CHAPTER 8

Other Network Management Tasks

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This chapter provides information on the following:

Performing Routine Network Management

This section presents checklists of routine procedures for network management using Cisco Media Gateway Controller (MGC) Node Manager (MNM). Because Cisco MNM is used in many different types of situations, no single checklist can describe optimal procedures for all cases. This information is designed to guide you with your own management routines, tailored to your particular network and users.

Note Cisco IP Transfer Point LinkExtender (ITP-L) is the new name for Cisco Signaling Link Terminal (SLT). Over time, ITP-L will replace SLT in publications and the product.

Procedures for Getting Started

Task	Steps
Install Cisco EMF and Cisco MNM (system administrator).	See the Cisco MNM Installation Guide.
Configure network devices for management (system administrator).	See Chapter 2, "Configuring Network Devices for Management".
Set up security (system administrator).	See Chapter 4, "Setting Up Cisco MNM Security".
Deploy the network, creating a model of your network in Cisco MNM.	See Chapter 5, "Deploying Your Network in Cisco MNM".
Identify key performance measurements to monitor.	See Chapter 7, "Managing the Performance of Cisco MNM Devices," "Selecting What To Monitor" section on page 7-16.
Set up threshold crossing alerts and scoreboards.	See Chapter 6, "Managing Faults with Cisco MNM," "Task 2. Customizing Event Management" section on page 6-4.

Routine Daily Procedures

Task	Steps
(Ongoing) Monitor the network for changes in status.	1. At the top level of the Map Viewer, monitor changes. 2. When you see an alarm, drill down to find where the problem occurred. 3. Right-click the device object and choose **Tools > Event Browser** to view details on the alarm. 4. Click **Acknowledge** for this event to indicate that the problem is being investigated. See Chapter 6, "Managing Faults with Cisco MNM," "Using the Event Browser to Manage Events" section on page 6-9 for details. After identifying the alarm, use diagnostics to diagnose the problem. See the "Using Diagnostic Tools" section on page 8-65.

Task	Steps
If the network is not monitored continuously, look at alarms that came in overnight, specifically: • Active alarms • Alarms that were received and cleared, including alarms cleared automatically • Destination in service alarms, such as PRIs or SS7s • Switchovers from standby to active status Work from the most severe alarm to the least severe.	Investigate active alarms as described in the previous task. Alternatively, in the Map Viewer, right-click the Cisco PGW 2200 Softswitch host object and choose **Properties**, and then click the **Software** tab. See the "Viewing Properties for Devices" section on page 8-9 for details.
Check the health of the devices assigned to you: • Are they in service? • Are they reachable using ping? • Is the device communicating with Cisco MNM?	If you cannot access a device, in the Map Viewer, right-click the device object, and choose **Tools > [Device name] Diagnostics**. On the General tab, click **IP Ping** or **SNMP Ping**. See the "Using Diagnostic Tools" section on page 8-65 for details.
Check the amount of disk space available on the Cisco PGW 2200 Softswitch host. Pay special attention to root (**/**) and **opt** directories.	Monitor the file system. In the Map Viewer, right-click the Cisco PGW 2200 Softswitch host object and choose **File Systems**. See the "Monitoring Cisco PGW 2200 Softswitch Host, the Cisco HSI Server, and the Cisco BAMS File Systems" section on page 8-19 for details.
Check the amount of virtual memory available on the Cisco PGW 2200 Softswitch host.	In the Map Viewer, right-click the Cisco PGW 2200 Softswitch host object and choose **Devices > Virtual Memory Properties**. See the "Viewing System Component Properties" section on page 8-22 for details.
Check the status of trunks.	Check status: In the Map Viewer, right-click the Trunking folder and choose **Properties**, and then click the Status tab. Verify trunk group: In the Map Viewer, right-click the BAMS and choose **Properties**, then click the Status tab.
Check CPU usage on the Cisco PGW 2200 Softswitch host.	In the Map Viewer, right-click the Cisco PGW 2200 Softswitch host object and choose **Devices > Processor Properties**. See the "Viewing System Component Properties" section on page 8-22 for details.

Task	Steps
Check the number of processes running on the Cisco PGW 2200 Softswitch host. Generally, there should not be more than 60 to 70 processes running.	To see the number of processes: In the Map Viewer, right-click the Cisco PGW 2200 Softswitch host object and choose **Properties**, and then click the Software tab. The number of processes is displayed at the bottom of the dialog box. See the "Viewing Properties for Devices" section on page 8-9 for details. To view the status of processes: In the Map Viewer, right-click the device object and choose **Tools > MGC Host Diagnostics**. On the General tab, click **Process Status**. See the "Using Diagnostic Tools" section on page 8-65 for details.
Check the number of users on the Cisco PGW 2200 Softswitch host.	In the Map Viewer, right-click the Cisco PGW 2200 Softswitch host object and choose **Properties**, and then click the **Software** tab. See the "Viewing Properties for Devices" section on page 8-9 for details.
Cisco ITP-Ls: Check memory used and RAM.	In the Map Viewer, right-click the Cisco ITP-L object, choose **Properties**, and then click the **Memory** tab. See the "Viewing Properties for Devices" section on page 8-9 for details.
For traffic engineering.	Look at trunk group measurements to identify when the network is reaching circuit capacity.
(As needed) Deploy new devices and delete obsolete devices.	See Chapter 5, "Deploying Your Network in Cisco MNM."

Routine Weekly Procedures

Task	For More Information, see
Analyze measurement data for trends: 1. Export desired performance data. 2. Import the data into an external measurement report and analysis tool such as Trinogy Trend.	Chapter 7, "Managing the Performance of Cisco MNM Devices," "Exporting Bulk Performance Data" section on page 7-19

Using Cisco MNM To Launch Device Configuration

From Cisco MNM, you can launch configuration tools for the Cisco PGW 2200 Softswitch node devices. Specifically, you can launch

- The Cisco Voice Services Provisioning Tool (VSPT) to configure the Cisco PGW 2200 Softswitch host.

Note The Voice Services Provisioning Tool (VSPT) was formerly known as MNM-PT.

- CiscoView to configure the Cisco ITP-L and Cisco LAN switch
- Telnet or an X terminal window to use MML, UNIX, and OSI commands. If SSH is enabled on Cisco MNM and the target device, SSH is used instead.

Launching Configuration Tools

You can launch configuration tools for various devices from the Cisco MNM Map Viewer, as shown in Table 8-1.

Table 8-1 Configuration Tools for Cisco PGW 2200 Softswitch Node Devices

Cisco PGW 2200 Softswitch Node Device	Available Tools
Cisco PGW 2200 Softswitch host	Cisco VSPT or Cisco MNM Telnet or ssh; MML
Cisco BAMS	Telnet or ssh; MML
Cisco HSI server	Telnet or ssh; MML
Cisco ITP-L	CiscoView Telnet or ssh
Cisco LAN Switch	CiscoView Telnet or ssh

Use the following procedure to launch a configuration tool:

Step 1 In the Map Viewer window, right-click the device you want to configure, and choose **Tools**.

Step 2 From the **Tools** menu, choose one of the following:

- **Voice Services Provisioning Tool** to configure the Cisco PGW 2200 Softswitch host

Note The Voice Services Provisioning Tool option is only available when the Cisco VSPT is installed. To get more information on Cisco VSPT installation, see Chapter 2, "Installing Cisco VSPT" in the *Cisco Voice Services Provisioning Tool User Guide.*

- **CiscoView** to configure the Cisco ITP-L and Cisco LAN switch

The application opens.

Note The Cisco PGW 2200 Softswitch deployment user ID and password are passed to Cisco VSPT and you are logged in with the privileges assigned to that user: read-write or read-only. If there is no deployment user ID and password, the Cisco VSPT opens to the log in window, and you must log in manually.

Step 3 Perform the desired configuration.

Step 4 Close the application when you are done.

Use the following procedure to launch a Telnet session (or ssh, if SSH is enabled) or an X terminal window to use UNIX, OSI, and MML commands:

Step 1 In the Map Viewer window, right-click the desired device, and choose **Tools**.

Step 2 From the **Tools** menu, choose **Connection Service**.

A Telnet, ssh, or X terminal window opens, and you are connected to the selected device.

Step 3 Enter MML commands, or perform other desired operations.

Step 4 Close the window when you are done.

Viewing or Modifying Account and SNMP Information

You can view the account and SNMP information that resides in the Cisco MNM database for any of the following Cisco PGW 2200 Softswitch node devices:

- Cisco PGW 2200 Softswitch host
- Cisco BAMS
- Cisco ITP-L
- Cisco LAN Switch
- Cisco HSI server

Account information and SNMP read and write community strings are defined when a device is deployed. If the actual device information changes—for example, if a password is changed—you can modify it to update the Cisco MNM database. The changed information is used in device rediscovery.

Use the following procedure to view or change account or SNMP information in the Cisco MNM database:

Step 1 In the Map Viewer window, select the desired device or devices.

Note Alternatively, if you have a Properties, States, Diagnostics, or File Systems dialog box open for the device, you can use the dialog box Navigation menu to open the Accounts dialog box.

Step 2 Right-click and choose **Accounts**.

The Accounts dialog box opens.

Step 3 If you have selected more than one device, choose the desired device in the list box on the left side of the dialog box.

Step 4 Check or change device information. See the "About the Accounts Dialog Box" section on page 8-7.

Step 5 If you make changes, click the toolbar **Save** button, or choose **File > Save**. The updated information is saved in the Cisco MNM database.

Step 6 In the Accounts dialog box, you can use the toolbar buttons or menu options to:

- Print the information on the current tab.
- Close the dialog box.
- Toggle dynamic update mode off and on.

- Refresh the window to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically-updated changes.

You can use the Navigation menu to open the Properties, File Systems (where applicable), States, or Diagnostics dialog box for the selected component.

Note

- The status bar shows the current status of the device.
- If the account is locked (lock icon is closed), you do not have permission to view this information.

About the Accounts Dialog Box

The Accounts dialog box displays login and SNMP information for the selected network device. This information is used when the device is rediscovered. The Accounts dialog box contains the Accounts tab and the SNMP tab.

By default, the Accounts dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes when dynamic updating is off.

The Accounts dialog box includes a Navigation menu that allows navigating directly to Properties, File Systems, States, or Diagnostics dialog boxes for the selected component, without having to reselect the component in the Map Viewer. See Chapter 3, "Getting Started with Cisco MNM," "Navigating between Dialog Boxes for a Given Component" section on page 3-31 for details.

Accounts Dialog Box Toolbar

The toolbar contains buttons for these functions:

- Close the current window.
- Print the contents of the window.
- Toggle dynamic update mode, to allow viewing or not viewing real-time changes.
- Refresh the window, to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically updated dialog box changes.
- Save your changes to the Cisco MNM database.

Dynamic updates are displayed in blue. When an update occurs, the dialog box moves in front of other open Cisco MNM windows. Click **Acknowledge** to acknowledge that you have seen the changes to and remove the blue highlighting.

Accounts Tab

The Accounts tab contains the following fields:

Login ID—The login ID defined in the Cisco MNM database

Password—The password defined in the Cisco MNM database

Root or Enable Password—The root or enable super-user password defined in the Cisco MNM database

Security Policy—The security protocol used for communication with the device

- Choose SSH if you have installed the Cisco EMF SSH add-in and the device is SSH-enabled. With SSH support installed, all operations that previously used Telnet or FTP to communicate with network elements instead use ssh (the secure shell program, the SSH counterpart of Telnet) and sftp (secure FTP).
- Choose None for non-secure devices.

SNMP Tab

The SNMP tab contains the following fields:

Read Community—SNMP read-community string.

Write Community—SNMP write-community string.

Timeout (seconds)—The number of milliseconds the system attempts to connect remotely when performing an SNMP operation before timing out. The default value is 5000.

Retries—The number of times the system attempts to connect when performing an SNMP operation. The default value is 2.

Varbinds/Packet—The number of varbinds sent in a single packet to an SNMP agent. The default value is 5.

SNMP Version—The version of SNMP running on the device. Versions 1 and 2c are supported.

Viewing Properties for Devices and Their Components

You can view properties for any of the Cisco PGW 2200 Softswitch node devices and their components.

You can view properties for the following devices. See the "Viewing Properties for Devices" section on page 8-9.

- Cisco PGW 2200 Softswitch host
- Cisco BAMS
- Cisco HSI server
- Cisco ITP-L
- Cisco LAN switch

You can view properties for Serial, Ethernet, and TDM interfaces. See the "Viewing Properties for Interfaces" section on page 8-14.

You can view properties and monitor the usage of the Cisco PGW 2200 Softswitch host, Cisco HSI server, and the Cisco BAMS file systems. See the "Monitoring Cisco PGW 2200 Softswitch Host, the Cisco HSI Server, and the Cisco BAMS File Systems" section on page 8-19.

You can view properties for system components (disk partitions, processor, RAM, and virtual memory) of the Cisco PGW 2200 Softswitch host, the Cisco HSI server, and the Cisco BAMS. See the "Viewing System Component Properties" section on page 8-22.

You can view properties for the following Cisco PGW 2200 Softswitch node components:

- Signaling components. See the "Viewing Signaling Component Properties" section on page 8-24.
- Trunking components. See the "Viewing Trunk Group Component Properties" section on page 8-54.

All Properties dialog boxes share the basic functionality described in the following "Common Functionality in Properties Dialog Boxes" section on page 8-9.

Common Functionality in Properties Dialog Boxes

All Properties dialog boxes display dynamically updated information and provide similar functionality with the main functions accessible from a toolbar. If a Properties dialog box is opened for more than one component, a list box on the left side of the dialog box lists the available components. The Properties information applies to the selected component.

Properties dialog boxes include a menu where you can navigate directly to other dialog boxes for the selected component without having to reselect the component in Map Viewer. See Chapter 3, "Getting Started with Cisco MNM," "Navigating between Dialog Boxes for a Given Component" on page 31.

Note The specific properties you see depends not only on the network element you are inspecting but also on the release of the Cisco PGW 2200 Softswitch host software that you are using.

Properties Dialog Box Toolbar

In every Properties dialog box (see Figure 8-1), a toolbar contains buttons for these functions:

- Close the current window.
- Print the contents of the window.
- Toggle dynamic update mode, to allow viewing or not viewing real-time changes.
- Refresh the window, to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically updated dialog box changes.

In addition, because the File System dialog box includes settings that you can modify to change how the file system is monitored, the File System Properties dialog box contains a Save button.

Dynamic updates are displayed in blue. When an update occurs, the dialog box moves in front of other open Cisco MNM windows. Click **Acknowledge** to acknowledge that you have seen the changes and to remove the blue highlighting.

Figure 8-1 Device Properties Dialog Box Toolbar

Viewing Properties for Devices

You can view properties for any of the following Cisco PGW 2200 Softswitch node devices. Property fields may vary.

- Cisco PGW 2200 Softswitch host
- Cisco HSI server
- Cisco BAMS
- Cisco ITP-L
- Cisco LAN switch

Use the following procedure to view properties for a device:

Step 1 In the Map Viewer window, select the desired device or devices.

Step 2 Right-click and choose **Properties**.

The Properties dialog box opens.

If you have selected more than one device, choose the desired device in the list box on the left side of the dialog box.

Step 3 Check device properties. See the "About the Device Properties Dialog Box" section on page 8-10 for details on properties.

Step 4 (Optional) In the Properties dialog box, use the toolbar buttons or menu options to manipulate the display.

Note The status bar shows the current status of the device.

About the Device Properties Dialog Box

The Properties dialog box contains a toolbar and tabs displaying various categories of device properties. The contents of the tabs varies with the device type.

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and to check for changes when dynamic updating is off. All fields are display-only.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more information.

General Tab

The General tab contains the following display-only fields:

- Management Address—Network management IP address.
- System Name—Administratively assigned name for the device.
- Location—Physical location of the device.
- Contact—Contact person or organization and brief contact information, such as phone number.
- (Cisco BAMS, Cisco HSI server, and Cisco PGW 2200 Softswitch only) System Status—Current operational status of the device. Values are Active, Standby, Outage, Error, and Other.
- Up-time—Time since the device was initialized.
- Description—Description of the device.

Details Tab

The Details tab contains the following fields:

For the Cisco PGW 2200 Softswitch, Cisco HSI server, and Cisco BAMS

- Hardware Model—Hardware model for the device.
- OS Version—Version of the operating system.
- OS Release—Release level of the operating system.

- Host ID—Host ID.
- Memory Size—Amount of physical main memory.
- System Date—Local time and day on the host.
- Last Boot Time—Time the machine was last booted.

For the Cisco ITP-L and Cisco LAN Switch

- Model—Chassis type.
- Chassis ID—Unique identifier for the chassis (Cisco ITP-L) or serial number (Cisco LAN switch).

For the Cisco ITP-L only

- Hardware Version—Chassis hardware revision level.
- ROM System Version—ROM system software version.
- ROM Monitor Version—ROM monitor version.

For the HSI server only

- Host Port-1—The first port number to be used by the Cisco HSI. The default value is 0.
- Host Port-2—The second port number to be used by the Cisco HSI. The default value is 0. This value should not be changed; it should always be set to 0.

Note This value must match the peer port setting on the Cisco PGW 2200 Softswitch EISUP IPLNK object.

For the Cisco LAN switch only

- Fan Status—Status of the fan. Values are OK, Other, Minor Fault, and Major Fault.

Details area

- System Type—Chassis system type.
- Backplane Type—Chassis backplane type.

Power Supply area

- Status (Primary and Secondary)—Power supply status. Values are OK, Other, Major Fault, and Minor Fault.
- Type (Primary and Secondary)—Type of power supply.

Host, HSI, or BAMS Tab (Cisco PGW 2200 Softswitch host, HSI server, or BAMS)

The Cisco PGW 2200 Softswitch Host or BAMS tab contains the following fields:

- In the **Call Agent**, **BAMS Software**, or **HSI Software** area, information about the software:
  - Host, BAMS Version, or HSI Version—Software version.
  - Patch Level—Patch level of the software.
  - (Cisco PGW 2200 Softswitch only) Host Vendor—Vendor of the host software.
  - Home Directory—Software home directory.
  - (Cisco PGW 2200 Softswitch only) Active Config Name—Name of the active MML configuration, if any.

- (Cisco PGW 2200 Softswitch only) Desired State—Desired state of the platform, such as standalone.
- (Cisco PGW 2200 Softswitch only) Switch Type—Switching configuration of the host.
- (Cisco PGW 2200 Softswitch only) Failover Peer Addresses A and B—IP address of each failover machine.
- (Cisco HSI server only)Primary MGC—In the first row, under IP Address, the primary IP address of the primary Cisco PGW 2200 Softswitch; under Port, the first port number of the primaryCisco PGW 2200 Softswitch.

  In the second row, the secondary IP address and the second port number of the primary Cisco PGW 2200 Softswitch. These must match the primary information in the first row.
- (Cisco HSI server only)Secondary MGC—In the first row, under IP Address, the primary IP address of the secondary Cisco PGW 2200 Softswitch; under Port, the first port number of the secondary Cisco PGW 2200 Softswitch.

  In the second row, the secondary IP address and the second port number of the secondary Cisco PGW 2200 Softswitch. These must match the information in the first row.

Note The Secondary MGC parameter is not used in a standalone Cisco PGW 2200 Softswitch configuration.

Network Tab (all)

The Network tab contains the following fields:

- IP addresses configured on the device—IP addresses from the IP address table. A device can have more than one IP address.
- IP Address—IP address of the selected entity.
- Net Mask—Subnet mask associated with the IP address.
- Interface Index—Interface on which the IP address is configured.

The Cisco LAN switch also contains these fields:

- Broadcast Address—The broadcast address of the switch.
- Net Mask—The net mask of the chassis.
- Booted Image—The name of the image from which the system was booted.
- Last Configuration Change—Time (in hundredths of a second) since the configuration of the system was last changed.

The Cisco PGW 2200 Softswitch host also contains a **Configuration** area:

- IP addresses configured on the Call Agent—Cisco PGW 2200 Softswitch host network addresses.

Software Tab (Cisco PGW 2200 Softswitch host, Cisco HSI server, and Cisco BAMS)

The Software tab contains the following fields describing software installed on the device:

- The software running on the selected device—A list of installed software. Select the software whose details you want to view.
- Name—Name of the selected software.
- Parameters—Parameters supplied to the software when it was run.
- Path—Location from where the software was run.

- Type—Type of software, such as operating system or device driver.
- Status—Status of the running software. Values are Running, Runnable, Not Runnable, and Invalid.

These fields apply to the Cisco PGW 2200 Softswitch host overall:

- Number of Processes—Actual: Number of process contexts currently running. Maximum: Number of process contexts this system can support.
- Number of Users—Actual: Number of user sessions for which this host is storing information. Maximum: Number of user sessions this host can support.

Virtual IP Tab (Cisco PGW 2200 Softswitch host)

The Virtual IP tab contains the following fields:

- Virtual IP address 1-Virtual IP address from Cisco PGW 2200 Softswitch host.
- Virtual IP Address 2- Second Virtual IP address from Cisco PGW 2200 Softswitch host.

Memory Tab (Cisco ITP-L and Cisco LAN Switch)

The Memory Tab contains the following fields:

- Memory Pool—A list of memory pools supported by the device. Select the memory pool whose details you want to view.
- Pool Name—Name assigned to the selected memory pool, such as DRAM.
- Memory Used—Number of memory pool bytes that are currently in use by applications.
- Memory Free—Number of memory pool bytes that are unused.
- Largest Free—Largest number of contiguous bytes that are currently unused.

Cisco ITP-L only:

- Configuration Memory—Bytes of nonvolatile configuration memory In Use/Total bytes of nonvolatile configuration memory.
- Processor RAM—Bytes of RAM available to the CPU.

Configuration Tab (Cisco ITP-L)

The Configuration Tab contains the following fields:

History area

- Configuration events on the device—List of configuration events in the device history. Select a device to view its details.

Event time:

- Source—Source of the selected configuration event.
- Destination—Configuration data destination for the event.
- Image Name—Name of the system boot image.
- Reason for Last Reload—Reason the system was last restarted.
- Running Last Changed—Value of system uptime (sysUpTime) when the running configuration last changed.
- Startup Last Changed—Value of system uptime when the startup configuration was last saved.

- Running Last Saved—Value of system uptime when the running configuration was last saved.

Poll Tab (BAMS)

The Poll Tab contains the following fields:

- Poll information—Poll table
- Host Name (primary and secondary)—Cisco PGW 2200 Softswitch host for this BAMS
- Prefix (primary and secondary)—Prefix for data files on the host
- Suffix (primary and secondary)—Suffix for data files on the host
- Remote Directory (primary and secondary)—Remote directory on the host
- Action—Action to perform after polling
- Interval—Polling unit (in minutes). Default value is 10
- Timeout—Timeout for file transfer. Default value is 10
- Maxtries—Maximum number of retries on each file. Default value is 3

RAS Parameters Tab (HSI Server)

The RAS Parameters Tab contains the following fields:

- Gatekeeper ID—Identifying name of the gatekeeper with which the endpoint is trying to register.
- Gateway Prefix—The telephone prefix for which the gateway is registering to be able to terminate.
- RAS Port—Number of the port receiving all RAS transactions for the current endpoint. Set to 0 to allow the OS to look for the available port.
- Gatekeeper IP Address—The IP address of a known gatekeeper with which an endpoint attempts to register.
- Gatekeeper Port—The port associated with the Gatekeeper IP Address, which can be either a well-known port or another port by agreement.

Viewing Properties for Interfaces

You can view properties for serial, Ethernet, loopback, and TDM interfaces of the various Cisco PGW 2200 Softswitch node devices. You can view properties for ports, VLAN, and SCO/SLO interfaces of the Cisco LAN switch.

Use the following procedure to view properties information for interfaces:

Step 1 In the Map Viewer window, select the desired interface.

Note Find TDM interfaces under the Cisco ITP-L.

Step 2 Right-click and choose **Properties**.

The Properties dialog box opens.

Step 3 If you have selected more than one device, choose the desired device in the list box on the left side of the dialog box.

Check device properties. See the "About the Serial, Ethernet, Loopback, and SCO/SLO Interface Properties Dialog Box" section on page 8-15 and the "About the TDM Interface Properties Dialog Box" section on page 8-16 for details on interface properties.

Step 4 (Optional) In the Properties dialog box, you can use the toolbar buttons or menu options to:

- Print the information on the current tab.
- Close the dialog box.
- Toggle dynamic update mode off and on.
- Refresh the window to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically updated changes.

Note The status bar shows the current status of the interface.

About the Serial, Ethernet, Loopback, and SCO/SLO Interface Properties Dialog Box

The Serial, Ethernet, Loopback, and SCO/SLO Interface Properties dialog boxes contain a toolbar and a General and Details tab. All fields are display-only.

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes as desired when dynamic updating is off.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more on dialog box functionality.

General Tab

The General tab contains the following display-only fields:

- (Ethernet, Loopback, and SCO/SLO) Physical Address—The interface address at the protocol sublayer.
- Description—A description of the interface.
- System Name—The administratively-assigned name for the interface.
- Interface Type—The type of interface, such as FDDI.
- Admin Status—The desired state of the interface. Values are Up, Down, or Testing.
- Operational Status—The current operational state of the interface. Values are Up, Down, Testing, Unknown, Dormant, Not Present, and Lower Layer Down.

Details Tab

The Details tab contains the following fields:

- Interface Index—Index of this interface in the interface table (ifTable)
- MTU—Size of the largest packet that can be sent or received on the interface
- (Ethernet, Serial, SCO/SLO only) Speed—Estimated speed of the interface, in bits per second
- Last Change—Time at which an interface was last created or deleted

About the TDM Interface Properties Dialog Box

The TDM Interface Properties dialog box contains a toolbar and a General and Details tab. All fields are display-only.

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes as desired when dynamic updating is off.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more on dialog box functionality.

General Tab

The General tab contains the following display only fields:

- Description—A description of the interface
- System Name—The administratively assigned name for the interface
- Circuit ID—Transmission vendor's circuit identifier
- Speed—Estimated speed of the interface, in bits per second
- Interface Index—Index of this interface in the interface table (ifTable)
- Interface Type—The type of interface, such as FDDI
- Line Type—DS1 line type
- Line Coding—Variety of Zero Coding Suppression used on the link
- Last Change—Time at the last creation or deletion of an interface

Details Tab

The Details tab contains the following fields:

Status area

- Admin Status—The desired state of the interface. Values are Up, Down, and Testing.
- Operational Status—The current operational state of the interface. Values are Up, Down, Testing, Unknown, Dormant, Not Present, and Lower Layer Down.
- Line Status—Alarm status of the line.

Configuration area

- Signal Mode—Signaling mode. Values are None, Robbed bit, Bit oriented, and Message oriented.
- Send Code—Type of code sent across the interface. Values are No code, Line code, Payload code, and Reset code.
- Facilities Data Link—Use of the facilities data link.
- Loopback Config—Loopback configuration of the interface. Values are No loop, Payload loop, line loop, and other loop.
- Transmit Clock Source—Source of the transmit clock. Values are Loop timing, local timing, and through timing.

About the Cisco LAN Switch Port Properties Dialog Box

The Port Properties dialog box contains a toolbar and a General, Details, and VLAN tab. All fields are display-only.

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes as desired when dynamic updating is off.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more on dialog box functionality.

General Tab

The General tab contains the following display-only fields:

- Physical Address—The interface address at the protocol sublayer.
- Description—A description of the interface.
- System Name—The administratively assigned name for the interface.
- Interface Type—The type of interface, such as FDDI.
- Admin Status—The desired state of the interface. Values are Up, Down, and Testing.
- Operational Status—The current operational state of the interface. Values are Up, Down, Testing, Unknown, Dormant, Not Present, and Lower Layer Down.
- MTU—Size of the largest packet that can be sent or received on the interface.
- Last Change—Time at the last creation or deletion of an interface.

Details Tab

The Details tab contains the following fields:

- Port Name—Name of the port.
- Port Type—Type of physical layer medium dependent interface on the port.
- Port Status—Current operational status of the port. Values are Up, Down, Testing, Unknown, Dormant, Not Present, and Lower Layer Down.
- Duplex—Indicates if port is operating in half-duplex, full-duplex, disagree, or auto-negotiation mode.
- Span Tree Fast Start—Whether the port is operating in span tree fast mode. Values are Enabled and Disabled.
- Desired Speed—Desired speed of the port, in bits per second.
- Speed—Estimated speed of the interface, in bits per second.

VLAN Tab

The VLAN tab contains the following fields:

- VLAN Number—Number assigned to the port.
- Switching Priority—Priority level the port uses to access the switching media. Values are Normal, High, and Not Applicable.
- Admin Status—Indicates whether the port will be assigned to a VLAN statically or dynamically. Values are Static and Dynamic.

- Operational Status—Current VLAN status of the port. Values are Inactive, Active, Shutdown, and VLAN Active Fault.

About the Cisco LAN Switch VLAN Properties Dialog Box

The VLAN Properties dialog box contains a toolbar and the fields described below. All fields are display-only.

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes as desired when dynamic updating is off.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more on dialog box functionality.

Fields

- System Name—The administratively assigned name for the interface
- Spanning Tree Enabled—Whether spanning tree protocol is enabled for this VLAN

Viewing Properties for the Cisco ITP-L SS7 MTP2 Channel

Use the following procedure to view properties information for the MTP2 channel:

Step 1 In the Map Viewer widow, select the Cisco ITP-L.

Step 2 Right-click and choose **Channels > MTP2 Channel Properties**.

The SS7 MTP2 Properties dialog box opens.

Step 3 If you have selected more than one device, choose the desired device in the list box on the left side of the dialog box.

Step 4 Check device properties. See the "About the Serial, Ethernet, Loopback, and SCO/SLO Interface Properties Dialog Box" section on page 8-15 or the "About the TDM Interface Properties Dialog Box" section on page 8-16 for details on interface properties.

Step 5 (Optional) In the Properties dialog box, you can use the toolbar buttons or menu options to:

- Print the information on the current tab.
- Close the dialog box.
- Toggle dynamic update mode off and on.
- Refresh the window to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically-updated changes.

Note The status bar shows the current status of the channel.

About the SS7 MTP2 Channel Properties Dialog Box

The Cisco ITP-L SS7 MTP2 Channel Properties dialog box contains a toolbar and the fields described below. All fields are display-only.

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes as desired when dynamic updating is off.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more information on dialog box functionality.

The SS7 MTP2 Channel Properties dialog box contains the following fields:

- Channel Number—MTP2 channel number
- Link Status—Overall status of the link
- Alignment Error Rate Monitor—Status of the alignment error rate monitor state machine
- Signal Unit Error Monitor—Status of the signal unit error monitor (SUERM)
- Transmission Control—Status of the initial alignment control state machine
- Receive Control—Status of the receive control state machine
- Remote Processor Outage—Processor outage status of the remote
- Congestion Backhaul—Status of the congestion control state between the Cisco PGW 2200 Softswitch host and the Cisco ITP-L
- Congestion—Status of the congestion control state machine

Monitoring Cisco PGW 2200 Softswitch Host, the Cisco HSI Server, and the Cisco BAMS File Systems

You can monitor file systems on the Cisco PGW 2200 Softswitch host, Cisco HSI server, and the Cisco BAMS by

- Viewing file system information.
- Setting a threshold to have the device send a trap if file system usage passes the threshold.
- Viewing which file systems have exceeded their threshold.
- Polling file systems at a desired frequency, specifying a global polling frequency or individual frequencies for each file system.
- Polling all file systems now.
- Turning traps on or off for individual file systems based on trap severity.

Use the following procedure to monitor Cisco PGW 2200 Softswitch host, Cisco HSI server, or Cisco BAMS file systems:

Step 1 In the Map Viewer window, select the desired Cisco PGW 2200 Softswitch host, Cisco HSI server, or Cisco BAMS.

Note Alternatively, if you have an Accounts, Properties, States, or Diagnostics dialog box open for the device, you can use the dialog box Navigation menu to open the File Systems dialog box.

Step 2 Right-click and choose **File Systems**.

The File System Properties dialog box opens, displaying file system properties and settings for monitoring the file system.

If there is more than one selected device, the details shown apply to the currently highlighted device. In the list, click the device whose details you want to view or change. See the "About the File System Properties Dialog Box" section on page 8-20 for details.

Step 3 Check or change settings as needed:

- Use the General tab to view file system information.
- Use the Monitor tab to change settings for monitoring file system usage.
- Use the Exception tab to check file systems that have crossed their threshold.

Note You can use the Navigation menu to open the Properties, Accounts, States, or Diagnostics dialog box for the selected component.

Step 4 If you make changes, click the toolbar **Save** button.

About the File System Properties Dialog Box

The File System Properties dialog box contains a toolbar and a single tab (General, Monitoring, and Exceptions).

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes when dynamic updating is off.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more on dialog box functionality. Unlike other Properties dialog boxes, the File System Properties dialog box includes a toolbar Save button for saving changes to monitoring specifications.

General Tab

- File System—List of file systems for this device. Select a system to view details.
- Capacity—Percentage of normally available space that is currently allocated to files on the system.
- Used Space—Amount of space allocated to existing files.
- Free Space—Total amount of space available for the creation of new files by unprivileged users.
- Mount Point—Mount point (directory) of the file system.

Monitor Tab

- File System—List of file systems. Select a system to check or change monitoring settings.
- Current Utilization—Percent of disk space currently In Use/Percent full at which an event (alarm) will be triggered for the selected file system. Set alarm severity with Trap Severity.
- Poll Interval—Period in seconds when this file system should be checked to see if it exceeds its threshold.

Note The Poll Now function is not currently supported for an individual file system. Global Poll Now (all file systems) is supported.

- Threshold Command—Command to execute when the threshold is exceeded.
- Trap Severity—Severity of the trap that is sent when the threshold is exceeded. Values are Warning and Critical.
- When Above Threshold—Send a trap if the threshold is exceeded. Values are Send Trap and Don't Send Trap. Use Don't Send Trap to turn off notification for the selected file system.
- When Below Threshold—Send a trap if the file system usage falls below the threshold. Values are Send Trap and Don't Send Trap. Use Don't Send Trap to turn off notification for the selected file system.
- Global Poll Interval—Period in seconds when all file systems should be checked to see if any exceed the threshold.
- Poll Now button—Check all file systems for this device immediately.

Exceptions Tab

- File system list box—List of file systems that have exceeded their threshold. Select a file system to view details.
- File System—Name of the selected file system.
- Threshold—Threshold that has been exceeded.
- Current Utilization—Current percent utilization of the file system.

Viewing BAMS Node Properties

Use the following procedure to view BAMS Node properties:

Step 1 In the Map Viewer window, select the desired BAMS node.

Step 2 Right-click and choose **Properties**.

The BAMS Node Properties dialog box opens.

Step 3 (Optional) In the Properties dialog box, you can use the toolbar buttons or menu options to:

- Print the information on the current tab.
- Close the dialog box.
- Toggle dynamic update mode off and on.
- Refresh the window to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically updated changes.

Note The status bar shows the current status of the interface.

About the BAMS Node Properties Dialog Box

The BAMS Node Properties dialog box contains a toolbar and tabs displaying various categories of component properties. All fields are display-only.

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes as desired when dynamic updating is off.

Properties Tab

The Properties tab contains the following display-only fields:

- Node Name—The name of the node.
- Node Status—Current Operational state of the node. Values are Active, Standby, Outage, Error, and Other.
- Measurement Interval—Interval in minute to generate measurement data.
- SC Collection—Indication flag of nail configuration collection.
- Dynamic Accumulator—Indication flag of dynamic accumulator usage.
- Zero-Count Suppression—Indication flag of the zero-count suppression feature.
- BAF ASCII Output—Indication flag of BAF records output in ASCII format.
- BAF Output—Indication flag of BAF records output.
- BAF Error Output—Indication flag of printing BAF error to syslog.
- ASCII Output—Indication flag of ASCII output.
- Measurement Output—Indication flag of measurement output function.
- Lookup Error Output—Indication which lookup errors are printed to syslog.

Poll Tab

- Poll information—Poll table.
- MGC Host (primary and secondary)—Cisco Cisco PGW 2200 Softswitch hosts that this BAMS node polls for CDR records.
- Prefix (primary and secondary)—Prefix for CDR data files on the Cisco PGW 2200 Softswitch host.
- Suffix (primary and secondary)—Suffix for CDR data files on the Cisco PGW 2200 Softswitch host.
- CDR Directory (primary and secondary)—Directory of the CDR data files on the Cisco PGW 2200 Softswitch host.
- Interval—Polling unit (in minutes). Default value is 10.
- Timeout—Timeout for file transfer. Default value is 10.
- Max Attempt—Maximum number of retries on each file. Default value is 3.

Viewing System Component Properties

You can check properties on the following system components of a Cisco PGW 2200 Softswitch host, a Cisco HSI server, or a Cisco BAMS:

- Disk partitions

- Processor
- RAM
- Virtual memory

Note For information about viewing performance data for system components, see the Appendix B, "Performance Measurements Reference," "Performance Data Collected for System Components" section on page B-11.

Use the following procedure to view system component properties:

Step 1 In the Map Viewer window, do one of the following:

- To view information for all components of a particular type, select a Cisco PGW 2200 Softswitch host, a Cisco HSI server, or a Cisco BAMS, and right-click. Choose **Devices**, and then choose one of the following:
  - Disk Partition Properties
  - Processor Properties
  - RAM Properties
  - Virtual Memory Properties
- To view information for a particular component, under the Cisco PGW 2200 Softswitch host, the Cisco HSI server, or the Cisco BAMS, select the component and right-click. Choose **Properties**.

  The dialog box displays information on the selected component's properties. See the "About the System Components Properties Dialog Boxes" section on page 8-23 for details.

Step 2 (Optional) In the Properties dialog box, you can use the toolbar buttons or menu options to:

- Print the information on the current tab.
- Close the dialog box.
- Toggle dynamic update mode off and on.
- Refresh the window to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically updated changes.

About the System Components Properties Dialog Boxes

There are two types of Cisco PGW 2200 Softswitch host, Cisco HSI server, and Cisco BAMS system component Properties dialog boxes:

- A Properties dialog box for fixed disk, RAM, and virtual memory
- A Properties dialog box for the processor

By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off and check for changes when dynamic updating is off.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more on dialog box functionality.

Fixed Disk, RAM, and Virtual Memory Properties Dialog Box

The Disk, RAM, and Virtual Memory Properties dialog boxes contain the following fields:

- Description—Description of the type and instance of the selected storage device.
- Allocation Units—Size in bytes of the data object allocated from this pool.
- Space Used—Amount of the storage that is allocated.
- Total Size—Size of the total device storage.
- Allocation Failures—Number of requests for storage that could not be honored.

Processor Properties Dialog Box

The Processor Properties dialog box contains the following fields:

- Description—Description of the processor.
- Status—Current operating status. Values are Running, Unknown, Testing, Warning, and Down.
- Utilization—Average over the last minute of the percent of time that the processor was active.
- Errors—Number of errors detected on this device.

Viewing Signaling Component Properties

You can view properties of the following signaling components of a Cisco PGW 2200 Softswitch node:

- Paths
- Links
- Point codes
- External nodes
- Interfaces
- SS7 components
- M3UA/SUA Components
- IPs In Mapping (used for EISUP and SIP signaling services only)
- In Sip Header
- Out Sip Header
- Domain Profile
- Profile
- SipI Version
- GW Pool
- IPGW

Use the following procedure to view signaling component properties:

Step 1 In the Map Viewer window, do one of the following:

- To view information for all components of a particular type, select the Signaling folder and right-click. Choose one of the following:

- **Paths**, and then choose the desired type of path component. See Table 8-2 for dialog box details.
- **Links**, and then choose the desired type of link component. See Table 8-3 for dialog box details.
- **Point Codes**, and then choose the desired type of point code component. See Table 8-4 for dialog box details.

Note In Cisco PGW 2200 Softswitch Release 9.x, detailed DPC point code properties do not appear on the DPC Properties dialog box Details tab. Instead, drill down from the DPC to the SS7 path object (ss7svc1, for example), choose Properties, and in the Properties dialog box click the Details tab.

- **External Nodes**, and then choose the desired type of external node component. See Table 8-5 for dialog box details.
- **Interfaces**, and then choose the desired type of interface component. See Table 8-6 for dialog box details.
- **SS7 Components**, and then choose the desired type of SS7 component. See Table 8-7 for dialog box details.
- **M3UA/SUA Components**, and then choose either the M3UA Key or Route, or SUA Key or Route, component. See Table 8-8 for details.
- **IPs In Mapping**, and then choose IpInMapping Properties. See Table 8-9 for dialog box details.
- **In Sip Header,** and then choose IpSipHeader Properties. See Table 8-10 for dialog box details.
- **Out Sip Header,** and then choose OutSipHeader Properties. See Table 8-11 for dialog box details.
- **Domain Profile,** and then choose Domain Profile Properties. See Table 8-12 for dialog box details.
- **Profile,** and then choose Profile Properties. See Table 8-13 for dialog box details.
- **SipI Version,** and then choose SipIVersion Properties. See Table 8-14 for dialog box details.
- **GW Pool,** and then choose GWPool Properties. See Table 8-15 for dialog box details.
- **IPGW,** and then choose IPGW Properties. See Table 8-16 for dialog box details.

- To view information for a particular component, under the Signaling folder, select the desired component and right-click. Choose **Properties**.

  The dialog box displays information on the selected component's properties. See the "About the Signaling Components Properties Dialog Boxes" section on page 8-26 for details.

Step 2 (Optional) In the Properties dialog box, you can use the toolbar buttons or menu options to:

- Print the information on the current tab.
- Close the dialog box.
- Toggle dynamic update mode off and on.
- Refresh the window to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically-updated changes.

About the Signaling Components Properties Dialog Boxes

The various Properties dialog boxes for signaling components contain a toolbar and fields described in tables below for each component type. By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes as desired when dynamic updating is off.

- Signaling path components, in Table 8-2
- Signaling link components, in Table 8-3
- Signaling point code components, in Table 8-4
- Signaling external node components, in Table 8-5
- Signaling interface components, in Table 8-6
- Signaling SS7 components, in Table 8-7
- Signaling M3UA/SUA components, in Table 8-8
- IPs In Mapping components, in Table 8-9
- In Sip Header components, in Table 8-10
- Out Sip Header components, in Table 8-11
- Domain Profile components, in Table 8-12
- Profile components, in Table 8-13
- SipI Version components, in Table 8-14
- GW Pool components, in Table 8-15
- IPGW components, in Table 8-16

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more on dialog box functionality.

Table 8-2 Properties of Signaling Path Components

Field Name	Definition
Association Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML componen.t
Port	Local SCTP port number.
Peer Port	Destination SCTP port number.
External Node	Name of a previously configured external node.
First IP Address	First local address.
Second IP Address	Second local address.
First Peer Address	The highest priority destination address.
Second Peer Address	The lowest priority destination address.
Receive Window Bytes	Number of bytes to advertise for the local receive window.
IP Route 1	MML name of the first IP route.
IP Route 2	MML name of the second IP route.

Table 8-2 Properties of Signaling Path Components (continued)

Field Name	Definition
Time Between Heartbeats	Time between heartbeats. The heartbeat is this value plus the current retransmission timeout value.
Max Retransmissions	Maximum number of retransmissions to either the first or second peer address before it is declared failed.
Previously Configured SGP	MML name of a previously configured SGP.
Details tab	
Maximum Init Retransmission Timer	Maximum initial timer retransmission value.
Max Retransmission Timer	Maximum value allowed for the retransmission timer.
Min Retransmission Timer	Minimum value allowed for the retransmission timer.
Maximum Retransmissions to Dest	Maximum number of retransmissions over all destination addresses before the association is declared failed.
Max Bundling Wait Time	Maximum time SCTP will wait for other outgoing datagrams for bundling.
Max Init Retransmission Times	Maximum number of times to retransmit SCTP INIT message.
Max Time Before Sending SACK	Maximum time after a datagram is received before an SCTP SACK is sent.
Association State	State of SCTP association.
AXL Server Properties dialog Box	
MML Name	Name of the component.
Description	Description of the MML component.
First IP Address	First local address.
Second IP Address	Second local address.
Port	Local SCTP port number.
First Peer Address	The highest priority destination address.
Peer Port	Destination SCTP port number.
IP Route 1	MML name of the first IP route.
IP Route 2	MML name of the second IP route.
CTI Path	CTI Sig Path component.
Version	The version of CTI Path supported by Cisco PGW 2200 Softswitch.
BRI Path Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	MML Name of a previously configured external node.
Side	User for user side and network for network side; (network).

Table 8-2 Properties of Signaling Path Components (continued)

Field Name	Definition
MDO	Message definition object file protocol name.
Customer Group ID	Four digit ID; (0000).
Call Ref Length	1 for 1 byte or 2 for 2 byte call reference length; (0).
Admin State	Administrative state of the component.
Destination Association	Point-code state.
Destination State	Destination Association.
Destination Package	Destination Package.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
CAS Path Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	External node.
Customer Group ID	ID of the customer associated with the selected trunk group.
Side	Q.931 call model side.
Admin State	Administrative state of the component.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
CTI Path Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	MML Name of a previously configured external node for this CTI Path.
CTI Manager Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
First IP Address	First local address.
Second IP Address	Second local address.
Port	Local SCTP port number.
First Peer Address	The highest priority destination address.
Peer Port	Destination SCTP port number.
IP Route 1	MML name of the first IP route.
IP Route 2	MML name of the second IP route.
CTI Path	CTI Sig Path component configured for this CTI Manager.

Table 8-2 Properties of Signaling Path Components (continued)

Field Name	Definition
Version	The version of CTI Manager supported by Cisco PGW 2200 Softswitch.
DPNSS Path Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
Destination Association	Type of association.
Component Type	Type of component.
External Node	External node.
Customer VPN ID	VPN customer name assigned to the selected trunk group.
Customer Group ID	ID of the customer associated with the selected trunk group.
Signal Slot	Physical slot on 2600/3660 (optional).
Signal Port	Physical port on the slot of 2600/3660 (optional).
Destination Package	Name of the installed package.
A/B Flag	DPNSS side.
Details tab	
Admin State	Administrative state of the component.
Destination State	Destination state.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
EISUP Path Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	External node
Customer Group ID	ID of the customer associated with the selected trunk group.
Customer Group Table	Customer group table.
Side	Q.931 call model side.
Destination State	Point-code state
Orig Label	Origination Location Label
Term Label	Termination Location Label
FAS Path Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Customer Group Table	Customer group table.
Customer Group ID	ID of the customer associated with the selected trunk group.

Table 8-2 Properties of Signaling Path Components (continued)

Field Name	Definition
Call Ref Length	Call reference length.
Side	Q.931 call model side.
MDO	Message definition object file protocol name.
A/B Flag	A/B flag.
ASP Part	Auxiliary signaling path.
IP FAS Path Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	External node.
Customer Group Table	Customer group table.
Customer Group ID	ID of the customer associated with the selected trunk group.
Call Ref Length	Call reference length.
Side	Q.931 call model side.
MDO	Message definition object file protocol name.
Details tab	
A/B Flag	A/B flag.
ASP Part	Auxiliary signaling path.
Admin State	Administrative state of the component.
Destination State	Point-code state.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
MGCP Path Properties dialog box and **SGCP Path** Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	External node.
NAS Path Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	External node.
MDO	Message definition object file protocol name.
Customer Group ID	ID of the customer associated with the selected trunk group.
Signal Slot	Physical slot on the NAS defining the NFAS Group (optional).
Signal Port	Physical port on the slot of NAS defining the NFAS Group (optional).

Table 8-2 Properties of Signaling Path Components (continued)

Field Name	Definition
Details tab	
Admin State	Administrative state of the component.
Destination State	Point-code state.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
Session Set Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	External node.
First IP Address	First logical IP address.
Second IP Address	Second logical IP address.
First Peer Address	Remote IP address 1.
Second Peer Address	Remote IP address 2.
Ext Node Type	Session set external node type.
IP Route 1	Name of first IP route.
IP Route 2	Name of second IP route.
Details tab	
Port	Local port number of link interface on the Cisco PGW 2200 Softswitch host.
Peer Port	Port number of the link interface on the remote device.
Network Mask Address 1	Network mask (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).
Next Hop Address 1	Next hop (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).
Network Mask Address 2	Network mask (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).
Next Hop Address 2	Next hop (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).
SIP Path Properties dialog box	
MML Name	Name of the component
Description	Description of the MML component.
MDO	Message definition object file protocol name.
Admin State	Administrative state of the component.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.

Table 8-2 Properties of Signaling Path Components (continued)

Field Name	Definition
Shutdown	Number of bearer channels in SHUTDOWN state.
SS7 Path Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
Customer Group ID	ID of the customer associated with the selected trunk group.
Customer Group Table	Customer group table.
ASP Part	Auxiliary signaling path.
MDO	Message definition object file protocol name.
Side	Q.931 call model side.
OPC	Originating point code.
DPC	Destination point code.
M3UAKey	MML name of M3UAKEY.
Details tab	
Admin State	Administrative state of the component.
Destination State	Point-code state.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
TCAP Path Property dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	External node.
Label Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Call Limit	Max number of calls allowed on this location label. 0-n. Integer value 0(default).
AXL Server Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
First IP Address	First local address.
Second IP Address	Second local address.
Port	Local SCTP port number.
First Peer Address	The highest priority destination address.
Peer Port	Destination SCTP port number.

Table 8-2 Properties of Signaling Path Components (continued)

Field Name	Definition
IP Route 1	MML name of the first IP route.
IP Route 2	MML name of the second IP route.
CTI Path	CTI Sig Path component.
Version	The version of CTI Path supported by Cisco PGW 2200 Softswitch.
CTI Path Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	MML Name of a previously configured external node for this CTI Path.
CTI Manager Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
First IP Address	First local address.
Second IP Address	Second local address.
Port	Local SCTP port number.
First Peer Address	The highest priority destination address.
Peer Port	MML name of the first IP route.
IP Route 1	MML name of the first IP route.
IP Route 2	MML name of the second IP route.
CTI Path	CTI Sig Path component configured for this CTI Manager.
Version	The version of CTI Manager supported by MGC.
H248Path Properties dialog box	
MML Name	Name of the component
External Node	External node.
Component Type	Type of the MML component
Description	Description of the MML component
Label	Call limiting label for gateway

Table 8-3 Properties of Signaling Link Components

Field Name	Definition
C7 IP Link Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
IP Address	IP address.
Interface	Ethernet interface to which the link connects.

Table 8-3 Properties of Signaling Link Components (continued)

Field Name	Definition
Priority	Priority of the route.
Timeslot	Time slot used by the link.
Details tab	
Port	Local port number of the link interface on the MGC host.
Peer Address	Remote IP address of link address.
SLC	SS7 signaling link code.
Signal Channel State	State of the signaling channel.
Network Mask	Network mask.
Next Hop	Next hop.
D Channel Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Service	Signaling service.
Status	Operational status of the D-channel.
Priority	Priority of the route.
Signal Slot	Physical slot on the gateway into which the T1/E1 is plugged.
Signal Port	Physical port on the gateway.
Session Set	Session set of backhaul link to the gateway.
TCP Link	Name of an existing TCP Link.
Sub Unit	Only for BRI D Channel. Integer 0 or 1.
IP Link Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
IP Address	IP address.
Interface	Ethernet interface to which the link connects (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).
Service	Signaling service.
Priority	Priority of the route.
Port	Local port number of link interface on the Cisco PGW 2200 Softswitch host.
Peer Port	Port number of the link interface on remote device.
Signal Slot	Physical slot on the gateway into which the T1/E1 is plugged.
Signal Port	Physical port on the gateway.
Signal Channel State	State of the signaling channel.
Network Mask	Network mask (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).

Table 8-3 Properties of Signaling Link Components (continued)

Field Name	Definition
Next Hop	Next hop (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).
IP Route	IP route's MML name.
State	State of the IP route.
IP Route Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
IP Address	Local IP address.
Destination	Destination hostname or IP address.
IP Route State	IP Route state.
Priority	Priority of the route.
Network Mask	Subnet mask of destination (optional).
Next Hop	Next hop router IP address.
Link Set Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Protocol Family	Protocol used by the component.
APC	Adjacent point code for an STP.
Linkset Type	Type of transport for this link set.
Linkset State	Service state of the link.
SIP Link Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
IP Address	IP address.
Interface	Ethernet interface to which the link connects (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).
Priority	Priority of the route.
Details tab	
Service	Type of signaling service.
Port	Local port number of the link interface on the Cisco PGW 2200 Softswitch host.
Signal Channel State	State of the signaling channel.
Network Mask	Network mask (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).
Next Hop	Next hop (not supported after Cisco PGW 2200 Softswitch Release 9.3(2)).

Table 8-3 Properties of Signaling Link Components (continued)

Field Name	Definition
TDM Link Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Interface	Ethernet interface to which the link connects.
Priority	Priority of the route.
Timeslot	Time slot used by the link.
Service	Type of signaling service.
SLC	SS7 signaling link code.
TCP Link Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
IP Address	IP address.
Type	Signaling Type. BRI.
Port	Local port number of link interface on the Cisco PGW 2200 Softswitch host.
IP Route	IP route's MML name.
External Node	External node.
Peer Port	Port number of the link interface on remote device.
Peer Address	Peer IP address.
Signal Channel State	State of the signaling channel.

Table 8-4 Properties of Signaling Point Code Components

Field Name	Definition
APC Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Network Address	SS7 network address in dotted notation.
Network Indicator	Indicator assigned by the network administrator.
OPC	Originating point code.
DPC	Destination point code.
Route Set State	State of the point code.
DPC Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
Network Address	SS7 network address in dotted notation.

Table 8-4 Properties of Signaling Point Code Components (continued)

Field Name	Definition
Network Indicator	Indicator assigned by the network administrator.
OPC	Originating point code.
DPC	Destination point code.
Details tab	
Admin State	Administrative state of the component.
Route Set State	State of the point code.
Destination State	Point-code state.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
OPC Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Network Address	SS7 network address in dotted notation.
Network Indicator	Indicator assigned by the network administrator.
OPC Type	Originating point code.

Table 8-5 Properties of Signaling External Node Components

Field Name	Definition
External Node Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Extnode Type	Type of the external node.
Admin State	Administrative state of the component.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
M3UA/SUA Group Number	M3UA/SUA group number.
ISDN Signaling Type	ISDN signaling type (optional).
SGP Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
External Node	External node's MML name.
SGP State	State of the Signaling Gateway Process.

Table 8-6 Properties of Signaling Interface Components

Field Name	Definition
Card Interface Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Card Type	Type of card or adapter.
Slot	Location of card or adapter within host device.
Ethernet Interface Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Card	Card that supports the interface.
TDM Interface Properties dialog box	
General tab	
MML Name	Name of the component.
Description	Description of the MML component.
Card	Card that supports the interface.
Signal Type	Signal type.
Coding	Line coding.
Format	Interface format.
Details tab	
Line Interface Number	Line interface number.
Resistance	Resistance.
Data Rate	Data rate.
Clock	Clock.
HDLC	High-level data link control.
DTE/DCE	Data terminal equipment/Data communications equipment.

Table 8-7 Properties of Signaling SS7 Components

Field Name	Definition
SS7 Route Properties dialog box	
MML Name	Name of the component.
Description	Description of the MML component.
Link Set	Link set that leads to destination device.
Priority	Priority of the route.
OPC	Originating point code.
DPC	Destination point code.
SS7 Subsystem Properties dialog box	

Table 8-7 Properties of Signaling SS7 Components (continued)

Field Name	Definition
MML Name	Name of the component.
Description	Description of the MML component.
Subsystem Number	Subsystem number.
Priority	Priority of the route.
Service	Type of signaling service.
Protocol Family	Protocol used by the component.
Transport Protocol	Transport protocol.
Mated APC	Adjacent point code for an STP mate.
STP/SCP Index	STP/Service control point index.
SuaKey	MML name of SUAKEY.
Local Subsystem Number	Local subsystem number (beginning in 9.5(2), used instead of Subsystem number).
Remote Subsystem Number	Remote subsystem number.
OPC	Origination point code.

Table 8-8 Properties of Signaling M3UA/SUA Components

Field Name	Definition
M3UA Key Properties dialog box	
MML Name	Routing key name, alphanumeric string up to 20 characters.
Description	Description of the MML component, up to 128 characters.
Service Indicator	(Optional) Service indicator: ISUP,TUP,N/A. Default: N/A
Routing Context	Routing context value, any integer except 0. Default: 0.
DPC	(Optional) Destination point code.
Network Appearance	(Optional) Network appearance. 0-32767. 0 indicates an invalid network appearance. Default: 0.
OPC	(Required) Originating point code.
M3UA Route Properties dialog box	
MML Name	M3UA route name, alphanumeric string up to 20 characters.
Description	Description of the MML component, up to 128 characters.
DPC	MML name of previously defined destination point code.
Pri	Priority.
External Node	MML name of a previously configured external node.
OPC	MML name of a previously configured origination point code.
SUA Key Properties dialog box	
MML Name	Routing key name, alphanumeric string up to 20 characters.

Table 8-8 Properties of Signaling M3UA/SUA Components (continued)

Field Name	Definition
Description	Description of the MML component, up to 128 characters.
OPC	(Required) Origination point code.
APC	(Optional) Adjacent point code.
Local SSN	Local subsystem number.
Routing Context	Routing context value, any integer except 0. Default: 0.
Network Appearance	(Optional) Network appearance. 0-32767. 0 indicates an invalid network appearance. Default: 0.
SUA Route Properties dialog box	
MML Name	SUA route name, alphanumeric string up to 20 characters.
Description	Description of the MML component, up to 128 characters.
APC	MML name of previously defined adjacent point code.
External Node	MML name of a previously configured external node.
Remote SSN	Remote subsystem number (destination).
OPC	MML name of a previously configured origination point code.

Table 8-9 Properties of IPs In Mapping Components

Field Name	Definition
IpInMapping Properties dialog box	
MML Name	MML name of this IpInMapping
Description	Description of the MML component
Sigsvc	Signaling services in which this IpInMapping is applied, SIP sigpath or EISUP sigpath
Allowed IP Address	Allowed IP address, host name or IP address with format x.x.x.x where x is 0-255
Allowed IP NetMask	Allowed net mask, the format is x.x.x.x where x is 0-255. The default is 255.255.255.255.
Port	Allowed SIP Port, only effective for SIP sigpath
Trunk Group Number	Trunk group number using the signaling services specified in Sigsvc (SIP or EISUP)

Table 8-10 Properties of In Sip Header Component

Field Name	Definition
InSipHeader Properties dialog box	
MML Name	The name of the SIP header table.
SIP Message Name	The SIP message that triggers a customized action. The value must be the name of a SIP request or response message.

Table 8-10 Properties of In Sip Header Component (continued)

Field Name	Definition
Treatment	The action that the Cisco PGW 2200 Softswitch takes when the SIP header is present.
Treatment Data Word 1 - 4	Data words that describe how the Cisco PGW 2200 Softswitch applies the treatment settings.
Index	Defines the preferred order for applying SIP header table entries. If a SIP header matches more than one entry in the SIP Header table, the Cisco PGW 2200 Softswitch applies the entry with the lowest Index value.
SIP header name	The name of a SIP header that the Cisco PGW 2200 Softswitch uses to modify traffic.
Condition	Defines how the Cisco PGW 2200 Softswitch uses the SIP header table entry to analyze traffic. This field requires one or more entries in the Condition DW fields.
Condition Data Word 1 - 4	The tags the Cisco PGW 2200 Softswitch uses to analyze SIP traffic. You can define up to four tags for each row in the SIP header table.

Table 8-11 Properties of Out Sip Header Component

Field Name	Definition
OutSipHeader Properties dialog box	
MML Name	The name of the SIP header table.
SIP Message Name	The SIP message that triggers a customized action. The value must be the name of a SIP request or response message.
Treatment	The action that the Cisco PGW 2200 Softswitch takes when the SIP header is present.
Treatment Data Word 1 - 4	The tag the Cisco PGW 2200 Softswitch uses based on the value in the Treatment field. You can apply up to four tags for each row in the SIP header table.
SIP header name	The name of a SIP header that the Cisco PGW 2200 Softswitch uses to modify traffic.
Index	Defines the order in which the Cisco PGW 2200 Softswitch applies SIP header table entries. If a SIP header matches more than one entry in the SIP Header table, the Cisco PGW 2200 Softswitch applies the entry with the lowest Index value.
policy	Defines the B2BUA mode applied to the call/trunk group
Condition	Defines how the Cisco PGW 2200 Softswitch uses the SIP header table entry to analyze traffic. This field requires one or more entries in the Condition DW fields.
Condition Data Word 1 - 4	The tags the Cisco PGW 2200 Softswitch uses to analyze SIP traffic. You can define up to four tags for each row in the SIP header table.

Table 8-12 Properties of Domain Profile Component

Field Name	Definition
Domain Properties dialog box	
Domain Name	The domain name used to analyze traffic
Domain Type	The direction of the profile
Profile Name	The name of a domain profile that is used for the domain name

Table 8-13 Properties of Profile Components

Field Name	Definition
Profile Properties dialog box	
default tab	
MML Name	The name of the profile.
Validation	Indicates whether the Cisco PGW 2200 Softswitch performs property validation.
Variant	The name of the variant.
Profile Type	The type of the profile.
Routing tab	
SIP Egress Routing Control	The preferred SIP header used for the initial routing decisions during sending of the Initial INVITE.
SIP Ingress Routing Control	The preferred SIP header used for the initial routing decisions(Initial INVITE).
Unavailable Procedure	Indicates the procedure to follow when there are no available ISUP circuits.
Enable IP Screening	Enables the incoming trunk group to select dial plan based on IP address, source ID and CLI prefix.
Map Redirecting Number Method	Decides the mapping from ISUP Redirecting Number and Original Called Number to outgoing SIP/EISUP message.
Inhibit Sip From Mapping	Decides the mapping from incoming SIP message to ISUP CLI
Customer Group ID	ID of customer associated with a particular trunk group.
Map CLI to Sip Header	Determines the mapping rule from calling line identity to SIP Headers.
Congestion Procedure	Indicates the procedure to follow when there is congestion on ISUP circuits.
Billing tab	
AOC Invoke Type	Allows configuration of whether or not the AOC Supplementary services are applicable on a per call basis or for all calls.
Charge Origin	Indicates whether or not to include Charge Number and Originating Line Info as a pair in the IAM.
AOC Enabled	Determines whether Advice of Charge (AOC) handling should be applied to this call.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
Populate SDP Info in CDR	Enable or disable extraction of informationn from SDP and thereby not populating it in CDR.
AOC Default Tariff Id	Allows configuration of the default tariff ID to be applied when AOCInvokeType is configured for all calls (that is, AOCInvokeType = 2).
Media tab	
SDP Xmit To H323 Trigger	Indicates the point in a call when the Cisco PGW 2200 Softswitch sends the Session Destination Protocol (SDP) from the terminating call leg to the H.323 Signaling Interface (HSI).
GW Default Codec String	Gateway default codec string. Enables the IOCC-MGCP to send the ordered series of codec choices separated by semicolons. Refer to your gateway documentation for a list of supported codec names.
GW Default ATM Profile	Defines an initial list of profiles that the Cisco PGW 2200 Softswitch uses to control ATM profile negotiation between two MGWs.
Compression Type	Indicates the G.711 compression type used on the trunk.
Num1 tab	
Directory Number NOA	Default Directory Number NOA.
Charge Number	Default Charge Number.
A Number National Prefix	Determines the prefix of the outgoing calling number when NOA is set to National.
B-Number Normalization	Indication that B-number normalization is appropriate.
CLI Select	Calling line identification. Determines whether or not the additional calling party number is presented in the incoming IAM.
Directory Number NPI	Default directory number NPI.
Directory Number Screening	Default directory screening indicator (SI).
Directory Number	Default directory number. This property is needed on the trunk group for a switched call and on the SigPath for a nailed call.
Carrier Network Type	Default carrier identifier network type.
Country Code to be Prefixed	Provides against the origin trunk group of a call the country code digits, which if needed can be prefixed on a number before sending the call forward. Only required when the property domain is SigPath or LinkSet.
B-number tech Prefix	This property will provide a digit string to be used as a Tech Prefix to the B-number when sending the call forward.type=”string” size min=”1” max=”16”.
A-number Normalization	Indication that A-number normalization is appropriate
CGPN Include	Indicates whether or not to include the CGPN in an IAM.
Originating Line Information	Default originating line information. Maps to trunk group property DefaultOLI.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
Number Plan Area	Numbering plan area. Indicates the NPA code associated with the incoming trunk group.
Directory Number Presentation	Default Directory Presentation Indicator.
Apply Country Code to A Number	Controls functionality that applies a country code prefix to the calling party number before sending the call forward.
A Number International Prefix	Determines the prefix of the outgoing calling number when NOA i set to International.
Default Presentation Number NOA	Default Presentation Number NOA value.
B Digit Country Code to be Removed	Country Code for comparison with Called Party Leading Digits and removing them from the number.
A Digit Country Code to be Removed	A string of digits (maximum of 5 digits) which will be compared to the A-number, and if matches will be removed from the front of the number.
Inhibit Outgoing Calling Name Display	Enables or disables the inhibiting of the outgoing calling name display in DPNSS and EISUP (HSI) protocols.
Default Presentation Number NPI	Default Presentation Number NPI value
Inhibit Incoming Calling Name Display	Enables or disables the inhibiting of the incoming calling name display in DPNSS and EISUP (HSI) protocols.
Inhibit Outgoing Connected Number Display	Enables or disables the inhibiting of the outgoing connected number display in DPNSS and EISUP (HSI) protocols.
Inhibit Incoming Connected Number Display	Enables or disables the inhibiting of the incoming connected number display in DPNSS and EISUP (HSI) protocols.
CLI Selection For Code of Practice 3	Provisions, on a per trunk group basis, the level of CLI selection that the Cisco PGW 2200 Softswitch uses when sending the calling line identities (such as Calling Party Number or Generic Number parameter) to the succeeding exchange.
B Number International Prefix	Determines the prefix of the outgoing called number when NOA is set to International.
Default PN Presentation Indicator	Default presentation number presentation indicator.
Inhibit Outgoing Connected Name Display	Enables or disables the inhibiting of the outgoing connected name display in DPNSS and EISUP (HSI) protocols.
Num2 tab	
Charge Number NOA	Default charge number NOA.
Carrier Network ID	Default carrier identifier network Identifier,
Default PN	Enables the incoming trunk group to have default PN if the incoming call does not have one.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
Charge Number NPI	Default charge number NPI.
Inhibit Incoming Connected Name Display	Enables or disables the inhibiting of the incoming connected name display in DPNSS and EISUP (HSI) protocols.
Apply Country Code to B Number	Controls functionality that applies a country code prefix to the called party number before sending the call forward.
B Number National Prefix	Determines the prefix of the outgoing called number when NOA is set to National.
Carrier Network ID Plan	Default carrier national network identifier plan.
Profile tab	
Tone Option	Specifies whether playing tone to originating side is mandatory, only be effectively on ingress IP trunk group.
Sip IFacility Reject Handling	Indicates whether to swallow or treat as transparent message to handle ISUP facility reject message.
Anchor Media	Defines the media anchor policy on this IP trunk group.
Use Domain Profile	Indicates whether to use domain profile or not.
Sip Insert Reason Header	To indicate that whether a reason header containing cause code is needed.
SipI Egress Handling	Indicates that the value of handling disposition-param set in the the Content-Disposition header field associated with the ISUP MIME body. Configured on outgoing SIP-I trunk groups.
Common Profile	Pointer to another profile of type COMMONPROFILE.
Gateway Pool	Associate the gateway pool to an IP trunk group, so that media may anchor on this gateway pool.
Outbound Domain Profile Source	Indicates the source of getting outbound domain.
SipI Ingress Version Map	To indicate the profile name of the acceptable Version in Content-Type for SIP I trunk group.The ISUP variant will be decided by both the profile name and the incoming Version.
SIP COLPReq Enabled	To indicate whether to enable COLP request.
Trust Level	Indicates if the trunk group or domain is trusted or untrusted interface.
LRNDigitCCPrefix	An egress trunk group-based property which, if enabled, prefix the destination Country code in CC_DIG for the call to the location routing number and changes the NOA code to international.
SipI Confusion Handling	Indicates whether to swallow or treat as transparent message to handle ISUP confusion message.
SipI CANCEL Encapsulated REL	To indicate that whether the encapsulated REL message is needed in CANCEL.
Sip Egress GN2 From Screen	To indicate with which Screen Indictor's, the Generic Number can be mapped to SIP From header.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
NAT Traversal Enabled	Indicates whether PGW will do NAT traversal in add or modify request. The detailed NAT traversal method is depended in the sigPah property NATTraversalMethod.
Sip ICLICOL Preference	To indicate that whether CLI/Connected Number should take SIP header as preference.
Sip Egress Early Dialog RelType	To indicate whether to send CANCEL or BYE for the Early Dialog release.
LRNDigitCCrm	An egress trunk group-based property which, if enabled, prefix the destination Country code in CC_DIG for the call to the location routing number and changes the NOA code to international.
In Sip Header Table	Pointer to a inbound SIP header table. Value range: Existing inbound SIP header table name.
Dummy Codec String	Specifies the dummy codec list in H.248 add request when neither remote SDP nor local codec provision is available. This property is only effect for DBE.
Out Sip Header Table	Pointer to a outbound SIP header table.
Anchor Policy	Defines the media anchor policy in the policy function whether to enable gateway pool on IP trunk group.
SipI Egress MDO	To indicate the MDO variant for SIP-I egress on the outgoing SIP trunk group.
SipI Egress ISUP Version	To indicate the Version sub-parameter used in the Content-Type header field for SIP-I EGRESS on the outgoing SIP trunkgroup.
SipIToiw2	To indicator Toiw2 timer interval (milliseconds).
SipIngressLNPHandling	To indicator how to map the SIP routing number and telephone number.
Announcement Option	Specifies whether playing announcement to originating side is mandatory, only be effectively on ingress IP trunk group.
GR Profile	Pointer to another profile of type GRPROFILE.
Sip tab	
MGC Domain	MGC Domain Name in SIP Messages.
Respect Sip URI User Parm	Determines whether or not respect user=phone in p-asserted-id and remote-party-id header.
Topology Hiding Enabled	Indicates whether topology hiding is enabled or not.
MIN Event Subscribe Duration	The minimum duration for which an event can be subscribed. It is an integer value in millisecond.
Support 100 Response Code	Indicates whether Cisco PGW 2200 Softswitch will support reliable 100 response code.
TG TagLabel Trans Enable	Indicates how the Cisco PGW 2200 Softswitch handles the ingress trunk group tag label (if present) in the outgoing SIP INVITE message.
DelayedOfferToEarlyOfferInterworking	Indicates TCC send initial INVITE with sdp or not if receiveing INVITE w/o sdp from line.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
MGC SIP Version	Supported MGC SIP Version.
MAX Subscription Duration	The maximum duration for which the subscription can exist. An integer value in milliseconds.
SIP IP Source	Tells MDL to use IP packet source address from SDP in INVITE message to do dial plan selection.
Unsolicited Notify Method	Enables or disables Unsolicited NOTIFY method for unsolicited notification of SIP DTMF digits by Cisco PGW 2200 Softswitch.
SIP Mime Body Support	Decides on SIP-T and SIP-GTD related special processing of data.
Support 183 Response Code	Flag indicating support of 183 response code.
Subscribe Notify Support	Enables or disables SUBSCRIBE/NOTIFY method for solicited notification of SIP DTMF digits
sipTransportMode	Transport mode supported by this trunkgroup.
Timer tab	
Wait for Originating SDP Timer	The timer is started when the originating SDP information has not been received.
EXPIRE Timer	Timer value (in milliseconds) in the EXPIRE header of SIP messages.
T1 Timer	T1 Timer (in milliseconds) for SIP messages other than INVITE messages.
Hold Timer	Maximum hold time for a SIP call.
Wait for Terminating SDP Timer	The timer is started when the terminating SDP information has not been received.
INVITE Timer	T1 timer for INVITE messages.
Retry Timer	The time (in milliseconds) Cisco PGW 2200 Softswitch waits before successfully retry of SIP calls
Retrans Method	Specifies the re-transmission mode for SIP messages.
Wait for Answer Timer	The timer is started when the Cisco PGW 2200 Softswitch instructs the MGW to apply ring back tone upon receiving Alerting. The timer is stopped when the Cisco PGW 2200 Softswitch receives the Answer message.
Response Attempts	Specifies the transmission times for SIP response.
Non Invite Req Attempts	Specifies the transmission times for SIP Non-INVITE request.
T2 Timer	T2 Timer (in milliseconds) for SIP messages other than INVITE messages.
Invite Attempts	Specifies the timer value (in milliseconds) for SIP waiting for final response of INVITE request.
Term Session Timer	The maximum session time in millisec allowed for a SIP call terminated by a Cisco PGW 2200 Softswitch.
Orig Session Timer	The maximum session time in millisecs allowed for a SIP call originated by the Cisco PGW 2200 Softswitch.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
Mid-Call CP Interval	Mid-Call check pointing interval.
Invite Wait Timer	Specifies the timer value (in milliseconds) for SIP waiting for final response of INVITE request.
Misc tab	
Gateway Ring Back Tone Support	Indicates whether or not the ringback tone application is supported.
Feature Transparency Disabled	Allows the user to disable feature transparency for all calls on the Cisco PGW 2200 Softswitch.
Allow H323 Hairpin	Allow H.323 hairpinning. Allows the Cisco PGW 2200 Softswitch to interconnect H.323-originated and H.323-terminated calls by the HSI component.
Fax/Modem Tone	Specifies if notification of fax/modem tone from the Cisco PGW 2200 Softswitch is desired.
Play Announcement	Enables, on a per trunk group basis, the playing of an early announcement. This property can either contain an integer announcement identity, or, if it is set to 0 (default), the announcement function is considered disabled at the trunk group level.
H323 Destination	The IP Address and Port of H323 Destination in the format of IP1[:PORT1][;IP2:PORT2] or NULL.
Mid-Call Service Customer ID	Customer ID associated with mid-call service. Values are any alphanumeric with length of 4.
GTD Message Format	Decides the GTD format.
DTMF Capability	Defines the DTMF capability of the egress trunk group.
Network Type	Base on this property, Cisco PGW 2200 Softswitch will know if the underlying network is ATM or IP. Based on the network type retrieved, various network specific (eg,atm profiles) parameters would be sent down to gateway.
TG TagLabel	This property identifies name of the trunk group from which a call comes.
Satellite	Indicates if the trunk is going over a satellite.
Inside VRF Name	Inside Virtual routing and forwarding (VRF) name.
ITP Action Request	The indication of the required ITP action.
ExtCOT	Determines the type of COT handling for the specified destination.
Local Port	UDP port for SIP communication.
QSIG Tunnel Variant	Allows the QSIG Tunnel capability to be enabled across outbound EISUP (HSI) interfaces and specifies which variant will be used.
Transparency Disabled	Indicates if ISUP transparency is disabled.
Disable QSIG Release Method	Decides release method with single release complete message or QSIG release sequence.
Echo Cancel	Indicates if echo cancellation is required.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
Propagate Delay Counter	Propagation Delay counter. Indicates the propagation delay value in milliseconds that will be increased if propagation delay is available.
ISUP Trans Early Backward Disabled	Indicates if the egress Cisco PGW 2200 Softswitch is to send an end-to-end message, called Early Backward Call Setup message, immediately after receiving the call setup message with GTD information about the outgoing protocol variant.
Max SIP Forward	The maximum number of SIP forward allowed.
Fax Support	FAX support. Indicates if T.38 FAX calls are supported on the trunk group. This property must be enabled on the incoming and outgoing trunk groups for T.38 fax calls to be successfully routed.
Enable CCBS Path Reservation	Allows configuration of the Path Reservation option for each QSIG destination. In the case of EISUP, this is valid for HSI destinations only.
Outside VRF Name	Outside Virtual routing and forwarding (VRF) name.
GWPool tab	
Gateway Selection Method	Specifies the border gateway selection method within a gateway pool.
Gateway Announcement Support	Specifies whether the gateway pool supports playing an announcement package to the IP side.
Gateway Tone Support	Specifies whether the gateway pool supports playing a tone to the IP side.
Gateway DTMF Support	Describes the DTMF capability support for a gateway pool.
Gateway Codec Support	Specifies whether the gateway pool supports transcoding for IP-to-IP traffic.
T1 tab	
T1	T1
T2	T2
T4	T4
T5	T5
T6	T6
T7	T7
T8	T8
T9	T9
T12	T12
T13	T13
T14	T14
T15	T15
T16	T16
T17	T17

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
T18	T18
T19	T19
T20	T20
T21	T21
T22	T22
T23	T23
T24	T24
T25	T25
T26	T26
T27	T27
T28	T28
T33	T33
T34	T34
T35	T35
T36	T36
T38	T38
T2 tab	
T_CGB	Wait timer for circuit group block message.
T_GRS	Wait timer for circuit group reset message.
T_CRA	Timer for circuit reservation acknowledgment.
T_CCRR	Timer for continuity check recheck request.
T_CVT	Timer for circuit validation test. Default: 0 (milliseconds).
T_CGBA	Wait timer for circuit group block ACK message.
T_CCR	Timer for continuity check request.
More1 tab	
Carrier Select Include	Indicates whether or not to include the carrier selection information paramter in an IAM.
RedirMax	Specifies the maximum allowable value of the redirection counter parameter available in some C7 signaling systems before the call is force-released. Used to prevent routing loops in certain applications.
ATM Connection Type	Populates the connection type parameter (ct:) in local connection option parameters. This property is read for both originating and terminating legs of all ATM-switched calls.
T Max Digits	Specifies maximum number of digits to receive for overlap digit processing for call termination to this traffic path(1~32).
Redirect Info Include	Indicates whether or not to include the Redirection Info in an IAM.
CGPN Presentation Restricted	Determines if incoming Presentation indication should be overridden.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
Expiry Warning Tone Type	Duration of expiry warning tone (1-5 seconds).
GTD Cap Type	To read the GTD configuration parameter string. Used by Cisco PGW 2200 Softswitch as a pointer to the subset of GTD params.
Glare	Call collision handling.
Include CIP for Non-geographic	Indicates whether or not to include the Carrier Identification Parameter (CIP) in an IAM on all calls to non-geographic numbers.
Own Routing Number	To enable or disable the RO service handling at point of interconnect.
Customer VPN ID	Allows the user to assign a VPN customer name to the trunk group.
Overlap Digit Time	Overlap interdigit timer. The time to wait for the rest of the digits.
CLI Default Allowed	If set to TRUE then it adjusts the presentation restricted field in the CLI to Presentation Allowed; if FALSE then it takes the mapped value from the OCC or TCC protocol side or the default value from the Map for this field if there is no received value from the other protocol side.
Inband Info Available	Indicates whether the outgoing ACM should contain inband information in optional back call indicator.
More2 tab	
Send Address in CGPN	Determines if CLI digits should be sent in outgoing CGPN parameter
Hop Count	Number of contiguous SS7 interchange circuits remaining before a call must be completed.
Redirect Counter Include	Indicates whether or not to include the Redirect Counter in an IAM.
From	Display name of the calling party.
Orig Carrier ID	The originating carrier ID for the trunk group. Supports the carrier screening capability as handled in the protocol.
Maximum ACL	Maximum automatic congestion level. The Cisco PGW 2200 Softswitch indicates its congestion level (if it is greater than 0) in the ISUP release message.
Transaction Request Include	Indicates whether or not to include the Transaction request parameter in an IAM.
CGPN Presentation	Determines if the incoming calling number presentation indication is to be overridden.
GAP Include	Indicates whether or not to include the Generic Address Parameter in an IAM.
Loop Avoidance Support	Enables the support of the loop avoidance feature in DPNSS protocol.
T Min Digits	Specifies minimum number of digits to receive for overlap digit processing for call termination to this traffic path.
ACL Duration	Duration (in seconds) ACL remains in effect
Allow CRMCRA	Indicates whether or not to allow the use of the Circuit Reservation Message (CRM) and Circuit Reservation Acknowledgement message (CRA).

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
VPN On-Net Table Number	Allows the user to assign VPN ON-NET profile table indices for a particular trunk group.
MWI String ON	Enables support for a Message Waiting Indication (MWI) string in a DPNSS protocol message. The message instructs a particular extension to light its MWI LED (also known as the MWI lamp).
Service Code Include	Indicates whether or not to include the Service Code parameter in an IAM.
O Max Digits	Specifies maximum number of digits to receive for overlap digit processing for call origination from this traffic path.
Redirect Capability Include	Indicates whether or not to include the Redirect Capability in an IAM.
ACC Response Control	Specifies the ACC Response Controls listed in the ACC Response Category table.
Charge Non-geographic	Indicates whether or not to include the Charge Number in an IAM on all calls to non-geographic numbers.
Confusion	A flag indicating whether or not to send the Confusion message when an unrecognized message type is received.
OCN Include	Indicates whether or not to include the Original Called Number in an IAM.
Location Number	The default outgoing number used if a location number is not present in an incoming call.
Suppress CLI Digits	Suppresses the calling party number. Values are: 0 (do not suppress but leave the calling number intact) or 1 (remove calling party number so no number is forwarded).
Package Type	Package type. Determines MDL MGCP message handling according to the CAS trunk group package.
Notification Include	Indicates whether or not to include the Notification parameter in the Call Progress (CPG) message.
Cot Percentage	Determines the percentage of calls on the trunk upon which a continuity test is performed.
DPNSS RO Routing Number Length	For DPNSS - QSIG PR ROO inter-working, the DPNSS RO routing number and call reference are concatenated and in QSIG they are separate fields. An indication of where the divide point is between the fields is an optional parameter in the DPNSS spec. It is therefore necessary to provide a configurable definition of how to split these two fields.
MWI String OFF	Enables support for a Message Waiting Indication (MWI) string in a DPNSS protocol message. The message instructs a particular extension to extinguish its MWI LED (also known as the MWI lamp).
Enable Hop	A flag indicating whether or not to enable the hop counter.
More3 tab	
AOCNodeID	This property is included in the Advice of Charge message to identify the node in the network that is activating the AOC service to this call.

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
OwnClli	Specifies the common language location identifier (CLLI) that identifies the Cisco PGW 2200 Softswitch. This can be up to 11 alphanumerical digits.
H248 Gateway Reserve Value	Enable Megaco to send ADD commands with ReserveValue "on" or "off" to indicate MG to reverse resource or not.
GN Include	Indicates whether or not to include the Generic Number in an IAM.
CLLI	Common language location identifier.
Allow EXM	Indicates whether or not to allow the use of the Exit Message (EXM).
TlinkAlignTime	Configurable timer for all Q.761, Q.767 and ANSI protocols.
SipDtmfContentType	Dtmf content type for SIP info message.
Generate Redirection Number	Defines whether generate Redirection Number for SIP diversion.
Alarm Carrier	Indicates the method of alarm carrier so that circuit validation tests may be fully compliant with ANSI T1.113.
Screen Fail Action	Screen fail action. Indicates if an action is to be performed when a screening failure occurs.
JIP Default	Indicates the default JIP value to be sent when jipInclude = 1 and no JIP value is present. If the value is 0, jipDefault is treated as if no value is present. Value range: 0 through 9.
Default Bearer Capability	Default bearer capability. Indicates the coding used by the User Service Information parameter in the outgoing IAM message.
TBufferDigitLength	Limits the maximum number of digits allowed in the outgoing IAM and SAM.
OD 32 Digit Support	To allow 32 digits and overdecadic digits support for the ANSI, O721, O761 and O767 protocol variant.
SCP Credit Expired Timer	Duration of time (1-180 seconds) before credit expiry that SCP will be notified.
Ring-No-Answer	Indicates the time, in seconds, ringing is allowed to occur.
JIP Include	Indicates whether or not to include the Jurisdiction Information Parameter (JIP) in an IAM.
RestrictPresIfNoPAID	To indicate that for an incoming SIP call on this TG with no P-Asserted-Identify header.
Circuit Group Carrier	Indicates the method of circuit group carrier so that circuit validation tests may be fully compliant with ANSI T1.113.
ATP Include	Indicates whether or not to include the Access Transport Parameter in an IAM.
Expiry Warning Tone Duration	Duration of expiry warning tone (1-5 seconds).
VPN Off-Net Table Number	Allows the user to assign VPN OFF-NET profile table indices for a particular trunk group

Table 8-13 Properties of Profile Components (continued)

Field Name	Definition
RN Include	Indicates whether or not to include the Redirecting Number in an IAM.
O Overlap	Set to 1 to enable overlap signaling for call origination from this traffic path.

Table 8-14 Properties of SipIVersion Component

Field Name	Definition
SipIVersion Properties dialog box	
Profile	MML name of a SIP-I mapping profile.
SIP-I Version	SIP-I version defined by the operator and used in the SIP-I message Content-Type header field.
MDO	SIP-I variant name mapped to the SIP-I message ParamContent field.

Table 8-15 Properties of GW Pool Component

Field Name	Definition
GWPool Properties dialog box	
MML Name	Gateway pool ID
Profile Name	Profile name
Description	Gateway pool description

Table 8-16 Properties of IPGW Component

Field Name	Definition
IPGW Properties dialog box	
Gateway Pool Name	Name of the gateway pool
External Node	Name of the external node

Viewing Trunk Group Component Properties

You can view the properties of trunk group components of a Cisco PGW 2200 Softswitch node such as

- Configuration
- Status
- SIP attributes (Cisco PGW 2200 Softswitch Release 9 and later)

Use the following procedure to view trunk group component properties:

Step 1 In the Map Viewer window, do one of the following:

- To view information for all trunk group components, select the Trunking folder, and right-click. Choose **Trunk Group Properties**.
- To view information for a particular trunk group component, under the Trunking folder, select the desired component and right-click. Choose **Trunk Group Properties**.

  The dialog box displays information on the selected component's properties. See the "About the Trunk Group Properties Dialog Box" section on page 8-55 for details.

Step 2 (Optional) In the Properties dialog box, you can use the toolbar buttons or menu options to:

- Print the information on the current tab.
- Close the dialog box.
- Toggle dynamic update mode off and on.
- Refresh the window to update the information when dynamic update mode is off.
- Acknowledge that you have seen dynamically updated changes.

About the Trunk Group Properties Dialog Box

The Properties dialog box for trunk group components contains a toolbar and the fields described in Table 8-17. By default, the Properties dialog is dynamically updated as device information changes. You can use toolbar buttons to turn updating on or off, acknowledge that you have seen updated information, and check for changes as desired when dynamic updating is off.

See the "Common Functionality in Properties Dialog Boxes" section on page 8-9 for more on dialog box functionality.

Note The trunk group properties you see, and the tabs they are located on, depend on the release of the Cisco PGW 2200 Softswitch software you are using.

Table 8-17 Properties of Trunk Group Components

Field Name	Definition
General tab	
Trunk Group Number	Trunk group number.
Trunk Type	Trunk transmission media.
Customer Group ID	ID of the customer associated with the selected trunk group.
Priority	Priority of the route.
Select Sequence	Selection sequence.
Service	Type of signaling service.
Queuable	Whether the trunk group is capable of queuing calls.
Package Type	CAS trunk group package.
Glare	Call collision handling.
Default Presentation Number NOA	Sets the default for Presentation Number NOA value.
Default Presentation Number NPI	Sets the default for Presentation Number NPI value.

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
Default PN	Enables the incoming trunk group to have default presentation number if the incoming call does not have one; overdecadic digits are supported.
O Min Digits	This property specifies minimum number of digits to receive for overlap digit processing for call origination from this traffic path (integer, from 0 to 32). Default value: 0
O Max Digits	This property specifies maximum number of digits to receive for overlap digit processing for call origination from this traffic path (integer, from 1 to 32). Default value: 24
O Overlap	This property indicates whether overlap signaling for call origination from this traffic path is enabled (1=enabled, 0=not enabled). Default value: 0
Overlap Digit Time	This property specifies the waiting period for the rest of the digits (integer, from 0 to 60). Default value: 6
Trunkgroup Profile	Trunkgroup profile name.
Number Plan Area	The numbering plan area (NPA) code associated with the incoming trunk group.
Carrier ID	The carrier ID to which users on this trunk group are associated.
Orig. Carrier ID	Carrier ID digit string.
CLLI	Common language location identifier.
Carrier Screening	Whether to apply carrier selection and screening on the call.
Notify Setup Complete/Network Type	Whether to send notification when call setup completes.
Send Address to CGPN	Determines if CLI digits should be sent in outgoing CgPN parameter. Value is 0 (False) for don't include address digits in CgPN param or 1 (True) for including address digits in CgPN param; default is 1.
CGPN Presentation Restricted	Determines if incoming Presentation Indication should be overridden. Value is 0 (False) for leave as-is or 1 (True) for set to presentation restricted; default is 0.
Enable IP Screening	Enables the incoming trunk group to select dial plan based on IP address, source ID and CLI prefix tables.
Default PN Presentation Indicator	Sets default Presentation Number Presentation Indicator value.
SDP Xmit To H323 Trigger	Indicates the point in a call when theCisco PGW 2200 Softswitch sends the Session Destination Protocol (SDP) from the terminating call leg to the H.323 Signaling Interface (HSI).
T Overlap	This property indicates whether overlap signaling for call termination to this traffic path is enabled (1=enabled, 0 = not enabled). Default value: 0

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
T Max Digits	This property specifies maximum number of digits to receive for overlap digit processing for call termination to this traffic path (integer, from 1 to 32). Default value: 24
T Min Digits	This property specifies minimum number of digits to receive for overlap digit processing for call termination to this traffic path (integer, from 0 to 32). Default value: 0
Maximum ACL	Maximum congestion level.
Configuration tab	
Fax/Modem Tone	Specifies if notification of the fax/modem tone from the Cisco PGW 2200 Softswitch is desired. Values are 0 (no) and 1 (yes).
Screen Fail Action	Indicates if an action is to be performed when a screening failure occurs. Values and 0 (no) and 1 (yes).
Ring-No-Answer	Time (in seconds) that ringing can occur.
AOC Enabled	Whether advice of charge handling should be applied to this call. Values and 0 (no) and 1 (yes).
Echo Cancel	Whether echo cancellation is required. Values and 0 (no) and 1 (yes).
ACC Control	Specifies the ACC Response Controls listed in the ACC Response Category table.
ACC Response Control	Turns on or off Automatic Congestion Control control procedures based on the Automatic Congestion Level value received by the Cisco PGW 2200 Softswitch from a linked switch.
External COT	External continuity test indicator.
Support 183 Response Code	Flag indicating support of 183 response code.
Customer VPN ID	Assigns a VPN customer name to the trunk group. Prefix=”*” Default=”00000000”, Size min=1 max=8.
VPN On-Net Table Number	Assigns VPN ON NET profile table indices for a particular trunk group. Prefix=”*” Default=”0”, Size min=1 max=8.
VPN Off-Net Table Number	Assigns VPN OFF NET profile table indices for a particular trunk group. Prefix=”*” Default=”0”, Size min=1 max=8.
Populate SDP Info in CDR	Enables extraction of information from SDP. 1 enables, 0 disables. Default 0.
Support 100 Response Code	Flag indicating support of 100 response code.
ACL Duration	Duration (in seconds) that ACL remains in effect.
Satellite	Indicates if the trunk group is going over a satellite. Values and 0 (no) and 1 (yes).
Call Orig. Index	Starting number analysis digit index for call origination.
Call Term. Index	Starting number analysis digit index for call termination.

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
Transparency Disabled	Indicates if ISDN User Part (ISUP) transparency is disabled. Values 0 (no) and 1 (yes).
COT Percentage	Statistical continuity test percentage.
Compression Type	The G.711 compression type used on the trunk.
From	The display name of the calling party.
Call Forward Reroute Disabled	Disables Call Forward rerouting for all calls. Prefix=”*. Range 0 - 1. Default 0.
Feature Transparency Disabled	Disables Feature Transparency for all calls. Prefix=”*. Range 0 - 1. Default 0.
OD 32 Digit Support	Indicates whether overdecadic and 32 digits are supported for ANSI, Q721, Q761, and Q767 protocol variants. Values 0 (no) and 1 (yes). Default 0.
Status tab	
Admin State	Administrative state of the component.
Locked	Number of bearer channels in LOCKED state.
Unlocked	Number of bearer channels in UNLOCKED state.
Shutdown	Number of bearer channels in SHUTDOWN state.
SIP tab	
Local Port	UDP port for SIP communication.
Unsolicited Notify Method	Enables or disables Subscribe/Notify method for solicited notification of SIP DTMF digits.
SIP IP Source	Tells MDL to use IP packet source address or IP address from SDP in INVITE message to do dial plan selection for SIP calls.
Max Redirection	The maximum number of SIP message redirects allowed.
T1 Timer	T1 timer (in milliseconds) for SIP messages other than INVITE messages.
Orig. Session Timer	The maximum session time (in milliseconds) for a SIP call originated by the Cisco PGW 2200 Softswitch.
INVITE Timer	T1 timer for INVITE messages.
Hold Timer	Maximum hold time for a SIP call.
MIN Event Subscribe Duration	Minimum duration for which an event can be subscribed, in msec. Range: 40-3600 msec.
MAX Subscription Duration	Maximum duration for which the subscription can exist before it needs a re-subscription, in msec. Range: 0-3600 msec.
ISUP Trans Early Backward Disabled	Sends the early backward message-183 session progress without the SDP MIME body. 0 - Enable, 1 - Disable. Default 1.

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
Invite Attempts	The transmission times for INVITE requests. Valid values are 1–15. Default, 7.
Response Attempts	The transmission times for response. Valid values are 1–15. Default, 11.
Invite Wait Timer	The timer (in milliseconds) of waiting for final response of INVITE request. Valid values are 10000–500000. Default, 200000.
SIP Ingress Routing Control	The preferred SIP header used for the initial routing decisions(Initial INVITE)
Map CLI to SIP Header	Determines the mapping rule from calling line identity to SIP Headers. Values: 0,1,2,3,4
SIP MIME Body Support	Determines SIP-T and SIP-GTD related special processing of data (used by SS7 and SIP trunk groups). 0 - None, 1- SIP-T supported, 2 - SIP-GTD supported. Default 0.
MGC SIP Version	The version of SIP protocol supported by Cisco PGW 2200 Softswitch. Maps to trunk group property MGCSipVersion. Any valid SIP version, SIP2.0 default.
MGC Domain	Cisco PGW 2200 Softswitch's domain name used in SIP messages. Maps to trunk group property MGCDomain. Any valid domain name or NULL string.
Max SIP Forward	The maximum number of SIP forward allowed. Maps to trunk group property MaxForwards. Any value > 0, default 10.
T2 Timer	T2 timer (in milliseconds) for SIP messages other than INVITE messages.
EXPIRE Timer	Timer value (in milliseconds) in the EXPIRE header of SIP messages.
Term. Session Timer	The maximum session time (in milliseconds) for a SIP call terminated by the Cisco PGW 2200 Softswitch.
Retry Timer	The time (in milliseconds) that Cisco PGW 2200 Softswitch waits before retrying SIP calls.
GTD Cap Type	Used as a pointer to the subset of GTD configuration parameters. Values: 0 - No GTD parameter string. Any other string - points to entry in gtdParam.dat file. Default: 0.
Subscribe Notify Support	Enables or disables Unsolicited Notify method for solicited notification of SIP DTMF digits.
GTD Message Format	Selects GTD message format. C - Compact mode, V - verbose mode. Default C.
Non Invite Req Attempts	The transmission times for Non-INVITE requests. Valid values are 1–15. Default, 11.
Retrans Method	The re-transmission method. 1, exponential. 2, linear. Default, 1.
SIP Egress Routing Control	The preferred SIP header used for the initial routing decisions during sending of the Initial INVITE

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
Respect SIP URI User Parm	Determines whether or not respect user=phone in p-asserted-id and remote-party-id header. Values: 0 (no) or 1 (yes)
Profile tab	
Originating Line Information	Default originating line information.
Carrier Network ID	Default carrier identifier network identifier.
Carrier Network Type	Default carrier identifier national network type.
Carrier Network ID Plan	Default carrier network national network identifier plan.
Charge Number	Default charge number.
Charge Number NOA	Default charge number nature of address.
Charge Number NPI	Default charge number plan identification.
Charge Origin	Specifies the charge origin. It is up to the network engineer to decide what value of charge origin will be used.
Refer Redirecting NOA	NOA value in ITU SS7 REL message for bind transfer by sip REFER, use internal NOA value.
Directory Number Presentation	Default directory presentation indicator.
Directory Number Screening	Default directory screening indicator.
Directory Number	Default directory number.
Directory Number NOA	Default directory number nature of address.
Directory Number NPI	Default directory number plan identification.
LRN Digit CCrm	An egress trunk group-based property which, if enabled, prefix the destination Country code in CC_DIG for the call to the location routing number and changes the NOA code to international.
LRN Digit CCPrefix	An egress trunk group-based property which, if enabled, prefix the destination Country code in CC_DIG for the call to the location routing number and changes the NOA code to international.
Xmit Calling Name	Allows the Cisco PGW 2200 Softswitch to use the displayname in the INVITE or INFO header for the calling party name.
Refer Redirecting Ind	Redirecting indication in ITU SS7 REL message for bind transfer by sip REFER.
H.323 Tab	
Gateway Ring Back Tone	Indicates if the gateway ring back tone application is supported within the gateway that hosts the trunk group and the connection method that is applied.
Wait for Answer Timer	Duration, in seconds, that the Cisco PGW 2200 Softswitch waits to receive the Answer message after instructing the MGW to apply ring back tone.

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
Wait for Originating SDP Timer	Duration, in seconds, that the Cisco PGW 2200 Softswitch waits for the originating SDP information after transiting the answer message.
Wait for Terminating SDP Time	Duration, in seconds, that the Cisco PGW 2200 Softswitch waits for the terminating SDP information after transiting the answer message.
Allow H.323 Hairpin	Whether to allow the HSI component connected through the EISUP path to make and receive H.323 calls to and from another HSI component.
Fax Support	What fax support, if any, is available on the incoming trunk group.
H.323 Adjunct Link	Identifies an EISUP link that is connected to an H.323 adjunct platform.
H323 Destination	HSI 323 Destination.
Characteristics Tab	
A Number National Prefix	National prefix string to be added to the national dialed number when NOA is enabled.
A Number International Prefix	International prefix string to be added to the international dialed number when NOA is enabled.
B Number National Prefix	B-number national prefix. Determines the prefix for outgoing called numbers when Nature of Address (NOA) is set to National.
B Number International Prefix	Determines the prefix for outgoing called numbers when NOA is set to International.
Apply Country Code to A Number	Controls functionality that applies a country code prefix to the calling party number before sending the call forward.
Apply Country Code to B Number	Controls functionality that applies a country code prefix to the called party number before sending the call forward.
B Digit Country Code to be Removed	Country Code for comparison with Called Party Leading Digits and removing them from the number.
Country Code to be Prefixed	Country code string to be prepended.
A-number Normalization	(European feature; ingress trunk groups) Indicates that A-number (Calling Party Number) normalization is appropriate based on the NOA value and the leading digits of the A-number. Leading digits 0: Remove 0 and set NOA to NATIONAL. 00: Remove 00 and set NOA to INTERNATIONAL.
B-Number Normalization	(European feature; ingress trunk groups) Indicates that B-number (Called Party Number) normalization is appropriate based on the NOA value and the leading digits of the B-number. Leading digits 0: Remove 0 and set NOA to NATIONAL. 00: Remove 00 and set NOA to INTERNATIONAL.

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
DPNSS RO Routing Number Length	For DPNSS - QSIG PR ROO inter-working, the DPNSS RO routing number and call reference are concatenated and in QSIG they are separate fields. An indication of where the divide point is between the fields is an optional parameter in the DPNSS spec. It is therefore necessary to provide a configurable definition of how to split these two fields.
QSIG Tunnel Variant	Allows the QSIG Tunnel capability to be enabled across outbound EISUP (HSI) interfaces and specifies which variant will be used.
SCP Credit Expired Timer	Time period before credit expiry that the SCP is notified.
SSF Credit Expired Timer	Time period before credit expiry that the SSF is notified.
Warning Credit Expired Timer	Time period before credit expiry that a warning tone or announcement is played.
Expiry Warning Tone Type	Type of warning tone.
Expiry Warning Tone Duration	Duration of warning tone.
CLI Select	Whether the Dual CLI feature is supported (default is N).
GW Default Codec String	Ordered series of codec choices, separated by semicolons.
A Digit Country Code to be Removed	A string of digits (maximum of 5 digits) which will be compared to the A-number, and if matches will be removed from the front of the number
H248 Gateway Reserve Value	Enable Megaco to send ADD commands with ReserveValue ON or OFF to indicate MG to reverse resource or not
Own Routing Number	To disable/enable RO service handling at point of interconnect. Value: NULL or a numeric string
Enable CCBS Path Reservation	Support for the Path Reservation option should be configurable against each QSIG destination. In the case of EISUP, this is valid for HSI destinations only.
Disable QSIG Release Method	This property indicates the QSIG release method. An H.225 signaling connection can be released with a single Release Complete message instead of a three-stage QSIG release sequence.
More Tab	
GW Default ATM Profile	Provides an initial list of profiles for use in ATM gateway profiles negotiation per trunkgroup. Default “NULL” type=”string” size min=”1” max=”140”.
Play Announcement	Contains announcement id. 0 means the functionality will be considered as switched off at the trunk group level. Default “0” type=”int”.

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
ATM Connection Type	Populates connection type indicator (ct:) in local connection option parameters. This property is read for both originating and terminating legs of all ATM switched calls. Property Valid Values: 1-->AAL1,2--> AAL1_SDT, 3-->AAL1_UDT, 4-->AAL2, 5-->AAL 3/4, 6-->AAL5. default=”4” type=”int” range min=”1” max=”6”.
B-number Tech Prefix	This property will provide a digit string to be used as a Tech Prefix to the B-number when sending the call forward.type=”string” size min=”1” max=”16”.
Loop Avoidance Support	This property will indicate whether to support Lop Avoidance feature in DPNSS or not. Default 0 not supported, 1 - supported.
Loop Avoidance Counter	Loop Avoidance counter for DPNSS. Min value is 0 and Max 25. default 0.
MWI String OFF	MWI OFF string as used by DPNSS PBX, Default = NULL.
MWI String ON	MWI ON string as used by DPNSS PBX, Default = NULL.
aocDefaultTariffId	Allows configuration of the default tariff ID to be applied when AOCInvokeType is configured for all calls (that is, AOCInvokeType = 2).
AOC Invoke Type	This property is used to configure whether the AOC Supplementary services should be applicable for all calls or for per call basis. (“1” = per call, “2” = All calls). Default = “1”.
midCallCPInterval	A property to allow user to enable/disable mid-call checkpointing and when enabled, it specifies the interval between checkpointing event in the connected state. min = 0, max=60(in minute unit). value zero means disabled.
TG TagLabel	This property identifies name of the trunk group from which a call comes.
TG TagLabel Trans Enable	Indicates how the Cisco PGW 2200 Softswitch handles the ingress trunk group tag label (if present) in the outgoing SIP INVITE message.
Mid-Call Service Customer ID	Customer ID associated with mid-call service. Values are any alphanumeric with length of 4.
Network Type	Base on this property, Cisco PGW 2200 Softswitch will know if the underlying network is ATM or IP. Based on the network type retrieved, various network specific (eg,atm profiles) parameters would be sent down to gateway.

Table 8-17 Properties of Trunk Group Components (continued)

Field Name	Definition
CLI Selection For Code Of Practice3	A new PGW2200 Trunk Group Property called "CliSelectionForCodeOfPractice3" will be introduced in order to provision "per Trunk Group" which level of CLI selection should be employed when sending the Calling Line Identities (such as Calling Party Number or Generic Number parameter) to the succeeding exchange. 0 - Indicates no specific CLI selection. 1 - Indicates Single CLI selection 2 - Indicates Dual (double) CLI selection Property Valid Values: 0 to 2 Property Default Value: 0.
Inhibit Incoming Calling Name Display	This property inhibit the support of incoming calling name display in DPNSS and EISUP(HSI) protocols. "1" = inhibit incoming calling name display. "0" = enable incoming calling name display.
Inhibit Outgoing Calling Name Display	This property inhibit the support of outgoing calling name display in DPNSS and EISUP HSI) protocols. "1" = inhibit outgoing calling name display. "0" = enable outgoing calling name display.
Inhibit Incoming Connected Name Display	Enables or disables the inhibiting of the incoming connected name display in DPNSS and EISUP (HSI) protocols.
Inhibit Incoming Connected Number Display	This property inhibit the support of the incoming connected name display for call transfer in DPNSS and EISUP (HSI) protocols. "1" = inhibit incoming connected name display. "0" = enable incoming connected name display.
Inhibit Outgoing Connected Name Display	This property inhibit the support of the outgoing connected name display for call transfer in DPNSS and EISUP (HSI) protocols. "1" = inhibit outgoing connected name display. "0" = enable outgoing connected name display.
Inhibit Outgoing Connected Number Display	This property inhibit the support of the outgoing connected number display for call transfer in DPNSS and EISUP (HSI) protocols. "1" = inhibit outgoing connected number display. "0" = enable outgoing connected number display.
Orig Label	Origination Location Label
Term Label	Termination Location Label
DTMF Cap	The DTMF capability in A-number or B-number analysis.
ITP Action Request	The indication of the required ITP action
Inhibit Sip From Mapping	Decides the mapping from incoming SIP message to ISUP CLI
Map Redirecting Number Method	Decides the mapping from ISUP Redirecting Number and Original Called Number to outgoing SIP/EISUP message
Default	Default trunk group of SIP/EISUP PATH for incoming call
Propagate Delay Counter	Propagation Delay counter. Indicates the propagation delay value in ms that will be increased if propagation delay is available.

Using Diagnostic Tools

When you need to troubleshoot Cisco PGW 2200 Softswitch node devices, you can use the Diagnostics dialog box to access a variety of diagnostic tools. The Diagnostics dialog box provides shortcuts for common diagnostics that normally require using UNIX or MML commands. For example, you can use the ping application to determine if a device is not responding because of an SNMP agent failure or a true network connectivity failure.

After the command is run, the results in the Action Result window displays. If the diagnostic command generates more information than can be shown in the Action Result window, the results are written to a file and the name of that file displays. The file can be retrieved and analyzed by external systems.

Note Many diagnostic commands are time consuming to run. Take this into account when planning your use of diagnostic tools.

Related Topics

The "Using Cisco MNM To Launch Device Configuration" section on page 8-4 describes how to use various configuration and diagnostic tools such as Cisco VSPT, CiscoView, and launching Telnet (or ssh) or X-windows to a device.

The "Using the MGC Toolbar" section on page 8-67 describes how to use the Cisco PGW 2200 Softswitch Toolbar, a diagnostic component of the Cisco PGW 2200 Softswitch software.

Use the following procedure to run diagnostics on a Cisco PGW 2200 Softswitch node device:

Step 1 In the Map Viewer window, select the desired device and right-click.

Note Alternatively, if you have an Accounts, Properties, States, or File Systems dialog box open for the device, you can use the dialog box Navigation menu to open the Diagnostics dialog box.

Step 2 Choose **[Device Name] Diagnostics** or **Tools > [Device Name] Diagnostics**.

The Diagnostics dialog box for the selected device opens.

Note You can use the Navigation menu to open the Properties, File Systems (where applicable), Accounts, or States dialog box for the selected component.

Step 3 Select the desired diagnostic option. For details, see the "About the Diagnostics Dialog Box" section on page 8-66.

You are asked to confirm the operation.

Step 4 Click **Yes** to confirm or **No** if you decide not to continue.

An Action Report box displays containing the results of the diagnostic operation or the name of the file to which the results have been saved.

Step 5 Review the results, and then click **Close** to close the Action Report box.

About the Diagnostics Dialog Box

The Diagnostics dialog box lets you run common UNIX and MML diagnostic commands from Cisco MNM without knowing any UNIX or MML or having to launch an X window to connect to the device.

For the Cisco PGW 2200 Softswitch host and the HSI host, the dialog box contains two tabs: the Diagnostics tab and the Advanced tab, which provides status check functions. For all other devices, the dialog box contains the Diagnostics option only.

The Diagnostics dialog box includes a Navigation menu that allows navigating directly to Properties, Accounts, File Systems (where applicable), or States dialog boxes for the selected component, without having to reselect the component in the Map Viewer. See Chapter 3, "Getting Started with Cisco MNM," "Navigating between Dialog Boxes for a Given Component" on page 31 for details.

Table 8-18 describes the diagnostic tools available from the Diagnostics dialog box General tab. Table 8-19 describes the tools available for the Cisco PGW 2200 Softswitch host from its Diagnostics dialog box Advanced tab. Table 8-20 describes the tools available for the Cisco HSI host from its Diagnostics dialog box Advanced tab.

Table 8-18 Cisco PGW 2200 Softswitch Diagnostics Dialog Box General Tab

Diagnostic Tool	Command	Available Devices	Description
IP Ping	—	Cisco PGW 2200 Softswitch host, BAMS, Cisco ITP-L, Cisco LAN Switch	Performs standard UNIX ping application on the device to see if its management interface is reachable
SNMP Ping	—	All IP devices	Makes an SNMP request to the device to determine if its SNMP agent is running and accessible
Traceroute	—	All IP devices	Determines the route that packets take from Cisco MNM to the device's management interface
Alarm Log	rtrv-alms	Cisco PGW 2200 Softswitch host, HSI server, and BAMS	Displays and saves current alarm log information
Process Status	rtrv-softw:all	Cisco PGW 2200 Softswitch host, HSI server, and BAMS	Displays and saves current status of all device processes
System Log	RTRV-FILES:: /acec/files/syslog	BAMS	Displays the BAMS system log
Cross-Device Audit	prov-rtrv:trunkgrp	BAMS	Audits BAMS trunk groups against the Cisco PGW 2200 Softswitch host configuration, producing a list of discrepancies, if any

Table 8-19 Cisco PGW 2200 Softswitch Diagnostics Dialog Box Advanced Tab

Option	MML Command[1]	Description
1	rtrv-admin-state	Retrieves the administrative state for all (applicable) components
2	rtrv-dest	Retrieves state information for all DPCs[2] and signaling paths
3	rtrv-lnk-ctr	Retrieves the service state of all linksets
4	rtrv-lssn	Retrieves the state of all local SSNs
5	rtrv-ne-health	Retrieves CPU occupancy and disk utilization
6	rtrv-rssn	Retrieves the state of all remote SSNs[3]
7	rtrv-rte	Retrieves the SS7 routes for all point codes
8	rtrv-sc	Retrieves the state of all signaling channels and linksets
9	rtrv-tc	Retrieves the state of bearers for all signaling paths
10	rtv-association	Retrieves the state of all associations
11	rtrv-dest:all	Retrieves the state of all DPNSS paths
12	rtrv-lics	Retrieves the license status
13	rtrv-h248:cntxs:sigpath=”all”,cntxid=”all”	Retrieves all the H.248 context information
14	rtrv-ovld	Retrieves information on overload level and number of messages in a queue
15	rtrv-loclabel	Retrieves location labels information

1. The MML command invoked by the Status Check options, which runs in the background
2. Destination point codes
3. Subsystem numbers

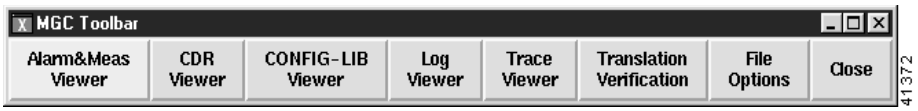
Table 8-20 Cisco HSI Host Diagnostics Dialog Box, Advanced Tab

Option	Description
Configuration	Displays current configuration of the HSI host using the rtrv-config command
HSI Link Status	Displays current status of the IP/EISUP links
HSI Host Status	Displays current status of the HSI host
HSI License Status	Display current status of the license

Using the MGC Toolbar

From Cisco MNM, you can access the MGC toolbar (see Figure 8-2), a standalone diagnostic component of the Cisco PGW 2200 Softswitch software. The toolbar contains a suite of tools for viewing diagnostic and troubleshooting information.

Figure 8-2 MGC Toolbar



From the MGC Toolbar you can access these viewers:

- Alarm and Measurement Viewer—Search and view alarms and system statistics.
- Call Detail Record (CDR) Viewer—Search and view call detail records (CDRs).
- CONFIG-LIB Viewer—Manage the contents of the configuration library.
- Log Viewer—Search and view system logs.
- Trace Viewer—View and navigate through call trace output.
- Translation Verification—View called number analysis results.
- File Options—A tool to manage these toolkit files.

Instructions for using the toolbar are provided in Chapter 3, "Using the Cisco MGC Viewer Toolkit" section in the *Cisco PGW 2200 Softswitch Release 9 Operations, Maintenance, and Troubleshooting Guide* at

http://www.cisco.com/en/US/docs/voice_ip_comm/pgw/9/maintenance/guide/omtguide.html