



# Setup for Cisco Unified Communications Manager

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This chapter describes how you can set up Cisco Jabber for iPad using Cisco Unified Communications Manager.

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## System and Network Requirements

Refer to this section for information on the system and network requirements for Cisco Jabber for iPad.

## Supported Audio and Video Codecs

Supported audio codecs include:

- G.722.1, including G.722.1 32k and G.722.1 24k



**Note** G.722.1 is supported in Cisco Unified Communications Manager 8.6.1 or later.

- G.711, including G.711 A-law and G.711 u-law

The supported video codec is H.264/AVC.

## Maximum Negotiated Bit Rate

You specify the maximum payload bit rate in the **Region Configuration** window in Cisco Unified Communications Manager. This maximum payload bit rate does not include packet overhead, so the actual bit rate used is higher than the maximum payload bit rate you specify.

This table describes how Cisco Jabber for iPad allocates the maximum payload bit rate:

Audio	Interactive video (Main video)
The application uses the maximum audio bit rate.	The application allocates the remaining bit rate in this way: The maximum video call bit rate minus the audio bit rate

## Performance Expectations for Bandwidth

A minimal upload bandwidth of 256 - 384 Kbps is required for good VGA video quality. An upload bandwidth above 512 Kbps can produce outgoing video resolution of 480 X 360 at 20 fps and a maximum incoming video resolution of 640 X 480 at 30 fps. VPN usage increases payload size and this increases bandwidth consumption. Video resolutions and frame rates may not be as high using a VPN connection.

## Video Rate Adaptation

Cisco Jabber for iPad uses video rate adaptation to negotiate optimal video quality based on your network conditions. Video rate adaptation dynamically scales video quality when video transmission begins.

Cisco Jabber for iPad automatically adapts video to suit available bandwidth. When users make video calls, the application rapidly and incrementally increases bit rate and resolution to achieve the optional settings. Users should expect video calls to begin at lower resolution and scale upwards to higher resolution over a short period of time. The application saves history so that subsequent video calls should begin at the optimal resolution. However, users can expect some fluctuation and scaling of video transmissions until the optimal resolution is achieved.

## Firewall Requirements

Configure hardware firewalls to allow the ports to carry traffic for the application. Hardware firewalls are network devices that provide protection from unwanted traffic at an organizational level. This table lists the ports required for the deployments of Cisco Unified Communications Manager and Cisco Unified Presence. These ports must be open on all firewalls for the application to function properly.

Port	Protocol	Description
Inbound		
16384-32766	UDP	Receives Real-Time Transport Protocol (RTP) media streams for video and audio. You set up these ports in Cisco Unified Communications Manager.
Outbound		
69	TFTP	Connects to the Trivial File Transfer Protocol (TFTP) server to download the TFTP file
80 and 6970	HTTP	Connects to services such as Cisco WebEx Messenger for meetings and Cisco Unity Connection for voicemail features If no port is specified in a TFTP server address, Cisco Jabber for iPad will try port 6970 to obtain phone setup files and dial rule files.
5060	UDP/TCP	Provides Session Initiation Protocol (SIP) call signaling
5061	TCP	Provides secure SIP call signaling
8443	TCP	Connects to the Cisco Unified Communications Manager IP Phone (CCMCIP) server to get a list of currently assigned devices
16384-32766	UDP	UDP Sends RTP media streams for video and audio
389	TCP	Connects to the LDAP server for contact searches
443 7080	VMRest HTTPS	Connects to Cisco Unity Connection to retrieve and manage voice messages.

Port	Protocol	Description
8443	HTTPS	Connects to the User Data Services (UDS) for contact searches in Cisco Unified Communications Manager
636	LDAPS	Connects to the secure LDAP server for contact searches

## Recommended Procedure

This checklist describes general steps to set up Cisco Jabber for iPad using Cisco Unified Communications Manager. The actual procedure for your organization may vary.

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## Setting Up System SIP Parameters

### Procedure

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- Step 1** Sign in to Cisco Unified CM Administration.
  - Step 2** Select **System > Service Parameter**.
  - Step 3** Set the SIP Trying Timer to 1000ms.
  - Step 4** Set the SIP Dual Mode Alert Timer to 4500ms.
  - Step 5** Select **Save**.
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# Installing Cisco Options Package (COP) File for Devices

Install a device-specific Cisco Options Package (COP) file on all Cisco Unified Communications Manager servers to make Cisco Jabber for iPad available as a device.

General information about installing COP files is available in the Software Upgrades chapter of the *Cisco Unified Communications Operating System Administration Guide* for your release at [http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html).



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**Important** Perform this procedure at a time of low usage because it may interrupt service.

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## Procedure

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- Step 1** Download the device COP file for iPad at <http://www.cisco.com/cisco/software/navigator.html?mdfid=280443139&flowid=29241>.
- Step 2** Place the COP file on an FTP or SFTP server that is accessible from your Unified CM servers.
- Step 3** Install the COP file on the Publisher server in your Unified CM cluster by following these steps:
- Select **Cisco Unified OS Administration** in the Navigation drop-down list and then select **Go**.
  - Select **Software Upgrades > Install/Upgrade**.
  - Specify the location of the COP file and provide the required information.  
For more information, see the online help.
  - Select **Next**.
  - Select the device COP file.
  - Select **Next**.
  - Follow the instructions on the screen.
  - Select **Next**.  
Wait for the process to be completed. This process may take some time.
  - Reboot Unified CM at a time of low usage.
  - Restart the Cisco Tomcat service on the Unified CM server.  
This step, which clears the Tomcat image cache, is required for the device icon to display properly on the device list page in Unified CM.
  - Enter this command from the CLI:  

```
utils service restart Cisco Tomcat
```
  - Let the system fully return to service.
- Important** To avoid interruptions in service, ensure that each server has returned to active service before you perform this procedure on another server.
- Step 4** Install the COP file on each Subscriber server in the cluster. Use the same process you use for the Publisher, including rebooting the server.
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## Setting Up a Dedicated SIP Profile

Set up a dedicated SIP profile that allows Cisco Jabber for iPad to stay connected to Cisco Unified Communications Manager if the application is running in the background.

### Procedure

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- Step 1** Sign in to Cisco Unified CM Administration.
- Step 2** Select **Device > Device Settings > SIP Profile**.
- Step 3** Create a SIP profile or copy an existing SIP profile.  
You can name the profile "Standard iPad SIP Profile."
- Step 4** In the Parameters Used in Phone section, enter these values:
- Timer Register Delta (seconds)—60
  - Timer Register Expires (seconds)—660
  - Timer Keep Alive Expires (seconds)—660
  - Timer Subscribe Expires (seconds)—660
- Step 5** Select **Save**.
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### What to Do Next

Select this SIP profile for all user devices running Cisco Jabber for iPad.

## Setting Up Application Dial Rules for Cisco Jabber for iPad

See the related chapters in the *Cisco Unified Communications Manager Administration Guide* for information about Application Dial Rule setup. The guide specific to your release of Cisco Unified Communications Manager can be found here:

[http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html)

## System-level Prerequisites for Midcall Features

Ensure that you set up your Cisco Unified Communications Manager system for these midcall features:

- Hold and Resume
- Conference and Merge
- Transfer
- To Mobile

**Note**

For details about setting up these features, see the *Cisco Unified Communications Manager Features and Services Guide* for your release at [http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html).

## Usage and Error Tracking

Cisco Jabber for iPad relies on a third-party service, Google Analytics, to collect and generate aggregated usage and error-tracking data that Cisco uses to discover defects and improve product performance. In compliance with the Google Analytics privacy statement, Cisco does not store personally identifying information.

All information collected is stored by Google and is confidential. Only Cisco has access to this information.

You can enable or disable usage and error tracking for each user when you set up each user device in Cisco Unified Communications Manager.

Depending on the setting, Cisco collects the following information:

Usage and Error Tracking Setting	Information Collected
Enabled	<ul style="list-style-type: none"> <li>• Errors and warnings</li> <li>• Screen views in the application (for example, how often users view their lists of voice messages)</li> <li>• Feature activities (for example, how often users add a contact)</li> <li>• The TFTP server address to which the application connects</li> <li>• Approximate geographic location, based on mobile service provider activity</li> </ul>
Detailed	Same information collected when Enabled is selected
Disabled	None

For more information about the reporting tool, see

- <http://www.google.com/analytics/>
- <http://www.google.com/policies/privacy/>

## Adding a User Device

Add a user device to your Cisco Unified Communications Manager server and verify the setup.

## Before You Begin

Perform these tasks:

- [Installing Cisco Options Package \(COP\) File for Devices](#), on page 5
- [Setting Up a Dedicated SIP Profile](#), on page 6
- Verify that the Device Pool that you will assign to the iPad device is associated with a region that includes support for all supported audio codecs. The audio codecs that Cisco Jabber for iPad supports include G.711 mu-law or A-law and G.722.1.

## Procedure

**Step 1** Sign in to Unified CM Administration.

**Step 2** Select **Device > Phone**.

**Step 3** Select **Add New**.

**Step 4** Select **Cisco Jabber for Tablet** in the drop-down list and then select **Next**.

**Step 5** Enter the information described in this table:

Parameter	Description
Device Information	
Device Name	A device name <ul style="list-style-type: none"> <li>• represents only one device. If a user has Jabber for iPad on multiple devices, set up each device with a different device name.</li> <li>• must start with TAB, followed by up to 15 uppercased or numeric characters. Example: TABJOHND.</li> <li>• can contain dot (.), dash (-), or underscore (_).</li> </ul>
Phone Button Template	Select <b>Standard Jabber for iPad</b> .
Protocol Specific Information	
Device Security Profile	Select <b>Cisco Jabber for iPad – Standard SIP Non-Secure Profile</b> .
SIP Profile	Select the SIP profile you created. For details, see <a href="#">Setting Up a Dedicated SIP Profile</a> , on page 6.
Product Specific Configuration Layout	
Enable LDAP User Authentication	If you select <b>Enabled</b> , be sure to instruct the users to also turn on <b>LDAP User Authentication</b> in the application.
LDAP Username	Specify needed LDAP settings so that they are automatically entered in the application.
LDAP Password	
LDAP Server	
LDAP Search Base	



Parameter	Description
LDAP Field Mappings	<b>Note</b> Customization of this field is not currently supported.
Enable LDAP SSL	If you select <b>Enabled</b> , be sure to instruct the users to also turn on <b>Use SSL</b> in the application.
Voicemail Username	Specify voicemail settings so that they are automatically entered in the application. For details, see <a href="#">Setting Up Visual Voicemail</a> , on page 10.
Voicemail Server	
Voicemail Message Store Username	
Voicemail Message Store	
Cisco Usage and Error Tracking	Select the level of usage information that is available to Cisco. For more information, see <a href="#">Usage and Error Tracking</a> , on page 7.
Video Capabilities	Select <b>Enabled</b> if you want to turn on video for the users.
On-Demand VPN URL	The URL used by the Connect on Demand VPN feature.
Preset Wi-Fi Networks	Preset Wi-Fi network information for the device.

**Note** You will specify other settings when you set up other features.

**Step 6** Select **Save**.

**Step 7** Select **Apply Config**.

**Step 8** Select **[Line n] - Add a new DN**.

**Step 9** Enter the directory number of this device.

**Step 10** If this device is a standalone device (not sharing a DN with a desk phone), specify these settings to forward calls when the application is not running and connected to the network so callers do not receive an error message:

- **Forward Unregistered Internal**
- **Forward Unregistered External**

For more information about these settings, see the online help in Cisco Unified Communications Manager.

**Step 11** Set the **No Answer Ring Duration** to 24 seconds to allow time for the application to ring before calls go to voicemail.

See general restrictions in the online help in Cisco Unified Communications Manager.

**Step 12** Specify other settings as appropriate for your environment.

**Step 13** Select **Save**.

**Step 14** Associate the device that you just created with the user by following these steps:

- a) Select **User Management > End User**.
- b) Search for and select the user.
- c) In the Device Information section, select **Device Association**.
- d) Check the device that you want to associate with the user.

e) Select **Save Selected/Changes**.

**Step 15** If this user has a desk phone, select the desk phone as the Primary User Device.

**Step 16** If the device is a standalone device that runs without an associated desk phone, you may need to enter other information that is standard for all devices in your system.

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### What to Do Next

Verify your setup by performing these tasks:

- Ensure that the iPad device is connected to the corporate Wi-Fi network. Verify that you can access a web page on your corporate intranet using the browser on the device.
- Start Jabber for iPad and enter the username (or email address), password, and TFTP server address for the device you just added.
- Test basic voice features in Cisco Jabber for iPad, such as making, holding, and transferring calls.

## Bulk Configuration

Use the information in this document to set up individual users and devices as the basis for completing a bulk administration template for setting up users and devices.

When you are ready for bulk processes, follow the instructions in the bulk administration guide for your release of Cisco Unified Communications Manager, available from [http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod\\_maintenance\\_guides\\_list.html](http://www.cisco.com/en/US/products/sw/voicesw/ps556/prod_maintenance_guides_list.html).

## Setting Up Visual Voicemail

### Before You Begin

Perform these tasks:

- Verify that VMRest secure message is enabled  
Select Allow Access to Secure Message Recordings to enable API access to secure messages. This is configured in the Cisco Unity Connection Messaging Interface (CUMI). Select **System Settings > Advanced > API Settings** in Cisco Unity Connection Administration.
- Consult your voicemail administrator if you have questions about any of the settings in this section.

### Procedure

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**Step 1** Sign in to Cisco Unified CM Administration.

**Step 2** Go to the device page for the user.

**Step 3** In the Product Specific Configuration Layout section, enter these voicemail settings:

Setting	Description
Voicemail Username	Enter the unique username for voicemail access for this user.
Voicemail Server (include the port)	For the voicemail server, enter the hostname or IP address. Use the format <code>Servename.YourCompany.com:portnumber</code> .
Voicemail Message Store Username	Enter the username for the voicemail message store.
Voicemail Message Store	For the voicemail message store, enter the hostname or IP address. This may be the same as the voicemail server. Use the format <code>YourVoiceMessageStoreServer.yourcompany.com:portnumber</code> .

#### Step 4 Select Save.

#### What to Do Next

Test your voicemail by performing these tasks:

- 1 Delete the existing voicemail account, if applicable, in Cisco Jabber for iPad and then restart the application.
- 2 Sign in using your Cisco Unified Communications Manager account.
- 3 When prompted for voicemail setup, enter or confirm the settings.
- 4 Tap **Save**, even if you make no changes.
- 5 Test the voicemail features.

## Setting Up Connect on Demand VPN

Cisco Jabber for iPad supports two ways to enable the Connect on Demand VPN feature.

If your Cisco Unified Presence and Cisco Unified Communications Manager servers are configured with a Fully Qualified Domain Name (FQDN), the Connect on Demand VPN feature is enabled or disabled using Cisco Jabber for iPad. If your Cisco Unified Presence and Cisco Unified Communications Manager servers are configured with an IP address, configure the On Demand VPN URL parameter to enable the Connect on Demand VPN feature.



#### Note

Cisco recommends that Cisco Unified Presence and Cisco Unified Communications Manager be deployed with a FQDN. Use of the Connect on Demand VPN feature requires no additional Cisco Unified Presence and Cisco Unified Communications Manager configuration when deployed with a FQDN.

#### Before You Begin

- Determine if your Cisco Unified Presence and Cisco Unified Communications Manager servers use a Fully Qualified Domain Name or IP address for network identification.

### Procedure

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- Step 1** Sign in to Cisco Unified CM Administration.
  - Step 2** Go to the device page for the user.
  - Step 3** Go to the **Product Specific Configuration Layout** section.
  - Step 4** Set the On Demand VPN URL to a that resolves to an appropriate server in the corporate network if it is not identified with a FQDN.
  - Step 5** Select **Save**.
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## Disabling Connect on Demand VPN in the Corporate Wireless Network

Perform the following steps to disable the Connect on Demand VPN feature in the corporate wireless network.

### Before You Begin

- Collect a list of corporate Wi-Fi SSIDs

### Procedure

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- Step 1** Sign in to Cisco Unified CM Administration.
  - Step 2** Go to the device page for the user.
  - Step 3** Go to the **Product Specific Configuration Layout** section.
  - Step 4** Set the Preset Wi-Fi Networks to up to three corporate Wi-Fi SSIDs separated by a slash (/).
  - Step 5** Select **Save**.
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## Preparing User Instructions

When you finish setting up Cisco Unified Communications Manager, send your users an email message that includes the following information:

- Directions to download and install the app, named **Cisco Jabber for iPad**, from the App Store
- The TFTP server address, the user's username or email address, and the optional CCMCIP server address
- Instructions to select **Select Account > Unified Communications Manager** after users start the application on their iPad devices
- Instructions for connecting the device to the corporate Wi-Fi network. This process is independent of Cisco Jabber for iPad.

- Instructions for setting up VPN (Virtual Private Network) access on the device, if you allow users to use Cisco Jabber for iPad through VPN connections. This process is independent of Cisco Jabber for iPad.
- Instruct whether the users need to turn on **Use SSL and LDAP User Authentication** from the application  
Ensure that you have specified all the needed LDAP settings in the Product Specific Configuration Layout section for the user device in Cisco Unified CM Administration so that the settings are automatically entered in the application. For details, see [Adding a User Device, on page 7](#).
- Directions to access the FAQs, which users can view by selecting **Settings icon > Help > FAQs**
- Anything else you want to communicate with your users

