



Installation Guide for Cisco Multicast Manager 3.0

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CHAPTER 1

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Preface

Cisco Multicast Manager (CMM) is a web-based software application that requires no client software. With CMM, you can gather information about multicast running in your network, monitor multicast networks, and diagnose problems.

This preface includes:

- [Document Objectives, page v](#)
- [Document Audience, page v](#)
- [Document Organization, page v](#)
- [Document Conventions, page vi](#)
- [Related Documentation, page vi](#)
- [Obtaining Documentation, Obtaining Support, and Security Guidelines, page vii](#)

Document Objectives

This guide describes how to install Cisco Multicast Manager. Using the information provided in this guide, you can complete the tasks that are necessary to install CMM in your multicast environment.

Document Audience

This guide is for network administrators or operators who use the CMM software to manage multicast networks. Network administrators or operators should have:

- Basic network management skills
- Basic multicast knowledge

Document Organization

This guide contains the following chapter:

[Chapter 1, “Installing Cisco Multicast Manager,”](#) describes preliminary installation steps, detailed installation steps for the Solaris platform and the Linux platform, and tasks to perform after the initial installation.

Document Conventions

This guide uses basic conventions to represent text and table information.

Command descriptions use the following conventions:

- Commands and keywords are in **boldface** font.
- Arguments for which you supply values are in *italic* font.
- Elements in square brackets ([]) are optional.
- Alternate but required keywords are grouped in braces ({ }) and separated by a vertical bar (|).

Examples use the following conventions:

- Terminal sessions and information that the system displays are printed in `screen` font.
- Information that you enter is in **boldface screen** font. Variables for which you enter actual data are printed in *italic screen* font.
- Nonprinting characters, such as passwords, are shown in angle brackets (< >).
- Information that the system displays is in `screen` font, with default responses in square brackets ([]).

This publication also uses the following conventions:

- Menu items and button names are in **boldface** font.
- Directories and filenames are in *italic* font.
- If items such as buttons or menu options are dimmed on the application windows, it means that the items are not available either because you do not have the correct permissions or because the item is not applicable at this time.



Note

Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in the manual.



Tip

Means *the following are useful tips*.

Related Documentation

Additional information can be found in the following publications of the CMM documentation set:

- *User Guide for Cisco Multicast Manager 3.0*
- *Release Notes for Cisco Multicast Manager 3.0*
- *Documentation Guide and Supplemental License Agreement for Cisco Multicast Manager 3.0*

Obtaining Documentation, Obtaining Support, and Security Guidelines

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

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

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.



CHAPTER 1

Installing Cisco Multicast Manager

This chapter contains the following sections:

- [System Requirements, page 1-1](#)
- [Licensing, page 1-3](#)
- [TFTP Server, page 1-3](#)
- [Linux IP Address/Default Route, page 1-4](#)
- [Solaris Installation Instructions, page 1-4](#)
- [Linux Installation Instructions, page 1-9](#)
- [Changing the HTTPS Port, page 1-13](#)
- [Upgrading to Cisco Multicast Manager 3.0, page 1-14](#)
- [Starting and Stopping CMM, page 1-22](#)
- [Service Migration, page 1-23](#)

System Requirements

This section describes the system requirements for running Cisco Multicast Manager 3.0.

Operating Systems

Cisco Multicast Manager can run on Linux systems and on Sun Microsystems systems running Sun Solaris.

Linux

CMM 3.0 can run on the following Linux versions:

- Red Hat Enterprise Linux ES/AS 4
- Red Hat Enterprise Linux ES/AS 5
- VMWare ESX 3.5

Sun Systems

CMM 3.0 can run on the following Sun Solaris versions:

- Solaris 8
- Solaris 9
- Solaris 10

Supported Hardware Platforms

This section describes the minimum recommended hardware for running Cisco Multicast Manager 3.0 on a Linux system or a Sun Microsystems system.

Linux

On Linux systems, the following hardware is supported:

- Dual AMD Opteron 250 processor.
A 2.4-GHz processor is recommended for a large enterprise network (more than 500 devices).
- 2.8-GHz Intel Pentium IV or 2.8-GHz Intel Xeon processor.
- A Dual 2.8-GHz Intel Pentium IV or a Dual 2.8-GHz Intel Xeon processor is recommended for large enterprise networks (more than 500 devices).

Sun Microsystems Servers

Cisco Multicast Manager supports the following hardware on Sun Microsystems servers:

- Sun Fire V440: Up to four 1.593-GHz UltraSPARC IIIi processors for a large enterprise network (more than 500 devices).
- Sun Fire V240: One 1.34-GHz or two 1.5-GHz UltraSPARC processors.



Note The Solaris X86 version and the 64-bit version of Red Hat Linux are not supported.

Disk Space Requirements

CMM requires 3 GB of disk space.



Note

Disk space requirements will vary depending on the size of the network, the number of devices being polled for thresholds, and how often log files are rotated. The following log files are generated by CMM 3.0:

<INSTALLDIR>/mmtsys/sys/rmspoll.log

Memory Requirements

- 2 GB

- 4 GB for large enterprise networks (more than 500 devices)

Licensing

CMM 3.0 requires a license file, which is provided when you purchase the product. 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.

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.key file.

The license.key file can be saved anywhere on the installation machine. During installation of CMM, the system prompts for the license key.

TFTP Server

Cisco Multicast Manager requires that the server have TFTP enabled if you want to download router configurations and use the router config verification tool.

A TFTP directory should be created on the largest partition and then linked 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:mmuser tftpboot
chmod 0775 tftpboot
```

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

For Solaris:

Comment out the `tftpd` line in the `/etc/inetd.conf` file to enable the TFTP server, then restart the **inetd** process.

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
```

Solaris Installation Instructions

Complete these steps to install CMM 3.0 on a Sun Solaris 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 Solaris installation script.



Note

NIS + must be disabled on Solaris for the proper installation of CMM.

Installing the License File

Copy the `license.key` file into an appropriate directory on the host machine. During installation, the interface will prompt you for the location of the license file. Enter the path where the `license.key` file is located. If the license file is invalid, or not present in the host, then the installation will not proceed.

Creating the Installation Directory (Optional)

On Solaris systems, Cisco Multicast Manager must be installed in the `/opt/RMSMMT` directory, and requires approximately 3 GB of disk space.

If there is not enough room in `/opt`, create the `RMSMMT` directory on another partition, then create a symbolic link to it from `/opt`. For example, log in as root and issue these commands:

```
# mkdir /space/RMSMMT
# cd /opt
# ln -s /space/RMSMMT RMSMMT
# chown -h mmtuser:mtuser RMSMMT
```

If you symbolically link `/opt/RMSMMT` to the actual installation directory as shown above, when the installation is complete, you *must* change directory to the actual installation directory. For example:

```
# cd /space
```

and issue the following command:

```
# chown -R mmtuser:mmtuser RMSMMT
```

Otherwise, the installation creates the directory and sets the ownership for you.

Mounting the CD-ROM

If you are mounting a *DVD* and the process `vold` is not running, you will need to manually mount the CD-ROM, use one of the following commands:

```
# mount -rt hsfs /dev/sr0 /cdrom
```

or

```
# mount -rt hsfs /dev/dsk/c0t6d0s2 /cdrom
```

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

```
mount -F hsfs -o ro `lofiadm -a /export/temp/cmm30.iso` /mnt
```



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

Unzipping the Tar File

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

```
# cd /tmp
# gunzip < cmm30_solaris.tar.gz | tar xvf -
```

Running the Solaris Installation Script

To run the Solaris installation script:

Step 1 Log in as root.

Step 2 If you are installing from a CDROM, enter:

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

If you are installing from the extracted tar file location, enter:

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

The system issues a series of prompts.

Step 3 Answer the prompts as indicated in [Table 1-1](#).

Table 1-1 *Solaris Installation Prompts*

| Prompt | Response |
|---|---|
| Checking for the available disk space... <This message is prompted only if the disk space is less than recommended> Space available in cmm-s-001: 465337 Kb which is less than the Disk space recommended: 3145728 Kb Do you wish to continue the installation? [y/n]: | Enter y if you want to proceed with the installation. |
| Checking for physical memory in the system... <This message is prompted only if the RAM space is less than recommended> Physical Memory available in cmm-s-001: 1060864 Kb which is less than the RAM space recommended: 2055200 Kb Do you wish to continue the installation? [y/n]: | Enter y if you want to proceed with the installation. |
| The application installs in /opt/RMSMMT. Do you wish to continue? [y/n]: | Enter y to install in the default installation directory. |
| Enter license file: | Enter the path and filename of the license.key file. |
| Cisco Multicast Manager by default uses a mysql database on port 3306. Do you want to change the default mysql port (y/n) (default - n): n | Enter y to set the default to mysql port or n to accept the default port. |
| The community name to add read-only access for (default- public): | The (default- public) is the default, but you can specify the community string that is configured on your device. |
| The physical location of the system: | Enter a description of where you are located. |
| Contact information of the administrator (default - root): | Enter the best method of contacting the administrator; for example, phone number, e-mail address, and so on. |
| Do you want to disable access control checks (y/n): (Default - y) | Select y . |
| Do you want to add some other Trap OIDs with the default list (y/n) (default - n): | Select n if you do not wish to add more Trap object identifiers (OIDs). If you wish to add more OIDs, select y and enter the Trap OID to be modified. |

Example 1-1 shows sample output from the Solaris installation.

Example 1-1 Sample Solaris Installation Output

```

bash-3.00# ./setup.sh
Cisco Multicast Manager Version 3.0 installation setup
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.
Checking the OS version in cmm-s-001...
Supported version 5.9 found
Checking for the available disk space...
Disk space available in cmm-s-001 is 4653370 Kb(Recommended: 3145728 Kb)
Checking for physical memory in the system...
Physical memory available in cmm-s-001 is 2097152 Kb(Recommended: 2055200 Kb)
No previous CMM version found in this machine cmm-s-001
Installing Cisco Multicast Manager Version 3.0
The application installs in /opt/RMSMMT. Do you wish to continue? [y/n]: y
License Installation Utility
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.
Enter license file: /usr/cmm/license.key
Checking the Licensing File...
Licensed to : cisco
Ip address : 172.20.111.246
Expire date : No expiration date.
Features : MMT,MVPN,VOS
Version : 3.0
Device limit : unlimited
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...
mysql group already exist
mysql user already exist
Installing MySQL system tables...
OK
Filling help tables...
OK

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
..... SUCCESS!
Initializing IP Address database with reserved Multicast Addresses...
Shutting down MySQL
.. SUCCESS!
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): public

```

```

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

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

Getting Configuration Information for Trap Receiver
=====

Access control Setup
Do you want to disable access control checks (y/n) (default - y): 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. ciscoMvvpnMvrfChange (1.3.6.1.4.1.9.10.113.0.2)
  6. ivMS Traps 3.x (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.*)

Do you want to add some other Trap OIDs with the default list (y/n) (default - n): n
Installation Finished.
Writing startup script...
Restarting the application...
Starting mysql server...
Starting MySQL
.. SUCCESS!
Starting CMM Data Service...
Sun Microsystems Inc.  SunOS 5.9      Generic May 2002
18489
CMM DataService process started
Restarting the application...
Sun Microsystems Inc.  SunOS 5.9      Generic May 2002
Using CATALINA_BASE:   /opt/RMSMMT/mmtsyst/apache-tomcat
Using CATALINA_HOME:   /opt/RMSMMT/mmtsyst/apache-tomcat
Using CATALINA_TMPDIR: /opt/RMSMMT/mmtsyst/apache-tomcat/temp
Using JRE_HOME:        /opt/RMSMMT/mmtsyst/jre/
18515
nohup: SIGHUP already handled by 18515; use -a to force process to ignore
Sending output to nohup.out
Restarting the polling daemon...
Sun Microsystems Inc.  SunOS 5.9      Generic May 2002
Starting the CLI proxy daemons...
Sun Microsystems Inc.  SunOS 5.9      Generic May 2002
Sun Microsystems Inc.  SunOS 5.9      Generic May 2002
Starting the CLI proxy dtv daemon...
Sun Microsystems Inc.  SunOS 5.9      Generic May 2002
Starting SNMP Trap Receiver daemon...
Starting SNMP Trap Receiver

Starting SNMP Agent daemon...
Starting SNMP Agent
Sun Microsystems Inc.  SunOS 5.9      Generic May 2002
18608
.....

```

```
CMM Util process started
```

Linux Installation Instructions

Complete these steps to install CMM 3.0 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

Copy the license.key file into an appropriate directory on the host machine. During installation, the interface will prompt you for the location of the license file. Enter the path where the license.key file is located. If the license file is invalid, or not present in the host, the installation will not proceed.

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
```

If you symbolically link /usr/local/netman to the actual installation directory as shown previously, then when the installation is complete, you *must* change directory to the actual installation directory. For example:

```
# cd /space
```

and issue the following command:

```
# chown -R mmtuser:mmtuser netman
```

Otherwise, the installation program creates the directory and sets the ownership for you.

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 place the tar file there:

```
# cd /tmp
# tar -xzvf cmm30_linux.tar.gz
```

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 for the available disk space... <This message is prompted only if the disk space is less than recommended> Space available in cmm-s-001: 465337 Kb which is less than the Disk space recommended: 3145728 Kb Do you wish to continue the installation? [y/n]: | Enter y if you want to proceed with the installation. |
| Checking for physical memory in the system... <This message is prompted only if the RAM space is less than recommended> Physical Memory available in cmm-s-001: 1060864 Kb which is less than the RAM space recommended: 2055200 Kb Do you wish to continue the installation? [y/n]: | Enter y if you want to proceed with the installation. |
| The application installs in /usr/local/netman. Do you wish to continue? [y/n]: | Enter y to install in the default installation directory. |
| Enter license file: | Enter the path and filename of the license.key 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): n | Enter y to set the default to mysql port or n to accept the default port. |
| Contact information of the administrator (default - root): | Enter the best method of contacting the administrator (Example: phone number, email address, etc.) |
| Do you want to disable access control checks (y/n): (Default - y) | Enter y . |
| Do you want to add some other Trap OIDs with the default list (y/n) (default - n): | Enter n if you do not wish to add more Trap OIDs. If you wish to add more OIDs, select y and enter the TRAP OID to be modified. |

[Example 1-2](#) shows sample output from the Linux installation.

Example 1-2 Sample Linux Installation Output

```
[root@cmm-as5-04 Linux]# ./setup.sh

Cisco Multicast Manager Version 3.0 installation setup
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.

Checking the OS version in cmm-as5-04...
Supported Version Server5 Found

Checking for the available disk space...
Disk space available in cmm-as5-04 is 60662080 Kb(Recommended: 3145728 Kb)

Checking for physical memory in the system...
Physical memory available in cmm-as5-04 is 2073972 Kb(Recommended: 2055200 Kb)

No previous CMM version found in this machine cmm-as5-04

Installing Cisco Multicast Manager Version 3.0
The application installs in /usr/local/netman. Do you wish to continue? [y/n]: y

License Installation Utility
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.

Enter license file: /usr/local/license.key
Checking the Licensing File...
Licensed to   : cisco
Ip address    : 172.20.111.233
Expire date   : No expiration date.
Features      : MMT,MVPN,VOS
Version       : 3.0
Device limit  : 10000
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...
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): n
Copying mysql configuration file to /etc folder ...
Starting MySQL..... [ OK ]
Initializing IP Address database with reserved Multicast Addresses...
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 :
Contact Information of the Administrator (default - root@):

Contact Inforamtion 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. ciscoMvvpnMvrfChange (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.*)

Do you want to add some other Trap OIDs with the default list (y/n) (default - n):
Default Trap OIDs Configured
Installation Finished.
Writing startup script...
Restarting the application...
Starting mysql server...
Starting MySQL.                                [ OK ]
Starting CMM Data Service...
CMM DataService process started
Using CATALINA_BASE:   /usr/local/netman/mmtsyst/apache-tomcat
Using CATALINA_HOME:   /usr/local/netman/mmtsyst/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtsyst/apache-tomcat/temp
Using JRE_HOME:        /usr/local/netman/mmtsyst/jre/
Restarting 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
.....
CMM Util process started

```

Changing the HTTPS Port

The server is configured by default to run on port 8080.

Step 1 To change to the default port from 8080 to another port number, change the port in the Listen field and the VirtualHost_default field.

Step 2 Navigate to the following directories:

Linux:

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

Solaris:

```
/opt/RMSMMT/mmtsys/apache-tomcat/conf/server.xml
```

Step 3 Define the new port number.

Example:

```
<Connector port="8443" protocol="HTTP/1.1" SSLEnabled="true"
  maxThreads="150" scheme="https" secure="true"
  clientAuth="false" sslProtocol="TLS" />
```

Upgrading to Cisco Multicast Manager 3.0

You may upgrade from versions 2.3, 2.4, or 2.5 to 3.0 using a DVD or ISO image downloaded from Cisco.com, or a tar file.

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



Note

Upgrading to Solaris 10 will require you to disable any naming service (NIS, NIS+, LDAP) on the gateway machine before installation. The installation assumes that the machine used for the install is not using a networked user credentials management feature such as NIS+ or LDAP.

Upgrading on Linux Using a CD or ISO Image

Step 1 Complete these steps to back up your existing CMM installation:

a. To stop the CMM 2.x processes, enter:

```
./K98mmt
```

b. To back up the CMM installation, create a tar file of the `/usr/local/netman` directory. For example, enter:

```
cd /usr/local/netman
tar -cvf cmm_backup_archive.tar
```

c. Save the backup tar file in the event it is needed later.

Step 2 Mount the CD-ROM or ISO image:

a. 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
```

- b. 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 3** 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 4** Execute the **install.sh** script and follow the steps [Running the Linux Installation Script, page 1-10](#).
- Step 5** If the upgrade procedure fails, see [Restoring a Previous Version of CMM, page 1-21](#) for instructions on restoring the CMM 2.x installation.

Upgrading on Linux Using a Tar File

- Step 1** Complete these steps to back up your existing CMM installation:

- a. To stop the CMM 2.x processes, enter:

```
./K98mmt
```

- b. To back up the CMM installation, create a tar file of the `/usr/local/netman` directory. For example, enter:

```
cd /usr/local/netman
tar -cvf cmm_backup_archive.tar
```

- c. Save the backup tar file in the event it is needed later.

- Step 2** Untar the CMM 3.0 distribution file in a directory other than the installation target directory.

```
# cd /tmp
# tar -xzvf cmm30_linux.tar.gz
```

- Step 3** Change the directory.

```
# cd /tmp/Linux
```

- Step 4** Execute the script **setup.sh** and follow the steps in subsection [Running the Linux Installation Script, page 1-10](#).

[Example 1-3](#) shows sample output from the Linux upgrade installation.

Example 1-3 Sample Linux Upgrade Installation Output

```

cmm-s09-01# ./setup.sh

Cisco Multicast Manager Version 3.0 installation setup
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.

Checking the OS version in cmm-le4-07...
Supported Version AS4 Found

Checking for the available disk space...
Disk space available in cmm-le4-07 is 63161856 Kb(Recommended: 3145728 Kb)

Checking for physical memory in the system...
Physical memory available in cmm-le4-07 is 2073808 Kb(Recommended: 2055200 Kb)

Cisco Multicast Manager 2.3(3) found in this machine cmm-le4-07
Do you want to continue upgrade from Cisco Multicast Manager 2.3(3) to Cisco Multicast
Manager 3.0? [y/n]: y

This will stops the CMM processes. Do you want to continue? [y/n]: y
Upgrading Cisco Multicast Manager Version to 3.0

Stopping CMM Processes ...
/usr/local/netman/httpd_perl/bin/apachectl stop: httpd stopped

License Installation Utility
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.

Enter upgarde license file: /usr/javenkat/cmm30/license.key
Reading old license file information...
Reading upgrade license file provided...
Updating License information...
Licensed to   : HCL
Ip address   : 172.20.111.242
Expire date  : No expiration date.
Features     : MMT,VOS,MVPN
Device limit : unlimited
Version      : 3.0
success

Creating backup folder /usr/local/netman/install/tmp
Backing up domain information ...
Backing up ipAddress database ...
Backing up device information for domain: Test ..
Backup process completed
Cleaning previous CMM installation ...
Installing Perl...
Installing MIBS...
Installing support files...
Installing ciscomm to /etc/init.d...
Installing Tomcat...

Cisco Multicast Manager by default uses mysql database on port 3306.
Do you want to change the default mysql port (y/n) (default - n): n
Copying mysql configuration file to /etc folder ...

Starting MySQL
..... SUCCESS!

```

```

Restoring device information ...
Updating network information (routers) for domain: Test (this may take few minutes)
Discovery completed for domain Test
HC.health
Constructing topology for domain: Test (This may take some time to update)
Shutting down MySQL
... SUCCESS!
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):  public

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

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

Getting Configuration Information for Trap Receiver
=====

Access control Setup
Do you want to disable access control checks (y/n) (default - y): 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 3.x (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.*)

Do you want to add some other Trap OIDs with the default list (y/n) (default - n): n
Installation Finished.
Writing startup script...
Restarting the application...
Starting mysql server...
Starting MySQL
.. SUCCESS!
Starting CMM Data Service...
18489
CMM DataService process started
Restarting the application...
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/
Restarting 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
18608
.....
CMM Util process started
```

- Step 5** If the upgrade procedure fails, see [Restoring a Previous Version of CMM, page 1-21](#) for instructions on restoring the CMM 2.x installation.
-

Upgrading on Solaris Using a CD or ISO Image

- Step 1** Complete these steps to back up your existing CMM installation:

- a. Create a tar file of the `/usr/local/netman` directory. For example, enter:

```
cd /opt/RMSMNT
tar -cvf cmm_backup_archive.tar
```

- b. Save the backup tar file in the event it is needed later.

- Step 2** Mount the CD-ROM or ISO image.

- a. If you are mounting a **DVD** and the process `vold` is not running, you will need to manually mount the CD-ROM, use one of the following commands:

```
# mount -rt hsfs /dev/sr0 /cdrom
or
# mount -rt hsfs /dev/dsk/c0t6d0s2 /cdrom
```

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

```
mount -F hsfs -o ro `lofiadm -a /export/temp/cmm25.iso` /mnt
```



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

- Step 3** To install, use the following commands:

For a **DVD**:

```
cd /cdrom/cdrom0
```

For an **ISO image** downloaded from Cisco.com:

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

- Step 4** Execute script `install.sh` script and follow the steps in [Running the Solaris Installation Script, page 1-5](#).

- Step 5** If the upgrade procedure fails, see [Restoring a Previous Version of CMM, page 1-21](#) for instructions on restoring the CMM 2.x installation.
-

Upgrading on Solaris Using a Tar File

Step 1 Complete these steps to back up your existing CMM installation:

- a. Create a tar file of the `/usr/local/netman` directory. For example, enter:

```
cd /opt/RMSMMT
tar -cvf cmm_backup_archive.tar
```

- b. Save the backup tar file in the event it is needed later.

Step 2 Untar the CMM 3.0 distribution file in a directory other than the installation target directory:

```
# cd /tmp
# gunzip < cmm30_solaris.tar.gz | tar xvf -
```

Step 3 Change to the `/tmp` directory:

```
# cd /tmp/Solaris
```

Step 4 Execute the script `setup.sh` and follow the steps in [Running the Solaris Installation Script, page 1-5](#).

[Example 1-4](#) shows sample output from the Solaris upgrade installation.

Example 1-4 Sample Solaris Upgrade Installation Output

```
cmm-s09-01# ./setup.sh

Cisco Multicast Manager Version 3.0 installation setup
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.

Checking the OS version in cmm-s09-01...
Supported version 5.9 found

Checking for the available disk space...
Disk space available in cmm-s09-01 is 3560423 Kb(Recommended: 3145728 Kb)

Checking for physical memory in the system...
Physical memory available in cmm-s09-01 is 4194304 Kb(Recommended: 2055200 Kb)

Cisco Multicast Manager 2.3(3) found in this machine cmm-s09-01
Do you want to continue upgrade from Cisco Multicast Manager 2.3(3) to Cisco Multicast
Manager 3.0? [y/n]: y

This will stops the CMM processes. Do you want to continue? [y/n]: y
Upgrading Cisco Multicast Manager Version to 3.0

Stopping CMM Processes ...
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
/opt/RMSMMT/httpd_perl/bin/apachectl stop: httpd stopped

License Installation Utility
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.

Enter upgarde license file: /usr/javenkat/cmm30/license.key
Reading old license file information...
Reading upgrade license file provided...
Updating License information...
Licensed to : HCL
Ip address : 172.20.111.237
```

```

Expire date : No expiration date.
Features    : MMT,VOS,MVPN
Device limit : unlimited
Version     : 3.0
success

Creating backup folder /opt/RMSMMT/install/tmp
Backing up domain information ...
Backing up ipAddress database ...
Backing up device information for domain: Test ..
Backup process completed
Cleaning previous CMM installation ...
Installing Perl...
Installing MIBS...
Installing support files...
Installing ciscomm to /etc/init.d...

Installing Tomcat...

Cisco Multicast Manager by default uses mysql database on port 3306.
Do you want to change the default mysql port (y/n) (default - n): n
Copying mysql configuration file to /etc folder ...
Starting MySQL
..... SUCCESS!
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
Restoring device information ...
Updating network information (routers) for domain: Test (this may take few minutes)
Discovery completed for domain Test
HC.health
Constructing topology for domain: Test (This may take some time to update)
Shutting down MySQL
... SUCCESS!
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): public

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

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

Getting Configuration Information for Trap Receiver
=====

Access control Setup
Do you want to disable access control checks (y/n) (default - y): 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 3.x (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.*)

```

```

Do you want to add some other Trap OIDs with the default list (y/n) (default - n): n
Installation Finished.
Writing startup script...
Restarting the application...
Starting mysql server...
Starting MySQL
.. SUCCESS!
Starting CMM Data Service...
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
18489
CMM DataService process started
Restarting the application...
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
Using CATALINA_BASE: /opt/RMSMMT/mmtsys/apache-tomcat
Using CATALINA_HOME: /opt/RMSMMT/mmtsys/apache-tomcat
Using CATALINA_TMPDIR: /opt/RMSMMT/mmtsys/apache-tomcat/temp
Using JRE_HOME: /opt/RMSMMT/mmtsys/jre/
18515
nohup: SIGHUP already handled by 18515; use -a to force process to ignore
Sending output to nohup.out
Restarting the polling daemon...
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
Starting the CLI proxy daemons...
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
Starting the CLI proxy dtv daemon...
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
Starting SNMP Trap Receiver daemon...
Starting SNMP Trap Receiver

Starting SNMP Agent daemon...
Starting SNMP Agent
Sun Microsystems Inc. SunOS 5.9 Generic May 2002
18608
.....
CMM Util process started

```

Step 5 If the upgrade procedure fails, see [Restoring a Previous Version of CMM, page 1-21](#) for instructions on restoring the CMM 2.x installation.

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 your CMM installation is on a Solaris server, enter the following to uninstall it:

```
/opt/RMSMMT/uninstall.sh
```

- Step 2** If your CMM installation is on a Linux server, enter the following 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 Solaris server, enter the following to delete it:
 

```
rm -fr /opt/RMSMMT
```
  - 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 2.x installation that you made during the upgrade procedure.
- Step 5** Issue the following command to extract the backed up installation from the tar file:
- ```
tar -xvf tar_file_name
```
- where *tar_file_name* is the name of the tar file containing the CMM 2.x backup.
- Step 6** Do one of the following to change ownership of the extracted folder.
- If your installation is on a Solaris server, enter:


```
chown -R mmtuser:mmtuser /opt/RMSMMT
```
 - If your installation is on a Linux server, enter:


```
chown -R mmtuser:mmtuser /usr/local/netman
```
- Step 7** Enter the following to start the CMM processes:
- ```
./S98mmt
```
- 

## Starting and Stopping CMM

To start the application:

### On Solaris:

From the CMM home directory (by default, /opt/RMSMMT), run the **S98mmt** script.

### On Linux:

From the CMM home directory (by default, /usr/local/netman), run the **S98mmt** script.

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

The **S98mmt** script also runs the **S98mmtpollld** script, which starts the polling daemon. The **S98mmtpollld** 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 Solaris:

```
0,5,10,15,20,25,30,35,40,45,50,55 * * * * /opt/RMSMMT/S98mmtpollld
```

**On Linux:**

```
* /5 * * * * /usr/local/netman/S98mmtpollld
```

These entries will run the script every 5 minutes.

The default login user name 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.

## Service 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.

## Export Utility

### Example 1-5 Sample Export Utility Output

```
bash-3.00# ./export.sh

Cisco Multicast Manager Version 3.0 export utility
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.

Enter the destination directory: /tmp
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 the Polling Daemon..
Stopping CLI Proxy Daemon(ssh)..
Stopping CLI Proxy Daemon(tel)..
Stopping CLI Proxy Daemon(dtv)..
Stopping SNMP Trap Receiver..
Stopping SNMP Trap Agent..
3972
CMM Util process stopped successfully...
3636
CMM Data Service process stopped successfully...
CMM Processes Stopped Successfully
```

```

Backing up data...

Starting MySQL. [OK]
Enter password:
Shutting down MySQL... [OK]
cp: cannot stat `sys/apache-jasper': No such file or directory
cp: cannot stat `sys/HULK': No such file or directory

Compressing the backed up data...
cmm_backup/
cmm_backup/cmmdb.sql
cmm_backup/db/
cmm_backup/db/TestDemo/
cmm_backup/db/TestDemo/TestDemo1236894368809.xml
cmm_backup/db/TestDemo/trace.1236894836553.trace.png
cmm_backup/db/TestDemo/TestDemolayout1236894368427.xml
cmm_backup/db/TestDemo/trace.1236894836553.trace
cmm_backup/db/TestDemo/discoveryFiles/
cmm_backup/db/TestDemo/discoveryFiles/multicast-discovery-results.xml
cmm_backup/db/TestDemo/discoveryFiles/multicast-discovery-results1.xml
cmm_backup/graphs/
cmm_backup/share/
cmm_backup/share/snmp/
cmm_backup/share/snmp/snmpd.conf
cmm_backup/share/snmp/snmptrapd.conf
cmm_backup/trace/
cmm_backup/data/
cmm_backup/data/HULK/
..
..
..
Data backed up successfully under /tmp/cmmbackup3_0.tar

Starting the application...
Starting mysql server...
Starting MySQL... [OK]
Starting CMM Data service...
CMM DataService process started
Using CATALINA_BASE: /usr/local/netman/mmtdsys/apache-tomcat
Using CATALINA_HOME: /usr/local/netman/mmtdsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmtdsys/apache-tomcat/temp
Using JRE_HOME: /usr/local/netman/mmtdsys/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
-bash-3.00#

```

## Import Utility

### Example 1-6 Sample Import Utility Output

```
[root@dev-as4-02 netman]# ./import.sh

Cisco Multicast Manager Version 3.0 import utility
Copyright (c) 2009 Cisco Systems, Inc. All Rights Reserved.

Enter the source directory of the tar file: /tmp
Enter the backup File: cmmbackup3_0.tar

Checking CMM 3.0 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 the Polling Daemon..
Stopping CLI Proxy Daemon(ssh)..
Stopping CLI Proxy Daemon(tel)..
Stopping CLI Proxy Daemon(dtv)..
Stopping SNMP Trap Receiver..
Stopping SNMP Trap Agent..
19024
CMM Util process stopped successfully...
18659
CMM Data Service process stopped successfully...
CMM Processes Stopped Successfully

This utility 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/rmspoll.Susant.conf
cmm_backup/sys/rmspoll.conf
cmm_backup/sys/multicasttrace.conf
cmm_backup/sys/rmspollcli.conf
cmm_backup/graphs/
cmm_backup/data/
cmm_backup/share/
cmm_backup/share/snmp/
cmm_backup/share/snmp/snmptrapd.conf
cmm_backup/share/snmp/snmpd.conf
cmm_backup/trace/
cmm_backup/trace/trace.1236906987300.png
cmm_backup/trace/trace.1236875292556.png
...
...
cmm_backup/cmmdb.sql
Starting mysql server...
Starting MySQL. [OK]
Enter Mysql password: cmm
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/mmmsys/apache-tomcat
Using CATALINA_HOME: /usr/local/netman/mmmsys/apache-tomcat
Using CATALINA_TMPDIR: /usr/local/netman/mmmsys/apache-tomcat/temp
Using JRE_HOME: /usr/local/netman/mmmsys/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
[root@dev-as4-02 netman]#

```

---

## 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
- On Solaris
  - /opt/RMSMMT/



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