



Release Notes for the Cisco Media Gateway Controller Node Manager, Release 2.7(3)

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The Cisco Media Gateway Controller Node Manager (MNM) Release 2.7(3) provides support on new features and performance improvements introduced on Cisco PGW 2200 Softswitch Release 9.7(3).

This document contains release information for the Cisco MNM Release 2.7(3) software. For more information on the Cisco MNM software, please visit the Cisco website at

http://www.cisco.com/en/US/products/sw/netmgtsw/ps1912/tsd_products_support_series_home.html

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Introduction

The Cisco Media Gateway Controller (MGC) Node Manager (MNM) is an element management system (EMS) for the Cisco PGW 2200 Softswitch node, a call control node based on the Cisco PGW 2200 Softswitch. The Cisco MNM provides basic management of the Cisco PGW 2200 Softswitch node devices, including fault, configuration, performance, and user security management.

The Cisco MNM helps you manage the following components:

- Cisco PGW 2200 Softswitch
- Cisco ITP-L
- Cisco LAN Switch (Cisco Catalyst 2900, 5500, and 6509 only)
- Cisco BAMS
- Cisco HSI

System Requirements

At a minimum, you need the following hardware and software to install and run Cisco MNM:

- Sun platform in the UltraSPARC families
- Minimum 4 GB of RAM
- 8 GB of swap (or greater)
- Sun Solaris 8 or 10 operating system (Solaris 10 recommended)
 - Latest patches recommended
 - Open Windows with the Common Desktop Environment (CDE)
- Properly configured drives, 36 GB or larger. The database drives should be configured as raw devices and connected to a separate controller for maximum performance.
- The tmpfs file system must be mounted to /tmp for maximum performance.

The following are additional requirements if Cisco MNM coexists with CiscoView 6.1(6) on the Solaris 10 operating system:

- Version must be the November 2006 release or higher, and the minimum recommended cluster patch levels are those cluster patches released April 17, 2007.

**Note**

- Cisco MNM Release 2.7(3) includes CiscoView for Solaris 10 only. CiscoView for Solaris 8 is not provided with the Cisco MNM media kit. However, previous CiscoView versions shipped with previous Cisco MNM media kits can be reused. New Cisco MNM users should be using Solaris 10 for best long-term satisfaction and full CiscoView support. New Cisco MNM users who use only Solaris 8 operating system must obtain CiscoView for Solaris 8 separately, possibly by purchasing the appropriate LMS 2.5.1 package.
- Cisco MNM is available on CD, and LMS 3.0 and CiscoView 6.1(6) are available on DVD.

Chapter 1 of the *Cisco Media Gateway Controller Node Manager Installation Guide* lists detailed system requirements for the Cisco MNM at

http://www.cisco.com/en/US/products/sw/netmgtsw/ps1912/prod_installation_guides_list.html

Review this chapter before installing or configuring the software.

Installing drives greater than 9 GB does not result in performance gains. The main restriction on the Cisco Element Management Framework (EMF) application speed is the hard disk input/output (I/O) capability, not capacity. Maximum performance is achieved using many drives of lower capacity instead of a few, larger capacity drives.

Software Requirements

The following are required for Cisco MNM installation:

- Server/Client: Solaris 8 or 10
- CiscoView (from LMS DVD-Solaris 10 only)
- CEMF Version 3.2, Service Pack 7, 7.1, and 7.2
- CEMF Crypto Add-on Package Software (mandatory if ssh function is needed)



Note

CEMF patches are required for Solaris 8 and 10 operating systems. For more information, see the *Cisco Media Gateway Controller Node Manager Installation Guide, Release 2.7(3)* at

http://www.cisco.com/en/US/docs/net_mgmt/mnm/2.7.3/install/guide/MNM_install_273.html

- Cisco VSPT Release 2.7(3)
- Cisco MNM Release 2.7(3)

For operating requirements, see the “Supported Configurations” section on page 8.

Software Changes

This section describes software changes in the Cisco MNM Release 2.7(3) and Release 2.7(3) patches.

Release 2.7(3)

The Cisco MNM Release 2.7(3) supports Cisco PGW 2200 Softswitch Release 9.5(2), 9.6(1) and 9.7(3) up to 9.7(3) S3P3.

New MML Components

- RASPath
- RaserverChannel
- RACLUSTER

New Sigpath Properties

- GatewayAnnouncementPackageSupport

- PRI

Modified Sigpath Properties

- Q761_97VER_RUS for ss7path component

New Trunk Group Properties

- H323Destination
- AdigitCCrm
- DtmfCap
- InviteWaitTimer
- TrunkGroupTagLabel
- TrunkGroupTagLabelTransEnable
- InviteAttempts
- NonInviteReqAttempts
- ResponseAttempts
- RetransMethod
- InviteWaitTimer

New Result Types

- BCMOD
- HLCMOD
- NUM_TRANS
- ORIG_VPN_ID
- FACILITY
- DTMFCAP

New Measurements

- For Cisco PGW 2200 Softswitch
 - CALL:CTICBReq
 - CALL:CTICBCancel
 - CALL:CallBackFreeNotification
 - CALL:CallBackCallSetup
 - CALL:MessageWaitingIndication
- For HSI
 - INC_ANNEX_M1_REJ_TOT
 - OTG_ANNEX_M1_REJ_TOT
 - INC_ANNEX_M1_TOT
 - OTG_ANNEX_M1_TOT
- For BAMS
 - BAM:IGR_CALL_ANS

- BAM:EGR_CALL_ANS
- BAM:TTL_CALL_ANS
- BAM:TTL_CALL_ATT
- BAM:IGR_ASR
- BAM:EGR_ASR
- BAM:TTL_ASR
- BAM:TTL_BH
- BAM:TTL_BP

New Alarms

- From Cisco PGW 2200 Softswitch
 - QSIG tunneled data received over QSIG disabled interface
 - RADIUS server unreachable
 - Lost connectivity to all RADIUS servers
 - RADIUS records needing collecting
 - Invalid target for DTMF collection
- From BAMS
 - License expire
 - License to expire at date

Other

- Support for Solaris 10 was added.
- Properties for association components: ipprecedence and dscp were removed.
- The digitToPresent component under dialplan was removed.
- Retrieving license information from the Cisco PGW 2200 Softswitch, Cisco HSI, and Cisco BAMS was added.

Release 2.7(3) Patch 1

The Cisco MNM Release 2.7(3) Patch 1 supports Cisco PGW 2200 Softswitch Releases 9.5(2), 9.6(1), and 9.7(3) up to 9.7(3) S3P3.

The patch does not include any new or modified MML components or trunk group or sigpath properties, nor does it have any property value changes.

Release 2.7(3) Patch 2

The Cisco MNM Release 2.7(3) Patch 2 supports Cisco PGW 2200 Softswitch Releases 9.5(2), 9.6(1), and 9.7(3) up to 9.7(3) S9P9.

New MML Components

- h248path

New Trunk Group Properties

- DpnssRORoutingNumberLength
- EnableCCBSpPathReservation
- H248GatewayReserveValue
- InhibitSipFromMapping
- ItpActionRequest
- MapRNMethod
- MapCLIToSipHeader
- MidCallServiceCustID
- OwnRoutingNumber
- RespectSipUriUserParm
- SipIngressRoutingControl
- SipEgressRoutingControl

Modified Result Types

- CPCMOD dw2

New Alarms

- From Cisco PGW 2200 Softswitch
 - EISUP: Tunneled QSIG data received over a tunneling disabled interface
 - Master PGW is Active
 - Slave PGW is Active
- From HSI
 - HSI_PGW_INCOMPATIBEL
 - HSI_NEEDS_UNLOCKING

New Functions in Diagnostic Dialogs

- rtrv-ovld: Retrieve information on overload level and number of messages in a queue
- rtrv-loclabel: Retrieve location label information
- rtrv-h248: Retrieve all of the H.248 context information

Release 2.7(3) Patch 3

The Cisco MNM Release 2.7(3) Patch 3 supports Cisco PGW 2200 Softswitch Release 9.5(2), 9.6(1) and 9.7(3) up to 9.7(3) S13P13.

New MML Components

- ipinmapping

Modified MML Components

- A Q761 variant Q761_97VER_RUSS_C2 was added to ss7path parameter MDO.

New Trunk Group Properties

- Default
- OMinDigits
- OMaxDigits
- OOverlap
- OverlapDigitTime
- TMaxDigits
- TMinDigits
- TOverlap

New Result Types

- REDIRECT

New Measurements

- CALL: SuccRedirected TOT

New Alarms

- From Cisco PGW 2200 Softswitch
 - Number of TCP connections reaches limitation.

Other

- Mozilla browser 1.7 support

Release 2.7(3) Patch 4

The Cisco MNM Release 2.7(3) Patch 4 supports Cisco PGW 2200 Softswitch Release 9.5(2), 9.6(1) and 9.7(3) up to 9.7(3) S20P20.

Modified MML Components

- A new parameter mdo was added to the eisupPath component.
- The EISUP variant EISUP_VER96 was added to eisupPath parameter mdo.

New Trunk Group Properties

- SipDtmfContentType
- ReferRedirectingNOA
- ReferRedirectingInd
- RejectOfferForResourcePending

Others

- The dial plan feature is no longer supported since Cisco MNM Release 2.7(3) patch 4.

Release 2.7(3) Patch 5

The Cisco MNM Release 2.7(3) Patch 5 supports Cisco PGW 2200 Softswitch Release 9.5(2), 9.6(1) and 9.7(3) up to 9.7(3) S25P25.

New Trap Type

- Call Report SNMP trap

New Trunk Group Properties

- IsdnNSF
- MidCallCodecSelect
- UseGtdCalledPartyNumber

Removed Trunk Group Properties

- H248GatewayReserveValue

Others

- BAMS virtual trunk group discovery was added.
- Performance manage of virtual trunk group when BAMS in nailed-mode was added.
- Support for all kinds of Network Interface Cards was added.

Supported Configurations

The following configurations are supported:

- Cisco MNM and Cisco VSPT installed together on a network management server (recommended)
- Cisco MNM installed on a network management server and Cisco VSPT installed on a Cisco PGW 2200 Softswitch host machine
- Cisco MNM installed on a network management server and Cisco VSPT installed on a separate server



Note

Other element managers can be installed on the network management server.



Caution

Cisco MNM is not supported on a Cisco PGW 2200 Softswitch host machine.

Supported Network Elements

Support is provided for the following network elements, which have been tested and verified to work with the Cisco MNM 2.7(3) release:

- Cisco PGW 2200 Softswitch:
 - 9.5(2)
 - 9.6(1)

- 9.7(3)
- Cisco Billing and Measurements Server (BAMS):
 - 3.13
 - 3.20
 - 3.30
- Catalyst 5500 (latest)
- Catalyst 2900XL (latest)
- Cisco ITP-L
 - 2611
 - 2651
 - 2811(12.3(10),12.3(20))
- Catalyst 6509
- HSI adjunct
 - 4.1
 - 4.2
 - 4.3
- Integrated ITP-L (5400 & 5350) Latest

Installation Notes

This section contains information and procedures you can use to remove, upgrade, or install the Cisco MNM software. It also contains information about software patches.

Installation Procedure

Before installing Cisco MNM Release 2.7(3), make sure you read the *Cisco Media Gateway Controller Node Manager Installation Guide, Release 2.7(3)* at

http://www.cisco.com/en/US/docs/net_mgmt/mnm/2.7.3/install/guide/MNM_install_273.html

Cisco MNM consists of server and client software. To set up a Client/Server architecture:

- Install the Cisco EMF and Cisco MNM software on both the client and server workstations. The Cisco MNM installation software determines whether the Client or Manger software should be installed.
- Verify that the minimum hardware requirements pertaining to your site have been met.
- Check to see if the computer is in the Domain Name System (DNS). If it is in the DNS, the computer must have a valid entry in the DNS, and if it is not in the DNS, you must disable **Name Resolution** completely and delete the `/etc/resolv.conf` file.
- Verify that the Cisco EMF software has been installed and is running.



Note The Cisco EMF software *must* be running before the Cisco MNM software can be installed.

Installing the Cisco MNM 2.7(3)

To install the Cisco MNM Release 2.7(3), perform the following steps:

-
- Step 1** Log in as the **root** user.
 - Step 2** Insert the Cisco MNM Release 2.7(3) product CD in the CD-ROM drive.
 - Step 3** Change to the **/cdrom/cdrom0** directory.
 - Step 4** Run the command **./cmnminstall**.
 - Step 5** Follow the on-screen prompts.
 - Step 6** Eject the Cisco MNM Release 2.7(3) product CD after the installation is complete.
-

Uninstalling the Cisco MNM 2.7(3)

To uninstall Cisco MNM Release 2.7(3), perform the following steps:

-
- Step 1** Log in as the **root** user.
 - Step 2** Insert the Cisco MNM Release 2.7(3) product CD in the CD-ROM drive.
 - Step 3** Change to the **/cdrom/cdrom0** directory.
 - Step 4** Run the command **./cmnminstall -r**
 - Step 5** Follow the on-screen prompts.
 - Step 6** Eject the Cisco MNM Release 2.7(3) product CD after the uninstall procedure is complete.
-

Upgrade Procedure

The Cisco MNM upgrade process enables you to upgrade the software from earlier releases easily.

To upgrade the Cisco MNM, perform the following steps:

-
- Step 1** Log in as the **root** user.
 - Step 2** Insert the Cisco MNM Release 2.7(3) product CD in the CD-ROM drive.
 - Step 3** Change to the **/cdrom/cdrom0** directory.
 - Step 4** Run the command **./cmnminstall -upgrade**.
 - Step 5** Follow the on-screen prompts.
 - Step 6** Eject the Cisco MNM Release 2.7(3) product CD after the upgrade is complete.
-

Patch Procedure

The Cisco MNM patch process is cumulative. Downloading and installing the latest patch installs all previous patches. The software automatically determines which portions of the Cisco MNM need to be patched.

Before you install a patch on Cisco MNM Release 2.7(3), the initial release of Cisco MNM Release 2.7(3) must be installed.

To install the patch, use these steps:

-
- Step 1** Verify that the initial release of Cisco MNM Release 2.7(3) is installed.
 - Step 2** Log in as the **root** user.
 - Step 3** Create a temporary installation directory `/opt/cmnm_tmp_install`.
 - Step 4** Download the patches:
 - a. Go to www.cisco.com.
 - b. Log in.
 - c. Navigate to Support > Download Software > Network Management Software.
 - d. Click **Cisco Media Gateway Controller Node Manager**.
The patch download page appears.
 - e. Download the patch to the temporary installation directory.
 - Step 5** Extract the patched software. For example, you can use
`zcat CSC0cmmPatch_0x.tar.Z | tar xvf -`
 - Step 6** Run the command `./cmnminstall`
 - Step 7** Follow the on-screen prompts.
-

Known Issues

This section contains information on known issues and the corresponding workarounds.

Cisco MNM Aborts Installation

During installation, Cisco MNM detects how much disk space is available for installation. If the system does not have enough available space, you are asked whether you want to continue the installation.

Even if you enter **Y** to continue the Cisco MNM installation, the installation aborts. To avoid this problem, ensure that enough free disk space is available before Cisco MNM is installed.

For the amount of disk space required, see the “[System Requirements](#)” section on page 2. For more information, see the *Cisco Media Gateway Controller Node Manager Installation Guide, Release 2.7(3)* at

http://www.cisco.com/en/US/docs/net_mgmt/mnm/2.7.3/install/guide/MNM_install_273.html

Cisco MNM Cannot Discover an Interface or IP Address for BAMS

Sometimes Cisco MNM reports that it cannot discover an interface or IP address for BAMS. This might be caused by the mib2agt state. You can restart mib2agt by stopping the current process. The new process mib2agt is restarted automatically.

To stop the current process, use the following commands:

```
ps -ef | grep mib2agt
kill -9 <PID>
```

Cisco MNM Still Starts Netscape in Some Dialog Boxes

Cisco MNM starts Mozilla in some dialog boxes. But there are still some functions that use Netscape as the web browser. If you take an action other than that one of those listed in [Table 1](#), your system starts Netscape, rather than Mozilla.

Table 1 Cisco MNM Functions Starting Mozilla

Function	Select This View or Object	Command	Description
CiscoView	LAN Switch, ITP-L	Right-click and choose Tools > CiscoView	Starts CiscoView application
Web Browser	ITP-L	Right-click and choose Tools > Web Browser	Opens a Mozilla web browser, pointing to the internal web server on Cisco ITP-Ls
Cisco MNM User Manual	—	Click CMNM Manuals button on the CEMF launch pad	Opens a Mozilla web browser, pointing to the Cisco MNM user manual at Cisco website.

If you want to use Mozilla instead of Netscape, open Mozilla manually first. Then you can copy the web page address in the opened Netscape to the Mozilla address bar and press **Enter**.

Cisco MNM Shows the Incorrect Time Information in Object Properties

Sometimes the time information in object properties is incorrect. This issue occurs when the time measurement of that device exceeds 248 days. [Table 2](#) describes the time information that might be wrong on Cisco MNM. The workaround for this issue is to restart the device which has the incorrect time information shown in the Cisco MNM.

Table 2 *Time Information Improperly Displayed in Object Properties*

Incorrect Time Information	Objects Affected	Location of the Incorrect Time Information
Up-time	<ul style="list-style-type: none"> • Cisco MGC • Cisco BAMS • Cisco HSI • LAN switches • Cisco ITP-L 	Right-click the object and choose Tools > Properties (leads you to the General Tab)
Event Time	<ul style="list-style-type: none"> • Cisco ITP-L • Cisco Catalyst 2900XL LAN Switch 	Right-click the object and choose Tools > Properties (leads you to the Configuration Tab)
Running Last Changed	<ul style="list-style-type: none"> • Cisco ITP-L • Cisco Catalyst 2900XL LAN Switch 	Right-click the object and choose Tools > Properties (leads you to the Configuration Tab)
Running Last Saved	<ul style="list-style-type: none"> • Cisco ITP-L • Cisco Catalyst 2900XL LAN Switch 	Right-click the object and choose Tools > Properties (leads you to the Configuration Tab)
Startup Last Changed	<ul style="list-style-type: none"> • Cisco ITP-L • Cisco Catalyst 2900XL LAN Switch 	Right-click the object and choose Tools > Properties (leads you to the Configuration Tab)
Last Config Change	<ul style="list-style-type: none"> • Cisco Catalyst 5500 LAN Switch • Cisco Catalyst 6509 LAN Switch 	Right-click the object and choose Tools > Properties (leads you to the Network Tab)
Last Change	<ul style="list-style-type: none"> • Ethernet, serial, and generic interfaces on the Cisco PGW 2200 Softswitch host, Cisco ITP-L, Cisco BAMS, Cisco Catalyst 5500 or 6509 LAN Switch, and HSI • Ports on Cisco Catalyst 2900XL and Catalyst 5500 LAN Switch • TDM interfaces on Cisco ITP-L 	Right-click the object and choose Tools > Properties (leads you to the Details Tab)

Resolved Problems

Release 2.7(3)

Table 3 describes resolved problems in Cisco MNM Release 2.7(3).

Table 3 *Resolved Problems in Cisco MNM Release 2.7(3)*

Identifier	Severity	Summary
CSCsc18527	3	Subunit field needs to be added to DPNSS Path property dialogs.
CSCse68976	3	A-number country code digit remove property needs to be added.
CSCsf09110	3	The parameters ipprecedence and dscp need to be deleted from assoc.
CSCsc18604	4	Remove all VSC references in MNM dialogs.
CSCsc18647	4	Second peer address field is missing from the AXLserver properties.
CSCsc89043	4	SUBUNIT field is missing from the dpnsspath property.
CSCse22228	4	Generic trap—linkdown/up on BAMS is improper.
CSCse58435	4	UserName fields are not getting updated in CTImanager/AXL properties.
CSCse59724	4	The sessionSet field is not getting updated in D channel properties.
CSCse14264	5	The tooltips in Trunk Group Properties need to be modified.
CSCsc18496	6	MNM support for PGW Non-RAS Feature.
CSCsc69714	6	Add new dialplan result type FACILITY.
CSCsc71313	6	Gateway MSC—New result type MAP needs to be added.
CSCse68630	6	New result types BCMOD and HLCMOD need to be added to dialplan properties.
CSCse68928	6	Support for new trunk group property H323Destination.
CSCse68989	6	Support for field priority for M3UA Priority Route.
CSCsf09021	6	Need to support new result type: DTMFCAP.
CSCsf09093	6	New trunk group property AdigitCCrm needs to be added.
CSCsf09118	6	Need to remove support for dialplan component digitToPresent.
CSCsf09124	6	Add the five trunk group properties.
CSCsf23701	6	Support for DPNSS Service Interworking with Cisco CallManager Over QSIG Tunneling.
CSCsf23742	6	Support for FlexLM.
CSCsf23769	6	Alarms for Radius server.
CSCsg37437	6	FlexLM—Node Locking—HSI.
CSCsg37440	6	FlexLM—Node Locking—BAMS.
CSCsg53477	6	New result type DB_XLATED needs to be added to dialplan properties.
CSCsh65927	6	INAP initiated Consultative Transfer support.
CSCsh65935	6	LI based on trunk group.

Table 3 *Resolved Problems in Cisco MNM Release 2.7(3) (continued)*

Identifier	Severity	Summary
CSCsh65941	6	Enhanced LNP and Dialplan Selection: B2BUA upgrade checkpointing issue.
CSCsh65944	6	Support of Trunk Group Id at the x-route-tag / tsp parameter.

Release 2.7(3) Patch 1

Table 4 describes resolved problems in Cisco MNM Release 2.7(3) Patch 1.

Table 4 *Resolved Problems in Cisco MNM Release 2.7(3) Patch 1*

Identifier	Severity	Summary
CSCsj60109	2	HostController core dump.
CSCsj36123	3	Fail to retrieve license info in BAMS diagnostic.
CSCsj41466	3	MNM interprets the trunk group name in BAMS ACC file wrong.
CSCsj43506	3	SSH does not work for CMNM 273 on Solaris 10.
CSCsj45232	3	The new measurements added in BAMS3.30 can't be shown correctly in CMNM.
CSCsj66086	3	Retrieve HSI information failed by ssh and none ssh.
CSCsj75789	3	Old Measurement—TTL Traffic Usage Pegs for BAMS is missing.
CSCsj83970	3	Failed to retrieve dtm pcap value in trnkgrp property.

Release 2.7(3) Patch 2

Table 5 describes resolved problems in Cisco MNM Release 2.7(3) Patch 2.

Table 5 *Resolved Problems in Cisco MNM Release 2.7(3) Patch 2*

Identifier	Severity	Summary
CSCsj77841	3	SipCallHoldMethod is wrongly added to SIP tab for trunk group property.
CSCsj95208	3	CMNM failed to deploy HSI-Host-1.
CSCsk70079	3	CMNM ComUtils.pm fails to return the correct XDisplay session.
CSCsk84008	3	New Result type RMODDIG and R_NUMBER_TYPE.
CSCsk84190	3	CMNM mgcController core dumped while re-parent objects.
CSCs112874	3	Remove all offline help for CMNM.
CSCsj77774	6	New InhibitSipFromMapping value.
CSCsj77781	6	Current trunk group property MapRNtoSipHeader is changed to MapRNMethod.
CSCsj77796	6	New trunk group property added: ItpActionRequest. and new alarm.
CSCsj77802	6	H.248 support.

Table 5 Resolved Problems in Cisco MNM Release 2.7(3) Patch 2 (continued)

Identifier	Severity	Summary
CSCsj77806	6	Dataword2 is valid now.
CSCsk67388	6	New respectSipUriUserParm trunk group property.

Release 2.7(3) Patch 3

Table 6 describes the resolved problems in Cisco MNM Release 2.7(3) Patch 3.

Table 6 Resolved Problems in Cisco MNM Release 2.7(3) Patch 3

Identifier	Severity	Summary
CSCsl02030	3	Trunk group property DisableQSIGReleaseMethod missing.
CSCsl02042	3	Trunk group properties wrongly displayed.
CSCsl20227	3	All the measurement data which unit is percent can't be collected by CMNM.
CSCsm80214	3	Remove obsolete properties from EISUP path tab.
CSCsj32300	6	CMNM cannot show CiscoView6.1(6) server page properly.
CSCsk82293	6	New Result type REDIRECT and Measurement CALL: SuccRedirected.
CSCsl92938	6	Allow configuring overlapped signaling per trunk group basis.
CSCsl92940	6	Support for Multiple Incoming IP Trunks.
CSCsl92996	6	Remove link to CMM from Host Views.
CSCsm25019	6	New MDO Q761_97VER_RUSS_C2.

Release 2.7(3) Patch 4

Table 7 describes the resolved problems in Cisco MNM Release 2.7(3) Patch 4.

Table 7 Resolved Problems in Cisco MNM Release 2.7(3) Patch 4

Identifier	Severity	Summary
CSCso62029	3	EISUP path measurement was not right.
CSCsu60440	3	JumpSSH script cannot support uppercase or special characters used by CEMF/CMNM.
CSCsw39263	3	Dialog box for Trunkgrp Properties was too big for 1024x768 screen.
CSCsr59785	6	Support for manually changing parameters in redirecting number parm in RE.
CSCsr59787	6	Support for SIP/NI Calling Name to Q931+ Display I.E.
CSCsr59794	6	Cisco PGW 2200 Softswitch cannot trigger iTNT after incorrect number is dialed on agent.
CSCsu44522	6	Support for BTNUP message trigger Engine "kill ghost call".
CSCsu73529	6	Support for Calls released: when DPNSS call diverting from Cisco PGW 2200 Softswitch Release 9.7 to 9.6.

Table 7 Resolved Problems in Cisco MNM Release 2.7(3) Patch 4 (continued)

Identifier	Severity	Summary
CSCsu99151	6	Support for Dynamite Enhancement: Support NCT after NCT completion.
CSCsv90632	6	Support for PGW - SIP - DPNSS - Causing 491.

Release 2.7(3) Patch 5

Table 8 describes the resolved problems in Cisco MNM Release 2.7(3) Patch 5.

Table 8 Resolved Problems in Cisco MNM Release 2.7(3) Patch 5

Identifier	Severity	Summary
CSCsy71033	3	Performance Manager query for BH and BP Measurements displays no results.
CSCsz69877	3	CMNM will collect history data when switchover happens and stoppolltime is empty.
CSCsz96697	3	Extra menu option was added on the BAMS Trunkgroup properties window.
CSCta00614	3	Call Severity mismatch between PGW and CMNM for call report alarm.
CSCta02796	3	BAM:IGR CALL ANS is missing in performance monitored attributes.
CSCsz96634	4	Help tip for nailed BAMS trunkgroup properties is not clear.
CSCta00689	4	Change SIPP Asserted to SIP P-Asserted in Event Description.
CSCta05774	4	BAMS patch level is incorrect.
CSCsv66730	6	No NSF found in SETUP for ATT41495_C2 variant.
CSCsx51985	6	Rework on the H248GatewayReserveValue for H.248 DO codec negotiation.
CSCsy76149	6	CMNM supports SNMP for 999 service.
CSCsy76155	6	PGW CODEC Preference handling for Reinvites / MDCX.
CSCsy81372	6	CMNM supports all kinds of NICs.
CSCsz13788	6	CMNM supports nailed mode PGW/BAMS connection.
CSCsz30792	6	Override the called number with the CPN in the MIME of the INVITE.

Tips

This section gives you tips for configuring and installing Cisco MNM.

Initial Cisco MNM Configuration

Cisco MNM is initially configured with one user.

To configure the ID and password for one user, enter the following:

```
id: admin
password: admin
```

Installing Cisco EMF/MNM on a Server

If you have installed Cisco EMF/MNM on a server and need to change the IP address/hostname, you must make the changes shown in the following procedure.


Note

Set the environment variable CEMF_ROOT to the value of the directory that the CEMF installed, and then change the CEMF directory to \$CEMF_ROOT.

The following example uses the hostname Cisco MNM and the IP address 10.1.1.1:

Step 1 Change the directory using the following command:

```
cd $CEMF_ROOT/bin
```

Step 2 Use the following command to stop the Cisco EMF:

```
./cemf stop
```

Step 3 Edit /var/adm/Atlantech/system/info to reflect the following hostname and ip address:

```
MGRHOSTNAME=rambler
MGRIPADDRESS=10.1.1.1
COREHOSTNAME=rambler
```

Step 4 Edit \$CEMF_ROOT/config/env/avCore.sh to reflect the hostname in the lines below and save the file.

```
MgrSystemManager=rambler1270; export MgrSystemManager
PortAllocator=rambler1270; export PortAllocator
transRouter=rambler1271; export transRouter;
```

Step 5 Edit /var/sadm/pkg/CSCOcemfm/pkginfo to reflect the following values:

```
MGRIPADDRESS=10.1.1.1
MGRHOSTNAME=10.1.1.1
COREHOSTNAME=10.1.1.1
LOCALHOSTNAME=10.1.1.1
```

Step 6 Make the same changes for each Element Manager by editing the following files:

```
/var/sadm/pkg/hostEM/pkginfo
/var/sadm/pkg/mgcEM/pkginfo
```

Step 7 Rename CEMFDirectory/ODI/OS5.1/ostore/hostname_server_parameter to reflect the new hostname. You must obtain a new CEMF license. See the [“Cisco EMF Licensing” section on page 19](#).

Step 8 Enter the following command to start the Cisco EMF:

```
$CEMF_ROOT/bin/cemf start
```

Configuring the Cisco EMF Software for Maximum Performance

The following are tips for configuring Cisco EMF:

- Use the primary drive for the Solaris operating system and the ObjectStore transaction log.

- The second drive must contain the Cisco EMF software (`/opt/cemf`).
- Configure the ObjectStore database for Raw File Systems. The remaining hard drives must contain the RAW File System partitions for the Cisco EMF database (preferably on a separate SCSI controller).

Mount the tmpfs file system to `/tmp` so that the ObjectStore cache files can be kept in memory. ObjectStore is the database program included with Cisco EMF. Keeping the cache files in memory increases the performance.

This is how the tmpfs line should read in the `/etc/vfstab` file. (The blanks between the keywords are spaces):

```
swap - /tmp tmpfs - yes -
```

Troubleshooting

This section describes troubleshooting procedures for Cisco MNM.

Viewing Core Files Generated by Cisco EMF and Cisco MNM

Use the `/opt/cemf/bin/listCores` command to view all core files generated by Cisco EMF and Cisco MNM.

Cisco EMF Licensing

If you come with an error with Cisco EMF licensing when starting the Cisco EMF, stop and restart the license manager daemon by running the following commands:

```
/etc/rc2.d/S98avlm stop
/etc/rc2.d/S98avlm start
```

If the problem is not resolved, please check that a valid license has already been uploaded into `/opt/cemf/config/licenses`, and use the following procedure:

Step 1 Add the following two lines in `/opt/cemf/flexlm/avlm`:

```
ulimit -n 1024
ulimit -H -n 1024
```

Step 2 Enter the following command to stop the `lmgrd`:

```
/opt/cemf/flexlm/lmdown
```

Step 3 Enter the following command to start the Cisco EMF again:

```
/opt/cemf/bin/cemf start
```

The Cisco EMF licenses are fixed for a particular machine. You cannot copy the license file from one machine to another. If you want to install the Cisco EMF software on another machine, you must contact Cisco TAC and ask for a new license. You are required to provide Cisco TAC with the hostname and hostid of the new machine.

Viewing the Most Recently Changed Log File

Cisco MNM log files are stored in \$CEMF_ROOT/logs. You can view the most recently changed log file with the `ls -lt` command.

Cisco MNM Log Files

If the CMNM is not working well or you have some problems with the CMNM, you could check the log file for detail information or collect the log file to the customer support engineer. The following are examples of Cisco MNM log files:

- `hostController.log` (Cisco PGW 2200 Softswitch Host)
- `mgcController.log` (Cisco PGW 2200 Softswitch Node)
- `trapLog.log` (Incoming traps are logged here to separate them from Cisco EMF log messages that are collected in `mgcTrapProcessor.log`.)

Error Messages You Can Ignore

Most of the entries in the Cisco MNM log files are created by the Cisco EMF platform and are of limited value.

You can ignore the following error messages:

- SNMP and MIB parsing errors that appear when an EM controller starts:
 - `SNMP: ERROR mib.cc:1283 Mib Object is already on the tree for.`
 - `SNMP: ERROR mibDependencyMgr.cc:191 mibDependencyMgr.cc:196 Mib. not defined.`
 - `SNMP: ERROR mibParser.y:359 EXPORTS are currently ignored (;, line 8).`
 - `SNMP: WARN mibParser.y:1154 Name and number form OIDs are not properly implemented.`
- Database warning that appears when an EM controller is first installed:
 - `general: WARN Creating Database /opt/AV3/db/mgcController.db.`
- General error messages that appear when the EM controller starts:
 - `General: ERROR Unable to get event channel ID for channel.`
 - `General: ERROR EventChannelManager: Failed to find location for event channel.`
 - `General: WARN OGManager::OGManager—Unable to get deleteEventChannel from .ini file.`
 - `General: ERROR OGManager::processGroupClass—invalid class id.`
 - `General: ERROR EventChannelManager: Failed to find location for event channel ERROR OGManager::processGroupClass—invalid class id.`
 - `General: ERROR OGChangeEventHandler::process—could not find drep!`
 - `General: ERROR IdAllocatorOS: Deprecated constructor called.`
 - `Task: WARN PerfPollTask::createGroupsResult: group already exists.`
 - `mgcController: WARN Controller::initialiseController Controller is configured NOT to auto populate tech tree on autodiscover.`
- Other miscellaneous errors:

- General: WARN CommsBuffer::serialize - resizing buffer size.
- General: ERROR PersistentAttributeStore::PersistentAttributeStore() nameInit = xxx. is longer than 16 characters. All Objectstore segment comments will be truncated to use the first 16 characters.

Resetting the User Password

If you forget your password you can reset it. The following command removes all the passwords and resets the password for the administrator user ID:

```
$CEMF_ROOT/bin/cemf shell
$CEMF_ROOT/bin/partitioningTool -r
```

Backing Up and Restoring the Cisco EMF/MNM Databases

To back up the Cisco EMF/MNM databases, you can use the following commands. By default the backup files are placed in /opt/AVBackup:

```
/opt/CSCOcemf/bin/cemf stop
/opt/CSCOcemf/bin/cemf backup
/opt/CSCOcemf/bin/cemf start
```

To restore a Cisco EMF/MNM database, you can use the following commands:

```
/opt/CSCOcemf/bin/cemf stop
/opt/CSCOcemf/bin/cemf restore -t mm-dd-yyyy
/opt/CSCOcemf/bin/cemf start
```

For more information on backing up and restoring Cisco EMF/MNM databases, refer to the “Cisco EMF Database Backup and Restore” section of the *Cisco Element Management System Installation and Configuration Guide, 3.2 Service Pack 7* at

http://www.cisco.com/en/US/docs/net_mgmt/element_manager_system/3.2_service_pack_7/installation/guide/backup.html

Forcing an Uninstallation of an Element Manager

The Cisco EMF daemons must be running for the Element Managers (EMs) to uninstall. If you have trouble uninstalling an Element Manager, there are two ways to force an uninstallation of an EM (each causes a loss of all Cisco EMF/MNM data). Before running either of these commands, you should back up your databases.

1. The first method invokes the uninstallCSCOcmmn script with an undocumented option to force the removal of all or one EM. From a command line, as root, enter the command:

```
/opt/CSCOcemf/uninstall/uninstallCSCOcmmn -force [-em <EM>]
```

To specify the removal of one EM or all EMs, omit the parameter. The list of EMs includes hostEM, mgcEM, and mgxEM.

Example:

```
/opt/CSCOcemf/uninstall/uninstallCSCOcmmn -force -em mgxEM -em mgcEM
```

After you run this command, the Cisco EMF databases are corrupted. To correct this problem, reset the Cisco EMF databases by running the following commands. You must do this before using Cisco EMF again, even if you are using Cisco EMF to reinstall Cisco MNM:

```
/opt/CSCOcemf/bin/cemf stop
/opt/CSCOcemf/bin/cemf reset
/opt/CSCOcemf/bin/cemf start
```

After you have successfully reset the database and restarted Cisco EMF, you must reinstall Cisco MNM. If you want to restore a Cisco EMF/MNM database after you have reinstalled Cisco MNM, see the [“Backing Up and Restoring the Cisco EMF/MNM Databases”](#) section on page 21.

2. If you receive a failure message that the first method does not remove the EMs, use this method. When the EMs are installed, Solaris package information is placed in subdirectories of `/var/sadm/pkg`.

The subdirectory name is the name of the package, as specified above (hostEMm, mgcEMm, and so forth). As the root user, enter the following for each EM that you want to remove:

```
/opt/CSCOcemf/bin/cemf stop
touch /var/sadm/pkg/<EM>/install/.avload
pkgrm <EM>
/opt/CSCOcemf/bin/cemf reset
/opt/CSCOcemf/bin/cemf start
```

In the following example, mgcEMm is uninstalled:

```
/opt/CSCOcemf/bin/cemf stop
touch /var/sadm/pkg/mgcEMm/install/.avload
pkgrm mgcEMm
/opt/CSCOcemf/bin/cemf reset
/opt/CSCOcemf/bin/cemf start
```

To restore a Cisco EMF/MNM database after you have reinstalled Cisco MNM, see the [“Backing Up and Restoring the Cisco EMF/MNM Databases”](#) section on page 21.

Managing Network Devices Over a Slow Link

If you are managing network devices over a slow link (T1 or slower), you might need to alter the values of SNMP parameters used by Cisco MNM for SNMP Get requests.

You can change the values of these parameters for any existing object by accessing the States dialog. You can also change the values of these parameters in the Advanced tab of the Seed File Deployment dialog.

- The default number of SNMP retries is 2. You might need to increase this value when the Cisco MNM workstation is connected to network devices over a slow link.
- The default SNMP timeout value is 5000 milliseconds (5 seconds). You might need to increase this value when the Cisco MNM workstation is connected to network devices over a slow link.

Maximizing the Output of Log Files

By default, Cisco MNM logs only warning and error messages. If you want to turn on debug messages in all log files, complete the following steps as the root user.

**Note**

Set the environment variable CEMF_ROOT to the value of the directory that the CEMF installed, and then change the CEMF directory to \$CEMF_ROOT.

Step 1 Enter the following commands to stop the Cisco EMF:

```
cd $CEMF_ROOT/bin
./cemf stop
```

Step 2 Change the directory using the following command:

```
cd $CEMF_ROOT/config/init
```

Step 3 Edit loggercommon.include and add or change the following line:

```
loggingLevelMask = 12
```

Step 4 Enter the following commands to start the Cisco EMF:

```
cd $CEMF_ROOT/bin
./cemf start
```

Step 5 Add or change the following line to set the logging level back to warning:

```
loggingLevelMask = 10
```

Setting VNC Parameters

If you are using VNC on Solaris 10 to access Cisco MNM, see the following URL for instructions on installing and configuring the VNC on the Solaris 10 platform from the Sun Microsystems website:

http://www.sun.com/bigadmin/jsp/descFile.jsp?url=descAll/install_and_configu

Set the parameter “depth” to 24 and the parameter “geometry” to 1024x768. The following example shows parameter settings. You can use this line to replace the corresponding line when you are editing /etc/dt/config/Xservers in the configuration procedure described in the above URL.

```
:1 Local local_uid@console root /opt/sfw/bin/Xvnc :1 -httpd /opt/sfw/vnc/classes -depth 24
-geometry 1024x768 -r fbwait 120000 -rfbauth /opt/sfw/vnc/.vnc/passwd -rfbport 5901
-httpport 5801 -fp tcp/localhost:7100 -alwaysshared -co /usr/openwin/lib/X11/rgb
-fp /usr/openwin/lib/X11/fonts/misc/, /usr/openwin/lib/X11/fonts/75dpi/
```

Product Documentation

The documents that contain information related to the Cisco MNM Release 2.7(3) are at the following URL

http://www.cisco.com/en/US/products/sw/netmgtsw/ps1912/tsd_products_support_series_home.html

Related Documentation

The documents that contain information related to the Cisco PGW 2200 Softswitch are at the following URL

http://www.cisco.com/en/US/products/hw/vcallcon/ps2027/tsd_products_support_series_home.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation at

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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