CHAPTER **8**

Networking

See the following sections:

- Search Connection Locations, page 8-1
- Join Connection Network, page 8-2
- Edit Connection Location, page 8-4
- Search VPIM Locations, page 8-5
- New VPIM Location, page 8-6
- Edit VPIM Location, page 8-7
- Contact Creation, page 8-10

Search Connection Locations



The Cisco Unity Connection digital networking feature is not supported by Cisco Unified Communications Manager Business Edition (CMBE). This page is not available on Cisco Unified CMBE systems.

Field	Description		
Display Name	(Display only) The name of the location.		
Push Directory	<i>(Display only)</i> Indicates whether a directory push to the remote location is in progress. If an administrator has initiated a request on the local server to push the directory of this location to the remote location (indicated in the Display Name column) or has initiated a request on the remote server to pull the directory of this location to the remote location, this field displays In Progress. Otherwise, it displays Idle.		
Pull Directory	 (Display only) Indicates whether a directory pull from the remote location is in progress. If an administrator has initiated a request on the local server to pull the directory of the remote location (indicated in the Display Name column) to this location or has initiated a request on the remote server to push the directory of the remote location to this location, this field displays In Progress. Otherwise, it displays Idle. 		

Field	Description		
Remove Selected	To remove a Cisco Unity Connection location from the digital network, check the check box to the left of the location display name and click Remove Selected. You can only remove one Connection location from the network at a time.		
	Note Depending on the size of the directory, removing a Connection location can take a few minutes to a few hours. Even though the operation may have completed on the local location, it may continue to be in progress on remote locations. We recommend that you wait for the removal operation to complete on all locations in the network before making additional changes to the network.		
Join Connection	To add a Cisco Unity Connection server to a network, click Join Connection Network.		
Network	You can use this button in the following ways:		
	• To join this server to an existing network.		
	• To join a remote server to the existing network to which this server belongs.		
	• To create a network between this server and another server if neither is a member of an existing network.		
	Note You cannot join a Cisco Unified Communications Manager Business Edition server to a Connection network.		
Push Directory To	To initiate a one-time push of the entire local directory to a remote Cisco Unity Connection location, check the check box to the left of the remote location display name and click Push Directory.		
Stop Push	To stop an in-progress push of the local directory to a remote location, check the check box to the left of the remote location display name and click Stop Push.		
Pull Directory From	To initiate a one-time pull of the entire directory of a remote Cisco Unity Connection location to this Connection location, check the check box to the left of the remote location display name and click Pull Directory.		
Stop Pull	To stop an in-progress pull of the directory from a remote location, check the check box to the left of the remote location display name and click Stop Pull.		

Table 8-1 Search Connection Locations (continued)

See Also

• The "Using Digital Networking" chapter of the System Administration Guide for Cisco Unity Connection.

Join Connection Network



The Cisco Unity Connection digital networking feature is not supported by Cisco Unified Communications Manager Business Edition (CMBE). This page is not available on Cisco Unified CMBE systems.

Field	Description		
Method Used to Join Network	Click one of the following options to indicate how to join this location to the Cisco Unity Connection network:		
	• Automatically Join the Network—The Connection server makes a request to the remote location that you specify, and automatically exchanges configuration information with the location.		
	• Manually Join the Network—You join this location to the network manually by uploading the configuration file of this location to a remote location on the network, and by uploading the configuration file of the remote location to this location. You may need to use this manual method if you are unable to automatically join the location to the network.		
Remote Location	(Applicable only when Automatically Join the Network is selected as the Method Used to Join Network) Enter the IP address or Fully-Qualified Domain Name (FQDN) of the Cisco Unity Connection server to connect to in order to join the network.		
Remote User Name	(Applicable only when Automatically Join the Network is selected as the Method Used to Join Network) Enter the user name of an administrator on the remote location. The user must be assigned to the System Administrator role.		
Remote Password	(Applicable only when Automatically Join the Network is selected as the Method Used to Join Network, Enter the password for the administrator specified in the Remote User Name field.		
Auto Join Network	(Applicable only when Automatically Join the Network is selected as the Method Used to Join Network) To join the server to the network, enter values for the Remote Location, Remote User Name, and Remote Password fields and click Auto Join Network.		
	If the automatic join succeeds, to begin replication between the servers, open Cisco Unity Connection Serviceability, click Tools > Service Management, and activate the Connection Digital Networking Replication Agent. This service must be activated and started on all locations in the network. When the replication has been started on all locations, depending on the size of your directory, it can take a few minutes to a few hours in the background for data to be fully replicated between all locations.		
	If the automatic join fails, try joining the server to the network by using the Manually Join the Network method.		
Select the Remote Configuration File to Upload	(Applicable only when Manually Join the Network is selected as the Method Used to Join Network) To manually join this location to the network, click Browse and browse to the location of the configuration file that you have downloaded from a remote location.		
	Note To manually join the network, you must upload the configuration file of this location to a remote location on the network and upload the configuration file of the remote location to this location. Once you have uploaded both files, to begin replication between the servers, open Cisco Unity Connection Serviceability, click Tools > Service Management, and activate the Connection Digital Networking Replication Agent. This service must be activated and started on all locations in the network. When the replication has been started on all locations, depending on the size of your directory, it can take a few minutes to a few hours in the background for data to be fully replicated between all locations.		
Upload	(Applicable only when Manually Join the Network is selected as the Method Used to Join Network) After browsing to the location of a configuration file that you have downloaded from a remote location, click Upload.		
Download This Location's Configuration File	(Applicable only when Manually Join the Network is selected as the Method Used to Join Network) To download the configuration file from this location, click Download. Then, upload the configuration file on to the remote Cisco Unity Connection location.		

Table 8-2 Join Connection Network Page

See Also

• The "Using Digital Networking" chapter of the System Administration Guide for Cisco Unity Connection.

Edit Connection Location

```
<u>Note</u>
```

The Cisco Unity Connection digital networking feature is not supported by Cisco Unified Communications Manager Business Edition (CMBE). This page is not available on Cisco Unified CMBE systems.

Table 8-3 Edit Connection Location Page

Field	Description		
Display Name	Enter a descriptive name for the location.		
	Note The Display Name can only be modified on the Cisco Unity Connection location to which it applies (the local Connection location).		
Host Address	(Display only) The IP address of the Cisco Unity Connection location.		
SMTP Domain Name	(Display only) The domain name of the Cisco Unity Connection SMTP server.		
Connection Version	(Display only) The release of Cisco Unity Connection running on the server.		
Last USN Sent	(Display only; applicable only to remote Cisco Unity Connection locations.) The sequence number of the last synchronization message sent to this remote location.		
Last USN Received	(Display only; applicable only to remote Cisco Unity Connection locations.) The sequence number of the last synchronization message received from the remote location.		
Last USN Acknowledged(Display only; applicable only to remote Cisco Unity Connection locations.) The sequencethe last synchronization message acknowledged by the remote location.			
	If the Last USN Sent value is higher than the Last USN Acknowledged value, the locations are not synchronized. The Last USN Acknowledged value should continue to increase until the locations are synchronized; if it does not, this can indicate a synchronization problem that you may be able to clear by doing a one-time directory push to the remote location.		
Allow Cross-Server Login to this Remote Location	(Applicable only to remote Connection locations.) When this check box is checked, Cisco Unity Connection requests a cross-server hand-off to the remote location if a user homed on the remote location attempts to log in to this server.		
Allow Cross-Server Transfer to this Remote Location	(Applicable only to remote Cisco Unity Connection locations.) When this check box is checked, Cisco Unity Connection requests a cross-server hand-off to the remote location if a caller on the local server attempts to transfer to a user or extension that is homed on the remote location.		
Cross-Server Dial String	(Applicable only to remote Cisco Unity Connection locations.) Enter the number to dial to reach the remote location when attempting a cross-server login or transfer.		
	You must enter a value in this field if either Allow Cross-Server Login to this Remote Location or Allow Cross-Server Transfer to this Remote Location is checked.		
Cross-Server Max Rings	(Applicable only to remote Cisco Unity Connection locations.) The maximum number of rings to wait for the remote location to answer when attempting a cross-server login or transfer.		

Field	Description			
Cross-Server Send Delay	(Applicable only to remote Cisco Unity Connection locations.) The amount of time in milliseconds that the local Connection location waits after the call connects before sending DTMF tones to the remote location to identify the call as a hand-off request when attempting a cross-server login or transfer.			
Cross-Server Response Timeout	(Applicable only to remote Cisco Unity Connection locations.) The amount of time in seconds that the local Connection location waits for a response from the remote location when attempting a cross-server login or transfer.			
	If this time limit is exceeded without receiving a response on a cross-server login attempt, the originating Connection location disconnects the call and notifies the user that the home server is unavailable. If the time limit is exceeded on a cross-server transfer attempt and the target user has a Cross-Server Transfer Extension configured, the originating location performs a release transfer to that extension; if the user does not have a Cross-Server Transfer Extension, the originating location allows the caller to leave a message for the user.			
Route to this Remote Location Through SMTP Smart Host	 Check this check box when either of the following conditions exists: The remote voice messaging system is outside the corporate firewall. Another smart host SMTP server is used to deliver the message to the remote voice messaging system. 			
	Note You configure the SMTP smart host on the System Settings > SMTP Configuration > Smart Host page.			

Table 8-3 Edit Connection Location Page (continued)

See Also

• The "Using Digital Networking" chapter of the System Administration Guide for Cisco Unity Connection.

Search VPIM Locations

Table 8-4 Search VPIM Locations

Field	Description	
Limit Search To	Select the criteria by which to limit the display of search results:	
	• All—Display all search results, regardless of the Cisco Unity Connection location or partition to which they belong.	
	• Location—(<i>Applicable to standalone configurations only</i>) Display only results that belong to a particular Connection location. When you select this option, choose the name of the location from the Where Name Is list.	
	• Partition—Display only results that belong to a particular partition. When you select this option, choose the name of the partition from the Where Name Is list.	
Delete Selected	To delete a location, check the check box to the left of the display name, and click Delete Selected. You can delete multiple locations at once.	
Display Name	(Display only) The name of the location.	

New VPIM Location

Revised May 2009

 Table 8-5
 New VPIM Location Page

Field	Description		
Display Name	Enter a descriptive name for the location.		
Dial ID (Connection 7.1)	Enter the Dial ID (DTMF Access ID) that identifies the location for Cisco Unity Connection.		
DTMF Access ID (Connection 7.0)			
Partition	Select the partition to which the object belongs. Partitions are grouped together into search spaces, which are used to define the scope of objects (for example, users and distribution lists) that a user or outside caller can reach while interacting with Cisco Unity Connection. Most objects can belong only to one partition; the exception is users, who can have their primary extension in one partition and alternate extensions in other partitions. A partition can belong to more than one search space.		
	Note that extensions must be unique within a partition, and that partitions can contain objects that do not have an associated extension (for example, some contacts and system distribution lists).		
SMTP DomainName (Connection7.1)Domain Name(Connection 7.0)	Enter the SMTP domain name of the remote voice messaging system. Cisco Unity Connection uses this domain name when formatting VPIM addresses for users at this VPIM location. For example, an outgoing VPIM message to Terry Campbell with the remote mailbox ID 2233 would be addressed to 2233@smtpdomainname.		
IP Address	Enter the IP address of the remote voice messaging system. Cisco Unity Connection allows SMTP connections from this address to accept incoming VPIM messages, and can connect to this address to deliver outgoing VPIM messages for this location. (Alternatively, you can configure Connection to use a smart host to deliver outgoing messages for this location by checking the Route to this Location Through SMTP Smart Host check box on the Edit VPIM Location page for this location.)		
	(<i>If the remote voice messaging system is a Cisco Unity server</i>) Enter the IP address of the Exchange or Domino server with which Connection initiates an SMTP connection to deliver outgoing messages to Cisco Unity. In addition, if a different Exchange or Domino server initiates SMTP connections to Connection to deliver incoming messages, you must manually add the IP address of the initiating server to the IP Address Access List so that Connection will accept the connection. (To do so, browse to System Settings > SMTP Configuration > Server, then click Edit > Search IP Address Access List.) Alternatively, if you plan to configure Connection to use a smart host to deliver outgoing messages to Cisco Unity, enter the IP address of the initiating Exchange or Domino server here, then check the Route to this Location Through SMTP Smart Host check box on the Edit VPIM Location page for this location.		
Remote Phone Prefix	If needed to accommodate your numbering plan, or if there is more than one VPIM location with the same domain name, enter a number that is inserted before the recipient extension (for outgoing messages) or that is removed from the recipient extension (for incoming messages).		

See Also

• The "Creating VPIM Locations" section in the "Using VPIM Networking" chapter of the System Administration Guide for Cisco Unity Connection.

Edit VPIM Location

Revised May 2009

Table 8-6Edit VPIM Location Page

Field	Description	
Display Name	Enter a descriptive name for the location.	
Dial ID (Connection 7.1)	Enter the Dial ID (DTMF Access ID) that identifies the location for Cisco Unity Connection.	
DTMF Access ID (Connection 7.0)		
Partition	Select the partition to which the object belongs. Partitions are grouped together into search spaces, which are used to define the scope of objects (for example, users and distribution lists) that a user or outside caller can reach while interacting with Cisco Unity Connection. Most objects can belong only to one partition; the exception is users, who can have their primary extension in one partition and alternate extensions in other partitions. A partition can belong to more than one search space. Note that extensions must be unique within a partition, and that partitions can contain objects that do not have an associated extension (for example, some contacts and system distribution lists).	
Search Scope	Select a search space to use as the search scope for the VPIM location. When Cisco Unity Connection receives a VPIM message from a sender at the location, Connection searches this search space to match the extension that is displayed in the To: address field of the message to a Connection user.	
SMTP Domain Name (<i>Connection</i> 7.1) Remote VPIM Domain Name (<i>Connection</i> 7.0)	Enter the SMTP domain name of the remote voice messaging system. Cisco Unity Connection uses this domain name when formatting VPIM addresses for users at this VPIM location. For example, an outgoing VPIM message to Terry Campbell with the remote mailbox ID 2233 would be addressed to 2233@smtpdomainname.	

Field	Description		
IP Address	Enter the IP address of the remote voice messaging system. Cisco Unity Connection allows SMTP connections from this address to accept incoming VPIM messages, and can connect to this address to deliver outgoing VPIM messages for this location. (Alternatively, you can configure Connection to use a smart host to deliver outgoing messages for this location by checking the Route to this Location Through SMTP Smart Host check box on the Edit VPIM Location page for this location.)		
	(<i>If the remote voice messaging system is a Cisco Unity server</i>) Enter the IP address of the Exchange or Domino server with which Connection initiates an SMTP connection to deliver outgoing messages to Cisco Unity. In addition, if a different Exchange or Domino server initiates SMTP connections to Connection to deliver incoming messages, you must manually add the IP address of the initiating server to the IP Address Access List so that Connection will accept the connection. (To do so, browse to System Settings > SMTP Configuration > Server, then click Edit > Search IP Address Access List.) Alternatively, if you plan to configure Connection to use a smart host to deliver outgoing messages to Cisco Unity, enter the IP address of the initiating Exchange or Domino server here, then check the Route to this Location Through SMTP Smart Host check box on the Edit VPIM Location page for this location.		
Voice Name	Click Play/Record to record a voice name for the VPIM contact.		
Remote Phone Prefix	If needed to accommodate your numbering plan, or if there is more than one VPIM location with the same domain name, enter a number that is inserted before the recipient extension (for outgoing messages) or that is removed from the recipient extension (for incoming messages).		
Cisco Connection Phone Prefix	If needed to accommodate your numbering plan, enter a number that is inserted before the Cisco Unity Connection user extension (for outgoing messages) or that is removed from the Connection user extension (for incoming messages).		
Enable AGC	Check this check box so that Cisco Unity Connection automatically adjusts the recording volume of voice messages to match the setting of the Automatic Gain Control (AGC) target decibels field on the System Settings > General Configuration page.		
	Default setting: Check box not checked.		
Incoming Messages	Click an option for converting the audio format of messages that arrive from the remote voice messaging system:		
	• Do Not Convert Incoming Messages—Cisco Unity Connection does not transcode the audio format.		
	• System Codec—Connection transcodes the audio format to the codec that is used for recording messages.		
Outbound Messages	Click an option for converting the audio format of messages that are sent to the remote voice messaging system:		
	• Do Not Convert Incoming Messages—Cisco Unity Connection does not transcode the audio format. We recommend this setting when the remote voice messaging system is Connection or Cisco Unity.		
	• G.726—Connection transcodes the audio format to the G.726 codec. Typically, this setting is used when the remote voice messaging system is not Connection or Cisco Unity.		
Sender's Recorded Name	Check this check box to have Cisco Unity Connection include the recorded voice name of the sender in outgoing messages to this location.		

Table 8-6Edit VPIM Location Page (continued)

Field	Description		
Enable Outgoing Secure Messages	Check this check box so that messages marked as secure are sent to the VPIM location.		
	Uncheck this check box so that messages marked as secure are not sent to the VPIM location. (The sender receives an NDR.)		
Enable Outgoing Private Messages	Check this check box so that messages marked as private (cannot be forwarded) are sent to the VPIM location.		
	Uncheck this check box so that messages marked as private are not sent to the VPIM location.		
Allow Blind Addressing	Check this check box to allow users to address messages to recipients at this location by entering a number that is made up of the VPIM location extension and the mailbox number of the recipient. Blind addressing allows users to send messages to recipients at the VPIM location even if the recipients are not defined as contacts in the Cisco Unity Connection directory.		
	Uncheck this check box so that users can send messages only to contacts that are defined for this location in the Connection directory.		
Route to this	Check this check box when either of the following conditions exists:		
Remote Location Through SMTP Smart Host	• The remote voice messaging system is outside the corporate firewall.		
	• Another smart host SMTP server is used to deliver the message to the remote voice messaging system.		
	Note You configure the SMTP smart host on the System Settings > SMTP Configuration > Smart Host page.		
Push Directory—All VPIM Locations	Click this button to update the VPIM contacts on all remote voice messaging systems with new users and recorded names from the local Cisco Unity Connection server.		

Table 8-6 Edit VPIM Location Page (continued)

See Also

• The "Customizing VPIM Locations" section in the "Using VPIM Networking" chapter of the System Administration Guide for Cisco Unity Connection.

Alternate Names

Table 8-7	Edit Alternate	Names Page
-----------	----------------	------------

Field	Description
Add a New Alternate Name	Enter an alternate name for the VPIM location, then click Add New.
Display Name	The alternate name of the VPIM location.
Delete Selected	To delete an alternate name, check the check box to the left of the display name, and click Delete Selected. You can delete multiple alternate names at once.

See Also

• The "Adding Alternate Names for Each VPIM Location" section in the "Using VPIM Networking" chapter of the *System Administration Guide for Cisco Unity Connection*.

Contact Creation

Table 8-8

Contact Creation Page

Field	Description
Automatically Create VPIM Contacts	Check this check box to enable automatic creation of a VPIM contact record for this location when a VPIM message arrives and the sender does not already have a corresponding VPIM contact record.
Contact Template	If you have checked the Automatically Create VPIM Contacts check box, select the template on which to base the automatically created contacts.
Automatically Modify VPIM Contact	Click one of the following to apply to VPIM contacts for this location:
	• No Automatic Update of Contacts—The VPIM contact record is not updated with the sender information in a VPIM message when an incoming message has changed sender information.
	• Only When the Text Name Changes—The VPIM contact record is updated only when the text name received in the VPIM message does not match the name of the VPIM contact.
	• With Each VPIM message—Every incoming VPIM message from a VPIM contact at this location results in an update to the corresponding VPIM contact record.
Automatically Delete VPIM Contact	Check this check box to enable automatic deletion of a VPIM contact for this location when a VPIM message is returned as undeliverable.
Allow VPIM Contact Display Name Updates	Check this check box to enable automatic updates to the VPIM contact display name when an incoming message from this location has a changed display name for the sender.
Allow VPIM Contacts Without Recorded Voice Names	Check this check box to enable automatic updates for this location to records for VPIM contacts that do not have a recorded voice name.
Mapping Text Names	Click one of the following options to indicate how text names in incoming messages from this location are mapped to the display names for automatically created VPIM contact records:
	• Directly to VPIM Contact Display Names—The display names for VPIM contacts match the corresponding text names.
	• Custom—Enter the rule that defines how test names are mapped to display names for VPIM contacts. You can enter the tokens <fn>, <ln>, or <tn> (respectively first name, last name, or text name) in any combination, along with any additional text. Always precede <fn>, <ln>, or <tn> with a space, comma, or semicolon unless it appears at the beginning of the rule. In addition, always follow one of these tokens with a space, comma or semicolon unless it appears at the end of the rule. No additional characters are required at the beginning or end of a rule.</tn></ln></fn></tn></ln></fn>

Field	Description
Map VPIM Contact Extensions To	Click one of the following settings to indicate how the phone number on incoming messages from this location are mapped to the extension for automatically created VPIM contact records:
	• Phone Number—Extensions are the same as the phone numbers that are parsed from incoming VPIM messages.
	• Phone Number - Remote Phone Prefix—Extensions are formed by removing the remote phone prefix from the beginning of the phone numbers.
	• Location Dial ID + Phone Number—Extensions are formed by adding the location Dial ID to the beginning of the phone numbers.
	• Location Dial ID + Phone Number - Remote Phone Prefix—Extensions are formed by removing the remote phone prefix from the beginning of the phone number, and adding the location Dial ID to the beginning of the resulting number.

Table 8-8 Contact Creation Page (continued)

See Also

• The "Customizing VPIM Contact Directory Update Settings" section in the "Using VPIM Networking" chapter of the System Administration Guide for Cisco Unity Connection.