



CHAPTER 3

Upgrading to CTM R8.0 from an Earlier Release

This chapter describes how to upgrade to CTM R8.0 from an earlier release. This chapter contains the following sections:

- [3.1 Upgrading from CTM R7.0 or CTM R7.2 to CTM R8.0 and Oracle9i on the Same Workstation, page 3-2](#)
- [3.2 Upgrading from CTM R7.0 or CTM R7.2 to CTM R8.0 and Oracle9i on Separate Workstations, page 3-16](#)
- [3.3 Verifying that the Oracle9i and CTM Server Processes Are Running, page 3-35](#)
- [3.4 Setting Up Sudo, page 3-36](#)
- [3.5 Upgrading the CTM Network Configuration Size, page 3-37](#)
- [3.6 Adding New Modules, page 3-37](#)



Note

After upgrading to CTM R8.0, 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 R8.0, verify that the NE versions in your network are supported by CTM R8.0. See the [Release Notes for Cisco Transport Manager Release 8.0](#) for the NE software versions that are supported. If your network contains NEs that are not supported in CTM R8.0, 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.”](#)

After the upgrade is complete, you can delete `/opt/CiscoTransportManagerServer.oldCTM` and also the install location it points to (if it is a link) because the new server `/opt/CiscoTransportManagerServer` is now installed.

If you cancelled the upgrade you should:

-
- Step 1** Delete the new CTM server that was installed—`/opt/CiscoTransportManagerServer`—as well as the install location it points to. The new server installation might not be complete.
 - Step 2** Delete `/opt/CiscoTransportManagerServer.oldCTM` and create a new `/opt/CiscoTransportManagerServer` (if it is a link) that points to the same old install location. Alternately, rename `/opt/CiscoTransportManagerServer.oldCTM` to `/opt/CiscoTransportManagerServer` (if it is a directory).
 - Step 3** Reimport the database.
 - Step 4** Check the database version in the `/opt/newdbinfo` file. The database version should be the old CTM release (that is, CTM R7.0 or R7.2).
 - Step 5** Proceed with the upgrade.
-

3.1 Upgrading from CTM R7.0 or CTM R7.2 to CTM R8.0 and Oracle9i on the Same Workstation

This section describes how to upgrade from CTM R7.0 or CTM R7.2 to CTM R8.0 when you are installing the CTM R8.0 server and the Oracle9i database, and migrating from Sun Solaris 8 to Sun Solaris 10.

**Note**

The C shell is assumed for all UNIX commands.

3.1.1 Backing Up the Database on Solaris 8 Before Migration

Before upgrading the database to CTM R8.0, 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.

To back up CTM, refer to the following sections in Chapter 4 of the [Cisco Transport Manager Release 8.0 User Guide](#):

- Backing Up the CTM Database from the CTM GUI
- Backing Up the CTM Database from the CLI

3.1.2 Solaris Migration from Sun Solaris 8 to Sun Solaris 10

-
- Step 1** Before upgrading to Solaris 10, verify that your root directory has enough space. A minimum of 6 GB of free root space must be available.
- Step 2** Enter the **stop + a** sequence to halt the workstation at the boot prompt.
- Step 3** At the OK prompt, enter the following command:
- Step 4** Insert the Solaris 10 media for installation.
- Step 5** The workstation reboots and you are prompted to enter values for system identification.
- Step 6** When prompted, select the Upgrade Installation feature. Continue the OS upgrade using the default values.
- Step 7** After the OS upgrade is complete, relink the Oracle database and any other Oracle tools or programs. Enter the following command to relink the Oracle database:

```
boot cdrom
```

```
$_ORACLE_HOME/bin/relink all
```

When you upgrade the OS, the version of OS-level utilities (such as Motif and the C compiler) might change. Relinking Oracle and your other products ensures that the database and tools use libraries and utilities that are currently on the system. Refer to the Oracle documentation to relink the Oracle database and tools.

3.1.3 Downloading the 9.2.0.7 Patch for Oracle9i

CTM R8.0 supports both the 9.2.0.7 and 9.2.0.8 patches for Oracle9i. Complete this section if you want to use the 9.2.0.7 patch for Oracle9i.

If you already have the 9.2.0.7 or 9.2.0.8 patch for Oracle9i installed, you can skip this section. To find out which patches have been installed, enter the following commands as the oracle user:

```
cd $_ORACLE_HOME/OPatch/
./opatch lsinventory -detail | grep -i "oracle9i patch"
```

The output shows:

```
Oracle9i Patch                               9.2.0.7.0
```

-
- Step 1** Go to <http://metalink.oracle.com> and click **Login to MetaLink**. Enter your Oracle MetaLink username and password.



Note This website is Copyright © 2004, Oracle Corporation. All rights reserved.

- Step 2** Click **Patches**.
- Step 3** Click **Simple Search**.
- Step 4** In the Search by Patch Number(s) field, enter **4163445**.
- Step 5** In the Platform or Language field, choose **Solaris Operating System (SPARC 64-bit)**.

- Step 6** Click **Go**.
- Step 7** Click **Download**. Download **p4163445_92070_SOLARIS64.zip**.
- Step 8** As the oracle user, save the patch to the /oraclesw9i directory and enter the following commands to prepare the patch set:

```
cd /oraclesw9i
unzip p4163445_92070_SOLARIS64.zip
```

3.1.4 Copying the .rsp Response File Provided by Cisco

If you already have the 9.2.0.7 patch for Oracle9i installed, you can skip this section.

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

```
cd /cdrom/cdrom0/Disk1
```

- Step 2** Enter the following command to list the files in the cdrom/cdrom0/Disk1 directory:

```
ls -laR
```



Note If a list of files is returned, it indicates that you can access the CD-ROM successfully. If no files are visible, or if an error message is returned, refer to Sun Solaris documentation for mounting the CD-ROM.

- Step 3** As the oracle user, enter the following command to copy the .rsp Response file provided by Cisco:

```
cp /cdrom/cdrom0/Disk1/patchset_64bit_9207.rsp /oraclesw9i
```

3.1.5 Installing the 9.2.0.7 Patch for Oracle9i

If you already have the 9.2.0.7 or 9.2.0.8 patch for Oracle9i installed, you can skip this section.

- Step 1** Enter the following command to log into the database workstation as the oracle user:

```
su - oracle
```

- Step 2** 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 3** 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 4 Enter the following command to stop the Oracle listener:

```
lsnrctl stop
```

Step 5 Enter the following commands to shut down the Oracle database:

```
sqlplus /nolog
SQL> connect / as sysdba
SQL> shutdown immediate
SQL> exit
```

Step 6 Enter the following commands to install the 9.2.0.7 patch:

```
cd /oraclesw9i/Disk1
./runInstaller -silent -responseFile /oraclesw9i/patchset_64bit_9207.rsp
```



Note If the Disk Location screen pops up, click **Cancel**.

Step 7 At the prompt to run the root.sh script, log into another terminal window as the root user and enter the following commands:

```
cd /oraclesw9i/product/9.2
./root.sh
```

Step 8 At the prompt for the local bin directory, enter the following path in the root.sh script:

```
/oraclesw9i/product/9.2/local/bin
```

Step 9 The script asks if you would like to overwrite the existing files. Confirm the request.

Step 10 After the script finishes running, return to the prompt popup window and click **OK**.

Step 11 Click **Exit**.

Step 12 Enter the following commands to start the Oracle database:

```
sqlplus /nolog
SQL> connect / as sysdba
SQL> startup
SQL> exit
```

Step 13 Enter the following command to start the Oracle listener:

```
lsnrctl start
```

Step 14 Enter the following commands to remove the 9.2.0.7 patch installation files:

```
rm -rf /oraclesw9i/Disk1
rm /oraclesw9i/p4163445_92070_SOLARIS64.zip
rm /oraclesw9i/README.html
```

3.1.6 Downloading the 9.2.0.8 Patch for Oracle9i

CTM R8.0 supports both the 9.2.0.7 and 9.2.0.8 patches for Oracle9i. Complete this section if you want to use the 9.2.0.8 patch for Oracle9i.

If you already have the 9.2.0.7 or 9.2.0.8 patch for Oracle9i installed, you can skip this section. To find out which patches have been installed, enter the following commands as the oracle user:

```
cd $ORACLE_HOME/OPatch/
./opatch lsinventory -detail | grep -i "oracle9i patch"
```

The output shows:

```
Oracle9i Patch                               9.2.0.8.0
```

-
- Step 1** Go to <http://metalink.oracle.com> and click **Login to MetaLink**. Enter your Oracle MetaLink username and password.
 - Step 2** Click **Patches**.
 - Step 3** Click **Simple Search**.
 - Step 4** In the Search by Patch Number(s) field, enter **4547809**.
 - Step 5** In the Platform or Language field, choose **Solaris Operating System (SPARC 64-bit)**.
 - Step 6** Click **Go**.
 - Step 7** Click **Download**. Download **p4547809_92080_SOLARIS64.zip**.
 - Step 8** As the oracle user, save the patch to the /oraclesw9i directory and enter the following commands to prepare the patch set:

```
cd /oraclesw9i
unzip p4547809_92080_SOLARIS64.zip
```

3.1.7 Copying the .rsp Response File Provided by Cisco

If you already have the 9.2.0.8 patch for Oracle9i installed, you can skip this section.

-
- Step 1** If you are installing 9.2.0.8, you must download the Oracle installation response file from Cisco.com. Go to <http://tools.cisco.com/support/downloads/pub/Redirect.x?mdfid=278875317> (which requires a registered Cisco.com username and password) and download the patchset_64bit_9208.rsp file.
 - Step 2** As oracle user, copy the downloaded patchset_64bit_9208.rsp file to /oraclesw9i.
-

3.1.8 Installing the 9.2.0.8 Patch for Oracle9i

If you already have the 9.2.0.7 or 9.2.0.8 patch for Oracle9i installed, you can skip this section.

Step 1 Enter the following command to log into the database workstation as the oracle user:

```
su - oracle
```

Step 2 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 3 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 4 Enter the following command to stop the Oracle listener:

```
lsnrctl stop
```

Step 5 Enter the following commands to shut down the Oracle database:

```
sqlplus /nolog
SQL> connect / as sysdba
SQL> shutdown immediate
SQL> exit
```

Step 6 Enter the following commands to install the 9.2.0.8 patch:

```
cd /oraclesw9i/Disk1
./runInstaller -silent -responseFile /oraclesw9i/patchset_64bit_9208.rsp
```



Note If the Disk Location screen pops up, click **Cancel**.

Step 7 At the prompt to run the root.sh script, log into another terminal window as the root user and enter the following commands:

```
cd /oraclesw9i/product/9.2
./root.sh
```

Step 8 At the prompt for the local bin directory, enter the following path in the root.sh script:

```
/oraclesw9i/product/9.2/local/bin
```

Step 9 The script asks if you would like to overwrite the existing files. Confirm the request.

Step 10 After the script finishes running, return to the prompt popup window and click **OK**.

Step 11 Click **Exit**.

Step 12 Enter the following commands to start the Oracle database:

```
sqlplus /nolog
SQL> connect / as sysdba
SQL> startup
SQL> exit
```

Step 13 Enter the following command to start the Oracle listener:

```
lsnrctl start
```

Step 14 Enter the following commands to remove the 9.2.0.8 patch installation files:

```
rm -rf /oraclesw9i/Disk1
rm /oraclesw9i/p4547809_92080_SOLARIS64.zip
rm /oraclesw9i/README.html
```

3.1.9 Post-Installation Steps for 9.2.0.7 or 9.2.0.8—When Upgrading Your CTM Server Installation

Complete the steps detailed in this section after you install the Oracle 9.2.0.7 or 9.2.0.8 patches for the Solaris operating system (SPARC 64-bit).

Step 1 Enter the following command to log into the database workstation as the Oracle user:

```
su - oracle
```

Step 2 For single-instance installations, enter the following command to start the listener:

```
lsnrctl start
```

Step 3 For single-instance installations, use SQL*Plus to log into the database as the SYS user with SYSDBA privileges. Enter the following commands:

```
sqlplus /nolog
SQL> CONNECT SYS/SYS_password AS SYSDBA
SQL> SHUTDOWN
```

Step 4 Enter the following SQL*Plus commands:

```
SQL> STARTUP MIGRATE
SQL> SPOOL patch.log
SQL> @?/rdbms/admin/catpatch.sql
SQL> SPOOL OFF
```



Note The patch.log file is created in the current directory where the SQL commands above were executed.

Step 5 Review the patch.log file for errors and inspect the list of components that are displayed at the end of the catpatch.sql script. This list provides the version and status of each server component in the database.

Step 6 If necessary, rerun the catpatch.sql script after correcting any problems.

Step 7 Enter the following commands to restart the database:

```
SQL> SHUTDOWN
SQL> STARTUP
```

Step 8 Run the utlrp.sql script to recompile all invalid PL/SQL packages now instead of when the packages are accessed for the first time. This step is optional but recommended.

```
SQL> @?/rdbms/admin/utlrp.sql
SQL> exit
```



Note Step 9 should be executed for Oracle patch version 9.2.0.8 only.

- Step 9** By default, all new files and directories are created with restricted access during the patch set installation. Users or third party applications with a group identifier that is different from the database will see permission errors when they try to access client utilities or libraries in the database home.
- Complete the following substeps to change the user permissions:
- a. Enter the following command to change to the install directory:

```
cd $ORACLE_HOME/install
```
 - b. Run changePerm.sh and specify the patched server Oracle home location before accessing the client utilities or libraries.
-

3.1.10 Downloading the Oracle Patch Installer (Required Only for 9.2.0.7)

The Oracle patch installer is used with 9.2.0.7 to install additional Oracle patches. If you have already installed the Oracle patch installer or if you are using the 9.2.0.8 patch, you can skip this section.

You must log in as an oracle UNIX user to download and unzip files.

-
- Step 1** Go to <http://metalink.oracle.com> and click **Login to MetaLink**. Enter your Oracle MetaLink username and password.
- Step 2** Click **Patches**.
- Step 3** Click **Simple Search**.
- Step 4** In the Search by Patch Number(s) field, enter **2617419**.
- Step 5** In the Platform or Language field, choose **Solaris Operating System (SPARC 64-bit)**.
- Step 6** Click **Go**.
- Step 7** Click **Download**.
- Step 8** In the list of patches returned, click the first patch, which has the latest release number.



Note Do not be concerned if the patch refers to a later version of Oracle.

- Step 9** In the Patch 2617419 window, go to the Platform or Language field and choose Generic Platform (the default).
- Step 10** Click **Download**.
- Step 11** Save the patch to the /oraclesw9i/product/9.2 directory.
- Step 12** Enter the following commands to change the patch ownership and unzip the patch:

```
chown oracle:dba /oraclesw9i/product/9.2/p2617419_10102_GENERIC.zip
cd /oraclesw9i/product/9.2
unzip p2617419_10102_GENERIC.zip
```

3.1.11 Installing the CTM R8.0 Server and Upgrading the Database



Note The C shell is assumed for all UNIX commands.

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 R8.0 server is running:
- ```
showctm
```
- Step 2** If the CTM server is running, enter the following command to stop the CTM server before performing the upgrade:
- ```
ctms-abort
```
- Step 3** If you are upgrading from CTM R7.0, install the latest CTM R7.0 service pack. If you are upgrading from CTM R7.2, install the latest CTM R7.2 service pack. See the [Migration Matrix for CTM Service Pack Releases](#) for more information.
- Step 4** Enter the following commands:
- ```
cd /opt/CiscoTransportManagerServer/patch/migration/8.0.0
./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 1.5.0_06 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 this procedure.

**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 this procedure.

This website is Copyright © 1994–2008, Sun Microsystems, Inc. All rights reserved.

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

```
Please wait, Cisco Transport Manager Server Release 8.0 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 3-37.

- 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. 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 R8.0.”](#)

**Note**

If the CTM GateWay/CORBA check box is disabled and checked, due to a previous installation, installation is mandatory during the upgrade. If the CTM GateWay/CORBA check box is disabled and unchecked, do not attempt installation during the upgrade.



Note The license for CiscoView (an optional application used by CTM to configure and monitor ONS 155xx NEs) 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.

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)
- IOS Module: Cisco 7600
- All of the Above Modules



Note

- The MDS 9000 module is a common module that will be installed with any selection.
- You cannot install the Cisco 7600 module without `/etc/resolv.conf` on the workstation.
- Because the Cisco 7600 module is not supported in CTM R7.0 but is supported in CTM R7.2, it will always be disabled if you are upgrading from CTM R7.0. The Cisco 7600 module will be enabled for CTM R7.2 if it was previously installed. To add this module, see [3.6 Adding New Modules, page 3-37](#).

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:

- 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**.



Note For information about the sudo feature, see [1.4.1 Overview of Sudo Commands, page 1-19](#).

Step 17 (For optical and Cisco 7600 modules 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 the [Cisco Transport Manager Release 8.0 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 (For optical, IOS XR, and Cisco 7600 modules only) At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP:

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

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 Enter the following commands:

```
cd /opt/CiscoTransportManagerServer.oldCTM/patch/migration/8.0.0
./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 R8.0 server is running, enter the **showctm** command after the server reboots. The **showctm** command displays the CTM server version running as 8.0, 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.

3.1.12 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 R8.0 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 5-7](#) 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 5-9](#) 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 R7.0 or CTM R7.2 to CTM R8.0 and Oracle9i on Separate Workstations

This section describes how to upgrade from CTM R7.0 or CTM R7.2 to CTM R8.0 when you are installing the CTM R8.0 server and the Oracle9i database on separate Sun Solaris 10 servers.



Note The C shell is assumed for all UNIX commands.

3.2.1 Backing Up the Database on Solaris 8 Before Migration

Before upgrading the database to CTM R8.0, 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.

To back up CTM, refer to the following sections in Chapter 4 of the [Cisco Transport Manager Release 8.0 User Guide](#):

- Backing Up the CTM Database from the CTM GUI
- Backing Up the CTM Database from the CLI

3.2.2 Solaris Migration from Sun Solaris 8 to Sun Solaris 10

-
- Step 1** Before upgrading to Solaris 10, verify that your root directory has enough space. A minimum of 6 GB of free root space must be available.
- Step 2** Enter the **stop + a** sequence to halt the workstation at the boot prompt.
- Step 3** At the OK prompt, enter the following command:
- ```
boot cdrom
```
- Step 4** Insert the Solaris 10 media for installation.
- Step 5** The workstation reboots and you are prompted to enter values for system identification.
- Step 6** When prompted, select the Upgrade Installation feature. Continue the OS upgrade using the default values.
- Step 7** After the OS upgrade is complete, relink the Oracle database and any other Oracle tools or programs. Enter the following command to relink the Oracle database:
- ```
$ORACLE_HOME/bin/relink all
```

When you upgrade the OS, the version of OS-level utilities (such as Motif and the C compiler) might change. Relinking Oracle and your other products ensures that the database and tools use libraries and utilities that are currently on the system. Refer to the Oracle documentation to relink the Oracle database and tools.

3.2.3 Downloading the 9.2.0.7 Patch for Oracle9i

CTM R8.0 supports both the 9.2.0.7 and 9.2.0.8 patches for Oracle9i. Complete this section if you want to use the 9.2.0.7 patch for Oracle9i.

If you already have the 9.2.0.7 or 9.2.0.8 patch for Oracle9i installed, you can skip this section. To find out which patches have been installed, enter the following commands as the oracle user:

```
cd $ORACLE_HOME/OPatch/  
./opatch lsinventory -detail | grep -i "oracle9i patch"
```

The output shows:

```
Oracle9i Patch                9.2.0.7.0
```

-
- Step 1** Go to <http://metalink.oracle.com> and click **Login to MetaLink**. Enter your Oracle MetaLink username and password.



Note This website is Copyright © 2004, Oracle Corporation. All rights reserved.

- Step 2** Click **Patches**.
- Step 3** Click **Simple Search**.
- Step 4** In the Search by Patch Number(s) field, enter **4163445**.
- Step 5** In the Platform or Language field, choose **Solaris Operating System (SPARC 64-bit)**.
- Step 6** Click **Go**.
- Step 7** Click **Download**. Download **p4163445_92070_SOLARIS64.zip**.
- Step 8** As the oracle user, save the patch to the /oraclesw9i directory and enter the following commands to prepare the patch set:

```
cd /oraclesw9i  
unzip p4163445_92070_SOLARIS64.zip
```

3.2.4 Copying the .rsp Response File Provided by Cisco

If you already have the 9.2.0.7 patch for Oracle9i installed, you can skip this section.

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

```
cd /cdrom/cdrom0/Disk1
```

Step 2 Enter the following command to list the files in the `cdrom/cdrom0/Disk1` directory:

```
ls -laR
```



Note If a list of files is returned, it indicates that you can access the CD-ROM successfully. If no files are visible, or if an error message is returned, refer to Sun Solaris documentation for mounting the CD-ROM.

Step 3 As the oracle user, enter the following command to copy the .rsp Response file provided by Cisco:

```
cp /cdrom/cdrom0/Disk1/patchset_64bit_9207.rsp /oraclesw9i
```

3.2.5 Installing the 9.2.0.7 Patch for Oracle9i

If you already have the 9.2.0.7 or 9.2.0.8 patch for Oracle9i installed, you can skip this section.

Step 1 Enter the following command to log into the database workstation as the oracle user:

```
su - oracle
```

Step 2 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 3 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 4 Enter the following command to stop the Oracle listener:

```
lsnrctl stop
```

Step 5 Enter the following commands to shut down the Oracle database:

```
sqlplus /nolog
SQL> connect / as sysdba
SQL> shutdown immediate
SQL> exit
```

Step 6 Enter the following commands to install the 9.2.0.7 patch:

```
cd /oraclesw9i/Disk1
./runInstaller -silent -responseFile /oraclesw9i/patchset_64bit_9207.rsp
```



Note If the Disk Location screen pops up, click **Cancel**.

Step 7 At the prompt to run the root.sh script, log into another terminal window as the root user and enter the following commands:

```
cd /oraclesw9i/product/9.2
./root.sh
```

Step 8 At the prompt for the local bin directory, enter the following path in the root.sh script:

```
/oraclesw9i/product/9.2/local/bin
```

Step 9 The script asks if you would like to overwrite the existing files. Confirm the request.

Step 10 After the script finishes running, return to the prompt popup window and click **OK**.

Step 11 Click **Exit**.

Step 12 Enter the following commands to start the Oracle database:

```
sqlplus /nolog
SQL> connect / as sysdba
SQL> startup
SQL> exit
```

Step 13 Enter the following command to start the Oracle listener:

```
lsnrctl start
```

Step 14 Enter the following commands to remove the 9.2.0.7 patch installation files:

```
rm -rf /oraclesw9i/Disk1
rm /oraclesw9i/p4163445_92070_SOLARIS64.zip
rm /oraclesw9i/README.html
```

3.2.6 Downloading the 9.2.0.8 Patch for Oracle9i

CTM R8.0 supports both the 9.2.0.7 and 9.2.0.8 patches for Oracle9i. Complete this section if you want to use the 9.2.0.8 patch for Oracle9i.

If you already have the 9.2.0.7 or 9.2.0.8 patch for Oracle9i installed, you can skip this section. To find out which patches have been installed, enter the following commands as the oracle user:

```
cd $ORACLE_HOME/OPatch/
./opatch lsinventory -detail | grep -i "oracle9i patch"
```

The output shows:

```
Oracle9i Patch                               9.2.0.8.0
```

Step 1 Go to <http://metalink.oracle.com> and click **Login to MetaLink**. Enter your Oracle MetaLink username and password.

Step 2 Click **Patches**.

Step 3 Click **Simple Search**.

Step 4 In the Search by Patch Number(s) field, enter **4547809**.

Step 5 In the Platform or Language field, choose **Solaris Operating System (SPARC 64-bit)**.

Step 6 Click **Go**.

- Step 7** Click **Download**. Download **p4547809_92080_SOLARIS64.zip**.
- Step 8** As the oracle user, save the patch to the /oraclesw9i directory.
- Step 9** As the root user, enter the following commands to prepare the patch set:

```
cd /oraclesw9i
unzip p4547809_92080_SOLARIS64.zip
```

3.2.7 Copying the .rsp Response File Provided by Cisco

If you already have the 9.2.0.8 patch for Oracle9i installed, you can skip this section.

- Step 1** If you are installing 9.2.0.8, you must download the Oracle installation response file from Cisco.com. Go to <http://tools.cisco.com/support/downloads/pub/Redirect.x?mdfid=278875317> (which requires a registered Cisco.com username and password) and download the patchset_64bit_9208.rsp file.
- Step 2** As oracle user, copy the downloaded patchset_64bit_9208.rsp file to /oraclesw9i.
-

3.2.8 Installing the 9.2.0.8 Patch for Oracle9i

If you already have the 9.2.0.7 or 9.2.0.8 patch for Oracle9i installed, you can skip this section.

- Step 1** Enter the following command to log into the database workstation as the oracle user:
- ```
su - oracle
```
- Step 2** 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 3** 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 4** Enter the following command to stop the Oracle listener:
- ```
lsnrctl stop
```
- Step 5** Enter the following commands to shut down the Oracle database:
- ```
sqlplus /nolog
SQL> connect / as sysdba
SQL> shutdown immediate
SQL> exit
```

Step 6 Enter the following commands to install the 9.2.0.8 patch:

```
cd /oraclesw9i/Disk1
./runInstaller -silent -responseFile /oraclesw9i/patchset_64bit_9208.rsp
```



Note If the Disk Location screen pops up, click **Cancel**.

Step 7 At the prompt to run the root.sh script, log into another terminal window as the root user and enter the following commands:

```
cd /oraclesw9i/product/9.2
./root.sh
```

Step 8 At the prompt for the local bin directory, enter the following path in the root.sh script:

```
/oraclesw9i/product/9.2/local/bin
```

Step 9 The script asks if you would like to overwrite the existing files. Confirm the request.

Step 10 After the script finishes running, return to the prompt popup window and click **OK**.

Step 11 Click **Exit**.

Step 12 Enter the following commands to start the Oracle database:

```
sqlplus /nolog
SQL> connect / as sysdba
SQL> startup
SQL> exit
```

Step 13 Enter the following command to start the Oracle listener:

```
lsnrctl start
```

Step 14 Enter the following commands to remove the 9.2.0.8 patch installation files:

```
rm -rf /oraclesw9i/Disk1
rm /oraclesw9i/p4547809_92080_SOLARIS64.zip
rm /oraclesw9i/README.html
```

3.2.9 Post-Installation Steps for 9.2.0.7 or 9.2.0.8—When Upgrading Your CTM Server Installation

After you install of the Oracle 9.2.0.7 or 9.2.0.8 patches for the Solaris operating system (SPARC 64-bit),

Step 1 Enter the following command to log into the database workstation as the Oracle user:

```
su - oracle
```

Step 2 For single-instance installations, enter the following command to start the listener:

```
lsnrctl start
```

Step 3 For single-instance installations, use SQL*Plus to log into the database as the SYS user with SYSDBA privileges. Enter the following commands:

```
sqlplus /nolog
```

```
SQL> CONNECT SYS/SYS_password AS SYSDBA
SQL> SHUTDOWN
```

Step 4 Enter the following SQL*Plus commands:

```
SQL> STARTUP MIGRATE
SQL> SPOOL patch.log
SQL> @?/rdbms/admin/catpatch.sql
SQL> SPOOL OFF
```



Note The patch.log file is created in the current directory where the SQL commands above were executed.

Step 5 Review the patch.log file for errors and inspect the list of components that are displayed at the end of the catpatch.sql script. This list provides the version and status of each server component in the database.

Step 6 If necessary, rerun the catpatch.sql script after correcting any problems.

Step 7 Enter the following commands to restart the database:

```
SQL> SHUTDOWN
SQL> STARTUP
```

Step 8 Run the utlrp.sql script to recompile all invalid PL/SQL packages now instead of when the packages are accessed for the first time. This step is optional but recommended.

```
SQL> @?/rdbms/admin/utlrp.sql
SQL> exit
```



Note [Step 9](#) should be executed for Oracle patch version 9.2.0.8 only.

Step 9 By default, all new files and directories are created with restricted access during the patch set installation. Users or third party applications with a group identifier that is different from the database will see permission errors when they try to access client utilities or libraries in the database home.

Complete the following substeps to change the user permissions:

- a. Enter the following command to change to the install directory:

```
cd $ORACLE_HOME/install
```

- b. Run changePerm.sh and specify the patched server Oracle home location before accessing the client utilities or libraries.

3.2.10 Downloading the Oracle Patch Installer (Required Only for 9.2.0.7)

The Oracle patch installer is used with 9.2.0.7 to install additional Oracle patches. If you have already installed the Oracle patch installer or if you are using the 9.2.0.8 patch, you can skip this section.

You must log in as an oracle UNIX user to download and unzip files.

Step 1 Go to <http://metalink.oracle.com> and click **Login to MetaLink**. Enter your Oracle MetaLink username and password.

Step 2 Click **Patches**.

- Step 3** Click **Simple Search**.
- Step 4** In the Search by Patch Number(s) field, enter **2617419**.
- Step 5** In the Platform or Language field, choose **Solaris Operating System (SPARC 64-bit)**.
- Step 6** Click **Go**.
- Step 7** Click **Download**.
- Step 8** In the list of patches returned, click the first patch, which has the latest release number.



Note Do not be concerned if the patch refers to a later version of Oracle.

- Step 9** In the Patch 2617419 window, go to the Platform or Language field and choose Generic Platform (the default).
- Step 10** Click **Download**.
- Step 11** Save the patch to the `/oraclesw9i/product/9.2` directory.
- Step 12** Enter the following commands to change the patch ownership and unzip the patch:

```
chown oracle:dba /oraclesw9i/product/9.2/p2617419_10102_GENERIC.zip
cd /oraclesw9i/product/9.2
unzip p2617419_10102_GENERIC.zip
```

3.2.11 Installing the CTM R8.0 Server and Upgrading the Database



Note The C shell is assumed for all UNIX commands.

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 R8.0 server is running:
- ```
showctm
```
- Step 2** If the CTM server is running, enter the following command to stop the CTM server before performing the upgrade:
- ```
ctms-abort
```
- Step 3** If you are upgrading from CTM R7.0, install the latest CTM R7.0 service pack. If you are upgrading from CTM R7.2, install the latest CTM R7.2 service pack. See the [Migration Matrix for CTM Service Pack Releases](#) for more information.
- Step 4** 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 5** 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 6 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 1.5.0_06 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 this procedure.



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 this procedure.

This website is Copyright © 1994–2008, Sun Microsystems, Inc. All rights reserved.

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

```
Please wait, Cisco Transport Manager Server Release 8.0 is being configured for your
system. This may take a moment...
```

Step 7 Click **Next** at the Introduction screen.

Step 8 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 9 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 3-37](#).

Step 10 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. 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 R8.0.”](#)

**Note**

If the CTM GateWay/CORBA check box is disabled and checked, due to a previous installation, installation is mandatory during the upgrade. If the CTM GateWay/CORBA check box is disabled and unchecked, do not attempt installation during the upgrade.

**Note**

The license for CiscoView (an optional application used by CTM to configure and monitor ONS 155xx NEs) 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.

Step 11 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**

- The MDS 9000 module is a common module that will be installed with any selection.
- You cannot install the Cisco 7600 module without /etc/resolv.conf on the workstation.
- Because the Cisco 7600 module is not supported in CTM R7.0 but is supported in CTM R7.2, it will always be disabled if you are upgrading from CTM R7.0. The Cisco 7600 module will be enabled for CTM R7.2 if it was previously installed. To add this module, see [3.6 Adding New Modules, page 3-37](#).

Step 12 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 13 (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 14 (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 15 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**.



Note For information about the sudo feature, see [1.4.1 Overview of Sudo Commands, page 1-19](#).

Step 16 (For optical and Cisco 7600 modules 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 the [Cisco Transport Manager Release 8.0 User Guide](#) for more information.

Step 17 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 18 (For optical, IOS XR, and Cisco 7600 modules only) At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP:

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

c. Click **Next**.

Step 19 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**.



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 20 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 21 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 22 The Web Server Installation Summary screen summarizes the results of the web server installation. Click **Next**.

Step 23 The Install Complete screen summarizes the results of the installation. Click **Next**.

Step 24 The Upgrade Server and Database Complete screen displays the log location. Click **Done**.

Step 25 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 26** To verify that the CTM R8.0 server is running, enter the **showctm** command after the server reboots. The **showctm** command displays the CTM server version running as 8.0, 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.

3.2.12 Upgrading the Database on the CTM Database Workstation



Note The C shell is assumed for all UNIX commands.

To upgrade the database, log in as the root user on the CTM database workstation 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** Enter the following commands:

```
cd /opt/CiscoTransportManagerServer/patch/migration/8.0.0
./pre_migration.sh
cd /
```

- Step 4** 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 1.5.0_06 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 this procedure.

**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 this procedure.

This website is Copyright © 1994–2008, Sun Microsystems, Inc. All rights reserved.

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

```
Please wait, Cisco Transport Manager Server Release 8.0 is being configured for your system. This may take a moment...
```

- Step 5** Click **Next** at the Introduction screen.
- Step 6** 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 7** 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 3-37](#).

- Step 8** 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. 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 R8.0.”](#)

- Step 9** 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**

- You cannot install the Cisco 7600 module without `/etc/resolv.conf` on the workstation.
- Because the Cisco 7600 module is not supported in CTM R7.0 but is supported in CTM R7.2, it will always be disabled if you are upgrading from CTM R7.0. The Cisco 7600 module will be enabled for CTM R7.2 if it was previously installed. To add this module, see [3.6 Adding New Modules, page 3-37](#).

Step 10 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.

Step 11 (Optional) If you selected **Upgrade CTM network configuration size** in [Step 7](#), the Select to Upgrade Network Configuration Type screen appears. Select the option to upgrade your current network configuration type.

Step 12 (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 13 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 [1.1 CTM Server Requirements, page 1-1](#).

Step 14 (For optical and Cisco 7600 modules only) At the FTP Information screen, accept the default values; then, click **Next**.

Step 15 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.

Step 16 The Upgrade Database Complete screen summarizes the results of the upgrade. Click **Done**.

Step 17 Enter the following commands:

```
cd /opt/CiscoTransportManagerServer.oldCTM/patch/migration/8.0.0
```

```
./post_migration.sh  
cd /
```

3.2.13 Installing the CTM R8.0 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 1.5.0_06 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 this procedure.

**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 this procedure.

This website is Copyright © 1994–2008, Sun Microsystems, Inc. All rights reserved.

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

```
Please wait, Cisco Transport Manager Server Release 8.0 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)
- IOS Module: Cisco 7600
- All of the Above Modules



Note

- The MDS 9000 module is a common module that will be installed with any selection.
 - You cannot install the Cisco 7600 module without `/etc/resolv.conf` on the workstation.
 - Because the Cisco 7600 module is not supported in CTM R7.0 but is supported in CTM R7.2, it will always be disabled if you are upgrading from CTM R7.0. The Cisco 7600 module will be enabled for CTM R7.2 if it was previously installed. To add this module, see [3.6 Adding New Modules, page 3-37](#).
-

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 and Cisco 7600 modules 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 the *Cisco Transport Manager Release 8.0 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** (For optical, IOS XR, and Cisco 7600 modules only) At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP:
- Check the **Enable TFTP Server** check box.
 - Enter the TFTP directory name. The default is /tftpboot.
 - 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 R8.0 server is running, enter the **showctm** command after the server reboots. The **showctm** command displays the CTM server version running as 8.0, 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.
-

3.2.14 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 R8.0 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 5-7](#) 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 5-7](#) 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 R8.0 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 1-19](#), 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



---

**Note** You can complete the following procedure whether you are installing CTM R8.0 as a new installation or upgrading to CTM R8.0 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



---

**Note** You can complete the following procedure whether you are installing CTM R8.0 as a new installation or upgrading to CTM R8.0 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 8.0 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**

- You cannot install the Cisco 7600 module without `/etc/resolv.conf` on the workstation.
  - All service modules of the MGX NE, including the RPM module, should be upgraded to R5.4 before adding the NE to CTM in SNMPv3 mode. Otherwise, CTM will not be able to synchronize with the NE.
  - 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 and Cisco 7600 modules only) 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** (For optical, IOS XR, and Cisco 7600 modules only) At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP:
- 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.
-