Installing Cisco Multicast Manager

This chapter contains the following sections:

System Requirements

This section describes the system requirements for running Cisco Multicast Manager 3.4.

Hardware Requirements

Cisco Multicast Manager can run on Linux systems and IPv6 Server.

Disk Space

4 GB or more of free space for CMM application and data.

Processors

The processor requirements for CMM 3.4 are shown below.

AMD Linux

- Dual, Quad, or 6-Core AMD Opteron processor

Linux-Intel

- Xeon Dual or Quad Core (equivalent or better)

Memory Requirements

The minimum memory requirements for CMM 3.4 are:

- 4 GB for less than 500 devices
- 8 GB for large Enterprise networks (more than 500 devices)

Swap Space

The CMM host should have twice as much swap memory as RAM. For example, a server with 4 GB of RAM should have 8 GB of swap memory, and a server with 8 GB of RAM should have 16 GB of swap memory.

Operating System Requirements

Linux

CMM 3.4 can run on the following Linux versions:

- Red Hat Enterprise Linux ES/AS 4
- Red Hat Enterprise Linux ES/AS 5
- Red Hat Enterprise Linux Client release 5.5
- Red Hat Enterprise Linux Server release 6.4

Both 32-bit and 64-bit Linux versions are supported.

CPU Requirements

Linux devices running CMM 3.4 should meet the following CPU requirements:

- Two CPUs with dual core for less than 500 devices
- Four CPUs with four cores for more than 500 devices

VMWare

- VMWare ESX 3.5

      • VMWare ESX 3.3.1

       CMM supports both the 32-bit and 64-bit versions.

Note   From this release, CMM provides support for Linux Instance of ESXI 5.5.

Supported Client Browsers

      • Internet Explorer 11.x on Windows 7

      • Firefox 27 on Windows 7

Note   The browser must have Adobe Flash Player installed.

Required Services and Ports

You must ensure that the required ports for inter-process communication and network access are accessible on the CMM host device.

Table 1-1 describes the ports used by CMM.

Table 1-1   *Ports and Services Used by CMM 3.4*

Service	Port	Description
HTTPS	8080	HTTP protocol with Secure Sockets Layer
Cliproxyd_tel	8081	CLI access through Telnet
Cliproxyd_ssh	8082	CLI access through SSH
Cliproxyd_dtv	8083	CLI threshold polling using Telnet
Snmpd	161	SNMP agent
snmptrapd	162	SNMP Trap Receiver
MySql	3306	MySql Database
Web Service	8085	Web Service on HTTP

Licensing

This section describes:

Overview of CMM Licensing

CMM 3.4 requires a license file, which is provided when you purchase the product. There are two types of license:

- Licenses which enables use of CMM to manage up to 50 devices for a 60-day trial period.

  The CMM distribution includes a free evaluation license.

- Permanent licenses that you receive when you purchase CMM.

The license file enables the product features that you have purchased.

The license file can enable:

- Cisco Multicast Manager with Video Operations Solution (VOS) support.

- Cisco Multicast Manager with Multicast VPN (MVPN) support.

- Cisco Multicast Manager with both VOS support and MVPN support.

CMM 3.4 uses FlexLM licensing.

If one of the features is not enabled, then the menus in the user interface do not include selections that enable options provided with the feature.

The application license is contained in the license file that you receive from Cisco when you purchase CMM. CMM license filenames consist of a timestamp that indicates when the license was obtained, and the file extension .*lic*. For example, *1294942836970.lic*.

After installation, CMM stores license files in the */etc/licenses* directory under the CMM root directory. If you upgrade your license after initially installing a license, the previous license is moved to the */etc/licenses/history* directory.

CMM 3.4 includes several license utility scripts that you can use to maintain your license files:

- *addFlexlmLicense.sh*—Adds a CMM license.

  See Running the CMM Add License Script, page 1-7.

- *FlexlmLicense*—Allows you to list your current licenses or check the validity of your CMM licensing.

  See Running the Check License Script, page 1-8.

Obtaining a CMM License

To obtain a CMM license, you will need a product authorization key (PAK). This key:

- Is provided on the product registration label that is in the Cisco Information Packet included with your product.

- May be provided by Cisco TAC in an e-mail sent to you in response to a license request.

To obtain a permanent license:

Step 1   Obtain the MAC address of the machine where you will install CMM.

- On a Linux device, obtain the MAC address of the machine by entering the following:

  ```
  [root]# /sbin/ifconfig | grep HWaddr
  ```

  The command line displays the MAC address:

  ```
  eth0      Link encap:Ethernet   HWaddr 00:0C:29:15:32:78
  ```

Step 2   Retain the MAC address.

You will need this information to register your license for CMM.

Step 3   Go to the Cisco Product Licensing Registration page at the following URL:

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

Step 4   Log into Cisco.com.

> ✎
> **Note**   You must have a Cisco.com user ID and password to log in.

The Product Licensing Registration page appears.

Step 5   Enter the product authorization key (PAK).

> ✎
> **Note**   The PAK is provided on the label that accompanied the Cisco Information Packet included with your
> product, or in an e-mail from Cisco TAC when you purchase CMM 3.4.

The Product Registration servlet displays a page summarizing the license. Figure 1-1 shows a typical
license summary.

Figure 1-1   ***Product License Summary Page***

Step 6   Review the information on the product information display and make sure that it is correct.

Step 7   If it is correct, click the **All Done** button.

The Product License Registration servlet prompts you to enter a MAC address (for Linux).

Step 8   Enter the MAC address that you obtained in Step 1 above.

Step 9   Click the **End-User License Agreement** link and review the license agreement.

Step 10   Check the **Agreement** check box if you agree.

Step 11   Scroll down the page and review the registrant information for your license and modify it if required.

Step 12   Click the **Continue** button.

The Product License Registration servlet displays a summary of the licensing information.

Step 13 Review the information to make sure it is correct.

Step 14 Click the **Submit** button.

Cisco will email you a license file for the product features that you have purchased.

Step 15 Save the license file on the host where you will install CMM.

The license file can be saved anywhere on the installation machine.

Installing the CMM License

You can install the CMM license in three ways:

- During initial installation or upgrade, by specifying the license filename when prompted.
- By using the CMM GUI.
- By using the add license script (*addFlexlmLicense.sh)*:

Complete these steps to install the license file:

Step 1   If you have obtained a license file prior to the initial installation, install the license during the installation process.

During installation of CMM, the system prompts for the license file. Enter the directory path and license file name when prompted by the installation script.

If you have not obtained a permanent license, the installation script allows you to complete the installation using an evaluation license that allows management of up to 50 devices and is good for 60 days.

See the installation sections for Linux for information on the licensing prompts:

- Running the Linux Installation Script, page 1-11

Step 2   After an initial installation, use one of the following methods to update the licenses for your CMM server:

- Choose **Administration > License Info** from the CMM Main Menu and click the **Update License** button to update your license file. You can use the licensing page to upgrade from an evaluation license to a permanent license, or to update your existing permanent licenses.

  See "License Info" in Chapter 10 of the *User Guide for Cisco Multicast Manager, 3.4*.

- To update the license using the CMM add license script (*addFlexlmLicense.sh*):

  – Go to the root directory for the CMM installation (*/usr/local/netman* for Linux).

  – Enter the following command:

    addFlexlmLicense.sh *<license_filename>*

    where *license_filename* is the directory path and filename for the license file.

    For additional information on running script, see Running the CMM Add License Script, page 1-7.

Managing CMM Licenses

CMM 3.4 includes a License Info page that allows you to update the license used for the CMM installation. For information on the License Info page, see
http://www.cisco.com/en/US/docs/net_mgmt/cisco_multicast_manager/3.4/user/guide/CMM_34_user_guide.html.

CMM 3.4 provides two license management scripts;

- *addFlexlmLicense.sh*—Adds a CMM license.

  See Running the CMM Add License Script, page 1-7.

- *FlexlmLicense*—Allows you to list your current licenses or check the validity of your CMM licensing.

  See Running the Check License Script, page 1-8.

Running the CMM Add License Script

Add CMM licenses from the command line using the *addFlexlmLicense.sh* script.

The *addFlexlmLicense.sh* script has the following syntax:

addFlexlmLicense <*license_filename*>

where *license_filename* is the directory and license filename of the license file.

To run the add license script:

Step 1   Go to the CMM root directory (*/usr/local/netman* on Linux).

Step 2   Enter the following command:

```
./addFlexlmLicense.sh <license_filename>
```

where *license_filename* is the directory path and license file name.

Example 1-1 shows sample output from *addFlexlmLicense.sh*.

Example 1-1   Sample Output from addFlexlmLicense.sh

```
-bash-3.00# ./addFlexlmLicense.sh    /tmp/test.lic
Install date  : Tue Aug 12 23:46:33 PDT 2014
Expire date   : Permanent
Features      : MMT,VOS,MVPN
Version       : 3.4
Device limit  : 1000
FlexlmHostId  : ANY
VendorName    : cisco
License Type  : Purchased

License status : success
```

Step 3   Start the CMM application and from the Main Menu, choose **Administration > License Info** to verify the license.

Running the Check License Script

Check your CMM license using the *FlexlmLicense* script.

The *FlexlmLicense* script has the following syntax:

CMMROOT/FlexlmLicense   [info] [check]

To view information about the current license, use the **info** option.

To verify the current license, use the **check** option.

To run the *FlexlmLicense* script:

Step 1   Go to the CMM root directory (*/usr/local/netman* on Linux.

Step 2   Enter one of following commands:

```
./FlexlmLicense info
```

or

```
./FlexlmLicense check
```

The **info** parameter specifies display of license information and the **check** parameter specifies that a license verification is performed.

Example 1-2 shows sample output from the *FlexlmLicense* script with the info option.

Example 1-2   Sample Output from FlexlmLicense info

```
-bash-3.00# ./FlexlmLicense info
Install date  : Tue Aug 12 23:46:33 PDT 2014
Expire date   : Permanent
Features      : MMT,VOS,MVPN
Version       : 3.4
Device limit  : 1000
FlexlmHostId  : ANY
VendorName    : cisco
License Type  : Purchased
License status : success
```

Example 1-3 shows sample output from *FlexlmLicense check*.

Example 1-3   Sample Output from FlexlmLicense check

```
-bash-3.00# ./FlexlmLicense check
cisco|MMT,MVPN,VOS|1000
License status : success
```

TFTP Server

If you want to download router configurations and use the router config verification tool, CMM requires that the server have Trivial File Transfer Protocol (TFTP) enabled and a TFTP server installed on the CMM system.

If you will set up a TFTP server, create a TFTP directory on the largest partition and then link it from the root directory as follows, assuming the directory was created under /usr: ln -s /usr/tftpboot /tftpboot.

For Linux ES/AS 4:

tftp-0.39-2

For Linux ES/AS 5:

tftp-0.39-0.EL5.0

After TFTP is installed, modify the */etc/xinetd.d/tftp* file to enable the TFTP server.

Set the ownership and permissions as follows:

```
chown root:mmtuser tftpboot
chmod 0775 tftpboot
```

Then restart the **xinetd** process: `/etc/init.d/xinetd restart`.

Linux IP Address/Default Route

- To change the system's IP address, you modify the */etc/sysconfig/network-scripts/ifcfg-eth0* file, then restart the system.

- To change the default gateway, you must modify the /etc/sysconfig/network file.

- To temporarily change these values, you can use the following commands:

```
ifconfig eth0 x.x.x.x
route delete default
route add default gw x.x.x.x metric 1
```

Linux Installation Instructions

Complete these steps to install CMM 3.4 on a Linux system:

1. Install the license file.

2. Create the installation directory (optional).

3. Do one of the following:

- If you are installing from the CD-ROM, mount the CD-ROM.

- If you are installing from the tar file, unzip the tar file.

4. Run the Linux installation script.

Installing the License File

If you have purchased a license for CMM, copy the license file provided by Cisco to an appropriate directory on the host machine. During installation, the interface will prompt you for the location of the license file.

If you have not yet purchased a license, you can use the evaluation license provided with the CMM 3.4 distribution to manage up to 50 devices for 60 days.

For information on how licensing works, see Licensing, page 1-3.

For additional information, see:

- Obtaining a CMM License, page 1-4

- Installing the CMM License, page 1-6

- Managing CMM Licenses, page 1-7

Creating the Linux Installation Directory (Optional)

On a Linux system, install Cisco Multicast Manager in */usr/local/netman*. On a Linux installation, Cisco Multicast Manager requires approximately 3 GB of disk space.

If there is not enough room in */usr/local*, create the netman directory on another partition, then create a symbolic link to it from */usr/local*. For example:

```
# mkdir /space/netman
```

```
# cd /usr/local
# ln -s /space/netman netman
# chown -h mmtuser:mmtuser netman
```

Mounting the CD-ROM (Linux)

If you are mounting an actual physical CD-ROM, use one of the following commands:

For Red Hat Linux ES/AS 4:

```
# mount /dev/cdrom /mnt/cdrom
```

For Red Hat Linux ES/AS 5:

```
# mount /dev/hdc /media/cdrom
```

For VMWare ESX 3.5:

```
# mount /dev/hdc /media/cdrom
```

If you are mounting an **ISO CD-ROM** image downloaded from Cisco.com, use the following command:

```
# mount -t iso9660 -o loop image.iso /mnt/isoimage
```

Note   */mnt* is the mount point and can be any designated directory. If this command does not work, please check with your system administrator for mounting instructions.

Unzipping the Tar File

If you are installing from the tar file, create a */tmp* directory and unzip the tar file there:

```
# cd /tmp
# tar -xzvf cmm34_linux.tar.gz
```

The system creates a *Linux* directory and unzips the distribution file to that directory.

Running the Linux Installation Script

To run the Linux installation script:

Step 1   Log in as *root*.

Step 2   If installing from a CDROM, enter:

```
# cd /cdrom/cdrom0
#./install.sh
```

If installing from the extracted tar file location, enter:

```
# cd /tmp/Linux
#./setup.sh
```

The system issues a series of prompts.

Step 3   Answer the prompts as indicated in Table 1-2.

Table 1-2   Linux Installation Prompts

Prompt	Response
Checking the OS version in cmm-as5-04... Supported Version Server5 Found Checking for the available disk space... <This message appears only if available disk space is less than recommended> Space available in cmm-as5-04: 465337 Kb which is less than the Disk space recommended: 3145728 Kb Do you wish to continue the installation? [y/n]:	There is no default entry for this prompt. Enter **y** if you want to proceed with the installation; otherwise, enter **n**.
Checking for physical memory in the system... <This message appears only if the available RAM is less than recommended> Physical Memory available in cmm-as5-04: 1060864 Kb which is less than the RAM space recommended: 2055200 Kb Do you wish to continue the installation? [y/n]:	There is no default entry for this prompt. Enter **y** if you want to proceed with the installation; otherwise, enter **n**.
The application installs in /usr/local/netman. Do you wish to continue? [y/n] (default - y):	Press <Enter> to accept the default installation directory (/usr/local/netman); otherwise enter **n** and then specify another installation directory.
Have you purchased a license for Cisco Multicast Manager 3.4? [y/n] [Enter n to continue with evaluation license] (default - n):	Do one of the following: • If you have purchased a license file for CMM 3.4, enter **y**. • If you have not yet purchased a license file, enter **n** to continue installation using the CMM evaluation license that is provided with the CMM 3.4 distribution. The evaluation license allows you to use CMM 3.4 for 60 days. For additional information on CMM licensing, see Licensing, page 1-3
Enter purchased license file:	If you enter **y** in response to the previous prompt, this prompt appears. Enter the path and filename of the license file. If the license file is in the current directory, enter the name of the license file.
Cisco Multicast Manager by default uses mysql database on port 3306. Do you want to change the default mysql port (y/n) (default - n):	To accept the default (do not change the default mysql database on port 3306), press **Enter**; otherwise, enter **y** to and then change the default Mysql port when prompted.

Table 1-2   Linux Installation Prompts (continued)

Prompt	Response
The community name to add read-only access for (default- public):	The default community string is *public*, but you can specify the community string that is configured on your device Press **Enter** to accept the default community name (public); otherwise, enter the community string that is defined on your device.
The physical location of the system:	Enter a description of where you are located. If you press **Enter**, the default is used (no string specifying a physical location)
Contact information of the administrator (default - root):	Enter the best method for contacting the administrator; for example, phone number, e-mail address, and so on. To accept the default email address (root@<*CMM server IP address*>, press **Enter**.
Do you want to disable access control checks (y/n) (default - y):	To accept the default value (**y**— for disable access control checks, press <**Enter**>; otherwise, enter **n** to enable access control checks.
Do you want to add some other Trap OIDs with the default list (y/n) (default - n):	To accept the default value (**n**—do not add additional trap OIDs, press <**Enter**>; otherwise, if you wish to add more OIDs, enter **y** and enter a trap OID to be added.

Example 1-4 shows sample output from the Linux installation.

Example 1-4   Sample Linux Installation Output

```
[root@cmm-server1 Linux]# ./setup.sh

Cisco Multicast Manager Version 3.4 installation setup
Copyright (c) 2009, 2010, 2011-2012, 2013, 2014 Cisco and/or its affiliates. All rights
reserved.

Checking the OS version in cmm-server1...
Supported Version AS4 Found

Checking for the available disk space...
Disk space available in cmm-server1 is 245024940 Kb(Recommended: 3145728 Kb)

Checking for physical memory in the system...
Physical memory available in cmm-server1 is 4151236 Kb(Recommended: 2055200 Kb)

No previous Cisco Multicast Manager version found in this machine cmm-server1

Installing Cisco Multicast Manager Version 3.4
The application installs in /usr/local/netman. Do you wish to continue? [y/n] (default -
y):
License Installation Utility
Copyright (c) 2009, 2010, 2011-2012, 2013, 2014 Cisco and/or its affiliates. All rights
reserved.

Have you purchased a license for Cisco Multicast Manager 3.4? [y/n][Enter n to continue
with evaluation license] (default - n):
```

```
*******************************************************************************

Installation will continue with Evaluation license.
Please contact get-cmm-key@cisco.com to get permanent license file
Specify the host id of this machine while sending license request

Host Id of this machine  : 001B78A6AC7B


*******************************************************************************


Press Enter key to continue installation...

Install date  : Tue Aug 05 15:08:53 PST 2014
Expire date   : Mon Sep 01 16:08:53 PDT 2014
Features      : MMT,MVPN,VOS
Version       : 3.4
Device limit  : 50
FlexlmHostId  : ANY
VendorName    : cisco
License Type  : Evaluation

License status : success

Creating mmtuser gid...
The mmtuser group already exists
Creating mmtuser uid...
The mmtuser id already exists.
Installing Perl...
Installing MIBS...
Installing support files...
Installing ciscomm to /etc/init.d...
Installing Tomcat...
Creating  db base version for fresh install
mysql group already exist
mysql user already exist


Cisco Multicast Manager by default uses mysql database on port 3306.
Do you want to change the default mysql port (y/n) (default - n): Copying mysql
configuration file to /etc folder ...
Starting MySQL......................................................._[60G[
_[0;32mOK_[0;39m  ]
Done creating cmm database
Updating Cisco Multicast Manager Db based on the install type and versions ...
Db schema changes done
Initializing IP Address database with reserved Multicast Addresses...
Shutting down MySQL.._[60G[  _[0;32mOK_[0;39m  ]
Configuring Trap Receiver and SNMP Agent...

Getting Configuration Information for SNMP Agent
================================================

Access control Setup
Description:SNMPv1/SNMPv2c read-only access community name

The community name to add read-only access for (default - public):  Community name for
read only access is public

System Information Setup
Description:This section defines some of the information reported in the
        "System" mib group
```

```
The physical Location of the system : Contact Information of the Administrator (default -
root@):
Contact Information of the Administrator is root@

Getting Configuration Information for Trap Receiver
=====================================================

Access control Setup
Do you want to disable access control checks (y/n) (default - y):
Disables the access control check and accepts all incoming Notification traps

Following are the list of default OIDs the TRAP receiver is configured with

     1.  ciscoIpMRouteMissingHeartBeats (1.3.6.1.4.1.9.10.2.3.1.0.1)
     2.  pimNeighborLoss (1.3.6.1.3.61.1.0.1)
     3.  CISCO-PIM-MIB Traps (1.3.6.1.4.1.9.9.184.2.0.*)
     4.  MSDP-MIB Traps (1.3.6.1.3.92.1.1.7.*)
     5.  ciscoMvpnMvrfChange (1.3.6.1.4.1.9.10.113.0.2)
     6.  iVMS Traps (1.3.6.1.4.1.15181.11.1.*)
     7.  iVMS Traps 4.x (1.3.6.1.4.1.15181.11.4.*)
     8.  Mixed Signal (1.3.6.1.4.1.24931.9.1.1.*)
     9.  BridgeTech Traps (1.3.6.1.4.1.24562.*)
     10. CISCO-PIM-MIB-extn (1.3.6.1.4.1.9.10.120.0.*)
     11. CISCO-PIM-IETF-MIB (1.3.6.1.4.1.9.10.119.0.*)
     12. MYSTRO-VIDEOPORT-MIB (1.3.6.1.4.1.14373.2.*)
     13. SAEUROPE-ADMINISTRATION-MIB (1.3.6.1.4.1.1482.20.1.*)
     14. SAEUROPE-DCM-MIB (1.3.6.1.4.1.1482.1.3.2.2.*)
     15. SAEUROPE-MESSAGES-MIB (1.3.6.1.4.1.1482.1.1.2.*)
     16. SAEUROPE-TRAPCONTROL-MIB (1.3.6.1.4.1.1482.1.1.1.*)
     17. CISCO-FLOW-MONITOR-MIB (1.3.6.1.4.1.9.9.692.0.*)

Do you want to add some other Trap OIDs with the default list (y/n) (default - n): Default
Trap OIDs Configured
Installation Finished.
Starting the application...
Starting mysql server...
Starting MySQL._[60G[ _[0;32mOK_[0;39m  ]
Starting CMM Data service...
CMM DataService process started
Using CATALINA_BASE:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_HOME:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtsys/apache-tomcat/temp
Using JRE_HOME:        /usr/local/netman/mmtsys/jre/
Starting mysql server...
Starting MySQL_[60G[ _[0;32mOK_[0;39m  ]
Starting the polling daemon...
Starting the CLI proxy daemons...
Starting the CLI proxy dtv daemon...
Starting SNMP Trap Receiver daemon...
Starting SNMP Trap Receiver

Starting SNMP Agent daemon...
Starting SNMP Agent
Starting CMM Util process...
...............
CMM Util process started
```

Changing the HTTPS Port

The server is configured by default to run on port 8080. If you want to change port 8080 to another port, complete these steps:

Step 1 Navigate to the following directory:

Linux:

```
/usr/local/netman/mmtsys/apache-tomcat/conf/server.xml
```

Step 2 Edit the *server.xml* file.

Step 3 Modify the `connector port` entry to specify a port other than port 8080:

  a. If your installation is on a Linux device:

  - Locate the XML element that reads:

```
<Connector port="8080" protocol="HTTP/1.1" SSLEnabled="true"
            maxThreads="150" scheme="https" secure="true"
            clientAuth="false" sslProtocol="TLS"                          \
keystoreFile="/usr/local/netman/mmtsys/apache-tomcat/conf/keystore"       \
keypass="cmm_dev" />
```

  - Change the entry `Connector port="8080"` to specify another port number.

  -

  b. Save the *server.xml* file.

Step 4 Restart the CMM processes.

For information on starting CMM, see Starting and Stopping CMM, page 1-22.

Upgrading to Cisco Multicast Manager 3.4

You may upgrade from versions 3.0, 3.0.1, 3.1, 3.1.1, 3.2, 3.3, 3.3.1 or 3.3.2 to version 3.4 using a DVD or ISO image downloaded from Cisco.com, or a tar file.

To successfully upgrade, you must obtain a license file for CMM 3.4. For information on obtaining a license file, see Licensing, page 1-3.

Before you upgrade, ensure that you have made a backup of your existing CMM installation as described in the upgrade instructions that follow.

Upgrading on Linux Using a CD or ISO Image

To upgrade on Linux using a CD or ISO image:

Step 1 To stop the CMM processes, enter:

```
./K98mmt
```

> **Note** If you are upgrading from CMM version 3.0, 3.0.1, 3.1, 3.1.1, 3.2, 3.3, 3.3.1, 3.3.2 or 3.4, the CMM installation script automatically backs up your existing configuration and network inventory.
>
> The backup files are stored in the following directory and .tar file:
>
> - */usr/local/netman/backup/cmmbackup3_0.tar* for CMM 3.0
> - */usr/local/netman/backup/cmmbackup3_1.tar* for CMM 3.1
> - */usr/local/netman/backup/cmmbackup3_2.tar* for CMM 3.2
> - */usr/local/netman/backup/cmmbackup3_3.tar* for CMM 3.3
> - */usr/local/netman/backup/cmmbackup3_3.1.tar* for CMM 3.3.1
> - */usr/local/netman/backup/cmmbackup3_3.2.tar* for CMM 3.3.2
> - */usr/local/netman/backup/cmmbackup3_4.tar* for CMM 3.4

For Red Hat Linux ES/AS 5:

```
# mount /dev/hdc /media/cdrom
```

c. If you are mounting an **ISO CD-ROM** image downloaded from Cisco.com, use the following command:

```
# mount -t iso9660 -o loop image.iso /mnt/isoimage
```

> **Note** */mnt* is the mount point and can be any designated directory. If this command does not work, please check with your system administrator for mounting instructions.

Step 2 To install, use the following commands:

For a physical DVD:

```
cd /mnt/cdrom
```

For an ISO image downloaded from Cisco.com:

```
cd /mnt/<isoimage folder>
```

Step 3 Execute the **setup.sh** script and follow the steps in Running the Linux Installation Script, page 1-11.

Step 4 If the upgrade procedure fails, see Restoring a Previous Version of CMM, page 1-21 for instructions on restoring the original CMM installation.

Upgrading on Linux Using a Tar File

To upgrade on Linux using a tar file:

Step 1 To stop the CMM processes, enter:

```
./K98mmt
```

Note   If you are upgrading from CMM version 3.0, 3.0.1, 3.1, 3.1.1, 3.2, 3.3, 3.3.1, 3.3.2 or 3.4 the CMM installation script automatically backs up your existing configuration and network inventory.

The backup files are stored in the following directory and .tar file:

- */usr/local/netman/backup/cmmbackup3_0.tar* for CMM 3.0

- */usr/local/netman/backup/cmmbackup3_1.tar* for CMM 3.1

- */usr/local/netman/backup/cmmbackup3_2.tar* for CMM 3.2

- */usr/local/netman/backup/cmmbackup3_3.tar* for CMM 3.3

- *usr/local/netman/backup/cmmbackup3_3.1.tar* for CMM 3.3.1

- *usr/local/netman/backup/cmmbackup3_3.2.tar* for CMM 3.3.2

- *usr/local/netman/backup/cmmbackup3_4.tar* for CMM 3.4

```
[root@vm-rh54_64-01 Linux]# ./setup.sh

Cisco Multicast Manager Version 3.4 installation setup
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reserved.

Checking the OS version in vm-rh54_64-01...
Supported Version Server5 Found

Checking for the available disk space...
Disk space available in vm-rh54_64-01 is 78945020 Kb(Recommended: 3145728 Kb)

Checking for physical memory in the system...
Physical memory available in vm-rh54_64-01 is 5975764 Kb(Recommended: 2055200 Kb)


INFO: Backing up   property files from previous version
Cisco Multicast Manager Version 3.4 found in this machine vm-rh54_64-01

Do you want to continue upgrade from 3.3 to Cisco Multicast Manager 3.4? [y/n]: y

This will stops the Cisco Multicast Manager processes. Do you want to continue? [y/n]: y
Upgrading Cisco Multicast Manager Version to 3.4

Stopping Cisco Multicast Manager Processes ...
Using CATALINA_BASE:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_HOME:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtsys/apache-tomcat/temp
Using JRE_HOME:        /usr/local/netman/mmtsys/jre
Shutting down MySQL..                                    [  OK  ]
Stopping CLI Proxy Daemon(ssh)..
Stopping CLI Proxy Daemon(tel)..
Stopping CLI Proxy Daemon(dtv)..
Stopping SNMP Trap Receiver..
Stopping SNMP Trap Agent..
7520
CMM Util process stopped successfully...
7204
CMM Data Service process stopped successfully...
CMM Processes Stopped Successfully


License Installation Utility
```

```
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reserved.

Have you have purchased license file for Cisco Multicast Manager 3.4 upgrade? [y/n]: y
Enter license file: /cmm/dummyFileName
Checking the Licensing File...

Install date  : Thu Aug 01 10:20:36 PST 2013
Expire date   : Permanent
Features      : MMT,MVPN,VOS
Version       : 3.3
Device limit  : Unlimited
FlexlmHostId  : ANY
VendorName    : cisco
License Type  : Purchased

License status : success


Backing up previous Cisco Multicast Manager database and configuration .....
Starting mysql server to upgrade export
Starting MySQL.                                      [  OK  ]
Stop mysql server after upgrade export
Shutting down MySQL..                                [  OK  ]
cat: /usr/local/netman/mmtsys/sys/rmspoll.conf: No such file or directory
cmm_backup/
cmm_backup/sys/
cmm_backup/sys/cmmdb.conf
cmm_backup/sys/multicastdiscovery.conf
cmm_backup/sys/mixedsignaloid.conf
cmm_backup/sys/rmspollcli.conf
cmm_backup/sys/multicasttrace.conf
cmm_backup/cmmdb.sql
cmm_backup/db/
cmm_backup/db/cookieState.db
cmm_backup/db/.ipaddr.db.lock
cmm_backup/db/ipaddr.db
cmm_backup/db/STDMIBS
cmm_backup/data/
cmm_backup/graphs/
cmm_backup/trace/
cmm_backup/share/
cmm_backup/share/snmp/
cmm_backup/share/snmp/snmptrapd.conf
cmm_backup/share/snmp/snmpd.conf
cmm_backup/application/
cmm_backup/application/i18n.properties
cmm_backup/application/warning.properties
Installing Perl...
Installing MIBS...
INFO : Shipping library for Linux 64 bit specific changes
Installing support files...
Installing ciscomm to /etc/init.d...
Installing Tomcat...
Updating Cisco Multicast Manager Db based on the install type and versions ...
Starting the mysql server for upgrade
Starting MySQL..                                     [  OK  ]
Base Db version exist is 3.4
Updating db for Cisco Multicast Manager version 3.4 schema changes
updating tree polling while upgrade for VidMon feature
Stopping mysql server after upgrade
Shutting down MySQL...                               [  OK  ]
Configuring Trap Receiver and SNMP Agent...
```

```
Getting Configuration Information for SNMP Agent
==================================================

Access control Setup
Description:    SNMPv1/SNMPv2c read-only access community name

The community name to add read-only access for (default - public):
Community name for read only access is public

System Information Setup
Description:    This section defines some of the information reported in the
                "System" mib group

The physical Location of the system : San Jose
Contact Information of the Administrator (default - root@):

Contact Information of the Administrator is root@

Getting Configuration Information for Trap Receiver
====================================================

Access control Setup
Do you want to disable access control checks (y/n) (default - y):

Disables the access control check and accepts all incoming Notification traps

Following are the list of default OIDs the TRAP receiver is configured with

        1.  ciscoIpMRouteMissingHeartBeats (1.3.6.1.4.1.9.10.2.3.1.0.1)
        2.  pimNeighborLoss (1.3.6.1.3.61.1.0.1)
        3.  CISCO-PIM-MIB Traps (1.3.6.1.4.1.9.9.184.2.0.*)
        4.  MSDP-MIB Traps (1.3.6.1.3.92.1.1.7.*)
        5.  ciscoMvpnMvrfChange (1.3.6.1.4.1.9.10.113.0.2)
        6.  iVMS Traps (1.3.6.1.4.1.15181.11.1.*)
        7.  iVMS Traps 4.x (1.3.6.1.4.1.15181.11.4.*)
        8.  Mixed Signal (1.3.6.1.4.1.24931.9.1.1.*)
        9.  BridgeTech Traps (1.3.6.1.4.1.24562.*)
       10.  CISCO-PIM-MIB-extn (1.3.6.1.4.1.9.10.120.0.*)
       11.  CISCO-PIM-IETF-MIB (1.3.6.1.4.1.9.10.119.0.*)
       12.  MYSTRO-VIDEOPORT-MIB (1.3.6.1.4.1.14373.2.*)
       13.  SAEUROPE-ADMINISTRATION-MIB (1.3.6.1.4.1.1482.20.1.*)
       14.  SAEUROPE-DCM-MIB (1.3.6.1.4.1.1482.1.3.2.2.*)
       15.  SAEUROPE-MESSAGES-MIB (1.3.6.1.4.1.1482.1.1.2.*)
       16.  SAEUROPE-TRAPCONTROL-MIB (1.3.6.1.4.1.1482.1.1.1.*)
       17.  CISCO-FLOW-MONITOR-MIB (1.3.6.1.4.1.9.9.692.0.*)

Do you want to add some other Trap OIDs with the default list (y/n) (default - n):
Default Trap OIDs Configured
Installation Finished.
INFO: Updating files for upgrade
INFO: Restoring  property files from previous version
Starting the application...
Starting mysql server...
Starting MySQL.                                         [  OK  ]
Starting CMM Data service...
CMM DataService process started
Using CATALINA_BASE:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_HOME:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtsys/apache-tomcat/temp
Using JRE_HOME:        /usr/local/netman/mmtsys/jre/
Starting mysql server...
Starting MySQL                                          [  OK  ]
Starting the polling daemon...
Starting the CLI proxy daemons...
```

```
Starting the CLI proxy dtv daemon...
Starting SNMP Trap Receiver daemon...
Starting SNMP Trap Receiver

Starting SNMP Agent daemon...
Starting SNMP Agent
Starting CMM Util process...
................
CMM Util process started
```

Upgrading CMM 2.x to CMM 3.4

There is no direct upgrade path from CMM 2.x to CMM 3.4. To upgrade from CMM 2.x to CMM 3.4 you must first upgrade to CMM 3.1 and then upgrade CMM 3.1 to CMM 3.4.

For detailed upgrade information, see:

- "Upgrading to CMM 3.1" in the *Installation Guide for Cisco Multicast Manager, 3.1*, at the following location:

  http://www.cisco.com/en/US/docs/net_mgmt/cisco_multicast_manager/3.1/installation/guide/cmm_in.html#wp1081762

- Upgrading to Cisco Multicast Manager 3.4, page 1-16

Restoring a Previous Version of CMM

In the event that you encounter problems with the upgrade procedure, you can restore a previous version of CMM from a backed up installation.

Complete these steps to restore a previous version of CMM:

Step 1   If the previous CMM version is 3.0, 3.0.1, 3.1, 3.1.1, 3.2, 3.3, 3.3.1 or 3.3.2 complete these steps:

   a.   Copy the backup files that were created automatically during the installation process:

- For example, if you are restoring a Linux installation of CMM 3.3.2, then copy the file */usr/local/netman/backup/cmmbackup3_3.2.tar* to any location.

  cp /usr/local/netman/backup/cmmbackup3_3_2.tar /tmp

Step 2   If your CMM installation is on a Linux server, enter the following command to uninstall it:

/usr/local/netman/uninstall.sh

Step 3   If the uninstall script does not remove the installation, then do one of the following to remove it manually:

- If your CMM installation is on a Linux server, enter the following to delete it:

  rm -fr /usr/local/netman

Step 4   Locate the tar file that contains the backup of the previous installation that you made during the upgrade procedure.

Step 5 If the previous CMM version used is version 3.0, 3.0.1, 3.1, 3.1.1, 3.2, 3.3, 3.3.1 or 3.3.2 complete these steps:

    a. Perform a fresh installation of the previous CMM version.

    b. Import the backed up information using

On Linux:

    To import back up data of the previous CMM version

    /usr/local/netman/import.sh

Step 6 Enter the following to start the CMM processes:

    `./S98mmt`

Starting and Stopping CMM

To start the application:

On Linux:

Run the **S98mmt** script to start the CMM process.

To stop the application, run the **K98mmt** script.

The **S98mmt** script and the **K98mmt** scripts are located in the CMM home directory (by default */usr/local/netman*).

The **S98mmt** script also runs the **S98mmtpolld** script, which starts the polling daemon. The **S98mmtpolld** script can also be used as a watchdog script to ensure that the polling daemon is up and running. The root **crontab** configuration would be:

On Linux:

`*/5 * * * * /usr/local/netman/S98mmtpolld`

These entries will run the script every five minutes.

The default login username is admin, and the default password is rmsmmt.

> **Note** The **K98mmt** script will stop the tomcat server, polling daemon, cliproxyd daemon, SNMP trap agent daemon, and SNMP trap receiver daemon. The **S98mmt** script will start the tomcat server, cliproxyd daemon, SNMP trap agent daemon, and SNMP trap receiver daemon, but not the polling daemon, for the first time. You will have to manually start the polling daemon through the application for the first time after configuring the global polling configuration.

During installation, the **K98mmt** script is installed in the /etc/rc0.d directory. This ensures that the polling daemon shuts down properly upon system reboot.

The installation script logs all of the install and upgrade information in a log file named cmminstall.log, under /tmp folder.

Remote Upgrade

CMM 3.0, 3.1, 3.2, 3.3, 3.3.1, and 3.3.2 can be upgraded remotely to 3.4. To perform a remote upgrade:

1. Export the CMM 3.x inventory, configurations, trace related information, administration information.

2. Import the exported inventory, configuration, trace related information, and administration information into the CMM 3.4 server.

   See Server Migration, page 1-23 for details on the procedure.

> **Note** The remote upgrade procedure cannot be used to migrate from one operating system platform to another.

Server Migration

Two scripts, **export.sh** and **import.sh**, are provided for server migration. All database content and configurations can be exported and imported from one machine to other.

These scripts make it possible to upgrade your CMM installation remotely.

> **Note** The server migration procedure cannot be used to migrate from one operating system platform to another.

Export Utility

The **export.sh** export utility allows you to save the CMM configuration to a tar file that you can transfer to another CMM device. On the second CMM device, you can import the saved configuration by using the **import.s**h script. This is useful when you want to configure several CMM installations with the same information.

To run the **export.sh** script, you will need the password for the MySQL server on the CMM device (the default password is *cmm*).

The export utility prompts you for a target directory to which to write the exported data, and saves the data in a tar file. The default name for the tar file is *cmmbackup3_4.tar*, but you can specify another name for the tar file.

Example 1-5 shows sample output from the Linux version of the export script.

Example 1-5   Sample Export Utility Output

```
[root@vm-rh54_64-01 Linux]# ./export.sh

Cisco Multicast Manager Version 3.4 export utility
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reserved.

Enter the destination directory: /temp
This utility stops the CMM processes for taking backup.
Do you wish to continue? [y/n]: y

Using CATALINA_BASE:   /usr/local/netman/mmtsys/apache-tomcat
```

```
Using CATALINA_HOME:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtsys/apache-tomcat/temp
Using JRE_HOME:        /usr/local/netman/mmtsys/jre
Shutting down MySQL...                                      [  OK  ]
Stopping CLI Proxy Daemon(ssh)..
Stopping CLI Proxy Daemon(tel)..
Stopping CLI Proxy Daemon(dtv)..
Stopping SNMP Trap Receiver..
Stopping SNMP Trap Agent..
8693
CMM Util process stopped successfully...
8361
CMM Data Service process stopped successfully...
kill 9176: No such process
kill 9195: No such process

Backing up data...

Starting MySQL.                                            [  OK  ]
Enter password:
Shutting down MySQL...                                      [  OK  ]
cat: /usr/local/netman/mmtsys/sys/rmspoll.conf: No such file or directory

Compressing the backed up data...
cmm_backup/
cmm_backup/sys/
cmm_backup/sys/cmmdb.conf
cmm_backup/sys/multicastdiscovery.conf
cmm_backup/sys/mixedsignaloid.conf
cmm_backup/sys/rmspollcli.conf
cmm_backup/sys/multicasttrace.conf
cmm_backup/cmmdb.sql
cmm_backup/db/
cmm_backup/db/cookieState.db
cmm_backup/db/.ipaddr.db.lock
cmm_backup/db/ipaddr.db
cmm_backup/db/STDMIBS
cmm_backup/data/
cmm_backup/graphs/
cmm_backup/trace/
cmm_backup/share/
cmm_backup/share/snmp/
cmm_backup/share/snmp/snmptrapd.conf
cmm_backup/share/snmp/snmpd.conf

Data backed up successfully under /temp/cmmbackup3_4.tar

Starting the application...
Starting mysql server...
Starting MySQL.                                            [  OK  ]
Starting CMM Data service...
CMM DataService process started
Using CATALINA_BASE:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_HOME:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtsys/apache-tomcat/temp
Using JRE_HOME:        /usr/local/netman/mmtsys/jre/
Starting mysql server...
Starting MySQL                                             [  OK  ]
Starting the polling daemon...
Starting the CLI proxy daemons...
Starting the CLI proxy dtv daemon...
Starting SNMP Trap Receiver daemon...
Starting SNMP Trap Receiver
```

```
Starting SNMP Agent daemon...
Starting SNMP Agent
Starting CMM Util process...
................
CMM Util process started
*********************
```

Import Utility

CMM 3.4 provides seven import utilities for specific CMM releases. The import utilities allow you to import a saved CMM configuration that you saved by using the **export.sh** script to update CMM. This is useful when you want to configure several CMM installations with the same information.

CMM 3.4 provides seven import scripts in the CMM root directory:

- **importCMM30.sh** —Run this script to import CMM 3.0 or CMM 3.0.x data.
- **importCMM31.sh** —Run this script to import CMM 3.1 or CMM3.1.x data.
- **importCMM32.sh** —Run this script to import CMM 3.2.
- **importCMM33.sh**— Run this script to import CMM 3.3.
- **importCMM331.sh**— Run this script to import CMM 3.3.1.
- **importCMM332.sh**— Run this script to import CMM 3.3.2
- **import.sh**— Run this script to import CMM 3.4.

To run the an import script, you will need the password for the MySQL server on the CMM device (the default password is *cmm*).

The import utility prompts you for the directory location and filename for the tar file that contains an exported CMM configuration.

Example 1-6 shows sample output from the Linux version of the **import.sh** script.

Example 1-6   Sample Import Utility Output

```
[root@vm-rh54_64-01 Linux]# ./import.sh

Cisco Multicast Manager Version 3.4 import utility
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reserved.

Enter the source directory of the tar file: /temp
Enter the backup File: cmmbackup3_4.tar

Checking CMM 3.4 installed in this machine...

This utility stops the CMM processes for restoring the backup
Do you wish to continue? [y/n]: y

Using CATALINA_BASE:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_HOME:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtsys/apache-tomcat/temp
Using JRE_HOME:        /usr/local/netman/mmtsys/jre
Shutting down MySQL..                             [  OK  ]
Stopping CLI Proxy Daemon(ssh)..
Stopping CLI Proxy Daemon(tel)..
```

```
Stopping CLI Proxy Daemon(dtv)..
Stopping SNMP Trap Receiver..
Stopping SNMP Trap Agent..
13174
CMM Util process stopped successfully...
12843
CMM Data Service process stopped successfully...
kill 13132: No such process
kill 13143: No such process

This utlity deletes all the previous domain information
Do you wish to continue? [y/n]: y
Extracting...
cmm_backup/
cmm_backup/sys/
cmm_backup/sys/cmmdb.conf
cmm_backup/sys/multicastdiscovery.conf
cmm_backup/sys/mixedsignaloid.conf
cmm_backup/sys/rmspollcli.conf
cmm_backup/sys/multicasttrace.conf
cmm_backup/cmmdb.sql
cmm_backup/db/
cmm_backup/db/cookieState.db
cmm_backup/db/.ipaddr.db.lock
cmm_backup/db/ipaddr.db
cmm_backup/db/STDMIBS
cmm_backup/data/
cmm_backup/graphs/
cmm_backup/trace/
cmm_backup/share/
cmm_backup/share/snmp/
cmm_backup/share/snmp/snmptrapd.conf
cmm_backup/share/snmp/snmpd.conf
Starting mysql server...
Starting MySQL.                                     [  OK  ]
Enter Mysql password:
Dumping the db contents...
Shutting down MySQL...                              [  OK  ]
Copying data and conf files..

Starting the application...
Starting mysql server...
Starting MySQL.                                     [  OK  ]
Starting CMM Data service...
CMM DataService process started
Using CATALINA_BASE:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_HOME:   /usr/local/netman/mmtsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtsys/apache-tomcat/temp
Using JRE_HOME:        /usr/local/netman/mmtsys/jre/
Starting mysql server...
Starting MySQL                                      [  OK  ]
Starting the polling daemon...
Starting the CLI proxy daemons...
Starting the CLI proxy dtv daemon...
Starting SNMP Trap Receiver daemon...
Starting SNMP Trap Receiver

Starting SNMP Agent daemon...
Starting SNMP Agent
Starting CMM Util process...
...............
CMM Util process started
```

Backup Utility

You can make periodic backups using the following script:

./backup.sh <folder>

This script is located in the following directories:

- On Linux:

  /usr/local/netman