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[Introduction](#)

This document provides a sample configuration for integrating Cisco Unified Presence Server (CUPS) with Cisco Unified Communications Manager (CUCM).

[Prerequisites](#)

[Requirements](#)

Ensure that you meet these requirements before you attempt this configuration:

- Make sure that Cisco Unified Communications Manager is up and running.

[Components Used](#)

The information in this document is based on these software and hardware versions:

- Cisco Unified Communications Manager 8.x

- Microsoft Active Directory 2008.
- Cisco Unified Presence Server 8.x

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to the [Cisco Technical Tips Conventions](#) for more information on document conventions.

Cisco Unified Personal Communicator CUPS Configuration

These are the steps that have to be performed on CUCM before integrating with CUPS.

- Make sure that the following user and device configuration is completed on Cisco Unified Communications Manager. Integrating the CUCM with LDAP Directory. Adding LDAP Users to User Groups. CUPS as an Application Server. Configuring the Presence Service Parameter. Configure the SIP Trunk on Cisco Unified Communications Manager. Configuring the SIP Trunk for Cisco Unified Presence. Modify the User Credential Policy. Verify that the Required Services are Running on Cisco Unified Communications Manager. End User Management. Configure Cisco Unified Personal Communicator on Cisco Unified Communications Manager. Assigning the Licensing Capabilities on Cisco Unified Communications Manager. Configuring Cisco IP Phone Messenger as an Application User. Add CtiGW application user. Add application users to a group with the Standard AXL Access Role enabled.

Integrating the LDAP Directory

Cisco Unified Presence integrates with these LDAP directory servers:

- Microsoft Active Directory 2000, 2003 and 2008
- Netscape Directory Server
- Sun ONE Directory Server 5.2
- OpenLDAP

In this example, Microsoft Active Directory 2008 is used.

Note: In order to know how to synchronize Cisco Unified Communications Manager 8.x with Lightweight Directory Access Protocol (LDAP), refer to [Integrate Cisco Unified Communications Manager 8.x with Active Directory](#).

Add LDAP Users to User Groups

In order to enable LDAP users to login to CUCM, you must add the users to **Standard CCM End Users** group. Complete these steps:

1. Go to **Cisco Unified Communications Manager Administration > User Management > User Group**.
2. Choose **Standard CCM End Users**

group.

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk

Find and List User Groups

+ Add New Select All Clear All Delete Selected

Status
24 records found

User Group (1 - 24 of 24)

Find User Group where Name Find Clear Filter + -

<input type="checkbox"/>	Name ^
<input type="checkbox"/>	Standard Audit Users
<input type="checkbox"/>	Standard CAR Admin Users
<input type="checkbox"/>	Standard CCM Admin Users
<input type="checkbox"/>	Standard CCM End Users
<input type="checkbox"/>	Standard CCM Gateway Administration
<input type="checkbox"/>	Standard CCM Phone Administration
<input type="checkbox"/>	Standard CCM Read Only
<input type="checkbox"/>	Standard CCM Server Maintenance
<input type="checkbox"/>	Standard CCM Server Monitoring
<input type="checkbox"/>	Standard CCM Super Users
<input type="checkbox"/>	Standard CTI Allow Call Monitoring
<input type="checkbox"/>	Standard CTI Allow Call Park Monitoring
<input type="checkbox"/>	Standard CTI Allow Call Recording
<input type="checkbox"/>	Standard CTI Allow Calling Number Modification
<input type="checkbox"/>	Standard CTI Allow Control of All Devices
<input type="checkbox"/>	Standard CTI Allow Control of Phases supporting Connected VFX and conf

3. Click **Add End Users to Group** and select the check box for users whom you want to add to this particular group.

The screenshot shows the Cisco Unified CM Administration interface. At the top, the Cisco logo and 'Cisco Unified CM Administration' are visible. Below the navigation menu, the 'User Group Configuration' section is active. The 'Name' field is populated with 'Standard CCM End Users'. In the 'User' section, there is a search bar with 'User ID' selected and 'begins with' as the filter. Below the search bar, a message states 'No active query. Please enter your search criteria using the options above.' A row of buttons includes 'Add End Users to Group' (highlighted with a red box), 'Add App Users to Group', 'Select All', 'Clear All', and 'Delete Selected'. At the bottom, there is a legend indicating that an asterisk (*) denotes a required item.

4. Similarly, add the End Users to the **Standard CTI Enabled Group** by performing the previous steps.

[CUPS as an Application Server](#)

Complete these steps in order to add Cisco Unified Presence as an Application Server on Cisco Unified Communications Manager.

1. Go to **Cisco Unified Communications Manager Administration > System > Application Server**.
2. Click **Add New**.
3. Choose **Cisco Unified Presence Server** from the drop down menu and click **Next**.
4. Set Name to hostname that you have given while installing CUPS and URL as IP address that is been assigned to CUPS server.



Cisco Unified CM Administration

For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Applicati

Application Server Configuration



Status



Status: Ready

Application Server Information

Application Server Type Cisco Unified Presence Server

Name *	<input type="text" value="CUPS8"/>
URL	<input type="text" value="10.78.177.30"/>
End User URL	<input type="text" value="10.78.177.30"/>

Save



*- indicates required item.

[Configure the Presence Service Parameter](#)

You enable the Inter-Presence Group Subscription parameter to allow users in one Presence Group to subscribe to the availability information for users in a different presence group.

1. Go to **Cisco Unified Communications Manager Administration > System > Service Parameters**.
2. Choose the Cisco Unified Communications Manager server from the Server menu.
3. Choose **Cisco CallManager** from the Service menu.
4. Choose **Allow Subscription** for Default Inter-Presence Group Subscription in the Clusterwide Parameters (System - Presence) section.

Clusterwide Parameters(System - Presence)		
Presence Subscription Throttling Threshold *	<input type="text" value="15000"/>	15000
Presence Subscription Resume Threshold *	<input type="text" value="80"/>	80
Default Inter-Presence Group Subscription *	<input type="text" value="Disallow Subscription"/>	Disallow Subscription
BLF Status Depicts DND *	<input type="text" value="Allow Subscription"/>	False

5. Click **Save**.

[Configure SIP Trunk on CUCM](#)

Complete these steps in order to configure the SIP Trunk on Cisco Unified Communications Manager:

1. Go to **Cisco Unified Communications Manager Administration > System > Security > SIP Trunk Security Profile.**
2. Click **Find.**
3. Choose **Non Secure SIP Trunk Profile.**
4. Verify that the setting for Device Security Mode is **Non Secure.**
5. Verify that the setting for Incoming Transport Type is **TCP+UDP.**
6. Verify that the setting for Outgoing Transport Type is **TCP.**
7. Check to enable these items:Accept Presence SubscriptionAccept Out-of-Dialog REFERAccept Unsolicited NotificationAccept Replaces Header

The screenshot displays the Cisco Unified CM Administration interface for configuring a SIP Trunk Security Profile. The page title is "SIP Trunk Security Profile Configuration". The profile name is "Non Secure SIP Trunk Profile". The configuration details are as follows:

Field	Value
Name*	Non Secure SIP Trunk Profile
Description	Non Secure SIP Trunk Profile authenticated by null Str
Device Security Mode	Non Secure
Incoming Transport Type*	TCP+UDP
Outgoing Transport Type	TCP
Nonce Validity Time (mins)*	600
X.509 Subject Name	
Incoming Port*	5060

Additional configuration options:

- Enable Digest Authentication
- Enable Application level authorization
- Accept presence subscription
- Accept out-of-dialog refer**
- Accept unsolicited notification
- Accept replaces header
- Transmit security status
- Allow charging header

8. Click **Save.**

[Configure the SIP Trunk for Cisco Unified Presence](#)

You only configure one SIP trunk between a Cisco Unified Communications Manager cluster and a Cisco Unified Presence cluster.

1. Go to **Cisco Unified Communications Manager Administration > Device > Trunk**.
2. Click **Add New**.
3. Choose **SIP Trunk** from the Trunk Type menu.
4. Choose **SIP** from the Device Protocol menu.
5. Choose **None** for the Trunk Service Type.
6. Click **Next**.
7. Enter **CUPS-SIP-Trunk** for the Device Name.
8. Select a device pool from the Device Pool menu.
9. In the SIP Information section at the bottom of the window, configure these values: In the Destination Address field, enter the dotted IP address, or the FQDN (Fully Qualified Domain Name), or the DNS SRV record for the Cisco Unified Presence server. **Note:** Check Destination Address is an SRV if you have configured a DNS SRV record for the Destination Address value. Enter **5060** for the Destination Port. Choose **Non Secure SIP Trunk Profile** from the SIP Trunk Security Profile menu. Choose **Standard SIP Profile** from the SIP Profile menu.

The screenshot displays the Cisco Unified CM Administration web interface. At the top, the navigation bar includes 'Cisco Unified CM Administration' and 'For Cisco Unified Communications Solutions'. Below the navigation bar, there are several tabs: 'System', 'Call Routing', 'Media Resources', 'Advanced Features', 'Device', 'Application', 'User Management', 'Bulk Administration', and 'Help'. The main content area is titled 'Trunk Configuration' and includes a 'Save' button and a checkbox for 'Use Device Pool Redirecting Party Transformation CSS'. The 'SIP Information' section is expanded, showing the 'Destination' configuration. The 'Destination Address' field contains '192.168.1.100', the 'Destination Port' is '5060', and the 'Destination Address IPv6' field is empty. Below these fields, there are several dropdown menus for configuration options: 'MTP Preferred Originating Codec*' (711ulaw), 'Presence Group*' (Standard Presence group), 'SIP Trunk Security Profile*' (Non Secure SIP Trunk Profile), 'Rerouting Calling Search Space' (< None >), 'Out-Of-Dialog Refer Calling Search Space' (< None >), 'SUBSCRIBE Calling Search Space' (< None >), 'SIP Profile*' (Standard SIP Profile), and 'DTMF Signaling Method*' (No Preference).

10. Click **Save**.

After you configure the SIP trunk, you must assign that SIP trunk as the CUP PUBLISH Trunk on Cisco Unified Communications Manager by selecting **Cisco Unified Communications Manager Administration > System > Service Parameters**.

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

Navigation: ccmadmin | Search Documentation | About

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾

Service Parameter Configuration

Save Set to Default Advanced

SIP Trunk TCP Call Forwarding Timeout	250	250
SIP V.150 Outbound SDP Offer Filtering *	No Filtering	No Filtering
Send SIP Multicast TTL in SDP *	False	False
Default PUBLISH Expiration Timer *	3600	3600
Minimum PUBLISH Expiration Timer *	60	60
CUP PUBLISH Trunk	< None >	
Send 181 Call Is Being Forwarded *	False	False
Fail Call Over SIP Trunk if MTP Allocation Fails *	False	False
Log Call-Related REFER/NOTIFY/SUBSCRIBE SIP Messages for Session Trace *	True	True
Port Received Timer for Outbound Call Setup *	2	2

There are hidden parameters in this group. Click on Advanced button to see hidden parameters.

Modify the User Credential Policy

You need to set an expiration date on the credential policy for users. The only type of user that does not require a credential policy expiration date is an Application user.

1. Go to **Cisco Unified Communications Manager Administration > User Management > Credential Policy Default**.
2. Click Default Credential Policy for **End user** and Credential Type as **PIN**.

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

Navigation: Cisco Unified CM Administration | Search Documentation | About

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

Find and List Credential Policy Defaults

Status
3 records found

Credential Policy Default			
Name	Credential User		Credential Type
Default Credential Policy	End User		PIN
Default Credential Policy	Application User		Password
Default Credential Policy	End User		Password

3. Check the **Does Not Expire** check box.



Credential Policy Default Configuration



Save

Status



Status: Ready

Credential Policy Default Information

Credential User

Credential Type

Credential Policy*

Change Credential

Confirm Credential

User Cannot Change

User Must Change at Next Login

Does Not Expire

Save



*- indicates required item.

Note: Similarly, repeat the steps 2 and 3 for Default Credential Policy as **End user** and Credential Type as **Password**.



Cisco Unified CM Administration

For Cisco Unified Communications Solutions

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Applications ▾

Credential Policy Default Configuration



Save

Status



Status: Ready

Credential Policy Default Information

Credential User

Credential Type

Credential Policy*

Change Credential

Confirm Credential

- User Cannot Change
- User Must Change at Next Login
- Does Not Expire

Save



*- indicates required item.

[Verify that Required Services are Running on CUCM](#)

Ensure that these services are activated and running on the CUCM:

1. From Cisco Unified Communications Manager, go to **Cisco Unified Serviceability > Tools > Control Center - Feature Services**.
2. Choose a Cisco Unified Communications Manager server from the Server menu.
3. Make sure that these services are running: Cisco CallManagerCisco TFTP (if you are deploying Cisco Unified Personal Communicator softphone)Cisco CTIManager (if you are deploying Cisco Unified Personal Communicator in desk phone control mode)Cisco AXL Web Service (for data synchronization between Cisco Unified Presence and Cisco Unified Communications

Manager)

Database and Admin Services			
	Service Name	Status	Activation Status
<input type="radio"/>	Platform SOAP Services	Not Running	Deactivated
<input type="radio"/>	Cisco AXL Web Service	Started	Activated
<input type="radio"/>	Cisco UXL Web Service	Started	Activated
<input type="radio"/>	Cisco Bulk Provisioning Service	Started	Activated
<input type="radio"/>	Cisco TAPS Service	Started	Activated

Performance and Monitoring Services			
	Service Name	Status	Activation Status
<input type="radio"/>	Cisco Serviceability Reporter	Started	Activated
<input type="radio"/>	Cisco CallManager SNMP Service	Started	Activated

Directory Services			
	Service Name	Status	Activation Status
<input type="radio"/>	Cisco DirSync	Started	Activated

CM Services			
	Service Name	Status	Activation Status
<input type="radio"/>	Cisco CallManager	Started	Activated
<input type="radio"/>	Cisco Messaging Interface	Not Running	Activated
<input type="radio"/>	Cisco Unified Mobile Voice Access Service	Started	Activated
<input type="radio"/>	Cisco IP Voice Media Streaming App	Started	Activated
<input type="radio"/>	Cisco CTIManager	Started	Activated
<input type="radio"/>	Cisco Extension Mobility	Started	Activated
<input type="radio"/>	Cisco DHCP Monitor Service	Started	Activated
<input type="radio"/>	Cisco Dialed Number Analyzer Server	Started	Activated
<input type="radio"/>	Cisco Dialed Number Analyzer	Started	Activated
<input type="radio"/>	Cisco Tftp	Started	Activated

[End User Management](#)

Associate an IP Phone for the **Enduser**.

1. Go to **Cisco Unified Communications Manager Administration > User Management > End User**.
2. Click on the User.

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

Navigation Cisco I
admin | Search Docu

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Admini

Find and List Users

+ Add New Select All Clear All Delete Selected

Status
1 records found

User (1 - 1 of 1)

Find User where First name ▾ begins with ▾ Find Clear Filter + -

<input type="checkbox"/>	User ID ^	First Name	Last Name
<input type="checkbox"/>	jdavis	John	Davis

Add New Select All Clear All Delete Selected

3. Click the **Device Association** button.

4. Check the check box adjacent to the phone you want to associate with the user, then click **Save Selected/Changes**.

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

Navigation admin | S

System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

User Device Association

Select All Clear All Select All In Search Clear All In Search Save Selected/Changes Remove All Associated Devices

Status
1 records found

User Device Association (1 - 1 of 1)

Find User Device Association where Name ▾ begins with ▾ Find Clear Filter + -

Show the devices already associated with user

<input type="checkbox"/>	Device Name	Directory Number	
<input checked="" type="checkbox"/>	SEPAA88A4881D01	9727661853	John Davis Phone

Select All Clear All Select All In Search Clear All In Search Save Selected/Changes Remove All Associated Devices

5. Choose the **Primary Extension** for the User.

The screenshot displays the Cisco Unified CM Administration interface for End User Configuration. The top navigation bar includes the Cisco logo, the title "Cisco Unified CM Administration For Cisco Unified Communications Solutions", and a "Navigation" menu. Below the navigation bar is a breadcrumb trail: System > Call Routing > Media Resources > Advanced Features > Device > Application > User Management > Bulk Admin. The main content area is titled "End User Configuration" and includes a "Related Links:" section. The configuration form contains several sections:

- Actions:** Save (floppy icon), Delete (red X icon), Add New (plus icon).
- Default Profile:** A dropdown menu currently showing "-- Not Selected --".
- Presence Group*:** A dropdown menu showing "Standard Presence group".
- SUBSCRIBE Calling Search Space:** A dropdown menu showing "< None >".
- Checkboxes:**
 - Allow Control of Device from CTI
 - Enable Extension Mobility Cross Cluster
- Directory Number Associations:**
 - Primary Extension:** A dropdown menu showing "< None >". A dropdown list is open, showing options "< None >" and "9727661853".
- Mobility Information:**
 - Enable Mobility
 - Primary User Device:** A dropdown menu showing "< None >".
 - Enable Mobile Voice Access
 - Maximum Wait Time for Desk Pickup*:** A text input field containing "10000".

[Configure CUPC on CUCM](#)

In order to enable Cisco Unified Personal Communicator softphone features, you must create a new softphone device for each user:

1. Go to **Cisco Unified Communications Manager Administration > Device > Phone**.
2. Click **Add New**.
3. Choose **Cisco Unified Personal Communicator** from the Phone Type menu.



Add a New Phone



Status

 Status: Ready

Select the type of phone you would like to create

Phone Type* -- Not Selected --

Next

 *- indicat

 **.- Creat

- Cisco 7945
- Cisco 7960
- Cisco 7961
- Cisco 7961G-GE
- Cisco 7962
- Cisco 7965
- Cisco 7970
- Cisco 7971
- Cisco 7975
- Cisco 7985
- Cisco 8961
- Cisco 9951
- Cisco 9971
- Cisco ATA 186
- Cisco IP Communicator
- Cisco TelePresence
- Cisco TelePresence 1000
- Cisco TelePresence 1100
- Cisco TelePresence 1300
- Cisco TelePresence 3000
- Cisco TelePresence 3200
- Cisco TelePresence 500
- Cisco Unified Client Services Framework
- Cisco Unified Mobile Communicator
- Cisco Unified Personal Communicator**
- H.323 Client
- IP-STE
- Third-party SIP Device (Advanced)
- Third-party SIP Device (Basic)
- Transnova S3

to enable t

4. Click **Next**.
5. Configure this information: Specify the softphone device name in the Device Name field.
Name must be: **UPC<userid>**
6. Enter a descriptive name for the phone in the Description field.
7. Choose **Default** from the Device Pool list.
8. Choose **Standard Client Services Framework** from the Phone Button Template list.
9. Choose the **user ID** from Owner User ID menu.
10. Select the device name of the Cisco Unified IP Phone to associate with Cisco Unified

Personal Communicator from Primary Phone.

11. Check Allow Control of Device from CTI to enable CTI to control and monitor this device.
12. Enter information in the Protocol Specific Information section, as shown here.

