic=276,rng=5
MGC-13 - Media Gateway Controller 2000-08-30 14:42:10
M RTRV
"dpc4:CIC=276,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=277,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=278,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=279,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=280,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=281,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
```

**RTRV-CTR**—Retrieve Measurement Counter

**Purpose:** This MML command displays a measurement counter for a component.

**Format:**

```
rtrv-ctr:<comp>:`"<meas cat>"`
```

**Input Description:**

- **comp**—The MML name of the component you want to examine. Use the
  **RTRV-CFG:COMPONENTS** command described on page 2-34 to retrieve a list of system components.

- **meas cat**—Logical identifier that selects the measurement category or measurement group. For a list of measurement categories, use the
  **RTRV-CFG:MEASCATEGORIES** command described on page 2-34 to retrieve a list of measurement categories. For descriptions of measurements, refer to the
  *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*. 


Chapter 2  MML Commands

RTRV-DEST—Retrieve Destination

Purpose: This MML command retrieves information about one or more destinations.

Format:

rtrv-dest:<point code>
rtrv-dest:<sig path>
rtrv-dest:all

Input Description:

- **point code**—MML component name of a point code provisioning component.
- **sig path**—The MML name of the logical signal channel for which you want to display information. These should be signal path DSS IP or sig path NAS entities.
- **all**—Displays information about all external point codes and signal paths.

Output Description:

- **<POINT CODE>**—Point code.
- **PKG**—Protocol family.
- **ASSOC**—Associated channels.
  - **UNK**—Unknown
  - **SWITCHED**—The destination is switched, not associated.
  - **<channel>**—The channel the destination is associated with.
• PST—Primary state.
  - AOOS—The system has taken it out of service.
  - INB—Installed busy (resource has been created but not yet commanded IS or OOS via the SET-SC-STATE command).
  - IS—In service.
  - MOOS—Manually taken out of service.
  - OOS—Out of service.
  - TRNS—Transient; the state is currently being changed.
  - UNK—Unknown.
• SST—Secondary state.
  - UND—Undefined.
  - CRTE—Created.
  - DLT—Deleted.
  - CIS—Commanded in service.
  - COOS—Commanded out of service.
  - FLD—Failed.
  - RSTO—Restored.
  - RST—Reset.
  - CONG—Congestion.
  - FOOS—Forced out of service.
  - CINH—Commanded to the inhibited state.
  - CUINH—Commanded to the uninhibited state.
  - CEA—Commanded into emergency alignment.
  - EIS—Engine in service.
  - EOOS—Engine out of service.

Example: The MML command shown in the following example retrieves the destination of point code dpc4:

```mml> RTRV-DEST:dpc4
MGC-01 - Media Gateway Controller 2000-08-30 16:44:42
M RTRV
"dpc4:PKG=SS7-ANSI,ASSOC=SWITCHED,PST=IS,SST=RSTO"
```

Comments: This command supports wildcarding.

**RTRV-EQPT— Retrieve Service State of a Component**

Comments: This command is no longer supported.
**RTRV-LNK-CTR— Retrieve SS7/C7 Link Measurements**

**Purpose:** The MML command shown in the following example displays the measurements for a single link or for all links. It returns all measurements for one link, for every link configured in the specified linkset, or for every linkset. The measurements are displayed in the same format as in **RTRV-CTR**.

**Format:**

```
RTRV-LNK-CTR:<C7 link/set>
RTRV-LNK-CTR:all
```

**Input Description:**
- `<C7 link/set>`—The provisioning component C7 IP link, a TDM link used in a linkset, or a linkset. Refer to for a description of C7 linksets. Use the **RTRV-CFG:COMPONENTS** command described on page 2-34 to retrieve a list of linksets.
- `all`—Displays the measurements for all links.

**Output Description:**
- `<C7 link/set>`—SS7 / C7 Linkset.
- `CAT`—Measurement category.
- `INT`—Interval at which the measurement is taken.
- `VAL`—Value of the measurement.

**Example:** The MML command shown in the following example displays the measurements for linkset1:

```
mml> RTRV-LNK-CTR:ls1
MGC-03 - Media Gateway Controller 2000-08-22 16:32:23
M RTRV
"ls1link1:CAT="SC: RCV FRM TOT",INT=900,VAL=0"
"ls1link1:CAT="SC: RCV FRM TOT",INT=3600,VAL=0"
"ls1link1:CAT="SC: RCV FRM TOT",INT=86400,VAL=0"
"ls1link1:CAT="SC: XMIT FRM TOT",INT=900,VAL=0"
"ls1link1:CAT="SC: XMIT FRM TOT",INT=3600,VAL=0"
"ls1link1:CAT="SC: XMIT FRM TOT",INT=86400,VAL=0"
"ls1link1:CAT="C7LNK: MSU DROP-CONG",INT=1800,VAL=0"
"ls1link1:CAT="C7LNK: DUR UNAVAIL",INT=1800,VAL=0"
"ls1link1:CAT="SC: RCV BAD CRC",INT=900,VAL=0"
"ls1link1:CAT="SC: RCV BAD CRC",INT=3600,VAL=0"
"ls1link1:CAT="SC: RCV BAD CRC",INT=86400,VAL=0"
"ls1link1:CAT="C7LNK: DUR IS",INT=1800,VAL=0"
"ls1link1:CAT="C7LNK: RCV SIO TOT",INT=1800,VAL=0"
"ls1link1:CAT="C7LNK: XMIT SIO TOT",INT=1800,VAL=0"
"ls1link1:CAT="C7LNK: RCV SU ERR",INT=1800,VAL=0"
```

**RTRV-LOG— Retrieve Log**

**Purpose:** This MML command is used to display the logging level of a process or all processes.

**Format:**

```
rtrv-log:all
rtrv-log:<proc>
```
Chapter 2  MML Commands

RTRV-LSET—Retrieve Linkset Service State

Purpose: This MML command is used to retrieve the service state of a linkset.

Format: `rtrv-lset:<linkset>`

Input Description:
- `<linkset>`—The provisioning component C7 link, TDM link used in a linkset, or linkset. Refer to the Cisco Media Gateway Controller Software Release 9 Provisioning Guide for a description of C7 linksets. Use the `RTRV-CFG:COMPONENTS` command, described on page 2-34, for a list of linksets.
Chapter 2  MML Commands

RTRV-LSSN—Retrieve State of All Local SSNs

Purpose: This MML command displays the state of all local SSNs (LSSNs).

Format:  RTRV-LSSN:all

Output Description:
- `<process>`—Name of process.
- `<LSSN>`—Name of local subsystem number.
- `PST`—Primary state
  - `IS`—In service
  - `OOS`—Out of service

Example:  mml> RTRV-LSSN:all
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
MOOS

RTRV-MML—Retrieve Active MML Sessions

Purpose: This MML command displays all active MML sessions, their session numbers, and the user IDs of the session originators.

Format:  RTRV-MML
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Output Description:

- `mml1`—Session number
  - `<username>`—UNIX username of session owner
- `mml2`—Session number
  - `<username>`—UNIX username of session owner

Example: The MML command shown in the following example shows all MML sessions:

```
mml> 
```

Example: The MML command shown in the following example displays information about the Cisco MGC:

```
mml> 
```

RTRV-NE—Retrieve Network Element Attributes

Purpose: This MML command displays information about the Cisco MGC hardware, software, and current state (active or standby).

Format: `RTRV-NE`

Output Description:

- `Type`—Type of controller
- `Hardware Platform`—Hardware platform
- `Vendor`—MGC vendor
- `Location`—Controller machine name
- `Version`—Controller software version
- `Platform State`—Use of controller
  - `ACTIVE`—The controller in use
  - `STANDBY`—The redundant controller

Example: The MML command shown in the following example displays information about the Cisco MGC:
**RTRV-OVLD—Retrieve Overload Level**

**Purpose:** This MML command displays the overload level and number of messages in a queue.

**Format:**

```
RTRV-OVLD
```

**Output Description:**

- `<Component>`—MML component name
- `OVLD`—Overload level
- `MSGQ`—Number of messages in the queue

**Example:**
The MML command shown in the following example displays the overload level in the queue:

```
mml> RTRV-OVLD
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
"ENGG-01: OVLD=0,MSGQ=0"
```

**RTRV-RSSN—Retrieve State of All Remote SSNs**

**Purpose:** This MML command displays the state of all remote SSNs (RSSNs).

**Format:**

```
RTRV-RSSN:all
```

**Output Description:**

- `<link>`—Name of link
- `<RSSN>`—Remote subsystem number
- `PC`—Point code(s)
- `SSN`—Subsystem number
- `PST`—Primary state
  - `IS`—In service
  - `OOS`—Out of service

**Example:**
The MML command shown in the following example displays the state of all remote SSNs:

```
mml> RTRV-RSSN:all
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
"stp1:PC=007.007.007,SSN=1,PST=OOS"
"stp2:PC=008.008.008,SSN=1,PST=OOS"
"stp3:PC=009.009.009,SSN=2,PST=OOS"
```
**RTRV-RTE—Retrieve Route**

**Purpose:**
This MML command retrieves all SS7 routes for a point code or SS7 routes for all point codes.

**Format:**
- `rtrv-rte:<point code>`
- `rtrv-rte:all`

**Input Description:**
- `point code`—The MML component name of a point code.
- `all`—Retrieves all SS7 routes for all point codes.

**Output Description:**
- `<PC>`—Target point code.
- `<linkset>`—Linkset ID.
- `APC`—Adjacent point code.
- `PRIO`—Priority set for the routes.
- `PST`—Primary state.
  - `AOOS`—The system has taken the resource out of service.
  - `INB`—Installed busy (resource has been created but not yet commanded IS or OOS via the `SET-SC-STATE` command).
  - `IS`—In service.
  - `MOOS`—Manually taken out of service.
  - `OOS`—Out of service.
  - `TRNS`—Transient; the state is currently being changed.
  - `UNK`—Unknown.
**SST**—Secondary state.
- **UNK**—Cause unknown.
- **NA**—Cause not available.
- **CONF**—Configuration failure.
- **LINE**—Line failure.
- **LINS**—Linkset failure.
- **LINK**—Link failure.
- **ENGR**—Engine reset.
- **COOS**—Cause: commanded out of service.
- **CIS**—Cause: commanded in service.
- **SUPPENT**—Supporting entity.
- **OOSPEND**—Out of service, pending.
- **ISPEND**—In service, pending.
- **TPATH**—Traffic path.
- **SERR**—C7 signal error.
- **BSNR**—C7 BSNR (backward sequence number received) over fiber.
- **ACKD**—C7 ACK delay.
- **LINH**—C7 local inhibit.
- **RINH**—C7 remote inhibit.
- **RBLK**—C7 remote blocked.
- **LCNG**—Congestion, local.
- **RCNG**—Congestion, remote.
- **PRHB**—C7 prohibited.
- **RSTR**—C7 restricted.
- **STBY**—Cause standby.

**Example:** The MML command shown in the following example retrieves the routes for destination point code PC-002:

```
  mml> RTRV-RTE:PC-002
  Media Gateway Controller - MGC-01 2000-01-12 15:19:51
  M RTRV
  PC-002:LS01,APC=000.028.007,PST=IS,SST=NA
```

**Note**
PC-002 is the target, LS01 is the linkset ID, APC=000.0028.007 is the adjacent point code, and PRI0 is the priority set for the routes.
RTRV-SC—Retrieve Signaling Channel Attributes

Purpose: This MML command displays the names and attributes of one signal channel and linkset or all signal channels and linksets.

Format:

\[
\text{rtrv-sc:<sig channel>}
\text{rtrv-sc:<C7 linkset>}
\text{rtrv-sc:all}
\]

Input Description:
- \( \text{all} \)—Displays information about all signal channels and linksets.
- \( \text{sig channel} \)—The MML name of a provisioning component, TDM link, C7 IP link, or IP link.
- \( \text{C7 linkset} \)—The MML name of a linkset.

Output Description:
- \( \text{<signal channel | linkset>} \)—Signal channel or linkset name.
- \( \text{<parent name>} \)—Signal channel or linkset parent name.
- \( \text{LID} \)—Link ID.
- \( \text{SSN} \)—Subsystem number.
- \( \text{<PST>} \)—Primary state.
  - \( AOOD \)—The system has taken the resource out of service.
  - \( \text{INB} \)—Installed busy (resource has been created but not yet commanded IS or OOS via the \text{SET-SC-STATE} command).
  - \( \text{IS} \)—In service.
  - \( \text{MOOS} \)—Manually taken out of service.
  - \( \text{OOS} \)—Out of service.
  - \( \text{TRNS} \)—Transient; the state is currently being changed.
  - \( \text{UNK} \)—Unknown.
• \(<SST>\)—Secondary state (appears only if the information is provided to MML.)
  - \(UNK\)—Cause unknown
  - \(NA\)—Cause not available
  - \(CONF\)—Configuration failure
  - \(LINE\)—Line failure
  - \(LINS\)—Linkset failure
  - \(LINK\)—Link failure
  - \(ENGR\)—Engine reset
  - \(COOS\)—Cause: commanded out of service
  - \(CIS\)—Cause: commanded in service
  - \(SUPPENT\)—Supporting entity
  - \(OOSPEND\)—Out of service, pending
  - \(ISPEND\)—In service, pending
  - \(TPATH\)—Traffic path
  - \(SERR\)—C7 signal error
  - \(BSNR\)—C7 BSNR (backward sequence number received) over fiber
  - \(ACKD\)—C7 ACK delay
  - \(LINH\)—C7 local inhibit
  - \(RINH\)—C7 remote inhibit
  - \(RBLK\)—C7 remote blocked
  - \(LCNG\)—Congestion, local
  - \(RCNG\)—Congestion, remote
  - \(PRHB\)—C7 prohibited
  - \(RSTR\)—C7 restricte
  - \(STBY\)—Cause standby

• Description of signal channel or linkset
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Example:  The MML command shown in the following example displays the names and attributes of all signal channels and linksets:

```
mml> RTRV-SC:all
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
"ls1link1:ls1,LID=0:IS"
    /* link 1 of ls1 to va-2600-29 */
"ls1link2:ls1,LID=1:IS"
    /* link 2 of ls1 to va-2600-30 */
"ls2link1:ls2,LID=0:IS"
    /* link 1 of ls2 to va-2600-29 */
"ls2link2:ls2,LID=1:IS"
    /* link 2 of ls2 to va-2600-30 */
"ls3link1:ls3,LID=0:OOS"
    /* link 1 of ls3 to va-2600-31 */
"ls3link2:ls3,LID=1:OOS"
    /* link 2 of ls3 to va-2600-31 */
"ls5link1:ls5,LID=0:OOS,STBY"
    /* link 2 of ls3 to va-2600-31 */
```

Comments:  This command supports wildcarding.

**RTRV-SC-TRC— Retrieve Names of Open Signal Channel Traces**

Purpose:  This MML command displays the names of all files currently open for traces in progress. Refer to the descriptions of **STA-SC-TRC** and **STP-SC-TRC** on pages 2-74 and 2-79, respectively, for information on starting and stopping traces.

Format:  `rtrv-sc-trc`

Output Description:
- Names of all files currently open for traces in progress.

Example:  The MML command shown in the following example displays the filenames of open traces:

```
mml> RTRV-SC-TRC
Media Gateway Controller 2000-03-21 15:28:03
M RTRV
"RTRV-SC-TRC:Trace in progress for the following files:
  ../var/trace/_dpc1_19991221131108.btr
  ../var/trace/sigtest_dpc2_19991221131109.btr
"
```


RTRV-SOFTW — Retrieve Software Status for a Process

Purpose: This MML command displays the status of one process or all processes.

Format:  
- rtrv-softw:<proc>
- rtrv-softw:all

Input Description:  
- proc—The MML name of a process or process group.
- all—Displays the status of all processes.
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Output Description:
- `<process>`—Process name.
- Status of process.
  - `UNKNOWN`—State of the process is unknown.
  - `STOPPED`—Process is not running.
  - `INIT`—Process is being initialized.
  - `INIT CMPL`—Initialization has been completed.
  - `CUT WAIT`—Cutover has occurred, waiting. (This state is momentary and unlikely to be seen.)
  - `RUNNING`—Process is running.
  - `LOCKED`—Process is locked.
  - `CUT MASTER`—Process is the master in a cutover situation. (This state is momentary and unlikely to be seen.)
  - `CUT SLAVE`—Process is the slave in a cutover situation. (This state is momentary and unlikely to be seen.)
  - `TERM`—Process is terminating.
  - `RUNNING ACTIVE`—Process is running on the active system.
  - `RUNNING STANDBY`—Process is running on the standby system.
  - `RUNNING OOS`—Process is running, but out of service.
  - `RUNNING IN N/A STATE`—Process is running, but in not available state.

Example: The MML command shown in the following example displays the status of all processes and process groups:

```
mml> RTRV-SOFTW:all
Media Gateway Controller  - MGC-02 2000-01-17 11:37:23
M  RTRV
"CFM-01:RUNNING ACTIVE"
"ALM-01:RUNNING ACTIVE"
"MM-01:RUNNING ACTIVE"
"AMDMPR-01:RUNNING ACTIVE"
"CDRDMPR-01:RUNNING ACTIVE"
"DSKM-01:RUNNING IN N/A STATE"
"MMDB-01:RUNNING IN N/A STATE"
"FOM-01:RUNNING ACTIVE"
"MEASAGT:RUNNING ACTIVE"
"OPERSAGT:RUNNING ACTIVE"
"PROVSAGT:RUNNING ACTIVE"
"PRILL3-1:RUNNING IN N/A STATE"
"Replic-01:RUNNING ACTIVE"
"ENG-01:RUNNING ACTIVE"
"IIOC-01:RUNNING ACTIVE"
"TCAP-01:RUNNING IN N/A STATE"
"IOCC-ASP:RUNNING IN N/A STATE"
"FOD-01:RUNNING IN N/A STATE"
"MGCP-1:RUNNING IN N/A STATE"
"EISUP-1:RUNNING IN N/A STATE"
"SS7-A-1:RUNNING IN N/A STATE"
"SS7-I-1-1:RUNNING IN N/A STATE"
```
RTRV-SP-CTR— Retrieve SS7/C7 Signal Point Measurements

Purpose: This MML command returns measurement data for one SS7 signal point or for all SS7 signal points. The measurements are displayed in the same format as for RTRV-CTR.

Format:
```
rtrv-sp-ctr:<point code>
rtrv-sp-ctr:all
```

Input Description:
- `point code`—The MML component name of a single provisioning component point code. Note that RTRV-CTR:<point code>:<group> is a related command.
- `all`—Displays measurements for all signal points.

Output Description:
- `<comp>`—Component.
- `CAT`—Measurement category. For a list of measurement categories, use the RTRV-CFG:MEASCATEGORIES command described on page 2-34.
- `BCKT`—Bucket.
- `VAL`—Value measured.
Example: The MML command shown in the following example retrieves all measurements for point code dpc1:

```
mml> RTRV-SP-CTR:dpc1
```

```
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
```

```
M  RTRV
```

```
dpc1:CAT="SP: cInit in",BCKT="b_prof_std15",VAL=0"
dpc1:CAT="SP: cInit in",BCKT="b_prof_std60",VAL=0"
dpc1:CAT="SP: cInit in",BCKT="b_prof_std24",VAL=0"
dpc1:CAT="SP: cInit out",BCKT="b_prof_std15",VAL=0"
dpc1:CAT="SP: cInit out",BCKT="b_prof_std60",VAL=0"
dpc1:CAT="SP: cInit out",BCKT="b_prof_std24",VAL=0"
dpc1:CAT="SP: PDU in",BCKT="b_prof_std15",VAL=0"
dpc1:CAT="SP: PDU in",BCKT="b_prof_std60",VAL=0"
dpc1:CAT="SP: PDU in",BCKT="b_prof_std24",VAL=3"
dpc1:CAT="SP: PDU out",BCKT="b_prof_std15",VAL=0"
dpc1:CAT="SP: PDU out",BCKT="b_prof_std60",VAL=0"
dpc1:CAT="SP: PDU out",BCKT="b_prof_std24",VAL=3"
dpc1:CAT="C7SP: SP DUR UNAVAIL","dpc1:BCKT="b_prof_ss75",VAL=0"
dpc1:CAT="C7SP: SP DUR UNAVAIL","dpc1:BCKT="b_prof_ss730",VAL=0"
dpc1:CAT="C7SP: XMIT MSU DROP/RT"
```

```
dpc1:BCKT="b_prof_ss77",VAL=0"
dpc1:CAT="ISUP: XMIT MSG TOT","dpc1:BCKT="b_prof_ss75",VAL=0"
dpc1:CAT="ISUP: XMIT MSG TOT","dpc1:BCKT="b_prof_ss730",VAL=0"
dpc1:CAT="ISUP: RCV MSG TOT","dpc1:BCKT="b_prof_ss75",VAL=0"
dpc1:CAT="ISUP: RCV MSG TOT","dpc1:BCKT="b_prof_ss730",VAL=0"
dpc1:CAT="ISUP: XMIT ACM TOT",dpc1:BCKT="b_prof_ss75",VAL=0"
dpc1:CAT="ISUP: XMIT ACM TOT",dpc1:BCKT="b_prof_ss730",VAL=0"
dpc1:CAT="ISUP: RCV ACM TOT",dpc1:BCKT="b_prof_ss75",VAL=0"
dpc1:CAT="ISUP: RCV ACM TOT",dpc1:BCKT="b_prof_ss730",VAL=0"
dpc1:CAT="ISUP: UNEX MSG TOT",dpc1:BCKT="b_prof_ss75",VAL=0"
dpc1:CAT="ISUP: UNEX MSG TOT",dpc1:BCKT="b_prof_ss730",VAL=0"
```
**RTRV-SPC— Retrieve Point Code**

**Purpose:** This MML command displays the route set for one provisioning component point code or the route sets of all point codes.

**Format:**
```
rtrv-spc:<point code>
rtrv-spc:all
```

**Input Description:**
- `point code`—The MML component name of a provisioning component point code.
- `all`—Displays information for all destination point codes.

**Output Description:**
- `point code`—The MML component name of a provisioning component point code.
- `DPC`—Destination point code.
- `DNW`—Network indicator.
- `OPC`—Originating point code.
- `<PST>`—Primary state.
  - `AOOS`—The system has taken the resource out of service.
  - `INB`—Installed busy (resource has been created but not yet commanded IS or OOS via the `SET-SC-STATE` command).
  - `IS`—In service.
  - `MOOS`—Manually taken out of service.
  - `OOS`—Out of service.
  - `TRNS`—Transient; the state is currently being changed
  - `UNK`—Unknown.

**Example:** The MML command shown in the following example retrieves a list of all destination point codes:
```
mml> RTRV-SPC:all
Media Gateway Controller  - MGC-01 2000-01-12 15:19:51
M  RTRV
"dpc1:DPC=012.012.012,DNW=2:OPC=011.011.011:IS"
"dpc3:DPC=014.014.014,DNW=2:OPC=011.011.011:AOOS"
"dpc5:DPC=111.111.111,DNW=2:OPC=011.011.011:AOOS"
"stp1:DPC=007.007.007,DNW=2:OPC=011.011.011:IS"
"stp2:DPC=008.008.008,DNW=2:OPC=011.011.011:IS"
"stp3:DPC=009.009.009,DNW=2:OPC=011.011.011:AOOS"
```

**RTRV-SS7-SLT— Retrieve SS7 SLT Test Results**

**Purpose:** This MML command retrieves the results of a Japanese signal link test.

**Format:**
```
rtrv-ss7-slt:<C7 link>
```
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**RTRV-SS7-SRT—Retrieve SS7 SRT Test Results**

**Purpose:** This MML command retrieves the results of a Japanese signal route test on a point code. The rtrv result has three cases: TEST PASSED, TEST FAILED, and TEST RUNNING.

**Format:**  
rtrv-ss7-srt:<point code>:LSET="<C7 link/set>"

**Input Description:**  
- **point code**—The MML component name of an adjacent point code or destination point code configured for Japanese SS7.
- **C7 link/set**—The MML provisioning component name of a linkset or C7 IP link or TDM link used in a linkset.
Chapter 2 MML Commands

RTRV-TC—Retrieve Bearer Channel States

Purpose: This MML command displays the state of bearer channels for one signal path or for all signal paths.

Format: rtrv-tc:<sig path>&<sig path>...
        rtrv-tc:all

Input Description:

- **<sig path>**—Logical signal destination, such as SS7 point code, FAS path, IP FAS path, or DPNSS path. Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for more information about signal destinations.
- **all**—Displays the bearer channel states for all signal paths.

Example: The MML command shown in the following example retrieves a signal route test run with the command **sta-ss7-srt:dpc1:LSET="ls1"**:  

```plaintext
mml> rtrv-ss7-srt:dpc1:LSET="ls1"  
  Media Gateway Controller  - MGC-01 2000-01-12 15:20:09
  M RTRV
  "dpc1:TEST FAILED; TEST TIMEOUT; COMPLETED 15:20:01"
```

Output Description:

- `<<c7 link>>`—The MML component name of the C7 link the test is performed upon.
- **TEST PASSED.**
- **TEST FAILED** (reasons for failure may be any of the following:)
  - TEST TIMEOUT
  - LINK INACTIVE
  - LINKSET INACTIVE
  - ROUTE UNAVAILABLE
  - INVALID TEST PATTERN
  - INVALID SLC
  - FLOW CONTROL ON
  - UNKNOWN REASON
- `<Completion time>`.
- **TEST RUNNING.**
Output Description:

- `<point code>`—MML component name of a point code provisioning component.
- `CIC`—Circuit identification code.
- `PST`—Primary state.
  - `AOOS`—The system has taken it out of service.
  - `INB`—Installed busy (resource has been created but not yet commanded IS or OOS via the `SET-SC-STATE` command).
  - `IS`—In service.
  - `MOOS`—Manually taken out of service.
  - `OOS`—Out of service.
  - `TRNS`—Transient; the state is currently being changed.
  - `UNK`—Unknown.
- `Call`—Call state.
  - `IDLE`—Circuit is idle, available for use.
  - `OUT`—Out of service.
  - `IN`—In service.
- `GW_STAT`—State of the gateway.
  - `CARRIER_FAILURE`—Carrier has failed.
  - `GW_HELD`—The call has been held at the gateway.
  - `CXN_IS`—The connection is in service.
  - `CXN_OOS_ACTIVE`—The connection is out of service on the active system.
  - `CXN_OOS_STANDBY`—The connection is out of service on the standby system.
- `BLK`—Blocking state.
  - `GATEWAY`—Locally blocked due to a gateway event (for example, RSIP or a group service message).
  - `LOCAUTO`—Hardware blocking type; the circuit is blocked by an external message generated by a network element outside the MGW.
  - `LOCMAN`—Blocked manually by MML. This is removable by the `UNBLK-CIC` or `RESET-CIC` command.
  - `LOCUNK`—Locally blocked for unknown reasons. (This indicates a potential software problem whereby a circuit has become blocked but the software did not track the cause of the blocking.)
  - `NONE`—There is no block on the CIC. DS0 is available for use.
  - `REMAUTO`—Remotely auto blocked.
  - `REMMAN`—Remotely blocked.
Example: The MML command shown in the following example displays the state of bearer channels for signal paths DPC2 through DPC4:

mml> rtrv-tc:dpc2&dpc3&dpc4

MGC-01 - Media Gateway Controller 2000-08-31 12:14:52
M RTRV
"dpc2:CIC=1,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=2,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=3,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=4,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=5,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=6,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=7,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=8,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=9,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=10,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=11,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=12,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=13,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=14,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=15,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=16,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=17,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=18,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=19,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=20,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=21,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=22,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=23,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=24,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=LOCMAN"
"dpc2:CIC=101,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=102,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=103,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=104,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=105,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=106,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=107,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=108,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=109,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=110,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=111,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=112,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=113,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=114,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=115,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=116,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=117,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=118,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=119,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=120,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=121,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=122,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=123,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc2:CIC=124,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc3:CIC=1,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc3:CIC=2,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc3:CIC=3,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc3:CIC=4,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=1,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=2,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=3,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE"
"dpc4:CIC=4,PST=IS,CALL=IDLE,GW_STAT=CXN_IS,BLK=NONE";
Comments: This command supports wildcarding.

**RTRV-TCAP-TRANS — Retrieve TCAP Transactions**

**Purpose:** This MML command displays the number of active TCAP transactions.

**Format:** `RTRV-TCAP-TRANS`

**Output Description:**
- `<TCAP name>`—The TCAP name.
- `TRANS`—Number of transactions.

**Example:** The MML command shown in the following example displays the number of active TCAP transactions:

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

**RTRV-TC-HELD— Retrieve States of Bearer Channels Held by Gateway**

**Purpose:** This MML command displays the state of bearer channels per signal path held by gateway or all bearer channels held by gateway.

**Format:**
- `rtrv-tc-held:<sig path>&<sig path>...`
- `rtrv-tc-held:all`

**Input Description:**
- `<sig path>`—Logical signal destination, such as SS7 point code, FAS path, IP FAS path, or DPNSS path. Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for more information about signal destinations.
- `all`—Displays the bearer channel states for all signal paths.
Output Description:

- `<point code>`—MML component name of a point code provisioning component.
- CIC—Circuit identification code.
- PST—Primary state.
  - AOOS—The system has taken the resource out of service.
  - INB—Installed busy (resource has been created but not yet commanded IS or OOS via the `SET-SC-STATE` command.)
  - IS—In service.
  - MOOS—Manually taken out of service.
  - OOS—Out of service.
  - TRNS—Transient; the state is currently being changed.
  - UNK—Unknown.
- Call—Call state.
  - IDLE—Circuit is idle, available for use.
  - OOS—Out of service.
  - IS—In service.
- GW_STAT—State of the gateway.
  - CARRIER_FAILURE—Carrier has failed.
  - GW_HELD—The call has been held at the gateway.
  - CXN_IS—The connection is in service.
  - CXN_OOS_ACTIVE—The connection is out of service on the active system.
  - CXN_OOS_STANDBY—The connection is out of service on the standby system.
- BLK—Blocking state.
  - GATEWAY—Locally blocked due to a gateway event (for example, RSIP or a group service message.)
  - LOCAUTO—Hardware blocking type; the circuit is blocked by an external message generated by a network element outside the MGW.
  - LOCMAN—Blocked manually by MML. This is removable by the `UNBLK-CIC` or `RESET-CIC` command.
  - LOCUNK—Locally blocked for unknown reasons. (This indicates a potential software problem whereby a circuit has become blocked but the software did not track the cause of the blocking.)
  - NONE—There is no block on the CIC. DS0 is available for use.
  - REMAUTO—Remotely auto blocked.
  - REMMAN—Remotely blocked.
Example: The MML command shown in the following example displays the state of bearer channels on DPC1:

```
nml> RTRV-TC-HELD:dpc1
```

```
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV
```

```
"dpc1"
```

Comments: This command was introduced in Release 7.4. This command accepts wildcarding.

**SET-ADMIN-STATE— Set Administrative State**

Purpose: This MML command locks the use of resources for future call creation or unlocks bearer channel resources to make them available for future call creation. A resource can be specified as an entire Cisco MGC, a gateway, a signal path, a trunk group, a span, or an individual trunk.

Format: 

```
set-admin-state:<mgc>:lock|unlock|reset
set-admin-state:<gway>:lock|unlock|reset
set-admin-state:<trkGrp>:lock|unlock|reset
set-admin-state:<sigPath>:lock|unlock|reset
set-admin-state:<sigPath>:span=x:lock|unlock|reset
set-admin-state:<sigPath>:span=x,BC=y[,RNG=z]:lock|unlock|reset
set-admin-state:<sigPath>:CIC=x[,RNG=y]:lock|unlock|reset
```

Input Description: Target parameters are as follows:

- **MGC**—Corresponding MML name of the Cisco Media Gateway Controller.
- **GWAY**—Corresponding MML name for media gateway. Not all media gateway types are applicable. Supported types are CU, MUX, MGW, and AVM external nodes.
- **trkGrp**—trkGrp is applicable only for time-division multiplexing (TDM). Use the corresponding MML name for component type "0020".
- **sigPath**—Corresponding MML name for any of the following component types:
  - Signal path of in-band TDM up to MUX and then time switched to TDM media and sent to the Cisco MGC
  - Signal path of in-band TDM signaling up to CU and then encapsulated and sent over IP to the Cisco MGC
  - Signal path of in-band TDM signaling up to NAS and then converted to NI2 and sent to Cisco MGC over IP (that is, FE box<-sig/tdm->NAS<-NI2/IP->MGC)
  - Signa path or route set associated with SS7 destination PC
  - Signal path for EISUP
• **span**—A 16-bit value that identifies an ISDN/PRI physical cable. The spanID defaults to 0xFFFF if it is not in the parameter list of `SET-ADMIN-STATE`, the target signal path is a valid target for span-id, and a "bc" or "rng" parameter is specified.

• **BC**—A numeric value that identifies the non-ISUP bearer channel number. BC is used for non-ISUP trunks; otherwise use CIC.

• **CIC**—A numeric value that identifies the ISUP circuit identification code number.

• **RNG**—The range of either bearer channel or circuit identification code.

• **Lock**—Bearer channel(s) are available for call processing. If bearer channel state is set to lock, calls go into pending state where calls remain up until either party voluntarily releases the call. New calls are disallowed from using locked bearer channels.

• **Unlock**—Bearer channel(s) are unavailable for call processing. If bearer channel state is set to unlock, resource becomes available. New calls are allowed to use the unlocked bearer channels.

• **Reset**—Clears local and remote blocking and takes on the blocking view of the remote side. This option is not permitted for span, BC, or LISUP, FAS, IP, and L3 signaling paths.

**Example:** The MML command shown in the following example locks CICs 10 through 13 on dpc1:

```
mml> set-admin-state:dpc1:cic=10,rng=3,lock
  MGC-01 - Media Gateway Controller 2000-09-12 13:59:30
  M COMPLD
  "dpc1"
```

**Example:** The MML command shown in the following example clears local and remote blocking for dpc-inet2 and takes on the blocking view of the remote side:

```
mml> set-admin-state:dpc-inet2:reset
  Media Gateway Controller 2000-06-20 11:21:57
  M COMPLD
  "dpc-inet2"
```
Example: The MML command shown in the following example locks all bearer channels on nassrv1:

```
mml> set-admin-state:nassrv1:lock
   Media Gateway Controller - MGC-02 2000-02-22 13:41:42
M COMPLD
   "nassrv1"
```

Comments: This command was introduced in Release 7.4. This command supports wildcarding. A platform info log is generated every time the `set-admin-state` command is entered. One alarm is generated every time the `set-admin-state` command is entered at either the Cisco MGC, gateway, signal path, or trunk group level.

### SET-ASN-STATE—Set Service State of Auxiliary Signal Path (Retired)

**Purpose:** This MML command changes the service state of an auxiliary signal path (ASP) to IS (in service) or OOS (out of service).

**Format:**

```
set-asn-state:<aux sig path>:IS|OOS
```

**Input Description:**

- `aux sig path`—Component name of an existing signal path.

**Example:**

```
mml> SET-ASN-STATE:ASP:OOS
```

**Comments:** This command is no longer supported as of Release 7.0.

### SET-DEST-STATE—Set Service State of a Signal Path

- If you are running the 7.3.17D release of PGW2200 software:
  - During maintenance, do not use SET-DEST-STATE or SET-SPC-STATE commands to take a signal path resource out of service. Instead, use the BLK-CIC command to block the resources associated with the signal path.
  - If the SET-DEST-STATE or SET-SPC-STATE commands are used to remove a signal path resource out of service, all active calls served by the signal path are dropped immediately.
  - Use the SET-DEST-STATE or SET-SPC-STATE commands during dynamic provisioning only.

- If you are running the 7.4.12 (or later) release of PGW2200 software:
  - During maintenance, do not use SET-DEST-STATE or SET-SPC-STATE commands to take a signal path resource out of service. Instead, use the SET-ADMIN-STATE command to block the resources associated with the signal path.
  - If the SET-DEST-STATE or SET-SPC-STATE commands are used to remove a signal path resource out of service, all active calls served by the signal path are dropped immediately.
  - Use the SET-DEST-STATE or SET-SPC-STATE commands during dynamic provisioning only.
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SET-EQPT-STATE— Change the Service State of a Card

Purpose: The MML command changes the service state of a DSS IP or NAS signal path to IS (in service) or OOS (out of service).

Format: set-dest-state:<sig path>:IS|OOS...

Input Description:
- sigpath—Signal path. This is the logical signal destination, such as SS7 point code, FAS path, IP FAS path, or DPNSS path. Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for more information about provisioning signal paths.
- is—in service.
- oos—Out of service.

Example: The MML command shown in the following example sets the service state of signal channel ASP to out of service:

mml> SET-DEST-STATE:ASP:OOS

Comments: This command supports wildcarding.
You must first shut down the D channel on the NAS before issuing the command SET-DEST-STATE:NASLINK:OOS.

SET-LNK-STATE— Set Link or Linkset Service State

Purpose: This MML command is used to set the service state of a link or linkset to in service (IS), out of service (OOS), inhibit SS7 link (INH), or uninhibit SS7 link (UNH).

Format: set-lnk-state:<C7 linkset>:IS|OOS|INH|UNH

Input Description:
- C7 linkset—MML component name of a link or a linkset, such as a provisioned component, a C7 IP link, or a TDM link in a linkset. Use the RTRV-CFG:COMPONENTS command described on page 2-34, to retrieve a list of system components.

Example: The MML command shown in the following example sets linkset1 and its links out of service:

mml> SET-LNK-STATE:ls1:OOS

Media Gateway Controller  - MGC-01 2000-01-12 15:19:51
M COMPLD
"ls1link1"
"ls1link2"
;

Comments: This command is no longer supported.
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SET-LOG— Set Logging Levels

Purpose: This MML command is used to set the logging level of a process or all processes.

Format: set-log:<proc>:<log level>
        set-log:all:<log level>

Input Description:
- proc—The various actively and passively monitored processes running on the Cisco MGC. Use the RTRV-SOFTW:ALL command to display all processes. Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for more information about processes.
- log level—Sets the logging level for the specified process. Logging levels are as follows:
  - CRIT—Critical level messages.
  - ERR—Error condition messages.
  - WARN—Warning condition messages.
  - INFO—Informational messages.
  - TRACE—Trace messages.
  - DEBUG—Debug level messages (lowest level). A CONFIRM parameter is required for the DEBUG log level. Do not set this log level unless directed to by the Cisco TAC.

Logging at any given level implies upper levels are included. In other words, setting the INFO logging level also sets the WARN, ERR, and CRIT levels. The order of the levels shown above can also be viewed as an order of verbosity, in that at CRIT the least information is logged, and at DEBUG the most information is logged.

Example: The MML command shown in the following example retrieves the logging level of the PM-01 process:

mml> SET-LOG:PM-01:DEBUG

Comments: This command was introduced in Release 7.4 and replaces the CHG-LOG command. The process manager (PM-01) is not included in the “all” parameter, because this is a special process. To set the logging level of PM-01, it must be used individually, as in the example above.

The DSKM-01 and LOG-01 (the disk monitor and log server) processes, respectively, do not accept log-level change requests.

SET-LSSN-STATE— Set State of Local SSN

Purpose: This MML command sets the state of a local SSN to IS or OOS.

Format: set-lssn-state::<SSN>,IS|OOS
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SET-SC-STATE— Set Signal Channel State

Purpose: This MML command changes the service state of a signal path or a link, or changes the service state of all signal paths or links on an entire line or linkset.

Format: 

- `set-sc-state:<C7 IP or TDM SS7 link>:IS|OOS|FOOS`
- `set-sc-state:<FAS link>:IS|OOS|FOOS|INH|UNH`

Input Description:

- **<C7 IP or TDM SS7 link>**—The MML name of the desired SS7 related link. For more information, refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*. Use the command `RTRV-SC:ALL` for a list of provisioned links.

- **FAS link**—The MML name of the desired FAS-related link. For more information, refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*.

- **IS**—Places a signal point code in service.

- **OOS**— Takes a signal point code out of service.

- **FOOS**—Forces a signal point code out of service.

- **INH**—Inhibit SS7 link.

- **UNH**—Uninhibit SS7 link.

Example: The MML command shown in the following example changes the service state of c7iplnk1 to out of service:

```
mml> set-sc-state:c7iplnk1:oos
MGC-01 - Media Gateway Controller 2000-09-11 16:38:08
M COMPLD
"c7iplnk1"
```

Comments: This command was introduced in Release 7.4. This command supports wildcarding.
SET-SPC-STATE— Set Signal Point Code State

- If you are running the 7.3.17D release of PGW2200 software:
  - During maintenance, do not use SET-DEST-STATE or SET-SPC-STATE commands to take a signal path resource out of service. Instead, use the BLK-CIC command to block the resources associated with the signal path.
  - If the SET-DEST-STATE or SET-SPC-STATE commands are used to remove a signal path resource out of service, all active calls served by the signal path are dropped immediately.
  - Use the SET-DEST-STATE or SET-SPC-STATE commands during dynamic provisioning only.
- If you are running the 7.4.12 (or later) release of PGW2200 software:
  - During maintenance, do not use SET-DEST-STATE or SET-SPC-STATE commands to take a signal path resource out of service. Instead, use the SET-ADMIN-STATE command to block the resources associated with the signal path.
  - If the SET-DEST-STATE or SET-SPC-STATE commands are used to remove a signal path resource out of service, all active calls served by the signal path are dropped immediately.
  - Use the SET-DEST-STATE or SET-SPC-STATE commands during dynamic provisioning only.

Purpose: This MML command changes the service state of a signal point code to in service (IS) or out of service (OOS).

Format: `set-spc-state:<point code>:IS|OOS...

Input Description:
- `point code`—Signal point code.
- `state`—Signal point code state:
  - `IS`—Places a signal point code in service.
  - `OOS`—Takes a signal point code out of service.

Example: The MML command shown in the following example changes the service state of stp1 to out of service:

```
mml> SET-SPC-STATE:stp1:oos
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M COMPLD
"stp1"
```

STA-ABN-TRC— Start Abnormal Trace

Purpose: This MML command prints the state machine global variable of a particular call, as well as external event information, to a file.

Format: `sta-abn-trc:<sigpath|all>[,LOG="<xyz>"][,PRD=n],CONFIRM`
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Input Description:

• **sigpath**—The originating or terminating signal path on which the trace needs to be started, corresponding MML name for any of the following component types:
  - Signal path of in-band TDM up to MUX and then time switched to TDM media and sent to the Cisco MGC
  - Signal path of in-band TDM signal up to CU and then encapsulated and sent over IP to the Cisco MGC
  - Signal path of in-band TDM signal up to NAS and then converted to NI2 and sent to the Cisco MGC over IP (that is, FE box<-sig/tdm->NAS<-NI2/IP->MGC)
  - Signal path or route set associated with SS7 destination PC
  - Signal path for EISUP

• **all**—Indicates that the start trace command needs to be applied to the whole Cisco MGC, in which case only one trace file is generated.

• **prl**—The period, in seconds, for which this trace is enabled, during which time any abnormal calls are traced. If this optional parameter is not used, the period defaults to 30 seconds.

• **log**—The name (“xyz” in this example) of an ASCII log file to which the output is written. The name given in this parameter is used as a prefix to the actual name of the file, which includes the signal path name and date and time. If no log filename is provided, a default name consisting of the signal path name and date and time is created. The extension of these log files is .prt and they are located in the ../var/trace directory.

Example: The MML commands shown in the following examples print information about various abnormal calls:

```
  mml> STA-ABN-TRC:ALL:CONFIRM
  Media Gateway Controller 2000-05-26 07:02:11
  M COMPLD
  "all"
```

Example:

```
  mml> STA-ABN-TRC:AM401A-PC:CONFIRM,TC=4
  Media Gateway Controller 2000-05-26 07:14:06
  M DENY
  SROF
  "am401a-pc:Trace active for the following file(s):
  ../var/trace/_20000526071406.abn"
  "*/
  /* Component already exists */
```

Comments: This command is available as of software Release 7.4(8). This command accepts wildcards on signal paths.
STA-AUD—Start Auditing Process

Purpose: This MML command starts the auditing process on all calls. The auditing process stops automatically when it is completed. Audit log files can be found in the platform.log file in $BASEDIR/var/log directory.

Format: STA-AUD

Example: The MML command shown in the following example starts the auditing process on all calls:

mml> STA-AUD
Media Gateway Controller - MG01 2000-01-12 15:19:51
M RTRV
"ENGG-01"
;

Comments: If you suspect a stuck or hung CIC, search the platform.log for the log message “CP_INFO_CHAN_STATE: NAS is idle, SC is busy.” If this message appears in the platform.log, refer to the Cisco Media Gateway Controller Software Release 7 Operations, Maintenance, and Troubleshooting Guide for troubleshooting information.

STA-AUDIT-GW—Start Auditing of MGCP Gateway

Purpose: This MML command starts the auditing of an MGCP gateway. There is no stop command at this time. The output of this audit is retrieved by issuing the RTRV-AUDIT-GW command.

Format: sta-aud-gw:<sig path MGCP>
sta-aud-gw:all

Input Description:
• sig path MGCP—MGCP signal path created with the PROV-ADD MGC command.
• all—All MGCP gateways.

Example: The MML command shown in the following example starts the auditing of T-1-16:

mml> STA-AUDIT-GW:T-1-16
Media Gateway Controller - MG01 2000-01-12 15:19:51
M COMPLD
;
STA-SC-TRC—Start Trace

Purpose: This MML command starts a protocol conversion trace on a signal path or a point code. The user typically performs a trace when calls are failing, and the engine is the suspected source of the problem.

Format:

sta-sc-trc:<sig path>[log="filenameprefix"][,prd=n],confirm
sta-sc-trc:<sig path>:span=x[,rng=y][log="filenameprefix"]{prd=n}
sta-sc-trc:<sig path>:span=x[.tc=y],rng=z[log="filenameprefix"]{prd=n}
sta-sc-trc:<trkgrp>[log="filenameprefix"]{prd=n},confirm
sta-sc-trc:<trkgrp>:trk=x[,rng=y][log="filenameprefix"]{prd=n}
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Input Description:

- sig path — The logical signal destination, such as SS7 point code, FAS path, IP FAS path, or DPNSS path. Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for more information about signal destinations.

- log=filenameprefix — The trace files are created and written to a file whose name can vary, depending on how the command is invoked. (A system log message is generated for each trace started. The filenames created as part of the STA-SC-TRC command are contained in the log messages.) If the log= parameter is used, the value of this parameter is treated as a prefix in the filename. For STA-SC-TRC:<TRKGRP>:LOG="trace1", the filename would be trace1_<trkgrp>_<sig path>_yyyymmddhhmmss.btr, where yyyymmddhhmmss in the filename represents the time (GMT) at which the file is created. All trace files have an extension of ".btr" The trace files are output to the $BASEDIR/var/trace directory.

If no LOG parameter is used, default filenames are used for each sta-sc-trc command. For example, for STA-SC-TRC:<TRKGRP>:CONFIRM, the filename would be <trkgrp>_<sig path>_yyyymmddhhmmss.btr.

For STA-SC-TRC<SIG PATH>:CONFIRM the filename would be <sig path>_yyyymmddhhmmss.btr.

- prd=n — Trace period in seconds. At the expiration of this period, the system discontinues PDU collection on the signal path and closes the log file. If this parameter is not supplied, the default period is set to 1800 seconds (30 minutes), at which time the trace is automatically stopped.

- confirm — If no confirm option is entered, the command is rejected, and you are notified via a message of the potential performance impact of this command. This is required for a signal path level trace or a trunkgroup level trace due to the potential performance impact of tracing at these levels.

- span — The span ID. This is an integer value denoting the traffic channel for the signal path (NFAS only).

- rng — Range. When used with "span=x," rng=y is an optional range of spans beginning with x and continuing for y spans. When used with "tc=y," rng=z is an optional range of traffic channels beginning with y and continuing for z traffic channels. When used with "trk=x", rng=y is an optional range of contiguous trunks to trace starting with trunk x and ending with trunk y.

- tc — The traffic channel of interest in integer form.

- trkgrp — Logical trunk group of interest. Refer to the Cisco Media Gateway Controller Software Release 7 Provisioning Guide for more information.

- trk — Trunk number. This is either a trunk number within the trunk group of interest or the starting trunk of a range.

On successful completion, all protocol data unit (PDU) traffic on the path is captured in a log file. This MML command succeeds regardless of the service state of the path.

Example: The MML command shown in the following example starts a capture session for all PDUs going through the signal path identified as T-1-16 and stores the trace log in the $BASEDIR/var/trace/T-1-16_yyyymmddyyhhmmss.log file:

```
mm1 > STA-SC-TRC:T-1-16
```
Example: The MML command shown in the following example starts a capture session for the signal path identified as T-2-18. It runs for 600 seconds (10 min) and stores the output in /var/trace/test_yyyymmddyyhhmmss.trc:

```
mml> STA-SC-TRC: T-2-18: log=test.trc, prd=600
```

Error Code:
- COMPLD—Path has started tracing.
- SNVS—Error opening the file; trace cannot be performed because the path is already being traced.

**STA-SS7-SLT—Start MTP SLT Test on a Link**

Purpose: This MML command starts a signal link test on a link configured for Japanese SS7.

Format: `sta-ss7-slt:<C7 link>`

Input Description:
- C7 link—The MML component name of a signal channel (linkset, C7 IP link, or TDM link used in a linkset. Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide* for more information.)

Example: The MML command shown in the following example starts a signal link test on ls1link1. The result of this test is retrieved by the command `rtrv-ss7-slt:ls1link1`.

```
mml> STA-SS7-SLT:slt:ls1link1
Media Gateway Controller - MGC-01 2000-01-12 15:18:34
M RTRV
"ls1link1"
```

**STA-SS7-SRT—Start MTP SRT Test on a Point Code**

Purpose: This MML command starts an MTP signal route test on a point code configured for Japanese SS7.

Format: `sta-ss7-srt:<point code>:LSET="<C7 link/set>"`
**STA-TCAP-TRC—Start TCAP Tracing**

**Purpose:** This MML command starts TCAP tracing.

**Format:**

```
STA-TCAP-TRC
```

**Example:**

```
mm1> STA-TCAP-TRC
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M RTRV "TCAP-01"
```

**STP-ABN-TRC—Stop Abnormal Trace**

**Purpose:** This MML command stops abnormal calls tracing initiated by the STA-ABN-TRC command.

**Format:**

```
stp-abn-trc:<sigpath|all>
```

**Input Description:**

- `sigpath`—Corresponding MML name for any of the following component types:
  - Signal path of in-band TDM up to MUX and then time switched to TDM media and sent to the Cisco MGC
  - Signal path of in-band TDM signal up to CU and then encapsulated and sent over IP to the Cisco MGC
  - Signal path of in-band TDM signal up to NAS and then converted to NI2 and sent to the Cisco MGC over IP (that is, FE box<sig/tdm->NAS<N12/IP->MGC)
  - Signal path or route set associated with SS7 destination PC.
  - Signal path for EISUP
- `all`—Stops all abnormal traces that exist on the whole Cisco MGC.
Example: The MML command shown in the following example stops an abnormal trace:

```
mmI> STP-ABN-TRC:ALL
Media Gateway Controller 2000-05-26 07:02:11
M  COMPLD
"ALL:Trace stopped for the following files:

../var/trace/20000526070211.abn"
```

Comments: This command is available as of Release 7.4(8). This command accepts wildcards on sigpaths.

### STP-AUD—Stop Auditing Process

**Purpose:** This MML command stops the auditing process started with the `STA-AUD` command.

**Format:** `STP-AUD`

**Example:** The MML command shown in the following example stops all auditing processes started with the `STA-AUD` command:

```
mmI> STP-AUD
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M  RTRV
"ENGG-01"
```

### STP-CALL—Stop Calls

**Purpose:** This MML command stops calls in progress for a specified signa channel or destination point code. By default, all traffic channels are affected.

**Format:**

```
STP-CALL:<mgc>
STP-CALL:<gway>
STP-CALL:<trkGrp>
STP-CALL:<sigPath>
STP-CALL:<sigPath>:span=x
STP-CALL:<sigPath>:span=x,BC=y[,RNG=z]
STP-CALL:<sigPath>:CIC=x[,RNG=y]
```
Input Description: Target parameters are as follows:

- **MGC**—Corresponding MML name of the Cisco Media Gateway Controller
- **GWAY**—Corresponding MML name for the Cisco Media Gateway. Not all media gateway types are applicable. Supported types are CU, MUX, MGW, and AVM external nodes
- **trkGrp**—trkGrp is applicable only for time-division multiplexing (TDM). Use the corresponding MML name for component type "0020"
- **sigPath**—Corresponding MML name for any of the following component types:
  - Signal path of in-band TDM up to MUX and then time switched to TDM media and sent to the Cisco MGC
  - Signal path of in-band TDM signal up to CU and then encapsulated and sent over IP to the Cisco MGC
  - Signal path of in-band TDM signal up to NAS and then converted to NI2 and sent to the Cisco MGC over IP (that is, FE box<-sig/tdm->NAS<-NI2/IP->MGC)
  - Signal path or route set associated with SS7 destination PC
  - Signal path for EISUP
- **span**—spanId is a 16-bit value that identifies an ISDN/PRI physical cable
- **BC**—Numeric value that identifies the non-ISUP bearer channel number. BC is used for non-ISUP trunks; otherwise use CIC
- **CIC**—A numeric value that identifies the ISUP circuit identification code number
- **RNG**—The range of either bearer channel or circuit identification code

Example: The MML command shown in the following example stops calls in progress for signal channel PC-2-2-2-2:

```
mml> STP-CALL:PC-2-2-2-2
Media Gateway Controller - MGC-01 2000-01-12 15:19:51
```

**STP-SC-TRC— Stop One or All Traces**

Purpose: This MML command stops a protocol conversion trace session on one signal path or on all signal paths.

Format: `stp-sc-trc:<sig path>`
- `stp-sc-trc:<trkgrp>`
- `stp-sc-trc:all`
Input Description:

- **sig path**—Logical identifier for a signal path. Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*.
- **trkgrp**—Logical identifier for a trunk group. Refer to the *Cisco Media Gateway Controller Software Release 7 Provisioning Guide*.
- **all**—Stops all traces.

Example:
The MML command shown in the following example stops a capture session on the path identified as T-1-1:

```
mm1> STP-SC-TRC:T-1-1
```

Example:
The MML command shown in the following example stops all active capture sessions:

```
mm1> STP-SC-TRC:all
```

**STP-TCAP-TRC— Stop TCAP Tracing**

Purpose: This MML command stops TCAP tracing that has been started with the **STA-TCAP-TRC** command.

Format: **STP-TCAP-TRC**

Example: The MML command shown in the following example stops TCAP tracing:

```
mm1> STP-TCAP-TRC
```

**SW-OVER— Manual Switchover**

Purpose: This MML command enables a switchover from an active to a standby system.

Format: **SW-OVER::CONFIRM**
Output Description:

- MSO refused, standby system not ready—Switchover failed because the standby system was not ready.
- MSO refused, warm start-up in progress—Switchover failed because start-up of the standby system was in progress.
- MSO refused, Warm start-up Failed—Switchover failed.
- MSO refused, System is not in active state—Switchover failed because the MGC host is not in an active state.
- MSO refused, Detected standalone Flag—Switchover failed because no standby MGC host is configured.

Example:  The MML command shown in the following example enables a switchover from the active system to the standby system:

```
mml> SW-OVER::CONFIRM
Media Gateway Controller  - MGC-01 2000-01-12 15:19:51
M COMPLD
;
```

Example:  The MML command shown in the following example attempts a switchover from the active system to the standby system but is not successful because the system is not active:

```
mml> SW-OVER::CONFIRM
Media Gateway Controller  - MGC-01 2000-01-12 15:19:51
MSO refused, System is not in active state
;
```

**TST-COT— Manual COT**

**Purpose:** This MML command executes a continuity test on a specified remote switch circuit.

**Format:**  
`tst-cot:<point code>:CIC=<number>`

**Input Description:**

- `<point code>`—MML component name of a provisioning component point code.
- `<CIC>=number`—Numeric value that identifies the ISUP circuit identification code number.

**Example:**  The MML command shown in the following example executes a continuity test on dpc1 CIC-5:

```
mml> TST-COT:dpc1:CIC=5
Media Gateway Controller  - MGC-01 2000-01-12 15:19:51
M COMPLD
;
```

**Comments:** If a continuity test fails, use the BLK-CIC command to block the CIC until the problem is identified and corrected. After a successful continuity test, use the UNBLK-CIC command to unblock the CIC.
UNBLK-CIC— Unblock a Circuit or a Circuit Range

Purpose: This MML command unblocks a circuit or a range of circuits that have been blocked with the BLK-CIC command.

Format: unblk-cic:<point code>:CIC=<number>[,RNG=<range>]

Input Description:
- point code—MML component name of a provisioning component point code.
- number—A valid circuit identification code (CIC).
- slaves—A number such that number + range is a valid CIC. All circuits between number and number + range are unblocked. The range should not span trunks. For example, to unblock all of the CICs from 60 through 90, the number would be 60 and the range would be 30. You would enter the following command:

mml> UNBLK-CIC:dpc1:CIC=60, RNG=30

This unblocks CIC 60 and the next 30 CICs.

Example: The MML command shown in the following example unblocks CICs 5 through 15 for destination point code dpc1:

mml> UNBLK-CIC:dpc1:CIC=5, RNG=10

Media Gateway Controller - MGC-01 2000-01-12 15:19:51
M COMPLD
"dpc1"
;

VLD-CIC— Validate a Circuit

Purpose: This MML command validates a circuit on a specified point code and CIC.

Format: vld-cic:<point code>:CIC=<number>

Input Description:
- point code—MML component name of a provisioning component point code.
- number—A valid circuit identification code.

Example: The MML command shown in the following example validates a circuit on PC7 CIC 36:

mml> VLD-CIC:PC7:CIC=36

Example: The MML command shown in the following example shows the MML response for a circuit that has failed validation:

mml> VLD-CIC:SS7SVC1:CIC=1314

MSG-01 - Media Gateway Controller 2001-02-08 13:54:04
M RTRV
"ss7svc1:CIC=1314, FAIL"