Element Management System Utilities

This chapter describes management utilities available in EMS and includes the following sections:

Provisioning EMS User Security

EMS offers three levels of security for EMS user accounts (see Table 15-1):

Table 15-1   EMS Security Levels

Security Level	Permitted EMS Operations
1	Displays the network topology and node configurations (read only).
2	Displays the network topology (read only), and changes the node configurations (read/write).
3	Changes the network topology and node configurations (read/write), manages EMS user accounts, and provisions EMS alarms.

EMS users with level 3 security can create, delete, and modify user accounts from EMS.

Step 1   From Cisco 6700 NetView, select **Applications > Configure EMS Security**. EMS launches the EMS security window, listing all configured users within a given EMS security level. (See Figure 15-1.)

Figure 15-1   Configuring EMS User Security
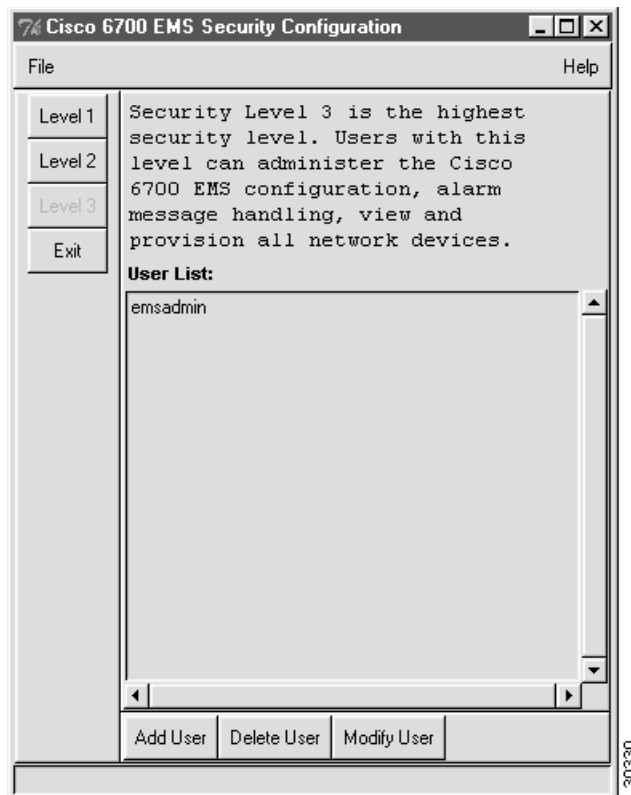
Step 2   Click the buttons labeled **Level 1**, **Level 2**, and **Level 3** to view user lists for each level of EMS security. Figure 15-1 shows the Level 3 button is grayed out; this indicates that only level 3 user accounts are displayed.

Step 3   Click the following buttons to configure EMS user accounts:

- **Add User**—Adds a user account for the currently-selected security level. When prompted, enter the user name and password for this new account, then click **Apply**.

- **Delete User**—Deletes a user account. Select the account to be deleted from the **User List**, then click **Delete User** to delete the account.

- **Modify User**—Changes the password or security level of an existing account. Select the account to be modified from the **User List**, then click **Modify User** to edit the account information.

Provisioning the EMS Inactivity Timer

The EMS inactivity timer tracks the amount of time that a particular NodeView remains open. When the inactivity timer expires, EMS displays a dialog box asking if Cisco 6700 NodeView should be kept active. (See Figure 15-2.)

Figure 15-2   EMS Inactivity Timer Dialog
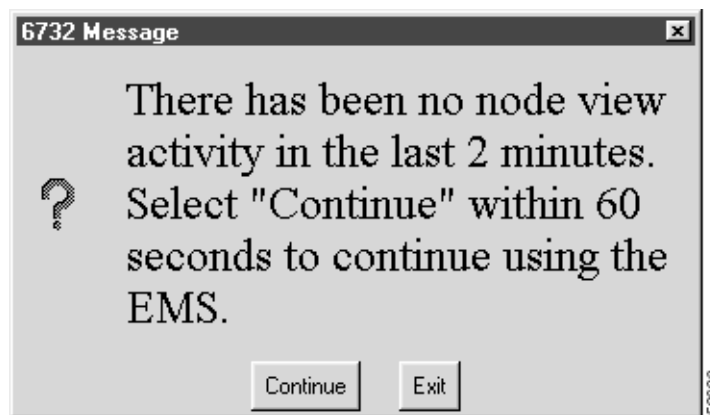
Click **Continue** to close the dialog box and continue working in NodeView, or click **Exit** to close NodeView. If no selection is made within 60 seconds, EMS closes Cisco 6700 NodeView. The timer is set to 60 minutes by default.

Step 1   From Cisco 6700 NetView, select **Applications > Configure Maximum Inactivity Timer**. EMS opens the provisioning window. (See Figure 15-3.)

Figure 15-3   Configure Maximum Inactivity Timer Window

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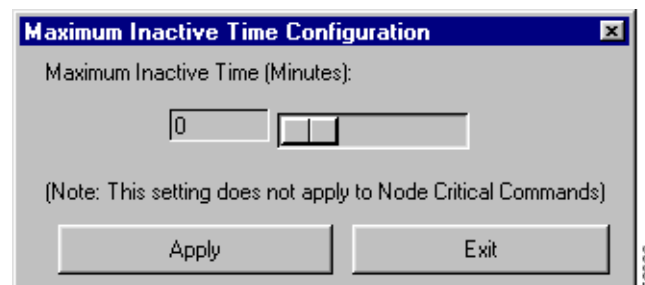
Step 2   Set the timer length in minutes and click **Apply**.

Step 3   To disable the inactivity timer, set the timer value to 0.


![Note pencil icon]

Note   The EMS inactivity timer does not apply to node critical commands.

Searching for a Node

The EMS node search utility lets you locate a previously created node by entering the node name or IP address of the node.

Step 1   Select **Applications > Node Search** from Cisco 6700 NetView menu. EMS launches the node search window. (See Figure 15-4.)

Figure 15-4   Node Search
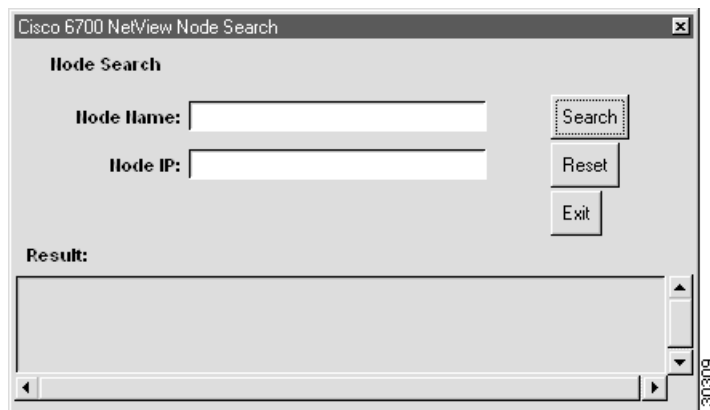
Step 2   Enter either the node name or node IP address in the node search window.

Step 3   Click **Search**.

EMS searches all subnets and end node lists for the specified node. If a matching node is found, the node name and node ID displays in the text window.

Pinging a Node

Use the ping node utility to test network connectivity between the NE and another network element (such as a Cisco 6700 series NE or a router).

Step 1   From the NE provision window, select **Ping Node** from the function bar. EMS launches the ping node window. (See Figure 15-5.)

Figure 15-5   Ping Node

Step 2   Set the following parameters:

- **Packet Size**—Enter the packet size (in bytes) used to ping the node.
- **IP Address**—Enter the IP address of the node being pinged.

Step 3   Click **Ping** to ping the node. The results of the attempted ping are displayed in the Results list.

Using the Node Provision Log

EMS provides an activity log that records each movement a user makes while provisioning a single node or multiple nodes. Logging can be enabled or disabled on a node-by-node basis with level 3 administrator privileges. Changes to logging options (enable/disable) do not take effect until you have logged off and then log back into EMS.

Step 1 Right-click the node icon in Cisco 6700 NetView. EMS launches the node provision log.

Step 2 Select **Node Provision Management** from the popup menu. EMS launches the node provision management display window. Items that display in the node provision category list vary, depending on how you provisioned the NE. (See Figure 15-6.)

Figure 15-6   Node Provision Management Display
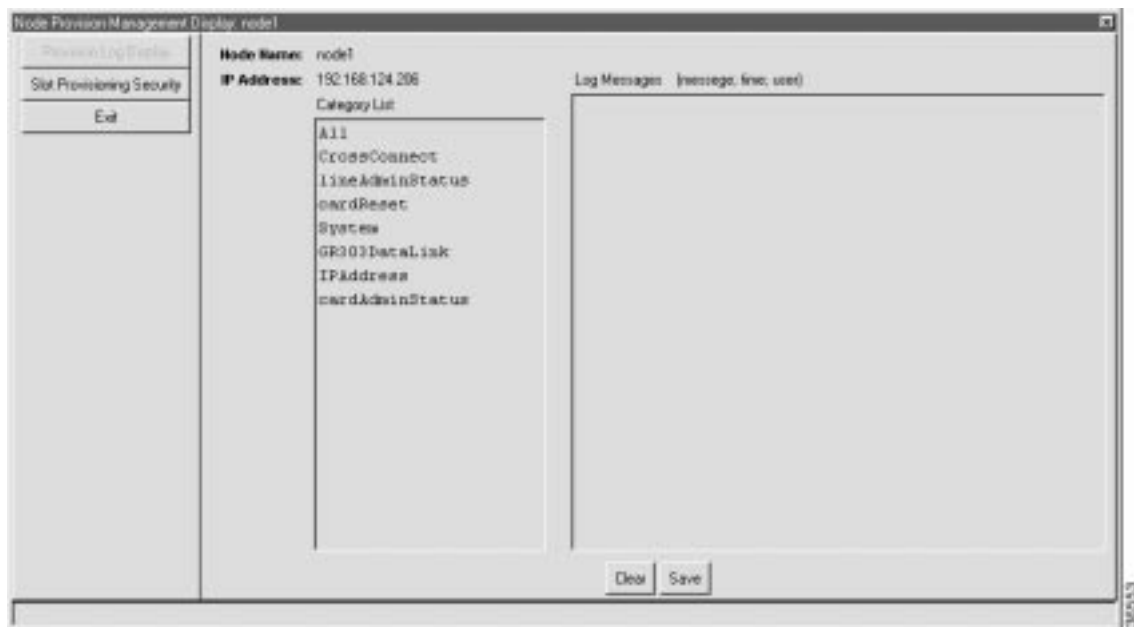
Common node provision categories are:

- **All**—Shows all logged messages from each of the other log categories.
- **CrossConnect**—Shows all cross-connect provisioning activity.
- **lineAdminStatus** —Shows card and line administrative status provisioning activities (in service/out of service).
- **cardReset**—Shows date, time, and who performed the most recent MCC reset.
- **System**—Shows systems-related provisioning activity (such as alarm changes, database reset, and software upgrade).
- **IPAddress**—Displays IP Address modifications.
- **CardAdminStatus**—Displays the card admin status (in service/out of service).

Step 3 Select a category by clicking it in the Category List box. EMS displays specific types of system information for the selected category.

Protecting Slots

The EMS slot provisioning security function allows selected slots in the NE to be protected from further provisioning changes. Protected slots, including the lines and cards in the protected slots, cannot be changed or modified.

✎
Note   Only level 3 users can provision slot security. Level 1 and level 2 users can view existing security settings, but they cannot add, modify, or delete slot security settings.

Step 1   From Cisco 6700 NetView, right-click the desired node icon and select **Node Provision Management** from the popup menu. EMS launches the node provision window.

Step 2   Click the **Slot Provisioning Security** tab from the function bar. EMS displays the slot provisioning security window. (See Figure 15-7.)

Figure 15-7   Slot Provisioning Security
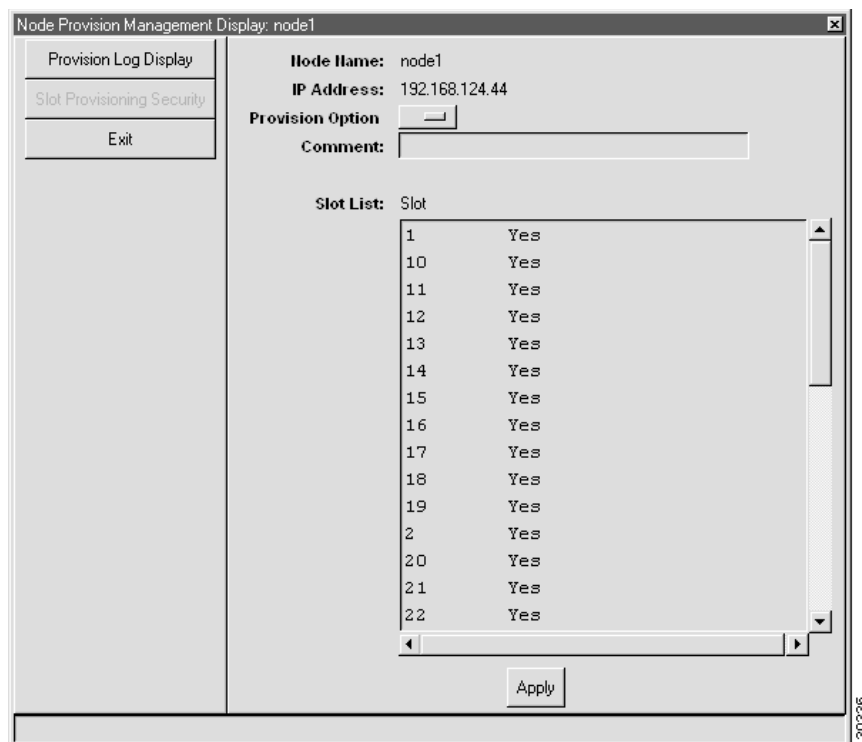
Step 3   In the **Slot List** window, click the slots to be provisioned.

Step 4   Set the **Provision Option** to **Yes** (allow slot provisioning) or **No** (disallow slot provisioning).

Step 5   Optionally, you can enter a **Comment** which displays next to the affected slots in the slot list.

Step 6   Click **Apply** to provision the slots.

Using the Schedule Editor

The EMS schedule editor lets you schedule software utilities such as database backups and software upgrades.
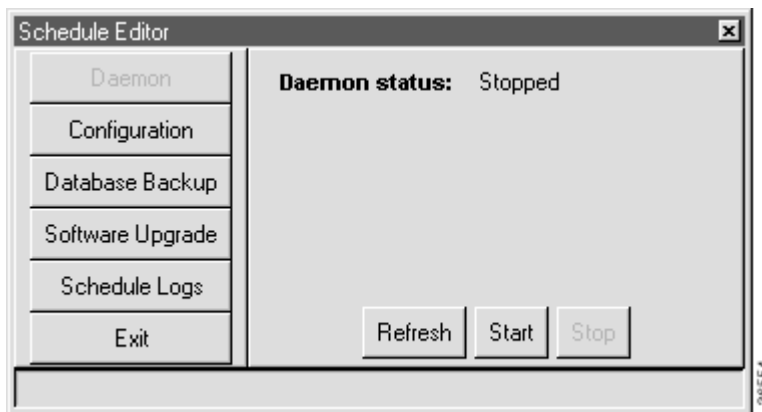
Note   Only level 3 users can create, modify, or delete scheduled activities. Level 1 and level 2 users can view existing schedule settings, but they cannot make changes.

Step 1   Select **Applications > Schedule Editor** from Cisco 6700 NetView. EMS launches the schedule editor. (See Figure 15-8.)

*Figure 15-8   Schedule Editor – Daemon*

Step 2   Click **Start** to activate the schedule daemon. The schedule daemon must be activated for scheduled activities to take place.

Step 3   Click **Stop** to shut down the schedule daemon.

Setting the Procedure Timeout

The schedule editor provides a configurable procedure timeout, allowing EMS to set a maximum time for database backup and software upgrade procedures.

Step 1   Click **Configuration** in the function bar. (See Figure 15-9.)

Figure 15-9   Schedule Editor – Timeout Configuration
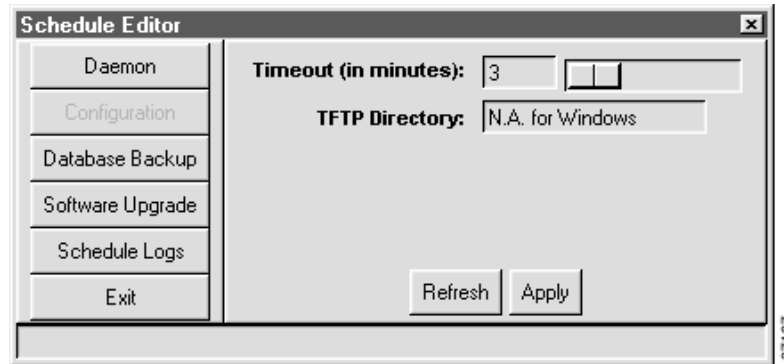
Step 2   Enter the desired timeout length in minutes in the Timeout (in minutes) field.


![Note icon]

Note   If the scheduled procedure takes longer than the timeout length, EMS disconnects from the active node. The procedure continues to run, but EMS does not display status updates.

Scheduling a Database Backup

Step 1   From the Schedule Editor, click **Database Backup** in the function bar. EMS launches the database backup scheduler window. (See Figure 15-10.)

Figure 15-10 Database Backup Scheduler
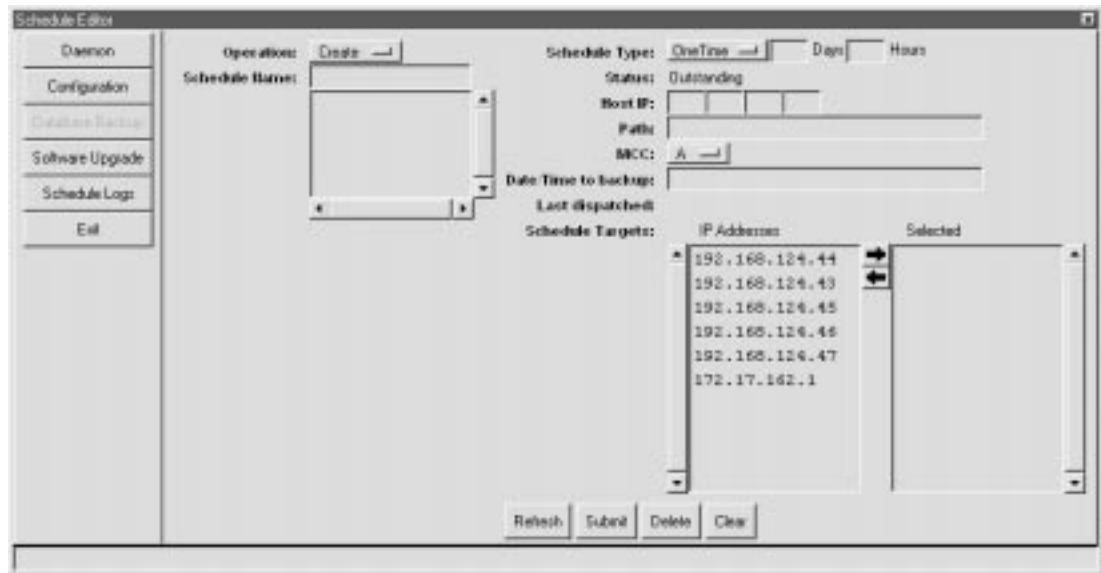
Step 2   Set the following parameters:

- **Operation**—Select **Create** to schedule a new database backup, or select **View/Delete** from the **Operation** drop-down menu to edit or delete an existing schedule. The **View/Delete** option shows a list of schedules; select one from the list, and click **Delete** to remove the schedule or click **Submit** to save the schedule with changes.

- **Schedule Name**—Enter a name for the new schedule (**Create** only). Schedule names are limited to 10 alphanumeric characters.

- **Schedule Type**—Select **OneTime** for a one-time scheduled backup, or select **Repeat** for a recurring backup.

- **Days/Hours** (**Repeat** only)—Enter the length of time to wait between performing another backup.

- **Host IP**—Enter the IP address of the TFTP server to receive the database backup.

- **Path and file name**—Enter the directory path and filename where the database backup file is sent.

- **MCC**—Select **Active**, **A** or **B** from the drop-down menu.

- **Date/Time to backup**—Enter the date and time that the backup will take place. For a repeating schedule, enter the date and time of the first backup to be performed. Use the following format when entering the date and time:

    – Date: MM/DD/YYYY

    – Time: HH:MM:SS

    If only the time is entered, the date is assumed to be today. If neither the time nor date is entered, the backup takes place as soon as you click **Submit**.

- **Schedule Targets**—Highlight the IP address of the node to be backed up in the **IP Addresses** list, and click the **right arrow** icon to move the address into the **Selected** list.

Step 3   Click **Submit**.

Note   EMS displays the IP addresses of all nodes in the active subnet. If the node you wish to back up does not appear in the list, return to NetView and select the proper subnet, then return to the schedule editor.

Scheduling a Software Upgrade

From the Schedule Editor, click **Software Upgrade** in the function bar. EMS launches the software upgrade scheduler window. (See Figure 15-11.)

Figure 15-11 Software Upgrade Scheduler Window
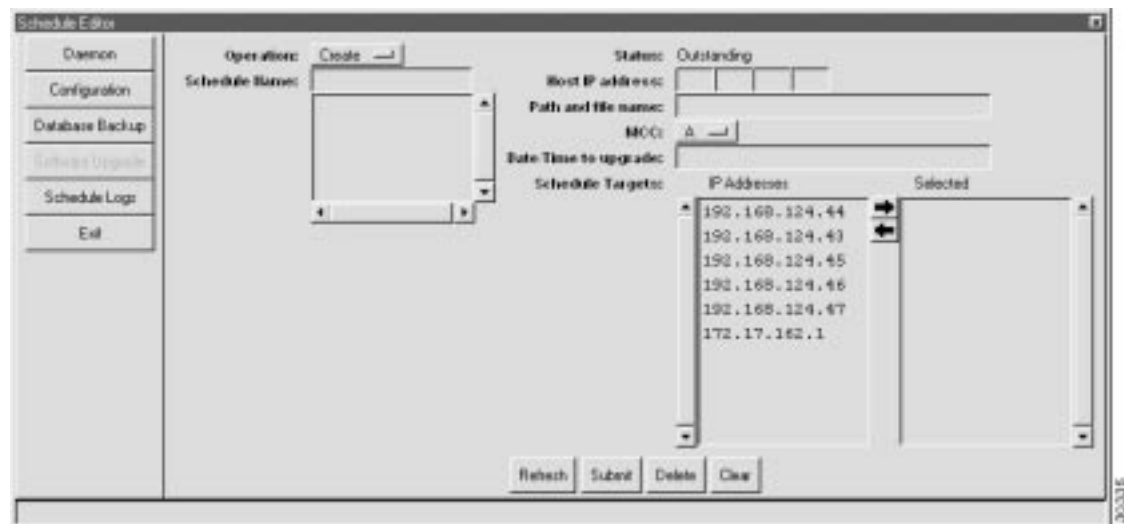
Step 1   Set the following parameters to schedule a software upgrade:

- **Operation**—Select **Create** to schedule a new software upgrade, or select **View/Delete** from the Operations drop-down menu to edit or delete an existing schedule. The **View/Delete** option shows a list of schedules; select one from the list, and click **Delete** to remove the schedule or click **Submit** to save the schedule with changes.

- **Schedule Name**—Enter a name for the new schedule (**Create** only). Schedule names are limited to 10 alphanumeric characters.

- **Host IP**—Enter the IP address of the TFTP server to provide the upgrade file.

- **Path and file name**—Enter the directory path and filename where the upgrade file is located on the TFTP server.

- **Date/Time to Upgrade**—Enter the date and time that the upgrade will take place. Use the following format when entering the date and time:

  - Date: MM/DD/YYYY
  - Time: HH:MM:SS

  If only the time is entered, the date is assumed to be today. If neither the time nor date is entered, the upgrade takes place as soon as you click **Submit**.

- **Schedule Targets**—Highlight the IP address of the node to be upgraded in the **IP Addresses** list, and click the **right arrow** icon to move the address into the **Selected** list.

**Step 2**   Click **Submit** to complete the new schedule.

Note   EMS displays the IP addresses of all nodes in the active subnet. If the node you wish to upgrade does not appear in the list, return to NetView and select the proper subnet, then return to the schedule editor.

Viewing the Schedule Log

The Schedule Log displays a detailed log of all scheduled activities.

Step 1   From the Schedule Editor, click **Schedule Logs** in the function bar. (See Figure 15-12.)

Figure 15-12 Schedule Editor – Schedule Logs Window
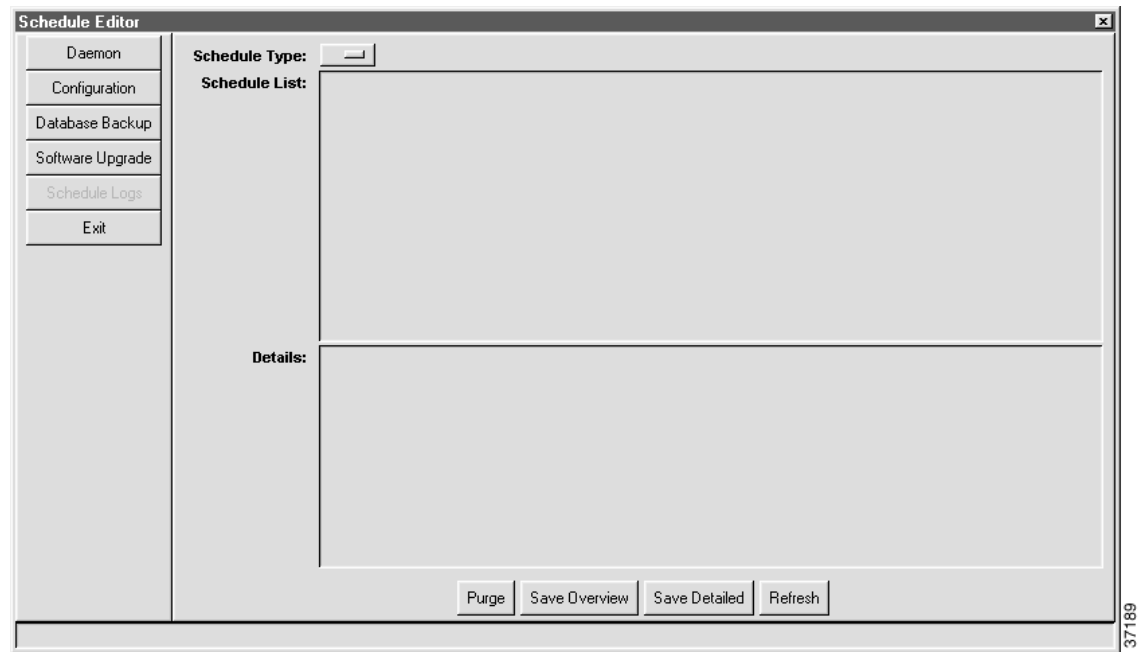
Step 2   Select a schedule type to view. Choose either **Software Upgrade** or **Database Backup** from the **Schedule Type** drop-down menu.

Step 3   Click either **Save Overview** to create a file containing the overview information (top list), or click **Save Detailed** to create a file containing detailed log information (bottom list).