



Upgrading a Cisco Unity 2.x System to the Shipping Version

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Task List for Upgrading a Cisco Unity 2.x System to the Shipping Version

Some of the following tasks apply only to specific situations, and are noted as such. If a task does not apply to your situation, skip it.

The application that imports data from Cisco Unity version 2.x works correctly only through version 4.0(4). Do the tasks in the following task list, then upgrade to the latest shipping version by using the [“Upgrading Cisco Unity 4.x Software to the Shipping Version”](#) chapter.



Caution

Beginning with Cisco Unity 4.2(1), Exchange 5.5 is no longer supported as the message store, so you must upgrade from Exchange 5.5 to Exchange 2000 or Exchange 2003 at the same time that you upgrade to the shipping version of Cisco Unity. However, do not upgrade Exchange before you upgrade

Cisco Unity. Typically, one of the early tasks in an upgrade from Exchange 5.5 is installing a two-way Exchange Active Directory Connector, which replicates data from the Exchange 5.5 directory to Active Directory and back again. When data is replicated from Active Directory to the Exchange 5.5 directory, where Cisco Unity 2.x subscriber data is stored, a large portion of the Cisco Unity data in the Exchange 5.5 directory is corrupted. This causes Cisco Unity to stop working. In addition, the corrupted data cannot be exported from the Cisco Unity 2.x system for import into the Cisco Unity 4.0(4) system.

If you plan to set up failover for the Cisco Unity system, upgrade the primary server and install the secondary server before you configure them for failover.

1. Verify the following requirements:
 - a. Requirements for the Cisco Unity 4.x system and for the upgrade. See the “[Verifying System Requirements](#)” section on page 3-5.
 - b. Requirements for integrating the phone system(s)—including for the failover feature, if applicable. Refer to the “Requirements” section of the applicable Cisco Unity integration guide(s), available at http://www.cisco.com/en/US/partner/products/sw/voicesw/ps2237/products_installation_and_configuration_guides_list.html.
2. Download software for Cisco Unity 4.0(4), which is available on the Cisco Unity Archives download page at <http://www.cisco.com/cgi-bin/tablebuild.pl/unity-archives>.
3. Download the latest version of the following utilities from CiscoUnityTools.com:
 - The Cisco Unity 2.x version of Directory Walker, available at http://ciscounitytools.com/App_DirectoryWalker.htm.
 - The Cisco Unity 4.x version of Directory Walker, available at http://ciscounitytools.com/App_DirectoryWalker4.htm.
 - The Full Database Export utility, for exporting data from the Cisco Unity 2.x system, and the Full Database Import utility, for importing Cisco Unity 2.x data into Cisco Unity 4.0(3) or 4.0(4). Both utilities are available at http://ciscounitytools.com/App_full_import_export4x.htm.
 - The Disaster Recovery Backup tool, available at http://ciscounitytools.com/App_DisasterRecoveryTools.htm.
4. Refer to *Release Notes for Cisco Unity Release <Version>* for additional information on upgrading to the shipping version of Cisco Unity. In particular, note the items in the sections “Installation and Upgrade Notes” and “Limitations and Restrictions.” Release notes are available at http://www.cisco.com/en/US/partner/products/sw/voicesw/ps2237/prod_release_notes_list.html.
5. Confirm that Cisco Unity license file(s) are available. If the Information Services manager has not already registered Cisco Unity, do so now. See the “[Converting from the System Key to License Files](#)” section on page 3-6.
6. Review the information on the amount of time required for the upgrade. See the “[Duration of the Upgrade](#)” section on page 3-8.
7. Generate and print reports on data for the existing Cisco Unity system, if applicable. Refer to the “Reports” chapter of the *Cisco Unity Maintenance Guide, Release 4.0(5)* at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/unity40/maint/maint405/ex/index.htm.

**Caution**

The Cisco Unity Database Export utility does not export data that Cisco Unity uses to generate reports. In addition, during the upgrade process, you delete all the existing Cisco Unity software and data, including data that Cisco Unity uses to generate reports. If you want any reports from the existing Cisco Unity system, generate them now.

8. Review the consistency of the Cisco Unity 2.x database, and fix any errors. See the “[Checking the Consistency of the Cisco Unity 2.x Database](#)” section on page 3-9.
9. *Only for the Unified Messaging configuration with Exchange 5.5 mailboxes homed on the Cisco Unity server:* Move Exchange 5.5 mailboxes to another Exchange server. (If there are no other Exchange servers, you will need to install Exchange on a separate server.) See the “[Moving Mailboxes from Exchange 5.5 on the Cisco Unity Server to Exchange 2003 or Exchange 2000 on a Separate Server](#)” section on page 3-10.
10. Back up the Cisco Unity server completely, and back up the Exchange servers that are home servers for Cisco Unity subscriber mailboxes. See the “[Backing Up Messages and Other Data](#)” section on page 3-10.
11. Write down the existing Cisco Unity data that will not be exported or cannot be imported. See the “[How the Cisco Unity Database Export Utility Handles Data](#)” section on page 3-11.
12. Install the Cisco Unity Database Export utility, and export Cisco Unity data. See the “[Installing and Running the Cisco Unity Database Export Utility](#)” section on page 3-14.
13. *Only for the Unified Messaging configuration with subscriber mailboxes homed in Exchange on a server other than the Cisco Unity server:* Uninstall Cisco Unity 2.x. See the “[Uninstalling Cisco Unity Version 2.x](#)” section on page 3-15.

**Caution**

You must uninstall Cisco Unity to remove Cisco Unity properties from Exchange users throughout the Exchange site. Otherwise, you will have to manually remove Cisco Unity properties from each Exchange user in raw mode before you can create subscriber accounts on the upgraded Cisco Unity server by importing mail users into Exchange.

14. Remove the system key from the Cisco Unity server.
15. Install and configure the Cisco Unity server by using the instructions in the *Cisco Unity Installation Guide (With Microsoft Exchange)*, Release 4.0(4), available at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/unity40/inst/inst404/ex/index.htm. The tasks are the same regardless of whether you are reinstalling software on the existing server or installing software on a new server.

In the “Part 1: Installing and Configuring the Cisco Unity Server” section of the “[Overview of Mandatory Tasks for Installing Cisco Unity](#)” chapter, do Task 2 through Task 12.

Note the following:

- Skip the “Obtaining Cisco Unity License Files” part of Task 2 (“[Preparing for the Installation](#)”) because you already converted from the system key to license files.
- In Task 5 (“[Installing the Operating System](#)”), you must reinstall Windows, or software and data from the Cisco Unity 2.x system may interfere with the upgrade. If you reinstall Windows by using the Cisco Unity Platform Configuration discs, everything on all hard disks is automatically deleted. If you reinstall Windows by using a retail Windows disc, run Setup to reinstall Windows instead of repair the existing installation, and delete all partitions. You will recreate the partitions required by a Cisco Unity 4.x system later in the installation process.

- In Task 7 (“[Setting Up Exchange](#)”), do not install Exchange 5.5 or Exchange 5.5 administration software on the Cisco Unity server. (Beginning with Cisco Unity 4.2(1), Exchange 5.5 is no longer supported as a message store.)

If you are using an Exchange 2000 server as the partner Exchange server, install Exchange 2000 or Exchange 2000 administration software on the Cisco Unity server, as documented in the in the *Cisco Unity Installation Guide (With Microsoft Exchange), Release 4.0(4)*.

If you are using an Exchange 2003 server as the partner Exchange server, install Exchange 2003 on a separate server, and install Exchange 2003 administration software on the Cisco Unity server. Installing Exchange 2003 on the Cisco Unity server is not supported. Refer to the “Setting Up Domino and Installing Lotus Notes” chapter in the applicable Cisco Unity installation guide for your configuration. (Installation guides are available at http://www.cisco.com/en/US/products/sw/voicesw/ps2237/prod_installation_guides_list.html. Confirm that you are using the correct version of the guide that matches your configuration; refer to the document *Use the Installation Guide That Matches the Cisco Unity 4.0(5) or Later Configuration* at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/unity40/inst/inst405/405list.htm.)

- In Task 9 (“Installing and Configuring Cisco Unity Software”), install Cisco Unity 4.0(4). The application that imports data from Cisco Unity version 2.x works correctly only through version 4.0(4), so if you upgrade to a later version of Cisco Unity, you will not be able to import data from the Cisco Unity 2.x system.

**Caution**

After you install Cisco Unity software, do not add any objects (such as subscribers and distribution lists) or remove any default objects until after you import data from the existing Cisco Unity system. The Cisco Unity Database Import utility requires that data be imported into a clean Cisco Unity system.

**Caution**

If you plan to change the phone system integration (for example, by changing from a circuit-switched phone system to Cisco CallManager), do not make any changes until you set up the integration. If you change the integration too soon, subscriber and call handler settings will not match integration settings, and transfers will fail.

16. Install the Cisco Unity Database Import utility, and import data exported from the Cisco Unity 2.x system. See the “[Installing and Running the Cisco Unity Database Import Utility](#)” section on [page 3-17](#).
17. Review the consistency of the imported database. See the “[Checking the Consistency of the Cisco Unity 4.0\(4\) Database](#)” section on [page 3-18](#).
18. If you want to restore messages and other Exchange data, use the backup you created in Task 10. of this task list.

Note that this task is not necessary if the Cisco Unity 2.x system was installed in the Unified Messaging configuration, because you moved Exchange accounts (if any) to other Exchange servers in Task 9.
19. Review the substitute objects on the System > Configuration > Settings page of the Cisco Unity Administrator. The objects are Substitute Recipient, Substitute Owner, Substitute After Message Call Handler, and Substitute Exit Call Handler. Cisco Unity uses the objects to substitute references to any subscriber that is deleted by using the Cisco Unity Administrator without first reassigning such references (for example, ownership of a call handler or distribution list). For new installations,

the Example Administrator is configured as the Substitute Recipient and Substitute Owner, and the Goodbye call handler is configured as the Substitute After Message Call Handler and Substitute Exit Call Handler. For upgrades, any changes made to the defaults will not be overwritten. However, we recommend that you review these settings now and update them if you wish to use different substitute objects. Refer to Cisco Unity Administrator Help for a description of each object and where it applies.

Note that when you are logging on to the Cisco Unity Administrator, if a page appears that reads, “Your Windows Domain Account [<Domain name>\<Active Directory account name>] is associated with multiple Cisco Unity subscribers,” select a subscriber and continue with the task. You will fix this in Task 20.

20. Manually re-enter custom data. See the “Re-entering Custom Data” section on page 3-19.
21. Upgrade to the latest shipping version by using the “Upgrading Cisco Unity 4.x Software to the Shipping Version” chapter.
22. Back up the Cisco Unity server. Refer to the “About Backing Up a Cisco Unity System” chapter of the *Cisco Unity Maintenance Guide, Release 4.0(5)* at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/unity40/maint/maint405/ex/index.htm.

Verifying System Requirements

Refer to the applicable version of the *Cisco Unity System Requirements* at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/sysreq/40_sysrq.htm to confirm that the hardware and software that you intend to use for the 4.x system is supported.

Some hardware, software, configurations, and Cisco Unity versions are no longer supported. In particular, note the following:

Some servers and voice cards that were supported for Cisco Unity 2.x are not supported with Cisco Unity 4.x. If the existing Cisco Unity server is not supported with version 4.x, version 4.x must be installed on a server that is supported. In addition, if the Cisco Unity server contains cards that are not supported with version 4.x, the cards must be replaced during the upgrade because Cisco Unity 4.x will not run with unsupported cards.

Fax cards on the Cisco Unity server and ActiveFax are not supported. You must remove fax cards before you begin the upgrade. ActiveFax, the fax server available with previous versions of Cisco Unity, is no longer supported, either on the Cisco Unity server or on a separate fax server.

Windows NT is not supported on the Cisco Unity server. The operating system on the Cisco Unity server must be Windows 2000 Server or Windows Server 2003.

Exchange support has changed:

- If Cisco Unity is configured for Unified Messaging, Exchange cannot be installed on the Cisco Unity server for Cisco Unity 4.x. You must either move Exchange mailboxes to other Exchange servers or, if there are no other Exchange servers, you must install Exchange on another server and move Exchange mailboxes to the new server.
- Beginning with Cisco Unity 4.2(1), Exchange 5.5 is not supported as a message store.
- For additional Exchange support and requirements, refer to the applicable version of the *Cisco Unity System Requirements*.

Upgrades from Cisco Unity versions earlier than 2.3(4.104) are not supported. The Cisco Unity Database Export and Database Import utilities, which let you export subscriber and other information from a 2.x system and import it into a 4.0(4) system, do not work on a Cisco Unity system earlier than version 2.3(4.104). You must install Cisco Unity 4.x as a new system, and all Cisco Unity data from the old system is lost.

Cisco Unity license files replace the system key. For more information on license files, see the following section, “[Converting from the System Key to License Files](#).”

Converting from the System Key to License Files

Cisco Unity has changed its license-control process from using a physical system key to using electronic license files. License files, which enable the features purchased by the customer, are now required for installing Cisco Unity software, for some upgrades, and for adding or changing licensed features. A system key is no longer required.

For an upgrade to Cisco Unity version 4.0, you obtain the license files by completing registration information on Cisco.com. Shortly after registration, Cisco e-mails the license files. The e-mail from Cisco contains instructions on how to save and store the files. The *Cisco Unity Reconfiguration and Upgrade Guide* provides specific instructions later in the upgrade process on the use of the license files and when to remove the system key. (For more information on licensing, refer to *White Paper: Licensing for Cisco Unity (All Versions)* at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/whitpapr/licenses.htm.)



Note

If the system is using failover, install the license files only on the primary server.

The following information is required during registration:

- The MAC address (physical address) for the network interface card (NIC) in the Cisco Unity server.
- The serial number of the currently installed system key.
- The currently installed system key code.
- The product authorization key (PAK), which appears on the sticker located on the front of the sleeve for Cisco Unity DVD 1 or CD 1.

Do the following four procedures in the order listed.

To Get the MAC Address of the Cisco Unity Server

- Step 1** On the Cisco Unity server, on the Windows Start menu, click **Programs > Accessories > Command Prompt**.
- Step 2** In the Command Prompt window, enter **ipconfig /all**, and press **Enter**.

- Step 3** Write down the value of Physical Address, excluding the hyphens, or save it to a file that you can access during online registration. (For example, if the physical address is 00-A1-B2-C3-D4-E5, record 00A1B2C3D4E5.)
- If the server contains more than one NIC, one value will appear for each NIC. Write down the value for the NIC that you will use to connect the Cisco Unity server to the network.
- Step 4** Close the Command Prompt window.
-

To Get the Serial Number of the Currently Installed System Key

- Step 1** On the Cisco Unity server, on the Windows Start menu, click **Programs > Cisco Unity > Key Dump**.
- Step 2** Write down the value for Serial Number, or save it to a file that you can access during online registration.
- Step 3** Click **Exit** to close the Key Dump window.
-

To Get the Currently Installed System Key Code

- Step 1** On the Cisco Unity server, on the Windows Start menu, click **Programs > Cisco Unity > Upgrade License**.
- Step 2** Click **Generate Current System Code**. Do not change the code type.
- Step 3** Click **Save to File**, and save the system code to a file that you can access during online registration. (The default name of the file is AvSysCode.txt.)
- Step 4** Click **Exit** to close the Generate Current System Code window.
- Step 5** Click **Exit** to close the Upgrade License window.
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To Register and Obtain the License Files

- Step 1** Browse to <http://www.cisco.com/go/license> (the URL is case sensitive).



Note You must be a registered user to access this web page. If you are not a registered user, go to <http://tools.cisco.com/RPF/register/register.do> to register and obtain a Cisco.com user ID.

- Step 2** Enter the PAK or software serial number, and click **Submit**.
- Step 3** Follow the on-screen prompts.
- Step 4** Shortly after registration, you will receive an e-mail with the Cisco Unity license files.
- If the license files are lost, it can take up to one business day to get another copy.
-

If you do not receive the license file(s) within 1 hour or to get another copy of a license file, call the Cisco Technical Assistance Center (TAC) and ask for the Licensing Team:

In the U.S.	800 553-2447
Outside the U.S.	For your local Cisco TAC phone number, refer to the website http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml .

Or send e-mail to licensing@cisco.com.

You will need to provide information to verify Cisco Unity ownership—for example, the purchase order number or the PAK (which appears on the sticker located on the front of the sleeve for Cisco Unity DVD 1 or CD 1).



Note

Cisco Unity software comes with a default license file that has a minimal number of settings. The license file allows installation of a Cisco Unity demonstration system. For information and instructions on installing a demonstration system, refer to the “Cisco Unity Demonstration System” section of the Cisco Unity release notes.

Duration of the Upgrade

The amount of time required to upgrade from Cisco Unity version 2.x to 4.0(4) depends on a number of variables. The following list is a very broad estimate of the duration of an upgrade:

Moving Exchange mailboxes from the Cisco Unity server (only if the Cisco Unity server is configured for Unified Messaging)	Depends on the size of the Exchange database and the speed of the network connection. May be several hours.
Backing up messages on the Cisco Unity server (only if the Cisco Unity server is configured for Voice Messaging)	Depends on the size of the Exchange database and the speed of the network connection. May be several hours.
Installing the operating system and other third-party software	About 6 hours, depending on complexity of installation.
Exporting data from Cisco Unity 2.x, uninstalling Cisco Unity 2.x, and importing data into Cisco Unity 4.0(4)	See duration data in Table 3-1 on page 3-9 .
Reintegrating the upgraded Cisco Unity server with the phone system	About 2 hours.
Testing	About 2 hours.

Data from Duration Tests

To test the duration of exporting data, uninstalling Cisco Unity 2.x, and importing data into Cisco Unity 4.x, we upgraded from Cisco Unity 2.4(6) on a server with an Intel Pentium II 450-MHz processor, 512 MB of RAM, and no other system activity.

The duration of these tasks will vary depending on the speed of the processor and the amount of RAM in the Cisco Unity server. In addition, for Unified Messaging configurations in which Cisco Unity subscriber mailboxes are homed on other Exchange servers, the duration will vary depending on the speed of the network.

We used three databases for our tests:

Database 1	1,150 objects: 500 mail users, 100 call handlers, other default and random objects.
Database 2	3,300 objects: 1,500 mail users, 250 call handlers, other default and random objects.
Database 3	5,300 objects: 2,500 mail users, 250 call handlers, other default and random objects.

(The number of objects on your system appears in the Cisco Unity Database Export utility before you run the export.)

All mail users had three greetings and a recorded name, and all call handlers had three greetings.

Table 3-1 lists the resulting duration data.

Table 3-1 *Duration Data*

Database	Duration of Export and Size of Exported Database	Duration of Uninstallation ¹	Duration of Import
1	12 min. 121 MB	20 min.	1 hr. 27 min.
2	28 min. 352 MB	1 hr. 3 min.	4 hr. 50 min.
3	60 min. 558 MB	1 hr. 29 min.	9 hr. 32 min.

1. Uninstallation is necessary only if the Cisco Unity server was configured as Unified Messaging and any Cisco Unity subscribers are homed in Exchange on a server other than the Cisco Unity server.

Checking the Consistency of the Cisco Unity 2.x Database

The Cisco Unity Directory Walker (DbWalker) utility for Cisco Unity version 2.x finds and fixes invalid links, and incorrect and stranded objects in the Exchange directory. You run DbWalker to correct any errors before exporting data. For a detailed list of the checks that DbWalker performs, refer to DbWalker Help.

DbWalker creates a log file that contains a list of invalid references. In addition, the utility includes options to automatically remove call handlers that are not associated with a subscriber (orphaned call handlers) and to remove Cisco Unity properties from Exchange mail users who do not have a primary call handler.

Do the following procedure.

To Check the Consistency of the Cisco Unity 2.x Database

- Step 1** Install the Cisco Unity 2.x DbWalker utility that you downloaded from CiscoUnityTools.com.
- Step 2** Log on to Windows by using the Cisco Unity installation account.
- Step 3** Confirm that Cisco Unity is running.
- Step 4** Browse to the directory **CommServer\Utilities\DbWalker2x**.

- Step 5** Run DbWalker, and correct all errors that the utility finds. Refer to DbWalker Help for detailed instructions on running the utility and on correcting errors in the database. (The Help file, DbWalker.htm, is in the same directory as DbWalker.exe.)
- Step 6** When you are finished, copy the DbWalker log file to a network drive or to a high-capacity removable storage device. If you encounter problems with the upgrade process, Cisco TAC requires this file for troubleshooting.
-

Moving Mailboxes from Exchange 5.5 on the Cisco Unity Server to Exchange 2003 or Exchange 2000 on a Separate Server

For Unified Messaging, Cisco Unity 4.x does not support Exchange installed on the Cisco Unity server. If Cisco Unity is configured for Unified Messaging and if Exchange 5.5 mailboxes are homed on the Cisco Unity server, you must move the Exchange mailboxes to an Exchange 2003 or Exchange 2000 server before you reinstall software on the Cisco Unity server. For more information, refer to Microsoft documentation.

Backing Up Messages and Other Data

The Cisco Unity Database Export utility does not back up messages, which are stored in Exchange. Back up voice messages on the Cisco Unity server by using the Microsoft Exchange ExMerge utility, which is available on the Cisco Unity Message Store CD in the Support\Utils\I386\Exmerge directory. For detailed instructions, refer to the ExMerge documentation, which appears in the same directory, and to the Microsoft website.

If you are upgrading a Cisco Unity system that was installed in the Unified Messaging configuration, back up the Exchange servers on which subscriber mailboxes are homed by using an Exchange-aware backup utility.



Caution

The Cisco Unity Database Export utility does not back up messages or other Exchange-specific data stored on the Cisco Unity server.



Note

If Cisco Unity is configured as Voice Messaging, and if subscriber mailboxes will still be homed on the Cisco Unity server after the upgrade, back up messages by using ExMerge. Other Exchange-aware backup utilities cannot restore Exchange 5.5 messages to Exchange 2000 or Exchange 2003.

Note that an ExMerge backup of the message database may be much larger than the message database itself because ExMerge backs up each Exchange mailbox separately. This affects how messages that are sent to groups (distribution lists) are backed up.

When someone sends a message to a group, that message appears in the Exchange database only once. Therefore, a 1-MB voice message that was sent to a distribution list of 20 people occupies only 1 MB in the Exchange database (and 1 MB in a Backup Exec backup of that database). However, when you back up the Exchange message database by using ExMerge, the entire 1-MB voice message is included in the backup of the mailbox for each subscriber who received the message. Therefore, the backup contains

20 MB for that voice message instead of just 1 MB. In addition, when you restore the messages, the restored database will include all 20 copies of the voice message rather than the one copy that appeared in the original database.

**Caution**

If you use ExMerge to back up Exchange messages, the only way to determine how large the backup will be is to perform the backup. The backup may not fit onto the backup medium. In addition, when you restore Exchange messages onto the Cisco Unity server, the restored database may require significantly more disk space than the original database, and it may not fit in the available hard disk space.

How the Cisco Unity Database Export Utility Handles Data

The Cisco Unity Database Export utility exports subscriber and system information from Cisco Unity 2.x systems so the data can be imported into Cisco Unity 4.0(4).

**Caution**

Upgrading to Cisco Unity 4.0(4) requires that you completely remove the previous version of Cisco Unity and then install the new version. If you do not export Cisco Unity data, you will have to recreate subscriber accounts, call handlers, and other objects and properties.

Data is exported to a Microsoft Access database. The size of the database depends on the number and size of objects and properties in the Cisco Unity 2.x database. (For example, exporting all objects and properties on a system with 1,500 subscribers, 2,000 call handlers, and short greetings for 700 of the call handlers generated a 300-MB database.)

Most of the Cisco Unity data stored on the Cisco Unity server and in Exchange is exported by the Cisco Unity Database Export utility and can be imported into Cisco Unity 4.0(4) with the Cisco Unity Database Import utility. The following three sections detail how data is handled:

- [Data That Is Exported, page 3-12](#)
- [Data That Is Not Exported, and Data That Is Exported But Not Imported, page 3-13](#)
- [Option to Skip Removal of Exchange Objects, page 3-15](#)

Data That Is Exported

Table 3-2 Data Exported by the Cisco Unity Database Export Utility

Data	Qualifications
Subscriber information	<p>Exported, except for the following values on each subscriber account:</p> <ul style="list-style-type: none"> • Phone password. • Last password change date/time. • Account lockout status. • Last contact time stamp. • SMTP address, unless the user is an Internet subscriber. This value is generated automatically when you import subscribers into Cisco Unity 4.0(4). • Home server. This value is assigned automatically when you import subscribers into Cisco Unity 4.0(4). <p>New users are homed on the Cisco Unity server, or—if Exchange is not installed on the Cisco Unity server—the user is created on the Exchange server to which Cisco Unity is connected.</p>
Subscriber templates	<p>Templates are exported except for the public distribution lists that were associated with the templates. Public distribution lists will need to be manually readded to subscriber templates on the Cisco Unity 4.0(4) system.</p>
Call handlers	Exported.
Interview handlers	Exported.
Class of service information	Exported.
Restriction tables	Exported.
Location objects	<p>The primary location object is exported but not imported. Secondary (delivery) location objects are exported and imported.</p> <p>All subscribers added to the Cisco Unity 4.0(4) system will be associated with the primary location object created by the Cisco Unity 4.0(4) Setup program. No subscribers will be associated with any other location object. The other location objects imported will be used for blind addressing only.</p>
Name lookup handler	Exported.
Password policy settings	Exported.
Port configuration information	<p>All the port capability settings information (such as answer, dial, TRAP, and out of service), the phone system with which the port is associated (for dual phone system configurations), the extension number associated with the port, and the MWI capability flag in the registry are exported.</p>

Data That Is Not Exported, and Data That Is Exported But Not Imported

Exchange Messages



Caution

Exchange messages are not exported by the Cisco Unity Database Export utility. If you do not back up messages as discussed in the [“Backing Up Messages and Other Data”](#) section on page 3-10, you will not be able to restore them on the Cisco Unity 4.0(4) system.

Phone System Settings

To restore the current phone system settings, you need to follow the procedures in the Cisco Unity integration guide for your phone system, later in the upgrade process.

Primary Location Object

The primary location object is exported but not imported. After upgrading, you need to re-record the voice name, and re-enter values for Dial ID and Display Name on the Primary Location page in the Cisco Unity Administrator (Network > Primary Location).

System Prompts

Customized system prompts are not supported. All system prompts are automatically deleted and replaced whenever you upgrade Cisco Unity.

Settings on the Configuration Pages in the Cisco Unity Administrator

You may want to write down settings on the Configuration pages in the Cisco Unity Administrator, including site name, file-aging settings, RSA SecurID security settings, contact information, recording options, and languages loaded.



Caution

If you do not install and load the same phone languages on the Cisco Unity 4.0(4) system as were installed and loaded on the 2.x system, subscribers who are configured to use the missing languages will not be able to hear the system conversation in their languages.

Schedules and Holidays

Schedules and holidays are exported, but they cannot be imported. Write down the settings so you can reproduce them in Cisco Unity 4.0(4).

Public Distribution Lists

Public distribution lists (PDLs) are not exported, but because list members are stored in Exchange, PDLs are preserved when Cisco Unity is installed in the Unified Messaging configuration and connected with Exchange on a separate server. When PDLs will not be preserved, you must manually recreate them after you complete the upgrade to 4.0(4).

Call Routing Rules

Call routing rules are exported, but they cannot be imported, and you cannot easily read the routing-rules file that is saved in the CommServer\BackupData directory. The information is exported for the benefit of technicians.

If you added any call routing rules to Cisco Unity 2.x, write down the settings for those rules so you can reproduce them in Cisco Unity 4.0(4). (The default routing rules can be changed only with the help of Cisco TAC, so you generally should not have to write down the settings for those rules.)

To Write Down the Settings for Customized Call Routing Rules

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- Step 1** In the Cisco Unity Administrator, go to **Call Management > Call Routing > Direct Calls**.
- Step 2** In the Routing Table, click each customized routing rule and write down the settings for that rule.
- Step 3** Go to **Call Management > Call Routing > Forwarded Calls**.
- Step 4** In the Routing Table, click each customized routing rule and write down the settings for that rule.
-

Phone System Files and Windows Registry Keys

Many Cisco Unity-related Windows registry keys and attributes in the Cisco Unity phone system files can be customized. Some of these customizable attributes are no longer relevant for Cisco Unity 4.0(4)—and some may even cause problems—so changes to the registry and phone system files are exported but cannot be imported.

After you run the Cisco Unity Database Import utility, you can find the settings from the Cisco Unity 2.x server on the Cisco Unity 4.0(4) server in the directory CommServer\BackupData. The directory will contain:

- The phone system file currently active on the Cisco Unity 2.x system.
- All phone system files in the Intlib directory that have an .avd extension: Avsmdi.avd, Avanalog.avd, Averic.avd, Avfuji.avd, Avdcs.avd, Avhcx.avd, Avmci.avd, and Avtosh.avd.
- The entire ActiveVoice tree in the Windows registry. The tree is saved in a file named RegistryTree.old.

Installing and Running the Cisco Unity Database Export Utility

To Run the Cisco Unity Database Export Utility

-
- Step 1** Log on to Windows by using the Cisco Unity installation account.
- Step 2** Install the Cisco Unity Database Export utility that you downloaded from CiscoUnityTools.com.
- Step 3** Confirm that the location to which you are exporting has enough space for the export database. See the [“How the Cisco Unity Database Export Utility Handles Data”](#) section on page 3-11. Without enough space, the export will fail and you will have to run the export again.
- Step 4** Exit the Cisco Unity software. (The utility will exit Cisco Unity automatically before it begins exporting data, if the software is still running.)
- Step 5** On the Windows Start menu, click **Programs > Unity > Database Export**.
- Step 6** Specify which information to include in the database. For each property that you exclude, the export and import processes will be faster and the database will be smaller.



Caution We strongly recommend that if you choose to exclude properties from the export, that subscriber greetings and recorded names be the only properties that you choose not to export.

If you exclude subscriber greetings and recorded names, you can set the Cisco Unity 4.0(4) system to play the first-time enrollment conversation for all subscribers when you import the database. The conversation prompts subscribers to record a greeting and name if none exist.

- Step 7** Specify the names and locations for the database file (which contains all the data listed in the “[Data That Is Exported](#)” section on page 3-12) and the log file (which logs the progress of the export and which Cisco TAC requires for any troubleshooting).
- Step 8** Click **Export Data**. If necessary, you can click **Exit** to interrupt the export before it finishes.
- Step 9** When the export finishes, a dialog box displays the number of errors that the export encountered. If there are any errors, display the log file and search for the string (**error**) to find and review each error.
- Step 10** Copy the database and log files that you specified in [Step 7](#) from the Cisco Unity server to a network drive or to a high-capacity removable storage device.
-

Uninstalling Cisco Unity Version 2.x

Cisco Unity version 4.0(4) includes the Cisco Unity Uninstaller utility for uninstalling Cisco Unity version 2.x.

Uninstall Cisco Unity 2.x only if the Cisco Unity system is installed in the Unified Messaging configuration and any Cisco Unity subscriber mailboxes are homed in Exchange on a server other than the Cisco Unity server.



Caution

If the Cisco Unity system is installed in the Unified Messaging configuration and any Cisco Unity subscriber mailboxes are homed in Exchange on a server other than the Cisco Unity server, you must uninstall Cisco Unity to remove Cisco Unity properties from Exchange users throughout the Exchange site. Otherwise, you will have to manually remove Cisco Unity properties from each Exchange user in raw mode before you can create subscriber accounts on the upgraded Cisco Unity server by importing mail users into Exchange.

For detailed information on what the Uninstaller utility does, refer to the Uninstaller Help.

Option to Skip Removal of Exchange Objects

If you have manually removed the Unity folder from Exchange, reinstalled Exchange, or want the Cisco Unity Uninstaller utility to skip the removal of all Exchange objects, run the Uninstaller utility with the /SkipDOH command line option. The following items are retained:

- All Cisco Unity custom data for all mail users in the Exchange directory who are associated with the local Cisco Unity server.
- All Cisco Unity objects on the current Cisco Unity server in the existing Exchange directory.
- The Example Administrator, Example Subscriber, and Cisco Unity_<MachineName> accounts in the recipients container of the local Cisco Unity server.

The /SkipDOH command line option can be useful if you reinstalled Exchange but forgot to remove Cisco Unity first, and you want to clean up all the Cisco Unity-specific files on your hard disk and in the registry before installing a new version of Cisco Unity.

Installing and Running the Cisco Unity Uninstaller Utility

Do the following two procedures in the order listed.

To Install the Cisco Unity Uninstaller Utility

-
- Step 1** 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 **Utilities\UninstallUnity2x\Setup**, and double-click **Setup.exe**.
- Step 2** Follow the on-screen prompts.
- Step 3** Restart the server.
-

To Run the Cisco Unity Uninstaller Utility

-
- Step 1** If the Windows Program menu item for Cisco Unity was renamed from Unity, change the name back to Unity now, or menu items will not be removed during the uninstall.
- Step 2** Log on to Windows by using the Cisco Unity installation account.
- Step 3** On the Windows Start menu, click **Programs > Unity Uninstaller > Unity Uninstaller**.
- If the uninstall does not start and you get an error message that indicates the LDAP port is incorrect, the wrong LDAP port was specified in the Uninstaller utility. To determine which LDAP port the Cisco Unity server is using, in the Exchange Administrator, open the site container, open the Configuration container, click **Protocols**, and double-click **LDAP**. If necessary, you can change this value at the server level instead of the site level.
- Step 4** Follow the on-screen prompts to complete the Cisco Unity uninstall.
- If you are prompted to stop IIS and NNTP services, click **OK** to continue.
- In some cases, a dialog box may appear explaining that you will need to manually remove the Unity folder from Exchange. Note this so that you can remove the folder later.



Caution Do not interrupt the Cisco Unity Uninstaller utility. Depending on the number of subscribers and the speed of the Cisco Unity server, the utility may take an hour or more to complete. If you interrupt the uninstall program, you cannot restart it. You will need to call Cisco TAC for information on completing the uninstall manually. For more information on the duration of the uninstall, see the [“Duration of the Upgrade” section on page 3-8](#).

- Step 5** If the dialog box on manually removing the Unity folder from Exchange did not appear in [Step 4](#), you are finished with the procedure.
- If the dialog box on manually removing the Unity folder from Exchange appeared in [Step 4](#), remove the folder now. Start the Exchange Administrator in raw mode:
- ```
<drive>:\Exchsrvr\bin\Admin.exe -r
```




---

**Caution** Delete the Unity folder from Exchange only if there are no other Cisco Unity servers on the site.

---

- Step 6** Select the Unity folder.
- Step 7** On the Exchange Administrator menu, click **Edit > Delete Raw Object**.

- Step 8 Confirm that you want to delete the folder.
  - Step 9 Close the Exchange Administrator.
- 

## Installing and Running the Cisco Unity Database Import Utility

After software on the Cisco Unity 4.0(4) server is fully installed and Cisco Unity is integrated with the phone system, use the Cisco Unity Database Import utility to import the data you exported earlier. For information on how long importing data will take, see the [“Duration of the Upgrade” section on page 3-8](#).

The Cisco Unity Database Import utility requires that data be imported into a clean Cisco Unity system.

### The Import Process

The Database Import utility imports subscribers into Exchange based on Exchange aliases. (Upgrading from Exchange 5.5 to Exchange 2003 or Exchange 2000 causes the Exchange distinguished name to change even if the container structure remains the same, so the alias is the only piece of data about each Cisco Unity subscriber that will be the same.) In rare cases, this may cause problems because Exchange does not require the alias to be unique, although it is highly recommended. If more than one match for an alias is found, the Cisco Unity subscriber will not be imported.

If you create a new Exchange directory and manually create users, be certain that aliases in the new directory match those in the old directory. If aliases do not match, the Database Import utility will look up a subscriber, not find that person, and then create a new Exchange account by using the old alias. Each subscriber for which this occurs will have two Exchange accounts.

### Importing Cisco Unity 2.x Data into Cisco Unity 4.0(4)



Caution

You must use the version of the Database Import utility on the Cisco Unity DVD or CD of the shipping version. Only this version of the utility is compatible with Cisco Unity 4.0(3) and later. Earlier versions of the utility can import data only into Cisco Unity 4.0(2) and earlier.

---

Do the following three procedures in the order listed.

#### To Install and Run the Cisco Unity Database Import Utility

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- Step 1 Log on to Windows by using the Cisco Unity installation account.
- Step 2 Install the Cisco Unity Database Import utility that you downloaded from CiscoUnityTools.com.
- Step 3 Note and write down the current maximum size of the paging file (virtual memory) on the Cisco Unity server.
- Step 4 Increase the maximum size of the paging file on the Cisco Unity server to 2 GB (2,000 MB).
- Step 5 On the Windows Start menu, click **Programs > Unity > Database Import - Unity 4.0(3) or 4.0(4)**.
- Step 6 Follow the on-screen prompts. For information on Database Import utility options, see the utility Help file, which appears in the same directory where you installed the utility.

Note the following:

- The Cisco Unity Database Import utility allows imports only into newly installed systems. If you try to import into a system to which you have added Cisco Unity subscribers or call handlers, the import will terminate with an error message.
- After subscriber information is imported, subscriber mailboxes are homed on the same Exchange server that they were homed on before you exported them by using the Cisco Unity Database Export utility. If a subscriber in the database is not found in Exchange, the Database Import utility will create a new Exchange account on the Cisco Unity server. If Exchange is not installed on the Cisco Unity server, the account will be created on the partner Exchange server.

For information on moving subscribers between Exchange servers, refer to the “Moving Subscriber Mailboxes” section in the “Cisco Unity Data and Log Files” chapter of the *Cisco Unity Maintenance Guide, Release 4.0(5)* at

[http://www.cisco.com/univercd/cc/td/doc/product/voice/c\\_unity/unity40/maint/maint405/ex/index.htm](http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/unity40/maint/maint405/ex/index.htm).

- Step 7** Reset the maximum size of the paging file on the Cisco Unity server to the value you noted and wrote down in Step 3.
- 

#### To Review the Error Log for Errors

---

- Step 1** Open the error log file (the default is DBImport.log).
- Step 2** Search for the string (**error**).
- Step 3** If you find any instances of the string (**error**), determine the cause. Error descriptions are detailed. Note the following:
- On the same line as the string (**error**) is an explanation of what caused the error (for example, **Menu entry destination link not found in target directory**). The lines immediately before the string (**error**), up to the previous appearance of the string **\*\*Starting record\*\***, identify the object and, if applicable, the part of the object (for example, the name of the call handler and the specific menu option that caused the error).
  - If you cannot tell from the name of the object what type of object it is, search backward again for the previous appearance of the string **Importing**. This line indicates the type of object (for example, **Importing Call Handlers, first pass**).
  - The Database Import utility passes through the database twice, once to create objects and a second time to create the links between them. As a result, errors for one object may appear in two different places in the error log.
- Step 4** Fix the error as appropriate. If necessary, contact Cisco TAC for assistance.
- 

## Checking the Consistency of the Cisco Unity 4.0(4) Database

#### To Check the Consistency of the Cisco Unity 4.0(4) Database

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- Step 1** Log on to Windows by using the Cisco Unity installation account.
- Step 2** Confirm that Cisco Unity is running.

- Step 3 Install the version of DbWalker that you downloaded from CiscoUnityTools.com.
  - Step 4 Browse to the directory in which you installed DbWalker, and run DbWalker.exe.
  - Step 5 Correct all errors that the utility finds. Refer to DbWalker Help for detailed instructions on running the utility and on correcting errors in the database. (The Help file, DbWalker.htm, is in the same directory as DbWalker.exe.)
- 


## Re-entering Custom Data

### Deleting Unneeded Cisco Unity Subscribers

In some cases, after you upgrade to Cisco Unity 4.0(4), two Cisco Unity subscribers become associated with the same Active Directory account. As a result, each time someone logs on to Windows by using that Active Directory account and then tries to access the Cisco Unity Administrator, a page appears asking which Cisco Unity subscriber to log on as. If you encounter the problem, do the following procedure to delete unneeded Cisco Unity subscribers.

#### To Delete Unneeded Cisco Unity Subscribers

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- Step 1 Access the Cisco Unity Administrator.  
A page appears that reads, “Your Windows Domain Account [<Domain name>\<Active Directory account name>] is associated with multiple Cisco Unity subscribers.” The list on this page includes all of the Cisco Unity subscribers that are associated with the Active Directory account that you used to log on to Windows.
  - Step 2 Write down the names of the Cisco Unity subscribers you want to delete.
-   
**Caution** Do not delete the Unity Installer - <Servername> account.
- 
- Step 3 Click **Unity Installer - <Servername>**, and click **Log In**.
  - Step 4 Go to the Subscriber pages, and delete the subscribers whose names you wrote down in [Step 2](#).
  - Step 5 Run the DbWalker utility to determine whether deleting the subscribers introduced any inconsistencies into the database. See the [“To Check the Consistency of the Cisco Unity 4.0\(4\) Database”](#) procedure on [page 3-18](#).
  - Step 6 Correct inconsistencies found by DbWalker, if any.
-

## Resetting Custom Settings

As noted in the “[Phone System Settings](#)” section on page 3-13, the “[Call Routing Rules](#)” section on page 3-13, and the “[Phone System Files and Windows Registry Keys](#)” section on page 3-14, some settings from the Cisco Unity 2.x system were not automatically imported into the Cisco Unity 4.0(4) system. You may want to:

- Selectively reapply changes to the Windows 2000 registry or to phone system files. (If you do not have a current backup of the registry, start Regedit, click **Registry > Export Registry File**, and save the registry settings to a file.)



---

**Caution**

Changing the wrong registry key or entering an incorrect value can cause the server to malfunction. Before you edit the registry, confirm that you know how to restore it if a problem occurs. (Refer to the “Restoring” topics in Registry Editor Help.) If you have any questions about changing registry key settings, contact Cisco TAC.

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- Rerecord the voice name for the primary location object, and re-enter values for Dial ID and Display Name on the Primary Location page in the Cisco Unity Administrator (**Network > Primary Location**).
- Re-enter settings on the Cisco Unity Administrator Configuration pages.
- Recreate routing rules.
- Re-enter holidays manually, if you upgraded a Cisco Unity system earlier than version 2.4.