

# **Element Management System Utilities**

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

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## **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

7% Cisco 67	700 EMS S	ecurity Confi	guration	-	
File					Help
Level 1 Level 2 Level 3 Exit	Securit securit level c 6700 EM message provisi <b>User List</b> :	y Level 3 y level. can admini S configu handling on all ne	is the P Users wit ster the tration, s , view ar twork dev	nighest Ch this Cisco Alarm nd Vices.	
	emsadmin	Delate U.c.			•
	Add User	Delete User	Modify User		

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

6732 M	essage 🔀	
?	There has been no node view activity in the last 2 minutes. Select "Continue" within 60 seconds to continue using the EMS.	
	Continue Exit	62628

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.)



Maximum Inactive Time Configuration 🛛 🛛 🛛			
Maximum Inactive Time (Minutes	):		
(Note: This setting does not apply	y to Node Critical Commands)		
Apply	Exit		

- Step 2 Set the timer length in minutes and click Apply.
- **Step 3** To disable the inactivity timer, set the timer value to 0.



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

Cisco 6700 NetView Node Search	X
Hode Search	
Hode Hame:	Search
Hode IP:	Reset
	Exit
Result:	
	<u> </u>

- 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.)

NE Provision for 6732 node: 67 System Basic Provisioning	Packet Size (bytes): 50
IP Address Configuration	IP Address:
IP & Datalink Route Configuration	Results:
Ping Node	
Node ID Configuration	
IP & Inter Node Link Configuration	
Timing Source Selection & Control	
Timing Distribution Provisioning	
NE Time Of Day Set	
Alarm Provisioning	
Common Control Card Switch Over	
Software Upgrade	
Database Backup/Restore	
Error Log Retrieval	
Exit	Clear Results Ping

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.)

iode Piovision Management D	leptor redel			
Site Provisioning Security Exit	Hode Barnes IP Address:	rodel 192168124206 EstegoyLit All CrossCouncet LineAdwinStatus cardBeset System GR303DataLink IPAddress cardAdminStatus	Log Memagen (hereorege, fine; user)	
			Dea Save	

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.)

lode Provision Management Di	splay: node1			×
Provision Log Display	Hode Hame:	node1		
Slot Provisioning Security	IP Address:	192.168.1;	24.44	
oloci i lovioloning occurry	Provision Option			
Exit	Comment:			
	Slot List:	Slot		
		1	Yes	▲
		10	Yes	
		11	Yes	
		12	Yes	
		13	Yes	
		14	Yes	
		15	Yes	
		16	Yes	
		17	Yes	
		18	Yes	
		19	Yes	
		2	Yes	
		20	Yes	
		21	Yes	
		22	Yes	<b>•</b>
		•		
			Apply	

#### 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
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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

Schedule Editor		×
Daemon	Daemon status:	Stopped
Configuration		
Database Backup		
Software Upgrade		
Schedule Logs		
Exit	Refresh	Start Stop

- 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

Schedule Editor	×
Daemon	Timeout (in minutes): 3
Configuration	TFTP Directory: N.A. for Windows
Database Backup	
Software Upgrade	
Schedule Logs	
Exit	Refresh Apply

Step 2 Enter the desired timeout length in minutes in the Timeout (in minutes) field.

	<u>(4</u>
Not	e

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.)

Daemon	Oper ation:	Desta	Schedule Type:	OneTime - Dan	Hours	
Configuration	Schedule Barnet		Status:	Outstanding		
Ovates Same			Pathe			
Software Upgrade			MCC	<u>A  </u>		
Schedule Logs		l	Date Time to backup:	1		
Ent		•	Schedule Targets:	IP Addectors	Selected	
				* 192.168.124.44 192.168.124.43 192.168.124.45 192.168.124.45 192.168.124.46 192.168.124.47 172.17.162.1	ŧ	
				-		-
			Refeato Submit D	viele Clear		

#### 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.



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.)



Daenon	Operation:	Croate	Statute	Outstanding	
Configuration	Schedule Barne:		Host IP address:		
Database Backup			Path and the name: MOCI		
Internet Organie.			Bate Time to upgrade:		- and the second
Schedule Logs			Schedule Targets:	PAddesses	Selected
Ext		•		192,168,124,44	
				192.168.124.45	1
				192.168.124.46	
				172.17.162.1	
				-	
			Trace I were the	- I and	1
			Rebech Subert De		1

#### **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.



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

Schedule Editor	1	X
Daemon	Schedule Type:	
Configuration	Schedule List:	
Database Backup		
Software Upgrade		
Schedule Logs		
Exit		
	Details:	
		Purge Save Overview Save Detailed Refresh

- 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).