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Vocera Incoming Email Adapter Configuration Guide

Version 1.17.0

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ADP-incomingemail-1170-Docs build 103

Contents

Understanding a Vocera Incoming Email Adapter Configuration

Configure the Vocera Incoming Email Adapter to receive email from specified sources.

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 Incoming Email Adapter can receive an email and the Vocera Platform can create an entry containing a patient's information such as name, phone number, address, and so on.

The Vocera Incoming Email Adapter receives emails from email addresses that have been enabled within the Vocera Platform. If an email is received from an address that does not match an entry in the list of acceptable senders, then the email is not accepted.

When an email is accepted, the adapter reads the subject and body of that email and matches it with a preexisting message type. The Vocera Platform stores this information in the Data Manager, and can then create an Object (which is a group of related Attributes) depending on how the data is stored
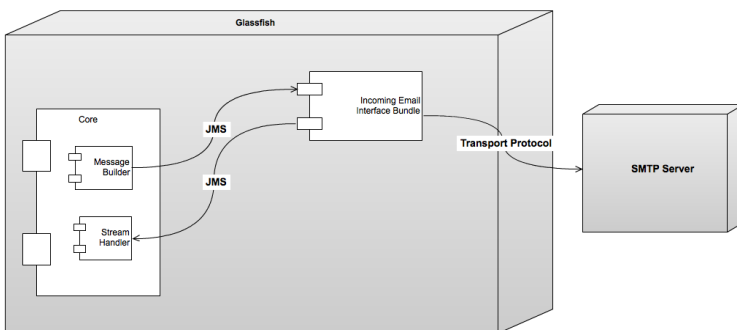
Viewing the Vocera Incoming Email Adapter Requirements

The minimum requirements for a Vocera Incoming Email Adapter installation are described here.

In order to use this adapter, the facility requires an enterprise email system, such as Outlook.

System

The Vocera Incoming Email Adapter is supported on Vocera Platform version 6.0.0 or later.

Ports

The port setting 25 is required for TCP/IP connections to allow the adapter to communicate with an external email system.
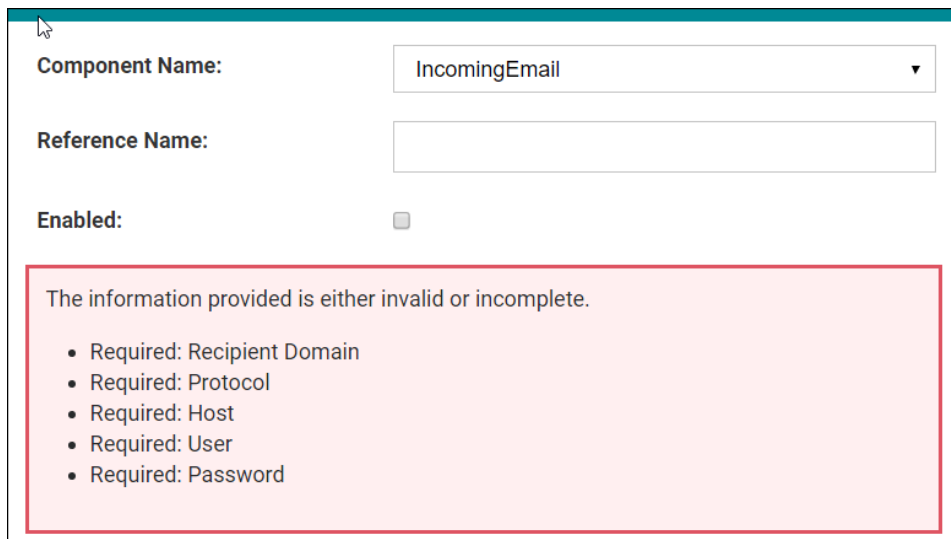
Configuring a Vocera Incoming Email Adapter

These settings enable direct communication between the Vocera Incoming Email 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 16 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 19 and Editing an Adapter on page 18 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.
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.

Configuration Field	Description
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.

5. Complete the **Server Settings** confiuration fields as described in the table.

Configuration Field	Description
Email Server	Select this box to process emails received from the incoming email server.
Recipient Domain	Enter the domain where the incoming emails will be received. Incoming emails are directed to this domain. This defined recipient domain is used for the incoming emails that apply to the Vocera Platform. See Configuring the Facility's Email to Integrate with Vocera on page 12 for information about domain name.
Acceptable Senders	Enter the email addresses, one per line, of the devices from which the Vocera Platform will accept emails. Email from addresses not included in this list will be rejected. The Vocera Platform will accept emails from any sender when this field is left blank. All email addresses from a sender at a domain are accepted when a wildcard is used; follow the format *@domainname.com. See Configuring the Facility's Email to Integrate with Vocera on page 12 for information about configuring senders. **Note:** Only valid email addresses can be used.

6. Complete the **Client Settings** configuration fields as described in the table.

Configuration Fields	Description
Reference Name	Specifiy a name or label for this collection of settings.
Active	Select this box if the Inbox Settings should be active.
Protocol	Specify the email protocol name from the drop down box. For example: IMAP, POP3, IMAPS, POP3S, etc.
Host	Specify the email host server name.
Port	Specify the email server port. The value must be a number between 1 and 65535. If the value is not set, the adapter will use the protocol default port.
User	Specify the email server user.
Password	Specify the email server password.
Retieve Interval	Enter a time, in seconds, to specify how often the adapter should check for new emails. The value must be between 15 and 90 seconds, with 30 seconds being the default.

Configuration Fields	Description
Acceptable Recipients	Enter a list of email addresses, one address per line, that the adapter can accept email from. All addresses at a domain may be accepted with a wildcared of the form, such as *@mydomain.com. Note that any email from address other than those specified will be rejected. If nothing is entered in the field, the default behavior will be to accept email from any email address.
Acceptable Senders	Enter a list of email addresses, one address per line, that the adapter can send email from. All addresses at a domain may be accepted with a wildcared of the form, such as *@mydomain.com. Note that any email from address other than those specified will be rejected. If nothing is entered in the field, the default behavior will be to send email from any email address.

7. Complete the **Message Types** configuration fields as described in the table.

Message Types [Add New Message Type]

▼ **alert**, Devices, (b.+)   Not Active

Reference Name: alert

Active: ☐

Starting Dataset: Devices ▼

Message Recipient

Store Recipient Mailbox?: ☑

Recipient Mailbox Path: recipient_mailbox

Message Sender

Store Sender Mailbox?: ☑

Sender Mailbox Path: sender_mailbox

Message Subject

Store Subject?: ☑

Subject Regex: (a.+)

Subject Regex Mapping: link.attribute

Message Body

Body Regex: (b.+)

Body Regex Mapping: link.attribute

[Remove Message Type]

Save **Reset** **Cancel**

Message Types	Description
Reference Name	Enter the name of the new message type in the Reference Name field. The Message Type header automatically updates to display the new reference name.
Active	Select the **Active** checkbox to activate this message type. The Message Type header automatically updates to display the Active status.
Starting Dataset	Select the **Starting Dataset** from the drop-down menu. All data mappings used in this adapter configuration are relative to the selected Starting Dataset reference. The Message Type header automatically updates to display the starting dataset name.
Message Recipient	The Message Recipient information below describes where the recipient part of the received message is stored in the Vocera Platform, if selected.
Store Recipient Mailbox	Select the **Store Recipient Mailbox** checkbox if the recipient mailbox should be stored.
Recipient Mailbox Path	Specify the attribute expression that stores the recipient of the incoming message in this field. This entry is where the Vocera Platform acquires the data needed to send and receive messages.
Message Sender	The Message Sender information below describes where that part of the received message will be stored in the Vocera Platform, if selected.
Store Sender Mailbox	Select the **Store Sender Mailbox** checkbox if the sender's mailbox should be saved.
Sender Mailbox Path	Enter the attribute path that stores the sender of the incoming message in the Sender Mailbox Path field. The Vocera Platform receives messages from this attribute path.
Message Subject	The Message Subject information below describes where the subject part of the received message will be stored in the Vocera Platform, if selected.
Store Subject	Select the **Store Subject** checkbox if the subject of incoming emails should be saved.
Subject Regex	Specify a Regex string to parse the data of the incoming message into the value paths contained in the Subject Regex Mapping field, shown in the next section. A Regex string which stores any alert regardless of data input to ensure that all alerts are recorded and stored is (.+). **Note:** To prevent high CPU loads, each regular expression used in the appliance is limited to run for five seconds. If the regular expression's processing time exceeds this threshold, an audit event is generated and the regex fails to match results. See **Understanding Regular Expressions** for an overview explanation and examples of Regex code and mappings.
Subject Regex Mapping	Specify one or more attributes or attribute paths in the **Subject Regex Mapping** field. Enter only one attribute per line that corresponds to a segment in the Regex code. The Regex string (.+) is only used with the alert_type mapping.

Message Types	Description
Message Body	The Message Body information below describes where the body section of an incoming email will be stored in the Vocera Platform.
Body Regex	Specify a Regex string to parse the data of the incoming message into the value paths contained in the Body Regex Mapping field, shown in the next section. A Regex string which stores any alert regardless of data input to ensure that all alerts are recorded and sent is (.+). See **Understanding Regular Expressions** for an overview explanation and examples of Regex code and mappings.
Body Regex Mapping	Specify one or more attributes or attribute paths in the **Body Regex Mapping** field. Enter only one attribute per line that corresponds to a segment in the Regex code. The Regex string (.+) is only used with the alert_type mapping. **Note:** Repeat this process until all of the necessary Message Types are in place to handle any format or combination of data sent within a facility pertaining to patient location.

8. Select one of the available options to exit the adapter configuration page. See for details.

Understanding the Vocera Incoming Email Adapter Rules

This adapter does not require dataset rule configuration.

Configuring the Facility's Email to Integrate with Vocera

The customer's facility and Vocera Platform must define the same domain name and acceptable sender list, and the facility's MX record must specify the DNS server to accept the emails.

Define the Recipient Domain Name

Define a unique domain name to be used for the incoming emails that apply only to the Vocera Platform. For example, vocera.hospitalname.org may be the domain name for a hospital to receive emails associated with Vocera.

In order to process emails with this domain name that are received by Vocera Platform, verify that the domain name is entered in the Recipient Domain field in the Common Settings section of the Vocera Incoming Email Adapter configuration settings. See Configuring a Vocera Incoming Email Adapter on page 5.

Define the Acceptable Senders

Define the acceptable addresses the sending system can send to the domain name. The recipient domain accepts email from only the defined addresses, such as 12345@vocera.hospitalname.org, and rejects email from any other address.

In order to send email to the Vocera Platform, verify the defined list of email addresses displayed in the Acceptable Senders field in the Common Settings section of the Vocera Incoming Email Adapter configuration settings. See Configuring a Vocera Incoming Email Adapter on page 5.

Define the MX Record

Enter a mail exchanger record (MX record) in the DNS server that will route the incoming email to the Vocera Platform. The MX record specifies the mail server designated to accept email messages for the recipient's domain.

The MX record contains the specified recipient domain and the IP address of the Vocera Platform.

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.

   ```
   #----------------------------------------------------------------------------
   # NOTICE: Only use the General Availability (platform-6.X-ga) repository for customer
    deployments.
   # Use of Controlled Release (platform-6.X-cr) or Software Quality Assurance
    (platform-6.X-sqa) in
   # accordance to process QOP-75-01 Production Work Order and History Record, contact
    your
   # manager for questions.
   #----------------------------------------------------------------------------
   [Platform-6.0]
   name=Platform-6.0
   baseurl=https://box.voceracommunications.com/Platform-6.0-GA
   enabled=1
   gpgcheck=0
   ```

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.

```
[tpx-admin@engage log]$ cat /etc/yum.repos.d/vocera.repo
#--------------------------------------------------------------------------------
# NOTICE: Only use the General Availability (platform-6.X-ga) repository for customer
 deployments.
# Use of Controlled Release (platform-6.X-cr) or Software Quality Assurance
 (platform-6.X-sqa) in
# accordance to process QOP-75-01 Production Work Order and History Record, contact
 your
# manager for questions.
#--------------------------------------------------------------------------------
[Platform-6.0]
name=Platform-6.0
baseurl=https://box.voceracommunications.com/Platform-6.0-GA
enabled=1
gpgcheck=0
```

2. Execute the following commands:

```
[tpx-admin@engage log] $ sudo yum check-updates
Loaded plugins: langpacks, product-id, subscription-manager
This system is not registered to Red Hat Subscription Management. You can use
 subscription-manager to register.
Quartz
                                               | 3.6 kB  00:00:00

(1/2): Quartz/group_gz
                                               |  483 B  00:00:00

(2/2): Quartz/primary_db
                                               |  29 kB  00:00:00
```

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:
 extension-navicare-interface                      x86_64
 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.
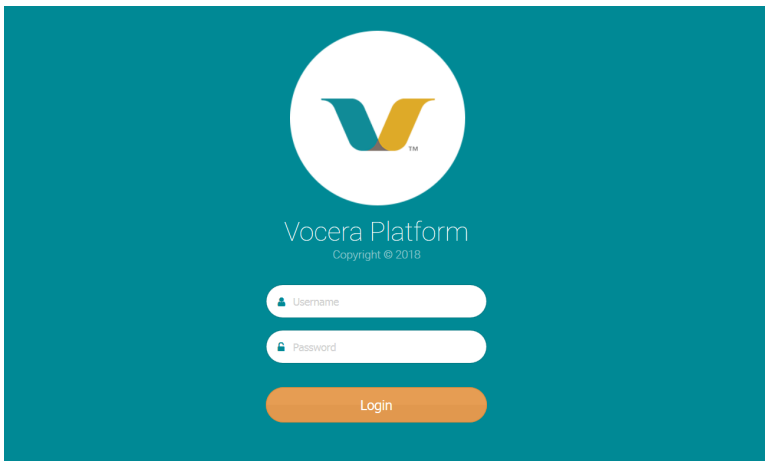
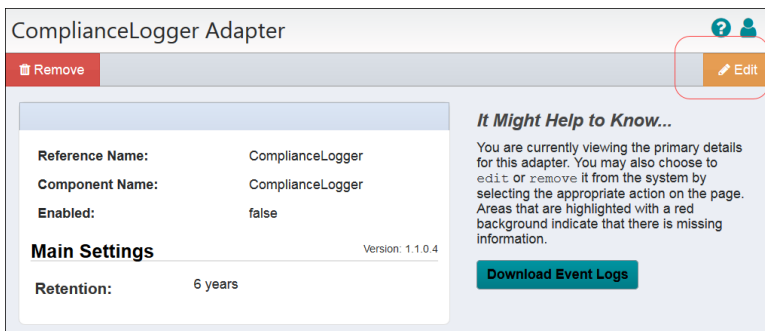2. Select **Settings > Adapters** in the navigation menu.
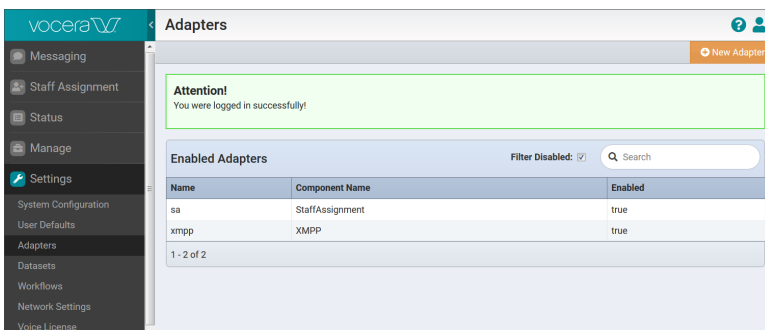
    The **Adapters** page displays.
3. Select an adapter to work with from the list displayed in the grid, or select the New Adapter Action option to create a new adapter.

    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.

16
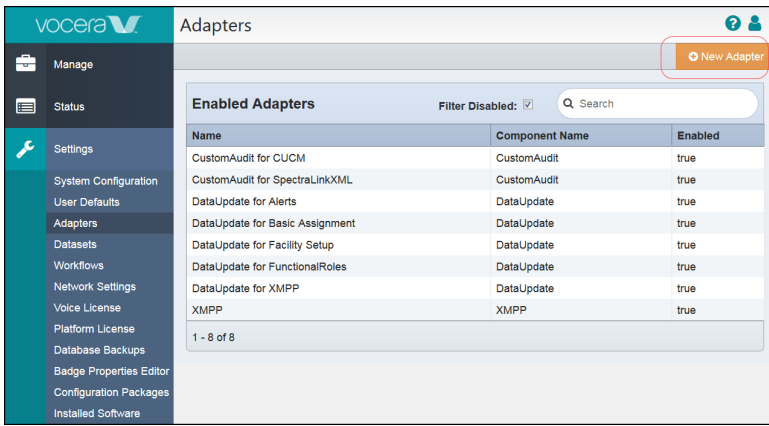
4. Uncheck the **Filter Disabled** box to display all the adapters that have been installed, including those that are not currently enabled. The column title now displays **All Adapters**.

   The Filter Disabled box is checked by default.
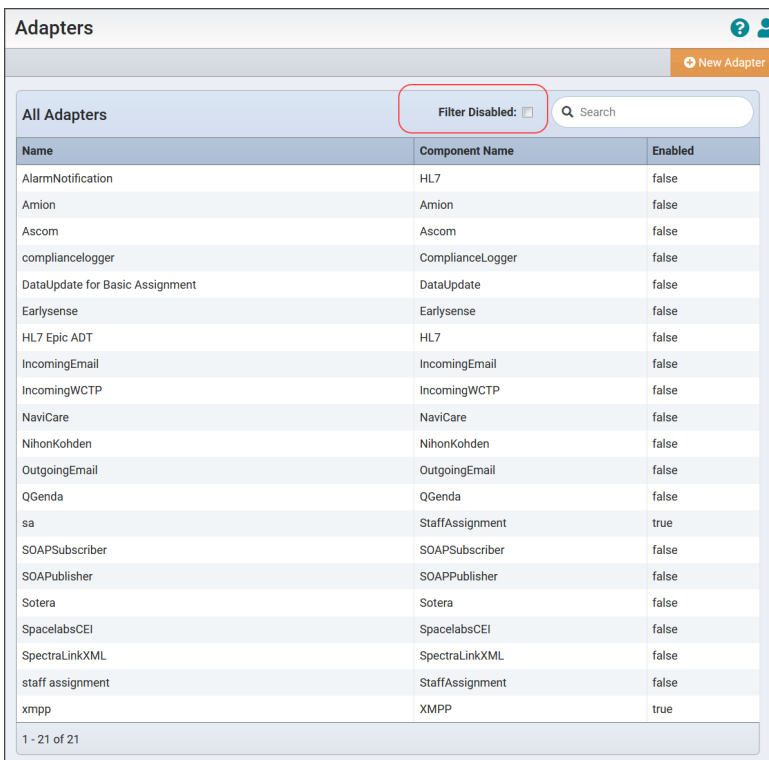
5. Enter a term in the **Search** field to locate a needed adapter on the system.

   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 **x** icon allows you to clear the search field.
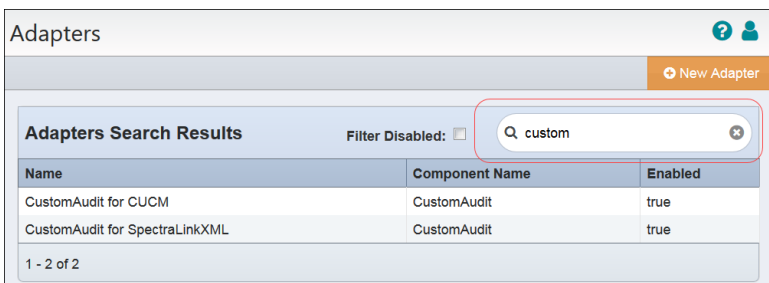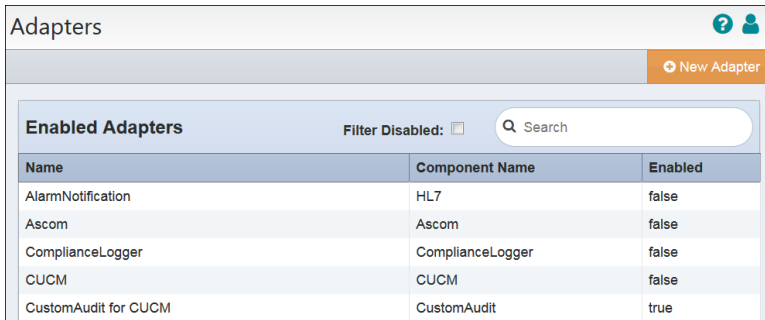
Editing an Adapter

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 16 for instructions.

2. Select the adapter to edit in the **Adapters** list.

3. Select **Edit** in the adapter's menu.
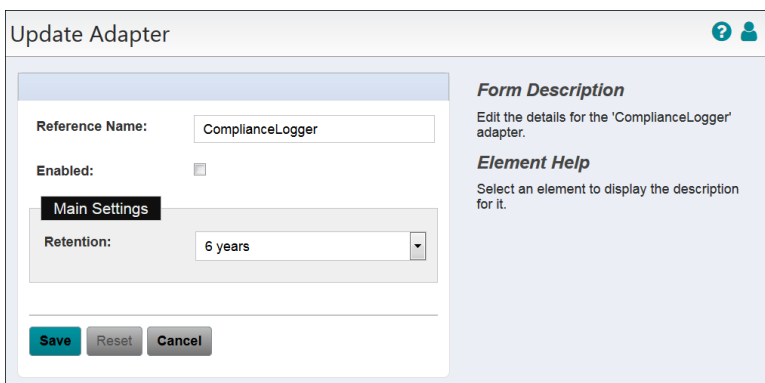
   The **Update Adapter** page for the adapter displays.

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 20 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 for instructions.
2. Select **New Adapter** in the Action menu on the Adapters page.
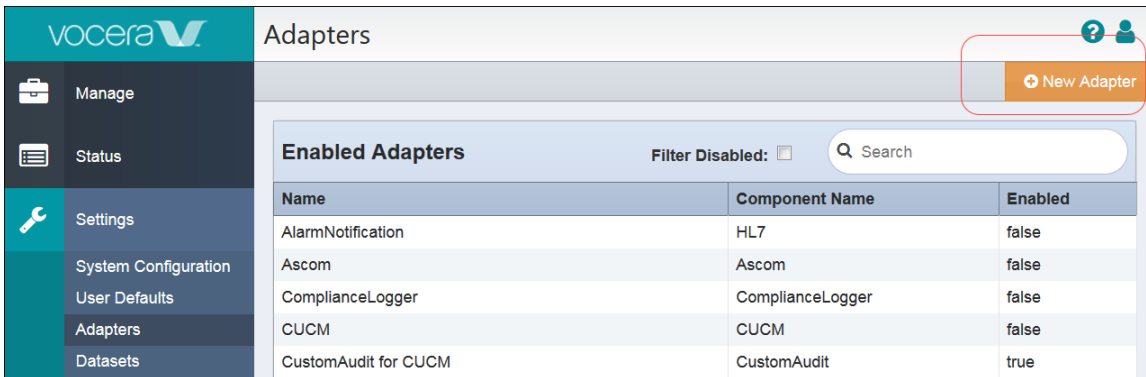
   The **Create a New Adapter** dialog displays.
3. Complete the configuration fields.
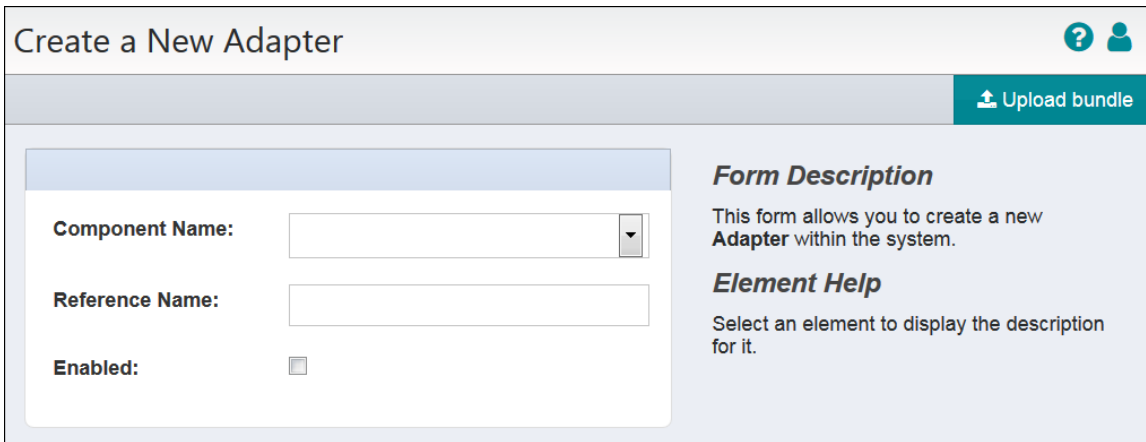
Name	Description
Component Name *	Select the Component Name field dropdown arrow to display a list of the systems and devices that Vocera currently supports. Select the name of the adapter to create.
Reference Name	Enter a short descriptive name in the Reference Name field to uniquely identify an adapter 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.
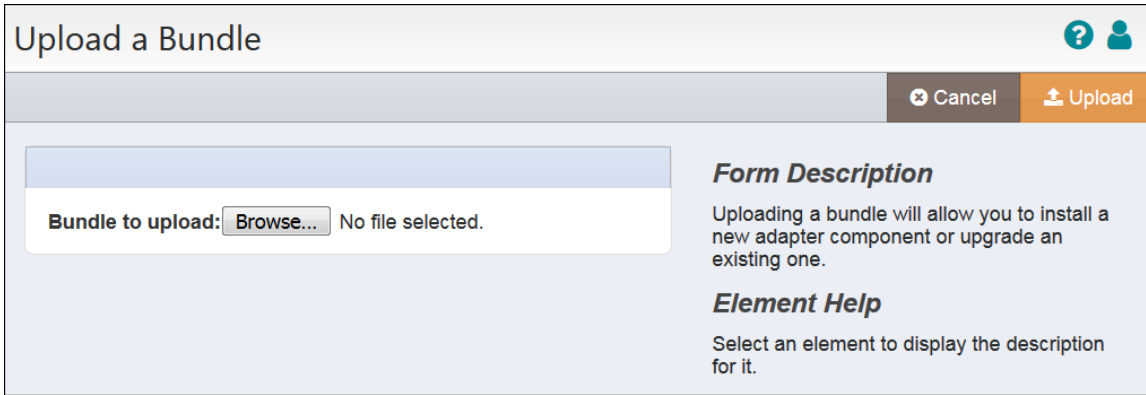
6. Select one of the Action options to exit from the Upload a Bundle dialog.
   - **Upload**: Upload the selected bundle to the appliance.
   - **Cancel**: Close the Upload a Bundle dialog without making a change to the system.

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:
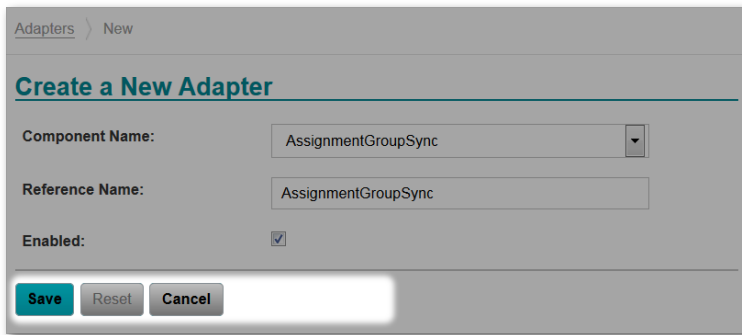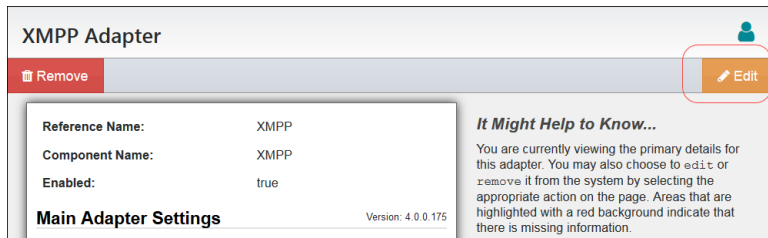
Option	Description
Save	Select Save to store the adapter configuration in the system, when the fields are set to desired specifications.
Cancel	Select Cancel to close the configuration window without saving your changes to the system.
Reset	Select Reset to clear all fields without closing the window, 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 16 for instructions.

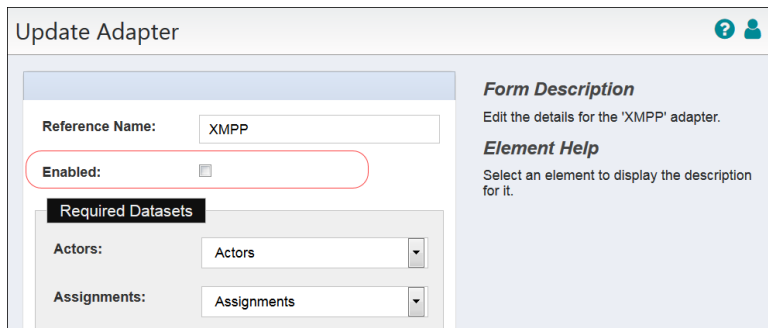2. Select **Edit** in the Actions menu to access the Update page for the adapter.

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 20 for details.

Removing an Adapter

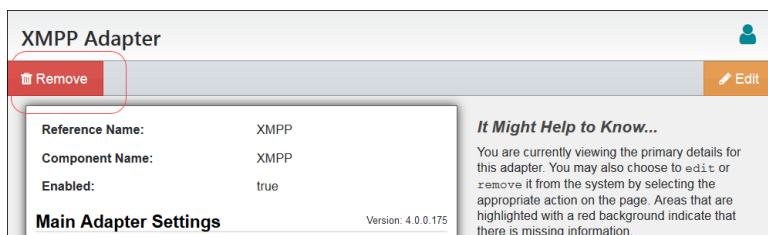Permanently remove an adapter from the Vocera system.

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 16 for instructions.

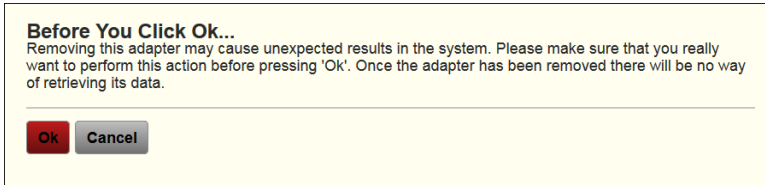2. Select **Remove** in the Actions menu to permanently delete the adapter.

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

Before You Click Ok...
Removing this adapter may cause unexpected results in the system. Please make sure that you really want to perform this action before pressing 'Ok'. Once the adapter has been removed there will be no way of retrieving its data.

Ok   Cancel

- **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.

Adapters

⊕ New Adapter

Attention!
The adapter was removed from the system successfully.