



CHAPTER 3

Upgrading to CTM R8.5 from an Earlier Release



Caution

A reliable network connection is required when carrying out an installation on a remote workstation.

This chapter describes how to upgrade to CTM R8.5 from an earlier release. This chapter contains the following sections:

- [3.1 Backing Up the Database on Solaris 10 Before Migration, page 3-2](#)
- [3.2 Solaris Migration to Sun Solaris 10, Release 11/06, page 3-3](#)
- [3.3 Upgrading from CTM R8.0 and Oracle9i to CTM R8.5 and Oracle 10g on the Same Workstation, page 3-4](#)
- [3.4 Upgrading from CTM R8.0 and Oracle9i to CTM R8.5 and Oracle 10g on Separate Workstations, page 3-11](#)
- [3.5 Verifying That the Oracle 10g and CTM Server Processes Are Running, page 3-19](#)
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- [3.8 New Zealand Daylight Saving Time Updates, page 3-22](#)



Note

You can upgrade to CTM R8.5 directly from CTM R8.0. If you are upgrading from a release prior to CTM R8.0, you must first upgrade to CTM R8.0. Refer to the [Cisco Transport Manager Release 8.0 Installation Guide](#) for the exact installation procedure. After you install CTM R8.0, you can upgrade to CTM R8.5.



Note

After upgrading to CTM R8.5, the old CTM server directory is moved to CiscoTransportManagerServer-old. Any data previously saved in the following directories is saved in the new /opt/CiscoTransportManagerServer directory:

- /opt/CiscoTransportManagerServer/admin
- /opt/CiscoTransportManagerServer/images
- /opt/CiscoTransportManagerServer/cms
- /opt/CiscoTransportManagerServer/bin/jcorbagw.sh
- /opt/CiscoTransportManagerServer/cfg/usr

- `/opt/CiscoTransportManagerServer/cfg/corbagw.properties`

Before removing the old version, move any relevant data to the new 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 R8.5, verify that the NE versions in your network are supported by CTM R8.5. See the [Release Notes for Cisco Transport Manager Release 8.5](#) for the NE software versions that are supported. If your network contains NEs that are not supported in CTM R8.5, 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.”](#)
- 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.

Complete the following steps if you canceled the upgrade:

-
- 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 R8.0).
 - Step 5** Proceed with the upgrade.
-

3.1 Backing Up the Database on Solaris 10 Before Migration

Before upgrading the database to CTM R8.5, 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 8.5 User Guide*:

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

3.2 Solaris Migration to Sun Solaris 10, Release 11/06

-
- 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 following command to reboot the system:
- ```
init 0
```
- Step 3** Insert the Solaris 10 media for installation.
- Step 4** At the OK prompt, enter the following command:
- ```
boot cdrom
```
- 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. 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.

As the Oracle user, complete the following substeps to relink the Oracle database and tools:

- a. Enter the following command:

```
env | pg
```



Note Make sure that you see the correct absolute path for \$ORACLE_HOME in the variable definitions.

- b. Enter the following commands to run the relink script provided in the \$ORACLE_HOME/bin directory:

```
cd $ORACLE_HOME/bin
relink all
```

The **relink all** command does not relink every executable that Oracle provides. (You can check which executables were relinked by using the **ls -l** command in the \$ORACLE_HOME/bin directory to check the time stamps.) However, the **relink all** command recreates the shared libraries that most executables rely on, thereby resolving most issues that require a valid relink.

3.3 Upgrading from CTM R8.0 and Oracle9i to CTM R8.5 and Oracle 10g on the Same Workstation

This section describes how to upgrade from CTM R8.0 and Oracle9i to CTM R8.5 and Oracle 10g when you are installing the CTM R8.5 server and the Oracle 10g database on the same workstation.



Note

- The procedures in this section are extracted from the Oracle documentation. Use the information in this section in conjunction with the Oracle documentation available on the Oracle website at www.oracle.com. The Oracle website is copyright © 2004, Oracle Corporation. All rights reserved.
- If you are upgrading from a release prior to CTM R8.0, you must first upgrade to CTM R8.0. Refer to the *Cisco Transport Manager Release 8.0 Installation Guide* for the exact installation procedure. After you install CTM R8.0, you can upgrade to CTM R8.5.

3.3.1 Installing the CTM R8.5 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** Before proceeding with the installation, verify that your server has enough RAM available for your CTM network size. See [1.1.1 Server Specifications, page 1-3](#) for details.
- Step 2** Enter the following command to verify that the CTM R8.0 server is running:
- ```
showctm
```
- Step 3** If the CTM server is running, enter the following command to stop the server before performing the upgrade:
- ```
ctms-abort
```
- Step 4** Install the latest CTM R8.0 service pack. See the *Migration Matrix for CTM Service Pack Releases* for more information.
- Step 5** Enter the following commands:
- ```
cd /opt/CiscoTransportManagerServer/patch/migration/8.5.0
./pre_migration.sh
cd /
```
- Step 6** Enter the following commands to copy the pre- and postmigration scripts:
- ```
cp /cdrom/cdrom0/Disk1/InstData/Solaris/VM/pre_migration_Ora9i2Ora10g.sh
/opt/CiscoTransportManagerServer/bin
cp /cdrom/cdrom0/Disk1/InstData/Solaris/VM/migration_Ora9i2Ora10g.sh
/opt/CiscoTransportManagerServer/bin
cp /cdrom/cdrom0/Disk1/InstData/Solaris/VM/pre_migration_extract_size.sql
/opt/CiscoTransportManagerServer/bin
```
- Step 7** Verify that the following scripts have execution permissions:
- `pre_migration_Ora9i2Ora10g.sh`
 - `migration_Ora9i2Ora10g.sh`
 - `pre_migration_extract_size.sql`

Step 8 If the scripts do not have execution permissions, enter the following commands:

```
chmod ugo+x pre_migration_Ora9i2Ora10g.sh
chmod ugo+x migration_Ora9i2Ora10g.sh
chmod ugo+x pre_migration_extract_size.sql
```



Note The location of the jre folder might vary. This step is required from the installation of Solaris 10, Release 11/06.

Step 9 Enter the following command:

```
mv /usr/bin/java.old /usr/bin/java
```

Step 10 Enter the following commands to run the premigration script:

```
cd /opt/CiscoTransportManagerServer/bin
./pre_migration_Ora9i2Ora10g.sh /cdrom/cdrom0 [<working_directory>]
```



Note The /cdrom/cdrom0 directory is the mount point where the Disk1 directory is located. It is required so that the CTM Server Disk 1 installation CD is mounted.



Note The <working_directory> is an optional parameter to specify the directory where the premigration phase can store the required files. The default location is /temp/ORA_MIG10. Take note of the <working_directory> parameter if you are planning to use a location other than the default location.

Step 11 Wait until the premigration script completes successfully. In the output, you should see:

```
"Preliminary checks phase SUCCESSFUL...."
```

Step 12 Enter the following commands to shut down Oracle:

```
su - oracle
dbshutimmediate
```



Caution The command to shut down Oracle does not work in a high availability (HA) installation.



Caution In a local redundancy HA environment, the /var/opt/oracle/oraInst.loc file is present in only one of the two servers in the same cluster. Verify that you can launch the installer where the file is present.

Step 13 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 14 Enter the following commands to uninstall the previous version of Oracle:

- For version 9.2.0.7, enter:
/oraclesw9i/product/9.2/oui/bin/runInstaller

- For version 9.2.0.8, enter:

```
/oraclesw9i/Disk1/runInstaller
```

Step 15 Click the **Deinstall Product** button. In the Inventory panel, select all of the Oracle products listed and click the **Remove** button. When Oracle is uninstalled, click the **Exit** button.

Step 16 Complete the following preinstallation steps:

- Enter the following command to view the CTM Oracle SID:

```
echo $ORACLE_SID
```

- Edit the `/var/opt/oracle/oratab` file as the root user. In this file, replace the `"/oraclesw9i/product/9.2"` string with `"/oracle/product/10.2.0"`.



Note Check that the first line of the file contains the CTM Oracle SID (as detailed in substep a).



Note It is not possible to install Oracle 10g in the same directory as Oracle9i.

- Edit the `/var/opt/oracle/oraInst.loc` file as the root user. In this file, replace the `"/oraclesw9i"` string with `"/oracle"`.

Step 17 Complete the following substeps to create a new Oracle home directory and install group, and then upgrade the existing Oracle user to the new environment:

- Log in as the root user.
- Enter the following command to create the oinstall group:

```
groupadd oinstall
```

- Enter the following command to create the new mount point for the Oracle user home directory:

```
mkdir /oracle
```

- Enter the following command to change ownership to the `/oracle` directory and its contents:

```
chown -R oracle:dba /oracle
```

- Enter the following command to remove all files and subdirectories from the `/oraclesw9i` directory:

```
rm -R /oraclesw9i/*
```

- If `/oraclesw9i` is a mount point for a dedicated partition for the Oracle application, enter the following commands to unmount the related partition and delete the mount point:

```
umount /oraclesw9i
rm -R /oraclesw9i
usermod -g oinstall -G dba -m -s /bin/csh -d /oracle oracle
```



Note When working in an HA installation, do not complete substep g; that is, for an HA installation, do not modify the `/etc/vfstab` file.

- Modify the `/etc/vfstab` file. In this file, replace the `"oraclesw9i"` string with `"oracle"`.
- Mount the `/oracle` mount point.

Step 18 Install Oracle 10g. Complete the procedures detailed in [2.1.1 Installing Oracle 10g, page 2-2](#), starting from [Step 11](#) in section [2.1.1.1 Setting the Environment for Installation, page 2-2](#).

Step 19 After completing the installation, enter the following command to log into the database workstation as the Oracle user:

```
su - oracle
```

Step 20 Copy the ADMIN_CTM.tar file from the /temp directory to the /oracle directory.

Step 21 Enter the following command to extract the ADMIN_CTM tar file:

```
tar xvf ADMIN_CTM.tar
```

Step 22 Enter the following command to create a soft link for the initCTM.ora file:

```
ln -s /oracle/admin/<Oracle_SID>/pfile/init<Oracle_SID>.ora /oracle/product/10.2.0/
dbs/init<Oracle_SID>.ora
```

Step 23 As the root user, enter the following command to run the postmigration script:

```
cd /opt/CiscoTransportManagerServer/bin ./migration_Ora9i2Ora10g.sh [<working_directory>]
```



Note The *<working_directory>* is an optional parameter to specify the directory where the premigration phase can store the required files. The default location is /temp/ORA_MIG10. Take note of the *<working_directory>* parameter if you are planning to use a location other than the default location. If you specified a working directory in [Step 10](#), use the same *<working_directory>*.

Step 24 The migration_Ora9i2Ora10g.sh script checks the results of the migration step. You should not see any error messages.

Step 25 As the Oracle user, enter the following commands:

```
chmod 777 $ORACLE_HOME/network/log
chmod 777 $ORACLE_HOME/network/trace
chmod +t $ORACLE_HOME/network/log
chmod +t $ORACLE_HOME/network/trace
```

Step 26 As the root user, insert the CTM Server Disk 1 installation CD and enter the following commands:

```
cp /cdrom/cdrom0/Disk1/InstData/Solaris/VM/cfg/{small | medium | large | highend}/dbstart
/oracle/product/10.2.0/bin/dbstart
chown oracle:dba /oracle/product/10.2.0/bin/dbstart
chmod +x /oracle/product/10.2.0/bin/dbstart
```

Step 27 Enter the following commands to start the CTM installation:

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

The setup program searches for Sun Microsystems JRE version 1.5.0_12 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.

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

```
Please wait, Cisco Transport Manager Server Release 8.5 is being configured for your
system. This may take a moment...
```

Step 28 At the Introduction screen, click **Next**.

Step 29 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 30 At the Installation Options screen, choose **Upgrade from existing CTM release**; then, click **Next**.

Step 31 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 R8.5.”](#)



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.

Step 32 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
- All of the Above Modules



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

Step 33 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 34 At the Select Network Configuration Type screen, select the option to upgrade your current network configuration type.

Step 35 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 36 At the User Migration screen, complete the following substeps:

- a. Select the **Migrate Users** or **Do not migrate users** check box. Complete the Password and Password (confirm) fields if you chose to migrate the CTM users. The Password field sets the password for all CTM users migrated from the CTM R8.0 server.



Note Users can login to the CTM R8.5 server using this password. They will be prompted to change their passwords on first login.

- b. Click **Next**.

Step 37 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 1-18](#).

Step 38 (For optical 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 8.5 User Guide* for more information.

Step 39 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 40 At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP for optical modules:

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

Step 41 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 42 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 43 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. Repeat substeps a through d for the other disks.

Step 44 The Web Server Installation Summary screen summarizes the results of the web server installation. Click **Next**.

Step 45 The Install Complete screen summarizes the results of the installation. Click **Next**.

Step 46 The Upgrade Server and Database Complete screen displays the log location. Click **Done**.

Step 47 Enter the following commands:

```
cd /opt/CiscoTransportManagerServer.oldCTM/patch/migration/8.5.0
./post_migration.sh
cd /
```

Step 48 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 49 To verify that the CTM R8.5 server is running, enter the **showctm** command after the server reboots. The **showctm** command displays the CTM server version running as 8.5, 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.

3.4 Upgrading from CTM R8.0 and Oracle9i to CTM R8.5 and Oracle 10g on Separate Workstations

This section describes how to upgrade from CTM R8.0 and Oracle9i to CTM R8.5 and Oracle 10g when you are installing the CTM R8.5 server and the Oracle 10g database on separate Sun Solaris 10 workstations.

**Note**

- The procedures in this section are extracted from the Oracle documentation. Use the information in this section in conjunction with the Oracle documentation available on the Oracle website at www.oracle.com. The Oracle website is copyright © 2004, Oracle Corporation. All rights reserved.
- If you are upgrading from a release prior to CTM R8.0, you must first upgrade to CTM R8.0. Refer to the [Cisco Transport Manager Release 8.0 Installation Guide](#) for the exact installation procedure. After you install CTM R8.0, you can upgrade to CTM R8.5.

3.4.1 Installing the CTM R8.5 Server on the CTM Server Workstation

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 Before proceeding with the installation, verify that your server has enough RAM available for your CTM network size. See [1.1.1 Server Specifications, page 1-3](#) for details.

Step 2 Enter the following command to verify that the CTM R8.0 server is running:

```
showctm
```

Step 3 If the CTM server is running, enter the following command to stop the server before performing the upgrade:

```
ctms-abort
```

Step 4 Install the latest CTM R8.0 service pack. See the [Migration Matrix for CTM Service Pack Releases](#) for more information.

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 Enter the following commands to uninstall the previous version of the Oracle client:

- For version 9.2.0.7, enter:

```
su - oracle
/oraclesw9i/product/9.2/oui/bin/runInstaller
```

- For version 9.2.0.8, enter:

```
su - oracle
/oraclesw9i/Disk1/runInstaller
```

Step 8 Complete the following preinstallation steps:

- Enter the following command to view the CTM Oracle SID:

```
echo $ORACLE_SID
```

- Edit the `/var/opt/oracle/oratab` file as the root user. In this file, replace the `"/oraclesw9i/product/9.2"` string with `"/oracle/product/10.2.0"`.



Note Check that the first line of the file contains the CTM Oracle SID (as detailed in substep a).



Note It is not possible to install Oracle 10g in the same directory as Oracle9i.

- c. Edit the `/var/opt/oracle/oraInst.loc` file as the root user. In this file, replace the `"/oraclesw9i"` string with `"/oracle"`.
- Step 9** Complete the following substeps to create a new Oracle home directory and install group. Afterward, upgrade the existing Oracle user to the new environment.
- a. Log in as the root user.
- b. Enter the following command to create the `oinstall` group:
- ```
groupadd oinstall
```
- c. Enter the following command to create the new mount point for the Oracle user home directory:
- ```
mkdir /oracle
```
- d. Enter the following command to change ownership to the `/oracle` directory and its contents:
- ```
chown -R oracle:dba /oracle
```
- e. Enter the following command to remove all files and subdirectories from the `/oraclesw9i` directory:
- ```
rm -R /oraclesw9i/*
```
- f. If `/oraclesw9i` is a mount point for a dedicated partition for the Oracle application, enter the following commands to unmount the related partition and delete the mount point:
- ```
umount /oraclesw9i
rm -R /oraclesw9i
usermod -g oinstall -G dba -m -s /bin/csh -d /oracle oracle
```
- g. Mount the `/oracle` mount point.
- Step 10** Install the Oracle 10g client. See from [Step 8](#) onward in [2.2.1 Installing the Oracle 10g Client on the CTM Server Workstation](#), page 2-19.
- Step 11** 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_12 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.

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

```
Please wait, Cisco Transport Manager Server Release 8.5 is being configured for your
system. This may take a moment...
```

Step 12 At the Introduction screen, click **Next**.

Step 13 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 14 At the Installation Options screen, choose **Upgrade from existing CTM release**; then, click **Next**.

Step 15 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 16 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
- All of the Above Modules



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

Step 17 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 18 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 19 (For optical 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 8.5 User Guide](#) for more information.

- Step 20** 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 21** At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP for optical modules:

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

- Step 22** 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 23** 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 24** 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 25** 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. Repeat substeps **a** through **d** for the other disks.
- Step 26** The Web Server Installation Summary screen summarizes the results of the web server installation. Click **Next**.
- Step 27** The Install Complete screen summarizes the results of the installation. Click **Next**.
- Step 28** The Upgrade Server Complete screen displays the log location. Click **Done**.
- Step 29** 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 30** To verify that the CTM R8.5 server is running, enter the **showctm** command after the server reboots. The **showctm** command displays the CTM server version running as 8.5, 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.

3.4.2 Upgrading the Database on the CTM Database Workstation

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/8.5.0
./pre_migration.sh
cd /
```

Step 4 Install Oracle 10g. See [Step 2](#) through [Step 26](#) of [3.3.1 Installing the CTM R8.5 Server and Upgrading the Database, page 3-4](#).

Step 5 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_12 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.

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

```
Please wait, Cisco Transport Manager Server Release 8.5 is being configured for your  
system. This may take a moment...
```

Step 6 At the Introduction screen, click **Next**.

Step 7 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 8 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 [3.6 Upgrading the CTM Network Configuration Size, page 3-20](#).

Step 9 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 R8.5.”](#)

Step 10 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
- All of the Above Modules

Step 11 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 12 (Optional) If you selected **Upgrade CTM network configuration size** in [Step 8](#), the Select to Upgrade Network Configuration Type screen appears. Select the option to upgrade your current network configuration type.

Step 13 (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 14 At the User Migration screen, complete the following substeps:

- a. Select the **Migrate Users** or **Do not migrate users** check box. Complete the Password and Password (confirm) fields if you chose to migrate the CTM users.
- b. Click **Next**.

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 1-18](#).

Step 16 (For optical modules only) At the FTP Information screen, accept the default values; then, click **Next**.

Step 17 The Pre Installation Summary screen shows the items that will be installed. Click **Install**.



Note It might take 40 minutes or longer to upgrade the database, depending on your system performance.

Step 18 The Upgrade Database Complete screen summarizes the results of the upgrade. Click **Done**.

Step 19 Enter the following commands:

```
cd /opt/CiscoTransportManagerServer/patch/migration/8.5.0
./post_migration.sh
cd /
```

3.5 Verifying That the Oracle 10g and CTM Server Processes Are Running

After installation, complete the following steps to verify that the Oracle 10g 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:
Oracle10g...
```

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

```
exit
```

Step 3 Enter the following command to verify that the CTM R8.5 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
```

3.6 Upgrading the CTM Network Configuration Size



Note

You can complete the following procedure whether you are installing CTM R8.5 as a new installation or upgrading to CTM R8.5 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**.
- Step 6** As the root user, enter the following command to reboot the system:

```
init 6
```



Note

The CTM server starts automatically after rebooting. After the server reboot, it might take up to 20 minutes for the CTM server to come up.

3.7 Adding New Modules

**Note**

You can complete the following procedure whether you are installing CTM R8.5 as a new installation or upgrading to CTM R8.5 from an earlier release.

**Caution**

Contact the Cisco Technical Assistance Center (TAC) before adding new modules on a patched CTM server.

Step 1 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 8.5 is being configured for your  
system. This may take a moment...
```

Step 2 At the Introduction screen, click **Next**.

Step 3 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 4 At the Installation Options screen, choose **Add new modules**; then, click **Next**.

Step 5 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
- All of the Above Modules

**Note**

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 cannot synchronize with the NE.

**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 6 (For optical 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 7 At the Configure TFTP Server screen, complete the following substeps if you want to enable TFTP for optical modules:

- a. Check the **Enable TFTP Server** check box.

- b. Enter the TFTP directory name. The default is /tftpboot.
- c. Click **Next**.

Step 8 At the Pre Installation Summary screen, click **Install**.

Step 9 At the Add New Module Complete screen, click **Done**.

3.8 New Zealand Daylight Saving Time Updates

If you are located in New Zealand, you must apply the steps described in [Appendix D, “Updating CTM Daylight Saving Time for New Zealand”](#) to make the CTM server compliant with the New Zealand Daylight Saving Time (DST) settings update.

For details, refer to the New Zealand Department of Internal Affairs website at <http://www.dia.govt.nz/diawebsite.nsf>.