



Overview

Cisco MGM operates as a component of the Cisco Element Management Framework (Cisco EMF) software. Cisco MGM enables you to deploy, configure, and manage Cisco MGX 8000 Series CVGs that utilize the Cisco PXM1, PXM1-E, and PXM45 Processor Switch Modules.

Cisco MGM provides a graphical user interface (GUI) for the display of network information and device management, including access to media gateway controllers (MGCs) functioning in the network.

Cisco MGM Architecture

Cisco MGM extends the functionality of Cisco EMF to include management of Cisco MGX 8000 Series CVGs, as well as supported media gateway controllers (MGCs). [Figure 1-1](#) provides a simple view of Cisco MGM's location in a voice gateway network.

Figure 1-1 Cisco MGM Architecture

User Interfaces

Cisco MGM provides a graphical user interface (GUI) using UNIX Motif. For device-specific configuration, Cisco MGM also provides access to the CiscoView GUI, as well as to command line interface functions through telnet sessions.

For detailed information on CiscoView installation and operation, refer to *Using CiscoView 5.4*.

For command line interface functions, refer to the following documents:

- *Cisco MGX 8230 Multiservice Gateway Command Reference*
- *Cisco MGX 8250 Multiservice Gateway Command Reference*
- *Cisco MGX 8830, MGX 8850 (PXM45 and PXM1E), and MGX 8950 Command Reference*

Supported Protocols

Cisco MGM supports the following protocols as part of its overall management capabilities:

- CEMF Event Channel
- HTTP
- Telnet
- FTP
- TFTP
- SNMPv1
- SNMPv2c
- CORBA

Features

Cisco MGM provides a powerful range of network management capabilities, including support for network configuration, administration, fault and performance management, and security.

Configuration

Cisco MGM configuration capabilities include the following features:

- Auto discovery and topology views of Cisco MGX 8000 Series CVGs
- Auto discovery of media gateway controllers (MGCs)
- Provisioning and queries of Cisco MGX 8000 Series service modules, lines, and ports. (This function is accessed through CiscoView.)
- Maintenance state support
- Software image downloads
- Configuration save and restore
- Menu-launched telnet sessions for CLI device management

Administration

Cisco MGM administration capabilities provide database support for Cisco MGX 8000 Series components, including:

- Chassis
- PXM1, PXM1-E, and PXM45 cards and lines
- Voice Interworking Service Module (VISM/VISM-PR) cards and lines
- Route Processor Module (RPM-PR and RPM-XF) cards and RPM-XF Ethernet lines
- Service Redundancy Module (SRM and SRM-E) cards and lines
- ATM Switch Service Module (AXSM and AXSM-E) cards and lines

Cisco MGM performs asynchronous database updates in response to network equipment configuration and status changes.

Fault Management

Cisco MGM provides consolidated alarm viewing and filtering through the use of the Cisco EMF event browser interface. Cisco MGM displays alarms and events on a color-coded topology map. Fault management functions include:

- Alarm monitoring
- Alarm filtering
- Assignment/Deletion
- Acknowledgement
- Alarm based performance threshold alerts
- Trap registration and forwarding of traps to remote SNMP managers

Performance Management

Cisco MGM performance management capabilities include threshold and call related statistics using CiscoView and the appropriate MGC element management systems.

CiscoView provides device-specific performance management, including the following information:

- LAPD Statistics
- Session Set Counters
- Session Group Counters
- RUDP Statistics and Counters
- SVC Statistics Counters
- Bearer Statistical Counters
- HDLC Counters
- DSX1 Line Real Time Counters

All statistics data are collected in real-time, no history is stored.

Security

Cisco MGM security uses the mechanisms of Cisco EMF, which authenticates users based on names and passwords. When using CLI management interfaces, the Cisco MGX 8000 Series CVGs also authenticate users based on user accounts. Security profiles define access rights for typical users, from administrators to guests.

SNMP community strings allow access between Cisco MGM and network elements messages to be controlled. Unique community strings known by all network elements should be configured.

Cisco Info Center Support

Cisco EMF provides an interface to the Cisco Info Center (CIC) through use of the Cisco EMF event channel. The Cisco Info Center is purchased as a separate product from Cisco MGM.

CIC provides service-level alarm monitoring and diagnostics tools for network fault and performance monitoring, network trouble isolation, and real-time service-level management for large networks. CIC helps operators focus on important network events, offering a combination of alarm processing rules, filtering, customizable alarm viewing, and partitioning. CIC provides a highly configurable client/server application that can consolidate, duplicate, filter, and correlate fault information from multiple network layers.

CIC is the fault management component of the Cisco Service Management (CSM) infrastructure that provides end-to-end service management solutions for service provider and large enterprise networks. Operating at the service and network levels, CIC interacts with other management tools within the CSM product suite to provide customer-focused, service-level monitoring and network partitioning for Virtual Private Network and Customer Network Management services. CIC works in conjunction with network element management software such as Wide Area Network Manager to provide fault and alarm management across local and wide area networks.