



CHAPTER 2

Configuring Required Servers for Cisco Unified Personal Communicator

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How to Configure Cisco Unified Communications Manager

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Adding Desk Phones to the Cisco Unified Communications Manager Database

You can enable users to control their desk phones from Cisco Unified Personal Communicator. For each user, you can add a Cisco Unified IP Phone or another Cisco-supported phone supported for use with Cisco Unified Personal Communicator to the Cisco Unified Communications Manager database. You can then configure the phone.

Before You Begin

- Make sure you are using a supported Cisco Unified Communications Manager release. See the release notes:

http://www.cisco.com/en/US/products/ps6844/prod_release_notes_list.html

- Decide how you want to add phones to the Cisco Unified Communications Manager database:
 - Automatically, through auto-registration
 - Manually, through the Phone Configuration windows

For details, see the online help topic “Configuring Cisco Unified IP Phones” in Cisco Unified Communications Manager Administration.

- Make sure that you add one of the Cisco Unified IP Phone products. Alternatively, you can add another Cisco-supported phone. Make sure that you add a phone that is supported for use with Cisco Unified Personal Communicator. See the release notes:

http://www.cisco.com/en/US/products/ps6844/prod_release_notes_list.html

Procedure

-
- Step 1** Select **Device > Phone**.
- Step 2** Add one of the Cisco Unified IP Phone products for the user. Alternatively, add another Cisco-supported phone for the user. Configure the phone for your environment.
- Step 3** Configure the phone to interoperate with Cisco Unified Personal Communicator, as follows:
- a. Allow control of the Cisco Unified IP Phone from the computer telephony interface (CTI).
 - b. Check **Allow Control of Device from CTI**.
- If this option is not provided in the Device Information section of the Phone Configuration window, the phone is not supported for use with Cisco Unified Personal Communicator.
- Step 4** Assign a directory number to the phone, and associate this number with the phone.



Note

In the Directory Number Configuration window, in the Line Settings for All Devices section, you can configure the Hold Reversion Ring Duration and the Hold Reversion Notification Interval settings, but they are not functional for Cisco Unified Personal Communicator.

Troubleshooting Tips

For detailed instructions, use the Cisco Unified Communications Manager Administration online help or the *Cisco Unified Communications Manager Administration Guide*:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html

Related Topics

- [Completing the Cisco Unified IP Phone Configuration, page 2-3](#)
- [Associating Cisco Unified IP Phones With Users and Adding Users to a Group, page 2-3](#)
- [Adding Cisco Unified Personal Communicator as a Phone Type, page 2-5](#)
- [Associating Lines, Users, and Directory Numbers, page 2-8](#)

Completing the Cisco Unified IP Phone Configuration

You can configure a Cisco Unified IP Phone with optional features by following the tasks in the table. However, these configuration steps are not necessary to run Cisco Unified Personal Communicator.

For a list of supported Cisco Unified Personal Communicator features, see the data sheet:

http://www.cisco.com/en/US/products/ps6844/products_data_sheets_list.html

Procedure

Task	For details, see... ¹
Configure telephony features and settings, including DND ² or extension mobility for environments where users are not permanently assigned to physical phones ³ .	<p><i>Cisco Unified Communications Manager Administration Guide</i></p> <p><i>Cisco Unified Communications Manager Features and Services Guide</i></p> <p>Do Not Disturb Behavior in Cisco Unified Personal Communicator, page 2-8</p> <p>Configuring Extension Mobility, page 2-10</p>
Modify phone button templates (softkeys).	<i>Cisco Unified Communications Manager Administration Guide</i>
Configure Cisco Unified IP Phone services, such as access to stock quotes and weather reports.	<p><i>Cisco Unified Communications Manager Administration Guide</i></p> <p><i>Cisco Unified Communications Manager Features and Services Guide</i></p>
Set up directories for Quick Search and Dialing Rules features.	<i>Cisco Unified Communications Manager Administration Guide</i>
Add users to Cisco Unified Communications Manager, and associate users with device IDs for access to the User Options web pages.	<i>Cisco Unified Communications Manager Administration Guide</i>

1. Cisco Unified Communications Manager documentation is available from the Help menu in the Cisco Unified Communications Manager Administration and at http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html
2. DND = Do Not Disturb
3. When you configure extension mobility, Cisco Unified Personal Communicator users can select the associated desk phone in Cisco Unified Personal Communicator. For details, see the Cisco Unified Personal Communicator user guide at http://www.cisco.com/en/US/products/ps6844/products_user_guide_list.html

Associating Cisco Unified IP Phones With Users and Adding Users to a Group

After you add Cisco Unified IP Phones to the Cisco Unified Communications Manager database and configure them to be controlled from CTI, you must perform the following tasks:

- Modify user credentials (required if integrating with Cisco Unified Communications Manager Release 6.0 and later)
- Set up user accounts, and associate directory numbers (primary extensions) to users.
- Associate phones with users.

- Add users to the CTI users group.
- Add users to a Cisco Unified Communications Manager user group.

Before You Begin

To avoid interoperability problems with Cisco Unified Personal Communicator, use care when you specify the usernames in the End User Configuration window. You must take care to create usernames that do not cause two users to have the same soft-phone device name. If Cisco Unified Personal Communicator cannot derive the soft-phone device name, the application does not properly register and function as expected. You convert the username into a soft-phone device name when you add Cisco Unified Personal Communicator as a phone type.

Procedure

-
- Step 1** Select **User Management > Credential Policy Default**.
- To modify user credentials, edit all entries (Application User Password, End User Password, and End User PIN):
- Uncheck **User Must Change at Next Login**.
 - Check **Does Not Expire**.
 - Click **Save**.
- Step 2** Select **User Management > End User** to provision users.
- Click **Add New** to add a new user.
 - Enter information for this user in the End User Configuration window.
 - Enter values into the fields in the User Information section.
For details about these fields, see the online help topic “End User Configuration Settings” in Cisco Unified Communications Manager Administration.
 - Make sure to configure a digest credential for the user. Any value works, but do not leave this field blank.
 - Select the primary extension, or primary directory number, for this user from the drop-down list in the Directory Number Associations section.
 - Click **Save**.
- Step 3** Click **Device Association** in the Device Associations section to associate a Cisco Unified IP Phone with this user.
- Enter the MAC address of the phone for this user, prefixed with SEP, in the User Device Association window.
 - Click **Find**.
 - Select the phone for the user from the list.
 - Click **Save**.
 - Select the primary extension for the newly-associated phone.
 - Click **Save**.
- Step 4** Select **Device > Phone** to associate the user with a line.
- Click the phone to associate with the user.
 - Click the directory number link.

- c. Click **Associate End Users** at the bottom of the Directory Number Configuration window.
 - d. Select the user to associate to this device.
 - e. Click **Add Selected**.
 - f. Click **Save**.
- Step 5** Add the user to the CTI users group.
- a. Select **User Management > User Group**.
 - b. Enter **Standard CTI Enabled** in the search field of the Find and List User Groups window.
This is a standard group that is created when Cisco Unified Communications Manager installs.
 - c. Click **Find**.
 - d. Click the **Standard CTI Enabled** group to open the User Group Configuration window.
 - e. Click **Add End Users to Group**.
 - f. Search for a user in the Find and List Users window.
 - g. Select the user.
 - h. Click **Add Selected**.
- Step 6** Follow the instructions in Step 5, but search for the **Standard CCM End Users** group, and add the user to this group to enable user pages.
- Step 7** Click **Save**.
-

Related Topics

- [Adding Cisco Unified Personal Communicator as a Phone Type, page 2-5](#)
- [Associating Lines, Users, and Directory Numbers, page 2-8](#)

Adding Cisco Unified Personal Communicator as a Phone Type

To enable Cisco Unified Personal Communicator soft-phone features, you must manually create a new soft-phone device for each user.

Restrictions

- The auto-registration features in Cisco Unified Communications Manager are not supported for use with Cisco Unified Personal Communicator.
- With Cisco Unified Communications Manager Release 6.0(1) and later, you can associate a secondary soft-phone device with a primary device and consume only one device license per device (also known as secondary licensing or adjunct licensing). For releases prior to Cisco Unified Communications Manager Release 6.0(1), three device licenses are consumed.
- Adjunct licensing has these restrictions:
 - You can associate up to two secondary soft-phone devices to a primary phone.
 - You cannot delete the primary phone unless you remove the associated secondary soft-phone devices.
 - The primary phone must be the device that consumes the most licenses. You cannot make the soft-phone device the primary phone and associate a Cisco Unified IP Phone as the secondary device.

- Secondary soft-phone devices are limited to Cisco IP Communicator, Cisco Unified Personal Communicator, and Cisco Unified Mobile Communicator.

Procedure

-
- Step 1** Select **Device > Phone**.
- Step 2** Click **Add New** in the Find and List Phones window.
- Step 3** Select **Cisco Unified Personal Communicator**.
- Step 4** Click **Next**.
- Step 5** Specify the soft-phone device name in the Device Name field. The soft-phone device name must conform to the following guidelines:
- Derives from the username.
 - Starts with *UPC*.
 - Contains only uppercase letters, or numerals.
 - Contains no more than 12 additional characters after *UPC*.
- See [Table 2-1](#) for examples.

Table 2-1 Username Conversion for Cisco Unified Personal Communicator Soft-Phone Device

Cisco Unified Communications Manager Username	Associated Soft-Phone Device Name
jjackson	UPCJJACKSON
johnnie_jackson	UPCJOHNNIEJACKS
johnniejackson	UPCJOHNNIEJACKS
john.jackson	UPCJOHNJACKSON



Note As shown in [Table 2-1](#), the usernames *johnnie_jackson* and *johnniejackson* translate to the same soft-phone device name and are said to collide. You must take care to create usernames that do not result in a collision when the soft-phone device name is configured. If Cisco Unified Personal Communicator is unable to derive its soft-phone device name, it cannot properly register and cannot function as expected. You might have to reconfigure a user to use a name other than their normal username to avoid this problem.

- Enter a descriptive name for the phone in the Description field. For example, enter Richard–soft phone.
- Configure all required fields for your environment.
- Select the user ID from Owner User ID.
- Select the device name of the Cisco Unified IP Phone to associate with Cisco Unified Personal Communicator from Primary Phone.
- Uncheck **Allow Control of Device from CTI** to disable the ability of CTI to control and monitor this device.

Step 6 Enter information in the Protocol Specific Information section, as follows:

Field	Setting
Presence Group	Select Standard Presence Group .
Device Security Profile	Select Cisco Unified Personal Communicator - Standard SIP Non-Secure Profile . This security profile is installed with Cisco Unified Communications Manager.
SIP Profile	Select Standard SIP Profile to specify the default SIP profile. SIP profiles provide specific SIP information for the phone such as registration and keepalive timers, media ports, and do-not-disturb control.
Digest User	Select the user ID. This is the same user ID as the one you selected for Owner User ID.

Step 7 Click **Save**.

Step 8 Verify that the status shown at the top of the page indicates a successful save.

Step 9 Click the **Add a New DN** link in the Association Information pane that displays on the left side of the window.

Step 10 Enter the directory number and route partition for the Cisco Unified Personal Communicator that are the same as the ones used by the Cisco Unified IP Phone for this user in the Directory Number Information section.

This configuration causes the Cisco Unified Personal Communicator to share the line with the Cisco Unified IP Phone for this user.

Step 11 Enter the caller ID in Display (Internal Caller ID), in the Line 1 on Device *Device-Name* section.

Step 12 Enter information in the Multiple Call/Call Waiting Settings on Device section, as follows:

- a. Enter **6** to specify the maximum number of calls that can be presented to Cisco Unified Personal Communicator in Maximum Number of Calls.
- b. Specify the trigger after which an incoming call receives a busy signal in Busy Trigger.
This setting works with the Maximum Number of Calls setting. For example, if the maximum number of calls is set to 6 and the busy trigger is set to 6, incoming call 7 receives a busy signal.

Step 13 Click **Save**.

Ensure that the status shown at the top of the page indicates a successful save and that the resulting status is *Ready*.

Cisco Unified Communications Manager reminds you that changes to line or directory number settings require a restart. However, a restart is required only when you edit lines on Cisco Unified IP Phones that are running at the time of the modifications.

Related Topics

- [Associating Lines, Users, and Directory Numbers, page 2-8](#)
- [Configuring Extension Mobility, page 2-10](#)
- [Licensing Options for Cisco Unified Personal Communicator, page 2-13](#)
- [Configuring Videoconferencing Resources, page 3-19](#)

Associating Lines, Users, and Directory Numbers

To ensure that the availability status in Cisco Unified Personal Communicator is accurately displayed, you must make sure there is an association between the user and the line that is configured for the user in Cisco Unified Communications Manager, Release 6.x.

Procedure

-
- Step 1** Select **Device > Phone**, and find the directory number.
 - Step 2** Click the link for the line in the Association Information section on the left side of the window.
 - Step 3** Scroll to the bottom of the page and make sure the user is associated with the line on the Directory Number Configuration window.
 - Step 4** Make sure you associate the line and user for all the phones used by the user for that directory number.
-



Note

You can also associate lines, users, and directory numbers by using the Bulk Administration Tool (BAT).

Related Topics

- [Adding Desk Phones to the Cisco Unified Communications Manager Database, page 2-1](#)
- [Associating Cisco Unified IP Phones With Users and Adding Users to a Group, page 2-3](#)
- [Adding Cisco Unified Personal Communicator as a Phone Type, page 2-5](#)

Do Not Disturb Behavior in Cisco Unified Personal Communicator

The Do Not Disturb (DND) feature in Cisco Unified Personal Communicator is always available in the user interface and is supported in both soft-phone and desk-phone modes as described in [Table 2-2](#).

Table 2-2 DND Behavior in Cisco Unified Personal Communicator

Configuration	Behavior
Cisco Unified Personal Communicator in soft-phone mode and set to DND by the user	<p>Rejects calls.</p> <ul style="list-style-type: none"> • User cannot answer incoming calls from Cisco Unified Personal Communicator. • Incoming call notifications are <i>not</i> displayed. • Incoming calls do <i>not</i> display in the Recent pane of Cisco Unified Personal Communicator. • Unanswered calls are diverted to the call forward no answer (CFNA) target. The default setting for CFNA is voicemail in Cisco Unified Communications Manager. If the CFNA target is not configured, incoming calls are rejected by Cisco Unified Communications Manager, and the caller hears a busy tone. • (Shared line) If Cisco Unified Personal Communicator shares the line appearance with other devices, the endpoints that are not set to DND call reject are alerted to the incoming call, and the caller hears the ringing tone. If all endpoints sharing the line appearance are set to DND call reject, incoming calls are forwarded to the CFNA target.
Cisco Unified Personal Communicator in desk-phone mode with DND Call Reject configured in Cisco Unified Communications Manager	<p>The DND behavior for Cisco Unified Personal Communicator is the same as the controlled Cisco Unified IP Phone:</p> <ul style="list-style-type: none"> • User cannot answer calls from either Cisco Unified Personal Communicator or from the desk phone. • Incoming call notifications are <i>not</i> displayed. • Incoming calls do <i>not</i> display in Recent pane of Cisco Unified Personal Communicator. • (Shared line) If Cisco Unified Personal Communicator shares the line appearance with other devices, the endpoints that are not set to DND call reject are alerted to the incoming call, and the caller hears the ringing tone. If all endpoints sharing the line appearance are set to DND call reject, incoming calls are forwarded to the call forward busy (CFB) target.
Cisco Unified Personal Communicator in desk-phone mode with DND Ringer Off configured in Cisco Unified Communications Manager	<p>The DND behavior for Cisco Unified Personal Communicator is the same as the controlled Cisco Unified IP Phone:</p> <ul style="list-style-type: none"> • User can answer incoming calls from Cisco Unified Personal Communicator or from the desk phone. In both cases, Cisco Unified Personal Communicator displays a call progress window with the connected call status. • An incoming call notification displays without an audio alert on the Cisco Unified IP Phone under Cisco Unified Personal Communicator desk-phone control, and Cisco Unified Personal Communicator displays the incoming call notification. If the call is not answered, it is diverted to the CFNA target. If CFNA is not configured, the call is rejected, and the caller hears a busy tone. • Incoming calls display in both Cisco Unified Personal Communicator and the desk phone communication histories.

Apart from Cisco Unified Personal Communicator, other devices might be associated with a particular user. For example, devices such as IP Phone Messenger or Cisco Unified IP Phone that are registered to Cisco Unified Communications Manager might be associated with a particular user.

If the DND status is set on other devices, Cisco Unified Personal Communicator displays the DND status. Similarly, Cisco Unified Presence passes the DND setting from Cisco Unified Personal Communicator to other devices associated with this Cisco Unified Personal Communicator user.

If a user clears the DND status, Cisco Unified Presence clears DND from all endpoints associated with this user even if the endpoint is shared by other users.

Related Topics

- For details about configuring the Cisco Unified IP Phone for DND, see the *Cisco Unified Communications Manager Features and Services Guide*:
http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html
- For details about which Cisco Unified IP Phone models support the DND feature, see the administration guide for the specific phone model:
http://www.cisco.com/en/US/products/hw/phones/ps379/prod_maintenance_guides_list.html

Configuring Extension Mobility

Use the extension mobility feature to allow users to log in to and configure a Cisco Unified IP Phone as their own, on a temporary basis,. After a user logs in, the phone adopts the default device profile information for that user, including line numbers, speed dials, services links, and other user-specific phone properties.

For example, when user A occupies a desk and logs in to the phone, the directory numbers, services, speed dials, and other properties for that user display on that phone. But when user B uses the same desk at a different time, information for user B displays. The extension mobility feature dynamically configures a phone according to who is currently logged into the phone.

By using extension mobility, Cisco Unified Personal Communicator users can associate this application with one of several desk phones that have the same directory number on the primary line as their default desk phone in Cisco Unified Communications Manager Administration.

Procedure

-
- Step 1** Select **Device > Phone**, and access the Directory Number Configuration window.
 - Step 2** Make sure to remove all devices from the phone association list (if any) of the user.
 - Step 3** Follow the Cisco Unified Communications Manager extension mobility configuration information in the *Cisco Unified Communications Manager Features and Services Guide*:
http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html
 - Step 4** When you create the device user profile (**Device > Device Settings > Device Profile**), make sure that it is controllable by CTI, and that the line is controllable by CTI.
 - Step 5** When you add the Cisco Unified IP Phone to Cisco Unified Communications Manager (**Device > Phone**), make sure that is controllable by CTI.
-

Related Topics

- [Adding Desk Phones to the Cisco Unified Communications Manager Database, page 2-1](#)

How to Configure Dialing Rules

- [Application Dialing and Directory Lookup Rules, page 2-11](#)
- [How Cisco Unified Personal Communicator Transforms Dialed Numbers, page 2-11](#)
- [Configuring Application Dialing Rules, page 2-12](#)
- [Configuring Directory Lookup Rules, page 2-12](#)

Application Dialing and Directory Lookup Rules

Based on the dial plan for your company and the information stored in the LDAP directory (telephone number for the user), you might need to define application dialing rules and directory lookup rules through the Cisco Unified Communications Manager routing information administration pages. Cisco Unified Presence queries Cisco Unified Communications Manager to obtain these dialing rules for the Cisco Unified Personal Communicator.

These rules define how Cisco Unified Personal Communicator can reformat the inbound call ID to be used as a directory lookup key and how to transform a phone number retrieved from the LDAP directory for outbound dialing.

You can configure Cisco Unified Communications Manager Release 7.0 to support the plus character in dialed numbers. Cisco Unified Personal Communicator Release 7.0 does not remove the plus character from dialed numbers. Releases of Cisco Unified Personal Communicator earlier than Release 7.0 do remove the plus character from dialed numbers.

You might need to configure the application dialing rules in Cisco Unified Communications Manager to remove the plus character from dialed numbers, in particular circumstances.

Related Topics

- [Application Dialing Rule Changes Required for Plus Dialing, page 1-10](#)
- [How Cisco Unified Personal Communicator Transforms Dialed Numbers, page 2-11](#)
- [Configuring Application Dialing Rules, page 2-12](#)
- [Configuring Directory Lookup Rules, page 2-12](#)

How Cisco Unified Personal Communicator Transforms Dialed Numbers

Before Cisco Unified Personal Communicator places a call through contact information, the application removes everything from the phone number to be dialed, except for letters and digits. The application transforms the letters to digits and applies the dialing rules from Cisco Unified Presence. The letter-to-digit mapping is locale-specific and corresponds to the letters found on a standard telephone keypad for that locale. For example, for an US English locale, 1800-GOTMILK transforms to 18004686455.

Users cannot view or modify transformed numbers before Cisco Unified Personal Communicator places the numbers. If there is a problem with the dialed number because of mistransformations, you must correct the dialing rules.

For detailed conceptual and task-based information on dialing rules, see the Cisco Unified Communications Manager Administration online help or the *Cisco Unified Communications Manager Administration Guide*:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html

Related Topics

- [Application Dialing and Directory Lookup Rules, page 2-11](#)
- [Configuring Application Dialing Rules, page 2-12](#)
- [Configuring Directory Lookup Rules, page 2-12](#)

Configuring Application Dialing Rules

Application dial rules automatically strip numbers from, or add numbers to, phone numbers that the user dials. For example, you can configure a dialing rule in Cisco Unified Communications Manager Administration that automatically adds the digit 9 at the start of a 7-digit phone number to provide access to an outside line. Application dialing rules are used to manipulate numbers that are dialed from Cisco Unified Personal Communicator.

Procedure

-
- Step 1** Select **Call Routing > Dial Rules > Application Dial Rules**.
- Step 2** Configure the dialing rules by following the online help for this page or see the *Cisco Unified Communications Manager Administration Guide*:
- http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html
-

Related Topics

- [Application Dialing and Directory Lookup Rules, page 2-11](#)
- [How Cisco Unified Personal Communicator Transforms Dialed Numbers, page 2-11](#)
- [Configuring Directory Lookup Rules, page 2-12](#)

Configuring Directory Lookup Rules

Directory lookup rules transform caller identification numbers into numbers that can be looked up in the directory from Cisco Unified Personal Communicator. Each rule specifies which numbers to transform based on the initial digits and the length of the number. For example, you can create a directory lookup rule in Cisco Unified Communications Manager Administration that automatically removes the area code and two prefix digits from a 10-digit telephone. This rule transforms 4089023139 into 23139.

Procedure

-
- Step 1** Select **Call Routing > Dial Rules > Directory Lookup Dial Rules**.
- Step 2** Configure the rules by following the online help for this page or see the *Cisco Unified Communications Manager Administration Guide*:
- http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html
-

Related Topics

- [Application Dialing and Directory Lookup Rules, page 2-11](#)
- [How Cisco Unified Personal Communicator Transforms Dialed Numbers, page 2-11](#)

- [Configuring Application Dialing Rules, page 2-12](#)

How to Configure Licensing in Cisco Unified Communications Manager

Cisco Unified Communications Manager Administration tracks the number of Cisco Unified Personal Communicator devices that are connected to it and compares this figure with the number of device licenses that have been purchased.

- [Licensing Options for Cisco Unified Personal Communicator, page 2-13](#)
- [Obtaining a License File, page 2-14](#)
- [Uploading a License File, page 2-14](#)
- [Assigning Capabilities to Users, page 2-15](#)
- [Viewing Licensing Information, page 2-16](#)

Licensing Options for Cisco Unified Personal Communicator

Cisco Unified Communications Manager Administration tracks the number of Cisco Unified Personal Communicator devices that are connected to it and compares it with the number of device licenses that have been purchased.

You can configure Cisco Unified Personal Communicator in these ways:

- **Base functionality**—This configuration provides a user with a presence-enabled contact list, directory searching, instant messaging, and the ability to control a Cisco Unified IP Phone for click-to-dial and incoming call notification through desk-phone mode in Cisco Unified Personal Communicator. Users can also use web conferencing and voice-mail features if they are licensed for these products. For a list of supported servers, see the release notes:

http://www.cisco.com/en/US/products/ps6844/prod_release_notes_list.html

These licenses are required:

- One Cisco Unified Personal Communicator software license. The Cisco Unified Personal Communicator license comes with one Cisco Unified Communications Manager device user license.
 - One Cisco Unified Presence user feature license. This license is also known as a Cisco Unified Communications Manager phone device license.
- **Base functionality and soft phone**—In addition to the base capabilities, you can configure Cisco Unified Personal Communicator as a video-enabled soft phone to allow the user to use Cisco Unified Personal Communicator in soft-phone mode.

These licenses are required:

- One Cisco Unified Personal Communicator software license. The Cisco Unified Personal Communicator license comes with one Cisco Unified Communications Manager device user license.
- One Cisco Unified Presence user feature license. This license is also known as a Cisco Unified Communications Manager phone device license.

- Three Cisco Unified Communications Manager phone device licenses to register as a Cisco Unified Communications Manager soft phone.

**Note**

In Cisco Unified Communications Manager Release 6.0(1), you can associate a secondary device with a primary device and consume only one device license per device. This is also known as adjunct licensing. You can configure adjunct licensing manually through the Phone Configuration window, through AXL, or through the BAT.

Related Topics

- [Adding Cisco Unified Personal Communicator as a Phone Type, page 2-5](#)
- [Obtaining a License File, page 2-14](#)
- [Uploading a License File, page 2-14](#)

Obtaining a License File

When you place an order for Cisco devices, Cisco provides a Product Authorization Key (PAK). The PAK provides the software activation key and the license file.

Before You Begin

- Obtain the MAC address of Cisco Unified Communications Manager for which you are requesting the licenses and a valid e-mail ID.
- Decide the number of device licenses that you need. You can use the license unit calculator in Cisco Unified Communications Manager Administration. Select **System > Licensing > License Unit Calculator**.

Procedure

-
- Step 1** Obtain the license files for Cisco Unified Personal Communicator. Follow the instructions in the Cisco Unified Communications Manager Administration online help or the *Cisco Unified Communications Manager Administration Guide*:
- http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html
- Step 2** Enter the MAC address of Cisco Unified Communications Manager for which you want the licenses.
- Step 3** Enter a valid e-mail address to which you want the license file document sent.
- Step 4** Enter the number of nodes and devices for which you want licenses.
- Step 5** Assign capabilities to users after the license is uploaded.
-

Related Topics

- [Uploading a License File, page 2-14](#)

Uploading a License File

After you obtain the license file, you must copy it to your local computer and then upload it to the server.

Procedure

-
- Step 1** Upload the Cisco Unified Personal Communicator license file to Cisco Unified Communications Manager Administration (**System > Licensing > License File Upload**).
- Step 2** Follow the instructions in the Cisco Unified Communications Manager Administration online help or the *Cisco Unified Communications Manager Administration Guide*:
http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html
-

Troubleshooting Tips

License files must have a *.lic* suffix.

Related Topics

- [Assigning Capabilities to Users, page 2-15](#)

Assigning Capabilities to Users

After the Cisco Unified Personal Communicator license files are uploaded, you must assign the capabilities to existing users in the Cisco Unified Communications Manager database. Use the first procedure to assign capabilities to a single user. Use the second procedure to assign capabilities to multiple users.

Before You Begin

You must upload the license file before you can assign capabilities to users.

Procedure

-
- Step 1** Select **System > Licensing > Capabilities Assignment**.
- Step 2** Click **Find** in the Find and List Capabilities Assignments window to display a list of all users.
- Step 3** Click the link for the user in the search results section to display the Capabilities Assignment Configuration window.
Alternatively, select multiple users and click **Bulk Assignment**.
- Step 4** Check **Enable CUP** to enable the user to log in to Cisco Unified Presence. This consumes one device license.
- Step 5** Check **Enable CUPC** to enable Cisco Unified Personal Communicator to obtain presence information for the contact list from Cisco Unified Presence. This consumes one device license.
If you added Cisco Unified Personal Communicator as a phone type, three device licenses are consumed for each user for soft-phone capabilities.
- Step 6** Click **Save**.
-

Related Topics

- [Adding Cisco Unified Personal Communicator as a Phone Type, page 2-5](#)
- [Uploading a License File, page 2-14](#)

- [Viewing Licensing Information, page 2-16](#)

Viewing Licensing Information

Procedure

If You Want To...	Then...
Display the license report.	In Cisco Unified Communications Manager Administration, select System > Licensing > License Unit Report . The report lists the number of authorized, used, and remaining licenses.
Determine the number of license units that are required for Cisco Unified Personal Communicator.	In Cisco Unified Communications Manager Administration, select System > Licensing > License Unit Calculator .
Obtain system information.	In Cisco Unified Presence Administration, select this menu: <ul style="list-style-type: none"> • Release 7.0: Diagnostics > System Status • Release 6.x: System > Status The status window provides the following information: <ul style="list-style-type: none"> • Number of licensed Cisco Unified Presence and Cisco Unified Personal Communicator users synchronized from the Cisco Unified Communications Manager database. • User IDs and the primary extension, number of devices, and the number of contacts associated with users. • Which users are licensed to use Cisco Unified Personal Communicator.

Related Topics

- [Obtaining a License File, page 2-14](#)
- [Uploading a License File, page 2-14](#)

Configuring the LDAP Server

The LDAP directory interacts with Cisco Unified Personal Communicator to provide contact information through directory searches.

Before You Begin

- Purchase a supported LDAP directory server. For information about supported LDAP directory servers, see the release notes:
http://www.cisco.com/en/US/products/ps6844/prod_release_notes_list.html
- Make sure the LDAP server is installed *before* you attempt LDAP-specific configuration in Cisco Unified Presence Administration.

Procedure

-
- Step 1** Install the server and software according to the instructions from the manufacturer.
- Step 2** Perform the LDAP-specific configuration in Cisco Unified Presence Administration.
-

Related Topics

- [How to Configure LDAP Settings, page 2-22](#)

How to Configure Cisco Unified Presence

- [Configuring Nodes, page 2-17](#)
- [How to Select the Proxy Listener, page 2-18](#)
- [Specifying TFTP Server Addresses, page 2-20](#)
- [How to Configure LDAP Settings, page 2-22](#)
- [How to Configure CTI Gateway Settings, page 2-28](#)
- [How to Change Application Profiles, page 2-31](#)
- [Disabling Instant Messaging Globally, page 2-33](#)
- [Configuring the Maximum Contact List Size, page 2-33](#)



Note

For information about configuring Cisco Unified Presence for voice-mail and web-conferencing functionality, see [Chapter 3, “Configuring Recommended Servers for Cisco Unified Personal Communicator.”](#)

Configuring Nodes

Cisco Unified Presence servers scale beyond the two-node cluster limit in previous releases and provide presence services for all users within a single Cisco Unified Presence cluster. If you use nodes, you can use the following functionality:

- Automatic failover from the primary to the secondary node—If Cisco Unified Personal Communicator cannot reach the primary node for the user, the client software automatically uses the secondary Cisco Unified Presence server as the failover node.
- Automatic redirect if the user tries to log in to a nonhome node—If a Cisco Unified Personal Communicator user tries to log in to a nonhome node, the Cisco Unified Presence nonhome node sends a redirect response that includes the correct home-node address. Cisco Unified Personal Communicator automatically logs in to the primary node for the user.
- Rehome a user to a different subcluster while the user is offline. Cisco Unified Personal Communicator switches to the new node in the home subcluster without user intervention.
- Rehome a user that is logged in. Cisco Unified Personal Communicator registers, publishes, and subscribes to the new home subcluster. During the transition, instant message capability, user status, and contact list status might be temporarily unavailable.

Procedure

Step 1 Create a subcluster and associate a primary and secondary node to that subcluster in Cisco Unified Presence Administration (**System > Topology**).

For details about installing the first and secondary nodes, see the Cisco Unified Presence installation and upgrade guide:

http://www.cisco.com/en/US/products/ps6837/prod_installation_guides_list.html

Step 2 Assign each Cisco Unified Personal Communicator user to a node in the subcluster as the home or primary node for the user. The other node in the subcluster becomes the failover node for redundancy. This subcluster pairing provides load sharing/balancing and redundancy for the partition.

For details about completing the node and system topology configuration, see the Cisco Unified Presence configuration and maintenance guide:

http://www.cisco.com/en/US/products/ps6837/prod_maintenance_guides_list.html

How to Select the Proxy Listener

Cisco Unified Personal Communicator sends SIP messages to, and receives SIP messages from, a proxy server, which communicates with Cisco Unified Communications Manager or other servers.

There are two different procedures depending on which release of Cisco Unified Presence you are using:

- [Selecting the Proxy Listener in Release 7.0, page 2-18](#)
- [Selecting the Proxy Listener and Creating Proxy Profiles in Release 6.x, page 2-19](#)

Selecting the Proxy Listener in Release 7.0

You must select a SIP proxy listener in Cisco Unified Presence Administration, Release 7.0.

Procedure

Step 1 Select **Application > Cisco Unified Personal Communicator > Settings** to display the settings window.

Step 2 Select **Default Cisco SIP Proxy TCP Listener** for Proxy Listener.

With this setting, Cisco Unified Personal Communicator uses TCP to communicate with the proxy server.



Note Do not select **Default Cisco SIP Proxy UDP Listener** because availability information for contacts in the Cisco Unified Personal Communicator contact list might not be available for large contact lists. Also, availability information might not be available when connected through a moderately lossy networks such as VPN over the Internet.

Step 3 Click **Save**.

- Step 4** Make sure that all availability-related messages between Cisco Unified Personal Communicator and Cisco Unified Presence use TCP.
- Select **System > Service Parameters**.
 - Select a Cisco Unified Presence server from Server.
 - Select **Cisco UP SIP Proxy** as the service on the Service Parameter Configuration window.
 - Set **Use Transport in Record-Route Header** to **On** in the SIP Parameters (Clusterwide) section.
This forces the Proxy to use the transport parameter in the record-route header.
 - Click **Save**.

Related Topics

- [Specifying TFTP Server Addresses, page 2-20](#)

Selecting the Proxy Listener and Creating Proxy Profiles in Release 6.x

Before You Begin

- You must create the SIP proxy server profile in Cisco Unified Presence Administration Release 6.x, before you can add Cisco Unified Personal Communicator licensed users to the application profile. You create the SIP proxy server profile when you change an application profile for a single user.
- Make sure you configure the SIP proxy server address during the Cisco Unified Presence installation from the **System > Server** menu. You need this address for this procedure.

Procedure

- Step 1** Select **Application > Cisco Unified Personal Communicator > Proxy Profile**.
- Step 2** Click **Add New** in the Find and List window to add a new profile.
- Step 3** Enter information into the fields.

Field	Setting
Name	Enter the server name.
Description	(Optional) Enter a profile description.
Proxy Listener	Select Default Cisco SIP Proxy TCP Listener . Note Do not select Default Cisco SIP Proxy UDP Listener because availability information for contacts in the Cisco Unified Personal Communicator contact list might not be available for large contact lists. Also, availability information might not be available when connected through a moderately lossy networks such as VPN over the Internet.
Primary Proxy Server	Select a primary server.

Field	Setting
Backup Proxy Server	(Optional) Do not select anything; redundant SIP proxy servers are not supported in Cisco Unified Personal Communicator.
Add Users to Profile	Click this button, then use the Find and List Users window to find and select users. Click Add Selected to add users to the profile.

Step 4 Click **Save**.

Step 5 Make sure that all availability-related messages between Cisco Unified Personal Communicator and Cisco Unified Presence use TCP.

- a. Select **System > Service Parameters**.
- b. Select a Cisco Unified Presence server from Server.
- c. Select **Cisco UP Presence Engine** from Service.
- d. Specify the string to insert into the Contact header field of the SIP message in Enterprise Presence Server Contact Name, in the Presence Engine Configuration section.
Use this format: *ipaddress:port;transport=tcp*.
- e. Click **Save**.
- f. Select **Cisco UP SIP Proxy** from Service.
- g. Set Use Transport in Record-Route Header to **On** in the SIP Parameters (Clusterwide) section.
This forces the Proxy to use the transport parameter in the record-route header.
- h. Click **Save**.

Related Topics

- [Specifying TFTP Server Addresses, page 2-20](#)
- [How to Change Application Profiles, page 2-31](#)
- [Changing Application Profiles for a Single User, page 2-32](#)

Specifying TFTP Server Addresses

You must specify TFTP server addresses in Cisco Unified Presence Administration. Cisco Unified Personal Communicator connects to the primary TFTP server (whose address is retrieved from Cisco Unified Presence) at startup, for suspend and resume operations, and for the re-establishment of dropped network connections. When the connection is established, Cisco Unified Personal Communicator downloads the *UPCusername.cnf.xml* configuration file from Cisco Unified Communications Manager for each user.

The configuration file contains the list of Cisco Unified Communications Manager primary and failover server addresses and the transport protocol for Cisco Unified Personal Communicator to use in soft-phone mode to connect to Cisco Unified Communications Manager.

After the file is successfully downloaded, the configuration information is made available to other Cisco Unified Personal Communicator subsystems, and Cisco Unified Personal Communicator disconnects from the TFTP server.

Each time Cisco Unified Personal Communicator tries to download the configuration file, the application attempts to contact the primary TFTP server. If the primary TFTP server does not respond, Cisco Unified Personal Communicator fails over to the backup TFTP servers, if any exist. Cisco Unified Personal Communicator fails over to the backup TFTP servers in the order specified in Cisco Unified Presence Administration,.

If all TFTP server connections fail, Cisco Unified Personal Communicator tries to load the last valid downloaded configuration from the following locations:

- For Windows XP: *drive:\Documents and Settings\username\Application Data\Cisco\Unified Personal Communicator*
- For Windows Vista: *drive:\Users\username\AppData\Local\Cisco\Unified Personal Communicator*
- For Mac OS: *~/Library/Preferences/Cisco/UnifiedPersonalCommunicator/*

If the loading of the local file is successful, Cisco Unified Personal Communicator updates the Server Health window with a warning notification (yellow indicator). If the file transfer fails and the file does not exist, Cisco Unified Personal Communicator updates the Server Health window with a failure notification and switches to *Disabled* mode.

Before You Begin

- Make sure that you are using a supported Cisco Unified Presence release. See the release notes: http://www.cisco.com/en/US/products/ps6844/prod_release_notes_list.html
- Obtain the hostnames or IP addresses of the TFTP servers.

Restrictions

The following Cisco Unified Communications Manager failover restrictions apply to Cisco Unified Personal Communicator:

- Auto-registration is not supported.
- Cisco Unified Personal Communicator fails over to a configured TFTP server when it tries to download the configuration file. The application also tries to download the file from the backup TFTP servers.
- AutoUpdate and upgrades through TFTP are not supported for Cisco Unified Personal Communicator software.

Procedure

-
- Step 1** Select **Application > Cisco Unified Personal Communicator > Settings** to display the settings window.
- Step 2** Assign the primary (required) and backup (optional) TFTP server addresses in the fields provided. You can enter an IP address or a fully-qualified domain name.
- Step 3** Click **Save**.
-

Troubleshooting Tip

You can see the TFTP server addresses in the server health window in Cisco Unified Personal Communicator (**Help > Show Server Health** on Windows and **Help > Show System Diagnostics** on Mac OS).

How to Configure LDAP Settings

- [Configuring the LDAP Attribute Map, page 2-22](#)
- [Rules for a Displayed Contact Name, page 2-23](#)
- [Fetching Contact Pictures from a Web Server, page 2-23](#)
- [Specifying LDAP Server Names and Addresses, page 2-24](#)
- [Creating LDAP Profiles, page 2-26](#)

Configuring the LDAP Attribute Map

You must configure the LDAP attribute map through in Cisco Unified Presence Administration. You enter LDAP attributes for your environment and map them to the given Cisco Unified Personal Communicator attributes.

Before You Begin

- Make sure you install and set up the LDAP server before configuring the LDAP attribute map in Cisco Unified Presence Administration.
- By default, Cisco Unified Personal Communicator uses the *jpegPhoto* LDAP attribute, which is present in the Windows 2003 Active Directory schema. By contrast, the Windows 2000 Active Directory uses the *thumbnailPhoto* attribute.

Restrictions

- The UPC UserID setting in the LDAP attribute map must match the Cisco Unified Communications Manager user ID. This mapping is required for a contact in LDAP to be added to the Contact list in Cisco Unified Personal Communicator. This field associates the LDAP user with the associated user on Cisco Unified Communications Manager and Cisco Unified Presence.
- You can pair an LDAP field to only one Cisco Unified Personal Communicator field.

Procedure

-
- Step 1** Select **Application > Cisco Unified Personal Communicator > Settings** to display the settings window.
- Step 2** Select a supported LDAP server from Directory Server Type. The LDAP server populates the LDAP attribute map with Cisco Unified Personal Communicator user fields and LDAP user fields.
- Step 3** If necessary, make modifications to the LDAP field to match your specific LDAP directory. The values are global to all LDAP server hosts.
- Step 4** If you are integrating with Microsoft Active Directory, set up the LDAP attribute map with the following mapping:
- LastName = SN
 - UserID = sAMAccountName
- Step 5** Click **Save**.
-

Troubleshooting Tips

- If you want to stop using the current attribute mappings and use the factory default settings, click **Restore Defaults**.
- You can see the LDAP attribute mappings in the server health window in Cisco Unified Personal Communicator (**Help > Show Server Health** on Windows and **Help > Show System Diagnostics** on Mac OS).
- For information on faster LDAP searches, see the Cisco Unified Personal Communicator troubleshooting guide:
http://www.cisco.com/en/US/products/ps6844/prod_troubleshooting_guides_list.html

Related Topics

- [Configuring the LDAP Server, page 2-16](#)
- [Configuring the LDAP Attribute Map, page 2-22](#)
- [Fetching Contact Pictures from a Web Server, page 2-23](#)
- [Specifying LDAP Server Names and Addresses, page 2-24](#)

Rules for a Displayed Contact Name

The following rules determine how names are displayed as contacts in Cisco Unified Personal Communicator:

- If the user edits a contact name in Cisco Unified Personal Communicator, display this name. This is the Nickname LDAP attribute in Cisco Unified Presence.
- If you configured an LDAP user field for DisplayName, display this name.
- If you configured an LDAP user field for Nickname, display this name with the last name.
- Otherwise, display the configured LDAP user fields for the first and last names in the Contact pane. If there is a first name but no last name, display the first name. If there is a last name but no first name, display the last name.
- If you do not configure LDAP user fields for the FirstName and LastName, display the LDAP UserID or the Cisco Unified Presence user ID in the Contact pane.
- If a user adds a non-LDAP contact, the contact details in Cisco Unified Personal Communicator allow the user to edit the Display As name, the first name, and the last name.

Related Topics

- [Configuring the LDAP Attribute Map, page 2-22](#)
- [Specifying LDAP Server Names and Addresses, page 2-24](#)

Fetching Contact Pictures from a Web Server

You can configure a parameterized URL in the Photo field in the LDAP attribute map in Cisco Unified Presence Administration so that Cisco Unified Personal Communicator can fetch pictures from a web server instead of from the LDAP server.

Before You Begin

- Use `%%uid%%` as the substitution string.

You can use any LDAP attribute whose query value contains a piece of data that uniquely identifies the photo of the user. For example:

- `http://wwwin.cisco.com/photo/std/%%uid%%.jpg`
- `http://wwwin.cisco.com/photo/std/%%sAMAccountName%%.jpg` (for ActiveDirectory)
- The double percent symbols are required, and they must enclose the name of the LDAP attribute to substitute.

Restrictions

- The URL length is limited to 50 characters in Cisco Unified Presence Administration. To work around this issue, obtain a shortened URL from <http://tinyurl.com>. For example, `http://wwwin.cisco.com/dir/photo/std` maps to `http://tinyurl.com/2rwkf9`. This saves 11 characters so that you can enter `http://tinyurl.com/2rwkf9/%%sAMAccountName%%` into Cisco Unified Presence Administration.
- This substitution technique works only if Cisco Unified Personal Communicator can use the results of the query and can insert it into the template specified above to construct a working URL that fetches a JPG photo. If the web server where photos are hosted in a company requires a POST (for example, the name of the user is not in the URL) or uses some other cookie name for the photo (for example, `http://www.../1234.jpg`) instead of the username, this technique does not work. Cisco Unified Personal Communicator does not support authentication for this query; the photo must be retrievable from the web server without credentials.

Procedure

-
- Step 1** Select **Application > Cisco Unified Personal Communicator > Settings** to display the settings window.
- Step 2** In the LDAP attribute map, configure a parameterized URL in the Photo field. Use `%%uid%%` as the substitution string.
- Step 3** Click **Save**.

Cisco Unified Personal Communicator removes the percent symbols and replaces the parameter inside with the results of an LDAP query for the user whose photo is to be resolved.

For example, if a query result contains the attribute “uid” with a value of “johndoe,” then a template such as `http://mycompany.com/photos/%%uid%%.jpg` creates the URL `http://mycompany.com/photos/johndoe.jpg`. Cisco Unified Personal Communicator attempts to fetch the photo.

Related Topics

- [Configuring the LDAP Attribute Map, page 2-22](#)
- [Specifying LDAP Server Names and Addresses, page 2-24](#)

Specifying LDAP Server Names and Addresses

You must specify the LDAP server names, addresses ports, and protocol types in Cisco Unified Presence Administration so that Cisco Unified Personal Communicator can interact with them.

Before You Begin

Obtain the hostnames or IP addresses of the LDAP servers.

Restrictions

If you are specifying more than one LDAP server in Cisco Unified Presence Administration for failover support in Cisco Unified Personal Communicator, the servers must all be of the same type (all Microsoft Active Directory, all Netscape, or all Sun One Directory). The LDAP attribute schema must be the same on all servers.

Procedure

Step 1 Select **Application > Cisco Unified Personal Communicator > LDAP Server**.

Step 2 Click **Add New** in the Find and List window to add a new server.

Step 3 Enter information into the fields.

Field	Setting
Name	Enter the server name.
Description	(Optional) Enter a server description.
Hostname/IP Address	Enter an IP address or a fully qualified domain name of the server.
Port	Specify the port number used by the LDAP server. The default is 389 . Check the LDAP server documentation or the LDAP server configuration for this information. If you are integrating with Microsoft Active Directory and if the server is Global Catalog, enter 3268 as the port number. Note The jpegPhoto attribute is not available in Microsoft Active Directory Global Catalog server, and it is not indexed (http://msdn2.microsoft.com/en-us/library/ms676813.aspx). If your LDAP configuration uses Global Catalog port 3268, the jpegPhoto is not retrievable. Instead, change the configuration in Cisco Unified Presence Administration to TCP and port 389. The photo is retrieved when you log in to Cisco Unified Personal Communicator again.
Protocol Type	Select TCP . If you are integrating with Microsoft Active Directory and if the server is Global Catalog, select TCP .

Step 4 Click **Save**.

Troubleshooting Tips

- If an application dial rule is configured, to make sure that a picture displays both when you place a call to a contact and in the contact details, create proper directory lookup dialing rules in Cisco Unified Communications Manager. When you add a contact in Cisco Unified Personal Communicator, the directory lookup returns a 10-digit number (for example, 1234567890). If the user places the call by dialing only four digits (for example, 7890), the picture does not display because 7890 is not a match for 1234567890. Create the following rules to fix this problem:
 - Outbound rule to remove the area code. The picture displays in the contact details.

- Inbound rule for directory lookup to prefix the area code (translate the 4-digit extension number into the 10-digit DID number stored in AD). The picture displays when you place a call.
- You can see LDAP server information in the server health window in Cisco Unified Personal Communicator (**Help > Show Server Health** on Windows and **Help > Show System Diagnostics** on Mac OS).

Related Topics

- [Configuring the LDAP Attribute Map, page 2-22](#)
- [Creating LDAP Profiles, page 2-26](#)

Creating LDAP Profiles

You must create LDAP profiles in Cisco Unified Presence Administration to specify LDAP directory configuration settings and context information for searching the LDAP directory. In the profile, you can assign primary and backup servers for redundancy.

Cisco Unified Personal Communicator connects to an LDAP server on a per-search basis. If the connection to the primary server fails, Cisco Unified Personal Communicator tries the first backup LDAP server, and if it is not available, it then tries the second backup server. Cisco Unified Personal Communicator also periodically tries to return to the primary LDAP server. An LDAP query that is in process when the failover to a secondary server occurs is processed on the next available server.

Connection status information is updated in the server health window (**Help > Show Server Health** on Windows and **Help > Show System Diagnostics** on Mac OS). If Cisco Unified Personal Communicator cannot connect to any of the LDAP servers, it reports the failure in the System Diagnostics window.

Before You Begin

- You must first specify LDAP server names and addresses in **Application > Cisco Unified Personal Communicator > LDAP Server** before you can select them in this procedure.
- You must create the LDAP profile before you can add Cisco Unified Personal Communicator licensed users to the application profile. You create the LDAP profile when you change an application profile for a single user.

Procedure

-
- Step 1** Select **Application > Cisco Unified Personal Communicator > LDAP Profile**.
- Step 2** Click **Add New** in the Find and List window to add a new server.
- Step 3** Enter information into the fields.

Field	Setting
Name	Enter the profile name.
Description	(Optional) Enter a description.
Bind Distinguished Name	(Optional) Enter the administrator-level account information. This is the distinguished name with which you bind for authenticated bind. The following is an example bind distinguished name: cn=administrator,cn=users,DC=cisco,DC=com The syntax for this field depends on the type of LDAP server you deploy. For details, see the LDAP server documentation.

Field	Setting
Anonymous Bind	<p>(Optional) Uncheck this option to use the user credentials to log in to this LDAP server.</p> <p>For non-anonymous bind operations, Cisco Unified Personal Communicator receives one set of credentials. These credentials must be valid on the backup LDAP servers, if they are configured.</p> <p>Note If you check Anonymous Bind, users can log in anonymously to the LDAP server with read-only access. Do not allow anonymous access on your directory server. Instead, create a user with read-only privileges on the same container where the users to be searched are located. Specify the directory number and password for Cisco Unified Personal Communicator to use in Cisco Unified Presence.</p>
Password	(Optional) Enter the LDAP bind password. This is the password for the administrator-level account that you provided in the Bind Distinguished Name string that allows users to access this LDAP server.
Confirm Password	<p>Enter the same password as the one entered in the Password field.</p> <p>(Optional) After configuring Cisco Unified Presence for authenticated bind with the LDAP server, configure the LDAP server for anonymous permissions and anonymous login so that all directory information (name, number, mail, fax, home number, and so forth) is passed to the Cisco Unified Personal Communicator client.</p>
Search Context	<p>(Optional) Enter the location where all LDAP users are configured. This location is a container or directory. Only a single OU/LDAP search context is supported.</p> <p>Note If integrating with Microsoft Active Directory, do the following:</p> <ul style="list-style-type: none"> Set O and OU (OU must contain users; for example, ou=users,dc=cisco,dc=com). For example, cn=users,DC=EFT-LA,DC=cisco,DC=com The searchbase must include all users of Cisco Unified Personal Communicator.
Recursive Search	(Optional) Check to perform a recursive search of the directory starting at the searchbase.
Primary LDAP Server and Backup LDAP Server	Select the primary LDAP server and optional backup servers.
Make this the Default LDAP Profile for the System	<p>(Not available in Release 6.x; optional) Check so that any new users who are added to the system are automatically placed into this default profile.</p> <p>Users who are already synchronized with Cisco Unified Presence from Cisco Unified Communications Manager are not added to the default profile. However, once the default profile is created, any users synchronized after that are added to the default profile.</p>
Add Users to Profile	Click this button, then use the Find and List Users window to find and select users. Click Add Selected to add users to the profile.

Step 4 Click **Save**.

Troubleshooting Tip

You can see the LDAP profile information in the server health window in Cisco Unified Personal Communicator (**Help > Show Server Health** on Windows and **Help > Show System Diagnostics** on Mac OS).

Related Topics

- [How to Change Application Profiles, page 2-31](#)
- [Changing Application Profiles for a Single User, page 2-32](#)

How to Configure CTI Gateway Settings

- [Desk-Phone Mode Failover and Recovery, page 2-28](#)
- [CTI Connection Failures and Recovery When No Calls Are Present, page 2-28](#)
- [CTI Connection Failures and Recovery When Calls Are Present, page 2-29](#)
- [Specifying CTI Gateway Server Names and Addresses, page 2-29](#)
- [Desk-Phone Mode Failover and Recovery, page 2-28](#)
- [CTI Connection Failures and Recovery When No Calls Are Present, page 2-28](#)
- [CTI Connection Failures and Recovery When Calls Are Present, page 2-29](#)
- [Creating CTI Gateway Profiles, page 2-30](#)

Desk-Phone Mode Failover and Recovery

If the CTI connection to Cisco Unified Communications Manager is lost while Cisco Unified Personal Communicator is operating in desk-phone mode, the application tries to re-establish the connection to the primary and then to the backup servers. Connection attempts continue on a round-robin basis, beginning again with the primary server. Successive attempts to reconnect to a server occur at intervals of 4, 8, 16, 32, and 60 seconds (maximum) until a connection is re-established.

Related Topics

- [CTI Connection Failures and Recovery When No Calls Are Present, page 2-28](#)
- [CTI Connection Failures and Recovery When Calls Are Present, page 2-29](#)
- [Creating CTI Gateway Profiles, page 2-30](#)

CTI Connection Failures and Recovery When No Calls Are Present

When a CTI connection fails and no calls are present:

- Cisco Unified Personal Communicator attempts to reconnect to the next available CTI server.
- Until a connection is established, the Cisco Unified Personal Communicator user cannot initiate any new calls through the application. No new incoming call notifications are provided through the application.
- The user has manual control of the desk phone for making and receiving calls.

- When Cisco Unified Personal Communicator reconnects to one of the CTI servers, Cisco Unified Personal Communicator users again have the ability to control and monitor new calls through the application.

Related Topics

- [CTI Connection Failures and Recovery When Calls Are Present, page 2-29](#)
- [Creating CTI Gateway Profiles, page 2-30](#)

CTI Connection Failures and Recovery When Calls Are Present

When a CTI connection fails with one or more calls present:

- Cisco Unified Personal Communicator attempts to reconnect to the next available CTI server.
- Existing calls are unaffected, but the user no longer has control through Cisco Unified Personal Communicator and does not receive any updates or changes in the call state. Any existing Cisco Unified Personal Communicator session window closes.
- The user has manual control of the desk phone for making and receiving calls.
- When Cisco Unified Personal Communicator reconnects to one of the CTI servers, it opens a new session window for each call and shows the current state.
- Cisco Unified Personal Communicator remains connected to the current server (whether primary or backup) until the user restarts Cisco Unified Personal Communicator or when a connection failure causes it to reconnect.

Related Topics

- [Creating CTI Gateway Profiles, page 2-30](#)

Specifying CTI Gateway Server Names and Addresses

The CTI gateway, which is the CTIManager component of Cisco Unified Communications Manager, provides desk-phone control (phone-association mode) to Cisco Unified Personal Communicator users. The CTIManager service is installed when Cisco Unified Communications Manager is installed.

You must specify CTI gateway server names, addresses, ports, and protocol types in Cisco Unified Presence Administration Release 7.0 so that the information for reaching the CTI gateway server can be downloaded when the user logs in to Cisco Unified Personal Communicator.

Before You Begin

- If you previously configured Cisco Unified Communications Manager with an IP address through the Cisco Unified Communications Manager Administration **System > Server** menu, Cisco Unified Presence dynamically creates a TCP-based CTI gateway host profile for that address. The fields in Cisco Unified Presence Administration (**Application > Cisco Unified Personal Communicator > CTI Gateway Server**) are automatically populated, and you do not need to perform this procedure.
- Obtain the hostnames or IP addresses of the CTI gateway.

Procedure

-
- Step 1** Select **Application > Cisco Unified Personal Communicator > CTI Gateway Server**.
 - Step 2** Click **Add New** in the Find and List window to add a new server.

Step 3 Enter information into the fields.

Field	Setting
Name	Enter the server name.
Description	(Optional) Enter a server description.
Hostname/IP Address	Enter an IP address or a fully qualified domain name of Cisco Unified Communications Manager that is running the CTI service.
Port	Enter 2748 .
Protocol Type	Select TCP .

Step 4 Click **Save**.

Troubleshooting Tip

You can see the CTI gateway information in the server health window in Cisco Unified Personal Communicator (**Help > Show Server Health** on Windows and **Help > Show System Diagnostics** on Mac OS).

Related Topics

- [Creating CTI Gateway Profiles, page 2-30](#)

Creating CTI Gateway Profiles

You must create CTI gateway profiles in Cisco Unified Presence Administration and assign primary and backup servers for redundancy.

Before You Begin

- You must create the CTI gateway profile before you can add Cisco Unified Personal Communicator licensed users to the application profile.
- You must first specify CTI gateway server names and addresses in **Application > Cisco Unified Personal Communicator > CTI Gateway Server** before you can select them as primary or backup servers in this procedure.
- Cisco Unified Presence dynamically creates a TCP-based CTI gateway profile based on the *hostname* of Cisco Unified Communications Manager. Before using this profile, verify that Cisco Unified Presence and Cisco Unified Personal Communicator clients can ping Cisco Unified Communications Manager by the DNS name. If they cannot contact the server, you need to add the *IP address* of Cisco Unified Communications Manager in Cisco Unified Presence Administration (**Application > Cisco Unified Personal Communicator > CTI Gateway Server**). You do not need to delete the automatically-created host profiles.
- If you previously configured Cisco Unified Communications Manager with an IP address through the Cisco Unified Communications Manager Administration System > Server menu, Cisco Unified Presence dynamically creates a TCP-based CTI gateway profile based on that address. The fields in Cisco Unified Presence Administration (**Application > Cisco Unified Personal Communicator > CTI Gateway Profile**) are automatically populated, and you need only to add users to the default CTI TCP profile that is created (see Step 4).

Procedure

- Step 1** Select **Application > Cisco Unified Personal Communicator > CTI Gateway Profile**.
- Step 2** Click **Add New** in the Find and List window to add a new profile.
- Step 3** Enter information into the fields.

Field	Setting
Name	Enter the profile name.
Description	(Optional) Enter a profile description.
Primary CTI Gateway Server and Backup CTI Gateway Server	Select a primary server and backup servers.
Make this the Default CTI Gateway Profile for the System	(Not available in Release 6.x; optional) Check so that any new users that are added to the system are automatically placed into this default profile. Users who are already synchronized to Cisco Unified Presence from Cisco Unified Communications Manager are not added to the default profile. However, once the default profile is created, any users synchronized after that are added to the default profile.
Add Users to Profile	Click this button, then use the Find and List Users window to find and select users. Click Add Selected to add users to the profile.

- Step 4** Click **Save**.

Related Topics

- [Desk-Phone Mode Failover and Recovery, page 2-28](#)
- [CTI Connection Failures and Recovery When No Calls Are Present, page 2-28](#)
- [CTI Connection Failures and Recovery When Calls Are Present, page 2-29](#)
- [Specifying CTI Gateway Server Names and Addresses, page 2-29](#)
- [How to Change Application Profiles, page 2-31](#)
- [Changing Application Profiles for a Single User, page 2-32](#)

How to Change Application Profiles

Application profiles enable you to partition your Cisco Unified Personal Communicator user base for performance and scalability. You can change individual application profiles for each user.

Application profiles are not required; some Cisco Unified Personal Communicator users might not have a voice-mail or a conferencing profile. In this situation, the drop-down selection displays **None**.

You must first create the server profile before you can change the user settings as described in the following sections:

- [Selecting the Proxy Listener and Creating Proxy Profiles in Release 6.x, page 2-19](#)
- [Creating LDAP Profiles, page 2-26](#)

- [Creating CTI Gateway Profiles, page 2-30](#)
- [Creating Voice-Mail Profiles in Cisco Unified Presence Administration, page 3-11](#)
- [Creating Conferencing Profiles in Cisco Unified Presence Administration, page 3-18](#)

For information on how to change application profiles, see the following sections:

- [Changing Application Profiles for a Single User, page 2-32](#)
- [Changing Application Profiles for Multiple Users, page 2-32](#)

Changing Application Profiles for a Single User

Procedure

-
- Step 1** Select **Application > Cisco Unified Personal Communicator > User Settings**.
- Step 2** Click **Find** in the Find and List window to populate the search results fields, or search for the user, and then click **Find**.
- Step 3** Click the link to select the user.
- Step 4** (Release 6.x only; optional) Assign the preferred CTI device to the user from the drop-down list in the CTI Control Information section.
- The preferred CTI device is the MAC address (in the form of *SEPxxxxxxxxxxxx*) of the primary desk phone that the user wants to control when in desk-phone mode.
- If the user does not specify a preferred device in Cisco Unified Personal Communicator, the one you specify as the preferred CTI device in Cisco Unified Presence Administration is used. If neither of these options are specified, Cisco Unified Personal Communicator chooses the first CTI-enabled phone that is associated with the user in Cisco Unified Communications Manager.
- Step 5** Specify the profiles to change for the user in the Application Profile Configuration section.
- If you change a user application profile in this window (for example, change from LDAP Profile 1 to LDAP Profile 2), the change is reflected in **Application > Cisco Unified Personal Communicator > LDAP Profile** window.
- If a user does not have an application profile for a specific server, select **None**.
- Step 6** Click **Save**.
-

Changing Application Profiles for Multiple Users

Procedure

-
- Step 1** Select the following menu in Cisco Unified Presence Administration:
- Release 7.0: **Bulk Administration > CUPC/MOC > Export**
- Release 6.x: **Bulk Administration > Cisco Unified Presence > Export Cisco Unified Presence Users**
- Step 2** Click **Find** in the Export Users Query window to obtain current profile information by finding all users.
- Step 3** Click **Next** at the bottom of the window.
- Step 4** Specify the filename to be exported in the Export CUP Users Configuration window.

- Step 5** Select **Bulk Administration > Upload/Download Files**.
- Step 6** Find and select the file that you want to download.
- Step 7** Click **Download Selected**.
- Step 8** Add or remove profile names according to the instructions in the sample file.
- Step 9** Select **Bulk Administration > Upload/Download Files**.
- Step 10** Click **Add New**.
- Step 11** Enter information into the fields.

Field	Setting
File	Enter the name of the file to upload.
Select The Target	Select the target for which you want to use the file.
Select Transaction Type	Select the transaction type that the file defines.
Overwrite File if it exists	Check this option if you want to overwrite an existing file with the same name.

- Step 12** Select **Bulk Administration > CUPC/MOC > Update**.
- Step 13** Select the updated .csv file.
- Step 14** Click **Save** to submit the file to update profile information in bulk.

Disabling Instant Messaging Globally

You can disable instant messaging clusterwide in Cisco Unified Presence Administration. When instant messaging is disabled, the Send an Instant Message option is dimmed in Cisco Unified Personal Communicator.

Procedure

- Step 1** Select the following menu in Cisco Unified Presence Administration:
- Release 7.0: **Presence > Settings**
- Release 6.x: **Cisco Unified Presence > Settings**
- Step 2** Deselect **Enable Instant Messaging**.
- Step 3** Click **Save**.

Configuring the Maximum Contact List Size

Restriction

This configuration is not available in Cisco Unified Presence Release 6.x.

Procedure

-
- Step 1** Select **Presence > Settings** in Cisco Unified Presence Administration.
- Step 2** Enter a number from 0 to 200 in Max Contact List Size.
- This setting specifies the maximum number of contacts users can have for both Cisco Unified Personal Communicator and IP Phone Messenger.
- Step 3** Click **Save**.
-

Configuring Firewalls to Pass Cisco Unified Personal Communicator Traffic

Frequently used by corporations and educational institutions for increased security, firewalls work by blocking certain Internet traffic from entering or leaving a network.

Internet traffic moves through a firewall based on service identification numbers that are known as *ports*. Certain ports must be open for Cisco Unified Personal Communicator to work. Network administrators typically open a minimal number of network ports, allowing the traffic for approved applications to enter and leave the network while blocking other network traffic.

Before You Begin

Read information about the network ports used by Cisco Unified Personal Communicator in the release notes:

http://www.cisco.com/en/US/products/ps6844/prod_release_notes_list.html

Procedure

-
- Step 1** Identify whether users have a software firewall installed on their computers, or if there is a hardware firewall in the network between Cisco Unified Presence and Cisco Unified Personal Communicator.
- Step 2** Configure the firewall to pass Cisco Unified Personal Communicator traffic.
- Failure to perform this step results in missing, incorrect, or intermittent display of availability status in Cisco Unified Personal Communicator.
-

Configuring Users for Point-to-Point Video Calls and for Multipoint Videoconferencing

Procedure

-
- Step 1** (For point-to-point video calls) Configure users for soft-phone use.

- Step 2** (For multipoint videoconferencing) If you want Cisco Unified Personal Communicator soft-phone users to have merged conference calls (three or more parties) with audio and video support, you must first configure videoconferencing resources.
- Step 3** Distribute video telephony (VT) cameras supported for use with Cisco Unified Personal Communicator. The camera driver installer is not provided with Cisco VT cameras. You must distribute the installer.
- For new installations:
 - If users are to perform the installation, distribute the camera, the camera driver installer, and the user guide.
 - If users already have a supported camera, do not distribute the driver.
 - For details about supported cameras, see the release notes:
http://www.cisco.com/en/US/products/ps6844/prod_release_notes_list.html
- Step 4** Provide users with the appropriate documentation to complete the installation:
- *User Guide for Cisco Unified Personal Communicator*
http://www.cisco.com/en/US/products/ps6844/products_user_guide_list.html
 - *Cisco VT Camera Quick Start Guide* (for use with Windows-based computers)
http://www.cisco.com/en/US/products/sw/voicesw/ps5662/prod_installation_guides_list.html
 - *iSight User Guide* (for use with Mac OS X-based computers)
<http://www.apple.com/support/manuals/>
 - Third-party USB video cameras—provide the documentation from the manufacturer
-

Related Topics

- [Adding Cisco Unified Personal Communicator as a Phone Type, page 2-5](#)
- [Configuring Videoconferencing Resources, page 3-19](#)
- [Information to Provide to Users, page 4-7](#)
- [Deploying the Application and the Camera Drivers in a Microsoft Windows Environment, page 4-4](#)

