Vocera Connect for Cisco Deployment Guide

Version 4.4.4

vocera

Vocera Communications, Inc.
www.vocera.com
tel :: +1 408 882 5100
fax :: +1 408 882 5101
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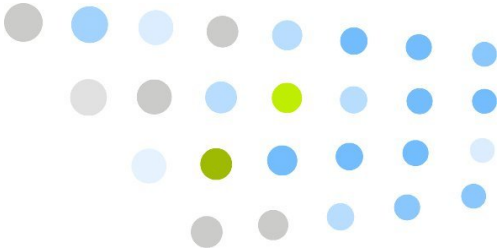
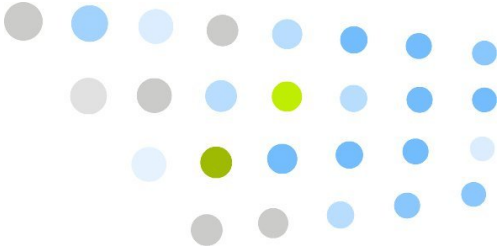


Contents



Introduction

If your organization has deployed Cisco Unified Communications Manager (CUCM), the Vocera Server provides built-in services that allow you to use Vocera features on the Cisco Unified Wireless IP Phone 7921G, 7925G, and 7926G, hereafter referred to as Cisco wireless IP phones.

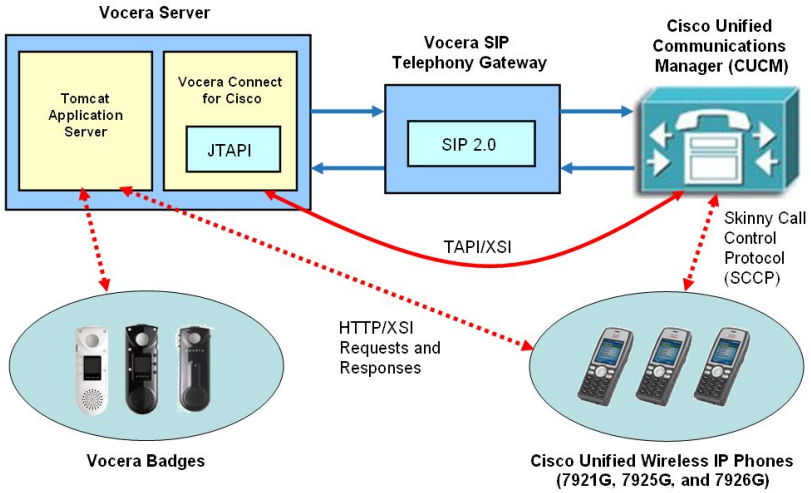
A Cisco wireless IP phone provides voice communication over the WLAN, allowing you to place and receive Vocera calls, put calls on hold, transfer calls, send and receive broadcasts, take part in a three-way conference call, receive text messages, and so on.

Architecture

Vocera Connect for Cisco, a component of the Vocera Server, provides Vocera services to CUCM via Cisco JTAPI, a Java telephony interface that exposes full call control of Cisco Unified Wireless IP Phones.

Cisco wireless IP phones are configured on the CUCM and are connected to the CUCM through Wi-Fi. The Cisco phones can be configured to use a different VLAN than Vocera badges. The Vocera Server uses JTAPI to find which phones are connected to the CUCM.

Figure 1. Vocera Connect for Cisco architecture



Unlike Vocera badges, Cisco wireless IP phones do not ping the Vocera Server, and they therefore cannot provide location information to the Vocera system.

When you configure Cisco wireless IP phones in CUCM Console, you must add two additional directory number lines to each phone for Vocera use.

- The first Vocera line is used for regular Vocera calls and has Auto Answer set to Off.
- The second Vocera line is used for Vocera broadcasts and urgent messages, and it is configured to Auto Answer with Speakerphone.

System Requirements

CUCM Requirements

Vocera Connect for Cisco requires the following version of CUCM:

- version 7.1 or later

Cisco Unified Wireless IP Phone Requirements

Vocera Connect for Cisco has been tested with the following Cisco Unified Wireless IP Phone models:

- Cisco Unified Wireless IP Phone 7921G
- Cisco Unified Wireless IP Phone 7925G
- Cisco Unified Wireless IP Phone 7926G

Important: Before using the Cisco Unified Wireless IP Phone models with CUCM, you must install the latest Cisco firmware on all CUCM servers in the cluster.

Vocera Telephony Requirements

Vocera Connect for Cisco requires Vocera SIP Telephony Gateway (VSTG) as the telephony gateway between Vocera Server and CUCM. Vocera Telephony Server (VTS) is NOT supported for Vocera Connect for Cisco.

Note: If your Vocera system already uses VSTG, you may need to purchase additional SIP lines to support Vocera Connect for Cisco. Each Vocera interaction with a Cisco phone will use a SIP line.

Vocera License Requirements

For Vocera Connect applications to connect to the Vocera Server to retrieve data, your Vocera Server license must include client application licenses for **Vocera Connect**. Every device that runs Vocera Connect consumes a license. To obtain additional licenses, contact your Vocera account manager.

Vocera system administrators can use the Administration Console to check the Vocera license.

To check if you have Vocera Connect client licenses:

1. Open Internet Explorer and log into the Vocera Administration Console.
2. Click **System** in the navigation bar to display the System screen.
3. Click the **License Info** tab.
4. Make sure the **Apps** field in the **Application Licenses** box lists Vocera Connect licenses.

   Each application license has a two-character ID. The application ID for Vocera Connect is "VB". The **Apps** field displays the number of each type of application license, and the **Currently Configured** field displays the number of application licenses that are currently assigned to users.

   For example, if you have 20 Vocera Connect licenses and 10 are currently being used, you should see "VB20" in the **Apps** field and "VB10" in the **Currently Configured** field.

To update your Vocera license key:

1. Log in to the Vocera Server computer with administrator privileges.
2. Choose **Start > Control Panel > System**.

The System Properties dialog box opens.

3. Click the **Advanced** tab.
4. Click **Environment Variables**.

   The Environment Variables dialog box opens.

5. In the System Variables box, select the VOCERA_LICENSE variable, and then click **Edit**.

   The Edit System Variable dialog box opens.

6. In the **Variable Value** field, enter your Vocera license key, and click **OK** to close the Edit System Variable dialog box.
7. Click **OK** to close the Environment Variables dialog box, and click **OK** again to close the System Properties dialog box.
8. Reboot the Vocera Server computer.

   Note: To verify your Vocera license information, log in to the Administration Console, click **System** in the navigation bar, and select the **License Info** tab.

To update the Vocera license key on a Vocera cluster:

1. On all standby nodes, follow the steps described above to update the license key.
2. After the standby nodes have rebooted AND completed a remote restore, force a failover to a standby node to make it become active.
3. On the remaining standby (formerly active) node, update the license key following the steps above.

WLAN Signal Strength

Make sure your wireless LAN has a minimum signal strength of **-65 dBm** in all areas where people use Vocera devices, including Cisco wireless IP phones.

Typical Call Flow

The Vocera Connect for Cisco application allows Cisco wireless IP phones to connect to the Vocera Server over the wireless LAN for calls, broadcasts, and text messages.

The following tables describes the technical details of what happens when someone uses Vocera Connect for Cisco to make a Vocera call and receive and respond to a VMI text message.

Table 1. Typical call flow for a Vocera call

Step	Data/ Voice	Description
1. A user presses the application button on a Cisco phone.	Data	The phone sends an HTTP request with the phone's MAC address to the Tomcat application server. Tomcat passes this request to the Vocera Server. The Vocera Server identifies the phone lines associated with that MAC address, and uses JTAPI to connect the phone to the Access Number specified on the Cisco tab of the Vocera Administration Console. The Vocera Server sets up the call on the Vocera SIP Telephony Gateway, using one SIP line for the duration of the call.
2. The user on the Cisco phone hears the Genie say "Vocera."	Voice	The Vocera Server plays the Genie prompt.
3. The user on the Cisco phone says, "Call Doctor Gupta."	Voice/ Data	The client sends an HTTP request to the Vocera Server to invite Doctor Gupta to join the call.
4. Doctor Gupta answers the call.	Voice	Both parties are now on the call.
5. The user finishes the call with Doctor Gupta and hangs up.	Voice	The call is ended. Vocera SIP Telephony Gateway tears down the call. The SIP line is freed up for another call.

The following table shows the typical call flow for a VMI text message. This call flow would be similar for a regular Vocera text message, except a regular Vocera text message does not provide a response.

Table 2. Typical call flow for a VMI text message

Step	Data/ Voice	Description
1. A telemetry system sends a VMI message to a Vocera group.	Data	Vocera Server receives the message and delivers it to a recipient group member, a user with a Cisco wireless IP phone.
2. A text message appears on the Cisco wireless IP phone.	Data	Vocera Server uses JTAPI to send XSI through CUCM to the phone, which updates the phone screen.
3. The user presses the Messages button to view the Message Inbox.	Data	The phone sends an HTTP request to Tomcat application server, and Tomcat sends XSI back, which updates the phone screen again.
4. The user selects a message response by pressing a softkey button.	Data	The phone sends an HTTP request to the Tomcat application server with the response, and the response is forwarded to the Vocera Server and then to the telemetry system.

Note: When the user receives a VMI message on a Cisco wireless IP phone, its status is not changed to "Read" until the user opens the message. If the VMI message is played aloud, its status is changed to "Read" after it is finished playing.

Vocera Features Not Supported on Cisco Phones

The following Vocera features are NOT supported on the Vocera Connect for Cisco client:

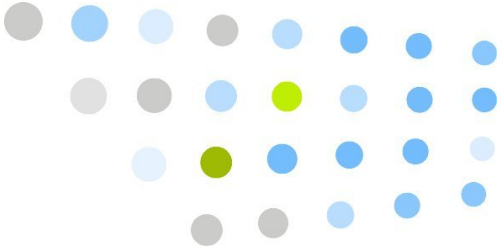
- **Do Not Disturb mode** – There is no DND button on Cisco wireless IP phones. Consequently, you cannot ignore an incoming call or put yourself in DND mode.

- **Button responses for urgent VMI messages** – There is no DND button on Cisco wireless IP phones. Consequently, you cannot use buttons to respond to urgent VMI messages, even if that feature has been enabled for your Vocera system.
- **Location-based commands** – Vocera voice commands that require your present location, such as "Where am I?" and "Locate nearest member of *Group Name*," are not supported on Cisco phones.
- **Push-to-talk** – The application button on Cisco wireless IP phones does not support press-and-hold to initiate push-to-talk calls (also called Instant Conferences) featured on Vocera badges. You also cannot receive push-to-talk calls.
- **Initiation of emergency (panic) broadcasts** – The application button on Cisco wireless IP phones does not support a double-click, which means you cannot use it to initiate an emergency broadcast.
- **Welcome Tutorial** – The Vocera Welcome Tutorial, which is available on Vocera badges, is not available on Cisco phones.
- **Vocera contacts** – Vocera Connect for Cisco does not provide a list of favorite Vocera contacts or the Vocera Directory.
- **Send text messages** – Cisco wireless IP phones do not allow you to send text messages. However, Vocera badges also do not allow you to send text messages.
- **Missing commands for text messages** – There are no soft keys for Save or Delete when a text message is selected.
- **Device Management** – Device Management is not supported for Cisco phones. Also, although the Badge Status Monitor displays a Cisco phone that is connected to the Vocera Server, it cannot show the phone's location because the phone does not ping the server.
- **Message reminder tones** – There are no message reminder tones on Cisco phones, unlike Vocera devices.
- **SSL** – Cisco wireless IP phones do not support SSL. If SSL is enabled on the Vocera Server, Cisco wireless IP phones will be unable to connect to the server unless additional configuration is performed on the Vocera Server computer and on the phones. For more information, see the Vocera 4.4 Release Notes.

Vocera Features that Work Differently on Cisco Phones

The following Vocera feature works differently on Cisco wireless IP phones:

- **Replying to a Broadcast** – The application button on Cisco wireless IP phones does not support press-and-hold. To reply to a broadcast, press any key from 1 through 9, wait for a chime, and then begin talking. To end your reply, press any key from 1 through 9 again.



Deploying Vocera Connect for Cisco

Configuration Checklist

Use the following configuration checklist to configure your network, CUCM, and Vocera system to support Vocera Connect.

Network Configuration Checklist

☐	1. Open ports needed for communication between the phones and the servers. See the "IP Port Usage" appendix in the *Vocera Infrastructure Planning Guide*.

Cisco Configuration Checklist

☐	1. Determine the Vocera line range you are going to use for Cisco wireless IP phones. See **Determining the Vocera Line Range** on page 14.
☐	2. Configure CUCM for Vocera Connect for Cisco. • Configure a trunk for VSTG (if one has not been configured before). See **Configuring a New Trunk for VSTG** on page 15. • Configure Cisco Unified Wireless IP Phones. See **Configuring Cisco Unified Wireless IP Phones** on page 21. • Create a Vocera application user in CUCM. See **Creating a Vocera Application User in CUCM** on page 25. • Configure Extension Mobility for end users who share their phones (optional). See **Configuring Extension Mobility (Optional)** on page 25.
☐	3. Configure WLAN Settings on Cisco Unified Wireless IP Phones. See **Configuring WLAN Settings on Cisco Unified Wireless IP Phones** on page 26.
☐	4. Test that calls can be placed to extensions and outside numbers from Cisco wireless IP phones.

Vocera Configuration Checklist

☐	1. Upload text message alert tones from the Vocera 4.4 Server Software DVD to the CUCM TFTP server. See **Uploading Text Message Alert Tones to the TFTP Server** on page 27.
☐	2. Install Vocera Server 4.4. See the *Vocera Installation Guide*.
☐	3. Install Vocera SIP Telephony Gateway 4.4. See the *Vocera Installation Guide*.
☐	4. Configure Vocera Server and Vocera SIP Telephony Gateway in the Vocera Administration Console. See **Configuring Vocera Server and Vocera SIP Telephony Gateway** on page 27.
☐	5. Use a Cisco wireless IP phone to call the Vocera Guest Access hunt number. **Note:** When you call the Vocera Guest Access hunt number, the Vocera Genie prompts you to say the full name of the person or group you want to reach, or to enter an extension. Try one of these methods to call someone.
☐	6. Log in and make a Vocera call from a Cisco wireless IP phone. See **Logging In and Making a Vocera Call** on page 32.

Determining the Vocera Line Range

Identify the Vocera line range you will use to configure the Cisco wireless IP phones. You need to assign two Vocera lines to each phone, and these lines must be exclusive to Vocera. Leave room for growth in case you later purchase additional phones.

You will use this line range to assign lines to phones. You will also later specify this line range on the **Telephony > Cisco** tab in the Vocera Administration Console.

Write down the Vocera line range here for reference:

First Line:_____
Last Line:_____

CUCM Configuration

To configure CUCM for Vocera Connect for Cisco, see the following topics:

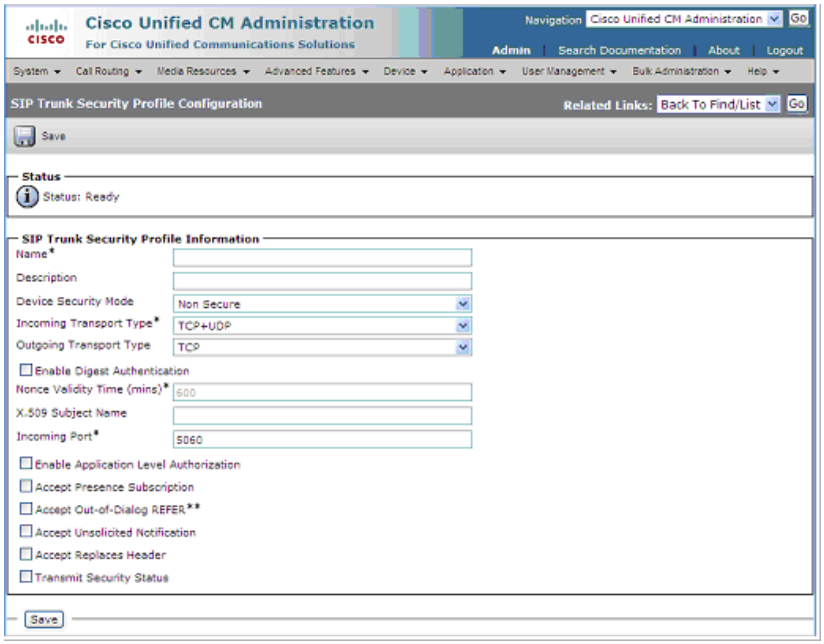
Configuring a New Trunk for VSTG

The VSTG needs a trunk to the CUCM for Vocera Connect to work on Cisco phones. If a trunk has already been configured for your VSTG, you can skip these steps.

To create a new trunk for VSTG in CUCM Console:

1. Create a SIP trunk security profile:
    a. Choose **System > Security > SIP Trunk Security Profile**.
    b. Click **Add New** to create a new SIP trunk security profile. The SIP Trunk Security Profile Configuration page appears.

Figure 2. SIP Trunk Security Profile Configuration page



c. In the **Name** field, enter a name (for example, "SIP_profile_to_VSTG").

d. Make sure the following checkboxes are all checked:

- Accept Presence Subscription
- Accept Out of Dialog REFER
- Accept Unsolicited Notification
- Accept Replaces Header
- Transmit Security Status

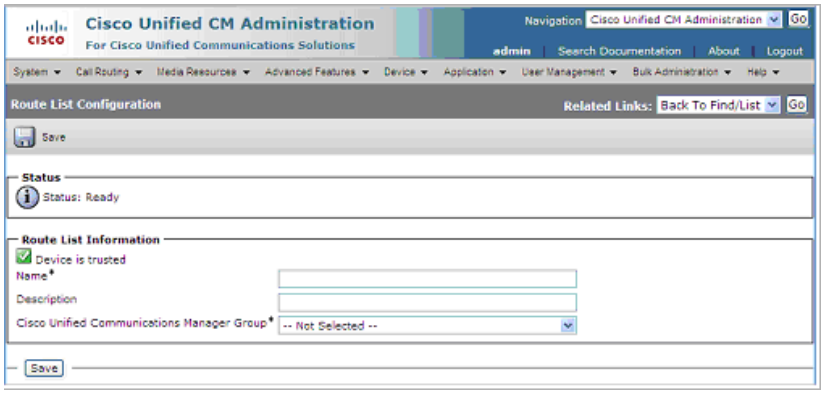
e. Click **Save**.

2. Create a route list:

a. Choose **Call Routing > Route/Hunt > Route List**.

b. Click **Add New** to create a new route list. The Route List Configuration page appears.

Figure 3. Route List Configuration page



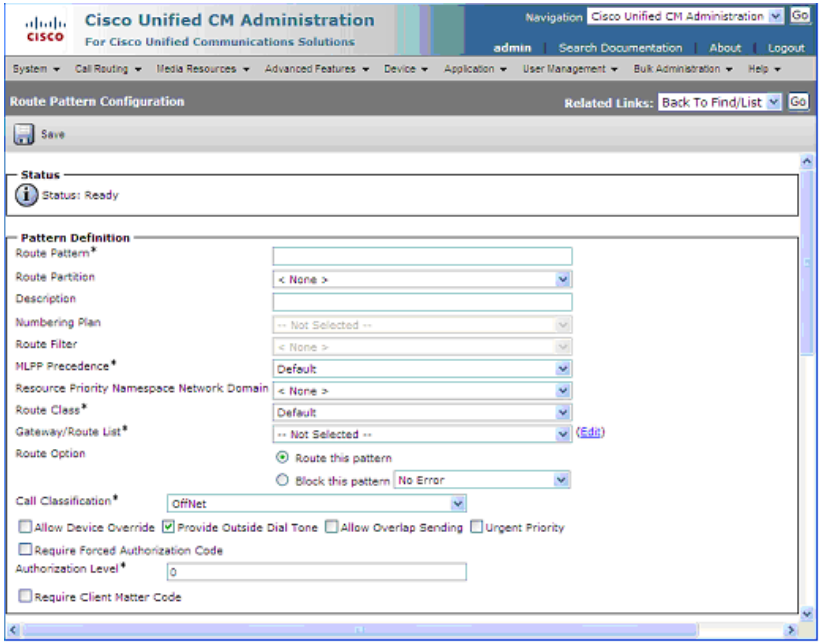
c. In the **Name** field, type any name.

d. In the **CUCM Group** field, select Default.

e. Click **Save**.

3. Create a routing pattern:
    a. Choose **Call Routing > Route/Hunt > Route Pattern**.
    b. Click **Add New** to create a new routing pattern. The Route Pattern Configuration page appears.

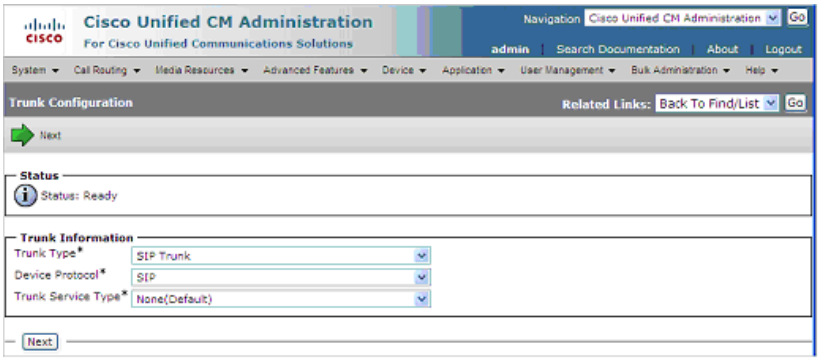
Figure 4. Route Pattern Configuration page



    c. In the **Route Pattern** field, enter the Calling Party Number used to configure VSTG on the **Telephony > Basic Info** page of the Vocera Administration Console.
    d. In the **Gateway/Route List** field, select the route list that you created in step 2 above.
    e. Make sure the **Require Forced Authorization Code** box is unchecked.
    f. Click **Save**.

4. Create a trunk configuration:
    a. Choose **Device > Trunk**.
    b. Click **Add New** to create a new trunk configuration. The Trunk Configuration page appears.

Figure 5. Trunk Configuration page



c. In the **Trunk Type** field, select SIP Trunk.

d. In the **Device Protocol** field, select SIP.

e. In the **Trunk Service Type** field, select None(Default).

f. Click **Next**.

g. In the **Device Name** field, enter a name.

h. In the **Device Pool** field, select Default.

i. In the **Inbound Calls** box, select the **Calling Search** space field, and select Default_CSS (or a value appropriate for your configuration).

j. In the **Connected Party Settings** box, select the **Connected Party Transformation CSS** field, and select Default_CSS (or a value appropriate for your configuration).

k. In the **SIP Information** box, select the **Destination Address** field, and enter the IP address of the Vocera SIP Telephony Gateway.

l. In the **Destination Port** field, enter 5060.

m. In the **SIP Trunk Security Profile** field, select the SIP trunk security profile you created earlier.

n. In the **SIP Profile** field, select Standard SIP Profile.

o. In the **DTMF Signaling Method** field, select RFC 2833.

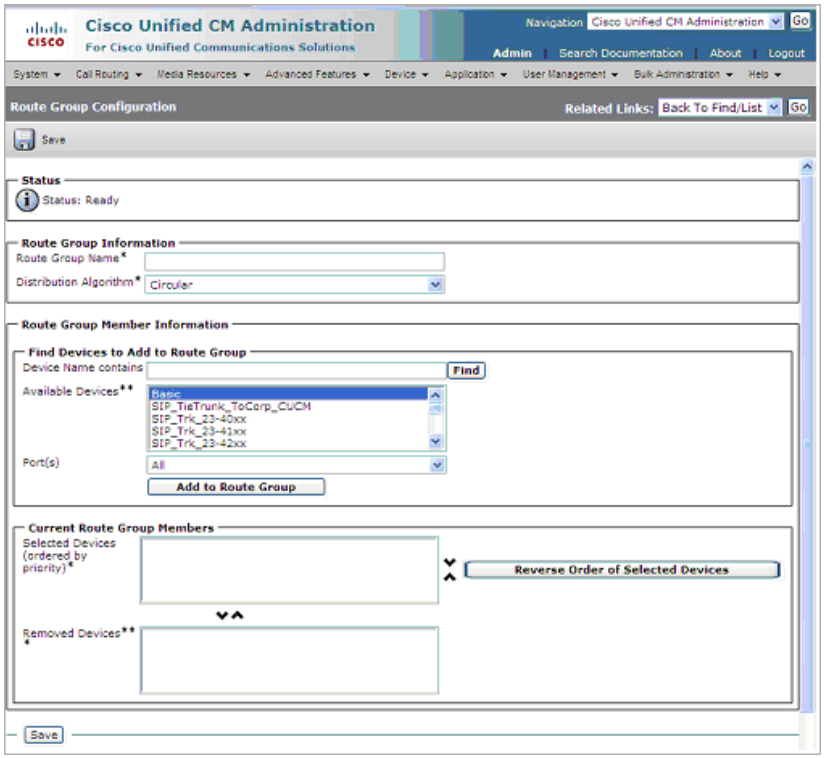
p. Click **Save**.

5. Create a route group:

a. Choose **Call Routing > Route/Hunt > Route Group**.

b. Click **Add New** to create a new route group configuration. The Route Group Configuration page appears.

Figure 6. Route Group Configuration page



c. In the **Route Group Name** field, enter a name.

d. In the **Available Devices** field, select the device name you entered earlier in the trunk configuration.

e. Click **Add to Route Group**.

f. Click **Save**.

6. Add the route group to the route list you created earlier:

a. Choose **Call Routing > Route/Hunt > Route List**.

b. Select the route list you created earlier. The Route List Configuration page appears.

c. Click **Add Route Group**. The Route List Detail Configuration page appears.

d. In the **Route Group** field, select the route group you created earlier.

e. Click **Save**, and then click **OK** to reset the route list.

f. Click **Apply Config**.

Configuring Cisco Unified Wireless IP Phones

Best Practice: In several places, these instructions ask you to enter the <Vocera_Server_IP_Address> as part of a URL. If you have a Vocera cluster, you can enter any one of the Vocera Server IP addresses. However, for ease of maintenance, consider entering a DNS name for the server instead of an IP address. This DNS name should include records with the different IP addresses of the Vocera Servers in the cluster. If the IP addresses change, you won't need to update the configuration of all the phones.

To configure existing phones in CUCM Console:

1. In the CUCM Console, choose **Device > Phone**.
2. Find a Cisco 7921, Cisco 7925, or Cisco 7926 phone based on its Device Type or Description.
3. Click the **Device Name** for the phone. The Phone Configuration page appears.
4. In the **Services Provisioning** field, select "Both".
5. Scroll down to the **External Data Locations** box.
6. In the **Messages** field, enter the following value:

   http://<Vocera_Server_IP_Address>/console/XSIService?formAction=getTextMessageList
7. In the **Idle** field, enter the following value:

   http://<Vocera_Server_IP_Address>/console/XSIService?formAction=idleURL
8. In the **Idle Timer** field, enter 10.
9. Scroll down to the **Product Specific Configuration Layout** box.
10. In the **Application URL** field, enter the following value:

    http://<Vocera_Server_IP_Address>/console/XSIService?name=#DEVICENAME#
11. In the **"Send" Key Action** field, select Onhook Dialing.
12. In the **Application Button Priority** field, select High.
13. Click **Save**.
14. Click **OK**.

15. If there is only one phone line, click **Line [2] - Add a new DN** to add another directory number. The Directory Number Configuration page appears.
16. In the **Directory Number** field, enter a dialable phone number.
17. In the **Route Partition** field, select Default (or a value appropriate for your configuration).
18. In the **Calling Search Space** field, select Default_CSS (or a value appropriate for your configuration).
19. In the **Auto Answer** field, select Auto Answer Off (the default).
20. Click **Save**.
21. Click **Apply Config** to make the changes take effect. Click **OK**.
22. Click **Back** several times until you return to the Phone Configuration page again.
23. Click **Line [3] - Add a new DN** to add another directory number. The Directory Number Configuration page appears.
24. In the **Directory Number** field, enter a dialable phone number.
25. In the **Route Partition** field, select Default (or a value appropriate for your configuration).
26. In the **Calling Search Space** field, select Default_CSS (or a value appropriate for your configuration).
27. In the **Auto Answer** field, select Auto Answer with Speakerphone.
28. Click **Save**.
29. Click **Apply Config** to make the changes take effect. Click **OK**.
30. Click **Reset**. The Device Reset page appears.
31. Click **Reset** to reset the phone.

To configure new phones in CUCM Console:

1. In the CUCM Console, choose **Device > Phone**.
2. Click **Add New**. The Add a New Phone page appears.
3. In the **Phone Type** field, select the type (for example, Cisco 7921, Cisco 7925, or Cisco 7926).
4. Click **Next**.
5. In the **MAC Address** field, enter the phone's MAC address.
6. In the **Device Pool** field, select Default.

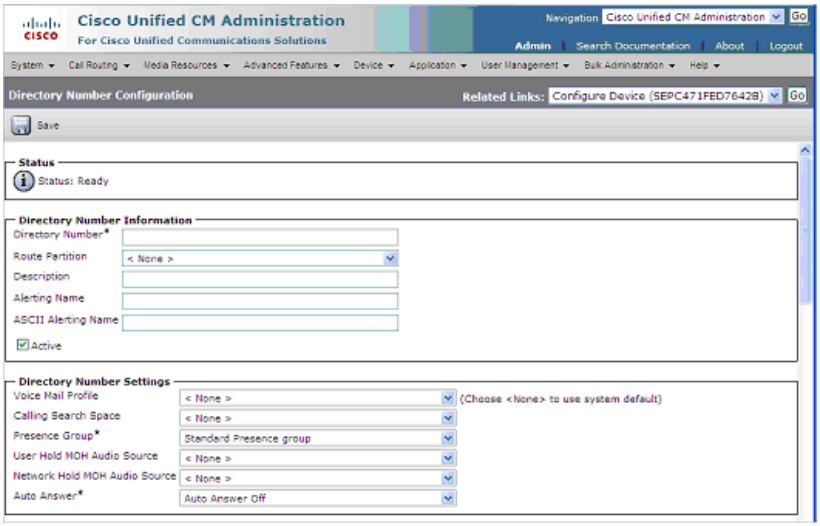
7. In the **Phone Button Template** field, select the appropriate template for your phone (Standard 7921 SCCP, Standard 7925 SCCP, or Standard 7926 SCCP).
8. In the **Services Provisioning** field, select "Both".
9. In the **Device Security Profile** field, select one of the following values based on your phone type:
   - Cisco 7921 – Standard SCCP Non-Secure Profile
   - Cisco 7925 – Standard SCCP Non-Secure Profile
   - Cisco 7926 – Standard SCCP Non-Secure Profile
10. Scroll down to the **External Data Locations** box.
11. In the **Messages** field, enter the following value:

    http://<Vocera_Server_IP_Address>/console/XSIService?formAction=getTextMessageList
12. In the **Idle** field, enter the following value:

    http://<Vocera_Server_IP_Address>/console/XSIService?formAction=idleURL
13. In the **Idle Timer** field, enter 10.
14. Scroll down to the **Product Specific Configuration Layout** box.
15. In the **Application URL** field, enter the following value:

    http://<Vocera_Server_IP_Address>/console/XSIService?name=#DEVICENAME#
16. In the **"Send" Key Action** field, select Onhook Dialing.
17. In the **Application Button Priority** field, select High.
18. Click **Save**.
19. Click **OK**.
20. If there is only one phone line, click **Line [2] - Add a new DN** to add another directory number. The Directory Number Configuration page appears.

Figure 7. Directory Number Configuration page



21. In the **Directory Number** field, enter a dialable phone number.
22. In the **Route Partition** field, select Default (or a value appropriate for your configuration).
23. In the **Calling Search Space** field, select Default_CSS (or a value appropriate for your configuration).
24. In the **Auto Answer** field, select Auto Answer Off (the default).
25. Click **Save**.
26. Click **Apply Config** to make the changes take effect. Click **OK**.
27. Click **Back** several times until you return to the Phone Configuration page again.
28. Click **Line [3] - Add a new DN** to add another directory number. The Directory Number Configuration page appears.
29. In the **Directory Number** field, enter a dialable phone number.
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31. In the **Calling Search Space** field, select Default_CSS (or a value appropriate for your configuration).
32. In the **Auto Answer** field, select Auto Answer with Speakerphone.
33. Click **Save**.
34. Click **Apply Config** to make the changes take effect. Click **OK**.

35. Click **Reset**. The Device Reset page appears.
36. Click **Reset** to reset the phone.

Using the CUCM Bulk Administration Tool to Update Phones

You can update many Cisco wireless IP phones at the same time using the CUCM Bulk Administration Tool (BAT). The BAT allows you to update phones quickly, especially if you need to change Vocera service URLs on many phones. For details on how to use BAT, see the *CUCM Bulk Administration Guide*, which is available in CUCM Console online help.

Creating a Vocera Application User in CUCM

A Vocera Connect application user allows JTAPI authentication with the Vocera Server, and it lists the phones that are controlled and monitored by Vocera.

To create an application user for Vocera Connect in CUCM Console:

1. In the CUCM Console, choose **User Management > Application User**.
2. In the **User ID** field, enter a unique application user ID.
3. In the **Password** and **Confirm Password** fields, enter the same application user password.
4. In the **Device Information** box, add the Cisco 7921, Cisco 7925, and Cisco 7926 phones that require Vocera access and need to be controlled by this application user.

   Important: DO NOT add other types of devices to the list. If you add unsupported devices to the Vocera application user, it could cause the Vocera Server to crash.
5. In the **Permissions Information** box, make sure all CTI permissions are assigned to the application user.
6. Click **Save**.

Configuring Extension Mobility (Optional)

If end users share their Cisco phones, you can use Cisco Extension Mobility to allow users to access their Cisco Unified Wireless IP Phone configuration from other Cisco wireless IP phones. When users log into a phone, the extension mobility profile (including line and speed-dial numbers) reconfigures the phone specifically for that user. When Extension Mobility is enabled, it will also automatically log users into Vocera when they are authenticated.

To associate an extension mobility profile to an end user, you must modify the End User Configuration window for that end user in the CUCM Console. For information about how to configure and associate Cisco Extension Mobility for end users, see the "Cisco Extension Mobility" chapter in the *Cisco Unified Communications Manager Features and Services Guide*, which is available in CUCM Console online help.

Important: If Extension Mobility is enabled, it must be enabled for ALL Vocera users. Otherwise, users without Extension Mobility enabled won't be able to log in.

Configuring WLAN Settings on Cisco Unified Wireless IP Phones

To allow a new phone to connect to the WLAN, you must configure the network profile for the phone. You can do this using the **Settings** menu on the phone or by using the Cisco Unified Wireless IP Phone Web pages. The following instructions describe how to use the **Settings** menu. For more complete information, see the *Cisco Unified Wireless IP Phone Administration Guide* for your Cisco phone model.

To configure a network profile for Cisco wireless IP phones:

1. On the phone, choose **Settings > Network Profiles**.
2. Select the profile name that you want to configure, and click **View**.

   Note: To unlock the network settings, press ****#**.
3. Press **1** to select **Profile Name**.
4. Enter a new profile name, and press **Options > Save**.
5. Press **2** to select **Network Configuration**.
6. Modify settings to allow the phone to connect to the WLAN.

   Important: In the **TFTP Server 1** field, enter the IP address of the CUCM.
7. Press **Save**.
8. Press **3** to select **WLAN Configuration**.
9. Make changes to the settings.
10. To save changes to settings in the Profile menu, press **Save**.
11. To use the modified profile, scroll to the profile name and press **Select**. A checkmark appears to the left of the profile name.

Uploading Text Message Alert Tones to the TFTP Server

Vocera provides two audio files in the **\VS\cucm_config** folder on the Vocera 4.4 Server Software DVD (or in the downloaded software distribution) that you must upload to the root of the TFTP server so that phones can use them for text message alert tones.

The two files are:

- **incoming_message.raw**
- **urgent_message.raw**

To upload text message alert tones to the TFTP server:

1. From the Cisco Unified Communications Operating System Administration window, navigate to **Software Upgrades > TFTP File Management**.
2. The TFTP File Management window displays and shows a listing of the current uploaded files. You can filter the file list by using the Find controls.
3. Click **Upload File**. The Upload File dialog box opens.
4. Click **Browse** and then choose the **incoming_message.raw** file from the **\VS\cucm_config** folder on the Vocera 4.4 Server Software DVD.
5. To start the upload, click **Upload File**.

   The Status area indicates when the file uploads successfully.
6. Repeat steps 3 through 5 to upload the **urgent_message.raw** file.
7. After uploading both files, restart the Cisco TFTP service.

Configuring Vocera Server and Vocera SIP Telephony Gateway

This section briefly describes the steps needed to enable Vocera Connect for Cisco in the Vocera Administration Console. For complete information on how to configure Vocera Server and Vocera SIP Telephony Gateway, see the following Vocera manuals:

- *Vocera Administration Guide*
- *Vocera Telephony Configuration Guide*

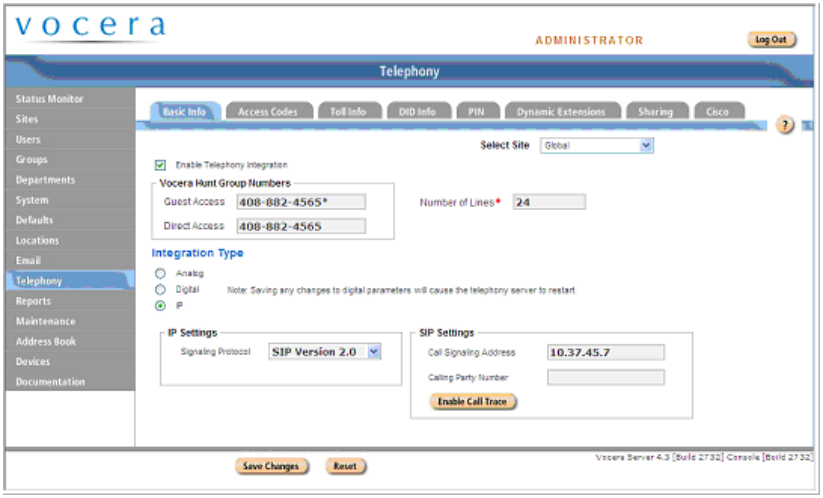
Configuring Basic Telephony for Vocera SIP Telephony Gateway

Use fields in the **Telephony > Basic Information** page of the Vocera Administration Console to specify the basic information Vocera needs to communicate with Vocera SIP Telephony Gateway and CUCM.

To specify basic Vocera telephony settings:

1. In the Vocera Administration Console, click **Telephony** in the navigation bar.
2. Click the **Basic Info** tab.

Figure 8. Telephony > Basic Info page



3. Specify the following basic telephony settings:

Field	Value
Select Site	Use the **Select Site** field to choose a site to configure. If you do not have multiple sites, choose the Global site.
Enable Telephony Integration	Make sure this box is checked to enable telephony integration.
Vocera Hunt Numbers	Specify the area code and phone numbers of the DID lines or hunt group you set up for the Vocera system in the Vocera Hunt Group Numbers fields.

Field	Value
Number of Lines	Specify the number of lines you want to provision for each telephony server in the **Number of Lines** field. Enter either of the following values, whichever is smaller: • the number of lines supported by your license • the number of lines provisioned by the CUCM for a single telephony server
Integration Type	Select **IP**, which specifies a VoIP connection to an IP PBX or VoIP gateway. Requires Vocera SIP Telephony Gateway.
Signaling Protocol	Specify the signaling protocol that your IP PBX uses. Currently only SIP Version 2.0 is supported.
Call Signaling Address	Enter the IP address of the CUCM.
Calling Party Number	Enter the DID number, including the area code, of the Vocera trunk (the number of digits depends on the locale). Outgoing calls use this value as the caller ID. However, you can configure Vocera SIP Telephony Gateway to use caller information contained in the dial signal from the Vocera Server as the caller ID.

4. Click **Save Changes** to save these values.

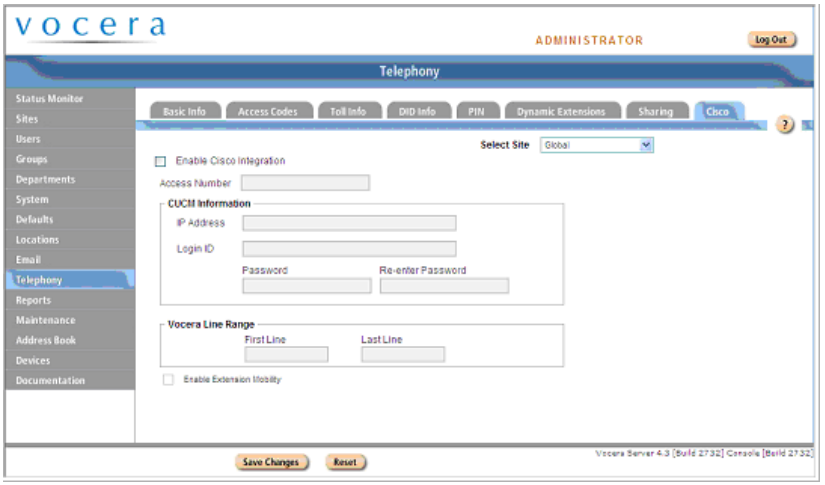
Configuring Cisco Integration

Use fields on the Cisco page to specify information to allow Vocera to integrate with CUCM and Cisco's wireless IP phones.

To configure Cisco integration settings:

1. In the Vocera Administration Console, click **Telephony** in the navigation bar.
2. Click the **Cisco** tab.

Figure 9. Telephony > Cisco page



3. Specify the following settings:

Important: Vocera integration with CUCM currently supports only one CUCM per site. Do NOT check the **Enable Cisco Integration** checkbox until after the CUCM and the Cisco wireless IP phones have been properly configured for Vocera Connect.

Field	Value
Site	Select a site to use for this Cisco Unified Communications Manager (CUCM). You can use the Sharing tab to share this Cisco configuration with other sites.
Enable Cisco Integration	Make sure this box is checked to enable integration with CUCM. **Important:** Integration with CUCM requires Vocera Connect application licenses. Otherwise, users of Cisco wireless IP phones will not be able to connect to the Vocera Server. For more information about license requirements, see **Vocera License Requirements** on page 7.

Field	Value
Access Number	Enter the voice access number for CUCM. This number should match the route pattern/number for the Vocera SIP trunk. You can find route patterns in CUCM Console by choosing **Call Routing > Route/Hunt > Route Pattern**. This number may be different from the outgoing Calling Party Number entered for the Vocera SIP Telephony Gateway on the **Telephony > Basic Info** page, which is used for Caller ID purposes.
CUCM Information	**IP Address** – Enter the IP address of the CUCM in dotted-decimal notation (for example, 192.168.15.10). **Login ID** – Enter the Vocera application user ID for CUCM. **Password** – Enter the Vocera application user password for CUCM. **Re-enter Password** – Re-type the same password you entered in the **Password** field.
Vocera Line Range	Specify the first line and last line used for the internal range of Vocera lines. **Important:** Vocera supports only one range of lines for Cisco integration. However, the lines are not real DID numbers. Go ahead and make the range large enough to accommodate future growth. You must assign 2 Vocera lines for each phone; in other words, for 50 phones you will need 100 lines.

Field	Value
Enable Extension Mobility	Check this box to enable the Extension Mobility service on the phones. With Extension Mobility, users can access their phone configuration from other Cisco Unified Wireless IP Phones. If Extension Mobility is enabled, it will automatically log users into Vocera when they are authenticated on Cisco wireless IP phones; separate Vocera login is not needed. **Important:** Additional configuration is required on CUCM devices to support Extension Mobility. Do NOT check this box until the CUCM devices have been configured accordingly.

4. Click **Save Changes** to save these values.

Logging In and Making a Vocera Call

After you finish configuring CUCM and your Vocera system for Vocera Connect for Cisco, you are ready to log into Vocera and make a call. Log into two Cisco wireless IP phones using two test Vocera accounts. Make a call from one phone to another using the Vocera application button on the phone.

Figure 10. Application button

To log into Vocera and make a call:

1. Check the phone's screen. If you are logged out, the status message is "Logged Out."
2. Hold a Cisco wireless IP phone to your ear and press the application button on the left side of the phone.

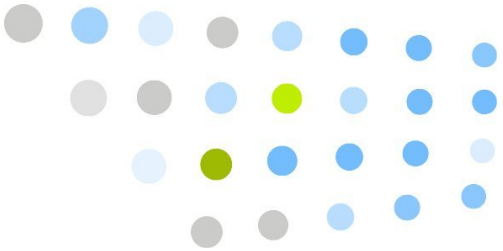
   The Vocera Genie prompts, "Please say or spell your first and last name."
3. Say your first and last name.

4. After you are logged in, check the phone's screen to make sure the status message displays your name, indicating you are logged in.
5. Press the application button  . At the "Vocera" prompt, say "Call <person's first and last name>."

Basic Vocera Voice Commands

Here is a list of basic Vocera voice commands. An asterisk (*) indicates the command requires special permission. For a complete list of Vocera voice commands, see the *Vocera Connect for Cisco User Guide*.

Action	**Voice Command**
Call a Vocera user.	Call <person's first and last names>.
Call a group member.	Call <group name>.
Place an urgent call to a user.*	Urgently call <person's first and last names>.
Place an urgent call to a group.*	Urgently call <group name>.
Call an extension.*	Dial extension <extension>.
Call a local or long distance number.*	Dial an outside number.
Initiate a broadcast to a group.*	Broadcast to <group name>.
Initiate an urgent broadcast to a group.*	Urgently broadcast to <group name>.
Send a voice message to a user.	Record a message for <person's first and last names>
Send a voice message to a group.	Record a message for <group name>.
Listen to voice messages.	Play messages.
Play text messages.	Play text messages.



Troubleshooting Vocera Connect for Cisco

This chapter provides some tips for troubleshooting problems with Vocera calls on Cisco wireless IP phones.

Troubleshooting Configuration Problems

Pressing the application button on the phone does nothing.

Check the following settings:

- Make sure the Vocera lines configured on the phone are within the valid range of lines specified on the Cisco page in the Vocera Administration Console.
- Make sure that "Auto Answer" setting for both the Vocera lines for the phone are correct. The first line should have Auto Answer off and the other one should be Auto Answer in speaker mode.
- Make sure the application button priority is set to High.
- Make sure the VSTG trunk has been reset in CUCM Console.

The phone displays a "No Licenses Available" error message.

Make sure your Vocera system has enough Vocera Connect licenses for everyone using Cisco wireless IP phones as well as other Vocera Connect smartphone clients. See **Vocera License Requirements** on page 7.

The phone displays an "Operation Failed" error message.

Check the following settings:

- The JTAPI connection could not be opened correctly. Check the Vocera Server logs and look for "Could not open JTAPI connection." If you see this, stop and start the Vocera Server to open the connection.
- Incorrect **Login ID** and **Password** values, which are needed for CUCM authentication, have been entered on the Cisco tab of the Vocera Administration Console.
- An incorrect **Access Number** value has been entered on the Cisco tab of the Vocera Administration Console.

The phone displays an "Invalid Device" error message.

Make sure the **Application URL** field has been specified correctly on the Phone Configuration page in CUCM Console.

Messages are not displayed when the Message soft key is pressed.

Check the following settings:

- Make sure the **Message URL** field has been specified correctly on the Phone Configuration page in CUCM Console.
- Make sure the **Services Provisioning** field has been set to "Both" on the Phone Configuration page in CUCM Console.

There are errors when trying to log into Extension Mobility on the phone.

Check the following settings:

- Make sure the Extension Mobility service is provisioned for the phone in CUCM Console.
- Make sure the **Extension Mobility** checkbox is checked for the phone in CUCM Console.
- Make sure the user is not already logged in via Extension Mobility to another device. If so, the phone displays the following error: "Cannot login to Extension Mobility."
- Make sure the Extension Mobility username/password has been entered correctly.

Logging into Extension Mobility does not log into Vocera.

Check the following settings:

- Make sure the **Extension Mobility** checkbox is checked on the Cisco tab of the Vocera Administration Console.
- Make sure the name of your user profile in CUCM Console matches the **User ID** in the Vocera Administration Console.

Checking a Cisco Call in the Vocera Logs

Here is an excerpt from a Vocera log file (from the **\vocera\logs** folder on the Vocera Server) that shows a call made from a Cisco wireless IP phone to a Vocera badge.

Example 1. Vocera Server log for a call from a Cisco phone to a Vocera badge

```
09/28/11 23:20:18.387  [Peter Lorre-Voc]       UnicastInProgress: LiveInProgress.
startAudio
09/28/11 23:20:18.387  TX StartAudio LineNo=0 SessionNo=698 Mode=1 VocoderType=1
cOthers=1 ipOthers[0]=172.19.4.44 iPortOthers[0]=5200 cPacketsPerChunk=2
ForceSpeaker=false [10.37.33.3]
09/28/11 23:20:18.387  [Peter Lorre-Voc]       UnicastInProgress: LiveInProgress.
displayName. Displayed name: BORIS KARLOFF Internal name: u-bkarloff
09/28/11 23:20:18.387  [Peter Lorre-Voc]       UnicastInProgress: In CiscoCallMan.
sendCallerName.  cs= [Peter Lorre] UnicastInProgress callername=BORIS KARLOFF
softkeys=Hold,EndCall
09/28/11 23:20:18.387  [Peter Lorre-Voc]       UnicastInProgress: Displaying text
on Cisco phone SEPC471FED7642B.  Text=BORIS KARLOFF MessageStatus= Responses=Hold,
EndCall
09/28/11 23:20:21.162  Dispatch time for SpeechEvent: Speech Completed Party: Peter
Lorre State: PlayPrompt IsDead:  true Session: no speechport : 2776 ms.
09/28/11 23:20:28.895  ServerStream RX GetCiscoUserWithDeviceName
09/28/11 23:20:28.895  TX SetCiscoUserWithDeviceName
09/28/11 23:20:28.895  TX Ack
09/28/11 23:20:28.895  ServerStream RX GetAppLicense
09/28/11 23:20:28.896  Granted app license for <user,app>: <u-plorre,
VB>. Have now used 6/500 licenses for this app.
09/28/11 23:20:28.896  TX Ack
09/28/11 23:20:28.896  ServerStream RX GetCiscoUserWithDeviceName
09/28/11 23:20:28.896  TX SetCiscoUserWithDeviceName
09/28/11 23:20:28.896  TX Ack
09/28/11 23:20:28.897  ServerStream RX CiscoKeyPress
09/28/11 23:20:28.897  In CiscoMan handleKeyPress().  sDeviceName=SEPC471FED7642B
TouchCode=0
09/28/11 23:20:28.897  [Peter Lorre-Voc]       UnicastInProgress: LiveInProgress.
handleTouchCall
09/28/11 23:20:28.897  [Peter Lorre-Voc]       UnicastInProgress: --> Goodbye
09/28/11 23:20:28.897  [Peter Lorre-Voc]       Goodbye: --> PlayPrompt
09/28/11 23:20:28.897  [Peter Lorre-Voc]       PlayPrompt: Unicast call.
```

```
disconnect. p=Peter Lorre
09/28/11 23:20:28.897  [Peter Lorre-Voc]       PlayPrompt: Unicast call.
CancelPendingInvites. psPending=
09/28/11 23:20:28.897  [BORIS KARLOFF-Voc]     UnicastInProgress:
AllOthersDisconnected
09/28/11 23:20:28.897  [BORIS KARLOFF-Voc]     UnicastInProgress: LiveInProgress.
handleAllOthersDisconnected
09/28/11 23:20:28.897  [BORIS KARLOFF-Voc]     UnicastInProgress: --> Goodbye
09/28/11 23:20:28.897  [BORIS KARLOFF-Voc]     Goodbye: TX [53] PlayPrompt
Prompt=party_left.wav
09/28/11 23:20:28.897  [BORIS KARLOFF-Voc]     Goodbye: --> CheckChatRoom
09/28/11 23:20:28.897  [BORIS KARLOFF-Voc]     CheckChatRoom: --> Disconnect
09/28/11 23:20:28.897  [BORIS KARLOFF-Voc]     Disconnect: -->
InactiveIgnoreTouch
...
09/28/11 23:20:30.623  [Peter Lorre-Voc 1320 1] PlayPrompt: Leaving
SpeechPort.abort()
09/28/11 23:20:30.623  [Peter Lorre-Voc 1320 1] PlayPrompt: --> CheckChatRoom
09/28/11 23:20:30.623  [Peter Lorre-Voc 1320 1] CheckChatRoom: --> Disconnect
09/28/11 23:20:30.623  Lines available for site Vocera [10.37.33.3]: 30
09/28/11 23:20:30.623  TX HangUp LineNo=0 SessionNo=698 [10.37.33.3]
09/28/11 23:20:30.623  Displaying text on Cisco phone for user: u-plorre
Device=SEPC471FED7642B Text=Peter Lorre
09/28/11 23:20:30.790  [Peter Lorre-Voc 1320 1] Disconnect: --> Inactive
09/28/11 23:20:30.790  [Peter Lorre-Voc 1320 1] Inactive: Entering setParm.
Parm=behavior.calllog.CloseChannel Value=1-1320-Peter Lorre-Voc
09/28/11 23:20:30.791  [Peter Lorre-Voc 1320 1] Inactive: Leaving setParm
```

Here's an excerpt from a VSTG log file (from the **\vocera\logs** folder on the VSTG server) for the same call:

Example 2. VSTG log for a call from a Cisco phone to a Vocera badge

```
2011:09:28 23:20:18.266 [01932,INFO_] [234535] [000:698:VGW] [VSi:RX]
StartAudio - cOthers [1], ipOthers(0) [ac13042c] iPort(0) [5200]
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
StartAudio - Redirecting Audio from [10.98.2.211:5101] to [172.19.4.44:5200]
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
VRTP Stats last segment - time/frames [11438/635], frames recv/sent [438/634]
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
Starting AudioChannel
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
AudioSettings::iMode              [1]
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
AudioSettings::cOthers            [1]
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
AudioSettings::ipOthers[0]        [172.19.4.44:5200]
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:VTG] StartAudio
handler called
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:s8700] VRTP Stats -
StartAudio - Audio flowing at tick count [611703453]
```

```
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:s8700] CSU_POI -
StartAudio, [13297] since Dial/INVITE
2011:09:28 23:20:18.266 [01932,DEBUG] [234535] [000:698:s8700] Mid call
StartAudio, ignoring on SIP side
2011:09:28 23:20:18.281 [01968,DEBUG] [234535] [000:698:s8700] VRTP Stats -
First packet since StartAudio, seqnum [6], time [611703468]
2011:09:28 23:20:18.281 [01968,DEBUG] [234535] [000:698:s8700] CSU_POI -
FirstVRTPPacket, [13312] since Dial/INVITE, [15] since StartAudio
2011:09:28 23:20:20.047 [01968,DEBUG] [234535] [000:698:s8700] VRTP Stats -
MISSED [2] packet(s) - last seq num [101], this packet [104]
2011:09:28 23:20:24.860 [01968,DEBUG] [234535] [000:698:s8700] VRTP Stats -
MISSED [2] packet(s) - last seq num [369], this packet [372]
2011:09:28 23:20:25.063 [01952,DEBUG] [trunk_status] [VTSIPStack] [SIP:TX]
Request msg OPTIONS/cseq=22275 (tdta06479008) to 10.1.9.6:5060
2011:09:28 23:20:25.063 [01956,DEBUG] [trunk_status] [VTSIPStack] [SIP:RX]
Response msg 200/OPTIONS/cseq=22275 (rdata064693B4) from 10.1.9.6:5060
2011:09:28 23:20:25.063 [01956,INFO_] [------------] [SIPTrunkMgr] SIP Trunk
[10.1.9.6] is alive
2011:09:28 23:20:25.563 [01968,DEBUG] [234535] [000:698:s8700] VRTP Stats -
MISSED [2] packet(s) - last seq num [407], this packet [410]
2011:09:28 23:20:26.375 [01968,DEBUG] [234535] [000:698:s8700] VRTP Stats -
MISSED [2] packet(s) - last seq num [451], this packet [454]
2011:09:28 23:20:27.610 [01952,DEBUG] [------------] [SessionMgr] Active
sessions found by RTP timer callback [1]
2011:09:28 23:20:28.782 [01932,INFO_] [234535] [000:698:VGW] [VSi:RX]
StartAudio - cOthers [1], ipOthers(0) [a6202d3] iPort(0) [5101]
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
StartAudio - Redirecting Audio from [172.19.4.44:5200] to [10.98.2.211:5101]
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:AudioCh_5300] VRTP
Stats last segment - time/frames [10515/584], frames recv/sent [576/583]
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
Starting AudioChannel
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
AudioSettings::iMode             [1]
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
AudioSettings::cOthers           [1]
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
AudioSettings::ipOthers[0]       [10.98.2.211:5101]
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:VTG] StartAudio
handler called
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:s8700] VRTP Stats -
StartAudio - Audio flowing at tick count [611713968]
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:s8700] CSU_POI -
StartAudio, [23812] since Dial/INVITE
2011:09:28 23:20:28.782 [01932,DEBUG] [234535] [000:698:s8700] Mid call
StartAudio, ignoring on SIP side
2011:09:28 23:20:29.001 [01968,DEBUG] [234535] [000:698:s8700] VRTP Stats -
First packet since StartAudio, seqnum [0], time [611714187]
2011:09:28 23:20:29.001 [01968,DEBUG] [234535] [000:698:s8700] CSU_POI -
FirstVRTPPacket, [24031] since Dial/INVITE, [219] since StartAudio
2011:09:28 23:20:29.001 [01968,DEBUG] [234535] [000:698:s8700] VRTP Stats -
marker bit set, reset vrtpLastSeqNum, seqnum [0], time [611714187]
2011:09:28 23:20:30.501 [01932,INFO_] [234535] [000:698:VGW] [VSi:RX] Near
```

```
HangUp, iLine [0], iSession [698]
2011:09:28 23:20:30.501 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
Stopping AudioChannel
2011:09:28 23:20:30.501 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
VRTP Stats last segment - time/frames [1719/95], frames recv/sent [84/97]
2011:09:28 23:20:30.501 [01932,DEBUG] [234535] [000:698:AudioCh_5300]
VRTP Stats full session - time/frames [23672/1315], frames recv/sent
[1098/1314], out of order [0]
2011:09:28 23:20:30.501 [01932,DEBUG] [234535] [000:698:VTG] Hangup handler
called with channel [0], sessionId [698]
2011:09:28 23:20:30.501 [01932,INFO_] [234535] [000:698:s8700] Hangup called,
disconnecting...
2011:09:28 23:20:30.516 [01932,DEBUG] [234535] [000:698:VTSIPStack] [SIP:TX]
Request msg BYE/cseq=13946 (tdta06479008) to 10.1.9.6:5060
...
2011:09:28 23:20:30.626 [01952,DEBUG] [234535] [000:698:SessionMgr]
ReleaseSession for channel and vocera sessionID [000:698]
2011:09:28 23:20:30.626 [01952,INFO_] [234535] [000:698:SessionMgr]
ReleaseSession [s8700] - Number of Active SIP Sessions: [0]
2011:09:28 23:20:30.626 [01952,INFO_] [234535] [000:698:VGW]
ReleaseLine - Number of Active VGW Calls: [0]
```

Frequently Asked Questions

This chapter answers frequently asked questions about Vocera Connect for Cisco.

Q: Does the deployment of Vocera Connect for Cisco affect Vocera server sizing guidelines?

A: No. See the **Vocera Server Sizing Matrix**[1].

Q: What network security options are available for Cisco wireless IP phones?

A: Cisco Unified Wireless IP Phone 7921G, 7925G, and 7926G support the following authentication and encryption protocols:

Authentication	Encryption
• Cisco Wireless Security Suite IEEE 802.1X • Lightweight Extensible Authentication Protocol (LEAP) Authentication • Protected Extensible Authentication Protocol (PEAP) MS-CHAP v2 • Extensible Authentication Protocol-Flexible Authentication via Secure Tunneling (EAP-FAST) • Extensible Authentication Protocol-Transport Layer Security (EAP-TLS) • Wi-Fi Protected Access (WPA) Versions 1 and 2; Personal and Enterprise • Cisco Centralized Key Management (CCKM)	• 40- and 128-bit static Wired Equivalent Privacy (WEP) • Temporal Key Integrity Protocol (TKIP) and Message Integrity Check (MIC) • Advanced Encryption Standard (AES)

[1] http://www.vocera.com/products/documents/VoceraServerSizingGuidelines.pdf

For more information, refer to the datasheets for Cisco wireless IP phones.

Q: What wireless LAN signal strength is recommended for Vocera Connect for Cisco?

A: Make sure your wireless LAN has a minimum signal strength of **-65 dBm** in all areas where people use Vocera devices, including Cisco wireless IP phones.

Q: Which TCP ports need to be opened on the Vocera Server to support Vocera Connect for Cisco?

A: The Vocera Server uses outbound TCP port 2748 for JTAPI signaling. All other Vocera Server ports are listed in the "IP Port Usage" appendix in the *Vocera Infrastructure Planning Guide*.

If SSL is enabled on the Vocera Server, you need to open up Tomcat port 8080 to allow Cisco wireless IP phones, which do not support SSL, to connect to the Vocera Server. For more information, see the Vocera 4.4 Release Notes.

Q: When you log into a Vocera on a Cisco wireless IP phone, are you prevented from logging into a Vocera badge or smartphone?

A: Yes.

Q: Is Vocera SIP Telephony Gateway (VSTG) required for Vocera Connect for Cisco?

A: Yes. If your Vocera system already uses VSTG, you may need to purchase additional SIP lines to support Vocera Connect for Cisco.

Q: Does Vocera Connect for Cisco require a special Vocera license?

A: Yes, Vocera sells packs of client application licenses for Vocera Connect that can be used by a pool of users. When someone runs one of the Vocera Connect applications, the Vocera Server assigns a client license to that person for a 24-hour period (regardless how long the application is used during that period). At the end of the 24-hour period, the license is made available to other Vocera Connect users.

Q: Where can I see how many Vocera Connect licenses the Vocera system has and how many are currently in use?

A: On the **System > License Info** tab of the Vocera Administration Console, you can view the application licenses your Vocera system has and how many are currently being used. The application ID for Vocera Connect is "VB".

If you have 20 Vocera Connect licenses, you should see "VB20" in the **Apps** field. If 10 people are using the app, you should see "VB10" in the **Currently Configured** field.

Q: Does Vocera provide any tools to manage Vocera Connect sessions?

A: No.

Q: Does Vocera Connect for Cisco have any special requirements to support broadcasts on Cisco wireless IP phones?

A: Vocera Connect for Cisco does not support true multicast on Cisco wireless IP phones. If a Vocera user sends a broadcast to a group, the VSTG will convert the multicast to unicast for any recipients who are using Cisco wireless IP phones.

If the VSTG is located on a different subnet from Vocera badges, you must enable multicast routing support on the Layer 3 switches that the VSTG subnet crosses. Check the IP multicast settings that you have enabled on the subnet that the badges are using. If multicast traffic is not properly routed, Cisco wireless IP phones will not receive audio packets from badge users during broadcasts.

Each unicast transmission sent to a Cisco wireless IP phone for a Vocera broadcast consumes an additional SIP line. The Vocera license does not limit SIP lines used for broadcasts to Cisco wireless IP phones, so you don't need to provision more SIP lines just to support broadcasts.

Note: If you send a broadcast to a group with more than 100 users of Cisco wireless IP phones, the broadcast may be delayed for some users of the Cisco phones.

Q: Do Vocera Connect for Cisco users require any special Vocera permissions?

A: No.

Q: Can Vocera Staff Assignment route calls to Vocera Connect for Cisco users?

A: Yes.

Q: Does Vocera Report Server have any reports on Vocera Connect usage?

A: Calls and broadcasts made from Vocera Connect users are treated like other Vocera calls and broadcasts in the reports.

There are no reports currently that isolate Vocera Connect usage.

Q: Are Vocera Connect for Cisco users listed in the Badge Status Monitor in the Vocera Administration Console?

A: Yes. However, Cisco phones are not listed with an IP address.

Q: Does Vocera support Cisco wireless IP phones in its Device Management solution?

A: No.

Q: Does Vocera Connect for Cisco save a client-side log file on Cisco wireless IP phones?

A: No.

Q: Are Vocera Connect for Cisco calls logged in the Vocera Server logs?

A: Yes. Vocera Connect for Cisco calls can be identified in the logs by the name of the user connecting to the server. For calls the user makes using a Cisco phone, the log will identify Cisco devices and CUCM interactions.

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