

Cisco 6700 Series Element Management System Alarm Server

This chapter describes the Element Management System (EMS) alarm server, and includes the following sections:

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Launching the Alarm Server

The EMS alarm server application works in conjunction with the UNIX and Windows NT versions of EMS. Alarms are user configurable for each NE.

Launching the EMS alarm server is detailed in Chapter 3, "Launching EMS."

Installing the Alarm Server

- Step 1 From Cisco 6700 NetView, double-click the icon of the appropriate node to open Cisco 6700 NodeView.
- Step 2 Double-click the node nameplate (located above the IP address) to open the NE Provisioning window. (See Figure 17-1.)

NE Provision for 6732 node: nod	e9	×
System Basic Provisioning	NE Name:	6732
IP Address Configuration	Alias:	
IP & Datalink Route Configuration	NE Location:	Central Office
Ping Node	NE Node Type:	NetworkNode
Nada ID Canformation	NE TIME OF Day:	2000-04-27,17:23:17:0
Node ID Configuration	NE Backplane Version:	13
IP & Inter Node Link Configuration	NE Loaded Software Version:	1.3(2)
Timing Source Selection & Control	NE CLEI Code:	SBMAFGODRA
Timing Distribution Provisioning	NE Serial Number:	6861
NE Time Of Day Set	NE Backplane Type:	Unknown
Alarm Provisioning	Alarm Status:	normal
	Problem List:	
Lommon Lontrol Lard Switch Uver		
Software Upgrade		
Database Backup/Restore		
Error Log Retrieval		
Exit		ply Refresh

Figure 17-1 Cisco 6732 NE Provisioning Window

Step 3 Select Alarm Provisioning in the function bar at the left. (See Figure 17-2.)

NE Provision for 6705 node: node8		×
System Basic Provisioning	Alarm Destination/Server IP Address:	
IP Address Configuration		0.0.0.0
IP & Datalink Route Configuration		0.0.0.0
Ping Node		0.0.0.0
Node ID Configuration		0.0.0.0
IP & Inter Node Link Configuration		
IP RIP Configuration		
IP Network Address Translation (NAT)	Alarm Report Level:	
IP Access Lists	Alarm Acknowledgement:	0n
Timing Source Selection & Control	Alarm Messge Serverity:	
Timing Distribution Provisioning		Alarm Cut Off
NE Time Of Day Set		Configurable Alarm 2
Alarm Provisioning		Configurable Alarm 3
Software Lingrade		Configurable Alarm 5
Database Baskup	Configurable Alarm Name	
	Input Level:	
Error Log Retrieval		
Exit	Apply	Hefresh

Figure 17-2 Alarm Server Provision Display

Step 4 In the box under the Alarm Destination/Server IP Address field, highlight the first IP address (0.0.0.0).

Step 5 In the Alarm Destination/Server IP Address field, enter the alarm server IP address. (See Figure 17-3.)

Figure 17-3 Alarm Server IP Provisioning

NE Provision for 6705 node: node8	×
System Basic Provisioning	Alarm Destination/Server IP Address: 192 168 0 20
IP Address Configuration	0.0.0
IP & Datalink Boute Configuration	0.0.0.0
	0.0.0.0
Ping Node	0.0.0.0
Node ID Configuration	0.0.0.0
IP & Inter Node Link Configuration	
IP RIP Configuration	

Step 6 Click Apply at the bottom of the screen.

Step 7 Click Exit in the function bar at the left.

Connecting to the Alarm Server

From Cisco 6700 NetView, (see Cisco 6700 NetView, Alarm Server Connected, page 17-4), select **Applications > Connect Alarm Server** from the menu bar.

Figure 17-4 Cisco 6700 NetView, Alarm Server Connected

Objects Applications Help			
al Alamic 0 Major Alamic 0 Minor Alamic 0	Subart root	Inter Node Provision	Schultzer Deri
• ma			4

If the alarm server is connected, the title bar displays the IP address of the alarm server, and the message "Successfully connected to the alarm server..." displays in the message bar at the bottom of the window (not shown in this illustration).

If EMS cannot connect to the alarm server, the title bar reads "Failed to connect to alarm server." Either the alarm server is not running, or it has been provisioned with an incorrect IP address.

Configuring the Polling Interval

The polling interval determines how often the alarm server checks for alarm conditions. To configure the polling interval, select **Applications > Configure Polling Interval** from the Cisco 6700 NetView menu bar.

Monitoring and Stopping the Alarm Server



An alarm server password is required to complete the following procedure. If you do not enter the alarm server password, you can still monitor the alarm server, but you cannot shut it down. Contact your EMS administrator for the alarm server password.

Step 1 From Cisco 6700 NetView, select Applications > Display Alarm Server Status from the menu bar.

Step 2 Respond to the login prompt by entering the alarm server password and clicking OK. EMS launches the alarm server status window, displaying the IP address of the alarm server host and the status of the alarm servers and daemons. (See Figure 17-5.)

Figure 17-5 Alarm Server Status Window

Cisco 6700 EMS Servers Status Display 🗵							
Cisco 6700 EMS Ser	vers Status:						
Server Host:	192.168.124.20						
Alarm Server:	Running						
History Server:	Running						
Event Server:	Running						
Trap Daemon:	Running						
Acknowledge Daemon:	Running						
Monitoring Daemon:	Running						
Dismiss Stop Alarm Serve	r -						

- Step 3 To shut down the EMS alarm server, click Stop Alarm Server.
- Step 4 Respond to the confirmation prompt by clicking Yes.
- Step 5 Click Dismiss to return to Cisco 6700 NetView.

Viewing and Modifying Alarms

Step 1 From Cisco 6700 NetView, select Applications > Display Total Alarm Messages from the menu bar. EMS launches the alarm display window. (See Figure 17-6.)

Figure 17-6 Alarm Message Display Window

7% Cisco 6700	EMS Total Alarm Messa	ge Display (Alarn	n Server: 192.16	8.0.15)					_ [IX
File View App	olications Help									
Critical: 2	Major: 0 Minor: 0	Warning: 0	-					Total Mess	ages: 2	
Severity	Host IP	Alarm Name				Instance	Issuing Time			
Critical	192.168.0.5	Node is not	responding	(maybe d	down)		Dec 14,	17:47:27,	1999	
Critical	192.168.1.2	Node is not	responding	(maybe d	down)		Dec 14,	17:46:57,	1999	
•									1	

The alarm display lists the following information:

- Severity—The severity level of the alarm. This field is color-coded depending on the severity of the alarm (Critical and Major = red, Minor = yellow, Warning = white).
- Host IP—The IP address of the node reporting the alarm.

- Alarm Name—The name of the reported alarm.
- Instance—The source of the alarm, usually a card name or slot number.
- Issuing Time—The date and time when the alarm was reported.
- Clearing Time—The date and time when the alarm was cleared.
- **#Incident**—The number of alarm incidents reported.
- Last Incident Time—The date and time of the most recent alarm incident.

To sort the alarm display by a field type, click on the header bar of the field used as the sort criterion.



You must scroll to the right to see the entire display.

The alarm message display window also contains the following menus and menu options:

- View Menu (see Figure 17-7)
 - Locate Alarm Messages From A Host
 - Locate Latest Alarm Message
 - Delete All cleared Alarms
 - Clear All New Alarm Highlight

Figure 17-7 Alarm Display View Menu

7% Cis	sco 6700 EMS Total Alarm Message Di	splay	(Alarn	n Server: 19	92.168	3.0.15)	_ [٦×
File	View Applications Help							
Criti	Locate Alarm Messages From A Host	arning:	0			Total Mes	sages: 2	
Sev	Locate Latest Alarm Message	Name	;					
Cr	Delete All Cleared Alarms	e is	not	respond	ing	(maybe	down)	
Cr	Clear All New Alarm Highlight	e is	not	respond	ing	(maybe	down)	
_		-						

- Applications Menu (see Figure 17-8)
 - Acknowledgement List
 - Alarm ID List

Figure 17-8 Alarm Display Applications Menu

7% Cisco 67	00 EMS Total Alarm Messa	age Display (Alarm Server: 192.168.0.15) 📃 🗖 🗙
File View /	Applications Help	
Critical: 2	Acknowledgement List	Warning: 0 Total Messages: 2
Severity	Alarm ID List	Alarm Name
Critica	1 192.168.0.5	Node is not responding (maybe down)
Critica	1 192.168.1.2	Node is not responding (maybe down)
at		
<u> </u>		<u>·</u>

Figure 17-9 shows an example of the alarm ID list. Figure 17-13 on page 17-8 shows an example of the alarm acknowledgement list.

Figure 17-9 Alarm ID List

7∦ Alarm	ID List		_ 🗆 ×
1	Alarm Cut Off		<u> </u>
2	Configurable Alarm 2		
3	Configurable Alarm 3		
4	Configurable Alarm 4		
5	Configurable Alarm 5		
6	Configurable Alarm 6		
7	Configurable Alarm 7		
8	Configurable Alarm 8		
9	Configurable Alarm 9		
10	Configurable Alarm 10		
11	Configurable Alarm 11		
12	Configurable Alarm 12		
13	Configurable Alarm 13		
14	Configurable Alarm 14		
15	Configurable Alarm 15		
16	Configurable Alarm 16		
21	Card Missing	{Card Number}	
22	Card Mismatch	{Card Number}	
23	Card Failure	(Card Number)	
24	Card Communication Failure	{Card Number}	-
Í∙[
	Disn	niss	31249

Acknowledging Alarms

You can acknowledge an alarm in EMS by attaching a comment to the alarm. This is not the same as clearing an alarm; an acknowledged alarm is still listed in the alarm display as active.

In the alarm display window, right-click on the **Severity** field of an alarm entry in the alarm display, and select **Acknowledge the Alarm Message** from the pop-up menu. (See Figure 17-10.) EMS launches the alarm acknowledgement window. (See Figure 17-11.)

7% Cisco 6700	EMS Total Alarm Messa	ige Display (Alarn	Server: 192.168.0.15)		_ 🗆 ×
File View Ap	plications Help					
Critical: 2	Major: 0 Minor: 0	Warning: 0			Total Me	ssages: 2
Severity	Host IP	Alarm Name		Instance	Issuing Time	
Critical	192.168.0.5	Node is not	responding (may)	oe down)	Dec 14, 17:47:27	, 1999 🔺
Critical	192 168 1 2	Node is not	responding (may	oe down)	Dec 14, 17:46:57	, 1999
	Acknowledge the Alarm Mes	sage				
•						

Figure 17-10 Alarm Popup Menu

Step 1

% Note for Ackowledging Alar 💶 🗙					
Alarm Message (192.168.0.5):					
Node is not responding (maybe down)					
Acknowledge Note (30 characters):					
,					
Done Cancel					

Figure 17-11 Alarm Acknowledgement

Step 2 Enter an attachment for the alarm, and click **Done**. EMS returns to the alarm display. The alarm display shows a dark blue background in the Severity field of the acknowledged alarm. (See Figure 17-12.)

Figure 17-12 Alarm Display with Acknowledged Alarm

7% Cisco 6700	EMS Total Al	arm Messag	e Displa	y (Alarn	Server: 192.1	68.0.15)	_ 🗆	\mathbf{X}
File View App	lications Help							
Critical: 1	Major: 0	Minor: 0	Warnin	ng: 0		Total Mes	sages: 2	
Severity	Host IP		Alarm Na	me				
Critical	192.168.0).5 -	Node i	s not	responding	(maybe	down)	
Critical	192.168.1	2	Node i	s not	responding	(maybe	down)	-
								إكر
<u> </u>							<u> </u>	J [å

- **Step 3** Right-click on the acknowledged alarm and select **Display Acknowledgement Note** to show the attachment for the acknowledged alarm.
- **Step 4** To show a list of all acknowledged alarms, select **Applications > Acknowledgement List** from the alarm display window. EMS displays the acknowledgement list. (See Figure 17-13.)

Figure 17-13 Alarm Acknowledgement List with Display

Advertigencel La		
Automolekjenert List		
2 202.140.1.2	2.12083 like mong TP sääkessi fo	Bode 10 mil refejonding Gerijke mens
*] Asknanledgement Detail		1.1
Alacte Heatt Dataarei Izeting Tiset Actoretiedged Dyn Actoretiedged Ats	Node is not responding compte down Dec 14, 10:101136, 1999 excendes: Dec 14, 10:05:24, 1999	
Dures	Save	

Manually Clearing Alarms

Clearing an alarm removes the alarm from the alarm display and any alarm lists.

- Step 1 In the alarm display window, right-click on the Host IP field of an alarm entry in the alarm display.
- Step 2 Select Manually clear this alarm message from the pop-up menu. (See Figure 17-14.)

Figure 17-14 Alarm Host Popup Menu

7% Cisco 6700 EM	IS Total A	larm Messag	ge Display	(Alarm	n Server: 192.10	68.0.15)						_ [IX
File View Applica	ations Help	0											
Critical: 2 Ma	ajor: 0	Minor: 0	Warning:	0							Total Messa	ages: 2	
Severity Ho	ost IP		Alarm Name					Instan	ce	Issuing Time	:		
Critical 19	92.168.	0.5	Node is	not	responding	(maybe	down)			Dec 14,	17:47:27,	1999	
Critical 19	92.168	1.2	Node is	not	responding	(mavhe	down)	H		Dec 14,	17:46:57,	1999	
		Delete Clea	red Alarms for	node 1	92.168.1.2								
		Purge node	192.168.1.2 f	rom mo	onitoring list								
		Manually cla	ear this alarm r	nessag	je: Node is not resj	oonding (ma	ybe down)						
		Node View	for node 192."	168.1.2	!								
Alarm Message Display for node 192.168.1.2													
		Event Mess	age Display fo	or node	192.168.1.2								
4		History Mes	sage Display f	or node	e 192.168.1.2								ة التي تاريخ
<u> </u>												<u></u>	-

Other Alarm Host Options

Other alarm host options include the following:

- Deleting cleared alarms
- Purging the node from the monitoring list (see Figure 17-12 on page 17-8; a strike-through identifies the purged host)
- Opening Cisco 6700 NodeView
- Viewing the alarm message display, history message display, or event message display for the node

Purging a Node

You can purge a node from the alarm monitoring list. This disables alarm reporting from the selected node.

Step 1 In the alarm display window, right-click on the Host IP field of an alarm entry in the alarm display, and select **Purge node from monitoring list** from the pop-up menu. (See Figure 17-14.)

Step 2 Respond to the confirmation prompt by clicking Yes. EMS returns to the alarm display window. Purged nodes are shown with a strikeout through the alarm name and a bright green background in the Severity field. (See Figure 17-12 on page 17-8.)

Viewing the History Message Display

The history message display provides a summary of all alarm conditions that have been cleared (resolved) to date. You cannot modify or delete the messages in this display, but you can sort them by time of occurrence, severity, or alarm name.

- Step 1 From Cisco 6700 NetView, right-click the icon of the appropriate NE.
- Step 2 Select History Message Display from the popup menu. (See Figure 17-15.)

Figure 17-15 History Message Display

Calcul 2 Hays 13 Mines 6 Wasting 3					c 21	
Severity.	Nove	rearen	Income Time	Opening Time	2 hei	
Baloc	PLL is set to holdover by system		New 15, 17:03:55, 2000	New 17, 14:03:30, 2000	1 1	
Major	1633) Loss of Signal	Card 19 , Line 1	New 16, 11:00:50, 1000	Nov 57, 14:05:19, 2000	1	
Major	DEX1/T1 Mear End Lose of Signal (Receive)	Card 5 , Line 1	New 16, 13:42:53, 2000	Nev 16, 13:43:23, 2000	1	
Critical	1021/Tt Carrier Group Alarm	Card S , Lize 1	Now 16, 13:44:12, 2000	Nov 16, 13146:14, 2000	12 -	
Major	DEX1/T1 Mear East Lose of Signal (Bereive)	Cerd 18 , Line 1	Nov 17, 14:02:37, 2000	New 17, 14:00:01, 2000	3	
Garniag	Loss of Timing Reference	Feference 2	Nov 17, 14:02:30, 2000	Nov 17, 14:00:30, 1000	1	
Stnot	Card Initializing	BCC+A	Now 17, 14:07:47, 2000	Nev 17, 14:09:24, 2000	1	
Manor	Card Initializing	Card Number 19	Nov 17, 14:07:48, 2000	Nov 17, 14:07:48, 1000	1	
Hinor	Card Initializing	Card Master 1	New 17, 14:07:48, 2000	New 17, 14:08:27, 2000	1	

Note

You must scroll to the right to see the entire display.

Viewing the Event Message Display

The event message display provides a summary of NE events that do not affect service (such as MCC switchover and timing reference switchover). You cannot modify or delete the messages in this display, but you can sort them by time of occurrence or alarm name. From the event message display, you can view a list of all possible event ID numbers.

Step 1 From Cisco 6700 NetView, right-click the icon of the appropriate NE.

Step 2 Select Event Message Display from the popup menu. (See Figure 17-16.)

Figure 17-16 Event Message Display

Event Name	Instance	Issuing Time	
SNMP Request to reset card	Card NCC-8, 1P Address: 192.168.124.33	Nov 17, 14:04:32, 2000	
SNMP Request for BCC switchover	from MCC-B to 63, 1P Address: 192.168.124.33	Nov 17, 14:07:50, 2000	
NCC Switchover	from NCC-A to NCC-B	Nov 17, 14:07:47, 2000	
SNMP Request for NCC switchover	from NCC-A to 63, IF Address: 192.168.124.33	Nov 17, 14:16:16, 2000	
NCC Switchover	from MCC-8 to MCC-A	Nov 17, 14:16:12, 2000	
Node Up		Nov 17, 15:38:43, 2000	

Note

You must scroll to the right to see the entire display.

Viewing the Event ID List

From the event message display window (see "Viewing the Event Message Display" section on page 17-11), select **Applications > Event ID List**. EMS displays the event ID list. (See Figure 17-17.)

Figure 17-17 Event ID List

7% Event ID List					
34	Sync Reference Switch	from to			
35	Timing Reference Quality Level Change				
36	TFTP device open error				
37	TFTP read error				
38	MCC Switchover	from to			
39	Node Up				
40	Protection Switchover	{from card} {from line			
41	SNMP Request to erase database	Card Port (Requesting			
42	SNMP Request to reset card	Card Port (Requesting			
43	Database conversion failed				
44	SNMP Request for MCC switchover	from to (Requesting IP			
500	SONET 15-Min CV-S TCA	{SONET Card} {SONET Li			
501	SONET 15-Min ES-S TCA	(SONET Card) (SONET Li			
502	SONET 15-Min SES-S TCA	(SONET Card) (SONET Li			
503	SONET 15-Min SEFS-S TCA	(SONET Card) (SONET Li			
550	SONET 1-Day CV-S TCA	(SONET Card) (SONET Li			
551	SONET 1-Day ES-S TCA	{SONET Card} {SONET Li			
552	SONET 1-Day SES-S TCA	(SONET Card) (SONET Li			
553	SONET 1-Day SEFS-S TCA	{SONET Card} {SONET Li			
600	SONET 15-Min CV-L TCA	(SONET Card) (SONET Li			
▲					
	Dismiss				