



Cisco EMF Coresidency

Multiple EMs can be installed onto a single Cisco EMF server, thereby allowing multi-device and multi-vendor management from a single system. The following packages are compatible to create a coresident network management system:

- Cisco Element Management Framework (Cisco EMF), Release 3.2 Service Pack 4 or greater
- Cisco Media Gateway Manager (Cisco MGM), version 3.0
- Cisco Media Gateway Controller (MCG) Node Manager (Cisco MNM), version 2.3
- Cisco Universal Gateway Manager (Cisco UGM), version 2.1

The following sections provide specific coresidency details for the Cisco MGM application:

- [Coresidence Hardware Requirements](#)
- [Coresidence Software Requirements](#)
- [Preparing the System for Coresident Applications](#)
- [Installing Coresident EM Applications](#)
- [Working with Coresident EM Applications](#)

Coresidence Hardware Requirements

The following table details the hardware requirements for Cisco MGM coresidence. All coresident systems must meet these requirements in order to support coresidency with Cisco MGM.

Table 9-1 Coresidence Hardware Requirements

Resource	Cisco MGM Server		Cisco MGM Client
	Small Installation ¹	Large Installation ²	
Workstation	Sun Netra t1400 ³	Sun Netra t1400 ³	Sun Ultra 10
Operating system	Solaris 8	Solaris 8	Solaris 8
Memory	2 GB RAM	4 GB RAM	256 MB RAM
Disk space	Two hard disks, each one 18 GB or larger	Four hard disks, each one 18 GB or larger	One hard disk, 9 GB or larger
Processor	2 x 440 MHz	4 x 440MHz	440 MHz
Swap space	5 GB ⁴	9 GB ⁴	2 GB
Monitor	17-inch color	17-inch color	17-inch color
Graphics card	24-bit	24-bit	24-bit
Power supply	1	2 (second power supply optional for high availability installations)	1
Miscellaneous Resources	Local or remote CD ROM DAT tape backup	Local or remote CD ROM DAT tape backup	Local or remote CD ROM

1. Up to 10 fully-loaded MGX CVGs
2. Between 10 to 50 fully-loaded MGX CVGs
3. Netra platforms are supported, but not required. Alternate platforms that have been tested include: Sun Ultra 60, 220r, 420r, 280r, and Netra 20. Sun UltraSPARC III servers and desktops are also supported by Cisco MGM.
4. If CiscoView is running on the same system as Cisco MGM, you will need an additional 1 GB swap space.

Coresidence Software Requirements

The following table details the software requirements for Cisco MGM coresidence. All coresident systems must meet these requirements in order to support coresidency with Cisco MGM. Note that all of the following software packages use the Solaris 8 operating system.

Table 9-2 Coresidence Software Requirements

Software Package	Version
Cisco EMF	3.2, Service Pack 4 or greater
Cisco MGM	3.0
Cisco MNM	2.3
Cisco UGM	2.1
CiscoView	5.4

Preparing the System for Coresident Applications

Prior to installing coresident EM applications, it is recommended that you perform the following tasks:

- [Installing Cisco EMF](#)
- [Initializing the Cisco EMF System](#)
- [Starting a Cisco EMF User Session](#)
- [Partitioning the Hard Disk](#)
- [Initializing the Cisco EMF System](#)

Installing Cisco EMF

In order to install coresident EM applications such as Cisco MGM, Cisco MNM, and Cisco UGM, the framework application must be installed. Once the base Cisco EMF application is installed, the applicable Cisco EMF patches must be installed.

To install Cisco EMF, follow these steps:

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- Step 1** Install the Cisco EMF v3.2 software.
- For further information on installing the Cisco EMF v3.2 software, see the *Cisco Element Management Framework Installation and Administration Guide* and related release notes.
- Step 2** Install the Cisco EMF v3.2, Service Pack 4 software.
- For details on installing the Cisco EMF v3.2, Service Pack 4 software, see the *Cisco Element Management Framework Installation and Administration Guide* and related release notes.
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Initializing the Cisco EMF System

Before logging into and using the Cisco EMF system, the associated processes must be initialized. Starting the Cisco EMF application also initiates the installed EM application processes.

To start the Cisco EMF system, follow these steps.

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- Step 1** Log into the workstation as the root user.
- Step 2** Start the Cisco EMF system by entering the following command in a terminal window:
- ```
CEMF_ROOT/bin/cemf start
```
- (Replace *CEMF\_ROOT* with the name of the directory where Cisco EMF is installed.)
- The Cisco EMF and the available EM processes initiate.
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## Starting a Cisco EMF User Session

Starting a Cisco EMF user session automatically begins a user session for the available EM(s) as well.

To start a Cisco EMF user session, follow these steps:

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- Step 1** Log into the workstation.
- Step 2** Ensure that the Cisco EMF process is running.
- For further information, see the preceding section.
- Step 3** To start a Cisco EMF user session, enter the following in a terminal window:
- ```
CEMF_ROOT/bin/cemf session
```
- (Replace *CEMF_ROOT* with the name of the directory where Cisco EMF is installed.)
- Step 4** Enter the appropriate Cisco EMF user name and password. (The default user name and password are required for the initial login by the system administrator.)
- The Cisco EMF application launches. For information on using the Cisco EMF application, see the *Cisco Element Management Framework Administration and Installation Guide*, *Cisco Element Management Framework User Guide*, and related release notes.
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Partitioning the Hard Disk

A large amount of data can be expected with the addition of coresident network management systems. In anticipation of the expected Cisco EMF database growth, it is recommended that you perform raw file system (RAWFS) hard disk partitioning before installing the coresident EM packages.

For detailed steps on partitioning the hard disk, see the *Cisco Element Management Framework Installation and Administration Guide*.

Installing CiscoView Applications

The CiscoView application is an installation prerequisite for the Cisco MGM and the Cisco UGM packages. The CiscoView application may be installed on the local Cisco EMF server or a remote server. Following the CiscoView installation, integration of security parameters and installation of device-specific packages are required. If the CiscoView server is the local Cisco EMF server, security parameter integration and device package installation occurs automatically through the EM installation. If the CiscoView server is a remote server, manual execution of available script files is required.

To install CiscoView, follow these steps:

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- Step 1** Install the CiscoView 5.4 software on the local Cisco EMF server or a remote server.
- For further information on installing the CiscoView 5.4 application, see the *Installation and Setup Guide for CiscoView 5.4*.
- Step 2** If the CiscoView server is installed on a remote workstation, execute the required CiscoView scripts on the CiscoView server.
- For details on running CiscoView scripts, see the [“Installing CiscoView Applications”](#) section on [page 2-8](#) of this guide.
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Installing Coresident EM Applications

Once the appropriate version of Cisco EMF software is installed, installation of the coresident applications may take place. Note that the EM installation type, server or client, must match that of the installed Cisco EMF application on the particular machine. The installation process is automated to ensure that the compatible EM package is installed.

To establish a coresident network management system, perform the following tasks as applicable:

- [Installing Cisco Media Gateway Manager](#)
- [Installing Cisco MGC Node Manager](#)
- [Installing Cisco Universal Gateway Manager](#)

Installing Cisco Media Gateway Manager

Before installing Cisco MGM server or client software, configuration of the /etc/hosts files must occur. Once configuration of the /etc/hosts files has taken place, the appropriate Cisco MGM software package may be installed.

The Cisco MGM package provides an integrated connection to management interfaces through supported media gateway controllers (MGCs). Following successful installation of Cisco MGM, installation of supported MGCs may occur.

The following procedure provides a summary of the installation process. For complete details regarding Cisco MGM installation, see [Chapter 2, “Installation,”](#) of this guide.

To install Cisco MGM, follow these steps:

-
- Step 1** Ensure that the appropriate Cisco EMF software package, version, and patches have been installed on the workstation where the EM software is to be installed by entering the following command in a terminal window:
- ```
cemf install -show
```
- Step 2** Configure the `/etc/hosts` files on the server or client workstation.  
Details regarding configuring `/etc/hosts` files are available in the [“Configuring /etc/hosts Files”](#) section on page 2-6.
- Step 3** Install the Cisco MGM v3.0 server or client package on the workstation.  
For detailed instructions on installing the Cisco MGM server package, see the [“Installing the Cisco MGM Server”](#) section on page 2-9.  
For detailed instructions on installing the Cisco MGM client package, see the [“Installing Cisco MGM Clients”](#) section on page 2-11.
- Step 4** Install the following supported MGCs:
- Cisco BTS 10200 Softswitch
  - Tekelec VXi Media Gateway Controller
  - NexVerse ipVerse Control Switch
- For further information on MGCs and detailed instructions on installing the Cisco MGM supported MGCs, see [Chapter 8, “Media Gateway Controller Integration,”](#) of this guide.
- Step 5** Upon completion of the installation process, verify the success of the installation and status of the running processes by entering the following in a terminal window:
- To verify the success of the installation, enter the following in a terminal window:  

```
cemf install -show cmgmvpkg_Server_Package
```
  - To view the status of the running processes, enter the following in a terminal window:  

```
CEMF_ROOT/cemf/bin/cemf query
```

  
(Replace `CEMF_ROOT` with the name of the directory where Cisco EMF is installed.)  
Ensure that the `cmgmvCtrl` controller is listed in the results which display.
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## Installing Cisco MGC Node Manager

Installing the Cisco MNM package requires that the installation of a Cisco MGC host provisioning tool has occurred. The host provisioning tool implemented depends on the installed PSTN Gateway software version. If the installed PSTN Gateway software version is 7.4.11, 7.4.12, or 9 (or higher), the Cisco Voice Services Provisioning Tool (VSPT) is available. If the installed PSTN Gateway software version is 7.4.11 or 7.4.12, the Cisco MGC Manager (CMM) host provisioning tool is available.

Once a host provisioning tool is installed, the appropriate Cisco MNM package, server or client, may be installed.

The following procedure provides a summary of the installation process. For complete details regarding Cisco MNM installation, see the *Cisco Media Gateway Controller Node Manager User's Guide*.

To install Cisco MNM, follow these steps:

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- Step 1** Ensure that the appropriate Cisco EMF software package, version, and patches have been installed on the workstation where the EM software is to be installed by entering the following command in a terminal window:
- ```
cemf install -show
```
- Step 2** Install the appropriate Cisco MGC host provisioning tool as follows:
- If running PSTN Gateway software version 7.4.11, 7.4.12, or 9 (or higher), install the Cisco VSPT.
 - If running PSTN Gateway software version 7.4.11 or 7.4.12, install the CMM and use the provisioning window.
- Note that the CMM provisioning feature is not available to PSTN Gateway software version 9 or higher.
- For detailed instructions on installing an available Cisco MGC host provisioning tools, see the *Cisco Media Gateway Controller Node Manager 2.3 User Guide* and related release notes.
- Step 3** Install the Cisco MNM v2.3 server or client package on the workstation.
- For further information on installing the Cisco MNM server or client package, see the *Cisco Media Gateway Controller Node Manager 2.3 User Guide* and related release notes.
- Step 4** Upon completion of the installation process, verify the success of the installation and status of the running processes by entering the following in a terminal window:
- To verify the success of the installation, enter the following in a terminal window:

```
cemf install -show mgcEM  
cemf install -show hostEM
```
 - To view the status of the running processes, enter the following in a terminal window:

```
CEMF_ROOT/cemf/bin/cemf query
```

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

Ensure that the following controllers are listed in the results which display:

 - hostController
 - mgcController
 - mgcTrapProcessor
-

Installing Cisco Universal Gateway Manager

The following procedure provides a summary of the installation process. For complete details regarding Cisco UGM installation, see the *Cisco UGM Installation, Upgrade, and Troubleshooting Guide*.

To install Cisco UGM, follow these steps:

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- Step 1** Ensure that the appropriate Cisco EMF software package, version, and patches have been installed on the workstation where the EM software is to be installed by entering the following command in a terminal window:

```
cemf install -show
```

Step 2 Download the Java plug-in and install.

To determine the specific Java plug-in required, see the *Using CiscoView 5.4* documentation.

For additional information on installing the Java plug-in, see the *Cisco Universal Gateway Manager Installation, Upgrade, and Troubleshooting Guide, Version 2.1* and related release notes.

Step 3 Install the Cisco UGM v2.1 server or client package on the workstation.

For further information on installing the Cisco UGM server or client package, see the *Cisco Universal Gateway Manager Installation, Upgrade, and Troubleshooting Guide, Version 2.1* and related release notes.

Step 4 Upon completion of the installation process, verify the success of the installation and status of the running processes by entering the following in a terminal window:

- To verify the success of the installation, enter the following in a terminal window:

```
cemf install -show mgcEM
cemf install -show hostEM
```

- To view the status of the running processes, enter the following in a terminal window:

```
CEMF_ROOT/cemf/bin/cemf query
```

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

Ensure that the following controllers are listed in the results which display:

- ASMainCtrl
- IOSConfigCtrl
- ASFaultStandAlone

Working with Coresident EM Applications

Similar to getting started using independent (i.e., non-coresident) EM applications, essential tasks must take place in order to begin managing the network through coresident EM applications including:

- Enabling the privileged password (as necessary)
- Configuring the Ethernet port on the device (as necessary)
- Configuring SNMP on the network devices (as necessary)
- Ensuring that the devices accept Telnet sessions (as necessary)
- Enabling traps
- Setting up a TFTP Server

Network objects may now be deployed. Again, as with independent EM applications, community strings and device passwords must be set within the EM to enable communication with each device to be managed. Once communication parameters are set, objects may be discovered and Fault, Configuration (Accounting), Performance, and Security (FC[A]PS) management may begin.

For details on performing these tasks, see the appropriate installation, administration, and/or user documentation for the applicable EM application. For a full listing of the related documentation, see the [“Coresidence Related Documentation”](#) section on the following page.

Limitations

When using a Cisco MGM, Cisco MNM, and Cisco UGM coresident system, the following limitations exist:

- Object Discovery—Different patterns of discovery are implemented for each application. Discovered Cisco MGM objects display under the Physical view. The Physical view name cannot be customized.
- Viewing Device Properties:
 - Cisco MGM—Select the chassis object, then right-click and choose **Tools > Object Configuration**
 - Cisco MNM—Select the chassis object, then right-click and choose **Properties**
- Monitored Performance Attribute Names:
 - Cisco MGM—Attributes reflect the MIB object title
 - Cisco MNM—Attributes are represented in English
 - Cisco UGM—Attributes reflect the MIB object title
- Modifying the level of debugging:
 - Cisco MNM—Enter the following changes:
In the hostController.ini file, add **loggingLevelMask=15**
In the mgcTrapProcessor.ini file, add **loggingLevelMask=15**
 - Cisco UGM—From the Map Viewer window, select **LoggingConfiguration**
- Exporting Inventory, Alarm, and Performance data—
 - Cisco MNM—Not supported
 - Cisco UGM—May export either all data or no data

Coresidence Related Documentation

- Cisco Element Management Framework
 - *Quick Start Guide Cisco EMF Version 3.2 SP4
Cisco Element Manager November 2002 Upgrade*
 - *Cisco Element Management Framework Installation and Administration Guide
Version 3.2 Service Pack 4 (Cisco Element Manager November 2002 Upgrade)*
 - *Cisco Element Management Framework User Guide Version 3.2 Service Pack 4
(Cisco Element Manager November 2002 Upgrade)*
 - *Release Notes for Cisco Element Management Framework v3.2 Service Pack 4
Cisco Element Manager November 2002 Upgrade*

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

- Cisco MGC Node Manager
 - *Release Notes for Cisco Media Gateway Controller Node Manager Release 2.3*
 - *Cisco Media Gateway Controller Node Manager User's Guide Release 2.3(1)*

- Cisco Universal Gateway Manager
 - *Release Note for Cisco Universal Gateway Manager, Version 2.1*
 - *Cisco UGM Installation, Upgrade, and Troubleshooting Guide, Version 2.1*
 - *Cisco UGM User Guide, Version 2.1*

- CiscoView 5.4
 - *Release Notes for CiscoView 5.4*
 - *Installation and Setup Guide for CiscoView 5.4*
 - *Using CiscoView 5.4*