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# Migrating to Windows Server 2003, Active Directory, and Exchange 2003

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## Chapter 7

# Installing Exchange Server 2003

In Chapter 6, we examined the migration planning that needs to occur before you attempt to implement or migrate to a Microsoft Exchange Server 2003 messaging environment. Even with a detailed implementation or migration plan in place, you still need to address some concerns before you insert the Exchange Server 2003 CD-ROM into your server's CD or DVD drive. For example, Exchange server naming conventions are important. Many organizations have server-naming standards that provide server name consistency across geographic boundaries. When naming conventions are well thought out, they offer clear, concise, and meaningful definitions for each server's primary role on the network and in the organization.

## Preinstallation Considerations for Exchange Server 2003

In this chapter, we will use a naming convention that describes each server's main function. The name for the first Exchange Server 2003 computer that we will install is *EX2003-BE-01*. The prefix *EX2003* designates the server to be running Exchange Server 2003 as opposed to Exchange 2000 Server or Exchange Server 5.5. The letters *BE* identify the server as a *back-end* server that stores Exchange mailboxes and public folders. (Exchange front-end servers do not store mailboxes or public folders. If we chose to designate this computer as a front-end server, we might identify it with *FE*, but you cannot install a front-end server without at least one back-end server already present in the organization.) Finally, the *01* suffix identifies it as the *first* back-end server within our organization.

Chapter 6 outlines in detail the hardware and software requirements for Exchange Server 2003. As a review, remember that you need the following components in place on the target server before you can perform a successful Exchange Server 2003 installation:

- WWW service
- SMTP service
- ASP.NET component (required on Windows Server 2003 only)
- Network News Transfer Protocol (NNTP) service
- Windows 2000 Server with Service Pack 3 (SP3) or the Windows Server 2003 OS
- Windows 2000 Server or Windows Server 2003 Active Directory (TCP/IP and the DNS service are required by Active Directory)
- One or more drives formatted with the NTFS file system for storing all Exchange Server 2003 data, logs, and components

## Performing the Installation

Running Exchange Server 2003's Setup program *without* any command-line options reveals a series of HTML-based checklists that guide you through the installation of your first server, additional servers, and the post-installation process. The basic installation steps are the same for both the Standard and the Enterprise editions. The first server you install is an important one. The Exchange

Server Deployment Tools setup can accommodate scenarios requiring Exchange 5.5 coexistence, Exchange 2000 coexistence, and so forth, as Figure 1 shows.

**Figure 1:**

*Choosing the best deployment option for the first Exchange Server 2003 computer*



The four installation scenarios are:

- ***Coexistence with Exchange 5.5.*** In this scenario, you run Exchange 5.5 but haven't yet connected it to Active Directory. When adding the first Exchange 2003 server, setup installs and configures the Active Directory Connector (ADC) for you, thereby setting up your basic migration environment.
- ***Coexistence with Mixed Mode Exchange 2000 and Exchange 5.5.*** This scenario is for environments already running the ADC to connect Exchange 5.5 and Exchange 2000; Setup will upgrade the ADC and let Exchange Server 2003 become a part of the environment.
- ***Upgrade from Exchange 2000 Native Mode.*** This option is for organizations that have only Exchange 2000 running (no Exchange 5.5 servers). You will join the Exchange 2003 server to the existing Exchange organization.
- ***New Exchange 2003 Installation.*** This option installs a new Exchange Server 2003 organization and doesn't provide interoperability with earlier Exchange versions.

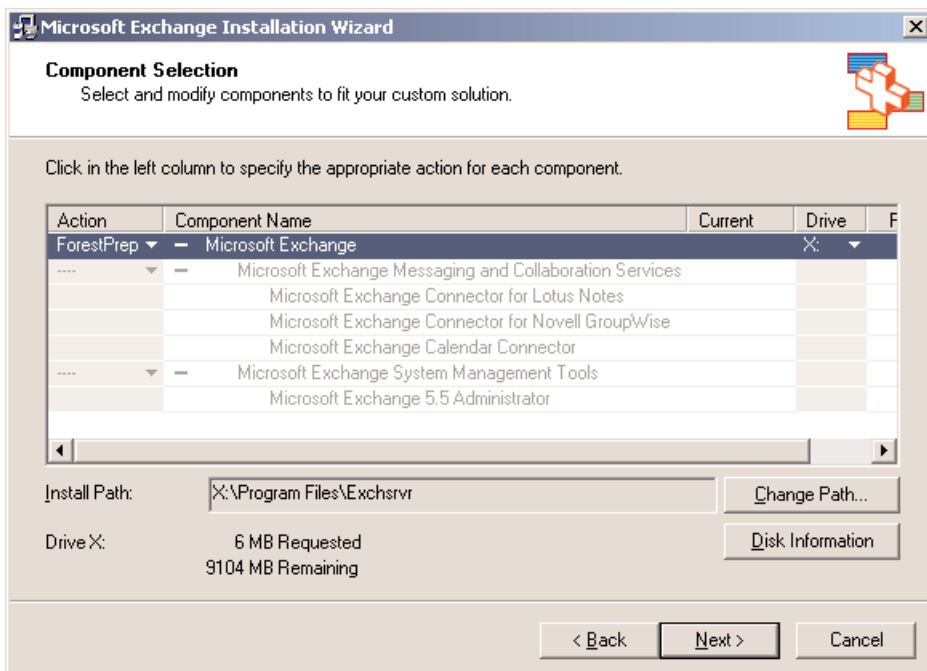
When you perform an in-place upgrade of an Exchange 2000 server, you will need to remove the Mobile Information Server (MIS) Exchange Event sink, if it is present. This component is replicated in Exchange Server 2003 as the mobile browser component. Exchange Server 2003 does not support MIS but provides much of the same functionality built-in. You will also need to remove the Instant Messaging (IM) service, the Chat service, the Key Management Server (KMS), the Lotus cc:Mail connector, and Microsoft Mail (MS Mail) connector, if any of these components are present.

None of these components are supplied with Exchange Server 2003; the Microsoft Office Live Communications Server 2003 replaces the IM service as well as the Exchange 2000 Conferencing Server product, and Windows Certificate Services replaces the KMS.

Your first installation step is to prepare the Active Directory schema for Exchange Server 2003. In anything but a completely native Windows Server 2003 forest, modifying the Active Directory schema will cause all forest Global Catalog (GC) servers to rebuild their databases from scratch. Therefore, we recommend that you *not* modify the Active Directory schema (a process known as *ForestPrep*) during business hours, when users rely on the availability of GC servers. To run ForestPrep, simply run Exchange Server 2003's Setup utility: It will automatically detect that ForestPrep has not been performed and offer to run it for you. Alternately, to explicitly specify ForestPrep to run, you can navigate to the `\Setup\I386` folder on the Exchange Server 2003 installation CD-ROM (e.g., `<CD drive letter>\English\Exch2003\Ent\Setup\I386`) and launch the command `setup /forestprep`. The process takes several minutes, although the GC rebuild process can take much longer in a large forest. Figure 2 shows the Microsoft Exchange Setup Wizard preparing to run ForestPrep.

**Figure 2:**

*Running the ForestPrep installation phase for Exchange Server 2003*



After performing ForestPrep, you will need to wait until the schema changes have replicated and your GCs have rebuilt before continuing. To help speed this process somewhat, you can run ForestPrep directly on the domain controller (DC) that holds the Schema Master role in your forest. Doing so ensures that the schema changes are applied quickly and correctly (if you run ForestPrep on

another computer, the Schema Master must still be available over the network to accept the schema changes).

You need to run ForestPrep only *once per forest*; you need to run a similar process called DomainPrep *once per domain* for each domain that will provide Exchange Server 2003 functionality. DomainPrep sets up some initial user groups and permissions, takes only a few minutes, and does not affect domain performance or operation. In other words, it's safe to run DomainPrep almost any time you want. To do so, simply rerun Exchange Server 2003 Setup and it will default to running DomainPrep if necessary. You can also run DomainPrep as a separate operation—the same as for ForestPrep—just substitute the `/domainprep` command-line switch for the `/forestprep` command-line switch (i.e., `setup /domainprep`). Note that DomainPrep, because it has no production effect, can also be run during the main Exchange installation process, instead of running it as an individual step.

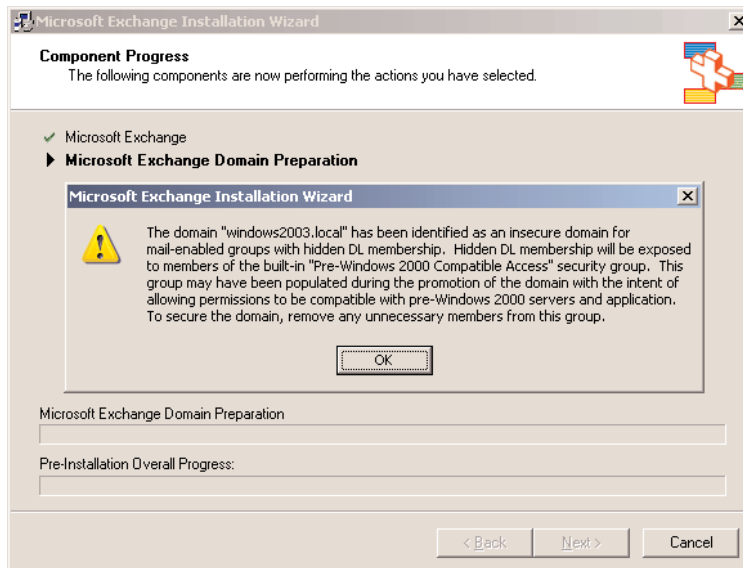


### Note

During the DomainPrep phase, you might see a message box appear that warns you about mail-enabled groups that have their distribution list (DL) membership hidden, as Figure 3 shows. Any Active Directory domain that has the built-in local Pre-Windows 2000 Compatible Access security group is considered an insecure domain because any members of this built-in group can view the properties of all users and groups within the domain, including hidden DL membership. To remedy this security vulnerability, simply remove unnecessary members from the built-in local Pre-Windows 2000 Compatible Access security group.

**Figure 3:**

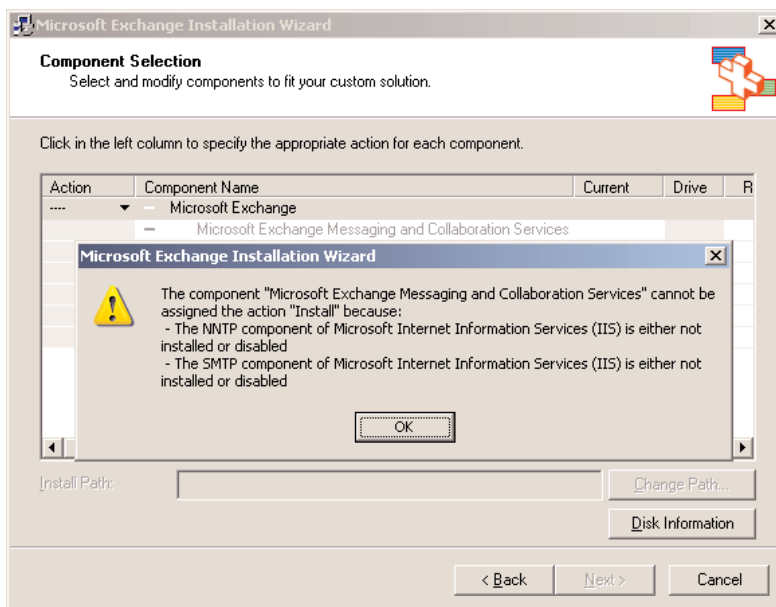
*Warning message advising you to remove unnecessary members from the Pre-Windows 2000 Compatible Access security group*



With both ForestPrep and DomainPrep out of the way, you can run the Setup routine for Exchange. You'll do this on each server that needs to run Exchange. The process is as follows:

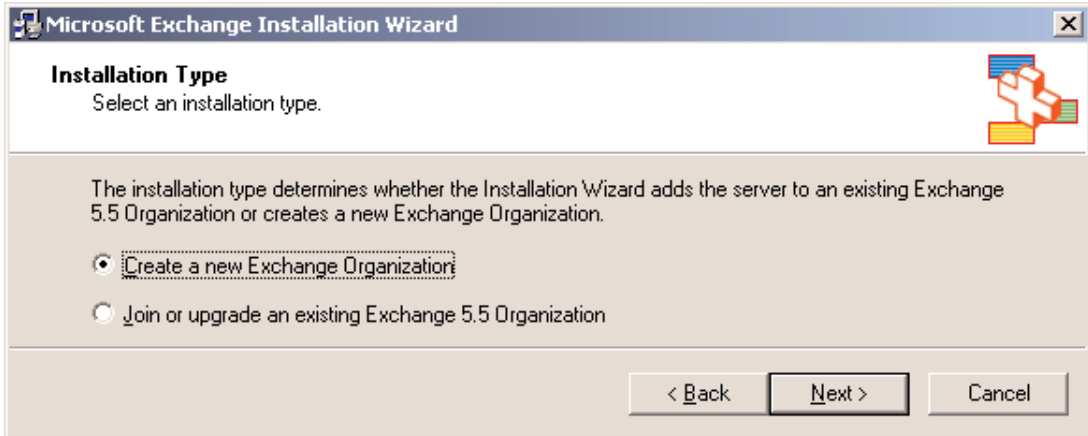
1. Run Exchange Server 2003 Setup. Navigate through the usual license agreement dialog boxes until you come to the main component selection dialog.
2. Select an installation option. The default option, *Typical*, will display if all Exchange Server 2003 prerequisite components are installed. If Typical is not preselected, select it manually, then Setup will tell you which components are missing, as Figure 4 shows.

**Figure 4:**  
*Showing which Windows Server components need to be installed*



3. As Figure 5 shows, you have the option to create a new Exchange organization or to join to an existing 5.5 organization. Select the appropriate option. For an interorg migration, you'll always create a new organization.

**Figure 5:**  
*Choosing an installation type for Exchange Server 2003*



4. If you're creating a new organization, provide its name. *Note that the organization name cannot be easily changed later (in fact, no means of doing so is supported), so make sure you choose a name that won't need to change later.* The organization name cannot be blank, nor can it contain any of the following invalid characters:

~ ` ! @ # \$ % ^ & \* ( ) \_ + = { [ ] } | \ : ; " ' < , > . ? /

Setup will run and need several minutes to complete the installation. Setup does not usually require you to restart your server after Exchange is installed.

When you install subsequent servers into the Exchange organization, you'll be prompted for the name of an Administrative Group into which the servers will be placed. Administrative Groups are a way of organizing individual servers within Exchange, so that administrative permissions can be more readily assigned to many servers at once. In other words, permissions are assigned at the Administrative Group level, and all servers within that Group inherit those permissions. *Deciding the selection of an Administrative Group is important because servers cannot be moved out of their Administrative Group without uninstalling and reinstalling Exchange.* Therefore, carefully consider how your Exchange servers will be managed and how to create the appropriate Administrative Group structure at the outset. Note that the first server in a new Exchange organization is automatically installed into a default Administrative Group named *First Administrative Group*. You can easily rename this default group to any name that you prefer.



## Post-Installation Tasks

Immediately after installation, you should take these steps:

- **Sign up for Microsoft's security bulletins at <http://www.microsoft.com/security>.** Exchange is a major attack target and thanks to its mission-critical nature, you'll miss it if it's down. Security bulletins can help you quickly get new patches and security updates installed.
- **Optimize Exchange's memory use.** On servers with more than 1GB of physical RAM, set the /3GB switch in the Windows *boot.ini* file so that Windows' extended memory support is enabled. If you don't configure this setting, then expect to see Event ID 9665 logged to the application event log. *Unfortunately, this special Boot.ini file setting is not supported under Windows 2000 Server, Standard Edition*—it is only supported under the Advanced Server and DataCenter Server editions. Under Windows Server 2003, it is supported for the Standard, Enterprise, and DataCenter editions. You should also go to registry key HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\MSExchangeIS\Parameters\System and set the value "Suppress Memory Configuration Notification" to 1.
- **For Windows Server 2003 servers only—configure the /USERVA=3030 switch in Boot.ini to allow for more system page table entries.** For more information on the /3GB and the /Userva=3030 switches, see the Microsoft Knowledge Base article "XADM: Using the /Userva Switch on Windows Server 2003-Based Exchange Servers," at <http://www.support.microsoft.com/?kbid=810371> and "How to Use the /USERVA Switch in the Boot.ini File to Tune /3GB Configurations," at <http://www.support.microsoft.com/?kbid=316739>.
- **Use the Internet Mail Wizard to configure at least one Exchange server in your organization to deliver Internet mail.** To do so, open the Exchange System Manager (ESM), right-click your organization, then select Internet Mail Wizard from the context menu. Select the server that will serve as the Internet mail gateway and the wizard will configure it. Note that you can have different servers handling incoming and outgoing email messages, thereby letting you create a more scalable Internet gateway infrastructure.

## Exchange Server Configuration Settings

You'll want to set up, or at least verify, several configuration options within Exchange before beginning a migration. Note that an in-place upgrade from Exchange 2000 will preserve your old configuration settings as much as possible, but that you still need to verify that all settings are configured the way you want.

Our recommended first step is to configure the ESM to display (which it doesn't do by default) routing groups and administrative groups. To modify this configuration, right-click the organization, then select Properties. As Figure 6 shows, you can force the ESM to display routing groups and administrative groups.

**Figure 6:**  
*Configuring the ESM to display routing groups and administrative groups*

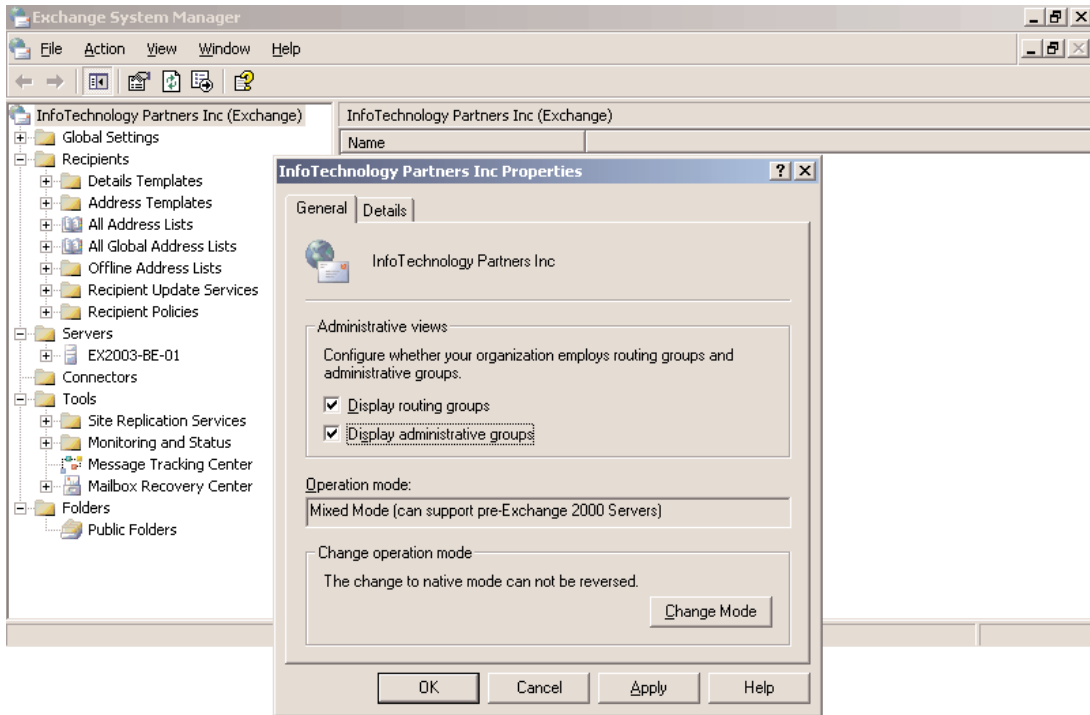
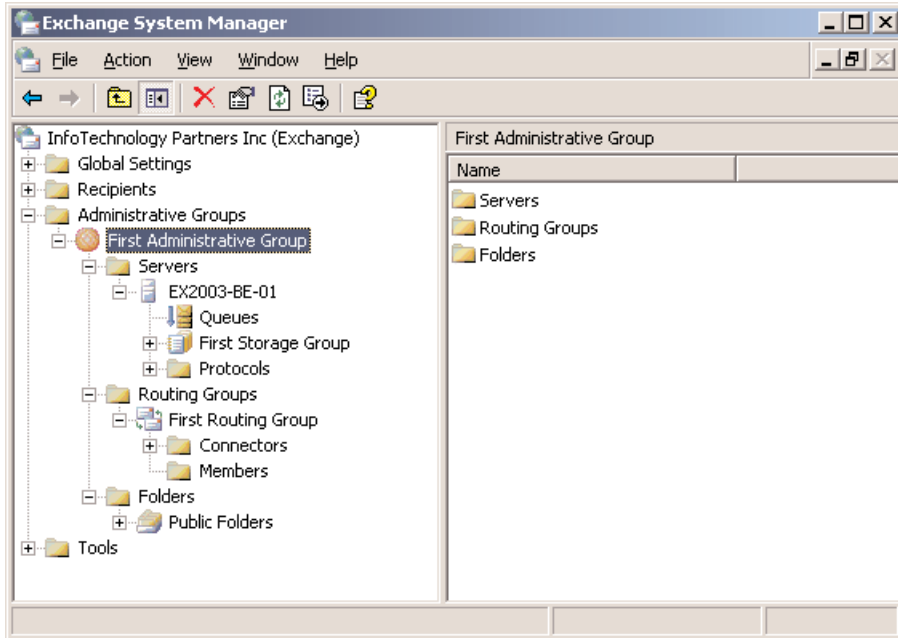


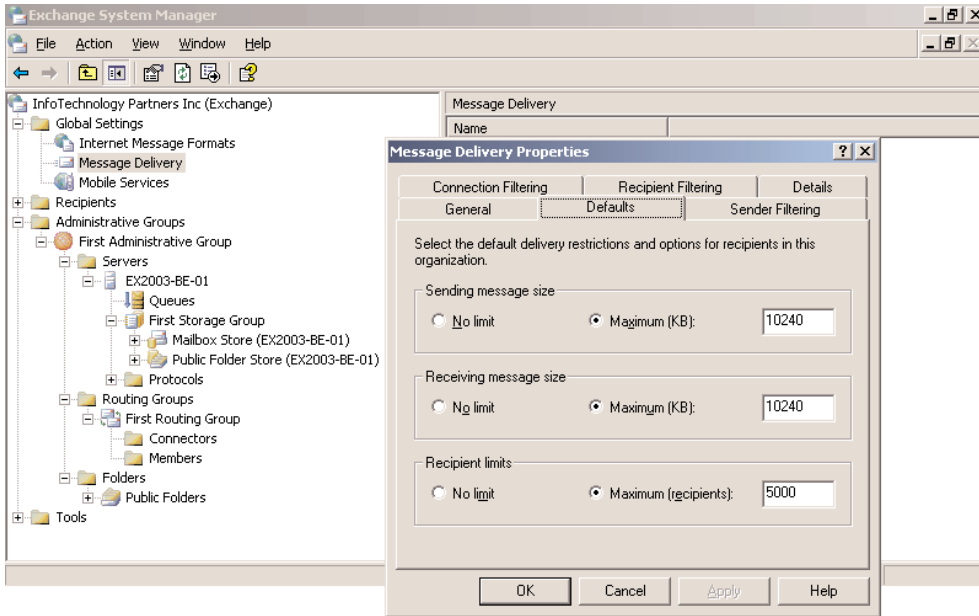
Figure 7 shows the new configuration in the ESM: both routing groups and administrative groups are displayed in the organization tree. By default, the first Exchange 2003 server is placed within the First Administrative Group along with any existing Exchange servers that are part of the same organization. You can drill down into each server displayed within the Servers subnode to view the mailbox stores and the public folder stores for each storage group. To view routing information, you can expand the Routing Groups subnode to reveal the Connectors and Members objects.

**Figure 7:**  
*Displaying administrative and routing groups in the Administrative Groups node*



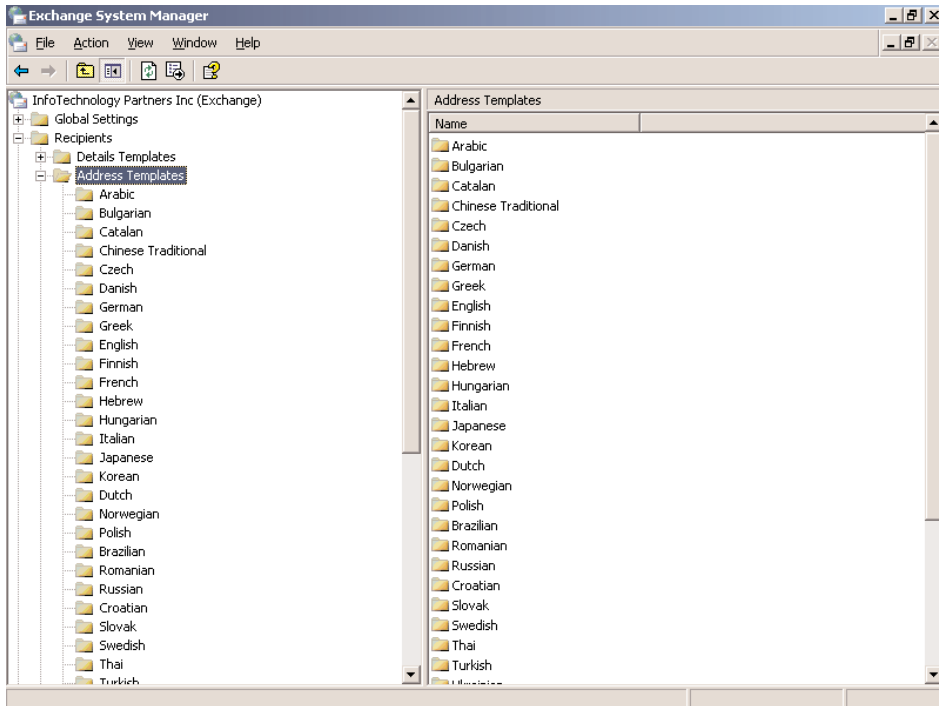
You might also want to configure message delivery options. To do this, right-click Message Delivery (under Global Settings in the ESM), then select Properties. Figure 8 shows the Defaults tab, which lets you configure maximum sizes for incoming and outgoing messages and the maximum number of recipients per message. You can also use this dialog box to configure sender and recipient filters, which block messages (on an organization-wide basis) from specific senders or messages sent to specific recipients.

**Figure 8:**  
*Specifying the maximum messaging limits from the Defaults tab*



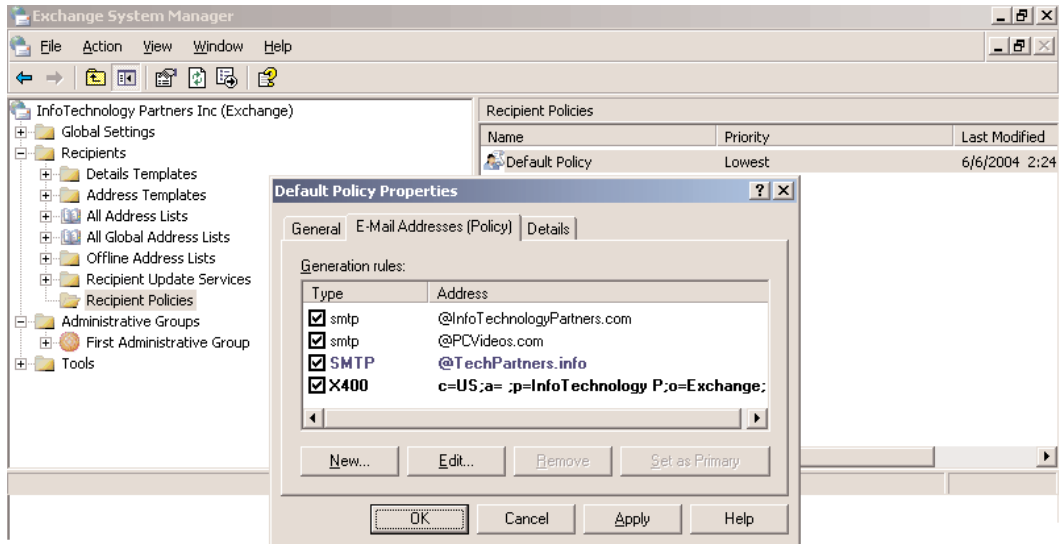
You can also review the address templates. To do so, expand the Recipients folder in the ESM, expand the Address Templates folder, then select the appropriate language. A template, which Figure 9 shows, is provided for each address type that Exchange supports. You can modify any of these to change the address templates for that message type.

**Figure 9:**  
*Working with Exchange Server 2003 Address Templates for supported languages*



To configure the email addresses created for recipients, expand Recipients, click Recipient Policies, then double-click the Default Policy in the right-hand pane. The Default Policy defines an SMTP and X.400 address that is assigned to each user. You can modify this policy: For example, if your company accepts email messages sent to @mycompany.com as well as @mycomp.com, you can have the Default Policy generate both SMTP addresses for all recipients. One of them is designated as the default SMTP address (displayed in **bold** letters) and is used as the reply-to address when your users send email messages. Figure 10 shows the Default Policy E-Mail Addresses (Policy) generation rules with two additional SMTP addresses added by the person responsible for administering this Exchange organization.

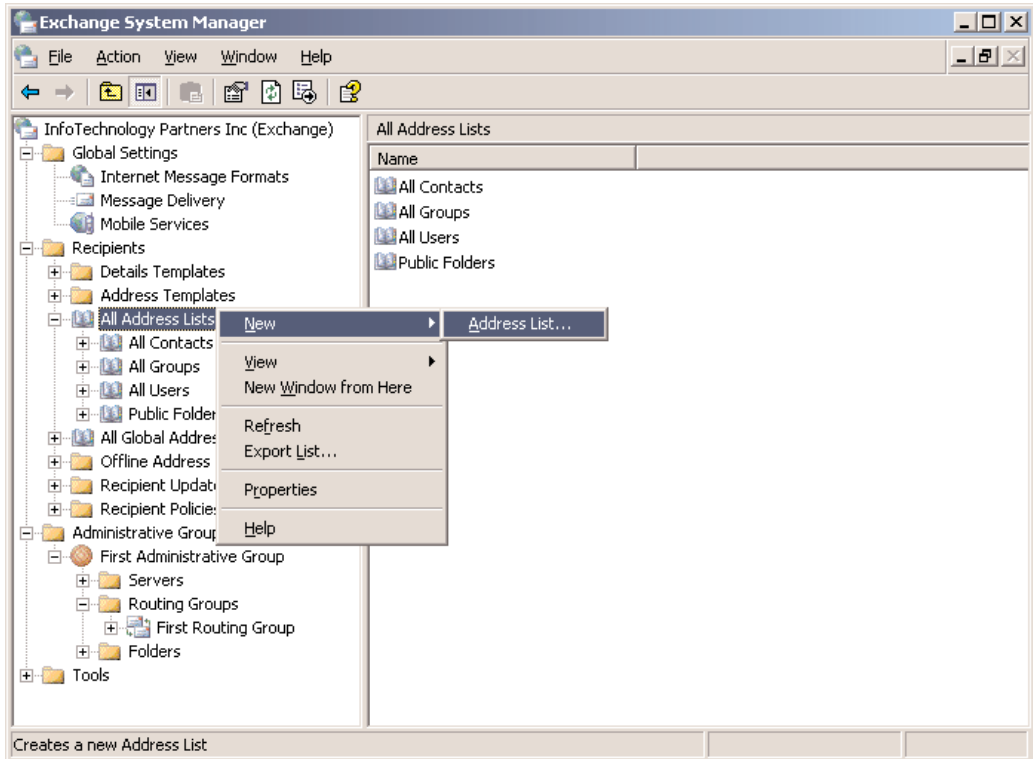
**Figure 10:**  
*Configuring E-Mail Addresses generation rules for Default Policy*



When you add or change email addresses to the Default Policy and click OK, a message box appears asking you if you want to update all corresponding recipient email addresses to match the new address generation rule settings. Click Yes to update the recipients or click No to cancel the update for existing recipients and just have the new settings apply to new recipients. The ESM will prompt you with this same message box for each modification or additional email address that you specify.

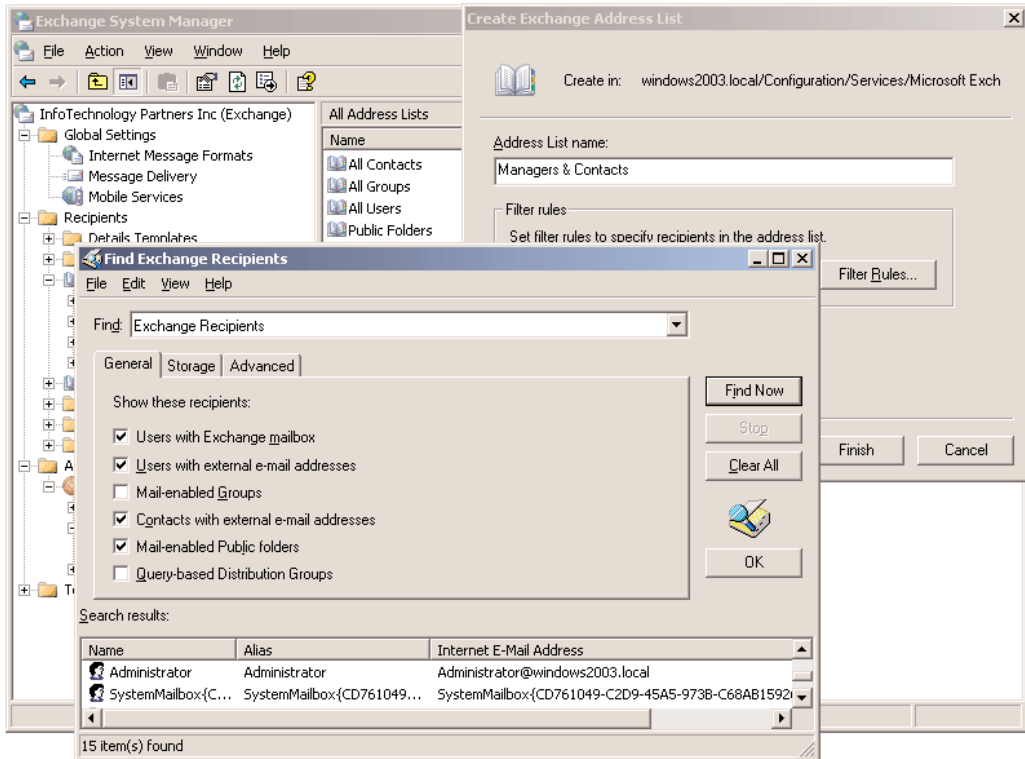
Configuring address lists is another common task. Exchange supports multiple address lists and comes preconfigured with lists for all Contact objects, all Groups, and all users. To create a new list, simply right-click All Address Lists, then select New Address List, as Figure 11 shows.

**Figure 11:**  
*Creating a new address list in the ESM*



You'll provide a name for the address list and have the option to provide Filter Rules. By default, all Address Lists contain *all* users in the directory; by filtering, you can create a list that contains a subset of your users, such as the users from a particular office or department. Figure 12 shows a filter configured to display only users with an Exchange mailbox, users with external email addresses, contacts with external email addresses, and mail-enabled public folders. By selecting the Storage tab or the Advanced tab on the Find Exchange Recipients dialog box, you can also use more advanced search criteria to set a filter for a custom address list.

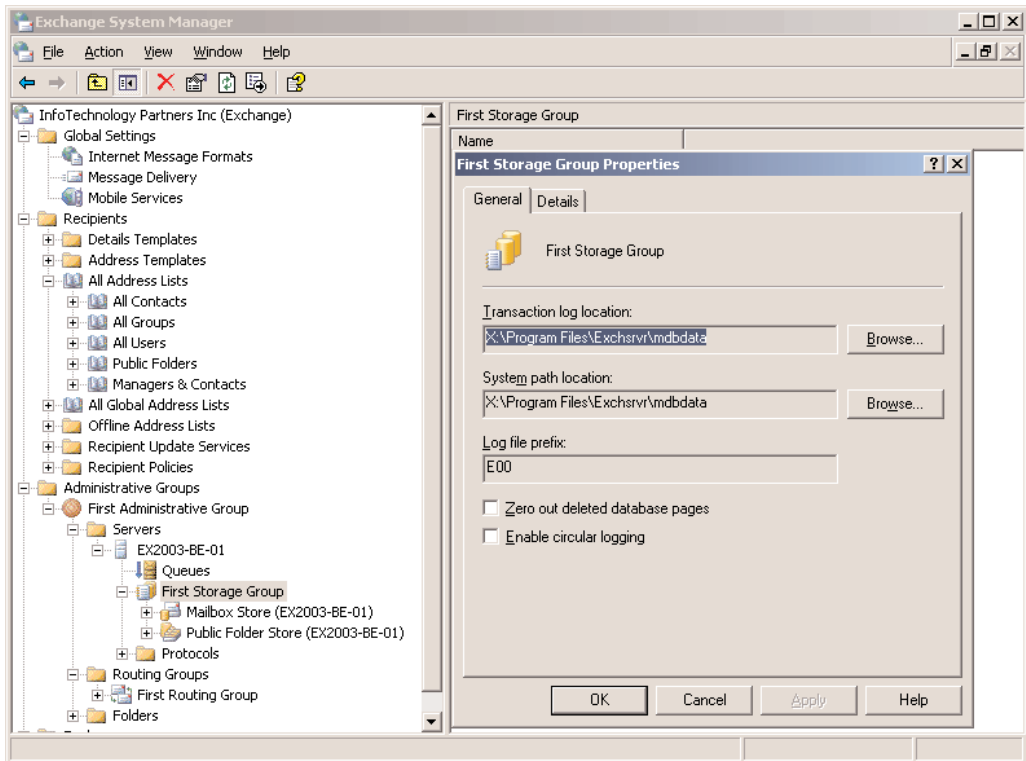
**Figure 12:**  
Setting search criteria for generating a custom address list



You can configure several additional attributes on a per-server basis, particularly with regard to stores and storage groups. Remember that a *storage group* is simply a means of organizing and managing *stores*, or databases. By default, new Exchange servers have one storage group, named First Storage Group, that contains one mailbox store and one public folder store. Every store within the storage group shares a single transaction log, and as Figure 13 shows, the only properties associated with the storage group are related to that log—its location and filename—whether or not deleted pages are *zeroed out* (or erased in such a way that data reconstruction is impossible) and whether or not *circular logging* is enabled. To work with storage groups and messaging databases, expand the First Administrative Group node in ESM, expand the Servers folder, expand the <server name> container, then expand the First Storage Group container. You can right-click the First Storage Group container and select Properties to review and modify its configuration settings.



**Figure 13:**  
*Showing the Properties sheet for the default First Storage Group*



By default, Exchange transaction logs are never emptied out until a full backup of the associated databases is made. This behavior ensures that, in the event of a database failure, the transaction log can be used to *replay*, or recreate, any database activity that occurred since the most recent backup. Circular logging causes the log to discard old transactions to make room for new transactions; this will prevent more than a couple of transaction logs from being created on the server, but will severely limit your ability to recover data in the event of a database failure. *Unless absolutely necessary because of disk space limitations, you should never enable circular logging.*

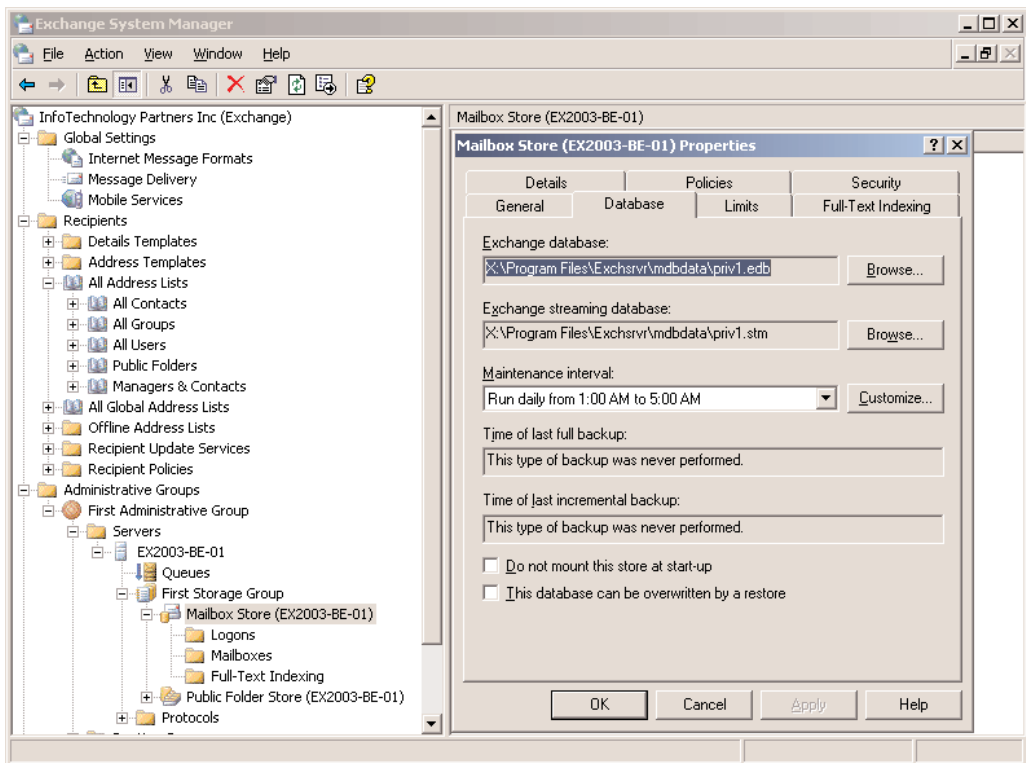
Another best practice for Exchange Server, as with SQL Server, is to place the transaction log files on a separate physical disk from the data files. Placing the transaction logs on a different disk (or disk array) provides another level of fault tolerance for the Exchange system because the transaction logs will survive a disk failure to the drive that stores the data files and the data files will survive a disk failure to the drive that stores the transaction logs. By default, the data and the transaction logs are stored in the same physical location—`<drive letter>\Program Files\Exchsrvr\mdbdata`. From the Properties sheet of a storage group, you can click the Browse button to move the transaction logs for that storage group to a new local physical location. You can also click the Browse button for the System Path Location box to move the Exchange data files to a new local physical location for that

storage group. Both transaction log location and system path location refer to a folder on a drive letter; all the log files and data files for a particular storage group are stored within the specified folder locations for that storage group.

Many options are available for each store. Figure 14 shows the Database tab of the Properties sheet for the default user mailbox database, named Mailbox Store. Here, you can see the physical location of the database file. Note that each database consists of two files: A basic Exchange database file and a secondary database for streaming data, such as video (.avi) files sent as attachments. You can specify the automated maintenance period for the database, and you can see when it was last backed up. From Mailbox Store Properties you can also configure the database to be overwritten by a copy that you're restoring from a backup.

**Figure 14:**

*Configuring the Database settings on the default Mailbox Store Properties sheet*

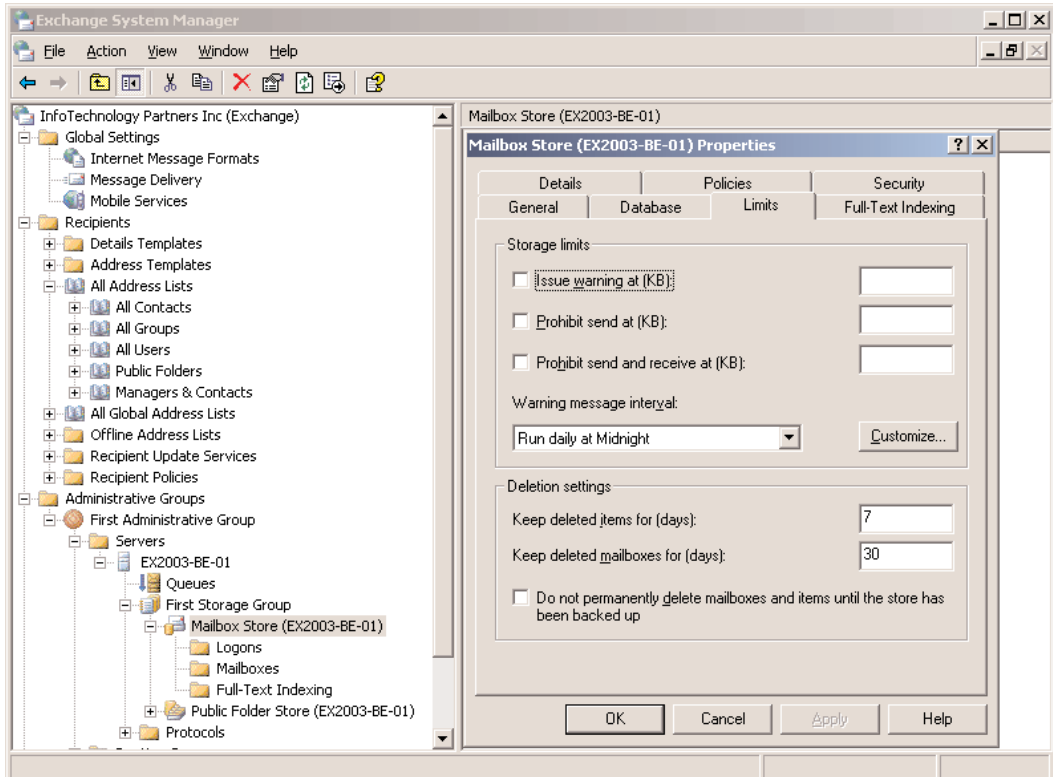


Restoring directly over a database is not necessary. In fact, if you need to restore only one mailbox, then restoring the entire database would be a bad idea because every user whose mailbox resides in that database would be offline during the process. Instead, Exchange lets you create a special storage group called a Recovery Storage Group. You can restore any database to this special group, which then enables you to export single mailboxes to a personal store (.pst) file for recovery. Message stores can also specify storage quotas or limits for users, which Figure 15 shows. To override

these values on a per-user basis, modify the user's account profile in Active Directory. You can also specify deleted item retention on a per-store basis.

**Figure 15:**

*Displaying the Limits settings on the default Mailbox Store Properties sheet*



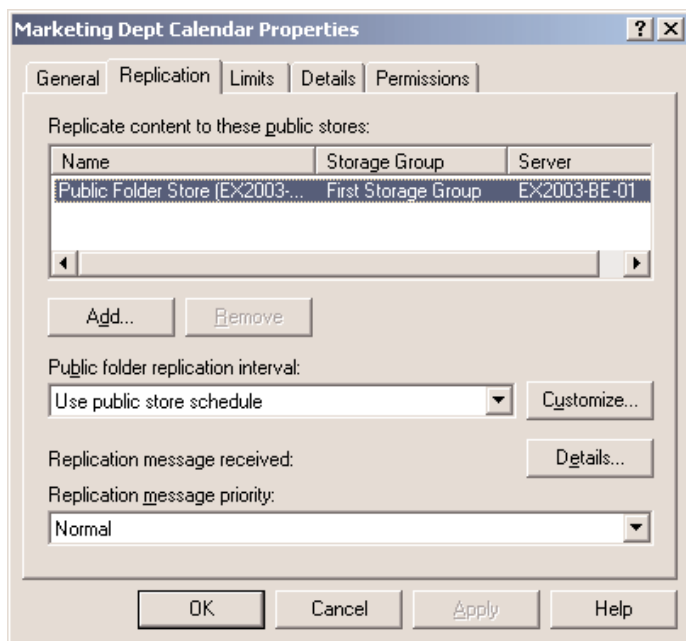
The default public store name is listed on the General tab of a mailbox store's Properties sheet. However, to work with configuration settings for the default Public Folder Store, right-click the Public Folder Store container found within the First Storage Group container, then select Properties. The properties that you can configure are similar to the properties for a mailbox store. However, a public folder store has one additional tab called Replication that lets you configure the replication interval and replication message size limit for synchronizing public folder replicas. Public folder replicas add fault tolerance and load balancing features to an Exchange Server 2003-based organization that relies on data stored in public folders. Public folders are very useful for things like department-wide or company-wide shared calendars, shared contacts, and shared message postings (similar to a public bulletin board).

To add one or more replicas for a given public folder, you can expand the administrative group in which the public folder resides and expand the Folders node. Next, expand the Public Folders container, right-click the public folder for which you want to add or remove a replica, and click Properties. Select the Replication tab to work with replication settings, as Figure 16 shows. Obviously,

the server on which a public folder has been created initially stores the first and only replica. To add a replica for the public folder to additional Exchange servers, click the Add button. To remove a replica from a server, select the replica and click Remove.

**Figure 16:**

*Selecting the Replication tab on a public folder's Properties sheet*



You might want to set up and use routing groups to manage the flow of message traffic between Exchange servers in different physical locations or sites. The planning, design, and implementation of routing groups is beyond the scope of this chapter, but you can learn more about them from the Exchange server documentation or from the planning documentation available from the Microsoft Exchange Web site at <http://www.microsoft.com/exchange>.

## Migrating from Exchange 5.5 to Exchange 2003

Exchange Server 2003 will not run under Windows NT Server 4.0; therefore you cannot perform a direct in-place upgrade from Exchange 5.5 to Exchange 2003. In theory, you could first upgrade the OS to Windows 2000 Server SP3 or later. Then you could upgrade Exchange Server 5.5 to Exchange 2000 Server. After that, you could upgrade Exchange 2000 Server to Exchange Server 2003. Finally, you could upgrade from the OS from Windows 2000 Server SP3 or later to Windows Server 2003. In reality, however, you are most likely not going to want to run Windows Server 2003 or Exchange Server 2003 on old hardware designed for Windows NT 4.0. In most cases, you will want to migrate from old Exchange 5.5 servers to new Exchange 2003 servers.

Microsoft documents several different methods that you can use to successfully migrate from Exchange 5.5 to Exchange 2003. Each method has its advantages and disadvantages. The method you

choose depends on the complexity of your network—the number of domains, DCs, Exchange 5.5 sites, and Exchange 5.5 servers involved. Each Exchange 5.5 server that you want to migrate needs to have at least Exchange 5.5 SP3 installed; Exchange 5.5 SP4 is even better.

For small environments, a fairly straightforward method is to install a new Windows NT 4.0 Backup Domain Controller (BDC), take it offline as a precautionary backup procedure, then upgrade the Primary Domain Controller (PDC) to Windows Server 2003. Then you can run the DCPROMO wizard to make the upgraded Windows NT 4.0 PDC into an Active Directory DC so that the Windows NT 4.0 user accounts and groups are brought into Active Directory. From that point, you can use the ADC to import users' mailboxes and other messaging data into Exchange Server 2003 from Exchange Server 5.5. The ADC also enables synchronization between the Exchange 5.5 directory and Active Directory.

Another method you can use is to take advantage of the ADC to import domain user accounts, groups, mailboxes, DLs, and other messaging objects into Active Directory from Windows NT Server 4.0 and Exchange Server 5.5. The balance of this section takes you through the major steps of using the ADC to migrate users and their mailboxes from Windows NT Server 4.0 and Exchange Server 5.5 to Windows Server 2003 and Exchange Server 2003. At the end of this section, you'll see how easy a migration can be when you use the Microsoft Exchange Server Migration Wizard.

Fortunately, the Exchange Server Deployment Tools Help files offer you a detailed step-by-step outline for migrating from Exchange 5.5 and coexisting with Exchange 2003. When you click Exchange Deployment Tools on the Welcome To Exchange Server 2003 Setup dialog box, click *Deploy the first Exchange 2003 server*, then click *Coexistence with Exchange 5.5*. The first two steps involve verifying that you have a server in place that is ready for Exchange 2003 as we've discussed throughout this chapter. The Exchange Server 2003 Deployment Tools break down the necessary steps for installing Exchange 2003 for coexistence with Exchange 5.5 into three phases: Planning, Prepare Active Directory, and Installing Exchange Server 2003 on the Initial Server.

### ***Phase One: Planning***

In step three of the Exchange 5.5 Coexistence Prerequisites for the Exchange Server Deployment Tools, type in the name of the Exchange 5.5 server and the Active Directory GC server, then click *Run DSScopeScan now*. Review the log files that are written by default to the C:\ExDeploy Logs folder. This utility generates seven log files. You must manually review each log to determine if you need to make any configuration changes to the Exchange 5.5 environment to insure a smooth migration to Exchange 2003.

Next, you need to install the Windows Server Support Tools which are found on the Windows 2000 Server CD-ROM and on the Windows Server 2003 CD-ROM. Install the version that corresponds to the OS on top of which you will be installing Exchange 2003. Next, run the Dcdiag.exe command-line utility on the server that will run Exchange 2003. This tool examines network connectivity and proper DNS name resolution for Active Directory. The results from running this utility will display on the screen; you must manually fix any problems discovered by the Dcdiag.exe utility.

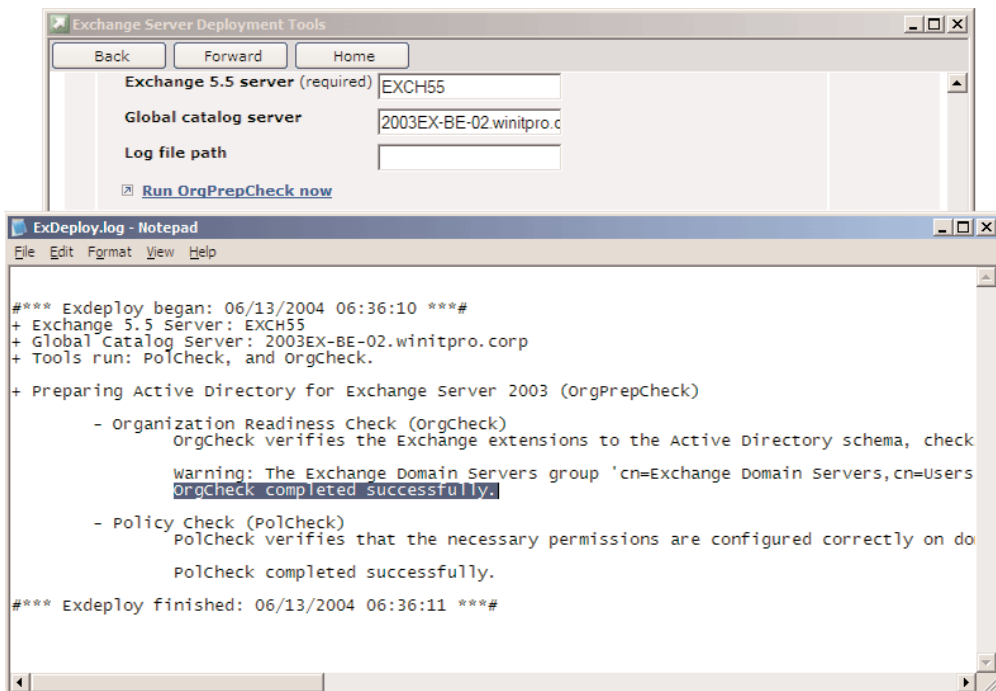
After you have run Dcdiag.exe and made any necessary corrections to network settings or DNS settings, you need to run the command-line tool Netdiag.exe to test for proper DNS and network functionality. The results from running this utility will display on the screen; you must manually fix any problems discovered by the Netdiag.exe utility.

## Phase Two: Prepare Active Directory

In phase two of the Deployment Tools for installing Exchange Server 2003 for coexistence with Exchange 5.5, you need to run the first two installation steps for the first Exchange 2003 server—*ForestPrep* and *DomainPrep*—just as we describe earlier in this chapter. After you have successfully run these two installation steps, you need to run the OrgPrepCheck tool to verify that all the required Active Directory schema extensions, security descriptors, and DC permissions settings were properly applied by the ForestPrep and DomainPrep installation options of the Exchange 2003 Setup program. Review the `exdeploy-polcheck.log` file and the `ExDeploy.log` file in the default `C:\ExDeploy Logs` folder, which Figure 17 shows, and remedy any problems listed in these files.

**Figure 17:**

*Reviewing the ExDeploy.log file after running the OrgPrepCheck tool*



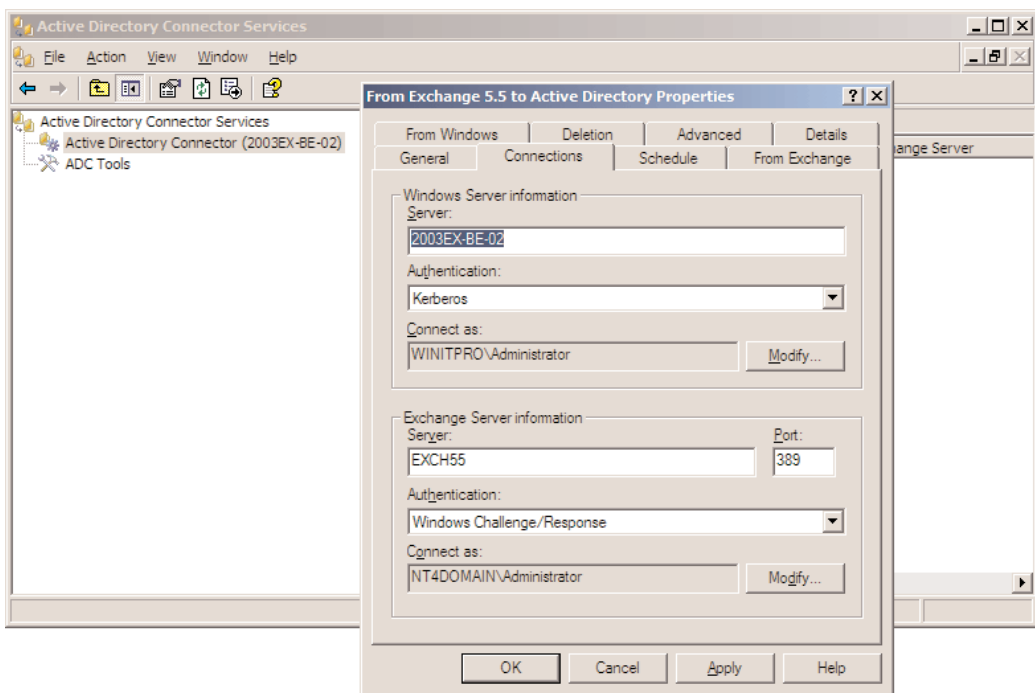
Steps five and six of the Exchange Server 2003 Deployment Tools for coexistence with Exchange 5.5 involve installing and running the ADC. The ADC lets you set up connection agreements between Active Directory and the Exchange Server 5.5 directory service. The ADC supports coexistence between Exchange 5.5 and Exchange 2003 for as long as you might need both messaging systems to run simultaneously. To install the ADC from the Exchange Server 2003 CD-ROM in the `\ADC\I386` folder, double-click `Setup.exe`. Install both the Connector and the ADC Tools. Now to launch the ADC Services console and run the ADC, right-click the Active Directory Connector icon in the left-hand pane, point to `New`, and select `Recipient Connection Agreement`. On the `General` tab of the Properties sheet that appears, type a name for this connection agreement, such as "From Exchange

5.5 To Active Directory”. Choose the Replication Direction: *Two-way, From Exchange to Windows*, or *From Windows to Exchange*. To maintain coexistence between Exchange Server 2003 (Active Directory) and Exchange Server 5.5, select the *Two-way* option, but you’ll have to make sure that the Exchange 5.5 organization is configured with the necessary permissions for interfacing with Active Directory. To export user mailboxes from Exchange 5.5 into Active Directory, select the *From Exchange to Windows* option.

Click the Connections tab, as Figure 18 shows, to specify the required *Connect* as information. Click the Schedule tab, then select the *Replicate the entire directory the next time the agreement is run* checkbox. Click the From Exchange tab to specify from which Exchange 5.5 containers to export user accounts. Select the default container (or organizational unit—OU) into which the user accounts will be imported within Active Directory. Choose which object types that you want imported (replicated) into Active Directory, such as custom recipients, mailboxes, and DLs.

**Figure 18:**

*Specifying Connection Agreement information from the Connections tab*

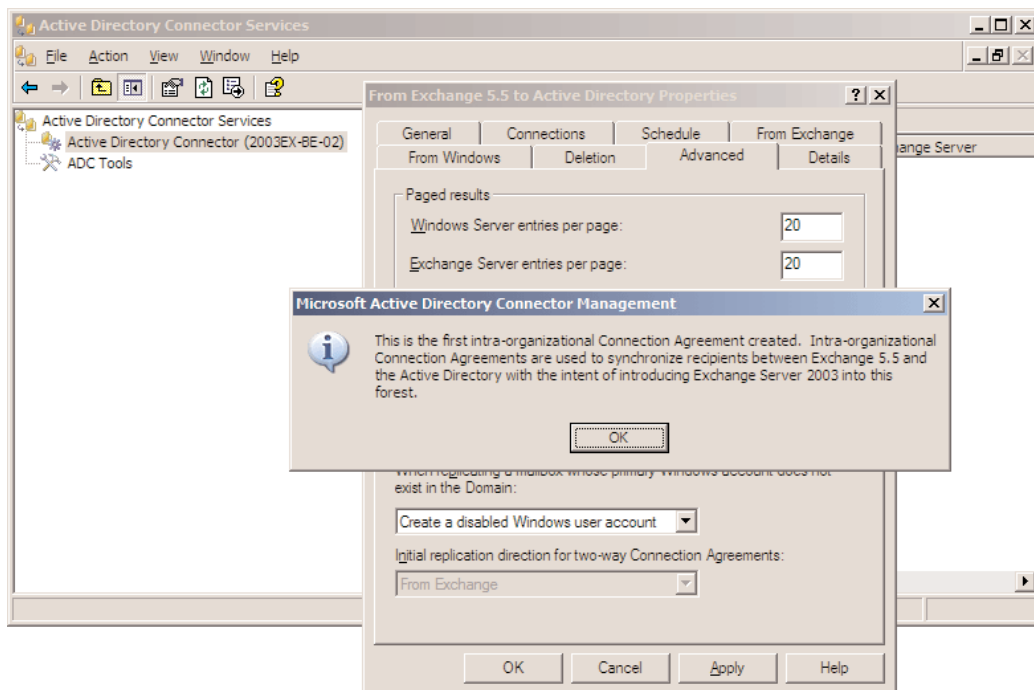


Click the Advanced tab and select the *This is an Inter-Organizational Connection Agreement* checkbox, *only* when you will be creating a *brand new Exchange organization* and not installing Exchange Server 2003 as part of an existing Exchange 5.5 organization. Click OK when you have completed filling in all the required information for the connection agreement. Then you should receive a message box that resembles Figure 19. After a connection agreement has been created, you

can right-click the connection agreement object in the right-hand pane of the ADC Services console and select Replicate Now to manually initiate the synchronization process.

**Figure 19:**

*Receiving a message confirming the first connection agreement's creation*



Instead of using the ADC as we've just outlined, you can use the ADC Tools from the ADC Services console and walk through steps one through four to set up and verify a new connection agreement between Active Directory and Exchange 5.5. Step four of the ADC Tools lets you verify the results of the connection agreement. In the Active Directory Users and Computers console, also be sure to visually verify that the users are replicated from the Exchange Server 5.5 directory.

### ***Phase Three: Installing Exchange Server 2003 on the Initial Server***

The initial step for phase three is to run the SetupPrep utility to ensure that DNS is functioning properly, to check which versions of Exchange are running on other servers (if any), and to validate the conversion of public folder permissions to Active Directory access control lists (ACLs). Review the results at the end of the ExDeploy.log file and in the orgnamecheck.log file stored in the C:\ExDeploy Logs folder and make any necessary changes on the network, on the Exchange 5.5 server, or on the designated Exchange 2003 server.

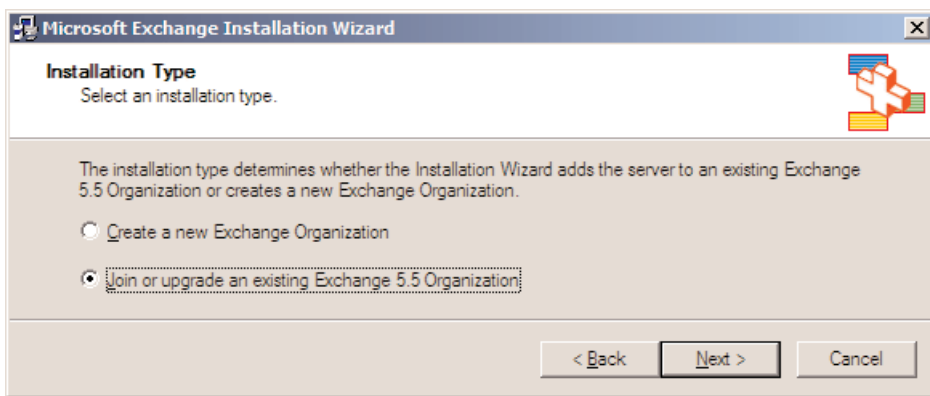
You can perform an IntraOrg migration by installing the first Exchange 2003 server *within the same site* as an existing Exchange 5.5 server. Run the Setup program and select the *Join or upgrade*



an existing Exchange 5.5 Organization option, as Figure 20 shows, and then click Next. Type in the name of the Exchange 5.5 server and complete the balance of the Setup program.

After the installation has been successfully completed, modify the settings on the connection agreements to point to the server running Exchange 2003, if this server is not the same server as the one initially used as the Active Directory DC. The final step is to run the ADConfigCheck, ConfigDSInteg, ReceiptDSInteg, and PrivFoldCheck utilities to validate the Exchange 2003 installation. The user account that runs these tools must be a member of the Domain Admins group in Active Directory and must have permission to at least view objects in the Exchange 5.5 directory.

**Figure 20:**  
*Joining an existing Exchange Server 5.5 Organization*



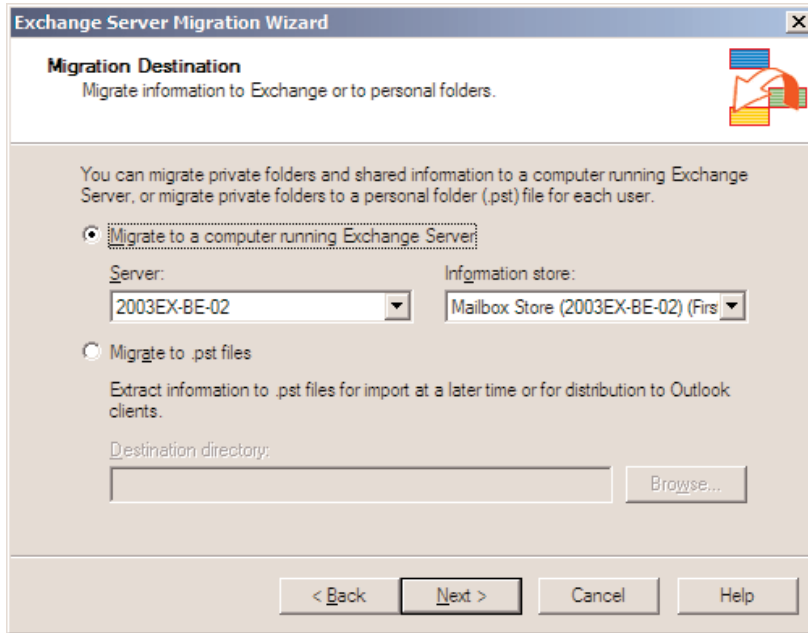
### ***The Easier Road: Exchange Server Migration Wizard***

An easier way to perform a migration from Exchange 5.5 to Exchange 2003 is to simply install Exchange 2003 and use the Migration Wizard. In our recent experience, the updated Exchange 2003 SP1 edition of the Migration Wizard seems to work better than the original version. *Although the Exchange Server 2003 Migration Wizard is not a full-featured migration tool, it can do the basic task of importing user accounts and mailboxes from Exchange 5.5 to Exchange 2003 and Active Directory.*

Before using the Migration Wizard, you should consider using the Active Directory Migration Tool (ADMT) 2.0. You can download the ADMT from the Microsoft Web site at <http://www.microsoft.com/downloads/details.aspx?FamilyID=788975b1-5849-4707-9817-8c9773c25c6c&DisplayLang=en>. After using the ADMT to import user accounts, groups, and other objects from a Windows NT Server 4.0 domain to Active Directory, you can use the Exchange Server 2003 Migration Wizard to transfer the Exchange 5.5 user mailboxes and match them up with the new Active Directory user accounts.

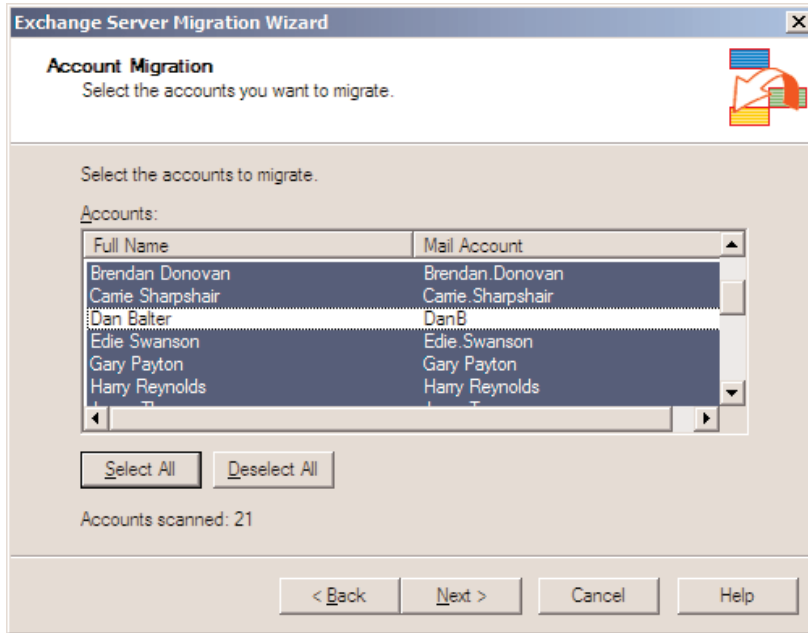
On an Exchange 2003 server, click Start, Programs, Microsoft Exchange, Deployment, and then Migration Wizard to launch this tool. Click Next at the Welcome window, then select the type of migration you want to perform—in this case, choose Migrate from Microsoft Exchange and click Next. Verify that the Lightweight Directory Access Protocol (LDAP) is active, then click Next again. From the Migration Destination dialog box, which Figure 21 shows, choose the Exchange 2003 server and the Information Store that will import the Exchange 5.5 mailboxes and click Next. You can migrate to .pst files instead of first migrating directly to an Information Store, if you want.

**Figure 21:**  
*Using the Migration Wizard to select the migration destination*



On the Source Exchange Server dialog box, verify that the *Exchange 5.5 server* checkbox is selected. Type in the Exchange 5.5 server name, administrator user account name, and password, then click Next again. On the Migration Information dialog box, you can filter the messages that the Migration Wizard will transfer to Exchange 2003. Click Next after specifying any message filter settings. On the Account Migration dialog box, select the user accounts that you want migrated, as Figure 22 shows, and click Next. Specify into which Active Directory container you want to place the migrated user accounts at the Container For New Windows Accounts dialog box. Click the Options button to specify how to generate user passwords, to select a template object for nonpersonal attributes (selecting an existing Active Directory user account to use as a template for the new migrated user accounts), and to create new accounts as InetOrgPerson account types. Click OK to close the Account Options dialog box and click Next to continue.

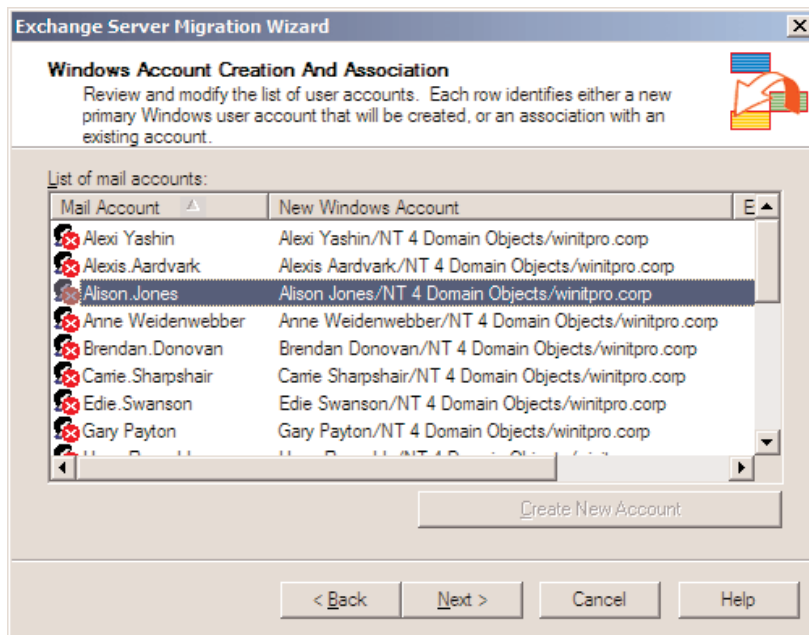
**Figure 22:**  
*Selecting user accounts to migrate to Exchange 2003*



Review the list of user accounts to be migrated from the Exchange 5.5 directory to Active Directory and Exchange 2003, as Figure 23 shows. Right-click an account and select Edit to modify the new Windows account information or right-click an account and select Match to assign the account to an existing Active Directory user account. Click Next to start the migration process and click Finish when it is complete.

**Figure 23:**

*Reviewing Exchange 5.5 user accounts to migrate to Exchange 2003 and Active Directory*



Any errors that occur during the migration process are logged to the Application Log in the Event Viewer. Each new Active Directory user account that is migrated from Exchange 5.5 is disabled by default. You can select individual accounts (some accounts or all accounts), right-click, and choose Enable Account to make the user accounts active. In addition to enabling the migrated user accounts in Active Directory, you also need to clean up the Pre-Windows 2000 Logon Name for each user. The Migration Wizard assigns a random set of letters (using the prefix MIGWIZ\_) as the logon name for each user account. So, a migrated account for a user named Alison Jones would be assigned a random logon name similar to MIGWIZ\_GMBGTWQHFLYKLU—not exactly a *user-friendly* logon name. You will probably want to change these hard-to-remember logon names.

## SP1 for Exchange Server 2003

In May 2004, Microsoft released SP1 for Exchange Server 2003. SP1 is more than just a smattering of bug fixes. SP1 introduces some new product functionality. One big improvement in SP1 is the capability to move users' mailboxes between Exchange Server 5.5 sites and Exchange Server 2003 (or Exchange 2000 Server) administrative groups in a mixed-mode Exchange organization. This new functionality lets you update the home site name for Exchange 5.5 mailboxes when user mailboxes are moved across sites. The following five new or updated components are responsible for providing support for cross-site mailbox moves:

- **The Exchange Server 2003 Deployment Tools (ExDeploy)** package has been updated and enhanced with new instructions for cross-site mailbox migrations under mixed mode Exchange. This guide now offers references to new and improved tools and documentation.
- **The ADC in SP1 has been updated.** This utility now supports synchronization for Exchange 5.5 mailboxes that have been moved to Exchange 2003 servers.
- **The ESM Move Mailbox utility now supports cross-site mailbox moves.**
- **The Object Rehome tool, also called the LegacyDN tool, updates a mailbox's legacy-ExchangeDN property** for DLs and custom recipients. This means that if you move Dan's mailbox homed on an Exchange 5.5 server from site three to site four, any DLs stored in site three with references to Dan's mailbox will no longer be able to route messages to Dan. The Rehome Object utility now has the ability to update those DLs with the new routing information for Dan's mailbox.
- **The Exchange Profile Redirector tool, also called the Exchange Profile Update tool, updates Microsoft Outlook profiles** when mailboxes are moved into a different administrative group. Outlook profiles are updated automatically when mailboxes are moved between servers within the same administrative group. However, the Messaging API (MAPI) referral mechanism does not work when mailboxes are moved across administrative group boundaries. Users need to run this utility just one time on their workstations to update their Outlook profile so that it points to their mailbox on the correct server.

You can download SP1 for Exchange 2003 from the Microsoft Web site at <http://www.microsoft.com/exchange/downloads/2003/sp1.asp>. You can read about and download many utilities from Microsoft for Exchange Server 2003 from the Microsoft Web site at <http://www.microsoft.com/exchange/downloads/2003.asp>. Be sure to read through the release notes found in the `ReleaseNotes.htm` file that you download with SP1. Also, be sure to completely backup *all* of your Exchange 2003 servers *before* and *after* you perform the upgrade to SP1. If your organization's mobile users depend on Exchange ActiveSync for synchronizing data and you are running Exchange 2003 under Windows 2000 Server SP3, you must install Windows 2000 SP4 or later so that Exchange ActiveSync will continue to function properly. You can install SP1 for Exchange 2003 *without* installing SP4 or later for Windows 2000 Server, but Exchange ActiveSync will no longer work.

Finally, Microsoft recommends that you upgrade all front-end servers that are set up within the same load-balanced configuration at roughly the same time. Obviously, you probably can't upgrade all of them at exactly the same time, but you should make a concerted effort to upgrade them within a fairly narrow timeframe to minimize "receive sync key" errors for mobile clients. These errors occur when mobile client requests are redirected from front-end servers running Exchange 2003 SP1 to front-end servers that have *not* been upgraded to SP1 (e.g., servers running the release to manufacturing—RTM—version).

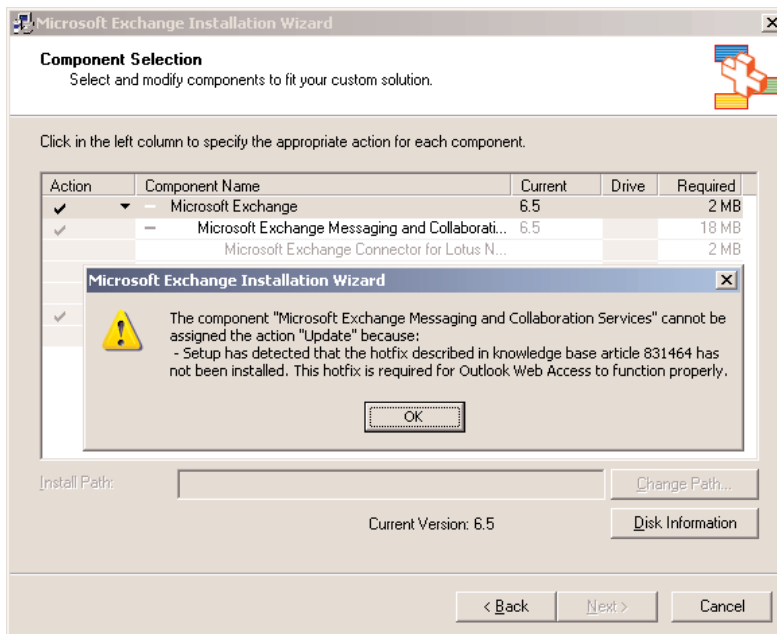
To install SP1, as previously mentioned, completely backup each server that you will upgrade both before and after installing the service pack. After you have downloaded SP1 from the Microsoft Web site, you can run the `E3SP1ENG.exe` (the English language version) program to extract the compressed SP1 files to a local or network location. If you have the SP1 CD-ROM, you can run the `Update.exe` program to launch the setup program directly. After you extract the compressed files from the SP1 download file, navigate to the folder where you placed the SP1 setup files. Open the

E3SPIENG folder created during the extraction process, next open the SETUP folder, then open the I386 folder. Double-click the Update.exe program file to begin the upgrade.

Click Next for the Welcome page, click *I agree* on the License Agreement page, and click Next again. Amazingly, you might see an error message appear at the Component Selection dialog box for the Microsoft Exchange Installation Wizard for SP1, which Figure 24 shows. The Microsoft Knowledge Base article number 831464 at <http://support.microsoft.com/?kbid=831464> states that if you receive this error message during SP1 Setup, you must install a patch (hotfix) to enable GNU zip (Gzip) compression under Windows Server 2003 for the ESM. You can download the patch from the Microsoft Web site at <http://www.microsoft.com/downloads/details.aspx?familyid=0BC9B5BC-A094-49BF-89A5-C8A2D32345A2&displaylang=en>. Install the patch, restart the server, then run the SP1 Setup program again.

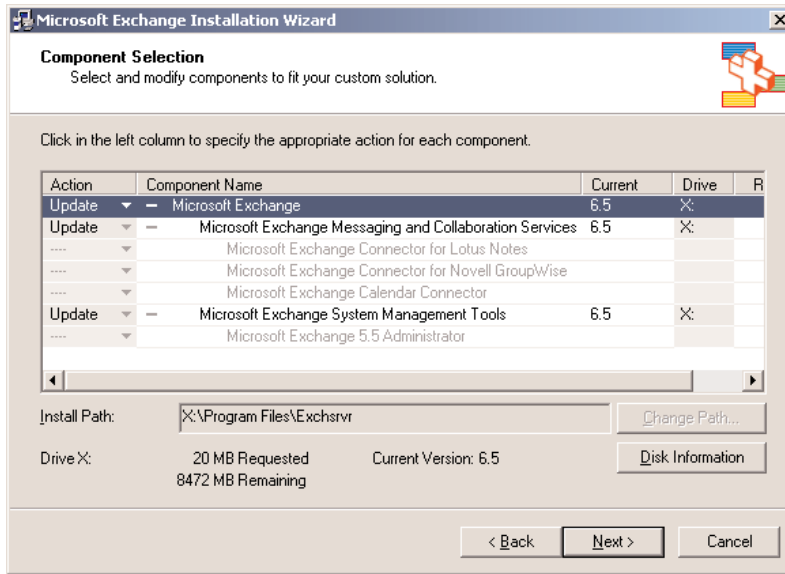
**Figure 24:**

*Receiving a message that you need to install a patch before you can install SP1*



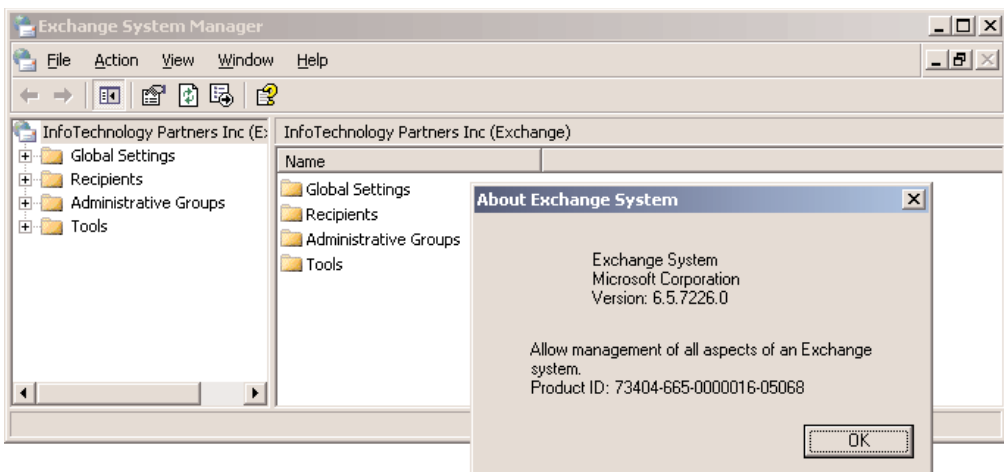
After you have applied the patch to your server, if necessary, the Component Selection dialog box for the SP1 Installation Wizard should look like Figure 25. Click Next to review your installation choices, then click Next again to start the upgrade installation.

**Figure 25:**  
Viewing the Component Selection dialog box for updating Exchange 2003 to SP1



After the SP1 installation has completed, you need to verify that the Exchange 2003 server has been updated to SP1. Open the ESM and click Help, *About Exchange System...* from the menu bar. The version number should be 6.5.7226.0, as Figure 26 shows, when SP1 has been properly installed, instead of the RTM release number: 6.5.6944.0.

**Figure 26:**  
Verifying the ESM SP1 version from the About Exchange System message box



## The Grand Finale

As this chapter describes, you have important preinstallation decisions to make before performing the Exchange Server 2003 installation. Having carefully outlined these considerations, you can move on to the installation and post-installation tasks. Upon successfully completing the installation and upgrading to the latest available service pack, you can then configure Exchange to meet the needs of your organization.

In the next and final chapter of this eBook we will examine how to manage Exchange Server 2003. We will look at administering Exchange, employing Outlook Web Access (OWA), implementing security, and avoiding unsolicited commercial email (UCE). At that point, you'll be ready to migrate to Windows Server 2003 and deploy Exchange Server 2003 with confidence.