



Accessing SGM Data from a Web Browser

This chapter provides information about accessing SGM data from the SGM server home page, using a Web browser.

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Accessing SGM Data from the SGM Server Home Page

From the SGM Server Home Page, you can access many Web pages containing SGM data, including server status, network status, installation logs, message logs, product documentation, Cisco.com, and other information about SGM. You can also download the SGM clients.

To access the SGM Server Home page, use one of the following procedures:

- Select **Server > Homepage** from the SGM Main Menu.
- Enter the following URL in a Web browser:

http://server_name:1774

Where *server_name* is the name or IP address of the server on which the SGM server is running and *1774* is the Web port being used by SGM. (**1774** is the default port number.) If you do not know the name or Web port of the SGM Web Server, contact the system administrator who installed the SGM server software.

- Select **Home** from the menu bar of any of the SGM Web pages.

The SGM Server Home Page ([Figure 7-1](#)) is displayed.

Figure 7-1 SGM Server Home Page



The rest of this chapter provides detailed information about the SGM information you can access from the SGM Server Home Page.

Modifying SGM Web Output (Solaris Only)

SGM enables you to modify the following aspects of its Web output:

- To control how often, in seconds, SGM updates certain Web output, use the **sgm weblogupdate** command. The valid range is 1 second to an unlimited number of seconds. The default value is 300 seconds (5 minutes).
- To set the maximum number of rows for SGM ASCII Web output, such as displays of detailed debugging information, use the **sgm maxascirows** command. The valid range is 1 row to an unlimited number of rows. The default value is 6000 rows.
- To set the maximum number of rows for SGM HTML Web output, such as displays of statistics reports, status change messages, or SNMP trap messages, use the **sgm maxhtmlrows** command. The valid range is 1 row to an unlimited number of rows. The default value is 500 rows.
- To specify whether SGM is to show real signaling point names or display names in Web pages, enter the **sgm webnames** command:
 - To show the real DNS names of signaling points, as discovered by SGM, enter **sgm webnames real**. This is the default setting.
 - To show display names, enter **sgm webnames display**. Display names are new names that you specify for signaling points. For more information about display names, see the [“Editing a Node” section on page 3-124](#).
- To specify whether SGM is to display send and receive utilization for linksets and links as percentages or in Erlangs in Web pages, enter the **sgm webutil** command:
 - To display utilization as a percentage, enter **sgm webutil percent**. This is the default setting.
 - To show display utilization in Erlangs, enter **sgm webutil erlangs**.

See the [“Working with SGM Statistics Reports” section on page 3-334](#) for more information on send and receive utilization for linksets and links.

Each of these commands requires you to be logged in as the root user, as described in the [“Becoming the Root User \(Solaris Only\)” section on page 3-2](#), or as a super user, as described in the [“Specifying a Super User \(Solaris Only\)” section on page 4-22](#).

Viewing Network Status and Statistics Information for SGM

You can view the following SGM network status and statistics information from the SGM Server Home Page:

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- [Viewing Information About Signaling Points, page 7-22](#)
- [Viewing Information About Linksets, page 7-34](#)
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- [Viewing Statistics Report Logs, page 7-99](#)

Viewing Information About Nodes

SGM enables you to view the following information about nodes:

- [Viewing the Network Status Node Dashboard, page 7-6](#)
- [Viewing ITP Node Status, page 7-6](#)
- [Viewing ITP Node Details, page 7-10](#)
- [Viewing ITP Node IOS Versions, page 7-16](#)
- [Viewing ITP Node Information: CPU Processes, page 7-17](#)
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Viewing the Network Status Node Dashboard

The SGM Node Dashboard page lists all discovered nodes, and provides links to messages and metrics for each node.

To access the SGM Node Dashboard page, select **Network Status Dashboard** from the SGM Server Home Page, then click **Node Dashboard**.

To see status change messages and SNMP trap messages associated with a given node, click **Messages**.

To see network status metrics associated with a given node, click **Metrics**.

To see detailed information about all CPU processes associated with a given node, click **ITP CPU Process**.

To see all messages in the ITP system log associated with a given node, click **Syslog**.

To see all trap settings for a given node, as well as all hosts and port numbers to which the node sends traps, click **Trap Host Configuration**. If you have implemented SGM User-Based Access, this option is available to users with authentication level System Administrator (Level 5) and higher.

You can sort the table based on the information in the **Nodes** column. See the [“Resizing, Sorting, and Hiding Table Columns”](#) section on page 3-279 for more details.

Viewing ITP Node Status

The SGM ITP Node Status page displays information about all discovered nodes, including their names, events, status, and other important information.

To access the SGM ITP Node Status page, select **ITP Node Status** from the SGM Server Home Page. SGM displays the SGM ITP Node Status page ([Figure 7-2](#)).

Figure 7-2 SGM ITP Node Status Page

SGM Server: sgm-sun28.cisco.com

Update Interval: 180 Seconds
Last Update: 03/20/2003 18:49:21

Node Name	Status	Status Reason	CLI Code	Device Type
sgm-sun28	Unknown	SNMP Timeout		IPDevice
sgm-75-80c	Warning	Link Inactive	cli_7580c	Cisco7507
sgm-26-61d	Warning	Link Inactive	cli_2661d	Cisco2651
sgm-26-61c	Warning	Link Inactive	cli_2661c	Cisco2651
sgm-26-63b	Warning	Linkset Inactive	63b_node	Cisco2651
sgm-26-63a	Warning	Linkset Inactive		Cisco2651
sgm-26-63c	Warning	Link Remote Interface Inactive	cli_2663c	Cisco2651
sgm-26-63d	Warning	Link Remote Interface Inactive	cli_2663d	Cisco2651
172.18.16.94	Warning	Linkset Inactive		Cisco2651XM
sgm-26-63e	Warning	Link Remote Interface Inactive		Cisco2651XM
sgm-75-70a	Warning	Linkset Inactive		Cisco7507mx
sgm-75-70b	Warning	Link Inactive		Cisco7507mx
sgm-75-70c	Warning	Link Receive Utilization Threshold exceeded		Cisco7507

You can sort the SGM ITP Node Status table based on the information in one of the columns. See the [“Resizing, Sorting, and Hiding Table Columns”](#) section on page 3-279 for more details.

The SGM ITP Node Status page displays the following information for each node:

- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node Name**—DNS name of the node, as discovered by SGM, or the new name that you specified for the node. For more information, see the [“Editing a Node”](#) section on page 3-124. To see detailed information for the node, click the node name.

- **Status**—Current status of the node, with a color-coded background. Possible values are:
 - **Active (green)**—The node is currently fully functional.
 - **Discovering (gray)**—The node is being discovered, and SNMP queries have been sent to the device.
 - **Polling (gray)**—The node is being polled.
 - **Unknown (red)**—The node failed to respond to an SNMP request. SGM sets all associated nodes, linksets, and links to **Unknown**.
 - **Unmanaged (gray)**—One of the following situations exists:
 - The node is known indirectly by SGM. In other words, SGM knows the device exists but there is no known SNMP stack on the device for SGM to query.
 - An SGM user has set the node to **Unmanaged** status, to prevent SGM from polling the node.

If the associated signaling points are referenced via linksets to other signaling points, SGM automatically sets all associated signaling points to **Unmanaged**, and deletes all associated linksets and links, as well as all linksets and links that reference the node as an adjacent node.

If the associated signaling points are not referenced to other signaling points, SGM automatically deletes the signaling points, all associated linksets and links, and all linksets and links that reference the node as an adjacent node.
 - **Waiting (gray)**—The node is in the Discovery queue but is not currently being discovered.
 - **Warning (yellow)**—The active, but one or more associated nodes, linksets, or links is in **Failed**, **Unavailable**, **Unknown**, or **Warning** status and is not flagged as **Ignored**.
- **Status Reason**—Reason for the current status of the node. Possible values are:
 - **None**
 - **SGM Restart**
 - **Unsupported Configuration**
 - **Unconfigured**

- **SNMP Timeout**
- **Device is unreachable, possibly wrong community string**
- **Not ITP Device**
- **Not Configured for ITP**
- **MIB Data Error**
- **SNMP Exception**
- **SignalingPoint Inactive**
- **Linkset Inactive**
- **Link Congested**
- **Link Send Utilization Threshold Exceeded**
- **Link Receive Utilization Threshold Exceeded**
- **Link Local Interface Inactive**
- **Link Remote Interface Inactive**
- **Link Inactive**

If the cell is too small to show all of the status reason, place the cursor over the cell to see the full status reason in a mouse over help popup.

The status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude is displayed.

If the status reason is **Unsupported Configuration**, correct the configuration and enter the **sgm cleandiscover** command to delete all current network data and begin a clean discovery of the ITP network. If the status reason is still **Unsupported Configuration**, enter the **sgm clean** command to restore the SGM server to a “clean” state, such as would exist after a new installation of SGM. For more information on the use of these commands, see the “[SGM Commands and Descriptions](#)” section on page B-2.

The “[Viewing Detailed Information for a Link](#)” section on page 3-175 displays additional information about the causes of link failures.

The “[Viewing Detailed Information for a Linkset](#)” section on page 3-42 displays additional information about the causes of linkset failures.

- **CLLI Code**—COMMON LANGUAGE Location Identification Code for the node. A CLLI code is a standardized 11-character identifier that uniquely identifies the geographic location of the node. If the node has no CLLI code configured, this field is blank.
- **Device Type**—Device type of the node. Possible values are:
 - **Cisco2650**—Cisco 2650 series router
 - **Cisco2650XM**—Cisco 2650XM series router
 - **Cisco2651**—Cisco 2651 series router
 - **Cisco2651XM**—Cisco 2651XM series router
 - **Cisco7204**—Cisco 7204 series router
 - **Cisco7204VXR**—Cisco 7204VXR series router
 - **Cisco7206**—Cisco 7206 series router
 - **Cisco7206VXR**—Cisco 7206VXR series router
 - **Cisco7507**—Cisco 7507 series router
 - **Cisco7507mx**—Cisco 7507mx series router
 - **Cisco7507z**—Cisco 7507z series router
 - **Cisco7513**—Cisco 7513 series router
 - **Cisco7513mx**—Cisco 7513mx series router
 - **Cisco7513z**—Cisco 7513z series router
 - **IPDevice**—IP device, other than those listed above. You can assign this icon to an unknown node if you know that it is an IP device.
 - **Unknown**—SGM is unable to determine the device type.

Viewing ITP Node Details

The SGM Node Details page displays detailed information about each discovered node, including its CLLI code, point code, status, and other information.

To access the SGM Node Details page, click a node name in a Web page. SGM displays the SGM Node Details page ([Figure 7-3](#)).

Figure 7-3 SGM Node Details Page

The screenshot shows a Netscape browser window displaying the 'SGM - Node Details' page for node 'sgm-75-80e'. The page has a navigation bar with links: Home, Node Status, Signaling Point Status, Linkset Status, Node IOS Versions, and Help. The main content area is titled 'SGM - Node Details' and 'sgm-75-80e'. It includes the SGM Server name 'sgm-sun28.cisco.com', an update interval of 180 seconds, and a last update time of 03/20/2003 18:49:48. Below this is a table with the following data:

IP Address or DNS HostName	sgm-75-80e.cisco.com	Messages	Metrics	Syslog	ITP CPU Process	Trap Host Configuration
Status	Active	Last State Change		03/20/2003 06:44:38		
Status Reason	None					
Display Name		First Discovered		03/12/2003 17:04:53		
Device Type	Cisco7507	MIB Level		ITP MB10		
ITP Uptime	7 Days, 5 Hours 39 Mins 33 Secs	Reboot Reason		reload		
ITP Version String	Cisco Internetwork Operating System Software IOS (tm) RSP Software (RSP-ITPV-M), Experimental Version 12.2(20030301:232824) [asifp-THROTTLE_V122_4_MB10_02 105] Copyright (c) 1986-2003 by cisco Systems, Inc. Compiled Sat 01-Mar-03 19:07 by asifp					

The SGM Node Details page displays the following information for the selected node:

- **Node Name (in header)**—DNS name of the node, as discovered by SGM.
- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **IP Address or DNS Hostname**—DNS name of the node, as discovered by SGM.
- **Messages**—Opens the Network Status: Last X Status Change and Trap Messages Web page for the node.
- **Metrics**—Opens the Network Status Messages: Messages Web page for the node.
- **Syslog**—(ITP nodes only) Opens the SGM ITP Syslog Web page for the node.

- **ITP CPU Process**—(ITP nodes only) Opens the SGM CPU Processes Web page for the node.
- **Trap Host Configuration**—(ITP nodes only) Opens the SGM Trap Host Configuration Web page for the node. If you have implemented SGM User-Based Access, this option is available to users with authentication level System Administrator (Level 5) and higher.
- **Status**—Current status of the node, with a color-coded background. Possible values are:
 - **Active (green)**—The node is currently fully functional.
 - **Discovering (gray)**—The node is being discovered, and SNMP queries have been sent to the device.
 - **Polling (gray)**—The node is being polled.
 - **Unknown (red)**—The node failed to respond to an SNMP request. SGM sets all associated nodes, linksets, and links to **Unknown**.
 - **Unmanaged (gray)**—One of the following situations exists:
 - The node is known indirectly by SGM. In other words, SGM knows the device exists but there is no known SNMP stack on the device for SGM to query.
 - An SGM user has set the node to **Unmanaged** status, to prevent SGM from polling the node.

If the associated signaling points are referenced via linksets to other signaling points, SGM automatically sets all associated signaling points to **Unmanaged**, and deletes all associated linksets and links, as well as all linksets and links that reference the node as an adjacent node.

If the associated signaling points are not referenced to other signaling points, SGM automatically deletes the signaling points, all associated linksets and links, and all linksets and links that reference the node as an adjacent node.
 - **Waiting (gray)**—The node is in the Discovery queue but is not currently being discovered.
 - **Warning (yellow)**—The active, but one or more associated nodes, linksets, or links is in **Failed**, **Unavailable**, **Unknown**, or **Warning** status and is not flagged as **Ignored**.
- **Last State Change**—Date and time that the status of the link last changed.

- **Status Reason**—Reason for the current status of the node. Possible values are:
 - **None**
 - **SGM Restart**
 - **Unsupported Configuration**
 - **Unconfigured**
 - **SNMP Timeout**
 - **Device is unreachable, possibly wrong community string**
 - **Not ITP Device**
 - **Not Configured for ITP**
 - **MIB Data Error**
 - **SNMP Exception**
 - **SignalingPoint Inactive**
 - **Linkset Inactive**
 - **Link Congested**
 - **Link Send Utilization Threshold Exceeded**
 - **Link Receive Utilization Threshold Exceeded**
 - **Link Local Interface Inactive**
 - **Link Remote Interface Inactive**
 - **Link Inactive**

If the cell is too small to show all of the status reason, place the cursor over the cell to see the full status reason in a mouse over help popup.

The status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude is displayed.

If the status reason is **Unsupported Configuration**, correct the configuration and enter the **sgm cleandiscover** command to delete all current network data and begin a clean discovery of the ITP network. If the status reason is still **Unsupported Configuration**, enter the **sgm clean** command to restore the SGM server to a “clean” state, such as would exist after a new installation of SGM. For more information on the use of these commands, see the “[SGM Commands and Descriptions](#)” section on page B-2.

The “[Viewing Detailed Information for a Link](#)” section on page 3-175 displays additional information about the causes of link failures.

The “[Viewing Detailed Information for a Linkset](#)” section on page 3-42 displays additional information about the causes of linkset failures.

- **Display Name**—New name that you specified for the node. If the node has no display name, this field is blank. For more information, see the “[Editing a Node](#)” section on page 3-124.
- **First Discovered**—Date and time that the node was first discovered by SGM.
- **Device Type**—Device type of the node. Possible values are:
 - **Cisco2650**—Cisco 2650 series router
 - **Cisco2650XM**—Cisco 2650XM series router
 - **Cisco2651**—Cisco 2651 series router
 - **Cisco2651XM**—Cisco 2651XM series router
 - **Cisco7204**—Cisco 7204 series router
 - **Cisco7204VXR**—Cisco 7204VXR series router
 - **Cisco7206**—Cisco 7206 series router
 - **Cisco7206VXR**—Cisco 7206VXR series router
 - **Cisco7507**—Cisco 7507 series router
 - **Cisco7507mx**—Cisco 7507mx series router
 - **Cisco7507z**—Cisco 7507z series router
 - **Cisco7513**—Cisco 7513 series router
 - **Cisco7513mx**—Cisco 7513mx series router
 - **Cisco7513z**—Cisco 7513z series router
 - **IPDevice**—IP device, other than those listed above. You can assign this icon to an unknown node if you know that it is an IP device.
 - **Unknown**—SGM is unable to determine the device type.

- **MIB Level**—MIB conformance level used by the ITP, such as **ITP MB5**.

**Note**

ITP Version String and **MIB Level** might not have a one-to-one correspondence, because multiple ITP versions can use the same MIB level if there are no changes to the MIBs between versions. For example, ITP versions **12.2(4)MB5** and **12.2(4)MB6** both use MIB level **ITP MB5**.

- **ITP Uptime**—Time the node has been up, in weeks, days, hours, minutes, and seconds.
- **Reboot Reason**—Reason for the last reboot of the node.
- **ITP Version String**—Version of IOS that is installed on the ITP.
- **Primary SNMP Address**—IP address of the node, used by SNMP to poll the node. (There might be other IP addresses on the node that are not the primary SNMP address.)
- **Last Polled Address**—Last IP address that was polled for this node.
- **IP Address List**—List of all IP addresses associated with this node, including the primary SNMP address and all backup IP addresses.
- **CLLI Code**—COMMON LANGUAGE Location Identification Code for the node. A CLI code is a standardized 11-character identifier that uniquely identifies the geographic location of the node. If the node has no CLI code configured, this field is blank.
- **Avg. SGM Poll Response (secs)**—Average time, in seconds, taken by this node to respond to SGM poll requests. For a non-ITP node, this field is left blank.
- **Last SGM Poll Response (secs)**—Time, in seconds, taken by this node to respond to the last SGM poll request. For a non-ITP node, this field is left blank.
- **Last Full ITP Poll**—Date and time of the last full poll of the node for ITP-related MIBs (as opposed to a demand poll for just one linkset's worth of data). For a non-ITP node, this field is left blank.
- **Note Timestamp**—Date and time the note associated with this node was last updated. If there is no note associated with this node, this field is blank.
- **Note**—Note associated with this node. If there is no note associated with this node, this field is blank.

- **Internal ID**—Internal ID of the node. The internal ID is a unique ID for every event, link, linkset, signaling point, and node, assigned by SGM for its own internal use. It can also be useful when the Cisco TAC is debugging problems.
- **Signaling Points**—Name and status of all signaling points associated with this node. To see detailed information for a signaling point, click the signaling point name.

Viewing ITP Node IOS Versions

The SGM ITP Node IOS Versions page displays the version of IOS installed on each ITP node.

To access the SGM ITP Node IOS Versions page, use one of the following procedures:

- Select **View > Report > ITP Node IOS Versions** from the SGM Main Menu.
- Select **ITP Node IOS Versions** from the SGM Server Home Page.

You can sort the SGM ITP Node IOS Versions table based on the information in one of the columns. See the [“Resizing, Sorting, and Hiding Table Columns” section on page 3-279](#) for more details.

The SGM ITP Node IOS Versions page displays the following information for each ITP node:

- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page. **None** means the page is not automatically updated.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—DNS name of the node, as discovered by SGM, or the new name that you specified for the node. For more information, see the [“Editing a Node” section on page 3-124](#).
- **IOS Version**—Version of IOS installed on the node.

- **Recognized MIB Level**—MIB conformance level used by the ITP, such as ITP MB5.

**Note**

IOS Version and **Recognized MIB Level** might not have a one-to-one correspondence, because multiple ITP versions can use the same MIB level if there are no changes to the MIBs between versions. For example, ITP versions **12.2(4)MB5** and **12.2(4)MB6** both use MIB level **ITP MB5**.

- **Device Type**—Device type of the node. Possible values are:
 - **Cisco2650**—Cisco 2650 series router
 - **Cisco2650XM**—Cisco 2650XM series router
 - **Cisco2651**—Cisco 2651 series router
 - **Cisco2651XM**—Cisco 2651XM series router
 - **Cisco7204**—Cisco 7204 series router
 - **Cisco7204VXR**—Cisco 7204VXR series router
 - **Cisco7206**—Cisco 7206 series router
 - **Cisco7206VXR**—Cisco 7206VXR series router
 - **Cisco7507**—Cisco 7507 series router
 - **Cisco7507mx**—Cisco 7507mx series router
 - **Cisco7507z**—Cisco 7507z series router
 - **Cisco7513**—Cisco 7513 series router
 - **Cisco7513mx**—Cisco 7513mx series router
 - **Cisco7513z**—Cisco 7513z series router

Viewing ITP Node Information: CPU Processes

The SGM CPU Processes page displays detailed information about all CPU processes associated with the selected node.

To access the SGM CPU Processes page, right-click a node in a window, then select **Drill Down > Show ITP CPU Processes** from the right-click menu. (This option is not available if the node is in **Unknown** or **Unmanaged** status.)

The SGM CPU Processes page displays the following information for the selected node:

- **Node Name (in header)**—Name of the node for which CPU processes are being displayed.
- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the node for which CPU processes are being displayed. To see detailed information for the node, click the node name.
- **CPU**—Number of the CPU for which processes are being displayed.
- **PID**—Process identifier.
- **Name**—Name of the process.
- **Time Created**—Total time since the process was created.
- **Total Runtime**—CPU time the process has used.
- **Times Invoked**—Number of times the process has been invoked.
- **Average Runtime**—Average CPU time for each process invocation.
- **5 Sec %**—Average CPU utilization percentage for the node over the last 5 seconds.
- **1 Min %**—Average CPU utilization percentage for the node over the last minute.
- **5 Min %**—Average CPU utilization percentage for the node over the last 5 minutes.
- **Priority**—Process queue priority. Possible values are:
 - **Low**
 - **Normal**
 - **High**
 - **Critical**

Viewing ITP Node Information: Syslog Messages

From the SGM ITP Syslog page, you can view all messages in the ITP system log for the selected node.

To access the SGM ITP Syslog page, select **Syslog** in the SGM Node Details page. (This option is not available if the node is in **Unknown** or **Unmanaged** status.) SGM displays the SGM ITP Syslog page, populated with the most recent syslog messages for the selected node.

The SGM ITP Syslog table displays the following information for the selected node:

- **Node Name (in header)**—Name of the node for which syslog messages are being displayed.
- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page. **None** means the page is not automatically updated.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the node for which syslog messages are being displayed. To see detailed information for the node, click the node name.
- **Timestamp**—Time since ITP reboot of the syslog message.
- **Severity**—Severity of the syslog message. Possible values are:
 - **Alert**—Messages that require immediate action.
 - **Critical**—Critical conditions.
 - **Debug**—Debug messages, log FTP commands, and WWW URLs.
 - **Emergency**—System unusable messages.
 - **Error**—Error messages.
 - **Info**—Information messages.
 - **Notice**—Normal but significant conditions.
 - **Warning**—Warning messages.
- **Facility**—Name of the facility that generated the syslog message, such as SYS, SNMP, CS7MTP3, or CS7PING.

- **Name**—Short text identifier for the message type. A facility name in conjunction with a message name uniquely identifies a syslog message type.
- **Message**—Text of the syslog message.

Viewing ITP Node Information: Trap Host Configuration

The SGM CPU Processes page displays detailed information about all trap settings associated with the selected node.

If you have implemented SGM User-Based Access, this option is available to users with authentication level System Administrator (Level 5) and higher.

To access the SGM Trap Host Configuration page, select **Trap Host Configuration** in the SGM Node Details page. (This option is not available if the node is in **Unknown** or **Unmanaged** status.) SGM displays the SGM ITP Syslog page, populated with the most recent syslog messages for the selected node.

The SGM Trap Host Configuration page displays the following information for the selected node:

- **Node Name (in header)**—Name of the node for which trap settings are being displayed.
- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the node for which trap settings are being displayed. To see detailed information for the node, click the node name.
- **Release 2 Trap Settings**—Indicates whether the following ITP release 12.2(4)MB4 trap settings are enabled:
 - **SCTP Remote Address Change**
 - **Linkset State Change**
 - **Link State Change**
 - **Link Congestion State Change**
 - **Link Receive Utilization Change**
 - **Link Send Utilization Change**

- **Route State Change**
- **GTT MAP State Change**
- **Release 3 Trap Settings**—Indicates whether the following ITP release 12.2(4)MB5 through 12.2(4)MB9a trap settings are enabled:
 - **ASP State Change**
 - **AS State Change**
 - **SGMP State Change**

This column might not be displayed if the ITP does not support ITP release 12.2(4)MB5 through 12.2(4)MB9a traps.

- **Release 4 Trap Settings**—Indicates whether the following ITP release 12.2(4)MB10 trap settings are enabled:
 - **Linkset State Change**
 - **Link State Change**
 - **Link Congestion State Change**
 - **Link Receive Utilization Change**
 - **Link Send Utilization Change**
 - **Route Destination State Change**
 - **Route Mgmt. State Change**
 - **Route Table Load**
 - **GTT MAP State Change**
 - **GTT Table Load**
 - **ASP Congestion Change**
 - **SGMP Congestion Change**

This column might not be displayed if the ITP does not support ITP release 12.2(4)MB10 traps.

- **IP Address**—IP address of a host to which the node sends traps.
- **Port**—Port to which the node sends traps.

- **Trap Version**—Trap version sent to this IP address and port.
- **Community String**—SNMP community name used by the node for read access to the information maintained by the SNMP agent on the ITP.

Viewing Information About Signaling Points

SGM enables you to view the following information about signaling points:

- [Viewing the Network Status Signaling Point Dashboard, page 7-22](#)
- [Viewing ITP Signaling Point Status, page 7-23](#)
- [Viewing ITP Signaling Point Details, page 7-26](#)
- [Viewing ITP Signaling Point Information: Access Lists, page 7-29](#)
- [Viewing ITP Signaling Point Information: GTT MAP Status, page 7-30](#)
- [Viewing ITP Signaling Point Information: MTP3 Event Log Messages, page 7-31](#)
- [Viewing ITP Signaling Point Information: Route Detail, page 7-32](#)

Viewing the Network Status Signaling Point Dashboard

The SGM Signaling Point Dashboard page lists all discovered signaling points, and provides links to messages and metrics for each signaling point.

To access the SGM Signaling Point Dashboard page, select **Network Status Dashboard** from the SGM Server Home Page, then click **Signaling Point Dashboard**.

To see status change messages and SNMP trap messages associated with a given signaling point, click **Messages**.

To see network status metrics associated with a given signaling point, click **Metrics**.

To see all access lists associated with a given signaling point, click **Access Lists**.

To see detailed information about routes associated with a given signaling point, click **Route Detail**.

To see detailed information about all GTT MAPs associated with a given signaling point, click **GTT MAP Status**.

To see detailed information about all MTP events associated with a given signaling point, click **MTP Event Log**.

You can sort the table based on the information in the **Signaling Points** column. See the [“Resizing, Sorting, and Hiding Table Columns”](#) section on page 3-279 for more details.

Viewing ITP Signaling Point Status

The SGM ITP Signaling Point Status page displays information about all discovered signaling points, including their names, status, and other important information.

To access the SGM ITP Signaling Point Status page, select **ITP Signaling Point Status** from the SGM Server Home Page.

The SGM ITP Signaling Point Status page displays the following information for each signaling point:

- **Server Name (in header)**—Name of the SGM server associated with the signaling point.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—DNS name of the node associated with the signaling point, as discovered by SGM, or the new name that you specified for the node. For more information, see the [“Editing a Node”](#) section on page 3-124. To see detailed information for the node, click the node name.
- **SP Name**—Name of the signaling point, as discovered by SGM, or the new name that you specified for the signaling point. For more information, see the [“Editing a Signaling Point”](#) section on page 3-162. To see detailed information for the signaling point, click the signaling point name.

- **Status**—Current status of the signaling point. Possible values are:
 - **Active (green ball)**—The signaling point is currently fully functional.
 - **Unknown (red ball)**—One of the following conditions occurred:
 - SGM cannot poll the node associated with the signaling point. SGM sets all signaling points, linksets, and links associated with the node to **Unknown**.
 - The signaling point has been unconfigured on the ITP, or the configuration is incomplete. At the next poll, SGM determines that the signaling point does not exist, and sets the signaling point and all associated linksets and links to **Unknown**.
 - **Unmanaged (gray ball)**—An SGM user has set the signaling point to **Unmanaged** status, to prevent SGM from polling the signaling point. SGM automatically deletes all associated links and linksets.
 - **Warning (yellow ball)**—The signaling point is active, but one or more associated links or linksets is in **Failed, Unavailable, Unknown, or Warning** status and is not flagged as **Ignored**.
- **Status Reason**—Reason for the current status of the signaling point. Possible values are:
 - **None**
 - **SGM Restart**
 - **Unsupported Configuration**
 - **Unconfigured**
 - **SNMP Timeout**
 - **Device is unreachable, possibly wrong community string**
 - **Not ITP Device**
 - **Not Configured for ITP**
 - **MIB Data Error**
 - **SNMP Exception**
 - **SignalingPoint Inactive**
 - **Linkset Inactive**
 - **Link Congested**

- **Link Send Utilization Threshold Exceeded**
- **Link Receive Utilization Threshold Exceeded**
- **Link Local Interface Inactive**
- **Link Remote Interface Inactive**
- **Link Inactive**

If the cell is too small to show all of the status reason, place the cursor over the cell to see the full status reason in a mouse over help popup.

The status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude is displayed.

If the status reason is **Unsupported Configuration**, correct the configuration and enter the **sgm cleandiscover** command to delete all current network data and begin a clean discovery of the ITP network. If the status reason is still **Unsupported Configuration**, enter the **sgm clean** command to restore the SGM server to a “clean” state, such as would exist after a new installation of SGM. For more information on the use of these commands, see the “[SGM Commands and Descriptions](#)” section on page B-2.

The “[Viewing Detailed Information for a Link](#)” section on page 3-175 displays additional information about the causes of link failures.

The “[Viewing Detailed Information for a Linkset](#)” section on page 3-42 displays additional information about the causes of linkset failures.

- **Point Code**—Primary point code of the signaling point.
- **Secondary Point Code**—Secondary point code of the signaling point. If the signaling point has no secondary point code, this field is blank.
- **Capability Point Code**—Capability point code of the signaling point. A capability, or alias, point code is one that is shared by more than one signaling point, each of which is also assigned a “real” point code. If the signaling point has no capability point code, this field is blank.

Viewing ITP Signaling Point Details

The SGM Signaling Point Details page displays detailed information about each discovered signaling point, including its point code, status, and other information.

To access the SGM Signaling Point Details page, click a signaling point name in the SGM ITP Node Status, SGM ITP Linkset Status, or SGM ITP Node IOS Versions page.

The SGM Signaling Point Details page displays the following information for the selected signaling point:

- **Signaling Point Name (in header)**—Name of the signaling point, as discovered by SGM, or the new name that you specified for the signaling point. For more information, see the [“Editing a Signaling Point” section on page 3-162](#).
- **Server Name (in header)**—Name of the SGM server associated with the signaling point.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Name**—Name of the signaling point, as discovered by SGM, or the new name that you specified for the signaling point. For more information, see the [“Editing a Signaling Point” section on page 3-162](#).
- **Messages**—Opens the Network Status: Last X Status Change and Trap Messages Web page for the signaling point.
- **Metrics**—Opens the Network Status Messages: Messages Web page for the signaling point.
- **Access Lists**—(ITP signaling points only) Opens the SGM ITP Access Lists Web page for the signaling point.
- **Route Detail**—(ITP signaling points only) Opens the SGM Route Detail Web page for the signaling point.
- **GTT MAP Status**—(ITP signaling points only) Opens the SGM GTT MAP Status Web page for the signaling point.
- **MTP3 Event Log**—(ITP signaling points only) Opens the SGM MTP3 Event Log Web page for the signaling point.

- **Status**—Current status of the signaling point. Possible values are:
 - **Active (green ball)**—The signaling point is currently fully functional.
 - **Unknown (red ball)**—One of the following conditions occurred:
 - SGM cannot poll the node associated with the signaling point. SGM sets all signaling points, linksets, and links associated with the node to **Unknown**.
 - The signaling point has been unconfigured on the ITP, or the configuration is incomplete. At the next poll, SGM determines that the signaling point does not exist, and sets the signaling point and all associated linksets and links to **Unknown**.
 - **Unmanaged (gray ball)**—An SGM user has set the signaling point to **Unmanaged** status, to prevent SGM from polling the signaling point. SGM automatically deletes all associated links and linksets.
 - **Warning (yellow ball)**—The signaling point is active, but one or more associated links or linksets is in **Failed, Unavailable, Unknown, or Warning** status and is not flagged as **Ignored**.
- **Last Status Change**—Date and time that the status of the link last changed.
- **Status Reason**—Reason for the current status of the signaling point. Possible values are:
 - **None**
 - **SGM Restart**
 - **Unsupported Configuration**
 - **Unconfigured**
 - **SNMP Timeout**
 - **Device is unreachable, possibly wrong community string**
 - **Not ITP Device**
 - **Not Configured for ITP**
 - **MIB Data Error**
 - **SNMP Exception**
 - **SignalingPoint Inactive**
 - **Linkset Inactive**

- **Link Congested**
- **Link Send Utilization Threshold Exceeded**
- **Link Receive Utilization Threshold Exceeded**
- **Link Local Interface Inactive**
- **Link Remote Interface Inactive**
- **Link Inactive**

If the cell is too small to show all of the status reason, place the cursor over the cell to see the full status reason in a mouse over help popup.

The status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude is displayed.

If the status reason is **Unsupported Configuration**, correct the configuration and enter the **sgm cleandiscover** command to delete all current network data and begin a clean discovery of the ITP network. If the status reason is still **Unsupported Configuration**, enter the **sgm clean** command to restore the SGM server to a “clean” state, such as would exist after a new installation of SGM. For more information on the use of these commands, see the “[SGM Commands and Descriptions](#)” section on page B-2.

The “[Viewing Detailed Information for a Link](#)” section on page 3-175 displays additional information about the causes of link failures.

The “[Viewing Detailed Information for a Linkset](#)” section on page 3-42 displays additional information about the causes of linkset failures.

- **Instance Name**—Name of the instance associated with the signaling point.
- **Node Name**—Name of the node associated with this signaling point. To see detailed information for the node, click the node name.
- **Description**—Description of the signaling point. If the signaling point has no description, this field is blank.
- **Point Code**—Primary point code of the signaling point.
- **Secondary Point Code**—Secondary point code of the signaling point. If the signaling point has no secondary point code, this field is blank.
- **Capability Point Code**—Capability point code of the signaling point. A capability, or alias, point code is one that is shared by more than one signaling point, each of which is also assigned a “real” point code. If the signaling point has no capability point code, this field is blank.

- **Note Timestamp**—Date and time the note associated with this signaling point was last updated. If there is no note associated with this signaling point, this field is blank.
- **Note**—Note associated with this signaling point. If there is no note associated with this signaling point, this field is blank.
- **Internal ID**—Internal ID of the signaling point. The internal ID is a unique ID for every event, link, linkset, signaling point, and node, assigned by SGM for its own internal use. It can also be useful when the Cisco TAC is debugging problems.
- **QoS**—Quality of service (QoS) class of the signaling point, mapped to the type of service (ToS) or IP differentiated-services-code-point (DSCP).
- **Linksets**—Name and status of all linksets associated with this signaling point. To see detailed information for a linkset, click the linkset name.

Viewing ITP Signaling Point Information: Access Lists

The SGM ITP Access Lists page displays all access lists associated with the selected signaling point.

To access the SGM ITP Access Lists page for a signaling point, select **Access List** in the SGM Signaling Point Details page. (This option is not available if the associated signaling point is in **Unknown** or **Unmanaged** status.)

The SGM ITP Access Lists page displays the following information for the selected signaling point:

- **Node Name, Signaling Point Name, and Linkset Name (in header)**—Name of the signaling point, signaling point, and linkset for which access lists are being displayed.
- **Server Name (in header)**—Name of the SGM server associated with the signaling point.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node/Signaling Point/Linkset**—Name of the signaling point, signaling point, and linkset for which access lists are being displayed. To see detailed information for the signaling point, signaling point, or linkset, click the signaling point, signaling point, or linkset name.

- **List #**—Access list number configured on the signaling point and applied to the linkset. ITP uses access list numbers 2700 through 2799.
- **Access List**—List of commands in the access list.

Viewing ITP Signaling Point Information: GTT MAP Status

The SGM GTT MAP Status page displays detailed information about all GTT MAPs associated with the selected signaling point.

To access the SGM GTT MAP Status page, select **GTT MAP Status** in the SGM Signaling Point Details page. (This option is not available if the signaling point is in **Unknown** status.)

The SGM GTT MAP Status page displays the following information for the selected signaling point:

- **Node Name and Signaling Point Name (in header)**—Name of the signaling point and signaling point for which GTT MAPs are being displayed.
- **Server Name (in header)**—Name of the SGM server associated with the signaling point.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the signaling point for which GTT MAPs are being displayed. To see detailed information for the signaling point, click the signaling point name.
- **Signaling Point**—Name of the signaling point for which GTT MAPs are being displayed. To see detailed information for the signaling point, click the signaling point name.
- **Point Code**—Primary point code for the GTT MAP.
- **SSN**—Primary subsystem number (SSN) for the GTT MAP.
- **Point Code Status**—Status of the primary point code. Possible values are:
 - **Allowed**
 - **Prohibited**—Either the point code cannot be reached, or the point code is labeled **Prohibited** by the SCCP protocol.

- **SSN Status**—Status of the primary SSN. Possible values are:
 - **Allowed**
 - **Prohibited**—Either the remote subsystem cannot be reached, or the subsystem is labeled **Prohibited** by the SCCP protocol.
- **Congestion Level**—MTP3 congestion level for the primary point code. Possible values are:
 - **No congestion**—Corresponds to **None**. The link is not congested.
 - **Congestion level 1**—Corresponds to **Low**. The link is slightly congested.
 - **Congestion level 2**—Corresponds to **High**. The link is congested.
 - **Congestion level 3**—Corresponds to **Very High**. The link is very congested.

Low, **High**, and **Very High** correspond roughly to equivalent ANSI, China standard, and ITU congestion levels.

Viewing ITP Signaling Point Information: MTP3 Event Log Messages

From the SGM MTP3 Event Log page, you can view the most recent MTP3 events associated with the selected signaling point.

To access the SGM MTP3 Event Log page, select **MTP3 Event Log** in the SGM Signaling Point Details page. (This option is not available if the signaling point is in **Unknown** status.)

The SGM MTP3 Event Log table displays the following information for the selected signaling point:

- **Node Name and Signaling Point Name (in header)**—Name of the signaling point and signaling point associated with the MTP3 event log.
- **Server Name (in header)**—Name of the SGM server associated with the signaling point.
- **Update Interval (in header)**—Time between automatic updates for the page. **None** means the page is not automatically updated.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name or IP address of the signaling point. To see detailed information for the signaling point, click the signaling point name.

- **Signaling Point**—Name of the signaling point. To see detailed information for the signaling point, click the signaling point name.
- **Logged Events**—Total number of MTP3 events that have been logged for this signaling point.
- **Dropped Events**—Total number of MTP3 events that have been dropped for this signaling point.
- **Max Events**—Maximum number of events that the event history can contain. When event history table is full, the oldest entries are deleted as new entries are added.
- **Allowed Events**—ITP parameter that specifies the absolute maximum for the **Max Events** field. That is, for this ITP device, the **Max Events** field can range from 0 to the value specified by the **Allowed Events** field.
- **Index**—Event number, assigned to the event by SGM.
- **Message**—Message text for the event.

Viewing ITP Signaling Point Information: Route Detail

From the SGM Route Detail page, you can view detailed information about routes associated with the selected signaling point, including dynamic and shadow routes.

To access the SGM Route Detail page, use one of the following procedures:

- Right-click a signaling point in a window, then select **Drill Down > Route to Point Code** from the right-click menu.
- Select **Route Detail** in the SGM Signaling Point Details page.

These options are not available if the signaling point is in **Unknown** status.

The SGM Route Detail table displays the following information for the selected signaling point:

- **Node Name and Signaling Point Name (in header)**—Name of the signaling point and signaling point for which route detail is being displayed.
- **Server Name (in header)**—Name of the SGM server associated with the signaling point.
- **Update Interval (in header)**—Time between automatic updates for the page. **None** means the page is not automatically updated.

- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the signaling point for which route detail is being displayed. To see detailed information for the signaling point, click the signaling point name.
- **Signaling Point**—Name of the signaling point for which route detail is being displayed. To see detailed information for the signaling point, click the signaling point name.
- **Destination**—Destination point code and mask length for packets on the selected signaling point.

The destination point code is the point code to which a given packet is routed.

The mask length is the number of significant leading bits in the point code.

The mask length is always 14 for ITU and 24 for ANSI.

- **Cost**—Cost of the route to the destination, relative to other routes. The valid costs range from **1** (lowest cost and highest priority) through **9** (highest cost and lowest priority).
- **Destination Linkset**—Destination linkset associated with the destination point code. The destination linkset is also known as the output linkset. To see detailed information for the linkset, click the linkset name.
- **QoS**—Quality of service (QoS) class of the route, as configured by the network administrator. Valid QoS classes range from **1** through **7**; **ALL** indicates that the route accepts all QoS classes.
- **Access**—Status of the destination. Possible values are:
 - **Accessible**
 - **Inaccessible**
 - **Restricted**
 - **Unknown**

- **Management Status**—Accessibility of the destination from the adjacent point code at the remote end of the linkset. Possible values are:
 - **Allowed**—Traffic is allowed on the route without restriction.
 - **Prohibited**—Traffic is prohibited on the route.
 - **Restricted**—Traffic is restricted on the route.
 - **Unknown**—Accessibility cannot be determined.
- **Route State**—Status of the route. Possible values are:
 - Available
 - Restricted
 - **Unavailable**

Viewing Information About Linksets

SGM enables you to view the following information about linksets:

- [Viewing the Network Status Linkset Dashboard, page 7-34](#)
- [Viewing ITP Linkset Status, page 7-35](#)
- [Viewing ITP Linkset Details, page 7-38](#)
- [Viewing ITP Linkset Information: Access Lists, page 7-49](#)

Viewing the Network Status Linkset Dashboard

The SGM Linkset Dashboard page lists all discovered linksets, and provides links to messages and metrics for each linkset.

To access the SGM Linkset Dashboard page, select **Network Status Dashboard** from the SGM Server Home Page, then click **Linkset Dashboard**.

To see status change messages and SNMP trap messages associated with a given linkset, click **Messages**.

To see network status metrics associated with a given linkset, click **Metrics**.

To see all access lists associated with a given linkset, click **Access Lists**.

You can sort the table based on the information in the **Linksets** column. See the “Resizing, Sorting, and Hiding Table Columns” section on page 3-279 for more details.

Viewing ITP Linkset Status

The SGM ITP Linkset Status page displays information about the linksets that have been discovered by SGM.

To access the SGM ITP Linkset Status page, select **ITP Linkset Status** from the SGM Server Home Page. SGM displays the SGM ITP Linkset Status page (Figure 7-4).

Figure 7-4 SGM ITP Linkset Status Page

Linkset Name	Node	SP Name	Point Code	Adjacent Linkset Name	Adjacent Node	Adjacent SP	Adjacent Point Code	Status	Status Reason	Type
tg3 to ss7115	sgm-75-59a	5.9.3	5.9.3				1.1.5	Unavailable	None	SCTPIP
tg3 to ss7116	sgm-75-59a	5.9.3	5.9.3				1.1.6	Unavailable	None	SCTPIP
tg3 to ss7121	sgm-75-59a	5.9.3	5.9.3				1.2.1	Shutdown	None	SCTPIP
tg3 to ss7122	sgm-75-59a	5.9.3	5.9.3				1.2.2	Shutdown	None	SCTPIP
tg3 to ss7123	sgm-75-59a	5.9.3	5.9.3				1.2.3	Unavailable	None	SCTPIP
tg3 to ss7124	sgm-75-59a	5.9.3	5.9.3				1.2.4	Unavailable	None	Other
tg3 to ss7125	sgm-75-59a	5.9.3	5.9.3				1.2.5	Unavailable	None	Other
tg3 to ss7126	sgm-75-59a	5.9.3	5.9.3				1.2.6	Unavailable	None	Other
ion	sgm-75-70b	5.10.2	5.10.2	ion2	sgm-26-52c	2.2.3	2.2.3	Warning	Link Inactive	SCTPIP
7570a to 7570d2	sgm-75-70a	5.10.1	3.10.1	7570d to 7570a2	sgm-75-70d	5.10.4	3.10.4	Unavailable	None	Other
7570c to 7570d2	sgm-75-70c	5.10.3	3.10.3	7570d to 7570c2	sgm-75-70d	5.10.4	3.10.4	Active	None	HSL

You can sort the SGM ITP Linkset Status table based on the information in one of the columns. See the “Resizing, Sorting, and Hiding Table Columns” section on page 3-279 for more details.

The SGM ITP Linkset Status page displays the following information for each linkset:

- **Server Name (in header)**—Name of the SGM server associated with the linkset.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Linkset Name**—Name of the linkset. To see detailed information for the linkset, click the linkset name.
- **Node**—Name of signaling point for the linkset. To see detailed information for the signaling point, click the signaling point name.
- **SP Name**—Name of signaling point for the linkset. To see detailed information for the signaling point, click the signaling point name.
- **Point Code**—Point code of the primary signaling point for the linkset.
- **Adjacent Linkset Name**—Name of adjacent linkset. To see detailed information for the linkset, click the linkset name.
- **Adjacent Node**—Name of adjacent signaling point for the linkset. To see detailed information for the signaling point, click the signaling point name.
- **Adjacent SP**—Name of adjacent signaling point for the linkset. To see detailed information for the signaling point, click the signaling point name.
- **Adjacent Point Code**—Point code of the adjacent signaling point for the linkset.
- **Status**—Current status of the linkset, with a color-coded background. Possible values are:
 - **Active (green)**—The linkset is currently fully functional.
 - **Unavailable (red)**—An error is preventing traffic from flowing on this linkset.
 - **Shutdown (blue)**—An ITP administrator has set the linkset to prevent traffic from flowing. When a linkset is set to **Shutdown**, all its associated links are set to **Failed** by Cisco IOS.

- **Unknown (red)**—Either the signaling point associated with this linkset has failed to respond to an SNMP request, or SGM found that the linkset no longer exists.
- **Warning (yellow)**—The linkset is active, but one or more links in the linkset is congested or is in **Failed**, **Unknown**, or **Warning** status, and is not flagged as **Ignored**. At least one link is available and can carry traffic.
- **Status Reason**—Reason for the current status of the linkset. Possible values are:
 - **None**
 - **SGM Restart**
 - **Unsupported Configuration**
 - **Unconfigured**
 - **SNMP Timeout**
 - **Device is unreachable, possibly wrong community string**
 - **Not ITP Device**
 - **Not Configured for ITP**
 - **MIB Data Error**
 - **SNMP Exception**
 - **SignalingPoint Inactive**
 - **Linkset Inactive**
 - **Link Congested**
 - **Link Send Utilization Threshold Exceeded**
 - **Link Receive Utilization Threshold Exceeded**
 - **Link Local Interface Inactive**
 - **Link Remote Interface Inactive**
 - **Link Inactive**

If the cell is too small to show all of the status reason, place the cursor over the cell to see the full status reason in a mouse over help popup.

The status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude is displayed.

If the status reason is **Unsupported Configuration**, correct the configuration and enter the **sgm cleandiscover** command to delete all current network data and begin a clean discovery of the ITP network. If the status reason is still **Unsupported Configuration**, enter the **sgm clean** command to restore the SGM server to a “clean” state, such as would exist after a new installation of SGM. For more information on the use of these commands, see the [“SGM Commands and Descriptions” section on page B-2](#).

The [“Viewing Detailed Information for a Link” section on page 3-175](#) displays additional information about the causes of link failures.

The [“Viewing Detailed Information for a Linkset” section on page 3-42](#) displays additional information about the causes of linkset failures.

- **Type**—Type of linkset, which SGM determines by examining the links defined in the linkset. Possible linkset types are:
 - **HSL**—The links in this linkset use the SS7-over-ATM (Asynchronous Transfer Mode) high-speed protocol.
 - **SCTPIP**—The links in this linkset use the Stream Control Transmission Protocol (SCTP) IP transport protocol.
 - **Serial**—The links in this linkset use the serial SS7 signaling protocol.
 - **Mixed**—The links in this linkset are of two or more types. (This arrangement is not recommended.)
 - **Virtual**—The links in this linkset are virtual links, which connect signaling point instances running on the same device. SGM does not poll virtual linksets, nor does it display real-time data or accounting statistics for virtual linksets.
 - **Other**—No links have been defined for this linkset.

Viewing ITP Linkset Details

The SGM Linkset Details page displays detailed information about all discovered linksets, including their associated signaling points, links, events, status, and other information.

To access the SGM Linkset Details page, click a linkset name in the SGM ITP Linkset Status page. SGM displays the SGM Linkset Details page ([Figure 7-5](#)).

Figure 7-5 SGM Linkset Details Page

SGM - Linkset Details
sgm-75-59a : 5.9.3 : tg3_to_ss7121

Update Interval: 5 Seconds
Last Update: 03/20/2003 18:51:11

SGM Server: sgm-sun28.cisco.com

Name	tg3_to_ss7121	Web Links	Messages Metrics Access Lists
Status	Shutdown	MTP3 Accounting Enabled	
Status Reason	None	GTT Accounting Enabled	
Description		Packets Received per Sec.	Waiting for second poll...
Poll Error Message		Packets Sent per Sec.	Waiting for second poll...
Node	sgm-75-59a	Bits Received per Sec.	Waiting for second poll...
Signaling Point	5.9.3	Bits Sent per Sec.	Waiting for second poll...
Local Point Code	5.9.3	Receive Utilization	Waiting for second poll...
Adjacent Node	1.2.1	Send Utilization	Waiting for second poll...
Adjacent Signaling Point	1.2.1	Receive Plan Capacity	
Adjacent Point Code	1.2.1	Send Plan Capacity	

The SGM Linkset Details page displays the following information for the selected linkset:

- **Node Name, Signaling Point Name, and Linkset Name (in header)**—DNS name of the node, as discovered by SGM, signaling point name, and linkset name.
- **Server Name (in header)**—Name of the SGM server associated with the linkset.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Name**—Name of the linkset.
- **Messages**—Opens the Network Status: Last X Status Change and Trap Messages Web page for the linkset.
- **Metrics**—Opens the Network Status Messages: Messages Web page for the linkset.

- **Access Lists**—Opens the SGM ITP Access Lists Web page for the linkset.
- **Status**—Current status of the linkset, with a color-coded background. Possible values are:
 - **Active (green)**—The linkset is currently fully functional.
 - **Unavailable (red)**—An error is preventing traffic from flowing on this linkset.
 - **Shutdown (blue)**—An ITP administrator has set the linkset to prevent traffic from flowing. When a linkset is set to **Shutdown**, all its associated links are set to **Failed** by Cisco IOS.
 - **Unknown (red)**—Either the signaling point associated with this linkset has failed to respond to an SNMP request, or SGM found that the linkset no longer exists.
 - **Warning (yellow)**—The linkset is active, but one or more links in the linkset is congested or is in **Failed**, **Unknown**, or **Warning** status, and is not flagged as **Ignored**. At least one link is available and can carry traffic.
- **Status Reason**—Reason for the current status of the linkset. Possible values are:
 - **None**
 - **SGM Restart**
 - **Unsupported Configuration**
 - **Unconfigured**
 - **SNMP Timeout**
 - **Device is unreachable, possibly wrong community string**
 - **Not ITP Device**
 - **Not Configured for ITP**
 - **MIB Data Error**
 - **SNMP Exception**
 - **SignalingPoint Inactive**
 - **Linkset Inactive**
 - **Link Congested**
 - **Link Send Utilization Threshold Exceeded**

- **Link Receive Utilization Threshold Exceeded**
- **Link Local Interface Inactive**
- **Link Remote Interface Inactive**
- **Link Inactive**

If the cell is too small to show all of the status reason, place the cursor over the cell to see the full status reason in a mouse over help popup.

The status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude is displayed.

If the status reason is **Unsupported Configuration**, correct the configuration and enter the **sgm cleandiscover** command to delete all current network data and begin a clean discovery of the ITP network. If the status reason is still **Unsupported Configuration**, enter the **sgm clean** command to restore the SGM server to a “clean” state, such as would exist after a new installation of SGM. For more information on the use of these commands, see the “[SGM Commands and Descriptions](#)” section on page B-2.

The “[Viewing Detailed Information for a Link](#)” section on page 3-175 displays additional information about the causes of link failures.

The “[Viewing Detailed Information for a Linkset](#)” section on page 3-42 displays additional information about the causes of linkset failures.

- **Description**—Description of the linkset. If the linkset has no description, this field is blank.
- **Poll Error Message**—Last error message received by the linkset.
- **Node**—Name of primary signaling point for the linkset. To see detailed information for the signaling point, click the signaling point name.
- **Signaling Point**—Name of primary signaling point for the linkset. To see detailed information for the signaling point, click the signaling point name.
- **Local Point Code**—Point code of the primary signaling point for the linkset.
- **Adjacent Node**—Name of adjacent signaling point for the linkset. To see detailed information for the adjacent signaling point, click the signaling point name.
- **Adjacent Signaling Point**—Name of adjacent signaling point for the linkset. To see detailed information for the adjacent signaling point, click the signaling point name.

- **Adjacent Point Code**—Point code of the adjacent signaling point for the linkset.
- **Linkset Type**—Type of linkset, which SGM determines by examining the links defined in the linkset. Possible linkset types are:
 - **HSL**—The links in this linkset use the SS7-over-ATM (Asynchronous Transfer Mode) high-speed protocol.
 - **SCTPIP**—The links in this linkset use the Stream Control Transmission Protocol (SCTP) IP transport protocol.
 - **Serial**—The links in this linkset use the serial SS7 signaling protocol.
 - **Mixed**—The links in this linkset are of two or more types. (This arrangement is not recommended.)
 - **Virtual**—The links in this linkset are virtual links, which connect signaling point instances running on the same device. SGM does not poll virtual linksets, nor does it display real-time data or accounting statistics for virtual linksets.
 - **Other**—No links have been defined for this linkset.
- **Links**—Total number of links in the linkset.
- **Active Links**—Number of links in the linkset that are **Active**.
- **Congested Links**—Number of links in the linkset that are **Congested**.
- **Note**—Note associated with this linkset. If there is no note associated with this linkset, this field is blank.
- **Note Timestamp**—Date and time the note associated with this linkset was last updated. If there is no note associated with this linkset, this field is blank.
- **Internal ID**—Internal ID of the linkset. The internal ID is a unique ID for every event, link, linkset, signaling point, and signaling point, assigned by SGM for its own internal use. It can also be useful when the Cisco TAC is debugging problems.
- **MTP3 Accounting Enabled**—Indicates whether the collection of MTP3 accounting statistics is enabled for the linkset.
- **GTT Accounting Enabled**—Indicates whether the collection of GTT accounting statistics is enabled for the linkset. For Cisco IOS software releases prior to 12.2(4)MB10, this field displays **Unknown**.

- **Packets Received Per Sec.**—Number of packets received by the linkset per second.
This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Packets Sent Per Sec.**—Number of packets sent by the linkset per second.
This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Bits Received Per Sec.**—Number of bits received by the linkset per second.
This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Bits Sent Per Sec.**—Number of bits sent by the linkset per second.
This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Receive Utilization**—Amount of the linkset's receive capacity being used, as a percentage or in Erlangs (as set in the Preferences window), calculated using the following formula:

$$\text{Receive Utilization} = (\text{Bits Received Per Sec.}) / \text{Planned Capacity}$$

Planned Capacity is the planned capacity of the linkset in bits per second.

- For a linkset of type **Serial**, **Planned Capacity** is the available bandwidth for the linkset.
- For a linkset of type **SCTPIP** or of type **Mixed**, **Planned Capacity** is set on the ITP using the **plan-capacity** CS7 linkset configuration command. If **Planned Capacity** is not set on the ITP for this linkset, this field displays the phrase **Planned Capacity for ITP Not Set**.
- For a linkset of type **Other**, this field displays the phrase **Planned Capacity for ITP Not Set**.

This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.

If the planned receive capacity is not set for the link, this field displays **Set Plan Capacity on ITP**.

- **Send Utilization**—Amount of the linkset's send capacity being used, as a percentage or in Erlangs (as set in the Preferences window), calculated using the following formula:

$$\text{Send Utilization} = (\text{Bits Sent Per Sec.})/\text{Planned Capacity}$$

Planned Capacity is the planned capacity of the linkset in bits per second.

- For a linkset of type **Serial**, **Planned Capacity** is the available bandwidth for the linkset.
- For a linkset of type **SCTPIP** or of type **Mixed**, **Planned Capacity** is set on the ITP using the **plan-capacity** CS7 linkset configuration command. If **Planned Capacity** is not set on the ITP for this linkset, this field displays the phrase **Planned Capacity for ITP Not Set**.
- For a linkset of type **Other**, this field displays the phrase **Planned Capacity for ITP Not Set**.

This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.

If the planned send capacity is not set for the link, this field displays **Set Plan Capacity on ITP**.

- **Receive Plan Capacity**—Planned capacity of the linkset to receive, in bits per second.
 - For a linkset of type **Serial** or **HSL**, available bandwidth for the linkset.
 - For a linkset of type **SCTPIP** or **Mixed**, set on the ITP using the **plan-capacity** CS7 linkset configuration command. If **Receive Plan Capacity** is not set on the ITP for this linkset, this field displays the value **0**.
 - For a linkset of type **Other**, this field always displays the value **0**.

- **Send Plan Capacity**—Planned capacity of the linkset to send, in bits per second.
 - For a linkset of type **Serial** or **HSL**, available bandwidth for the linkset.
 - For a linkset of type **SCTPIP** or **Mixed**, set on the ITP using the **plan-capacity** CS7 linkset configuration command.
If **Send Plan Capacity** is not set on the ITP for this linkset, this field displays the value **0**.
 - For a linkset of type **Other**, this field always displays the value **0**.
- **Drops**—Total number of packets that have been dropped by the linkset.
- **Inbound ACL**—Inbound IP access control list (ACL) number for the linkset. If there is no inbound ACL for the linkset, this field displays **0**.
- **Outbound ACL**—Outbound ACL number for the linkset. If there is no outbound ACL for the linkset, this field displays **0**.
- **Duration In Service %**—Percentage of time the linkset has been in service since the last reboot of the ITP, or since ITP last reset the counters.
- **Duration Out Of Service %**—Percentage of time the linkset has been out of service since the last reboot of the ITP, or since ITP last reset the counters.

The SGM Linkset Details page also displays the following information about links associated with the selected linkset:

- **SLC**—Identifier for the link, assigned by SGM.
- **Type**—Type of link. Possible link types are:
 - **HSL**—The link uses the SS7-over-ATM (Asynchronous Transfer Mode) high-speed protocol.
 - **SCTPIP**—The link uses the Stream Control Transmission Protocol (SCTP) IP transport protocol.
 - **Serial**—The link uses the serial SS7 signaling protocol.
 - **Virtual**—The link is a virtual link, which connects signaling point instances running on the same device. SGM does not poll virtual links, nor does it display real-time data or accounting statistics for virtual links.

- **Interface Name**—Primary IP address and interface name of the link. The primary IP address is the first CS7 local IP address configured in the ITP. For example, if the following IP addresses are configured in the ITP:

```
cs7 local-peer 4180
  local-ip 128.3.0.77
  local-ip 128.3.0.254
```

Then SGM uses **128.3.0.77** as the primary IP address. If at any time that IP address is deleted from the ITP configuration, or if a new IP address is added to the beginning of the list, SGM detects the change and automatically updates this field to reflect the new primary IP address.

If the link has no interface name, this field is blank.

- **Ports**—Local and remote ports for the link.
- **QoS**—Quality of service (QoS) class of the link.
- **Congestion**—Indicates whether there is congestion on the link. A link is congested if it has too many packets waiting to be sent. This condition could be caused by the failure of an element in your network.

Possible values for the **Congestion** field are:

- **None**—The link is not congested.
- **Low**—The link is slightly congested.
- **High**—The link is congested.
- **Very High**—The link is very congested.

Low, **High**, and **Very High** correspond roughly to equivalent ANSI, China standard, and ITU congestion levels.

- **Utilization**—Receive Utilization (Rcvd) and Send Utilization (Sent) for the link, expressed as either a utilization percentage or a number of Erlangs.

This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.

If the planned send or receive capacity is not set for the link, this field displays **Set Plan Capacity on ITP**.

- **Bits/Sec**—Number of bits received (Rcvd) and sent by the link per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.

- **Ignored**—Indicates whether the link has been flagged as **Ignored** (that is, whether the link is to be included when aggregating and displaying SGM status information).
- **Status**—Current status of the link, with a color-coded background. Possible values are:
 - **Active (green)**—The link is currently fully functional.
 - **Blocked (red)**—Either the signaling point associated with this link has failed to respond to an SNMP request, or SGM found that the link no longer exists.
 - **Failed (red)**—An error is preventing traffic from flowing on this link, or the associated linkset has been set to **Shutdown** status.

A link can be **Failed** from an MTP3 perspective, but control messages might still be sent or received on the link, resulting in changing packet/second and bit/second rates. The rates might also be different at each end of the link, depending on the reason for the failure and the timing related to each endpoint.
 - **InhibitLoc (blue)**—A local ITP administrator has set the link to prevent traffic from flowing.
 - **InhibitRem (blue)**—A remote ITP administrator has set the link to prevent traffic from flowing.
 - **Shutdown (blue)**—An ITP administrator has set the link to prevent traffic from flowing.

- **Unknown (red)**—Either the signaling point associated with this link has failed to respond to an SNMP request, or SGM found that the link no longer exists.

When you physically delete a link, the **Status** field displays **Unknown** until you delete the link from the SGM database.

- **Warning (yellow)**—The link is active and traffic is flowing, but one or more of the following situations has occurred:
 - The link is congested.
 - The link has exceeded the defined **Receive Utilization %** or **Send Utilization %**.
 - One or more of the local or remote IP addresses defined for SCTP is not active.

There is no **Unshut** or **No Shut** status.

- **Status Reason**—Reason for the current status of the link. Possible values are:
 - **None**
 - **SGM Restart**
 - **Unsupported Configuration**
 - **Unconfigured**
 - **SNMP Timeout**
 - **Device is unreachable, possibly wrong community string**
 - **Not ITP Device**
 - **Not Configured for ITP**
 - **MIB Data Error**
 - **SNMP Exception**
 - **SignalingPoint Inactive**
 - **Linkset Inactive**
 - **Link Congested**
 - **Link Send Utilization Threshold Exceeded**
 - **Link Receive Utilization Threshold Exceeded**
 - **Link Local Interface Inactive**

- **Link Remote Interface Inactive**
- **Link Inactive**

If the cell is too small to show all of the status reason, place the cursor over the cell to see the full status reason in a mouse over help popup.

The status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude is displayed.

If the status reason is **Unsupported Configuration**, correct the configuration and enter the **sgm cleandiscover** command to delete all current network data and begin a clean discovery of the ITP network. If the status reason is still **Unsupported Configuration**, enter the **sgm clean** command to restore the SGM server to a “clean” state, such as would exist after a new installation of SGM. For more information on the use of these commands, see the “[SGM Commands and Descriptions](#)” section on page B-2.

The “[Viewing Detailed Information for a Link](#)” section on page 3-175 displays additional information about the causes of link failures.

The “[Viewing Detailed Information for a Linkset](#)” section on page 3-42 displays additional information about the causes of linkset failures.

- **Status Summary**—Opens the SGM Link Status Summary Web Page.

Viewing ITP Linkset Information: Access Lists

The SGM ITP Access Lists page displays all access lists associated with the selected linkset.

To access the SGM ITP Access Lists page for a linkset, select **Access List** in the SGM Linkset Details page. (This option is not available if the associated signaling point is in **Unknown** or **Unmanaged** status.)

The SGM ITP Access Lists page displays the following information for the selected linkset:

- **Node Name, Signaling Point Name, and Linkset Name (in header)**—Name of the signaling point, signaling point, and linkset for which access lists are being displayed.
- **Server Name (in header)**—Name of the SGM server associated with the linkset.
- **Update Interval (in header)**—Time between automatic updates for the page.

- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node/Signaling Point/Linkset**—Name of the signaling point, signaling point, and linkset for which access lists are being displayed. To see detailed information for the signaling point, signaling point, or linkset, click the signaling point, signaling point, or linkset name.
- **List #**—Access list number configured on the signaling point and applied to the linkset. ITP uses access list numbers 2700 through 2799.
- **Access List**—List of commands in the access list.

Viewing Information About Links

SGM enables you to view the following information about links:

- [Viewing the Network Status Link Dashboard, page 7-50](#)
- [Viewing ITP Link Status, page 7-51](#)
- [Viewing Q.752 Measurements for a Link, page 7-58](#)
- [Viewing Interface Details for a Link, page 7-61](#)
- [Viewing M2PA Peer Details for a Link, page 7-64](#)

Viewing the Network Status Link Dashboard

The SGM Link Dashboard page lists all discovered links, and provides links to messages and metrics for each link.

To access the SGM Link Dashboard page, select **Network Status Dashboard** from the SGM Server Home Page, then click **Link Dashboard**.

To see status change messages and SNMP trap messages associated with a given link, click **Messages**.

To see network status metrics associated with a given link, click **Metrics**.

To see detailed network performance measurements for a given link, based on ITU-T Recommendation Q.752, click **Q.752 Measurements**. (This field is displayed only if the selected link has a status of **Active** or **Warning** and is connected to an ITP device.)

To see detailed interface information for a given link, click **Interface Details**. (This field is displayed only if the selected link has a status of **Active** or **Warning** and is connected to an ITP device.)

To see detailed SCTP association information for a given link, click **M2PA Peer Details**. (This field is displayed only if the selected link has a status of **Active** or **Warning** and is connected to an ITP device.)

You can sort the table based on the information in the **Links** column. See the [“Resizing, Sorting, and Hiding Table Columns”](#) section on page 3-279 for more details.

Viewing ITP Link Status

The SGM Link Status Summary page displays status information for a single link.

To access the SGM Link Status Summary page, click a linkset name in the SGM ITP Linkset Status page to display the SGM Linkset Details page, then click **Summary** beside a link at the bottom of the page. SGM displays the SGM Link Status Summary page ([Figure 7-6](#)).

Figure 7-6 SGM Link Status Summary Page

SGM - Link Status Summary
sgm-75-59a : 5.9.3 : tg3_to_ss7121 : 0

Update Interval: 5 Seconds
Last Update: 03/20/2003 18:51:40

SGM Server: sgm-sun28.cisco.com

Node		Web Links	Messages Metrics
Signaling Point		Type	SCTPIP
Linkset		QOS	All
Link SLC	0	Ignored	No
Status	Failed	Signal Link Test	
Status Reason	Link Inactive	Packets Received per Sec.	Waiting for second poll
Last State Change	03/20/2003 17:42:23	Packets Sent per Sec.	Waiting for second poll
Congestion Level	None	Bits Received per Sec.	Waiting for second poll
Receive Utilization	UnderThreshold	Bits Sent per Sec.	Waiting for second poll
Send Utilization	UnderThreshold	LSSU Packets Rcvd	Waiting for second poll
Receive Plan Capacity		LSSU Packets Sent	Waiting for second poll

The SGM Link Status Summary page displays the following information for the selected link:

- **Node Name, Signaling Point Name, Linkset Name, and SLC (in header)**—Name of the signaling point, signaling point, and linkset associated with the link, and the SLC of the link.
- **Server Name (in header)**—Name of the SGM server associated with the link.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the signaling point associated with the link. To see detailed information for the signaling point, click the signaling point name.
- **Signaling Point**—Name of the signaling point associated with the link. To see detailed information for the signaling point, click the signaling point name.

- **Linkset**—Name of the linkset associated with the link. To see detailed information for the linkset, click the linkset name.
- **Link SLC**—Signaling link code (SLC) ID for the link.
- **Messages**—Opens the Network Status: Last X Status Change and Trap Messages Web page for the link.
- **Metrics**—Opens the Network Status Messages: Messages Web page for the link.
- **Q.752 Measurements**—Opens the SGM Q.752 Measurements Web page for the link. This link is not displayed for virtual links.
- **Interface Details**—Opens the SGM Interface Details Web page for the link. This field is displayed only if the selected link is not a virtual link, has a status of **Active** or **Warning**, and is connected to an ITP device.
- **M2PA Peer Details**—Opens the SGM M2PA Peer Details Web page for the link. This field is displayed only if the selected link is not a virtual link, has a status of **Active** or **Warning**, and is connected to an ITP device.
- **Status**—Current status of the link, with a color-coded background. Possible values are:
 - **Active (green)**—The link is currently fully functional.
 - **Blocked (red)**—Either the signaling point associated with this link has failed to respond to an SNMP request, or SGM found that the link no longer exists.
 - **Failed (red)**—An error is preventing traffic from flowing on this link, or the associated linkset has been set to **Shutdown** status.

A link can be **Failed** from an MTP3 perspective, but control messages might still be sent or received on the link, resulting in changing packet/second and bit/second rates. The rates might also be different at each end of the link, depending on the reason for the failure and the timing related to each endpoint.
 - **InhibitLoc (blue)**—A local ITP administrator has set the link to prevent traffic from flowing.
 - **InhibitRem (blue)**—A remote ITP administrator has set the link to prevent traffic from flowing.
 - **Shutdown (blue)**—An ITP administrator has set the link to prevent traffic from flowing.

- **Unknown (red)**—Either the signaling point associated with this link has failed to respond to an SNMP request, or SGM found that the link no longer exists.

When you physically delete a link, the **Status** field displays **Unknown** until you delete the link from the SGM database.

- **Warning (yellow)**—The link is active and traffic is flowing, but one or more of the following situations has occurred:
 - The link is congested.
 - The link has exceeded the defined **Receive Utilization %** or **Send Utilization %**.
 - One or more of the local or remote IP addresses defined for SCTP is not active.

There is no **Unshut** or **No Shut** status.

- **Status Reason**—Reason for the current status of the link. Possible values are:
 - **None**
 - **SGM Restart**
 - **Unsupported Configuration**
 - **Unconfigured**
 - **SNMP Timeout**
 - **Device is unreachable, possibly wrong community string**
 - **Not ITP Device**
 - **Not Configured for ITP**
 - **MIB Data Error**
 - **SNMP Exception**
 - **SignalingPoint Inactive**
 - **Linkset Inactive**
 - **Link Congested**
 - **Link Send Utilization Threshold Exceeded**
 - **Link Receive Utilization Threshold Exceeded**
 - **Link Local Interface Inactive**

- **Link Remote Interface Inactive**
- **Link Inactive**

If the cell is too small to show all of the status reason, place the cursor over the cell to see the full status reason in a mouse over help popup.

The status reasons are listed in order of decreasing magnitude. If two or more reasons apply, the reason of greatest magnitude is displayed.

If the status reason is **Unsupported Configuration**, correct the configuration and enter the **sgm cleandiscover** command to delete all current network data and begin a clean discovery of the ITP network. If the status reason is still **Unsupported Configuration**, enter the **sgm clean** command to restore the SGM server to a “clean” state, such as would exist after a new installation of SGM. For more information on the use of these commands, see the “[SGM Commands and Descriptions](#)” section on page B-2.

The “[Viewing Detailed Information for a Link](#)” section on page 3-175 displays additional information about the causes of link failures.

The “[Viewing Detailed Information for a Linkset](#)” section on page 3-42 displays additional information about the causes of linkset failures.

- **Last State Change**—Date and time that the status of the link last changed.
- **Congestion Level**—Indicates whether there is congestion on the link. A link is congested if it has too many packets waiting to be sent. This condition could be caused by the failure of an element in your network.

Possible values for the **Congestion Level** field are:

- **None**—The link is not congested.
- **Low**—The link is slightly congested.
- **High**—The link is congested.
- **Very High**—The link is very congested.

Low, **High**, and **Very High** correspond roughly to equivalent ANSI, China standard, and ITU congestion levels.

- **Receive Utilization**—Amount, expressed as either a utilization percentage or a number of Erlangs (as set in the Preferences window), that the link is under (**UnderThreshold**) or over (**OverThreshold**) its configured receive utilization threshold.

- **Send Utilization**—Amount, expressed as either a utilization percentage or a number of Erlangs (as set in the Preferences window), that the link is under (**UnderThreshold**) or over (**OverThreshold**) its configured send utilization threshold.
- **Receive Plan Capacity**—Planned capacity of the link to receive, in bits per second.
 - For a link of type **Serial** or **HSL**, available bandwidth for the link.
 - For a link of type **SCTPIP** or **Mixed**, set on the ITP using the **plan-capacity** CS7 link configuration command.
If **Receive Plan Capacity** is not set on the ITP for this link, this field displays the value **0**.
 - For a link of type **Other**, this field always displays the value **0**.
- **Send Plan Capacity**—Planned capacity of the link to send, in bits per second.
 - For a link of type **Serial** or **HSL**, available bandwidth for the link.
 - For a link of type **SCTPIP** or **Mixed**, set on the ITP using the **plan-capacity** CS7 link configuration command.
If **Send Plan Capacity** is not set on the ITP for this link, this field displays the value **0**.
 - For a link of type **Other**, this field always displays the value **0**.
- **Receive Threshold**—Indicates when a `cItpSpLinkRcvdUtilChange` is to be generated for the link, as a percent of its total receive capacity. For example, if **Receive Plan Capacity** is **64000** bits per second, and **Receive Threshold %** is **50**, then a `cItpSpLinkRcvdUtilChange` notification is generated when the link reaches 50% of 64000, or 32000 bits per second.
- **Send Threshold**—Indicates when a `cItpSpLinkSentUtilChange` is to be generated for the link, as a percent of its total send capacity. For example, if **Send Plan Capacity** is **64000** bits per second, and **Send Threshold %** is **50**, then a `cItpSpLinkSentUtilChange` notification is generated when the link reaches 50% of 64000, or 32000 bits per second.
- **Local Addresses**—Local IP addresses associated with the link, and their status.
- **Remote Addresses**—Remote IP addresses associated with the link, and their status.

- **Type**—Type of link. Possible link types are:
 - **HSL**—The link uses the SS7-over-ATM (Asynchronous Transfer Mode) high-speed protocol.
 - **SCTPIP**—The link uses the Stream Control Transmission Protocol (SCTP) IP transport protocol.
 - **Serial**—The link uses the serial SS7 signaling protocol.
 - **Virtual**—The link is a virtual link, which connects signaling point instances running on the same device. SGM does not poll virtual links, nor does it display real-time data or accounting statistics for virtual links.
- **QoS**—Quality of service (QoS) class of the link.
- **Ignored**—Indicates whether the link is **Ignored** (that is, whether the link is to be included when aggregating and displaying SGM status information).
- **Signal Link Test**—Indicates whether the link acknowledged a Signal Link Test Message (SLTM), which tests the link's ability to carry data.
- **Packets Received Per Sec.**—Number of packets received by the link per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Packets Sent Per Sec.**—Number of packets sent by the link per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Bits Received Per Sec.**—Number of bits received by the link per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Bits Sent Per Sec.**—Number of bits sent by the link per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **LSSU Packets Received**—Total number of SS7 Message Transfer Part Layer 2 (MTP2) Links Status Signal Unit (LSSU) packets received by the link.
- **LSSU Packets Sent**—Total number of LSSU packets sent by the link.
- **Drops**—Total number of packets that have been dropped by the link.
- **Transmit Queue Depth**—Number of packets waiting to be sent on by the link.

- **Ports**—Local and remote ports for the link.
- **Config. Local IP Address**—Configured local IP address associated with the link.

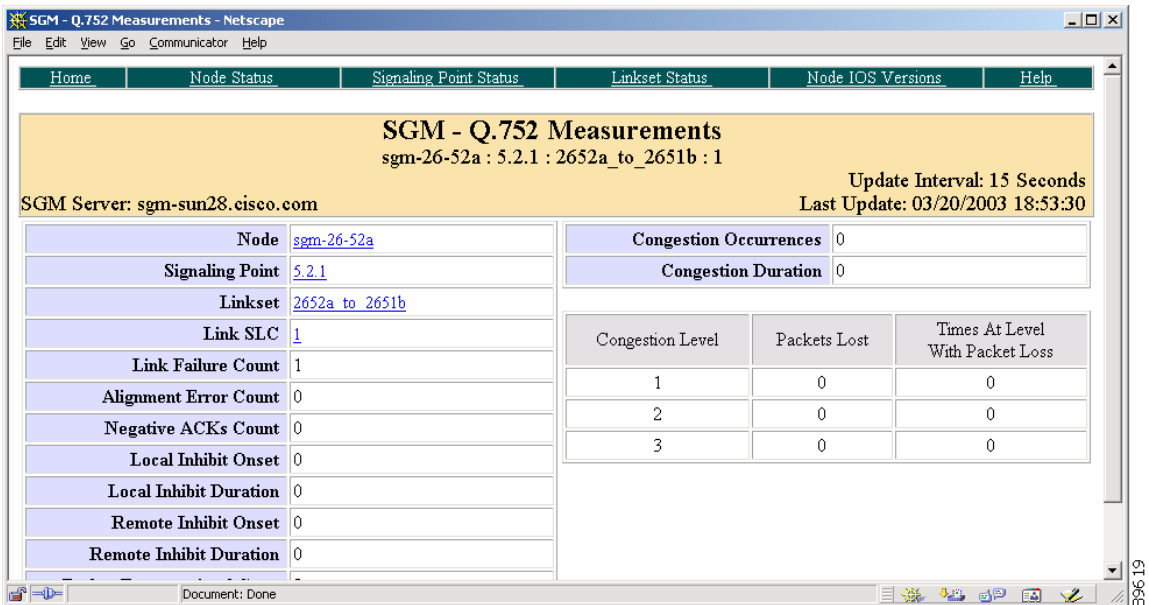
Viewing Q.752 Measurements for a Link

The SGM Q.752 Measurements page displays network performance measurements for a link, based on ITU-T Recommendation Q.752.

To access the SGM Q.752 Measurements page, use the following procedure:

-
- Step 1** Click a linkset name in the SGM ITP Linkset Status page to display the SGM Linkset Details page.
 - Step 2** Click **Summary** beside a link at the bottom of the page to display the SGM Link Status Summary page.
 - Step 3** Click **Q.752 Measurements** to display the SGM Q.752 Measurements page ([Figure 7-7](#)).
-

Figure 7-7 SGM Q.752 Measurements Page



The SGM Q.752 Measurements table displays the following information for the selected link:

- **Server Name (in header)**—Name of the SGM server associated with this link.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the node associated with this link. To see detailed information for the node, click the node name.
- **Signaling Point**—Name of the signaling point associated with this link. To see detailed information for the signaling point, click the signaling point name.
- **Linkset**—Name of the linkset associated with this link. To see detailed information for the linkset, click the linkset name.

- **Link SLC**—Signaling link code (SLC) ID for the link. To see detailed information for the link, click the link name.
- **Link Failures Count**—Number of times the link was unavailable for signaling.
- **Alignment Error Count**—Number of errors detected during link alignment. Link alignment takes place at start up, or when trying to bring up a failed link.
- **Negative ACK Count**—Number of errors detected during link acknowledgement.
- **Local Inhibit Onset**—Number of times a local ITP administrator has inhibited the link (that is, set the link to prevent traffic from flowing).
- **Local Inhibit Duration**—Total time, in seconds, the link has been locally inhibited.
- **Remote Inhibit Onset**—Number of times a remote ITP administrator has inhibited the link.
- **Remote Inhibit Duration**—Total time, in seconds, the link has been remotely inhibited.
- **Packets Retransmitted Count**—Number of packets retransmitted by the link.
- **Bytes Retransmitted Count**—Number of bytes retransmitted by the link.
- **Congestion Occurrences**—Number of times congestion has occurred on the link.
- **Congestion Duration**—Total time the link has been congested.
- **Congestion Level**—Level of congestion: 1, 2, or 3.
- **Packets Lost**—Number of packets lost by the link as a result of congestion at each level.
- **Times At Level With Packet Loss**—Number of times the link has been congested and has lost packets at each level.

Viewing Interface Details for a Link

The SGM Interface Details page displays detailed interface information for a link, with one column of information for each of the link's interfaces.

To access the SGM Interface Details page, use the following procedure:

-
- Step 1** Click a linkset name in the SGM ITP Linkset Status page to display the SGM Linkset Details page.
 - Step 2** Click **Summary** beside a link at the bottom of the page to display the SGM Link Status Summary page.
 - Step 3** Click **Interface Details** to display the SGM Interface Details page (Figure 7-8).
-

Figure 7-8 SGM Interface Details Page

Interfaces	
Description	FastEthernet0/0
Ip Address	172.18.16.42
Mask	255.255.255.248
Type	ethernetCsmacd
MTU	1500
Speed	100M

The SGM Interface Details table displays the following information for the selected link:

- **Node Name, Signaling Point Name, Linkset Name, and SLC (in header)**—Name of the signaling point, signaling point, and linkset associated with the link, and the SLC of the link.
- **Server Name (in header)**—Name of the SGM server associated with the link.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the signaling point associated with the link. To see detailed information for the signaling point, click the signaling point name.
- **Signaling Point**—Name of the signaling point associated with the link. To see detailed information for the signaling point, click the signaling point name.
- **Linkset**—Name of the linkset associated with the link. To see detailed information for the linkset, click the linkset name.
- **Link SLC**—Signaling link code (SLC) ID for the link. To see detailed information for the link, click the link name.
- **Description**—Text string containing information about the interface.
- **IP Address**—(SCTP links only) IP address corresponding to the media-dependent “physical” address. If the interface does not have such an address (for example, a serial line), this field displays **N/A**.
- **Mask**—(SCTP links only) Subnet mask corresponding to the media-dependent “physical” address. If the interface does not have such an address (for example, a serial line), this field displays **N/A**.
- **Type**—Type of interface, such as Ethernet.
- **MTU**—Size, in bytes, of the largest datagram that can be sent or received on the interface.
- **Speed (Bits/Sec)**—Estimate, in bits per second, of the interface's current bandwidth. If the interface does not vary in bandwidth, or if no accurate estimate can be made, this field displays the nominal bandwidth.

- **Physical Address**—(SCTP links only) Address of the interface at the protocol layer immediately “below” the network layer in the protocol stack. If the interface does not have such an address (for example, a serial line), this field displays N/A.
- **Admin Status**—Desired state of the interface. Possible values are:
 - **Up**
 - **Down**
 - **Testing**
- **Operational Status**—Current operational state of the interface. Possible values are:
 - **Up**
 - **Down**
 - **Testing**
 - **Unknown**
 - **Dormant**
- **Line Protocol**—Current state of the line protocol. Possible values are:
 - **Up**—Software processes that handle the line protocol consider the line to be usable (that is, keepalives are successful).
 - **Down**—Software processes that handle the line protocol consider the line to be unusable.

You can use the **Line Protocol** together with **Operational Status** to troubleshoot interface connection problems. For example, if **Operational Status** is **Up**, but **Line Protocol** is **Down**, the interface has detected a carrier on the physical layer, but there might be clocking or framing problems.

- **Bytes In/Sec**—Number of bytes received on the interface per second, including framing characters.
- **Bytes Out/Sec**—Number of bytes sent on the interface per second, including framing characters.
- **Packets In/Sec**—Number of packets delivered per second to a higher-layer protocol.
- **Packets Out/Sec**—Total number of packets that higher-level protocols requested to be sent to the network per second, including those that were discarded or not sent.

- **Discards In**—Number of inbound packets that were discarded, even though no errors were detected to prevent their delivery to a higher-layer protocol. For example, a packet might be discarded to free buffer space.
- **Discards Out**—Number of outbound packets that were discarded, even though no errors were detected to prevent their delivery to a higher-layer protocol. For example, a packet might be discarded to free buffer space.
- **Errors In**—Number of inbound packets that contained errors that prevented their delivery to a higher-layer protocol.
- **Errors Out**—Number of outbound packets that were not sent because of errors.

Viewing M2PA Peer Details for a Link

The SGM M2PA Peer Details page displays detailed SCTP association information for a link.

To access the SGM M2PA Peer Details page, use the following procedure:

-
- Step 1** Click a linkset name in the SGM ITP Linkset Status page to display the SGM Linkset Details page.
 - Step 2** Click **Summary** beside a link at the bottom of the page to display the SGM Link Status Summary page.
 - Step 3** Click **M2PA Peer Details** to display the SGM M2PA Peer Details page (Figure 7-7).
-

Figure 7-9 SGM M2PA Peer Details Page

SGM - M2PA Peer Details
sgm-26-52a : 5.2.1 : 2652a_to_2651b : 1

Update Interval: 15 Seconds
Last Update: 03/20/2003 18:54:41

SGM Server: sgm-sun28.cisco.com

Node	sgm-26-52a
Signaling Point	5.2.1
Linkset	2652a to 2651b
Link SLC	1

Remote IP Address Status				
IP Address	Smoothed Round Trip Time (msecs)	Failure Count	Heartbeat Status	IP Status
172.18.16.35	176	0	Active	Active
172.18.16.147	0	0	Active	Active

Configuration Information	
Status	Established
Uptime	7 Days, 5 Hours 43 Mins 39 Secs
Remote Port	5341
Local Port	5361
Primary Address	172.18.16.35
Secondary Address	172.18.16.35

Statistics	
Packets Sent per Sec.	3.65
Packets Received per Sec.	5.45
Control Chunks Sent per Sec.	3.52
Control Chunks Received per Sec.	0.199

The SGM M2PA Peer Details table displays the following information for the selected link:

- **Node Name, Signaling Point Name, Linkset Name, and SLC (in header)**—Name of the signaling point, signaling point, and linkset associated with the link, and the SLC of the link.
- **Server Name (in header)**—Name of the SGM server to which this SCTP association belongs.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Node**—Name of the signaling point to which this SCTP association belongs. To see detailed information for the signaling point, click the signaling point name.
- **Signaling Point**—Name of the signaling point to which this SCTP association belongs. To see detailed information for the signaling point, click the signaling point name.

- **Linkset**—Name of the linkset to which this SCTP association belongs. To see detailed information for the linkset, click the linkset name.
- **Link SLC**—Signaling link code (SLC) ID to which this SCTP association corresponds.
- **Status**—Current status of the SCTP association. Possible values are:
 - **Closed**
 - **CookieWait**
 - **CookieEchoed**
 - **DeleteTCB**
 - **Established**
 - **ShutdownAckSent**
 - **ShutdownPending**
 - **ShutdownReceived**
 - **ShutdownSent**

For detailed information about each status, refer to RFC 2960, Stream Control Transmission Protocol.

- **Uptime**—Time the link has been up, in weeks, days, hours, minutes, and seconds.
- **Remote Port**—Remote port number for the SCTP association.
- **Local Port**—Local port number for the SCTP association.
- **Primary Address**—Designated primary IP address for the SCTP association.
- **Effective Address**—IP address currently being used by the SCTP association.
- **Local IP Address Configuration: IP Address**—Local IP addresses associated with the link.
- **Local IP Address Configuration: Uptime**—Time each local IP address associated with the link has been up, in weeks, days, hours, minutes, and seconds.
- **Remote IP Address Configuration: IP Address**—Remote IP addresses associated with the link.

- **Remote IP Address Configuration: Uptime**—Time each remote IP address associated with the link has been up, in weeks, days, hours, minutes, and seconds.
- **Remote IP Address Configuration: Retry Timeout (msecs)**—Time, in milliseconds, that SGM waits between attempts to connect to the remote IP address.
- **Remote IP Address Configuration: Maximum Retries**—Maximum number of times SGM will attempt to connect to the remote IP address.
- **Remote IP Address Configuration: Retries**—Number of times SGM has attempted to connect to the remote IP address.
- **Remote IP Address Status: Smoothed Round Trip Time (msecs)**—Average, in milliseconds, of all round-trip times between the local and remote systems on an IP network.
- **Remote IP Address Status: Failure Count**—Number of times the remote IP address was marked as failed.
- **Remote IP Address Status: Heartbeat Status**—Current status of the heartbeat associated with the remote IP address. Valid values are **Active** and **Inactive**.
- **Remote IP Address Status: IP Status**—Current status of the remote IP address. Valid values are **Active** and **Inactive**.
- **Packets Sent per Sec.**—Number of IP datagrams sent per second by this SCTP association.
- **Packets Received per Sec.**—Number of IP datagrams received per second by this SCTP association.
- **Control Chunks Sent per Sec.**—Number of control chunks sent per second by this SCTP association.
- **Control Chunks Received per Sec.**—Number of control chunks received per second by this SCTP association.
- **Ordered Chunks Sent per Sec.**—Number of ordered chunks sent per second by this SCTP association.
- **Ordered Chunks Received per Sec.**—Number of ordered chunks received per second by this SCTP association.
- **Unordered Chunks Sent per Sec.**—Number of unordered chunks sent per second by this SCTP association.

- **Unordered Chunks Received per Sec.**—Number of unordered chunks received per second by this SCTP association.
- **Retransmitted Chunks per Sec.**—Number of chunks retransmitted per second by this SCTP association.
- **Retransmitted Fast Chunks per Sec.**—Number of fast chunks retransmitted per second by this SCTP association.
- **MTU**—Maximum transmission unit (MTU) size to be used by this SCTP association. This is the smallest MTU size supported by any of the IP addresses used by the SCTP association.
- **In Streams**—Inbound streams as negotiated when the SCTP association was started.
- **Out Streams**—Outbound streams as negotiated when the SCTP association was started.
- **Maximum Retries**—Maximum number of data retransmissions in the SCTP association context.
- **Local Receive Window Size**—Current local receive window size for this SCTP association.
- **Remote Receive Window Size**—Current local send window size for this SCTP association.
- **Initial Retry Timeout (msecs)**—Initial timeout value, in milliseconds, permitted by the SCTP implementation for the retry timeout.
- **Minimum Retry Timeout (msecs)**—Minimum timeout value, in milliseconds, permitted by the SCTP implementation for the retry timeout.
- **Maximum Retry Timeout (msecs)**—Maximum timeout value, in milliseconds, permitted by the SCTP implementation for the retry timeout.
- **Bundle Chunks**—Indicates whether the SCTP protocol allows chunks to be bundled into a single datagram as follows. Valid values are:
 - **true (1)**—Chunks are bundled.
 - **false (2)**—Chunks are not bundled.
- **Bundle Timeout (msecs)**—Time, in milliseconds, to wait to allow data chunks to accumulate so that they can be transmitted in the same datagram.

Viewing Information About Application Servers

SGM enables you to view the following information about application servers:

- [Viewing Application Server Status, page 7-69](#)
- [Viewing Application Server Details, page 7-71](#)
- [Viewing Application Server Process Association Details, page 7-77](#)

Viewing Application Server Status

The SGM Application Server Status page displays information about all discovered application servers, including their names, status, and other important information.

To access the SGM Application Server Status page, select **ITP Application Server Status** from the SGM Server Home Page.

You can sort the Application Server Status table based on the information in any column. See the [“Resizing, Sorting, and Hiding Table Columns” section on page 3-279](#) for more details.

The SGM Application Server Status page displays the following information:

- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **AS Name**—Name of the application server. To see detailed information for the application server, click the application server name.
- **Node**—Name of the node associated with the application server. To see detailed information for the node, click the node name.
- **SP**—Name of the signaling point associated with the application server. To see detailed information for the signaling point, click the signaling point name.

- **Status**—Current status of the application server, with a color-coded background. Possible values are:
 - **Active (green)**—The application server is available and application traffic is active. At least one application server process serving this application server is **Active**.
 - **Deleted (red)**—The application server has been deleted from the SGM database.
 - **Down (red)**—The application server is not available. All application server processes that serve this application server are **Down**. This is the initial status for application servers.
 - **Inactive (red)**—The application server is available, but no application traffic is active (that is, at least one application server process is **Inactive**, and no application server process is **Active**).
 - **Pending (yellow)**—The last remaining **Active** application server process serving this application server has become **Inactive** or **Down**. The next status for this application server will be **Active**, **Inactive**, or **Down**, depending on the recovery timer, and whether an application server process can become **Active**.
 - **Shutdown (blue)**—An administrator has forced the application server to an unavailable state.
 - **Unknown (red)**—SGM cannot determine the current status of the application server.
 - **Warning (yellow)**—The application server is **Active**, but at least one application server process association for this application server is not fully functional.
- **Mate Status**—Current status of the application server on the signaling gateway mate, with a color-coded background. Possible values are:
 - **Active (green)**—The application server is available and application traffic is active. At least one application server process serving this application server is **Active**.
 - **Deleted (red)**—The application server has been deleted from the SGM database.
 - **Down (red)**—The application server is not available. All application server processes that serve this application server are **Down**. This is the initial status for application servers.

- **Inactive (red)**—The application server is available, but no application traffic is active (that is, at least one application server process is **Inactive**, and no application server process is **Active**).
- **Pending (yellow)**—The last remaining **Active** application server process serving this application server has become **Inactive** or **Down**. The next status for this application server will be **Active**, **Inactive**, or **Down**, depending on the recovery timer, and whether an application server process can become **Active**.
- **Shutdown (blue)**—An administrator has forced the application server to an unavailable state.
- **Unknown (red)**—SGM cannot determine the current status of the application server.
- **Warning (yellow)**—The application server is **Active**, but at least one application server process association for this application server is not fully functional.
- **Number of ASP Associations**—Total number of application server processes associated with the application server.
- **Active ASP Associations**—Number of currently active application server processes associated with the application server.
- **Protocol**—Protocol associated with the application server. Possible values are:
 - **M3UA**—MTP3-User Adaptation.
 - **SUA**—SCCP-User Adaptation.
- **Routing Key**—Routing key associated with the application server. The routing key is the value upon which the routing decisions are made for the application server.

Viewing Application Server Details

The SGM Application Server Detail page displays detailed information for an application server.

To access the SGM Application Server Detail page, click the application server name on the SGM Application Server Status page.

You can sort the Application Server Detail table based on the information in any column. See the [“Resizing, Sorting, and Hiding Table Columns”](#) section on page 3-279 for more details.

The SGM Application Server Detail page displays the following information:

Server Name (in header)—

Name of the SGM server associated with the node.

- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **Name**—Name of the application server.
- **Status**—Current status of the application server, with a color-coded background. Possible values are:
 - **Active (green)**—The application server is available and application traffic is active. At least one application server process serving this application server is **Active**.
 - **Deleted (red)**—The application server has been deleted from the SGM database.
 - **Down (red)**—The application server is not available. All application server processes that serve this application server are **Down**. This is the initial status for application servers.
 - **Inactive (red)**—The application server is available, but no application traffic is active (that is, at least one application server process is **Inactive**, and no application server process is **Active**).
 - **Pending (yellow)**—The last remaining **Active** application server process serving this application server has become **Inactive** or **Down**. The next status for this application server will be **Active**, **Inactive**, or **Down**, depending on the recovery timer, and whether an application server process can become **Active**.
 - **Shutdown (blue)**—An administrator has forced the application server to an unavailable state.

- **Unknown (red)**—SGM cannot determine the current status of the application server.
- **Warning (yellow)**—The application server is **Active**, but at least one application server process association for this application server is not fully functional.
- **Poll Timestamp**—Date and time of the last poll of the application server.
- **Poll Error Message**—Last error message received by the application server.
- **Node**—Name of the node associated with the application server. To see detailed information for the node, click the node name.
- **Signaling Point**—Name of the signaling point associated with the application server. To see detailed information for the signaling point, click the signaling point name.
- **Protocol**—Protocol associated with the application server. Possible values are:
 - **M3UA**—MTP3-User Adaptation.
 - **SUA**—SCCP-User Adaptation.
- **Mate Status**—Current status of the application server on the signaling gateway mate, with a color-coded background. Possible values are:
 - **Active (green)**—The application server is available and application traffic is active. At least one application server process serving this application server is **Active**.
 - **Deleted (red)**—The application server has been deleted from the SGM database.
 - **Down (red)**—The application server is not available. All application server processes that serve this application server are **Down**. This is the initial status for application servers.
 - **Inactive (red)**—The application server is available, but no application traffic is active (that is, at least one application server process is **Inactive**, and no application server process is **Active**).
 - **Pending (yellow)**—The last remaining **Active** application server process serving this application server has become **Inactive** or **Down**. The next status for this application server will be **Active**, **Inactive**, or **Down**, depending on the recovery timer, and whether an application server process can become **Active**.

- **Shutdown (blue)**—An administrator has forced the application server to an unavailable state.
- **Unknown (red)**—SGM cannot determine the current status of the application server.
- **Warning (yellow)**—The application server is **Active**, but at least one application server process association for this application server is not fully functional.
- **Routing Key**—Routing key associated with the application server. The routing key is the value upon which the routing decisions are made for the application server.
- **ASP Associations**—Total number of application server processes associated with the application server.
- **Active ASP Associations**—Number of currently active application server processes associated with the application server.
- **Internal ID**—Internal ID of the application server. The internal ID is a unique ID for every event, link, linkset, signaling point, and node, assigned by SGM for its own internal use. It can also be useful when the Cisco TAC is debugging problems.
- **MTP3 Packets Per Sec.**—Number of MTP3 packets received by the application server per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **ASP Packets Per Sec.**—Number of application server process packets sent by the application server per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Active Time**—Time, in weeks, days, hours, minutes, and seconds, that the application server process has been **Active**.
- **Note**—Note associated with this application server. If there is no note associated with this application server, this field is blank.
- **Note Timestamp**—Date and time the note associated with this application server was last updated. If there is no note associated with this application server, this field is blank.

- **Traffic Mode**—Method by which the application server forwards requests to its active application server processes. Possible values are:
 - **overRide**—One application server process takes over all traffic for the application server, possibly overriding any currently active application server process in the application server.
 - **broadcast**—Every active application server process receives the same message.
 - **loadBind**—Each application server process shares in the traffic distribution with every other currently active application server process, based on application server process bindings.
 - **loadRndRobin**—Each application server process shares in the traffic distribution with every other currently active application server process, using a roundrobin algorithm.
 - **undefined**—The traffic mode is not defined. The first application server process that becomes active defines the traffic mode.
- **Name**—Name of an application server process serving this application server.
- **Adjacent Node**—Name of the adjacent node associated with the application server process. To see detailed information for the adjacent node, click the adjacent node name.
- **Adjacent ASP**—Name of the adjacent application server process.
- **Status**—Current status of the application server process, with a color-coded background. Possible values are:
 - **Active (green)**—The application server is available and application traffic is active. At least one application server process serving this application server is **Active**.
 - **Deleted (red)**—The application server has been deleted from the SGM database.
 - **Down (red)**—The application server is not available. All application server processes that serve this application server are **Down**. This is the initial status for application servers.
 - **Inactive (red)**—The application server is available, but no application traffic is active (that is, at least one application server process is **Inactive**, and no application server process is **Active**).

- **Pending (yellow)**—The last remaining **Active** application server process serving this application server has become **Inactive** or **Down**. The next status for this application server will be **Active**, **Inactive**, or **Down**, depending on the recovery timer, and whether an application server process can become **Active**.
- **Shutdown (blue)**—An administrator has forced the application server to an unavailable state.
- **Unknown (red)**—SGM cannot determine the current status of the application server.
- **Warning (yellow)**—The application server is **Active**, but at least one application server process association for this application server is not fully functional.
- **Instance Status**—Current status of the protocol associated with the application server process, with a color-coded background. Possible values are:
 - **Active (green)**—The protocol is available.
 - **Shutdown (blue)**—An administrator has forced the protocol to an unavailable state.
 - **Unknown (red)**—SGM cannot determine the current status of the protocol.
- **Congestion**—Indicates whether there is congestion on the application server process. An application server process is congested if it has too many packets waiting to be sent. This condition could be caused by the failure of an element in your network.

Possible values for the **Congestion** field are **None**, indicating no congestion, and **1** to **7**, indicating levels of congestion from very light (**1**) to very heavy (**7**).

- **Status Summary**—Opens the SGM Application Server Process Association Detail Web Page.

Viewing Application Server Process Association Details

The SGM Application Server Process Association Detail page displays detailed information for an application server process.

To access the SGM Application Server Process Association Detail page, click **Summary** beside an application server process association at the bottom of the SGM Application Server Detail page.

You can sort the Application Server Process Association Detail table based on the information in any column. See the [“Resizing, Sorting, and Hiding Table Columns” section on page 3-279](#) for more details.

The SGM Application Server Process Association Detail page displays the following information:

- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **ASP Name**—Name of the application server process.
- **Status**—Current status of the application server process, with a color-coded background. Possible values are:
 - **Active (green)**—The remote peer at the application server process is available and application traffic is active.
 - **Blocked (red)**—The application server process cannot receive normal data traffic, but it can send and receive control messages.
 - **Deleted (red)**—The application server process has been deleted from the SGM database.
 - **Down (red)**—The remote peer at the application server process is not available, or the related SCTP association is down. This is the initial status for application server processes.
 - **Inactive (red)**—The remote peer at the application server process is available, and the related SCTP association is up, but application traffic has stopped. The application server process should not receive any DATA or SNMM messages for the application server.

- **Shutdown (blue)**—An administrator has forced the application server process to an unavailable state.
- **Unknown (red)**—SGM cannot determine the current status of the application server process.
- **Warning (yellow)**—The application server process is **Active**, but some underlying facility is not fully functional.
- **Poll Timestamp**—Date and time of the last poll of the application server process.
- **Poll Error Message**—Last error message received by the application server process.
- **Node**—Name of the node associated with the application server process. To see detailed information for the node, click the node name.
- **Signaling Point**—Name of the signaling point associated with the application server process. To see detailed information for the signaling point, click the signaling point name.
- **Application Server**—Name of the application server associated with the application server process. To see detailed information for the application server, click the application server name.
- **Protocol**—Protocol associated with the application server process. Possible values are:
 - **M3UA**—MTP3-User Adaptation.
 - **SUA**—SCCP-User Adaptation.
- **Instance Status**—Current status of the protocol associated with the application server process, with a color-coded background. Possible values are:
 - **Active (green)**—The protocol is available.
 - **Shutdown (blue)**—An administrator has forced the protocol to an unavailable state.
 - **Unknown (red)**—SGM cannot determine the current status of the protocol.

- **Congestion**—Indicates whether there is congestion on the application server process. An application server process is congested if it has too many packets waiting to be sent. This condition could be caused by the failure of an element in your network.

Possible values for the **Congestion** field are **None**, indicating no congestion, and **1** to **7**, indicating levels of congestion from very light (**1**) to very heavy (**7**).

- **QoS**—Quality of service (QoS) class of the application server process.
- **Config Local Port**—Local port number that was configured for the application server process.
- **Local Port**—Local port number that is currently in use for the application server process.
- **Local Addresses**—Local IP addresses associated with the application server process, and their status.
- **Config Remote Port**—Remote port number that was configured for the application server process.
- **Remote Port**—Remote port number that is currently in use for the application server process.
- **Remote Addresses**—Remote IP addresses associated with the application server process, and their status.
- **From ASP Packets per Sec.**—Number of application server process packets sent by the application server process per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **To ASP Packets per Sec.**—Number of application server process packets received by the application server process per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **From MTP3 Packets per Sec.**—Number of MTP3 packets sent by the application server process per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.

- **To MTP3 Packets per Sec.**—Number of MTP3 packets received by the application server process per second. This field initially displays the phrase **Waiting for second poll**. After two polling cycles, SGM populates this field with actual calculated rates.
- **Note**—Note associated with this application server process. If there is no note associated with this application server process, this field is blank.
- **Note Timestamp**—Date and time the note associated with this application server process was last updated. If there is no note associated with this application server process, this field is blank.
- **ASP UP Received**—Total number of application server process up (ASPUP) messages received by the application server process.
- **ASP UP ACK Sent**—Total number of application server process up acknowledgement (UPACK) messages sent by the application server process.
- **ASP DOWN Received**—Total number of application server process down (ASPDN) messages received by the application server process.
- **ASP DOWN ACK Sent**—Total number of application server process down acknowledgement (DOWNACK) messages sent by the application server process.
- **ASP Active Received**—Total number of application server process active messages received by the application server process.
- **ASP Active ACK Sent**—Total number of application server process active acknowledgement messages sent by the application server process.
- **ASP Inactive Received**—Total number of application server process inactive messages received by the application server process.
- **ASP Inactive ACK Sent**—Total number of application server process inactive acknowledgement messages sent by the application server process.
- **ERR Received**—Total number of error (ERR) messages received by the application server process.
- **ERR Sent**—Total number of error (ERR) messages sent by the application server process.
- **Notify Sent**—Total number of notify messages sent by the application server process.
- **DUNA Received**—Total number of destination unavailable (DUNA) messages received by the application server process.

- **DUNA Sent**—Total number of destination unavailable (DUNA) messages sent by the application server process.
- **DAVA Received**—Total number of destination available (DAVA) messages received by the application server process.
- **DAVA Sent**—Total number of destination available (DAVA) messages sent by the application server process.
- **DUPU Received**—Total number of destination user part unavailable (DUPU) messages received by the application server process.
- **DUPU Sent**—Total number of destination user part unavailable (DUPU) messages sent by the application server process.
- **DAUD Received**—Total number of destination state audit (DAUD) messages received by the application server process.
- **DAUD Sent**—Total number of destination state audit (DAUD) messages sent by the application server process.
- **SCON 0 Received**—Total number of signaling congestion level 0 (SCON0) messages received by the application server process.
- **SCON 0 Sent**—Total number of signaling congestion level 0 (SCON0) messages sent by the application server process.
- **SCON 1 Received**—Total number of signaling congestion level 1 (SCON1) messages received by the application server process.
- **SCON 1 Sent**—Total number of signaling congestion level 1 (SCON1) messages sent by the application server process.
- **SCON 2 Received**—Total number of signaling congestion level 2 (SCON2) messages received by the application server process.
- **SCON 2 Sent**—Total number of signaling congestion level 2 (SCON2) messages sent by the application server process.
- **SCON 3 Received**—Total number of signaling congestion level 3 (SCON3) messages received by the application server process.
- **SCON 3 Sent**—Total number of signaling congestion level 3 (SCON3) messages sent by the application server process.

Viewing Information About Signaling Gateway Mated Pairs

SGM enables you to view the following information about signaling gateway mated pairs:

- [Viewing Signaling Gateway Mated Pair Status, page 7-82](#)
- [Viewing Signaling Gateway Mated Pair Details, page 7-84](#)

Viewing Signaling Gateway Mated Pair Status

The SGM Signaling Gateway Mated Pairs Status page displays information about all discovered signaling gateway mated pairs, including their names, status, and other important information.

To access the SGM Signaling Gateway Mated Pairs Status page, select **ITP SGMP Status** from the SGM Server Home Page.

You can sort the Signaling Gateway Mated Pairs Status table based on the information in any column. See the [“Resizing, Sorting, and Hiding Table Columns” section on page 3-279](#) for more details.

The SGM Signaling Gateway Mated Pairs Status page displays the following information:

- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **SGMP Name**—Name of the signaling gateway mated pair. To see detailed information for the signaling gateway mated pair, click the signaling gateway mated pair name.
- **Node**—Name of the node associated with the signaling gateway mated pair. To see detailed information for the node, click the node name.
- **Signaling Point**—Name of the signaling point associated with the signaling gateway mated pair. To see detailed information for the signaling point, click the signaling point name.

- **Status**—Current status of the signaling gateway mated pair, with a color-coded background. Possible values are:
 - **Active (green)**—The signaling gateway mated pair is available and application traffic is active.
 - **Deleted (red)**—The signaling gateway mated pair has been deleted from the SGM database.
 - **Down (red)**—The signaling gateway mated pair is not available.
 - **Inactive (red)**—The signaling gateway mated pair is available, but application traffic has stopped.
 - **Shutdown (blue)**—An administrator has forced the signaling gateway mated pair to an unavailable state.
 - **Unknown (red)**—SGM cannot determine the current status of the signaling gateway mated pair.
 - **Warning (yellow)**—The signaling gateway mated pair is **Active**, but some underlying facility is not fully functional.
- **Instance Status**—Current status of the protocol associated with the signaling gateway mated pair, with a color-coded background. Possible values are:
 - **Active (green)**—The protocol is available.
 - **Shutdown (blue)**—An administrator has forced the protocol to an unavailable state.
 - **Unknown (red)**—SGM cannot determine the current status of the protocol.
- **Congestion**—Indicates whether there is congestion on the signaling gateway mated pair. A signaling gateway mated pair is congested if it has too many packets waiting to be sent. This condition could be caused by the failure of an element in your network.

Possible values for the **Congestion** field are **None**, indicating no congestion, and **1** to **7**, indicating levels of congestion from very light (**1**) to very heavy (**7**).

Viewing Signaling Gateway Mated Pair Details

The SGM Signaling Gateway Mated Pairs Details page displays detailed information about a signaling gateway mated pair.

To access the SGM Signaling Gateway Mated Pairs Details page, click the signaling gateway mated pair name on the SGM Signaling Gateway Mated Pairs Status page.

You can sort the Signaling Gateway Mated Pairs Details table based on the information in any column. See the [“Resizing, Sorting, and Hiding Table Columns” section on page 3-279](#) for more details.

The SGM Signaling Gateway Mated Pairs Details page displays the following information:

- **Server Name (in header)**—Name of the SGM server associated with the node.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Last Update (in header)**—Date and time the information on the page was last updated by SGM.
- **SGMP Name**—Name of the signaling gateway mated pair. To see detailed information for the signaling gateway mated pair, click the signaling gateway mated pair name.
- **Status**—Current status of the signaling gateway mated pair, with a color-coded background. Possible values are:
 - **Active (green)**—The signaling gateway mated pair is available and application traffic is active.
 - **Deleted (red)**—The signaling gateway mated pair has been deleted from the SGM database.
 - **Down (red)**—The signaling gateway mated pair is not available.
 - **Inactive (red)**—The signaling gateway mated pair is available, but application traffic has stopped.
 - **Shutdown (blue)**—An administrator has forced the signaling gateway mated pair to an unavailable state.

- **Unknown (red)**—SGM cannot determine the current status of the signaling gateway mated pair.
 - **Warning (yellow)**—The signaling gateway mated pair is **Active**, but some underlying facility is not fully functional.
- **Node**—Name of the node associated with the signaling gateway mated pair. To see detailed information for the node, click the node name.
- **Signaling Point**—Name of the signaling point associated with the signaling gateway mated pair. To see detailed information for the signaling point, click the signaling point name.
- **Instance Status**—Current status of the protocol associated with the signaling gateway mated pair, with a color-coded background. Possible values are:
 - **Active (green)**—The protocol is available.
 - **Shutdown (blue)**—An administrator has forced the protocol to an unavailable state.
 - **Unknown (red)**—SGM cannot determine the current status of the protocol.
- **Congestion**—Indicates whether there is congestion on the signaling gateway mated pair. A signaling gateway mated pair is congested if it has too many packets waiting to be sent. This condition could be caused by the failure of an element in your network.

Possible values for the **Congestion** field are **None**, indicating no congestion, and **1** to **7**, indicating levels of congestion from very light (**1**) to very heavy (**7**).

- **QoS**—Quality of service (QoS) class of the signaling gateway mated pair.
- **Passive**—Indicates whether the signaling gateway can initiate the connection with the mate. Possible values are:
 - **True**—The signaling gateway cannot initiate the connection. The mate must initiate the connection.
 - **False**—The signaling gateway can initiate the connection.
- **Config Local Port**—Local port number that was configured for the signaling gateway mated pair.
- **Local Port**—Local port number that is currently in use for the signaling gateway mated pair.

- **Config Remote Port**—Remote port number that was configured for the signaling gateway mated pair.
- **Remote Port**—Remote port number that is currently in use for the signaling gateway mated pair.
- **Note**—Note associated with this signaling gateway mated pair. If there is no note associated with this signaling gateway mated pair, this field is blank.
- **Note Timestamp**—Date and time the note associated with this signaling gateway mated pair was last updated. If there is no note associated with this signaling gateway mated pair, this field is blank.

Viewing Status Change and SNMP Trap Messages

SGM enables you to view the following status change and SNMP trap messages:

- [Viewing Status Change and SNMP Trap Messages for SGM, page 7-86](#)
- [Viewing Status Change Messages for SGM, page 7-90](#)
- [Viewing SNMP Trap Messages for SGM, page 7-93](#)
- [Viewing All Archived Status Change and SNMP Trap Messages, page 7-96](#)
- [Modifying Network Status Message Colors, page 7-96](#)

Viewing Status Change and SNMP Trap Messages for SGM

The Network Status: Last X Status Change and Trap Messages page displays status change messages and SNMP trap messages in the SGM network log.

To access the Network Status: Last X Status Change and Trap Messages page and display all status change and trap messages, use one of the following procedures:

- Select **View > Event History > Status and Trap Messages** from the SGM Main Menu.
- Select **Status & SNMP Trap Messages** from the SGM Server Home Page.

To access the Network Status: Last X Status Change and Trap Messages page and display status change and trap messages for a specific signaling point, signaling point, linkset, or event, right-click a signaling point, signaling point, linkset, or event in a window, then select **Event History > Status and Trap Messages** from the right-click menu.

SGM displays the Network Status: Last X Status Change and Trap Messages page (Figure 7-10).

Figure 7-10 Network Status: Last X Status Change and Trap Messages Page

Network Status - Last 500 Status Change and Trap Messages			
All Severity			Update Interval : 5 mins
			2003/03/20 18:55:36
Last10	Last20	Last50	Last100
Last300	Last500	Max	DefPrefs
Admin	Error	Warning	Normal
		Unclassified	All
Row	Time	Type	Message
1	2003/03/20 18:52:40	Status	SignalingPoint sgm-75-70c.cisco.com/5.10.3 changed state from Warning to Warning/Linkset Inactive.
2	2003/03/20 18:52:40	Status	Node sgm-75-70c.cisco.com changed state from Warning to Warning/Linkset Inactive.
3	2003/03/20 18:52:34	Status	SignalingPoint sgm-75-70c.cisco.com/5.10.3 changed state from Warning to Warning/Link Receive Utilization Threshold exceeded.
4	2003/03/20 18:52:34	Status	Node sgm-75-70c.cisco.com changed state from Warning to Warning/Link Receive Utilization Threshold exceeded.
5	2003/03/20 18:52:24	Status	SignalingPoint sgm-75-70c.cisco.com/5.10.3 changed state from Warning to Warning/Linkset Inactive.
6	2003/03/20 18:52:24	Status	Node sgm-75-70c.cisco.com changed state from Warning to Warning/Linkset Inactive.
7	2003/03/20 18:48:47	Status	An SNMP timeout occurred polling sgm-sun28.cisco.com address 172.18.12.67. No interfaces available for retry.
8	2003/03/20 18:32:12	Trap	sgm-26-64b.cisco.com (cli_2664b) 1.91.2.net2 - Link 2664b_to_2664c2/3: sgm-26-64c.cisco.com/172.18.16.92 is Active.
9	2003/03/20 18:32:12	Trap	sgm-26-64c.cisco.com (cli_2664b) 1.91.2.net2 - Link 2664b_to_2664c2/3: sgm-26-64c.cisco.com/172.18.16.92 is Active.

The Network Status: Last X Status Change and Trap Messages page displays the following information for each message:

- **Severity (in header)**—Message severity currently being displayed.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Row**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Type**—Type of message:
 - **Status**—Status change message
 - **Trap**—SNMP trap message
- **Message**—Text of the message.

To sort the messages by time, type, or alphabetically by message text, click the **Time**, **Type**, or **Message** header.

SGM enables you to modify the way information is presented in the Network Status: Last X Status Change and Trap Messages page:

- To display only the top 10 or bottom 10 records, based on the column by which the table is sorted, click the **Top 10** menu option:
 - If the column is sorted in descending order, displays only the top 10 records.
 - If the column is sorted in ascending order, displays only the bottom 10 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 20 or bottom 20 records, based on the column by which the table is sorted, click the **Top 20** menu option:
 - If the column is sorted in descending order, displays only the top 20 records.
 - If the column is sorted in ascending order, displays only the bottom 20 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 50 or bottom 50 records, based on the column by which the table is sorted, click the **Top 50** menu option:
 - If the column is sorted in descending order, displays only the top 50 records.
 - If the column is sorted in ascending order, displays only the bottom 50 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 100 or bottom 100 records, based on the column by which the table is sorted, click the **Top 100** menu option:
 - If the column is sorted in descending order, displays only the top 100 records.
 - If the column is sorted in ascending order, displays only the bottom 100 records.
 - To switch between the two displays, left-click the column header.

- To display only the top 300 or bottom 300 records, based on the column by which the table is sorted, click the **Top 300** menu option:
 - If the column is sorted in descending order, displays only the top 300 records.
 - If the column is sorted in ascending order, displays only the bottom 300 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 500 or bottom 500 records, based on the column by which the table is sorted, click the **Top 500** menu option:
 - If the column is sorted in descending order, displays only the top 500 records.
 - If the column is sorted in ascending order, displays only the bottom 500 records.
 - To switch between the two displays, left-click the column header.
- To display up to 15,000 records in the table, click the **Max** menu option.
- To reset the **Top** preferences for this Web page to the default settings for the SGM server, click the **DefPrefs** menu option.

By default, SGM displays status change and SNMP trap messages of all types on the Network Status: Last X Status Change and Trap Messages page. However, menu options are provided that enable you to display only messages of a specific type on the page. To display only messages of a specific type, select one of the following options:

- **Admin**—Displays only administrative messages. SGM displays administrative messages with a cyan background.
- **Error**—Displays only error messages. SGM displays error messages with a coral background.
- **Warning**—Displays only warning messages. SGM displays warning messages with a yellow background.
- **Normal**—Displays only normal messages. SGM displays normal messages with a light green background.
- **Unclassified**—Displays only messages that do not fall into one of the above classifications. SGM displays unclassified messages with a white background.
- **All**—Displays all status change and SNMP trap messages.

The list of messages displayed in the Last Status Change and Trap Messages table is continually refreshed as new messages are received.

- To pause the message display, select **Pause** from the menu bar.
- To resume the message display, select **Resume** from the menu bar.

Viewing Status Change Messages for SGM

The Network Status: Last X Status Change Messages page displays status change messages in the SGM network log.

To access the Network Status: Last X Status Change Messages page and display all status change messages, use one of the following procedures:

- Select **View > Event History > Status Changes** from the SGM Main Menu.
- Select **Status Change Messages** from the SGM Server Home Page.

To access the Network Status: Last X Status Change Messages page and display status change messages for a specific signaling point, signaling point, linkset, or event, right-click a signaling point, signaling point, linkset, or event in a window, then select **Event History > Status Change Messages** from the right-click menu.

The Network Status: Last X Status Change Messages page displays the following information for each message:

- **Severity (in header)**—Message severity currently being displayed.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Row**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Message**—Text of the message.

To sort the messages by time or alphabetically by message text, click the **Time** or **Message** header.

SGM enables you to modify the way information is presented in the Network Status: Last X Status Change Messages page:

- To display only the top 10 or bottom 10 records, based on the column by which the table is sorted, click the **Top 10** menu option:
 - If the column is sorted in descending order, displays only the top 10 records.
 - If the column is sorted in ascending order, displays only the bottom 10 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 20 or bottom 20 records, based on the column by which the table is sorted, click the **Top 20** menu option:
 - If the column is sorted in descending order, displays only the top 20 records.
 - If the column is sorted in ascending order, displays only the bottom 20 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 50 or bottom 50 records, based on the column by which the table is sorted, click the **Top 50** menu option:
 - If the column is sorted in descending order, displays only the top 50 records.
 - If the column is sorted in ascending order, displays only the bottom 50 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 100 or bottom 100 records, based on the column by which the table is sorted, click the **Top 100** menu option:
 - If the column is sorted in descending order, displays only the top 100 records.
 - If the column is sorted in ascending order, displays only the bottom 100 records.
 - To switch between the two displays, left-click the column header.

- To display only the top 300 or bottom 300 records, based on the column by which the table is sorted, click the **Top 300** menu option:
 - If the column is sorted in descending order, displays only the top 300 records.
 - If the column is sorted in ascending order, displays only the bottom 300 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 500 or bottom 500 records, based on the column by which the table is sorted, click the **Top 500** menu option:
 - If the column is sorted in descending order, displays only the top 500 records.
 - If the column is sorted in ascending order, displays only the bottom 500 records.
 - To switch between the two displays, left-click the column header.
- To display up to 15,000 records in the table, click the **Max** menu option.
- To reset the **Top** preferences for this Web page to the default settings for the SGM server, click the **DefPrefs** menu option.

By default, SGM displays status change messages of all types on the Network Status: Last X Status Change Messages page. However, menu options are provided that enable you to display only messages of a specific type on the page. To display only messages of a specific type, select one of the following options:

- **Admin**—Displays only administrative messages. SGM displays administrative messages with a cyan background.
- **Error**—Displays only error messages. SGM displays error messages with a coral background.
- **Warning**—Displays only warning messages. SGM displays warning messages with a yellow background.
- **Normal**—Displays only normal messages. SGM displays normal messages with a light green background.
- **Unclassified**—Displays only messages that do not fall into one of the above classifications. SGM displays unclassified messages with a white background.
- **All**—Displays all status change messages.

The list of messages displayed in the Last Status Change Messages table is continually refreshed as new messages are received.

- To pause the message display, select **Pause** from the menu bar.
- To resume the message display, select **Resume** from the menu bar.

Viewing SNMP Trap Messages for SGM

The Network Status: Last X SNMP Trap Messages page displays SNMP trap messages in the SGM network log.

To access the Network Status: Last X SNMP Trap Messages page and display all SNMP trap messages, use one of the following procedures:

- Select **View > Event History > SNMP Traps** from the SGM Main Menu.
- Select **SNMP Trap Messages** from the SGM Server Home Page.

To access the Network Status: Last X SNMP Trap Messages page and display SNMP trap messages for a specific signaling point, signaling point, linkset, or event, right-click a signaling point, signaling point, linkset, or event in a window, then select **Event History > SNMP Trap Messages** from the right-click menu.

The Network Status: Last X SNMP Trap Messages page displays the following information for each message:

- **Severity (in header)**—Message severity currently being displayed.
- **Update Interval (in header)**—Time between automatic updates for the page.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Row**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Node**—Node that sent the trap. To see only SNMP trap messages for that signaling point, click the signaling point name.
- **Message**—Text of the message.

To sort the messages by time or alphabetically by message text, click the **Time** or **Message** header.

SGM enables you to modify the way information is presented in the Network Status: Last X SNMP Trap Messages page:

- To display only the top 10 or bottom 10 records, based on the column by which the table is sorted, click the **Top 10** menu option:
 - If the column is sorted in descending order, displays only the top 10 records.
 - If the column is sorted in ascending order, displays only the bottom 10 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 20 or bottom 20 records, based on the column by which the table is sorted, click the **Top 20** menu option:
 - If the column is sorted in descending order, displays only the top 20 records.
 - If the column is sorted in ascending order, displays only the bottom 20 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 50 or bottom 50 records, based on the column by which the table is sorted, click the **Top 50** menu option:
 - If the column is sorted in descending order, displays only the top 50 records.
 - If the column is sorted in ascending order, displays only the bottom 50 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 100 or bottom 100 records, based on the column by which the table is sorted, click the **Top 100** menu option:
 - If the column is sorted in descending order, displays only the top 100 records.
 - If the column is sorted in ascending order, displays only the bottom 100 records.
 - To switch between the two displays, left-click the column header.

- To display only the top 300 or bottom 300 records, based on the column by which the table is sorted, click the **Top 300** menu option:
 - If the column is sorted in descending order, displays only the top 300 records.
 - If the column is sorted in ascending order, displays only the bottom 300 records.
 - To switch between the two displays, left-click the column header.
- To display only the top 500 or bottom 500 records, based on the column by which the table is sorted, click the **Top 500** menu option:
 - If the column is sorted in descending order, displays only the top 500 records.
 - If the column is sorted in ascending order, displays only the bottom 500 records.
 - To switch between the two displays, left-click the column header.
- To display up to 15,000 records in the table, click the **Max** menu option.
- To reset the **Top** preferences for this Web page to the default settings for the SGM server, click the **DefPrefs** menu option.

By default, SGM displays SNMP trap messages of all types on the Network Status: Last X SNMP Trap Messages page. However, menu options are provided that enable you to display only messages of a specific type on the page. To display only messages of a specific type, select one of the following options:

- **Admin**—Displays SNMP trap administrative messages. SGM displays administrative messages with a cyan background.
- **Error**—Displays SNMP trap error messages. SGM displays error messages with a coral background.
- **Warning**—Displays SNMP trap warning messages. SGM displays warning messages with a yellow background.
- **Normal**—Displays normal SNMP trap messages. SGM displays normal messages with a light green background.
- **Unclassified**—Displays SNMP trap messages that do not fall into one of the above classifications. SGM displays unclassified messages with a white background.
- **All**—Displays all SNMP trap messages.

The list of messages displayed in the Last SNMP Trap Messages table is continually refreshed as new messages are received.

- To pause the message display, select **Pause** from the menu bar.
- To resume the message display, select **Resume** from the menu bar.

Viewing All Archived Status Change and SNMP Trap Messages

The Network Status Daily Archives: Status and SNMP Trap Messages page displays all archived status change and SNMP trap messages.

To access the Network Status Daily Archives: Status and SNMP Trap Messages page, use one of the following procedures:

- Select **View > Event History > Network Status Archives** from the SGM Main Menu.
- Select **Network Status Archives** from the SGM Server Home Page.

On the Network Status Daily Archives: Status and SNMP Trap Messages page, messages are archived by time stamp. SGM automatically archives the messages at 11:59 PM each night; each archived file contains messages from a single calendar day.

To view archived messages, click a time stamp. SGM displays the message archive, with columns and features as described in the [“Viewing Status Change and SNMP Trap Messages for SGM”](#) section on page 7-86.

Modifying Network Status Message Colors

By default, SGM displays network status messages with the following background colors:

- **Admin**—cyan background
- **Error**—coral background
- **Normal**—light green background
- **Warning**—yellow background
- **Unclassified**—white background

For information about customizing the background colors for network status messages, see the [“Modifying the SGM Event Configuration File \(Solaris Only\)”](#) section on page 5-26.

Viewing Network Status Metrics

The Network Status Messages: Messages page displays a number of metrics for SGM, based on the number of messages of each type and severity received by SGM.

To access the Network Status Messages: Messages page and display all metrics, use one of the following procedures:

- Select **View > Event History > Network Status Metrics** from the SGM Main Menu.
- Select **Network Status Metrics** from the SGM Server Home Page.

To access the Network Status Messages: Messages page and display metrics for a specific signaling point, signaling point, linkset, or event, right-click a signaling point, signaling point, linkset, or event in a window, then select **Event History > Network Status Metrics** from the right-click menu.

The Network Status Messages: Messages page displays both raw numbers and calculated metrics for the following information:

- Total number of messages of each type and severity received by SGM.
- Messages sorted by severity.
- Messages sorted by type (status change messages and SNMP trap messages)
- Status change messages sorted by severity.
- SNMP trap messages sorted by severity.
- Names of all files processed by SGM.
- Beginning and ending date and time for the displayed metrics.

Viewing Network Statistics Reports for Links and Linksets

You can view the following SGM network statistics reports for links and linksets from the SGM Server Home Page:

- Linkset Statistics Hourly Summary Reports
- Linkset Statistics Daily Summary Reports
- Link Statistics Hourly Summary Reports
- Link Statistics Daily Summary Reports

- Five Day Link Utilization Report
- Hourly Network Statistics Export Files
- Daily Network Statistics Export Files
- Rolling Network Statistics Export Files
- Custom Network Statistics Export Files

For more information, see the [“Viewing SGM Network Statistics Reports”](#) section on page 3-343.

Viewing Accounting Statistics Reports

You can view the following SGM accounting statistics reports from the SGM Server Home Page:

- Accounting Statistics Daily Detail Reports
- Daily Accounting Statistics Export Files
- Custom Network Statistics Export Files

For more information, see the [“Viewing SGM Accounting Statistics Reports”](#) section on page 3-364.

Viewing Point Code Inventory Reports

You can view the following SGM point code inventory reports from the SGM Server Home Page:

- Current Point Code Inventory
- Daily Point Code Inventory Daily Reports
- Daily Point Code Inventory Export Files

For more information, see the [“Viewing SGM Point Code Inventory Reports”](#) section on page 3-390.

Viewing Statistics Report Logs

You can view the following SGM network and accounting statistics report logs from the SGM Server Home Page:

- SGM System Reports Logs
- SGM System Report Parameters and Timers

For more information, see the [“Viewing SGM Statistics Reports Logs”](#) section on page 3-394.

Viewing SGM System Messages

You can view the following SGM system messages from the SGM Server Home Page.

**Note**

These messages are all related to the SGM system itself, not to your network.

- [Viewing SGM Error Messages, page 7-100](#)
- [Viewing SGM Info Messages, page 7-101](#)
- [Viewing SGM Action Messages, page 7-102](#)
- [Viewing SGM Trace Messages, page 7-105](#)
- [Viewing SGM Debug Messages, page 7-106](#)
- [Viewing SGM Dump Messages, page 7-107](#)
- [Viewing SGM SNMP Messages, page 7-108](#)
- [Viewing All Current SGM Messages, page 7-109](#)
- [Viewing All Archived SGM Messages, page 7-110](#)
- [Viewing the SGM System Console Log, page 7-110](#)
- [Viewing All Archived SGM System Console Log Messages, page 7-111](#)
- [Viewing the SGM System Command Log, page 7-111](#)
- [Viewing the SGM System Event Automation Log, page 7-112](#)
- [Viewing the SGM System Security Log, page 7-113](#)

- [Viewing the SGM System Web Server Error Log, page 7-114](#)
- [Viewing the SGM System Web Access Log, page 7-115](#)

Viewing SGM Error Messages

The System Messages: Last X Error Messages page displays error messages stored in the ITP system log. These messages can be useful when diagnosing and correcting SGM operational problems.

To access the System Messages: Last X Error Messages page, use one of the following procedures:

- Select **System Error Messages** from the SGM Server Home Page.
- Select **Error** from the menu bar of any SGM System Messages Web page.

The Last Error Messages table provides the following information for each message:

- **Period (in header)**—Collection period of the table, such as **Since Server Restart**.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Index**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged. To sort the messages by time, click the **Time** header.
- **Source**—Source for the message, with the format *process.host.id*, where:
 - *process* is the process that logged the message.
 - *host* is the host name of the process that logged the message.
 - *id* is an SGM ID that uniquely identifies the process that logged the message, in the event that there are two or more clients running on the same device, connected to the same SGM server.
- **Task**—Task, or thread, that logged the message.
- **Message**—Text of the message. To sort the messages alphabetically by message text, click the **Message** header.

To sort the messages by time or alphabetically by message text, click the **Time** or **Message** header.

Viewing SGM Info Messages

The System Messages: Last X Info Messages page displays informational messages stored in the ITP system log. These messages can be useful when diagnosing and correcting SGM operational problems.

To access the System Messages: Last X Info Messages page, select **Info** from the menu bar of any SGM System Messages Web page.

The Last Info Messages table provides the following information for each message:

- **Period (in header)**—Collection period of the table, such as **Since Server Restart**.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Index**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged. To sort the messages by time, click the **Time** header.
- **Source**—Source for the message, with the format *process.host.id*, where:
 - *process* is the process that logged the message.
 - *host* is the host name of the process that logged the message.
 - *id* is an SGM ID that uniquely identifies the process that logged the message, in the event that there are two or more clients running on the same device, connected to the same SGM server.
- **Task**—Task, or thread, that logged the message.
- **Message**—Text of the message. To sort the messages alphabetically by message text, click the **Message** header.

To sort the messages by time or alphabetically by message text, click the **Time** or **Message** header.

Viewing SGM Action Messages

The System Messages: Last X Action Messages page displays action messages stored in the ITP system log. These messages can be useful when diagnosing and correcting SGM operational problems, and when monitoring audit trails of user actions.

To access the System Messages: Last X Action Messages page, use one of the following procedures:

- Select **View > User Audit > User Actions** from the SGM Main Menu.
- Select **User Actions** from the SGM Server Home Page.
- Select **Action** from the menu bar of any SGM System Messages Web page.

SGM displays the System Messages: Last X Action Messages page (Figure 7-11).

Figure 7-11 System Messages: Last X Action Messages Page

The screenshot shows a Netscape browser window titled "SGM Server - sgm-sun28 - Netscape". The page content is titled "System Messages - Last 500 Action Messages" and shows messages from the last 31 days, ending on 2003/03/20 18:59:34. The table below represents the data shown in the screenshot.

Row	Time	Class	Message
1	2003/03/20 18:55:34	OverWrite	The file /opt/CSCOSgm/evprefs/sgmClient.jeffmoor-w2k04.f40d891d7df40dd33a65.eprf was overwritten by sgmClient.jeffmoor-w2k04.f40d891d7d.
2	2003/03/20 18:48:16	OverWrite	The file /opt/CSCOSgm/evprefs/sgmClient.jeffmoor-w2k04.f40d891d7df40dd33a65.eprf was overwritten by sgmClient.jeffmoor-w2k04.f40d891d7d.
3	2003/03/20 18:46:55	Create	The file /opt/CSCOSgm/evprefs/sgmClient.jeffmoor-w2k04.f40d891d7df40dd33a65.eprf was created by sgmClient.jeffmoor-w2k04.f40d891d7d.
4	2003/03/20 18:09:18	Create	The file /opt/CSCOSgm/egp/filter.egg was created by jeffmoor-w2k04.amer.cisco.com on jeffmoor-w2k04.amer.cisco.com.
5	2003/03/20 18:03:57	Edit	Link sgm-26-61c.cisco.com/1.60.0.net0/2661c_to_7580a0/0 edited by user dhcp-64-102-82-134.cisco.com.
6	2003/03/20 18:03:57	Edit	Link sgm-75-80a.cisco.com/1.18.0.net0/7580a_to_2661c0/0 edited by user dhcp-64-102-82-134.cisco.com.
7	2003/03/20 17:59:37	Edit	SP sgm-75-80a.cisco.com/1.18.0.net0 edited by user dhcp-64-102-82-134.cisco.com.
8	2003/03/20 17:57:36	Edit	Node sgm-26-51a.cisco.com edited by user dhcp-64-102-82-134.cisco.com.
9	2003/03/20 17:44:36	Delete	The file /opt/CSCOSgm/views/Jeff1.vew was deleted by jeffmoor-w2k04.amer.cisco.com on jeffmoor-w2k04.amer.cisco.com.

The Last Action Messages table provides the following information for each message:

- **Period (in header)**—Collection period of the table, such as **Since Server Restart**.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Row**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Class**—Class of the message. Possible classes are:
 - **Create**—Creation event, such as the creation of a seed file.
 - **Delete**—Deletion event, such as the deletion of a signaling point, signaling point, linkset, or file.
 - **Discover**—Discovery event, such as Discovery beginning.
 - **Edit**—Edit event. A user has edited an event, linkset, or signaling point.
 - **Ignore**—Ignore event. A user has flagged a link or linkset as **Ignored**.
 - **Login**—Login event. A user has logged in to SGM.
 - **LoginDisable**—LoginDisable event. SGM has disabled a user's User-Based Access authentication as a result of too many failed attempts to log in to SGM.
 - **LoginFail**—LoginFail event. An attempt by a user to log in to SGM has failed.
 - **OverWrite**—OverWrite event. An existing file, such as a seed file or route file, has been overwritten.
 - **Poll**—Poll event, such as an SNMP poll.
 - **Purge**—Purge event. A user has requested Discovery with **Delete Existing Data** selected, and SGM has deleted the existing SGM database.
- **Message**—Text of the message.

To sort the messages by time, class, or alphabetically by message text, click the **Time**, **Class**, or **Message** header.

By default, SGM displays action messages of all classes on the System Messages: Last X Action Messages page. However, menu options are provided that enable you to display only messages of a specific class on the page. To display only messages of a specific class, select one of the following options:

- **All**—Opens the System Messages: Last X Action Messages Web page, which displays all action messages.
- **Create**—Opens the System Messages: Last X Action: Create Messages Web page, which displays only Create action messages.
- **Delete**—Opens the System Messages: Last X Action: Delete Messages Web page, which displays only Delete action messages.
- **Discover**—Opens the System Messages: Last X Action: Discover Messages Web page, which displays only Discover action messages.
- **Edit**—Opens the System Messages: Last X Action: Edit Messages Web page, which displays only Edit action messages.
- **Ignore**—Opens the System Messages: Last X Action: Ignore Messages Web page, which displays only Ignore action messages.
- **Login**—Opens the System Messages: Last X Action: Login Messages Web page, which displays only Login action messages.
- **OverWrite**—Opens the System Messages: Last X Action: OverWrite Messages Web page, which displays only OverWrite action messages.
- **Poll**—Opens the System Messages: Last X Action: Poll Messages Web page, which displays only Poll action messages.
- **Purge**—Opens the System Messages: Last X Action: Purge Messages Web page, which displays only Purge action messages.

Viewing SGM Trace Messages

The System Messages: Last X Trace Messages page displays trace messages stored in the ITP system log. These messages can be useful when diagnosing and correcting SGM operational problems.

To access the System Messages: Last X Trace Messages page, select **Trace** from the menu bar of any SGM System Messages Web page.

The Last Trace Messages table provides the following information for each message:

- **Period (in header)**—Collection period of the table, such as **Since Server Restart**.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Index**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Source**—Source for the message, with the format *process.host.id*, where:
 - *process* is the process that logged the message.
 - *host* is the host name of the process that logged the message.
 - *id* is an SGM ID that uniquely identifies the process that logged the message, in the event that there are two or more clients running on the same device, connected to the same SGM server.
- **Task**—Task, or thread, that logged the message.
- **Message**—Text of the message.

Viewing SGM Debug Messages

The System Messages: Last X Debug Messages page displays debug messages stored in the ITP system log. These messages can be useful when diagnosing and correcting SGM operational problems.

To access the System Messages: Last X Debug Messages page, select **Debug** from the menu bar of any SGM System Messages Web page.

**Note**

The **Debug** option is displayed only when enabled at the request of Cisco TAC.

The Last Debug Messages table provides the following information for each message:

- **Period (in header)**—Collection period of the table, such as **Since Server Restart**.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Index**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Source**—Source for the message, with the format *process.host.id*, where:
 - *process* is the process that logged the message.
 - *host* is the host name of the process that logged the message.
 - *id* is an SGM ID that uniquely identifies the process that logged the message, in the event that there are two or more clients running on the same device, connected to the same SGM server.
- **Task**—Task, or thread, that logged the message.
- **Message**—Text of the message.

Viewing SGM Dump Messages

The System Messages: Last X Dump Messages page displays dump messages stored in the ITP system log. These messages can be useful when diagnosing and correcting SGM operational problems.

To access the System Messages: Last X Dump Messages page, select **Dump** from the menu bar of any SGM System Messages Web page.

**Note**

The **Dump** option is displayed only when enabled at the request of Cisco TAC.

The Last Dump Messages table provides the following information for each message:

- **Period (in header)**—Collection period of the table, such as **Since Server Restart**.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Index**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Source**—Source for the message, with the format *process.host.id*, where:
 - *process* is the process that logged the message.
 - *host* is the host name of the process that logged the message.
 - *id* is an SGM ID that uniquely identifies the process that logged the message, in the event that there are two or more clients running on the same device, connected to the same SGM server.
- **Task**—Task, or thread, that logged the message.
- **Message**—Text of the message.

Viewing SGM SNMP Messages

The System Messages: Last X SNMP Messages page displays SNMP messages stored in the ITP system log. These messages can be useful when diagnosing and correcting SGM operational problems.


Note

These are not SNMP trap messages. These are debugging messages from internal, low-level SNMP encoding and decoding routines.

To access the System Messages: Last X SNMP Messages page, select **SNMP** from the menu bar of any SGM System Messages Web page.


Note

The **SNMP** option is displayed only when enabled at the request of Cisco TAC.

The Last SNMP Messages table provides the following information for each message:

- **Period (in header)**—Collection period of the table, such as **Since Server Restart**.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Index**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Source**—Source for the message, with the format *process.host.id*, where:
 - *process* is the process that logged the message.
 - *host* is the host name of the process that logged the message.
 - *id* is an SGM ID that uniquely identifies the process that logged the message, in the event that there are two or more clients running on the same device, connected to the same SGM server.
- **Task**—Task, or thread, that logged the message.
- **Message**—Text of the message.

Viewing All Current SGM Messages

The System Messages: Last X All Messages page displays all current messages in the ITP system log.

To access the System Messages: Last X All Messages page, select **All** from the menu bar of any SGM System Messages Web page.

The Last All Messages table provides the following information for each message:

- **Period (in header)**—Collection period of the table, such as **Since Server Restart**.
- **Timestamp (in header)**—Date and time the information on the page was last updated by SGM.
- **Index**—Message number, assigned to the message by SGM.
- **Time**—Date and time the message was logged.
- **Type**—Type of message. Possible types are:
 - **Action**
 - **Debug**
 - **Dump**
 - **Error**
 - **Info**
 - **SNMP**
 - **Trace**
- **Source**—Source for the message, with the format *process.host.id*, where:
 - *process* is the process that logged the message.
 - *host* is the host name of the process that logged the message.
 - *id* is an SGM ID that uniquely identifies the process that logged the message, in the event that there are two or more clients running on the same device, connected to the same SGM server.
- **Task**—Task, or thread, that logged the message.
- **Message**—Text of the message.

Viewing All Archived SGM Messages

The System Message Archives: All Messages page displays all archived messages in the ITP system logs, including error messages, informational messages, trace messages, debug messages, dump messages, and SNMP messages.

To access the System Message Archives: All Messages page, use one of the following procedures:

- Select **System Message Archives** from the SGM Server Home Page.
- Select **Archives** from the menu bar of any SGM System Messages Web page.

On the System Message Archives: All Messages page, messages are archived by time stamp. Each archived file contains all SGM system messages for a single session for the server to which you are connected, and which is currently running the SGM server. (If you restart the server, SGM creates a new file.)

To view archived messages, click a time stamp. SGM displays the archived messages.

Viewing the SGM System Console Log

The SGM System Console Log page displays the contents of the SGM system console log file for the server to which you are connected, and which is currently running the SGM server. The console log file contains unexpected error and warning messages from the SGM server, such as those that might occur if the SGM server cannot start.

To access the SGM System Console Log page, use one of the following procedures:

- Select **System Console Log** from the SGM Server Home Page.
- Select **Console** from the menu bar of any SGM System Messages Web page.

Viewing All Archived SGM System Console Log Messages

The Console Archives: All Messages page displays all archived SGM system console log messages for the server to which you are connected, and which is currently running the SGM server. The archived console logs contain unexpected error and warning messages from the SGM server, such as those that might occur if the SGM server cannot start.

To access the Console Archives: All Messages page, select **Console Archives** from the menu bar of any SGM System Messages Web page.

On the Console Archives: All Messages page, messages are archived by time stamp. Each archived file contains all SGM system console log messages for a single session for the server to which you are connected, and which is currently running the SGM server. (If you restart the server, SGM creates a new file.)

To view archived messages, click a time stamp. SGM displays the archived messages.

Viewing the SGM System Command Log

The SGM System Command Log: Last X Commands page displays the contents of the SGM system command log file for the server to which you are connected, and which is currently running the SGM server. The system command log lists all **sgm** commands that have been entered for the SGM server, the time each command was entered, and the user who entered the command.

To access the SGM System Command Log: Last X Commands page, use one of the following procedures:

- Select **View > User Audit > Command Log** from the SGM Main Menu.
- Select **System Command Log** from the SGM Server Home Page.
- Select **Command Log** from the menu bar of any SGM System Messages Web page.

SGM displays the SGM System Command Log: Last X Commands page ([Figure 7-12](#)).

Viewing SGM System Messages

Figure 7-12 SGM Command Page: Last X Commands Page

Row	Time	User	Command
1	2003/03/20 18:00:15	root	sgm gtt
2	2003/03/20 17:34:26	jkinder	sgm version
3	2003/03/20 17:14:11	root	sgm statrep
4	2003/03/20 17:11:44	root	sgm start
5	2003/03/20 17:00:51	root	sgm backup norestart
6	2003/03/20 16:59:39	root	sgm killclients
7	2003/03/20 16:59:38	root	sgm evilstop
8	2003/03/20 16:41:22	jkinder	sgm who
9	2003/03/20 16:27:36	root	sgm t
10	2003/03/20 16:27:13	root	sgm t
11	2003/03/20 16:27:07	root	sgm gtclient
12	2003/03/20 09:36:00	root	sgm client
13	2003/03/20 07:30:01	jkinder	sgm status
14	2003/03/20 06:44:30	root	sgm cleandiscover sgm-seed2

The Last Commands table provides the following information for each command:

- **Last Updated (in header)**—Date and time the information on the page was last updated by SGM.
- **Row**—Command number, assigned to the command by SGM.
- **Time**—Date and time the command was entered.
- **User**—User who entered the command.
- **Command**—Text of the command.

To sort the commands by time, by user, or alphabetically by command text, click the **Time**, **User**, or **Command** header.

Viewing the SGM System Event Automation Log

The SGM System Event Automation Log page displays the contents of the SGM system event automation log file for the server to which you are connected, and which is currently running the SGM server. The system event automation log lists all messages generated by scripts launched by event automation.

The default path and filename for the system event automation log file is */opt/CSCOsgm/logs/eventAutomationLog.txt*. If you installed SGM in a directory other than */opt*, then the system event automation log file is located in that directory.

To access the SGM System Event Automation Log page, use one of the following procedures:

- Select **System Event Automation Log** from the SGM Server Home Page.
- Select **EventAuto** from the menu bar of any SGM System Messages Web page.

Viewing the SGM System Security Log

The SGM System Security Log: Last X Entries page displays the contents of the SGM system security log file for the server to which you are connected, and which is currently running the SGM server. The system security log lists all SGM security events that have occurred for the SGM server, the time each event occurred, the user and command that triggered the event, and the text of any associated message.

The default path and filename for the system security log file is */opt/CSCOsgm/logs/sgmSecurityLog.txt*. If you installed SGM in a directory other than */opt*, then the system security log file is located in that directory.

To access the SGM System Security Log: Last X Entries page, use one of the following procedures:

- Select **View > User Audit > Security Log** from the SGM Main Menu.
- Select **System Security Log** from the SGM Server Home Page.
- Select **Security Log** from the menu bar of any SGM System Messages Web page.

The Last Security Entries table provides the following information for each entry:

- **Last Updated (in header)**—Date and time the information on the page was last updated by SGM.
- **Row**—Entry number, assigned to the entry by SGM.
- **Time**—Date and time the security event occurred.
- **User**—User who triggered the security event.
- **Message**—Text of the security event message.
- **Command**—Text of the command that triggered the security event.

To sort the entries by time, user, or alphabetically by message or command text, click the **Time**, **User**, **Message**, or **Command** header.

Viewing the SGM System Web Server Error Log

The SGM System Web Server Error Log: Last X Messages page displays the contents of the SGM system Web server error log file for the server to which you are connected, and which is currently running the SGM server. The system Web server error log lists all SGM system Web error messages that have been logged for the SGM Web server.

To access the SGM System Web Server Error Log: Last X Messages page, select **Web Server Errors** from the SGM Server Home Page, or enter the **sgm weberrorlog** command. (You must be logged in as the root user or as a super user to use the **sgm weberrorlog** command.)

The SGM System Web Server Error Log: Last X Messages page provides the following information:

- **Last Updated (in header)**—Date and time the information on the page was last updated by SGM.
- **Row**—Message number, assigned to the message by SGM.
- **Message**—Text of the Web server error message.

Viewing the SGM System Web Access Log

The SGM System Web Access Log: Last X Messages page displays the contents of the SGM system Web access log file for the server to which you are connected, and which is currently running the SGM server. The system Web access log lists all SGM system Web access messages that have been logged for the SGM server. This provides an audit trail of all access to the SGM server via the Web interface.

To access the SGM System Web Access Log: Last X Messages page, select **Web Access Log** from the SGM Server Home Page, or enter the **sgm webaccesslog** command. (You must be logged in as the root user or as a super user to use the **sgm webaccesslog** command.)

The SGM System Web Access Log: Last X Messages page provides the following information:

- **Last Updated (in header)**—Date and time the information on the page was last updated by SGM.
- **Row**—Message number, assigned to the message by SGM.
- **Message**—Text of the Web error message.

Viewing System Status Information for SGM

You can view the following SGM system status information from the SGM Server Home Page:

- [Viewing Status Information for SGM, page 7-116](#)
- [Viewing Version Information for SGM, page 7-116](#)
- [Viewing SGM Client Information, page 7-116](#)
- [Viewing SGM User Account Information, page 7-116](#)
- [Viewing SGM Object Counts, page 7-118](#)
- [Viewing the Troubleshooting Log for SGM \(Solaris Only\), page 7-119](#)

Viewing Status Information for SGM

The SGM System Status page displays the status of all SGM servers, local clients, and processes. To access the SGM System Status page, select **System Status**. (SGM might take a few seconds to display this page.)

Viewing Version Information for SGM

The SGM System Versions page displays version information for all SGM servers, clients, and processes. To access the SGM System Versions page, select **System Versions**. (SGM might take a few seconds to display this page.)

Viewing SGM Client Information

The SGM System Connected Clients page lists all SGM clients that are currently connected to the SGM server. It also lists all Solaris users that are logged in to the SGM server.

To access the SGM System Connected Clients page, use one of the following procedures:

- Select **View > User Audit > Connected Clients** from the SGM Main Menu.
- Select **Connected Clients** from the SGM Server Home Page.
- Select **Clients** from the menu bar of any SGM System Status Web page.

Viewing SGM User Account Information

The SGM User Accounts page displays information about all user accounts that have been defined for the SGM server. If no user accounts have been defined, SGM displays the message, “User Database is Empty.”

To access the SGM User Accounts page, use one of the following procedures:

- Select **View > User Audit > User Accounts** from the SGM Main Menu.
- Select **System User Accounts** from the SGM Server Home Page.
- Select **Users** from the menu bar of any SGM System Status Web page.

The SGM User Accounts page provides the following information:

- **Server Name (in header)**—Name of the SGM server for which user accounts are being displayed.
- **User**—SGM user for whom a User-Based Access account has been set up.
- **Last Login**—Date and time the user last logged in to SGM.
- **Level Name**—Authentication level for the user. Valid levels are:
 - Basic User
 - Power User
 - Network Operator
 - Network Administrator
 - System Administrator
- **Level Number**—Authentication level for the user, expressed as a number. Valid levels are:
 - 1—Basic User
 - 2—Power User
 - 3—Network Operator
 - 4—Network Administrator
 - 5—System Administrator

- **Status**—Current status of the user’s account. Valid status settings are:
 - **Account Enabled**—The account has been enabled and is functioning normally.
 - **Account Disabled**—The account has been disabled for one of the following reasons:
 - A System Administrator disabled the account. See the descriptions of the **sgm disablepass** and **sgm disableuser** commands in the “[SGM Command Reference](#)” for more information.
 - SGM disabled the account as a result of too many failed attempts to log in using the account. See the description of the **sgm badlogindisable** command in the “[SGM Command Reference](#)” for more information.
 - SGM disabled the account because it was inactive for too many days. See the description of the **sgm inactiveuserdays** command in the “[SGM Command Reference](#)” for more information.

To sort the SGM User Accounts page based on the contents of any column, click the column header.

Viewing SGM Object Counts

The SGM Object Counts page displays counts of objects in the SGM database, including nodes, signaling points, linksets, links, and so on.

To access the SGM Object Counts page, select **System Object Counts** from the SGM Server Home Page.

The SGM Object Counts page displays the following counts:

- **Nodes**—Number of nodes that are in the following states: Active, Warning, Unmanaged, Unknown, and Total.
- **SigPoints**—Number of signaling points that are in the following states: Active, Warning, Unmanaged, Unknown, and Total.
- **Linksets**—Number of linksets that are in the following states: Active, Warning, Unknown, Shutdown, Failed, Unavailable, Inactive, and Total.
- **Links**—Number of links that are in the following states: Active, Warning, Unknown, Shutdown, Failed, Unavailable, Inactive, Inhibited, InhibitLoc, InhibitRem, Blocked, and Total.

- **Application Servers**—Number of application servers that are in the following states: Active, Warning, Unknown, Down, Pending, and Total.
- **AS Processes**—Number of application server processes that are in the following states: Active, Warning, Unmanaged, Unknown, Down, and Total.
- **ASP Associations**—Number of application server process associations that are in the following states: Active, Warning, Unknown, Down, and Total.
- **SG Mated Pairs**—Number of signaling gateway mated pairs that are in the following states: Active, Warning, Inactive, Unknown, Down, and Total.

Viewing the Troubleshooting Log for SGM (Solaris Only)

The SGM System Troubleshooting page displays the troubleshooting information that is stored in the `/opt/CSCOsgm/tmp/cisco_sgm_tshoot.log` file on the SGM server. This log, which is updated each time the SGM System Troubleshooting page is accessed or the `sgm tac` command is run, contains information that might be requested by Cisco customer support personnel.

To access the SGM System Troubleshooting page, select **System Troubleshooting** from the SGM Server Home Page, or from the Web page menu bar, if shown.



Note

SGM might take several minutes to create and display the troubleshooting log, and the resulting log might be several MB, depending on the size of the network and system logs.

Viewing System Data Files for SGM

You can view the following SGM system data files from the SGM Server Home Page:

- **ITP SNMP MIBs**—Displays a list of the MIBs on the server to which you are connected, and which is currently running the SGM server. To access the ITP SNMP MIBs page, select **ITP MIBs** from the menu bar of any SGM System Files Web Page.
- **SGM System Files: Discovery Seeds**—Displays a list of the seed files that have been created on this SGM server. To access the SGM System Files: Discovery Seeds page, select **Discovery Seeds** from the SGM Server Home Page.
- **SGM System Files: GTT**—Displays a list of the GTT files that have been created on this SGM server. To access the SGM System Files: Global Title Tables page, select **Global Title Tables** from the SGM Server Home Page. Click a GTT file name to view its contents.
- **SGM System Files: Network Views**—Displays a list of the network view files that have been created on this SGM server. To access the SGM System Files: Network Views page, select **Views** from the menu bar of any SGM System Files Web Page.
- **SGM System Files: Notes**—Displays a list of the note files that have been created on this SGM server. The notes are listed by the name of the signaling point, signaling point, or linkset, or by the internal ID of the event. To access the SGM System Files: Notes page, select **Notes** from the SGM Server Home Page. Click a signaling point name, linkset name, or event ID to view the contents of the note.
- **SGM System Files: Routes**—Displays a list of the route table files that have been created on this SGM server. To access the SGM System Files: Routes page, select **DPC Route Tables** from the SGM Server Home Page. Click a route table file name to view its contents.

In the route table file, linksets are listed with the format **Lnumber:name**, where:

- **L** indicates that the line is for a linkset.
- *number* is the linkset number.
- *name* is the name of the linkset.

In the route table file, routes are listed with the format *Rcode:bits:Inumber:cost:qos*, where:

- **R** indicates that the line is for a route.
 - *code* is the destination point code in hexadecimal format.
 - *bits* is the number of bits in the mask, in hexadecimal format. For example, *e* indicates that there are 14 bits in the mask (7.255.7 = 111.11111111.111).
 - **I** indicates the information for the route.
 - *number* is the linkset number to use, which matches one of the linkset numbers from the above list.
 - *cost* is the cost or priority of the route to the destination, relative to other routes. The valid costs range from 1 (lowest cost and highest priority) through 9 (highest cost and lowest priority).
 - *qos* is the quality of service (QoS) class of the route, as configured by the network administrator. A value of **ff** means the QoS is not set.
- **SGM System Files: Server Event Automation Sounds**—Displays a list of event automation sound files on this SGM server. To access the SGM System Files: Server Event Automation Sounds page, select **Sounds** from the menu bar of any SGM System Files Web Page.

Viewing System Information for SGM

You can view the following SGM system information from the SGM Server Home Page:

- **SGM Install Log**—Displays the contents of the SGM system installation log. The installation log contains messages and other information recorded during installation, which can be useful when troubleshooting problems. To access the SGM System Install Log page, select **System Install Log**.
- **SGM ITP IOS README**—Displays the versions of IOS with which SGM is compatible. To access the SGM System ITP IOS README page, select **System ITP IOS README** from the SGM Server Home Page.

- **SGM Process Services**—Displays the processes that are started and managed by the SGM Process Manager. To access the SGM System Process Services page, select **System Process Services**, or enter the **sgm services** command. (You must be logged in as the root user or as a super user to use the **sgm services** command.)
- **SGM README**—Contains late-breaking information about SGM that might not be found in the other product documentation. To access the SGM System README page, select **System README**.
- **SGM Root Variables**—Displays the contents of the */etc/CSCOsgm.sh* file, which determines the root location of the SGM server and client installation. To access the SGM System Root Variables page, select **System Root Variables**, or enter the **sgm rootvars** command.
- **SGM System Properties**—Displays SGM server and client properties that control various SGM configuration parameters. To access the SGM System Properties page, select **System Properties**.

Viewing the SGM Technical Documentation

From the SGM Server Home Page, you can view the following SGM technical documentation:

- To access the Cisco Signaling Gateway Manager Help System, select **Help Home Page**.
- To view Frequently Asked Questions (FAQs) about SGM, select **Frequently Asked Questions**.
- To view the entire SGM Installation Guide as a PDF file on the Web, select **Installation Guide**.
- To view the entire SGM User Guide as a PDF file on the Web, select **User Guide**.
- To view the entire SGM Release Notes as a PDF file on the Web, select **Release Notes**.
- To view the syntax for every SGM command, select **Output of sgm help command** from the SGM Server Home Page.

Downloading the SGM Client from the Web

You can access the SGM client installation software for Linux, Solaris, and Windows from the SGM Server Home Page. This access is useful if you do not have the CD-ROM, or if you prefer to download the software using your Web browser. Once you have downloaded the SGM client installation software to your workstation, you must install the software on your local system.

For more information about installing the SGM client software using a Web server, see the “Installing SGM on Solaris” and “Installing SGM on Windows” chapters of the *Cisco Signaling Gateway Manager Installation Guide*.

- To access the SGM Client for Solaris page, select **Download Solaris Client**.
- To access the SGM Client for Windows page, select **Download Windows Client**.
- To access the SGM Client for Linux page, select **Download Linux Client**. (The SGM client for Linux is not a supported feature of SGM. Use it under advisement.)

Downloading the SGM Server’s SSL Certificate from the Web

If you have implemented Secure Sockets Layer (SSL) support in your SGM system, you can download the SGM server’s signed SSL certificate to all remote SGM clients that connect to the server using SSL.

To access the SGM Server SSL Certificate page, select **Server SSL Certificate** from the SGM Server Home Page.

For more information about downloading the certificate, or about enabling SSL in SGM, see the “[Implementing SSL Support in SGM](#)” section on page 4-24.

Accessing Software Updates and Additional Information

You can access the following additional information about SGM from the SGM Server Home Page:

- To read Cisco literature associated with SGM, including product data sheets, Q and As, and helpful presentations, select **SGM Home Page** from the SGM Server Home Page.
- To view information about SGM or any other Cisco product available on Cisco.com (also known as Cisco Connection Online), use one of the following procedures:
 - Select **View > Cisco.com** from the SGM Main Menu.
 - Select **Cisco Home Page** from the SGM Server Home Page.
- To access the Network Management Software page, which includes the latest downloads for SGM, select **Network Management Software Center** from the SGM Server Home Page.
- To access software updates for SGM from Cisco.com for FTP, select **Engineering Software Updates**. The SGM Software Home page is displayed.

Displaying the ITP Home Page

SGM enables you to display the home page of a selected ITP in a new Web browser window.

To view an ITP's home page, right-click a signaling point in the Node or Topology window, then select **ITP > Home Page** from the right-click menu.