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Vocera Media Adapter Configuration Guide

Version 1.1.0

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Last modified: 2023-02-24 14:07

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Understanding a Vocera Media Adapter Configuration

The Vocera Media Adapter provides a mechanism by which other adapters (such as the Vocera XMPP Adapter) can store images and other large files.

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.

It provides a mechanism to allow media metadata to be stored in the core database while keeping the media content itself on a device better suited to storing them such as the Media appliance, or on the facility's network if the storage needs are large.

Unlike most other Vocera adapters, the Vocera Media Adapter is intended for use as an OSGi service by other parts of the Vocera Platform. The Vocera Media Adapter's external access is through an OSGi service defined by a Java interface. The Java interface provides the ability to store a media object, along with associated metadata, and retrieve that metadata, the media, and/or a media thumbnail. The metadata (but not the media data) is stored in a core dataset, along with information to allow the media itself to be retrieved from the media storage provider.

- Vocera XMPP Adapter, Vocera Media Adapter, and dataset records are all found on the customer's Vocera Platform appliance/VM
- Media is stored in the customer's Media appliance

In the figure below, installers can see how information and data is communicated between systems.

Engage appliance   Media appliance
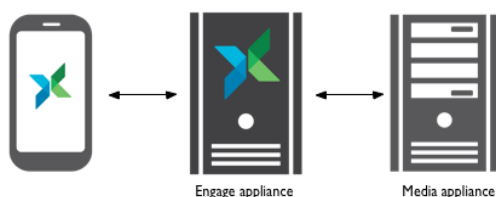
Viewing the Vocera Media Adapter Requirements

The minimum requirements for a Vocera Media Adapter are described here.

Ports

Vocera Platform will use **port 445/tcp** to connect with the Media storage appliance. **Ports 137-139/tcp** may optionally be used for NetBios/Name resolution.

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 IDENTITIES Dataset stores the user's system and interface identities.
- The MEDIA Dataset stores all media information. This can be files such as documents, images, or video.
- The MEDIA_METADATA Dataset these are the details associated with a specific piece of media.
- The PATIENTS Dataset stores all patient information.
- The USERS Dataset stores all Vocera users.

IDENTITIES 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 user's identity.
Link	usr	identities	False	False	N/A	Many-to-one	The IDENTITIES Dataset is linked to the USERS Dataset, and the link order is n:1 (many identities associated to one user)

MEDIA Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Attribute	media_id	N/A	True	N/A	N/A	String	Attribute that stores the unique identifier for the stored media.
Attribute	media_created	N/A	False	N/A	True	Date/Time	Attribute that stores when the media was created or made available.
Attribute	mime_type	N/A	False	N/A	True	String	Attribute that stores the MIME type of the stored media data.

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Attribute	storage_media	N/A	False	N/A	True	String	Attribute that stores the storage provider identifier for the media data.
Attribute	storage_provid	N/A	False	N/A	True	String	Attribute that stores the storage provider holding the media data.
Attribute	deleted_at	N/A	False	N/A	False	Date/Time	Attribute that stores the date and time the media data was deleted.
Attribute	storage_locati	N/A	False	N/A	False	String	Attribute that stores the configured storage provider location for the media data.
Attribute	thumbnail_mi	N/A	False	N/A	False	String	Attribute that stores the MIME type of the thumbnail for the media data.
Link	creator	created_media	False	False	N/A	Many-to-one	The MEDIA Dataset is linked to the USERS Dataset, and the link order is n:1 (many medias associated to one user)
Link	metadata	media	False	True	N/A	One-to-many	The MEDIA Dataset is linked to the MEDIA_METADATA Dataset, and the link order is 1:n (one media associated to many media_metadatas)

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Link	patient	media	False	False	N/A	Many-to-one	The MEDIA Dataset is linked to the PATIENTS Dataset, and the link order is n:1 (many medias associated to one patient)

MEDIA_METADATA Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Attribute	key	N/A	True	N/A	N/A	String	Attribute that stores the identifier for the type of meta-data.
Attribute	value	N/A	False	N/A	False	String	Attribute that stores the value of the meta-data.
Link	media	metadata	True	False	N/A	Many-to-one	The MEDIA_METADATA Dataset is linked to the MEDIA Dataset, and the link order is n:1 (many media_metadatas associated to one media)

PATIENTS Dataset

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Attribute	mrn	N/A	True	N/A	N/A	String	Attribute that stores the Medical Record Number of the patient.

Element	Name	Reverse Name	Key	Reverse Key	Required	Type	Description
Link	media	patient	False	False	N/A	One-to-many	The PATIENTS Dataset is linked to the MEDIA Dataset, and the link order is 1:n (one patient associated to many medias)

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.
Link	created_media	creator	False	False	N/A	One-to-many	The USERS Dataset is linked to the MEDIA Dataset, and the link order is 1:n (one user associated to many medias)
Link	identities	usr	False	False	N/A	One-to-many	The USERS Dataset is linked to the IDENTITIES Dataset, and the link order is 1:n (one user associated to many identities)

Configuring a Vocera Media Adapter

Description of the settings that enable direct communication between the Vocera Media 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 32 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 35 and Editing an Adapter on page 34 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.
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. **Warning:** Only one Vocera Media Adapter configuration can be active at a time.

Configuration Field	Description
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 **Main Settings** configuration fields as described in the table.

Main Settings Configuration Field	Description
Storage Provider	Select the storage provider to store the media from a list of storage providers available in the system. This field is required. The SMB File System Storage option provides access to a remote storage device (e.g., the Media appliance or network-attached storage/NAS) via the Windows File Sharing protocol (also known as SMB or CIFS).
Storage Location/URL	Enter the location where the storage provider will store the media. This option depends upon the storage provider selected above. When SMB File System Storage is selected, the storage location will be a share in the following format: //host/share/[/directory/...]. The hostname is preferred, but the IP address is acceptable.
Storage User Name	Enter the user name provided to access the media storage system underlying the storage provider at the given location. When SMB File System Storage is selected above, enter the user name in the following format: username[\workgroup], where workgroup is an optional workgroup name.
Storage Password	Enter the password used to access the media storage system underlying the storage provider at the given location.

6. Complete the **Media Deletion** configuration fields as described in the table.

The Vocera Platform appliance can be configured to enable the deletion of media data from the Media appliance.

Conditions created on the Media dataset may specify criteria identifying when media data should be deleted from the Media appliance. This is needed to manage the data volume accumulated with media, given server storage size limitations. Vocera Platform generally recommends storing media data for no more than 72 hours, however, the customer may provide the storage criteria to meet their needs.

Select a deletion condition in this Media Deletion section. This field is required. Click the "Select a condition" field as shown below to display the list of dataset conditions that exist on the Vocera Platform appliance.

Media Deletion Configuration Field	Description
Deletion Conditions	Select a dataset conditon from the Deletion Conditions dropdown list. This field is required. The "Select a condition" list displays all the dataset conditions that exist on the Vocera Platform appliance. Click **Add** to specify an additional condition on the Media dataset for which to delete media data. Select **Remove** if you do not wish to use the specified condition to determine media data deletion.

7. Select one of the available options to exit the adapter configuration page. See Saving an Adapter on page 36 for details.

Creating Media Dataset Conditions

Conditions created on the Media dataset may specify criteria to identify when media data should be deleted from the Media appliance in order to manage data volume.

The Vocera Platform appliance can be configured to enable deletion of media data from the Media appliance. Conditions created on the Media dataset may specify criteria identifying when media data should be deleted from the Media appliance. This is needed to manage the data volume accumulated with media, given server storage size limitations. Vocera Platform generally recommends storing media data for no more than 72 hours, however, the customer may provide the storage criteria to meet their needs.

Once the media deletion conditions and filters are defined on the Media dataset, they are used in the Vocera Media Adapter configuration to implement the customer's media data deletion strategy. Follow the instructions in this page to create a deletion condition on the Media dataset for use by the Vocera Media Adapter.

Create the Dataset Condition

In the Vocera Platform Web Console, select the Datasets tab and open the Media dataset.

Click on Conditions to expand the tab, then select **Add a condition** as shown below.
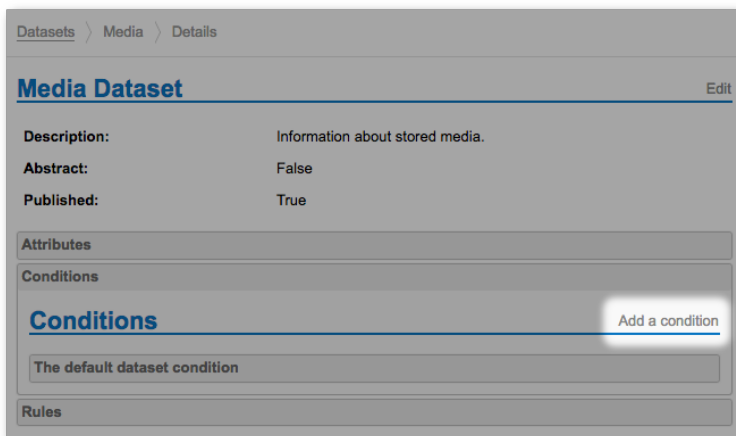
Enter the following information in the Condition fields as shown below, then select **Create**. Vocera Platform recommends that the Name include underscores, and the Description contain the same text with spaces in place of underscores.

- Name: Media_was_created_some_time_ago
- Description: Media was created some time ago

Expand the new condition and select **Add a filter**.

Enter the following information in the Condition's Filter fields as shown below, then select **Create**.

- Attribute: created_at
- Comparator: Less than
- Value: #{now-72.hours}

The completed condition and filter enable the identification of media data 72 hours after it is received on the Media appliance.

This condition can be edited as needed to implement the customer's deletion strategy. You can use the steps in this page to create additional conditions for use in the Vocera Media Adapter.

Configure the Vocera Media Adapter with the New Condition

Once created, the Media dataset conditions are then available for use in a Vocera Media Adapter configuration. In the Vocera Platform Web Console, navigate to the Adapter tab and select the Vocera Media Adapter.

In Edit mode, scroll down to the **Media Deletion** section shown below. Next to **Deletion Conditions**, click **Add** to display a dropdown list of datasets and conditions.

Select a deletion condition configured on the Media dataset, such as the "Media_was_created_some_time_ago" deletion condition created above.

Once this adapter update has been saved to the system, media data will be removed from storage as defined for the customer's configuration.

Adapters > MediaAdapter > Details

Attention!
The adapter was updated.

MediaAdapter Adapter

Edit   Remove

Reference Name:	MediaAdapter
Component Name:	Media
Enabled:	true

Main Settings

Version: 1.0.4.0

Storage Provider:	SMB File System Storage
Storage Location/URL:	\\techmedia.ext-inc.com\media-share
Storage User Name:	extension

Media Deletion

Deletion Conditions
Media/Media_was_created_some_time_ago

Configuring a Media Appliance

A Vocera Media appliance is an optional dedicated server for media storage. This document describes how to configure the Vocera Media appliance for customer use.

While the media metadata, Vocera Media Adapter, and Vocera XMPP Adapter are located on the Vocera Platform appliance, a separate appliance (Vocera's Media appliance) or an enterprise file storage setup is needed to manage the file storage capacity associated with the customer's media useage. Larger enterprises may rely upon usage of their own network for storage, while smaller customers may choose to use the dedicated Media appliance to store media.

The Media appliance runs the Samba service to host an SMB/CIFS file storage server to store media objects over the network. The Samba service supports up to the 3.0 SMB protocol and the Media appliance allows for the ability to receive software updates both from Vocera Platform and Redhat. The Media appliance system can be monitored via SNMP to provide information such as CPU load and disk usage. In addition, the SNMP service will send messages via SNMP whenever the disk storage is above 90% or the CPU load is above 2.

Media Appliance Resource Specifications

The following table of information describes the Media appliance resource needs for small, medium, and large facilities. The VM disk size can be increased at any point in time via the LVM disk management service.

For enterprise VM resource specifications, please see the Virtual Machine Installation documentation in the Vocera Platform Installation Guide.

Small (200 Beds or Less)

Resource	Value
CPU	1 Core
RAM	2GBytes
Disk	10GBytes

Medium (200 to 500 Beds)

Resource	Value
CPU	1 Core
RAM	2GBytes
Disk	25GBytes

Large (500 Beds or Larger)

Resource	Value
CPU	1 Core
RAM	2GBytes
Disk	60GBytes

Media Appliance Sizing Calculation

The following information is provided to calculate capacity for the Media appliance's database or estimated storage requirements for the fileshare. Generally speaking, photo data is stored on the Media appliance for 72 hours (three days). Assuming on average, a location may capture and store two photos per day. It should also be noted that Vocera Platform compresses any photos regardless of the native file size of a phone's camera.

Step	Process	Calculation
1.	Count the average number of photos per day at approximately 500k per photo	Assume 2 photos per day = 1 MB
2.	Count the number of locations that alerts are delivered to	Assume locations = Beds + Tele-pack locations + Other = 1000
3.	Determine how long data will stay on the primary appliance	Assume 72 hours (3 days) worth of data
Total	**Photo size * Number of Locations * Number of days of Storage**	**3 GB**

SMB Share Information

The Samba SMB Service is configured via the /etc/samba/smb.conf file and hosts an SMB share named 'media-share' which has read/write access for the 'extension' SMB user in the EXTENSIONWORKGROUP workgroup. The share is physically located at '/opt/media-share'.

SMB Setting	Value
Host	extension-media-appliance, IP address, or other DNS (to be provided by customer)
Share	media-share
Workgroup	EXTENSIONWORKGROUP
SMB User	extension

Account Information

The Media appliance provides three system accounts. Contact Vocera Professional Services for passwords.

Login	Default Password	Purpose	Provides
tpx-admin	N/A	Vocera Support/Upgrade	Provided for access to the BASH command line and SUDO administration privileges for full administrative control of the server.

Login	Default Password	Purpose	Provides
administrator	Forced change on first login	Media Appliance Configuration	Provided to share with the customer so they can configure the Media appliance server settings. Automatically launches the configuration menu; the session will end upon exiting the menu, and the user is returned to the main login prompt. User cannot access the BASH prompt or access any functions outside of those defined in the configuration menu.
extension	Configured by administrator	SMB User Account	Provided for read and write access to the share 'media-share'. The password can be set by the administrator user at any point in time.

Configuring the Main Menu in the Media Appliance

The Media appliance is configured by navigating a simple text-based menu, Vocera Media Appliance Main Menu, accessed via a terminal window.

While in the Main Menu, use the keyboard arrows to highlight the menu options and press the Return key to click on a highlighted option.

Contact the facility administrator for the login details. Once you have accessed the Vocera Media appliance, the Main Menu displays.

Network

In the Main Menu, use the keyboard up/down arrows to navigate the options list; select **Network** as shown below. Then use the keyboard left/right arrows to toggle between Select and Exit; highlight the **Select** option and press Return on the keyboard.
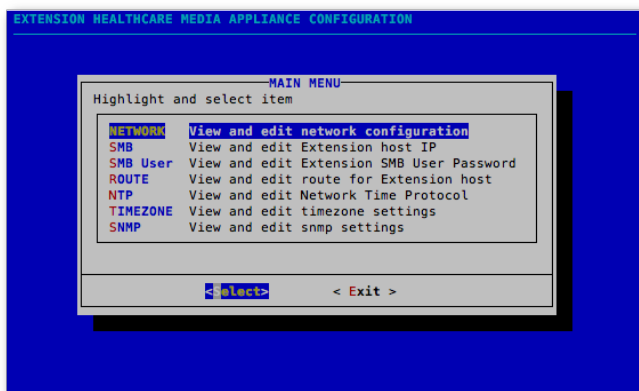

The system is set up with DHCP configuration by default to provide access to the server. Now the IP address must be set to the customer's static address.

Use the keyboard left/right arrows to toggle between Edit and Cancel; highlight the **Edit** option and press Return on the keyboard.
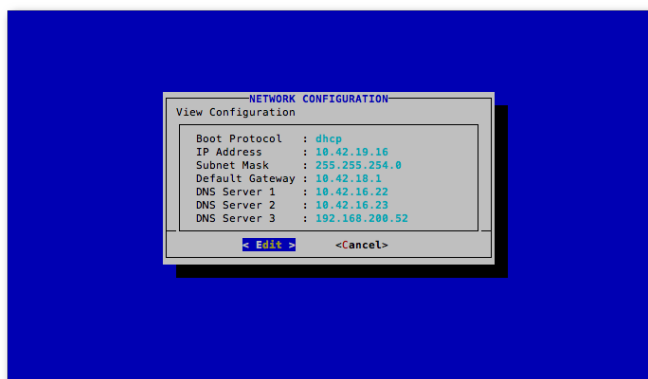
In the DHCP Configuration window, highlight **Disable** and press the Space key to select this option. Then press Tab to highlight **Submit** and press the Return key to actually disable DHCP.

The highlighted selection must display the asterisk in the parentheses in order to choose the option. In the image below, although Disable is highlighted, the Enable option is active.
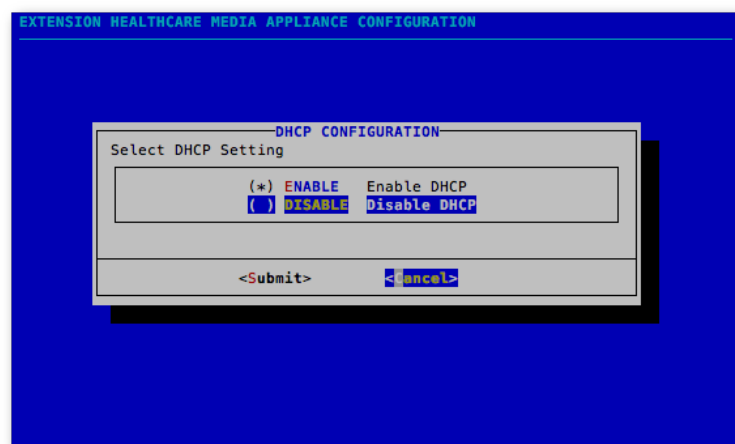

You must press the Space key to ensure the asterisk displays in the highlighted **Disable** option as shown here, before selecting **Submit**.
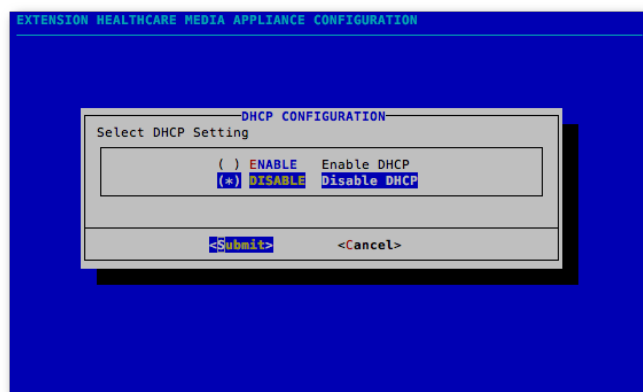

In the Network Configuration window, enter the permanent address for the Media appliance. Obtain the IP address or the subnet from the hospital administrator to enter the correct information.

Press the keyboard Tab key to access the Submit and Cancel options, and then use the keyboard up/down arrows to toggle to select **Submit**. Press Return to submit the configuration settings.
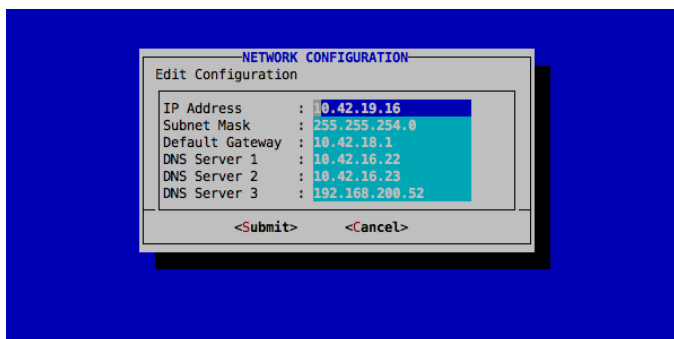
Highlight **Yes** and press the Return key to reboot the appliance. Reboot is required after changing the IP address. If needed, select No to make additional configuration changes and reboot the appliance later.
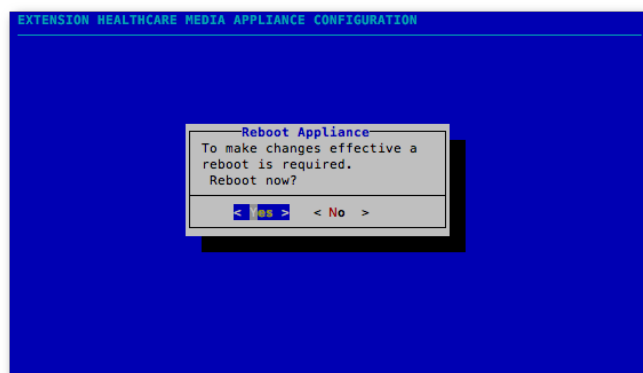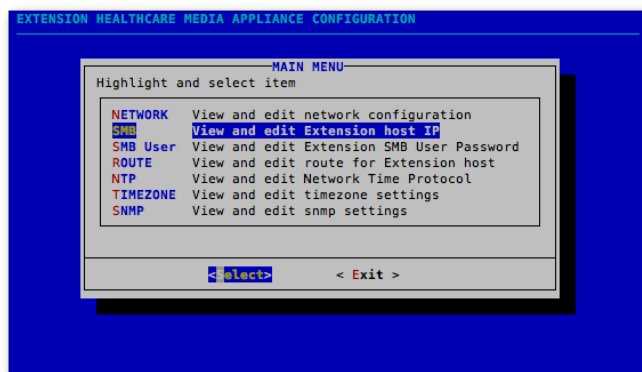

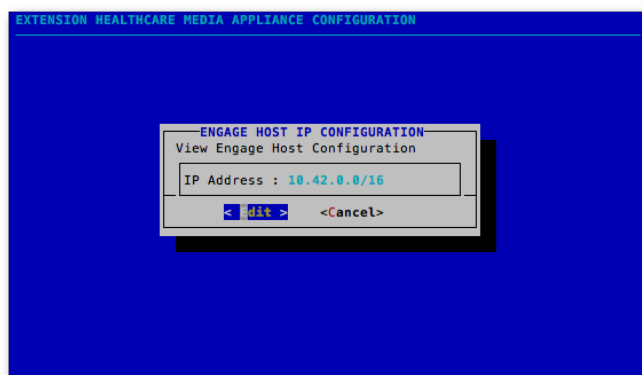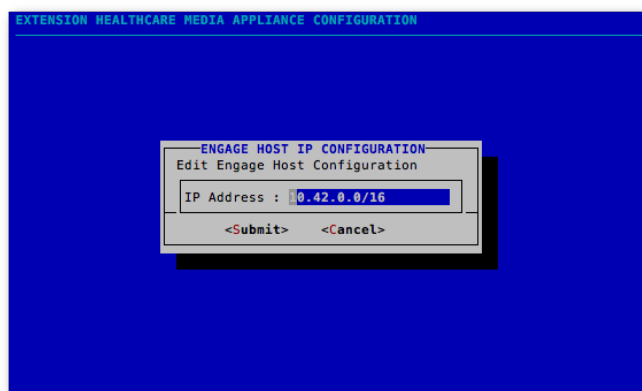The final configuration will use a static Boot protocol as shown below.
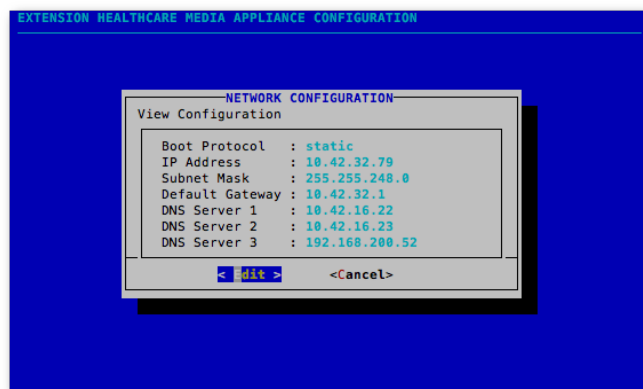
SMB

In the Main Menu, highlight **SMB** and then click **Select**.

```
EXTENSION HEALTHCARE MEDIA APPLIANCE CONFIGURATION

                    ┌────────MAIN MENU────────┐
                    │ Highlight and select item │
                    │                           │
                    │   NETWORK   View and edit network configuration │
                    │   SMB       View and edit Extension host IP      │
                    │   SMB User  View and edit Extension SMB User Password │
                    │   ROUTE     View and edit route for Extension host │
                    │   NTP       View and edit Network Time Protocol  │
                    │   TIMEZONE  View and edit timezone settings      │
                    │   SNMP      View and edit snmp settings          │
                    │                           │
                    │                           │
                    │     <Select>      < Exit > │
                    └───────────────────────────┘
```

The Engage Host IP Configuration is optional. If no IP address, or range of IP addresses, is entered in this field, then any computer will be able to connect to the Media appliance. If the client chooses to limit the IP addresses that can connect to the Media appliance, then these IP addresses are identified here. To input these IP addresses, select **Edit** in the View Engage Host IP Configuration window.

```
EXTENSION HEALTHCARE MEDIA APPLIANCE CONFIGURATION

              ┌────ENGAGE HOST IP CONFIGURATION────┐
              │ View Engage Host Configuration       │
              │                                      │
              │ IP Address : 10.42.0.0/16            │
              │                                      │
              │      < Edit >    <Cancel>            │
              └──────────────────────────────────────┘
```

In the Edit Engage Host IP Configuration window, enter the exact IP address for the Engage appliance (or the subnet) and then select **Submit**. If a range of IP addresses are identified, they are stated as four octets followed by the CIDR; e.g., 10.42.22.0/24. A single IP address can be specified with a CIDR value of 32; e.g., 10.42.22.123/32.

```
EXTENSION HEALTHCARE MEDIA APPLIANCE CONFIGURATION

              ┌────ENGAGE HOST IP CONFIGURATION────┐
              │ Edit Engage Host Configuration       │
              │                                      │
              │ IP Address : 10.42.0.0/16            │
              │                                      │
              │      <Submit>    <Cancel>            │
              └──────────────────────────────────────┘
```
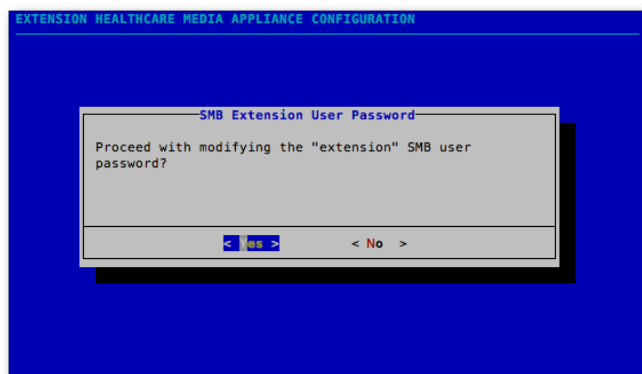
SMB User

In the Main Menu, highlight the **SMB User** option and then click **Select**.
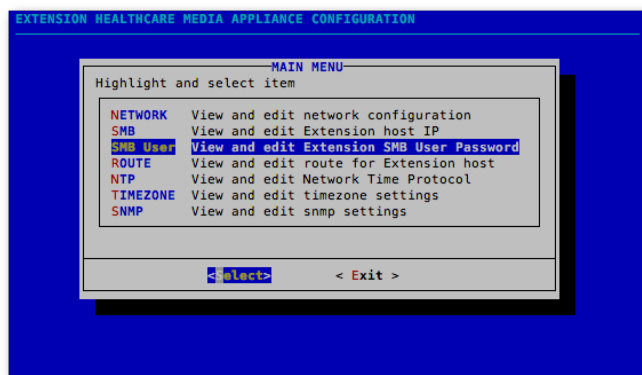
Select **Yes** to set the user password required by the Media adapter on the Engage appliance.

In the SMB Extension User Password window, type the desired password for the SMB User and then click **OK**. Any password requirements are fulfilled in this SMB User password configuration, and will be matched in the Storage Password field in the Media adapter.

**Warning:** No text is displayed while typing, no confirmation is required, and no completion message displays.
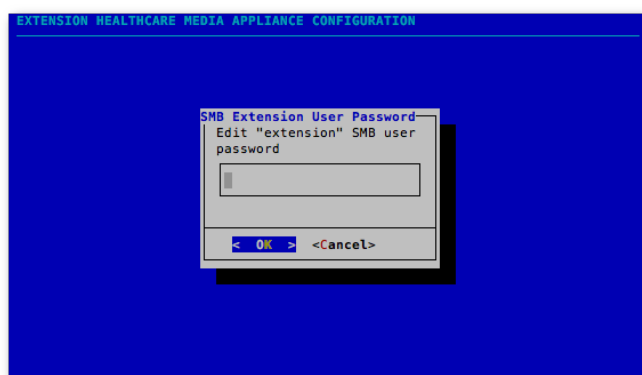
Route

In the Main Menu, select **Route** if a gateway is required to communicate with the Engage appliance. This configuration option is generally not needed, because the Media appliance and the Engage appliance should both be located on the same broadcast domain / Layer 2 adjacency.
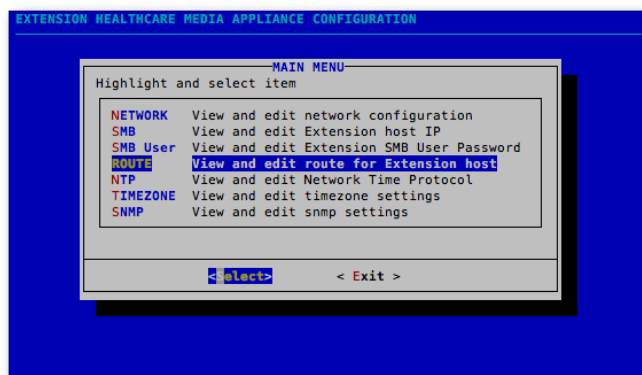
NTP

In the Main Menu, highlight **NTP** and then click **Select**.
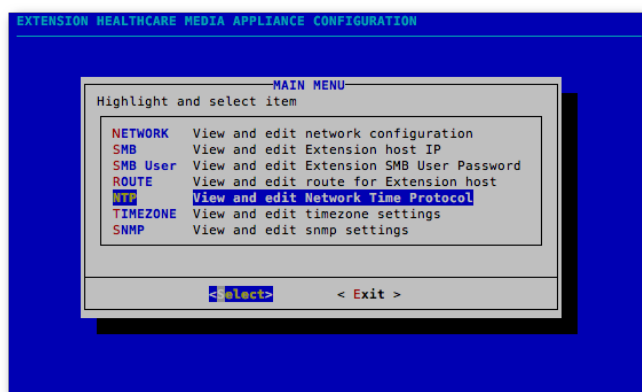
In the View NTP Server Configuration window, select **Edit**.
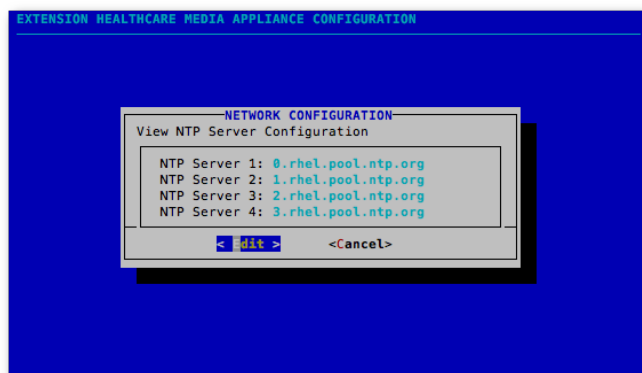
In the Edit NTP Server Configuration window, configure the IP address of the Network Time Protocol sources and then select **Submit**. Ensure that the values entered here match those on the Engage appliance to synchronize time across the two appliances.
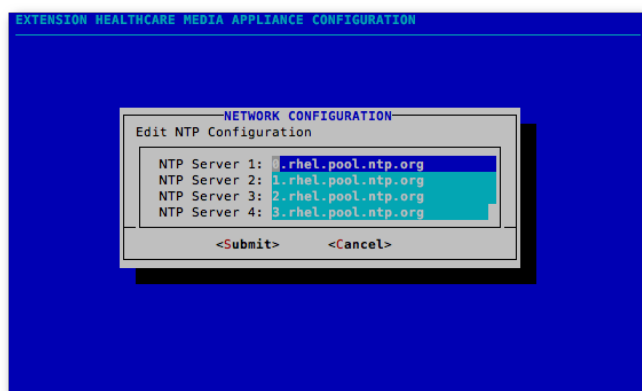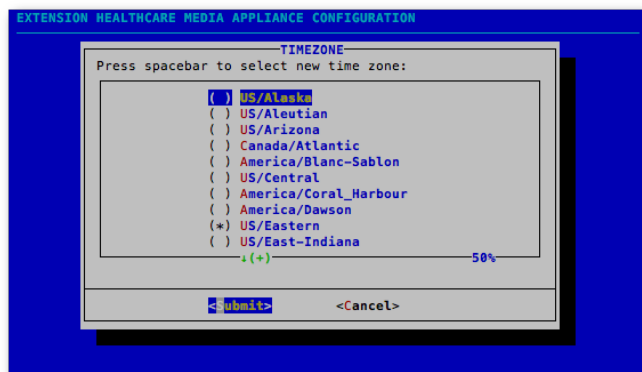
Timezone

In the Main Menu, highlight **Timezone** and then click **Select**.
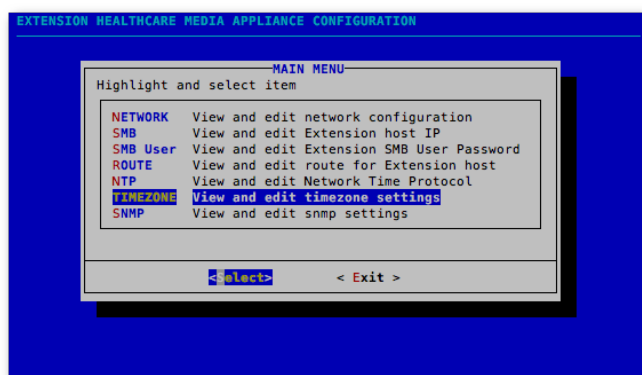
In the Timezone window, select the timezone used by the Engage appliance and then click **Submit**. If the timezone needs to be changed, highlight the correct zone using the arrow keys, and then hit the Space bar to select that zone. In the example below, US/Eastern is the configured Media timezone.
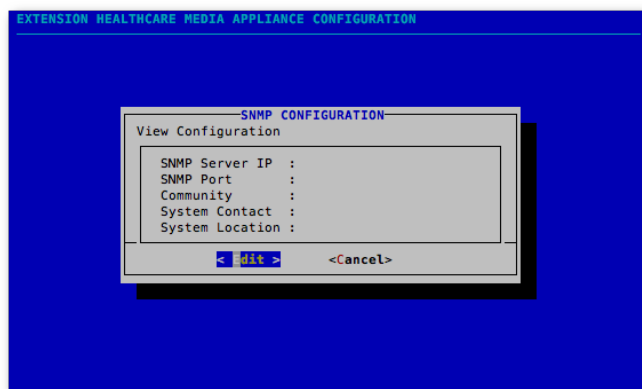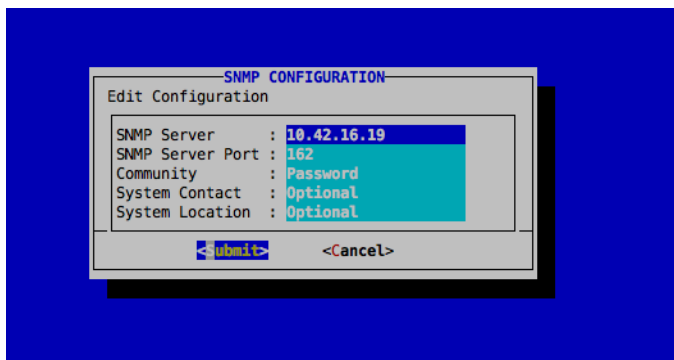

SNMP

In the Main Menu, highlight **SNMP** and click **Select**.
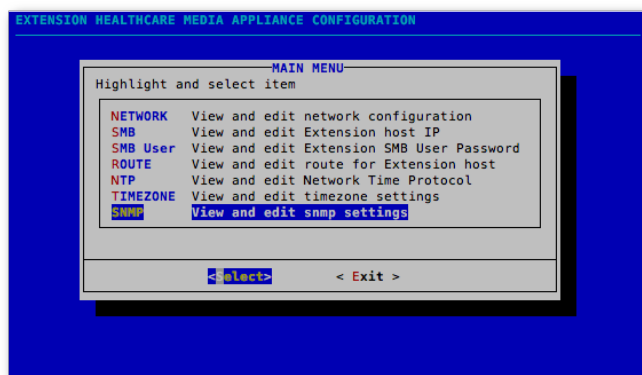
In the View SNMP Configuration window, select **Edit**.

In the Edit SNMP Configuration window, configure SNMP to match the Engage appliance settings. This enables Engage to access error notifications from the Media appliance. The SNMP Server, SNMP Port, and Community fields must be completed.

| SNMP Configuration Field	Description
SNMP Server	This field contains the IP Address or the FQDN within the DNS of the facility's Monitoring Tool.
SNMP Port	This field contains the Port number where the Monitoring Tool is located, usually 162.
Community	This field contains the password that is utilized by the SNMP Monitoring Tool.
System Contact	This field is optional.
System Location	This field is optional.

When SNMP is configured, select Tab, then press the left/right arrows on the keyboard to toggle between Submit and Cancel, and finally press the Return key to select **Submit**.
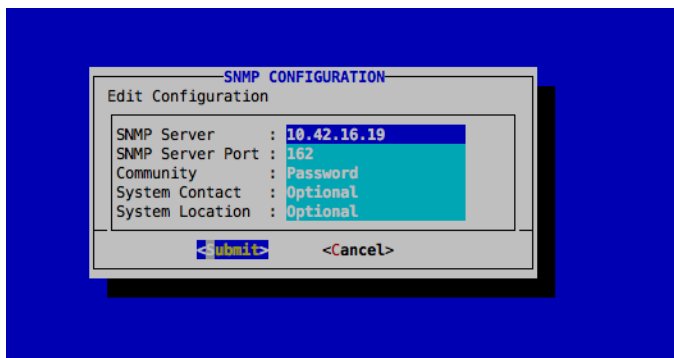
In the Main Menu, select **Exit** to immediately close the Extension Healthcare Media Appliance Configuration menu. This action returns you to the terminal window.

Warning: No confirmation is required and no warning or completion message is displayed.
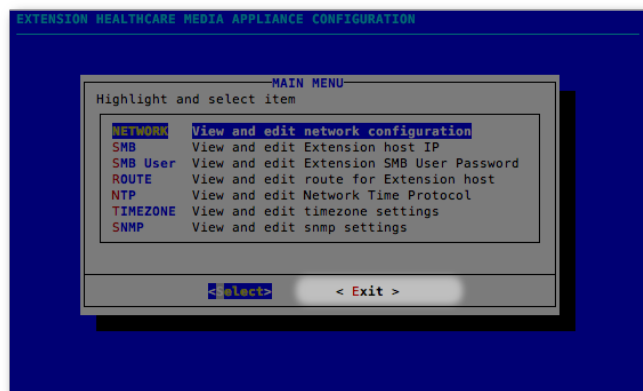
Understanding Adapter Installation

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.
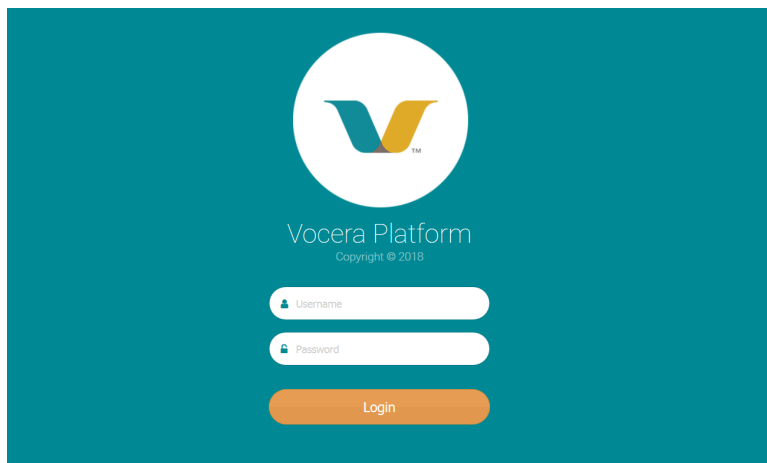
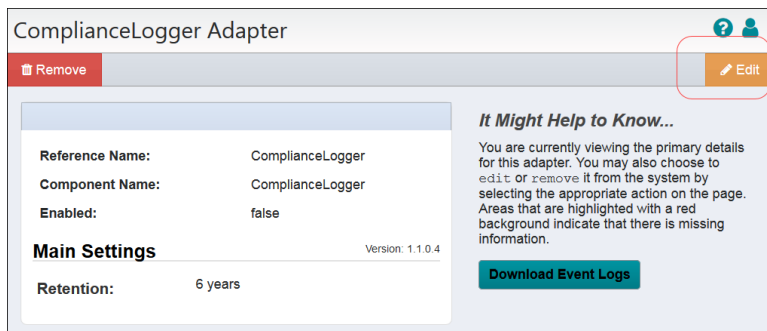2. Select **Settings > Adapters** in the navigation menu.
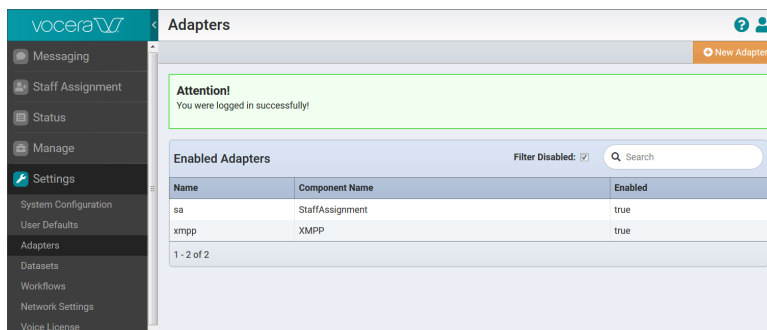
   The **Adapters** page displays.

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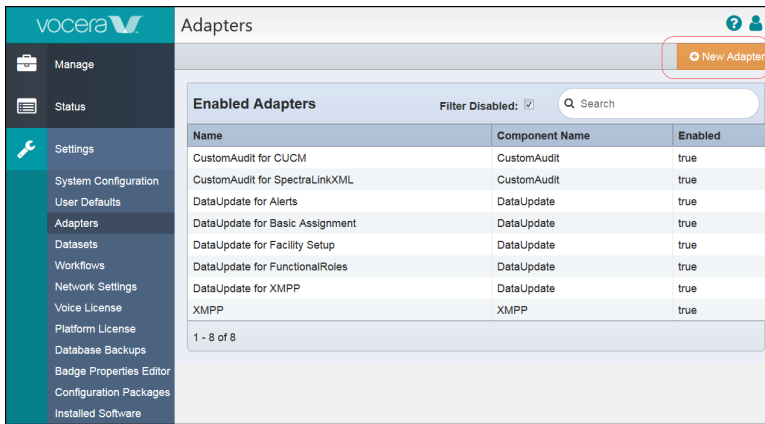
4. Uncheck the **Filter Disabled** box to display all the adapters that have been installed, including those that are not currently enabled. The column title now displays **All Adapters**.

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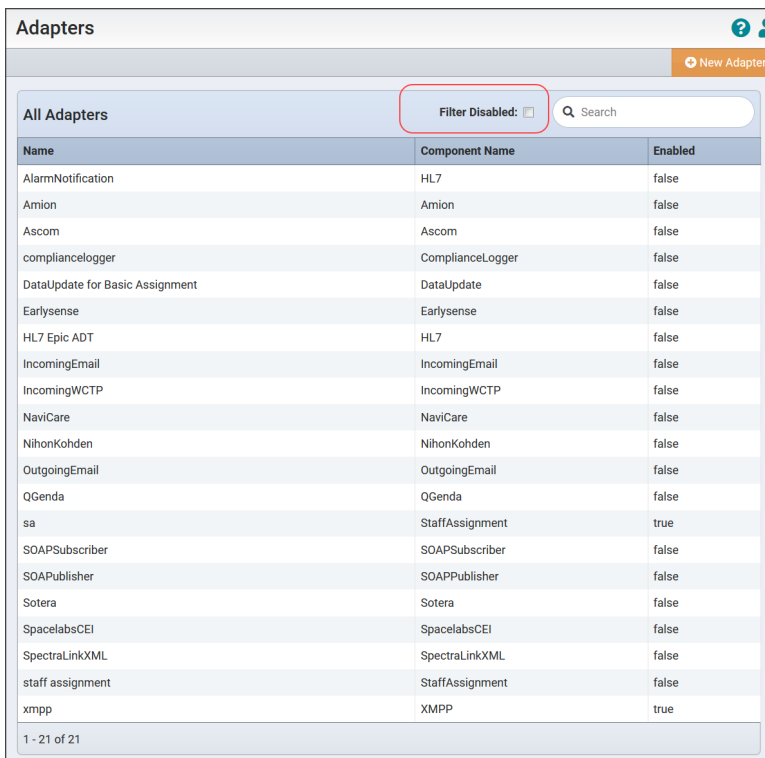
5. Enter a term in the **Search** field to locate a needed adapter on the system.

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.
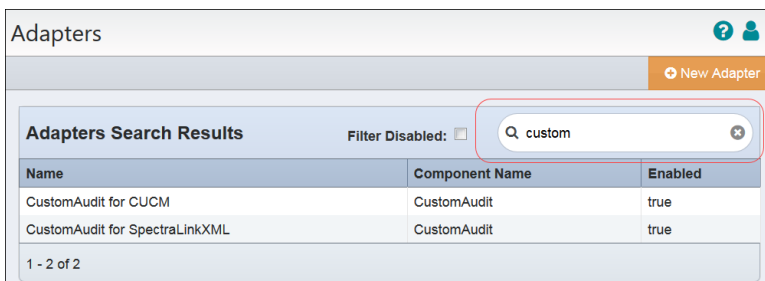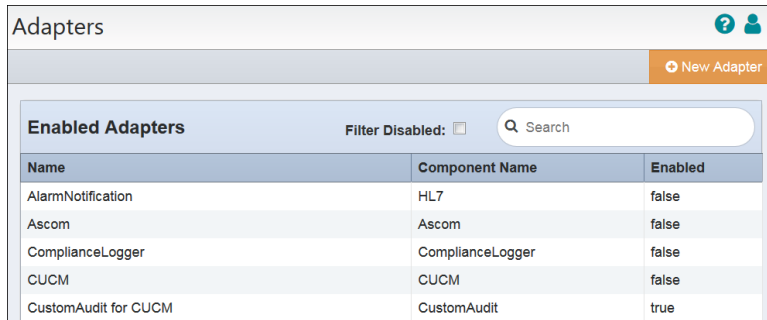
Editing an Adapter

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 32 for instructions.

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

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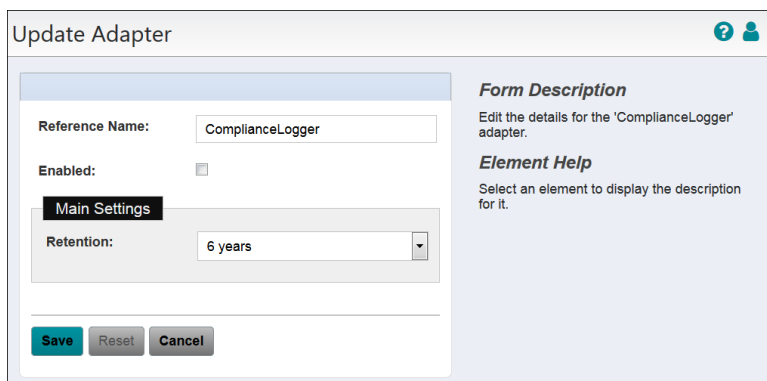
   The **Update Adapter** page for the adapter displays.

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 36 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 32 for instructions.

2. Select **New Adapter** in the Action menu on the Adapters page.
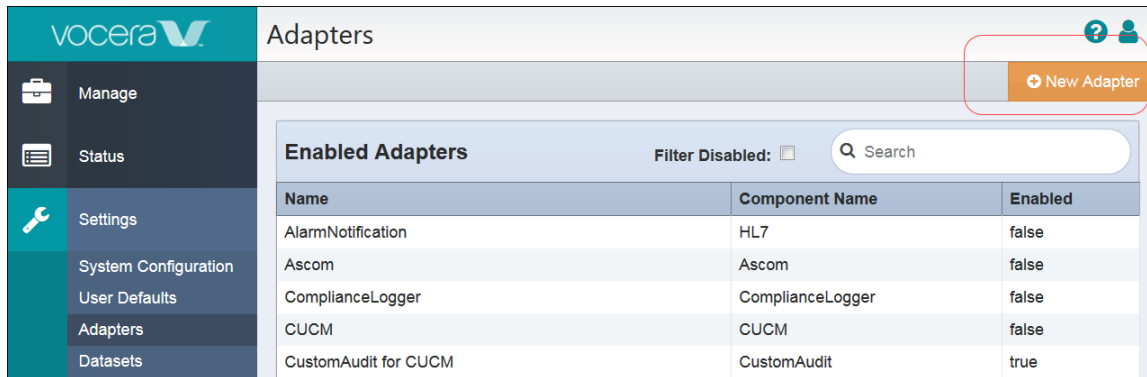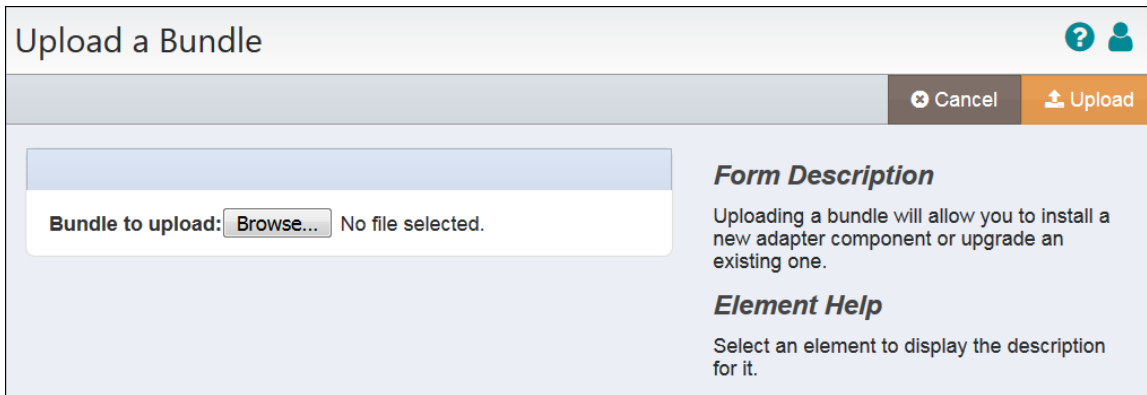

   The **Create a New Adapter** dialog displays.

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.
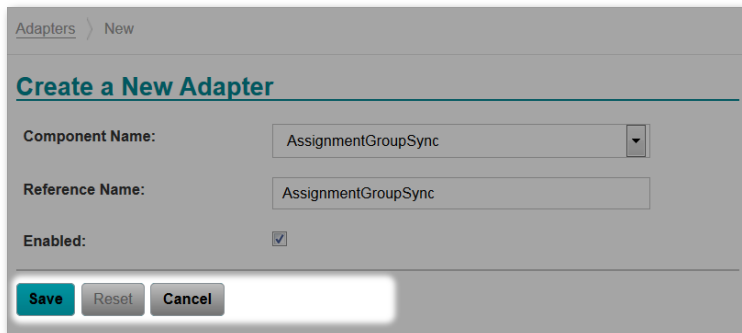
Saving an Adapter

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 32 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 36 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 32 for instructions.

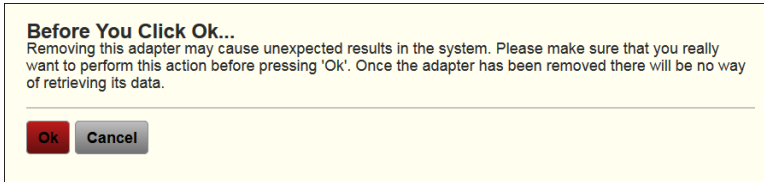2. Select **Remove** in the Actions menu to permanently delete the adapter.

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.