Messaging

This chapter outlines the types of messages available in Cisco Unity Connection, how Unity Connection handles the recording, delivery, storage of messages, and the integrated messaging and unified messaging models.

See the following sections:

Basics of Messaging

Unity Connection handles the recording, playback, storage, and delivery of different types of messages.

See the following sections:

Types of Messages

Following are the different types of messages supported by Unity Connection:

- **Unidentified Voice Messages**: The messages left by outside callers are unidentified or oustide caller voice messages. The outside callers are non Unity Connection users or the users who are not signed in to Unity Connection.

  An outside caller can call the main phone number for the Unity Connection server and spell by name or enter an extension to reach the user using a directory handler, or can be directed to the user mailbox (or to a distribution list) through a call handler. If an outside callers calls a user extension and the user does not answer, the call gets forwarded to the voicemail and the caller leaves a voicemail. Unity Connection identifies the senders of these messages as unidentified callers. When an unidentified caller leaves a message, the **From** field of the message displays "UnityConnection@<servername>" in the Web Inbox or in an email client or an RSS reader, if applicable. Depending on whether the subject line has been customized, it displays the phone number of the caller, if it is available.

Note Messages from outside callers can be forwarded to other users but cannot be replied to.

- **User to User Voice Messages**: The messages left by Unity Connection users to another users or distribution lists are identified or user to user voice messages. Users can reply or forward messages from other users.

  Consider a user calls another user extension, the called user does not answer and the call is forwarded to user mailbox where the caller leaves a voice message. In this case, if **Identified User Messaging** is enabled and supported by phone system, and the user calls from primary extension or an alternate device, Unity Connection recognizes that the calling extension is associated with a user or identified user. The identified user messaging is enabled by default. It can be disabled using the **Disable Identified User Messaging Systemwide** setting on the System Settings > Advanced > Conversations page.

Note Unity Connection does not perform caller authentication or verification when an identified caller leaves a voicemail for another user.

- **Email Messages in Exchange Server**: Users can access emails stored in the user mailboxes on an Exchange server. The Exchange emails can be accessed using the Text-to-Speech feature. For more information, see the Unified Messaging, page 11-20 section.
- **System Broadcast Messages**: The recorded announcements sent to everyone in an organization are system broadcast messages. Users must listen to each system broadcast message in its entirety before listening to other new and saved messages or changing setup options. They cannot fast-forward or skip a system broadcast message. For more information, see the Broadcast Messaging, page 11-10 section.

Note By design, system broadcast messages do not trigger message waiting indicators (MWIs) on user phones.

- **Text or HTML Notifications**: Message notifications are sent in the form of text messages to email addresses, text pagers, and text-compatible mobile phones. When a new voicemail is delivered to users, they receive SMTP based HTML notifications. For more information, see the "Notifications" chapter.
- **Receipts**: A user can request a read receipt when sending a message. The sender receives a message receipt when the recipient listens to the message. New receipts turn on the message waiting indicator on the user phone and can trigger message notifications.

When a voice message cannot be delivered, if the sender is configured to accept receipts, Unity Connection alerts the sender with a nondelivery receipt (NDR). A user can re-send the NDR to a different recipient at a later time. The NDR contains a copy of the original message.

- **Interview Handler Messages**: Interview handlers collect information from callers by playing a series of questions that you have recorded and then recording the answers offered by callers.

  When all the answers have been recorded, they are forwarded as a single voice message, with beeps separating the answers, to the recipient (user or distribution list) that you designate in the interview handler configuration.

- **Dispatch Messages**: The dispatch message is sent to a distribution list with the message configured in such a way that only one user responds to that message. A user can accept, decline, or postpone the dispatch message. For more information, see the Dispatch Messages, page 11-4 section.

- **Live Record Messages**: The messages recorded during a live conversation between a user and a caller are the live record messages. The recorded messages are stored in the user mailbox. The user can access the messages at any time or forward it another user or group of users. For more information, see the Live Record, page 11-8 section

Message Recording

The audio format (or codec) used for recording a message is in the same format as used by playback devices. For example, if you listen to messages primarily on a phone system extension, you should configure Unity Connection to record messages in the same audio format that the phone system uses. For more information, see the Changing the Audio or Video Format of Recordings, page A-10 section.

Configuring Termination Warning Prompt

By default, Unity Connection plays a termination warning prompt before reaching the maximum allowable message length while callers record their messages. By default, the warning plays 15 seconds before the end of a recording, provided that the recording is not restricted to less than 30 seconds in length.

To Configure Termination Warning Prompt for the End of Recording

Step 1 In Cisco Unity Connection Administration, expand **System Settings** and select **Telephony**.

Step 2 On the Telephony Configuration page, enter the values of the following fields:

- **Minimum Recording Duration in Milliseconds for Termination Warning**
- **Recording Termination Warning Time in Milliseconds**

Step 3 Select **Save** to apply the changes.

Default Recipient Accounts

The default users are created at the time of installation. The users can be modified but cannot be deleted. Following are the three default users that are responsible for message delivery and retrieval of messages when callers are routed to one of the default call management objects:

- **Operator**: By default, the mailbox of the Operator user stores the messages left for Operator call handler. You should either assign a user to monitor this mailbox or reconfigure the Operator call handler to send messages to a different user or system distribution list.
- **UndeliverableMessagesMailbox**: By default, this mailbox is the only member of the Undeliverable Messages distribution list. You should either assign a user to monitor this mailbox or add a user to the Undeliverable Messages distribution list to monitor and reroute (as appropriate) any messages that are delivered to the list.
- **Unity Connection Messaging System**: By default, this mailbox acts as a surrogate sender for unidentified messages or messages from unidentified callers.

Dispatch Messages

Dispatch messaging is useful when a team is available to respond to messages and only one member of the team is required to respond.

Following are the ways to handle dispatch messages:

- If a user selects to accept a message, all other copies of the message are removed from the mailboxes of the other members of the distribution list, regardless of whether the other users have listened to or postponed the message.
- If a user selects to postpone the message, it remains as an unread message in the mailbox of that user and in the mailboxes of the other members of the distribution list.
- If the user selects to decline the message, it is removed from the mailbox of that user but copies of the message remain as unread in the mailboxes of the other members of the distribution list.
- If there is only one copy of the dispatch message remaining and no user has yet selected to accept the message, the final user whose mailbox it is in must accept it. That user is not given the option to decline the message.

Configuring Dispatch Messages

To Configure Dispatch Messaging for Call Handlers

Step 1 In Cisco Unity Connection Administration, expand **Call Management** and select **System Call Handlers**.

Step 2 On the Search Call Handlers page, in the System Call Handlers table, select the applicable call handler.

Step 3 On the Edit Call Handler Basics page, in the **Edit** menu, select **Message Settings**.

Step 4 On the Edit Message Settings page, under **Message Recipient**, select a distribution list as the recipient and check the **Mark for Dispatch Delivery** check box. Select **Save**.

To Configure Dispatch Messaging for Interview Handlers

Step 1 In Cisco Unity Connection Administration, expand **Call Management** and select **Interview Handlers**.

Step 2 On the Search Interview Handlers page, in the Interview Handlers table, select the applicable interview handler.

Step 3 On the Edit Interview Handler Basics page, under **Message Recipient**, select a distribution list as the recipient and check the **Mark for Dispatch Delivery** check box. Select **Save**.

Dispatch Messaging Limitations and Behavior

Following are the limitations and behavior of dispatch messaging:

- Only voice messages can be flagged for dispatch.
- The handling of dispatch messaging is supported only over the phone interface. If you handle the dispatch messages from any other client interface, such as Web Inbox or Cisco Unified Personal Communicator, the user cannot postpone, accept, or decline the message.

Note The handling of dispatch messaging is not supported with Visual Voicemail.

- The dispatch messages are not synchronized between Unity Connection and Exchange server if single inbox has been configured. For information on single inbox, see the Unified Messaging, page 11-20 section.
- The dispatch messages can never be transcribed even if SpeechView has been enabled for the recipients.
- A user can delete the last copy of a dispatch message using Web Inbox or Cisco Unified Personal Communicator.
- During playback of a dispatch message, if a user presses the phone keypad key that is mapped to the “skip” or “delete” menu options, Unity Connection interprets the “skip” key press as “postpone,” and the “delete” key press as “decline.”
- The recipient who accepts the dispatch message is the only user to have a copy of that message in his/ her mailbox. The recipient can select to hear the dispatch messages first, during the playback of all voice messages using phone interface.
- The copy of a dispatch message is not stored in the **Deleted Items** folder if the recipient declines a dispatch message.
- A dispatch message once accepted by a user is treated as a general voice message. Therefore, a dispatch message once accepted cannot be forwarded to another user. The message is presented to the phone interface like a voice message and not announced as a dispatch message.
- If message notification rules are configured for dispatch messages, by the time users receive the notification and call in to retrieve the message, the accepted dispatch messages are gone from the recipient mailboxes.
- The dispatch messaging is not supported for digital networking. For more information on digital networking, see the “Networking” chapter.
- For a Unity Connection cluster configuration, two different users can call into the publisher and subscriber servers to accept the same dispatch message if the cluster is stuck in a split brain condition. The split brain condition refers to the time when both publisher and subscriber servers are stuck in **Primary** state.

  After the split brain condition has been resolved, the user who last accepted the dispatch message is the final recipient and the message is removed from the mailbox of the other user.

Message Delivery

When a message is delivered by Unity Connection, the recipient is either the Unity Connection Messaging system for unidentified messages or the recipient listed in the identified messages.

Message Delivery and Sensitivity Settings

The message delivery and sensitivity settings allow the users to control the delivery time of a message, the users who can access it, and if the messages can be forwarded to other users.

Following are the message delivery and sensitivity options for users and outside callers:

- **Urgent**: The urgent messages are delivered before other messages. The users who are signed in to the mailboxes can always mark a message urgent.
- **Private**: A private message can be send to any user but it cannot be forwarded using phone, Messaging Inbox, Web Inbox, ViewMail for Outlook, or ViewMail for Notes. The identified messages can always be marked private and can be saved as .wav files.
- **Secure**: Only Unity Connection users can receive secure messages. The secure messages can be played or forwarded using phone, Messaging Inbox, Web Inbox, or ViewMail for Outlook 8.5. The identified messages can be marked secure but cannot be saved as .wav files.
- **Future delivery**: A user can mark a message for future delivery to a recipient using the touchtone conversation or the voice recognition conversation. Unity Connection waits to send the message on the day and time that the user specifies. Once future delivery is set on the message, the user can cancel the future delivery as long as the user has not yet selected the option to send the message.

  An administrator can cancel the pending messages set for future delivery using the **delete cuc futuredelivery** CLI command.

The unidentified callers or users who are not signed in to mailboxes, can mark a message urgent, private, or secure depending on the user or user template settings. The message delivery and sensitivity settings can be managed in either of the following ways:

  – In Cisco Unity Connection Administration> Users> Users> select a user> Edit> Message Settings> select the desirable action under the **Message Urgency**, **Message Security**, and **Message Sensitivity** fields.

  – In Cisco Unity Connection Administration> Templates> User Template> select a user template> Edit> Message Settings> select the desirable action under the **Message Urgency**, **Message Security**, and **Message Sensitivity** fields.

Message Delivery Issues

Following are the information pertaining to message delivery issues:

- If a message failed to be delivered to a recipient that the caller intended to reach, the message is sent to the Undeliverable distribution list. Unity Connection sends a non delivery receipt (NDR) to the sender if the sender is configured to accept NDRs.

Note NDRs are not send if the sender is an unidentified caller or the mailstore of the recipient is offline.

  If the original message is malformed, the message is not sent to Undeliverable distribution list. The message is instead sent to the MTA bad mail folder (**UmssMtaBadMail**).

- If the Unity Connection components involved in message delivery are unavailable, the recorded messages are queued and delivered when the components are available. For example, if a mailbox store is disabled, messages are held in queue, and delivered once the mailbox store is enabled again.

  For single inbox configuration, if network or other conditions are slow and prevent attempts to retrieve messages from Exchange, Unity Connection announces to users that email is unavailable. The time period that Unity Connection waits for a response from Exchange is four seconds by default. This can be configured in Cisco Unity Connection Administration> System Settings> Advanced> Unified Messaging Services> the **TTS and Calendars: Time to Wait for a Response (in seconds)** field.

  The messages are held in queue for delivery but they are not synchronized with Exchange mailboxes. The synchronization between Unity Connection and Exchange resumes once Exchange is available.

- If a call is disconnected while users are in the process of sending, replying, or forwarding messages, the messages are handled in the way depending on user configuration. This configuration is specified in either of the following ways:
  - In Cisco Unity Connection Administration> **Users**> **Users**> select a user> **Edit**> **Send Message Settings**> select the desirable action under the **When a Call is Disconnected or the User Hangs Up** field.
  - In Cisco Unity Connection Administration> Templates> User Templates> select a user template> Edit> Send Message Settings> select the desirable action under the **When a Call is Disconnected or the User Hangs Up** field.
- If the mailbox quota is exceeded or the mailbox store size is exceeded, Unity Connection allows to record the message if the recipient mailbox has not exceeded the **Send/ Receive Quota**. For more information on mailbox quotas and mailbox store size, see the Controlling the Size of Mailboxes, page 9-5 section of the Message Storage chapter.

Message Actions

The message actions for a user or user template determines how to handle the different types of messages received for a user. For more information, see the Message Actions, page A-6 section.

Message Subject Line Formats

Message subject lines are visible when users view and listen to messages in the Messaging Inbox, Web Inbox, or any other visual client that displays the message subject. Subject lines are not presented to users when they listen to voice messages by phone. For more information, see the Subject Line Formats, page 16-5 section.

Message Storage and Disk Capacity

The message content is stored as .wav file on the Unity Connection server and the information about the messages is stored in a database. For more information, see the Message Storage and Disk Capacity, page 11-7 sections.

Message Deletion

The users can delete messages using multiple methods, such as phone, Web Inbox, or Messaging Inbox. In addition to this, an administrator can also manage the message deletion to meet the disk capacity requirements and security needs.

Following are the ways to delete messages:

- The messages can be either soft deleted or hard deleted depending on the settings configured in Cisco Unity Connection Administration> Class of Service> class of service for the users> the **Delete Messages without Saving to Deleted Items Folder** check box under the **Message Options** field.

  If the check box is unchecked and a user deletes a message, then the deleted message moves to the Deleted Items folder. This action is referred to as soft delete.

  If the check box is checked and a user deletes a message, then the message is permanently deleted without sending any copy to Deleted Items folder. This action is referred to as hard delete.
- The messages can be permanently deleted without any action required from the users who received them, using the message aging policies. For more information, see the Message Aging Policies, page 9-7 section.
- The messages can be deleted using the **Message File Shredding Level** setting in the Messaging Configuration page in Cisco Unity Connection Administration> Advanced System Settings. This is a system wide setting that ensures copies of messages are securely deleted by shredding the messages the specified number of times when they are deleted. The shredding can be done only when they have been hard deleted.

Message Access

Users can access new and saved voice messages using a touchtone or voice recognition conversation over phone. You can specify whether users can access the deleted messages.

The users may also gain access to voice messages using Web Inbox, Messaging Inbox, Cisco Unified Personal Communicator, RSS reader or other applications. For information on accessing voice messages using RSS reader, see the RSS, page 17-11 section.

Depending on the unified messaging service accounts, users may access email messages in an external message store using phone.

Live Record

Live record allows users to record conversations while they talk to callers. The recorded conversation is stored as a message in the user mailbox and the user can review it later, or redirect it to another user or group of users. Operators in your organization may find live record particularly useful. Live record is supported only for Cisco Unified Communications Manager integrations.

The live record does not work for users who have full mailboxes. When a user with a full mailbox tries to record a call, the recorded conversation is not stored as a message in the user mailbox.

To Configure Live Record

Step 1 Add a live record pilot number to Cisco Unified Communications Manager:

a. In Cisco Unified Communications Manager Administration, expand **Call Routing** and select **Directory Number**.

b. In the Find and List Directory Numbers page, select **Add New**. The Directory Number Configuration page appears.

c. In the **Directory Number** field, enter the directory number of the live record pilot number.

d. In the **Route Partition** field, select the partition that contains voicemail port directory numbers.

e. In the **Description** field, enter a description.

f. In the **Voice Mail Profile** field, accept the default of **None**.

g. In the **Calling Search Space** field, select the calling search space that includes the partition with all voicemail port directory numbers.

h. In the **Forward All** field, under **Destination**, enter the voicemail pilot number for the voice messaging ports.

i. In the **Forward All** field, under **Calling Search Space**, select the calling search space that includes the partition with all voicemail port directory numbers and select **Save**.

Step 2 (*optional)* Configure Cisco Unified Communications Manager conference settings:

a. In Cisco Unified Communications Manager Administration, expand **System** and select **Service Parameters**.

b. On the Service Parameters Configuration page, in the **Server** field, select the name of the Cisco Unified CM server.

c. In the **Service** list, select **Cisco CallManager**. In the **Clusterwide Parameters (Feature - Conference)**, in the **Drop Ad Hoc Conference** field, select **When Conference Controller Leaves** and select **Save**.

Step 3 Create a routing rule for live record in Unity Connection:

a. In Cisco Unity Connection Administration, expand **Call Management** and select **Call Routing > Forwarded Routing Rules**.

b. On the Forwarded Routing Rules page, select **Add New**.

c. On the New Forwarded Routing Rule page, enter a description in the **Description** field and select **Save**.

d. On the Edit Forwarded Routing Rule page, in the **Status** field, select **Active**.

e. In the **Send Call To** field, select **Conversation**.

f. In the **Conversation** list, select **Start Live Record** and select **Save**.

g. In the Routing Rule Condition section, select **Add New**.

h. In the New Forwarded Routing Rule Condition page, select **Forwarding Station**. To the right of the **Forwarding Station** option, select **Equals** and enter the live record pilot number that you created in the **To Add a Live Record Pilot Number to Cisco Unified CM** field and select **Save**.

Step 4 (*optional)* Adjust the live record beep interval:

a. In Cisco Unity Connection Administration, expand **System Settings** and select **Advanced > Telephony**.

b. In the Telephony Configuration page, enter value in the **Live Record Beep Interval in Milliseconds** field. (For more information on this field, see **Help> This Page**).

c. Select **Save**.

Step 5 Test the live record:

a. From a user phone, dial an extension.

b. After the dialed extension is answered, on the user phone, press the **Confrn** softkey to start a conference call.

c. Dial the live record pilot number that you created in Cisco Unified Communications Manager.

d. Press the **Confrn** softkey to join the Unity Connection live recorder with the conference call.

e. After recording the phone conversation, hang up the user phone. Sign in to the voice mailbox for the user and listen to the recorded phone conversation.

Broadcast Messaging

System broadcast messages are different from regular voice messages in the following ways:

- The users when sign in to Unity Connection using phone, immediately hear the number of broadcast messages they have and the system begins playing them. This happens even before users hear message counts for new and saved messages.
- The sender of a broadcast message specifies the time for which the message is active. The system can broadcast the message till it is active. The message can be active for a day, week, month or for an indefinite time period.
- The playback of a broadcast message can be interrupted by a user, for example, a user hangs up. The message plays again the next time when the user signs in to Unity Connection using phone.
- The broadcast message can either be replayed or permanently deleted after a user has finished playing a system broadcast message. Users cannot respond to, forward, or save broadcast messages.
- The users can receive an unlimited number of system broadcast messages even when they exceed the mailbox size limits and are no longer able to receive other messages. This is because the storage of broadcast messages is not included in the total mailbox size for each user.
- The users can listen to broadcast messages only using phone. Other clients, such as RSS reader and Web Inbox cannot be used to listen to broadcast messages.
- The single inbox messages are not synchronized between Unity Connection and Exchange server.
- Unity Connection stops responding to voice commands during the playback of voice messages. When using the voice-recognition input style, users needs to use key presses to either replay or delete the broadcast message.

Follow the given steps to configure broadcast messaging to users:

1. Set up a way for users to access the Broadcast Message Administrator. See the Enable Phone Access to the Broadcast Message Administrator, page 11-11 section.
2. Enable user accounts or a template to send and update system broadcast messages. See the Enable Sending and Updating Broadcast Messages, page 11-13 section.

Enable Phone Access to the Broadcast Message Administrator

To send a system broadcast message, users sign in to the Broadcast Message Administrator, a special conversation that allows them to send and update system broadcast messages. You can give users access to the Broadcast Message Administrator using either of the following ways:

- **Configure a Custom Keypad Mapping conversation**: The Custom Keypad Mapping tool can be configured to map a key to the Broadcast Message Administrator Conversation so that it is offered to users from the main menu. See the Custom Keypad Mapping Tool, page 19-6 section.
- **Create a call handler**: See the Create a Call Handler to Send Users to the Broadcast Message Administrator, page 11-11 section.
- **Set up a one-key dialing option**: See the Set Up a One Key Dialing Option to Send Users to Broadcast Message Administrator, page 11-11 section.
- **Set up a phone number and routing rule**: Set up a new phone number and then add a routing rule. See the Set Up a Routing Rule to Send Users to Broadcast Message Administrator, page 11-12 section.

Create a Call Handler to Send Users to the Broadcast Message Administrator

A new call handler with unique extension is created to specify the Broadcast Message Administrator as the destination to which Unity Connection sends the user after hearing the greeting.

To Create a Call Handler to Send Users to the Broadcast Message Administrator

Step 1 In Cisco Unity Connection Administration, expand **Call Management** and select **System Call Handlers**.

Step 2 In the Search Call Handlers page, select **Add New**.

Step 3 In the New Call Handler page, enter a display name and the extension that users can dial to reach the call handler. Select the call handler template on which to base the new call handler and select **Save**.

Step 4 In the Edit Call Handler Basics page, in the **Edit** menu, select **Greetings**.

Step 5 In the Greetings page, select the **Standard** greeting.

Step 6 In the Edit Greeting page, in the **Callers Hear** section, select **Nothing**.

Step 7 In the After Greeting section, select **Conversation** and then select B**roadcast Message Administrator** and select **Save**.

Set Up a One Key Dialing Option to Send Users to Broadcast Message Administrator

You can specify that Unity Connection sends a caller to the Broadcast Message Administrator when a caller presses a particular key during the greeting. To set up a one-key dialing option for accessing the Broadcast Message Administrator, use either of the following procedures:

- To Set Up a One Key Dialing Option from a Call Handler to Access Broadcast Message Administrator, page 11-12
- To Set Up a One Key Dialing Option from a User Greeting to Access Broadcast Message Administrator, page 11-12

To Set Up a One Key Dialing Option from a Call Handler to Access Broadcast Message Administrator

Step 1 In Cisco Unity Connection Administration, expand **Call Management** and select **System Call Handlers**.

Step 2 In the Search Call Handlers page, select the applicable call handler. If you want to set up access to the Broadcast Message Administrator from the opening greeting, select the **Opening Greeting** call handler.

Step 3 In the Edit Call Handler Basics page, in the **Edit** menu, select **Caller Input**.

Step 4 In the Caller Input page, in the **Caller Input Keys** table, select the applicable phone keypad key.

Step 5 In the Edit Caller Input page for the key that you have selected, check the **Ignore Additional Input (Locked)** check box.

Step 6 In the **Conversation** section, select **Broadcast Message Administrator** and then select **Save**.

To Set Up a One Key Dialing Option from a User Greeting to Access Broadcast Message Administrator

Step 1 In Cisco Unity Connection Administration, expand **Users** and select **Users**.

Step 2 In the Search Users page, in the **Search Results** table, select the applicable user.

Step 3 In the Edit User Basics page, in the **Edit** menu, select **Caller Input**.

Step 4 In the Caller Input page, in the **Caller Input Keys** table, select the applicable phone keypad key.

Step 5 In the Edit Caller Input page for the key that you have selected, check the **Ignore Additional Input (Locked)** check box.

Step 6 In the **Conversation** section, select **Broadcast Message Administrator** and then select **Save**.

Set Up a Routing Rule to Send Users to Broadcast Message Administrator

Step 1 In Cisco Unity Connection Administration, expand **Call Management > Call Routing** and select **Direct Routing Rules**.

Step 2 In the Direct Routing Rules page, select **Add New**.

Step 3 In the New Direct Routing Rule page, enter a display name for the new routing rule and select **Save**.

Step 4 In the Edit Direct Routing Rule page, confirm that the **Status** is set to **Active**.

Step 5 In the **Send Call To** field, in the **Conversation** section, select **Broadcast Message Administrator** and select **Save**.

Step 6 In the **Routing Rule Conditions** table, select **Add New**.

Step 7 In the New Direct Routing Rule Condition page, in the **Dialed Number** section, select **Equals** and enter the phone number that has been set up for access to the Broadcast Message Administrator. Select **Save**.

Step 8 In the Direct Routing Rule menu, select **Direct Routing Rules**. Make sure that the new routing rule is in an appropriate position in the routing table.

Step 9 (*optional)* If you want to change the order of routing rules, select **Change Order**. In the Edit Direct Routing Rule Order page, select the name of the rule you want to reorder, and select the **Up** or **Down** arrow until the rules appear in the correct order. Select **Save**.

Enable Sending and Updating Broadcast Messages

After configuring the Broadcast Message Administrator, you need to enable users to send or update broadcast messages using either of the following ways:

- To Enable Sending and Updating Broadcast Messages for Users, page 11-13
- To Enable Sending and Updating Broadcast Messages for User Templates, page 11-13

To Enable Sending and Updating Broadcast Messages for Users

Step 1 In Cisco Unity Connection Administration, expand **Users** and select **Users**.

Step 2 In the Search Users page, select the applicable user. For more than one user, check the check boxes against the applicable users and select **Bulk Edit**.

Step 3 In the Edit User Basics page, in the **Edit** menu, select **Send Message Settings**.

Step 4 In the Send Message Settings page, under **Broadcast Messages**, check the applicable check boxes and select **Save**. (For more information on each field, see **Help> This Page**).

To Enable Sending and Updating Broadcast Messages for User Templates

Step 1 In Cisco Unity Connection Administration, expand **Templates** and select **User Templates**.

Step 2 In the Search User Templates page, select the applicable user template. For more than one user template, check the check boxes against the applicable user templates and select **Bulk Edit**.

Step 3 In the Edit User Template Basics page, in the **Edit** menu, select **Send Message Settings**.

Step 4 In the Send Message Settings page, under **Broadcast Messages**, check the applicable check boxes and select **Save**. (For more information on each field, see **Help> This Page**).

Importance of Broadcast Message Administrator

The users allowed to send and update broadcast messages can use the Broadcast Message Administrator to do the following tasks:

- Record and send one or more broadcast messages.
- Define when a system broadcast message becomes active and for how long. The date and time reflect the time zone for the user who sends the message.

Note If a sender hangs up or is disconnected while creating a broadcast message but before sending it, Unity Connection deletes the recording.

The users allowed to update broadcast messages can use the Broadcast Message Administrator to do the following tasks:

- Review active messages. If there is more than one active message, the Broadcast Message Administrator presents them in order based on the start date and time, starting with the newest messages.
- Change the end date and time for active messages.

- Change or add to a recording for future messages.
- Change the start date and time or the end date and time for future messages. (Note that the end date and time does not adjust automatically if senders change the start date and time but do not change the end date and time.)
- Delete active and future messages.

Changing Broadcast Message Administrator Defaults

Default behavior for the Broadcast Message Administrator is controlled by settings on the System Settings > Advanced > Conversations page in Cisco Unity Connection Administration.

Following are the changes you can make to the system defaults:

- **Retention Period**: This indicates the time for which Unity Connection retains the expired broadcast messages on the server. By default, the .WAV file and any data associated with a message purges in 30 days. To change the retention period for expired broadcast messages, enter a number from one to 60 days.
- **Default Active Days**: This indicates the number of days that a broadcast message remains active when the sender does not specify an end date and time. The default is 30 days. To change how long a message without an end date and time remains active, enter a number from zero (0) to 365 days. A value of zero (0) days means that messages that are sent without a specified end date and time remain active indefinitely.
- **Maximum Recording Length**: This indicates the maximum length allowed for system broadcast messages. By default, senders can record messages up to 300,000 milliseconds (5 minutes) in length. To change the maximum recording length, enter a number from 60,000 (1 minute) to 36,000,000 (60 minutes) milliseconds.
- **Play Oldest Message First**: This indicates the order in which broadcast messages are presented to users. By default, the check box is checked that plays the oldest message first. To play the newest message first, uncheck the check box.

Integrated Messaging

The model of messaging in which there are separate user accounts handle the voicemails and emails for a user is known as integrated messaging. The emails for a user are managed through the user mailbox on an email server and the voicemails for a user are managed through a user mailbox in Unity Connection.

Unity Connection supports IMAP and SMTP protocols for integrated messaging. The SMTP protocol is used for sending messages to another users and IMAP protocol is used for retrieval of messages.

SMTP Message Handling

Unity Connection can receive and process SMTP messages generated by IMAP clients, for example, a voice message recorded in a Microsoft Outlook email client using ViewMail for Outlook.

When an authorized IMAP client tries to send a message to Unity Connection through SMTP, the message is categorized as a voicemail, email, fax, or delivery receipt. The sender is mapped to a user and the message recipients are mapped to users or contacts by comparing the SMTP address in the message header to its list of SMTP proxy addresses.

Unity Connection processes the message for each recipient under either of the given conditions:

- If SMTP authentication is configured for IMAP client and SMTP address of the sender matches a proxy address or primary SMTP address for the authenticated user.
- If SMTP authentication is not configured for the IMAP client and the SMTP address of the sender matches a proxy address or primary SMTP address for any Unity Connection user.

Following are the types of recipient based on which Unity Connection processes the messages for each individual:

- If the recipient maps to a VPIM contact, Unity Connection converts the message into a VPIM message, removing any attachment that is not allowed by the VPIM standard. Unity Connection either delivers the message to the specified VPIM location if the VPIM location is homed on the local server, or forwards it to another digitally networked Unity Connection server for delivery if the VPIM location is homed on that server. For more information on VPIM, see the *Networking Guide for Cisco Unity Connection*, *Release 10.x,* available at http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/10x/networking/guide/10xcucnetx.html.
- If the recipient maps to a user homed on the local server, Unity Connection performs the action specified on the Message Actions page of the profile for the user in Cisco Unity Connection Administration. For each type of message (voice, email, fax, or delivery receipt) you can configure whether the message is accepted and placed in the user mailbox on the Unity Connection server, relays the message to the user at an alternate SMTP address, or rejects the message and generates a non delivery receipt (NDR).
- If the recipient maps to a user homed on a remote Unity Connection server, the message is relayed to the home server of the user that performs the action specified on the Message Actions page of the user profile.
- If the recipient does not map to any of the above, Unity Connection either relays the message to the SMTP smart host or sends an NDR to the sender, depending on the option selected for the **When a Recipient Cannot be Found** setting on the System Settings > General Configuration page in Cisco Unity Connection Administration. By default, Unity Connection sends an NDR.

If SMTP authentication is configured for the IMAP client and the SMTP address of the sender does not match a proxy address or the primary SMTP address for the authenticated user, the Unity Connection server returns an SMTP error that causes the message to remain in the client outbox.

If SMTP authentication is not configured for the IMAP client and the SMTP address of the sender does not match any known user proxy address or primary SMTP address, Unity Connection places the message into the MTA bad mail folder (UmssMtaBadMail).

Example Using IMAP and ViewMail for Outlook

Consider an example of an organization ExampleCo. that uses Microsoft Outlook to access a Microsoft Exchange server for email. Each employee at the company receives corporate email at an address that follows the pattern <firstname.lastname@example.com>. ExampleCo wants employees to be able to use Outlook to access voice messages stored on the Unity Connection server. To allow employees to send, forward, or reply to voice messages in the Outlook client, ExampleCo deploys the Cisco Unity Connection ViewMail for Microsoft Outlook plugin. The Outlook client for each employee is configured to access the user account using IMAP.

When Robin Smith at ExampleCo wants to send an email message to a coworker, Chris Jones, Robin composes a new email message to chris.jones@example.com. By default, Outlook is configured to route new email messages to the Microsoft Exchange server for delivery. Next, Robin wants to send Chris a voice message and selects the **New Voice Message** icon that opens the ViewMail for Outlook form.

Robin again addresses the message to chris.jones@example.com, records audio for the message, and selects the **Send** button. The voice message is routed to Unity Connection for delivery because ViewMail is configured to use Unity Connection IMAP accounts to send the messages.

When Unity Connection receives the voice message, it searches the list of SMTP proxy addresses for robin.smith@example.com (the sender) and chris.jones@example.com (the recipient). Unity Connection delivers the message as a voice message from Robin Smith to Chris Jones because these addresses are defined as SMTP proxy addresses for the user profiles of Robin Smith and Chris Jones respectively.

When Chris opens Outlook, the email message from Robin shows up as a new message in the Microsoft Exchange Inbox. The voice message from Robin, on the other hand, shows up as a new message in the Inbox of the Unity Connection account that Chris accesses using IMAP. If Chris replies to either message, the Outlook client automatically route the reply using the account in which Chris received the original message.

Important Points for Deploying Integrated Messaging

Following are the considerations when deploying IMAP clients to send and receive Unity Connection messages:

- Use a firewall to protect the SMTP port from unauthorized access. The SMTP port and domain are listed on the System Settings > SMTP Configuration > Server page in Cisco Unity Connection Administration.
- Configure Transport Layer Security for IMAP client connections in order to protect user passwords.
- Configure the corporate email address of each user as an SMTP proxy address for the user. When setting up theUnity Connection IMAP account on user workstation, use the corporate email address of the user instead of the Unity Connection specific email address. In this way, users are insulated from changes to the Unity Connection-specific addresses if the SMTP domain is changed.
- Create a separate Outlook address book for ViewMail users that is limited to the objects in the user search space if you are using search spaces to limit the objects that users can reach and do not want users to receive NDRs for unreachable objects.

Task List for Configuring IMAP Access

Follow the given steps to configure IMAP access to Unity Connection messages:

1. (*optional)* Do the following tasks if you plan to configure Unity Connection to relay messages for users to another SMTP server:
   a. Configure the SMTP smart host to accept messages from Unity Connection server. For more information, see the documentation for the SMTP server you are using.
   b. Configure Unity Connection to relay messages to smart host. For more information, see the Configure Unity Connection to Relay Messages to a Smart Host, page 11-17 section.
   c. Review the settings that control whether private or secure messages can be relayed. For more information, see the Configure Message Relay Settings, page 11-17 section.
2. Configure message actions for users or user templates. For more information, see the Configure Message Actions for Users or User Templates, page 11-18 section.

3. Configure SMTP proxy addresses for users who send or receive messages from IMAP clients. For more information, see the Configure SMTP Proxy Addresses for Users or User Templates, page 11-18 section.
4. Associate users with a class of service that offers a license to use an IMAP client to access voice messages. For more information, see the Enable IMAP Client Access to Voice Messages for Users, page 11-18 section.
5. Configure SMTP proxy addresses for VPIM contacts who may receive messages from IMAP clients. For more information, see the Configure SMTP Proxy Addresses for Contacts, page 11-19 section.
6. *If you configured Transport Layer Security to be required or optional in the procedure in* Task 7.: Configure the Unity Connection server to provide a secure IMAP Unity Connection, as described in the "Securing Cisco Unity Connection Administration, Cisco PCA, Cisco Unity Connection SRSV, and IMAP Email Client Access to Cisco Unity Connection" section in the "Using SSL to Secure Client/ Server Connections in Cisco Unity Connection 10.x" chapter of the *Security Guide for Cisco Unity Connection*, *Release 10.x*, available at http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/10x/security/guide/10xcucsecx/10xcucsec065.html#pgfId-1076634.
7. Configure Unity Connection to allow SMTP connections from IMAP clients. For more information. see the Configure IMAP Client Access and Authentication, page 11-19 section.
8. (*optional*) If you want to customize SMTP settings, do the steps as mentioned in the Configure SMTP Message Parameters, page 11-19 section.
9. Configure a supported IMAP client to access the SMTP messages in the user mailbox. For more information, see the "Configuring an Email Account to Access Cisco Unity Connection 10.x Voice Messages" chapter of the *User Workstation Setup Guide for Cisco Unity Connection*, *Release 10.x* available at http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/10x/user_setup/guide/10xcucuwsx/10xcucuws030.html.

Configure Unity Connection to Relay Messages to a Smart Host

To Configure Unity Connection to Relay Messages to a Smart Host

Step 1 In Cisco Unity Connection Administration, expand **System Settings> SMTP Configuration** and select **Smart Host**.

Step 2 In the Smart Host page, in the **Smart Host** field, enter the IP address or fully qualified domain name of the SMTP smart host server and select **Save**. (For more information on each field, see **Help> This Page**).

Configure Message Relay Settings

To Configure Message Relay Settings

Step 1 In Cisco Unity Connection Administration, expand **System Settings> Advanced** and select **Messaging**.

Step 2 Configure message relay settings (For information on each field, see **Help> This Page**):

a. To mark the relay messages private, check the **Allow Relaying of Private Messages** check box.

b. To mark the relay messages secure, check the **Allow Relaying of Secure Messages** check box and select **Save**.

Note Unity Connection sends an NDR to the message sender when it receives a message that it cannot relay because the message is marked private or secure.

Configure Message Actions for Users or User Templates

To Configure Message Actions for Users or User Templates

Step 1 In Cisco Unity Connection Administration, expand **Users> Users** and select the applicable user. To apply changes in user template, expand **Templates> User Templates** and select the applicable user template.

Step 2 In the **Edit** menu of the user or user template, select **Message Actions**.

Step 3 In the Edit Message Actions page, enter the values of the required fields and select **Save**. (For information on each field, see **Help> This Page**).

Configure SMTP Proxy Addresses for Users or User Templates

To Configure SMTP Proxy Addresses for Users or User Templates

Step 1 In Cisco Unity Connection Administration, expand **Users> Users** and select the applicable user. To apply changes in user template, expand Templates> User Templates and select the applicable user template.

Step 2 In the **Edit** menu of the user or user template, select **SMTP Proxy Addresses**.

Step 3 In the SMTP Proxy Addresses page, select **Add New** to add a new SMTP proxy address. Enter the values of the required fields and select **Save**. (For information on each field, see **Help> This Page**).

Enable IMAP Client Access to Voice Messages for Users

To Enable IMAP Client Access to Voice Messages for Users

Step 1 In Cisco Unity Connection Administration, expand **Class of Service** and select **Class of Service**. The Search Class of Service page appears displaying the currently configured class of services.

Step 2 Select the class of service that you want to update. If you select more than one class of service, select **Bulk Edit**.

Step 3 On the Edit Class of Service page, under **Licensed Features**, select the **Allow Users to Access Voicemail Using an IMAP Client and/ or Single Inbox** field. Check the applicable check boxes. (For more information on each field, see **Help> This Page**).

Step 4 Select **Save**.

Configure SMTP Proxy Addresses for Contacts

To Configure SMTP Proxy Addresses for Contacts

Step 1 In Cisco Unity Connection Administration, expand **Contacts** and select **Contacts**. Select the contact that you want to update. If you select more than one contact, select **Bulk Edit**.

Step 2 On the Edit Contact Basics page, in the **Edit** menu, select **SMTP Proxy Addresses**.

Step 3 On the SMTP Proxy Addresses page, select **Add New** to add an SMTP proxy address. Enter the address and select **Save**.

Configure IMAP Client Access and Authentication

To Configure IMAP Client Access and Authentication

Step 1 In Cisco Unity Connection Administration, expand **System Settings > SMTP Configuration**, then select **Server**. The SMTP Server Configuration page appears.

Step 2 Configure IP address access list (For more information, see **Help> This Page**):

a. In the **Edit** menu, select **Search IP Address Access List**.

b. In the Search IP Address Access List page, select **Add New** to add a new IP address to the list.

c. In the New Access IP Address page, enter an IP address and select **Save**.

d. In the Access IP Address page, to allow connections from the IP address, check the **Allow Unity Connection** check box and select **Save**.

Configure SMTP Message Parameters

You can configure Unity Connection to reject any incoming SMTP messages that are larger than a configurable total size or have more than a configurable number of recipients.

To Configure SMTP Message Parameters

Step 1 In Cisco Unity Connection Administration, expand **System Settings> SMTP Configuration** and select **Server**.

Step 2 In the SMTP Server Configuration page, in the **Limit Size of Message** field, enter a number in kilobytes to limit the size of an individual message sent by an SMTP client.

Step 3 In the **Limit Number of Recipients per Message** field, enter the number of recipients allowed per message and select **Save**.

Unified Messaging

The model of messaging in which different types of messages are integrated into a single interface and accessible from variety of devices is known as unified messaging. The voicemails, emails, and faxes are all stored in a single message store, for example, an Exchange mailbox store. The voice messages in the Exchange mailbox are synchronized with the user mailbox in Unity Connection.

Unity Connection is supported to be integrated with the following servers:

- Microsoft Exchange 2013, 2010, 2007, and 2003
- Microsoft Office 365
- Cisco Unified MeetingPlace

The unified messaging, also known as the single inbox feature supports access to Exchange calendars and contacts, transcription of voice messages, notification of upcoming meeting over phone, and many other features. For more information on configuring unified messaging and the supported features, see the *Unified Messaging Guide for Cisco Unity Connection*, *Release 10.x*, available at http://www.cisco.com/c/en/us/td/docs/voice_ip_comm/connection/10x/unified_messaging/guide/10xcucumgx.html.