



CHAPTER 3

Upgrading to CTM R7.2 from an Earlier Release

This chapter describes how to upgrade to CTM R7.2 from an earlier release. This chapter contains the following sections:

- [3.1 Upgrading from CTM R6.0 or CTM R7.0 to CTM R7.2 and Oracle9i on the Same Workstation, page 3-2](#)
- [3.2 Upgrading from CTM R6.0 or CTM R7.0 to CTM R7.2 and Oracle9i on Separate Workstations, page 3-8](#)
- [3.3 Verifying that the Oracle9i and CTM Server Processes Are Running, page 3-16](#)
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- [3.5 Upgrading the CTM Network Configuration Size, page 3-18](#)
- [3.6 Adding New Modules, page 3-18](#)



Note

After upgrading to CTM R7.2, the old CTM server directory is moved to `CiscoTransportManagerServer-old`. Any data previously saved under `/opt/CiscoTransportManagerServer/admin`, `/opt/CiscoTransportManagerServer/images`, `/opt/CiscoTransportManagerServer/cms`, `/opt/CiscoTransportManagerServer/bin/jcorbagw.sh`, `/opt/CiscoTransportManagerServer/cfg/usr`, and `/opt/CiscoTransportManagerServer/cfg/corbagw.properties` is saved under the new directory. Before removing the old version, move any relevant data to the new `/opt/CiscoTransportManagerServer` directory.



Caution

When migrating data, the migration could stall if the `/temp` directory contains temporary files left over from previous upgrades. Remove all temporary files from `/temp` before upgrading CTM.



Caution

Before upgrading to CTM R7.2, verify that the NE versions in your network are supported by CTM R7.2. See the [Release Notes for Cisco Transport Manager Release 7.2](#) for the NE software versions that are supported. If your network contains NEs that are not supported in CTM R7.2, it will not be possible to discover or manage them.



Note

For an explanation of error messages that you might encounter during the upgrade, see [Appendix A, “Understanding Installation Error Messages.”](#)

**Note**

If you need instructions to mount or unmount CDs, see [Appendix C, “Mounting and Unmounting CDs on Sun Solaris.”](#)

3.1 Upgrading from CTM R6.0 or CTM R7.0 to CTM R7.2 and Oracle9i on the Same Workstation

This section describes how to upgrade from CTM R6.0 or CTM R7.0 to CTM R7.2 when you are installing the CTM R7.2 server and the Oracle9i database on the same Sun Solaris 8 server.

Before upgrading the database to CTM R7.2, it is strongly recommended that you back up the existing database. This ensures that you can revert to the old data in the event that the upgrade fails.

**Note**

The C shell is assumed for all UNIX commands.

3.1.1 Installing the CTM R7.2 Server and Upgrading the Database

To install the CTM server and upgrade the database, log in as the root user and complete the following steps:

-
- Step 1** Enter the following command to verify that the CTM R7.2 server is running:
- ```
showctm
```
- Step 2** If the CTM server is running, enter the following command to stop the server before performing the upgrade:
- ```
ctms-abort
```
- Step 3** *(If you are upgrading from CTM R6.0, skip this step.)* If you are upgrading from CTM R7.0, install the latest CTM R7.0 service pack. See the [Migration Matrix for CTM Service Pack Releases](#) for more information.
- Step 4** *(If you are upgrading from CTM R6.0, skip this step.)* If you are upgrading from CTM R7.0, enter the following commands:
- ```
cd /opt/CiscoTransportManagerServer/patch/migration/7.2.0
./pre_migration.sh
cd /
```
- Step 5** If you are using an xterm window or a remote host, enter the following command to set the DISPLAY variable:
- ```
setenv DISPLAY <hostname_or_IP_address>:0.0
```
- Step 6** Enter the following command to verify that the display is set correctly:
- ```
echo $DISPLAY
```
- In the output, you should see:
- ```
<hostname_or_IP_address>:0.0
```

Step 7 Insert the CTM Server Disk 1 installation CD and enter the following commands:

```
cd /  
cdrom/cdrom0/Disk1/ctmsetup.sh
```

The setup program searches for Sun Microsystems JRE version 1.4.2_11 on your workstation.



Note If JRE is not installed, the setup program starts the Java installation program. Follow the prompts to install JRE. Enter **yes** at the following binary license code agreement prompt:
Do you agree to the above license terms? [yes or no]

Then, continue installing the CTM server and upgrading the database.



Note If the required Solaris patches are missing, you must install them manually. Click **Cancel**; then, click **Quit**. Download the patches from SunSolve Online at <http://sunsolve.sun.com>. After you install the patches, continue installing the CTM server and upgrading the database.

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Wait for up to 60 seconds while the following message appears:

```
Please wait, Cisco Transport Manager Server Release 7.2 is being configured for your  
system. This may take a moment...
```

Step 8 Click **Next** at the Introduction screen.

Step 9 At the License Agreement screen, read the license agreement and click the **I accept the terms of the license agreement** radio button. Click **Next**.

Step 10 At the Installation Options screen, choose **Upgrade from existing CTM release**; then, click **Next**.



Note If your network size is medium or large, you can also choose **Upgrade CTM network configuration size**. (Small or high-end network sizes cannot be upgraded.) Alternately, you can upgrade the network size as a separate step; see [3.5 Upgrading the CTM Network Configuration Size, page 3-18](#).

Step 11 At the Select Products to Install screen, check the **Cisco Transport Manager server** check box; then, click **Next**.



Note The Web Server check box is selected automatically when you choose Cisco Transport Manager server. The web server allows you to use an HTTP connection to download files from the CTM server to the CTM client. The web server is also used to launch the online help and CiscoView, which is an application used by CTM to configure and monitor ONS 155xx NEs. The web server is required for the CTM server.



Caution Do not check the other check boxes on the Select Products to Install screen.



Note The license for CTM GateWay/CORBA is sold separately. If you are using this feature in a production environment, you must purchase a license. You can install CTM GateWay/CORBA when you install the CTM server; however, this section assumes that you are installing the two products separately. For more information, see [Chapter 4, “Installing CTM GateWay/CORBA R7.2.”](#)



Note The license for CiscoView is sold separately if used to manage the ONS 15530, ONS 15540 ESP, or ONS 15540 ESPx. If you are using this feature in a production environment to manage the ONS 15530, ONS 15540 ESP, or ONS 15540 ESPx, you must purchase a license for LAN Management Solution (LMS) Release 2.5, which includes CiscoView.

The license for CiscoView is bundled with CTM if used to manage the ONS 15501 DC or AC. You do not need to purchase a separate CiscoView license to manage the ONS 15501 DC or AC.



Note If you check the Install CiscoView Server check box, you receive the following prompt:

```
CiscoView installation has been moved to CTM Server Disk 4. After CTM server has
been installed, insert the CTM Server Disk 4 and run the './installCiscoView.sh'
script.
```

You must install the CTM server before you can install CiscoView. After installing the CTM server, see [Chapter 6, “Installing and Setting Up CiscoView.”](#)

Step 12 At the Select Modules to Install screen, select individual modules or select all; then, click **Next**.

- Optical Module: ONS 15xxx (inc. shelf controller)
- Cisco MGX Voice Gateway
- IOS XR Module: XR 12000, CRS-1 (inc. shelf controller)
- All of the Above Modules



Note The MDS 9000 module is a common module that will be installed with any selection.



Note Because the Cisco 7600 module is not supported in earlier releases, the IOS Module: Cisco 7600 option is disabled. To add this module, see [3.6 Adding New Modules, page 3-18](#).

Step 13 At the Main Options screen, complete the following substeps:

- a. Check the **Upgrade CTM database** check box.
- b. Check the **Install CTM server** check box.
- c. Click **Next**.

Step 14 (Optional) If you selected **Upgrade CTM network configuration size** in [Step 10](#), the Select to Upgrade Network Configuration Type screen appears. Select the option to upgrade your current network configuration type.

Step 15 (Optional) At the Select Network Configuration screen, select which of the following available network configuration types you want to upgrade:

- Large
- High end



Note This screen is displayed only if you selected the Upgrade Network Configuration Type option in the previous step.

Step 16 At the CTM Group Information & Sudo Installation screen, complete the following substeps:

- Enter the name of the UNIX group to which you want to assign administrator privileges.
- To install sudo, check the **Install CTM Sudo** check box. If you do not want to install sudo, uncheck the check box.
- Click **Next**.



Note For information about the sudo feature, see [1.4.1 Overview of Sudo Commands, page 1-18](#).

Step 17 (For optical selections only) At the FTP Information screen, complete the following substeps to configure an FTP account for software download operations:

- Enter the following information:
 - FTP username
 - FTP user password
 - Confirm FTP user password
 - FTP directory
- Check or uncheck the **Create new FTP account** check box. If checked, the FTP user will be created automatically on the CTM server workstation by the install script. If unchecked, it is assumed that an FTP user already exists on the CTM server workstation.
- Click **Next**.



Note The FTP information that you enter during the CTM server installation can be modified later from the CTM client Control Panel window. See *Cisco Transport Manager Release 7.2 User Guide* for more information.

Step 18 At the Server IP Address screen, specify an IP address for the CTM server. The Hostname field is automatically populated with the hostname of the selected IP address. After confirming the IP address and hostname details, click **Next**.



Note The hostname is available only if you select Cisco MGX Voice Gateway.

Step 19 At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP for optical or Cisco IOS XR devices:

- Check the **Enable TFTP Server** check box.
- Enter the TFTP directory name. The default is /tftpboot.

c. Click **Next**.



Note Because the Cisco 7600 module is not supported in earlier releases, this screen does not apply to the Cisco 7600.

Step 20 At the Destination Folder screen, specify where you want to install the CTM server. The default directory is `/opt/CiscoTransportManagerServer`. You can click **Change** to choose a different destination. After you specify your destination, click **Next**.



Note If the destination directory that you specified is a new directory, you will receive the message “Specified directory does not exist, create it?” Click **Yes**.



Note Do not specify any mount point as the target installation directory for the server installation, or the installation data might be lost when the workstation restarts.



Caution CTM checks for the `/opt/CiscoTransportManagerServer` directory or a symbolic link to it. If CTM cannot find the `/opt/CiscoTransportManagerServer` directory or a symbolic link, CTM creates a symbolic link automatically. Therefore, do not delete any instances of `/opt/CiscoTransportManagerServer` from your CTM file structure.

Step 21 The Pre-Installation Summary screen shows the items that will be installed. Click **Install**.



Note It might take 30 to 60 minutes or longer to install the CTM server and upgrade the database, depending on your system performance.

Step 22 At the Insert New Media screen, complete the following substeps:

- a. Eject the CTM Server Disk 1 installation CD, insert the CTM Server Disk 2 installation CD, and click **Browse**.
- b. The Select a Folder dialog box opens. Double-click **cdrom**; then, single-click **cdrom0**. The filename text box now reads `/cdrom/cdrom0`.
- c. In the Select a Folder dialog box, click **Select**.
- d. In the Insert New Media screen, click **OK**.
- e. Eject the CTM Server Disk 2 installation CD, insert the CTM Server Disk 3 installation CD, and click **Browse**.
- f. The Select a Folder dialog box opens. Double-click **cdrom**; then, single-click **cdrom0**. The filename text box now reads `/cdrom/cdrom0`.
- g. In the Select a Folder dialog box, click **Select**.
- h. In the Insert New Media screen, click **OK**.

Step 23 The Web Server Installation Summary screen summarizes the results of the web server installation. Click **Next**.

Step 24 The Install Complete screen summarizes the results of the installation. Click **Next**.

Step 25 The Upgrade Server and Database Complete screen displays the log location. Click **Done**.

Step 26 (If you are upgrading from CTM R6.0, skip this step.) If you are upgrading from CTM R7.0, enter the following commands:

```
cd /opt/CiscoTransportManagerServer.oldCTM/patch/migration/7.2.0
./post_migration.sh
cd /
```

Step 27 Enter the following command to reboot the system. The CTM server starts automatically after rebooting:

**Caution**

After you click the Done button in the installation GUI, the background processes continue to run for several minutes. Before rebooting, you must wait for the reboot message on the terminal where you started the installation. Depending on the server performance, the background processes can take up to 15 minutes before the reboot message appears. Rebooting the server before this message appears will break CTM functionalities.

```
init 6
```

Step 28 To verify that the CTM R7.2 server is running, enter the **showctm** command after the server reboots. The **showctm** command displays the CTM server version running as 7.2, followed by the build number. In the output, you will see two instances of “CTM Server,” “SnmpTrapService,” “SMService,” and “Apache Web Server.” This indicates that the CTM server is running. You should also see NE-specific processes, depending on your network. You might also see CTM GateWay/CORBA and CTM GateWay/TL1 instances.

3.1.2 Copying the Client Upgrade Files After the CTM Server Installation

You have two options for upgrading each client installation to the latest version of CTM that is on the server. You can choose to:

- Manually upgrade each client installation. If you have a previously installed version of the CTM client, you must delete the directory where the previous client is installed before installing the CTM R7.2 client. See [5.1 Installing the CTM Client and Cisco Edge Craft on Microsoft Windows, page 5-2](#) or [5.4 Installing the CTM Client and Cisco Edge Craft on Sun Solaris, page 5-6](#) for more information.
- Automatically upgrade each client when it connects to a server. During login, if the CTM client software version is older than the CTM server software version, the client will be prompted for upgrade. See [5.2 Starting the CTM Client in Microsoft Windows, page 5-5](#) or [5.5 Starting the CTM Client in Sun Solaris, page 5-8](#) for more information.

For this option you must copy the client installation files to the server. The CTM client and server installation files reside on separate installation CDs. To copy the client installation files to the server, you must eject the CTM server CD, insert the CTM client CD, and run an automated script, `CopyUpgradeFiles.sh`, to copy the client installation files to a specific folder under the CTM server installation directory. To do this, log in as the root user and complete the following steps.

**Note**

The CTM server must be installed before completing the following steps.

Step 1 Enter the following commands to eject the CTM server installation CD:

```
cd /
eject cdrom
```

Step 2 Insert the CTM client Solaris installation CD and enter the following command:

```
/cdrom/cdrom0/ctmc/CopyUpgradeFiles.sh
```

You should see the following output:

```
Copying the client upgrade files can take several minutes.
Copying CTM Client upgrade files...
Copying Solaris client upgrade files
Solaris client upgrade files copied
Please insert CTM client Windows CD to CD ROM, Copy will continue in 60 seconds...
Could not find Window Client CD, Please insert CTM client Windows CD to continue
Copy will continue in 300 seconds...
Copying Windows client upgrade files
Done...All upgrade files have been copied to server successfully!
Please hit Enter key to return to the prompt mode
```



Note This operation will occupy 800 MB of disk space.

3.2 Upgrading from CTM R6.0 or CTM R7.0 to CTM R7.2 and Oracle9i on Separate Workstations

This section describes how to upgrade from CTM R6.0 or CTM R7.0 to CTM R7.2 when you are installing the CTM R7.2 server and the Oracle9i database on separate Sun Solaris 8 servers.

Before upgrading the database to CTM R7.2, it is strongly recommended that you back up the existing database. This ensures that you can revert to the old data in the event that the upgrade fails.



Note The C shell is assumed for all UNIX commands.

3.2.1 Upgrading the Database on the CTM Database Workstation

To upgrade the database, log in as the root user on the CTM server workstation and complete the following steps:

Step 1 Enter the following command to verify that the CTM server is running:

```
showctm
```

Step 2 If the CTM server is running, enter the following command to stop the server before performing the upgrade:

```
ctms-abort
```

Step 3 (If you are upgrading from CTM R6.0, skip this step.) If you are upgrading from CTM R7.0, install the latest CTM R7.0 service pack. See the [Migration Matrix for CTM Service Pack Releases](#) for more information.

Step 4 Log in as the root user on the CTM database workstation and complete the following substeps:

- a. (If you are upgrading from CTM R6.0, skip this step.) If you're upgrading from CTM 7.0, enter the following commands:

```
cd /opt/CiscoTransportManagerServer/patch/migration/7.2.0
./pre_migration.sh
cd /
```

- b. If you are using an xterm window or a remote host, enter the following command to set the DISPLAY variable:

```
setenv DISPLAY <hostname_or_IP_address>:0.0
```

- c. Enter the following command to verify that the display is set correctly:

```
echo $DISPLAY
```

In the output, you should see:

```
<hostname_or_IP_address>:0.0
```

- d. Insert the CTM Server Disk 1 installation CD and enter the following commands:

```
cd /
cdrom/cdrom0/Disk1/ctmsetup.sh
```

The setup program searches for Sun Microsystems JRE version 1.4.2_11 on your workstation.



Note If JRE is not installed, the setup program starts the Java installation program. Follow the prompts to install JRE. Enter **yes** at the following binary license code agreement prompt:
Do you agree to the above license terms? [yes or no]

Then, continue upgrading the database.



Note If the required Solaris patches are missing, you must install them manually. Click **Cancel**; then, click **Quit**. Download the patches from SunSolve Online at <http://sunsolve.sun.com>. After you install the patches, continue installing the CTM server and database.

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Wait for up to 60 seconds while the following message appears:

```
Please wait, Cisco Transport Manager Server Release 7.2 is being configured for your
system. This may take a moment...
```

- e. Click **Next** at the Introduction screen.
- f. At the License Agreement screen, read the license agreement and click the **I accept the terms of the license agreement** radio button. Click **Next**.
- g. At the Installation Options screen, choose **Upgrade from existing CTM release**; then, click **Next**.



Note If your network size is medium or large, you can also choose **Upgrade CTM network configuration size**. (Small or high-end network sizes cannot be upgraded.) Alternately, you can upgrade the network size as a separate step; see [3.5 Upgrading the CTM Network Configuration Size](#), page 3-18.

- h. At the Select Products to Install screen, check the **Cisco Transport Manager server** check box; then, click **Next**.



Note The Web Server check box is selected automatically when you choose Cisco Transport Manager server. The web server allows you to use an HTTP connection to download files from the CTM server to the CTM client. The web server is also used to launch the online help and CiscoView, which is an application used by CTM to configure and monitor ONS 155xx NEs. The web server is required for the CTM server.



Caution Do not check the other check boxes on the Select Products to Install screen.



Note The license for CTM GateWay/CORBA is sold separately. If you are using this feature in a production environment, you must purchase a license. You can install CTM GateWay/CORBA when you install the CTM server; however, this section assumes that you are installing the two products separately. For more information, see [Chapter 4, “Installing CTM GateWay/CORBA R7.2.”](#)



Note The license for CiscoView is sold separately if used to manage the ONS 15530, ONS 15540 ESP, or ONS 15540 ESPx. If you are using this feature in a production environment to manage the ONS 15530, ONS 15540 ESP, or ONS 15540 ESPx, you must purchase a license for LAN Management Solution (LMS) Release 2.5, which includes CiscoView.

The license for CiscoView is bundled with CTM if used to manage the ONS 15501 DC or AC. You do not need to purchase a separate CiscoView license to manage the ONS 15501 DC or AC.

If you check the Install CiscoView Server check box, you receive the following prompt:

```
CiscoView installation has been moved to CTM Server Disk 4. After CTM server
has been installed, insert the CTM Server Disk 4 and run the
'./installCiscoView.sh' script.
```

You must install the CTM server before you can install CiscoView. After installing the CTM server, see [Chapter 6, “Installing and Setting Up CiscoView.”](#)

- i. At the Select Modules to Install screen, select individual modules or select all; then, click **Next**.
- Optical Module: ONS 15xxx (inc. shelf controller)
 - Cisco MGX Voice Gateway
 - IOS XR Module: XR 12000, CRS-1 (inc. shelf controller)

- All of the Above Modules



Note Because the Cisco 7600 module is not supported in earlier releases, the IOS Module: Cisco 7600 option is disabled. To add this module, see [3.6 Adding New Modules, page 3-18](#).

- j. At the Main Options screen, check only the **Upgrade CTM database** check box; then, click **Next**.



Note Be sure to uncheck the **Install CTM server** check box.

- k. (Optional) If you selected **Upgrade CTM network configuration size** in [g.](#), the Select to Upgrade Network Configuration Type screen appears. Select the option to upgrade your current network configuration type.
- l. (Optional) At the Select Network Configuration screen, select which of the following available network configuration types you want to upgrade:
- Large
 - High end



Note This screen is displayed only if you selected the Upgrade Network Configuration Type option in the previous step.

- m. At the CTM Group Information & Sudo Installation screen, complete the following substeps:
1. Enter the name of the UNIX group to which you want to assign administrator privileges.
 2. To install sudo, check the **Install CTM Sudo** check box. If you do not want to install sudo, uncheck the check box.
 3. Click **Next**.



Note For information about the sudo feature, see [1.4.1 Overview of Sudo Commands, page 1-18](#).

- n. (For optical selections only) At the FTP Information screen, accept the default selections; then, click **Next**.
- o. The Pre-Installation Summary screen shows the items that will be installed. Click **Install**.



Note It might take 20 minutes or longer to upgrade the database, depending on your system performance.

- p. The Upgrade Database Complete screen summarizes the results of the upgrade. Click **Done**.
- q. (If you are upgrading from CTM R6.0, skip this step.) If you are upgrading from CTM R7.0, enter the following commands:

```
cd /opt/CiscoTransportManagerServer.oldCTM/patch/migration/7.2.0
./post_migration.sh
cd /
```

3.2.2 Installing the CTM R7.2 Server on the CTM Server Workstation


Note

The C shell is assumed for all UNIX commands.

To install the CTM server, log in as the root user on the workstation where the CTM server will run and complete the following steps:

- Step 1** If you are using an xterm window or a remote host, enter the following command to set the DISPLAY variable:

```
setenv DISPLAY <hostname_or_IP_address>:0.0
```

- Step 2** Enter the following command to verify that the display is set correctly:

```
echo $DISPLAY
```

In the output, you should see:

```
<hostname_or_IP_address>:0.0
```

- Step 3** Insert the CTM Server Disk 1 installation CD and enter the following commands:

```
cd /
cdrom/cdrom0/Disk1/ctmsetup.sh
```

The setup program searches for Sun Microsystems JRE version 1.4.2_11 on your workstation.


Note

If JRE is not installed, the setup program starts the Java installation program. Follow the prompts to install JRE. Enter **yes** at the following binary license code agreement prompt:

```
Do you agree to the above license terms? [yes or no]
```

Then, continue installing the CTM server.


Note

If the required Solaris patches are missing, you must install them manually. Click **Cancel**; then, click **Quit**. Download the patches from SunSolve Online at <http://sunsolve.sun.com>. After you install the patches, continue installing the CTM server.

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Wait for up to 60 seconds while the following message appears:

```
Please wait, Cisco Transport Manager Server Release 7.2 is being configured for your
system. This may take a moment...
```

- Step 4** Click **Next** at the Introduction screen.
- Step 5** At the License Agreement screen, read the license agreement and click the **I accept the terms of the license agreement** radio button. Click **Next**.
- Step 6** At the Installation Options screen, choose **Upgrade from existing CTM release**; then, click **Next**.
- Step 7** At the Select Products to Install screen, check the **Cisco Transport Manager server** check box; then, click **Next**.



Caution Do not check the other check boxes on the Select Products to Install screen.

Step 8 At the Select Modules to Install screen, select individual modules or select all; then, click **Next**.

- Optical Module: ONS 15xxx (inc. shelf controller)
- Cisco MGX Voice Gateway
- IOS XR Module: XR 12000, CRS-1 (inc. shelf controller)
- All of the Above Modules



Note The MDS 9000 module is a common module that will be installed with any selection.



Note Because the Cisco 7600 module is not supported in earlier releases, the IOS Module: Cisco 7600 option is disabled. To add this module, see [3.6 Adding New Modules, page 3-18](#).

Step 9 At the Main Options screen, check only the **Install CTM server** check box; then, click **Next**.



Note Be sure to uncheck the **Upgrade CTM database** check box.

Step 10 At the CTM Group Information & Sudo Installation screen, complete the following substeps:

- a. Enter the name of the UNIX group to which you want to assign administrator privileges.
- b. To install sudo, check the **Install CTM Sudo** check box. If you do not want to install sudo, uncheck the check box.
- c. Click **Next**.

Step 11 (For optical selections only) At the FTP Information screen, complete the following substeps to configure an FTP account for software download operations:

- a. Enter the following information:
 - FTP username
 - FTP user password
 - Confirm FTP user password
 - FTP directory
- b. Check or uncheck the **Create new FTP account** check box. If checked, the FTP user will be created automatically on the CTM server workstation by the install script. If unchecked, it is assumed that an FTP user already exists on the CTM server workstation.
- c. Click **Next**.



Note The FTP information that you enter during the CTM server installation can be modified later from the CTM client Control Panel window. See *Cisco Transport Manager Release 7.2 User Guide* for more information.

- Step 12** At the Server IP Address screen, specify an IP address for the CTM server. The Hostname field is automatically populated with the hostname of the selected IP address. After confirming the IP address and hostname details, click **Next**.



Note The hostname is available only if you select Cisco MGX Voice Gateway.

- Step 13** At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP for optical or Cisco IOS XR devices:

- a. Check the **Enable TFTP Server** check box.
- b. Enter the TFTP directory name. The default is /tftpboot.
- c. Click **Next**.

- Step 14** At the Specify CTM Database to Connect to screen, enter the IP address or hostname of the database workstation; then, click **Next**.



Caution Be sure to enter the correct IP address or hostname. Do not simply accept the default.



Note If you entered a hostname, the setup program automatically translates the hostname to a physical IP address and prompts you to confirm the address. Click **Yes**.

- Step 15** At the Destination Folder screen, specify where you want to install the CTM server. The default directory is /opt/CiscoTransportManagerServer. You can click **Change** to choose a different destination. After you specify your destination, click **Next**.



Note If the destination directory that you specified is a new directory, you will receive the message “Specified directory does not exist, create it?” Click **Yes**.



Note Do not specify any mount point as the target installation directory for the server installation, or the installation data might be lost when the workstation restarts.



Caution CTM checks for the /opt/CiscoTransportManagerServer directory or a symbolic link to it. If CTM cannot find the /opt/CiscoTransportManagerServer directory or a symbolic link, CTM creates a symbolic link automatically. Therefore, do not delete any instances of /opt/CiscoTransportManagerServer from your CTM file structure.

- Step 16** The Pre-Installation Summary screen shows the items that will be installed. Click **Install**.



Note It might take 20 minutes or longer to install the server, depending on your system performance.

- Step 17** At the Insert New Media screen, complete the following substeps:

- a. Eject the CTM Server Disk 1 installation CD, insert the CTM Server Disk 2 installation CD, and click **Browse**.

- b. The Select a Folder dialog box opens. Double-click **cdrom**; then, single-click **cdrom0**. The filename text box now reads `/cdrom/cdrom0`.
 - c. In the Select a Folder dialog box, click **Select**.
 - d. In the Insert New Media screen, click **OK**.
- Step 18** The Web Server Installation Summary screen summarizes the results of the web server installation. Click **Next**.
- Step 19** The Install Complete screen summarizes the results of the installation. Click **Next**.
- Step 20** The Upgrade Server Complete screen displays the log location. Click **Done**.
- Step 21** Enter the following command to reboot the system. The CTM server starts automatically after rebooting:

**Caution**

After you click the Done button in the installation GUI, the background processes continue to run for several minutes. Before rebooting, you must wait for the reboot message on the terminal where you started the installation. Depending on the server performance, the background processes can take up to 15 minutes before the reboot message appears. Rebooting the server before this message appears will break CTM functionalities.

```
init 6
```

- Step 22** To verify that the CTM R7.2 server is running, enter the **showctm** command after the server reboots. The **showctm** command displays the CTM server version running as 7.2, followed by the build number. In the output, you will see two instances of “CTM Server,” “SnmpTrapService,” “SMService,” and “Apache Web Server.” This indicates that the CTM server is running. You should also see NE-specific processes, depending on your network. You might also see CTM GateWay/CORBA and CTM GateWay/TL1 instances.

3.2.3 Copying the Client Upgrade Files After the CTM Server Installation

You have two options for upgrading each client installation to the latest version of CTM that is on the server. You can choose to:

- Manually upgrade each client installation. If you have a previously installed version of the CTM client, you must delete the directory where the previous client is installed before installing the CTM R7.2 client. See [5.1 Installing the CTM Client and Cisco Edge Craft on Microsoft Windows, page 5-2](#) or [5.4 Installing the CTM Client and Cisco Edge Craft on Sun Solaris, page 5-6](#) for more information.
- Automatically upgrade each client when it connects to a server. During login, if the CTM client software version is older than the CTM server software version, the client will be prompted for upgrade. See [5.2 Starting the CTM Client in Microsoft Windows, page 5-5](#) or [5.4 Installing the CTM Client and Cisco Edge Craft on Sun Solaris, page 5-6](#) for more information.

For this option you must copy the client installation files to the server. The CTM client and server installation files reside on separate installation CDs. To copy the client installation files to the server, you must eject the CTM server CD, insert the CTM client CD, and run an automated script, `CopyUpgradeFiles.sh`, to copy the client installation files to a specific folder under the CTM server installation directory. To do this, log in as the root user and complete the following steps.

**Note**

The CTM server must be installed before completing the following steps.

Step 1 Enter the following commands to eject the CTM server installation CD:

```
cd /
eject cdrom
```

Step 2 Insert the CTM client Solaris installation CD and enter the following command:

```
/cdrom/cdrom0/ctmc/CopyUpgradeFiles.sh
```

You should see the following output:

```
Copying the client upgrade files can take several minutes.
Copying CTM Client upgrade files...
Copying Solaris client upgrade files
Solaris client upgrade files copied
Please insert CTM client Windows CD to CD ROM, Copy will continue in 60 seconds...
Could not find Window Client CD, Please insert CTM client Windows CD to continue
Copy will continue in 300 seconds...
Copying Windows client upgrade files
Done...All upgrade files have been copied to server successfully!
Please hit Enter key to return to the prompt mode
```

**Note**

This operation will occupy 800 MB of disk space.

3.3 Verifying that the Oracle9i and CTM Server Processes Are Running

After installation, complete the following steps to verify that the Oracle9i and CTM server processes are running:

Step 1 Enter the following commands on the CTM database workstation to verify that CTM database is running:

```
su - oracle
sqlplus ctmanager/<password_for_ctmanager_Oracle_user>
```

**Note**

The default password for the ctmanager oracle user is *ctm123!*.

You should see the following output:

```
Connected to:
Oracle9i...
```

Step 2 Enter the following command to exit SQL*Plus:

```
exit
```

Step 3 Enter the following command to verify that the CTM R7.2 server is running:

```
showctm
```

In the output, you should see the text “CTM Server,” “SnmpTrapService,” “SMService,” and “Apache Web Server.” This indicates that the CTM server is running. You should also see some NE-specific processes, depending on your network. You might also see CTM GateWay/CORBA and CTM GateWay/TL1 instances.

Step 4 If the CTM server is not running, log into the UNIX workstation as the root user and enter the following command:

```
ctms-start
```

Step 5 If the following error is returned on the command prompt for the web server:

```
(125)Address already in use: make_sock: could not bind to address <IP_address>
no listening sockets available, shutting down
```

Complete the following substeps:

a. Enter the following command on the server workstation; then, kill the processes listed:

```
ps -ef | grep httpd | grep CiscoTransportManagerServer | grep -v grep
```

b. Enter the following command to shut down the CTM server:

```
ctms-stop
```

c. Enter the following command to restart the CTM server (this restarts the latest installed web server):

```
ctms-start
```

Step 6 If you do not have root user privileges but you belong to the UNIX group that can use sudo functionality to run commands as nonroot, enter the following command:

```
sudo ctms-start
```

3.4 Setting Up Sudo

As described in [1.4.1 Overview of Sudo Commands, page 1-18](#), the CTM server installation includes installation of the UNIX sudo command. This command allows nonroot users who belong to the UNIX group specified during installation to run certain CTM administrative commands. For security reasons, the installed sudo command **setuid** is disabled by default. You must enable setuid on the sudo command in order for it to work.



Note

Sudo is often available in the standard UNIX environment established by the CTM server system administrator. If so, it is not necessary to use the sudo bundled with CTM or follow this procedure to enable it. Instead, you can use the sudo established by the system administrator.

To enable setuid:

Step 1 Log into the CTM server as the root user and enter the following command:

```
chmod 4111 /opt/CiscoTransportManagerServer/admin/sudo/sudo
```

- Step 2** Verify that users have `/opt/CiscoTransportManagerServer/admin/sudo` in their path environment, so that they can execute `sudo` without having to specify the full path.
-

3.5 Upgrading the CTM Network Configuration Size

You can complete the following procedure whether you are installing CTM R7.2 as a new installation or upgrading to CTM R7.2 from an earlier release.

- Step 1** At the Introduction screen, click **Next**.
- Step 2** At the License Agreement screen, read the license agreement and click the **I accept the terms of the license agreement** radio button. Click **Next**.
- Step 3** At the Installation Options screen, choose **Upgrade CTM network configuration size**; then, click **Next**.
- Step 4** At the Select Network Configuration screen, specify the size of your network; then, click **Next**.



Note You can upgrade the network configuration only if your network size is medium or large. Small and high-end configurations cannot be upgraded.

- Step 5** At the Pre-Installation Summary screen, click **Install**.
-

3.6 Adding New Modules

You can complete the following procedure whether you are installing CTM R7.2 as a new installation or upgrading to CTM R7.2 from an earlier release.

- Step 1** If the GUI is running, exit.
- Step 2** Enter the following command to stop the CTM server:
- ```
ctms-stop
```
- Step 3** Insert the CTM Server Disk 1 installation CD and enter the following commands:

```
cd /
cdrom/cdrom0/Disk1/ctmsetup.sh
```

Wait for up to 60 seconds while the following message appears:

```
Please wait, Cisco Transport Manager Server Release 7.2 is being configured for your
system. This may take a moment...
```

- Step 4** Click **Next** at the Introduction screen.
- Step 5** At the License Agreement screen, read the license agreement and click the **I accept the terms of the license agreement** radio button. Click **Next**.
- Step 6** At the Installation Options screen, choose **Add new modules**; then, click **Next**.
- Step 7** At the Select Modules to Install screen, select individual modules or select all; then, click **Next**.

- Optical Module: ONS 15xxx (inc. shelf controller)
- Cisco MGX Voice Gateway
- IOS XR Module: XR 12000, CRS-1 (inc. shelf controller)
- IOS Module: Cisco 7600
- All of the Above Modules



**Note** For any modules that are already installed, the option to install them is dimmed. You cannot install modules that are already installed. Only modules that are not yet installed are selectable.

- Step 8** (For optical or Cisco 7600 modules) At the FTP Information screen, enter the following information to configure an FTP account for software download operations:
- FTP username
  - FTP user password
  - Confirm FTP user password
  - FTP directory
- Step 9** At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP for optical, Cisco IOS XR, and Cisco 7600 modules:
- a. Check the **Enable TFTP Server** check box.
  - b. Enter the TFTP directory name. The default is /tftpboot.
  - c. Click **Next**.
- Step 10** At the Pre-Installation Summary screen, click **Install**.
- Step 11** At the Add New Module Complete screen, click **Done**.
- Step 12** After the install is complete, enter the following command to start the CTM server:
- ```
ctms-start
```
- Step 13** Start the client GUI after all of the CTM server services are launched.
-

