



# CHAPTER 4

## MML Basics

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This chapter describes how to use Man-Machine Language (MML) commands to configure the Cisco PGW 2200 Softswitch. It includes the following sections:

- [Working with MML, page 4-1](#)
- [MML Configuration Commands, page 4-3](#)
- [Working with MML Session Commands, page 4-6](#)
- [Working with Provisioning Commands, page 4-15](#)

For more information on MML, including starting an MML session, killing an MML session, saving an MML session, stopping an MML session, online help, operating tips, command syntax, and status message definitions, refer to *Cisco PGW 2200 Softswitch Release 9 MML Command Reference*.

Before starting an actual configuration, refer to [Chapter 2, “Planning for Provisioning,”](#) for instructions and worksheets for configuring your system.

## Working with MML

You must start an MML session before you can start a provisioning session. MML interfaces with the Provisioning Object Manager (POM). The POM requires an active provisioning session to make provisioning changes. During an active session, the POM locks all the data files to prevent other users from making changes.

You must start an MML session before you can start a provisioning session.

If a provisioning session is running, you cannot start another 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 4-33).

Keep the following tips in mind when working with MML.



Tip

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In general, MML commands are *not* case sensitive (ExtCOT is an example of a case-sensitive command); however, property values *are* case sensitive.

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Tip

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Keywords do not need to be enclosed in quotes (“ ”).

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**Tip** Use only one MML command on each line.

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**Tip** An open provisioning session is not needed to access the AWHITE, ABLACK, BWHITE, BBLACK, PORTTBL, TERMTBL, ANUMDPSEL, ACHGORIGIN, CLIPREFIX, CLIIPADDRESS, H323IDDIVFROM, ANNOUNCEMENT, and SCRIPT tables.

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**Tip** After starting a provisioning session, MML displays COMPLD, indicating success. (This is true for all successful commands; for all failed commands, MML displays DENY.).

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**Tip** A provisioning session inactive for 30 minutes results in a warning. If the session continues without activity for five more minutes, it terminates.

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**Tip** As many as 12 MML sessions may exist at any given time; however, only one provisioning session is allowed.

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**Tip** You can create an ASCII text file to batch process provisioning commands.

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

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**Tip** You can create batch files for individual segments of provisioned data.

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**Tip** 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.

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**Tip** 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.

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**Tip** You can obtain online help in an MML session by typing **help** at the command prompt.

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**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 key starting an MML session.

## MML Configuration Commands

There are three types of MML configuration commands:

- Configuration session commands—Use session commands to work with entire provisioning data filesets. The session commands are described in [Table 4-1](#).
- Configuration provisioning commands—Use provisioning commands to perform actions on components or parameters affecting a specific data file. The provisioning commands are described in [Table 4-2](#).
- Configuration bulk export command—Use the bulk command to export the current Cisco PGW 2200 Softswitch configuration to a file. The bulk export command is described in [Table 4-3](#).

**Caution**

Due to differences in software file formats, do not use the prov-sync command between Cisco PGW 2200 Softswitch platforms that have different software revision levels.

**Table 4-1 MML Configuration Session Commands**

Command—Explanation	Description
PROV-STA—Start Provisioning Session	<p>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.</p> <p><b>Note</b> The <b>PROV-STA</b> command cannot be performed on the standby Cisco PGW 2200 Softswitch.</p>
PROV-CPY—Copy Provisioning Session	<p>Copies configuration settings from the current provisioning session to the active Cisco PGW 2200 Softswitch in a single Cisco PGW 2200 Softswitch configuration, activates the configuration, and then terminates the current provisioning session. Requires an open provisioning session.</p> <p><b>Note</b> You can use <b>PROV-CPY</b> on dual systems to change the configuration of one machine (for example, during upgrading). Use the <b>PROV-SYNC</b> command to resynchronize both machines.</p> <p><b>Note</b> The <b>PROV-CPY</b> command cannot be performed on the standby Cisco PGW 2200 Softswitch.</p> <p><b>Note</b> The <b>PROV-CPY</b> command terminates the current provisioning session only if it is successfully executed.</p>

Table 4-1 MML Configuration Session Commands (continued)


Command—Explanation	Description
PROV-DPLY—Deploy Provisioning Session	<p>Copies configuration settings from the current provisioning session to both MGCs in a dual Cisco PGW 2200 Softswitch configuration, activates the configuration, and then terminates the current provisioning session. Requires an open provisioning session.</p> <p><b>Note</b> The <b>PROV-DPLY</b> command terminates the current provisioning session only if it is successfully executed.</p> <p><b>Note</b> Use the <b>PROV-DPLY</b> command to commit SS7 provisioning changes.</p>
PROV-SYNC—Synchronize Provisioning Data	<p>Copies the active configuration (in the CONFIG_LIB) from the active Cisco PGW 2200 Softswitch side to the standby side in a dual Cisco PGW 2200 Softswitch configuration to ensure that both sides are using the same configuration.</p> <p><b>Note</b> You cannot perform a <b>PROV-SYNC</b> command in an open provisioning session. You must stop the provisioning session before using the <b>PROV-SYNC</b> command.</p> <p><b>Note</b> After adding a signaling link or CIC, perform a reboot of the standby system to synchronize the new objects in the active system to the standby system. Not rebooting the standby system can cause the loss of calls after a switchover.</p> <p> <b>Caution</b> Due to differences in software file formats, do not use the <b>PROV-SYNC</b> command between Cisco PGW 2200 Softswitch platforms that have different software revision levels.</p>

Table 4-1 MML Configuration Session Commands (continued)

Command—Explanation	Description
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 files names are:</p> <p>all (exports the entire Cisco PGW 2200 Softswitch configuration)</p> <p><b>Note</b> The prov-exp:all MML command creates a <code>properties.dat</code> file that is used only by VSPT to display the default values. This file is not used by the Cisco PGW 2200 Softswitch.</p> <p>config.mml (core configuration information with trunks and trunk groups)  export_trkgrp.dat (if trunk groups are defined, only trunk group data)  export_trunks.dat (if trunks are defined, only trunk data)  numan.mml (dial plan only)  routing.mml (routing only)  <i>custGrpID.mml</i> (for dial plans)</p>

Table 4-2 MML Configuration Provisioning Commands

Command—Explanation	Description
PROV-ADD—Adds a Component	Adds a component to the Cisco PGW 2200 Softswitch configuration.
PROV-DLT—Deletes a Component	<p>Deletes a provisioned component.</p> <p><b>Note</b> 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 Component	Edits a provisioned component.
PROV-RTRV—Retrieves a Component	Retrieves the information about an existing provisioning session, variants, or all components.
<b>Note</b>	For more information on these commands, refer to the <i>Cisco PGW 2200 Softswitch Release 9 MML Command Reference</i> .

Table 4-3 MML Configuration Bulk Export Command

Command—Explanation	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.</p> <p><b>Note</b> When using the <b>prov-exp</b> command, default values are not listed in the exported configuration.</p> <p>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"> <li>config (includes trunks and trunkgroup definitions)</li> <li>routing</li> <li>numan</li> <li>trkgrp</li> <li>trunks</li> <li>all</li> </ul>

## Working with MML 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.
- Copy a provisioning session, deploy a provisioning session, or synchronize a provision session.



#### Tip

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



#### Note

On the Cisco PGW 2200 Softswitch running software Release 9, it is possible that the standby system may not recover from a failover if the active system has an open provisioning session. Make sure there is no provisioning session open on the active Cisco PGW 2200 Softswitch.

**Note**

You can use “new” as the source configuration only when there is no existing, active set of provisioning data in the configuration library. Therefore, “new” cannot be used as the source configuration once a provisioning session has been saved and activated by using **prov-cpy** or **prov-dply**. Once you have saved and activated a set of data, you must use either “active” or the name of the set of provisioning data as the source configuration.

## Creating a New Provisioning Configuration

To create a new configuration, use the **PROV-STA** command as follows:

Command	Purpose
mml> <b>prov-sta::srcver="new",dstver="ver1"</b>	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>

Use the **PROV-RTRV** command to verify that your new configuration has been saved.

**Note**

If you create a new configuration, while a non-empty active configuration is running, and the same MML component names exist in both, the new configuration is treated as a modification and not a creation. If this is not your desired result, start the provisioning session on an empty active configuration.

**Tip**

An empty active configuration can be created by using the following MML commands. Use caution when creating an empty configuration because an empty configuration indicates no service is available.

```
mml> prov-sta:srcver"new",dstver="empty-ver"
mml> prov-cpy
```

**Tip**

The Cisco PGW 2200 Softswitch software Release 9 appends *CFG\_* in front of any user-supplied destination version name. For example, *ver1* becomes *CFG\_ver1*.

In the preceding example, 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 error 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.

**Note**

Refer to the *Cisco Media Gateway Controller Software Release 9 Messages Reference Guide* for a list of error messages and their meanings.

## Overwriting an Existing Inactive Configuration

To overwrite an existing inactive configuration, use the **PROV-STA** command as follows:

Command	Purpose
<code>mml&gt; prov-sta::srcver="ver1",dstver="ver1"</code>	Starts a provisioning session, opens the existing configuration named <i>ver1</i> , and overwrites that configuration.

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

**Note**

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.

**Tip**

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.

**Note**

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**

In Release 9, an existing, nonactive configuration can be overwritten by using the following command:

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

## Modifying and Activating a Configuration

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

Command	Purpose
mml> <b>prov-sta::srcver="active", dstver="ne_active"</b>	Starts a provisioning session, selects the active configuration as the source for configuration change, and saves the configuration as <i>new_active</i> .

Use the **PROV-RTRV** command to verify that the existing configuration has been saved as another version.



Tip

dstver cannot be the same as the existing directory name; otherwise, you overwrite the existing non-active provisioning configuration.



Tip

A provisioning session inactive for 30 minutes results in a warning. If the session continues without activity for five more minutes, it terminates.

## Modifying an Existing Configuration and Saving It as Another Version

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

Command	Purpose
mml> <b>prov-sta::srcver="ver1",dstver="ver2"</b>	Starts a provisioning session, opens the existing configuration named <i>ver1</i> , and saves the configuration as <i>ver2</i> .

Use the **PROV-RTRV** command to verify that the existing configuration has been saved as another version.



Tip

A provisioning session inactive for 30 minutes results in a warning. If the session continues without activity for five more minutes, it terminates.

## Committing a Provisioning Session to a Single Cisco PGW 2200 Softswitch

To direct the POM to make the data files that belong to the current provisioning session operational on a single Cisco PGW 2200 Softswitch and then terminate the POM session, use the **PROV-CPY** command as follows:

Command	Purpose
mm1> <b>PROV-CPY</b>	Copies configuration settings from the current provisioning session to the active Cisco PGW 2200 Softswitch in a single 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 Cisco PGW 2200 Softswitch configurations, whereas the **PROV-CPY** command applies the configuration changes to single Cisco PGW 2200 Softswitch configurations only.

To avoid errors before a complete configuration change, be sure the component being changed is not in service (IS), then execute the **PROV-CPY** command.

Use the **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 Cisco PGW 2200 Softswitch, and (3) terminate the POM session, use the **PROV-DPLY** command as follows:

Command	Purpose
mm1> <b>PROV-DPLY</b>	Copy configuration settings from the current provisioning session to both MGCs in a dual Cisco PGW 2200 Softswitch configuration, and then activate the configuration.

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 without activity for five 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 Cisco PGW 2200 Softswitch configurations, whereas the **PROV-CPY** command applies the configuration changes to a single Cisco PGW 2200 Softswitch configuration.

## Synchronizing Configuration Data

To synchronize the configuration data between two MGCs, use the **PROV-SYNC** command as follows:

Command	Purpose
mml> <b>PROV-SYNC</b>	<p>Copies the configuration data from the active Cisco PGW 2200 Softswitch side to the standby side to ensure that both sides are using the same configuration.</p> <p><b>Note</b> Set pom.dataSync to true in XEcfgParm.dat for prov-sync.</p> <p><b>Note</b> After adding a signaling link or CIC, perform a reboot of the standby system to synchronize the new objects in the active system to the standby system. Not rebooting the standby system can cause the loss of calls after a switchover.</p> <p> <b>Caution</b> Due to differences in software file formats, do not use the <b>PROV-SYNC</b> command between Cisco PGW 2200 Softswitch platforms that have different software revision levels.</p>

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



**Tip**

The configuration data always goes from the active Cisco PGW 2200 Softswitch side to the standby side.



**Note**

You cannot perform the **PROV-SYNC** command with an open provisioning session.

## 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 as follows:

Command	Purpose
mml> <b>PROV-STP</b>	Stop the provisioning session and save your configuration changes to the destination version specified when the session was started.
mml> <b>PROV-STP:&lt;session name&gt;:confirm</b>	Stop a provisioning session started from another MML session.

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, the only commands that can stop a session are **PROV-STP**, **PROV-CPY**, and **PROV-DPLY**.

## Performing a Manual Switchover

To switch over from an active to a standby system, use the **SW-OVER** command as follows:

Command	Purpose
mml> <b>sw-over::CONFIRM</b>	Performs a manual switchover to a standby system platform.

Use the **RTRV-NE** command to verify the manual switchover. For information on this command, refer to the *Cisco Media Gateway Controller Software Release 9 MML Command Reference Guide*.

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

## Exporting Configuration Data

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.

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

Command	Purpose
<code>mml&gt; prov-exp:config:dirname="saved_config"</code>	Exports configuration data in MML format to the directory: /opt/CiscoMGC/etc/cust_specific/saved_config The directory contains the MML commands for all of the configuration data.
<code>mml&gt; prov-exp:routing:dirname="saved_config"</code>	Exports routing data in MML format to the directory: /opt/CiscoMGC/etc/cust_specific/saved_config The directory contains the MML add/edit commands for all of the data in the route analysis file.
<code>mml&gt; prov-exp:numan:dirname="saved_config"</code>	Exports dial plan data in MML format to the directory: /opt/CiscoMGC/etc/cust_specific/saved_config The directory contains MML commands for all of the data in the dial plan. The first line of the created file will contain an MML command to create the dial plan.
<code>mml&gt; prov-exp:all:dirname="saved_config"</code>	Exports configuration, routing, and dial plan data in MML format to the directory: /opt/CiscoMGC/etc/cust_specific/saved_config The directory contains the MML commands for all of the data in the configuration, route analysis, and dial plan files.

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.

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

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

## Importing Saved MML Configuration Data

To import previously exported configuration data (from the directory `"saved_config"` in the previous procedure), you can use batch MML configuring as described in this section.



### Caution

Cisco strongly recommends that you perform this import procedure during a maintenance window. This procedure will stop all call processing on both the active and standby systems.

**Note**

Be sure that you are familiar with the use of the `prov-cpy` and `prov-sync` commands as described in the “[PROV-SYNC—Synchronize Provisioning Data](#)” section of the *Cisco PGW 2200 Softswitch Release 9 MML Command Reference*.

**Step 1** Stop the standby Cisco PGW 2200 Softswitch.

**Step 2** Stop the active Cisco PGW 2200 Softswitch.

**Step 3** On the previously active system, clear the existing provisioning:

a. Log in as `mgcur`.

b. Navigate to the `etc` directory:

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

c. Make a backup of the `XECfgParm.dat` file by copying it to a temporary directory:

```
cp XECfgParm.dat /tmp/XECfgParm.dat
```

d. Remove the `.dat` and `.link` files:

```
rm *.dat
rm *.link
```

e. Copy the new configuration files:

```
cp /opt/CiscoMGC/etc/CONFIG_LIB/new/*.dat /opt/CiscoMGC/etc/
```

f. Restore the `XECfgParm.dat` file.

```
cp /tmp/XECfgParm.dat ./
```



**Note** The system replaces the `XECfgParm.dat` file when it copies the new configuration files, so you must restore `XECfgParm.data` with the above command.

**Step 4** Start the previously active system.

**Step 5** When the previously active system comes up, combine the two MML files.

a. Navigate to the directory that contains the saved (previously exported) configuration:

```
cd /opt/CiscoMGC/etc/cust_specific/<saved_config>
```

b. Combine the files:

```
cat config.mml routing.mml <CustGrpID>.mml > all-config.mml
```

c. Find the `numan-add:dialplan:custgrp` in `<CustGrpID>.mml` file and add it to the top of the `all-config.mml` file. You must do this step manually for `numan-add:dialplan:custgrp`, because it does not copy automatically.

**Step 6** Enter the following commands to import the combined provisioning file:

```
mml
prov-sta::srcver=new,dstver=mmlImport, confirm
quit
mml -b all-config.mml
mml
prov-cpy
```

**Step 7** Start the standby system.

**Step 8** When the standby system comes up, issue the prov-sync command on the active system:

```
prov-sync
```

**Note**

When you migrate an export\_trkgrp.dat file from Release 9.6(1) or earlier into Release 9.7(3) or later, first use the **migrateTKGfile** script to change the file from nonXML format to XML format. Then execute the **prov-add:files** commands to import the files.

Files exported from Release 9.7(3) and later are in XML format and can be imported directly into later releases. Therefore, there is no need for you to use the **migrateTKGfile** script in these cases.

## 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 guide.

- **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 4-15](#)
- [Modifying a Component, page 4-16](#)
- [Deleting a Component, page 4-17](#)
- [Overriding Component Properties, page 4-17](#)
- [Changing Overridden Properties, page 4-18](#)
- [Retrieving All Components, page 4-29](#)
- [Retrieving an Individual Component, page 4-30](#)
- [Retrieving a Component Based on Signaling Service, page 4-30](#)
- [Retrieving Provisioning Session Information, page 4-33](#)

## Adding a Component

To add a component to the Cisco PGW 2200 Softswitch configuration, use the **PROV-ADD** command as follows:

Command	Purpose
<pre>mml&gt; prov-add:dpc:name="dpc1", netaddr="0.0.1",netind=2,desc="DPC1",</pre>	Add a point code with the MML name of dpc1, a net address (point code) of 0.0.1, and a net indicator of 2, and a component description of the point code for DPC1.

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.

- Add external nodes for each device connected to the network
- Add point codes (OPC, DPC, and APC)
- Add the interface cards
- Add SS7 signaling service
- Add media gateway signaling service
- Add linksets
- Add C7 IP links (redundant)
- Add IP links
- Add SS7 routes
- Add SS7 subsystem
- Add trunks (x24 or x31)

## Modifying a Component

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

Command	Purpose
<pre>mml&gt; prov-ed:opc:name="opc1", netaddr="120.40.221",netind=2,desc="opc1", type="trueopc"</pre>	Changes the description of a provisioned point code named opc1.

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

**Tip**


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 Enter only those parameters that you want to modify.
 

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## Deleting a Component

To remove a component from the Cisco PGW 2200 Softswitch configuration, use the **PROV-DLT** command as follows:

Command	Purpose
<code>mm1&gt; prov-dlt:opc:name="opc1"</code>	Deletes the point code component named <code>opc1</code> .

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

**Tip**


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

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**Note**


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 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 as follows:

Step	Command	Purpose
1	<code>mm1&gt; prov-add:propertyType:name="name", property=value</code>	Each command adds a property to a different signaling service.
2	<code>mm1&gt; prov-add:sigsvccprop:name="ss7srv1", alarmcarrier="1"</code>	The property override value is added to the configuration the current session is modifying.

To view the component configuration, use the **PROV-RTRV** command as described in the [“Retrieving Provisioning Session Information”](#) section on page 4-33.

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

After overriding 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 on page 4-18.

## Changing Overridden Properties

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

Command	Purpose
<code>mml&gt; prov-ed: sigsvccprop:NAME="ss7srv1", alarmcarrier="2"</code>	Change the SS7 signaling service (ss7srv1) overridden property (alarm carrier) value to 2 for a different alarm carrier (hardware carrier).

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 specifies a specific protocol family for the linkset or a specific 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 Cisco PGW 2200 Softswitch software is stopped and started again, even though the **PROV-RTRV** command indicates the changed value.



### Note

The `TRNKGRPPROP` property type supports trunk group provisioning. For more information, refer to [“Overriding the Trunk Group Property”](#) section on page 5-31.

[Table 4-4](#) lists the properties that can be provisioned and indicates if the modified property value takes effect without stopping and restarting the Cisco PGW 2200 Softswitch software.

**Table 4-4 Provisionable Properties**

Property	Modified value takes effect without restart
ACCRespCatName	Yes
ACCRespCntlInhibit	No
ACLDur	No
ADigitCCPrefix	Yes

**Table 4-4 Provisionable Properties (continued)**

adjDestinations	No
AInternationalPrefix	Yes
AlarmCarrier	Yes
allowCRMCR	Yes
allowEXM	Yes
AllowH323Hairpin	Yes
ANationalPrefix	Yes
AnnSuppressInbandInfo	Yes
Anumnormalise	Yes
AOCDefaultTariffId	Yes
AOCEnabled	Yes
AOCInvokeType	Yes
AOCNodeID	Yes
AtmConnectionType	Yes
atpInclude	Yes
AuditWhenSscIs	No
BcInitState	Yes
BDigitCCPrefix	Yes
BDigitCCrm	Yes
BInternationalPrefix	Yes
BNationalPrefix	Yes
Bnumnormalise	Yes
BothwayWorking	Yes
BTechPrefix	Yes
CallForwardRerouteDisabled	Yes
CarrierInfoTransferBackward	Yes
CarrierInfoTransferForward	Yes
CarrierScreening	No
carrierSelectInclude	Yes
CCOrigin	Yes
CctGrpCarrier	Yes
CGBA2	Yes
cgpnForceIncomplete	Yes
cgpnInclude	Yes
cgpnPres	Yes
CgpnPresRes	Yes
ChargeAreaInformation	Yes

**Table 4-4 Provisionable Properties (continued)**

ChargeOrigin	Yes
chnNonGeo	Yes
chnOlipInclude	Yes
cipInclude	Yes
cipNonGeo	Yes
CircHopCount	Yes
CLIDefaultAllowed	Yes
CLIPess	Yes
CLISelect	Yes
CliSelectionForCodeOfPractice3	Yes
CLLI	Yes
COLDefaultAllowed	Yes
CompressionType	Yes
confusion	Yes
congProc	Yes
CorrelationCallIDFormat	Yes
CotInTone	Yes
CotOnTerminatingSupport	Yes
CotOutTone	Yes
CotPercentage	Yes
CustGrpId	No
CustomerVPNid	Yes
CustomerVPNOffNetTbINum	Yes
CustomerVPNOnNetTbINum	Yes
defaultBC	Yes
DefaultCARIDNatNetIdPlan	Yes
DefaultCARIDNetId	Yes
DefaultCARIDNetType	Yes
DefaultCHG	Yes
DefaultCHGNOA	Yes
DefaultCHGNPI	Yes
DefaultDN	Yes
DefaultDNNOA	Yes
DefaultDNNPI	Yes
DefaultDNPres	Yes
DefaultDNSI	Yes
DefaultOLI	Yes

**Table 4-4 Provisionable Properties (continued)**

DefaultPN	Yes
DefaultPNNOA	Yes
DefaultPNNPI	Yes
DefaultPNPres	Yes
delayTimer	No
dialogRange	No
EchoCanRequired	Yes
EnableIPScreening	Yes
ExpiresTimer	Yes
ExpiryWarnToneDur	Yes
ExpiryWarnToneType	Yes
ExtCOT	Yes
FastConnect	Yes
FAXsupport	Yes
FeatureTransparencyDisabled	Yes
ForwardCLIinIAM	Yes
ForwardSegmentedNEED	Yes
FromField	Yes
gapInclude	Yes
GatewayName	No
GatewayRBToneSupport	Yes
GenTimerT1	Yes
GenTimerT2	Yes
GLARE	Yes
gnInclude	Yes
GRA2	Yes
GRSEnabled	No
GRSonSSCEnabled	No
GtdCapTypeProp	Yes
GtdMsgFmt	Yes
GWDefaultATMProfile	Yes
GWDefaultCodecString	No
GWNetworkContinuity	Yes
GWProtocolVersion	No
H323AdjunctLink	Yes
HoldTimer	Yes
hopOn	Yes

**Table 4-4 Provisionable Properties (continued)**

InhibitIncomingCallingNameDisplay	Yes
InhibitIncomingConnectedNameDisplay	Yes
InhibitIncomingConnectedNumberDisplay	Yes
InhibitOutgoingCallingNameDisplay	Yes
InhibitOutgoingConnectedNameDisplay	Yes
InhibitOutgoingConnectedNumberDisplay	Yes
InitEndpointsAsEnabled	No
InSessionTimer	Yes
InviteTimerT1	Yes
IOCC.chkPtPort	Yes
IOCC.port	Yes
IsupTransEarlyACMEnable	Yes
IsupTransEarlyBackwardDisabled	Yes
IsupTransparencyDisabled	No
jipDefault	Yes
jipInclude	Yes
lapdDropErr	No
lapdKval	No
lapdN200	No
lapdN201	No
lapdT200	No
lapdT203	No
layerRetries	No
layerTimer	No
LocalPort	Yes
LocationNumber	Yes
LoopAvoidanceCounter	Yes
LoopAvoidanceSupport	Yes
MaxACL	Yes
MaxForwards	Yes
maxMessageLength	No
MaxRedirectCnt	Yes
MaxSubscriptionDuration	Yes
MGCdomain	Yes
MgcpBehavior	No
mgcpDomainNameRemote	No
mgcpGWRspAckTimeout	No

**Table 4-4 Provisionable Properties (continued)**

mgcpGWStdbyHeartbeatInterval	No
mgcpHeartbeatInterval	No
mgcpLocalIpInterfacePollCount	No
mgcpMaxRspAckToBuffer	No
mgcpRemoteIpPollCount	No
mgcpRetxCount	No
mgcpRetxTimer	No
MGCSipVersion	Yes
MidCallCPIInterval	Yes
MinEventSubscribeDuration	Yes
mtp3Queue	No
MWIIInvokeTimerT1	Yes
MwiStringOFF	Yes
MwiStringON	Yes
NatureOfAddrHandling	No
NetworkType	Yes
NFASImplicitInterfaceId	Yes
Normalization	Yes
notificationInclude	Yes
Npa	Yes
ocnInclude	Yes
OD32DigitSupport	Yes
OMaxDigits	No
OMinDigits	No
OmitCgPnFromUnavailable	Yes
OOverlap	No
OrigCarrierId	No
OutSessionTimer	Yes
OverlapDigitTime	Yes
OwnClli	Yes
PackageType	Yes
PlayAnnouncement	Yes
populateSDPInfoInCDR	Yes
PostConnectToneDuration	Yes
PostConnectToneValue	Yes
PropagateSvcMsgBlock	Yes
ProtocolidandVariantidProv	Yes

**Table 4-4 Provisionable Properties (continued)**

radiuskey	Yes
radiusretrycount	Yes
radiustimeout	Yes
redirCapInclude	Yes
redirCounterInclude	Yes
RedirectingNbrMap	Yes
redirInfoInclude	Yes
RedirMax	Yes
ReleaseMode	Yes
restartTimer	No
RetryAfterTimer	Yes
RingNoAnswer	Yes
RLM.port	Yes
RLM.PropagateSvcMsgBlock	Yes
RLM.timerCmdAck	Yes
RLM.timerLinkDownMin	Yes
RLM.timerLinkEcho	Yes
RLM.unstableLink	Yes
rnInclude	Yes
RouteId	Yes
RoutePref	Yes
rudpNumRetx	No
rudpRetxTimer	No
rudpWindowSz	No
SatelliteInd	Yes
ScreenFailAction	Yes
SdpXmitToH323Trigger	Yes
SendAddressInCgpn	Yes
sendAfterRestart	No
SendDtmfBeforeConnect	Yes
serviceCodeInclude	Yes
sgcpRetxCount	No
sgcpRetxTimer	No
SipIPSource	Yes
sipMimeBodySupport	Yes
SipReferForSingleStepXfer	Yes

**Table 4-4 Provisionable Properties (continued)**

SipSatelliteIndEnable (Release 9.7(3) S5P5 and later)	Yes
slsTimer	No
spanId	No
srcpAuditGwInterval	No
srcpAuditLineInterval	No
srcpHeartbeatInterval	No
srcpIpPortLocal	No
srcpIpPortRemote	No
srcpRemoteAuditGwInterval	No
srcpRetxCOUNT	No
srcpRetxTimer	No
srtTimer	No
SS7-ANSI.mtp3ApcMtpRstrT28	No
SS7-ANSI.mtp3DlnkConnAckT7	No
SS7-ANSI.mtp3FrcUnhT13	No
SS7-ANSI.mtp3InhAckT14	No
SS7-ANSI.mtp3LocInhTstT20	No
SS7-ANSI.mtp3MaxSlTries	No
SS7-ANSI.mtp3MsgPriority	No
SS7-ANSI.mtp3MtpRstrT24	No
SS7-ANSI.mtp3RepeatRstrT26	No
SS7-ANSI.mtp3TfrUsed	No
SS7-ANSI.mtp3TraSntT29	No
SS7-ANSI.mtp3tstSlTmT1	No
SS7-ANSI.mtp3tstSlTmT2	No
SS7-ANSI.mtp3UnhAckT12	No
SS7-ANSI.reference	Yes
SS7-ANSI.standard	No
SS7-China.mtp3ApcMtpRstrT21	No
SS7-China.mtp3DlnkConnAckT7	No
SS7-China.mtp3FrcUnhT13	No
SS7-China.mtp3InhAckT14	No
SS7-China.mtp3LocInhTstT22	No
SS7-China.mtp3MaxSlTries	No
SS7-China.mtp3MsgPriority	No
SS7-China.mtp3MtpRstrT20	No

**Table 4-4 Provisionable Properties (continued)**

SS7-China.mtp3TfrUsed	No
SS7-China.mtp3tstSlmT1	No
SS7-China.mtp3tstSlmT2	No
SS7-China.mtp3UnhAckT12	No
SS7-China.reference	Yes
SS7-ITU.mtp3ApcMtpRstrT21	No
SS7-ITU.mtp3DlnkConnAckT7	No
SS7-ITU.mtp3FrcUnhT13	No
SS7-ITU.mtp3InhAckT14	No
SS7-ITU.mtp3LocInhTstT22	No
SS7-ITU.mtp3MaxSlTries	No
SS7-ITU.mtp3MsgPriority	No
SS7-ITU.mtp3MtpRstrT20	No
SS7-ITU.mtp3TfrUsed	No
SS7-ITU.mtp3tstSlmT1	No
SS7-ITU.mtp3tstSlmT2	No
SS7-ITU.mtp3UnhAckT12	No
SS7-ITU.reference	Yes
SS7-ITU.standard	Yes
SS7-Japan.mtp3ApcMtpRstrT21	No
SS7-Japan.mtp3ClearTfc	No
SS7-Japan.mtp3DlnkConnAckT7	No
SS7-Japan.mtp3FrcUnhT13	No
SS7-Japan.mtp3InhAckT14	No
SS7-Japan.mtp3LocInhTstT22	No
SS7-Japan.mtp3MaxSlTries	No
SS7-Japan.mtp3MsgPriority	No
SS7-Japan.mtp3MtpRstrT20	No
SS7-Japan.mtp3T12	No
SS7-Japan.mtp3T13	No
SS7-Japan.mtp3T14	No
SS7-Japan.mtp3T20	No
SS7-Japan.mtp3T21	No
SS7-Japan.mtp3T22	No
SS7-Japan.mtp3T7	No
SS7-Japan.mtp3Tc	No
SS7-Japan.mtp3TfrUsed	No

**Table 4-4 Provisionable Properties (continued)**

SS7-Japan.mtp3tstSltmT1	No
SS7-Japan.mtp3tstSltmT2	No
SS7-Japan.mtp3tstSrtaT10	No
SS7-Japan.mtp3UnhAckT12	No
SS7-Japan.reference	Yes
SS7-Japan.sltmT1	Yes
SS7-Japan.sltmT2	Yes
SS7-Japan.srtaT10	Yes
SS7-UK.mtp3ApcMtpRstrtT21	No
SS7-UK.mtp3DlnkConnAckT7	No
SS7-UK.mtp3FrcUnhT13	No
SS7-UK.mtp3InhAckT14	No
SS7-UK.mtp3LocInhTstT22	No
SS7-UK.mtp3MaxSltTries	No
SS7-UK.mtp3MsgPriority	No
SS7-UK.mtp3MtpRstrtT20	No
SS7-UK.mtp3TfrUsed	No
SS7-UK.mtp3tstSltmT1	No
SS7-UK.mtp3tstSltmT2	No
SS7-UK.mtp3UnhAckT12	No
SS7-UK.reference	Yes
SSCTInvokeTimerT1	Yes
sstTimer	No
STdigitforCLI	Yes
SubscribeNotifySupport	Yes
Support183	Yes
SupportReliable100	Yes
SuppressCHGNtoCGPNMapping	Yes
SuppressCLIDigits	Yes
SwitchID	Yes
T_CCR	Yes
T_CCRR	Yes
T_CGB	Yes
T_CGBA	Yes
T_CRA	Yes
T_CVT	Yes
T_GRS	Yes

**Table 4-4** *Provisionable Properties (continued)*

T1	Yes
T12	Yes
T13	Yes
T14	Yes
T15	Yes
T16	Yes
T17	Yes
T18	Yes
T19	Yes
T2	Yes
T20	Yes
T21	Yes
T22	Yes
T23	Yes
T24	Yes
T25	Yes
T26	Yes
T27	Yes
T28	Yes
T309Time	Yes
T310Time	Yes
T33	Yes
T34	Yes
T35	Yes
T36	Yes
T38	Yes
T4	Yes
T5	Yes
T6	Yes
T7	Yes
T8	Yes
T9	Yes
Ta1TimePeriod	Yes
Ta2TimePeriod	Yes
Ta3TimePeriod	Yes
TCAPOverIPKpAlive	No
TCAPOverIPKpOpcod	No

**Table 4-4 Provisionable Properties (continued)**

TCAPOverIPKpTimer	No
TCAPOverIPTcpConn	No
TlinkAlignTime	Yes
TMaxDigits	Yes
TMinDigits	Yes
TOverlap	Yes
TransferAwaitConnect	Yes
transReqInclude	Yes
unavailProc	Yes
UnsolicitedNotifyMethod	Yes
variant	No
VOIPPrefix	Yes
WaitAnswerTimer	Yes
WaitOrigSDPTimer	Yes
WaitTermSDPTimer	Yes

## Retrieving All Components

To retrieve all configured components, use the **PROV-RTRV** command as follows:

Command	Purpose
<pre> mml&gt; 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**

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 as follows:

Command	Purpose
mm1> <b>prov-rtrv:card:"ALL"</b>	Retrieves all the components associated with the component named “card”.

## Retrieving an Individual Component

To display an individual component that is configured on the Cisco PGW 2200 Softswitch, use the **PROV-RTRV** command as follows:

Command	Purpose
mm1> <b>prov-rtrv:enetif:name="en2"</b>	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

To display a component that is based on the signaling service and is configured on the Cisco PGW 2200 Softswitch, use the **PROV-RTRV** command as follows:

Command	Purpose
mm1> <b>prov-rtrv:iplnk:svc="mgcpsvc1"</b>	Retrieves the IP links associated with the signaling service for “mgcpsvc1”.

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.
 

```
mm1> prov-rtrv:iplnk:srcsvc="mgcpsvc1"
```
- Nailed trunk—Retrieve all nailed trunks associated with the named (source or destination) signaling service.

```
mm1> 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.

```
mm1> prov-rtrv:switchtrnk:trnkgrpnum="1000"
```

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

```
mm1> prov-rtrv:trnkgrp:svc="ss7svc1"
```

## Retrieving Protocol Variants

To retrieve the signaling protocol variants available on the Cisco PGW 2200 Softswitch, use the **PROV-RTRV:VARIANTS** command as follows:

Command	Purpose
<pre> mml&gt; prov-rttrv:variants /* MDO File name          Protocol Family ----- DPNSS_BTNR188PNSS ETS_300_102ISDNPRI ETS_300_102_C2ISDNPRI ATT_41459ISDNPRI ATT_41459_C2ISDNPRI BELL_1268ISDNPRI ETS_300_172ISDNPRI BELL_1268_C2ISDNPRI NTT_INS_1500ISDNPRI ETS_300_121SS7-ITU Q931_AUSTRALIAISDNPRI Q931ISDNPRI Q931_SINGAPOREISDNPRI GR317SS7-ANSI NORTEL_IBN7SS7-ANSI ANSISS7_92SS7-ANSI ANSISS7_STANDARDSS7-ANSI ANSISS7_C2SS7-ANSI ANSISS7_C3SS7-ANSI BTNUP_BTNR167SS7-UK BTNUP_NRCSS7-UK BTNUP_IUPSS7-UK HONGKONGSS7-ITU ETS_300_356SS7-ITU ISUPV2_FRENCHSS7-ITU ISUPV2_AUSTRIANSS7-ITU ISUPV2_SWISSSS7-ITU ISUPV2_SWISS_C2SS7-ITU ISUPV2_GERMANSS7-ITU ISUPV2_FINNISH96SS7-ITU ISUPV1_POLISS7-ITU ISUPV2_DUTCHSS7-ITU ISUPV2_JAPANSS7-Japan ISUPV2_JAPAN_C2SS7-Japan ISUPV2_CZECHSS7-ITU ISUPV3SS7-ITU ISUPV3_UKSS7-UK ISUPV3_UK_C2SS7-UK ISUPV3_UK_C3SS7-UK ISUPV3_UK_C4SS7-UK . . . */ </pre>	<p>To display the signaling protocol variants on the Cisco PGW 2200 Softswitch.</p> <p><b>Note</b> The list to the left is for example purposes only and is not complete and may not reflect all the protocols available for your software version. For more information on protocol families, refer to the <i>Cisco Media Gateway Controller Software Release 9 Installation and Configuration (Release 9.7)</i>.</p>



**Tip** A provisioning session is not required to retrieve protocol variants.



**Note** The protocol variants displayed may vary depending on the software revision you are using.

## Retrieving Provisioning Session Information

To obtain information about the provisioning session, for example, if there is an active session, use the **PROV-RTRV** command as follows:

Command	Purpose
mml> <b>prov-rtrv:session</b>	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 and, when read by MML, the commands 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 interface 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 Cisco PGW 2200 Softswitch or to quickly provision multiple MGCs.



### 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 4-1](#). You can use any name for the file (use the UNIX file naming convention) and you can copy and paste components. You can store it in any location; however, the file must be accessible on the machine where you run MML sessions.

**Figure 4-1** Sample MML Provisioning Batch File

```
prov-sta::srcver="new",dstver="oldyella"
prov-add:opc:name="opc1",netaddr="111.111.666",netind=1,desc="opc1",type="trueopc"
prov-add:dpc:name="dpc1",netaddr="444.777.444",netind=1,desc="TDM Switch dpc1"
prov-add:dpc:name="dpc2",netaddr="555.333.555",netind=3,desc="Host Node dpc2"
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
```

In the sample batch file shown in [Figure 4-1](#), 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 to first stop the provisioning session.

If you plan to run the batch file multiple times on the same host, plan the source and destination directories to ensure file names are not duplicated.

The example shown in [Figure 4-1](#) would fail if run twice, because the destination directory already exists. 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 4-6.

**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.

## Executing a Batch File

To start executing the batch file, use the following UNIX command as follows:

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.

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 Controller Software Release 9 MML Command 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 2001 | mml11 (PID 24954) <Info>
MML_INFO_COMMAND: MML Command
Sat Jan  8 04:10:06:218 2001 | mml11 (PID 24954) <Info>
```

```
MML_INFO_COMMAND: MML Command
mml> sta-aud
Media Gateway Controller - MGC-01 2001-01-08 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%
```

