



Cisco Unity Data and Log Files

Introduction to Cisco Unity Data and Message Storage

Information about subscriber accounts and other Cisco Unity data is stored in a SQL Server database on the Cisco Unity server. Additionally, a small subset of the Cisco Unity information is stored in the directory. Cisco Unity keeps the information in the directory and in the SQL Server database synchronized.

The directory that Cisco Unity uses for data storage depends on what was selected when Cisco Unity was installed. During installation, you specify a partner Exchange server for Cisco Unity to communicate with. The partner server can be an Exchange 5.5, Exchange 2000, or Exchange 2003 server. When the partner server is an Exchange 5.5 server, the directory in which Cisco Unity stores data is the Exchange 5.5 directory. When the partner server is an Exchange 2000 or Exchange 2003 sever, Cisco Unity stores data in Active Directory.

By storing its data in a SQL Server database, Cisco Unity derives many performance, reliability, and scalability benefits. Because very little information is stored in the directory, and because that information is not likely to change often, directory replication caused by changes to Cisco Unity data is minimal after the initial creation of subscriber accounts.

Cisco Unity Functions When the Network Is Down

In addition to the SQL database that contains subscriber names and extensions, the Unity Messaging Repository (UMR) is also on the Cisco Unity server. When an Exchange server or even the entire Exchange network is down, Cisco Unity can answer calls, allow unidentified callers to look up subscriber extensions, and take voice messages. While the e-mail system or network is off line, new voice messages are stored in the UMR on the Cisco Unity server. During this time, subscribers checking their voice messages hear the UMR conversation, which explains that the Exchange server is not available, but which gives them access to voice messages that have been left from the time that the Exchange server went down. When the Exchange server or network is back on line, the voice messages stored in the UMR are routed to the subscriber mailboxes.

Managing the Location of Log Files and Database Files

The way in which logical drives on the Cisco Unity server are partitioned and what content is located on the drives depends on the size of the Cisco Unity system, the RAID volume configuration used, whether the system will be installed as Voice Messaging Only (VM) or as Unified Messaging (UM), and whether Exchange is used on-box or off-box.

The partition and drive content recommendations from the *Cisco Unity Installation Guide* should continue to be followed when maintaining your system.

For more information on storage issues, refer to *White Paper: Physical Storage Best Practices for Cisco Unity with Microsoft Exchange*, available at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/whitpapr/storage.htm.

Moving Subscriber Mailboxes

From time to time you may need to move subscriber mailboxes to another server that is faster or has more disk space available, or you may want to move mailboxes when you add new servers to your network. It is possible to move subscribers between servers without having to shut down Cisco Unity.



Caution

If you are moving a group of subscriber mailboxes at once, confirm that you do not inadvertently select the Unity Messaging System, UAmis, or UOmni mailboxes. To move these special mailboxes, see the [“Moving the Unity Messaging System, UAmis, and UOmni Exchange Mailboxes”](#) section on page 6-5.

If your Cisco Unity server is connected to Exchange 2000 or to Exchange 2003, follow the instructions in the Microsoft Exchange documentation to move mailboxes from one server to another. However, if your Cisco Unity server is connected to Exchange 5.5, you need to use the Bulk Logout utility to direct the Cisco Unity server(s) to log out of the mailboxes that you plan to move before you move them in Exchange. With the Bulk Logout utility, you can select the subscriber mailboxes that you want to log out of Exchange 5.5 on each Cisco Unity server in your site. You can select one or more of the following:

- All subscriber mailboxes.
- A group of subscriber mailboxes, based on an extension range, membership in a public distribution list, an association with a class of service (COS), or an assigned phone system (in dual phone system environments).
- You can also use a comma-separated value (CSV) file to select subscribers based on their Exchange aliases. CSV is a common text file format for moving data from one data store to another. You can edit CSV files in a text editor or in a spreadsheet application. If you choose to select subscribers from a CSV file, format your file by using the following guidelines to ensure that it parses correctly:
 - Separate values by commas. Do not use a tab, spaces, or a semicolon to separate values in the file.
 - Include a column header titled “alias” in the first line. Column headers are not case sensitive, and can be formatted with spaces on the left, right, or on both sides.

For example:

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first name, last name, home server, alias, domain
Alex, Abade, EXServer1, aabade, ENG_MAIN
Kelly, Bader, EXServer1, kbader, ENG_MAIN
```

To move multiple subscriber mailboxes between Exchange 5.5 servers while Cisco Unity is running, do the applicable procedures that follow, in the order listed. Note that if your Cisco Unity server is connected to Exchange 2000 or Exchange 2003, you do not need to do these procedures. Instead, you can move Exchange 2000 or Exchange 2003 mailboxes by following the instructions in the Microsoft Exchange documentation.

To Force Cisco Unity to Log Out of Multiple Exchange 5.5 Mailboxes

Step 1 Confirm that subscribers have exited Outlook and have logged off of Cisco Unity.



Caution

The mailboxes that you plan to move must not be accessed until after they have been moved and the Exchange directory has replicated. Subscribers must understand not to start Outlook or to access Cisco Unity over the phone until notified by you that it is okay to do so. If mailboxes are accessed during this process, subscribers will be disconnected, and the Cisco Unity server may need to be restarted.

Step 2 Start the Bulk Logout utility, available in Tools Depot, and then run it on the drive on which Cisco Unity is installed.

Step 3 In the Bulk Subscriber Logout window, select the subscribers that you want to log out of Exchange by doing one of the following:

- Click **All Subscribers**.
- Click **Subscribers with Extension Numbers**, and then enter the range in the From and To fields.
- Click **All Subscribers in This Public Distribution List**, and then click the distribution list from the list in the adjacent field.
- Click **All Subscribers Associated with This Class of Service**, and then click the COS from the list in the adjacent field.
- Click **All Subscribers with Aliases in This CSV File**, and then click **Browse** to locate the CSV file.

Step 4 Click **Add Subscribers to Grid**. The subscribers that you selected in [Step 3](#) are displayed in the grid. If you selected subscribers from a CSV file, note that only those subscribers with mailboxes associated with the local Cisco Unity server are displayed.

Step 5 Repeat [Step 3](#) and [Step 4](#), if applicable, to add additional subscribers to the grid.

Step 6 If necessary, check or uncheck the check boxes next to each subscriber listed in the grid to add or remove subscribers from the group that you selected for log out.

Step 7 Click **Log Out Subscribers**, and follow the on-screen instructions. For the selected subscribers, Cisco Unity logs out of all Exchange mailboxes that are associated with the local Cisco Unity server.

Step 8 If subscribers are associated with more than Cisco Unity server, or if you are not sure which Exchange mailboxes are associated with which Cisco Unity servers in your site, repeat [Step 2](#) through [Step 7](#) for each Cisco Unity server in your site as necessary.

Step 9 Leave the Bulk Subscriber Logout window open, and continue with the following [“To Move Exchange 5.5 Mailboxes”](#) procedure.

To Move Exchange 5.5 Mailboxes

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- Step 1** On the Windows Start menu, click **Programs > Microsoft Exchange > Microsoft Exchange Administrator**.
- Step 2** In the tree in the left pane, click **Recipients**, then click the name(s) of the subscriber(s) in the right pane.



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- Step 3** Click **Tools > Move Mailbox**.
- Step 4** In the Move Mailbox To list, click the server to which the mailbox(es) will be moved.
- Step 5** Click **OK** to move the mailbox(es).
- Step 6** After the mailbox(es) have been moved, subscribers may not be able to access messages until the directory is updated. You can either force directory replication, or you can wait for the directory replication to occur automatically, depending on your Exchange settings.

Before you force directory replication, it is a good idea to discuss this with the Exchange administrator for your site. If you decide to force directory replication, do so for the Cisco Unity server where the mailbox(es) used to reside and for the server to which the mailbox(es) were moved. Refer to the Microsoft Exchange 5.5 documentation for detailed procedures.

- Step 7** Continue with the following [“To Synchronize the Servers”](#) procedure.
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To Synchronize the Servers

Repeat this procedure for each Cisco Unity server from which subscribers have had their mailboxes moved in the previous [“To Move Exchange 5.5 Mailboxes”](#) procedure.

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- Step 1** In the Bulk Subscriber Logout window, click the **Resynch Subscribers** button, and follow the on-screen instructions. This step synchronizes the Cisco Unity cache with the Exchange 5.5 directory, logging Cisco Unity back into the subscriber mailboxes.
- Step 2** Click **Exit**.
- Step 3** Notify subscribers that they can log on to both Outlook and Cisco Unity.
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To Run the Exchange 5.5 Optimizer

If you have moved more than 100 subscribers in Exchange 5.5, run the Exchange Optimizer on the Cisco Unity server. Otherwise, you may encounter problems with Cisco Unity not accepting dialed extensions for subscribers and call handlers, and with conversation-related errors in the event log. If there are other Exchange servers in the site, you do not need to run the Exchange Optimizer on the other Exchange servers.

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- Step 1** Shut down the Cisco Unity server, if it is running.
- Step 2** On the Windows Start menu, click **Programs > Microsoft Exchange > Microsoft Exchange Optimizer**.

- Step 3** Follow the on-screen instructions. If the Exchange Optimizer recommends that you move files, you can safely choose not to do so.
- Step 4** If the Exchange 5.5 Optimizer displays an error message saying that a service could not be shut down, do the following sub-steps:
- Exit the **Exchange Optimizer**.
 - Right-click the **Cisco Unity** icon in the status area of the taskbar, and click **Exit**.
 - Start the **Exchange Optimizer**, and follow the on-screen instructions.
- Step 5** When the Exchange Optimizer is finished, restart the Cisco Unity server.
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Moving the Unity Messaging System, UAmis, and UOmni Exchange Mailboxes

The Unity Messaging System, UAmis, and UOmni mailboxes are special Exchange mailboxes with specific functions. You use the same procedures to move these special mailboxes that you use to move ordinary subscriber mailboxes in Exchange—but with a few extra steps to prevent problems that can occur after the mailboxes are moved.

To avoid inadvertently moving the Unity Messaging System, UAmis, or UOmni mailboxes when you move a group of subscriber mailboxes, consider changing their Exchange display names so that these mailboxes are clearly identified as requiring “special” treatment.

The following sections describe the mailboxes and how to move them correctly.

Unity Messaging System Mailbox

When an unidentified caller—an outside caller or a caller from inside the organization calling from a phone that is not associated with a subscriber account (such as a conference room)—leaves a message for a subscriber, Cisco Unity gives the message to the subscriber home server and stores it in the subscriber mailbox. Such messages are identified as coming from the Unity Messaging System mailbox, which is homed on the server that Cisco Unity gives the message to, and has the display name Unity Messaging System.

For more information on the Unity Messaging System mailbox and its associated account, refer to the “Default Accounts and Message Handling” chapter in the *Cisco Unity System Administration Guide*. The *Cisco Unity System Administration Guide* is available at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/unity40/sag/sag404/ex/index.htm.

To Move the Unity Messaging System Mailbox

- Step 1** Use the same procedures that you use for moving ordinary subscriber mailboxes in Exchange 5.5, Exchange 2000, or Exchange 2003 as indicated in the “[Introduction to Cisco Unity Data and Message Storage](#)” section on page 6-1.
- Step 2** To prevent messages from unidentified callers from getting stuck in the Unity Messaging Repository (UMR) after the move, do the following sub-steps:
- On the Windows Start menu, click **Programs > Administrative Tools > Services**.

- b. From the Services window, stop and restart **AvUMRSyncSvr** service.

After the UMR service has restarted (it may take a few minutes), Cisco Unity exhibits the following behavior:

- Messages from unidentified callers that are addressed to subscribers who do not have full mailboxes are delivered.
- As expected, messages from unidentified callers that are addressed to subscribers who have full mailboxes are not delivered. However, when Cisco Unity attempts to send a nondelivery receipt (NDR), the NDR gets stuck in the Unity Messaging System mailbox, and is never forwarded to the Unidentified Messages distribution list.

- Step 3** To release any stuck NDRs from the Unity Messaging System mailbox, stop and restart the Cisco Unity software by using the system tray icon.
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UAmis Mailbox

Outgoing AMIS messages are placed in the special Exchange mailbox that has the display name UAmis_<Servername>. For more information on the UAmis mailbox, refer to the “UAmis Mailbox” section in the “AMIS Networking” chapter of the *Networking in Cisco Unity Guide*, available at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/unity40/net/net404/ex/index.htm.

To Move the UAmis Mailbox

- Step 1** Use the same procedures that you use for moving ordinary subscriber mailboxes in Exchange 5.5, Exchange 2000, or Exchange 2003 as indicated in the “Introduction to Cisco Unity Data and Message Storage” section on page 6-1.
- Step 2** To prevent messages from getting stuck in the UAmis mailbox after the move, stop and restart Cisco Unity by using the system tray icon.
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UOmni Mailbox

Administrative messages from the Cisco Unity Bridge to create, modify, or delete Bridge subscribers are placed in the special Exchange mailbox that has the display name UOmni_<Servername>.

For more information on the UOmni mailbox, refer to the “UOmni Mailbox” section in the “About Bridge Networking” chapter of the *Cisco Unity Bridge Networking Guide*, available at http://www.cisco.com/univercd/cc/td/doc/product/voice/c_unity/bridge30/bnet/bnet30/index.htm.

To Move the UOmni Mailbox

- Step 1** Use the same procedures that you use for moving ordinary subscriber mailboxes in Exchange 2000 or Exchange 2003 as indicated in the “Introduction to Cisco Unity Data and Message Storage” section on page 6-1.
- Step 2** On the Windows Start menu, click **Programs > Administrative Tools > Services**.
- Step 3** From the Services window, stop and restart **CsBridgeConnector**, which is the Bridge Connector service.

The Bridge Connector monitors the UOmni mailbox. Restarting it immediately after the mailbox move ensures that the Active Directory contacts that are associated with Bridge subscribers are created correctly and messages do not get stuck in the UOmni mailbox. When you have restarted the Connector, Bridge subscribers can be added, modified, and deleted without any problems.
