Release Notes for Cisco Media Gateway Manager, Release 3.0.1

Contents

This document is divided into the following sections:

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Introduction

Cisco Media Gateway Manager (MGM) is a component of the network management strategy for the MGX 8000 series Carrier Voice Gateway (CVG) products. This strategy has five major aspects:

- Provides a common, carrier class element management (EM) system for MGX 8000 series CVG networks in VoIP applications that have an IP core transport.
- Provides a common, carrier class network management system to support an integrated EM layer and network concept across Cisco and third party voice network elements via interfaces to EMSs.
- Supports integration with upstream NML/OSS applications via a common CORBA IDL interface.
- Where possible, provides EMS integration with partner and Cisco call agent EMSs.
- Provides open standards-based interfaces across element and network management systems.

These release notes describe new features and caveats in system software release 3.0.1 for the Cisco MGM. Use these release notes in conjunction with the documentation listed in the "Related Documentation" section on page 14.

System Requirements

Cisco MGM and MGX 8000 Series hardware and software requirements are listed in the following sections.

Cisco MGM Hardware Requirements

The hardware resources you need for Cisco MGM depends on the number of Cisco MGX 8000 Series CVGs and associated MGCs that Cisco MGM will manage. Additional client or presentation servers may be added as necessary to maintain good operator response time in large networks with heavy alarm traffic. Presentation and management servers may run co–resident for medium networks when faster processors are used or operator loads are light. Adding presentation servers increases the number of supported operators.

Although Cisco MGX 8000 Series CVG components are managed by Cisco MGM, the number of VISMs in the network help determine the workstation sizing appropriate to the installation. A small network, for example, might consist of 240 VISMs; a medium is defined as up to 1200 VISMs; and a large network includes more than 1200 VISMs.

General hardware recommendations include:

- Sun MicroSystems™ UltraSPARC II or III workstations

  Sun MicroSystems™ UltraSPARC II and III servers and desktops are recommended for use with the Cisco MGM EMS, but not required. Alternate platforms that have been tested include: Sun MicroSystems™ Ultra 60, 220r, 420r, 280r, and Netra 20, t1400.

- Solaris 8 operating system

  Note System testing conducted using Solaris 8 patch 108528–17.

- 19–inch color monitor

  The use of 1280 x 1020 resolution of the monitor is recommended for Xwindows–Motif display.

- 24–bit graphics card

Additional miscellaneous resources may include:

- Local or remote CD–ROM drive
- Digital archive tape (DAT) drive

  DAT drive is only applicable to stand–alone or server workstations for archiving system backups.

The following table lists the server and client recommendations for small, medium, and large Cisco MGM installations.

Table 1 Cisco MGM Platform Recommendations

Network Size	Small Network[1]	Medium Network[2]		Large Network[3]	
	One machine	Client	Management Server	Client or Presentation Server	Management Server
Memory	2 GB RAM	1 GB RAM	2 GB RAM	2 GB RAM	4 GB RAM
Disk space (9 GB or larger)	2 hard disks	1 hard disk	4 hard disks	1 hard disk	4–6 hard disks
Processor	2 x 440 MHz	1 x 650 MHz	2 x 1.05 GHz	2 x 1.05 GHz	2 x 1.05 GHz
Swap space[4]	4 GB	2 GB	4 GB	2 GB	8 GB
Power supply[5]	1	1	1 or 2	1	1 or 2

1. One to three operators; 240 VISMs
2. Four to six operators; up to 1200 VISMs
3. Seven to ten or more operators; more than 1200 VISMs
4. If CiscoView is running on the same system as Cisco MGM, an additional 1 GB swap space is required
5. Second power supply, where noted, is optional for high availability installations

Cisco MGM Supported Hardware

Cisco MGM manages Cisco MGX 8000 Series CVGs based on the Cisco processor switch modules (PXM1, PXM1-E, and PXM45). In addition, Cisco MGM provides management of VISM, VISM-PR, RPM-PR, RPM-XF, SRM, SRM-E, AXSM, and AXSM-E cards. The following table lists the processor switch and services modules supported by chassis.

Table 2 Cisco MGM Supported Hardware

	Chassis			
Modules	MGX 8230	MGX 8250	MGX 8830	MGX 8850
PXM1	Yes	Yes	N/A	Yes
PXM1-E	N/A	N/A	Yes	Yes
PXM45	N/A	N/A	N/A	Yes
VISM	Yes	Yes	N/A	Yes
VISM-PR	Yes	Yes	Yes	Yes
RPM-PR	Yes	Yes	Yes	Yes
RPM-XF	N/A	N/A	N/A	Yes
SRM/SRM-E	Yes	Yes	Yes	Yes
AXSM/AXSM-E	N/A	N/A	N/A	Yes

In the preceding table, “yes” indicates that the module listed in the left–hand column is supported by the chassis type displayed at the top of the column. An entry of “N/A” indicates that the module listed in the left–hand column is not supported by the chassis type displayed at the top of the column.

For information on card–to–card compatibility, see the appropriate Cisco MGX software release notes.

Cisco MGM Software Requirements

This version of Cisco MGM requires the following software components:

- Cisco EMF Release 3.2 Service Pack 4, patch 6 or greater
- CiscoView 5.4
- WANCV package release 4.11 (included with Cisco MGM package)

Note To ensure optimal system performance and the inclusion of critical security updates, it is recommended that you install the latest Solaris patches available. Cisco MGM has been tested against Solaris 8 patch 108528-17.

Cisco MGX 8000 Series Software Requirements

The Cisco processor switch and service modules require the installation of specific firmware releases in order to function properly in Cisco MGX 8000 series chassis running Cisco MGM. Depending on the Cisco processor switch module present in the chassis, different service modules may be supported. For each processor module and service module within a particular chassis, the firmware release may vary.

The following table lists Cisco MGM and Cisco MGX 8000 Series CVG compatibility, including the supported firmware release. Other firmware versions may be used; however, some functionality may not be compatible with other firmware releases.

Table 3 Cisco MGM and Cisco MGX 8000 Series CVG Compliance Matrix

	Module		
Chassis	**Processor Module**	**Service Module**	**Supported Firmware Release[1]**
MGX 8230	PXM1	N/A	MGX 1.2.10
MGX 8250		VISM/VISM-PR	VISM 3.1
MGX 8850		RPM-PR	RPM 1.2.13
		SRM/SRM-E	N/A
MGX 8830	PXM1-E	N/A	MGX 3.0.20
MGX 8850		VISM-PR	VISM 3.1
		RPM-PR	RPM 1.2.13
		SRM/SRM-E	N/A
MGX 8850	PXM45	N/A	MGX 3.0.20
		VISM-PR	VISM 3.1
		RPM-PR/RPM-XF	RPM 1.2.13
		SRM/SRM-E	N/A
		AXSM/AXSM-E	AXSM 3.0.20

1. For other Cisco MGX firmware versions, see the corresponding Cisco MGX software release notes to determine the appropriate firmware version supported for the specific service module(s).

Media Gateway Controller Software Requirements

Cisco EMF and Cisco MGM provide integrated connection to the management interfaces of the following Media Gateway Controllers (MGCs):

- Cisco BTS 10200 Softswitch
- Tekelec VX*i* Media Gateway Controller (MGC)
- NexVerse ipVerse ControlSwitch

The following table shows the software requirements for each supported MGC.

Table 4 Media Gateway Controller Software Requirements

Cisco BTS 10200	Release 3.3
Tekelec Vxi	Release 4.0
NexVerse ipVerse	Release 5.1

New Features

In addition to all of the features supported by previous releases of Cisco MGM, Cisco MGM 3.0.1 enhances clear correlation rules and provides alarm severity customization capabilities. The following features have been added or enhanced in Cisco MGM 3.0.1:

- Cisco Voice CORBA Gateway
- Clear Correlation Rules
- Alarm Severity Modification

Cisco Voice CORBA Gateway

The Cisco MGM 3.0.1 package includes the Cisco Voice CORBA Gateway (Cisco VCG) application. Cisco VCG installs independently from Cisco MGM, but the necessary scripts and documentation are available in the Cisco MGM 3.0.1 package.

Note *For information on the features Cisco VCG provides, refer to the Cisco Voice CORBA Gateway Developer Reference Guide, Software Release 2.0.*

Clear Correlation Rules

Cisco MGM 3.0.1 includes additional clear correlation rules. Clear correlation rules automatically clear traps listed in the Event Browser when the specified criteria is met. Files describing clear correlation rules for each supported packages are available in the following directory:

CEMF_ROOT/config/dataload/clearCorrelationRules/

For a complete listing of the traps and associated clear correlation rules Cisco MGM 3.0.1 supports, see the following file:

CEMF_ROOT/config/dataload/clearCorrelationRules/cmgmvClearCorrelations

For a complete listing of the traps and associated clear correlation rules Cisco BTS supports, see the following file:

CEMF_ROOT/config/dataload/clearCorrelationRules/btsClearCorrelations

Note Replace *CEMF_ROOT* in the previous statements with the name of the directory where Cisco EMF is installed.

Alarm Severity Modification

Cisco MGM 3.0.1 provides the capability to adjust the trap severity level shown within the Event Browser application as required. Trap severity mapping is controlled by the trap mapping file that installs with the EM. In order to modify default alarm severities, the trap mapping file must be modified manually. The Cisco MGM trap mapping file is located in the following directory:

CEMF_ROOT/config/cmgmvCtlr/trapMappingFiles/cmgmvTrapMappingFile

(Replace *CEMF_ROOT* with the name of the directory where Cisco EMF is installed.)

Modification of the Cisco MGM trap mapping file is possible through the editor of your choice. Specifically, the MGX 8000 trap severity value(s) are modifiable as required. Possible severity values are 1 through 8, as the following table defines.

Table 5 Trap Severity Mapping

Cisco EMF Alarm Severity	Associated Event Color	MGX 8000 Trap Severity Value
Minor	Yellow	minor (1)
Major	Orange	major (2)
Critical	Red	critical (4)
Warning	Cyan	error (5) warning (6) notice (7)
Informational	White	info (8) dont-Care (3)

Note *For further information in regards to alarm severity mapping, refer to the Cisco Element Management Framework Installation and Administration Guide.*

In order to utilize the trap severity mapping revisions, the Cisco MGM controller must be restarted after updating the Cisco MGM trap mapping file.

Stop and restart the Cisco MGM controller by performing the following:

Step 1 Open a cemf shell by entering the following at a command prompt:

```
cemf shell
```

Step 2 Kill the Cisco MGM controller by entering the following at a command prompt:

```
CEMF_ROOT/sysmgrClient -k cmgmvCtlr
```

(Replace *CEMF_ROOT* with the name of the directory where Cisco EMF is installed.)

Note To verify the termination of the Cisco MGM controller, enter **cemf status** at the command prompt and review the corresponding Run Status.

Step 3 Execute the Cisco MGM controller by entering the following at a command prompt:

```
CEMF_ROOT/sysmgrClient -x cmgmvCtlr
```

(Replace *CEMF_ROOT* with the name of the directory where Cisco EMF is installed.)

Note To verify the execution of the Cisco MGM controller, enter **cemf status** at the command prompt and review the corresponding run status.

After restarting the Cisco MGM controller, the revised alarm severity definitions in the trap mapping file are utilized within the EM.

Limitations and Restrictions

- Cisco MGM supports only Solaris 8.
- Cisco MGM GUI does not support the Open Windows environment.
- The CiscoView 5.4 server can run on a local or remote machine. If it is running on a remote machine, you must manually run the CiscoView security integration script and WanCV installation by executing the following commands from the Cisco MGM on the remote machine:

  ```
  /cmgm3.0.1pkg/ciscoview/cvsecurity/cvsecurityinstall
  /cmgm3.0.1pkg/ciscoview/wancv/wancvinstall
  ```

- Cisco MGX 8000 Series CVGs do not send traps to Cisco MGM when you enter **clrallcnf** commands. The **clrallcnf** command erases the gateway configuration in Cisco MGM, but this does not show in the Map Viewer because no trap is sent. You must perform a manual chassis synchronization from Cisco MGM to reset the gateway configuration in the Map Viewer.
- The system reset CLI command may cause the chassis to be out-of-reach from the network, which leads to loss of traps from the device to the Cisco MGM management server. Redundant card failover may not report all the necessary information in the alarm for Cisco MGM to recovery its configuration on the Map Viewer. If the operator executes a **resetsys** command on a chassis or if Cisco MGM receives traps indicating card failover, the Cisco MGM operator should perform a manual sub-chassis synchronization. The 24-hour periodic resync task will eventually pick up the correct inventory for all the chassis managed by Cisco MGM as well.
- Cisco MGM coresidency, as described in the *Cisco Media Gateway Manager User Guide*, has not been verified at this time.

Installation Notes

- Installing the latest Solaris patches available ensures optimal system performance and the inclusions of critical security updates.
- In order to support databases of 2 GB or larger, the Cisco EMF application ObjectStore must be configured for RAW File System (RAWFS) partitions. Cisco EMF software is installed with standard UNIX File System partitions. Detailed information regarding the configuration of the Cisco EMF ObjectStore is available in the *Cisco Element Management Framework Installation and Administration Guide*, Chapter 5, “ObjectStore Installation Options”.
- If the Cisco MGM server does not have DNS or NIS service, add the following line to the server /etc/hosts file to access the Cisco MGM user guide:

  ```
  198.133.219.25    www.cisco.com   www.cisco.com
  ```

- Before uninstalling the Cisco MGM server or client, backup your Cisco EMF database according to the procedures described in the *Cisco Element Management Framework Installation and Administration Guide*, Chapter 10, “Cisco EMF Database Backup and Restore”.
- Uninstalling Cisco MGM does not uninstall WanCV and other CiscoView integration files that were previously installed. The following directory and files remain in your CiscoView installation:

  ```
  <CiscoView Root>/www/classpath/ems
  <CiscoView Root>/www/classpath/cvpars.properties
  <CiscoView Root>/www/classpath/com/cisco/nm/cvw/devpkgs/MGX8*.zip
  <CiscoView Root>/htdocs/CmgmSessionTimeOut.html
  ```

For detailed Cisco MGM installation instructions, refer to the *Cisco Media Gateway Manager User Guide.*

Important Notes

- Do not interrupt the Cisco MGM installation or uninstallation with **Ctrl-C** or the **kill** command. After such an interruption, the system might not successfully install or uninstall Cisco MGM when you try to perform these actions again, or the system might enter an abnormal state.
- Do not interrupt the cemf backup operation using **Ctrl-C** or the **kill** command.
- In rare cases, installation fails with a pkgadd error. If this occurs, manually set the file permissions for the /tmp directory to rwx.
- Always run **cemf stop** to gracefully shut down Cisco EMF and Cisco MGM processes before rebooting the machine. If the machine is accidentally rebooted (or restarted due to a power failure), the Cisco MGM database integrity can be damaged, and you might need to run **cemf reset** and rediscover the network to restore normal operation. Running low on swap space leads to the same problem. Make sure that a minimum of 2 GB of swap space is allocated on the server machine.
- If the **cemf stop** operation hangs while suspending the participant service, wait for at least 1 hour for the **cemf stop** command to complete. If the **cemf stop** command continues to hang, enter the **/opt/cemf/bin/sysmgrClient -q** command to stop Cisco EMF core processes, and then run **cemf stop** and **cemf reset** to reset the database.
- If the following error messages appear when you are running **cemf session**, run **cemf stop** and **cemf start** to restart the Cisco EMF and Cisco MGM processes.

  ```
  ERROR: "/opt/cemf/config/scripts/session" command failed.
  ERROR: Cannot connect to Session
  ```

- Do not use the Deployment menu on the Cisco MGM GUI to delete site objects that contain chassis underneath them. Doing so might cause the MapViewer window to stop working correctly. If this occurs, close the MapViewer window and reopen it from the Cisco EMF LaunchPad. Always delete chassis one at a time.
- Before launching CiscoView from a Cisco MGM session, make sure that you do not have any Netscape processes already running. ((If a Netscape process is running before you launch CiscoView for the first time in your Cisco MGM session, Netscape will incorrectly prompt you to install the java plug-in every time CiscoView is launched.)
- The object indicator color on the Cisco MGM GUI represents the highest severity of alarm on the object, but not necessarily the status of the resource on the chassis. To find out the status of the resource that the object represents, use the Object Configuration window.
- The alarm indicator next to the object name on the left side of the Cisco MGM GUI sometimes does not show the correct color of the highest outstanding alarm. If this occurs, close the MapViewer window and open a new one. For information about Cisco MGM alarm colors, refer to the *Cisco Media Gateway Manager User Guide*, Chapter 6, “Fault and Performance Management”.

Caveats

Resolved Caveats

The following limitations which existed in previous versions Cisco MGM have been resolved in Cisco MGM 3.0.1.

Table 6 Caveats Resolved in Cisco MGM 3.0.1

Caveat ID	Description
CSCea00299	DeleteMGCPCtrlPath action does not handle incomplete configs
CSCea11457	DS1 line modify operation fails if lineEnable is Enabled
CSCea17071	NEI Traps Correlation should be implemented in EMs
CSCeb40431	trapVismChanActive does not clear a trapVismChanFailed alarm
CSCdz47240	cwAnnounceTable is not populated in CMGM
CSCdz59920	Enh: Need CEMF severity adjustments capability for ME traps

Open Caveats

The following caveats exist in Cisco MGM. Generally, caveats include unexpected behaviors or defects in the software release. This document addresses caveats which directly impact user functionality and indicates alternative approaches (workarounds) where available. A complete listing of caveats is available in the Cisco bug tracking tool at the following URL:

http://www.cisco.com/support/bugtools

- CSCdy73770

  Symptom: Image download failure; creates new file of 0 byte size

  Conditions: For a PXM1-based MGX 8000 Series chassis, the ComMat.dat file is overwritten on the MGX 8000 when firmware images are downloaded using the Image Download dialog in Cisco Media Gateway Manager (CMGM). This is not a problem for PXM-45 or PXM1-E based MGX 8000 Series chassis.

  Workaround: Have a valid ComMat.dat file in the same directory as the firmware files on the CMGM server.

- CSCdz28089

  Symptom: CMGM install gives ERROR while CV security files install

  Conditions: While running the CiscoView Security script (cvsecurityinstall), that will be executed if CiscoView is installed on the same workstation as Cisco Media Gateway Manager (CMGM), an ERROR message could appear. However, the install of the CV Security is successful.

  Workaround: Ensure that the CiscoView processes are running after the error message is displayed.

- CSCdz32875

  Symptom: Customer cannot upgrade the CiscoView device package for the MGX 8000 Series Voice Gateway because a lack of documentation.

  Conditions: CMGM does not support CiscoView device package upgrading. CMGM installs a version of the CiscoView device package for the MGX 8000 Series Voice Gateway.

  Workaround: Refer to CiscoView documentation to upgrade the CiscoView device packages.

- CSCdz69509

  Symptom: Install script does not recognize local CiscoView on multiple IP server.

  Conditions: When the CMGM Server has multiple IP addresses during installation, the CiscoView security install script (cvsecurityinstall) and WAN CiscoView (wancvinstall) install scripts are not executed. The CMGM install script (cmgminstall) determines if CiscoView is installed on the same workstation that the cmgminstall script is running on. The IP address that is entered during install is compared to the IP address determined by the cmgminstall script. If the IP addresses are equal, CiscoView is installed on the workstation and the CiscoView scripts are run automatically. In this case the IP addresses are not equal because another IP address is determined for the local IP. The CiscoView scripts are not run automatically

  Workaround: Execute the CiscoView Security install script (cvsecurityinstall) and WAN CiscoView (wancvinstall) install script manually as outlined in the CMGM User's Guide.

- CSCdz78023

  Symptom: functionModuleState is not updated after VISM switchover.

  Conditions: VISM redundancy is setup on the MGX 8000 Series Voice Gateway. After the VISM switchover due to failure, the functionModuleState is not updated with the proper values for the new Active and Standby VISMs after the switchover. Only DS1 lines are reparented.

  Workaround: No workaround is currently available.

- CSCdz80286

  Symptom: MapViewer adjustments (Region) and object reassignments are not saved.

  Conditions: Map Viewer allows the user to reorganize chassis, but then resets back to default after the next sub chassis sync up. This makes it difficult for the customer to organize his chassis into meaningful regions.

  Workaround: Set the SNMP variable "sysLocation" to the container name; for example, set sysLocation to "East" or "West" on the MGX 8000. This will put the CMGM chassis in a "CMGM_Site_East" or CMGM_Site_West" site on the Map Viewer. The SNMP set on "sysLocation" can be performed by selecting the MGX 8000 and selecting "Tools -> Open Object Configuration ...". A new Object Configuration dialog is displayed. Select "SNMPv2-MIB.systemCMGMVMGX..." for the Object Type, enter the new value in the "sysLocation" text box, and select "File -> Save".

- CSCeb40950

  Symptom: Install order of components causes problems with MGC device.

  Conditions: Installing the Cisco UGM software package after the Cisco MGM package causes the ENTITY–MIB file, which both EMs require, to be overwritten. The ENTITY–MIB file contained by the Cisco UGM package is older than that of the Cisco MGM package, creating the inability to discover PXM–1Es and PXM–45s.

  Workaround: Install the Cisco UGM package prior to installing the Cisco MGM package to ensure the newer ENTITY–MIB is available. The proper order in which to install these co–resident software packages is as follows:

  1. Cisco EMF 3.2
  2. Cisco EMF 3.2, patch 6
  3. Java 1.3.1 SDK
  4. CiscoView
  5. Cisco UGM 2.1
  6. Cisco VSPT 2.4(1)
  7. Cisco MGM 3.0
  8. Cisco MNM 2.4(1)

- CSCuk33887

  Symptom: Cisco MGM documentation must clarify how to change CMGM_Default_Site name.

  Conditions: An improvement will be implemented whereby sites can be added through a CEMF dialog. The user guide should provide more explanations on the feature.

  Workaround: The CMGM site name can be changed by performing a SNMP set on the SNMP variable "sysLocation". The SNMP set can be performed using the Object Configuration dialog from the Map Viewer.

- CSCuk35100

  Symptom: CiscoView security and wancv packages are not installed without DNS

  Conditions: The CMGM install script (cmgminstall) determines if CiscoView is installed on the same workstation that the cmgminstall script is running on. The IP address that is entered during install is compared to the IP address that is determined by the cmgminstall script. If the IP addresses are equal, CiscoView is installed on the workstation and the CiscoView scripts are run automatically. In this case, the IP addresses are not equal because the nslookup fails and the CiscoView scripts will not execute automatically.

  Workaround: Execute the CiscoView Security install script (cvsecurityinstall) and WAN CiscoView (wancvinstall) install script manually as outlined in the CMGM User's Guide.

- CSCuk36859

  Symptom: Cisco MGM does not download ComMat.dat file into the PXM card.

  Conditions: In Cisco MGM, when the user downloads a PXM image, the ComMat.dat file is downloaded for PXM1 firmware images; it is not tied to RPM images.

  Workaround: Have a "ComMat.dat" file in the same directory as the firmware files for PXM1 based devices. This is not a problem for PXM45 or PXM1E based MGX Voice Gateways.

Related Documentation

The following Cisco publications contain additional information related to the operation of Cisco MGM:

While you can access all related documentation on the Cisco website, URLs which are available at the time of publication are noted in the following lists.

The following Cisco EMF documentation is available for reference:

- *Quick Start Guide Cisco EMF Version 3.2 SP4*
  Cisco Element Manager November 2002 Upgrade

  http://www.cisco.com/en/US/partner/products/sw/netmgtsw/ps829/products_quick_start09186a0080112a2d.html
- *Cisco Element Management Framework Installation and Administration Guide*
  Version 3.2 Service Pack 4 (Cisco Element Manager November 2002 Upgrade)

  http://www.cisco.com/en/US/partner/products/sw/netmgtsw/ps829/products_installation_and_configuration_guide_book09186a00800ffd0d.html
- *Cisco Element Management Framework User Guide Version 3.2 Service Pack 4*
  (Cisco Element Manager November 2002 Upgrade)

  http://www.cisco.com/en/US/partner/products/sw/netmgtsw/ps829/products_user_guide_book09186a00800ffd02.html
- *Release Notes for Cisco Element Management Framework v3.2 Service Pack 4*
  Cisco Element Manager November 2002 Upgrade

  http://www.cisco.com/en/US/partner/products/sw/netmgtsw/ps829/prod_release_note09186a0080128a9c.html

In addition to this document, the following Cisco MGM documentation is available for reference:

- *Cisco Media Gateway Manager User Guide, Release 3.0*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps4982/c1629/ccmigration_09186a0080144474.pdf
- *Release Notes for Cisco Media Gateway Manager, Release 3.0*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps4982/c1629/ccmigration_09186a0080144474.pdf

The following Cisco BTS documentation is available for reference:

- *Cisco BTS 10200 Softswitch—Release Notes for Release 3.3 V04*

  http://www.cisco.com/univercd/cc/td/doc/product/voice/bts10200/bts3_2/relnotes/btsrnv04.pdf
- *Cisco BTS 10200 Softswitch System Description, Software Release 900-03.01.00*

  http://www.cisco.com/univercd/cc/td/doc/product/voice/bts10200/bts3_0/sysdesc/sysds_31.pdf
- *Cisco BTS 10200 Softswitch Command Line Interface Reference Guide,*
  Software Release 3.2, 3.3, and 3.5

  http://www.cisco.com/univercd/cc/td/doc/product/voice/bts10200/bts3_2/cmdref/cli3233.pdf
- *Cisco BTS 10200 Softswitch Application Installation, Release 3.3*

  http://www.cisco.com/univercd/cc/td/doc/product/voice/bts10200/bts3_2/applinst/duplex33/01app.pdf

- *Cisco BTS 10200 Softswitch CORBA Adapter Interface Specification Programmer Guides, Software Releases 3.2, 3.3, and 3.5*

  http://www.cisco.com/univercd/cc/td/doc/product/voice/bts10200/bts3_2/corba/prgguide/corba33.pdf

- *Cisco BTS 10200 Softswitch Cabling, VLAN, and IRDP Procedures*

  http://www.cisco.com/univercd/cc/td/doc/product/voice/bts10200/bts3_2/cabling/bts33cbl.pdf

The following CiscoView documentation is available for reference:

- *Using CiscoView 5.4*

  http://www.cisco.com/en/US/partner/products/sw/cscowork/ps4565/products_user_guide_book09186a00800e19db.html

- *WAN CiscoView Release 3 for the MGX 8230 Edge Concentrator, Release 1*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps2340/c1629/ccmigration_09186a00800e717d.pdf

- *WAN CiscoView Release 3 for the MGX 8250 Edge Concentrator, Release 1*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps2340/c1629/ccmigration_09186a00800d82dd.pdf

- *WAN CiscoView Release 3 for the MGX 8850 Edge Switch, Release 1*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps2340/c1629/ccmigration_09186a00800d8061.pdf

- *WAN CiscoView Release 2 of the MGX 8850*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps2340/c1629/ccmigration_09186a00800e0fa6.pdf

The following Cisco MGX 8000 Series CVGs documentation is available for reference:

- *Cisco MGX 8850 and MGX 8950 Switch Software Configuration Guide, Release 2.1*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps1938/c1069/ccmigration_09186a0080088978.pdf

- *Cisco MGX 8850 (PXM1E) and MGX 8830 Switch Software Configuration Guide, Release 3*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps1935/c1069/ccmigration_09186a008014e29c.pdf

- *Cisco MGX 8850 (PXM45) and MGX 8950 Switch Software Configuration Guide, Release 3*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps1935/c1067/ccmigration_09186a00800df1a9.pdf

- *Cisco MGX 8230 Multiservice Gateway Command Reference, Release 1.1.4*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps1928/c1051/ccmigration_09186a0080088bc8.pdf

- *Cisco MGX 8250 Multiservice Gateway Command Reference, Release 1.1.31*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps1932/c1051/ccmigration_09186a0080088c5d.pdf

- *Cisco MGX 8830, MGX 8850 (PXM45 and PXM1E), and MGX 8950 Command Reference, Release 3*

  http://www.cisco.com/application/pdf/en/us/guest/products/ps1935/c1051/ccmigration_09186a00800e70d2.pdf

Obtaining Documentation

Cisco provides several ways to obtain documentation, technical assistance, and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation on the World Wide Web at this URL:

http://www.cisco.com/univercd/home/home.htm

You can access the Cisco website at this URL:

http://www.cisco.com

International Cisco websites can be accessed from this URL:

http://www.cisco.com/public/countries_languages.shtml

Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which may have shipped with your product. The Documentation CD-ROM is updated regularly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual or quarterly subscription.

Registered Cisco.com users can order a single Documentation CD-ROM (product number DOC-CONDOCCD=) through the Cisco Ordering tool:

http://www.cisco.com/en/US/partner/ordering/ordering_place_order_ordering_tool_launch.html

All users can order annual or quarterly subscriptions through the online Subscription Store:

http://www.cisco.com/go/subscription

Ordering Documentation

You can find instructions for ordering documentation at this URL:

http://www.cisco.com/univercd/cc/td/doc/es_inpck/pdi.htm

You can order Cisco documentation in these ways:

- Registered Cisco.com users (Cisco direct customers) can order Cisco product documentation from the Networking Products MarketPlace:

  http://www.cisco.com/en/US/partner/ordering/index.shtml

- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco Systems Corporate Headquarters (California, USA.) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

Documentation Feedback

You can submit comments electronically on Cisco.com. On the Cisco Documentation home page, click **Feedback** at the top of the page.

You can send your comments in e-mail to bug-doc@cisco.com.

You can submit comments by using the response card (if present) behind the front cover of your document or by writing to the following address:

Cisco Systems
Attn: Customer Document Ordering
170 West Tasman Drive
San Jose, CA 95134-9883

We appreciate your comments.

Obtaining Technical Assistance

For all customers, partners, resellers, and distributors who hold valid Cisco service contracts, the Cisco Technical Assistance Center (TAC) provides 24-hour, award-winning technical support services, online and over the phone. Cisco.com features the Cisco TAC website as an online starting point for technical assistance.

Cisco TAC Website

The Cisco TAC website (http://www.cisco.com/tac) provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The Cisco TAC website is available 24 hours a day, 365 days a year.

Accessing all the tools on the Cisco TAC website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a login ID or password, register at this URL:

http://tools.cisco.com/RPF/register/register.do

Opening a TAC Case

The online TAC Case Open Tool (http://www.cisco.com/tac/caseopen) is the fastest way to open P3 and P4 cases. (Your network is minimally impaired or you require product information). After you describe your situation, the TAC Case Open Tool automatically recommends resources for an immediate solution. If your issue is not resolved using these recommendations, your case will be assigned to a Cisco TAC engineer.

For P1 or P2 cases (your production network is down or severely degraded) or if you do not have Internet access, contact Cisco TAC by telephone. Cisco TAC engineers are assigned immediately to P1 and P2 cases to help keep your business operations running smoothly.

To open a case by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)
EMEA: +32 2 704 55 55
USA: 1 800 553-2447

For a complete listing of Cisco TAC contacts, go to this URL:

http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml

TAC Case Priority Definitions

To ensure that all cases are reported in a standard format, Cisco has established case priority definitions.

Priority 1 (P1)—Your network is “down” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Priority 2 (P2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Priority 3 (P3)—Operational performance of your network is impaired, but most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Priority 4 (P4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The *Cisco Product Catalog* describes the networking products offered by Cisco Systems, as well as ordering and customer support services. Access the *Cisco Product Catalog* at this URL:

  http://www.cisco.com/en/US/products/products_catalog_links_launch.html

- Cisco Press publishes a wide range of networking publications. Cisco suggests these titles for new and experienced users: Internetworking Terms and Acronyms Dictionary, Internetworking Technology Handbook, Internetworking Troubleshooting Guide, and the Internetworking Design Guide. For current Cisco Press titles and other information, go to Cisco Press online at this URL:

  http://www.ciscopress.com

- Packet magazine is the Cisco quarterly publication that provides the latest networking trends, technology breakthroughs, and Cisco products and solutions to help industry professionals get the most from their networking investment. Included are networking deployment and troubleshooting tips, configuration examples, customer case studies, tutorials and training, certification information, and links to numerous in-depth online resources. You can access Packet magazine at this URL:

  http://www.cisco.com/go/packet

- iQ Magazine is the Cisco bimonthly publication that delivers the latest information about Internet business strategies for executives. You can access iQ Magazine at this URL:

  http://www.cisco.com/go/iqmagazine

- Internet Protocol Journal is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

  http://www.cisco.com/en/US/about/ac123/ac147/about_cisco_the_internet_protocol_journal.html

- Training—Cisco offers world-class networking training. Current offerings in network training are listed at this URL:

  http://www.cisco.com/en/US/learning/index.html

This document is to be used in conjunction with the documents listed in the "Related Documentation" section.