

CHAPTER 6

Configuring Cisco Unified Communications Manager for Cisco TelePresence Manager

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Introduction

This section describes adding parameters to Cisco Unified Communications Manager (Cisco Unified CM) and researching information from the current installation of Cisco that will be used to initialize the Cisco TelePresence Manager installation. For more information refer to *Cisco Unified Communications Manager Configuration Guide for Cisco TelePresence System*.

Important Considerations

Before you proceed with CTS-Manager installation, the servers and applications within your network must be configured so that Cisco TelePresence Manager can find the resources and information needed to initialize the installation. This section describes the following applications:

- Cisco Unified CM should already be installed and configured. For more information refer to section *Logging into Cisco Unified CM Administrator, page 6-6* or refer to the *Cisco Unified Communications Manager Configuration Guide for Cisco TelePresence System*.

**Note**

If you see the test connection failure message, you may need to specify IP addresses for your Cisco Unified Communications Manager server(s) if this is a non-DNS environment, as well as other network devices. You can change any server name values in Cisco Unified Communications Manager. Cisco recommends you configure the system using static IP addressing so it will be easier to manage.

Pre-Configuration Procedure Guidelines for Cisco Unified CM Setup

This table provides a guideline for the procedures you will need to reference in order to preconfigure the Cisco Unified Communications Manager **before** installing the Cisco TelePresence Manager.

**Note**

The system uses either Microsoft or IBM not both. So either Chapter 3 or Chapter 4 needs to be referenced when doing the preconfiguration.

Table 6-1***Pre-Configuration Guidelines for Setting Up Unified CM for CTS-Manager***

Setup Procedure Guidelines before Installing CTS-MAN	Description	Location
Configuring Cisco Unified CM	Before CTS-Manager installation, you must verify that Cisco Unified Communications Manager is configured for the CTS-Manager system.	Current Chapter
Install and Configuring PreQualification Assistant	Install and run the PreQualification Assistant to ensure that your pre-installation setup is configured correctly. The data you enter into the Tool Test Configuration forms are used to verify connections to the servers and retrieve data from them to be used to configure CTS-Manager	Chapter 7, “Installing and Configuring Cisco PreQualification Assistant”

Configuring Cisco Unified CM for CTS-Manager

The procedures in the next section must be completed before installing and initializing Cisco TelePresence Manager.

If at any time you encounter problems, go to [Chapter 17, “Troubleshooting Cisco TelePresence Manager”](#) to see how to correct the problem.

For Deployments Using Microsoft Exchange or IBM Domino or Scheduling API

- A Cisco Unified Communications Manager certificate must be accessible for CTS-Manager to communicate with Unified CM.

**Note**

Only one certificate can be used. Do not reuse it or give it a new name and then try to upload it to CTS-Manager. Also, if a certificate is expired, it cannot be uploaded.

- Unified CM Certificate
 - To get a Cisco Unified Communications Manager certificate do the following:
 1. Log into the Cisco Unified CM Administration application
 2. From the Navigation menu, select **Cisco Unified OS Administration** and click **Go**.
 3. From the Security menu click **Certificate Management**.
 4. Click the link for **tomcat.der**.
 5. In the Certificate Configuration window, click the **Download** button.
 - This saves a copy of the certificate on your computer. Make sure this file is accessible to the computer that has browser access to the Cisco TelePresence Manager server.

**Note**

Deleting a Unified CM won't delete the CTS-Trust certificate corresponding to that Unified CM. If the administrator adds the deleted Unified CM back, then he/she doesn't need to upload the trust certificate again as it is already there in the system. If the administrator tries to upload it again, an error will be detected.

Step 1

Create an application user for CTS-Manager. Refer to section [Logging into Cisco Unified CM Administrator, page 6-6](#) or to your [Cisco Unified Communications Manager Configuration Guide for Cisco TelePresence System](#) for the steps to perform this. Save these credentials for the CTS-Manager initialization procedure that follows.

**Warning**

Application user names must contain only ASCII characters to work correctly with CTS-Manager.

**Note**

Make sure that the application user you've created has all the endpoints assigned to it that you plan to use.


Assign all TelePresence units/IP phone devices to this user profile. MAC Address of each unit and shared phone should be added to the user profile. Add TelePresence endpoints in the Cisco Unified CM Admin UI, by going to Device > Phone.

**Note**

It is not required to add an IP phone associated with the CTS to the application user.

**Note**

To secure CTS-Manager, add the “Standard CTI Secure Connection” group to the application user.

- Step 2** For each TelePresence endpoint device, follow these steps:
- Go to Device > Phone and click the device name corresponding to the TelePresence endpoint device.
 - At the bottom of the Device Information section, check the **Allow Control of Device from CTI** checkbox.
 - In the Product Specific Configuration Layout section, enter the endpoint email address in the **Room Name** field.
-  **Caution** You cannot assign the same email address to more than one endpoint. If you do, you must fix the problem in Unified CM and then do a resync in the Microsoft Exchange or IBM Domino window in CTS-Manager.
- Assign the same DN as the IP phone that is associated with this TelePresence endpoint device.
 - In the Directory Number Information section of Directory Number Configuration, check the **Allow Control of Device from CTI** checkbox.
- Step 3** For each IP phone device that is associated to TelePresence endpoint device, check the **Allow Control of Device from CTI** checkbox at the bottom of the **Device Information** section.
- Step 4** Go to User Management > Application User, and create an application user in Cisco Unified CM for Cisco TelePresence Manager. Save these credentials for use during the Cisco TelePresence Manager first time setup.
- Step 5** Assign all TelePresence endpoints and their associated IP phone devices to this application user. The MAC Address of each unit and IP phone should be added to the user profile.
- Step 6** Create a user group in the CiscoUnified CM for Cisco Telepresence Manager.
- Assign the following roles to this user group:
 - Standard AXL API access
 - Standard CTI enabled
 - Standard serviceability
 - Standard CCM Admin Users
 - Standard RealtimeandTracesCollection
 - Add the above application user to the newly created user group.
- Step 7** Verify all required services are activated and running on the Cisco Unified CM node. It is required to have Cisco AXL Web Service activated on the Cisco Unified CM Publisher node. Similarly, Cisco RIS Data Collector should be running on the Cisco Unified CM Publisher node. Cisco CTIManager should be activated and running, but can be running on any node inside the same Cisco Unified CM Cluster. Please refer to the Cisco Unified CM Configuration Guide for details on service activation and start/stop.

- Step 8** Download the certificate for Cisco Unified CM using IE Browser. User is prompted with a certificate when browser is pointed to Cisco Unified CM server. You can save cert file on local machine. This would be used later while configuring the CTS-Manager during first time setup. You cannot upload a certificate twice even if you change the name of the certificate.
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**Note**

If an endpoint's display name is changed once CTS-Manager is up and running, CTS-Manager reads new display name once every 24 hours, so the new name will display after this 24 hour period. In addition, when a new endpoint is added to Unified CM, restarting CTS-Manager is also not required.

Configuring Cisco Unified CM Server Names

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- Step 1** Log into Cisco Unified Communications Manager as an Administrator.
- Step 2** Choose the **Server** option from the **System** menu.
- Step 3** Click **Find** to discover all the servers in your Cisco Unified Communications Manager cluster.
- Step 4** In the Cisco TelePresence Manager's Configuration > Cisco UCM Host field, use only IP address in a non-DNS environment. If DNS is configured and accessible, use either hostname or IP address.
-

As you add a Unified CM, do not set up a non-DNS and DNS in a mixed mode environment, i.e., where Unified CM is configured with DNS and CTS-Manager is configured with non-DNS environment. Unified CM is configured with DNS but has IP address in the Server Config. In a typical deployment, all applications are in either DNS or non-DNS. Identifying a Unified CM node as publisher does not support mixed mode.

To display and modify settings that associate CTS-Manager with Cisco Unified CM, choose **Configure > Unified CM** in the CTS-Manager.

The **Configure > Unified CM** window opens. This window provides Service Status and the listings of the Unified CM connections.

**Note**

If changing settings in the Unified CM, it is necessary to perform a Discovery in CTS-Manager to register the new settings. Otherwise, CTS-Manager won't display or connect to the correct settings.

Logging into Cisco Unified CM Administrator

To log into the Cisco Unified CM Administration application, follow these steps:

Step 1 Open a web browser.



Note

The Cisco Unified CM Administration program is compatible with the Microsoft Internet Explorer version 6 or a later version web browser.

Step 2 Access a web server that is supported by the Cisco Unified CM Administration application from any user PC in your network.

Step 3 In the address bar of the web browser, enter the following URL:

`https://CCM-server-name`

Where *CCM-server-name* is the name or IP address of the server.



Note

You may need to specify the address of the server where Cisco Unified CM is installed. If your network uses [DNS](#) services, you can specify the hostname of the server. If your network does not use DNS services, you must specify the IP address of the server.

Step 4 Log in with your assigned administrative privileges.

Step 5 Select **Cisco Unified Communications Manager Administration** in the Navigation field at the upper right corner of the page and click **Go** to return to the Cisco Unified CM Administration home page.

Configuring the Options File

Cisco Unified CM is customized with an options file to configure support for the Cisco TelePresence device.

To configure the options file, follow these steps:

Step 1 Log into the Cisco Unified CM Administration application. See the [“Logging into Cisco Unified CM Administrator”](#) section on page 6-6.

Step 2 Add the Cisco TelePresence device pack to Cisco Unified CM. The device pack adds functionality to Cisco Unified Communications Manager so that you can create a Cisco TelePresence device. See the [“Adding a Cisco TelePresence Device”](#) section on page 6-7.

Step 3 Create a Cisco TelePresence device to register the Cisco TelePresence device as a Cisco Unified IP Phone. See the [“Creating and Configuring a Cisco TelePresence Device”](#) section on page 6-8.

Step 4 Assign a directory number to the Cisco TelePresence device. See the [“Assigning a Directory Number to a TelePresence Device”](#) section on page 6-13.

Step 5 Create a Cisco Unified IP Phone 7975 device type.



Note

Auto registration cannot be used to create the device type.

Adding a Cisco TelePresence Device


Use the information in the following sections to add a CTS device:

- [Download Device Pack, page 6-7](#)
- [Install Device Pack, page 6-8](#)

Download Device Pack


If the Cisco TelePresence device is not listed on the Cisco Unified Communications Manager phone list, you must add the device. The Cisco TelePresence device is included in the latest device packs for Cisco Unified CM.

To download device packs, follow these steps:

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- Step 1** Go to the following location on Cisco.com:
- Support**
The Support and Downloads page appears.
 - Under the Product Support tab, click **Voice & Unified Communications**
The Voice and Unified Communications window appears.
 - At the top of the Voice and Unified Communications window, click **Browse All Voice and Unified Communications Categories**
The Select Your Product or Technology page appears.
 - In the far-right column, click **IP Telephony**
 - Click **Call Control**
 - Scroll down (if necessary) and click **Cisco Unified Communications Manager (CallManager)**
The Introduction page appears.
- Step 2** Click **Download Software**.
- Step 3** (If needed) Enter your Cisco username and password and click **Log In**.
The Select a Product page appears.
- Step 4** In the Cisco Unified Communications Manager (CallManager) section, click the version that corresponds to the Unified CM version you have configured in CTS-Manager.
- Step 5** Click **Unified Communications Manager/CallManager Device Packages**.
- Step 6** Click the latest release.
-  **Note** To register EX, MX and C-series endpoints, Unified CM 8.6.1.20000-1 and device pack 8.6.1.21019-1 are required.
-
- The software download page for that release opens.
- Step 7** Click **Download Now** to begin the download process.
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Install Device Pack

To install a device pack, follow these steps:

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- Step 1** Log into the Cisco Unified CM Administration application.
- Step 2** At the Cisco IPT Platform Administration window, choose **Software Installation/Upgrade**.
-  **Note** For an explanation of how to access the Cisco IPT Platform Administration window, see the [Cisco IP Telephony Platform Administration Guide for Cisco Unified Mobility Manager, Release 1.2](#).
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- Step 3** From the **Source** drop-down list, choose the source for the device pack.
- Step 4** Click **Next**. The Options/Upgrades window appears.
- Step 5** Choose the appropriate file from the drop-down list and click **Next**. The system compiles a checksum value.
- Step 6** Click **Save** to accept the checksum value and start installation.
- Step 7** After installation is complete, restart.

The installation process can take several minutes. An on-screen log reports status of the installation. Once the device pack is installed, you can begin configuring the Cisco TelePresence device.

Creating and Configuring a Cisco TelePresence Device

The following sections describe how to create and configure a Cisco TelePresence device (endpoint) so you can register it as a Cisco Unified IP phone:

- [Adding a Cisco TelePresence Device, page 6-8](#)
- [Configuring a Cisco TelePresence Device, page 6-9](#)
- [Assigning a Directory Number to a TelePresence Device, page 6-13](#)
- [Verifying a TelePresence Device is Registered to Unified CM, page 6-13](#)
- [Adding a TelePresence Device to the Application User, page 6-14](#)

Adding a Cisco TelePresence Device



Note

Before you begin this procedure, note the MAC address of the Cisco TelePresence device.

To add a Cisco TelePresence device, follow these steps from the Cisco Unified Communications Manager Administration menu bar:

- Step 1** Log into the Cisco Unified CM Administration application.
- Step 2** From the Device drop-down menu, select **Phone**. The Find and List Phones Page appears.
- Step 3** Click the **Add New** button at the bottom of the window. The Add a New Phone window appears.

- Step 4** In the Add a New Phone window, click the **Phone Type** drop-down list and choose the **Cisco TelePresence** device you want to add.
- Step 5** Click **Next** to display the Phone Configuration window.
- Step 6** Proceed to [Configuring a Cisco TelePresence Device](#).

Configuring a Cisco TelePresence Device



Note

You must restart your system after you have completed the configuration tasks in this section.

This section describes how to configure Cisco TelePresence devices and their associated parameters.

To configure the Cisco TelePresence device, perform the tasks in this section. When you are finished configuring your settings, click **Save** and follow the prompts to restart the system.

Device Information for Cisco TelePresence Devices

- Step 1** To configure a Cisco TelePresence device, enter the information appropriate for the device you are configuring using the information in the following sections:
- [Cisco TelePresence System \(CTS\) Devices, page 6-9](#)
 - [EX and C-series Devices, page 6-11](#)

Cisco TelePresence System (CTS) Devices

Table 6-2 *Cisco TelePresence System Device Information*

Field	Required?	Setting
MAC Address	Yes	MAC address for the Cisco TelePresence primary codec.
Description	—	Short description of the device.
Device Pool	Yes	Any
Common Device Configuration	—	Leave field as <None>.
Phone Button Template	Yes	Standard_Cisco_TelePresence
Common Phone Profile	Yes	Standard Common Phone Profile
Calling Search Space	—	Leave field as <Any>.
Media Resource Group List	—	Leave field as <None>.
Location	Yes	Hub_None
User Locale	—	Leave field as <None>.
Network Locale	—	Leave field as <None>.
Owner User ID	—	Leave field as <None>.
Phone Load Name	—	Specify required version of Cisco TelePresence System if no device default is set.

Table 6-2 *Cisco TelePresence System Device Information (continued)*

Field	Required?	Setting
Use Trusted Relay Point	—	Chose from the following: <ul style="list-style-type: none">• Default• On• Off
Calling Party Transformation CSS	—	Leave field as <None>.

EX and C-series Devices

To register EX, MX and C-series devices, TC version 5 or later and Unified CM version 8.6.1.20000-1 or later are required. Endpoints with a previous TC firmware version must be upgraded to version 5 before they can be registered with Unified CM and be discovered by CTS-Manager.

The TC5.0.0 firmware for the endpoints is available in both .pkg and .cop formats.

- For TC4.x to TC5.0 upgrades, use the .pkg format. The .pkg file is uploaded directly onto each endpoint. Because it is a prerequisite that the endpoint run TC5.0 to be able to register with Unified CM, you must use the .pkg file to upgrade them first, and then provision them in Unified CM.

For more information, go to the following link:

<http://www.cisco.com/cisco/software/release.html?mdfid=283645026&softwareid=280886992&release=TC5.0.0&rellifecycle=&relind=AVAILABLE&reltype=all>

- For TC5.0.0 to TC5.0.x or later upgrades, use the .cop file format. The .cop file is installed on Unified CM, which extracts the .pkg file into the TFTP directory on the Unified CM and sets the Device Defaults to point to it so that all TC endpoints registered to Unified CM will be upgraded to that .pkg version.

For more information, go to the following link:

<http://www.cisco.com/cisco/software/release.html?mdfid=283645026&softwareid=280886992&release=TC5.0.0-CUCM&rellifecycle=&relind=AVAILABLE&reltype=all>

Table 6-3 Cisco TelePresence EX and C-series Device Information

Field	Required?	Setting
MAC Address	Yes	MAC address for the Cisco TelePresence EX or C-series primary codec.
Description	—	Short description of the device.
Device Pool	Yes	Default
Common Device Configuration	—	Leave field as <None>.
Phone Button Template	Yes	Standard_Cisco_TelePresence <endpoint model name>
Common Phone Profile	Yes	Standard Common Phone Profile
Calling Search Space	—	Leave field as <Any>.
Media Resource Group List	—	Leave field as <None>.
Location	Yes	Hub_None
User Locale	—	Leave field as <None>.
Network Locale	—	Leave field as <None>.
Owner User ID	—	Leave field as <None>.
Phone Load Name	—	Specify required version of Cisco TelePresence System if no device default is set.
Use Trusted Relay Point	—	Chose from the following: <ul style="list-style-type: none"> Default On Off
Calling Party Transformation CSS	—	Leave field as <None>.

- Step 2** Make sure that the following check boxes at the bottom of the Device Information section are marked as indicated:
- **Use Device Pool Calling Party Transformation CSS**—Checked
 - **Is Active**—Checked
 - **Retry Video Call as Audio**—Checked
 - **Ignore Presentation Indicators**—Unchecked
 - **Allow Control of Device from CTI**—Checked
 - **Logged Into Hunt Group**—Checked
 - **Remote Device**—Unchecked
- Step 3** (EX and C-Series Devices Only) In the Protocol Specific Information section:
- Set Device Security Profile to Standard SIP Non-secure for non-secure or create and select your own secure profile.
 - Set Sip Profile to **Standard SIP Profile**
- Step 4** (EX and C-Series, including MX200, Devices Only) In the Product Specific Configuration Layout section:
- For Room Name, enter the Exchange Conference Room Name from Microsoft Exchange
This setting must be the email address used in Exchange (e.g. room1@cisco.com).
 - (Optional) Web Access
This indicates whether the device will accept connections from a web browser or other HTTP client. Disabling web access for the device blocks access to the phone's internal web pages and certain support capabilities, but does not degrade normal operation. A device RESET is required for this parameter to take effect.
 - (Optional) SSH Access
This parameter indicates whether the device accepts SSH connections. Disabling the SSH server functionality blocks certain support capabilities such as log file collection but does not degrade normal operation.
 - Default Call Protocol
This parameter sets the default call protocol of the device. This device only supports SIP when registering to Cisco Unified Communications Manager.
 - Quality Improvement Server
Specifies a hostname or IP address of a remote system to collect quality improvement reports from the device. Use the default hostname or IP address, unless otherwise directed by the specific device documentation.
 - Admin Username and Password
Admin Username and Password are required for CTS-Manager to discover endpoints and provide One-Button-to-Push scheduling to them.
 - a. Enter a user ID for the admin user (default: **admin**).



Note Username must be between 1 and 64 characters long and cannot be “apache”, “daemon”, “nobody”, “root”, or “shutdown”.

- b. Enter a password for the admin user (default: “”).

**Note**

Password must be between 1 and 64 characters long and can only contain printable ASCII characters, except space.

**Caution**

You must configure Admin Username and Password individually on both Unified CM and the endpoint device. If the username and/or passwords do not match between Unified CM and the endpoint device, the endpoint will not be discoverable or schedulable by CTS-Manager. If you change these in the future, it is recommended that you do so immediately before a maintenance cycle. If you do it during another time, you must go to **Configure > Unified CM**, select the Unified CM to which the endpoint is registered and click **Discover Rooms**.

- Step 5** Click **Save** to save your settings.

The Phone Configuration screen appears.

Proceed to [Assigning a Directory Number to a TelePresence Device](#).

Assigning a Directory Number to a TelePresence Device

In the Phone Configuration screen for the TelePresence device you configured, do the following to assign a directory number to the TelePresence Device:

- Step 1** Under Association Information, click **Add a new DN**
- Step 2** Under Directory Number Information, enter a phone number for your TelePresence device in the Directory Number field.
- Step 3** Click **Save**.
- Step 4** Verify that the Associated Devices field contains information that begins with “SEP” (Example: SEP6C504EDA443C).
- Step 5** In the Line 1 on Device section, toward the bottom of the page, enter a name for your endpoint in the Display (Internal Caller ID) field.

**Note**

If this field is left blank, the endpoint name will not display properly in the WebEx participant’s list for TelePresence meetings with WebEx.

- Step 6** Click **Apply Config**.
- Step 7** Click **OK** to confirm.

Verifying a TelePresence Device is Registered to Unified CM

After assigning a directory number to a TelePresence device, you can verify that the device is now registered to Unified CM by doing the following:

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- Step 1** First, you must find the device:
- a. From the Device drop-down menu, select **Phone**. The Find and List Phones Page appears containing a list of configured phones.
If a list of configured phones is not displayed, click the plus sign (+) under **Find and List Phones**.
 - b. To find all phones that are registered in the database, follow these steps:
 - a. Choose **Device Name** from the list of fields.
 - b. Choose **is not empty** from the list of patterns.
 - c. Click **Find**.
- Or
- a. Choose the appropriate search pattern for your text search (for example, “Begins with”).
 - b. Enter your search text in the **Find** field.
 - c. Click **Find**.
- Step 2** Under Device Name, the TelePresence device name should appear and under the Status column make sure that the device is shown as “Registered with” the name of the Unified CM.
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Adding a TelePresence Device to the Application User

The final step to making a TelePresence device schedulable through CTS-Manager, is to add the TelePresence device to the application user used by CTS-Manager. For more information, refer to [Cisco Unified Communications Manager Configuration Guide for Cisco TelePresence System](#) for the steps to perform this.