

Vocera LDAP Adapter Configuration Guide

Version 3.0.0

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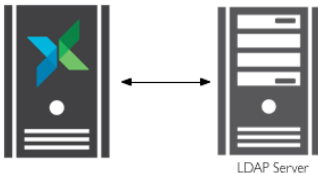
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Understanding a Vocera LDAP Adapter Configuration

Configure a Vocera LDAP Adapter to enable the customer to use single sign on authentication in the system.

Adapters send information to and receive information from the Vocera Platform, as well as monitor and collect data. Each adapter is configured to allow Vocera Platform to communicate with a specific type of resource and any devices that resource may control. For example, the Vocera LDAP Adapter connects to an LDAP server to provide authentication, and to retrieve and map LDAP users to Vocera Platform users.



Vocera Platform provides the ability to connect to a Lightweight Directory Access Protocol (LDAP) server, allowing users to authenticate with the same set of credentials they use elsewhere in their organization. The Vocera LDAP Adapter configuration settings allow facility administrators to use the organization's existing security configurations, rather than create unique users, groups, or security policies to access the Vocera Platform. Vocera Platform allows connection to only one LDAP server per organization.

A new LDAP user account is not visible in Vocera Platform until the new user logs into the system. If an organization uses PIN authorization security for devices, such as a Smartphone, the user will be prompted to create the PIN when they first log into the Vocera Platform platform. Vocera Platform will not retrieve a user's PIN from the organization's LDAP server.

Vocera Platform leverages the organization's existing LDAP user and group configurations to manage access securely. The organization's groups can be assigned to membership in Vocera Platform groups. Retrieved LDAP groups are assigned membership in Vocera Platform roles and groups to manage system access.

The Vocera Platform appliance must be connected to the organization's LDAP server to retrieve available attributes and groups. Once collected, you can edit the mappings that pair the data stored in the organization's LDAP server with system attributes in order to allow users to authenticate in Vocera Platform. Vocera Platform supports most LDAP servers, including Microsoft Active Directory (AD).

LDAP servers and clients communicate by defining a directory service and access to the service. A directory service information tree (DIT) is composed of entries that have a set of named components called attributes to hold the data for that entry. An attribute consists of its name, a type, and the value for the attribute. A schema specifies the attributes for the entries in an LDAP server by defining the rules for which attributes may be used in an entry, the kinds of values that those attributes may have, and how clients may interact with those values. These directory entries are arranged in a hierarchical structure, starting at a base entry, and then branching down into individual entries.

Each entry in a directory tree can be located by its distinguished name (DN). The DN consists of a string of relative distinguished names (RDNs). An RDN is composed of one or more attribute name and value pairs. For example, the RDN for the entry cn=John Smith contains the attribute name of cn (common name) and the value of John Smith. A DN is composed of an entry's RDN followed by all of the RDNs (separated by commas or semicolons) found while moving up the tree toward the base entry.



Warning: Creating a group on the LDAP server and mapping that LDAP group to USERS\DOMAIN USERS in Vocera Platform will prevent successful Vocera LDAP Adapter integration with the hospital LDAP server.

Users in LDAP need to be assigned to groups inside of Active Directory, other than the Domain Users group, for LDAP to work properly with Vocera Platform. Domain Users is the primary group for users in Active Directory and this group's memberships are not visible via LDAP as a "memberOf" user attribute. LDAP users have to be a member of a group created on the LDAP server for Vocera Platform to use in mappings, not the default Domain Users.

Viewing the Vocera LDAP Adapter Requirements

A Vocera LDAP Adapter uses these minimum requirements in a Vocera Platform installation.

System

The Vocera LDAP Adapter is designed to connect Vocera Platform to one LDAP server per organization.

Port

Port **389/tcp** is the port the Vocera Platform will use to communicate with the facility's LDAP server. Port 663/tcp is used for SSL communication.

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 **ACTORS Dataset** stores all actors.
- The **FACILITIES Dataset** stores all facility information. Represents a physical building location or campus.
- The **GROUPS Dataset** stores all user groups.
- The **GROUP_MEMBERS Dataset** stores all the members in a group.
- The **USERS Dataset** stores all Vocera users.

ACTORS Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Link	groups	actor	False	True	N/A	One-to-many	The ACTORS Dataset is linked to the GROUP_MEMBERS Dataset, and the link order is 1:n (one actor associated to many group_members)

FACILITIES Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Attribute	name	N/A	True	N/A	N/A	String	Attribute that stores the unique name for the facility.
Link	groups	facility	False	True	N/A	One-to-many	The FACILITIES Dataset is linked to the GROUPS Dataset, and the link order is 1:n (one facility associated to many groups)

GROUPS Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Attribute	name	N/A	True	N/A	N/A	String	Attribute that stores the name of the group.
Attribute	ldap_dn	N/A	False	N/A	False	String	Attribute that stores the distinguished name of the group in LDAP.

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Link	facility	groups	True	False	N/A	Many-to-one	The GROUPS Dataset is linked to the FACILITIES Dataset, and the link order is n:1 (many groups associated to one facility)
Link	members	group	False	True	N/A	One-to-many	The GROUPS Dataset is linked to the GROUP_MEMBERS Dataset, and the link order is 1:n (one group associated to many group_members)

GROUP_MEMBERS Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Link	actor	groups	True	False	N/A	Many-to-one	The GROUP_MEMBERS Dataset is linked to the ACTORS Dataset, and the link order is n:1 (many group_members associated to one actor)
Link	group	members	True	False	N/A	Many-to-one	The GROUP_MEMBERS Dataset is linked to the GROUPS Dataset, and the link order is n:1 (many group_members associated to one group)

USERS Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Attribute	login	N/A	True	N/A	N/A	String	Attribute that stores the login name of the user.
Attribute	active	N/A	False	N/A	False	String	Attribute that stores whether or not the user's account is enabled.
Attribute	ldap_dn	N/A	False	N/A	False	String	Attribute that stores internal use only.

Configuring a Vocera LDAP Adapter

The Vocera LDAP Adapter settings enable direct communication between the 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 22 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 25 and [Editing an Adapter](#) on page 24 for instruction as needed.
The configuration fields are the same for new and existing adapters.

Update Adapter

Reference Name:

ABS LDAP

Enabled:

☐

Required Datasets

Actors:

Actors

Groups:

Groups

Group members:

GroupMembers

Sites:

Sites

Users:

Users

Set up a connection to an LDAP or ActiveDirectory server to allow users to authenticate using the same credentials they do elsewhere in the organization. Each configuration allows one LDAP server per organization.

LDAP Settings

Use Automatic Discovery:

☐

LDAP Server:

127.0.0.1

LDAP Port:

389

Use SSL:

☐

Base DN:

DC=vocera,DC=dom

DN of Schema:

CN=Schema,CN=Configuration,DC=vocera,DC=dor

DN of Service Account:

CN=Holodeck Admin,CN=Users,DC=vocera,DC=do

Service Account Password:

.....

Site:

Global

Read Attributes

Connect to the facility's LDAP server to retrieve the attributes. This will take a few minutes, depending on the quantity of data to retrieve from LDAP. Additionally, the attributes will be read from Vocera.

The Adapter must be active and running in order to read attributes. To use new settings, the configuration must be saved first.

Retrieve Attributes

Attribute Mappings

Once the data are retrieved, edit the configuration to map Vocera attributes to LDAP attributes.

Vocera Attribute:

LDAP Attribute:

[Add Mapping]

login

sAMAccountName

ldap_dn

distinguishedName

first_name

givenName

[Remove Mapping]

last_name

sn

[Remove Mapping]

middle_initials

initials

[Remove Mapping]

email

mail

[Remove Mapping]

Group Mappings

Once the data are retrieved, edit the configuration to map Vocera groups to LDAP groups.

Vocera Group Name:

LDAP Group:

[Add Mapping]

Permissions - Administrator

Holodeck-Group

[Remove Mapping]

User Principal Mapping

[Add]

▼ Email Address: mail

Active

Principal Type:

Email Address

Active:

☒

LDAP Attribute:

mail

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.
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.

5. Complete the **LDAP Settings** configuration fields as described in the table.

Set up a connection to an LDAP or ActiveDirectory server to allow users to authenticate using the same credentials they do elsewhere in the organization. Each configuration allows one LDAP server per organization. The LDAP Settings section displays example settings for server connections, and must be changed to the appropriate settings for the organization's LDAP server.



Note: Once you have entered the LDAP Settings information in this section, click the **Save** button at the bottom of the page. In order to retrieve the attributes and groups from the LDAP server, the adapter must first be active and running in the system.

LDAP Settings

Use Automatic Discovery: ☒

Use SSL: ☐

Base DN:


DN of Schema:

DN of Service Account:

Service Account Password:

Site:

LDAP Settings Field	Description
Use Automatic Discovery	Check the Use Automatic Discovery box to automatically discover the LDAP server(s) for the given base Distinguished Name (DN). Select this option instead of using the LDAP Server and Port settings described below.

LDAP Settings Field	Description
LDAP Server	Enter the host name or IP address of the LDAP server hosting the facility's directory service. Vocera Platform supports one LDAP server connection per organization.
LDAP Port	Enter the port, usually 389/tcp , that Vocera Platform will use to communicate with the facility's LDAP server. The LDAP port setting must match the port set in the LDAP server.
Use SSL	Check the SSL box to set the port to 636/tcp . Toggle this checkbox on and off to view the default port settings for the LDAP Port and Use SSL fields. Select the Use SSL checkbox to enforce Secure Sockets Layer (SSL) security for communication over the Internet when retrieving data from the directory service.
Base DN	Enter the Distinguished Name (DN) for the top level entry in the LDAP directory. The base DN describes where to load users and groups. Some example entry names include CN=Users for the common name attribute, or DC=example.com for a domain component attribute. This must be a domain partition root; other partitions, such as OU or Organization Unit, will not synchronize properly.
DN of Schema	Enter the Distinguished Name (DN) of the facility's LDAP schema to obtain the set of rules governing what can be stored as entries in the LDAP directory. This allows Vocera Platform to retrieve attributes from LDAP to match to the Users dataset.
DN of Service Account	Enter the DN of the LDAP Service Account for Vocera Platform to use to authenticate with the organization's server. Leave this field blank for anonymous access.
Service Account Password	Enter the password for the LDAP Service Account for Vocera Platform to use to authenticate with the organization's server. Leave this field blank for anonymous access.
Site	Select a Vocera Platform site name from the dropdown list. This site will be linked to all new users and groups.  Note: During synchronization, existing users will not be linked to the selected site if they are already linked to a different site. See Synchronizing Users and Groups on page 17.

6. Complete the **Read Attributes** configuration fields as described in the table.

Read Attributes

Connect to the facility's LDAP server to retrieve the attributes. This will take a few minutes, depending on the quantity of data to retrieve from LDAP. Additionally, the attributes will be read from Vocera.

The Adapter must be active and running in order to read attributes. To use new settings, the configuration must be saved first.

Retrieve Attributes

The adapter is not active.

Read Attributes Field	Description
Retrieve Attributes and Groups	<p>Once connected to the LDAP server, you can read the attributes and groups in the organization's directory service.</p> <p>Click Save at the bottom of the adapter page, if LDAP settings were just added or changed. The Vocera LDAP Adapter must be running, and the configuration must be saved if new settings were applied, in order to access the service.</p> <p>Select the Retrieve Attributes and Groups button in the Read Attributes and Groups section to collect all configured attributes and groups from the LDAP server. The retrieval will take several minutes, depending on the quantity of data to transfer.</p>

7. Complete the **Attribute Mappings** configuration fields as described in the table.

Attribute Mappings

Once the data are retrieved, edit the configuration to map Vocera attributes to LDAP attributes.

Vocera Attribute:	LDAP Attribute:	
login	sAMAccountName	
ldap_dn	distinguishedName	
first_name	givenName	[Remove Mapping]
last_name	sn	[Remove Mapping]
middle_initials	initials	[Remove Mapping]
email	mail	[Remove Mapping]

[Add Mapping]

If a mapping has already been set up, the existing mapping will be validated against the new LDAP Attributes and new USERS Dataset Attributes. If the mapping is still valid (both the USERS Attributes and the LDAP Attributes exist), the user will be able to save the form. If any mapping is invalid (either a USERS Attribute or an LDAP Attribute does not exist) the user will not be able to save the form.

Refer to [Storing LDAP Images and Binary Data in User Attributes](#) on page 16 for information about mapping binary data, such as photos.

The following default attributes are paired when there are no pre-existing mappings for the systems:

Vocera	maps to	LDAP
USERS.login	maps to	LDAP:sAMAccountName
USERS.ldap_dn	maps to	LDAP:distinguishedName
USERS.first_name	maps to	LDAP:givenName
USERS.last_name	maps to	LDAP:sn
USERS.middle_initials	maps to	LDAP:initials
USERS.email	maps to	LDAP:mail

After the data is retrieved from the LDAP server, map Vocera Platform attributes to the retrieved LDAP attributes. The attributes **login** and **ldap_dn** are required.

Attribute Mappings Field	Description
Vocera Attribute	Select a mapping for a Vocera Platform attribute.
LDAP Attribute	Select a mapping for an LDAP attribute.

8. Complete the **Group Mappings** configuration fields as described in the table.

Group Mappings

Once the data are retrieved, edit the configuration to map Vocera groups to LDAP groups.

Vocera Group Name:	LDAP Group:	[Add Mapping]
Permissions - Administrator	Holodeck-Group	[Remove Mapping]

At most one mapping should exist in each section for any particular LDAP group, although this is not enforced.

Group Mappings Field	Description
Vocera Group Name	Select a mapping for a Vocera Platform Group. Enter the Vocera Platform group name to which an LDAP group will be mapped. Group names provide auto completion from the retrieved Vocera Platform groups based on the configured site, but they can be any value (if a Vocera Platform group does not exist for the group name, a new group will be created and a warning will be shown).
LDAP Group	Select a mapping for an LDAP Group. Choose from the LDAP groups found during synchronization. LDAP group names provide auto completion which will search the configured AD Server for groups matching the keyword. LDAP groups that do not exist in the AD server will result in an error message preventing updating the configuration until a valid LDAP group is specified.

9. Complete the **User Principal Mapping** configuration fields as described in the table.

User Principal Mapping

[Add]

▼ Email Address: mail Active

Principal Type: Email Address

Active: ☒

LDAP Attribute: mail

Regular Expression: *

LDAP Value Mapping: \$0

[Remove]

LDAP matches externally authenticated users to LDAP directory entries using the user's principal values. LDAP allows 0 or more mappings from a principal value type to an LDAP attribute which will be matched to identify the LDAP entry. The user principal mapping is required for SSO Kerberos use in authentication and generating a keytab file. See **Establishing Security** in the [Vocera Platform Administration Guide](#).

In addition to the given configuration, every instance is an implicit mapping from the user's username to the login attribute configured in the attribute mapping (using the unmodified username).

Each user is looked up in LDAP based on the requested or authenticated identity and their Vocera Platform data is updated to match their LDAP data. Users are considered authorized only if they are a member of at least one of the mapped LDAP groups. Authentication adds a step to check their password against LDAP.

User Principal Mapping Field	Description
Principal Type	Select the type of principal this mapping supports from the dropdown list. A principal represents a unique identity. Options provided are NT Principal, X.509 Certificate Subject, Email Address, Kerberos Principal, or Other Principal.

User Principal Mapping Field	Description
Active	Check the Active box to enable the configuration in the Vocera Platform system.
LDAP Attribute	Select the LDAP attribute from the dropdown list to which the principal value will be matched.
Regular Expression	Enter the regular expression which the given principal type value must match to be matched to LDAP.
LDAP Value Mapping	Enter a regular expression mapping for the value to use in searching for the principal in LDAP. A mapping of '\$0' will leave the value unchanged.

10. Select one of the available options to exit the adapter configuration page. See [Saving an Adapter](#) on page 26 for details.

Storing LDAP Images and Binary Data in User Attributes

Vocera LDAP Adapter can be used to store Active Directory (AD) binary data in user attributes, including an image of up to 1 MB.

You can use Vocera LDAP Adapter to store a JPEG, PNG, or GIF image when a binary attribute is mapped to the user photo field in the user attributes. If the AD binary attribute contains multiple photos, the largest which is less than the maximum size (1 MB) will be stored on the user.

Both the Vocera attributes 'photo' and 'photo_type' exist in the system. When mapping the 'photo' field, the Vocera LDAP Adapter will automatically populate the 'photo_type' field with the corresponding Content-Type. You should not attempt to map both fields in the adapter's Attribute Mappings configuration.

For example, a common mapping to access the thumbnail photo for users would map the Vocera attribute "USERS.photo" to the LDAP attribute "LDAP:thumbnailPhoto" as shown in the example below. As mentioned, 'photo_type' field is not mapped in Attribute Mappings because the adapter will automatically populate it with the Content-Type.

Attribute Mappings

Once the data are retrieved, edit the configuration to map Vocera attributes to LDAP attributes.

Vocera Attribute:	LDAP Attribute:	[Add Mapping]
login	sAMAccountName	
ldap_dn	distinguishedName	
first_name	givenName	[Remove Mapping]
last_name	sn	[Remove Mapping]
middle_initials	initials	[Remove Mapping]
photo	thumbnailPhoto	[Remove Mapping]

Synchronizing Users and Groups

Periodically the Vocera LDAP Adapter synchronizes Vocera Platform users and groups with the users and groups on the LDAP server.


The Vocera LDAP Adapter searches the LDAP server for new or changed data by default every three minutes from the time the adapter is started.

The first search returns all LDAP users and groups, but the following searches return only users and groups that are new or changed since the last search. During synchronization, new users and groups will be linked to a selected site (see [Configuring a Vocera LDAP Adapter](#) on page 9 to view Site field configuration details). Please note that existing users will **not** be linked to the selected site if they are already linked to a different site.

When synchronizing, the LDAP Group search occurs first, followed by the LDAP Users search, then the Users are created and updated, and finally the Group memberships are updated in Vocera Platform. Users without group membership are not synchronized; they are deactivated and cannot log into the system.

This synchronization process can be restarted without restarting the Vocera LDAP Adapter. Restarting the synchronization clears the search and timer, then restarts the timer and synchronization process. Depending on the number of users, this process may take a significant amount of time because all the LDAP data is re-uploaded and processed.

Select **Resynchronize Users and Groups** in Additional Actions, as shown below.

 **Warning:** The Resynchronize Users and Groups button will require a significant amount of time to process. Pressing this button uploads all user and group information from the LDAP server, which is then read and updated in Vocera Platform.

LDAP Adapter

Remove

Edit

Reference Name:LDAP

Component Name:LDAP

Enabled:true

LDAP Settings

Use Automatic Discoveryfalse

LDAP Server10.42.22.222

Version: 3.0.0.11

It Might Help to Know...

You are currently viewing the primary details for this adapter. You may also choose to edit or remove it from the system by selecting the appropriate action on the page. Areas that are highlighted with a red background indicate that there is missing information.

Additional LDAP Adapter Actions

Resynchronize Users and Groups

The synchronization initiates as shown in the message below.

It Might Help to Know...

You are currently viewing the primary details for this adapter. You may also choose to `edit` or `remove` it from the system by selecting the appropriate action on the page. Areas that are highlighted with a red background indicate that there is missing information.

Additional LDAP Adapter Actions[Resynchronize Users and Groups](#)

Directory synchronization started.

An error message displays if the Vocera LDAP Adapter is not active. Restart the adapter, and allow the users and groups to be synchronized.

It Might Help to Know...

You are currently viewing the primary details for this adapter. You may also choose to `edit` or `remove` it from the system by selecting the appropriate action on the page. Areas that are highlighted with a red background indicate that there is missing information.

Additional LDAP Adapter Actions[Resynchronize Users and Groups](#)

The adapter is not active.

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
(1/2): Quartz/group_gz | 3.6 kB 00:00:00
(2/2): Quartz/primary_db | 483 B 00:00:00
| 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                               Size
Version                               Repository
=====
Installing:
extension-navicare-interface          x86_64                             59 k
1.3.3-0                               Quartz
```

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!

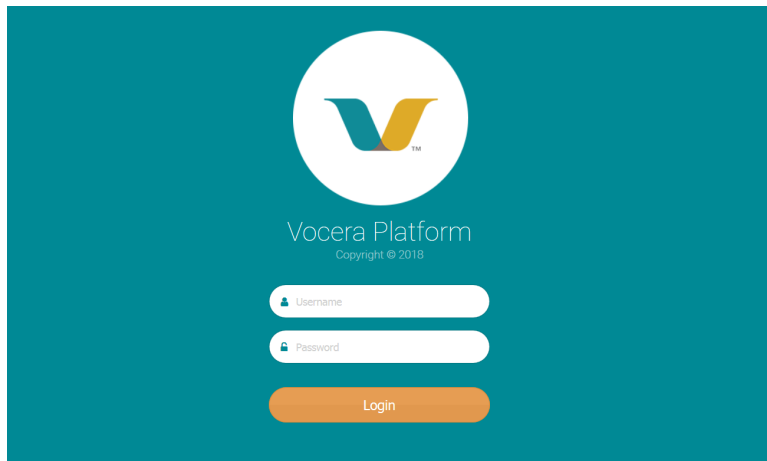
5. This completes the steps to install an adapter.

Navigating the Vocera Platform Adapters

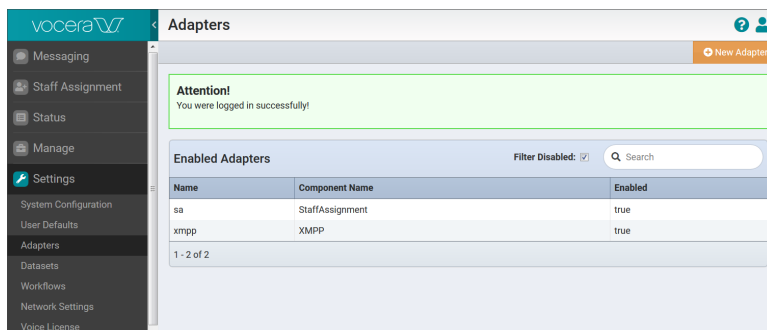
Access the Adapters tab and use the filter or search tools to display a specific adapter.

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.



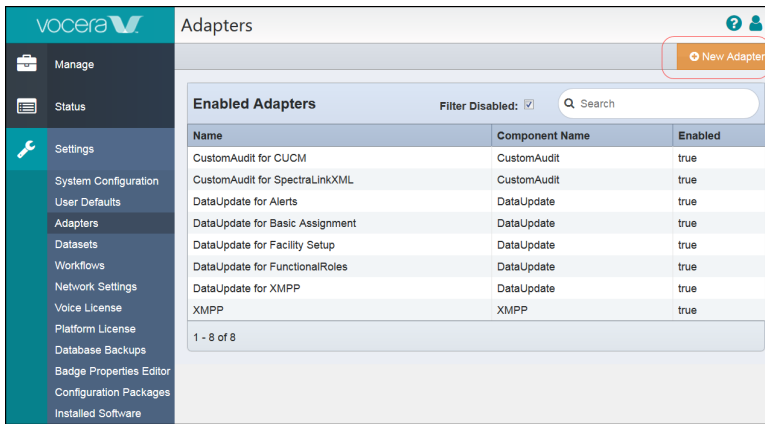
The **Adapters** page displays.

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.

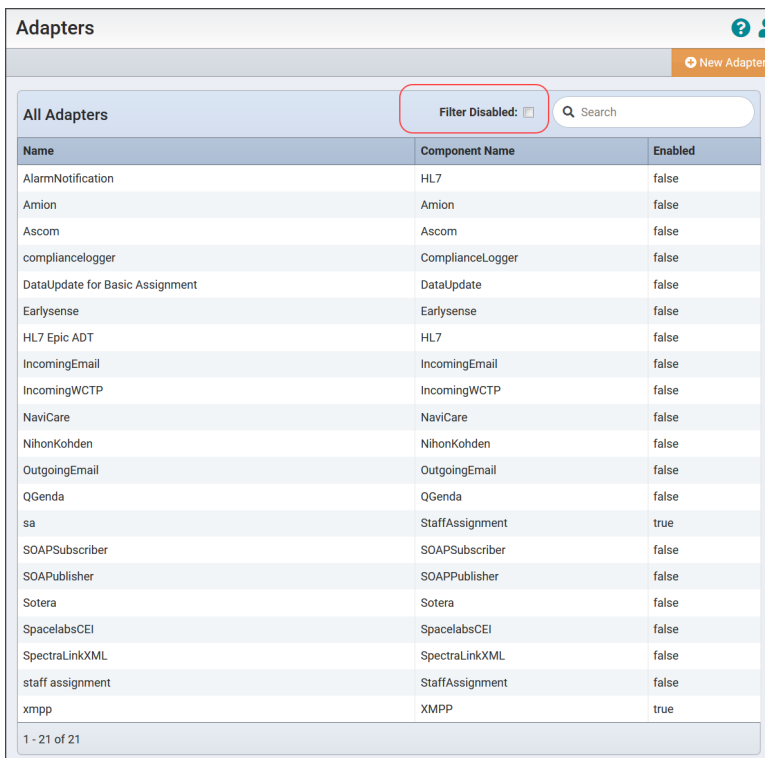
On the **Adapters** page you can identify adapters by their name or component name. The Enabled column (displaying a true or false status) indicates whether the adapter is active on the system, or disabled.

The bottom row of the grid reports the number of adapters displayed, of the available adapters.

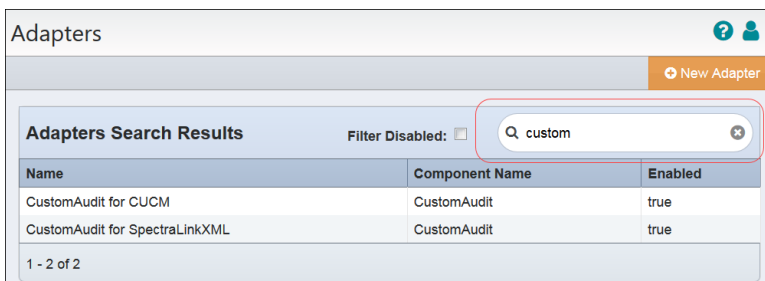
The Filter Disabled box is checked by default, and displays only the enabled adapters that are configured on the Vocera Platform.



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 **x** icon allows you to clear the search field.

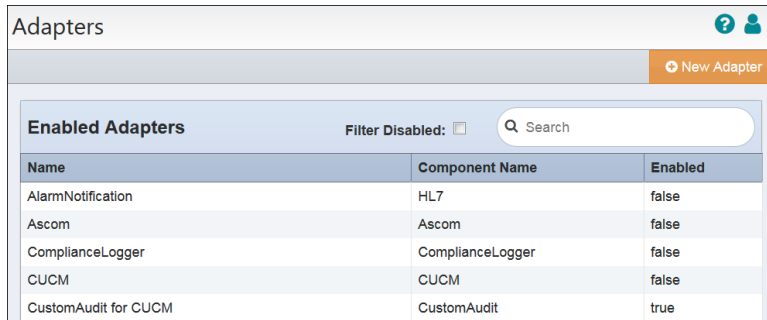


Editing an Adapter

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

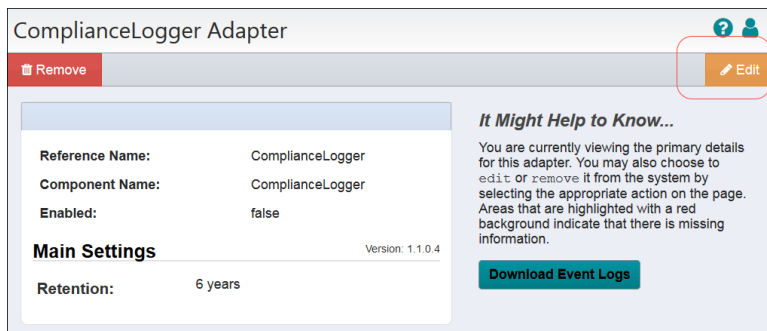
This page is used by all the adapter guides, and therefore, the adapter used as an example here may not be the adapter that you are working with currently.

1. Access the Vocera Platform Web Console and navigate to the adapters.
See [Navigating the Vocera Platform Adapters](#) on page 22 for instructions.
2. Select the adapter to edit in the **Adapters** list.



Name	Component Name	Enabled
AlarmNotification	HL7	false
Ascom	Ascom	false
ComplianceLogger	ComplianceLogger	false
CUCM	CUCM	false
CustomAudit for CUCM	CustomAudit	true

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



ComplianceLogger Adapter

[Remove](#) [Edit](#)

Reference Name: ComplianceLogger
Component Name: ComplianceLogger
Enabled: false

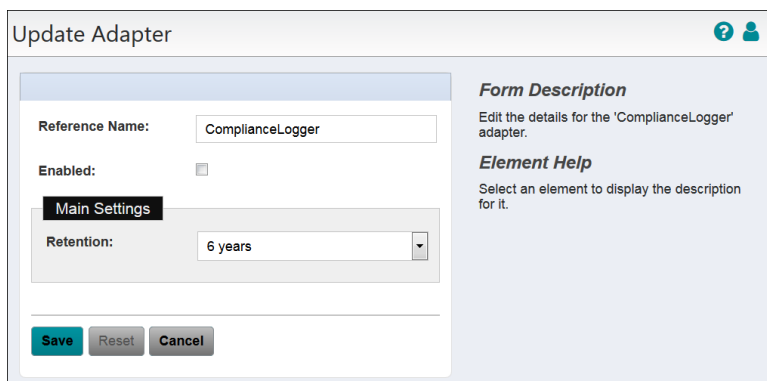
Main Settings Version: 1.1.0.4
Retention: 6 years

[Download Event Logs](#)

It Might Help to Know...
 You are currently viewing the primary details for this adapter. You may also choose to edit or remove it from the system by selecting the appropriate action on the page. Areas that are highlighted with a red background indicate that there is missing information.

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.



Update Adapter

Reference Name: ComplianceLogger
Enabled: ☐

Main Settings
Retention: 6 years

[Save](#) [Reset](#) [Cancel](#)

Form Description
 Edit the details for the 'ComplianceLogger' adapter.

Element Help
 Select an element to display the description for it.

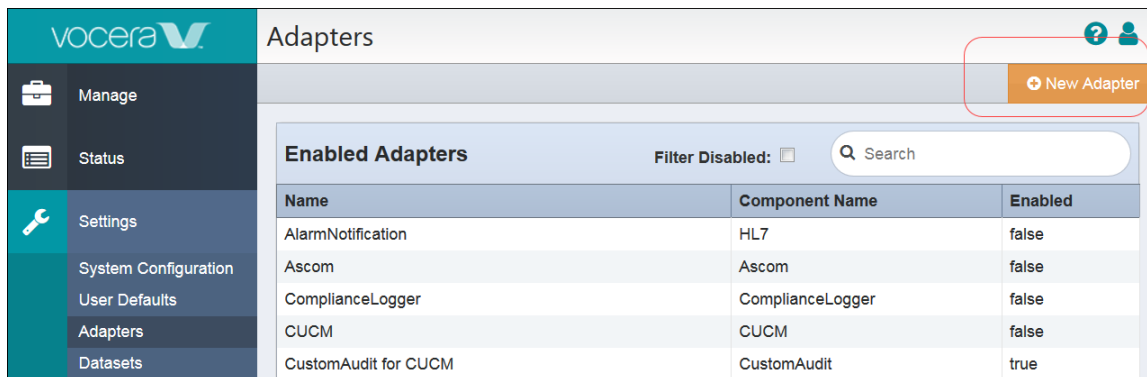
5. Select one of the options to exit the **Update Adapter** page. See [Saving an Adapter](#) on page 26 for details.

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 22 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 22 for instructions.
2. Select **Edit** in the Actions menu to access the Update page for the adapter.

The screenshot shows the 'XMPP Adapter' configuration page. At the top, there are two buttons: 'Remove' (with a trash icon) and 'Edit' (with a pencil icon). The 'Edit' button is highlighted with a red circle. Below the buttons, there is a table with the following information:

Reference Name:	XMPP
Component Name:	XMPP
Enabled:	true

Below the table, it says 'Main Adapter Settings' and 'Version: 4.0.0.175'. To the right of the table, there is a section titled 'It Might Help to Know...' with a warning icon. The text in this section reads: 'You are currently viewing the primary details for this adapter. You may also choose to edit or remove it from the system by selecting the appropriate action on the page. Areas that are highlighted with a red background indicate that there is missing information.'

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.

The screenshot shows the 'Update Adapter' page. On the left, there is a form with the following fields:

- Reference Name: XMPP
- Enabled: ☐ (highlighted with a red circle)
- Required Datasets:
 - Actors: Actors (dropdown menu)
 - Assignments: Assignments (dropdown menu)

On the right, there is a section titled 'Form Description' with the text: 'Edit the details for the 'XMPP' adapter.' Below this, there is a section titled 'Element Help' with the text: 'Select an element to display the description for it.'

4. Select one of the options to exit the **Update Adapter** page. See [Saving an Adapter](#) on page 26 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.

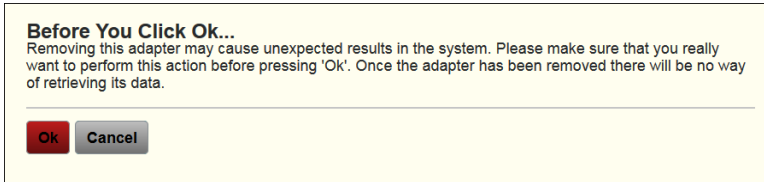
1. Access the Vocera Platform Web Console and navigate to the adapter to remove.
See [Navigating the Vocera Platform Adapters](#) on page 22 for instructions.
2. Select **Remove** in the Actions menu to permanently delete the adapter.

The screenshot shows the 'XMPP Adapter' configuration page. At the top, there are two buttons: 'Remove' (with a trash icon) and 'Edit' (with a pencil icon). The 'Remove' button is highlighted with a red circle. Below the buttons, there is a table with the following information:

Reference Name:	XMPP
Component Name:	XMPP
Enabled:	true

Below the table, it says 'Main Adapter Settings' and 'Version: 4.0.0.175'. To the right of the table, there is a section titled 'It Might Help to Know...' with a warning icon. The text in this section reads: 'You are currently viewing the primary details for this adapter. You may also choose to edit or remove it from the system by selecting the appropriate action on the page. Areas that are highlighted with a red background indicate that there is missing information.'

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.

