



Notifications

Cisco Unity Connection allows the users to be notified of the incoming voice messages and emails as soon as the message arrives in the user mailbox.

Following are some of the types of notifications received by users:

- Users receive message alerts through text notifications on pager.
- Users receive a call on their configured phones to get notified about new messages.
- Users receive messages and calendar notifications in the form of SMS messages to wireless devices using SMPP.
- Users receive HTML notifications if SMTP configuration has been set up.

The notifications for events are delivered to the end users through various notification devices. The notification devices can be enabled or disabled by the administrator for individual or multiple users through Cisco Unity Connection Administration and a user can override their specific notification device settings through Messaging Assistant feature of Cisco Personal Communications Assistant.

Default Notification Devices

Unity Connection comes with a set of default notification devices that can be configured as required. Following are the default notification devices:

- Pager
- Work Phone
- Home Phone
- Mobile Phone
- SMTP
- HTML

The default notification devices can be modified or enabled but cannot be deleted. An administrator can add, edit or delete additional notification devices whereas a user can only edit the notification devices.

Configuring Notification Devices

Message notification settings for each user account or user template allows you to control how and when Unity Connection notifies a user of new messages. User accounts and user templates include notification devices for a home phone, mobile phone, work phone, and one pager. Users can also use the Messaging Assistant to set up phones and pagers to receive message notifications.

To configure Notification Devices for User Accounts or User Templates

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- Step 1** In Cisco Unity Connection Administration, find the user account that you want to edit.
- Step 2** On the Search User Basics page of the user account, select the user account that you want to edit.
- Step 3** On the Edit User Basics page, in the **Edit** menu, select **Notification Devices**.
- Step 4** Configure a notification device.(Phone, Pager, SMTP, HTML, SMS) (For more information on each field, see **Help> This Page**)
- To add a notification device:
 - a. On the Edit User Basics page, select **Edit> Notification Devices**.
 - b. On the Notification Devices page, select **Add New**.
 - c. On the New Notification Device page, enter the fields as applicable depending on the notification device you selected and **Save**.
 - To edit a notification device:
 - a. On the Edit User Basics page, select **Edit> Notification Devices**.
 - b. On the Notification Device page, select the notification device that you want to edit.
 - c. On the Edit Notification Device page, edit the required settings and **Save**.



Note

- To edit the notification devices for more than one user, on the Search Users page, check the check boxes for the applicable users and select **Bulk Edit**.
- You can also schedule Bulk Edit for a later period using **Bulk Edit Task** scheduling and select **Submit**.

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- To delete one or more notification devices:
 - a. On the Edit User Basics page, select **Edit> Notification Devices**.
 - b. On the Notification Device page, select the notification devices you want to delete.
 - c. Select **Delete Selected** and **OK** to confirm deletion.



Note Similarly, you can configure the notification devices associated with a particular user template.

Cascading Message Notification

Cascading message notification allows you to send notifications to a wide circle of recipients. Unity Connection continues to send notifications until the message has been saved or deleted by a recipient.

For example, to create a cascade of message notifications for your Technical Support department, set the first message notification to be sent immediately to the pager of the front-line technical support representative. If the message that triggered the first notification has not been saved or deleted, then after a delay of 15 minutes, the next notification can be sent to the pager of the department manager. A third notification can be set up to call an employee in the Problem Resolution Group if the message is not saved or deleted after 30 minutes, and so on.



Note

When a user receives a notification as part of the cascade, the notification prompts the user to sign in to the mailbox that is being monitored by the cascade.

An alternative to cascading message notification is to use dispatch messaging. For details, see the [Dispatch Messages, page 11-4](#) section.

Task List for Cascading Message Notification

1. For the first recipient in the notification cascade, you need to set up the notification device in the following way:
 - a. Find the user account or user template to configure with cascading notifications.
 - b. In the Notification Devices page for the user or template, enter the desired delay for the notification device, in minutes in the **Delay Before First Notification Attempt** field.

Space notifications between each device at regular intervals, such as every 15 minutes. For the first device you set up, consider specifying 0 as the delay so that the first recipient receives the notification immediately. For the device of the second recipient, specify 15 minutes. Specify 30 minutes for the device of the next recipient, and so on.
2. For each of the other recipients in the notification cascade, you can repeat Step 1. to setup the device till you reach the end of recipient list.



Note

For the cascading notification to work properly, the same **Notification Rule Events** check boxes must be checked on all of the devices in the cascade.

Chaining Message Notification

Message notification can be set to “chain” to a series of notification devices if an attempt to send a notification to the first selected device fails. A failure occurs when a notification device is not answering or is busy and the retry attempts to reach that device using various options has also failed



Note

Do not configure SMTP devices for chaining message notification, except as the last device in the chain. Unity Connection does not detect notification failure for SMTP devices.

Task List for Chaining Message Notification

1. For the first recipient in the notification chain, you need to set up the notification device in the following way:
 - a. Find the user account or user template to configure with chaining notifications.
 - b. In the Notification Devices page for the user or template, for **On Notification Failure**, select **Send To**, and select the device that you want Unity Connection to notify next if notification to the device fails.
 - c. Select the device that you specified for **Send To** in the Edit Notification devices page.

Uncheck all **Notification Rule Events** check boxes. If you enable any notification events, message notification for the device starts immediately and does not wait for the notification failure of the previous device. Your notifications do not chain, they all trigger at once.

If you want to chain to a third device if notification to the device fails, select **Send To** and the device that you want Unity Connection to notify next if notification to the device fails. If not, select **Do Nothing**.
 2. For each of the other recipients in the notification chain, you can repeat step 1. to setup the device till you reach the end of recipient list.
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Setting Up SMTP Message Notification

Cisco Unity Connection can notify a user of new messages by calling a phone or pager. Also, you can set up Unity Connection to send message and calendar event notifications in the form of text messages to text pagers and text-compatible mobile phones using SMTP.



Note

Users can receive notification of new messages by email. Unity Connection supports two types of notification emails: plain text using SMTP notification devices; or HTML using HTML notification devices. HTML notifications can only be used for new voice mail. For other types of messages, you must use plain text SMTP notifications. To enhance security, both types of devices require connection to an SMTP smart host.

To Enable SMTP Notifications

1. Configure the SMTP smart host to accept messages from the Unity Connection server. See the documentation for the SMTP server application that you are using.
 2. Configure the Unity Connection server. See the [To Configure the Unity Connection Server to Relay Messages to a Smart Host](#) section.
 3. Configure Unity Connection user accounts or user templates. See the [Configuring Notification Devices, page 14-2](#) section.
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To Configure the Unity Connection Server to Relay Messages to a Smart Host

1. In Cisco Unity Connection Administration, expand **System Settings > SMTP Configuration**, then select **Smart Host**.
 2. On the Smart Host page, in the **Smart Host** field, enter the IP address or fully qualified domain name of the SMTP smarthost server, for example, `https://<domain name of server>.cisco.com`. (Enter the fully qualified domain name of the server only if DNS is configured.)
 3. Select **Save**.
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**Note**

If the Unity Connection server has not been properly enabled to use SMTP smart host for message notification, it places SMTP notification messages in the Unity Connection SMTP server badmail folder

Setting Up SMS Message Notification

With the services and information provided by a wireless carrier, mobile messaging service provider, Unity Connection can use the **Short Message Peer-to-Peer** (SMPP) protocol to send message notifications in the **Short Message Service** (SMS) format to mobile phones and other SMS-compatible devices when users receive new messages.

Advantages Over SMTP Message Notifications

An advantage of using SMS is that the user device often receives message notifications much faster than when using SMTP. You can configure Unity Connection so that each SMS notification message replaces the previous one. Note that this functionality may not be supported by all mobile service providers.

SMS Message Length Limitations

The acceptable message length for an SMS message varies depending on the service provider, the character set used to compose the message text, and the specific characters used in the message text.

Character sets available include:

- Default alphabet (GSM 3.38), 7-bit characters
- IA5/ASCII, 7-bit characters
- Latin 1 (ISO-8859-1), 8-bit characters
- Japanese (JIS), multi-byte characters
- Cyrillic (ISO-8859-5), 8-bit characters
- Latin/Hebrew (ISO-8859-8), 8-bit characters
- Unicode (USC-2), 16-bit characters
- Korean (KS C 5601), multi-byte characters

For 7-bit character sets, a maximum of 160 characters can fit into an SMS message; for 8-bit character sets, the limit is 140 characters; for 16-bit character sets, the limit is 70 characters; for multi-byte character sets, the limit is somewhere between 70 and 140 characters, depending on which characters make up the text of the message. (For multi-byte character sets, most characters are 16 bits; some of the more common characters are eight bits.)



Note Not all mobile phones support all character sets; most support the GSM 3.38 default alphabet.

Cost Considerations

The cost of setting up SMS(SMPP) message notifications depends directly on the number of SMS notifications that Unity Connection sends to user devices. More SMS notification implies higher cost as the service providers typically charge for each SMS message or group of messages sent.

To cut down cost, you can restrict the use SMS notifications to a group of users or inform users to limit the number of message notifications that they receive by message type or urgency. For example, users can specify in the Messaging Assistant that Unity Connection sends message notifications only when new urgent voice messages arrive.

Task List for Setting Up SMS Message Notifications

To Enable SMS Message Notifications

- Step 1** Set up an account with a mobile messaging service provider that offers SMS messaging. Unity Connection supports the SMPP version 3.3 or SMPP version 3.4 protocols.
- Step 2** Gather the information needed to allow Unity Connection to communicate with the SMPP server at the SMSC affiliated with your contracted service provider, and enter the information on the SMPP Provider page. See the [To Set Up an SMPP Provider](#).
- Step 3** When the Unity Connection server is set up behind a firewall, configure the TCP port used by the SMPP server when connecting to Unity Connection.
- Step 4** Enable the SMPP provider on Cisco Unity Connection Administration. See the [To Set Up an SMPP Provider, page 14-6](#) section.
- Step 5** Configure SMS message notification, set up an SMS notification device to receive notifications for a test user account. See the [Configuring Notification Devices, page 14-2](#) section.

To Set Up an SMPP Provider

- Step 1** In Cisco Unity Connection Administration, expand **System Settings > Advanced**, then select **SMPP Providers**.
- Step 2** On the Search SMPP Providers page, select **Add New**.
- Step 3** Enable the new provider and enter the Name, System ID and Hostname of the provider and **Save**. For more information on settings, select **Help > This Page**.
- Step 4** On the Edit SMPP Provider page, enter the **Port**, which is the TCP port number that is used by the SMSC to listen for incoming connections.



Note The port number should be in range of >100 and <=99999.

Setting Up HTML Message Notification

The HTML notification is triggered based on the HTML notification device settings and is received on the configured email address using SMTP.

The content and format of the HTML notifications received through email are customized using notification templates, custom variables, and custom graphics. The administrator must ensure that the HTML notifications are configured over IPv4. Only the administrator has the rights to create and edit the notification templates. The SMTP outbound proxy is supported over IPv4 only. Therefore, Unity Connection sends HTML notifications to an email server over SMTP in the IPv4 mode only.

Notification Templates

HTML notification template includes the following:

- Free flow HTML text
- HTML tags, and support of HTML tags depend on the email client that the user is using.
- Custom Variables and Custom Graphics
- Status Items for Voice Message - MWI, Message Status as Icons within an HTML template.
- Embedded links to external URIs or URLs.

Default Notification Templates

The default templates are `Default_Dynamic_Icons` and `Default_Actionable_Links_Only`. The `Default_Dynamic_Icons` template has the HTML tags along with the custom graphics and the status items. The `Default_Actionable_Links_Only` template has the HTML tags along with the actionable links without any images, custom graphics, or status items. For example, the administrators can configure the HTML templates to include header, footer, logos, images, MWI status, and hyperlinks to Mini Web Inbox

The administrator can assign a notification template to the users or can allow the users to select a template. But the users do not have the permissions to create or edit a template. The template selected can either be a default or a custom template that the administrator has created.



Note

The use of images, MWI status, and Message status is not mandatory. However, if used, the administrators need to ensure that the image rendering when used with the HTML tags and the APIs is supported by their respective email clients.

Configuring Notification Templates

Notification templates can be created, modified and deleted that include status items, action items, static items, custom variables, and custom graphics.

To Configure Notification Templates

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- Step 1** In Cisco Unity Connection Administration, expand **Templates > Notification Templates** and select **Notification Templates**. The Search Notification Templates page appears displaying the list of currently configured templates.

- Step 2** Configure notification template. (For more information on each field, see **Help > This Page**)
- To add new notification template:
 - a. Select **Add new** and New Notification Template page appears.
 - b. Enter the **Display name** and **HTML** content.
 - c. Select and copy the required status, action, and/or static items from the left panel of the HTML field and paste the items on the right panel. See the [table 14-1](#) for more information.

Table 14-1 Description of Notification Templates

| Items | Description |
|---------------------------|--|
| %MWI_STATUS% | Displays the image based on MWI status. The default images are displayed as defined in the Administrative Replaceable Images section. To insert the status items directly in the notification template, you can use the <code></code> <code></code> tag. |
| %MESSAGE_STATUS% | Displays the message status as unread, read, unread urgent, read urgent, or deleted. The default images are displayed as defined in the Administrative Replaceable Images, page 14-12 section. To insert the status items directly in the notification template, you can use the <code></code> <code></code> tag. |
| %LAUNCH_MINI_INBOX% | Launches the Unity Connection Mini Web Inbox. To insert this item directly in the notification template, you can use the <code></code> Text <code></code> tag. |
| %LAUNCH_WEB_INBOX% | Launches the Web Inbox only on computer. To insert this item directly in the notification template, you can use the <code></code> Text <code></code> tag. |
| %MESSAGE_PLAY_MINI_INBOX% | Launches the Mini Web Inbox for a specific message and auto plays the message. To insert this item directly in the notification template, you can use the <code></code> Text <code></code> tag. |
| %MESSAGE_DELETE% | Deletes the voice message. To insert this item directly in the notification template, you can use the <code></code> Text <code></code> tag. |

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| %MESSAGE_FORWARD% | Forwards a particular voice message. To insert this item directly in the notification template, you can use the <code>Text </code> tag. |
| %MESSAGE_REPLY% | Launches the Mini Web Inbox with the Reply to Message window to reply to a voice message. To insert this item directly in the notification template, you can use the <code>Text </code> tag. |
| %MESSAGE_REPLY_ALL% | Launches the Mini Web Inbox with the Reply to Message window. The To and Subject fields get populated automatically with multiple recipients. To insert this item directly in the notification template, you can use the <code>Text </code> tag. |
| %MESSAGE_MARKUNREAD% | Launches the Mini Web Inbox with marking the message as unread and increasing the unread message count. To insert this item directly in the notification template, you can use the <code>Text </code> tag. |
| Custom Variables | <p>The administrator can store values in the form of text and numbers in custom variables. For example, the administrator can use custom variables for headers and footers. To insert a variable directly in the notification template, as specified by the administrator under the Templates > Notification Templates > Custom Variables page, you can use the <code>%Var1%</code>.</p> <p>For more information on custom variables, see the Configuring Custom Variables, page 14-11 section.</p> |
| Custom Graphics | <p>The administrator can use custom graphics for adding logos, images, within an HTML template. The images could also be used to define Image based Template Structure. For example - See Default_Dynamic_Icons.</p> <p>To insert a graphic directly in the notification template as specified by the administrator under the Templates > Notification Templates > Custom Graphics page, you can use the <code></code> tag. For more information on custom graphics, see the Configuring Custom Graphics, page 14-12 section.</p> |

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|--------------------------------|---|
| <code>%CALLER_ID%</code> | Displays the alias name of the caller who has received a voice message. |
| <code>%SENDER_ALIASE%</code> | Displays the alias name of the sender who has dropped a voice message. |
| <code>%RECEIVER_ALIASE%</code> | Displays the alias name of the receiver who has received a voice message. |



Note The administrator can upload a new image through the administrative replaceable images option for `%MWI_STATUS%`, `%MESSAGE_STATUS%`. For more information refer to [Administrative Replaceable Images, page 14-12](#)

- d. Select **Validate** after creating or updating the notification template page to verify the HTML content.



Note The notification template does not get saved if any error is returned in the HTML validation. You must remove the error(s) returned by validation before saving the notification template. However, an HTML template with warnings can be saved successfully.

- e. Select **Save**.
 - f. You can also preview the template by selecting **Preview**. The **Preview** option displays the view as per your default browser, however, the display may vary on the various email clients.
- To edit a notification template:
 - a. On the Search Notification Templates page, select the template that you want to edit.
 - b. On the Edit Notification Template <device> page, change the settings, as applicable.
 - c. Select **Validate** to verify the HTML content and **Save**.
 - To delete a notification template:
 - a. On the Search Notification Templates page, check the check box next to the display name of the notification template that you want to delete.
 - b. Select **Delete Selected** and **OK** to confirm deletion.



Note If a template is assigned to an HTML notification device, then you cannot delete the template unless all the existing associations with the template are removed.

Custom Variables

The custom variables can be used to define commonly used HTML fragments such as, company's name, address, web address.



Note You should not create more than 20 custom variables.

Configuring Custom Variables

To Configure Custom Variable

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- Step 1** In Cisco Unity Connection Administration, expand **Templates > Notification Templates** and select **Custom Variables**. The Search Custom Variables page appears.
- Step 2** Configure a custom variable. (For more information on each field, see **Help > This Page**)
- To add a custom variable:
 - a. Select **Add New** and the New Custom Variables page appears.
 - b. Enter the values of the required fields and select **Save**.



Note You can also add new custom variables in the notification templates. For more information, see the [Notification Templates, page 14-7](#) section.

- To edit a custom variable:
 - a. On the Search Custom Variables page, select the custom variable that you want to edit.
 - b. On the Edit Custom Variables page, enter the values of the required fields and select **Save**.
- To delete a custom variable:
 - a. On the Search Custom Variables page, check the check box next to the display name of the custom variable that you want to delete.
 - b. Select **Delete Selected** and **OK** to confirm deletion.



Note If a notification template uses a custom variable that has been deleted, then the variable gets displayed in the notification instead of its value.

Custom Graphics

The custom graphics can be used to insert the company's graphics into notifications including logos and product images.



Note You cannot create more than 20 custom graphics.

The default custom graphics are **DEFAULT_BOTTOM** and **DEFAULT_TOP**. You cannot edit or delete the default custom graphics.

Custom graphics display in email clients when they are correctly configured and are functionally capable of displaying graphics.



Note For more information refer to “Configuring Cisco Unity Connection 10.x for HTML-based Message Notification” section of the *User Guide for Accessing Cisco Unity Connection Voice Messages in an Email Application*, available at http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/10x/user/guide/csGmail/10xcucugemailx/10xcucugemail055.html.

Configuring Custom Graphics

To Configure Custom Graphics

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- Step 1** In Cisco Unity Connection Administration, expand **Templates > Notification Templates** and select **Custom Graphics**. The Search Custom Graphics page appears.
- Step 2** Configure a custom graphic (For more information on each field, see **Help > This Page**)
- To add a custom graphic
 - c. Select **Add New** and the new Custom Graphics page appears.
 - d. Enter the value of the required fields and select **Save**.
 - To edit a custom graphic
 - a. On the Search Custom Graphics page, select the display name of the custom graphic that you want to edit.
 - b. On the Edit Custom Graphics page, enter the value of the required fields and select **Save**.
 - To delete a custom graphic:
 - a. On the Search Custom Graphics page, check the check box next to the display name of the custom graphics that you want to delete.
 - b. Select **Delete Selected** and **OK** to confirm deletion.



Note The file must not be more than 1 MB in size and must be unique in its display name and image. You cannot upload the same graphic again.

Administrative Replaceable Images

The administrator can replace the default images for the following status items:

- Deleted_message
- MWI_OFF
- MWI_ON
- Read_message
- Read_urgent_message
- Unread_message
- Unread_urgent_message

You can restore the images to the defaults using **Restore** button present on the Search Replaceable Images page. You cannot add or delete any image in the default list.

Editing an Administrative Replaceable Image

To Edit an Administrative Replaceable Image

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- Step 1** In Cisco Unity Connection Administration, expand **Templates > Notification Templates** and select **Administrative Replaceable Image**.
- Step 2** On the Search Replaceable Image page, select the display name of the image that you want to edit.
- Step 3** On the Edit Replaceable Image page, change the settings, as applicable. (For field information, see **Help > This Page**).



Note You are not allowed to edit the **Display Name** field. The replaceable images are used in the notification templates for the status items tags, for example, `%MWI_STATUS%` and `%MESSAGE_STATUS%` displays the MWI status and message status of the voice message.

- c. Select **Save** after applying the settings.
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Configuring HTML-based Message Notification

Unity Connection can be configured to send message notifications in the form of HTML template to an email address. The HTML-based templates can be selected and applied by the administrator to allow HTML notification for a device.

To get the HTML notifications exactly as per the template defined by the administrator, the user's email client must support the display of images and icons. For more information on whether your email client support the display of images and icons, refer to documentation of your email service provider.

HTML notifications are supported with the following email clients:

- Microsoft Outlook 2007
- Microsoft Outlook 2010
- IBM Lotus Notes
- Gmail (Web based access only)

The user must ensure to select the authentication or non-authentication mode as desired.

Configuring the Authenticated and Non-Authenticated Mode

If the administrator has created a template that includes images, icons, or status items, then the **authentication mode** ensures that the user authenticates with the Unity Connection credentials before the images are displayed in an email notification.

The **non-authentication mode** does not prompt user for credentials and the embedded images or icons are displayed without authentication in the email notification.

By default, the system is configured for the authentication mode. The administrator can configure the settings through Cisco Unity Connection Administration.

To Configure the Authenticated and Non-Authenticated Mode

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- Step 1** In Cisco Unity Connection Administration, select **System Settings > General Configuration**.
- Step 2** On the Edit General Configuration page, select the **Authenticate Graphics for HTML Notification** option to turn on the authentication mode and **Save**.
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Configuring Unity Connection to Send Voice Message as an Attachment with HTML Notification

With Unity Connection 10.0(1) release, the administrator can configure Unity Connection to send the voice message as an attachment in the HTML notification to the user. Along with the link to access Unity Connection Mini Web Inbox through the HTML notification email, the user can now access the voice message attachment in the .wav format that can be played on a PC or mobile using any player. Prior to 10.0(1) version, the end user received only a link in the HTML notifications to access Unity Connection Mini Web Inbox and listen to voice messages through Mini Web Inbox only.



Note

In case of forwarded messages, the attachment is sent only for the latest voice message. The secure and private voice messages cannot be sent as an attachment.

Following mobile clients are supported to access voice messages from mobile devices:

- iPhone 4 and above
- Android

To Configure Unity Connection to Send Voice Message as an Attachment

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- Step 1** In Cisco Unity Connection Administration, expand **Advanced** and select **Messaging**.
- Step 2** On the Messaging Configuration page, select the **Allow voice mail as attachments to HTML notifications** option to send the voice message as an attachment and **Save**.
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Configuring the Size of Voice Messages Sent as an Attachment

Unity Connection is configured to send the voice message as an attachment upto 2048KB with HTML notification. The administrator can configure the size of the voice message using the Cisco Unity Connection Administration.

To Configure the Size of Voice Message Sent as an Attachment

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- Step 1** In Cisco Unity Connection Administration, expand **Advanced** and select **Messaging**.

- Step 2** On the Messaging Configuration page, enter the size of voice message in the **Max size of voice mail as attachment to HTML notifications** (KB) text box.
- Step 3** Select **Save**. You should restart the **Connection Notifier** service for changes to take effect.
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