

# **Vocera CUCM Adapter Configuration Guide**

Version 2.5.0

## Notice

Stryker Corporation or its divisions or other corporate affiliated entities own, use or have applied for the following trademarks or service marks: Stryker, Vocera. All other trademarks are trademarks of their respective owners or holders. The absence of a product or service name or logo from this list does not constitute a waiver of Stryker's trademark or other intellectual property rights concerning that name or logo. Copyright © 2023 Stryker.

**Last modified:** 2023-02-24 13:35 ADP-cucm-250-Docs build 196

## **Contents**

Understanding a Vocera CUCM Adapter Configuration	4
Viewing the Vocera CUCM Adapter Requirements	5
Configuring a Vocera CUCM Adapter	13
Downloading a JTAPI Library	
Working with Vocera CUCM Adapter Rules	20
Integrating CUCM with the Vocera Platform	22
Adding Vocera Platform to the List of IP Phone Services	22
Creating an Application User	25
Adding Phones to Extension IP Phone Service	26
Modifying the Phone Template	26
Updating the Phones to Add to Extension IP Phone Service	28
Enabling Instant Messaging on Cisco Jabber	30
Configuring Cisco Extension Mobility (Optional)	31
Enabling Extension Mobility for the Device	31
Enabling Extension Mobility for the End User	33
Create Matching User Accounts in Vocera Platform	34
Understanding Adapter Installation	35
Recreating a Repository	35
Installing an Adapter	36
Practicing an Adapter Installation	36
Navigating the Vocera Platform Adapters	38
Editing an Adapter	40
Creating a New Adapter	41
Saving an Adapter	42
Deactivating an Adapter	42
Removing an Adapter	43

## **Understanding a Vocera CUCM Adapter Configuration**

Configure a Vocera CUCM Adapter in the Vocera Platform Web Console to allow communication between the CUCM system and the Vocera Platform.

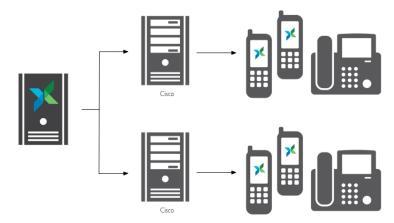
Adapters send information to and receive information from the Vocera Platform, as well as monitor and collect data. Each adapter is configured to allow the Vocera Platform to communicate with a specific type of resource and any devices that resource may control. For example, the Vocera CUCM Adapter (Cisco Unified Communications Manager) is often used by customers to integrate with Cisco Unified Communications Systems.

Vocera CUCM Adapter configuration allows the Vocera Platform direct communication with CUCM, enabling our system to request Cisco device information (including line appearances and events), and to send alerts and notification messages to Cisco endpoints.



**Note:** The Vocera CUCM Adapter is designed specifically for Cisco Unified Communications Manager versions 7.1.3 and higher. The Vocera CUCM Adapter has not been tested with other call processing agents.

Communication with Cisco endpoints between the Vocera Platform and Communications Manager is handled through a series of JTAPI requests from the Vocera Platform and JTAPI responses from Communications Manager.



When the Communications Manager service starts, the Vocera Platform automatically sends a JTAPI request to Communications Manager; Communications Manager then sends a JTAPI response to all of its registered devices and endpoints. This information is stored in the Data Manager and populates five Datasets: Devices, Lines, Users, Calls, and Called Parties.

Once this initial connection between the Vocera Platform and Communications Manager is complete, separate JTAPI request and response sequences relay events from each Cisco device to the Vocera Platform. Unlike the initial JTAPI request and response, this exchange happens whenever a new event occurs on a registered device or endpoint. Information regarding the device events is stored in the Vocera Platform Data Manager and is used to populate the Calls Dataset.

### **Viewing the Vocera CUCM Adapter Requirements**

The minimum requirements for a Vocera CUCM Adapter (CUCM) installation are described here.

### **System**

The Vocera Platform requires Cisco Unified Communications Manager server version 7.1.3. or higher.

## **Phone Registration**

The Vocera CUCM Adapter will register only the line configured for Button 1 on that phone in order to receive messages. Sending messages to multiple lines on the same phone is not supported.

The phone must be reset if a new line is added to an existing phone in Communications Manager and the Vocera CUCM Adapter is already enabled in Vocera Platform.

#### **Ports**

Cisco phones connect to the Vocera Platform via port 80/tcp (or 443/tcp if SSL is enabled).

The network connectivity used in communicating with CUCM is handled by the JTAPI library via port 2748/tcp.

### **Lines and Devices**

One device is required per line that is registered with Vocera Platform. Vocera Platform will send messages to one device using a unique line. Multiple devices cannot receive messages from the same line.

#### **Datasets**

An adapter defines a default Dataset structure in order to function. Attributes are organized by Datasets and store the information required by the adapter. Adapters use this data during the process of receiving and sending messages.

Not all adapters require Datasets to function. When an adapter does require Datasets, the system will determine if they already exist. If they do not exist, the system will create the needed Datasets.

When creating or editing an adapter, use the following information to select the appropriate datasets in the Required Datasets section.

- The CALLED PARTIES Dataset stores the parties that received a phone call.
- The CALLS Dataset stores the phone calls Vocera has monitored.
- The DEVICES Dataset stores all details of every device registered with Vocera. Each device to which Vocera can send a message must be listed in this dataset.
- The LINES Dataset stores each telephone line reported by a device when it is registered.
- The PRESENCE UPDATE Dataset stores records created to update a users presence.
- The REGISTRATION HISTORY Dataset stores the history of all registrations for a device.
- The **USERS** Dataset stores all Vocera users.

#### CALLED\_PARTIES Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description
Attribute	number	N/A	True	N/A	N/A	String	Attribute that stores the phone number that a call was placed from or to.

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description
Attribute	caller_id	N/A	False	N/A	False	String	Attribute that stores the caller ID of a person making or receiving a phone call.
Link	call	called_parties	s True	False	N/A	Many-to-one	The CALLED_PAR' Dataset is linked to the CALLS Dataset, and the link order is n:1 (many called_parties associated to one call)

### **CALLS Dataset**

Element	Name	Reverse Name	Кеу	Reverse Key	Required	Туре	Description
Attribute	call_id	N/A	True	N/A	N/A	String	Attribute that stores the ID of a call. Not to be confused with caller ID. This is an internal Call Manager identifier.
Attribute	established	N/A	False	N/A	True	Date/Time	Attribute that stores time when the call was established.
Attribute	number	N/A	False	N/A	True	String	Attribute that stores the phone number that a call was placed from or to.
Attribute	status	N/A	False	N/A	True	String	Attribute that stores the status of the call. One of INITIATING, CONNECTING RINGING, ANSWERED, COMPLETED, or FAILED.

Element	Name	Reverse Name	Кеу	Reverse Key	Required	Туре	Description
Attribute	caller_id	N/A	False	N/A	False	String	Attribute that stores the caller ID of a person making or receiving a phone call.
Attribute	duration	N/A	False	N/A	False	Integer	Attribute that stores the length of a call.
Link	called_parties	call	False	True	N/A	One-to-many	The CALLS Dataset is linked to the CALLED_PAR' Dataset, and the link order is 1:n (one call associated to many called_parties

### **DEVICES Dataset**

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description
Attribute	name	N/A	True	N/A	N/A	String	Attribute that stores the name that identifies the device, often based upon the MAC address of the device.
Attribute	status	N/A	False	N/A	True	String	Attribute that stores the current registration status of the device. Possible values are Registered, Disconnected, Virtual, or Unregistered.
Attribute	vendor	N/A	False	N/A	True	String	Attribute that stores the vendor of the device. For example, Cisco or XMPP.

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description
Attribute	ip_address	N/A	False	N/A	False	String	Attribute that stores the current IP address of the device. In some cases Engage needs to keep track of the IP address of a device, such as with a Cisco phone.
Attribute	priority	N/A	False	N/A	False	String	Attribute that stores the priority level of the most recent message sent to a device. Required by the device management library, but not set by the XMPP adapter. It is used as a filter to prevent less important messages from being sent to a user currently handling a critical issue.
Attribute	token	N/A	False	N/A	False	String	Attribute that stores a special identifier needed by some devices, such as smart phones, in order to deliver a message.

Element	Name	Reverse Name	Кеу	Reverse Key	Required	Туре	Description
Link	history	device	False	False	N/A	One-to-many	The DEVICES Dataset is linked to the REGISTRATIO Dataset, and the link order is 1:n (one device associated to many registration_hi
Link	lines	devices	False	False	N/A	One-to-many	The DEVICES Dataset is linked to the LINES Dataset, and the link order is 1:n (one device associated to many lines)
Link	usr	devices	False	False	N/A	Many-to-one	The DEVICES Dataset is linked to the USERS Dataset, and the link order is n:1 (many devices associated to one user)

### **LINES Dataset**

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description
Attribute	number	N/A	True	N/A	N/A	String	Attribute that stores an actual telephone or directory number
Link	device_histor	y line	False	False	N/A	One-to-many	The LINES Dataset is linked to the REGISTRATIO Dataset, and the link order is 1:n (one line associated to many registration hi

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description
Link	devices	lines	False	False	N/A	Many-to-one	The LINES Dataset is linked to the DEVICES Dataset, and the link order is n:1 (many lines associated to one device)

## ${\bf PRESENCE\_UPDATE\ Dataset}$

Element	Name	Reverse Name	Кеу	Reverse Key	Required	Туре	Description
Attribute	timestamp	N/A	True	N/A	N/A	Date/Time	Attribute that stores the time this PresenceUpda record was created.
Attribute	show	N/A	False	N/A	False	String	Attribute that stores the show of the presence to set.
Attribute	status	N/A	False	N/A	False	String	Attribute that stores the status of the presence to set.
Link	usr	presence_upda	: True	False	N/A	Many-to-one	The PRESENCE_U Dataset is linked to the USERS Dataset, and the link order is n:1 (many presence_updassociated to one user)

### ${\bf REGISTRATION\_HISTORY\ Dataset}$

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description
Attribute	device_status	N/A	False	N/A	False	String	Attribute that stores the current registration status of the device.
Attribute	ip_address	N/A	False	N/A	False	String	Attribute that stores the device's current IP address.

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description
Attribute	token	N/A	False	N/A	False	String	Attribute that stores some devices, such as smartphones, require a special identifier in order to receive a message. The token is used to store that special identifier.
Link	device	history	False	False	N/A	Many-to-one	The REGISTRATION Dataset is linked to the DEVICES Dataset, and the link order is n:1 (many registration_his associated to one device)
Link	line	device_histor	ry False	False	N/A	Many-to-one	The REGISTRATION Dataset is linked to the LINES Dataset, and the link order is n:1 (many registration_his associated to one line)
Link	usr	device_histor	ry False	False	N/A	Many-to-one	The REGISTRATION Dataset is linked to the USERS Dataset, and the link order is n:1 (many registration_his associated to one user)

### **USERS Dataset**

Element	Name	Reverse Name	Key	Reverse Key	Required	Туре	Description	
Attribute	login	N/A	True	N/A	N/A	String	Attribute that stores the login name of the user.	
Attribute	presence_sho	ov N/A	False	N/A	False	String	Attribute that stores the current presence show value for the user.	
Attribute	presence_sta	tı N/A	False	N/A	False	String	Attribute that stores the current presence status message for the user.	
Link	device_histor	ry usr	False	False	N/A	One-to-many	The USERS Dataset is linked to the REGISTRATIO Dataset, and the link order is 1:n (one user associated to many registration_h	
Link	devices	usr	False	False	N/A	One-to-many	The USERS Dataset is linked to the DEVICES Dataset, and the link order is 1:n (one user associated to many devices)	
Link	presence_upo	da usr	False	True	N/A	One-to-many	The USERS Dataset is linked to the PRESENCE_U Dataset, and the link order is 1:n (one user associated to many presence_upd	

## **Configuring a Vocera CUCM Adapter**

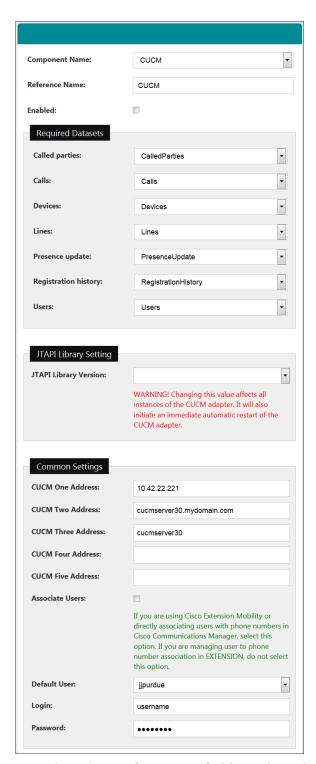
Description of the settings that enable direct communication between the Vocera CUCM Adapter and the Vocera Platform.

Select an empty field and begin typing, or select an existing value and type over it. To keep an existing value, do not edit that field.

- 1. Access the Vocera Platform Web Console and navigate to the adapters.

  See Navigating the Vocera Platform Adapters on page 38 for instructions.
- 2. Select **New Adapter** in the Action menu, or select an adapter you wish to configure and then select **Edit**, to display the configuration fields. The configuration fields are the same for new and existing adapters.
- 3. Navigate to the New Adapter option, or navigate to an existing adapter to edit. See Creating a New Adapter on page 41 and Editing an Adapter on page 40 for instruction as needed.

  The configuration fields are the same for new and existing adapters.



 $4. \,$  Complete the configuration fields as described in the table.

Configuration Field	Description
Component Name	Click the Component Name field to display a list of the systems and devices that the Vocera Platform currently supports. Select the name of the adapter to create.

Configuration Field	Description
Reference Name	Enter a short descriptive name in the Reference Name field to uniquely identify an adapter instance. It may demonstrate the adapter function or other information; for example, Production adapter may differentiate a live adapter from a development or "sandbox" adapter.
Enabled	Select the Enabled checkbox to allow the Vocera Platform to use the new adapter. The Vocera Platform ignores the adapter if this option is disabled.
Required Datasets	If more than one dataset exists that meets the adapter's requirements, select the appropriate datasets for the new adapter to function correctly. The system searches for the datasets that meet the adapters requirements. If the datasets already exist, the system will use them. If the datasets do not exist, the system will create them automatically. Select Create in the drop-down menu to create a new dataset to meet the organization's requirements.
JTAPI Library Settings	Select the version of the Communications Manager and the JTAPI library to use for all Vocera CUCM Adapters in the organization's installation. The CUCM version selected in this field must match the version of CUCM to which the adapter will be connecting.
	Warning: Changing the JTAPI library version affects all instances of the Vocera CUCM Adapter, and initiates an immediate automatic re-start of the Vocera CUCM Adapter.
	If the JTAPI library version you require does not appear in the drop-down menu, refer to the Downloading a JTAPI Library on page 17 documentation for download instructions.

#### Common Settings Configuration Field

## CUCM Address One through Five

#### Description

Enter the unique address for each of the customer's CUCM servers in the order they are meant to be used. There can be one to five CUCM servers for any single Vocera CUCM Adapter. Each of the CUCM Address boxes is optional, but if no server address is entered, this adapter is unable to connect to a Communications Manager.

Type in all addresses exactly as provided by the client organization's CUCM system administrator, one per text box; leave unused Address fields blank. Each entry must be an IP Address, a Fully Qualified Domain Name (FQDN), or an unqualified DNS hostname (PQDN) belonging to a CUCM server.

Use the following standards to complete the server address fields:

Server Address Type	Description
IP addresses	Unique numerical
	labels assigned to
	each device on a
	computer network,
	in standard IP
	Address format
	(xxx.xxx.xxx,
	where each xxx is a
	number from 0-255)
Fully Qualified	The complete
Domain Names	hostname for a
(FQDN)	specific computer
	on a network; e.g.,
	cucmserver30.mydomain.com
Partially Qualified	Usually a single word
Domain Name (PQDN)	or phrase indicating
	only the computer's
	"DNS Name"; e.g.,
	cucmserver30



Note: DNS hostnames must be registered on the Appliance configured in the Network Settings and may not contain spaces or punctuation other than a hyphen. Appliances using hostnames that contain underscores or spaces may not be compatible with devices that try to connect to them. Connecting to a CUCM server that contains those characters is not recommended or supported.

**Associate Users** 

Select this checkbox if the Cisco phones are configured for user login. Do not select this checkbox if Vocera Platform manages the phone-to-user association.

Common Settings Configuration Field	Description
Default User	Select a user's login in the <b>Default User</b> drop-down list. The user names displayed in the list are nonsystem users who are Active and are not authenticated by LDAP. If you select a Default User when PIN Authentication bypass for Cisco phones is enabled, this will allow any individual to access Vocera Platform without entering a PIN on the device.  Select the Default User setting to apply the <b>Security Policies</b> associated with the customer's roles. All of the customer's Cisco phones that the adapter is aware of will use these default user settings.  • If the default user is configured for <b>PIN</b> Authentication, all users authenticate with that user's PIN when they access the Vocera Platform from Cisco phones.  • If the default user is configured for PIN Authentication and PIN Authentication Bypass for Cisco Phones, customers are not required to authenticate when they access the Vocera Platform Administration Guide for information about these security policies.  Warning: A default user MUST be set. If a default user is not defined, the user is forced to re-authenticate after every session timeout. This may cause a user to miss notifications.
Login	Enter the <b>Login</b> for the user account. This Login must match exactly (including capitalization) the User ID and Password specified in the Cisco Unified Communications Manager described in Creating an Application User on page 25.  These fields allow the Vocera Platform to authenticate with the CUCM server(s) entered in the CUCM Address fields.
Password	Enter the <b>Password</b> for the user account. This Password must match exactly (including capitalization) the User ID and Password specified in the Cisco Unified Communications Manager described in Creating an Application User on page 25.  These fields allow the Vocera Platform to authenticate with the CUCM server(s) entered in the CUCM Address fields.

5. Select one of the available options to exit the adapter configuration page. See Saving an Adapter on page 42 for details.

### **Downloading a JTAPI Library**

Download a Linux JTAPI library plugin and submit it to Vocera Platform to add the library version to the system.

The Vocera CUCM Adapter uses Java Telephony API (JTAPI) to communicate with Cisco's Unified Communication Manager. Depending on the version of Cisco software you are using, you may not find the correct JTAPI library listed in the JTAPI Library Setting section of the Vocera CUCM Adapter configuration.

If the JTAPI library version you require is not available, create a Support issue or ticket to request adding the library to the Vocera Platform. Navigate to the Plugins page in the Cisco Unified Communications Manager (CUCM) server, and download the missing Linux JTAPI library plugin. Add the CUCM server version number to the Support issue, attach the library plugin file, and submit the issue to Vocera Platform.

Use these steps as a guidance to locate, download, and pass a Linux plugin to Vocera Support. There may be some variation in the details, depending on the CUCM server version, to successfully perform the download described in this document.

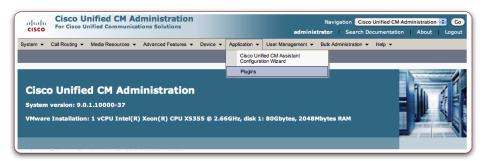
## **Download a JTAPI Library**

Access the CUCM Administration server to download a JTAPI library from the website, and perform the following steps.

1. Enter the login credentials and click **Login**. The login credentials are specific to the installation site.



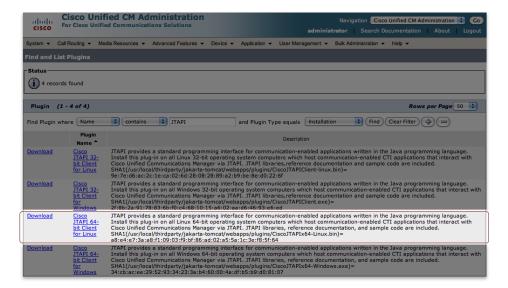
2. Select the **Application** tab, and then select **Plugins** from the drop-down menu as displayed below. Note the CUCM system version to report to Support in step 6; the example below displays version 9.0.1.10000-37.



3. Define the criteria to search for the JTAPI library plugin, or leave the fields blank to return all plugins, in the Find and List Plugins page, and then select **Find**. Select **Clear Filter** to search again.



4. Select **Download** next to the Linux plugin name to add to the Vocera Platform. In the example below, **Cisco JTAPI 64-bit Client for Linux** is selected. Select the plugin for the version of Cisco software that displays in the CUCM server login page, as shown in step 2 above.



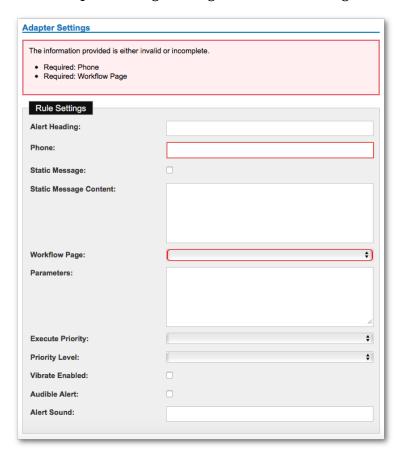
- 5. Locate the plugin file in the subdirectory when the download is complete.
- 6. Attach the JTAPI Library plugin file to the support issue or ticket, note the CUCM server software version number in the issue, and submit the issue to Vocera Support.

## **Working with Vocera CUCM Adapter Rules**

Rules can be configured to trigger the Vocera CUCM Adapter to send messages to Cisco phones registered with the Cisco Unified Communications Manager.

See the Vocera Platform Dataset Guide for information about working with rules. See Configuring a Vocera CUCM Adapter on page 13 for information about the adapter settings.

In the Adapter Settings, configure the Rule Settings fields to manage message delivery.



Setting	Description
Alert Heading	The heading shown on the top of the login screen for the alert. Can be hard-coded text or an attribute expression in the form of an attribute $\#\{\}$ .

Cotting	Description
Setting	Description
Phone	The phone number(s) to which the alert message will be delivered. Can be hard-coded text or an attribute expression in the form of an attribute #{}. If hard-coded, the value can be a single phone number, or multiple phone numbers that are comma-separated.  Required when "Static Message" is not enabled.
Static Message	If enabled, the adapter will send plain text to a Cisco phone. When enabled, the "Parameters" and "Workflow Page" will be disabled and "Static Message Content" will be marked as required. If not enabled, the "Phone" and "WorkflowPage" fields are required and the "Static Message Content" field is disabled.
Static Message Content	The content to be sent as static text. <b>Required if "Static Message" is enabled</b> .
Workflow Page	The workflow page that will be displayed on the phone when the message is delivered. The page will display all currently defined workflow pages grouped by the workflow that contains them. <b>Required when "Static Message" is not enabled</b> .
Parameters	Additional query string parameters that will be passed to the workflow page when it is opened. Parameters are entered in the form "key=value", one per line.
Execute Priority	Defined by Cisco, specifies when the workflow page, audio alert, and vibration occur. The choices are "Immediate", "When Idle", and "Only if Idle"." Immediate" will execute the URL regardless of the phone state, even if other calls or actions are in progress. "When Idle" will execute when the phone becomes idle. "Only If Idle" will execute the URL if the phone is idle, and will never execute the URL if the phone is not idle.
Priority Level	The severity level of the message. Tracked by the device object so that rules can filter out lower severity level messages. Options are "High", "Medium", and "Low".
Vibrate Enabled	If enabled, tells the phone to vibrate when the message is received (based on Execute Priority).
Audible Alert	If enabled, tells the phone to play the sound defined in "Alert Sound" when the message is received (based on Execute Priority).
Alert Sound	The sound file for the phone to play if "Audible Alert" is enabled. Leave this field empty to play the default alert sound.

## **Integrating CUCM with the Vocera Platform**

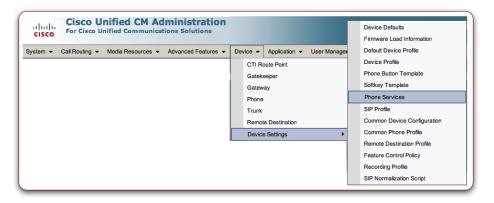
Complete these steps in the order listed to configure Cisco Unified Communications Manager for a Vocera Platform integration.

These steps are performed in the Cisco environment. Contact a Cisco representative for additional information.

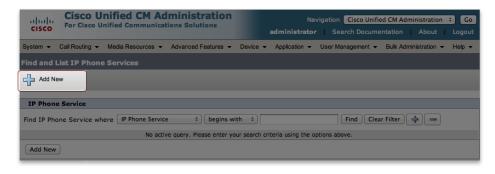
## **Adding Vocera Platform to the List of IP Phone Services**

Complete the fields in the Service Information window precisely as described.

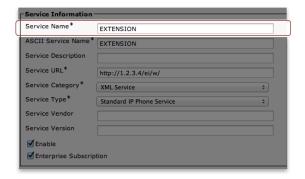
 Select **Device** in the navigation menu, then select **Device Settings > Phone Services** from the dropdown menus, as shown below.



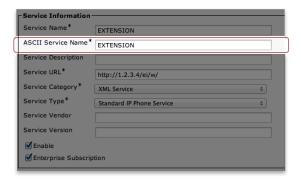
2. Select **Add New** on the Find and List IP Phone Services page.



3. Enter Vocera Platform in the Service Name field.

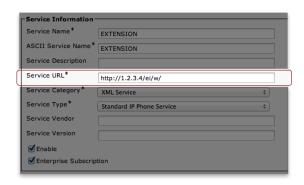


4. Enter Vocera Platform in the ASCII Service Name field.



- 5. Specify a workflow page to be the phone's default workflow, or specify the root URL for workflows (http://{IP}/ei/w/) in order to use the default workflow that is set in the General Settings of the Admin Console. Use the Service URL field to specify a workflow page to be the phone's default, rather than use the organization's default workflow.
  - The URL must be in the format http://{IP}/ei/w/ where {IP} is the IP address for Vocera Platform. This URL will direct the end user to the default workflow that is set in the Admin Console to be the organization's default workflow when Vocera Platform is accessed from the phone's Services.
  - To direct the end user to a workflow page other than the default, include a workflow name at the end of the URL. The URL must be in the format http://{IP}/ei/w/{WorkflowName} where {WorkflowName} is the name of the desired workflow.

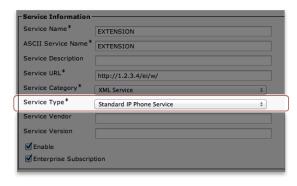
The example below displays the Service URL for a default workflow.



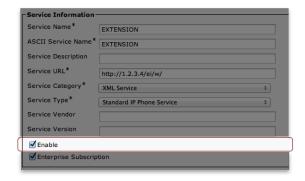
6. Leave the default **XML Service** setting in the Service Category field.



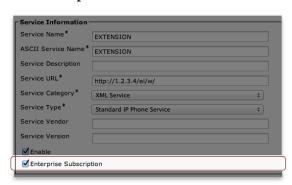
7. Leave the default **Standard IP Phone Service** setting in the Service Type field.



8. Select the **Enable** checkbox.



9. Select the **Enterprise Subscription** checkbox to enable Vocera Platform on all Cisco phones. If Enterprise Subscription is not selected, the Vocera Platform needs to be added as a service on each individual phone.



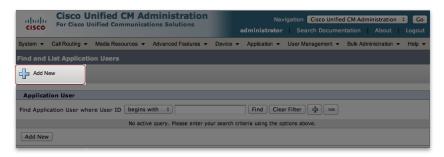
### **Creating an Application User**

Complete the fields on the Application User Information window precisely as described.

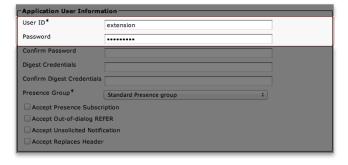
 Select User Management in the navigation menu, then select Application User from the drop-down menu.



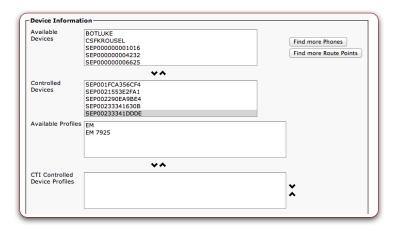
2. Select **Add New** on the Find and List Application Users page.



3. Enter the **User ID** and **Password** in the Application User Information fields. These entries must match (including capitalization) the Vocera Platform Login and Password created in the **User Account Login** fields described in Common Settings.



4. Move phones that should be allowed to work with the Vocera Platform from the **Available Devices** box to the **Controlled Devices** box in the Device Information panel. Highlight the desired devices and use the downward pointing arrow to move them to the Controlled Devices box.



5. Select the **Add to User Group** button in the Permissions Information panel shown below to search for groups. Select the following groups:



**Warning:** All device lines MUST be enabled in CTI. Failure to do so will result in improper device registration which may result in Alerts not being delivered to devices.

- Standard CTI Allow Control of Phones supporting Connected Xfer and conf
- Standard CTI Enabled
- Standard CCM Read Only



## **Adding Phones to Extension IP Phone Service**

Modify the phone template and then update the phones to add them to the Phone Service.

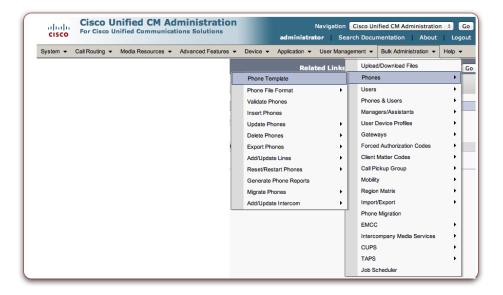
Add each phone enabled in Creating an Application User on page 25 to the Extension IP Phone Service created in Adding Vocera Platform to the List of IP Phone Services on page 22.

To do this, first modify the phone template, and then update the phones.

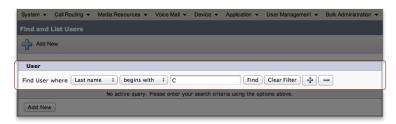
### **Modifying the Phone Template**

Modify the phone template in order to add the enabled phones.

 Select Bulk Administration in the navigation menu, then select Phones > Phone Template from the drop-down menu.



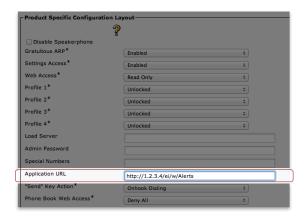
2. Use the query fields in the **Phone** panel to search for a template, or select **Add New** to create the desired template.



3. Select the **Phone Type** from the drop-down menu for which you will create the new phone template. A Cisco 7925 phone is selected in this example.



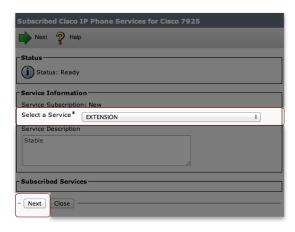
- 4. Enter an **Application URL** in the Product Specific Configuration Layout panel to configure the phone's Push To Talk button for one-click access to Extension.
  - To access a specific workflow, the Application URL must be in the format http://{IP}/ei/w/ {WorkflowName}, where {IP} is the IP Address for Extension and {WorkflowName} is the name of the desired workflow.
  - To access the default workflow from the push to talk button, the Application URL must be in the format http://{IP}/ei/w.



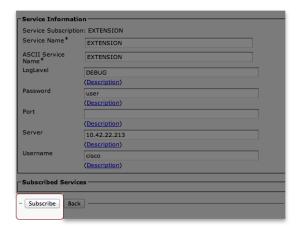
5. Select **Subscribe/Unsubscribe Services** from the drop-down menu in the Related Links field at the top of the page, then select **Go**.



6. Select **Extension** from the drop-down menu in the Select a Service field, then select **Next**.



7. Review the **Service Information** fields, then select **Subscribe** in Subscribed Services.



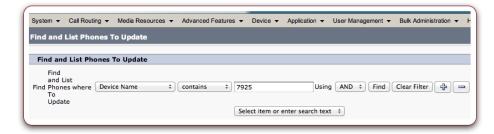
### **Updating the Phones to Add to Extension IP Phone Service**

Update the phones to add them to the Phone Service.

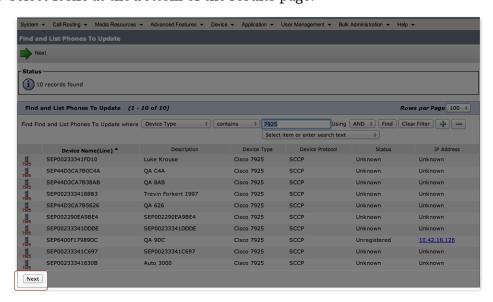
1. Select **Bulk Administration** in the navigation menu, then select **Phones > Update Phones > Query** from the drop-down menus.



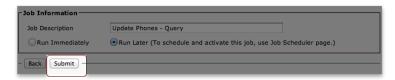
2. Select **Find** to perform a query specified to find the phones that you wish to update.



3. Select **Next** at the bottom of the results page.



4. Select **Submit** at the bottom of the Update Phones page.

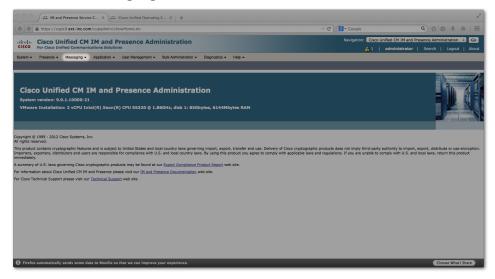


### **Enabling Instant Messaging on Cisco Jabber**

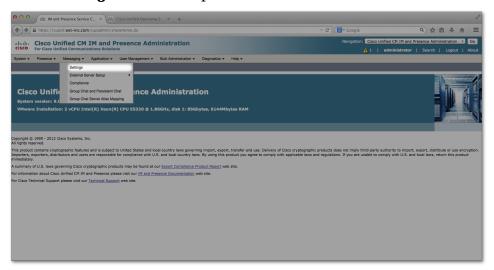
Cisco Jabber is a unified communications application that provides presence and instant messaging capabilities. Jabber enables the Vocera Vina mobile application to utilize these capabilities within the appliance.

To enable Cisco Jabber instant messaging, login to the Cisco Unified CM IM and Presence Console.

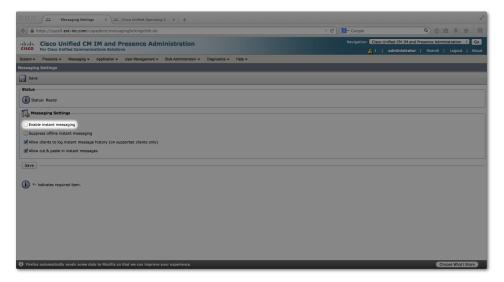
1. Select the **Messaging** tab to expand the drop down menu.



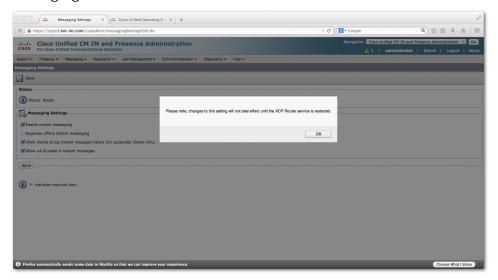
2. Select **Settings** from the drop down menu.



3. Check the Enable instant messaging checkbox.



4. Checking (or unchecking) this checkbox will prompt a menu notifying the user the changes will not take effect until the XCP Router service is restarted. Select OK and then select **Save**. After a restart, instant messaging will be enabled for CUCM.



## **Configuring Cisco Extension Mobility (Optional)**

Cisco Extension Mobility allows users to configure any Cisco phone as their own, on a temporary basis. The Cisco Extension Mobility feature dynamically configures a phone according to the current user profile.

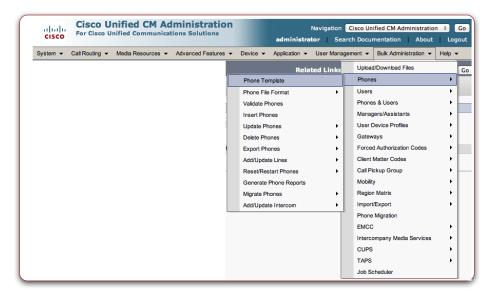
Once a user logs in, the phone adopts the individual user's default device profile information, including line numbers, speed dials, services links, and other user-specific properties of a phone. When a user authenticates on the phone, a login service performs the administrative updates.

For Cisco Extension Mobility to work with the Vocera Platform, each Vocera Platform user account must have the security policy item **PIN Authentication Bypass for Cisco Phones** enabled. See **Security** in the Vocera Platform Administration Guide.

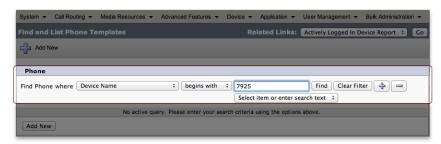
In addition, a **Default User** (see Configuring a Vocera CUCM Adapter on page 13) must not be assigned; as those default settings will override the individual profile.

### **Enabling Extension Mobility for the Device**

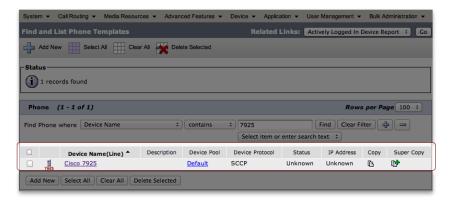
1. Select **Bulk Administration** in the navigation menu, then select **Phones > Phone Template** from the drop-down menus.



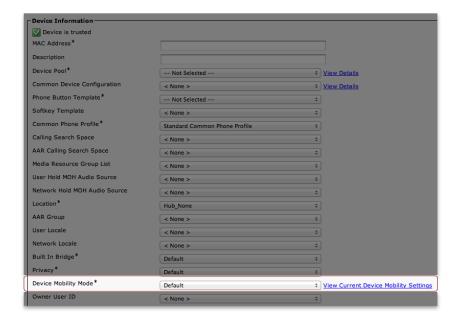
2. Use the query fields in the **Phone** panel to search for a template.



3. Select the **Phone** template.



4. Ensure **Device Mobility Mode** is set to **Default** or **On** for each phone configuration's Device Information.

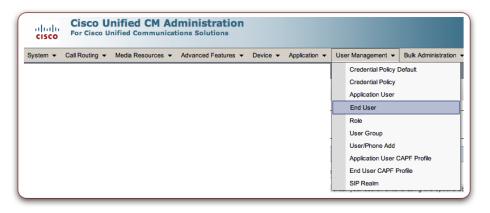


5. Select Enable Extension Mobility in Extension Information.

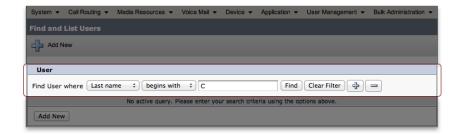


### **Enabling Extension Mobility for the End User**

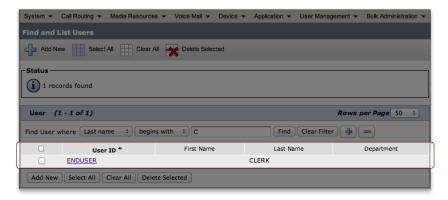
1. Select **User Management** in the navigation menu, then select **End User** from the drop-down menu.



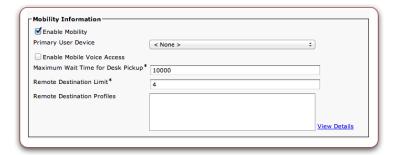
2. Use the query fields in the **User** panel to search for an end user.



3. Select the **User ID** link to access the user information.



4. Select **Enable Mobility** in Mobility Information.



#### **Create Matching User Accounts in Vocera Platform**

Each Cisco Extension Mobility end user must have a matching user account in the Vocera Platform. The login credentials in both the Vocera Platform and Cisco Extension Mobility end user accounts must be exactly the same, including case sensitivity.

You can use the bulk import of users feature (described in **Security** in the Vocera Platform Administration Guide) to create matching user accounts in the Vocera Platform for multiple Cisco accounts. If you do not wish to import a list of users or have only a few users to add to the system, you will create each new user account separately.

Cisco Extension Mobility will not function if a **Default User** is set in Vocera Platform. When a default user is selected, those user settings override the individual user's settings, thereby replacing the Extension Mobility configuration.

For the Vocera Platform to function with Cisco Extension Mobility, each Vocera Platform user account must have the security policy item **PIN Authentication Bypass for Cisco Phones** enabled. This is accomplished by associating the security policy item to a role, and adding the user to a group that has that role assigned. For more information, see **Security** in the Vocera Platform Administration Guide.

## **Understanding Adapter Installation**

Adapters are installed on the Vocera Platform in a solution package, or individually as needed by the customer.

The Vocera Platform uses adapters to integrate with external systems and devices. Each adapter is configured by the user to include information that will allow the Vocera Platform to communicate and interact with a specific type of resource and, depending on the adapter, devices that resource may control. Adapters can allow the Vocera Platform to monitor and collect data, as well as send data out, when triggered manually or automatically.

When implementing Vocera Platform at a customer site, use this document to install an adapter that is not supplied in the Gold Image. Otherwise, you will install a needed adapter when instructed in the solution package installation process described in the Vocera Platform Installation Guide.

### **Recreating a Repository**

In the event that the repository reference file has been compromised, you can re-create the platform repository.

This information should be specified on the related adapter's Release Information page in the wiki. See **Releases** and navigate to the needed adapter.

- 1. Verify that the adapter resides in a repository which is in 'etc/yum.repos.d'.
- 2. If the **repolist** or **yum** commands fail, verify that the file exists and try again. For example, use the following code to verify the repository exists on the Vocera Platform appliance:

[tpx-admin@engage log]\$ cat /etc/yum.repos.d/vocera.repo

3. Verify the output appears as shown.

### **Installing an Adapter**

Install or uninstall a Vocera Platform adapter at a customer site on a Vocera system for a customer.

Execute the following steps using the system's command prompt.

- 1. Verify that the adapter resides in a repository which is in '/etc/yum.repos.d/'.
- 2. Run the following commands:

```
sudo yum clean all
sudo yum check-updates
```

3. Verify that the rpm package to be installed is available using the following command:

```
sudo yum list available | grep extension
```

4. Install the adapter by specifying its rpm package name in place of <package-name> in the code below. (This information should be specified on the related Release Information page in the wiki; see Release Notes.)

```
sudo yum install <package-name>
```

5. Uninstall an adapter by specifying its rpm package name in place of package-name in the code below. (This information should be specified on the related Release Notes page; see Release Notes.) sudo yum remove package name>

### **Practicing an Adapter Installation**

Replicate these steps using the needed adapter package, in order to install adapters other than the example given here.

1. Verify the repo file contains the repos up to and including the release of interest.

2. Execute the following commands:

3. Verify the package is available, using the following command:

```
[tpx-admin@engage log] $ sudo yum list available | grep extension extension-navicare-interface.x86_64 1.3.6-0 Platform 5.0
```

4. Install the needed adapter; in this example, install the Navicare adapter:

```
[tpx-admin@engage log] $ sudo yum install extension-navicare-interface
Loaded plugins: langpacks, product-id, subscription-manager
This system is not registered to Red Hat Subscription Management. You can use
 subscription-manager to register.
Resolving Dependencies
--> Running transaction check
---> Package extension-navicare-interface.x86 64 0:1.3.6-0 will be installed
--> Finished Dependency Resolution
Dependencies Resolved
Package
                                                 Arch
Version
                                Repository
                                                             Size
Installing:
                                                 x86 64
 extension-navicare-interface
 1.3.3-0
                                Quartz
                                                             59 k
Transaction Summary
Install 1 Package
Total download size: 59 k
Installed size: 62 k
Is this ok [y/d/N]: y
Downloading packages:
extension-navicare-interface-1.3.6-0.x86_64.rpm
                                             59 kB 00:00:00
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
 Installing : extension-navicare-interface-1.3.6-0.x86_64
                                                            1/1
 Verifying : extension-navicare-interface-1.3.6-0.x86_64
                                                            1/1
Installed:
  extension-navicare-interface.x86_64 0:1.3.6-0
  Complete!
```

5. This completes the steps to install an adapter.

## **Navigating the Vocera Platform Adapters**

Access the Adapters tab and use the filter or search tools to display a specific adapter.

This page is used by all the adapter guides, and therefore, the adapter used as an example here may not be the adapter that you are working with currently.

1. Access the Vocera Platform Web Console and sign in with your system credentials.



2. Select **Settings > Adapters** in the navigation menu.

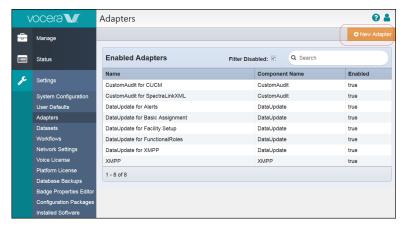


The **Adapters** page displays.

3. Select an adapter to work with from the list displayed in the grid, or select the New Adapter Action option to create a new adapter.

On the **Adapters** page you can identify adapters by their name or component name. The Enabled column (displaying a true or false status) indicates whether the adapter is active on the system, or disabled.

The bottom row of the grid reports the number of adapters displayed, of the available adapters. The Filter Disabled box is checked by default, and displays only the enabled adapters that are configured on the Vocera Platform.



4. Uncheck the Filter Disabled box to display all the adapters that have been installed, including those that are not currently enabled. The column title now displays All Adapters.
The Filter Disabled box is checked by default.



5. Enter a term in the **Search** field to locate a needed adapter on the system.

The search field is identified by a text field with a magnifying glass icon. The search is performed on the Name and Component Name columns.

When results are returned, the column header displays **Adapters Search Results** and an  $\mathbf{x}$  icon allows you to clear the search field.



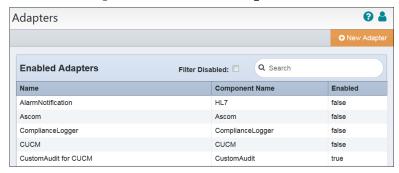
### **Editing an Adapter**

Edit an adapter that has been installed on the Vocera Platform.

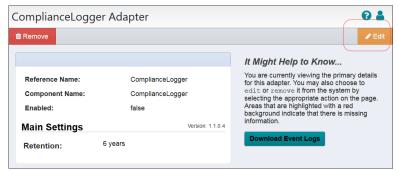
This page is used by all the adapter guides, and therefore, the adapter used as an example here may not be the adapter that you are working with currently.

- 1. Access the Vocera Platform Web Console and navigate to the adapters.

  See Navigating the Vocera Platform Adapters on page 38 for instructions.
- 2. Select the adapter to edit in the **Adapters** list.



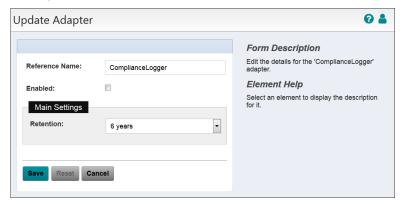
3. Select **Edit** in the adapter's menu.



The **Update Adapter** page for the adapter displays.

4. Edit the adapter's settings to revise the configuration as needed. See the adapter-specific configuration page for details on working with settings for this adapter.

Select an empty field and begin typing, or select an existing value and type over it. To keep an existing value, do not edit that field.



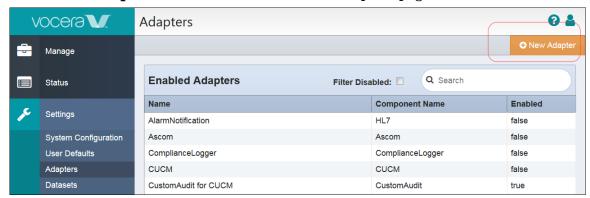
5. Select one of the options to exit the **Update Adapter** page. See Saving an Adapter on page 42 for details.

### **Creating a New Adapter**

Access the Vocera Platform Web Console to work with adapters, or create a new adapter when prompted in the package import process.

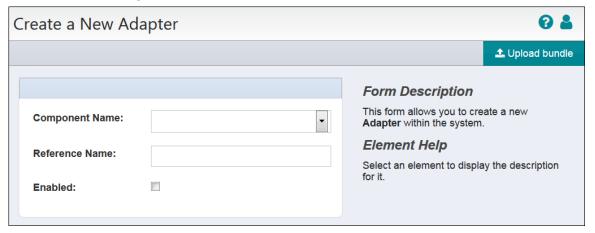
This page is used by all the adapter guides, and therefore, the adapter used as an example here may not be the adapter that you are working with currently.

- 1. Access the Vocera Platform Web Console and navigate to the adapters. See Navigating the Vocera Platform Adapters on page 38 for instructions.
- 2. Select **New Adapter** in the Action menu on the Adapters page.



The **Create a New Adapter** dialog displays.

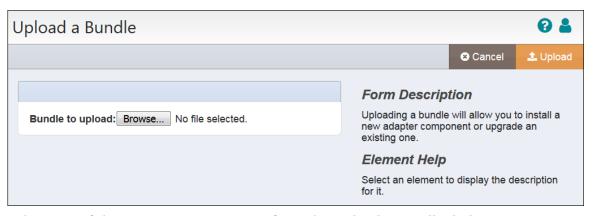
3. Complete the configuration fields.



Name	Description
Component Name *	Select the Component Name field dropdown arrow to display a list of the systems and devices that Vocera currently supports. Select the name of the adapter to create.
Reference Name	Enter a short descriptive name in the Reference Name field to uniquely identify an adapter instance. It may demonstrate the adapter function or other information; for example, Production adapter may differentiate a live adapter from a development or "sandbox" adapter.
Enabled	Select the Enabled check box to allow Vocera Platform to use the new adapter. Vocera ignores the adapter if this option is disabled.

- 4. Select **Upload Bundle** in the Action menu to install a package on a Vocera Platform.

  Use the Upload Bundle feature to install when the adapter is not available in the Component Name dropdown list, and you have downloaded the needed adapter bundle to a storage location.
- 5. Click on **Browse** to navigate to the bundle to install.



- 6. Select one of the Action options to exit from the Upload a Bundle dialog.
  - **Upload**: Upload the selected bundle to the appliance.
  - **Cancel**: Close the Upload a Bundle dialog without making a change to the system.

### Saving an Adapter

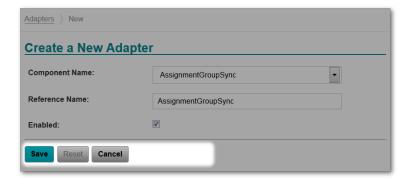
Close an adapter configuration dialog using the Save, Reset, or Cancel options.

This page is used by all the adapter guides, and therefore, the adapter used as an example here may not be the adapter that you are working with currently.

When creating a new adapter, the options at the bottom of the adapter configuration page are Save, and Cancel.

When editing an existing adapter, the options are Save, Reset, and Cancel.

Choose an option to close the dialog:



Option	Description
Save	Select Save to store the adapter configuration in the system, when the fields are set to desired specifications.
Cancel	Select Cancel to close the configuration window without saving your changes to the system.
Reset	Select Reset to clear all fields without closing the window, in order to select other specifications for the adapter's settings.

## **Deactivating an Adapter**

Temporarily deactivate an adapter to avoid unintentional use of it in an implementation.

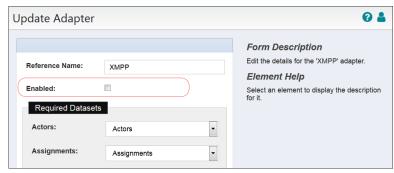
This page is used by all the adapter guides, and therefore, the adapter used as an example here may not be the adapter that you are working with currently.

- 1. Access the Vocera Platform Web Console and navigate to the adapter to deactivate. See Navigating the Vocera Platform Adapters on page 38 for instructions.
- 2. Select **Edit** in the Actions menu to access the Update page for the adapter.



3. Un-check the **Enabled** box to temporarily deactivate the adapter.

When deactivated, the Vocera system will ignore the adapter. You can easily enable or disable the adapter at any time.



4. Select one of the options to exit the **Update Adapter** page. See Saving an Adapter on page 42 for details.

### Removing an Adapter

Permanently remove an adapter from the Vocera system.

This page is used by all the adapter guides, and therefore, the adapter used as an example here may not be the adapter that you are working with currently.

Use the remove function to permanently delete the adapter from the system. Alternatively, you can disable an adapter and the Vocera system will ignore it.

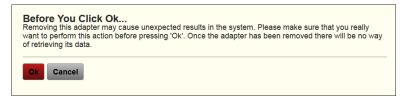


**Warning:** Remove cannot be undone. If any system features use this adapter, removing the adapter prevents the features from functioning.

- 1. Access the Vocera Platform Web Console and navigate to the adapter to remove. See Navigating the Vocera Platform Adapters on page 38 for instructions.
- 2. Select **Remove** in the Actions menu to permanently delete the adapter.



3. Click **Ok** in the confirmation window.



- **Ok**: Confirm the choice to remove the adapter from the system.
- Cancel: Return to the adapter page without making a change.
- 4. Confirm that the adapter no longer displays in the Adapters list view, when a success message displays.

