



Setting Up Networking Between Cisco Unity and Cisco Unity Connection 8.x Servers

See the following sections:

- Setting Up an Intersite Link Between Cisco Unity and Cisco Unity Connection 8.x Gateways, page 3-1
- Procedures for Linking Cisco Unity and Cisco Unity Connection 8.x Gateways, page 3-4
- Notable Behavior in Networking Cisco Unity and Cisco Unity Connection 8.x, page 3-19

Setting Up an Intersite Link Between Cisco Unity and Cisco Unity Connection 8.x Gateways

This section describes the prerequisites for setting up an intersite link to connect a Cisco Unity server, failover pair, or Digital Network to a Cisco Unity Connection server, cluster, or site, and provides a high-level task list of all of the tasks that you need to complete for the setup in the order in which they should be completed. If you are unfamiliar with intersite link concepts, you should first read the "Overview of Networking Concepts in Cisco Unity Connection 8.x" chapter and then review the task list and procedures before beginning the setup.

See the following sections:

- Prerequisites—Cisco Unity, page 3-1
- Prerequisites—Cisco Unity Connection, page 3-2
- Task List for Setting Up an Intersite Link Between Cisco Unity and Cisco Unity Connection Gateways, page 3-2

Prerequisites—Cisco Unity

I

• At least one Cisco Unity release 8.x server is already installed and connected to the network as applicable for your installation. You can link a single Cisco Unity server or a single Cisco Unity Digital Network to Cisco Unity Connection.

- Your Cisco Unity and Microsoft Exchange environment must be meet the requirements listed in the "Cisco Unity Connection Networking Requirements" section of the *Networking Options Requirements*, available at http://www.cisco.com/en/US/docs/voice_ip_comm/unity/compatibility/matrix/cunetoptionsreqs.ht ml.
- The Cisco Unity server that will act as the gateway to the Cisco Unity Connection site must be able to route directly to the Connection site gateway via HTTP on port 80 or HTTPS on port 443.

Prerequisites—Cisco Unity Connection

- You can link a single Cisco Unity Connection 8.x server or cluster or a single Connection site to a single Cisco Unity server, failover pair, or Digital Network. To link a Connection site, all servers in the site must be running version 8.x.
- If you are linking a Connection site, the site has been set up according to the "Setting Up a Cisco Unity Connection 8.x Site" section on page 2-1.
- The Connection site must meet the requirements listed in the "Requirements for Intersite Networking" section in the System Requirements for Cisco Unity Connection Release 8.x at http://www.cisco.com/en/US/docs/voice_ip_comm/connection/8x/requirements/8xcucsysreqs.html
- You have access to an account that has the Manage Servers privilege on the Connection server that will serve as the gateway. (The System Administrator and Technician roles each have this privilege.)
- The Connection server that will act as the gateway to the Cisco Unity site must be able to route directly to the Cisco Unity site gateway via HTTP on port 80 or HTTPS on port 443.

Task List for Setting Up an Intersite Link Between Cisco Unity and Cisco Unity Connection Gateways

Revised November 16, 2010

- 1. Make decisions about your network topology and gather information needed to configure the intersite link. See the "Making Deployment Decisions and Gathering Important Information" section on page 3-4.
- 2. Determine the Cisco Unity domain name that will be used for messaging with Cisco Unity Connection. See the "Determining the Cisco Unity Interoperability Domain Name" section on page 3-4.
- **3.** Prepare the Cisco Unity gateway by configuring settings on the primary location page, checking permissions, and extending the Active Directory schema. See the "Preparing the Cisco Unity Gateway" section on page 3-5.
- 4. If you have previously installed the Cisco Unity Voice Connector on an Exchange 2000 or Exchange 2003 server to handle VPIM Networking, uninstall it. See the "Uninstalling the Cisco Unity Voice Connector" section of the "Upgrading and Uninstalling Networking Options" chapter in the *Networking Guide for Cisco Unity Release* 8.x, available at http://www.cisco.com/en/US/docs/voice_ip_comm/unity/8x/networking/guide/8xcunetx.html.

If you still require the Voice Connector to handle Bridge Networking and/or AMIS Networking, you will reinstall it with only those options configured later in the task list.

1

5. If you have previously installed the Interoperability Gateway for Microsoft Exchange, do one of the following to ensure that it is properly configured:

- If the Interoperability Gateway is installed on Exchange 2010 or 2007, check the foreign connector configuration and configure a Send Connector and a Receive Connector. See the "Configuring a Previously Installed Interoperability Gateway for Cisco Unity Connection Interoperability on Exchange 2010 or 2007" section on page 3-7.
- If the Interoperability Gateway is installed on Exchange 2003, update your SMTP connector, adding the UCI address space. See the "Configuring a Previously Installed Interoperability Gateway for Cisco Unity Connection Interoperability on Exchange 2003" section on page 3-10.
- **6.** If you have not previously installed the Interoperability Gateway for Microsoft Exchange, install and configure it. (If you are currently using or plan to use VPIM Networking or Trusted Internet locations on Cisco Unity, configure the Interoperability Gateway to handle these types of networking as well as Cisco Unity Connection interoperability.) See the "Setting Up the Interoperability Gateway for Microsoft Exchange" section in the "Installing and Configuring the Interoperability Gateway for Microsoft Exchange" chapter of the *Networking Guide for Cisco Unity Release 8.x*, available at

http://www.cisco.com/en/US/docs/voice_ip_comm/unity/8x/networking/guide/8xcunetx.html.

- If you uninstalled the Cisco Unity Voice Connector in task 4. and you still require the Voice Connector to handle Bridge Networking and/or AMIS Networking, reinstall it with only those options configured. See the "Installing the Voice Connector" section of the applicable *Release Notes* for Cisco Unity Voice Connector for Microsoft Exchange, available at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_release_notes_list.html.
- 8. Configure the Cisco Unity Connection gateway to accept SMTP connections from the Exchange server that will deliver messages from Cisco Unity. See the "Configuring SMTP Access on the Cisco Unity Connection Gateway" section on page 3-11.
- **9.** Download the Cisco Unity gateway configuration file. See the "Downloading the Cisco Unity Gateway Configuration File" section on page 3-12.
- On the Cisco Unity site gateway, set up a template to use when importing Connection users into Cisco Unity. See the "Setting Up a Template for Cisco Unity Connection Users on the Cisco Unity Gateway" section on page 3-12.
- Begin linking the gateways by creating the intersite link in Cisco Unity Connection Administration on the Cisco Unity Connection gateway. See the "Creating the Intersite Link on the Cisco Unity Connection Gateway" section on page 3-13.
- **12.** Finish linking the gateways by creating the intersite link on the Cisco Unity gateway. See the "Creating the Intersite Link on the Cisco Unity Gateway" section on page 3-15.
- Configure partitions and search spaces so that Cisco Unity Connection users can address to Cisco Unity users and vice versa. See the "Configuring Partitions and Search Spaces for Cisco Unity and Cisco Unity Connection Interoperability" section on page 3-16.
- 14. Optionally, if you chose to synchronize system distribution lists in either or both directions between the gateways, configure individual distribution lists to allow or prevent replication. See the "Configuring Individual System Distribution Lists for Synchronization" section on page 3-17.
- 15. Optionally, extend identified subscriber messaging on the Cisco Unity servers to include Connection Networking subscribers. See the "Extending Cisco Unity Identified Subscriber Messaging to Include Connection Networking Subscribers" section on page 3-18.
- **16.** Optionally, set up cross-server sign-in, transfers, and live reply. See the "Cross-Server Sign-In, Transfers, and Live Reply in Cisco Unity Connection 8.x" chapter.

Procedures for Linking Cisco Unity and Cisco Unity Connection 8.x Gateways

Making Deployment Decisions and Gathering Important Information

Before you begin setting up Cisco Unity-Cisco Unity Connection interoperability, be sure to plan for the following, and gather the applicable information:

- If you have configured VPIM on your Cisco Unity servers by using the Cisco Unity Voice Connector and its associated transport event sink, you must migrate your VPIM configuration to use the Interoperability Gateway for Microsoft Exchange rather than the Voice Connector. The Interoperability Gateway and the Voice Connector transport event sink cannot coexist when Cisco Unity is configured for interoperability with Cisco Unity Connection. If you are installing the Interoperability Gateway for the first time, be sure to configure it for both VPIM and Cisco Unity Connection Networking. The task list will tell you when to uninstall the Voice Connector. (If you still require the Voice Connector to handle Bridge Networking and/or AMIS Networking, you will reinstall it to handle those options.)
- Select a single location on each site to act as a gateway to the other site. The gateways you select must have HTTP or HTTPS connectivity in order for directory synchronization to occur.
 - When selecting the Cisco Unity site gateway, if possible, choose the server with the highest resources, lowest user count, and smallest amount of call activity. In particular, Platform Overlay 1 servers have CPU, memory, disk and MSDE/SQL Express limits that lower the ability of the server to handle synchronization overhead.
 - When selecting the Cisco Unity location, consider that all locations from the Connection site will belong to the same Dialing Domain as the Cisco Unity site gateway.

Determining the Cisco Unity Interoperability Domain Name

Revised November 16, 2010

In order for messages to be exchanged between Cisco Unity Connection and Cisco Unity, you will need to decide on the domain name that Connection will use when addressing messages to Cisco Unity users. The domain name uniquely identifies the messaging system. The domain name will be configured as follows:

- On the SMTP Domain Name field on the Network > Primary Location page in the Cisco Unity Administrator on the Cisco Unity gateway.
- On the Interop Domain FQDN field in the Interoperability Gateway Administrator.

Additionally, based on the Interop Domain FQDN, the domain name is configured as follows:

- If you install the Interoperability Gateway on an Exchange 2010 or 2007 server:
 - As the SMTP AddressSpace domain on the Interoperability Gateway Foreign Connector. (This value is set automatically, based on the Interop Domain FQDN, when the Interoperability Gateway Foreign Connector is created or modified by using the Interoperability Gateway Administrator.)
 - As the DomainName on the Interoperability Gateway Accepted Domain. (This value is set automatically, based on the Interop Domain FQDN, when the Interoperability Gateway Accepted Domain is created or modified by using the Interoperability Gateway Administrator.)

- If you install the Interoperability Gateway on an Exchange 2003 server:
 - As the SMTP Address Space domain in the Interoperability Gateway SMTP Connector.
 - As the SMTP Email Address Policy on the Interoperability Gateway Recipient Policy.

If you have previously installed the Interoperability Gateway for Microsoft Exchange to handle VPIM or Trusted Internet subscribers on Cisco Unity, use the interoperability domain that was chosen during that process, unless it matches the Cisco Unity Connection gateway SMTP domain.

If you have not previously installed the Interoperability Gateway to handle other networking features, the interoperability domain name can be whatever you would like it to be. As a best practice, however, we recommend that you use a name that follows the format <Name>.<DomainName>, where <Name> is a descriptive term and <DomainName> is the domain name of your organization, for example, interop.mydomain.com. Note however that the interoperability domain name that you choose must meet the following requirements:

- It should not match any SMTP domain used in the Exchange organization to which Cisco Unity belongs for any purpose other than for routing messages through the Interoperability Gateway for Microsoft Exchange.
- It must not match the SMTP domain of the Connection site gateway. (You can check the SMTP domain on the System Settings > SMTP Configuration > Server page in Cisco Unity Connection Administration on the Connection gateway.)

Preparing the Cisco Unity Gateway

Do the procedures in the following sections to prepare the Cisco Unity gateway:

- Configuring the Primary Location Profile Page on the Cisco Unity Gateway, page 3-5
- Checking Cisco Unity Permissions to Create Cisco Unity Connection Users, page 3-6
- Extending the Active Directory Schema, page 3-6

Configuring the Primary Location Profile Page on the Cisco Unity Gateway

To Configure the Primary Location Profile Page on the Cisco Unity Gateway

Step 1	In the Cisco Unity Administrator on the Cisco Unity gateway, go to the Network > Primary Location Profile page.		
Step 2	Enter a meaningful name for the location.		
Step 3	If a Dial ID has not been entered, enter one. The Dial ID identifies this location to Cisco Unity and is required to save changes to the page.		
Step 4	For the Dialing Domain name:		
	• If your installation consists of only one Cisco Unity server, create a dialing domain name.		
	• If your installation consists of multiple Cisco Unity servers networked via Digital Networking, and if this server is integrated with the same phone system as other networked Cisco Unity servers, you may have already added this server to a dialing domain. If not, enter the dialing domain name, or select it from the available list. The list contains names of dialing domain names already configured on at least one other Cisco Unity server in the network.		

Note that the dialing domain name is case sensitive and must be entered exactly the same on all of the servers. To ensure that all servers are correctly added to the same dialing domain, enter the dialing domain name on one Cisco Unity server and wait for the name to replicate to the other Cisco Unity servers. By doing so, you also confirm that replication is working correctly among the servers. The time that it takes for the primary location data from other Cisco Unity servers to be reflected on the local server depends on your network configuration and replication schedule.

Step 5 In the SMTP Domain Name field, enter the interoperability domain name that you previously chose in the "Determining the Cisco Unity Interoperability Domain Name" section on page 3-4.

Step 6 Select the Save icon.

Checking Cisco Unity Permissions to Create Cisco Unity Connection Users

During Cisco Unity installation, when you ran the Cisco Unity Permissions wizard to grant the necessary permissions to the installation and service accounts, if you did not check the Set Permissions Required by AMIS, Cisco Unity Bridge, and VPIM check box on the Choose Whether to Enable Voice Messaging Interoperability page, do the "To Set Permissions to Create Cisco Unity Connection Users on Cisco Unity" procedure on page 3-6.

<u>)</u> Tip

If you do not know whether you checked the check box, run the Permissions wizard in report mode. For more information, see the Report Mode Help file, PWReportHelp_<language>.htm, in the directory in which the Permissions wizard is installed.

For more information on running the Permissions wizard, see the Permissions wizard Help file, PWHelp_<language>.htm, in the directory in which the Permissions wizard is installed.

To Set Permissions to Create Cisco Unity Connection Users on Cisco Unity

- **Step 1** Sign in to the gateway server by using an account that:
 - Is a member of the Domain Admins group in the domain that the Cisco Unity server belongs to, or that has permissions equivalent to the default permissions for the Domain Admins group.
 - Is either an Exchange Full Administrator or a member of the Domain Admins group in the domain that contains all of the domains from which you want to import Cisco Unity subscribers.
- **Step 2** Re-run the Permissions wizard, and follow the on-screen prompts until the Choose Whether to Enable Voice Messaging Interoperability page appears.
- Step 3 Check the Set Permissions Required by AMIS, Cisco Unity Bridge, and VPIM check box.
- **Step 4** Follow the on-screen prompts to complete the Permissions wizard.

Extending the Active Directory Schema

Before Cisco Unity is installed, the Active Directory schema is extended to store Cisco Unity-specific information. To support interoperability with Cisco Unity Connection, the schema must be further extended.

To see the schema changes that need to be made to support Cisco Unity Connection interoperability, browse to the directory Schema\LdifScripts on Cisco Unity Disc 1, and view the file vpimgateway.ldf. (The extensions needed for Cisco Unity Connection interoperability are the same as those needed for VPIM Networking.)

Do the following procedure only if you did not already modify the Active Directory schema to support VPIM Networking. You can verify whether the schema has already been modified by examining the log file that is generated each time the schema is updated. A shortcut to the directory where the log file is located is placed on the Windows desktop.

To Extend the Active Directory Schema for Cisco Unity Connection Interoperability and VPIM Networking

- **Step 1** Confirm that all domain controllers are on line before making the schema updates. Schema replication will occur only when all domain controllers are on line.
- **Step 2** On the domain controller that is the schema master, sign in by using an account that is a member of the Schema Administrators group.
- **Step 3** On Cisco Unity DVD 1 or CD 1, or from the location to which you saved the downloaded Cisco Unity CD 1 image files, browse to the directory **ADSchemaSetup**, and double-click **ADSchemaSetup.exe**.
- **Step 4** In the dialog box, double-click a row to choose the language in which you will view ADSchemaSetup.
- **Step 5** Check the **Exchange VPIM and Connection Networking Connector** check box, uncheck the other check boxes, and then select **OK**.
- **Step 6** When the LDAP Data Interchange Format (LDIF) scripts have finished running, select **OK**.
- **Step 7** When the schema extension has finished, Ldif.log and LDif.err files are saved to the desktop. View the contents of the files to confirm that the extension completed successfully.
- **Step 8** Wait for the changes to the schema to replicate throughout the forest before adding information to the primary location and to delivery locations. Changes to the schema may take 15 minutes or more to replicate.

Configuring a Previously Installed Interoperability Gateway for Cisco Unity Connection Interoperability on Exchange 2010 or 2007

Revised November 16, 2010

In order for messages to be exchanged between Cisco Unity and Cisco Unity Connection via the Interoperability Gateway for Microsoft Exchange, a valid Foreign Connector must be present on the Exchange 2010 or 2007 server to properly route messages through the Interoperability Gateway. In addition, the Exchange organization to which your Cisco Unity servers belong must be allowed to send mail to and receive mail from the SMTP bridgehead servers in the remote network. In the case where the remote network is a Cisco Unity Connection site, depending on your configuration, mail may be sent and received directly with the Connection site gateway or with a smart host or other relay outside of the Exchange organization that handles SMTP connections on behalf of the Connection gateway.

In this section, first do the "To Configure a Previously Installed Interoperability Gateway for Cisco Unity Connection Interoperability (Exchange 2010 or 2007 Only)" procedure on page 3-8.

If you are already familiar with how to configure the Exchange organization to allow messages to be sent and received with the Cisco Unity Connection gateway, smart host, or relay, skip the remaining procedures and handle the message delivery configuration based on rules and practices established in your organization. Otherwise, do the remaining two procedures:

- To Configure a Send Connector for a Remote Voice Messaging System (Exchange 2010 or 2007 Only), page 3-8
- To Configure a Receive Connector for a Remote Voice Messaging System (Exchange 2010 or 2007 Only), page 3-9

To Configure a Previously Installed Interoperability Gateway for Cisco Unity Connection Interoperability (Exchange 2010 or 2007 Only)

Step 1 Open the Interoperability Gateway Administrator. (In the Windows Start Menu, browse to Start > Programs > Cisco > IGE Admin.)

If the Interoperability Gateway is installed on Exchange 2010, the Interoperability Gateway Administrator prompts you to enter account credentials. Use an account that has Full Exchange Administrator privileges.

- Step 2 In the top pane of the Administrator, under Address Spaces, confirm whether the UCI (Cisco Unity-Connection Interoperability) check box is checked. If it is already checked, close the Interoperability Gateway Administrator and continue with the next task in the task list. If it is not checked, check it.
- **Step 3** In the tree control at left in the Interoperability Gateway Administrator, select Foreign Connector.
- Step 4 If a Foreign Connector has not previously been created that covers the interoperability domain and the UCI feature address space that you checked in Step 2, a warning message displays in red at the top of the Foreign Connector pane.

If you do not see this warning, and a valid Foreign Connector is displayed in the list box on the upper left side of the pane, close the Interoperability Gateway Administrator and continue with the next task in the task list.

If you do see the warning, you can modify the existing Foreign Connector that was created when the Interoperability Gateway for Microsoft Exchange was initially installed. To do so, do the following substeps:

- **a.** In the list of Foreign Connectors that are homed on the server and contain at least one address space that pertains to Cisco Unity networking (at the upper left), select the existing Foreign Connector.
- **b.** Select **Modify** below the list box.
- c. On the Execute Shell Command screen, select Run.
- **Step 5** Close the Interoperability Gateway Administrator.

To Configure a Send Connector for a Remote Voice Messaging System (Exchange 2010 or 2007 Only)

- **Step 1** On the Exchange server on which the Interoperability Gateway is installed, open the Exchange Management Shell.
- Step 2 In the left-hand pane, expand Organization Configuration and select Hub Transport.
- Step 3 In the main Hub Transport pane, select the Send Connectors tab.
- Step 4 In the Actions pane, under Hub Transport, select New Send Connector.
- **Step 5** In the New SMTP Send Connector wizard, on the Introduction page, enter a Name for the new connector.

- Step 6 Under Select the Intended Use for this Send Connector, select Custom, then select Next.
- **Step 7** On the Address space page, select **Add**.

- **Step 8** For Address, enter the SMTP domain of the remote network, then select **OK**.
- Step 9 Select Next.
- **Step 10** On the Network settings page, select **Route Mail through the Following Smart Hosts**.
- Step 11 Select Add.
- **Step 12** For IP Address, enter the IP address of the Cisco Unity Connection gateway if messages will route directly to the gateway, or of a smart host or other relay if one is configured to deliver messages from the Exchange organization to the Connection gateway.
- Step 13 Select OK.
- **Step 14** Select **Next** to continue to the next page.
- **Step 15** On the Configure Smart Host Authentication Settings Page, select the type of authentication to use when sending mail between the Exchange organization and the Connection gateway.
- **Step 16** Select **Next** to continue to the next page.
- Step 17 On the Source Server page, the local Exchange server should be listed by default. Select Next to continue.
- **Step 18** Confirm the settings on the New Connector page and select **New** to add the new connector.
- Step 19 Select Finish to exit the wizard.
- **Step 20** On the Send Connectors tab, right-click the connector that you created and select **Properties**.
- **Step 21** Set the Protocol Logging Level to **Verbose**.
- **Step 22** Select **OK** to close the properties window.

To Configure a Receive Connector for a Remote Voice Messaging System (Exchange 2010 or 2007 Only)

- **Step 1** On the Exchange server on which the Interoperability Gateway is installed, open the Exchange Management Shell.
- **Step 2** In the left-hand pane, expand **Server Configuration** and select **Hub Transport**.
- **Step 3** In the upper Hub Transport pane, select the local Exchange server from the list of servers.
- **Step 4** In the lower pane, confirm that the title of the pane is the name of the local Exchange server, then select the **Receive Connectors** tab.
- **Step 5** In the Actions pane, under the local server name, select **New Receive Connector**.
- **Step 6** In the New SMTP Send Connector wizard, on the Introduction page, enter a name for the new connector.
- Step 7 Under Select the Intended Use for this Send Connector, select Custom, then select Next.
- **Step 8** On the Local Network settings page enter the fully qualified domain name of the local server in the Specify the FQDN this Connector Will Provide in Response to HELO or EHLO: field.
- **Step 9** Select **Next** to continue to the next page.
- Step 10 On the Remote Network settings page, in the list box, select 0.0.0-255.255.255.255, then select Edit.
- Step 11 If messages will be received directly from the Cisco Unity Connection gateway, enter the IP address of the gateway as both the Start Address and End Address value. If a smart host or other relay external to the Exchange organization will deliver messages on behalf of the Connection gateway, enter the IP address of the smart host or relay as both the Start Address and End Address value.
- Step 12 Select OK.

Step 13	Select Next to continue to the next page.		
Step 14	Confirm the settings on the New Connector page, then select New to add the new connector.		
Step 15	Select Finish to exit the wizard.		
Step 16	On the Receive Connectors tab, right-click the connector that you created and select Properties.		
Step 17	Set the Protocol Logging Level to Verbose.		
Step 18	Select the Permission Groups tab.		
Step 19	Check the Anonymous Users check box.		
Step 20	Select OK to close the properties window.		

Configuring a Previously Installed Interoperability Gateway for Cisco Unity Connection Interoperability on Exchange 2003

To Check the SMTP Connector Configuration on a Previously Installed Interoperability Gateway for Cisco Unity Connection Interoperability (Exchange 2003 Only)

- Step 1 Open the Interoperability Gateway Administrator. (In the Windows Start Menu, browse to Start > Programs > Cisco > IGE Admin.)
- **Step 2** In the top pane of the Administrator, under Address Spaces, check the UCI (Cisco Unity-Connection Interoperability) check box if it is not checked.
- **Step 3** In the tree control at left in the Interoperability Gateway Administrator, select **SMTP Connector**.
- **Step 4** If an SMTP Connector has not previously been created that covers the interoperability domain and the UCI feature address space, a warning message displays in red at the top of the SMTP Connector pane.
 - If you do not see this warning, and a valid SMTP Connector is displayed in the list box on the upper left side of the pane, close the Interoperability Gateway Administrator and continue with the next task in the task list—no further SMTP Connector configuration is necessary.
 - If you do see the warning, and an SMTP Connector is displayed in the list box on the upper left side of the pane, note the name of the SMTP Connector, then continue with the "To Update the Interoperability Domain SMTP Connector (Exchange 2003 Only)" procedure on page 3-10.

To Update the Interoperability Domain SMTP Connector (Exchange 2003 Only)

- **Step 1** On the Exchange server on which the Interoperability Gateway for Microsoft Exchange is installed, open the Exchange System Manager.
- **Step 2** In Exchange System Manager, in the left pane, navigate to and expand **Connectors**. (Depending on the configuration, you may need to expand the Administrative Groups and/or Routing Group trees that include the server on which the Interoperability Gateway will be installed.)
- Step 3 Right-click the SMTP Connector that you noted in Step 4 of the "To Check the SMTP Connector Configuration on a Previously Installed Interoperability Gateway for Cisco Unity Connection Interoperability (Exchange 2003 Only)" procedure on page 3-10 and select Properties.
- **Step 4** On the Address Space tab, select **Add** to add a new address space.

- Step 5 In the Add Address Space window, select Other, then select OK.
- **Step 6** For Type, enter **UCI**. In the Cost field, enter **1**. In the Address field, enter ***** and select **OK**.
- **Step 7** On the Address Space tab, for the Connector scope, select **Entire Organization**.
- **Step 8** Select **OK** to save the SMTP Connector settings.



To double-check the SMTP Connector configuration, return to the Interoperability Gateway Administrator. If the SMTP Connector pane is still open, select any other item in the tree control at left and then select SMTP Connector to refresh the pane. The warning message should no longer display.

Configuring SMTP Access on the Cisco Unity Connection Gateway

The Cisco Unity Connection SMTP server running on each system has an IP access list that controls which IP addresses are allowed to establish connections to it. Incoming SMTP connections are automatically accepted from some servers, such as the systemwide smart host that is defined on the System Settings > SMTP Configuration > Smart Host page, and any Connection or Cisco Unity locations that are part of the same site or Cisco voicemail organization.

If messages from Cisco Unity users will be delivered to the Connection gateway by one or more servers that are not already defined either as the systemwide smart host or as a Cisco Unity location (this would be the case, for example, in a very simple configuration with a single Cisco Unity server that also hosts the Interoperability Gateway for Microsoft Exchange and the entire Exchange organization) or in the IP access list, do the following procedure to add the IP address of the delivery servers to the Connection gateway IP access list.



If you are unsure whether adding the IP address of the delivery servers to the Connection gateway IP access list is necessary, do the procedure. Explicitly adding the address of a server for which SMTP connections are automatically accepted does not negatively impact the SMTP server.

To Configure SMTP Access on the Cisco Unity Connection Gateway

- Step 1 In Cisco Unity Connection Administration on the Cisco Unity Connection gateway, expand System Settings > SMTP Configuration, then select Server.
- Step 2 On the Edit menu, select Search IP Address Access List.
- Step 3 Select Add New.
- **Step 4** On the New Access IP Address page, enter the IP address of the server that will deliver messages on behalf of the Cisco Unity site.
- Step 5 Select Save.
- **Step 6** On the Access IP Address page, check the **Allow Connection** check box.
- Step 7 Select Save.

Step 8 Repeat Step 2 through Step 7 for each additional server that will deliver messages on behalf of the Cisco Unity site.

Downloading the Cisco Unity Gateway Configuration File

When linking Cisco Unity and Cisco Unity Connection gateways, you download the configuration file for each gateway and load it on the other gateway. Start by downloading the Cisco Unity configuration file to a location where you will be able to access it from Cisco Unity Connection Administration on the Connection gateway.

To Download the Cisco Unity Gateway Configuration File

- **Step 1** In the Cisco Unity Administrator on the Cisco Unity site gateway, browse to **Network** and select **Connection Networking**.
- **Step 2** Select **Download** to download the local site configuration file.
- **Step 3** Save the file to a location on your hard drive, or on media that you can use to copy the file to the Cisco Unity gateway. Note that the file contains a public key certificate and should be treated as sensitive data.

Setting Up a Template for Cisco Unity Connection Users on the Cisco Unity Gateway

While creating an intersite link on the Cisco Unity gateway, you must select the template that the Cisco Unity gateway uses to create directory objects for Cisco Unity Connection users. We recommend that you review existing templates or create a new template specifically for Connection users prior to creating the link.

The template that you select affects a number of important settings, such as:

- Public distribution list membership—Connection users are added as list members in any Cisco Unity public distribution lists that are configured for the template.
- Show Subscriber in Email Server Address Book—Controls whether Connection users are listed in the Outlook address book.
- Class of Service—Although most of the class of service settings do not affect the Connection users directly, the Connection users are considered members of the class of service and therefore can affect search results in cases where the class of service is used as the search scope of an object such as a directory handler.

I

You can review existing templates in the Cisco Unity Administrator by going to any Subscribers > Subscriber Template page and selecting the Find icon. To create a new template, do the following procedure.

To Create a New Template for Cisco Unity Connection Users on the Cisco Unity Gateway

Step 1 In the Cisco Unity Administrator, go to any **Subscribers > Subscriber Template** page.

Step 2	Select the Add icon.		
Step 3	In the Add a Subscriber Template dialog box, enter a name.		
Step 4	Select New Template or Based on Existing Template . If you select Based on Existing Template, select the applicable template in the Based On field.		
Step 5	Select Add.		
Step 6	On the Profile page, select a Class of Service and check or uncheck the Show Subscriber in Email Server Address Book check box, as applicable.		
Step 7	Select the Distribution Lists page.		
Step 8	On the Distribution Lists page, to assign all new users based on this template to a public distribution list, select the list in the Public Distribution Lists box, then select >>.		
	To remove a distribution list from those to which new users are added, select the list, then select <<.		
Step 9	Select the Save icon.		

Creating the Intersite Link on the Cisco Unity Connection Gateway

Do the following procedure to create the intersite link on the Cisco Unity Connection gateway.

If the site gateway is a Connection cluster, do the procedure only on the publisher server. The publisher server must be acting primary when you do the procedure.

To Create an Intersite Link on the Cisco Unity Connection Gateway

- **Step 1** In Cisco Unity Connection Administration on the Cisco Unity Connection gateway, expand Networking, expand Links, then select Intersite Links.
- Step 2 Select Add.
- Step 3 On the New Intersite Link page, select Link to Cisco Unity Site or Cisco Unity Connection Site by Manually Exchanging Configuration Files.
- **Step 4** Select **Download** and save the Cisco Unity Connection site configuration file to a location on your hard drive, or on media that you can use to copy the file to the Cisco Unity gateway. Note that the file contains a public key certificate and should be treated as sensitive data.
- Step 5 Select Browse and upload the Cisco Unity configuration file that you downloaded in the "To Download the Cisco Unity Gateway Configuration File" procedure on page 3-12.
- **Step 6** For Transfer Protocol settings, decide whether you want to enable SSL to encrypt directory synchronization traffic between Cisco Unity and Cisco Unity Connection.



Caution To enable SSL, you must configure the Cisco Unity server to use SSL, which affects multiple applications that access the Cisco Unity server. See the applicable version of the *Security Guide for Cisco Unity* at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_maintenance_guides_list.ht ml.

Step 7 For Synchronization Settings, check the Include Distribution Lists When Synchronizing Directory Data check box to have system distribution lists that are created on the Cisco Unity site replicated to Connection so that Connection users can address messages to them. (Note that only the list name and other information used in addressing are replicated.)



- **Note** In order for individual system distribution lists to be offered for synchronization by the Cisco Unity gateway, they must also be marked to allow synchronization. By default, individual Cisco Unity system distribution lists are not marked to allow synchronization. The task list alerts you when and how to enable individual lists for synchronization.
- **Step 8** To convert recorded names from this site to a different encoding when synchronizing them with the remote site, check the **Convert Outgoing Recorded Names To** check box, and select the codec to use.

Note Verify that the codec you select is the correct one for the Cisco Unity site gateway. If you need to change the recording format after creating the intersite link, you must clear all recorded names and then resynchronize all directory data and names by using the Clear Recorded Names and Resync All buttons on the Networking > Intersite Links > Search Intersite Links page in Cisco Unity Connection Administration. This can have a heavy performance impact and should only be performed during non-business hours.

Caution

Do not select G711 a-law format when setting up an intersite link to a Cisco Unity site gateway.

Step 9 By default, two tasks that each run on their own schedule to pull directory data and recorded names from Cisco Unity to Connection are enabled immediately after you create the intersite link. To disable either type of directory synchronization until you manually edit and enable the applicable synchronization task, uncheck the Enable Task to Synchronize Directory Data After the Join or Enable Task to Synchronize Recorded Names After the Join check boxes.



Caution We strongly recommend that you perform the initial synchronization outside of normal business hours to avoid peak traffic times. In particular, if your Cisco Unity site gateway is a Platform Overlay 1 server, the synchronization activity can cause noticeable delays in the user conversation.

Step 10 For Intersite Routing, select the appropriate option:

- **Route to this Remote Site Through**—Enter the specific IP address or fully-qualified domain name of a Microsoft Exchange server in your organization that can accept SMTP messages and route them to the Interoperability Gateway for Microsoft Exchange. The host must be able to accept SMTP messages sent from the Cisco Unity Connection gateway to addresses at the interoperability domain.
- Route to this Remote Site Through SMTP Smart Host (If One Is Defined)—Routes outgoing messages to the host that is defined on the System Settings > SMTP Configuration > Smart Host page. If you choose this option, the smart host must be defined, and must be able to accept SMTP messages sent from the Cisco Unity Connection gateway to addresses at the interoperability domain. If the smart host is not defined, a non-delivery receipt (NDR) is sent to the message sender.

• Route to this Remote Site Through the Remote Site Gateway—Routes outgoing messages to the Cisco Unity gateway. Use this option only if Microsoft Exchange is installed on the Cisco Unity server and the server is able to accept SMTP messages sent from the Cisco Unity Connection gateway to addresses at the interoperability domain.

Step 11 Select Link.

Creating the Intersite Link on the Cisco Unity Gateway

Do the following procedure to create the intersite link on the Cisco Unity gateway.

If the site gateway is a failover pair, do the procedure only on the primary server. The primary server must be active when you do the procedure.



When you do Step 12 in the following procedure, synchronization of Cisco Unity Connection objects to Cisco Unity begins automatically. We strongly recommend that you do this step outside of normal business hours to avoid peak traffic times. In particular, if your Cisco Unity site gateway is a Platform Overlay 1 server, the synchronization activity can cause noticeable delays in the user conversation.

To Create an Intersite Link on the Cisco Unity Gateway

- **Step 1** In the Cisco Unity Administrator on the Cisco Unity site gateway, browse to **Network** and select **Connection Networking**.
- Step 2 On the Connection Networking page, in the Remote Configuration File field, select Browse and upload the Cisco Unity Connection configuration file that you downloaded in Step 4 of the "To Create an Intersite Link on the Cisco Unity Connection Gateway" procedure on page 3-13.
- Step 3 Select Add.
- Step 4 For Template, select the template that you chose or created in the "Setting Up a Template for Cisco Unity Connection Users on the Cisco Unity Gateway" section on page 3-12. The template is used to create Cisco Unity directory objects for Connection users so that Cisco Unity users can address messages to them. You must choose a template before you can create the intersite link.
- Step 5 Optionally, enter a Display Name Suffix. When the Cisco Unity site gateway creates directory objects for Connection users and any replicated system distribution lists, this suffix is placed at the end of the display names of the objects. This can help Cisco Unity users locate the proper contact to use for addressing messages in Microsoft Outlook or other clients that access the directory, particularly if Connection users already have Active Directory accounts prior to creating the intersite link.



If you do not want to append a suffix to Connection user and system distribution list objects, delete the default text in the Display Name Suffix field and leave the field blank.

Step 6 Check the Synchronize Distribution Lists check box to have system distribution lists that are created on the Connection site replicated to Cisco Unity so that Cisco Unity users can address messages to them. (Note that only the list name and other information used in addressing are replicated.)

.

	Note	In order for individual system distribution lists to be offered for synchronization by the Connection gateway, they must also be marked to allow synchronization. By default, individual Connection system distribution lists are marked to allow synchronization, although this setting may have been changed. The task list alerts you when and how to enable individual lists for synchronization.		
Step 7		Check the Synchronize Voice Names check box to have Cisco Unity synchronize voice names for Connection users and system distribution lists.		
Step 8	If you enabled SSL in Step 6 of the "To Create an Intersite Link on the Cisco Unity Connection Gateway" procedure on page 3-13, check the Use Secure Sockets Layer (SSL) check box. If the Connection site gateway is using a self-signed certificate (the default for Connection), also check the Use Self-Signed Certificates check box.			
Step 9	For Outbound Audio Conversion, if you want to convert voice names to a different format before sending them to the Connection site gateway, select a codec in the Voice Names field.			
	Note	Verify that the codec you select is the correct one for the Connection site gateway. If you need to change the recording format after creating the intersite link, you must clear all recorded names and then resynchronize all directory data and names by using the Clear Voice Names and Total Sync buttons on the Networking > Connection Networking > Profile page in the Cisco Unity Administrator. This can have a heavy performance impact and should only be done during non-business hours.		
Step 10	Review	Review and continue entering settings, as applicable.		
Step 11	When	When you have finished entering settings, select the Save icon.		
Step 12	Select	Select Join.		

Configuring Partitions and Search Spaces for Cisco Unity and Cisco Unity Connection Interoperability

When you initially set up the intersite link between Cisco Unity Connection and Cisco Unity, Connection users are not able to address messages to Cisco Unity users, because the Cisco Unity users are placed in newly-created partitions (based on their home Cisco Unity server) that are not a member of any Connection search spaces.

After initial replication completes between the gateways and Cisco Unity objects are replicated throughout the Connection site, you can reconfigure your search spaces to include the Cisco Unity partitions. (Note that you cannot assign Cisco Unity Connection users or other objects to a partition that was created for Cisco Unity users.)

In addition, for each Connection location, you can specify the Local Partition That Cisco Unity Users Can Address To By Extension. Only extensions belonging to this partition will be replicated to Cisco Unity. These extensions can be used for message addressing as well as auto-attendant dialing at the Cisco Unity site. Replicated extensions will be added to the Dialing Domain of the Cisco Unity site gateway. Because extensions within a Dialing Domain must be unique, the collection of all partitions chosen across the Connection site should not contain duplicates of any extension. When the collection includes duplicate extensions, or extensions that already exist in the Cisco Unity site gateway Dialing

Domain, one or more extensions will be omitted from the Cisco Unity directory. Warnings will appear in the Cisco Unity application event log indicating the owner of each omitted extension. After remedying any conflicts, you may need to do a manual resynchronization on the Cisco Unity site gateway (by selecting Total Sync on the Network > Connection Networking Profile page in Cisco Unity Administrator) in order to update the extensions.

It is possible for a Connection user to not have any extensions belonging to the Local Partition That Cisco Unity Users Can Address To By Extension configured on the server on which the user is homed. In this case, Cisco Unity users will need to use dial-by-name for addressing messages to such Connection users. Also, callers at the Cisco Unity site will only be able to reach the user via dial-by-name Directory Handlers.

To configure the Local Partition That Cisco Unity Users Can Address To By Extension, do the following procedure on each Connection server.



By default, for each Connection location, the default <Server Name> Partition is used as the Local Partition That Cisco Unity Users Can Address To By Extension. Cisco Unity users cannot address messages by extension to any Connection users who do not have an extension in this partition.

To Configure the Partition that Cisco Unity Users Can Address To for a Cisco Unity Connection Location

- **Step 1** In Cisco Unity Connection Administration (on any location), expand **Networking**, then select **Locations**.
- **Step 2** Expand Local Site and select the display name of the local location (the location on which you are accessing Connection Administration).
- **Step 3** Under Local Partition That Cisco Unity Users Can Address To By Extension, for Partition, select the name of the partition to use.
- Step 4 Select Save.
- **Step 5** Repeat Step 1 through Step 4 on each Connection location in the site.

Configuring Individual System Distribution Lists for Synchronization

If you checked the Include Distribution Lists When Synchronizing Directory Data check box in Step 7 of the "To Create an Intersite Link on the Cisco Unity Connection Gateway" procedure on page 3-13, system distribution lists created on Cisco Unity can be replicated to Cisco Unity Connection so that Connection users can address to them. However, by default, individual Cisco Unity system distribution lists are not marked for synchronization. To mark them, use the Public Distribution List Builder tool, located in the Cisco Unity Tools Depot. (The option to set or unset synchronization for lists is referred to as "Configuring distribution lists for Connection Networking.")

If you checked the Synchronize Distribution Lists check box in Step 6 of the "To Create an Intersite Link on the Cisco Unity Gateway" procedure on page 3-15, system distribution lists created on Connection can be replicated to Cisco Unity. However, in order for information about an individual list to be offered to the Cisco Unity site, the Replicate to Remote Sites Over Intersite Links check box must be checked on the Edit Distribution List Basics page for a list. By default, Replicate to Remote Sites Over Intersite Links is checked, so individual Connection system distribution lists are marked for synchronization by default. However, in order to allow contacts as members of a system distribution list, you must uncheck Replicate to Remote Sites Over Intersite Links, so if you have lists that have been configured to allow contacts as members, they will not be offered for replication to the remote site.

To disable synchronization for an individual list, uncheck Replicate to Remote Sites Over Intersite Links. To enable synchronization for an individual list, remove any contacts that have been added as members and check the Replicate to Remote Sites Over Intersite Links check box. To enable or disable synchronization for multiple lists at once, you can use either Bulk Edit or the Bulk Administration Tool.

Extending Cisco Unity Identified Subscriber Messaging to Include Connection Networking Subscribers

Added November 16, 2010

When a user on the Cisco Unity Connection site calls a Cisco Unity user and leaves a message, by default Cisco Unity will not identify the message as being from the Connection user. For Cisco Unity to identify callers whose calling number matches the extension or alternate extension of a Connection user, identified subscriber messaging (ISM) must be extended to networking contacts. (If you are also using other types of networking, such as VPIM, you may already have enabled ISM for networking contacts.)

Enabling ISM to include Connection Networking subscribers and other networking contacts requires the following:

- The automated attendant search scope on each server must be set to the dialing domain. On each server, verify that the Set Auto Attendant Search Scope field is set to Dialing Domain on the Network > Primary Location > Profile page in Cisco Unity Administrator.
- Identified subscriber messaging must be enabled on each server. (ISM is enabled for "regular" subscribers by default.) On each server, verify that the Disable Identified Subscriber Messaging check box is unchecked on the System > Configuration > Settings page in Cisco Unity Administrator. (This setting is stored in the registry. If the system is using failover, verify the setting on both the primary and secondary servers.)

To Extend Identified Messaging to Include Connection Networking Subscribers

- **Step 1** On the Cisco Unity server desktop, double-click the Cisco Unity Tools Depot icon. (If the location is using failover, start the procedure on the primary server.)
- Step 2 In the left pane, under Administrative Tools, double-click Advanced Settings Tool.
- Step 3 In the Unity Settings pane, click Networking Enable Identified Subscriber Messaging (ISM) for AMIS, Bridge, VPIM and Trusted Internet Subscribers.

- **Step 4** In the New Value list, click **1**, then click **Set**.
- **Step 5** When prompted, click **OK**.
- Step 6 Click Exit.
- **Step 7** Restart Cisco Unity for the registry setting to take effect.
- **Step 8** If the location is using failover, repeat Step 1 through Step 7 on the secondary server.
- **Step 9** Repeat Step 1 through Step 8 on each Cisco Unity location in the site.

Notable Behavior in Networking Cisco Unity and Cisco Unity Connection 8.x

This section provides information about notable expected behavior associated with Cisco Unity and Cisco Unity Connection networking.

See the following sections:

- Changes to Configuration Settings in the Cisco Unity Administrator Do Not Take Effect Immediately on the Interoperability Gateway for Microsoft Exchange, page 3-19
- Cisco Unity Connection Users Are Not Listed in the Directory in Exchange 2010 or 2007 Organizations, page 3-19
- Differences in User Experience Between Cisco Unity and Cisco Unity Connection 8.x, page 3-20
- Display of Cisco Unity User Address Information, page 3-20
- Feature Support Limitations, page 3-20
- Manual Resynchronization on the Cisco Unity Connection Site Gateway Runs Both Directory and Voice Name Synchronization Tasks, page 3-21
- No Results Are Found When a Cisco Unity Connection 8.x Directory Handler Search Scope is Set to a Remote System Distribution List, page 3-21
- Outbound SMTP Authentication, page 3-21
- Users May Receive Multiple Copies of a Message Sent to Multiple Distribution Lists, page 3-21
- ViewMail for Microsoft Outlook and Body Text in Voice Messages, page 3-21

Changes to Configuration Settings in the Cisco Unity Administrator Do Not Take Effect Immediately on the Interoperability Gateway for Microsoft Exchange

The Interoperability Gateway for Microsoft Exchange gets information about Cisco Unity networking locations by communicating with the web services resource on a server running Cisco Unity 8.x. For example, when evaluating an outgoing secure message, the Interoperability Gateway looks up the configuration for the destination to determine whether the message should be decrypted and sent or returned as undeliverable. In the Cisco Unity Administrator, you configure this and other location-specific settings on the Connection Networking profile for a Cisco Unity Connection site.

To understand how your topology dictates when changes to configuration settings made in the Cisco Unity Administrator will take effect in the Interoperability Gateway, and for information on how to expedite the process, see the "The Interoperability Gateway for Microsoft Exchange with Cisco Unity 8.x" section in the "Troubleshooting Networking in Cisco Unity 8.x" chapter of the *Troubleshooting Guide for Cisco Unity Release 8.x* at

http://www.cisco.com/en/US/docs/voice_ip_comm/unity/8x/troubleshooting/guide/8xcutsgx.html.

Cisco Unity Connection Users Are Not Listed in the Directory in Exchange 2010 or 2007 Organizations

Revised November 16, 2010

When Cisco Unity is installed in an Active Directory forest that does not contain any servers running Exchange 2003 or earlier, public distribution lists and contact objects created by the Cisco Unity server do not have a value written to the showInAddressBook attribute. As a result, those objects are not available in an address book that is accessed through a mail client, such as Microsoft Outlook. In a Cisco Unity Connection Networking deployment, this affects all users and distribution lists that are replicated from Connection.

For instructions on how to update address lists to include Connection objects, see the "Public Distribution Lists and Networking Subscribers Created by Cisco Unity Are Not Listed in the Directory" section in the applicable 8.x or later version of the *Release Notes for Cisco Unity* at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_release_notes_list.html.

Differences in User Experience Between Cisco Unity and Cisco Unity Connection 8.x

When you network Cisco Unity and Cisco Unity Connection, and particularly when you migrate users from Cisco Unity to Cisco Unity Connection, users may notice differences in behavior between the two products, including the following:

• Cisco Unity Connection turns on the message waiting indicator (MWI) for new receipts; Cisco Unity does not.

Display of Cisco Unity User Address Information

Cisco Unity Connection users who use applications such as Cisco Unity Connection ViewMail for IBM Lotus Notes, Cisco Unity Connection ViewMail for Microsoft Outlook, and Visual Voicemail may see system-generated SMTP addresses for Cisco Unity users. For example, when viewing a message received by a Cisco Unity user, the sender is identified by display name, and the system-generated address is displayed along with the display name.

Feature Support Limitations

The following features are not supported across intersite links between Cisco Unity and Cisco Unity Connection sites:

- License pooling
- Relay of messages to or from VPIM, AMIS, Bridge, or system contacts, including blind addressing to such contacts

- Broadcast messages
- Dispatch messages
- Message recall

Manual Resynchronization on the Cisco Unity Connection Site Gateway Runs Both Directory and Voice Name Synchronization Tasks

The Resync All button on the Search Intersite Links page in Cisco Unity Connection Administration starts the Synchronize Directory With Remote Network task. When that task completes, it automatically starts the Synchronize Voice Names With Remote Network task. These tasks normally run independently on separate schedules.

No Results Are Found When a Cisco Unity Connection 8.x Directory Handler Search Scope is Set to a Remote System Distribution List

Added November 16, 2010

If you set the Search Scope of a Cisco Unity Connection directory handler to System Distribution List and select a list that is homed on the Cisco Unity site, no results are returned when callers reach the handler and attempt a search. This happens because list membership is not replicated across intersite links. (This behavior does not apply to voice-enabled directory handlers, which do not have the option to use a system distribution list as the search scope.)

Outbound SMTP Authentication

Cisco Unity Connection does not support outbound SMTP authentication. If the Exchange environment in use by Cisco Unity requires authentication, you must configure the Connection site gateway to route messages.

Users May Receive Multiple Copies of a Message Sent to Multiple Distribution Lists

When a message is sent to multiple distribution lists, under some circumstances, when the message traverses an intersite link, users who are members of more than one of the lists may receive multiple copies of the message.

ViewMail for Microsoft Outlook and Body Text in Voice Messages

When Cisco Unity ViewMail for Microsoft Outlook users type text in the body of a voice message, the text is not received by Cisco Unity Connection users. Likewise, when Cisco Unity Connection ViewMail for Microsoft Outlook users type text in the body of a message, the text is not received by Cisco Unity users. However, recipients on the same type of system do receive the text (Cisco Unity users receive text sent by other Cisco Unity users).

1