

Jabber for Android Configuration Example

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Introduction

Cisco Jabber for Android provides users with Enterprise VoIP calling and access to the corporate directory while users are connected to the corporate network. You can place and receive VoIP calls from your corporate phone number through Cisco Unified Communications Manager (CUCM) using your mobile device, while Cisco Jabber for Android runs in the background and is connected to the corporate network.

Jabber for Android automatically registers to CUCM when available. This document describes how to configure Cisco Dual Mode for Android.

Prerequisites

Requirements

Make sure that you meet these requirements before you attempt this configuration:

- CUCM 8.6 is supported with Cisco Jabber for Android 8.6.1 and later.
- Voicemail (optional): Cisco Unity Connection versions 7.1, 8.0, 8.5, and 8.6.1.
- Lightweight Directory Access Protocol (LDAP) integration (optional):– Microsoft Active Directory 2003 and 2008, or Open LDAP. Required only to support corporate directory search.
- You can run Cisco Jabber for Android on these devices:
 - ◆ Samsung Galaxy S International (GT-I9000) with Android operating system (OS) Version 2.2.1 or 2.3
 - ◆ Samsung Galaxy Tab International (GT-P1000) with Android 2.2.1 or 2.3
 - ◆ Samsung Galaxy S II (AT&T) with Android 2.3

Note: In order to use Cisco Jabber for Android on the Samsung Galaxy S device, it is important that you upgrade your handset OS to Android Version 2.2.1 or 2.3. See the manufacturer/carrier site for more information about how to update the OS on your device. Minor voice quality issues may be experienced

depending on the device used.

Components Used

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

- CUCM 8.6
- Samsung Galaxy Tab
- Best Access Points with same Service Set Identifier (SSID). When using Jabber over Wi-Fi in order to obtain the best possible experience, the Wi-Fi networks should be designed to minimize occurrences of layer 3 roams when the IP addresses change, resulting in long latency or roam times, dropped calls, or dropped voice packets.

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.

Main Task

High-level Steps

In this section, you are presented with the information needed to configure the features described in this document:

1. Download the Device Cisco Options Package (COP) file into the CUCM.
2. Install COP file for devices.
3. Increase SIP Dual Mode Alert Timer value.
4. Create dedicated SIP Profile.
5. Confirm system-level prerequisites.
6. Add user device.
7. Download the Cisco Jabber application for your device.

Download the Device COP file

The COP file is required in order to make Application Dial Rules available to Jabber. Complete these steps in order to get the Device COP file:

1. Go to the software download site.
2. Locate and download **cmterm-android_8.6.2v17.cop.sgn**.

Install COP file for devices

In order to make Jabber available as a device in CUCM, you must install a device-specific COP file on all your CUCM servers.

Complete these steps:

1. Place the COP file on an FTP or SFTP server that is accessible from your CUCM servers.

2. From the Navigation list box in the top–right corner of the CUCM Administration portal, choose **Cisco Unified OS Administration**, and select **Go**.
3. Select **Software Upgrades > Install/Upgrade**.
4. Specify the location of the COP file in the Software **Installation/Upgrade** window, and provide the required information.
5. Click **Next**.
6. Choose the device COP file from the Available Software list box.
7. Click **Next**.
8. Click **Install**.
9. Wait for the process to complete. This process may take some time.
10. Reboot all CUCM servers at a time of low usage.
11. Restart the Cisco Tomcat service on the CUCM server.

- ◆ This step is required for the device icon to display properly on the device list page in CUCM. This step clears the Tomcat image cache:

Issue this command from the CLI:

```
utils service restart Cisco Tomcat
```

12. Allow the system to fully return to service.

Note: Install the COP file on each Subscriber server in the cluster. Use the same process you used for the Publisher, including rebooting the server.

Increase SIP Dual Mode Alert Timer value

Increase the SIP Dual Mode Alert Timer in order to ensure that calls to the Jabber extension are not prematurely routed to the mobile–network phone number. Jabber must be running in order to receive VoIP calls.

Complete these steps:

1. Sign in to CUCM Administration.
2. Go to **System > Service Parameters**.
3. Choose the server.
4. Select the **Cisco CallManager (Active)** service.
5. Scroll to the **Clusterwide Parameters (System – Mobility)** section.
6. Increase the SIP Dual Mode Alert Timer to **4500** milliseconds.
7. Click **Save**.

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

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

Service Parameter Configuration

Save Set to Default Advanced

Default **Save** Presence Group Subscription * Disallow Subscription ▾
 BLF Status Depicts DND * False ▾

Clusterwide Parameters (System - Mobility)

Enterprise Feature Access Code for Hold *	*81
Enterprise Feature Access Code for Exclusive Hold *	*82
Enterprise Feature Access Code for Resume *	*83
Enterprise Feature Access Code for Transfer *	*84
Enterprise Feature Access Code for Conference *	*85
Enterprise Feature Access Code for Session Handoff *	*74
Smart Mobile Phone Interdigit Timer *	500
Non-Smart Mobile Phone Interdigit Timer *	2000
Send Call to Mobile Menu Timer *	60
SIP Dual Mode Alert Timer *	4500
Call Screening Timer *	4000
Session Resumption Await Timer *	180
Inbound Calling Search Space for Remote Destination *	Trunk or Gateway Inbound Calling Search Space ▾
Enable Enterprise Feature Access *	False ▾
Dial-via-Office Forward Service Access Number	

Note: If after you increase the SIP Dual Mode Alert Timer, incoming calls still arrive in Jabber and are terminated and diverted using Mobile Connect, you can increase the SIP Dual Mode Alert Timer value. The 4500 millisecond value is the lowest recommended value.

Create dedicated SIP Profile

Create a dedicated SIP Profile that allows Jabber to stay connected to CUCM while Jabber is running in the background.

Complete these steps:

1. In CUCM, go to **Device > Device Settings > SIP Profile**.
2. Create a new SIP profile, or copy an existing SIP profile. Enter the Name and Description as shown here:

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SIP Profile Configuration

Save Delete Copy Reset Apply Config Add New

Status

- Info Add successful
- Info All SIP devices using this profile must be restarted before any changes will take affect.

SIP Profile Information

Name* Cisco Jabber SIP Profile

Description Cisco Jabber SIP Profile

Default MTP Telephony Event Payload Type* 101

Resource Priority Namespace List < None >

Early Offer for G.Clear Calls* Disabled

Redirect by Application

Disable Early Media on 180

Outgoing T.38 INVITE include audio mline

Enable ANAT

Require SDP Inactive Exchange for Mid-Call Media Change

3. Scroll down, and set these values in the new SIP profile:

- ◆ Timer Register Delta to **30**
- ◆ Timer Register Expires to **660**
- ◆ Timer Keep Alive Expires to **660**
- ◆ Timer Subscribe Expires to **660**
- ◆ Timer Subscribe Delta to **15**

Save Delete Copy Reset Apply Config Add New

Parameters used in Phone

Timer Invite Expires (seconds)*	180
Timer Register Delta (seconds)*	30
Timer Register Expires (seconds)*	660
Timer T1 (msec)*	500
Timer T2 (msec)*	4000
Retry INVITE*	6
Retry Non-INVITE*	10
Start Media Port*	16384
Stop Media Port*	32766
Call Pickup URI*	x-cisco-serviceuri-pickup
Call Pickup Group Other URI*	x-cisco-serviceuri-opickup
Call Pickup Group URI*	x-cisco-serviceuri-gpickup
Meet Me Service URI*	x-cisco-serviceuri-meetme
User Info*	None
DTMF DB Level*	Nominal
Call Hold Ring Back*	Off
Anonymous Call Block*	Off
Caller ID Blocking*	Off
Do Not Disturb Control*	User
Telnet Level for 7940 and 7960*	Disabled
Timer Keep Alive Expires (seconds)*	660
Timer Subscribe Expires (seconds)*	660
Timer Subscribe Delta (seconds)*	15
Maximum Redirections*	70

4. Save the changes.

Confirm system-level prerequisites

Make sure your system meets these prerequisites:

- Standard SIP and phone features such as these are set up and working independently of Jabber:
 - ◆ Music on hold
 - ◆ Music for network hold
- Midcall features, including:
 - ◆ Hold/resume
 - ◆ Call waiting
 - ◆ Add a call
 - ◆ Conference call
 - ◆ Transfer
 - ◆ The ability to handle RFC 2833, Key Press Markup Language (KPML), and dual-tone multifrequency (DTMF) tones for IVR call routing allowing users to use the keypad in order to route to the correct extension or department.

- Conferencing calls using software-based conference bridges requires G.711 for all participating endpoints. Hardware-based conference bridges that use digital signal processing (DSP) on a Cisco router allow for G.729 conference participants without the use of a transcoder.

Add user device

Verify that the Device Pool that you will assign to the Jabber device is associated with a region that includes support for the G.711 codec.

Complete these steps:

1. Sign in to **Cisco Unified Communications Manager Administration**.
2. Go to **Device > Phone**.
3. Click **Add New**.
4. From the Phone Type drop-down list, choose **Cisco Dual Mode for Android**.

The screenshot shows the Cisco Unified CM Administration interface. At the top, there's a navigation menu with 'System', 'Call Routing', 'Media Resources', 'Advanced Features', 'Device', and 'App'. Below this is a 'Add a New Phone' section with a green arrow and 'Next' button. The main content area has a 'Status' section with an information icon and 'Status: Ready'. Below that is a section titled 'Select the type of phone you would like to create' with a 'Phone Type*' dropdown menu. The dropdown menu is open, showing a list of phone models, with 'Cisco Dual Mode for Android' selected. To the left of the dropdown is a 'Next' button. Below the dropdown are two information icons: one with an asterisk indicating a note, and another with two asterisks indicating a note about creating a device.

5. Click **Next**.
6. Enter settings for **Device-Specific Information**:

- ◆ Enter the **Device Name**. The Device Name:
 - ◇ Must start with BOT.
 - ◇ Must be uppercase.
 - ◇ Can contain up to 15 characters.
 - ◇ Can include only these characters: A to Z, 0 to 9, dash (-), or underscore (_).
- ◆ Choose **Standard Dual Mode for Android** for the Phone Button Template.
- ◆ Configure these settings in order to prevent confusion for the person the user calls:
 - ◇ Media Resource Group List
 - ◇ User Hold MOH Audio Source
 - ◇ Network Hold MOH Audio Source

- ◆ Choose the desk phone as the **Primary Phone** if the user has a desk phone.

Cisco Unified CM Administration
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System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾

Phone Configuration

Save

Device Information

Device is not trusted

Device Name*	BOTJOHNDOE
Description	John Doe's Android Phone
Device Pool*	Sub-Pub
Common Device Configuration	< None >
Phone Button Template*	Standard Dual Mode for Android
Softkey Template	Standard User
Common Phone Profile*	Standard Common Phone Profile
Calling Search Space	CSS_Phone_Cluster1
Media Resource Group List	Cluster MRGL
User Hold MOH Audio Source	1-SampleAudioSource
Network Hold MOH Audio Source	1-SampleAudioSource
Location*	Hub_None
User Locale	< None >
Network Locale	< None >
Device Mobility Mode*	On Settings
Owner User ID	johndoe
Mobility User ID	johndoe
Primary Phone	SEP64A0E71502CC
Use Trusted Relay Point*	Default
Always Use Prime Line*	Default
Always Use Prime Line for Voice Message*	Default
Calling Party Transformation CSS	< None >
Geolocation	< None >
<input type="checkbox"/> Enable Cisco Unified Mobile Communicator <input checked="" type="checkbox"/> Use Device Pool Calling Party Transformation CSS <input type="checkbox"/> Ignore Presentation Indicators (internal calls only) <input checked="" type="checkbox"/> Logged Into Hunt Group <input type="checkbox"/> Remote Device	

7. Enter the settings for **Protocol Specific Information** as described here:

- In the Device Security Profile drop-down list, choose **Cisco Dual Mode for Android – Standard SIP Non-Secure Profile**.

- b. In the SIP Profile drop-down list, change the SIP profile to the profile you just created in the Create dedicated SIP profile section.


The screenshot shows the Cisco Unified CM Administration web interface. At the top, there is a navigation menu with items: System, Call Routing, Media Resources, Advanced Features, Device, and Application. Below the navigation is a header for "Phone Configuration" with a "Save" button. The main content area is titled "Protocol Specific Information" and contains several configuration fields:

Presence Group*	Standard Presence group
MTP Preferred Originating Codec*	711ulaw
Device Security Profile*	Cisco Dual Mode for Android - Standard SIP Non-S
Rerouting Calling Search Space	< None >
SUBSCRIBE Calling Search Space	< None >
SIP Profile*	Cisco Jabber SIP Profile
Digest User	< None >

Below the table are three checkboxes:


- Media Termination Point Required
- Unattended Port
- Require DTMF Reception

- Note:** Select this SIP Profile for all Cisco Dual-Mode for Android devices that are running Jabber.
8. Enter settings for the **Product Specific Configuration Layout** section as described here:
- Select the appropriate level of usage tracking in the Cisco Usage and Error Tracking drop-down list.
 - Leave the Application Dial Rules URL field blank.
 - If your directory server requires authentication, enter the LDAP username and password. Otherwise, leave these fields blank.
 - Enter any designated emergency numbers in the Emergency Numbers field.
 - Enter your domain in the Domain Name field if the CUCM setting in **System > Server** is a hostname that does not include the domain name.
 - Enter a list of up to three SSIDs separated by forward slashes (/) in the Preset Wi-Fi Networks field.

 **Cisco Unified CM Administration**
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System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Manag

Phone Configuration

 Save

Product Specific Configuration Layout

Cisco Usage and Error Tracking	Enabled ▾
Directory Lookup Rules URL	<input type="text"/>
Application Dial Rules URL	<input type="text"/>
Transfer to Mobile Network	Use Mobility Softkey (user receives call) ▾
Enable LDAP User Authentication	Disabled ▾
LDAP Username	<input type="text"/>
LDAP Password	<input type="text"/>
LDAP Server	<input type="text"/>
Enable LDAP SSL	Disabled ▾
LDAP Search Base	<input type="text"/>
LDAP Field Mappings	<input type="text"/>
LDAP Photo Location	<input type="text"/>
Emergency Numbers	<input type="text"/>
Domain Name	<input type="text"/>
Preset Wi-fi Networks	<input type="text"/>
Enable Secure Connect	Enabled ▾
Secure Connect Gateway Address	<input type="text"/>
Secure Connect Certificate Enrollment Group	<input type="text"/>
Secure Connect Authentication Group	<input type="text"/>
Secure Connect Username	<input type="text"/>
Reserved	<input type="text"/>

9. Click **Save**.
10. Click **Apply Config**.
11. Click **[Line n] – Add a new DN**.
12. Enter the Directory Number (DN) of this device.

Note: This can be a new DN. A desk phone with the same DN is not required.

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Directory Number Configuration

Save **X** Delete **R** Reset **A** Apply Config **+** Add New

Status
i Status: Ready

Directory Number Information

Directory Number* 44020
Route Partition PT_W_Phone ▾
Description John Doe
Alerting Name John Doe
ASCII Alerting Name John Doe

Allow Control of Device from CTI

Associated Devices
SEP64A0E71502CC
BOTJOHNDOE

Edit Device
Edit Line Appearance

▼ ▲

Dissociate Devices

Directory Number Settings

Voice Mail Profile CLSTR1_VM_Profile ▾ (Choose <None> to use system default)
Calling Search Space CSS_Phone_Cluster1 ▾
Presence Group* Standard Presence group ▾
User Hold MOH Audio Source < None > ▾
Network Hold MOH Audio Source < None > ▾

13. If this device is a standalone device (not sharing a DN with a desk phone), configure these settings in order to forward calls when Jabber is not running and connected to the network, so callers do not receive an error message:

- ◆ Forward Unregistered Internal
- ◆ Forward Unregistered External

System ▾ Call Routing ▾ Media Resources ▾ Voice Mail ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

Directory Number Configuration

Save **X** Delete **R** Reset **A** Apply Config **+** Add New

Related Links: [Configure Device \(BOTJOHN\)](#)

Forward No Coverage Internal or < None > ▾
Forward No Coverage External or < None > ▾
Forward on CTI Failure or < None > ▾
Forward Unregistered Internal or < None > ▾
Forward Unregistered External or < None > ▾

No Answer Ring Duration (seconds) 24
Call Pickup Group < None > ▾

14. Set the No Answer Ring Duration to 24 seconds in order to allow time for Jabber to ring before calls go to voicemail.

15. Click **Save**.

16. Navigate to the End User page for the user.

17. Associate the Cisco Dual Mode for Android device that you just created for this user.

18. If this user has a desk phone, select the desk phone as the Primary User Device.
19. 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.

Download Cisco Jabber Application for Mobile

Use the Android Market application on your device in order to obtain the Jabber for Android application. Search for Jabber on the Google Android Market.

Related Information

- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Troubleshooting Cisco IP Telephony](#)
- [Technical Support & Documentation – Cisco Systems](#)

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