



Configuring with MML

This chapter describes how to use the Man-Machine Language (MML) commands to configure the MGC. It provides information about:

- [Working with MML, page 5-1](#)
- [MML Configuration Commands, page 5-6](#)
- [Working with Provisioning Session Commands, page 5-8](#)
- [Working with Provisioning Commands, page 5-16](#)
- [Creating a Batch File, page 5-29](#)

For more information on MML, including online help, operating tips, command syntax, and status message definitions, refer to the *Cisco Media Gateway Controller Software Release 7 Reference Guide*.

Before starting an actual configuration, refer to [Chapter 1, “Provisioning Overview,”](#) for instructions and worksheets for configuring your system.

Working with MML

MML interfaces with the Provisioning Object Manager (POM). The POM requires an active provisioning session to make provisioning changes. Only one active provisioning session is allowed at a time. During an active provisioning session, the POM locks all the data files to prevent other users from making changes.



Tip

Keep these tips in mind when working with MML:

- In general, MML commands are *not* case sensitive. However, file names *are* case sensitive when used as arguments in MML commands (for example, TKGFile, BCFFile, RoutingFile).
- Keywords do not need to be enclosed in quotes (“ ”).
- Use only one MML command on each line.
- After starting a provisioning session, MML displays COMPLD, indicating success. (This is true for all successful commands; for all failed commands, MML displays DENY.)
- A provisioning session inactive for 30 minutes results in a warning. If the session continues without activity for 5 more minutes, the session terminates.
- As many as 12 MML sessions can exist at any given time; however, only one provisioning session is allowed.

- You can create an ASCII text file for batch processing of provisioning commands.
- When performing batch provisioning, be sure no call processing is on going to prevent impacting call processing performance.
- You can create batch files for individual segments of provisioned data.
- During batch file execution, each MML command response echoes to the terminal. You can log command responses for later review so that the file can run unattended.
- Place quotes around all value strings in your commands. For example, `card="Interface1"`. The keyword **card** does not have to be enclosed in quotes. The value *Interface1* is being assigned to keyword **card** and must be enclosed in quotes.
- You can obtain online help in an MML session by typing **help** at the command prompt. For more information, refer to the *Cisco Media Gateway Controller Software Release 7 Reference Guide*.

**Timesaver**

To repeat the last MML command you entered, press the Up Arrow key. To scroll through all the previous MML commands, continue to press the Up Arrow key after pressing the Shift Starting an MML Session.

You must start an MML session before you can start a provisioning session. Keep the following in mind when starting an MML session:

**Caution**

Do not log in as root when starting MML. If you log in as root, then attempt to start an MML session, it will cause an MML core dump and MML will not start.

Starting MML

Perform the following steps to start an MML session.

Step 1 From the dumb terminal connected to the MGC, enter:

```
mm1
```

**Tip**

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

```
mm11: Already in use
Failure to run MML, reason=Entry was already present
```

Step 2 To run a second MML session, enter:

```
mm1 -s 2
```

**Note**

The MML command `mm1 -s 2` starts the second session and `mm1 -s 3` starts the third session. There can be as many as 12 MML sessions open at one time.

Killing an MML Session

If another MML session is running, it can be killed by performing the following steps.

Step 1 Exit MML by entering:

```
mml>quit
```

Step 2 To see the other MML sessions that are running enter:

```
ps -ef |grep mml
```

Step 3 To kill the undesired MML session, enter:

```
kill -9 xxxx
```

(where xxxx is the session number).



Note

You can kill an MML session only if you created the MML session you are going to kill. To kill an MML session created by another user, you must log in as root.

Step 4 Log in as root.

Step 5 Kill the undesired MML session.



Note

If there are multiple MML sessions to be killed, enter a kill command for each MML session.

Step 6 Logout from the root by entering:

```
.exit
```

If another provisioning session is running, you cannot start a provisioning session. To see if another provisioning session is running, use the **PROV-RTRV** command (refer to the [“Retrieving Provisioning Session Information”](#) section on page 5-29).

Saving the Provisioning Session for Review

To save the provisioning session for review purposes, perform the following procedure.

Procedure

Step	Command	Purpose
1	mml>diaglog:pom-log-session-cie3:start	Creates a log file of the provisioning session, cie3, for later review. For information about where the log is saved, refer to the <i>Cisco Media Gateway Controller Software Release 7 Reference Guide</i> .
2	mml>prov-sta::srcver="new",dstver="cie3-prov"	Creates a new configuration, cie3-prov.

Verify

View the log file.



Tip

You can place the diaglog commands to start and stop at the start and end of an MML batch file.

All MML commands are automatically logged to the mml.log file located in the /opt/CiscoMGC/var/log directory.

Killing an Orphan Provisioning Session

To kill an orphan provisioning session, perform the following procedure.

Procedure

Command	Purpose
<pre>mml>prov-stp Virtual Switch Controller 2000-09-30 11:19:17 M COMPLD "PROV-STP" ;</pre>	<p>Terminates the provisioning session, saves the configuration, and releases the lock on the configuration data files.</p> <p>For information about where the log is saved, refer to the <i>Cisco Media Gateway Controller Software Release 7 Reference Guide</i>.</p>

Verify

View the log file.



Tip

This command does not activate the new configuration.

Stopping an MML Session

To stop an MML session, perform the following procedure.

Procedure

Command	Purpose
<pre>va-cerulean mml> quit va-cerulean%</pre>	<p>Terminates the MML session.</p> <p>For information about where the log is saved, refer to the <i>Cisco Media Gateway Controller Software Release 7 Reference Guide</i>.</p>

Verify

View the log file.

Getting Help

To get help for a specific MML command, enter **help:** followed by the command you want help for, as shown in the following procedure.

Procedure

Command	Purpose
<pre>mml> help:prov-sync Virtual Switch Controller - VSC-01 2000-01-13 11:28:51 M RTRV PROV-SYNC - SYNCHRONIZE PROVISIONING DATA Purpose: This command copies the active configuration from the active telephony controller to the standby telephony controller, ensuring that both telephony controllers are using the same configuration. Format: PROV-SYNC Example: This command copies the configuration from the active to standby telephony controller:mml> PROV-SYNC</pre>	<p>Obtains help for the MML command prov-sync.</p> <p>For information on MML help, refer to the <i>Cisco Media Gateway Controller Software Release 7 Reference Guide</i>.</p>

MML Configuration Commands

There are three types of MML configuration commands:

- Configuration session commands—Use session commands to work with entire provisioning data filesets. See [Table 5-1](#).
- Configuration component/parameter commands—Use component/parameter commands to perform actions on components or parameters affecting a specific data file. See [Table 5-2](#).
- Bulk configuration export commands—Use bulk commands to export the current VSC configuration to a file. See [Table 5-3](#).

Table 5-1 MML Configuration Session Commands

Command—Heading	Description
PROV-STA—Start Provisioning Session	Starts a provisioning session to create a new configuration or to modify an existing configuration. The POM locks the data files to prevent other users from making changes.
PROV-CPY—Copy Provisioning Session	<p>Copies configuration settings from the current provisioning session to the active MGC in a single MGC configuration, activates the configuration, and then terminates the current provisioning session. Requires an open provisioning session.</p> <p>Note You can use PROV-CPY on dual systems to change the configuration of one machine (for example, during upgrading). Use the PROV-SYNC command to resynchronize both machines.</p> <p>Note The PROV-CPY command terminates the current provisioning session only if it is successfully executed.</p>
PROV-DPLY—Deploy Provisioning Session	<p>Copies configuration settings from the current provisioning session to both MGCs in a dual MGC configuration, activates the configuration, and then terminates the current provisioning session. Requires an open provisioning session.</p> <p>Note Verifies the permissions and ownerships of the .dat files copied to the standby machine.</p> <p>Note The PROV-DPLY command terminates the current provisioning session only if it is successfully executed.</p>

Table 5-1 MML Configuration Session Commands (continued)

Command—Heading	Description
PROV-SYNC—Synchronize Provisioning Data	<p>Copies the active configuration from the active MGC to the standby MGC in a dual MGC configuration to ensure that both MGCs are using the same configuration.</p> <p>Note No ownerships or permissions are verified on .dat files copied to the standby machine.</p> <p>Note You cannot perform a PROV-SYNC command in an open provisioning session. You must stop the provisioning session before using the PROV-SYNC command.</p>
PROV-STP—Stop Provisioning Session	Stops the provisioning session and saves the configuration. It releases the lock on the configuration data files, but does not activate the new configuration.
PROV-EXP—Export Configuration Data.	<p>Exports current configuration data routing plans, dial plans, configuration, or all three in MML-command form to the directory <code>/opt/CiscoMGC/etc/cust_specific/directory name</code> where the file names are:</p> <ul style="list-style-type: none"> • config.mml • export_trunks.dat (if trunks are defined) • export_trkgrp.dat (if trunk groups are defined) • routing.mml • <i>custGrpID.mml</i> (for dial plans)

Table 5-2 MML Configuration Component/Parameter Commands

Command	Description
PROV-ADD	Adds a component to the MGC configuration.
PROV-DLT	<p>Deletes a provisioned component.</p> <p>Note You cannot delete a component that is a parent of another component. For example, you cannot delete a linkset that contains links. You receive an error message when you try to delete a parent component.</p>
PROV-ED	Edits a provisioned component.
PROV-RTRV	Retrieves the information about an existing provisioning session.
Note	For more information on these commands, refer to the <i>Cisco Media Gateway Controller Software Release 7 Reference Guide</i> .

Table 5-3 MML Configuration Bulk Export Commands

Command—Heading	Description
PROV-EXP—Export Configuration Data.	<p>Exports current core configuration data (signaling paths, SS7 nodes, and so on) with or without trunks and trunkgroup definitions, routing plans, dial plans, trunkgroups, trunks, or all in one directory. MML-command form to the directory <code>/opt/CiscoMGC/etc/cust_specific/directory_name</code> where the files names are:</p> <ul style="list-style-type: none"> • config (includes trunks and trunkgroup definitions) • routing • numan • signal (without trunks and trunkgroups) • trkgrp • trunk • all

Working with Provisioning Session Commands

Use session commands to work with the entire set of provisioning data files.

Starting a Provisioning Session

Use the **PROV-STA** command to start a provisioning session when you want to:

- Create a new configuration.
- Modify an existing configuration.
- Modify an existing configuration and save it as another version.
- To copy a provisioning session, to deploy a provisioning session, or to synchronize a provision session.



Tip

Although you can save to either the same version or a new version, saving to a new version instead of overwriting the old one gives you an easy way to return to a known configuration if there are problems with the new configuration.



Caution

Do *not* name the destination directory “active” or “new.” The names “active” and “new” have special meanings in the Cisco MGC software.

Creating a New Provisioning Configuration

To create a new configuration, use the **PROV-STA** command as indicated in the following section.

Procedure

Command	Purpose
<pre>mml>prov-sta::srcver="new",dstver="ver1" Virtual Switch Controller 2000-07-13 17:35:42 M COMPLD "PROV-STA" ;</pre>	<p>Starts a new provisioning session ("new"), names it <i>CFG_ver1</i>, and saves the configuration files at <i>/opt/CiscoMGC/etc/CONFIG_LIB/CFG_ver1</i></p>

Verify

Use the **PROV-RTRV:SESSION** command to verify that your new provisioning session has been created.



Tip

The Cisco MGC Software Release 7 appends *CFG_* in front of any user-supplied destination version name. For example, *ver1* becomes *CFG_ver1*.

If you enter the *prov-sta* command without including the quotation marks around *new* or *ver1*, the following error message is generated:

```
M  DENY
   IIDT
   "SRCVER"
/* Input, Invalid Data Parameter */
;
```



Note

If you enter an invalid MML command, only the first error encountered in the command string is listed. Any additional errors in the MML command are not listed.

The first line of the returned MML message indicates the command was denied (DENY). The second line indicates the error was due to an invalid input data parameter (IIDT). The third line indicates the invalid data parameter (SRCVER). And the fourth line indicates the error cause in generic terms.

Refer to the *Cisco Media Gateway Controller Software Release 7 Reference Guide* for a list of error messages and their meanings.

Overwriting an Existing Inactive Configuration

For you to overwrite an existing inactive configuration, use the **PROV-STA** command.

Procedure

Command	Purpose
<pre>mml>prov-sta:srcver="ver1",dstver="ver1" Virtual Switch Controller 2000-07-16 10:04:02 M COMPLD "PROV-STA"</pre>	Starts a provisioning session, opens the existing configuration named <i>ver1</i> , and overwrites that configuration.

Verify

Observe the xterm window and verify that COMPLD is displayed in response to the MML command.



Tip

For you to modify an existing configuration directory, the *srcver* and *dstver* must be the same. If they are the same, then the original configuration is overwritten by the new 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.



Caution

If the source configuration specified is new, the software does not allow you to overwrite an existing configuration. For example, if a provisioning directory “CFG_ver1” exists, the following command fails:

```
mml>prov-sta:srcver"new", dstver="ver1"
```



Note

An existing nonactive configuration can be overwritten.

Modifying and Activating a Configuration

To modify an existing inactive configuration and save it as another version, use the **PROV-STA** command.

Procedure

Command	Purpose
<pre>mml>prov-sta:srcver="active",dstver="new_active" Virtual Switch Controller 2000-07-16 10:08:48 M COMPLD "PROV-STA"</pre>	Starts a provisioning session, selects the active configuration as the source for configuration change, and saves the configuration as <i>new_active</i> .

Verify

Observe the xterm window and verify that COMPLD is displayed in response to the MML command.

**Tip**

dstver cannot be the same as the existing directory name; otherwise, you override the existing configuration.

**Note**

An MML provisioning session that is not active for 30 minutes results in a warning. If the session continues with no activity for 5 more minutes, the session terminates.

Modifying an Existing Inactive Configuration and Saving It as Another Version

To modify an existing inactive configuration and save it as another version, use the **PROV-STA** command.

Procedure

Command	Purpose
<pre>mml>prov-sta::srcver="ver1",dstver="ver2" Virtual Switch Controller 2000-07-16 10:08:48 M COMPLD "PROV-STA"</pre>	Starts a provisioning session, opens the existing configuration named <i>ver1</i> , and saves the configuration as <i>ver2</i> .

Verify

Observe the xterm window and verify that COMPLD is displayed in response to the MML command.

**Tip**

A provisioning session not active for 30 minutes results in a warning. If the session continues with no activity for 5 more minutes, it terminates.

Committing a Provisioning Session to a Single MGC

To direct the POM to make the data files that belong to the current provisioning session operational on a single MGC and then terminate the POM session, use the **PROV-CPY** command.

Procedure

Command	Purpose
<pre>mml> PROV-CPY</pre>	Copies configuration settings from the current provisioning session to the active MGC in a single MGC configuration, and then activates the configuration.



Tip

The **PROV-CPY** command differs from the **PROV-DPLY** command in that the **PROV-DPLY** command applies the configuration changes to dual MGC configurations, whereas the **PROV-CPY** command applies the configuration changes to single MGC configurations only.

Verify

Use the **PROV-RTRV-softw:all** command to verify that all processes are running.

Use the **PROV-RTRV:session** command to verify your configuration.

Deploying a Provisioning Session to Dual MGCs

To (1) direct the POM to make the data files that belong to the current POM session operational, (2) copy the data files to the standby MGC, and (3) terminate the POM session, use the **PROV-DPLY** command.

Procedure

Command	Purpose
mm1> PROV-DPLY	Copy configuration settings from the current provisioning session to both MGCs in a dual MGC configuration, and then activate the configuration.

Verify

Use the **PROV-RTRV:session** command to verify your configuration.



Tip

A provisioning session not active for 30 minutes results in a warning. If the session continues with no activity for 5 more minutes, it terminates.

The **PROV-CPY** command is different from the **PROV-DPLY** command in that the **PROV-DPLY** command applies the configuration changes to dual MGC configurations, whereas the **PROV-CPY** command applies the configuration changes to a single MGC configuration.

Synchronizing Configuration Data

To synchronize the configuration data between two MGCs, use the **PROV-SYNC** command.

Procedure

Command	Purpose
mml> PROV-SYNC	Copies the configuration data from the active MGC to the standby MGC to ensure that both MGCs are using the same configuration.

Verify

Use the **PROV-RTRV:session** command to verify your configuration.



Tip

The configuration data always goes from the active MGC to the standby MGC.

You cannot perform the **PROV-SYNC** command with an open provisioning session, and pomSync.dat (in the XECfgParm.dat file) must be set to **true**.

Stopping a Configuration Session

To save all changes made during the configuration session and terminate the session with the POM, use the **PROV-STP** command.

Procedure

Command	Purpose
mml> PROV-STP Virtual Switch Controller 2000-06-16 11:19:17 M COMPLD	Stop the provisioning session and save your configuration changes to the destination version specified when the session was started.
mml> PROV-STP:<session name>:confirm	Stop a provisioning session started from another MML or CMM session.

Verify

On successful completion of this command, the POM releases the lock on the configuration data files.



Tip

This command saves the new configuration but does not activate it. You must use the **PROV-CPY** or **PROV-DPLY** command to activate the configuration.



Caution

Quitting an MML session does not stop the session. While inactive sessions terminate, but the only command that can stop a session is **PROV-STP**, **PROV-CPY**, or **PROV-DPLY**.

Performing a Manual Switchover

To enable a switchover from an active to a standby system, use the **SW-OVER** command.

Procedure

Command	Purpose
<pre>mml>sw-over::CONFIRM Virtual Switch Controller 2000-04-02 17:06:23 M COMPLD</pre>	Performs a manual switchover.

Verify

Use the **RTRV-NE** command to verify. For information on this command, refer to the *Cisco Media Gateway Controller Software Release 7 Reference Guide*.

The standby system becomes active in less than 2 seconds after the switchover.

Exporting Configuration Data

To export core configuration data (signaling paths, SS7 nodes, trunks, and trunk groups), routing plans, and dial plans, use the **PROV-EXP** command.

The following are key points to understand when you are exporting routing and dial plan information:

- If a provisioning session exists, the **PROV-EXP** command uses the provisioning link as the source of the data to be exported. If no provisioning session exists, this command uses the active link as the source of the data to be exported.
- If the directory indicated with DIR_NAME already exists, the **PROV-EXP** command fails. This ensures that current files generated by previous **PROV-EXP** commands are not overwritten by a subsequent **PROV-EXP** command.

Procedure

Command	Purpose
<pre>mml> prov-exp:config:dirname="saved_config" Virtual Switch Controller 2000-06-16 11:19:17 M COMPLD</pre>	Exports configuration data in MML format to the file: /opt/CiscoMGC/etc/cust_specific/saved_config The file contains the MML commands for all of the configuration data.
<pre>mml> prov-exp:routing:dirname="saved_config" Virtual Switch Controller 2000-06-16 11:19:17 M COMPLD</pre>	Exports routing data in MML format to the file: /opt/CiscoMGC/etc/cust_specific/saved_config The file contains the MML add/edit commands for all of the data in the route analysis file.

Command	Purpose
<pre>mml> prov-exp:numan:dirname="saved_config" Virtual Switch Controller 2000-06-16 11:19:17 M COMPLD</pre>	<p>Exports dial plan data in MML format to the file: /opt/CiscoMGC/etc/cust_specific/saved_config</p> <p>The file contains MML commands for all of the data in the dial plan. The first line of the created file contains an MML command to create the dial plan.</p>
<pre>mml> prov-exp:all:dirname="saved_config" Virtual Switch Controller 2000-06-16 11:19:17 M COMPLD</pre>	<p>Exports configuration, routing, and dial plan data in MML format to the file: /opt/CiscoMGC/etc/cust_specific/saved_config</p> <p>The file contains the MML commands for all of the data in the configuration, route analysis, and dial plan files.</p>

Verify

Examine the exported data to verify the configuration data.

If trunks and trunk groups are defined, a file for the trunks and a file for the trunk groups will also be generated as part of the command to export configuration data. The files `export_trunks.dat` and `export_trkgrp.dat` are placed in the same directory created by the initial **PROV-EXP** command. An MML command to import the generated files is appended to the end of the `config.mml` file to import the trunk and trunk group files. These commands look like this:

```
prov-add:files:name="TKGfile", file="<dir_name>/export_trkgrp.dat", action="import"
prov-add:files:name="BCfile", file="<dir_name>/export_trunks.dat", action="import"
```

Importing Saved MML Configuration Data

To import previously exported configuration data, you can use batch MML as follows:

From a UNIX prompt, enter the following command to import previously exported configuration data:

```
mml -b /opt/CiscoMGC/etc/cust_specific/dumpdir/config.mml
```



Note

When performing batch provisioning, be sure no call processing is on going to prevent impacting call processing performance.

To export all the configuration data:

Command	Purpose
<pre>mml> prov-exp:all:dirname="saved_config" Virtual Switch Controller 2000-06-16 11:19:17 M COMPLD</pre>	<p>Saves the following files in the /opt/CiscoMGC/etc/cust_specific/saved_config file:</p> <ul style="list-style-type: none"> • config.mml • export_trunks.dat (optionally created if trunks are defined) • export_trkgrp.dat (optionally created if trunk groups are defined) • routing.mml • <i>custGrpID</i>.mml (any number of these depending on number of dial plans defined)

To import all configuration data from the directory “*saved_config*” in the previous procedure, use the following UNIX commands, which execute MML in batch mode, in the following order:

```
mml -b /opt/CiscoMGC/etc/cust_specific/saved_config/config.mml
mml -b /opt/CiscoMGC/etc/cust_specific/saved_config/routing.mml
mml -b /opt/CiscoMGC/etc/cust_specific/saved_config/<CustGrpID>.mml
```

To export the MML trunk group file, use the following MML commands:

```
prov-add:files:name="TKGFile",file="trunkGroupCust.dat",action="export"
prov-ed:files:name="TKGFile",file="trunkGroupCust.dat",action="export"
```

Working with Provisioning Commands

Use provisioning commands to work with components, parameters, and properties.

- **Components**—Describe physical and logical entities, such as external switches, signaling links, and signaling services.
- **Parameters**—Are defined when you create or modify a component. For example, when you add a signaling service, the options that you specify when you create the service are called parameters.



Note Although parameters are often called options or properties, properties have a specific meaning in this section.

- **Properties**—Are options that are applied to a linkset or signaling service or trunk groups when you create the linkset or service. A default set of properties is assigned to each linkset and signaling service. The default property settings should work for most installations. You can override them to customize your installation.

Use the MML provisioning commands for the actions discussed in the following sections:

- [Adding a Component, page 5-17](#)
- [Modifying a Component, page 5-18](#)
- [Deleting a Component, page 5-18](#)

- [Overriding Component Properties, page 5-19](#)
- [Changing Overridden Properties, page 5-19](#)
- [Retrieving All Components, page 5-25](#)
- [Retrieving an Individual Component, page 5-26](#)
- [Retrieving a Component Based on Signaling Service \(Release 7.4.8\), page 5-27](#)
- [Retrieving Provisioning Session Information, page 5-29](#)

Adding a Component

To add a component to the MGC configuration, use the **PROV-ADD** command.

Procedure

Command	Purpose
<pre>mml> prov-add:ptcode:name="opc", desc="Point code of CP1", netaddr="0.0.1", netind=2 Virtual Switch Controller 2000-06-16 11:28:17 M COMPLD "ptcode"</pre>	<p>Add a point code with the MML name of <code>opc</code>, a component description of point code for CP1, a <code>netaddr</code> parameter of 0.0.1, and a <code>netind</code> of 2.</p>

Verify

To verify the new component, use the **PROV-RTRV** command.



Tip

After you add a system component, you can change the value of most parameters at any time. However, you cannot change the component type or name, because these attributes uniquely identify the component you are modifying. To change the type or name of a component, you must delete the component and create a new component with a new type and name.

If you want to use a component's default values, you do not have to specify any parameters. For information on component default parameters, refer to [Chapter 2, "Planning for Provisioning."](#)

When adding components, add the components in the following order.

- External nodes
- Point codes (OPC, APC, and DPC)
- Adapter cards
- Adapter interfaces
- Signaling services
- Linksets
- Links
- SS7 routes
- SS7 subsystems
- Trunk groups

- Trunks
- Route groups

Modifying a Component

To modify a provisioning object within the data files, use the **PROV-ED** command.

Procedure

Command	Purpose
<pre>mm1> prov-ed:ptcode:name="opc", desc="Point code for this SSP" Virtual Switch Controller 2000-06-16 11:32:09 M COMPLD "ptcode"</pre>	Changes the description of a provisioned point code named opc.

Verify

After you enter the command to modify a component, the component is changed. To verify the change, use the **PROV-RTRV** command.



Tip

Enter only those parameters that you want to modify.

Deleting a Component

To remove a component from the MGC configuration, use the **PROV-DLT** command.

Procedure

Command	Purpose
<pre>mm1> prov-dlt:ptcode:name="opc" Virtual Switch Controller 2000-06-16 11:42:45 M COMPLD "ptcode"</pre>	Deletes the point code component named opc.

Verify

To verify that the component is removed, use the **PROV-RTRV:ALL** command.



Tip

Component types are listed in the *Cisco Media Gateway Controller Software Release 7 Reference Guide*. If you cannot remember the name of a component, use the **PROV-RTRV:ALL** command to display all components.

You cannot delete a component that is a parent of another component. For example, you cannot delete a linkset that contains links. You receive an error message when you try to delete a parent component.

Overriding Component Properties

To override component properties for an existing provisioning component, use the **PROV-ADD** command.

Procedure

Command	Purpose
<pre>mml>prov-add:propertyType:name="name",property =value mml>prov-add:sigserv:name="ss7srv1", alarmcarrier="1"</pre>	<p>Each command adds a property to a different signaling service.</p> <p>The property override value is added to the configuration that the current session is modifying.</p>

Verify

To view the component configuration, use the **PROV-RTRV** command as described in the [“Retrieving Provisioning Session Information”](#) section on page 5-29.



Tip

Working with properties is similar to working with components, but there are differences. For example, when you create a component, you have to define values for all of the component parameters. However, you never have to create a component property, because a set of default properties is automatically created when you create a component. If you want to change a default property value, you must override that value.

For information on components, parameters, and properties, refer to [Chapter 2, “Planning for Provisioning.”](#)

After you override a property value with the **PROV-ADD** command, an override statement is added to the configuration file for a specific linkset or signaling service property. Do not use additional **PROV-ADD** commands to change the overridden property value. Use the **PROV-ED** command to modify overridden property values, as explained in the [“Changing Overridden Properties”](#) section.

Changing Overridden Properties

To modify a provisioning object within the data files, use the **PROV-ED** command.

Procedure

Command	Purpose
<pre>mml> prov-ed:alarmcarrier:NAME="ss7srv1", alarmcarrier="2" Virtual Switch Controller 2000-09-30 11:32:09 M COMPLD "alarmcarrier"</pre>	Change the SS7 signaling service (ss7srv1) overridden property (alarm carrier) value to 2 for a different alarm carrier (hardware carrier).

Verify

After you enter the **PROV-ED** command, the property value is changed. To view the component configuration, use the **PROV-RTRV** command.



Tip

There are two property types: `lnksetprop` and `sigsvccprop`. The `lnksetprop` property type changes properties for a linkset, and the `sigsvccprop` property type changes properties for a signaling service. The *name* parameter in the command above indicates a specific linkset or signaling service that you have already defined. Replace the *property* parameter with the property name. For more information on these property types, refer to the [Chapter 2, "Planning for Provisioning."](#)



Note

Changes made to the `lnksetprop` property type do not take effect until the MGC software is stopped and restarted, even though the **PROV-RTRV** command indicates the changed value.

[Table 5-4](#) lists the properties that can be provisioned and indicates whether or not the modified value takes effect without stopping and restarting the MGC software.

Table 5-4 Provisionable Properties

Property	Modified value takes effect without restart
ACCRspCntlInhibit	No
ACLDur	No
AOCEnabled	Yes
AOCNodeID	Yes
AlarmCarrier	Yes
AuditWhenSscIs	No
BOrigStartIndex	Yes
BTermStartIndex	Yes
BcInitState	Yes
BothwayWorking	Yes
CGBA2	Yes
CLIDefaultAllowed	Yes
CLIPess	Yes

Table 5-4 Provisionable Properties (continued)

Property	Modified value takes effect without restart
CLISelect	Yes
CLLI	Yes
COLDefaultAllowed	Yes
CarrierIdentity	Yes
CarrierInfoTransferBackward	Yes
CarrierInfoTransferForward	Yes
CarrierScreening	No
CctGrpCarrier	Yes
ChargeAreaInformation	Yes
CircHopCount	Yes
CompressionType	Yes
CotInTone	Yes
CotOutTone	Yes
CotPercentage	Yes
CustGrpId	No
DetectFaxModemTone	No
EchoCanRequired	Yes
ExtCOT	Yes
FastConnect	Yes
ForwardCLInIAM	Yes
ForwardSegmentedNEED	Yes
GLARE	Yes
GRA2	Yes
GRSEnabled	No
GWDefaultCodecString	No
GWProtocolVersion	No
GatewayName	No
InitEndpointsAsEnabled	No
InternationalPrefix	Yes
IsupTransparencyDisabled	No
LocationNumber	Yes
MaxACL	Yes
MgcpBehavior	No
NationalPrefix	Yes
NatureOfAddrHandling	No
Normalization	Yes

Table 5-4 Provisionable Properties (continued)

Property	Modified value takes effect without restart
NotifySetupComplete	Yes
Npa	Yes
OMaxDigits	No
OMinDigits	No
OOverlap	No
OrigCarrierId	No
OverlapDigitTime	Yes
OwnCli	Yes
PropagateSvcMsgBlock	Yes
RedirMax	Yes
ReleaseMode	Yes
RingNoAnswer	Yes
RouteId	Yes
RoutePref	Yes
SatelliteInd	Yes
ScreenFailAction	Yes
SuppressCLIDigits	Yes
SwitchID	Yes
T309Time	Yes
T310Time	Yes
TCAPOverIPKpAlive	No
TCAPOverIPKpOpcod	No
TCAPOverIPKpTimer	No
TCAPOverIPTcpConn	No
TMaxDigits	Yes
TminDigits	Yes
TOverlap	Yes
TlinkAlignTime	Yes
VOIPPrefix	Yes
adjDestinations	No
avmAssocCAFIF	No
avmCmdRespTimeout	No
avmCmdRetryCount	No
avmControllerId	No
avmIckInterval	No
avmIckRespTimeout	No

Table 5-4 Provisionable Properties (continued)

Property	Modified value takes effect without restart
avmIckRetryCount	No
delayTimer	No
dialogRange	No
layerRetries	No
layerTimer	No
maxMessageLength	No
mgcpDomainNameRemote	No
mgcpGWRspAckTimeout	No
mgcpGWStdbyHeartbeatInterval	No
mgcpHeartbeatInterval	No
mgcpLocalIpInterfacePollCount	No
mgcpMaxRspAckToBuffer	No
mgcpRemoteIpPollCount	No
mgcpRetxCount	No
mgcpRetxTimer	No
mtp3Queue	No
restartTimer	No
rudpAck	No
rudpKeepAlives	No
rudpNumRetx	No
rudpRetxTimer	No
rudpSdm	No
rudpWindowSz	No
sendAfterRestart	No
sgcpRetxCount	No
sgcpRetxTimer	No
slsTimer	No
spanId	No
srcpAuditGwInterval	No
srcpAuditLineInterval	No
srcpHeartbeatInterval	No
srcpIpPortLocal	No
srcpIpPortRemote	No
srcpRemoteAuditGwInterval	No
srcpRetxCount	No
srcpRetxTimer	No

Table 5-4 *Provisionable Properties (continued)*

Property	Modified value takes effect without restart
srtTimer	No
sstTimer	No
standard	No
variant	No
vsiCmdRespTimeout	No
vsiCmdRetryCount	No
vsiControlVPI	No
vsiControllerId1	No
vsiControllerId2	No
vsiControllerId3	No
vsiControllerId4	No
vsiKeepAliveTimeout	No
vsiMaxSlaves	No
vsiStartingControlVCI	No

Retrieving All Components

To retrieve all configured components, use the **PROV-RTRV** command.

Procedure

Command	Purpose
<pre> mml> prov-rtrv:all /* Name Parent Name TID Description ---- - "TKGFile" "LPC-01" TRNKGRP " " "BCFile" "LPC-01" BEARCHAN " " "TrkRtFile" "LPC-01" TRNKROUTE " " "Ether1" "LPC-01" CARD "Motherboard 1" "Ether2" "LPC-01" CARD "Motherboard 2" "en1" "Ether1" ENETIF "Ethernet IF 1" "en2" "Ether2" ENETIF "Ethernet IF 2" "ls1" "stp1" LNKSET "Link Set 1" "route1" "LPC-01" SS7ROUTE "route to dpc1 via ls1" "opc" "LPC-01" PTCODE "Own Pointcode" "dpc1" "LPC-01" PTCODE "Dest Point Code 1" "dpc2" "LPC-01" PTCODE "Dest Point Code 2" "ss7svc1" "dpc1" SS7PATH "SS7 Service to DPC1" "ss7svc2" "dpc2" SS7PATH "SS7 Service to DPC2" "ls1link1" "ls1" C7IPLNK "SS7 link 1 to SP1" "stp1" "LPC-01" APC "STP 1 Point Code" "stp2" "LPC-01" APC "STP 2 Point Code" "mate1" "LPC-01" SS7SUBSYS "mate stp1 to stp2" */ </pre>	<p>Displays all configured components. A provisioning session is not required.</p>



Tip

Component types and component parameters are listed in the *Cisco Media Gateway Software Release 7 Reference Guide*. If you cannot remember the name of a component, use the **PROV-RTRV:ALL** command to display all components.

Retrieving All Components of a Specific Type

To retrieve all the components of a specific type, use the **PROV-RTRV** command.

Procedure

Command	Purpose
<pre> mml> prov-rtrv:card:"ALL" Virtual Switch Controller 2000-11-10 15:17:55 M RTRV "session=tmp:CARD" /* NAMETYPE SLOT card1EN 0 card2EN 1 </pre>	Retrieves all the components associated with the component named "card".

Verify

To verify the retrieve, use the **PROV-RTRV** command.

Retrieving an Individual Component

To display an individual component that is configured on the MGC, use the **PROV-RTRV** command.

Procedure

Command	Purpose
<pre> mml> prov-rtrv:enetif:name="en2" Virtual Switch Controller 2000-07-20 20:39:14 M RTRV "enetif" /* NAME = en2 DESC = Ethernet IF 2 CARD = Ether2 */ </pre>	Retrieves the attributes associated with the Ethernet interface component named "en2".



Tip

If you cannot remember the name of a component, use the **PROV-RTRV:ALL** command to display all components.

Retrieving a Component Based on Signaling Service (Release 7.4.8)

To display a component that is based on the signaling service and is configured on the MGC, use the **PROV-RTRV** command.

Procedure

Command	Purpose
<pre>mml> prov-rtrv:iplink:svc="mgcpsvc1" Virtual Switch Controller 2000-07-20 20:39:14 M RTRV "session=tmp:iplnk" /*</pre>	<p>Retrieves the IP links associated with the signaling service for "mgcpsvc1".</p> <p>Component: iplnk Name: mgcp-link1 SIGSLOT: 0 SIGPORT: 0 IF: enif1 IPADDR:IP_Addr1 PORT: 7001 PEERADDR: 172.12.21.11 PEERPORT: 7001 1 SIGSLOT: 0 SIGPORT:0 IF: enif2 IPADDR:IP_Addr2 PORT: 7001 PEERADDR: 172.12.12.11 PEERPORT: 7001 2</p>

You can use the following provisioning commands to retrieve information based on the signaling service or trunk group.

- IP links—Retrieve the IP links associated with the named signaling service.

```
mml> prov-rtrv:iplink:srcsvc="mgcpsvc1"
```

- Nailed trunk—Retrieve all nailed trunks associated with the named (source or destination) signaling service.

```
mml> prov-rtrv:nailedtrnk:srcsvc="sc-1"
```

- Switched trunk—Retrieve all switched trunks associated with the named (source or destination) signaling service. You can also retrieve the span (source or destination) too.

```
mml> prov-rtrv:switchtrnk:trunkgrpname="1000"
```

- Trunk group—Retrieve all trunk groups associated with the named signaling service. You can also retrieve the span (source or destination) too.

```
mml> prov-rtrv:trnkgrp:svc="ss7svc1"
```

Retrieving Protocol Variants

To retrieve the signaling protocol variants available on the MGC, use the **PROV-RTRV:VARIANTS** command.

Procedure

Command	Purpose
<pre> mml>prov-rtrv:variants /* MDO File name Protocol Family ----- DPNSS_BTNR188 DPNSS ETSI_300_102 ISDNPRI ETSI_300_102_C1 ISDNPRI ATT_41459 ISDNPRI ATT_41459_C2 ISDNPRI BELL_1268 ISDNPRI ETSI_300_172 ISDNPRI BELL_1268_C3 ISDNPRI JAPAN_INS_1500 ISDNPRI T113_BELL SS7-ANSI NORTEL_IBN7 SS7-ANSI ANSISS7_SPRINT SS7-ANSI ANSISS7_STANDARD SS7-ANSI Q721_CHINA SS7-China Q721_BASE SS7-China Q767_BASE SS7-ITU ETSI_300_356 SS7-ITU BTNUP_BTNR167 SS7-ITU BTNUP_NRC SS7-ITU Q767_SPAN SS7-ITU Q761_BASE SS7-ITU HKTA_2202 SS7-ITU ISUPV2_FRENCH SS7-ITU ETS_300_121 ISDNPRI ISUPV2_SWISS SS7-ITU ISUPV2_GERMAN SS7-ITU FINLAND_5779 SS7-ITU Q761_AUSTRAL SS7-ITU ISUPV1_POLI SS7-ITU ISUPV2_KPNPB SS7-ITU ISUPV2_JAPAN SS7-JAPAN ISUPV3_UK SS7-UK Q761_BELG_MOBI SS7-ITU Q767_ITAL SS7-ITU Q767_RUSS SS7-ITU EISUP EISUP */ </pre>	To display the signaling protocol variants on the MGC.



Tip

A provisioning session is not required.

Retrieving Provisioning Session Information

To obtain information about the provisioning session, for example (if there is an active session) use the **PROV-RTRV** command.

Procedure

Command	Purpose
<pre>mml> prov-rtrv:session Virtual Switch Controller 2000-07-16 10:32:01 M RTRV "session" /* Session ID = mml1 SRCVER = ver1 DSTVER = ver1 */</pre>	To display information about the provisioning session.

Creating a Batch File

You can create a file of MML provisioning commands for use as a batch file. All commands go into a single ASCII text file that, when read by MML, are executed sequentially.



Note

The MML provisioning commands must be in the correct provisioning sequence based on component dependencies. For example, a line interface cannot be provisioned before the card.

Some advantages to using an MML provision batch file are that you can cut and paste commands and the batch files can be used repeatedly to “re-provision” the MGC or to quickly provision multiple MGCs.

You can create an MML batch file by using any ASCII text editor. Simply enter each MML provisioning command on a single line, ending with a carriage return. You can use any name for the file (use the UNIX file naming convention) and you can copy and paste components.



Note

When performing batch provisioning, be sure no call processing is on going to prevent impacting call processing performance.

To create a batch file, use an ASCII text editor program to create a new file with one MML command on each line, as shown in [Figure 5-1](#). You can use any name for the file and you can store it in any location; however, the file must be accessible on the machine where you run MML sessions.

Figure 5-1 Sample MML Provisioning Batch File

```
prov-sta::srcver="new",dstver="oldyella"
prov-add:ptcode:name="opc",netaddr="111.111.666",netind=1,desc="originating Pointcode"
prov-add:ptcode:name="dpc1",netaddr="444.777.444",netind=2,desc="TDM Switch dpc1
Pointcode"
prov-add:ptcode:name="dpc2",netaddr="555.333.555",netind=3,desc="Host Node dpc2 Pointcode"
prov-add:apc:name="apc1",netaddr="666.222.222",desc="STP 1 APC pointcode",netind=1
prov-add:apc:name="apc2",netaddr="777.333.333",desc="STP 2 APC pointcode",netind=2
prov-add:apc:name="apc3",netaddr="888.777.777",desc="STP 3 APC pointcode",netind=3
prov-cpy
```

Notice that the first command starts a provisioning session, and the last command terminates and commits the provisioning session. If you are not ready to commit a session, use the **prov-stp** command to save and stop the provisioning session.

The **prov-cpy** or **prov-dply** command makes the provisioning session active and then automatically stops the provisioning session.

Also notice that the commands in the file do not configure a complete system. You can create batch files to define complete systems or modify parts of an existing system.

**Note**

If you want to test the batch file before you use it, use the **prov-stp** command.

If you plan to run the batch file multiple times on the same host, plan the source and destination directories carefully.

**Note**

The example shown above would fail if run twice, because the destination directory already exists.

In this example, you could edit the batch file after the first execution and replace the source version name with the destination version name. Future executions of the batch file would then replace the previous configuration. For more information on the source and destination directories, refer to the [“Starting a Provisioning Session”](#) section on page 5-8.

**Note**

If any of the provisioning commands fail in batch mode, the changes do not become active. The **prov-cpy** and **prov-dply** commands fail, indicating that some of the provisioning commands in the batch file have failed.

**Note**

Due to interdependencies between objects used by channel controllers, all provisioning components should be defined in one provisioning session. If multiple batch files are used, each batch file except the last one should start with **prov-sta** and end with **prov-stp**. End only the last batch file with the **prov-cpy** command.

Starting a Batch File

To start executing the batch file, use the following UNIX command.

Procedure

Command	Purpose
<code>mml -b path/filename.ext</code>	To execute the MML commands in the batch file. Replace the <i>path</i> parameter with the absolute path to the file, and replace the <i>filename.ext</i> parameter with the filename of the batch file containing the provisioning commands.

Verify

After you enter the command, MML displays the result of each command as it is executed. When the batch file is done, the MML session is closed.



Tip

MML provides a log function that records the MML commands and responses for you in a log file. If you start this function before you start the provisioning session and stop it after you stop the provisioning session, you can let the batch file run unattended and then check the log file later for any error messages. The log command is called **diaglog**. For more information on using this command, refer to the *Cisco Media Gateway Software Release 7 Reference Guide*.

The `diaglog` commands to start and stop can be placed at the beginning and end, respectively, of an MML batch file.

All MML commands are automatically logged to the `mml.log` file located in the `/opt/CiscoMGC/var/log` directory. A sample log file is shown below:

```
va-cerulean% more mml.log.4
Sat Jan  8 04:10:01:694 2000 | mml111 (PID 24954) <Info>
MML_INFO_COMMAND: MML Command
Sat Jan  8 04:10:06:218 2000 | mml111 (PID 24954) <Info>
MML_INFO_COMMAND: MML Command
mml> sta-aud
  Virtual Switch Controller - VSC-01 2000-01-08 04:10:06
M  RTRV
  SABT
  /* Status, Command Aborted - Command has timed out
    without successful completion of operation
    Some operations may have completed successfully */
va-cerulean%
```

