Configuring SGM for Your Network

This chapter provides the following information about configuring SGM to better suit your needs:

Importing SNMP Community Names from CiscoWorks2000 (Solaris Only)

SGM enables you to store all SNMP community names in a single database in CiscoWorks2000 Resource Manager Essentials (RME), and to export those names for use by SGM.

To export the database from CiscoWorks2000 RME to SGM, use the following procedure:

Step 1 Log in to CiscoWorks2000 and select **Resource Manager Essentials > Administration > Inventory > Export to File**.

Step 2 At the prompt, choose the following settings:

Filename Field = sgm

Comma Separated Value Format

Version 2.2

CiscoWorks2000 creates the */var/adm/CSCOpx/files/inventory/sgm* file in the default export directory.

Step 3 When you start the SGM server, SGM looks for this file. If the file exists, SGM merges the file with its own community name database, the */opt/CSCOsgm/etc/communities.conf* file.

For more information about SNMP, refer to "Configuring SNMP Support" in the Cisco IOS Release 12.2 *Configuration Fundamentals Configuration Guide*, Part 3, Cisco IOS System Management.

Retaining Unknown Objects (Solaris Only)

By default, SGM deletes all **Unknown** nodes, linksets, and links from the SGM database after 7 days. To change the length of time unknown objects stay in the SGM database, use the **sgm unknownage** command. See the "SGM Command Reference" section on page B-1 for more information on the use of this command.

Each method requires you to be logged in as the root user or as a super user. See the "Becoming the Root User (Solaris Only)" section on page 3-2 and the "Specifying a Super User (Solaris Only)" section on page 4-22 for more information.

Modifying Preference Settings

When a user changes some aspect of the SGM client, such as the size of a window or the order of columns in a window, SGM makes note of the user's preferences on the SGM client and server.

Thereafter, whenever the user launches the SGM client, SGM searches for the user's SGM preferences. If SGM finds the user's preferences on the SGM server, SGM launches the SGM client with those preferences. Otherwise, SGM launches the SGM client with the default SGM preferences file.

In addition to the user preferences that are automatically saved, SGM enables you to modify many GUI, data, topology, and table settings that affect the way SGM presents its information.

Note Anyone who uses this SGM client can modify its preference settings, and the changes affect all views running on this client.

The GTT preferences file is separate from the SGM preferences file. For information on modifying GTT preferences, see the "Editing a Global Title Translation Table" section on page 3-188.

This section includes the following information:

Related Topics:

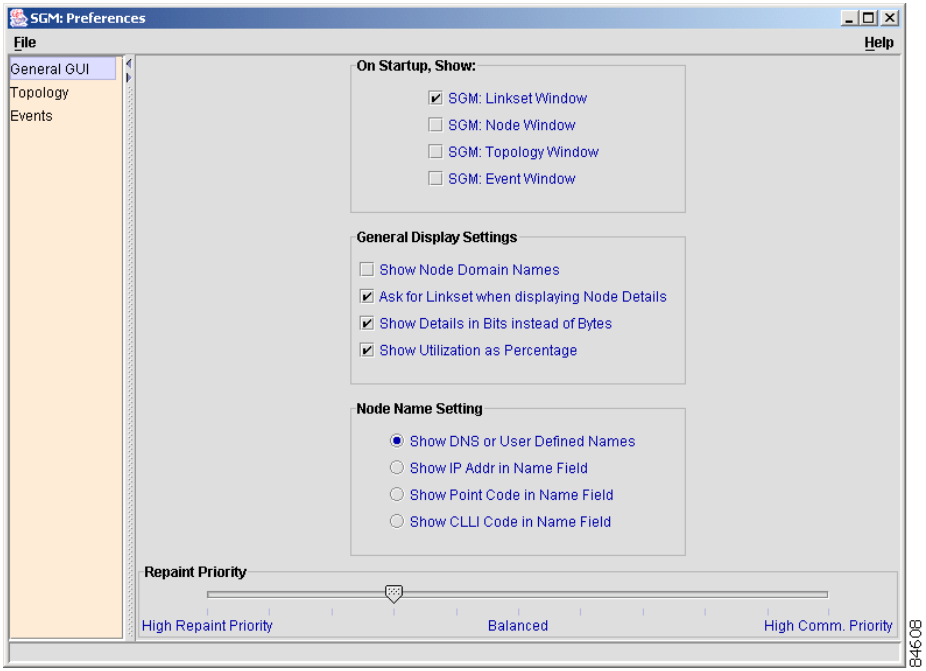
- Working with Events, page 3-143
- Working with Links, page 3-111
- Working with Linksets, page 3-34
- Working with Nodes, page 3-81
- Viewing the Topology of the Network, page 3-163

Modifying Overall Preference Settings

To modify overall preference settings, use the following procedure:

Step 1 Select **Edit > Preferences** from the SGM Main Menu. SGM displays the Preferences window (Figure 5-1).

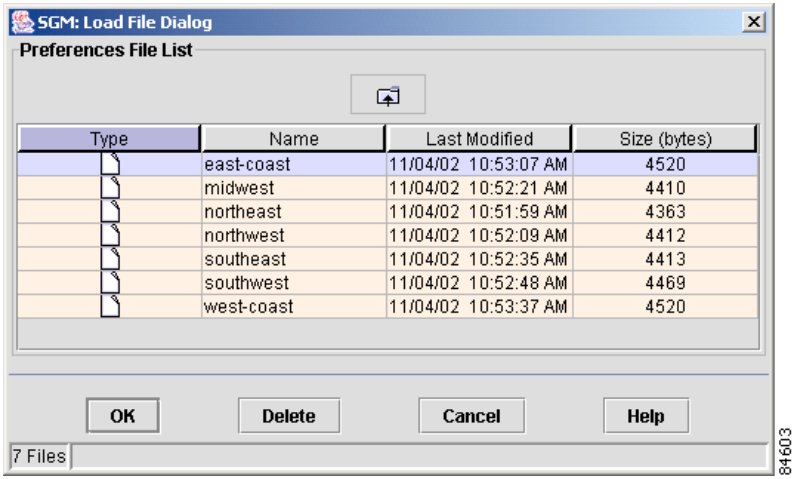
Figure 5-1 Preferences Window



Step 2 (Optional) To restore all preference settings to the original system default settings, select the **File > Load System Default** menu option.

Step 3 (Optional) To load an existing preference settings file, select the **File > Load** menu option. SGM displays the Load File Dialog - Preferences File List dialog (Figure 5-2).

Figure 5-2 Load File Dialog - Preferences File List Dialog



The Load File Dialog - Preferences File List dialog contains the following fields:

- **Type**—Icon indicating whether the item in the table is a file or a folder.
- **Name**—Name of the preference settings file or folder.
- **Last Modified**—Date and time the preference settings file or folder was last modified.
- **Size (bytes)**—Size of the preference settings file or folder, in bytes.
- **Number of Files**—Total number of preference settings files and folders (displayed in bottom left corner).

To load a preference settings file, enter the name of the file or select it in the list and click **OK**. SGM loads the preference settings file, closes the Load File Dialog - Preferences File List dialog, and returns to the Preferences window.

To delete a preference settings file from the preference settings file list, select a file and click **Delete**. SGM issues an informational message containing the name and location of the deleted file.

To save any changes you made to the list of files, click **OK**. SGM saves the changes and closes the Load File Dialog - Preferences File List dialog.

If you want the preference settings file to be the default file, select the **Make this my preferred startup option** checkbox.

To close the Load File Dialog - Preferences File List dialog without loading a preference settings file or saving any changes to the preference settings file list, click **Cancel**.

Step 4 (Optional) The General GUI settings enable you to change general display settings for SGM, including which window to display first when starting SGM, and whether to display values in bits or bytes.

To display the General GUI settings, select **General GUI** in the left pane of the Preferences window. SGM displays the On Startup, Show; General Display Settings; Node Name Setting; and Repaint Priority sections:

a. The On Startup, Show section specifies which SGM window or windows you want to display when you launch the SGM client. You can display one or more of the following windows:

- Select the **SGM: Linkset Window** checkbox used to display the Linkset window when SGM is started. The default setting for this checkbox is selected.
- Select the **SGM: Node Window** checkbox used to display the Node window when SGM is started. The default setting for this checkbox is cleared.
- Select the **SGM: Topology Window** checkbox used to display the Topology window when SGM is started. The default setting for this checkbox is cleared.
- Select the **SGM: Event Window** checkbox used to display the Event window when SGM is started. The default setting for this checkbox is cleared.

b. The General Display Settings section specifies the following settings:

- Select **Show Node Domain Names** if you want SGM is to show node domain names in its displays. The default setting for this checkbox is cleared (do not show node domain names).
- Select **Ask for Linkset when Displaying Node Details** if you want SGM to prompt you to select a linkset when you select **View > Details** for a node from the SGM Main Menu:

  - If you want SGM to prompt you to select a linkset, select this checkbox. When you select **View > Details** for a node that has more than one linkset, then select a linkset, SGM displays all connection details (that is, details for the node, its adjacent node, and its associated linksets and links).

  - If you do *not* want SGM to prompt you to select a linkset, clear this checkbox. When you select **View > Details** for a node that has more than one linkset, and you do not select a linkset, SGM displays details for the node only (that is, no details for its adjacent node, linksets, or links). This is the default setting.
- Select **Show Details in Bits Instead of Bytes** to specify whether SGM is to display data and data rates in bits or bytes:

  – If you want SGM to display data in bits, and data rates in bits per second, select this checkbox. This is the default setting.

  – If you want SGM to display data in bytes, and data rates in bytes per second, clear this checkbox.
- Select **Show Utilization as Percentage** to specify whether SGM is to display receive and send utilization for linksets and links as a percentage or in Erlangs:

  – If you want SGM to display utilization as a percentage, select this checkbox. This is the default setting.

  – If you want SGM to display utilization in Erlangs, clear this checkbox.

c. Use the Node Name setting in the Data Display settings to specify how SGM is to display node domain names:

   – If you want SGM to identify nodes by their DNS or user-defined names, select the **Show DNS or User-Defined Names** radio button. The default setting for this radio button is selected.

   – If you want SGM to identify nodes by their IP addresses, select the **Show IP Addr in Name Field** radio button. The default setting for this radio button is cleared.

   – If you want SGM to identify nodes by their point codes, select the **Show Point Code in Name Field** radio button. The default setting for this radio button is cleared.

   – If you want SGM to identify nodes by their CLLI codes, select the **Show CLLI Code in Name Field** radio button. If a node has no CLLI code, or if the CLLI code is a 0-length string, SGM identifies the node by its point code coupled with the string **[No CLLI]**. The default setting for this radio button is cleared.

d. The Repaint Priority section balances the responsiveness versus efficiency of the SGM client, controlling how quickly the SGM client repaints its displays:

   – Slide the selector toward **High Repaint Priority** if you want to maximize repainting (responsiveness) over communication (efficiency).

   – Slide the selector toward **High Comm. Priority** if you want to maximize communication (efficiency) over repainting (responsiveness).

   – The default setting is balanced.

Step 5 (Optional) The Topology settings enable you to change default settings for the Topology window.

To display the Topology settings, select **Topology** in the left pane of the Preferences window.

SGM displays the Topology settings:

a. Select **Spring Layout Spacing Factor (1-10)** to specify how far apart nodes are to be spaced when SGM draws the Spring Layout topology map. Valid values are 1 through 10, with 1 being closer together and 10 being farther apart. The default spacing factor is 5.

   Even if you apply preferences and close the Preferences window, the new spacing factor is not reflected in the topology map until you select **Topology Tools > Layout > Spring**, or click the **Spring Layout** button.

b. Select **Show Mouse Overs** to enable mouse over popups in topology maps. The default setting for this checkbox is selected.

c. Select **Auto Save Icon Positions** to specify how SGM is to save topology map changes:

   - If you want SGM to ask you for confirmation before saving topology map changes when you close the Topology window, clear this checkbox. This is the default setting
   - If you want SGM to save topology map changes automatically when you close the Topology window, without asking you for confirmation, select this checkbox.

d. Select **Draw Linksets When Dragging Node** to specify whether SGM is to draw linkset lines in the topology map as you move nodes:

   - If you want SGM to draw the associated linkset lines dynamically as you move a node, select this checkbox.
   - If you do not want SGM to draw the associated linkset lines until after you have finished moved a node, clear this checkbox. This is the default setting.

e. Select **Show Small SS7 Icons** to specify the size of the SS7 icons displayed in the topology map:

   – If you want SGM to display large SS7 icons, clear this checkbox. This is the default setting.

   – If you want SGM to display small SS7 icons, select this checkbox. This setting can save space in the topology map, making it easier to read.

f. Select **Show Non-ITP Devices** to specify whether SGM is to display non-ITP nodes and linksets in the topology map:

   – If you want SGM to display non-ITP nodes and linksets in the topology map, select this checkbox. This is the default setting.

   – If you want SGM to hide non-ITP nodes and linksets in the topology map, clear this checkbox. (Hidden nodes and linksets are still shown in the left panel.)

g. Select **Show Point Code and Node Name** to specify whether SGM is to display point codes as well as node names in the topology map:

   – If you want SGM to display node names but not point codes, clear this checkbox. This is the default setting.

   – If you want SGM to display both point codes and node names, select this checkbox.

Step 6 (Optional) The Event settings enable you to change the default background color for each type of event in the Event window, and to specify whether to display acknowledged events.

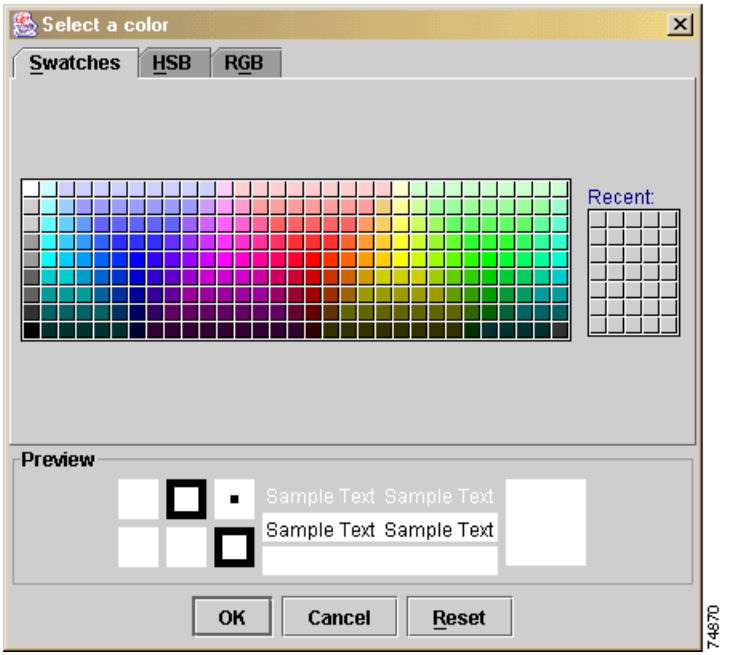
To display the Event settings, select **Events** in the left pane of the Preferences window.

SGM displays the Event settings:

- The default background color for **None** events is white.
- The default background color for **Normal** events is green.
- The default background color for **Admin** events is cyan.
- The default background color for **Warning** events is yellow.
- The default background color for **Error** events is coral.

To change the background color for any of the event types, click **Set Color**. SGM displays the Select a Color dialog (Figure 5-3).

Figure 5-3 Select a Color Dialog



The Select a Color dialog provides the following options:

- To select an event color from a set of color swatches (the recommended method), click the **Swatches** tab and select a swatch.
- To select an event color based on color hue, saturation, and brightness (HSB), click the **HSB** tab, then use one of the following procedures:
  - Select a color range on the vertical color bar, then select a specific color by moving the cursor around on the color square.
  - Enter specific values in the hue (**H**), saturation (**S**), and brightness (**B**) fields.

- To select an event color based on the red, green, and blue (RGB) content of the color, click the **RGB** tab, then select values for the **Red**, **Green**, and **Blue** fields.
- To reset the event color to its initial setting, click **Reset**.

Whichever method you choose, the selected color is displayed in the **Preview** field. When you are satisfied with the color, click **OK**. SGM saves the event color settings and closes the Select a Color dialog.

Step 7 (Optional) To specify whether SGM is to display acknowledged events in the Event Dialog and the Details Window, use the **Show acknowledged events in the Event Dialog and the Details Window** checkbox:

- If you want SGM to display acknowledged events, select this checkbox.
- If you do not want SGM to display acknowledged events, clear this checkbox. This is the default setting.

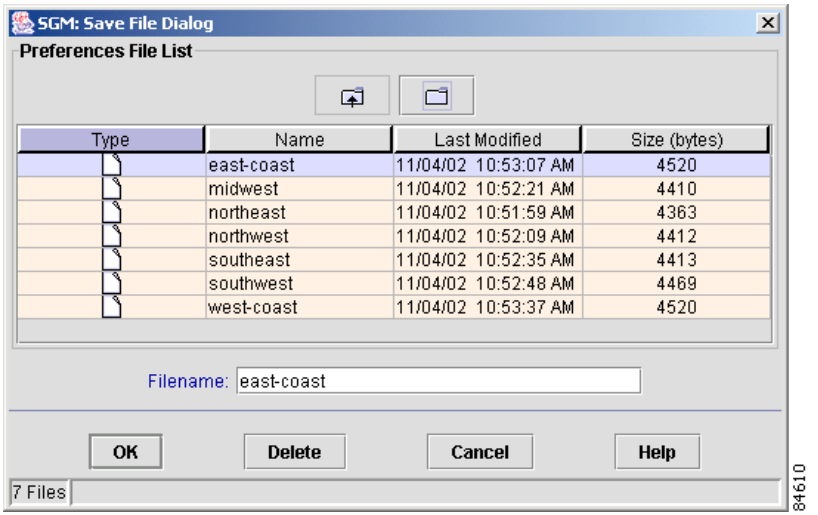
Step 8 (Optional) To apply the changes you have made at any time without closing the Preferences window, click **File > Apply**.

Step 9 (Optional) To close the Preferences window at any time, click **File > Close**. If you have changed any preferences, SGM asks if you want to apply the changes before leaving the window:

- Click **Yes** to apply the changes and close the prompt window and the Preferences window.
- Click **No** to close the prompt window and the Preferences window without applying or saving any changes.
- Click **Cancel** to close the prompt window without applying any changes. The Preferences window remains open.

Step 10 When you are satisfied with the preference settings, click **Save**. SGM displays the Save File Dialog - Preferences File List dialog (Figure 5-4).

Figure 5-4 Save File Dialog - Preferences File List Dialog



The Save File Dialog - Preferences File List dialog contains the following fields:

- **Type**—Icon indicating whether the item in the table is a file or a folder.
- **Name**—Name of the preference settings file or folder.
- **Last Modified**—Date and time the preference settings file or folder was last modified.
- **Size (bytes)**—Size of the preference settings file or folder, in bytes.
- **Filename**—Name by which you want to save the preference settings file.

  If you create a new preference settings file name, you can use any letters, numbers, or characters in the name that are allowed by your operating system.
- **Number of Files**—Total number of preference settings files and folders (displayed in bottom left corner).

To save the preference settings file with a new name, use one of the following procedures:

- To save the file with a completely new name, enter the new name and click **OK**.
- To save the file with an existing name, overwriting an old preference settings file, select the name in the list and click **OK**.

SGM saves the preference settings file with the new name, closes the Save File Dialog - Preferences File List dialog, and returns to the Preferences window.

To delete a preference settings file from the preference settings file list, select a file and click **Delete**. SGM issues an informational message containing the name and location of the deleted file.

To save any changes you made to the list of files, click **OK**. SGM saves the changes and closes the Load File Dialog - Preferences File List dialog.

If you want the preference settings file to be the default file, select the **Make this my preferred startup option** checkbox.

To close the Save File Dialog - Preferences File List dialog without saving the preference settings file or saving any changes to the preference settings file list, click **Cancel**.

Modifying Node Table Column Settings

To specify the columns that SGM displays in node tables, right-click in the header of the node table in one of the following windows:

- Node Window
- Discovery panel of the Discovery Dialog
- Nodes Not In Current View panel of the Network View Editor window
- Nodes In Current View panel of the Network View Editor window
- Topology node table in the left pane of the Topology Window

SGM displays the Node Table Preferences checkboxes:

- Select **Internal ID** to display the internal ID of the node. The default setting for this checkbox is cleared.
- Select **Name** to display the name of the node. The default setting for this checkbox is selected.
- Select **CLLI Code** to display the CLLI code of the node. The default setting for this checkbox is cleared.
- Select **Primary SNMP Addr** to display the IP address used by SNMP to poll the node. The default setting for this checkbox is selected in the Node Window, Discovery panel, and Network View Editor window. The default setting for this checkbox is cleared in the Topology Window.
- Select **Point Code** to display the point code of the node. The default setting for this checkbox is selected in the Node Window, Discovery panel, and Network View Editor window. The default setting for this checkbox is cleared in the Topology Window.
- Select **Secondary Point Code** to display the secondary point code of the node. The default setting for this checkbox is cleared.
- Select **Capability Point Code** to display the capability point code. The capability point code is also known as the alias point code. The default setting for this checkbox is cleared.
- Select **Device Type** to display the device type. The default setting for this checkbox is selected. The default setting for this checkbox is selected in the Node Window and Discovery panel. The default setting for this checkbox is cleared in the Network View Editor window and Topology Window.
- Select **Notes** to display the **Notes** column. The default setting for this checkbox is cleared.
- Select **Events** to display the **Events** column. The default setting for this checkbox is selected. The default setting for this checkbox is selected in the Node Window and Discovery panel. The default setting for this checkbox is cleared in the Network View Editor window and Topology Window.
- You cannot edit the **Status** checkbox.

You can resize each column, or sort the table based on the information in one of the columns. See the "Resizing, Sorting, and Hiding Table Columns" section on page 3-178 for more details.

Modifying Linkset Table Column Settings

To specify the columns that SGM displays in linkset tables, right-click in the header of the linkset table in one of the following windows:

- Linkset Window
- Topology linkset table in the left pane of the Topology Window

SGM displays the Linkset Table Preferences checkboxes:

- Select **Internal ID** to display the internal ID of the linkset. The default setting for this checkbox is cleared.
- Select **Name** to display the name of the linkset. The default setting for this checkbox is cleared in the Linkset Window. The default setting for this checkbox is selected in the Topology Window.
- Select **Node** to display the name of the primary node for the linkset. The default setting for this checkbox is selected in the Linkset Window. The default setting for this checkbox is cleared in the Topology Window.
- Select **Local Point Code** to display the point code of the primary node for the linkset. The default setting for this checkbox is cleared.
- Select **Adjacent Node** to display the name of the adjacent node for the linkset. The default setting for this checkbox is selected in the Linkset Window. The default setting for this checkbox is cleared in the Topology Window.
- Select **Adj Point Code** to display the point code of the adjacent node for the linkset. The default setting for this checkbox is cleared.
- Select **Linkset Type** to display the type of the linkset. The default setting for this checkbox is selected in the Linkset Window. The default setting for this checkbox is cleared in the Topology Window.
- Select **Links** to display the total number of links in the linkset. The default setting for this checkbox is selected in the Linkset Window. The default setting for this checkbox is cleared in the Topology Window.
- Select **Active Links** to display the number of links in the linkset that are **Active**. The default setting for this checkbox is selected in the Linkset Window. The default setting for this checkbox is cleared in the Topology Window.

- Select **Congested Links** to display the number of links in the linkset that are **Congested**. The default setting for this checkbox is selected in the Linkset Window. The default setting for this checkbox is cleared in the Topology Window.
- Select **Ignored** to display the **Ignored** column. The default setting for this checkbox is selected.
- Select **Notes** to display the **Notes** column. The default setting for this checkbox is cleared.
- Select **Events** to display the **Events** column. The default setting for this checkbox is selected in the Linkset Window. The default setting for this checkbox is cleared in the Topology Window.
- You cannot edit the **Status** checkbox.

You can resize each column, or sort the table based on the information in one of the columns. See the "Resizing, Sorting, and Hiding Table Columns" section on page 3-178 for more details.

Modifying Event Table Column Settings

To specify the columns that SGM displays in event tables, right-click in the header of the event table in the Event Window. SGM displays the Event Table Preferences checkboxes:

- Select **Internal ID** to display the internal ID of the event. The default setting for this checkbox is cleared.
- Select **Ack** to display the acknowledged/unacknowledged setting for the event. The default setting for this checkbox is selected.
- Select **Category** to display the category of the event. The default setting for this checkbox is selected.
- Select **Severity** to display the severity of the event. The default setting for this checkbox is selected.
- Select **Note** to display the **Notes** column. The default setting for this checkbox is cleared.
- Select **Time** to display the date and time the event was logged. The default setting for this checkbox is selected.

- Select **Ack By** to display the SGM client that acknowledged the event. The default setting for this checkbox is selected.
- Select **Node** to display the node associated with the event. The default setting for this checkbox is selected.
- Select **Linkset** to display the linkset associated with the event. The default setting for this checkbox is selected.
- Select **Message** to display the event message. The default setting for this checkbox is selected.

You can resize each column, or sort the table based on the information in one of the columns. See the "Resizing, Sorting, and Hiding Table Columns" section on page 3-178 for more details.

Modifying the Message Display

The following sections provide information about modifying the way SGM displays and stores messages:

Related Topics:

- Viewing Network Status and Statistics Information for SGM, page 7-5
- Viewing System Status Information for SGM, page 7-75

Changing the Location of SGM Message Log Files

By default, all SGM system message log files are located on the SGM server at */opt/CSCOsgm/logs*. To change the location of the system message log directory, use the **sgm msglogdir** command. See the "SGM Command Reference" section on page B-1 for more information on the use of this command.

Changing the Size of the SGM Message Log File

To change the size of the message log file, use the **sgm msglogsize** command. See the "SGM Command Reference" section on page B-1 for more information on the use of this command.

Changing the Time Mode for Dates in Log Files

To change the time mode for dates in log files, use the **sgm logtimemode** command. See the "SGM Command Reference" section on page B-1 for more information on the use of this command.

Changing the Age of the SGM Message Log Files

To change the number of days SGM archives system message log files before deleting them from the SGM server, use the **sgm msglogage** command. See the "SGM Command Reference" section on page B-1 for more information on the use of this command.

Setting the Point Code Format (Solaris Only)

SGM enables you to set a new point code format for an SGM server. The new point code format is used by the SGM server, and by all associated SGM clients. Normally, you need to do this only once, after installation.

To set the new point code format:

Step 1 Log 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.

Step 2 Enter the following commands:

```
# cd /opt/CSCOsgm/bin

# ./sgm pcformat {ansi | china | itu | string}
```

Where:

- **ansi**—Formats point codes using the 24-bit format American National Standards Institute (ANSI) standard, *xxx.yyy.zzz* format, where:
  - *xxx* is the 8-bit network identification
  - *yyy* is the 8-bit network cluster
  - *zzz* is the 8-bit network cluster member
- **china**—Formats point codes using the 24-bit format China standard, *xxx.yyy.zzz* format, where:
  - *xxx* is the 8-bit network identification
  - *yyy* is the 8-bit network cluster
  - *zzz* is the 8-bit network cluster member
- **itu**—Formats point codes using the 14-bit format International Telecommunication Union (ITU) standards, *x.yyy.z* format, where:
  - *x* is the 3-bit zone identification
  - *yyy* is the 8-bit region identification
  - *z* is the 3-bit signal-point

  This is the default setting.
- *string*—Formats point codes using a user-specified variation on the ANSI or ITU standard, with each bit-number segment separated from the next by either a dot (.) or a dash (-). Valid formats are:
  - *x.x.x* or *x-x-x*
  - *x.x* or *x-x*
  - *x*

  Where *x* is the number of bits in that segment. The number of bits must total either 14 bits (for the ITU standard) or 24 bits (for the ANSI and China standards). For example, **sgm pcformat 4.6.4** specifies a 14-bit ITU point code format with a 4-bit segment, a 6-bit segment, and a 4-bit segment.

Enabling SNMP Traps (Solaris Only)

By default, SGM cannot receive SNMP traps. To use SNMP traps with SGM, you must first configure SGM to receive traps.

Related Topics:

- Integrating SGM with Other Products, page 3-285
- Viewing Network Status and Statistics Information for SGM, page 7-5

To view the current trap reception configuration for SGM, use the following procedure:

Step 1 Log 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.

Step 2 Enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./sgm trapstatus

SGM displays the current trap reception configuration for SGM, including:

- SNMP trap integration type:
  - **native**—SGM receives traps natively on a UDP port.
  - **hpov**—SGM receives traps using HP OpenView.
- For **native**, SGM also displays the UDP port number on which SGM receives traps natively.
- For **hpov**, SGM also displays the location of the HP OpenView home directory.
- Status for the sgmTrapReceiver (such as **Running** or **Stopped**).

To configure SGM to receive traps, using the following procedure:

Step 1 Log 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.

Step 2 Enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./sgm trapsetup

SGM stops the SGM Process Manager and all managed processes and displays the following prompt:

Would you like to configure SGM to receive SNMP traps? [yes]

Step 3 Press **Enter**. SGM displays the following message and prompt:

SGM can receive traps natively on a UDP port or receive traps via integration with HP OpenView.

Enter SNMP trap integration type: native or hpov? [native]

- If you want SGM to receive traps natively, press **Enter**. The SGM installation program displays the following messages and prompt:

  SGM can receive traps natively on the standard UDP port number 162 or on any other UDP port chosen. If another application is already bound to the SNMP standard trap reception port of 162, an alternate port number for SGM must be specified.

  UDP port number 44750 is the default alternate port.

  Enter trap port number? [162]

  By default, ITP routers send traps to port 162. To accept the default value, press **Enter**.

  If your ITP routers have been configured to send traps to a different port, type that port number and press **Enter**.

By default, SGM listens for traps from trap multiplexing devices and NMS applications on port 44750. If you want SGM to monitor that port, and port 162 is not available on the SGM server device, type **44750** and press **Enter**.

If trap multiplexing devices and NMS applications in your network have been configured to send traps to a different port, type that port number and press **Enter**.

If you are a super user, you must specify a port number that is greater than 1024, then press **Enter**.

Do not enter a non-numeric port number. If you do, you are prompted to enter a numeric port number.

When you select an SNMP trap port number for the SGM server, make sure your ITP routers use the same SNMP trap port number. See the description of the **snmp-server host** command in the "ITP Router Requirements" section of the *Cisco Signaling Gateway Manager Installation Guide* for more information.

- If you want SGM to receive traps using HP OpenView, type **hpov** and press **Enter**. The SGM installation program displays the following prompt:

  Please enter location of HP OpenView home directory: [/opt/OV]

  To accept the default value, press **Enter**; or type a different location and press **Enter**.

Step 4 SGM confirms your choices and restarts the SGM Process Manager and all managed processes.

SGM filters traps based on the contents of the *SgmEvent.conf* file. If a new trap becomes available that is of interest to SGM, you can modify the *SgmEvent.conf* file to enable SGM to recognize and process the new trap. For more information about modifying the *SgmEvent.conf* file, see the "Modifying the SGM Event Configuration File (Solaris Only)" section on page 5-25.

Modifying the SGM Event Configuration File (Solaris Only)

SGM processes events based on the contents of the SGM event configuration file, *SgmEvent.conf*. This file determines the size of the SGM event database, the maximum length of time SGM is to retain events, the default severity and color associated with each type of event, and all other aspects of SGM event processing.

If you want to change the way SGM processes events, you can modify the *SgmEvent.conf* file. After you save your changes and restart the SGM server, SGM reflects the changes on the SGM server and on all SGM clients that connect to that server. The changes are reflected in all SGM GUI and Web event displays, even in displays of archived events. SGM even reflects any new or changed categories and severities in its Web display navigation bars.

When you modify the *SgmEvent.conf* file, keep the following considerations in mind:

- Changes you make to the *SgmEvent.conf* file can adversely affect your operating environment. In most environments, SGM recommends that you use the default file without modification.
- To view the current *SgmEvent.conf* file, enter the **sgm eventconfig view** command.

  SGM creates a backup copy of the *SgmEvent.conf* file during installation. At any time, if you are unsatisfied with the changes you have made to the file, you can use the **sgm restoreprops** command to restore the backup copy of the *SgmEvent.conf* file.

  To restore the *SgmEvent.conf* file from the previous version that was used, enter the **sgm eventconfig restore** command.

  To restore the *SgmEvent.conf* file to the default SGM settings, enter the **sgm eventconfig master** command.

  See the "SGM Commands and Descriptions" section on page B-2 for more information on the use of these commands.

  Any changes you make take effect when you restart the SGM server. SGM reflects the changes on the SGM server and on all SGM clients that connect to that server. The changes are reflected in all SGM GUI and Web event displays, even in displays of archived events. SGM even reflects any new or changed categories and severities in its Web display navigation bars.

- After you save your modified *SgmEvent.conf* file, *always* validate it before restarting the SGM server. When you validate the file, you can detect XML and non-XML errors before they negatively impact SGM. See the "Validating the Modified SGM Event Configuration File" section on page 5-36 for more information.

This section provides the following information:

Editing the SGM Event Configuration File

To edit the *SgmEvent.conf* file, use the following procedure:

Step 1 Log 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.

Step 2 Enter the following commands:

```
# cd /opt/CSCOsgm/bin

# sgm eventconfig edit
```

Step 3 Modify the file as desired, then save the file.

Step 4 Validate the file. See the "Validating the Modified SGM Event Configuration File" section on page 5-36 for details.

The new configuration becomes effective when you restart the SGM server.

Modifying Basic Settings

SGM enables you to modify the following basic settings for the event database:

Modifying the Size of the Event Database

By default, the SGM event database can hold a maximum of 5000 events. If the database exceeds 5000 events, SGM deletes the oldest events until the database is reduced to 5000 events.

To change the size of the SGM event database, modify the following line in the *SgmEvent.conf* file:

<MaxEventDbRecords value="*events***" />**

where *events* is the maximum number of events the database can hold.

Note The larger the event database, the greater the impact on the performance of the SGM server and clients.

Modifying the Maximum Age for Events

By default, the SGM event database retains events a maximum of 7 days. SGM deletes events that are older than 7 days.

To change the maximum age for events, modify the following line in the *SgmEvent.conf* file:

<MaxEventTimeToLive value="*days***" />**

where *days* is the maximum length of time, in days, SGM is to retain an event in the database.

Modifying the Event Database Maintenance Interval

By default, SGM performs maintenance on the event database every 60 minutes, deleting all events in excess of 5000 and all events older than 7 days.

To change the maintenance interval, modify the following line in the *SgmEvent.conf* file:

<CompressEventDbInterval value="*minutes***" />**

where *minutes* is the length of time, in minutes, between maintenance checks of the database.

Note The shorter the maintenance interval, the greater the impact on the performance of the SGM server and clients.

Modifying the Event Automation Timeout Interval

By default, the SGM event database allows an event automation script to run for 300 seconds (5 minutes) before canceling the script and moving on.

To change the event automation timeout interval, modify the following line in the *SgmEvent.conf* file:

<AutomationTimeout value="*seconds***" />**

where *seconds* is the maximum length of time, in seconds, SGM is to allow an event automation script to run.

Enabling SGM to Process Events from Undiscovered Nodes

By default, SGM does not process events from undiscovered nodes.

To begin processing events from undiscovered nodes, change the following line in the *SgmEvent.conf* file:

<ProcessUndiscovered value="False" />

to:

<ProcessUndiscovered value="True" />

Modifying Event Categories, Severities, Colors, and Message Text

There are three main types of events in SGM:

- **Trap** events, which are incoming events that are not solicited by SGM.
- **Status** events, which are status changes detected by SGM.
- **User Action** events, which are events triggered by user actions.

Within those broad types, there are many subordinate types of events, each with a default associated category, severity, color, message text, and event help file. SGM enables you to modify the default characteristics of each type of event, tailoring them to meet your needs.

This section provides the following information to help you modify event characteristics:

- Modifying Event Categories, page 5-29
- Modifying Event Severities and Colors, page 5-30
- Modifying Event Message Text, page 5-31

Modifying Event Categories

By default, SGM provides the following event categories:

- **Create**—Creation event, such as the creation of a seed file.
- **Delete**—Deletion event, such as the deletion of a node or linkset.
- **Discover**—Discovery event, such as Discovery beginning.
- **Edit**—Edit event. A user has edited an event, linkset, or node.
- **Ignore**—Ignore event. A user has **Ignored** a link or linkset.
- **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.
- **Status**—Status change message generated.
- **Trap**—SNMP trap message generated.

To change the name of an existing event category, find the category name in the *SgmEvent.conf* file and replace every occurrence with your new category name. For example, you could replace every occurrence of **LoginFail** with **BadLogin**.

Modifying Event Severities and Colors

By default, SGM provides the following event severities and colors:

- **Admin**—The default color is cyan.
- **Error**—The default color is coral.
- **None**—The default color is white.
- **Normal**—The default color is light green.
- **Warning**—The default color is yellow.

To change the name of an existing event severity, find the severity name in the *SgmEvent.conf* file and replace every occurrence with your new severity name. For example, you could replace every occurrence of **Error** with **Problem**.

To change the color associated with an existing severity, find the line that defines the severity's color in the *SgmEvent.conf* file and change the color. For example, to display **Warning** events in maroon instead of yellow, change the following line:

<SeverityName value=”Warning” /> <SeverityColor value="yellow" />

to:

<SeverityName value=”Warning” /> <SeverityColor value="maroon" />

You can assign any of the standard HTML/Web colors to SGM events. For a list of all supported HTML/Web colors, see the */opt/CSCOsgm/etc/SgmEvent.colors* file.

Modifying Event Message Text

SGM provides default message text for each event defined in the *SgmEvent.conf* file.

To modify the message text for an event, find the line that defines the event's message text in the *SgmEvent.conf* file and change the text. For example, the default message text for a Poll event is:

<Message value="Poll for $NodeDisplayName requested by user $User." />

If you care more about the user than about the polled node, you could change that message text to:

<Message value="User $User requested a poll for $NodeDisplayName." />

Automating Events

SGM enables you to automate events. That is, you can configure SGM to call a UNIX script to drive automatic paging or e-mail, for example, whenever SGM logs an event for which you have defined an automation script.

To configure automation for an event, use the following procedure:

Step 1 Find the event in the *SgmEvent.conf* file.

Step 2 Find the event's Help element, **<HelpFile value="" />**.

Step 3 *Before* the Help element, add an Action element. The Action element has the following format:

<Action Poll="[True|False]" Run="*UNIXCommand EventParameters***" />**

where:

- **Poll** indicates whether SGM is to poll the associated nodes immediately (**True**) or not poll the nodes (**False**).
- **Run** spawns a UNIX process to execute the specified command or script.

- *UnixCommand* specifies either a binary command name or a shell script.
- *EventParameters* are information from the event that SGM sends to *UnixCommand* as parameters. The set of *EventParameters* is the same as the set of Message element parameters, and they are specified the same way.

For example, the following Action element:

```
<Action Poll="True" Run="/users/sgrimes/auto-inhibit.exp
    $NodeDisplayName $LinksetName $User" />
```

causes the following automatic actions whenever SGM logs the associated event:

- SGM polls the associated nodes.
- SGM spawns a UNIX process to execute the */users/sgrimes/auto-inhibit.exp* script.
- SGM passes the **$NodeDisplayName**, **$LinksetName**, and **$User** parameters to the script.

Step 4 When you are satisfied with the event automation changes you have made to the *SgmEvent.conf* file, validate your changes using the **sgm testeventconfig** command. See the "Validating the Modified SGM Event Configuration File" section on page 5-36 for more information.

Step 5 Restart the SGM server. Thereafter, the specified event causes the automation script to run.

When you are working with automated events, keep in mind the following considerations:

- Detailed information about event automation scripts, including the times they start and stop and any output produced by the scripts, is recorded in the SGM system event automation log file. For more information, see the "Viewing the SGM System Event Automation Log" section on page 7-73.
- SGM event automation scripts run separately from all other SGM processing.

- If SGM logs more than one automated event in rapid succession, SGM runs each automation script sequentially, not in parallel. SGM spawns a new UNIX process for each script, and waits for it to complete before running the next script.
- By default, SGM allows an event automation script to run for 300 seconds (5 minutes) before canceling the script and moving on to the next script. To change the maximum run-time for event automation scripts, see the "Modifying the Event Automation Timeout Interval" section on page 5-28.

Setting Sounds for Events at the SGM Server

You can configure the SGM server to play specific sounds when specific events are logged. (To configure sounds on the SGM client, see the "Setting Sounds for Events at an SGM Client" section on page 5-38.)

To configure event sounds on the SGM server, create a script to call the Solaris **audioplay** command, then configure automation for an event, with the script specified in place of the *UnixCommand* argument.

The **audioplay** command has the following basic format:

/usr/bin/audioplay *soundfile*

where *soundfile* is the full path and name of a sound file stored in the SGM server's */sounds* directory:

- If you installed SGM in the default directory, */opt*, then the sound file directory is */opt/CSCOsgm/sounds*.
- If you installed SGM in a different directory, then the sound file directory is located in that directory.

See the **audioplay** command man page for more information about this command.

See the "Automating Events" section on page 5-31 for more information about configuring automation for an event.

To see the list of event automation sound files that are stored in the */sounds* directory, select **Sounds** from the Web page menu bar, if shown. SGM displays the SGM System Files - Server Event Automation Sounds page. The SGM server can play sound files with the formats that are supported by its audio system.

Adding New Event Categories and Severities

SGM also enables you to add entirely new categories and severities to the *SgmEvent.conf* file. This is useful if you want to group different events into logical groups for filtering.

For example, you might want to create a new **Trap** category, **LinkUtilization**, that combines the **cItpSpLinkRcvdUtilChange** and **cItpSpLinkSentUtilChange** traps for easier filtering in the SGM GUI. To do so, find the following line in the *SgmEvent.conf* file:

<Categories>

and add the following line to the list of category definitions:

<CategoryName value="LinkUtilization" />

Now find each occurrence of the **cItpSpLinkRcvdUtilChange** and **cItpSpLinkSentUtilChange** trap, and change each category definition from **Trap**:

<CategoryName value="Trap" />

to **LinkUtilization**:

<CategoryName value="LinkUtilization" />

You can also change the severity, color, message text, or event help file generated by the **cItpSpLinkRcvdUtilChange** and **cItpSpLinkSentUtilChange** traps.

Now, after you save the *SgmEvent.conf* file, validate your changes, and restart the SGM server, whenever SGM processes a **cItpSpLinkRcvdUtilChange** or **cItpSpLinkSentUtilChange** trap, the SGM GUI and Web displays show the events with the new **LinkUtilization** category.

When processing events, SGM searches for the best match in the *SgmEvent.conf* file. For example, by default, **NodeStateAdded** has event definitions for the following **NodeStates**:

- **Active**—Generates a **Normal** event
- **Unknown**—Generates an **Error** event
- **Unmanaged**—Generates an **Admin** event

- **Warning**—Generates a **Warning** event
- <Blank>—Generates a **None** event

If a node is added to the SGM database with a status of **Unknown**, SGM generates an **Error** event, as defined for **NodeState value="Unknown"**.

However, if a node is added with a status of **Waiting**, SGM generates a **None** event, because that is the best match in the **NodeStateAdded** event definitions.

Modifying Help for Events

SGM provides extensive type-specific help for events. To see help for an event, right-click the event in the Event Window and select **Help for Event**.

However, you might prefer to provide your own enterprise-specific instructions to operators in the event help, and SGM enables you to do so.

To modify the help for an event, use the following procedure:

Step 1 Create a new HTML help file for the event.

You can use the default SGM event help file as a basis for your help file:

- If you installed SGM in the default directory, */opt*, then the event help files are in the */opt/CSCOsgm/apache/share/htdocs/eventHelp* directory.
- If you installed SGM in a different directory, then the event help directory and files are located in that directory.

If you use an SGM event help file as a basis for your event help file, rename it when you save it. Do not use the existing SGM name. If you do so, then the next time you install SGM, SGM overwrites the file and you lose your changes.

For example, the default SGM help file for **cItpSpLinkRcvdUtilChange** and **cItpSpLinkSentUtilChange** traps is *cItpSpLinkRcvdUtilChange.html*. If you use that file as the basis for your new help file, which covers all link utilization events, you might name your new file *cMyLinkUtilChange.html*.

Step 2 Store your new help file in the */opt/CSCOsgm/apache/share/htdocs/eventHelp* directory.

Step 3 In the *SgmEvent.conf* file, replace each occurrence of the SGM default event help file name with the name of your file. For example, given the preceding example, you would replace each occurrence of the following line:

<HelpFile value="/eventHelp/cItpSpLinkRcvdUtilChange.html" />

with this line:

<HelpFile value="/eventHelp/cMyLinkUtilChange.html" />

Step 4 Save the the *SgmEvent.conf* file.

Step 5 Validate the file. See the "Validating the Modified SGM Event Configuration File" section on page 5-36 for details.

Step 6 Restart the SGM server. Now, whenever you display help for a **cItpSpLinkRcvdUtilChange** or **cItpSpLinkSentUtilChange** trap event, SGM displays your custom event help.

Validating the Modified SGM Event Configuration File

Always validate the *SgmEvent.conf* file after you save your changes and before you restart the SGM server. When you validate the file, you can detect XML and non-XML errors before they negatively impact SGM.

To validate the *SgmEvent.conf* file, use the following procedure:

Step 1 Log 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.

Step 2 Enter the following commands:

```
# cd /opt/CSCOsgm/bin

# ./sgm testeventconfig
```

SGM parses the *SgmEvent.conf* file and generates a list of all found XML and non-XML errors:

- For XML errors, SGM points to the line that contains the error. The following is a sample XML error:

```
SgmEventConfig: Element "Parms" does not allow "SeverityNamex"
here.
SgmEventConfig: Unable to parse event configuration file.
```

- For non-XML errors, SGM points to the bottom of the **Trap**, **Status**, or **User Action** definition block that contains the error. The following is a sample XML error:

```
SgmEventConfig: Severity 'Normalx' is not contained in the valid
severities list.
SgmEventConfig: Unable to parse event configuration file.
```

If you prefer to dump the event configuration to STDOUT for visual validation, enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./sgm testeventconfig -print

Step 3 Correct the errors and continue to validate the file until SGM detects no further errors. SGM displays the following messages:

```
SgmEventConfig: Loaded xx categories, xx severities, and xx events
definitions.
Finished loading /opt/CSCOsgm/etc/SgmEvent.conf
```

Step 4 Restart the SGM server to begin processing events using the modified file.

Setting Sounds for Events at an SGM Client

SGM enables you to create and modify event sound filters for the SGM client. Event sound filters determine the sounds that the SGM client plays when specific events are logged. The SGM client plays the sounds even if the Event Window and Event Dialog are not currently displayed. (To configure sounds on the SGM server, see the "Setting Sounds for Events at the SGM Server" section on page 5-33.)

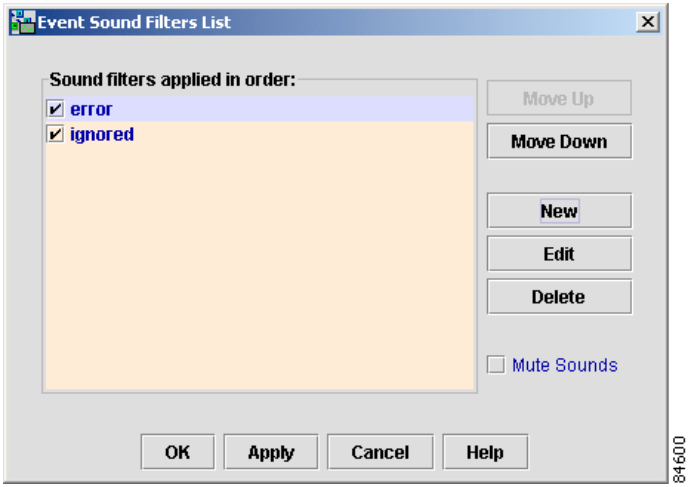
Related Topics:

- Working with Events, page 3-143

To work with event sound filters:

Step 1 Select **Edit > Event Sounds** from the SGM Main Menu. SGM displays the Event Sound Filters List dialog (Figure 5-1).

Figure 5-5 Event Sound Filters List Dialog



The Event Sound Filters List dialog lists all event sound filters that have been defined.

The **Sound filters applied in order:** list indicates the order in which sound filters are to be applied, from top to bottom. That is, if an event matches two or more filters in the list, the top-most filter determines the sound that the SGM client plays. (The **Sound filters applied in order:** list is blank until you have created at least one new sound filter for events.)

- To move an event sound filter up in the list, select the filter, then click **Move Up**.
- To move an event sound filter down in the list, select the filter, then click **Move Down**.

Step 2 (Optional) To create a new event sound filter, click **New**. SGM displays the Event Sound Filters dialog (Figure 5-1).

Figure 5-6 Event Sound Filters Dialog

Enter a name for the filter, then specify filter criteria for this event sound filter:

- (Optional) To add a filter based on message text:
  - **a.** Select **Message Text** from the first drop-down list box.
  - **b.** Select **Contains**, **Equals**, **Does Not Contain**, or **Does Not Equal** from the second drop-down list box.
  - **c.** Enter the message text in the character string field.

- (Optional) To add a filter based on event severity:
  a. Select **Severity** from the first drop-down list box.
  b. Select **Equals** or **Does Not Equal** from the second drop-down list box.
  c. Select a severity, such as **Normal** or **Error**, from the third drop-down list box.the message text.
- (Optional) To add a filter based on event category:
  a. Select **Category** from the first drop-down list box.
  b. Select **Equals** or **Does Not Equal** from the second drop-down list box.
  c. Select a category, such as **Status** or **Purge**, from the third drop-down list box.the message text.
- (Optional) To add a filter based on the name of the node associated with the event:
  a. Select **Node** from the first drop-down list box.
  b. Select **Equals** or **Does Not Equal** from the second drop-down list box.
  c. Select a node from the third drop-down list box. SGM lists all nodes that have been discovered in the drop-down list box.
- (Optional) To add a filter criteria to the event sound filter, click **More**. SGM adds a new criteria to the bottom of the list.
- (Optional) To remove a filter criteria from the event sound filter, click **Fewer**. SGM deletes the last criteria in the list.
- (Optional) To specify the sound to be played when an event matches this event sound filter, select a sound file from the **Play this sound:** drop-down list box.

  SGM client sound files are stored in the */sounds* directory:
  - If you installed the SGM client for Solaris in the default directory, */opt*, then the sound file directory is */opt/CSCOsgmClient/sounds*.
  - If you installed the SGM client for Windows in the default directory, */Program Files*, then the sound file directory is *C:\Program Files\SGMClient\sounds*.
  - If you installed the SGM client in a different directory, then the sound file directory is located in that directory.

You can add sound files to the */sounds* directory. SGM can play the following sound file formats: AIFC, AIFF, AU, SND, and WAV.

If for some reason SGM cannot play a specified sound file, SGM plays a default beep. For example, SGM cannot play a sound file if one of the following conditions exists:

- The file has been moved or deleted from the */sounds* directory
- The */sounds* directory has been deleted or cannot be found
- Some other application is using all of the sound resources
- There is no sound card present

- (Optional) To play a sample of the sound selected in the **Play this sound:** drop-down list box, click **Play**.
- (Optional) To apply any changes you made to the event sound filter criteria without closing the Event Sound Filters dialog, click **Apply**.
- (Optional) To close the Event Sound Filters dialog at any time without applying any changes to the event sound filter criteria, click **Cancel**.

When you are satisfied with the changes you have made to the event sound filter criteria, click **OK**. SGM applies your changes and closes the Event Sound Filters dialog.

Step 3 (Optional) To modify an existing event sound filter, select the filter in the **Sound filters applied in order:** list, then click **Edit**. SGM displays the Event Sound Filters dialog (Figure 5-1), populated with the selected filter's settings. Modify the settings as desired, then click **OK**. SGM applies your changes and closes the Event Sound Filters dialog.

Step 4 (Optional) To delete an event sound filter from the **Sound filters applied in order:** list, select the filter, then click **Delete**.

Step 5 (Optional) You can specify whether you want the SGM client to play event sounds:

- To play event sounds, clear the **Mute Sounds** checkbox. This is the default setting.
- To not play event sounds, select the **Mute Sounds** checkbox.

Step 6 (Optional) To apply any changes you made to the event sound filters list without closing the Event Sound Filters List dialog, click **Apply**.

Step 7 (Optional) To close the Event Sound Filters List dialog at any time without applying any changes to the event sound filters list, click **Cancel**.

Step 8 When you are satisfied with the changes you have made to the event sound filters list, click **OK**. SGM applies your changes and closes the Event Sound Filters List dialog.

On Solaris, the root user can access the sound feature from a local or remote device. However, users other than the root user must use a local device, and must use a local client, not a remote Solaris SGM client accessed using the **xhost +** UNIX command.

Limiting Traps by IP Address (Solaris Only)

By default, when you first install SGM, all IP addresses are allowed to send traps to the SGM server. However, SGM enables you to limit the IP addresses that can send traps to the server by creating and maintaining the *trapaccess.conf* file.

You can create the *trapaccess.conf* file and populate it with a list of IP addresses that can send traps to the SGM server. SGM receives traps from only those IP addresses, plus the local host. If the file exists but is empty, SGM receives traps only from the local host. (SGM always receives traps from the local host.)

When you first install SGM, the *trapaccess.conf* file does not exist and SGM allows all IP addresses to send traps to the SGM server.

To create the *trapaccess.conf* file and work with the list of allowed IP addresses, use the following procedure:

Step 1 Log 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.

Step 2 Enter the following command:

```
# cd /opt/CSCOsgm/bin
```

Step 3 Create the *trapaccess.conf* file:

- To create the *trapaccess.conf* file and add a client IP address to the list, enter the following command:

  # ./sgm trapaccess add

- To create the *trapaccess.conf* file and open the file to edit it directly, enter the following command:

  # ./sgm trapaccess edit

The default directory for the file is located in the SGM installation directory:

- If you installed SGM in the default directory, */opt*, then the default directory is */opt/CSCOsgm/etc*.
- If you installed SGM in a different directory, then the default directory is located in that directory.

In the *trapaccess.conf* file, begin all comment lines with a pound sign (#).

All other lines in the file are SGM client IP addresses, with one address per line.

Wildcards (*) are allowed, as are ranges (for example, 1-100). For example, the address *.*.*.* allows all clients to send traps to the SGM server.

After you create the *trapaccess.conf* file, you can use the full set of **sgm trapaccess** keywords to work with the file. See the description of the **sgm trapaccess** command in the See the "SGM Command Reference" section on page B-1 for more details.

Any changes you make to the *trapaccess.conf* file take effect when you restart the SGM server.

Setting the DISPLAY Variable (Solaris Only)

The DISPLAY variable is set as part of your login environment on Solaris. However, if you Telnet into a remote workstation, you must set the DISPLAY variable to local display. To do so, enter the following command:

 # setenv DISPLAY *local_ws*:**0.0**

where *local_ws* is your local workstation.

If your shell does not support the **setenv** command, enter the following command:

 # export DISPLAY=*local_ws*:**0.0**

Backing Up or Restoring SGM Files (Solaris Only)

SGM automatically backs up all SGM data files to the SGM installation directory at 11:59 PM each night.

To change the time at which SGM automatically backs up files, log in as the root user and modify the *root crontab* file.

To manually back up the SGM data files at any time, log in as the root user, as described in the "Becoming the Root User (Solaris Only)" section on page 3-2, and enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./sgm backup

SGM backs up the data files in the installation directory.

If you installed SGM in the default directory, */opt*, then the default backup directory is also */opt*. If you installed SGM in a different directory, then the default backup directory is that directory.

To change the directory in which SGM stores its nightly backup files, use the following procedure:

Step 1 Log 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.

Step 2 Enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./sgm backupdir *directory*

where *directory* is the new backup directory. If the new directory does not exist, SGM does not change the directory, and issues an appropriate message.

Note The **sgm backupdir** command does not change the directory in which SGM stores GTT files, ITP route table files, report files, or sound files. To change those directories, you must use the **sgm gttdir**, **sgm repdir**, **sgm routedir**, and **sgm sounddir** commands, respectively.

To restore the SGM data files from the previous night's backup, log in as the root user, as described in the "Becoming the Root User (Solaris Only)" section on page 3-2, and enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./sgm restore

SGM restores the data files.

Warning **Do not interrupt this command. Doing so can corrupt your SGM data files.**

Removing SGM Data from the SGM Server

There might be times when you want to remove all SGM data from the SGM server, without uninstalling the product. There are two ways to do this, both of which restore the SGM server to a "clean" state, such as would exist after a new installation of SGM.

To remove all SGM data from the SGM server, **excluding** message log files, backup files, and report files, use the following procedure:

Step 1 Log in as the root user, as described in the "Becoming the Root User (Solaris Only)" section on page 3-2.

Step 2 Enter the following commands:

```
# cd /opt/CSCOsgm/bin

# ./sgm clean
```

Data removed includes all SGM data, notes, preferences, route files, and views, as well as any user-created files stored in SGM directories.

To remove all SGM data from the SGM server, **including** message log files, backup files, and report files, use the following procedure:

Step 1 Log in as the root user, as described in the "Becoming the Root User (Solaris Only)" section on page 3-2.

Step 2 Enter the following commands:

```
# cd /opt/CSCOsgm/bin

# ./sgm cleanall
```

Data removed includes all SGM data, notes, preferences, route files, views, message log files, backup files, and report files, as well as any user-created files stored in SGM directories.

Configuring a Backup SGM Server (Solaris Only)

SGM enables you to configure a secondary SGM server as a backup for the primary SGM server. For best results, Cisco recommends that you configure the primary server and the secondary server as secondaries for each other.

To configure a secondary SGM server, use the following procedure:

Step 1 Log 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.

Step 2 Enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./sgm secondaryserver *hostname naming-port*

where:

- *hostname* is the optional name of the host on which the secondary SGM server is installed.
- *naming-port* is the optional SGM Naming Server port number for the secondary SGM server. The default port number is 44742.

Note If you use the **sgm secondaryserver** command to configure a secondary SGM server, but the primary SGM server fails before you launch the SGM client, then the SGM client has no knowledge of the secondary server.

Step 3 (Optional) To list the secondary SGM server that has been configured for this primary SGM server, enter the following commands:

 # cd /opt/CSCOsgm/bin

 # ./sgm secondaryserver list

Telnetting to a Router

SGM enables you to link to a router using Telnet.

To Telnet to a router, use one of the following procedures:

- Select a node, or a linkset associated with the node, in the Node, Linkset, or Topology window, then select **View > Telnet to Router** from the SGM Main Menu.
- Right-click a node in the Node or Topology window, then select **Telnet to Router** from the right-click menu.

Note If your client workstation does not have network access to the IP address of the router (that is, if the router is behind a firewall or NAT device), you might be unable to Telnet to the router.