

Installation and Migration Guide

Novell® GroupWise® Migration Utility for Microsoft* Exchange

7

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About This Guide

This Novell® *GroupWise® 7 Migration Utility for Microsoft Exchange Installation and Migration Guide* explains how to install and run the GroupWise Migration Utility for Microsoft Exchange. The guide is divided into the following sections:

- Chapter 1, “What Is the GroupWise Exchange Migration Utility?,” on page 9
- Chapter 2, “Exchange Migration Utility System Requirements,” on page 11
- Chapter 3, “Planning Your Migration from Exchange to GroupWise,” on page 13
- Chapter 4, “Preparing Your E-Mail Systems for Migration,” on page 31
- Chapter 5, “Installing the Exchange Migration Utility,” on page 41
- Chapter 6, “Migrating Your Exchange System to GroupWise 7,” on page 43
- Chapter 7, “Performing Post-Migration Tasks,” on page 51

- Appendix A, “eDirectory Attributes Populated from Exchange,” on page 55
- Appendix C, “Migration Utility Error Messages,” on page 59
- Appendix D, “Documentation Updates,” on page 63

Audience

This guide is intended for network administrators who want to move from Microsoft Exchange to GroupWise.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comment feature at the bottom of each page of the online documentation, or go to www.novell.com/documentation/feedback.html and enter your comments there.

Documentation Updates

For the most recent version of the *GroupWise 7 Migration Utility for Microsoft Exchange Installation and Migration Guide*, visit the [GroupWise Utilities Documentation Web site \(http://www.novell.com/documentation/gwutilities\)](http://www.novell.com/documentation/gwutilities).

Additional Documentation

For information about the GroupWise Gateway for Microsoft Exchange, see the [GroupWise Utilities Documentation Web site \(http://www.novell.com/documentation/gwutilities\)](http://www.novell.com/documentation/gwutilities).

For additional GroupWise documentation, see the following guides at the [GroupWise 7 Documentation Web site \(http://www.novell.com/documentation/gw7\)](http://www.novell.com/documentation/gw7):

- ◆ *Installation Guide*
- ◆ *Administration Guide*
- ◆ *Multi-System Administration Guide*
- ◆ *Interoperability Guide*

- ♦ *Troubleshooting Guides*
- ♦ *GroupWise Client User Guides*
- ♦ *GroupWise Client Frequently Asked Questions (FAQ)*

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In Novell documentation, a greater-than symbol (>) is used to separate actions within a step and items in a cross-reference path.

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When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux*, should use forward slashes as required by your software.

When a startup switch can be written with a forward slash for some platforms or a double hyphen for other platforms, the startup switch is presented with a forward slash. Users of platforms that require a double hyphen, such as Linux, should use double hyphens as required by your software.

What Is the GroupWise Exchange Migration Utility?

1

The GroupWise® Migration Utility for Microsoft Exchange transfers data from an Exchange system into a GroupWise system. The data transfer is performed one Exchange server at a time. You can transfer all the data from the Exchange server in a single migration session, or you can select subsets of data to transfer in multiple migration sessions.

The Migration Utility migrates Exchange users and their mailboxes, along with distribution lists/groups and public folders.

- ♦ [Section 1.1, “Users and Their Mailboxes,” on page 9](#)
- ♦ [Section 1.2, “Distribution Lists/Groups,” on page 10](#)
- ♦ [Section 1.3, “Public Folders,” on page 10](#)

1.1 Users and Their Mailboxes

When Exchange users’ mailboxes are migrated, the following user items are always migrated:

- ♦ Mailbox items (mail messages, notes, appointments, meeting requests, task requests)
- ♦ Calendars
- ♦ Contacts
- ♦ System Address Book
- ♦ Tasks
- ♦ Personal folders

The following items are not migrated by default, but you can configure the Migration Utility to migrate them:

- ♦ Deleted items
- ♦ Sent items
- ♦ Journal items
- ♦ Draft items

The following items are not migrated and must be re-created in GroupWise:

- ♦ Personal address books (.pab files)
- ♦ Nickname (auto-completion) cache (.nk2 files)
- ♦ Rules
- ♦ Junk e-mail lists
- ♦ Search folders
- ♦ In general, any data stored on users’ workstations is not migrated.

The Migration Utility can notify Exchange users that their mailboxes have been migrated and can send them their GroupWise usernames and passwords. After the migration, users are responsible for importing their personal Outlook PST files into GroupWise by using the GroupWise Import Utility for Microsoft Outlook. The *Import Utility Quick Start* (http://www.novell.com/documentation/gwutilities/pdfdoc/gw7_exchimp/gw7_exchimp.pdf) makes this an easy process.

1.2 Distribution Lists/Groups

Distribution lists/groups are essentially the same in both e-mail systems, so migrating distribution lists/groups is a straightforward process. Nested distribution lists/groups are migrated to GroupWise with the same nested structure that they had in Exchange.

1.3 Public Folders

GroupWise does not include a feature like Exchange public folders. Therefore, public folders are migrated into standard GroupWise folders in the mailboxes of GroupWise resources and all users have proxy access to the contents of the folders. The Migration Utility takes care of creating the Resource objects and then lets you assign resource owners to manage the folders.

You can group the folders all together or you can distribute them throughout your GroupWise system.

Exchange Migration Utility System Requirements

2

You, as an e-mail system administrator, must ensure that your Exchange system and your GroupWise® 7 system meet the requirements listed below, so that the migration can take place successfully. After you have migrated to GroupWise 7, you must ensure that users' workstations meet GroupWise 7 client requirements, so that users can run the GroupWise Windows client and the GroupWise Import Utility for Microsoft Outlook successfully.

- ♦ [Section 2.1, “Exchange System Requirements,” on page 11](#)
- ♦ [Section 2.2, “GroupWise System Requirements,” on page 11](#)
- ♦ [Section 2.3, “Exchange Migration Utility Workstation Requirements,” on page 12](#)

2.1 Exchange System Requirements

- Microsoft Exchange 5.5/2000/2003
- Outlook* XP/2000/2002/2003, plus the latest Service Pack, installed on users' workstations for use with the GroupWise Import Utility for Microsoft Outlook, which requires Windows Messaging

2.2 GroupWise System Requirements

- GroupWise 7 system (specifically, the domains and post offices to which Exchange users will be migrated) on one of the following operating systems:
 - ♦ Novell® Open Enterprise Server (NetWare® or Linux version), plus the latest Support Pack
 - ♦ NetWare 5.1 or 6.x, plus the latest Support Pack
 - ♦ SUSE® Linux Enterprise Server 9 or SUSE Linux Enterprise Server 10, plus the latest Support Pack
 - ♦ Windows* Server 2000, Windows Server 2003, or Windows Server 2003 R2, plus the latest Service Pack
- Latest GroupWise 7 Support Pack Post Office Agent installed for post offices to which Exchange users will be migrated
- GroupWise 7 Windows client, plus the latest Support Pack, installed on users' workstations
- For complete GroupWise 7 system requirements, see “[GroupWise System Requirements](#)” in the *GroupWise 7 Installation Guide*

NOTE: After you have finished migrating Exchange users to all GroupWise 7 post offices in a GroupWise 7 domain, and after users have imported their Outlook PST files, you can then update that domain and its post offices to GroupWise 8, as described in “[Update](#)” in the *GroupWise 8 Installation Guide*. Migrated users can then use the GroupWise 8 clients to access their mailboxes.

The GroupWise Connector for Microsoft Outlook is not currently available for GroupWise 8, as explained in the [GroupWise 8 Readme \(http://www.novell.com/documentation/gw8/gw8_readmeen/data/gw8_readmeen.html#b8n5h57\)](http://www.novell.com/documentation/gw8/gw8_readmeen/data/gw8_readmeen.html#b8n5h57). If you use the GroupWise 7 version of the Outlook Connector to access a GroupWise 8 mailbox, you might encounter benign peculiarities with multiple contacts folders, but otherwise, the GroupWise 7 version of the Outlook Connects can be used to access a GroupWise 8 mailbox.

2.3 Exchange Migration Utility Workstation Requirements

- Windows XP, plus the latest Service Pack
- Outlook XP/2000/2002/2003, plus the latest Service Pack
- Collaboration Data Objects Component installed with Outlook
- Novell Client™ 4.90, plus the latest Support Pack 2

Planning Your Migration from Exchange to GroupWise

3

Your migration from Microsoft Exchange to Novell® GroupWise® 7 can go more smoothly if you invest time in planning. Several aspects of your system must be considered as you plan your migration from Exchange to GroupWise:

- ♦ [Section 3.1, “Planning the Migration of Your Exchange System,” on page 13](#)
- ♦ [Section 3.2, “Planning to Run the Migration Utility for Each Exchange Server,” on page 21](#)
- ♦ [Section 3.3, “Exchange Migration Worksheets,” on page 26](#)

Print the [Exchange System Migration Worksheet](#) and the [Exchange Server Worksheet](#) to help you gather the information you need as you perform the migration. Use the [Exchange Migration Quick Checklist](#) to track migration progress.

3.1 Planning the Migration of Your Exchange System

When preparing for a migration, do your top-level planning first. It is important to understand clearly how large your Exchange system is, how much data is being migrated, and how you want to organize that data in the resulting GroupWise system. You can gather this information on the [Exchange System Migration Worksheet](#).

- ♦ [Section 3.1.1, “Assessing Migration Scope,” on page 13](#)
- ♦ [Section 3.1.2, “Gathering Information about Your Exchange System,” on page 17](#)
- ♦ [Section 3.1.3, “Planning Your GroupWise System,” on page 18](#)
- ♦ [Section 3.1.4, “Planning eDirectory Object Organization,” on page 20](#)
- ♦ [Section 3.1.5, “Estimating Migration Time Requirements,” on page 21](#)

3.1.1 Assessing Migration Scope

When assessing migration scope, you consider how complex the migration is and how much data needs to be migrated.

- ♦ [“Migration Scenarios” on page 13](#)
- ♦ [“Migration Process” on page 16](#)
- ♦ [“Migration Utility Usage” on page 16](#)

Migration Scenarios

These migration scenarios summarize your migration options:

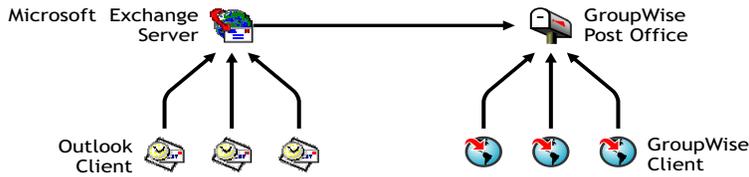
- ♦ [“One Exchange Server to One GroupWise Post Office” on page 14](#)
- ♦ [“One Exchange Server to Multiple GroupWise Post Offices” on page 14](#)

- ♦ “Multiple Exchange Servers to One GroupWise Post Office” on page 14
- ♦ “Multiple Exchange Servers to Multiple GroupWise Post Offices” on page 15

One Exchange Server to One GroupWise Post Office

If your Exchange system is small, you can perform the migration as a single-stage process.

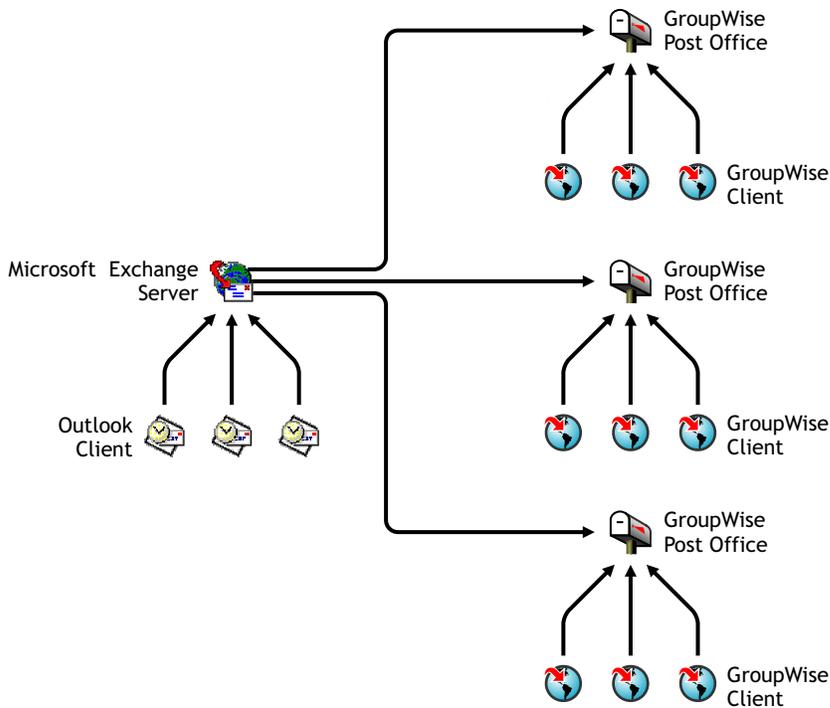
Figure 3-1 *Small System Migration*



One Exchange Server to Multiple GroupWise Post Offices

If the Exchange server has a larger number of users, you might want to migrate the users into multiple GroupWise post offices.

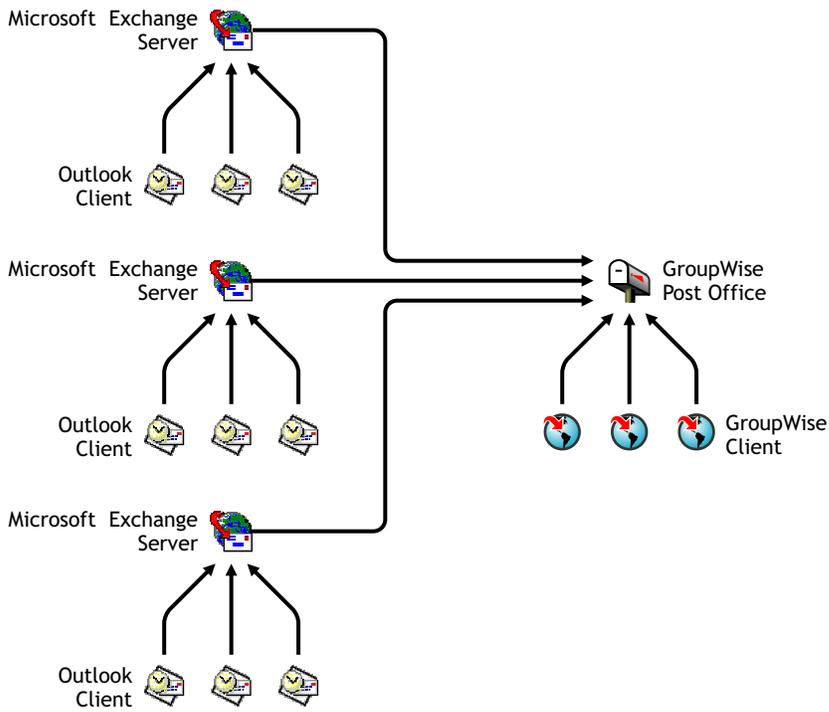
Figure 3-2 *One Exchange Server to Multiple Post Offices*



Multiple Exchange Servers to One GroupWise Post Office

If you are engaged in server consolidation, you can migrate users from multiple Exchange servers into one GroupWise post office.

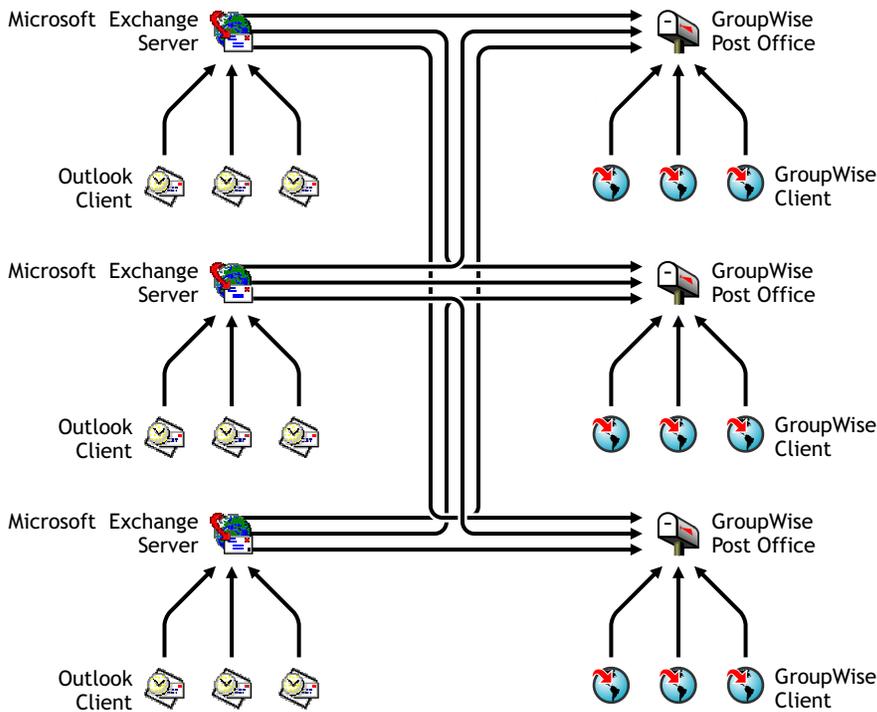
Figure 3-3 Multiple Exchange Servers to One GroupWise Post Office



Multiple Exchange Servers to Multiple GroupWise Post Offices

If you want to reorganize your users, you can migrate users from multiple Exchange servers to multiple GroupWise post offices.

Figure 3-4 Large System Migration



Migration Process

If you are migrating a small to moderate Exchange system, you can complete the migration in a single-stage process, perhaps over a weekend. However, if you are migrating a large Exchange system, especially one with multiple remote sites, you cannot complete the migration over a weekend. Instead, you must migrate parts of the system over a period of time in a multi-stage process.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under **Item 1: Migration Scope**, mark whether you need a single-stage process or a multi-stage process to complete the migration.

If you need a multi-stage migration, the Migration Utility can set up message forwarding so that users in the GroupWise and Exchange systems can send messages to each other throughout the migration process. For a single-stage migration, message forwarding is not needed. Setting up message forwarding is described in [“Message Forwarding” on page 19](#) and [Section 4.2.4, “Setting Up Message Forwarding,” on page 38](#).

Migration Utility Usage

Again, depending on the size of your Exchange system, you might be able to run the Migration Utility on a single workstation, or you might need to run the Migration Utility concurrently on multiple workstations.

If your Exchange system is small, consisting perhaps of a single Exchange server, you can run the Migration Utility on a single workstation. But if your Exchange system is large, consisting of dozens of Exchange servers, running the Migration Utility on multiple workstations gets the job done much

more quickly. You should plan to use the fastest workstations available in your environment. If possible, plan to locate the workstations close to the Exchange server being migrated and use the fastest network connection available. Do not install the Migration Utility on Exchange servers.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under **Item 2: Migration Utility Usage**, mark whether you need one Migration Utility workstation or multiple workstations to complete the migration. Note the number of workstations you can dedicate to the migration process.

3.1.2 Gathering Information about Your Exchange System

- ♦ “Exchange Version” on page 17
- ♦ “Exchange System Information” on page 17

Exchange Version

The Exchange Migration Utility can migrate from Exchange 5.5, 2000, and 2003. Some setup steps are different if you are using Exchange 5.5.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under **Item 3: Exchange Version**, mark the version of Exchange you are migrating from.

Exchange System Information

You migrate users from one Exchange server at a time. You should compile a list of all Exchange servers in your system. To help you plan your GroupWise system, you might want to list the Exchange users, distribution lists/groups, and public folders that reside on each Exchange server.

To gather the information on an Exchange 5.5 server:

- 1 In Exchange Administrator, click *Global Address List* to list all users and distribution lists/groups on the server.
- 2 Expand *Folders*, then click *Public Folders* to list all public folders on the server.
- 3 If you want to save the lists, click *Tools > Directory Export* when the list is displayed.
This produces a CSV (comma-separated value) file that can be viewed in a spreadsheet program and printed if desired.

To gather the information on an Exchange 2000/2003 server:

- 1 In Exchange System Manager, expand *Recipients > All Global Address Lists*, then click *Default Global Address List* to list all users and distribution lists/groups on the server.
- 2 Expand *Administrative Groups > First Administrative Group > Servers > server_name > First Storage Group > Public Folder Store*, then click *Public Folders* to list all public folders on the server.
- 3 If you want to save the lists, right-click the container object, then click *Export List*.
This produces a CSV (comma-separated value) file that can be viewed in a spreadsheet program and printed if desired.

The Migration Utility also provides helpful lists of users, distribution lists/groups, and public folders when you run it for each Exchange server.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under **Item 4: Exchange System Information**, list all the servers in your Exchange system and note any comments about the contents of each server.

3.1.3 Planning Your GroupWise System

- ♦ “GroupWise System Information” on page 18
- ♦ “Message Forwarding” on page 19
- ♦ “Client Software Distribution” on page 19

GroupWise System Information

Typically, you create a new GroupWise system for the migrated Exchange users, but it is possible that some people in your organization are already using GroupWise. If this is the case, you would add the migrated Exchange users to an existing GroupWise system.

NOTE: The instructions in this guide are written for those who are creating a new GroupWise system. Those with an existing GroupWise system can easily adapt the instructions to their circumstances.

Users are migrated from Exchange servers into GroupWise post offices. The maximum size for a GroupWise post office can range from 1000 to 2500 users, taking into account the following considerations:

- ♦ Minimizing the impact if you have a problem with a server.
- ♦ Avoiding excessive time requirements for performing post office and mailbox maintenance activities including backups.
- ♦ Allowing room to grow while maintaining best performance.

For more information about planning the size and composition of your GroupWise post offices, see “[Understanding the Purpose of Post Offices](#)” and “[Planning a New Post Office](#)” in “[Post Offices](#)” in the *GroupWise 7 Administration Guide*. See also the *GroupWise 6.5 Best Practices Guide* (http://www.novell.com/coolsolutions/gwmag/features/a_gw65_best_practices_guide_gw.html).

GroupWise 6.5 best practices can be applied to GroupWise 7. Each post office should have a unique name.

Taking into account the information you gathered when you surveyed your Exchange servers for number of users, distribution lists/groups, and public folders, consider how many post offices you need in your GroupWise system. Consider whether you want distribution lists/groups and public folders to be consolidated or distributed throughout your GroupWise system. Consider whether you need to migrate all of your public folders; some of the information might be obsolete.

Sometimes, one Exchange server conveniently migrates to one GroupWise post office, but you might want to migrate multiple Exchange servers into one GroupWise post office or to migrate one Exchange server into multiple post offices.

In GroupWise, post offices are organized within domains. For information about planning the domains for the new post offices, see “[Understanding the Purpose of Domains](#)” and “[Planning a New Domain](#)” in “[Domains](#)” in the *GroupWise 7 Administration Guide*. Each domain should have a unique name.

Typically, one domain or post office is placed on a server. Plan your hardware requirements for your GroupWise system accordingly. Consider the directory structure you want to use for post office directories and domain directories.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under [Item 6: GroupWise System Information](#), list the post offices, domains, servers, and directories needed for your GroupWise system.

Message Forwarding

If you are performing a single-stage migration, you do not need message forwarding for your GroupWise and Exchange systems. If you are performing a multi-stage migration, the Migration Utility can set up message forwarding between the two systems so that users can continue to send and receive messages while other users are being migrated.

Temporary Internet domain names are used internally throughout the migration process. For example, if your corporate Internet domain name is Example.com, you could use GW.Example.com for your GroupWise system and Exch.Example.com for your Exchange system.

You must configure your DNS to recognize the Internet domain names you choose before you run the Migration Utility in order for the utility to be able to set up message forwarding for the Exchange server you are migrating.

The Migration Utility also creates a GroupWise external domain named Exchange_ExtDomain. This external domain represents the Exchange system and the Migration Utility creates External User objects in it for all Exchange users that have not yet been migrated to GroupWise. This enables Exchange users to appear in the GroupWise Address Book as if they are part of the GroupWise system.

EXCHANGE SERVER WORKSHEET

Under [Item 4: Message Forwarding](#), specify the temporary Internet domain names that you want to use for your GroupWise system and your Exchange system. Set up the temporary names in DNS.

Client Software Distribution

You can distribute the GroupWise Windows client to users on a CD or you can automate the process using GroupWise AutoUpdate, GroupWise SetupIP, or ZENworks[®] Desktop Management. For information about these distribution alternatives, see “[Distributing the GroupWise Client](#)” in “[Client](#)” in the *GroupWise 7 Administration Guide*.

IMPORTANT: Make sure all client workstations meet the requirements listed in “[GroupWise Client Requirements](#)” in the *GroupWise 7 Installation Guide*.

The Windows client is required in order for users to use the GroupWise Import Utility for Microsoft Outlook to import their personal PST files into their GroupWise mailboxes. After this task has been accomplished, they can use the WebAccess Client, the Cross-Platform client, or a POP or IMAP e-mail client to access their GroupWise mailbox. They can even continue to use Outlook, along with the GroupWise Connector for Microsoft Outlook.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under **Item 9: Client Software Distribution**, mark how you want to distribute the GroupWise Windows client to users.

The Migration Utility can send out a notification message to Exchange users informing them of their GroupWise usernames and passwords. The GroupWise software should be installed in a timely manner so that users can access their GroupWise mailboxes when they receive the notification message in their Exchange mailboxes.

3.1.4 Planning eDirectory Object Organization

- ◆ “eDirectory Tree Name” on page 20
- ◆ “Post Office and Domain Contexts” on page 20
- ◆ “User and Distribution List Contexts” on page 21

IMPORTANT: It is not necessary to prepopulate eDirectory with User objects for the Exchange users who are being migrated. The Migration Utility takes care of creating the necessary User objects.

eDirectory Tree Name

GroupWise stores its configuration information in eDirectory™ objects. Therefore, you must create a new eDirectory tree or prepare an existing eDirectory tree to accommodate your planned GroupWise system. Make sure you have an eDirectory username and password with sufficient rights to create objects.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under **Item 10: eDirectory Tree Name**, specify the name of the eDirectory tree where you want to create the post offices for the migrated Exchange users. Also specify a username and password that can be used to access the tree.

Post Office and Domain Contexts

There are many ways to organize the containers where Post Office objects and Domain objects are placed. For some examples, see “Domain Context” in “Installing a Basic GroupWise System” in the *GroupWise 7 Installation Guide*.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under **Item 7: Post Office and Domain Contexts**, list the contexts where you plan to create Post Office objects and Domain objects.

User and Distribution List Contexts

User objects and Distribution List objects are typically created in different containers from where Post Office objects and Domain objects are created. User objects and Distribution List objects are created in GroupWise with the same names they had in Exchange.

Although it is possible to create multiple eDirectory objects with the same name, as long as they are in different contexts, you should plan for all GroupWise User objects and Distribution List objects to have unique names because ongoing administration is simplified. This might require renaming some Exchange user accounts and distribution lists/groups before the migration.

EXCHANGE SYSTEM MIGRATION WORKSHEET

Under [Item 12: User and Distribution List Contexts](#), list the contexts where you plan to create User objects and Distribution List objects.

3.1.5 Estimating Migration Time Requirements

The migration process can require a substantial amount of time. The following factors influence the amount of time it takes:

- ◆ Number of mailboxes
- ◆ Size of the mailboxes
- ◆ Content of the mailboxes (Large numbers of recurring appointments are especially high in overhead.)
- ◆ How the migration options are set, as described in [“Selecting Migration Options” on page 23](#)
- ◆ Performance of the network connections between the Exchange servers and the Migration Utility workstations
- ◆ CPU speed and memory on the Migration Utility workstations

The larger the amount of e-mail, the more workstations you should concurrently run the Migration Utility on, in order to speed up the process. The only accurate way to determine how long the migration process will take is to do a trial run on a small number of mailboxes and estimate based on the results. In general, you can expect to see approximately 750 MB of throughput from the utility. If you see substantially less than this, you should examine your network configuration for bottlenecks.

3.2 Planning to Run the Migration Utility for Each Exchange Server

The Migration Utility migrates data from one Exchange server at a time, in one or more migration sessions. The utility can migrate data to one or more post offices during each migration session. The utility prompts you for many kinds of information during the migration process. You can gather this information on the [Exchange Server Worksheet](#). Fill out one worksheet for each Exchange server, or if you plan to run more than one migration session for a server, fill out one worksheet for each migration session.

- ◆ [Section 3.2.1, “Obtaining Exchange Login Credentials,” on page 22](#)
- ◆ [Section 3.2.2, “Creating the Exchange Data File,” on page 22](#)
- ◆ [Section 3.2.3, “Locating a GroupWise Domain Directory,” on page 23](#)

- ◆ [Section 3.2.4, “Planning Post Office Contents,” on page 23](#)
- ◆ [Section 3.2.5, “Selecting Migration Options,” on page 23](#)
- ◆ [Section 3.2.6, “Selecting a User ID Conversion Rule,” on page 24](#)
- ◆ [Section 3.2.7, “Planning Public Folder Conversion and Ownership,” on page 24](#)
- ◆ [Section 3.2.8, “Planning eDirectory Contexts for GroupWise Objects,” on page 25](#)
- ◆ [Section 3.2.9, “Selecting Users to Migrate,” on page 25](#)
- ◆ [Section 3.2.10, “Selecting Public Folders to Migrate,” on page 25](#)
- ◆ [Section 3.2.11, “Notifying Migrated Users,” on page 25](#)

3.2.1 Obtaining Exchange Login Credentials

The Migration Utility needs to run with administrator rights so that it can access all mailboxes on each Exchange server. The workstation where you run the Migration Utility must have a username and password identical to a username and password on each Exchange server. The most straightforward way to provide the proper access is to not use the default `administrator` users, but to create corresponding pairs of administrator users for the Migration Utility workstation and each Exchange server.

For example, on the first Exchange server that you plan to migrate, you might create an account and mailbox named `administrator1` and a corresponding `administrator1` account on the Migration Utility workstation. On the second Exchange server, you might create an account and mailbox named `administrator2` and a corresponding `administrator2` account on the Migration Utility workstation. Each Exchange server needs a unique administrator account and mailbox so that the Exchange Utility can access each Exchange server with the necessary rights.

EXCHANGE SERVER WORKSHEET

Under [Item 1: Exchange Login Credentials](#), record the network address of the Exchange server and a unique administrator username and password that the Migration Utility can use to log in to the server in order to access mailboxes on that server.

3.2.2 Creating the Exchange Data File

In order to list the Exchange users, distribution lists/groups, and public folders on the Exchange server, the Migration Utility generates a CSV (comma-separated value) file containing that information. If you plan multiple migration sessions for a server, the utility keeps track of what you have already migrated so that the lists it displays accurately reflect what still needs to be migrated.

By default, the file is named `exmigdata.csv` and is created in the directory where the Migration Utility software is installed. You can change the name and location as needed.

EXCHANGE SERVER WORKSHEET

Under [Item 2: Exchange Data File](#), specify the full path and filename for the CSV file if you do not want to use the default.

During the first migration session for an Exchange server, the CSV file contains a complete list of users, distribution lists/groups, and public folders. For a server with a large quantity of data to migrate, you can manually edit the CSV file and divide the data up into multiple smaller CSV files. These subset CSV files can be used on other workstations to simultaneously run multiple migration sessions for the Exchange server.

3.2.3 Locating a GroupWise Domain Directory

A GroupWise domain database (**wpdomain.db**) provides all the information the Migration Utility needs about your GroupWise system. Specifically, it enables the Migration Utility to list all of the post offices in your GroupWise system. The information can be obtained from any domain database. Make sure you know a network username and password with sufficient rights to map a drive and access a domain directory.

IMPORTANT: For best performance during each migration session, you should map to the domain that owns all of the post offices that you are planning to migrate Exchange data to. If post offices are owned by multiple domains, updates must replicate between domains, which significantly slows the migration process.

EXCHANGE SERVER WORKSHEET

Under **Item 3: GroupWise Domain Directory**, list a domain directory where the Migration Utility can access a domain database. Also provide a username and password for mapping a drive to the server where the domain directory is located.

3.2.4 Planning Post Office Contents

All the Exchange users, distribution lists/groups, and public folders on the Exchange server must be assigned to one or more GroupWise post offices. Taking into account the information you gathered when you surveyed your Exchange servers for number of users, distribution lists/groups, and public folders, consider where you want to migrate the Exchange data from this server. Make a plan that includes all the data from the server, even if you are planning multiple migration sessions for this server.

EXCHANGE SERVER WORKSHEET

Under **Item 6: Post Office Planning**, list what post office you want each Exchange user, distribution list/group, and public folder to be migrated to.

3.2.5 Selecting Migration Options

The Migration Utility provides options for whether or not certain types of mailbox items are migrated. By default, deleted items, sent items, journal items, and draft items are not migrated.

If you migrate journal items, they are placed in a folder in the GroupWise mailbox. GroupWise does not have the equivalent of the Journal feature, so the items are for reference only and no more journal items can be created. If you migrate draft items, they are placed in the GroupWise Work in Progress folder. You can also restrict migrated items by age.

EXCHANGE SERVER WORKSHEET

Under **Item 9: Migration Options**, mark the migration options you want to use to customize the items that are migrated.

3.2.6 Selecting a User ID Conversion Rule

Exchange user IDs can include periods (.) but GroupWise user IDs cannot. If you have Exchange user IDs that contain periods, they must be renamed before they can be migrated to GroupWise. There are three alternative formats offered by the Migration Utility:

- ♦ **Replace periods with spaces ():** If you choose this option, Sophie.Jones becomes Sophie Jones.
- ♦ **Replace periods with underscores (_):** If you choose this option, Sophie.Jones would become Sophie_Jones.
- ♦ **Replace periods with hyphens (-):** If you choose this format, Sophie.Jones would become Sophie-Jones.

If desired, you can manually rename the Exchange user IDs that contain periods using a convention of your own choice.

Although the Migration Utility must change the user ID to conform to the GroupWise user ID convention, this does not affect the user's e-mail address. Periods in e-mail addresses are permitted. E-mail addresses are retained just as they were in Exchange.

EXCHANGE SERVER WORKSHEET

Under **Item 11: User ID Conversion Rules**, mark the conversion you want to use for user IDs that contain periods.

3.2.7 Planning Public Folder Conversion and Ownership

Exchange public folders are converted into standard GroupWise folders in the mailboxes of GroupWise resources. All users are granted proxy access to the resource mailboxes so that they can access the contents of the folders. Before migrating your Exchange public folders, you should assess their contents. You might not need to migrate all of them.

GroupWise resources that store the folders must be owned by users. You might find it convenient to own the resources yourself or you can choose different owners.

EXCHANGE SERVER WORKSHEET

Under **Item 5: Public Folder Planning**, list the resources you want the Migration Utility to create to own the GroupWise folders. List which public folders you want each resource to own. Specify a user to own each resource. Take into account all public folders on the Exchange server.

3.2.8 Planning eDirectory Contexts for GroupWise Objects

GroupWise users require eDirectory User objects. GroupWise distribution lists require Distribution List objects. GroupWise resources that store folders require Resource objects. Objects exist in eDirectory contexts. You must create the eDirectory contexts before you perform the migration.

In [Section 3.1.4, “Planning eDirectory Object Organization,” on page 20](#), you planned all of the eDirectory contexts that are required for your entire GroupWise system. Now you need to determine the contexts into which you want to migrate the Exchange data from this Exchange server.

EXCHANGE SERVER WORKSHEET

Under [Item 7: eDirectory Context Planning](#), list a context for each user, distribution list, and resource that is being migrated or created during this migration session.

3.2.9 Selecting Users to Migrate

If you are planning more than one migration session for the current Exchange server, decide which users you want to migrate during the current migration session. The Migration Utility provides the number of items in each user’s mailbox, which is indicative of the size of each mailbox, so you can adjust your list as needed while performing the migration.

EXCHANGE SERVER WORKSHEET

Under [Item 8: Users to Migrate](#), list the users you want to migrate in the current migration session.

It is not necessary to prepopulate eDirectory with User objects for the Exchange users who are being migrated. The Migration Utility takes care of creating the necessary User objects.

NOTE: All selected Exchange distribution lists/groups are migrated during the initial migration session for an Exchange server. You do not choose which distribution lists/groups to migrate during each migration session.

3.2.10 Selecting Public Folders to Migrate

If you are planning more than one migration session for the current Exchange server, decide which public folders you want to migrate during the current migration session. The Migration Utility will provide the number of items in each folder, which is indicative of the size of each folder, so you can adjust your list as needed while performing the migration.

EXCHANGE SERVER WORKSHEET

Under [Item 10: Public Folders to Migrate](#), list the public folders you want to migrate in the current migration session.

3.2.11 Notifying Migrated Users

By default, the Migration Utility sends out notification messages to users that have been migrated. The messages are sent to users’ Exchange mailboxes. Each message includes the user’s GroupWise user ID, password, and server address. The default notification message is:

Exchange migration status

Your Exchange account has been successfully migrated to GroupWise. A GroupWise account has been created. Your username is %USERID% and your password is %PASSWORD%. Your GroupWise server address is %SERVER%:%PORT%.

Each user's personal information is inserted into the variables when the notification messages are sent. You can use the default message or compose your own.

By default, copies of the notification messages are sent to the Administrator user in the Exchange system as a record of each user's personal information. This information is also available in the CSV file that the Migration Utility uses during the migration.

EXCHANGE SERVER WORKSHEET

Under **Item 12: E-Mail to Migrated Users**, mark whether you want the Migration Utility to send notification messages to migrated users. If desired, compose your own notification message, being sure to include all the variable information. Also mark whether you want copies sent to the Administrator user of the Exchange system.

3.3 Exchange Migration Worksheets

- ◆ [Section 3.3.1, "Exchange System Migration Worksheet," on page 26](#)
- ◆ [Section 3.3.2, "Exchange Server Worksheet," on page 27](#)
- ◆ [Section 3.3.3, "Exchange Migration Quick Checklist," on page 29](#)

3.3.1 Exchange System Migration Worksheet

Fill out this worksheet to collect information about the migration process for your Exchange system.

Item	Explanation
1) Migration Type: <ul style="list-style-type: none">◆ Single stage◆ Multi-stage	Mark whether you can complete the migration in a single stage or whether the migration will be a multi-stage process that requires message forwarding. See Section 3.1.1, "Assessing Migration Scope," on page 13 .
2) Migration Utility Usage: <ul style="list-style-type: none">◆ Single workstation◆ Multiple workstations	Mark whether you can complete the migration on a single workstation or whether you need multiple workstations with multiple Migration Utility sessions running simultaneously. See Section 3.1.1, "Assessing Migration Scope," on page 13 .
3) Exchange Version: <ul style="list-style-type: none">◆ 5.5◆ 2000/2003	Mark the version of Exchange you are migrating from. See Section 3.1.2, "Gathering Information about Your Exchange System," on page 17 .

Item	Explanation
4) Exchange System Information:	List the servers in your Exchange system and an indication of how much Exchange data resides on each server.
<ul style="list-style-type: none"> ◆ Exchange servers ◆ Number of users ◆ Number of distribution lists/groups ◆ Number of public folders 	See Section 3.1.2, "Gathering Information about Your Exchange System," on page 17.
5) GroupWise System Information:	Record the information about the destination GroupWise system that you plan to create.
<ul style="list-style-type: none"> ◆ Post offices ◆ Domains ◆ Servers ◆ Post office directories ◆ Domain directories 	See Section 3.1.3, "Planning Your GroupWise System," on page 18.
6) eDirectory Tree:	Specify the name of the eDirectory tree where you want to create your GroupWise system. Make sure you have an eDirectory username with sufficient rights to create containers and other objects.
<ul style="list-style-type: none"> ◆ Tree name ◆ Username ◆ Password 	See Section 3.1.4, "Planning eDirectory Object Organization," on page 20.
7) Post Office and Domain Contexts:	Specify the eDirectory contexts where you plan to create Post Office objects and Domain objects.
	Section 3.1.4, "Planning eDirectory Object Organization," on page 20.
8) User and Distribution List Contexts:	Specify the eDirectory contexts where User objects and Distribution List objects will be created.
	See Section 3.1.4, "Planning eDirectory Object Organization," on page 20.
9) Client Software Distribution:	Mark how you want to distribute the GroupWise Windows client software to users.
<ul style="list-style-type: none"> ◆ Client CD ◆ AutoUpdate ◆ SetupIP ◆ ZENworks Desktop Management 	Section 3.1.3, "Planning Your GroupWise System," on page 18.

3.3.2 Exchange Server Worksheet

Fill out this worksheet for each Exchange server, or if you plan to run the Migration Utility more than once for a server, fill it out for each migration session.

Item	Explanation
1) Exchange Login Credentials: <ul style="list-style-type: none"> ◆ Exchange server address ◆ Administrator user ID ◆ Password 	<p>Record the authentication information that the Migration Utility needs in order to access the Exchange server.</p> <p>See Section 3.2.1, "Obtaining Exchange Login Credentials," on page 22.</p>
2) Exchange Data File:	<p>By default, the Migration utility creates <code>exmigdata.csv</code> in the directory where the Migration Utility is installed. Specify a different name as needed.</p> <p>See Section 3.2.2, "Creating the Exchange Data File," on page 22.</p>
3) GroupWise Domain Directory <ul style="list-style-type: none"> ◆ Directory ◆ Login name ◆ Password 	<p>Provide the full pathname of a domain directory, along with a network login name and password so that you can map a drive to it.</p> <p>See Section 3.2.3, "Locating a GroupWise Domain Directory," on page 23.</p>
4) Message Forwarding: <ul style="list-style-type: none"> ◆ Yes No ◆ Exchange Internet domain name ◆ GroupWise Internet domain name 	<p>If you are performing a multi-stage migration, list two temporary Internet domain names that can be used for internal message forwarding.</p> <p>See Section 3.1.3, "Planning Your GroupWise System," on page 18.</p>
5) Public Folder Planning: <ul style="list-style-type: none"> ◆ Exchange public folders ◆ GroupWise resources ◆ Resource owners 	<p>Specify the names of the resources that you want to own the migrated Exchange public folders.</p> <p>See Section 3.1.3, "Planning Your GroupWise System," on page 18.</p>
6) Post Office Planning <ul style="list-style-type: none"> ◆ Users ◆ Distribution lists/groups ◆ Public folders 	<p>Decide which post office you want to migrate each Exchange user, distribution list/group, and public folder to.</p> <p>See Section 3.2.4, "Planning Post Office Contents," on page 23.</p>
7) eDirectory Context Planning <ul style="list-style-type: none"> ◆ Tree ◆ Contexts 	<p>Specify the name of the eDirectory tree where you are creating the GroupWise system. Decide which eDirectory context you want you want each User object, Distribution List object, and Resource object created in.</p> <p>See Section 3.2.8, "Planning eDirectory Contexts for GroupWise Objects," on page 25.</p>
8) Users to Migrate	<p>If you are performing multiple migration sessions for the Exchange server, list the users you want to migrate during the current session.</p> <p>See Section 3.2.9, "Selecting Users to Migrate," on page 25.</p>

Item	Explanation
9) Migration Options	Mark any migration options that you want to select.
<ul style="list-style-type: none"> ◆ Deleted items ◆ Sent Items ◆ Journal ◆ Outlook Drafts into GroupWise Work in Progress ◆ Items older than 	See Section 3.2.5, “Selecting Migration Options,” on page 23.
10) Public Folders to Migrate	If you are performing multiple migration sessions for the Exchange server, list the public folders you want to migrate during the current session.
	See Section 3.2.10, “Selecting Public Folders to Migrate,” on page 25.
11) User ID Conversion Rules	If you have Exchange user IDs that contain periods (.), specify the character you want to replace periods with.
<ul style="list-style-type: none"> ◆ Space ◆ Underscore ◆ Dash 	See Section 3.2.6, “Selecting a User ID Conversion Rule,” on page 24.
12) E-Mail to Migrated Users	Mark whether you want the Migration Utility to send notification messages to migrated users and whether you want copies sent to the Administrator user.
<ul style="list-style-type: none"> ◆ Send e-mail? Yes No ◆ Copy to Administrator? Yes No 	See Section 3.2.11, “Notifying Migrated Users,” on page 25.

3.3.3 Exchange Migration Quick Checklist

Mailboxes

From Exchange Server: _____

To GroupWise Post Offices: _____

- Plan the migration for users on the Exchange server listed above, including creation of eDirectory contexts and GroupWise post offices and domains.
See [Chapter 3, “Planning Your Migration from Exchange to GroupWise,”](#) on page 13
- Make sure that the Outlook Collaboration Data Objects module is installed where you installed the Migration Utility.
See [Section 4.1.1, “Checking for the Outlook Collaboration Data Objects Module,”](#) on page 31
- Set up administrative access to the Exchange server.
See [Section 4.1.2, “Designating a Service Account Administrator on Exchange 5.5,”](#) on page 32 or [Section 4.1.3, “Ensuring Administrative Rights on Exchange 2000/2003,”](#) on page 33.

- ❑ If you are performing a multi-stage migration, enable automatic forwarding on your Exchange system.
See [Section 4.1.4, “Enabling Automatic Forwarding,” on page 33.](#)
- ❑ Set up eDirectory in preparation for creating the GroupWise system into which you will migrate the Exchange users.
See [Section 4.2.1, “Setting Up eDirectory for Your GroupWise System,” on page 36.](#)
- ❑ Create your GroupWise system.
[Section 4.2.2, “Setting Up Your GroupWise System,” on page 36.](#)
- ❑ Before your first migration session, configure GroupWise so that users can successfully reply to and forward messages after they are migrated.
See [Section 4.2.3, “Establishing Internet Connectivity,” on page 37.](#)
- ❑ If you are performing a multi-stage migration, set up automatic forwarding between your GroupWise and Exchange systems.
See [Section 4.2.4, “Setting Up Message Forwarding,” on page 38.](#)
- ❑ Install the Migration Utility on one or more Windows workstations.
See [Chapter 5, “Installing the Exchange Migration Utility,” on page 41.](#)
- ❑ Run the Migration Utility to migrate Exchange data from the Exchange server to the post offices listed above.
See [Chapter 6, “Migrating Your Exchange System to GroupWise 7,” on page 43.](#)
- ❑ Run additional migration sessions as needed to complete the migration.
- ❑ Perform post-migration tasks to configure your new GroupWise system and to decommission your old Exchange system.
See [Chapter 7, “Performing Post-Migration Tasks,” on page 51](#)

Preparing Your E-Mail Systems for Migration

4

Before you run the Exchange Migration utility, you must prepare both e-mail systems for the migration process.

- ♦ Section 4.1, “Preparing Your Exchange System for the Migration,” on page 31
- ♦ Section 4.2, “Preparing Your GroupWise System for the Migration,” on page 35

4.1 Preparing Your Exchange System for the Migration

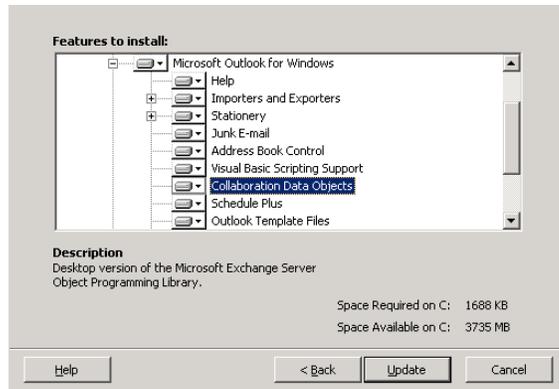
Your Exchange system and each Migration Utility workstation must be properly set up before you start the migration.

- ♦ Section 4.1.1, “Checking for the Outlook Collaboration Data Objects Module,” on page 31
- ♦ Section 4.1.2, “Designating a Service Account Administrator on Exchange 5.5,” on page 32
- ♦ Section 4.1.3, “Ensuring Administrative Rights on Exchange 2000/2003,” on page 33
- ♦ Section 4.1.4, “Enabling Automatic Forwarding,” on page 33
- ♦ Section 4.1.5, “Cleaning Up Mailboxes,” on page 34
- ♦ Section 4.1.6, “Migrating Personal Address Books,” on page 35
- ♦ Section 4.1.7, “Backing Up Your Exchange System,” on page 35

4.1.1 Checking for the Outlook Collaboration Data Objects Module

Some versions of Outlook install the Collaboration Data Objects (CDO) module by default and some do not. The Migration Utility requires that the CDO be installed on each workstation where it runs.

- 1 In the Windows Control Panel, double-click *Add or Remove Programs*.
- 2 Select the *Microsoft Office* entry, then click *Change*.
- 3 Click *Next*, then expand the *Microsoft Outlook for Windows* entry.



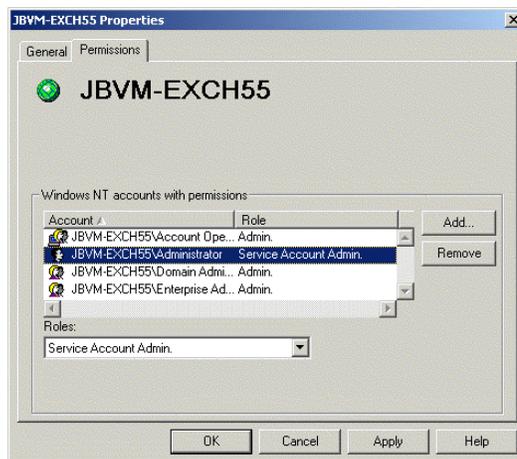
If a red X appears beside the Collaboration Data Objects item in the list, then the CDO has not been installed.

- 4 If you need to install it, select *Run from My Computer* in the drop-down list for *Collaboration Data Objects*, then click *Update* to install the CDO component.
- 5 Repeat **Step 1** through **Step 4** on each Migration Utility workstation.

4.1.2 Designating a Service Account Administrator on Exchange 5.5

The Migration Utility needs full access to your Exchange 5.5 system. Therefore, the user who runs the Migration Utility must be set up as a Service Account Administrator in your Exchange 5.5 system.

- 1 In Exchange Administrator, select an Exchange Domain object, then click *File > Properties*.
- 2 On the *Permissions* tab, select the user account that you plan to log in as when you run the Migration Utility (**server worksheet item 1**).



IMPORTANT: The workstation where you run the Migration Utility must have a username and password identical to the one you select on the *Permissions* tab. Otherwise, you cannot access the Exchange server with the necessary rights.

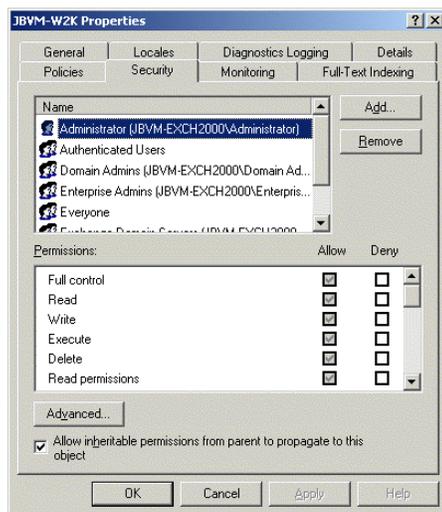
- 3 In the *Roles* field, select *Service Account Administrator*.

- 4 Click *OK* to grant the rights to the selected user.
- 5 Restart the Information Store service.
 - 5a In the Windows Services window, select *Microsoft Exchange Information Store*.
 - 5b Click *Actions > Restart*.
- 6 Repeat **Step 1** through **Step 5** for each Exchange Domain object in your system.

4.1.3 Ensuring Administrative Rights on Exchange 2000/2003

The Exchange Migration Utility needs full access to your Exchange 2000/2003 system. Therefore, the user who runs the Migration Utility must be set up with sufficient rights in your Exchange 2000/2003 system.

- 1 In Exchange System Manager, right-click an Exchange Server object, then click *Properties*.
- 2 On the *Security* tab, select the user account that you plan to log in as when you run the Migration Utility (**server worksheet item 1**).



IMPORTANT: The workstation where you run the Migration Utility must have a username and password identical to the one you select on the *Permissions* tab. Otherwise, you cannot access the Exchange server with the necessary rights.

- 3 Make sure that all the check boxes in the *Allow* column are selected, then click *OK*.
- 4 Repeat **Step 1** through **Step 3** for each Exchange Server object in your system.

4.1.4 Enabling Automatic Forwarding

The Migration Utility configures forwarding rules on mailboxes that remain on Exchange for a period of time during the migration process. These forwarding rules require that automatic forwarding is enabled in the Exchange system.

On Exchange 5.5:

- 1 In Exchange Administrator, expand the Server object, expand *Configuration*, then click *Connections*.

- 2 Double-click *Internet Mail Service*.
- 3 On the Internet Mail tab, click *Advanced Options*.
- 4 Deselect *Disable automatic replies to the Internet*, then click *OK*.
- 5 Repeat **Step 1** through **Step 4** for each Exchange 5.5 server.

On Exchange 2000/2003:

- 1 Expand the Global Settings object, then click *Internet Message Format*.
- 2 Right-click the default Internet message format, then click *Properties*.
- 3 On the Advanced tab, select *Allow automatic forward*, then click *OK*.
- 4 Repeat **Step 1** through **Step 3** for each Exchange 2000/2003 server.

4.1.5 Cleaning Up Mailboxes

Cleaning up Exchange mailboxes streamlines the migration process. It reduces the amount of data to migrate and it ensures that the data to migrate is in a valid format that the Migration Utility can process.

- ♦ “Personal Mailbox Cleanup” on page 34
- ♦ “Administrator Cleanup” on page 34
- ♦ “Information Store Cleanup” on page 34
- ♦ “Private and Public Store Cleanup” on page 35

Personal Mailbox Cleanup

Ask your users to clean up their Exchange mailboxes by deleting and archiving as many messages as possible. The less data there is to migrate, the more quickly the migration is finished.

Administrator Cleanup

As an administrator, delete any unused mailboxes, distribution lists/groups, and public folders.

Information Store Cleanup

To help minimize data corruption during the migration, clean up the information store by running ESEUtil on each server's `priv.edb` and `pub.edb` files. This compresses and defragments the files. Run the utility on one database at a time.

- 1 Perform an information store backup before running any maintenance on Exchange databases.
- 2 Shut down all Exchange agents before running ESEUtil.

In Exchange 5.5, ESEUtil is located in the `Winnt\System32` folder. In Exchange 2000/2003, it is located in the `Exchsrvr/bin` folder.

- 3 From the command prompt in the `c:\exchsrvr\bin` directory (or wherever the Exchange server is installed), run the following commands:

```
eseutil /d path_to_.edb_files
eseutil /d /exchsrvr/mdbdata/priv.edb
```

- 4 To verify that `priv` and `pub` information stores are not corrupt, run ESEUtil with the `/r` switch:

```
eseutil /r /exchsrvr/mdbdata/priv.edb
```

- 5 Start all Exchange services and verify that the Exchange system is running smoothly.
- 6 When you are satisfied that system is up and running without problems, perform another information store backup.
- 7 Repeat **Step 1** through **Step 6** for each Exchange server in your system.

Private and Public Store Cleanup

As an administrator, you should also run ISInteg against the databases on Private and Public Stores. ISInteg makes sure Exchange messages are consistent and fixes the integrity of the information store. Run this utility repeatedly until no errors are found.

- 1 Start the Information Store Service and dismount the databases.
You can check only databases that are offline.
- 2 Stop the Information Store Service.
This also stops the Exchange Events Service.
- 3 At an Exchange 5.5 server, run the following command to fix problems with information stores:

```
c:\exchsrvr\bin\isinteg -pri -dump -fix -test alltests
```

or

At an Exchange 2000/2003 server, run the following command:

```
c:\program files\exchsrvr\bin\isinteg -s ServerName -fix -test  
alltests
```

For additional ISInteg options, run `isinteg.exe /?` at the command prompt. See [Microsoft Technical document Q301460 \(http://support.microsoft.com/kb/301460\)](http://support.microsoft.com/kb/301460).

Additional information about using ISInteg can be found in the `Isinteg.doc` file located on the Exchange Server CD in the `/server/support/utils` folder.

- 4 Repeat **Step 1** through **Step 3** for each Exchange server in your system.

4.1.6 Migrating Personal Address Books

The Migration Utility does not migrate Personal Address Books (.pab files). Users should transfer the contents of Personal Address Books into the Contacts folder or their Outlook mailboxes so that the information can be migrated.

4.1.7 Backing Up Your Exchange System

Before starting the migration, make a complete backup of your Exchange system.

4.2 Preparing Your GroupWise System for the Migration

Your GroupWise system must be set up and prepared to receive incoming Exchange data.

- ♦ [Section 4.2.1, “Setting Up eDirectory for Your GroupWise System,” on page 36](#)

- ◆ Section 4.2.2, “Setting Up Your GroupWise System,” on page 36
- ◆ Section 4.2.3, “Establishing Internet Connectivity,” on page 37
- ◆ Section 4.2.4, “Setting Up Message Forwarding,” on page 38
- ◆ Section 4.2.5, “Setting Up GroupWise Name Servers,” on page 39
- ◆ Section 4.2.6, “Handling Password Issues in an Existing GroupWise System,” on page 39

4.2.1 Setting Up eDirectory for Your GroupWise System

eDirectory™ must be set up and container objects created before you can create your GroupWise system for the migration.

- 1 If necessary, download eDirectory from the [Novell Download page \(http://download.novell.com\)](http://download.novell.com) and install it according to the instructions provided in *Novell eDirectory Installation Guide* (<http://www.novell.com/documentation/edir88>).
- 2 Create the containers where you plan to create Post Office objects and Domain objects (**system worksheet item 7**).
- 3 Create the containers where you plan to create User objects and Distribution List objects (**system worksheet item 8**).
- 4 Continue with **Setting Up Your GroupWise System**.

4.2.2 Setting Up Your GroupWise System

You need to set up your full GroupWise system before you start the migration from Exchange. You can create your GroupWise system on any GroupWise platform supported for migration (NetWare®, Linux, or Windows).

IMPORTANT: Make sure you have the latest GroupWise 7 Support Pack.

- 1 Install a basic GroupWise system, as described in “**Installing a Basic GroupWise System**” in the *GroupWise 7 Installation Guide*.
This includes installing the GroupWise Administrator snap-in to ConsoleOne®, creating a domain and post office, and installing the Message Transfer Agent (MTA) and the Post Office Agent (POA).
- 2 During installation, create a software distribution directory with at least the GroupWise client software.
- 3 In ConsoleOne, create the GroupWise domains (**system worksheet item 5**) that will house the post offices for the migrated Exchange users, as described in “**Creating a New Domain**” in “**Domains**” in the *GroupWise 7 Administration Guide*.
- 4 At each domain server, install and start the MTA for the domain, as described in “**Installing GroupWise Agents**” *GroupWise 7 Installation Guide*.
- 5 In ConsoleOne, create the GroupWise post offices (**system worksheet item 5**) for the migrated Exchange users, as described in “**Creating a New Post Office**” in “**Post Offices**” in the *GroupWise 7 Administration Guide*.

IMPORTANT: Leave the post office security level set to the default of *Low* until you have finished migrating users into the post office.

- 6 At each post office server, install and start the POA for post office, as described in “[Installing GroupWise Agents](#)” *GroupWise 7 Installation Guide*.
- 7 Continue with “[Establishing Internet Connectivity](#)” on page 37.

4.2.3 Establishing Internet Connectivity

If you are migrating to a GroupWise system on Linux, some preparation is required for the Internet Agent. If you are migrating to a GroupWise system on NetWare or Windows, skip to “[Installing the GroupWise Internet Agent](#)” on page 37.

- ♦ “[Preparing a Linux Server for the GroupWise Internet Agent](#)” on page 37
- ♦ “[Installing the GroupWise Internet Agent](#)” on page 37

Preparing a Linux Server for the GroupWise Internet Agent

By default, Linux servers run the Postfix mail program. It typically uses an IP address of 127.0.0.1 and listens on port 25, which is the default for SMTP communication. By default, the Internet Agent binds to all IP addresses on the server and it also uses port 25. As a result, if Postfix is running on the Linux server, the Internet Agent cannot start because port 25 is already in use.

Occasionally, Postfix might be configured to listen on a different IP address. This would also cause a conflict if the Internet Agent is configured to use the same IP address. On the Linux server, use the following command to test for conflicts:

```
telnet IP_address 25
```

If you receive a response, then something is already listening on the specified IP address.

To resolve the conflict, you can bind the Internet Agent to a specific IP address that is not the address used by Postfix. See “[Binding the Internet Agent to a Specific IP Address](#)” in “[Internet Agent](#)” in the *GroupWise 7 Administration Guide*.

As an alternative, you can disable Postfix. Disabling Postfix is not the preferred solution, because Postfix is responsible for sending system messages to the administrator, but steps are provided below.

- 1 In a terminal window at the Linux server, log in as `root`.
- 2 Enter the following commands:

```
/etc/init.d/postfix stop  
chkconfig postfix off
```

- 3 To ensure that Postfix is not running, enter the following command:

```
ps -eaf | grep postfix
```

You should see no Postfix processes running. The server is now ready for the Internet Agent to run on it.

- 4 Continue with [Installing the GroupWise Internet Agent](#).

Installing the GroupWise Internet Agent

- 1 Install and start the Internet Agent, as described in “[Installing the GroupWise Internet Agent](#)” *GroupWise 7 Installation Guide*.

- 2 Enable Internet addressing and set up the permanent Internet domain name for your GroupWise system, as described in “[Enabling Internet Addressing](#)” in “[Internet Agent](#)” in the *GroupWise 7 Administration Guide*.
- 3 Set the preferred address format to *UserID@Internet_domain_name*.
This is the format that most easily ensures uniqueness of users’ Internet addresses. You can choose other alternatives, though, as described in “[Preferred Address Format](#)” in “[Internet Agent](#)” in the *GroupWise 7 Administration Guide*.
- 4 If you are performing a single-stage migration, skip to [Section 4.2.5, “Setting Up GroupWise Name Servers,”](#) on page 39.
or
If you are performing a multi-stage migration, continue with “[Setting Up Message Forwarding](#)” on page 38.

4.2.4 Setting Up Message Forwarding

If you are performing a multi-stage migration, the Migration Utility can set up message forwarding. Incoming messages are forwarded to the appropriate e-mail system and internal messages flow back and forth between the GroupWise system and the Exchange system as if they were a single e-mail system. Some advance setup is required.

- ♦ “[Forwarding Incoming Mail](#)” on page 38
- ♦ “[Forwarding Internal Mail](#)” on page 38

Forwarding Incoming Mail

In order for incoming mail to be correctly forwarded, you need a mechanism for messages to be sorted according to whether they need to go to GroupWise or to Exchange.

- 1 In DNS, set up the temporary Internet domain names ([server work sheet item 4](#)) for the GroupWise system and the Exchange system.
- 2 Set up an SMTP router, relay server, or smart host that can resolve e-mail addresses and forward messages to the appropriate e-mail system.

Forwarding Internal Mail

In order for internal mail to be correctly forwarded, you need a mechanism in each e-mail system that knows what to do with undeliverable mail. The Migration Utility helps set this up. When it migrates an Exchange user, it places a forwarding address on that user’s e-mail account. This tells the Exchange system to forward the message.

The Migration Utility also creates a GroupWise external domain named `Exchange_ExtDomain`. This external domain represents the Exchange system, and the Migration Utility creates External User objects in it for all Exchange users that have not yet been migrated to GroupWise. This enables Exchange users to appear in the GroupWise Address Book as if they were part of the GroupWise system.

- ♦ “[Setting Up Forwarding in GroupWise](#)” on page 39
- ♦ “[Setting Up Forwarding in Exchange](#)” on page 39

After you have set up internal forwarding, continue with [Section 4.2.5, “Setting Up GroupWise Name Servers,”](#) on page 39.

Setting Up Forwarding in GroupWise

In ConsoleOne, you configure the Internet Agent to forward messages that are undeliverable in the GroupWise system over to the Exchange system for delivery.

- 1 Browse to and right-click the Internet Agent object, then click *Properties*.
- 2 Click *SMTP/MIME > Undeliverables*.
- 3 In the *Forward Inbound Undeliverable Messages to Host* field, specify the hostname of an Exchange server where the SMTP connector is running.
- 4 Click *OK* to save the setting.

Setting Up Forwarding in Exchange

In Exchange System Manager, you configure the SMTP connector to forward messages that are undeliverable in the Exchange system over to the GroupWise system for delivery.

- 1 Expand *Administrative Group > First Administrative Group*.
- 2 Expand *Servers > your_exchange_server*.
- 3 Expand *Protocols > SMTP*.
- 4 Right-click *your_SMTP_server > Properties*.
- 5 Click the *Messages* tab.
- 6 In the *Forward all mail with unresolved recipients to host* field, specify the hostname of the server where the GroupWise Internet Agent is running.
- 7 Click *OK* to save the setting.

4.2.5 Setting Up GroupWise Name Servers

To simplify users’ access to their new GroupWise mailboxes, set up two GroupWise name servers, as described in “[Simplifying Client/Server Access with a GroupWise Name Server](#)” in “[Post Office Agent](#)” in the *GroupWise 7 Administration Guide*.

If you are migrating Exchange users into an existing GroupWise system, continue with [Handling Password Issues in an Existing GroupWise System](#).

If not, you are ready to start your migration. Skip to [Chapter 5, “Installing the Exchange Migration Utility,”](#) on page 41.

4.2.6 Handling Password Issues in an Existing GroupWise System

If you are migrating Exchange users into an existing GroupWise system, care must be taken with existing User objects and existing GroupWise accounts.

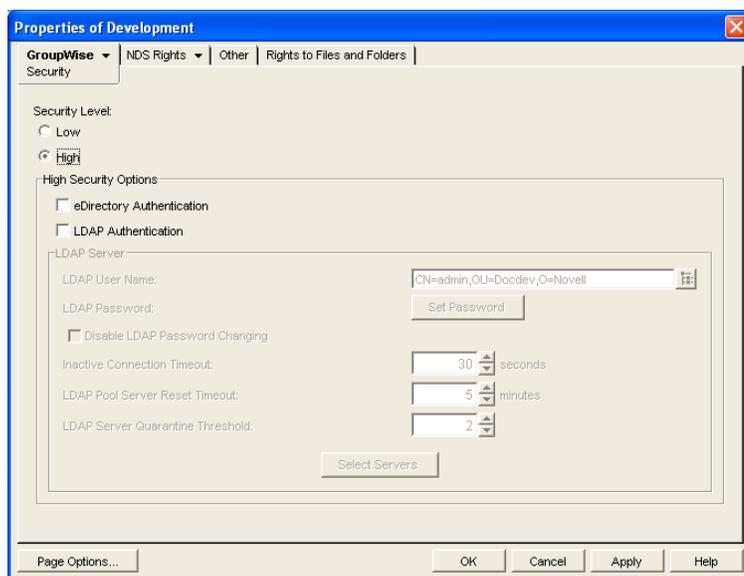
- ♦ “[Handling Existing eDirectory User Objects with Personal Passwords](#)” on page 40
- ♦ “[Handling Existing GroupWise Accounts with Personal Passwords](#)” on page 40

After understanding and taking care of these issues, continue with [Chapter 5, “Installing the Exchange Migration Utility,”](#) on page 41.

Handling Existing eDirectory User Objects with Personal Passwords

If the Exchange users whose mailboxes are being migrated to GroupWise already have eDirectory User objects with personal passwords already set, the security level on the post office to which the users are being migrated is important. You can check the security setting in ConsoleOne:

- 1 Browse to and right-click the Post Office object, then click *Properties*.
- 2 Click *GroupWise > Security*.



If *Security Level* is set to *Low* or *High*, or if *eDirectory Authentication* is selected, the Migration Utility can add GroupWise accounts to existing User objects as they are added to the post office. However, if *LDAP Authentication* is selected, the Migration Utility cannot add GroupWise accounts because the Migration Utility cannot perform LDAP authentication.

- 3 If *LDAP Authentication* is selected, select a different security option, then click *OK* to save your change.
- 4 After all Exchange users have been migrated to the post office, return to ConsoleOne and select *LDAP Authentication* again.

Handling Existing GroupWise Accounts with Personal Passwords

You cannot use the Migration Utility to migrate data from an Exchange mailbox into an existing GroupWise mailbox because the existing password does not match the randomly generated password provided by the Migration Utility. To accomplish this task, the user can use Microsoft Outlook to save all data from the Exchange mailbox into a PST file, then use the GroupWise Import Utility for Microsoft Outlook to import the Exchange data into the existing GroupWise mailbox. For instructions, see the [GroupWise Import Utility for Microsoft Exchange Quick Start \(http://www.novell.com/documentation/gwutilities/pdfdoc/gw7_exchimp/gw7_exchimp.pdf\)](http://www.novell.com/documentation/gwutilities/pdfdoc/gw7_exchimp/gw7_exchimp.pdf).

Installing the Exchange Migration Utility

5

If you are performing a small system migration, install the Migration Utility on one Windows workstation. If you are performing a large system migration, install the Migration Utility on multiple Windows workstations ([system worksheet item 2](#)).

IMPORTANT: Do not install and run the Migration Utility on Exchange servers.

1

2 At a machine that meets the system requirements listed in [Chapter 2, “Exchange Migration Utility System Requirements,”](#) on page 11, make sure that Outlook is already installed.

The GroupWise® client should not be installed. If it is, the Exchange Migration Utility Setup program removes it.

3 Make sure that you have administrator rights to the Exchange server that you want to migrate ([server worksheet item 1](#)).

IMPORTANT: The workstation where you run the Migration Utility must have a username and password identical to the one on the Exchange server. Otherwise, you cannot access the Exchange server with the necessary rights.

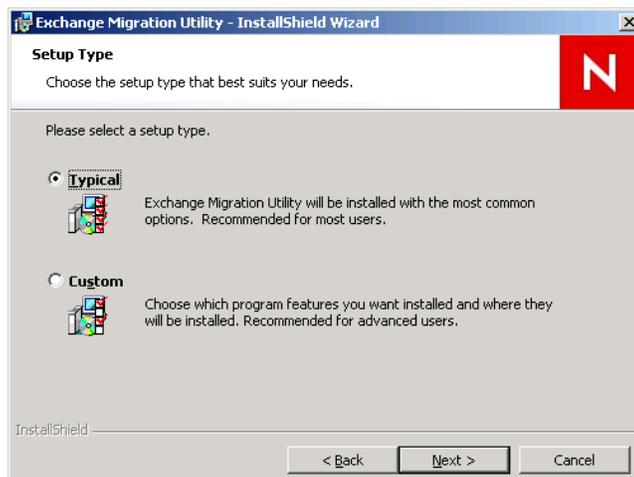
4 From the [Novell® Downloads Web site \(http://download.novell.com\)](http://download.novell.com), download the GroupWise Migration Utility for Microsoft Exchange (`gw700exmig.exe`) into a temporary directory.

5 Run `gw700exmig.exe` to extract the Migration Utility files into a convenient directory.

6 Run `setup.exe`, then click *Next* to install the Migration Utility.

7 Click *Yes* to accept the license agreement.

8 Click *Next* to select the setup type.



Typical: Installs the Migration Utility in English in the `c:\novell\exchange migration utility` directory.

Custom: Lets you select the installation directory. The utility is currently available in English only.

9 To accept the default of *Typical*, click *Next*.

or

Change the installation directory:

9a Click *Custom*, then click *Next*.

9b Click *Change*.

9c Browse to and select the desired installation directory, then click *OK*.

9d Click *Next*.

10 Click *Install* to install the Exchange Migration Utility.

11 When the software has been installed, click *Finish*.

12 Repeat **Step 6** through **Step 11** for each workstation where you want to run the Migration Utility.

As an alternative, you could map a drive from other workstations to a central installation of the Migration Utility. However, the Migration Utility runs significantly faster when installed locally.

13 Continue with “**Migrating Your Exchange System to GroupWise 7**” on page 43.

Migrating Your Exchange System to GroupWise 7

6

Before you start the migration process, both the Novell® GroupWise® system and the Microsoft Exchange system should be running smoothly. The migration process is performed in three stages. First, the Migration Utility helps you gather important information about your Exchange and GroupWise systems. Second, the Migration Utility helps you plan how you want the Exchange users, distribution lists/groups, and public folders to be organized in your GroupWise system. Third, the Migration Utility performs the migration to GroupWise.

- ♦ [Section 6.1, “Starting the Migration Utility,” on page 43](#)
- ♦ [Section 6.2, “Gathering System Information,” on page 44](#)
- ♦ [Section 6.3, “Planning Your GroupWise System,” on page 45](#)
- ♦ [Section 6.4, “Migrating to GroupWise,” on page 48](#)
- ♦ [Section 6.5, “Re-Migrating Data,” on page 49](#)

6.1 Starting the Migration Utility

The first time you run the Migration Utility, you should migrate only a small number of mailboxes, so you know how long it takes to migrate mailboxes on your system with its current configuration. This information helps you decide how to implement multiple migration sessions, as needed.

It is not necessary to stop your Exchange system or prevent users from accessing their Exchange mailboxes during the migration. It is possible that some messages arriving during the migration might be delivered to users’ Exchange mailboxes and other messages to users’ GroupWise mailboxes, but because both mailboxes are available to users for a period of time after the migration, this is not a problem.

NOTE: If you are migrating to a GroupWise system on Linux, see [Appendix B, “Linux Migration,” on page 57](#) before starting the Migration Utility.

- 1 Make sure that you have completed all the tasks in [Chapter 4, “Preparing Your E-Mail Systems for Migration,” on page 31](#).

IMPORTANT: The workstation where you run the Migration Utility must have a username and password identical to the one on the Exchange server. Otherwise, you cannot access the Exchange server with the necessary rights.

- 2 Log in to the eDirectory™ tree ([system worksheet item 6](#)) where you are migrating the Exchange users.
- 3 Map a drive to a GroupWise domain directory ([system worksheet item 6](#)), preferably to the domain that owns the post offices to which you are migrating Exchange users.
If the domain is located on Linux, see [Appendix B, “Linux Migration,” on page 57](#) for additional instructions.
- 4 Click *Start > All Programs > Exchange Migration Utility > Exchange Migration Utility*.

or

Double-click the Migration Utility icon created by the Installation program on your desktop.

- 5 After reviewing the utility overview, click *Next* to display the License Agreement.
- 6 Accept the License Agreement, then click *Next* to list the major prerequisites for running the Migration Utility.

Meeting these prerequisites has already been discussed in the following sections:

- ♦ [Section 4.2.1, “Setting Up eDirectory for Your GroupWise System,” on page 36](#)
 - ♦ [Section 4.2.2, “Setting Up Your GroupWise System,” on page 36](#)
 - ♦ [Section 4.2.4, “Setting Up Message Forwarding,” on page 38](#)
 - ♦ [Step 3](#) above
- 7 Make sure you have met the prerequisites, select each check box, then click *Next* to display the Stage 1: Identification page.
 - 8 Continue with [Gathering System Information](#).

6.2 Gathering System Information

- 1 On the Stage 1: Identification page, review the information you need to have available in order to complete Stage 1, then click *Next* if you are ready to proceed.
- 2 On the Exchange Login Credentials page, specify the network address of the Exchange server that you are migrating, then click *Next*.

IMPORTANT: The workstation where you are running the Migration Utility must have a username and password identical to the username and password of the Exchange server. The utility displays your current username. If the Exchange server you specified does not have a corresponding username, the utility cannot access the Exchange server.

- 3 On the Exchange Data File page:
 - 3a If this is the first time you are running the Migration Utility on this Exchange server, specify the full path name of the Exchange Data File you want to create ([server worksheet item 2](#)), then click *Extract Exchange Data*.

This creates a CSV (comma-separated value) file of all users, distribution lists/groups, and public folders on the Exchange server. If you want, you can divide a large CSV file into smaller parts so you can run migration sessions for a single Exchange server on multiple workstations. For example, you might want to divide the CSV file so that data for each post office in the GroupWise domain is in a separate CSV file. This approach makes it very convenient to process each CSV file on a separate workstation.

or

If you have already created the initial Exchange data file in a previous migration session, accept the displayed CSV file.

The existing CSV file has been modified by the Migration Utility during the previous migration session so that the Migration Utility can display only the Exchange data that has not yet been migrated.

- 3b Click *Next* to continue.

- 4 On the GroupWise System Information page, browse to and select a domain database (`wpdomain.db`) in the GroupWise domain ([server worksheet item 3](#)) that owns the post office where you want to migrate Exchange data to, then click *Next*.

NOTE: The Migration Utility can migrate to post offices in domains other than the one you specify on the GroupWise System Information page, but performance is substantially slower.

- 5 On the Message Forwarding to Exchange page, specify the Internet domain name of the Exchange server ([server worksheet item 4](#)), then click *Next*.

This enables migrated users to continue sending messages to Exchange users who have not yet been migrated.

- 6 On the Message Forwarding to GroupWise page:

- 6a If you are performing a single-stage migration, select *I am migrating all users at once, so I do not need forwarding rules*.

or

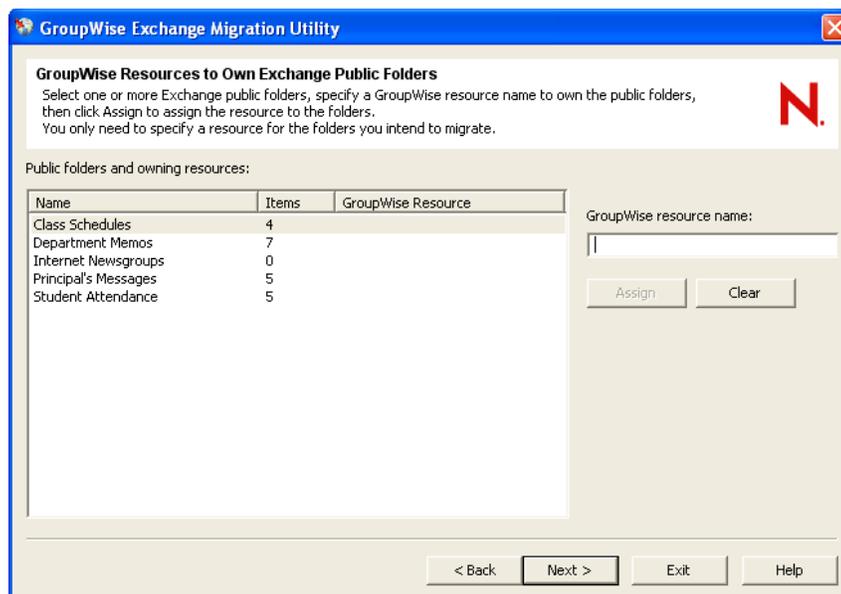
If you are performing a multi-stage migration, specify the Internet domain name of the GroupWise system ([server worksheet item 4](#)).

This enables unmigrated Exchange users to continue sending messages to migrated users in the GroupWise system.

- 6b Click *Next* to continue with [Section 6.3, “Planning Your GroupWise System,”](#) on page 45.

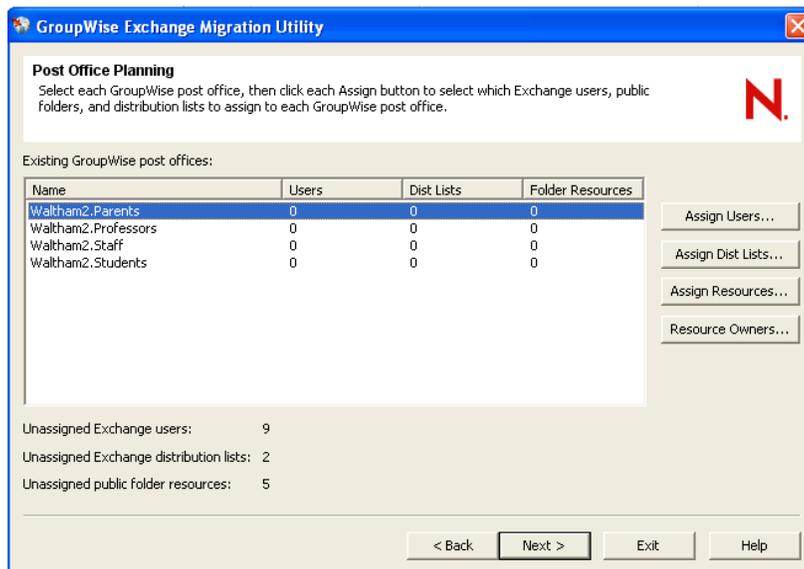
6.3 Planning Your GroupWise System

- 1 On the Stage 2: Planning page, review the decisions you need to make in order to complete Stage 2, then click *Next* if you are ready to proceed.



In the first migration session for an Exchange server, all public folders on the server are listed. If there are additional migration sessions for the server, public folders that have already been migrated are not listed.

- 2 Set up the resources and resource owners for the public folders you want to migrate ([server worksheet item 5](#)).
 - 2a Select the public folders that you want to be owned by the same resource.
Use Ctrl+A to select all the public folders.
 - 2b Specify a unique resource name.
 - 2c Click *Assign*.
 - 2d Repeat [Step 2a](#) through [Step 2c](#) until you have assigned all the public folders to GroupWise resources for the current migration session.
 - 2e Specify the user ID of the user who you want to own the resources.
- 3 Click *Next* to display the Post Office Planning page.



All of the post offices in your GroupWise system are listed.

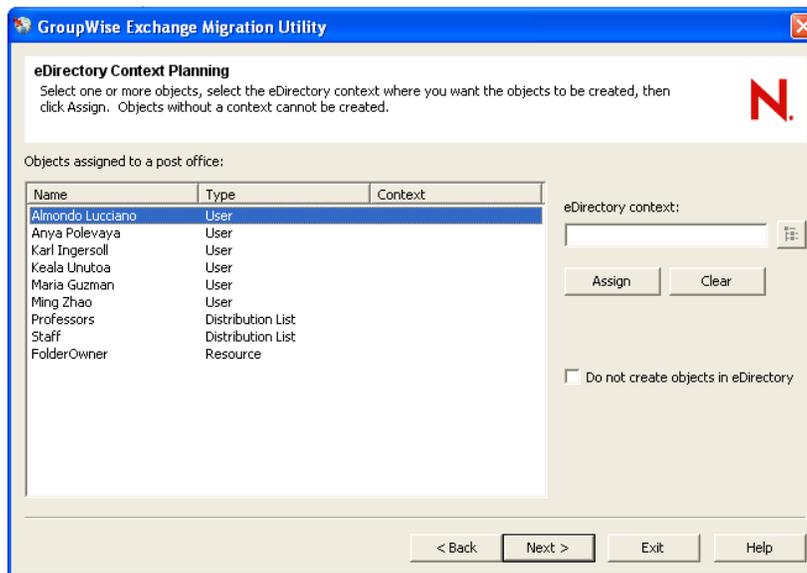
- 4 Set up the Exchange users, distribution lists/groups, and public folders that you want to assign to each GroupWise post office ([server worksheet item 6](#)).
 - 4a Select a post office.
 - 4b Click *Assign Users*, select the users you want to assign to this post office, click *Assign*, then click *Close*.
 - 4c Click *Assign Dist Lists*, select the Exchange distribution lists/groups you want to assign to this post office, click *Assign*, then click *Close*.
 - 4d Click *Assign Resources*, select the public folder resources you want to assign to this post office, click *Assign*, then click *Close*.
 - 4e Click *Resource Owners*, select one or more public folder resources, select a user to own the resources, then click *Assign*; repeat this step as needed for additional users to own resources.

Public folder resources that do not have assigned owners are not migrated. You can migrate them during a subsequent migration session as long as the owner has already been migrated or is being migrated along with the folder resource.

- 4f** Repeat **Step 4a** through **Step 4e** until you have assigned all Exchange users, distribution lists/groups, and public folders on the Exchange server to GroupWise post offices.

IMPORTANT: It is not necessary to migrate all Exchange users, distribution lists/groups, and public folders during the current migration session, but it is important to have a plan in place for all Exchange items.

- 5** Click *Next* to display the eDirectory Context Planning page.



- 6** Set up the eDirectory contexts that you want to assign to each GroupWise User object, Distribution List object, and Resource object. (**server worksheet item 7**).
- 6a** Select all the users, distribution lists/groups, and public folders whose objects you want to create in the same context.
Use Ctrl+A to select all.
- 6b** Browse to and select the context where you want to create the objects, then click *OK* to fill in the eDirectory context field.
- 6c** Click *Assign* to assign to selected objects to the selected eDirectory context.
- 6d** Repeat **Step 6a** through **Step 6c** until you have assigned all users, distribution lists/groups, and public folders on the Exchange server to eDirectory contexts in your GroupWise system.
- 6e** If you want to have User objects and Resource objects created only in GroupWise databases and not in eDirectory, select *Do not create objects in eDirectory*.
Such User objects and Resource objects can be viewed in ConsoleOne in the GroupWise View, but not in the standard eDirectory view
- 7** Click *Next* to display the Plan Summary page.
- 8** Review the Plan Summary page to see how many items and how much data you are planning to migrate.

The number of items listed on the Plan Summary page represents the number of actual items that will be migrated. For users, it is the number of items in their mailboxes. For distribution lists/groups, it is the number of names on each list. For public folders, it is the number of items in each folder. The size of the data planned for migration to each post office is also listed to help you gauge migration time, at least in comparative terms.

- 9 Select each post office, then click *Details* to make sure you have organized your GroupWise system as intended.

Each post office plan lists all the users, distribution lists/groups, and public folders that will be migrated to the post office. It also includes items and data size for each. You can adjust the migration plan for any post office as needed.

- 10 When you are satisfied with the organization of your planned GroupWise system, continue with [Migrating to GroupWise](#).

6.4 Migrating to GroupWise

- 1 On the Stage 3: Data Migration page, review the tasks you will perform in order to complete Stage 3, then click *Next* if you are ready to proceed.

The Select Users to Migrate page lists all users on the Exchange server.

- 2 Select the Exchange users to migrate during the current migration session ([server worksheet 8](#)), then click *Next*.

Use *Check All* to select all Exchange users.

- 3 Select migration options ([server worksheet 9](#)), then click *Next*.

The Select Public Folders to Migrate page lists all public folders on the Exchange server.

- 4 Select the Exchange public folders to migrate during the current migration session ([server worksheet item 10](#)), then click *Next*.

Use *Check All* to select all Exchange public folders

NOTE: Exchange distribution lists/groups are not selected at this point. All distribution lists/groups that have been assigned to post offices are automatically migrated.

If the Migration Utility encounters Exchange user IDs that include periods (.), it prompts you for a character to replace the period with, as described in [Section 3.2.6, “Selecting a User ID Conversion Rule,”](#) on page 24.

- 5 If prompted, select the conversion rule you want to use ([server worksheet item 11](#)), then click *Next*.
- 6 On the Send E-Mail to Migrated Users page ([server worksheet item 12](#)):

- 6a Select whether you want to send notification messages to Exchange users when they are migrated.

Notification messages provide users’ GroupWise user IDs and passwords, along with their server address information. Users cannot log in to GroupWise without this information.

- 6b Select whether you want to send copies of notification messages to the Administrator user.
 - 6c Modify the default subject line and message text as needed for your users and circumstances.

- 6d Click *Next* to display the Ready to Migrate Data page.

7 If you are performing the migration over a slow link, or if you want to check the results of each stage of the migration process, select *Pause after Each Step of the Migration Process*.

Selecting this option allows eDirectory object synchronization to complete over the slow link before the next step of the migration begins. It also allows you to ensure that each step of the migration process is successful before proceeding to the next step. If you select this option, make sure that someone is monitoring the migration process.

8 Click *Migrate* to start the migration.

Status information and error messages are logged throughout the migration process. The Migration Utility log file can be displayed in Normal mode, Verbose mode, or Diagnostic mode, depending on the amount of detail desired. By default, the name of the log file is `migrate.log` and it is located in the Migration Utility installation directory. You can change the name or location by clicking *Save Log As*. You can delete the current log file and start a new log file by clicking *Clear Log*.

9 If you configured the migration to pause between stages, check the results of each migration stage, then click *Continue* or *Stop*, depending on whether you are satisfied with the migration results.

10 When the migration is complete, click *Finish*.

11 Continue with [Chapter 7, “Performing Post-Migration Tasks,” on page 51](#).

6.5 Re-Migrating Data

The Migration Utility keeps track of what has already been migrated by updating the Exchange data file that it creates in its installation directory. This CSV (comma-separated value) file is named `exmigdata.csv` by default. You can view and edit this file as a spreadsheet.

The Migration Utility also creates GroupWise objects in eDirectory as it migrates data.

- ♦ [Section 6.5.1, “User,” on page 49](#)
- ♦ [Section 6.5.2, “Distribution List,” on page 49](#)
- ♦ [Section 6.5.3, “Public Folder,” on page 49](#)

6.5.1 User

To re-migrate a user, delete the User object from GroupWise. Rerun the Migration Utility and select the user for migration. You do not need to update the CSV file.

6.5.2 Distribution List

To re-migrate a distribution list, update the CSV file to remove the migration date of the distribution list. After you remove the migration date, the Migration Utility does not know that the distribution list has already been migrated and it migrates it again as if for the first time. You do not need to delete the Distribution List object from GroupWise.

6.5.3 Public Folder

To re-migrate a public folder, delete the folder Resource object from GroupWise. Rerun the Migration Utility and select the public folder for migration. You do not need to update the CSV file.

Performing Post-Migration Tasks

7

After you have finished running the Migration Utility on all of your exchange servers, there are a few tasks to take care of in order to complete the migration.

- ♦ [Section 7.1, “GroupWise Post-Migration Tasks,” on page 51](#)
- ♦ [Section 7.2, “Exchange Post-Migration Tasks,” on page 53](#)

After you have performed the post-migration tasks, you have finished your part in the migration from Exchange to GroupWise®, but your users still have some work to do. As an administrator, you can help users adapt to GroupWise by giving them the *GroupWise Import Utility for Microsoft Outlook Quick Start* (http://www.novell.com/documentation/gwutilities/pdfdoc/gw7_exchimp/gw7_exchimp.pdf).

7.1 GroupWise Post-Migration Tasks

- ♦ [Section 7.1.1, “Distributing and Installing the GroupWise Windows Client,” on page 51](#)
- ♦ [Section 7.1.2, “Distributing and Installing the GroupWise Import Utility for Microsoft Outlook,” on page 51](#)
- ♦ [Section 7.1.3, “Re-creating Rules,” on page 52](#)
- ♦ [Section 7.1.4, “Rebuilding Your Junk E-Mail List,” on page 52](#)
- ♦ [Section 7.1.5, “Re-creating Search Folders,” on page 52](#)
- ♦ [Section 7.1.6, “Configuring Your GroupWise System,” on page 52](#)
- ♦ [Section 7.1.7, “Providing Additional GroupWise Client Alternatives,” on page 53](#)
- ♦ [Section 7.1.8, “Using Outlook and GroupWise on the Same Workstation,” on page 53](#)

7.1.1 Distributing and Installing the GroupWise Windows Client

During or after the migration, install the GroupWise Windows client on users’ workstations using your chosen distribution method ([worksheet item 9](#)), as described in “[Distributing the GroupWise Client](#)” in “[Client](#)” in the *GroupWise 7 Administration Guide*.

Have users log in and review the contents of their GroupWise mailboxes to ensure that the expected items are present. Make sure that they can reply to and forward messages. Make sure that appointments are set for the correct time. Make sure that they know how to access the resource mailboxes where the GroupWise version of the Exchange public folders are stored.

7.1.2 Distributing and Installing the GroupWise Import Utility for Microsoft Outlook

Promptly distribute the GroupWise Import Utility for Microsoft Outlook to your users so that they can import their Outlook PST files into their GroupWise mailboxes. Depending on the needs of your users, you could:

- ♦ Provide a network installation of the Import Utility that users could run
- ♦ E-mail the Import Utility to users so they can install it on their own workstations

- ◆ Provide them with the URL for the [Novell Downloads page \(http://download.novell.com\)](http://download.novell.com) where they can download the Import Utility for themselves
- ◆ Install the Import Utility as an add-on program along with the GroupWise Windows client, as described in “[Modifying the addon.cfg File](#)” in “[Client](#)” in the *GroupWise 7 Administration Guide*

To help users adjust to GroupWise, make sure that they have access to the *GroupWise 7 Import Utility for Microsoft Outlook Quick Start* (ImportUtilityQuickStart.pdf). It is available in the installation directory of the Import Utility and on the [GroupWise Utilities Documentation Web site \(http://www.novell.com/documentation/gwutilities\)](http://www.novell.com/documentation/gwutilities). You might want to print copies for your users to help them get comfortable in their GroupWise mailboxes as quickly as possible.

7.1.3 Re-creating Rules

The rules you used in your Exchange mailbox were not migrated to your GroupWise mailbox. For instructions on creating rules, see “[Creating Rules](#)” in “[Managing Your Mailbox](#)” in the *GroupWise 7 Windows Client User Guide*.

7.1.4 Rebuilding Your Junk E-Mail List

GroupWise provides a robust Junk Mail Handling feature. For setup instructions, see “[Handling Unwanted Mail](#)” in “[Working with Items in Your Mailbox](#)” in the *GroupWise 7 Windows Client User Guide*.

7.1.5 Re-creating Search Folders

GroupWise lets you associate frequently used searches with folders just like Outlook does. For setup instructions, see “[Understanding Find Results Folders](#)” in “[Managing Your Mailbox](#)” in the *GroupWise 7 Windows Client User Guide*.

7.1.6 Configuring Your GroupWise System

Configure your GroupWise system of migrated Exchange users just as you would any other GroupWise system. The *GroupWise 7 Administration Guide* provides complete instructions. Review each part of the guide to determine what tasks you need to perform to secure and optimize your GroupWise system. Important tasks include:

- ◆ “[Providing LDAP Authentication for GroupWise Users](#)”
- ◆ “[Managing Disk Space Usage in the Post Office](#)”
- ◆ “[Maintaining User/Resource and Message Databases](#)”
- ◆ “[Using eDirectory User Synchronization](#)”
- ◆ “[Enabling Intruder Detection](#)”
- ◆ “[Blocking Unwanted E-Mail from the Internet](#)”
- ◆ “[Securing the Post Office with SSL Connections to the POA](#)”
- ◆ “[Securing the Domain with SSL Connections to the MTA](#)”
- ◆ “[Securing Internet Agent Connections with SSL](#)”

- ♦ “Securing WebAccess Agent Connections with SSL”
- ♦ “Using GroupWise Monitor”

To ensure a secure system, see “Security Policies” in the *GroupWise 7 Administration Guide*.

7.1.7 Providing Additional GroupWise Client Alternatives

Although the GroupWise Windows client is required for use with the GroupWise Import Utility for Microsoft Exchange, users can choose among various clients for long-term use:

- ♦ WebAccess client, as described in “Installing GroupWise WebAccess” in the *GroupWise 7 Installation Guide*
- ♦ Cross-Platform client for use on Linux, as described in “Setting Up the GroupWise Cross-Platform Client on Linux”
- ♦ Cross-Platform client for use on Macintosh, as described in “Setting Up the GroupWise Cross-Platform Client on Macintosh”
- ♦ GroupWise Connector for Microsoft Outlook, as described in [Outlook Connector Quick Start \(http://www.novell.com/documentation/gw7/outlookconquickstart/data/aiw00yd.html\)](http://www.novell.com/documentation/gw7/outlookconquickstart/data/aiw00yd.html)
- ♦ POP and IMAP clients, as described in “Configuring POP3/IMAP4 Services” in “Internet Agent” in the *GroupWise 7 Administration Guide*.

7.1.8 Using Outlook and GroupWise on the Same Workstation

If some users want to run Outlook after GroupWise has been installed on their workstations, they must configure Outlook to prompt for a profile at startup. Otherwise, the GroupWise profile is used by default.

Also, these users should use the GroupWise Connector for Microsoft Outlook, as described in the *GroupWise Connector for Microsoft Outlook Quick Start* (<http://www.novell.com/documentation/gw7/pdfdoc/outlookconquickstart/outlookconquickstart.pdf>).

7.2 Exchange Post-Migration Tasks

- ♦ [Section 7.2.1, “Removing Migrated Mailboxes,” on page 53](#)
- ♦ [Section 7.2.2, “Shutting Down the Exchange Server,” on page 54](#)

7.2.1 Removing Migrated Mailboxes

If you are performing a multi-stage migration, you should remove or disable the Exchange mailboxes of users who have already been migrated so that new messages are delivered to the GroupWise mailboxes and not the Exchange mailboxes. However, do not remove or disable the Exchange mailboxes until all migrated users have had time to receive their notification messages that provide their GroupWise usernames, passwords, and server information.

If some users do not receive their notification messages and you configured the Migration Utility to send copies to the Administrator user, the needed information can be retrieved from the Administrator mailbox. Users’ usernames and passwords are also available in the CSV used by the Migration Utility, as described in [Section 3.2.2, “Creating the Exchange Data File,” on page 22](#).

7.2.2 Shutting Down the Exchange Server

After all users have been migrated from each Exchange server, you can shut down Exchange and use the server for other purposes as needed.

eDirectory Attributes Populated from Exchange



During migration from Microsoft Exchange to Novell® GroupWise®, the Migration Utility automatically populates the following eDirectory™ attributes on User objects with information from the Exchange system when the GroupWise account is created:

eDirectory Attribute	Description
assistant	Assistant
assistantPhone	Assistant's phone number
company	Company
country	Country
homePhone	Home phone number
L	City
mobile	Mobile phone number
otherPhoneNumber	Business phone number
pager	Pager phone number
Physical Delivery Office Name	City
Postal Code	ZIP code
S	State
SA	Street address

Linux Migration

B

If you are migrating from Exchange to GroupWise® on Linux, you must create the proper connection between the Windows Exchange server and the Linux server where a GroupWise domain directory is already located before you start the Migration Utility.

- ♦ [Section B.1, “Novell Open Enterprise Server Linux,” on page 57](#)
- ♦ [Section B.2, “SUSE Linux Enterprise Server,” on page 57](#)

B.1 Novell Open Enterprise Server Linux

Use the NetWare Core Protocol™ (NCP™) Server to create an NCP volume on the Open Enterprise Server Linux (OES) server that will be visible from Windows just as a NetWare volume would be.

- 1 On the OES Linux server, become `root`, then enter the following commands:

```
ncpcon create volume volume_name directory
ncpcon set cross_protocol_locks=1
```

- 2 From a Windows workstation or server where the Novell® Client™ is installed, use the Novell Map Network Drive feature to map a drive to the volume on your OES Linux server.

Windows-type file locking is now respected by OES Linux.

For more information about NCP Server, see the *NCP Server Administration Guide for Linux* (http://www.novell.com/documentation/oes/ncp_lx/data/h9izvdye.html#h9izvdye).

B.2 SUSE Linux Enterprise Server

- 1 Use Samba to create a Windows share on the Linux server that will be visible from Windows just as a directory on another Windows server would be.

For instructions on setting up a Samba share, see the *SUSE® Linux Enterprise Server Administration and Installation Guide* (http://www.novell.com/documentation/sles10/pdfdoc/sles_admin/sles_admin.pdf).

- 2 From a Windows workstation or server, use the Windows Map Network Drive feature to map a drive to the directory on your Linux server.

Migration Utility Error Messages

C

The Novell® GroupWise® 7 Migration Utility for Microsoft Exchange might generate the messages in the “[Error Message List](#)” on page 59. Error messages display while the Migration Utility runs and are written to the `migrate.log` file located in the Migration Utility installation directory.

C.1 Error Message List

- ♦ “[Could not attach to eDirectory context](#)” on page 59
- ♦ “[Could not log onto Exchange server through MAPI](#)” on page 59
- ♦ “[Could not log onto mailbox](#)” on page 59
- ♦ “[Could not open Exchange mailbox table](#)” on page 60
- ♦ “[Could not open Exchange private store](#)” on page 60
- ♦ “[Could not open GroupWise MAPI store provider for specified user](#)” on page 61
- ♦ “[Generated exception accessing Exchange mailbox store](#)” on page 61
- ♦ “[User not created](#)” on page 61

Could not attach to eDirectory context

Source: GroupWise Migration Utility for Microsoft Exchange.

Explanation: The Migration Utility could not locate the eDirectory context where it has been instructed to create User objects for Exchange users.

Possible Cause: The context does not exist in eDirectory.

Action: Create the eDirectory context using ConsoleOne®.

Action: Specify an existing context in the Migration Utility.

Could not log onto Exchange server through MAPI

Source: GroupWise Migration Utility for Microsoft Exchange.

Explanation: The Migration Utility cannot access the Exchange server.

Possible Cause: The Exchange server is down.

Action: Make sure that the Exchange server is running.

Possible Cause: The workstation where you are running the Migration Utility has Outlook 2002 but no Service Packs have been applied to it.

Action: Apply Outlook 2002 Service Pack 1 or later.

Could not log onto mailbox

Source: GroupWise Migration Utility for Microsoft Exchange.

Explanation: The Migration Utility cannot access a mailbox that was selected for migration.

Possible Cause: The mailbox was deleted from the Exchange system between the time it was selected for migration and the time when the migration session was run.

Action: None. The mailbox is no longer available for migration.

Could not open Exchange mailbox table

Source: GroupWise Migration Utility for Microsoft Exchange.

Explanation: The Migration Utility could not read the list of mailboxes in your Exchange system.

Possible Cause: The user that is running the Migration Utility does not have administrator rights to the Exchange server or the Domain object in the Exchange system.

Action: Configure the user that runs the Migration Utility to have administrator rights, as described in [Section 4.1.2, “Designating a Service Account Administrator on Exchange 5.5,” on page 32](#) or [Section 4.1.3, “Ensuring Administrative Rights on Exchange 2000/2003,” on page 33](#), depending on your version of Exchange.

Possible Cause: The workstation where you are running the Migration Utility does not have a username and password that matches a username and password with administrator rights on the Exchange server.

Action: Set up a username and password on the workstation where you are running the Migration utility that matches a username and password on the Exchange server.

Could not open Exchange private store

Source: GroupWise Migration Utility for Microsoft Exchange

Explanation: The Migration Utility could not access the mailbox store on the Exchange server. This error might be accompanied by the additional error, “Properties for this information service must be defined prior to use.”

Possible Cause: The Windows desktop account being used by the user running the Migration Utility does not have Admin rights.

Action: Before running the Migration Utility, follow the instructions in [Section 4.1.2, “Designating a Service Account Administrator on Exchange 5.5,” on page 32](#) or [Section 4.1.3, “Ensuring Administrative Rights on Exchange 2000/2003,” on page 33](#), depending on your version of Exchange. When you log into the Windows desktop, make sure that you use the account you set up specifically for use with the Migration Utility.

Possible Cause: Outlook has been installed on the Windows machine where you want to run the Migration Utility but you have not yet run Outlook. Outlook must be run at least once in order for its MAPI providers to be available for use by the Migration Utility.

Action: Run Outlook before running the Migration Utility.

When starting, if Outlook prompts you to fix another application that is installed on the workstation, click *Yes*. If it does not prompt you, click *Help > Detect and Repair*, then click *Start* after Outlook is running.

Could not open GroupWise MAPI store provider for specified user

Source: GroupWise Migration Utility for Microsoft Exchange.

Explanation: The Migration Utility could not access the GroupWise mailbox that it previously created for the user.

Possible Cause: The Post Office Agent (POA) for the post office where the user is being migrated is not running.

Action: Start the POA. See the appropriate section in “[Installing GroupWise Agents](#)” in the *GroupWise 7 Installation Guide*:

- ◆ “[Starting the NetWare GroupWise Agents](#)”
- ◆ “[Starting the Linux GroupWise Agents as Daemons](#)”
- ◆ “[Starting the Windows GroupWise Agents](#)”

Possible Cause: The mailbox was created during a previous migration session and has now been removed from the GroupWise system.

Action: Select the mailbox again in a subsequent migration session.

Possible Cause: The eDirectory object for the user exists but the GroupWise account could not be created.

Action: Select the mailbox again in a subsequent migration session.

Generated exception accessing Exchange mailbox store

Source: GroupWise Migration Utility for Microsoft Exchange.

Explanation: The Migration Utility cannot access the mailbox store on the Exchange server.

Possible Cause: The workstation where you are running the Migration Utility has Outlook 2002 but no Service Packs have been applied to it.

Action: Apply the latest Outlook 2002 Service Pack.

User not created

Source: GroupWise Migration Utility for Microsoft Exchange.

Explanation: The Migration Utility could not create a GroupWise account for the Exchange user.

Possible Cause: The username already exists in eDirectory™.

Action: Rename the Exchange mailbox so that the associated username is unique in eDirectory.

Action: Rename the existing GroupWise user so that the Exchange username is unique in eDirectory. See “[Renaming Users and Their GroupWise Accounts](#)” in “[Users](#)” in the *GroupWise 7 Administration Guide*.

Possible Cause: The eDirectory account file does not contain an eDirectory context for the username.

Action: Provide complete information in the eDirectory account file, as described in [Section 3.1.4, “Planning eDirectory Object Organization,” on page 20](#).

Possible Cause: The Post Office Agent (POA) for the post office where the user is being migrated is not running.

Action: Start the POA. See the appropriate section in “[Installing GroupWise Agents](#)” in the *GroupWise 7 Installation Guide*:

- ◆ “[Starting the NetWare GroupWise Agents](#)”
- ◆ “[Starting the Linux GroupWise Agents as Daemons](#)”
- ◆ “[Starting the Windows GroupWise Agents](#)”

Documentation Updates

D

This section lists updates to the *GroupWise 7 Migration Utility for Microsoft Exchange Installation and Migration Guide* that have been made since the initial release of the Migration Utility. The information helps you to keep current on documentation updates and, in some cases, software updates (such as a Support Pack release).

The information is grouped according to the date when the *GroupWise 7 Migration Utility for Microsoft Exchange Installation and Migration Guide* was republished. Within each dated section, the updates are listed by the names of the main table of contents sections.

The *GroupWise 7 Migration Utility for Microsoft Exchange Installation and Migration Guide* has been updated on the following dates:

- ♦ [Section D.1, “December 19, 2008 \(Support Pack 1\),” on page 63](#)
- ♦ [Section D.2, “September 28, 2007,” on page 64](#)
- ♦ [Section D.3, “September 7, 2007,” on page 64](#)
- ♦ [Section D.4, “December 19, 2006 \(Support Pack 1 Beta\),” on page 64](#)

D.1 December 19, 2008 (Support Pack 1)

Location	Change
Chapter 2, “Exchange Migration Utility System Requirements,” on page 11	Increased the requirement for POAs of post offices with migrated users to the latest GroupWise 7 Support Pack.
Section 3.1.4, “Planning eDirectory Object Organization,” on page 20	Emphasized that it is not necessary to prepopulate eDirectory™ User objects for migrated Exchange users.
Section 3.2.1, “Obtaining Exchange Login Credentials,” on page 22	Clarified that a unique administrator username and password is required on each Exchange server and that a matching username and password must exist on the Migration Utility workstation.
Section 3.2.3, “Locating a GroupWise Domain Directory,” on page 23	Emphasized that utility performance is best when you map a drive to the domain that owns the post offices to which you are migrating GroupWise users.
Section 3.2.9, “Selecting Users to Migrate,” on page 25	Re-emphasized that it is not necessary to prepopulate eDirectory User objects for migrated Exchange users.
Section 6.1, “Starting the Migration Utility,” on page 43	Re-emphasized that utility performance is best when you map a drive to the domain that owns the post offices to which you are migrating GroupWise users.
Appendix B, “Linux Migration,” on page 57	Added instructions for mapping a drive to a SUSE® Linux Enterprise Server server.

D.2 September 28, 2007

Location	Change
Section 2.2, "GroupWise System Requirements," on page 11	Broadened the system requirements to include SUSE Linux Enterprise Server and additional versions of Microsoft Outlook.

D.3 September 7, 2007

Location	Change
Section 6.2, "Gathering System Information," on page 44	Added that the Migration Utility now displays the username that you are logged in as, so that you can ensure that a corresponding username exists on the Exchange server; updated the steps for two message forwarding pages instead of one.
Section 6.4, "Migrating to GroupWise," on page 48	Added the new <i>Pause after Each Step of the Migration Process</i> option.
Appendix B, "Linux Migration," on page 57	Replaced Samba instructions with NCP™ volume mount instructions.

D.4 December 19, 2006 (Support Pack 1 Beta)

Location	Change
Chapter 2, "Exchange Migration Utility System Requirements," on page 11	Updated the system requirements for using the Exchange Migration Utility.
Chapter 3, "Planning Your Migration from Exchange to GroupWise," on page 13	Introduced how to plan your Exchange to Microsoft migration in light of the improved functionality of the Exchange Migration Utility Beta.
Section 4.1.4, "Enabling Automatic Forwarding," on page 33	Added instructions for a new required step in preparing your Exchange system for the migration.
Section 4.2.4, "Setting Up Message Forwarding," on page 38	Added instructions for a new step in preparing your GroupWise system for the migration if you are performing a multi-stage migration.
Chapter 6, "Migrating Your Exchange System to GroupWise 7," on page 43	Explained the new functionality of the Exchange Migration Utility Beta.
Chapter 7, "Performing Post-Migration Tasks," on page 51	Included additional post-migration tasks.
