

NetApp®

Single Mailbox Recovery 4.0

Administrator's Guide

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Contents

Introduction	1
Top five reasons for using Single Mailbox Recovery	1
Single Mailbox Recovery 4.0 enhancements	2
Single Mailbox Recovery editions.....	3
Single Mailbox Recovery agents	4
PST source agent.....	4
Advanced searching agent.....	4
ExtractWizard agents	4
How ExtractWizard can be used with SnapManager.....	5
About this guide	6
Menu commands and shortcuts	6
Shortcut menu	6
Notes and tips	6
Other documents	7
Reference documents	7
For the most current information	7
Getting help	8
Online help	8
Technical support.....	8
 Installing or Upgrading Single Mailbox Recovery	 9
Task I: Prepare your installation environment	9
Verify system requirements for your Single Mailbox Recovery server	10
Configure MAPI functionality on your Single Mailbox Recovery server.....	10
Task II: Install or upgrade Single Mailbox Recovery	11
Installing Single Mailbox Recovery	11
Updating Single Mailbox Recovery	11
Uninstalling Single Mailbox Recovery	11
Task III: Enable any optional agents	12
About the license.ini file.....	12
Viewing and enabling agents	12
 Chapter 1: Using the ExtractWizard Direct Method	 13
ExtractWizard: Welcome Page	13

Contents

ExtractWizard: Pointing to a NetApp device.....	14
ExtractWizard: Method of Extraction	14
Direct Method	15
Advanced Method	15
ExtractWizard: Exchange Information Store Extraction Source	17
ExtractWizard: Catalog Performance Options.....	18
ExtractWizard: Catalog Progress	19
ExtractWizard: Exchange Information Store Selection.....	20
Step 1: Viewing an Exchange backup.....	20
Step 2: Extracting an online or offline backup.....	21
Step 3: Saving an ExtractWizard catalog file	30
Step 4: Completing the Exchange Information Store selection.....	30
ExtractWizard: Exchange Information Store Destination Folder	31
ExtractWizard: Exchange Information Store Copy Progress.....	32
ExtractWizard: Completing the Wizard	33
Organizing the extracted files for Single Mailbox Recovery	33
 Chapter 2: Using the ExtractWizard Advanced Method	35
Using the API Method	36
Using the API Method for IBM Tivoli Storage Manager	36
Using the API Method for Legato NetWorker	42
Using the Exchange Emulation method	50
Exchange Emulation for Microsoft NT Backup	51
Exchange Emulation for HP OpenView Storage Data Protector	67
Exchange Emulation for Veritas Backup Exec 8.6 and 9.1.....	77
Exchange Emulation for CA BrightStor ARCserve	95
Exchange Emulation for Veritas NetBackup	106
Exchange Emulation for CommVault Galaxy Backup & Recovery	115
Exchange Emulation for UltraBac	124
Organizing the extracted files for Single Mailbox Recovery	132
 Chapter 3: Looking at the Interface	133
Single Mailbox Recovery main window	133
Source pane	134
Source message list.....	134
Target pane	135
Target message list (restored messages).....	135

Menu bar	136
Toolbar	136
Status bar	137
Previewing and opening messages.....	137
Opening attachments.....	138
Saving attachments	138
Changing the view	139
Viewing or hiding the toolbar and status bar	139
Resizing panes separated by a split bar	139
Sorting messages in the message lists.....	141
Refreshing the screen	141
Viewing the properties of an EDB file, PST file, folder, or mailbox.....	142
Performing an integrity check	144
Viewing deleted messages.....	144
Setting preferences.....	144
Chapter 4: Starting Single Mailbox Recovery	149
Pointing Single Mailbox Recovery to a NetApp device	150
Running the Single Mailbox Recovery Data Wizard.....	150
Before you use the Data Wizard	151
Data Wizard: Welcome Page	151
Data Wizard: Source Path Selection.....	152
Data Wizard: Target Type and Path Selection.....	153
Data Wizard: Now Processing Data File	156
Data Wizard: Completing the Data Wizard	157
Looking at the main window after using the Data Wizard	158
Returning to the Single Mailbox Recovery Data Wizard	158
Opening the source and target from the main window	159
Before you open the source database from the main window	159
Specifying a source and a target from the main window	160
Opening multiple sources and targets	163
Closing sources and targets	164
Deleting Items in the Target Pane	164
Chapter 5: Finding Messages	165
Guidelines for using the Find dialog box	165
Searching for messages.....	166

Contents

Searching within results.....	169
Viewing previous search results	170
Clearing fields and clearing results.....	170
Saving and using search profiles.....	170
Using multiple search windows	172
Searching within attachments.....	172
Exceptions when searching within attachments	173
Other Single Mailbox Recovery features available through the Find dialog box....	173
Opening and saving attachments in the Find dialog box	173
Exporting messages from the Find dialog box.....	173
Restoring messages from the Find dialog box.....	173
Performing an integrity check on messages in the Find dialog box.....	173
 Chapter 6: Exporting Messages	175
General information about exporting messages.....	175
About message (.msg) and text (.txt) export	175
Exporting messages	176
About the Export Progress dialog box	180
 Chapter 7: Restoring Exchange Data.....	181
Quick look at restoring your Exchange data.....	181
Restoring your Exchange data in three easy steps	181
Limits for PST targets and folder targets.....	182
About restoring messages to an Exchange server	183
About the Copy Progress dialog box.....	184
Creating, renaming, and deleting folders in the Target pane.....	185
Copying and pasting or dragging and dropping	186
Examples of restoring your Exchange data.....	187
Restoring messages with Copy-Paste	187
Restoring messages with Paste Special	190
Restoring a folder	199
Restoring a mailbox.....	201
Restoring an EDB file	202
Restoring to public folders.....	203
 Chapter 8: Using the Command Line	206
Command line grammar	206

Command line syntax	206
Command line parameters	207
Examples of using the command line	208
Example 1	208
Example 2	209
Example 3	210
Example 4	211
Example 5	212
Example 6	213
Chapter 9: Reporting	215
Creating reports	215
Viewing reports	217
Single Instance Storage (SIS) vs. Cumulative Counts.....	217
Attachment Statistics report	218
Domain Statistics report	218
Messages by Database report	219
Messages by Mailbox report	220
Messages by Date report	221
Sorting reports	221
Saving reports.....	222
Appendix A: Before You Open an EDB File as a Source	223
About the Exchange database	223
Organizing files extracted from other backup applications.....	224
Verifying hard drive space for .idx and .dat files.....	224
Appendix B: Known Issues.....	225
Index.....	227

Introduction

Welcome to NetApp® Single Mailbox Recovery 4.0, the mailbox recovery software that saves time, money, and resources when recovering Microsoft Exchange data.

Single Mailbox Recovery works with your existing **Microsoft® Exchange server** backup architecture and procedures, and allows you to recover individual mailboxes, folders, messages, attachments, and even calendar, notes, and tasks directly to your production Exchange server or any PST file. This eliminates time-consuming and expensive single mailbox (brick-level) backups. This powerful software also lets you search and create a copy of all archived email that matches a given keyword or criteria.

Because Single Mailbox Recovery can work in conjunction with your existing **NetApp® SnapManager® for Microsoft® Exchange** environment, you can continue to use SnapManager to perform full, online backups of Exchange databases using NetApp Snapshot™ technology. This technology enables you to retain many Exchange backups on a **NetApp storage system** with minimal storage requirements for each incremental backup. Later, whenever you need to restore previously deleted, individual Exchange mail items, use Single Mailbox Recovery to rapidly locate and then restore the items—at any level of granularity—directly to an existing mailbox on your **production Exchange server** or to a new or existing offline **Outlook PST file**.

- To restore mail items from an Exchange database (EDB) file in a **SnapManager backup set¹ snapshot**, connect to the LUN in the snapshot on the NetApp storage system and then use Single Mailbox Recovery to restore the mail items directly from the SnapManager-created snapshot.
- To restore mail items from an EDB file in a **tape or disk backup created using an Exchange-aware backup application**, first use the appropriate application-specific Single Mailbox Recovery ExtractWizard agent to read the Exchange server backup directly from the backup media and restore the Exchange database to any alternate location where you can perform Single Mailbox Recovery processes. You can then use Single Mailbox Recovery to restore the mail items from the database. The use of an ExtractWizard agent also enables you to use Single Mailbox Recovery to restore Exchange mail items from **an archived copy of a SnapManager-based full backup set** created by a supported, Exchange-aware backup application run in copy mode.
- To restore mail items from an **Outlook PST file** located on any alternate location where you can perform Single Mailbox Recovery processes, use the Single Mailbox Recovery PST agent.

Single Mailbox Recovery locates and restores Exchange mail items without the assistance of the Exchange server, thereby eliminating the need for a recovery server. In contrast, most backup programs let you restore Exchange data only to the same or duplicate server from which it was backed up.

Top five reasons for using Single Mailbox Recovery

There are five primary ways you can benefit from using Single Mailbox Recovery.

Minimize the time to restore an individual mailbox. Single Mailbox Recovery can slash restore time, making it possible to restore mail items from a previous full backup directly into your production Exchange server, or directly into a new or existing PST file. This eliminates the need for a recovery server and the extra steps required to separately import mail back into Exchange or Outlook.

¹ A SnapManager backup set consists of all the data that SnapManager requires to perform a restore operation: Exchange databases, Exchange transaction logs, and SnapInfo directory.

Introduction

Eliminate backups of an individual mailbox. Single Mailbox Recovery eliminates the need to back up individual mailboxes because they can be restored directly from an EDB file.

Minimize the time to locate all email matching specific criteria. Single Mailbox Recovery includes an Advanced Find feature that can search across all mailboxes in an archive EDB file, rather than searching one mailbox at a time or bringing an old backup back online for analysis. And you can search by a variety of criteria, including keywords, subject, date and specific users.

Minimize storage space and the cost required to store and archive your backups. Because you don't need to back up mailboxes individually doing a brick-level backup, you eliminate the backup space, cost, and time associated with performing brick-level backups.

Minimize the time to back up all mailboxes. Single Mailbox Recovery eliminates the need to back up mailboxes individually. Normally, companies do a full Exchange backup, and then run a second process to back up "Very Important Mailboxes" (VIMs) individually as well. Single Mailbox Recovery eliminates this second process.

Single Mailbox Recovery 4.0 enhancements

Single Mailbox Recovery 4.0 contains all the features and benefits of Single Mailbox Recovery 3.1 plus these new and improved features:

ExtractWizard agent for CommVault Galaxy. This new agent offers ExtractWizard support for CommVault Galaxy 5.0 and 5.9. It provides the direct method for cataloging/extracting offline and online Exchange backups and the advanced method to catalog/extract online Exchange backups.

ExtractWizard agent for UltraBac. This new agent offers ExtractWizard support for UltraBac 7.1 and 8.0. It provides the direct method for cataloging/extracting offline and online Exchange backups and the advanced method to catalog/extract online Exchange backups.

Single Mailbox Recovery agent for search within attachments. Single Mailbox Recovery allows you to search attachment text for user-defined keywords or phrases. The Find dialog box has a new "Attachment Text" check box allowing you to search any combination of Attachment Text, Message Subject, Message Body, and Attachment File Name(s).

Public folders as target. Single Mailbox Recovery allows you to open public folders as a target for restoring public folders or messages. When restoring folders from a pub.edb database to a public folder target, all folder permissions and messages are transferred to the target folders. In addition, you can restore messages from any database source or search results to a public folder target.

Data store reporting capabilities. Single Mailbox Recovery can now create data store reports. The reports contain statistics about the data store such as sizes and counts for attachments and messages, and may be generated per domain, mailbox, database, and date. The reports may be saved as tab-delimited or comma-delimited text files. Any data store opened as a source can be the source of a report.

Save search criteria. Single Mailbox Recovery now allows you to save search criteria to a file for later retrieval. Once you select a saved search profile, the Find dialog box populates all fields with the appropriate values. You can also open and edit previously saved search profiles.

Multiple search session capabilities. Single Mailbox Recovery now lets you open multiple instances of the Find dialog box to search any combination of information stores at the same time. There is no limit other than system resources for the number of concurrent searches you can initiate.

Database integrity check. Single Mailbox Recovery now has the Database Integrity Check feature in all versions, which was previously available only in the Free edition. This feature allows you to perform a recursive read of all properties of folders and messages contained in an EDB, mailbox, or folder. It also allows you to perform a database structure test.

Command-line date filtering. Single Mailbox Recovery offers you the ability to enter a date range at the command line. During a restore or export operation, Single Mailbox Recovery restores or exports only those messages that fall within the specified date range.

Improved ExtractWizard agent for VERITAS Backup Exec. ExtractWizard now supports VERITAS Backup Exec 10.0 in both Direct and Advanced modes. This brings the total support for VERITAS Backup Exec to include versions 8.x, 9.x, and 10.0.

Improved ExtractWizard agent for HP Data Storage Protector. ExtractWizard now supports HP Data Storage Protector 5.5 in both Direct and Advanced modes. This brings the total support for HP Data Storage Protector to include versions 4.1, 5.0, 5.1, and 5.5.

Improved ExtractWizard agent for Tivoli Storage Manager. ExtractWizard now supports Tivoli Storage Manager 5.3 in both Direct and Advanced modes. This brings the total support for Tivoli Storage Manager to include versions 5.1, 5.2, and 5.3.

ExtractWizard Advanced Restore Method. ExtractWizard capabilities have been expanded to provide two methods for restoring from backup tapes: the Direct Method and the Advanced Method.

- With the Direct Method (supported in the current release as well as in previous releases of Single Mailbox Recovery), the tape drive is directly connected to the Single Mailbox Recovery server, and you insert and eject the tape when prompted. ExtractWizard reads the backup tape directly, without assistance from the backup application, and reads Exchange backups located on that tape. This method is useful when you have old tape archives.
- With the Advanced Method, ExtractWizard communicates with the tape backup server and can read tapes with assistance of the backup application. The advantage is that it is a quicker way to read your most recent backups. Useful when you have a tape library. In order to use the ExtractWizard Advanced Method, Single Mailbox Recovery must be installed on the same server that is running the backup application.

ExtractWizard agent for Hewlett-Packard OpenView® Storage Data Protector. This latest agent addition offers ExtractWizard support for HP OpenView Storage Data Protector 4.1, 5.0, and 5.1 backup formats.

Single Mailbox Recovery editions

Single Mailbox Recovery 4.0 is available as a **fully-licensed** edition or as a **trial** edition. The trial edition supports all the features of the fully-licensed edition, but it is enabled for a maximum of 30 days before it expires.

To determine whether an installed copy of Single Mailbox Recovery 4.0 is a trial edition or a fully-licensed edition, select **Help > About** in the Single Mailbox Recovery main window.

NOTE: To upgrade from a trial edition to fully-licensed edition, you must uninstall the trial edition and install the fully-licensed version.

Single Mailbox Recovery agents

Single Mailbox Recovery is distributed with the following agents:

PST source agent

By default, SMBR enables you to open an **EDB file** as the source of the Exchange mail items to be restored to your production Exchange server or to a new or existing PST file. If you enable the optional PST source agent (priced separately), you can also open a **PST file** as the source of the Exchange mail items.

Advanced searching agent

By default, SMBR enables you to search attachment text for user-defined keywords or phrases. If you enable the optional advanced searching agent (priced separately), you can also search any combination of attachment text, message subject, message body, and attachment file name(s).

ExtractWizard agents

Typically, Single Mailbox Recovery is used to restore individual mail items from Exchange database files that you backed up to a **NetApp storage system** using **SnapManager for Microsoft Exchange**. However, for integration with your legacy tape backup environment, Single Mailbox Recovery also enables you to restore mail items from Exchange Information Store data that you backed up to **disks or tapes** using an **Exchange-aware, tape-based backup application other than SnapManager**. Application-specific ExtractWizard agents enable you to read Exchange Information Store data from the media and copy the data to any location where you can perform Single Mailbox Recovery processes. NetApp provides ExtractWizard agents for the most widely-used disk and tape backup software, as summarized in the following table.

ExtractWizard Agent	Versions supported	Disk backup	Tape backup
<i>Agents enabled by default</i>			
Microsoft® NT Backup	All Versions	.BKF files*	Microsoft Tape Format (MTF)
VERITAS Backup Exec	8.x, 9.x, and 10.0	.BKF files*	Microsoft Tape Format (MTF)
<i>Optional agents (priced separately)</i>			
LEGATO NetWorker®	6.x and 7.x**	.0 (LEGATO) files	LEGATO Tape Format
Computer Associates® BrightStor™ ARCserve®	9.x and 11.x***	.CTF (ARCserve) files	ARCserve Tape Format
VERITAS NetBackup™	4.5 and 5.x	_C1_F (NetBackup) Files	VERITAS NetBackup Tape Format
IBM® Tivoli® Storage Manager	5.1, 5.2, and 5.3	.BFS and .OST files	Tivoli Tape Format
Hewlett-Packard OpenView® Storage Data Protector	4.1 (OmniBack II), 5.0, 5.1, and 5.5	User-defined file extension	Hewlett-Packard OpenView Storage Data Protector Tape Format
CommVault® Galaxy™ Backup & Recovery	5.0 and 5.9	BackupPath	CommVault Galaxy Tape Format
UltraBac	7.1 and 8.0	Magnetic Library	UltraBac Software Tape Format

- * Microsoft NT Backup BKF files and VERITAS Backup Exec BKF files are proprietary to each respective program and are not interchangeable.
- ** For Legato NetWorker 7.x backups created using Advanced File Backup, NetApp recommends the Advanced Method for extraction.
- *** For ARCserve 11.x multiplexed backup tapes, NetApp recommends the Advanced Method for extraction.

A new **license.ini** file is required to enable any of the optional, separately priced agents. For detailed information, see “Task III: Enable any optional agents” on page 12.

How ExtractWizard can be used with SnapManager

Even if you are using SnapManager for Exchange as your primary Exchange backup application, ExtractWizard is useful in the following situations:

- **To enable recovery of mailbox items from a legacy backup.** If you have Exchange Information Store data stored in legacy backups created using a supported backup application, you can use the associated ExtractWizard agent to restore the Exchange data to any location where you can perform Single Mailbox Recovery processes.
- **To enable recovery of mailbox items from a SnapManager archive.** If you used an Exchange aware backup application to archive a SnapManager for Exchange **full backup set in read only mode**, use the associated ExtractWizard agent to restore the Exchange Information Store data from the archive to any location where you can perform Single Mailbox Recovery processes.

After the Exchange data has been restored, you can use Single Mailbox Recovery to restore individual mailbox items to your production Exchange server or to a PST file.

About this guide

This guide shows you how to install Single Mailbox Recovery, how to use its commands and design features, and how to get help. It provides step-by-step instructions for completing specific tasks on the Windows platform.

Menu commands and shortcuts

This manual uses the following conventions for documenting menu commands and shortcuts:

Example	Describes
On the File menu, point to Target PST , and then click Create New .	Choosing the Create New command on the Target PST submenu on the File menu.
On the Edit menu, click Paste Special .	Choosing the Paste Special command on the Edit menu.
Press Ctrl+S (Open Source EDB)	Holding down the Ctrl key and the S key at the same time and then releasing them.
Right-click	Clicking the right mouse button.

Shortcut menu

You can access many of the same commands available on the menu bar and toolbar by right-clicking the mouse to display a shortcut menu. The contents of the shortcut menu depend on whether you right-click in the Source or Target pane. This manual seeks to teach you how to use commands on the menu bar and toolbar, and doesn't always specify when you can use the shortcut menu. Once you become familiar with Single Mailbox Recovery, the commands available to you on the shortcut menu should become apparent.

Notes and tips²

Notes (including cautions, important notes, tips, and warnings, as well as general notes) call the reader's attention to information of special importance or information that can't otherwise be suitably presented in the main text.

NOTE: A note indicates neutral or positive information that emphasizes or supplements important points of the main text. A note supplies information that may apply only in special cases—for example, memory limitations, equipment configurations, or details that apply to specific versions of a program.

TIP: A tip helps users apply the techniques and procedures described in the text to their specific needs. A tip suggests alternative methods that may not be obvious and helps users understand the benefits and capabilities of the product. A tip is not essential to the basic understanding of the text.

IMPORTANT NOTE: An important note provides information essential to the completion of a task. Users can disregard information in a note and still complete a task, but they should not disregard an important note.

CAUTION: A caution advises users that failure to take or avoid a specified action could result in loss of data.

² The information in this section is taken from the *Microsoft Manual of Style for Technical Publications*, 3rd Edition. Redmond, WA: Microsoft Press, 2002.

Other documents

In addition to this guide, you should be familiar with the following guides and have them at hand, available for reference during installation and administration.

NOTE: All of the NetApp documents can be found on the NetApp on the Web (NOW) site at <http://now.netapp.com/NOW/knowledge/docs>.

Reference documents

You should have the following documents readily available for reference.

For detailed information about...	Read
Connecting NetApp LUNs	<i>SnapDrive Installation and Administration Guide</i> for the version of SnapDrive that you are using
Configuring a Windows server	Microsoft Windows documentation
Configuring Microsoft Outlook	Microsoft Outlook documentation
Configuring Microsoft Exchange	Microsoft Exchange documentation
Installing or upgrading SnapDrive™ software	<i>SnapDrive Installation and Administration Guide</i> for the version of SnapDrive that you are using

For the most current information

The following documents contain the most current information about NetApp products.

For detailed information about...	Read
Compatible versions of SnapDrive and Data ONTAP™ software	<i>SnapDrive / ONTAP Compatibility Matrix</i>
SnapDrive system requirements: - Operating system - Hardware platform - Network	<i>SnapDrive NOW Description</i> page for the version of SnapDrive that you are using
Single Mailbox Recovery installation requirements	<i>Single Mailbox Recovery 4.0 NOW Description page</i>

Getting help

NetApp provides you with the following ways to get help with Single Mailbox Recovery: online help and technical support.

Online help

Online help includes all of the information in the administrator's guide and more, and it lets you quickly access this information by using one of three tabs. The Contents tab offers a hierarchical view of the contents of the administrator's guide. The Search tab offers a full-text search of the administrator's guide. The Index tab offers a keyword-based way to get to specific topics.

To start online help

- Do one of the following:
- Click the **Help** menu and then click **Contents**.
- Click  on the toolbar.
- Press the F1 key.

To identify a tool or control

- Position the pointer over a tool or control, and then pause. A tool tip shows the name of the item.

Technical support

If you have questions or problems not answered in the administrator's guide or the online help, call NetApp Global Services at 1-888-4NETAPP. When reporting an issue, please include any information that might help us diagnose the problem. The following details are often the most helpful:

- The version of Single Mailbox Recovery you are using (on the **Help** menu, click **About**).
- The version of Data ONTAP you are using.
- The version of SnapDrive you are using.
- The versions of Windows and Outlook that you are running.
- The version of Exchange that contained the source EDB file.
- The circumstances and sequence of steps that led to the problem.
- The text of the error messages (if any appeared), and the contents of the Details dialog box.
- A list of other Windows programs that you were running when the error occurred.

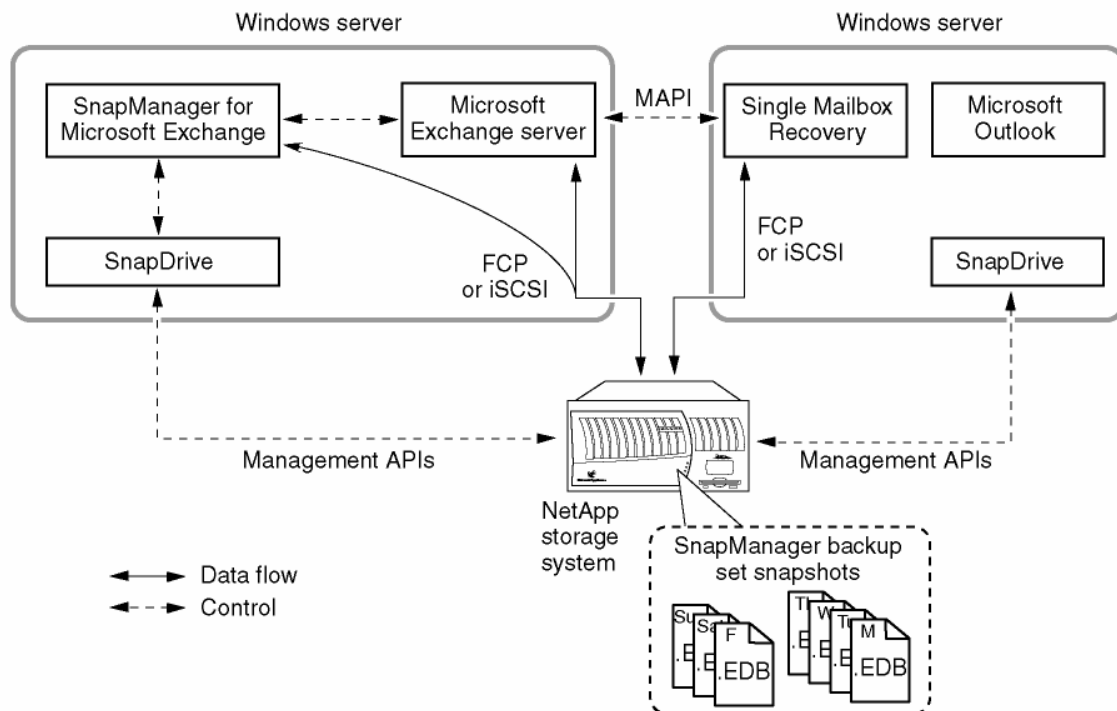
Installing or Upgrading Single Mailbox Recovery

To install or upgrade to Single Mailbox Recovery 4.0, step through each of the following tasks:

- **Task I: Prepare your installation environment**
- **Task II: Install or upgrade Single Mailbox Recovery**
- **Task III: Enable any optional agents**

Task I: Prepare your installation environment

Single Mailbox Recovery runs on the Windows server on which Microsoft **Outlook** is running, and it uses native Microsoft Messaging Application Program Interface (MAPI) protocol to communicate with the Microsoft **Exchange Server** that is running on a separate machine. The following illustration shows an example of a Single Mailbox Recovery environment in which you can restore mail items from an Exchange database (EDB) file in a SnapManager backup set snapshot.



Example of a typical Single Mailbox Recovery environment

Before you install or upgrade to Single Mailbox Recovery 4.0, you must prepare your installation environment by verifying system requirements on both of the Windows servers and configure Microsoft Outlook so that MAPI is installed on the Single Mailbox Recovery server.

Verify system requirements for your Single Mailbox Recovery server

The machine on which you will run Single Mailbox Recovery must meet the following requirements:

- Pentium-class processor
- 256 MB RAM
- 50 MB of free hard disk space for the installation of Single Mailbox Recovery.

NOTE: More disk space will be needed for processing log files when opening an EDB file.

- Monitor with 800 x 600 or higher screen resolution
- One of the following operating systems:
 - o Windows 2000 Server or Professional
 - o Windows 2000 Professional
 - o Windows XP Professional
 - o Windows XP Home
 - o Windows 2003 Server

NOTE: If SnapDrive will be used to connect and disconnect LUNs on the Single Mailbox Recovery server, then the operating system requirements must match the system requirements specified in the SnapDrive Installation and Administration Guide for the version of SnapDrive that you are using.

- Microsoft Outlook 2000 or later (with the latest service pack installed)
- For connecting and disconnecting LUNs:
 - o *Optional but recommended.* SnapDrive

NOTE: The SnapDrive version must be compatible with the version of Data ONTAP that is running on your NetApp storage system.

- o FCP or iSCSI connectivity to the NetApp storage system

NOTE: Single Mailbox Recovery is not designed to run from an Exchange server. Also, Outlook cannot be installed on an Exchange server.

- One or more NetApp storage systems must exist in the same network environment as the machine on which you run SMBR.

Configure MAPI functionality on your Single Mailbox Recovery server

Single Mailbox Recovery requires MAPI to communicate with the Exchange server. Perform the following steps **prior to** installing the Single Mailbox Recovery software. These steps ensure that a MAPI client (Outlook) is installed on the Single Mailbox Recovery server and establishes the MAPI connection between the Single Mailbox Recovery server and the MAPI application (Exchange).

1. Make sure that Microsoft Outlook is installed and has been run once.
2. Set up an e-mail account on a Microsoft Exchange server.
3. For those versions of Microsoft Outlook that distinguish between “Internet Email” and “Corporate Email,” use “Corporate Email” when configuring Outlook.

4. Run Outlook again, and connect to the Exchange server.

Task II: Install or upgrade Single Mailbox Recovery

NOTE: If you are upgrading from a **trial** version of Single Mailbox Recovery, first uninstall the trial version and then install the fully enabled release of Single Mailbox Recovery. Both “Installing Single Mailbox Recovery” and “Uninstalling Single Mailbox Recovery” are described in the paragraphs that follow.

Installing Single Mailbox Recovery

Follow these steps to install Single Mailbox Recovery:

1. Turn off any disk utility or antivirus program running in the background.
2. Insert the Single Mailbox Recovery CD-ROM into your CD-ROM drive.
3. The installation program will automatically start. If it does not, click **Run** on the **Start** menu, and type **D:\autorun.exe** or **D:\bin\setup.exe**, where *D* is the drive letter of your CD-ROM drive. Click **OK**.
4. Follow the on-screen instructions.

Updating Single Mailbox Recovery

NetApp periodically improves Single Mailbox Recovery—adding features, making changes based on customer requests, and fixing problems. When an update becomes available, follow these steps to download and install the update from the NetApp on the Web (NOW) web site:

1. Using your web browser, navigate to <http://now.netapp.com> and select **Software Downloads**.
2. When the Download Software page appears, locate the listing for Single Mailbox Recovery, select the **Microsoft Exchange** platform and click **Go**.
3. On the Single Mailbox Recovery page, locate the listing for the latest version and click **View and Download**.
4. Read the Single Mailbox Recovery Description page and click **Continue**.
5. Read the License page and click **Accept**.
6. Read and follow the instructions on the Single Mailbox Recovery Download page.

Uninstalling Single Mailbox Recovery

You can uninstall Single Mailbox Recovery by running the uninstall program.

1. Click the **Start** button and then click Control Panel. (In Windows 2000 and earlier, you will point to **Settings** before you click Control Panel.)
2. In Control Panel, click the **Add or Remove Programs** icon.
3. Click **Single Mailbox Recovery**, and then click **Change/Remove**.
4. Click **Yes** when the confirmation dialog box appears.
5. Follow the on-screen instructions.

Task III: Enable any optional agents

Single Mailbox Recovery includes all of the agents described in “Single Mailbox Recovery agents” on page 4. The ExtractWizard agent for **Microsoft NT Backup** and the ExtractWizard agent for **VERITAS Backup Exec™** are enabled by default at no extra cost. All other agents are disabled by default. The following paragraphs describe the license.ini file and how to enable optional ExtractWizard agents.

About the license.ini file

Single Mailbox Recovery requires a **license.ini** file. The license.ini file is a NetApp-supplied, read only text file that specifies license settings. Before Single Mailbox Recovery enables itself, it checks the license.ini file for the following:

- **Software version.** The license.ini file must be valid for Single Mailbox Recovery 4.0. You cannot use a Single Mailbox Recovery 3.0 or 3.1 license.ini file with Single Mailbox Recovery 4.0. Similarly, you cannot use a Single Mailbox Recovery 4.0 license.ini file with Single Mailbox Recovery 3.0 or 3.1.
- **Licensed agents.** Only the agents specified in the license.ini file will be enabled.

Viewing and enabling agents

To view the currently enabled agents

- On the **Help** menu, click **About** and then click **License Info**.

To enable an agent

1. Contact a sales representative and specify which agent you wish to purchase. A license.ini file containing the newly enabled agent will be sent to you.
2. Replace the existing .ini file with the new .ini file. The default location for this file is in the Single Mailbox Recovery directory.

TIP: To view or change the location of the license.ini file, see “Setting preferences” on page 144. In the Single Mailbox Recovery Preferences dialog box, click the **Options** tab and read the instructions for the “License file name” preference.

Chapter 1: Using the ExtractWizard Direct Method

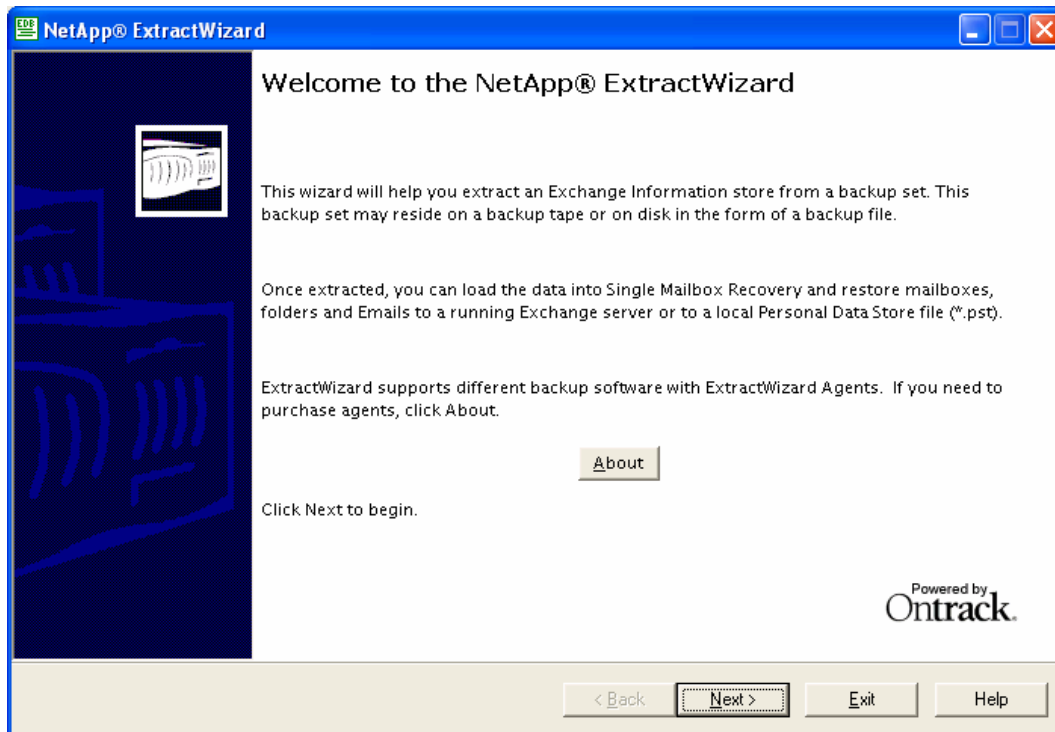
If you have not yet extracted backed-up Exchange Information Store data, try using Single Mailbox Recovery ExtractWizard. The ExtractWizard extracts both private and public Exchange Information Store data from tape and disk backups to any alternate location (e.g., machine, volume, folder), thereby eliminating the need for a recovery server. In contrast, most backup programs let you restore Exchange data only to the same or duplicate server from which it was backed up.

The Direct Method of extracting backed-up Exchange data reads the tape or disk file directly without needing the original backup software installed. This method is useful if the original backup software is unavailable and you know the tapes on which the Exchange Information Store backups reside. For more information, see “ExtractWizard: Method of Extraction” on page 14.

NOTE: For information on using the Advanced Method of extracting backed-up Exchange data, see “Chapter 2: Using the ExtractWizard Advanced Method.”

ExtractWizard: Welcome Page

1. Click the **Start** button, and then point to **Programs**. Point to **NetApp**, point to **Single Mailbox Recovery**, and then click **ExtractWizard**. The first page describes the wizard.



ExtractWizard: Pointing to a NetApp device

In order for ExtractWizard to operate, one or more NetApp storage systems must be present on the same network as the one on which ExtractWizard is installed.

The first time you start ExtractWizard, complete the following steps to point ExtractWizard to the presence of a NetApp storage system that is running in the same network environment.

1. When the ExtractWizard Welcome page appears, click **About** and then click **License Info** to display the License Information page.
2. Locate the **Storage appliance name or IP address** field. Type or browse and select the name or address of any NetApp storage system on the network and press the **Enter** key.

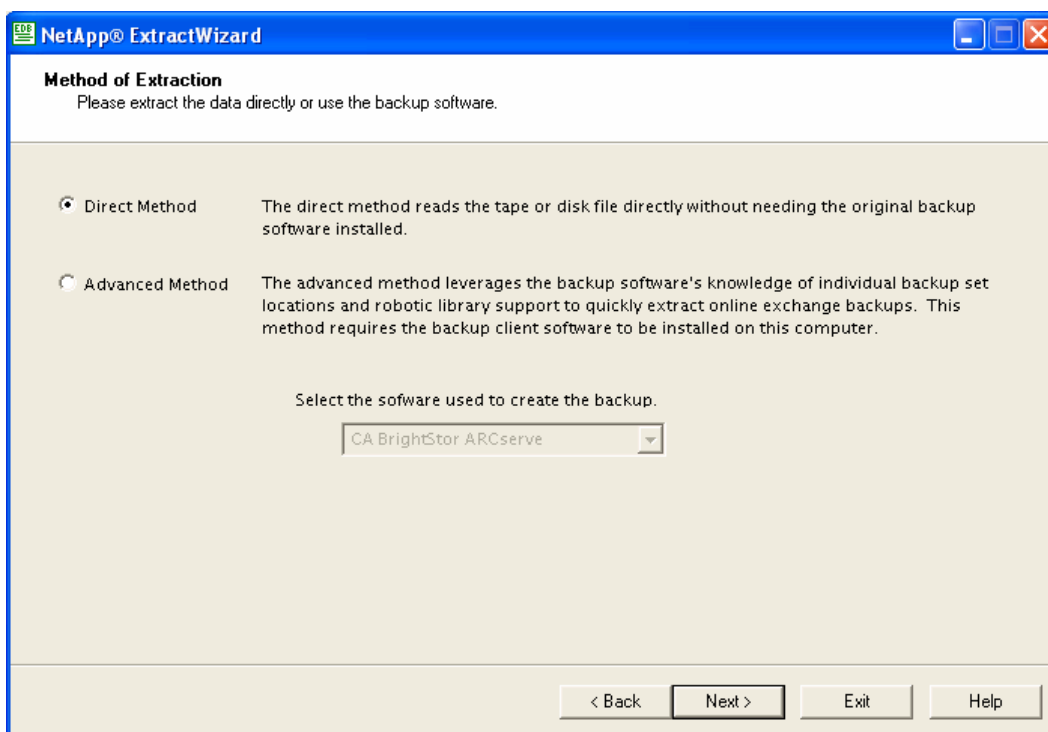
Note: The name or IP address of any NetApp storage system in the environment will suffice, whether or not you intend to carry out ExtractWizard operations on it.

3. After you press the **Enter** key, click the **Close** button (Be sure to press the **Enter** key first) to close the License information box.
4. Click **OK** to close the About box and redisplay the ExtractWizard Welcome page.
5. Click **Next**.

Note: After you have specified the name or IP address of a NetApp storage system in the environment once, you do not need to enter it again, as long as the specified storage system exists in this network environment.

ExtractWizard: Method of Extraction

The second page of the ExtractWizard offers two methods of extracting backed-up Exchange data.



Direct Method

The Direct Method reads the tape or disk file directly without needing the original backup software installed. This method is useful if the original backup software is unavailable and you know the tapes on which the Exchange Information Store backups reside.

The Direct Method has the following requirements:

- The tape drive must be directly attached to the computer and configured and active in the Windows Device Manager.
- The latest Windows drivers supplied directly from the manufacturer of the tape drive hardware should be installed for best results.
- Both online and offline Exchange backups are supported.
- As ExtractWizard reads tapes one at a time, you must manually insert and eject each tape when prompted
- If ExtractWizard is installed on your backup server, make sure the services for the backup software are disabled.

Advanced Method

The ExtractWizard Advanced Method uses your existing backup software to extract an Exchange database from a backup server or tape library, across the network, to the computer running ExtractWizard. The Advanced Method takes full advantage of your backup software's knowledge of individual set locations and robotic library support. This is the fastest method to extract an Exchange Information Store from the most recent backups managed by your backup server.

Chapter 1: Using the Extract Wizard Direct Method

Once configured for the Advanced Method, ExtractWizard seamlessly integrates with your backup software and fully supports your existing catalogs, backups, and tape library. No other changes to your existing backup architecture or settings are required.

The Advanced Method offers two choices: the API method of extraction and the Exchange Emulation method of extraction. They share the following requirements:

- Only online Exchange backups are supported. This includes full, copy, incremental, and differential backups.
- The backup client software must be installed on the computer running ExtractWizard.

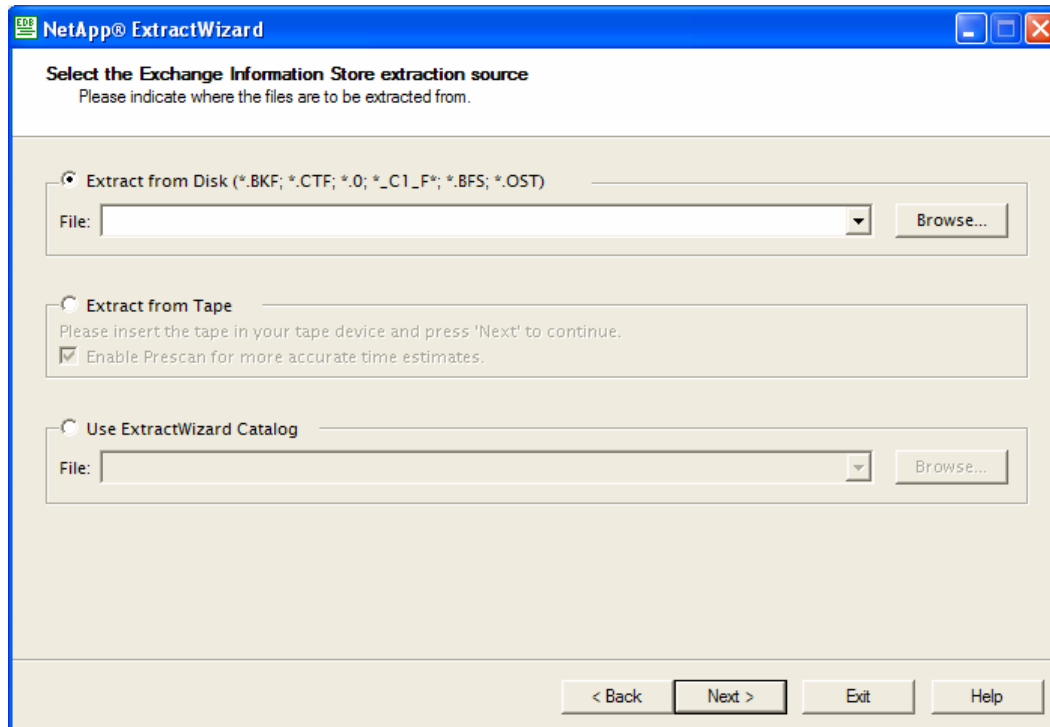
NOTE: The Exchange Emulation method has additional requirements. For information on using the Advanced Method of extracting backed-up Exchange data, see Chapter 2: “Using the ExtractWizard Advanced Method.”

To use the direct method of extracting backed-up Exchange data

1. Select the **Direct Method** option.
2. Click **Next**.

ExtractWizard: Exchange Information Store Extraction Source

On the next page of the ExtractWizard, select the Exchange Information store extraction source.



Do one of the following:

- Select **Extract from Disk**. Then type the extraction source file path, use the history drop-down menu, or browse to it. Click **Next**.
- Select **Extract from Tape**. Then insert a backup tape in your tape device and, if desired, select the **Enable Prescan** option for more accurate time estimates. Click **Next**.

If the ExtractWizard cannot locate a tape in the selected device, it will prompt you to insert the tape. If you have more than one tape device connected to your system, another screen will appear. Select the device containing the tape.

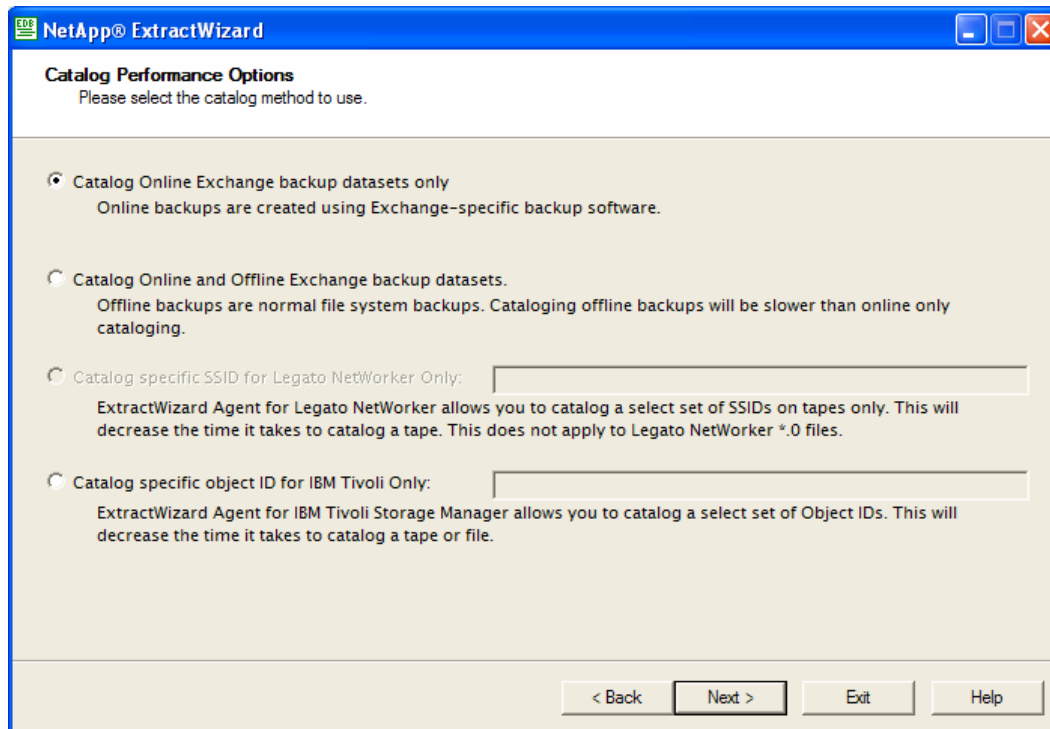
- Select **Use ExtractWizard Catalog**. Then browse to a previously created catalog file, or use the history drop-down menu. Look for the .ewc extension on the file. Click **Next**. In order to select this option, you must have previously created one or more ExtractWizard catalog files. For information on creating an ExtractWizard catalog file, see “Saving an ExtractWizard Catalog File” on page 30.

NOTES:

- ExtractWizard requires that the tape drive be configured and active in the Device Manager.
- ExtractWizard works best with Windows drivers supplied directly from the manufacturer of the tape drive hardware.
- If ExtractWizard is installed on your backup server, make sure the services for the backup software are disabled.

ExtractWizard: Catalog Performance Options

The **Catalog Performance Options** page of the ExtractWizard offers three options for cataloging Exchange backup data sets. All three of the options will automatically skip over known backup types that do not contain Exchange Information Store files. These types include registry backups, SQL backups, UNIX backups, image backups, NetWare backups, Macintosh backups.



To choose a catalog performance option

6. Select one of the following options:

- **Catalog Online Exchange backup datasets only:** This option will catalog only known online Exchange backup datasets. It will skip all other types of backups. If the backup type is unknown, it will be skipped.
- **Catalog Online and Offline Exchange backup datasets:** This option will catalog known online and offline Exchange backup datasets. If an unknown backup type is encountered, Extract Wizard will catalog it just in case it is a new backup identifier for Exchange backups. This option is slower because it will catalog more types of backups.
- **Catalog SSID for Legato NetWorker Only:** Enter a specific SSID or a list of SSIDs, separated by commas, in the box. This option is available only if the Legato agent is installed and you selected a tape source. ExtractWizard will catalog only the SSIDs listed. When ExtractWizard detects the end of the SSIDs in the list, it will stop immediately and rewind the tape.

This option greatly increases the catalog speed for Legato users who want to start on a tape in the middle of a span set. If you select a specific SSID search on a non-Legato tape, it will behave identically to the second option (Catalog Online and Offline Exchange backup datasets).

- **Catalog specific object ID for IBM Tivoli Only:** Enter a specific object ID or a list of object IDs, separated by commas, in the box. This option is available only if the IBM Tivoli agent is

installed. ExtractWizard will catalog only the object IDs listed. When ExtractWizard detects the end of the object IDs in the list, it will immediately stop processing.

This option greatly increases the catalog speed for Tivoli users who know the Object ID of the backup they wish to extract. If you select a specific Object ID search on a non-Tivoli tape, it will behave identically to the second option (Catalog Online and Offline Exchange backup datasets).

- **Catalog specific job ID for CommVault Galaxy only:** Enter a specific job ID or a list of job IDs, separated by commas, in the box. This option is available only if the CommVault Galaxy agent is installed. ExtractWizard will catalog only the sessions associated with the Job IDs entered, both online and offline sessions. ExtractWizard will be unable to know when all data associated with the Job ID has been processed; therefore, ExtractWizard will be unable to stop cataloging early and will still need to process the entire tape. Using this option will still greatly increase the speed of the catalog, because all other sessions can be quickly skipped over.

This option greatly increases the catalog speed for CommVault Galaxy users who know the job IDs of the backup they want to extract. This option also applies to CommVault backup-to-disk files. If you select a specific job ID search on a non-CommVault Galaxy tape, it will behave identically to the second option (Catalog Online and Offline Exchange backup datasets).

NOTE: All five options skip known non-Exchange backups (such as registry, SQL, Unix, Mac, Netware).

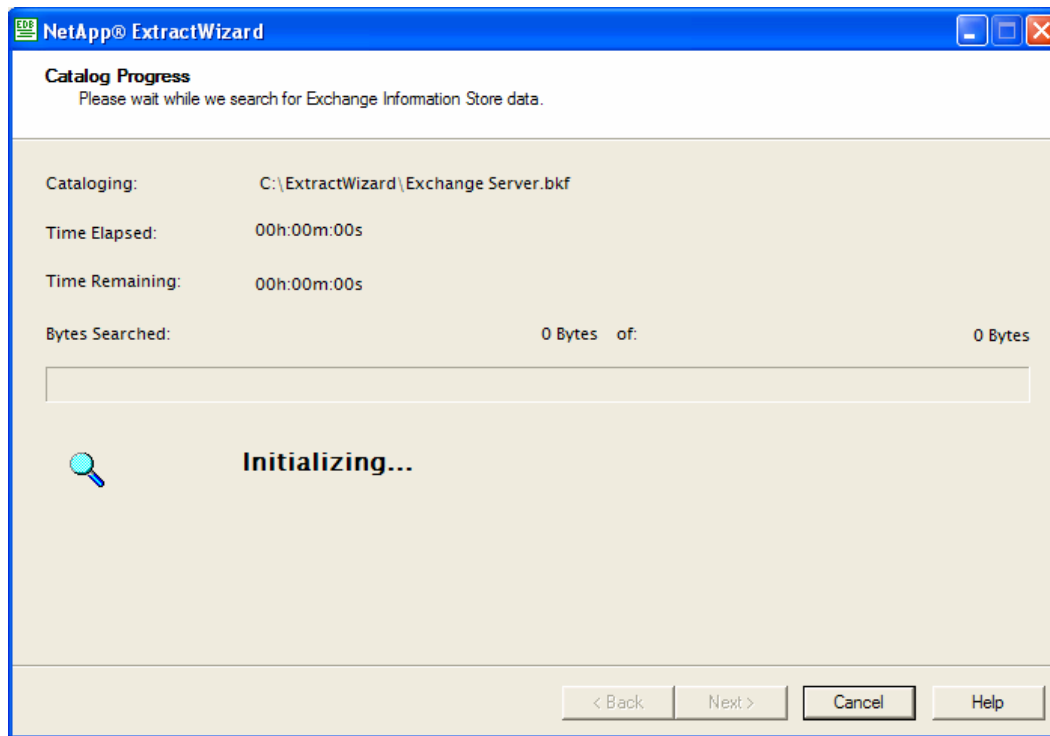
7. Click **Next**.

ExtractWizard: Catalog Progress

The **Catalog Progress** page of the ExtractWizard shows the catalog progress. The ExtractWizard catalogs the disk or tape and locates the Information Store data. Cataloging a disk backup is much faster than cataloging a full tape. During cataloging, the ExtractWizard can be in one of four states: initializing, reading (processing one block at a time), scanning (seeking ahead multiple blocks), and rewinding. In addition, CommVault Galaxy Backup & Recovery displays a pre-cataloging stage (i.e., reading session information from the backup) after the initializing stage.

Do one of the following:

- Click **Cancel** if you want to stop the catalog process. If you click **Cancel**, the ExtractWizard catalog will display all files that it found to that point.
- When the catalog is completed, click **Next** to proceed to the next page of the ExtractWizard.



ExtractWizard: Exchange Information Store Selection

On the **Exchange Information Store File Selection** page of the ExtractWizard, you can select both the private and public Exchange Information Store files that you want to extract from an Exchange backup. This page of the wizard requires you to perform four steps:

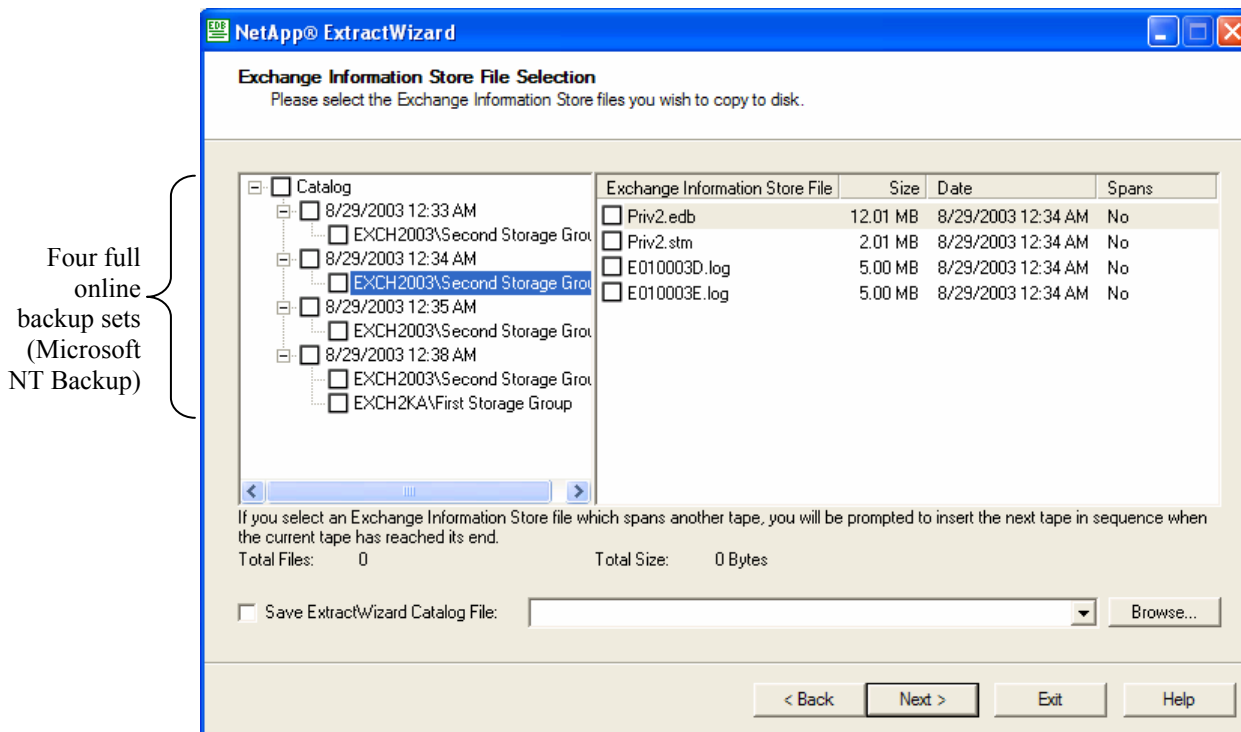
- “Step 1: Viewing an Exchange backup”
- “Step 2: Extracting an online or offline backup”
- “Step 3: Saving an ExtractWizard catalog file”
- “Step 4: Completing the Exchange Information Store selection”

The remainder of this section describes each step in detail.

Step 1: Viewing an Exchange backup

1. On the left side of the window, click the plus sign (+) next to a backup set to view its volumes.
2. Select a volume (select its name, not its check box) to display the Exchange Information Store Files on the right side of the window.

In the illustration below, the Microsoft NT Backup contains four backup sets and five volumes. Each backup set lists the session day and time (e.g., 8/29/2003 12:34 AM). Each volume lists the machine name and volume name (e.g., EXCH 2003\Second Storage Group).



Viewing a full online disk backup (Microsoft NT Backup)

Step 2: Extracting an online or offline backup

After viewing the Exchange backup sets and information store files, you can select the files you want to extract. When viewing and selecting files, keep in mind the following points:

- Microsoft NT Backup, VERITAS Backup Exec, VERITAS NetBackup, and IBM Tivoli Storage Manager can contain multiple backup sets for both disk and tape backups.
- Computer Associates BrightStor ARCserve and LEGATO NetWorker can contain only one backup set for disk, but multiple backup sets for tape.

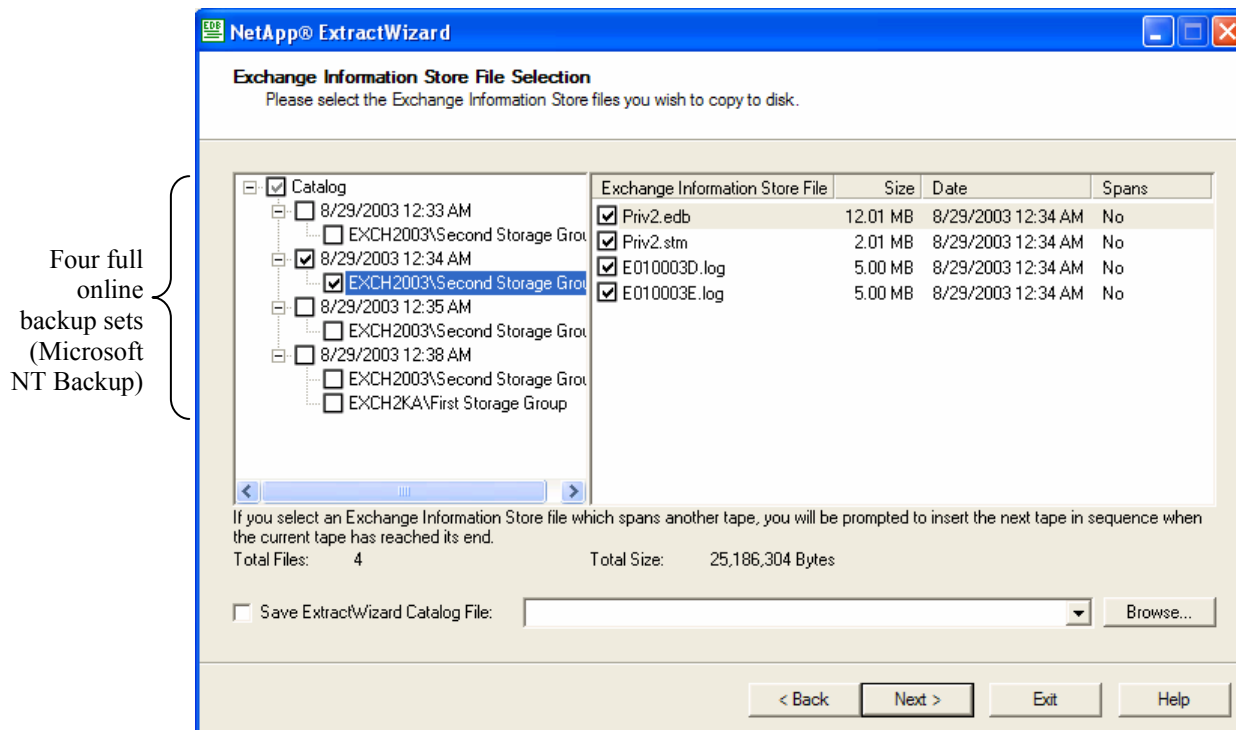
To extract a full online (normal) backup

- On the **Exchange Information Store File Selection** page of the ExtractWizard, select the .edb, .stm, and .log files, as well as .pat files, if they exist.

Example 1: Extracting a Full Online Disk Backup (Microsoft NT Backup)

A Microsoft NT Backup to disk can contain multiple backup sets and volumes. Each backup set lists the session day and time (e.g., 8/29/2003 12:34 AM). Each volume lists the machine name and volume name (e.g., EXCH 2003\Second Storage Group).

Chapter 1: Using the Extract Wizard Direct Method

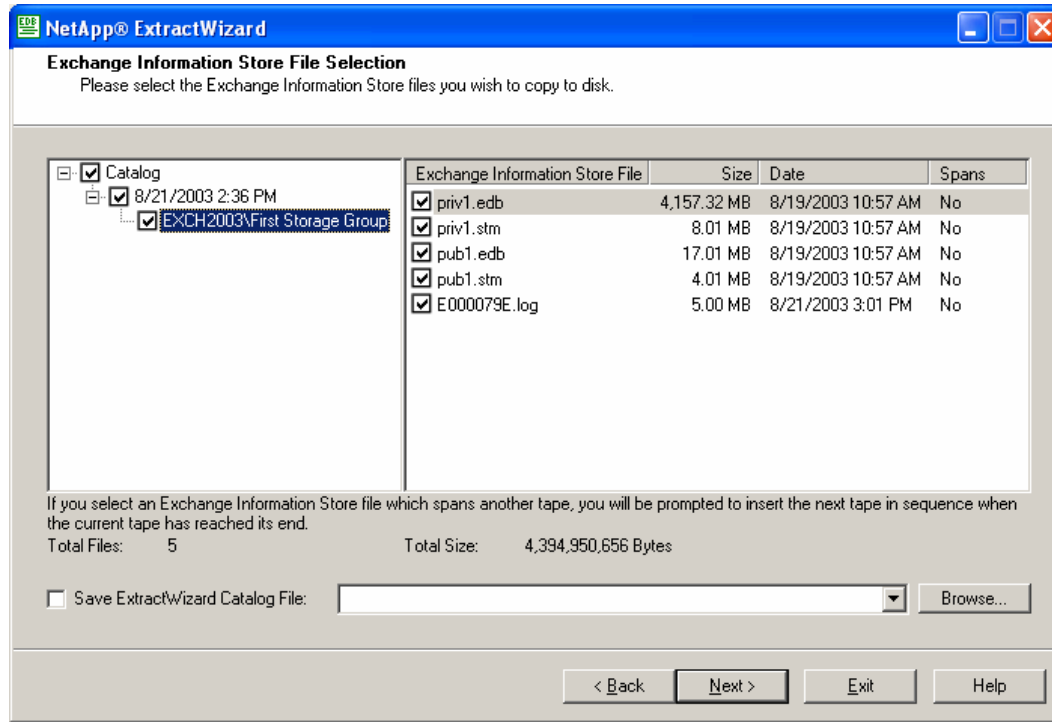


Extracting a full online disk backup (Microsoft NT Backup)

Example 2: Extracting a Full Online Disk Backup (Computer Associates BrightStor ARCserve)

A Computer Associates BrightStor ARCserve backup to disk can contain only one backup set and volume. The backup set lists the session day and time (e.g., 8/21/2003 2:36 PM). Each volume lists the machine name and volume name (e.g., Exch2003\First Storage Group).

One full
online
backup set
(CA BrightStor
ARCserve)

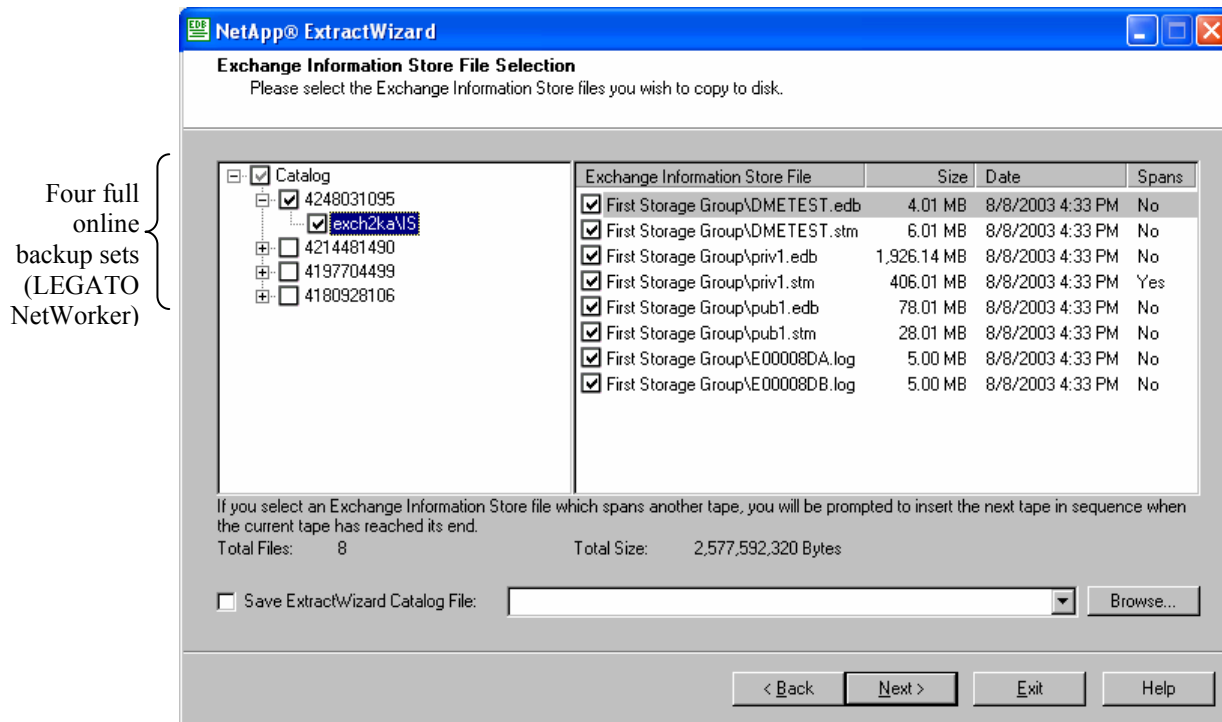


Extracting a full online disk backup (Computer Associates BrightStor ARCserve)

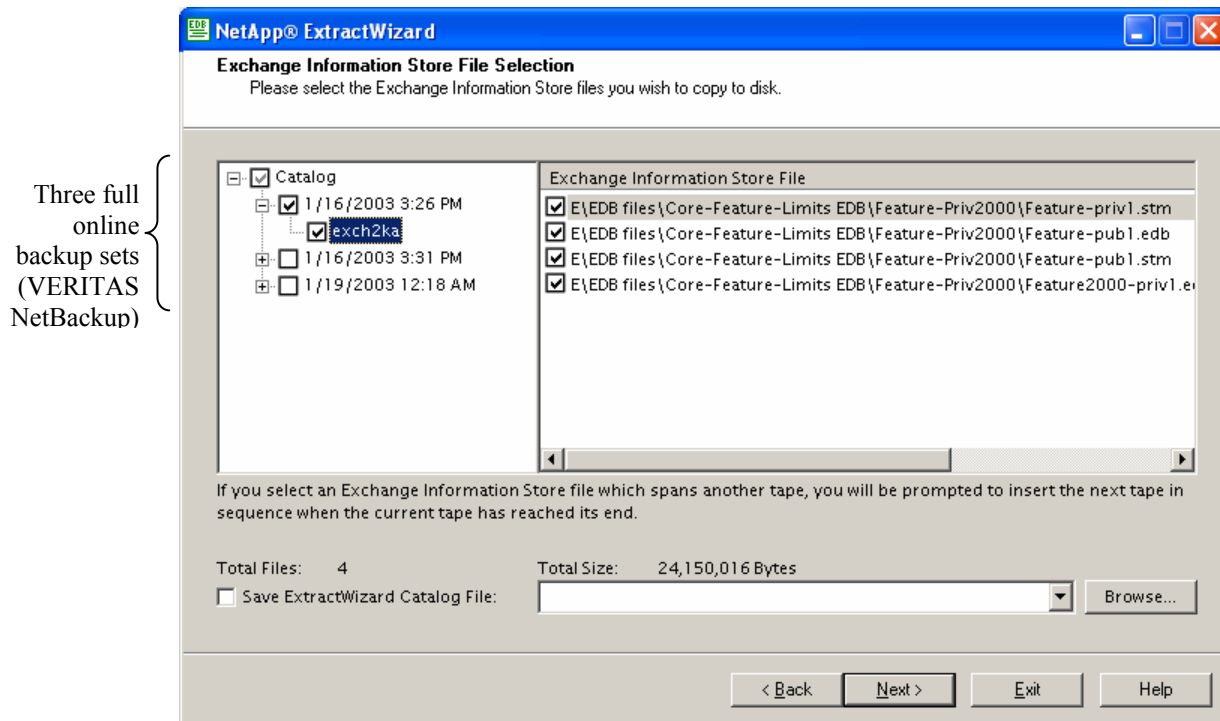
Chapter 1: Using the Extract Wizard Direct Method

Example 3: Extracting a Full Online Tape Backup (LEGATO NetWorker)

A LEGATO NetWorker backup to tape can contain multiple backup sets and volumes. The backup set lists the SSID (e.g., 4248031095). The volume lists the machine name and volume name (e.g., Exch2ka\IS).



Extracting a full online tape backup (LEGATO NetWorker)

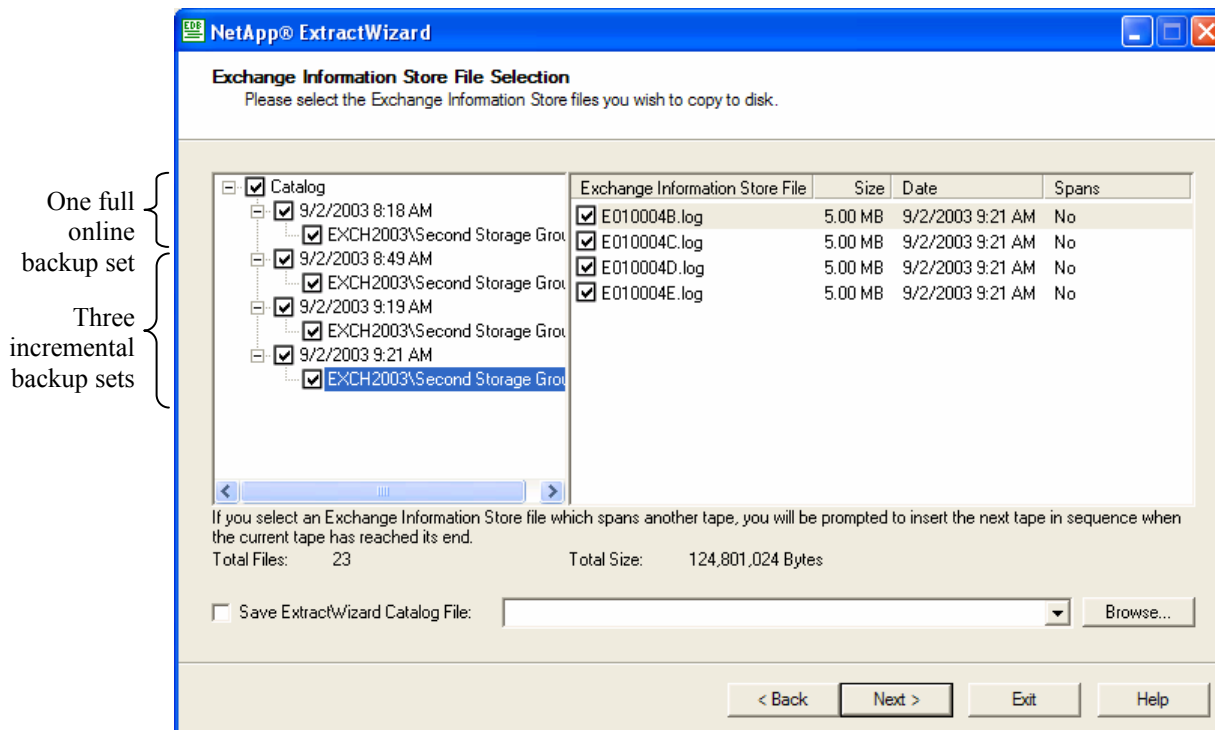


Extracting a full online tape backup (VERITAS NetBackup)

To extract the last full online and every incremental backup

- On the **Exchange Information Store File Selection** page of the ExtractWizard, select all of the files (e.g., .edb, .log, .stm, .pat) from the last full online (normal) backup, plus the .log files from every incremental backup.

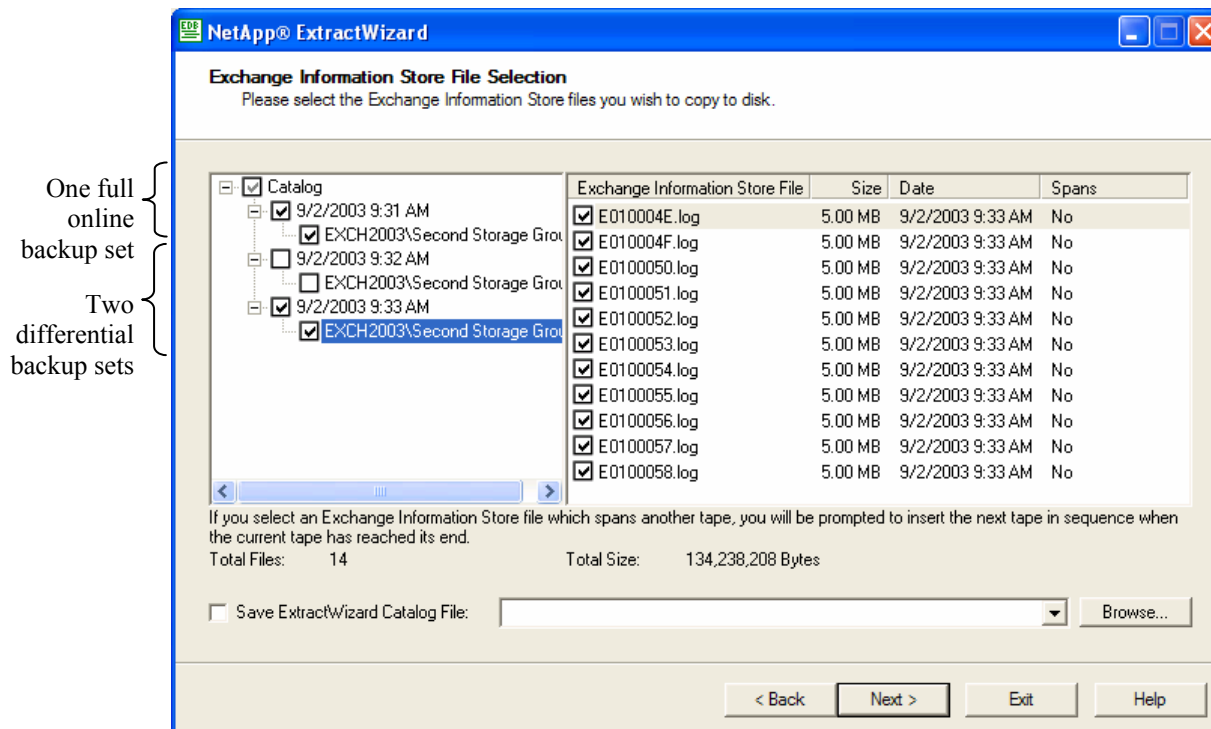
Chapter 1: Using the Extract Wizard Direct Method



Extracting the last full online plus every incremental backup to disk (Microsoft NT Backup)

To extract the last full online and last differential backup

- On the **Exchange Information Store File Selection** page of the ExtractWizard, select all of the files (e.g., .edb, .log, .stm, .pat) from the last full online (normal) backup, plus the .log files from the last differential backup.



Extracting the last normal plus the last differential backup to disk (Microsoft NT Backup)

To extract an online copy backup (plus every incremental or last differential)

Use the same procedure for extracting a copy backup as you do for extracting a full online backup. A copy backup also works the same as a full online backup when extracting a copy backup plus every incremental or last differential backup. For more information see the following topics:

- “To extract a full online (normal) backup” on page 21.
- “To extract the last full online and every incremental backup” on page 25.
- “To extract the last full online and last differential backup” on page 27.

NOTE: The only difference between a full online backup and a copy backup is the following: For a full online backup, the .log files are truncated. For a copy backup, the .log files are not truncated.

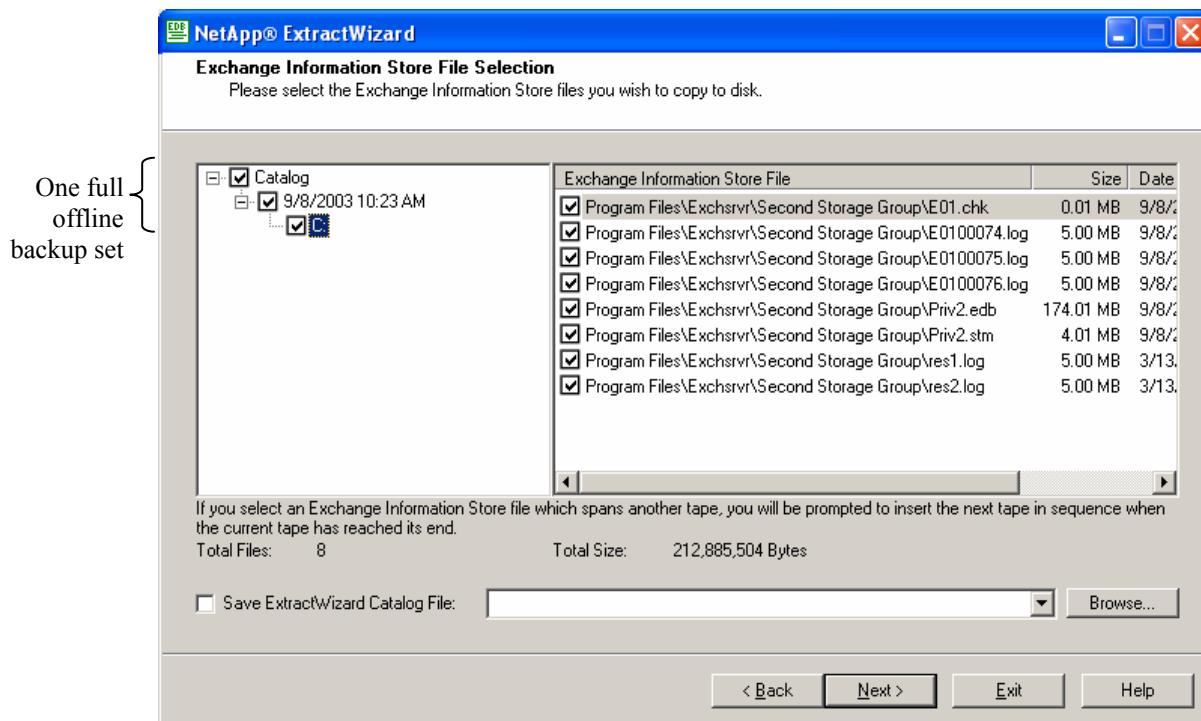
About extracting a full offline backup

The ExtractWizard works the same for an offline backup as it does for an online backup. There are four differences between an offline backup and an online backup:

1. For an offline backup, you need to extract the .edb and .stm files. To ensure that all email data is recovered, you should also include all .log files, as well as .pat and .chk files if they exist. Single Mailbox Recovery performs its own verification process and will include the .log, .pat, and .chk files to determine if it needs them to recover the data.
2. An offline backup can contain a .chk file.
3. The name of the volume for an offline backup displays the drive letter.
4. The volume for an offline backup extracts the full path for the Information Store files.

To extract a full offline backup

- On the **Exchange Information Store File Selection** page of the ExtractWizard, select the .edb and .stm files. To ensure that all email data is recovered, you should also select .log files, as well as .pat and .chk files if they exist.



*Extracting a full **offline** disk backup (Microsoft NT Backup)*

About extracting a backup from Exchange 5.5 vs. Exchange 2000/2003

Extracting data from Exchange 5.5 works the same way as extracting data from Exchange 2000/2003. However, when you are selecting files to extract on the **Exchange Information Store File Selection** page of the ExtractWizard, you will notice the two following differences: vs. Exchange 2000/2003

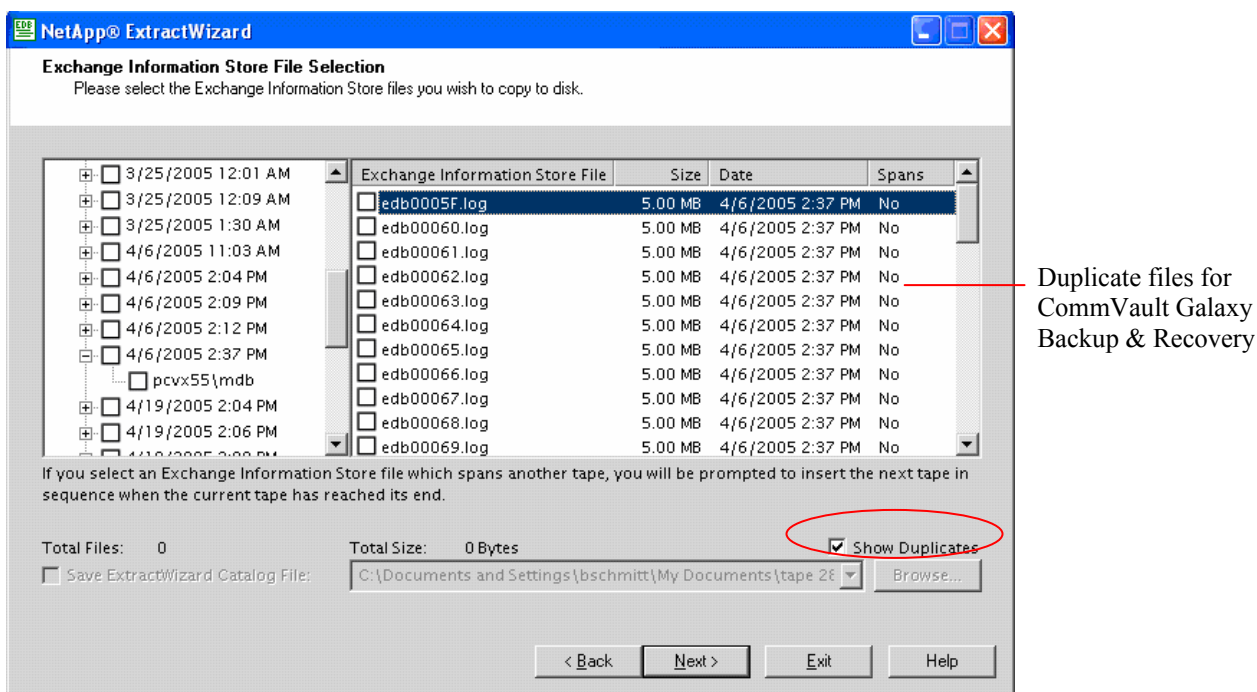
- Exchange 5.5 through Exchange 2000 (SP1) contain .pat (patch) files in their information stores, whereas Exchange 2000 (SP2) and later do not contain .pat files in their information stores.

In Exchange 5.5 through Exchange 2000 (SP1), the .pat files are used to record information on page splits. In Exchange 2000 (SP2) and later, the functionality provided by .pat files is incorporated into Exchange log files.

- Exchange 2000/2003 information stores contain .stm files in addition to the .edb files. Exchange 5.5 does not contain .stm files.

Using the “Show Duplicates” Option for CommVault Galaxy Backup & Recovery

ExtractWizard has a “Show Duplicates” check box for CommVault users. Duplicates can occur when CommVault Backup fails and restarts. You can select this check box, and if duplicates exist, they will appear on the right side of the ExtractWizard window. If ExtractWizard or Single Mailbox Recovery encountered a problem with a file, you can then attempt to extract its duplicate. This feature saves time by allowing you to extract only that file (that is, its duplicate) which encountered the problem, instead of performing a full extraction of all of the files in the session.



Selecting the “Show Duplicates” check box for CommVault users

To use the “Show Duplicates” Option for CommVault Galaxy Backup & Recovery

- Select the **Show Duplicates** check box. If duplicates exist, they will appear on the right side of the ExtractWizard window.

Chapter 1: Using the Extract Wizard Direct Method

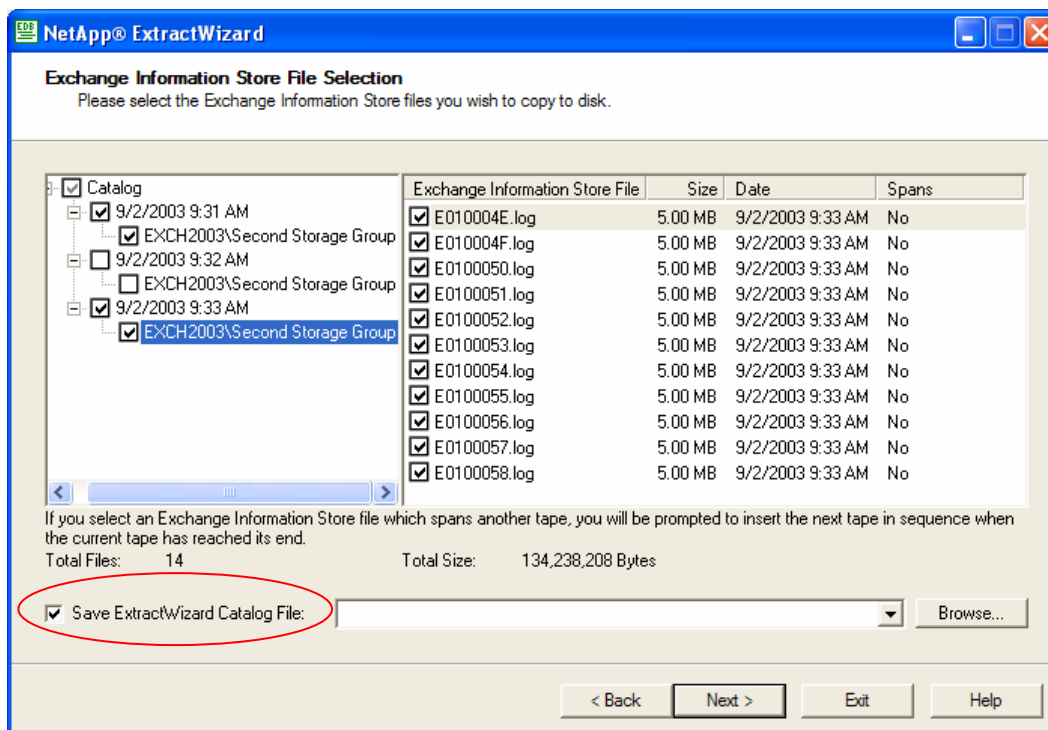
2. Select the duplicates of the files that encountered problems in ExtractWizard or Single Mailbox Recovery, and click **Next**.
3. Complete the remaining steps of the ExtractWizard.

Step 3: Saving an ExtractWizard catalog file

The catalog file saves all the information that ExtractWizard needs to extract from a backup disk or tape. Saving a catalog file means that the next time you extract from that tape or backup disk, you can skip the catalog process.

To save an ExtractWizard catalog file

1. On the **Exchange Information Store File Selection** page of the ExtractWizard, select the files you want to extract, and then select the **Save ExtractWizard Catalog File** check box.
2. Browse to the desired location, type a file name, and click **Save**. Note that the catalog file is not saved until you click **Next**.

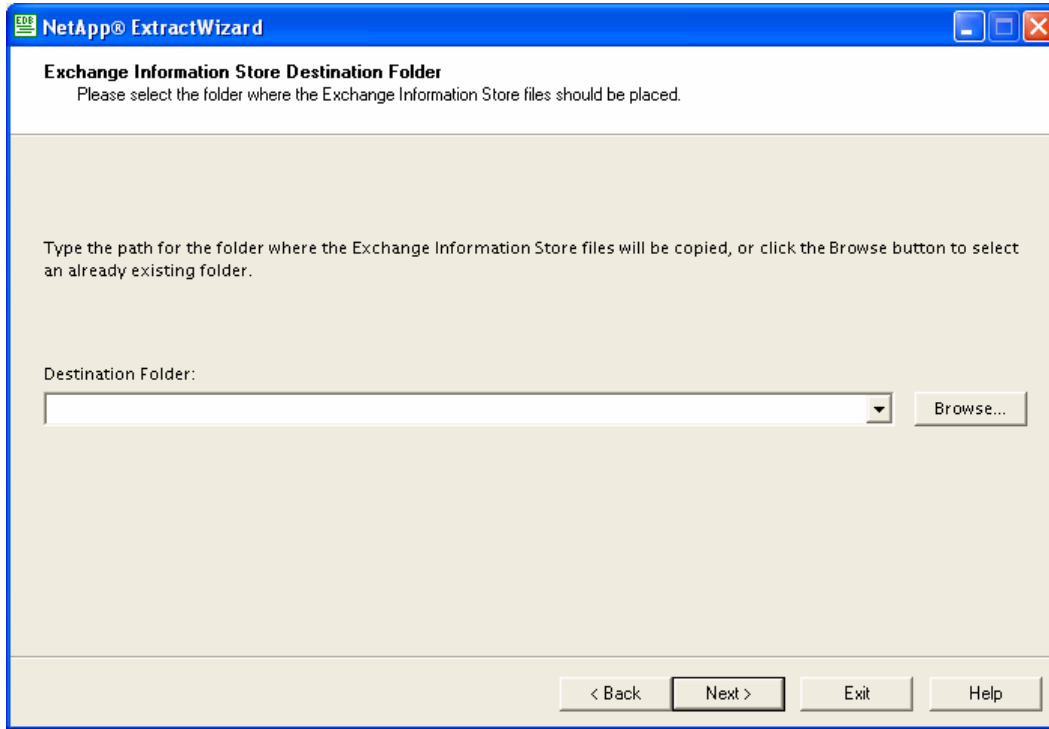


Step 4: Completing the Exchange Information Store selection

On the **Exchange Information Store File Selection** page of the ExtractWizard, make sure you have selected the Information Store files that you want to extract, and saved the ExtractWizard catalog file, if desired. Then click **Next** to proceed to the last page of the wizard.

ExtractWizard: Exchange Information Store Destination Folder

1. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, type the path where you want ExtractWizard to extract the data, use the history drop-down menu, or browse to the desired location and type the file name. (The Browse window lets you create a new folder on the target volume, unless you are running Windows NT 4).
2. Click **Next**. The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories.

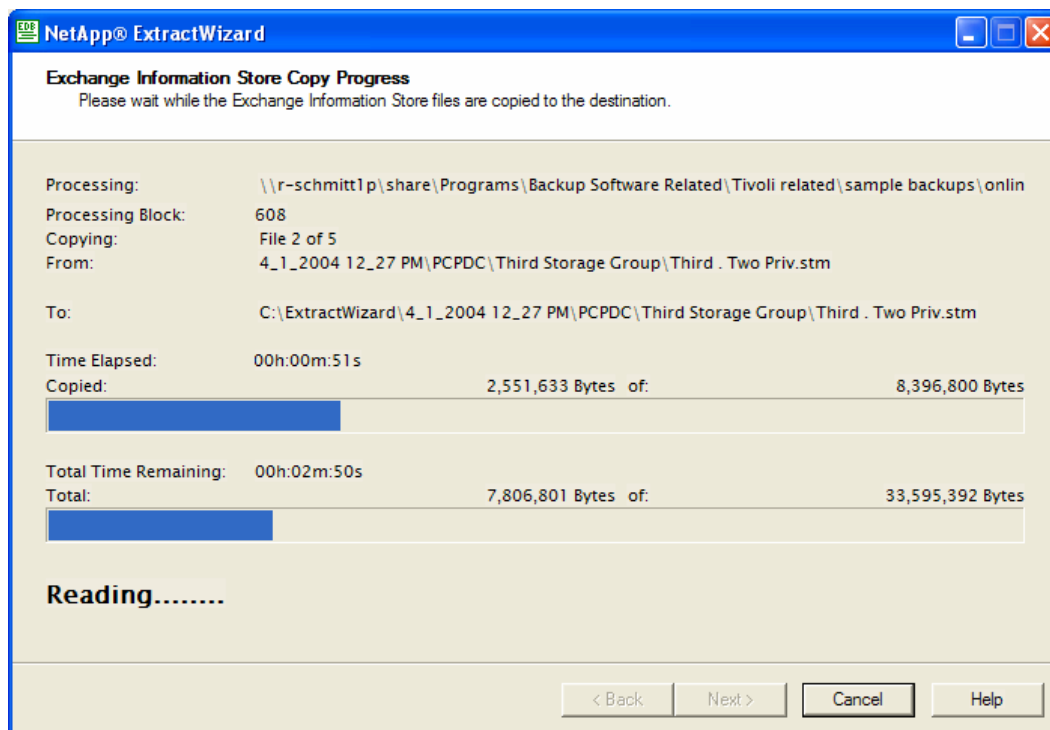


ExtractWizard: Exchange Information Store Copy Progress

The **Exchange Information Store Copy Progress** page of the ExtractWizard shows the progress of the ExtractWizard extracting the Exchange Information Store data to the destination folder. This process may take some time.

The top bar indicates the progress for the file that is currently being extracted. The bottom bar indicates the progress for all of the files. For LEGATO and NetBackup tapes, the top bar may switch back and forth between files if they are interleaved.

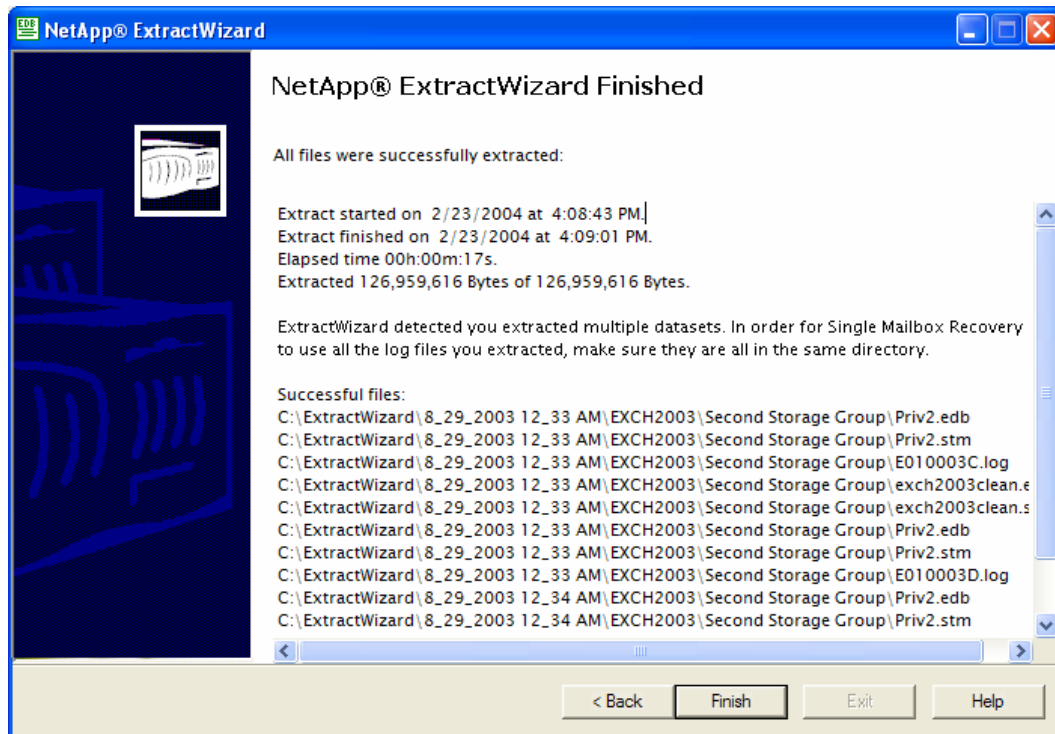
During file extraction, ExtractWizard can be in one of four states: initializing, reading (processing one block at a time), scanning (seeking ahead multiple blocks), and rewinding.



NOTE: You can click **Cancel** to stop the process. The file currently being extracted will be deleted, but you can access any files that have completed extraction.

ExtractWizard: Completing the Wizard

The last page of the ExtractWizard displays all of the files that were successfully extracted. If you are satisfied with the results, click **Finish**.



If you extracted multiple data sets, see “Organizing the Extracted Files for Single Mailbox Recovery” below.

Organizing the extracted files for Single Mailbox Recovery

Before using the extracted files to restore Exchange mail items, you will need to organize the extracted files for Single Mailbox Recovery if the backup was created using one of the following backup methods:

- Online incremental backup
- Online differential backup
- Offline backup

For detailed information, see “Organizing files extracted from other backup applications” on page 224.

Chapter 2: Using the ExtractWizard Advanced Method

The ExtractWizard Advanced Method uses your existing backup software to extract an Exchange database from a backup server or tape library, across the network, to the computer running ExtractWizard. The Advanced Method takes full advantage of your backup software's knowledge of individual set locations and robotic library support. This is the fastest method to extract an Exchange Information Store from the most recent backups managed by your backup server.

Once configured for the Advanced Method, ExtractWizard seamlessly integrates with your backup software and fully supports your existing catalogs, backups, and tape library. No other changes to your existing backup architecture or settings are required.

NOTE: For information on using the **Direct Method** of extracting backed-up Exchange data, see "Chapter 1: Using the ExtractWizard Direct Method" on page 13.

The ExtractWizard Advanced Method offers you two choices:

API Method. With this method, ExtractWizard communicates directly with the backup software server through methods provided by the client side .dll files. For more information, see "Using the API Method" on page 36. The API method is used for these types of backup software:

- IBM Tivoli Storage Manager—see page 36
- Legato NetWorker—see page 42

Exchange Emulation. With this method, ExtractWizard appears as an Exchange server to the backup software. You run the backup software and extract the Exchange data to the computer running ExtractWizard. For more information, see "Using the Exchange Emulation method" on page 50. The Exchange Emulation method is used for these types of backup software:

- Microsoft NT Backup—see page 51
- HP OpenView Storage Data Protector—see page 67
- VERITAS Backup Exec—see page 77
- Computer Associates BrightStor ARCserve—see page 95
- VERITAS NetBackup—see page 106
- CommVault Galaxy Backup & Recovery—see page 115

Requirements for using the ExtractWizard Advanced Method. The API and Exchange Emulation advanced methods share two main requirements:

- Only online Exchange backups are supported. This includes full, copy, incremental, and differential backups.
- The backup client software must be installed on the computer running ExtractWizard.
- One or more NetApp storage systems must exist in the same network environment.

NOTE: The Exchange Emulation method has additional requirements. For more information, see page 50.

Using the API Method

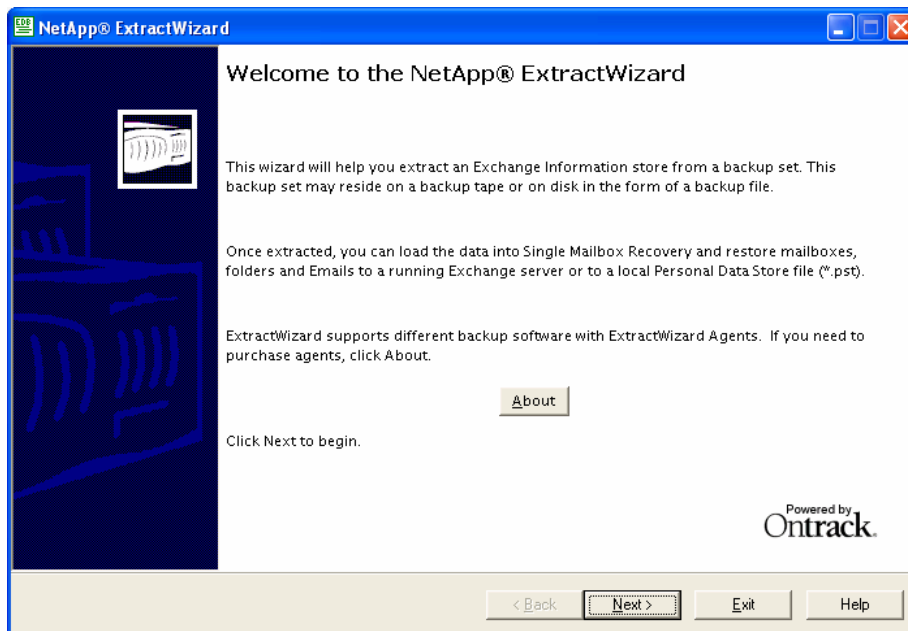
The API method of extracting backed-up Exchange data allows ExtractWizard to communicate directly to the backup software server. ExtractWizard queries the backup server for online Exchange backups using the backup software APIs (Application Program Interface). You then select which backups you want extracted and ExtractWizard will extract the databases to the desired location on disk.

The API method is used for two types of backup software:

- IBM Tivoli Storage Manager
- Legato NetWorker

Using the API Method for IBM Tivoli Storage Manager

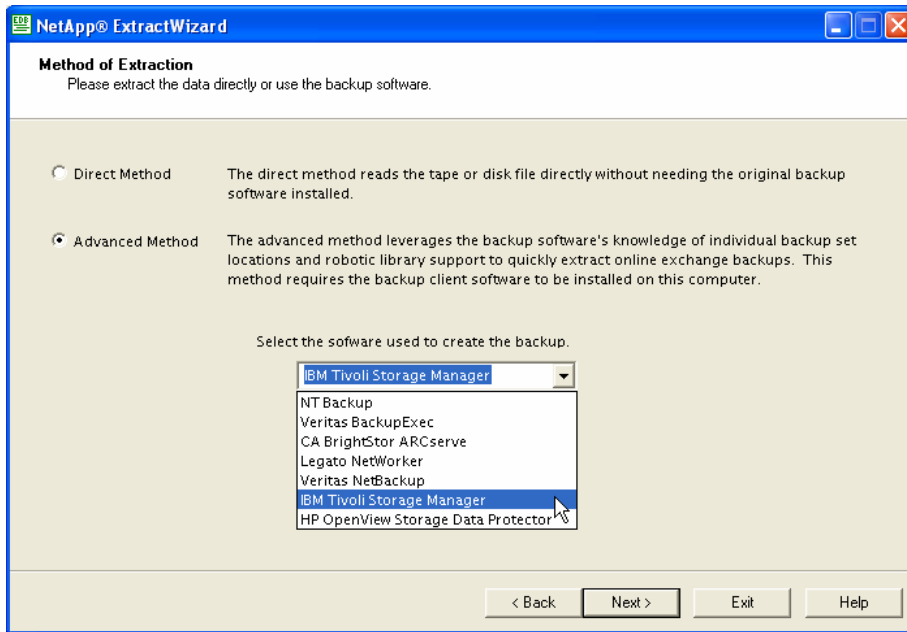
1. Install the IBM Tivoli client software on the computer that will be running ExtractWizard.
2. Start ExtractWizard. Click the **Start** button, and then point to **Programs**. Point to **NetApp**, point to **Single Mailbox Recovery**, and then click **ExtractWizard**. The first page describes the wizard.



Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 3.

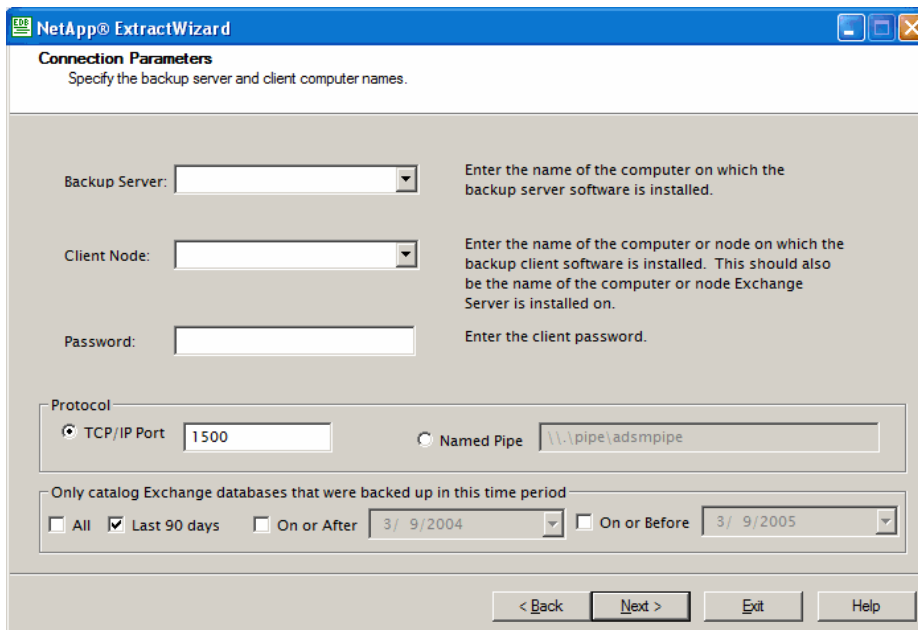
3. Click **Next**.

The **Method of Extraction** page of the ExtractWizard offers two methods of extracting backed-up Exchange data. For more information on these two methods, see page 14.



4. Select the **Advanced Method** option.
5. Select **IBM Tivoli Storage Manager** from the drop-down menu.
6. Click **Next**.

The **Connection Parameters** page of the ExtractWizard lets you specify the backup server and client computer names.



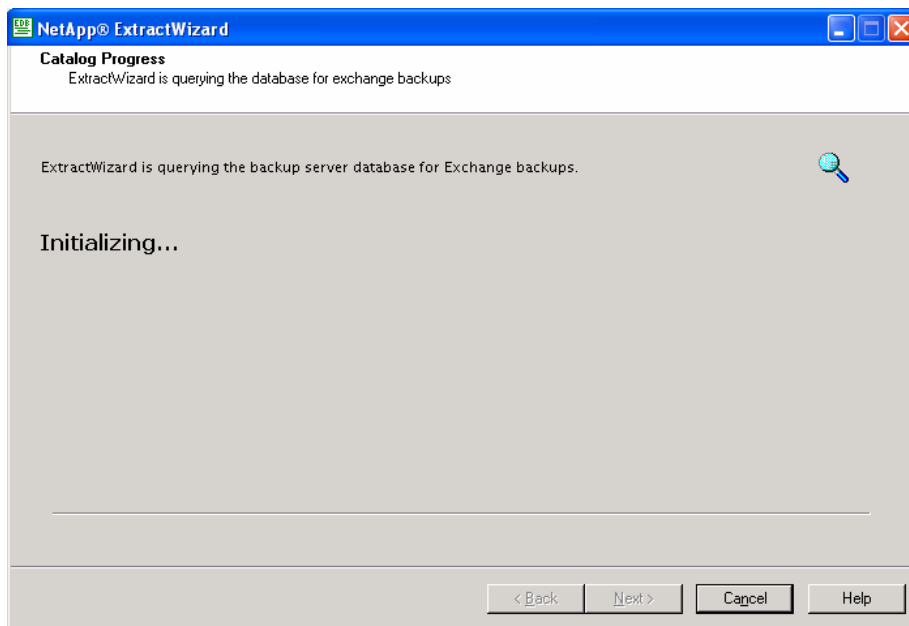
Connection parameters for IBM Tivoli Storage Manager

7. Specify the connection parameters:

Chapter 2: Using the Extract Wizard Advanced Method

- For **Backup Server**, enter the name of the computer on which the backup server software is installed.
- For **Client Node**, enter the IBM Tivoli client node that backed up the Exchange Information Store.
- For **Password**, enter the client password.
- For **Protocol**, select one of the following options:
 - o **TCP/IP Port:** Refer to your IBM Tivoli Storage Manager user guide or help for instructions.
 - o **Named Pipe:** Refer to your IBM Tivoli Storage Manager user guide or help for instructions.
- For **Only catalog Exchange databases that were backed up in this time period**, select the desired time period.

The **Catalog Progress** page of the ExtractWizard shows the catalog progress. The ExtractWizard queries the Tivoli backup server database for Information Store backups.



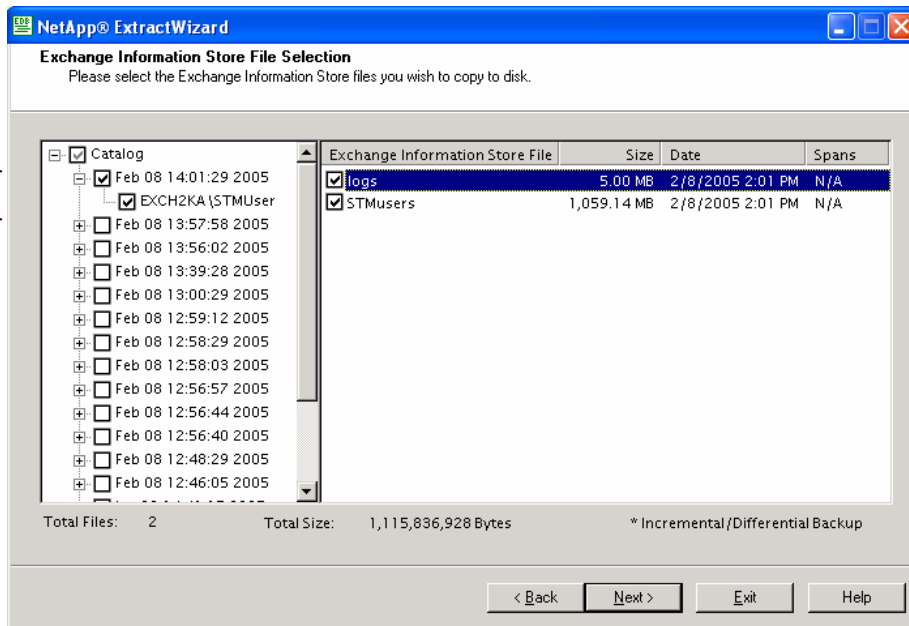
8. Do one of the following:
- Click **Cancel** if you want to stop the catalog process. If you click **Cancel**, the ExtractWizard catalog will display all files that it found to that point.
 - When the catalog is completed, click **Next** to proceed to the next page of the ExtractWizard.

The **Exchange Information Store File Selection** page of the ExtractWizard lets you select both the private and public Exchange Information Store files that you want to extract from an Exchange backup.

In the following example, IBM Tivoli Storage Manager contains multiple backup sets and volumes. Each backup set lists the session day and time (e.g., Feb 08 14:01:29 2005). Each volume lists the computer name and volume name (e.g., EXCH 2KA\STMUser). The objects belonging to the volume appear on the right side of the window. One object contains the log files, and the other object contains the .edb and .stm files.

NOTE: An asterisk (*) next to a backup indicates that it is an incremental or differential backup.

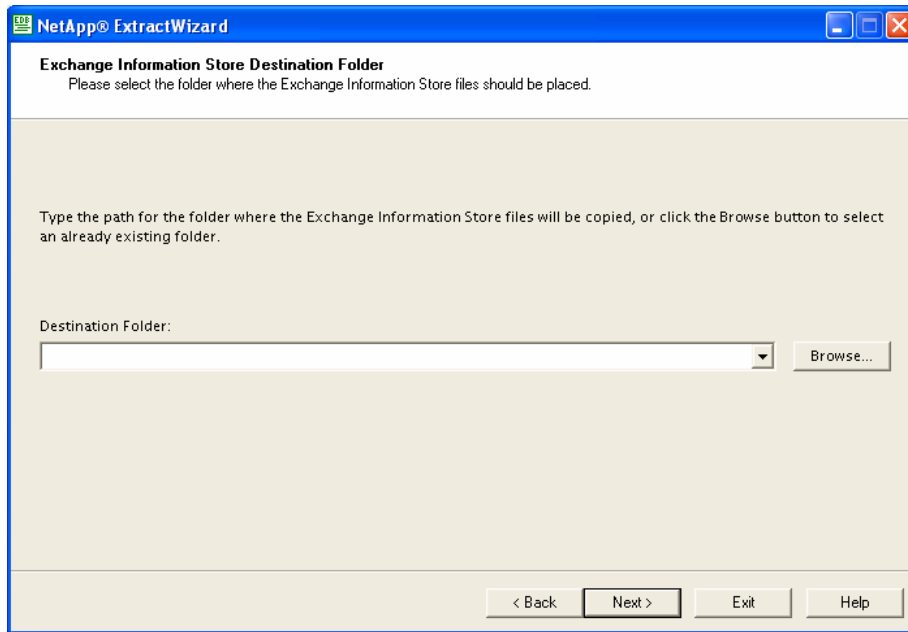
One full online
backup set
(IBM Tivoli
Storage
Manager)



Extracting a full online disk backup (IBM Tivoli Storage Manager)

9. On the left side of the window, click the plus sign (+) next to a backup set to view its volumes.
10. Select a volume (select its name, not its check box) to display the Exchange Information Store objects on the right side of the window.
11. Select the check boxes next to the objects containing the .log, .edb, and .stm, files, as well as .pat files, if they exist.
12. Click **Next**.

The **Exchange Information Store Destination Folder** page of the ExtractWizard lets you select a folder for the extracted files.



13. Under **Destination Folder**, specify a location for the extracted files.
14. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First, the ExtractWizard checks for the following conditions:

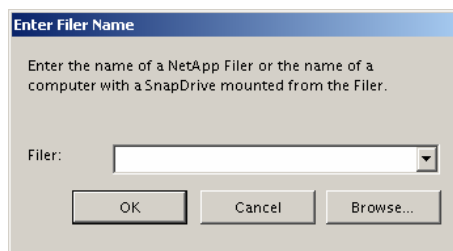
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

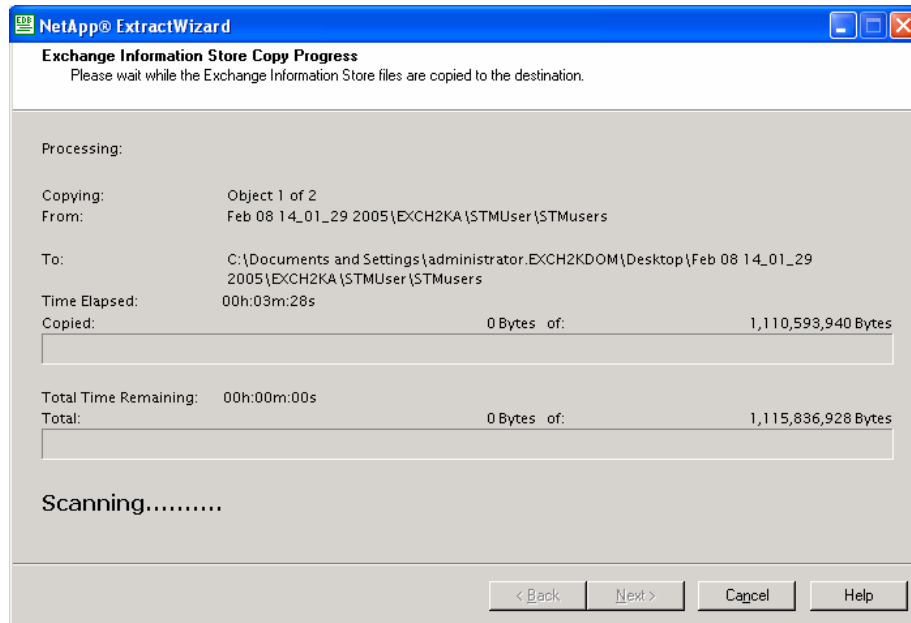
- o Enter or browse to the host name of a NetApp storage system.

- o Enter the IP address of a NetApp storage system.

Click **OK** to proceed to the next verification.

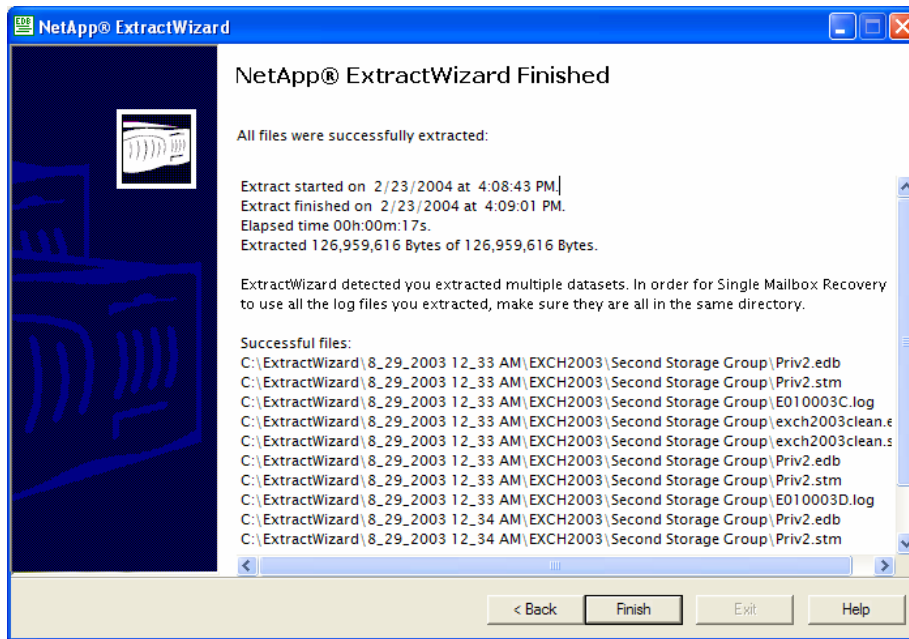
- b. Next, the ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **Exchange Information Store Copy Progress** page of the ExtractWizard shows the progress of the ExtractWizard extracting the Exchange Information Store data to the destination folder. This process may take some time.



15. (Optional) Click **Cancel** only if you want to stop the process. The file currently being extracted will be deleted, but you can access any files that have completed extraction.

The last page of the ExtractWizard displays all of the files that were successfully extracted.



16. If you are satisfied with the results, click **Finish**.
17. If you extracted multiple data sets, see “Organizing the Extracted Files for Single Mailbox Recovery” on page 115.

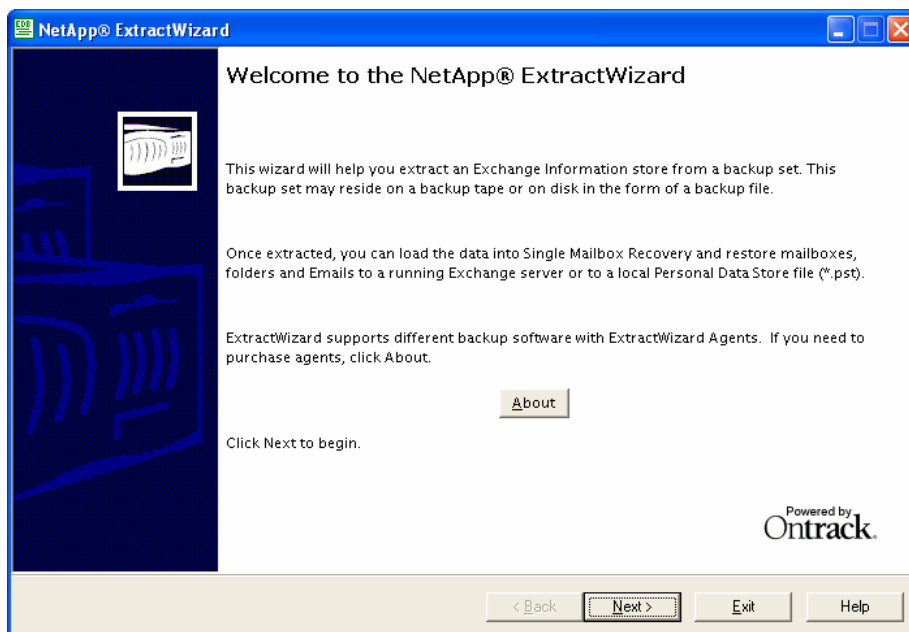
Using the API Method for Legato NetWorker

Before you use the API Method for Legato NetWorker, you must do the following:

- Make sure your current login has remote access to the client you are restoring to. To gain remote access, perform these steps: 1) Run NetWorker Administrator. 2) Select **Manage Clients**. 3) Right-click the Exchange client you wish to restore the database from and click **Edit**. 4) In the **Remote** tab, enter your full user name in the **Remote Access** box. Example: postmaster@yourcompany.com
- Make sure your login has Legato administrative rights to get correct sizes for Exchange files. If you do not have these rights, you can still run ExtractWizard, but you will not get accurate extraction progress.

To use the API Method for Legato NetWorker

1. Install the Legato client software on the computer that will be running ExtractWizard.
2. Start ExtractWizard. Click the **Start** button, and then point to **Programs**. Point to **NetApp**, point to **Single Mailbox Recovery**, and then click **ExtractWizard**. The first page describes the wizard.

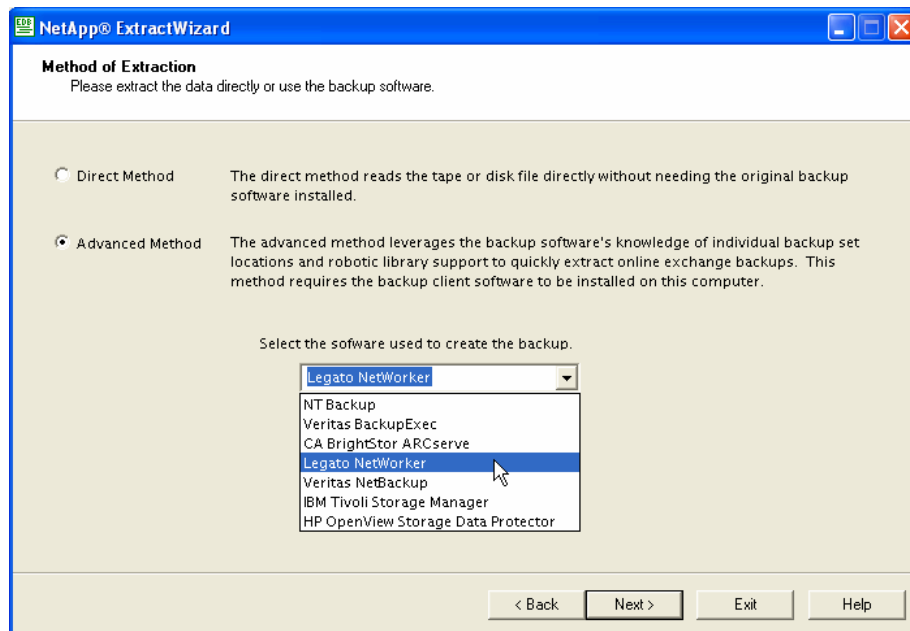


Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 3.

3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.

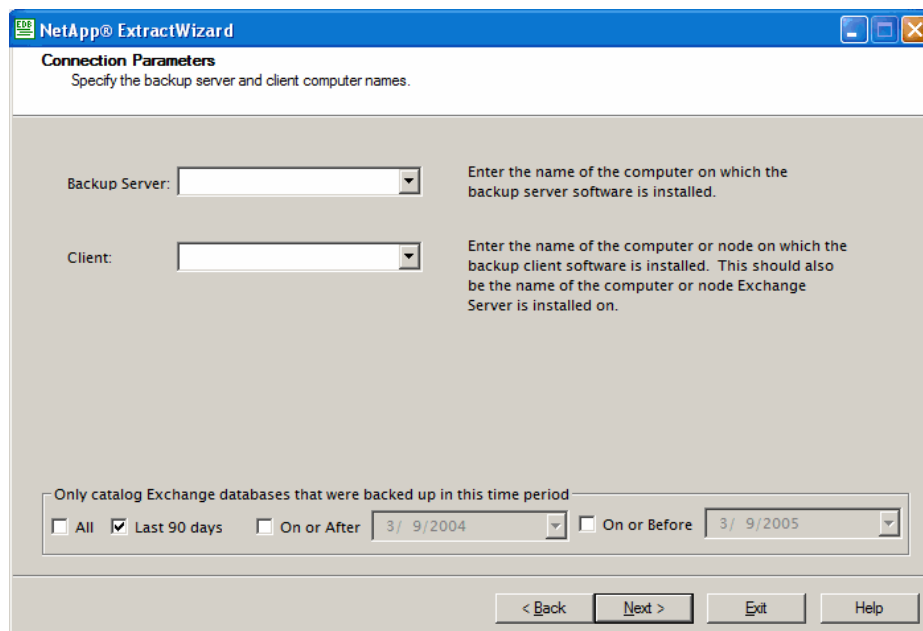
Chapter 2: Using the Extract Wizard Advanced Method

The **Method of Extraction** page of the ExtractWizard offers two methods of extracting backed-up Exchange data. For more information on these two methods, see page 14.



5. Select the **Advanced Method** option.
6. Select **Legato NetWorker** from the drop-down menu.
7. Click **Next**.

The **Connection Parameters** page of the ExtractWizard lets you specify the backup server and client computer names.

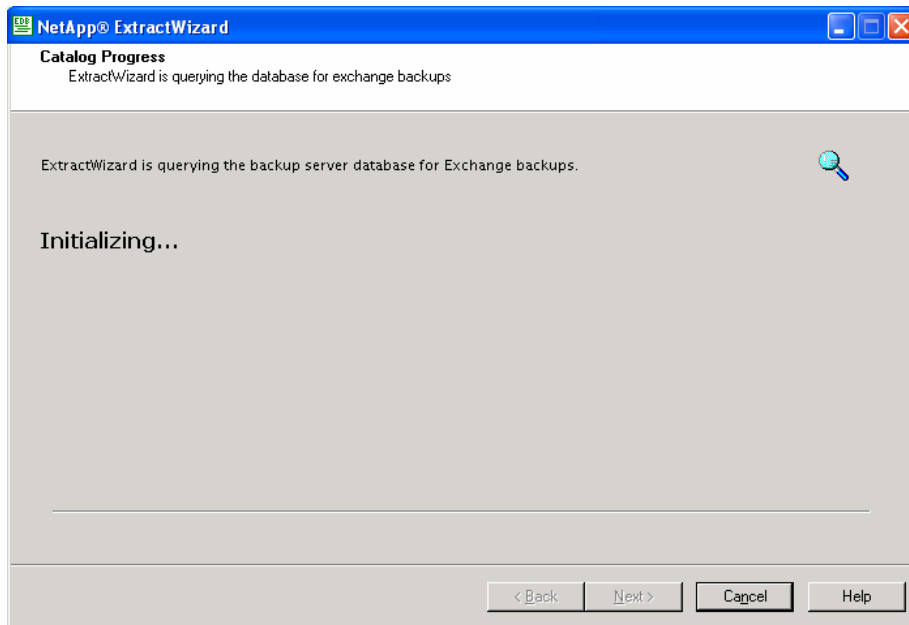


Connection parameters for Legato NetWorker

8. Specify the connection parameters:

- For **Backup Server**, enter the name of the computer on which the backup server software is installed.
- For **Client**, enter the Legato NetWorker client that backed up the Exchange Information Store.
- For **Only catalog Exchange databases that were backed up in this time period**, select the desired time period.

The **Catalog Progress** page of the ExtractWizard shows the catalog progress. The ExtractWizard queries the Legato backup server database for Information Store backups.



9. Do one of the following:

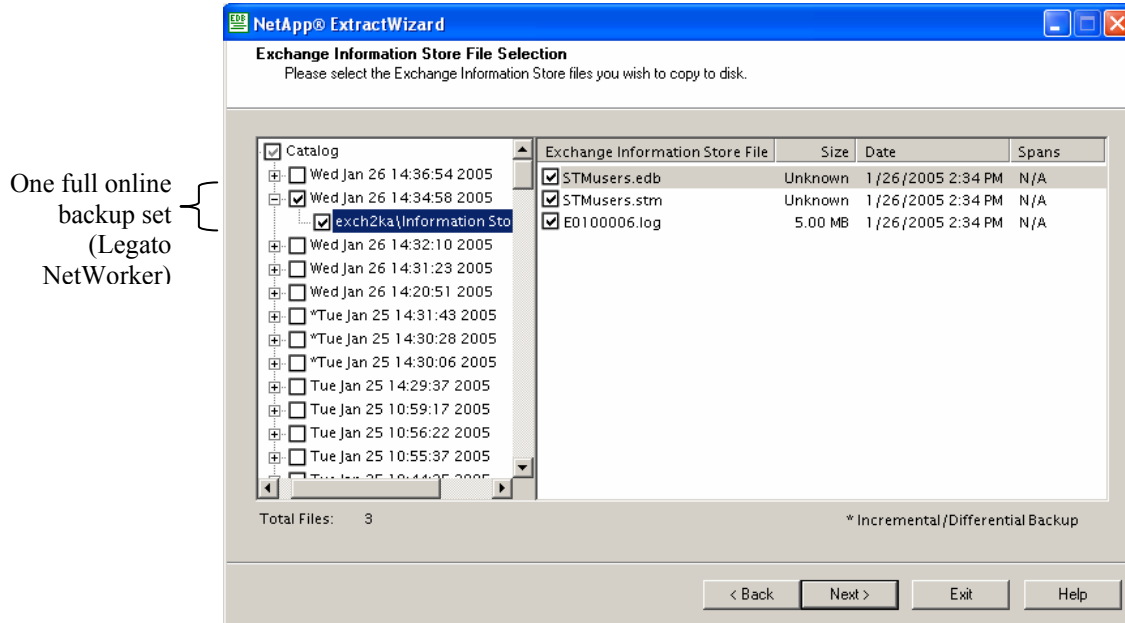
- Click **Cancel** if you want to stop the catalog process. If you click **Cancel**, the ExtractWizard catalog will display all files that it found to that point.
- When the catalog is completed, click **Next** to proceed to the next page of the ExtractWizard.

The **Exchange Information Store File Selection** page of the ExtractWizard lets you select both the private and public Exchange Information Store files that you want to extract from an Exchange backup.

Chapter 2: Using the Extract Wizard Advanced Method

In the following example, Legato NetWorker contains multiple backup sets and volumes. Each backup set lists the session day and time (e.g., Wed Jan 26 14:36:58 2005). Each volume lists the computer name and volume name (e.g., exch2ka\Information Store).

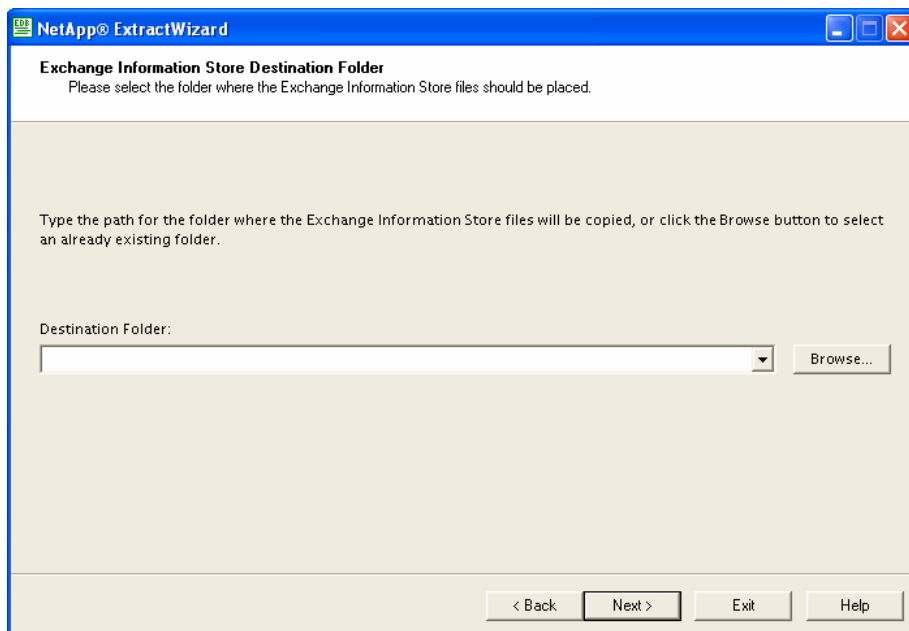
NOTE: An asterisk (*) next to a backup indicates that it is an incremental or differential backup.



Extracting a full online disk backup (Legato NetWorker)

10. On the left side of the window, click the plus sign (+) next to a backup set to view its volumes.
11. Select a volume (select its name, not its check box) to display the Exchange Information Store objects on the right side of the window.
12. Select the check boxes next to the .log, .edb, and .stm, files, as well as .pat files, if they exist.
13. Click **Next**.

The **Exchange Information Store Destination Folder** page of the ExtractWizard lets you select a folder for the extracted files.



14. Under **Destination Folder**, specify a location for the extracted files.
15. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First, the ExtractWizard checks for the following conditions:

You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

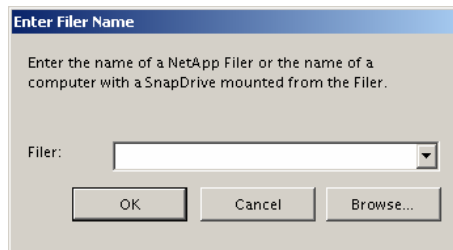
A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.

Chapter 2: Using the Extract Wizard Advanced Method



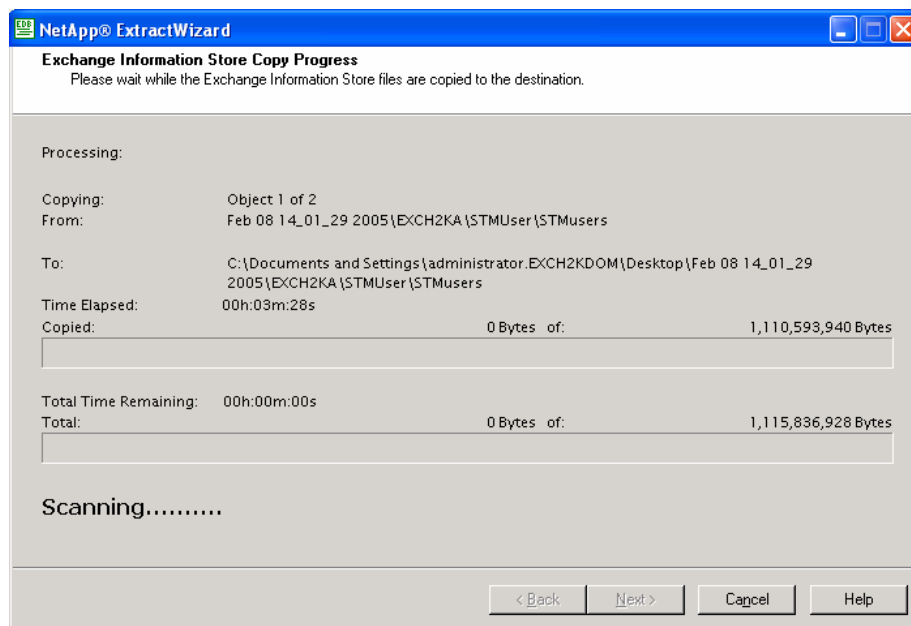
If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

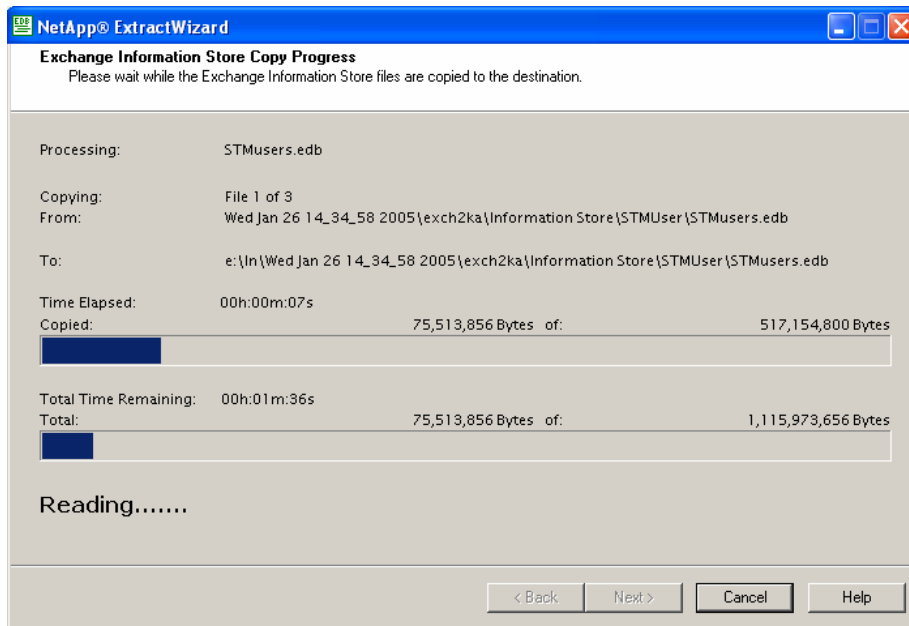
Click **OK** to proceed to the next verification.

- b. Next, the ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **Exchange Information Store Copy Progress** page of the ExtractWizard shows the progress of the ExtractWizard extracting the Exchange Information Store data to the destination folder. This process may take some time.

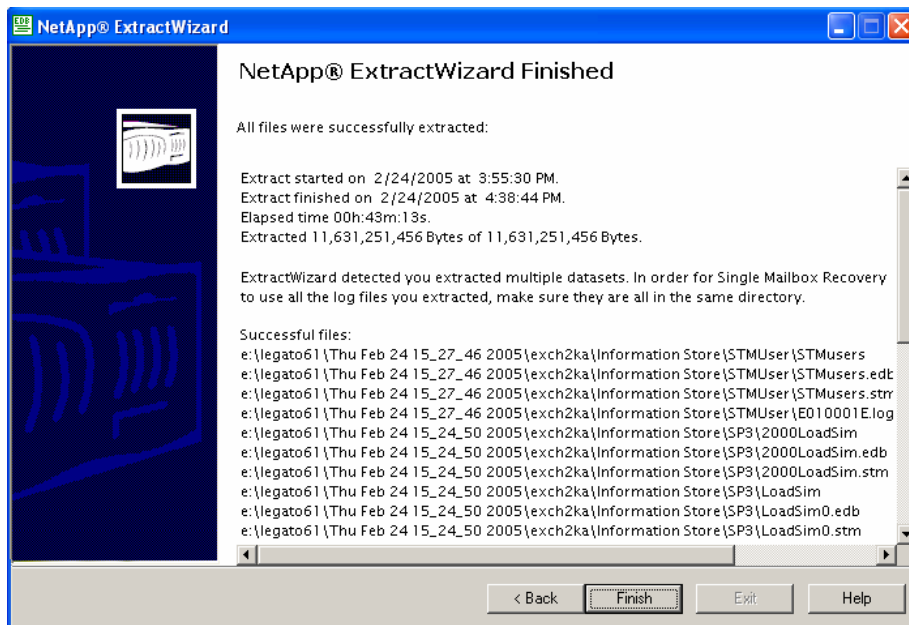


16. (Optional) Click **Cancel** only if you want to stop the process. The file currently being extracted will be deleted, but you can access any files that have completed extraction.



Copy Progress for Legato NetWorker

The last page of the ExtractWizard displays all of the files that were successfully extracted.



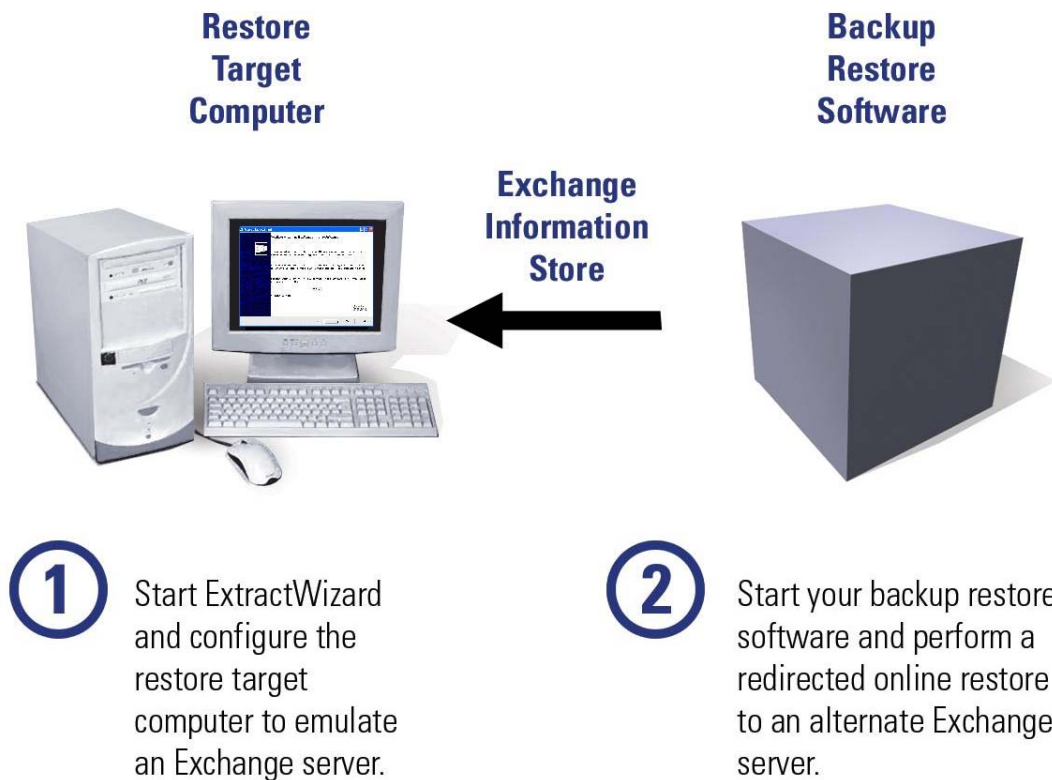
17. If you are satisfied with the results, click **Finish**.
18. If you extracted multiple data sets, see “Organizing the Extracted Files for Single Mailbox Recovery” on page 115.

Using the Exchange Emulation method

The Exchange Emulation method of extracting backed-up Exchange data allows you to run your backup software and restore to the computer running ExtractWizard, which acts as the alternate Exchange server. ExtractWizard responds to the backup software by using the same interfaces that Exchange uses.

Two basic steps for using the Exchange Emulation method

1. Start ExtractWizard on the computer where the Exchange Information Store files will be restored. Then configure it for the Advanced Method of Exchange Emulation.
2. Start your backup restore software on the computer you normally run it on, and then perform a redirected online restore to an alternate Exchange server. The computer running ExtractWizard acts as the alternate Exchange server.



Terms

- **Restore Target Computer** is the computer running ExtractWizard, where the Exchange Information Store files will be restored.
- **Backup Restore Software** is the backup software used to initiate the restore. It may be on the same computer running ExtractWizard.

NOTE: For Veritas NetBackup, you must run your backup restore software on the computer running ExtractWizard.

Requirements for Using the Exchange Emulation Method

The Advanced Method for Exchange Emulation has five requirements:

- Only online Exchange backups are supported. This includes full, copy, incremental, and differential backups.
- The backup client software must be installed on the computer running ExtractWizard.
- ExtractWizard cannot be run on an Exchange server.
- Backup restore .dll files must be in the system path on the computer running ExtractWizard. For Exchange 2000/2003, esebcli2.dll is required as well as a registry key pointing to it. For Exchange 5.5, edbbcli.dll is required. For more information, see the instructions for each type of backup software discussed in this section.
- You must have the rights to create and start services on the computer running ExtractWizard.

Exchange Emulation for Microsoft NT Backup

In order to run Microsoft NT Backup on the computer running Exchange Emulation, NT Backup must be set up to do online Exchange backups. If it is not, follow the instructions in this Microsoft Knowledgebase article:

XADM: How to Use Microsoft NT Backup from a Non-Exchange 2000 Computer
<http://support.microsoft.com/?kbid=275876>

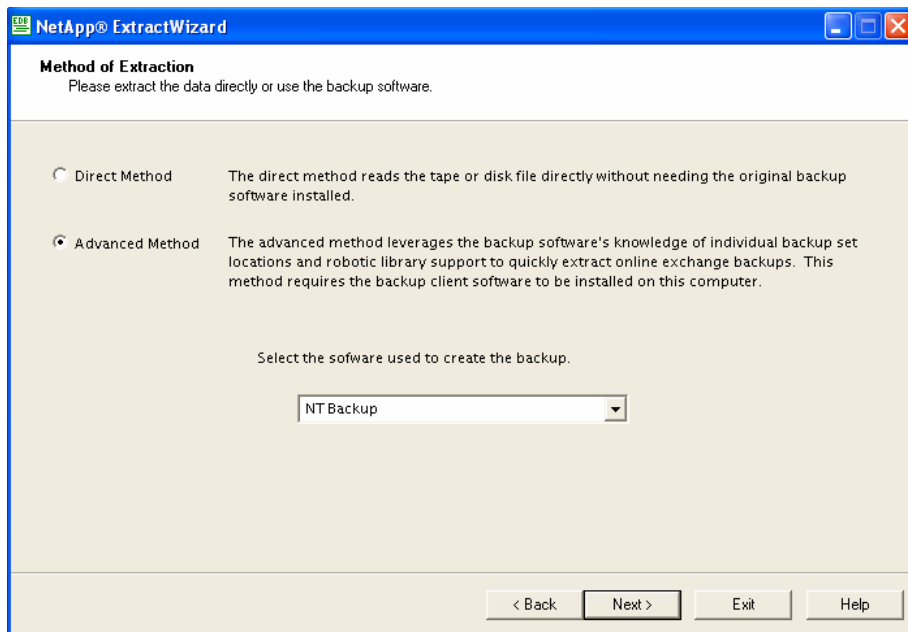
For information on related topics, refer to these Microsoft knowledge base articles:

- XADM: Troubleshooting a Remote Online Backup of Exchange 2000
<http://support.microsoft.com/?kbid=275676>
- XADM: Files Needed to Perform Exchange NT Backup on Workstation
<http://support.microsoft.com/?kbid=181445>

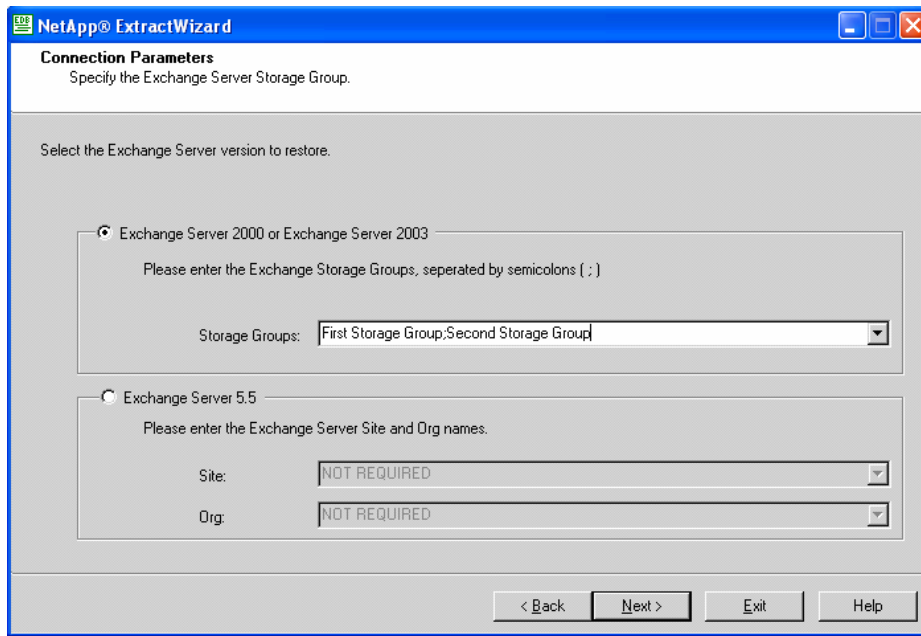
Exchange Emulation for NT Backup: Exchange 2000/2003 on Windows 2000/XP/2003

1. On the computer that will be running ExtractWizard, do the following:
 - a. Install the Exchange System Management Tools.
 - b. Add the path **C:\Program Files\Exchsrvr\bin** to the system path: winnt\system32 or windows\system32.
2. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.

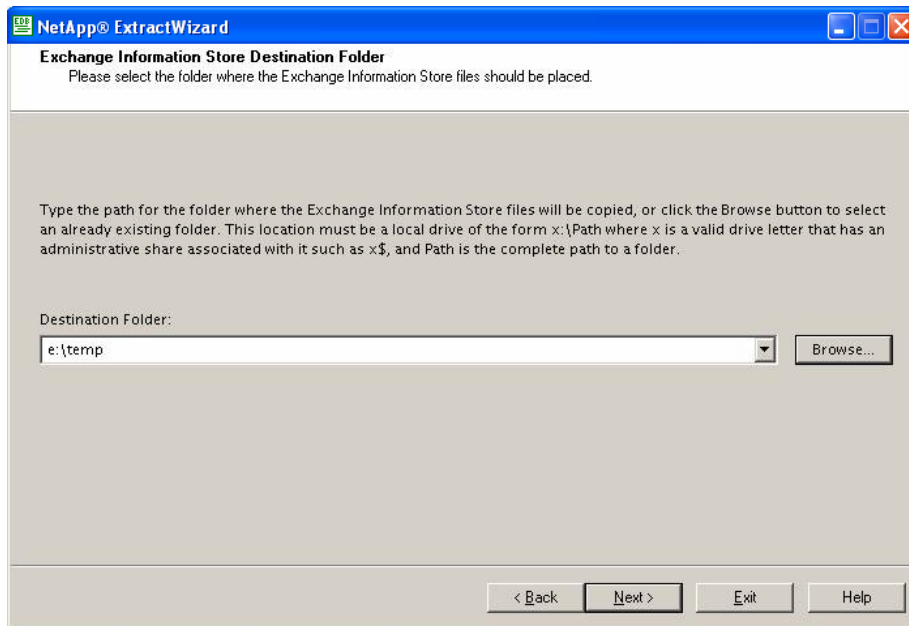
Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; . otherwise, continue to Step 3.
3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **NT Backup**. Then click **Next**.



The **Connection Parameters** page of the ExtractWizard appears.



6. Select the **Exchange Server 2000 or Exchange Server 2003** option.
7. In the **Storage Groups** box, enter the name of the storage group you will be extracting. The storage group name is case sensitive and must match exactly the name that appears in the Exchange System Manager. You can enter multiple storage groups, separated by semicolons (;).
8. Click **Next**.
9. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



10. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.

- a. First verification: The ExtractWizard checks for the following conditions:

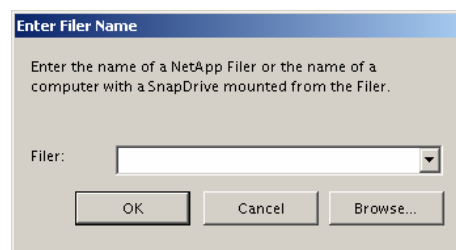
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in "ExtractWizard: Pointing to a NetApp device" on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

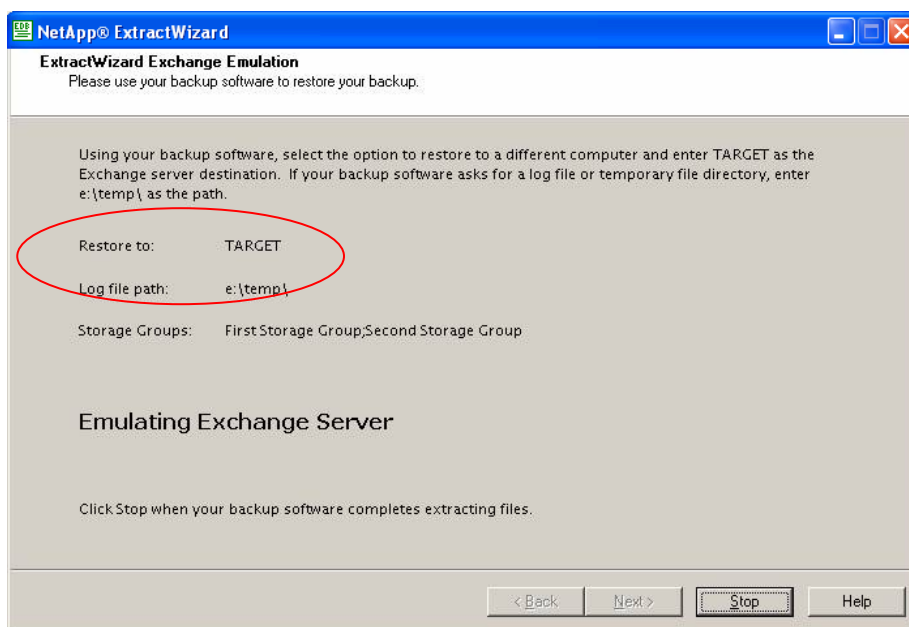
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start NT Backup.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



TIP: You can copy the “Restore to” and “Log file path” information on this page and paste it into NT Backup when prompted later in this section.

11. Start NT Backup (Backup Utility in Windows XP and 2003) on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
12. Do one of the following:
 - a. If NT Backup is on a different computer than ExtractWizard, proceed to step 12.
 - b. If NT Backup is on the same computer as ExtractWizard, skip steps 12-15 and proceed to step 16.
13. In NT Backup, click the **Backup** tab.
14. On the **Tools** menu, click **Remote Store**.
15. In the **Remote Store** dialog box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). The name must be in all capital letters. See previous step 9 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard. Click **OK**.
16. If you receive an error stating that the Microsoft Exchange Server does not appear in the **Backup** tree (i.e., it does not appear in the left pane in the **Backup** tab), this means that NT Backup is not able to verify the ExtractWizard emulation. Therefore, you must follow the steps outlined in this article from

Chapter 2: Using the Extract Wizard Advanced Method

the Microsoft Knowledge Base: “XADM: Troubleshooting a Remote Online Backup of Exchange 2000”: <http://support.microsoft.com/?kbid=275676>

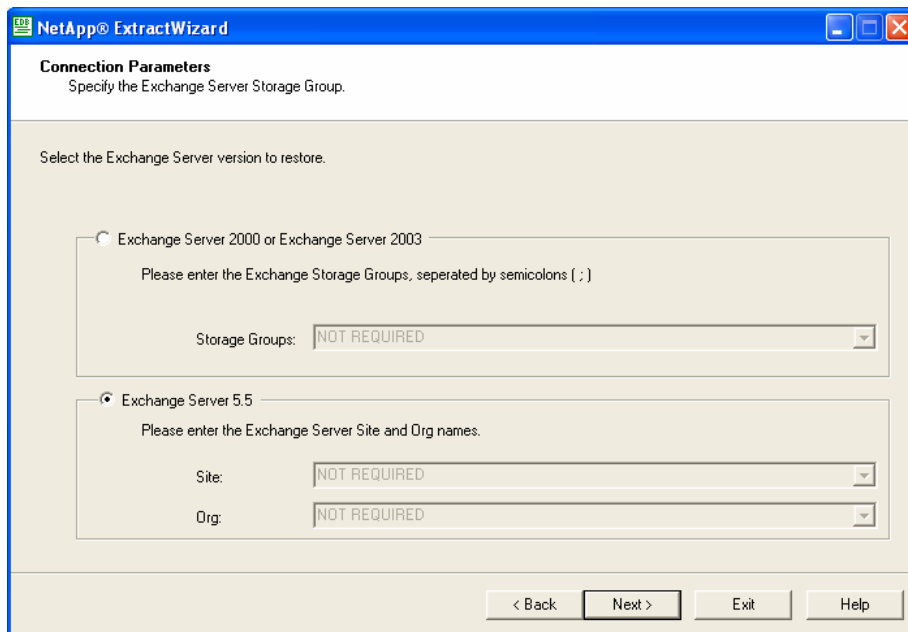
When NT Backup has finished verifying the computer, the Restore Target computer appears under the **Microsoft Exchange Server** node.

17. In NT Backup, click the **Restore** tab (the **Restore and Manage Media** tab in Windows 2003).
18. In the tree view, select your Exchange backup from the list of media.
19. Click the **Start Restore** button. The **Restoring Database Store** dialog box appears.
20. In the **Restore To** box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). The name must be in all capital letters. See previous step 9 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
21. In the **Temporary location for log and patch files** box, enter the log file path. See previous step 9 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
22. Do not select either of the check boxes at the bottom of the **Restoring Database Restore** dialog box.
23. Click **OK**. NT Backup will start to restore Exchange files to the ExtractWizard. The **Restore Progress** dialog box appears.
24. When NT Backup has finished, click **Close** and close NT Backup.
25. In ExtractWizard, click **Stop** and then click **Finish**.

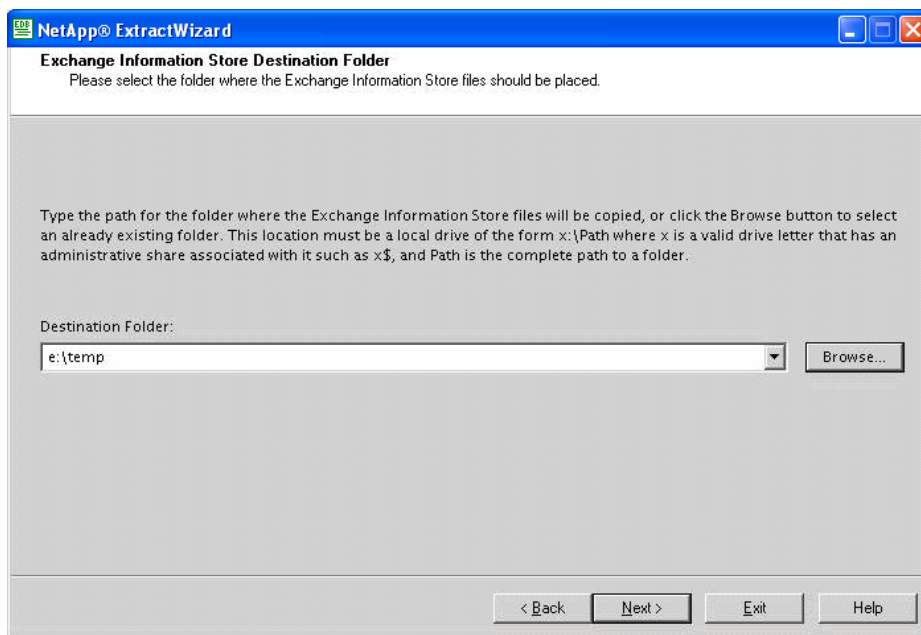
Exchange Emulation for NT Backup: Exchange 5.5 on Windows 2000/XP/2003

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; . otherwise, continue to Step 3.
3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **NT Backup**. Then click **Next**.

6. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option and click **Next**.



7. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive and of the form `x:\Path` where `x` is a valid drive letter that has an administrative share associated with it such as `x$`, and `Path` is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



8. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

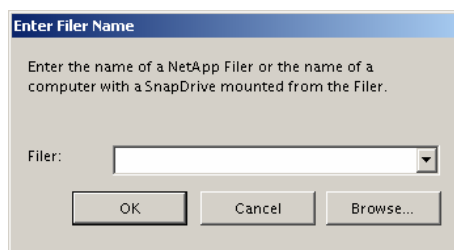
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

Click **OK** to proceed to the next verification.

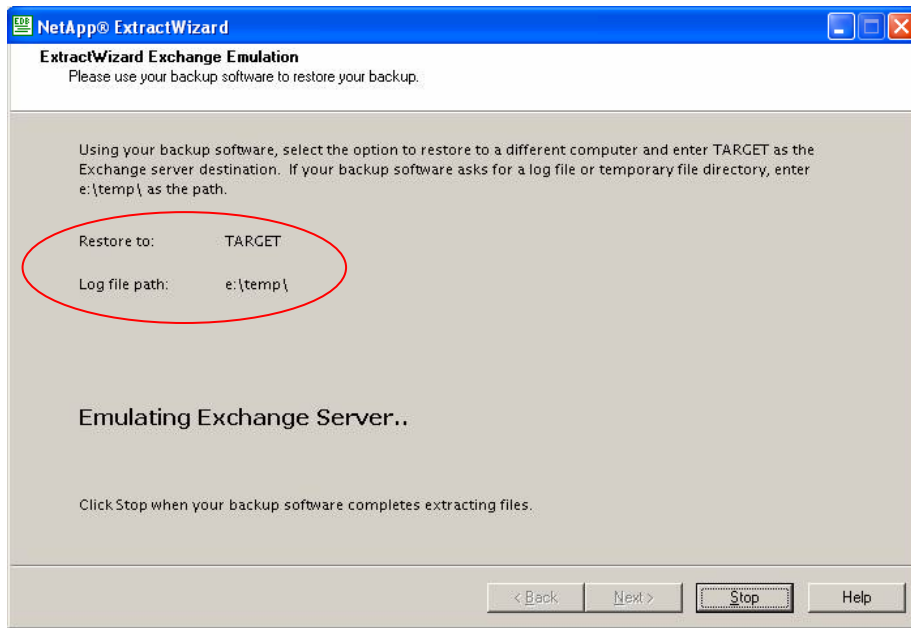
- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start NT Backup.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.

Chapter 2: Using the Extract Wizard Advanced Method



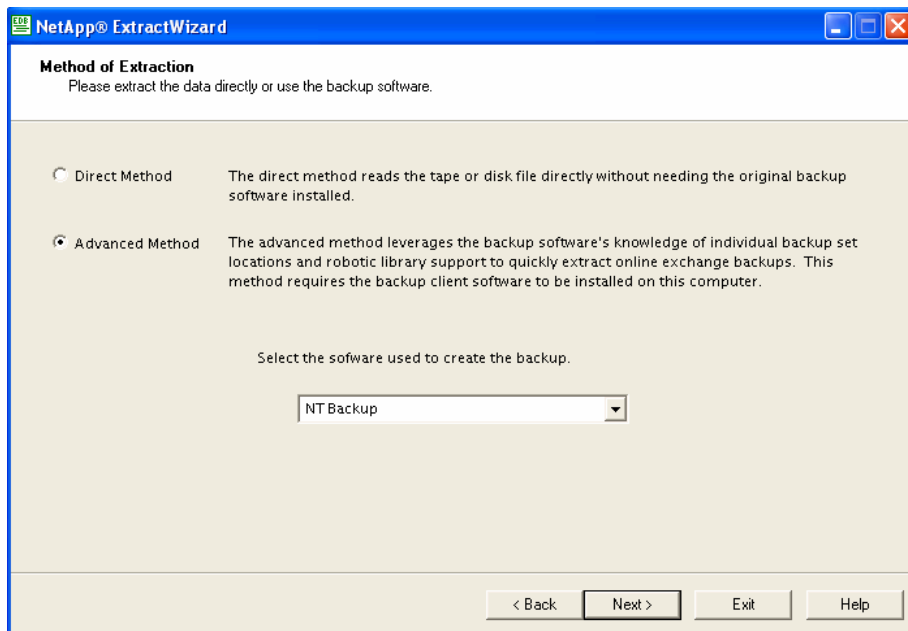
9. Start NT Backup (Backup Utility in Windows XP and 2003) on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
10. In NT Backup, click the **Restore** tab (the **Restore and Manage Media** tab in Windows 2003).
11. In the tree view, select your Exchange backup from the list of media. NT Backup allows you to restore only one Exchange Information Store at a time.

NOTE: You cannot restore the Directory.

12. Click the **Start Restore** button. The **Restoring Microsoft Exchange** dialog box appears.
13. Select the **Erase all existing data** check box.
14. In the **Restore To** box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). The name must be in all capital letters. See previous step 7 to verify that you are using the "Restore to" value from the Exchange Emulation page of the ExtractWizard.
15. Click **OK**. NT Backup will start to restore Exchange files to the ExtractWizard.
16. When NT Backup has finished, click **Close** and close NT Backup.
17. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for NT Backup: Exchange 5.5 on Windows NT 4

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; . otherwise, continue to Step 3.
3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **NT Backup**. Then click **Next**.



6. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option and click **Next**.

NetApp® ExtractWizard

Connection Parameters
Specify the Exchange Server Storage Group.

Select the Exchange Server version to restore.

☐ Exchange Server 2000 or Exchange Server 2003
Please enter the Exchange Storage Groups, separated by semicolons (;)
Storage Groups:

☒ Exchange Server 5.5
Please enter the Exchange Server Site and Org names.
Site:
Org:

< Back Next > Exit Help

7. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive and of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).

NetApp® ExtractWizard

Exchange Information Store Destination Folder
Please select the folder where the Exchange Information Store files should be placed.

Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder.

Destination Folder:
 Browse...

< Back Next > Exit Help

8. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

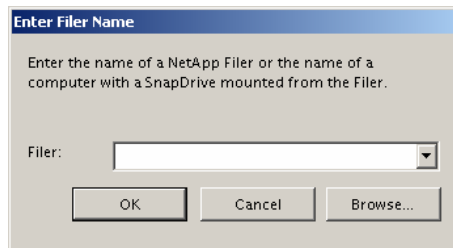
Chapter 2: Using the Extract Wizard Advanced Method

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

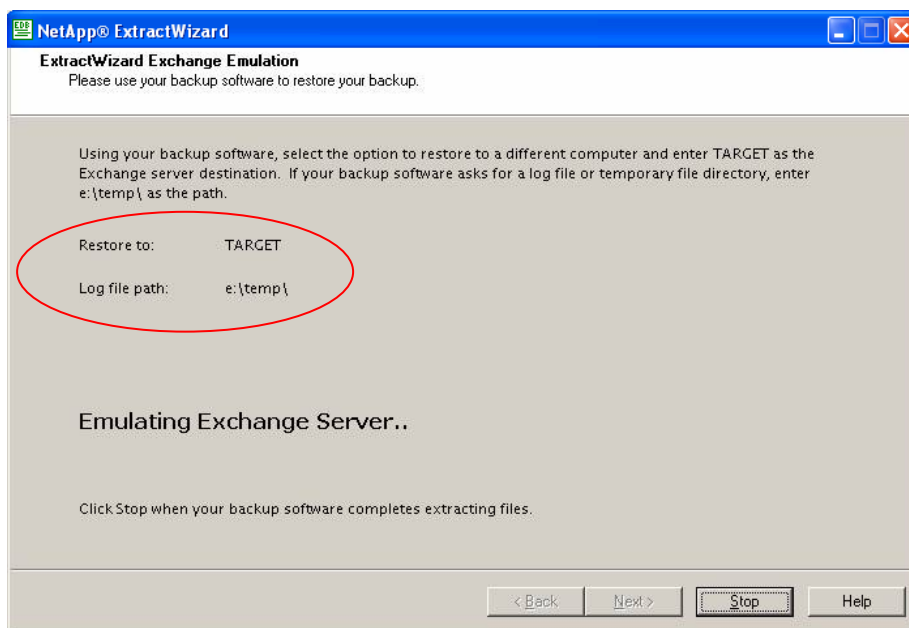
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start NT Backup.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Restore to” information on this page and paste it into NT Backup when prompted later in this section.

Chapter 2: Using the Extract Wizard Advanced Method

9. Start Microsoft NT Backup on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
10. In the **Tapes** window, select the Exchange backup you want to restore. NT Backup allows you to restore only one Exchange Information Store at a time.

NOTE: You cannot restore the Directory.

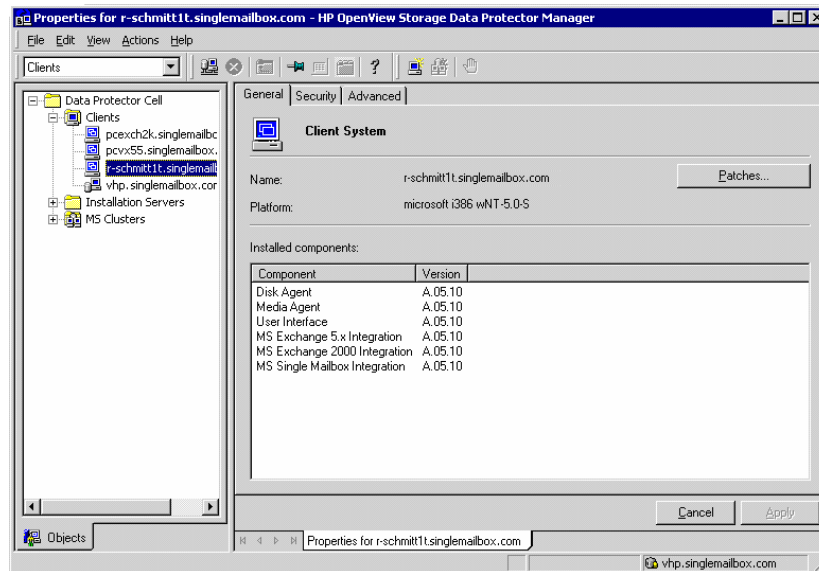
11. Click the **Restore** button. The **Restoring Microsoft Exchange** dialog box appears.
12. In the **Destination Server** box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). The name must be in all capital letters. See previous step 7 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
13. Select the **Erase all existing data** check box.
14. Click **OK**. NT Backup will start to restore Exchange files to the ExtractWizard.
15. When NT Backup has finished, click **Close** and close NT Backup.
16. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for HP OpenView Storage Data Protector

Exchange Emulation for HP OpenView Storage Data Protector and Exchange 2000/2003

1. Install HP client software on the computer that will be running ExtractWizard. When choosing components for this client, make sure to include the MS Exchange 2000 Integration component.

NOTE: If the computer running ExtractWizard already has the HP client software installed, make sure the MS Exchange 2000 Integration component has been included in the installation.

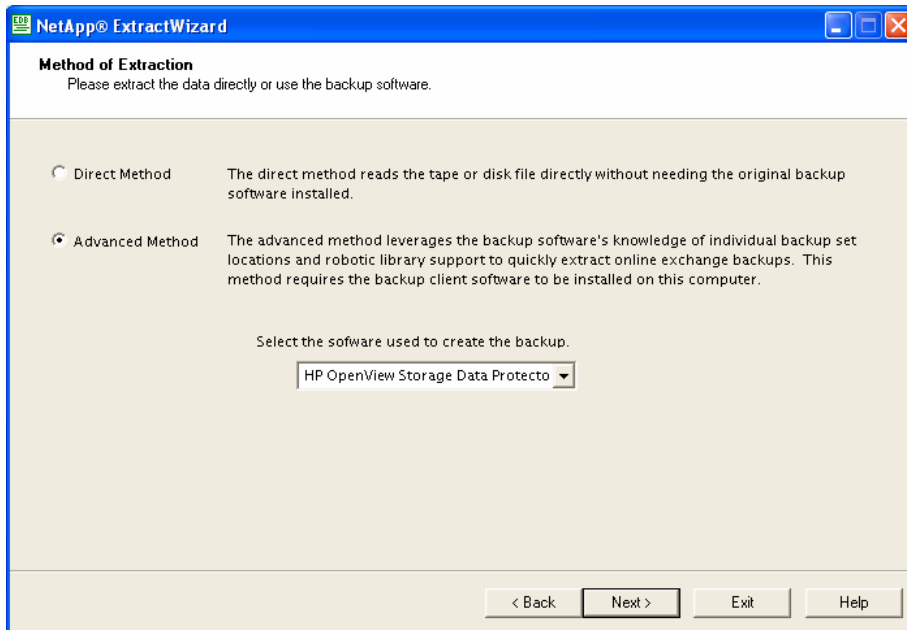


2. On the computer that will be running ExtractWizard, do the following:
 - a. Install the Exchange System Management Tools.
 - b. Add the path **C:\Program Files\Exchsrvr\bin** to the system path: winnt\system32 or windows\system32.
3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.

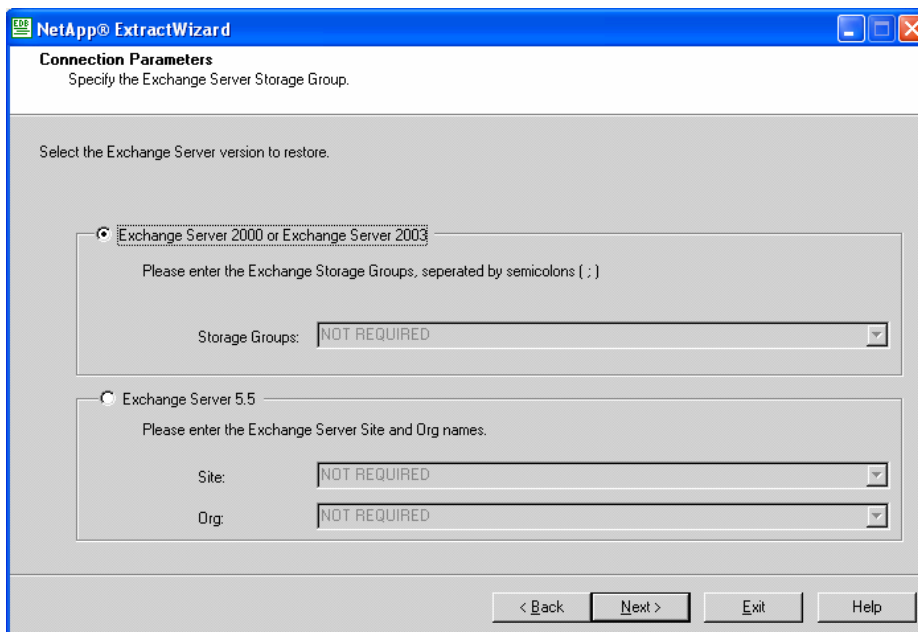
Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 4.

4. On the first page of the ExtractWizard, click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **HP OpenView Storage Data Protector**. Then click **Next**.

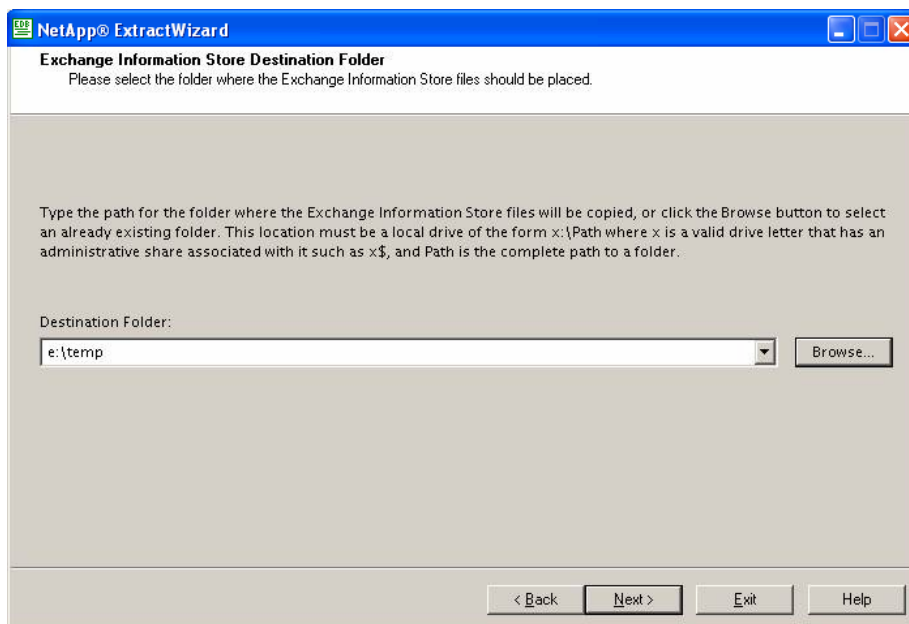
Chapter 2: Using the Extract Wizard Advanced Method



6. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 2000 or Exchange Server 2003** option, and then click **Next**.



7. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



8. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

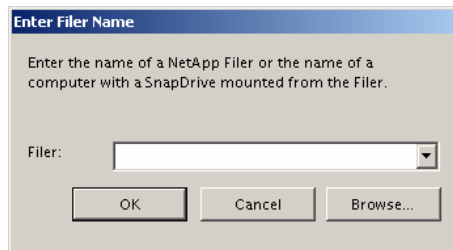
A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.

Chapter 2: Using the Extract Wizard Advanced Method



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

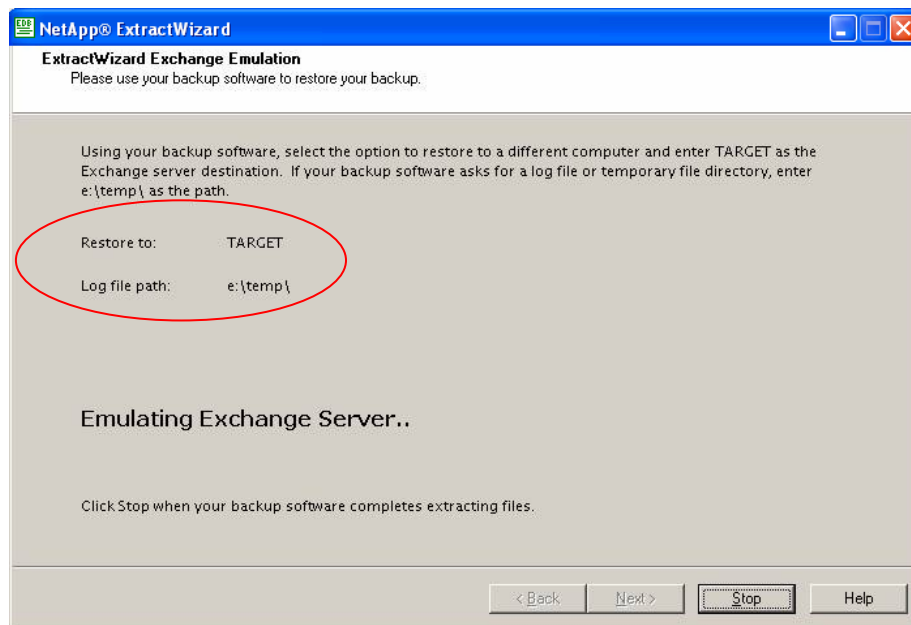
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start HP OpenView Storage Data Protector.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can refer to the “Restore to” and “Log file path” information on this page when verifying it in HP OpenView Storage Data Protector later in this section.

9. Start HP OpenView Storage Data Protector on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
10. Select **Restore** from the drop-down list at the top left of the window.
11. In the left pane, expand the MS Exchange 2000 Server tree node and select the appropriate Exchange Server.
12. In the right pane, click the **Source** tab and then select the Exchange backup you want to restore.
13. In the right pane, click the **Options** tab.
14. Select the **Restore to another client** check box.
15. Select the name of the Restore Target Computer from the drop-down menu. See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
16. In the **Directory for temporary log files** box, enter the log file path. See previous step 8 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
17. Do not select the **Last resort set (start recovery)** check box.

NOTE: If this check box is selected, HP OpenView Storage Data Protector will display a message stating the restore failed. Click OK. The files will still be extracted and usable.
18. Click the **Devices** tab, and verify your devices are properly configured
19. Click the **Media** tab, and verify the required media is available.
20. Click the **Restore** button. The **Start Restore Session** dialog box appears.
21. Do one of the following:
 - a. Click **Next** to specify options on Report level and Network load, and then click **Finish**.
 - b. Click **Finish**.
22. When HP OpenView Storage Data Protector says it has finished, close the program.
23. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for HP OpenView Storage Data Protector and Exchange 5.5

1. Install HP client software on the computer that will be running ExtractWizard. When choosing components for this client, make sure to include the MS Exchange 5.x Integration component.

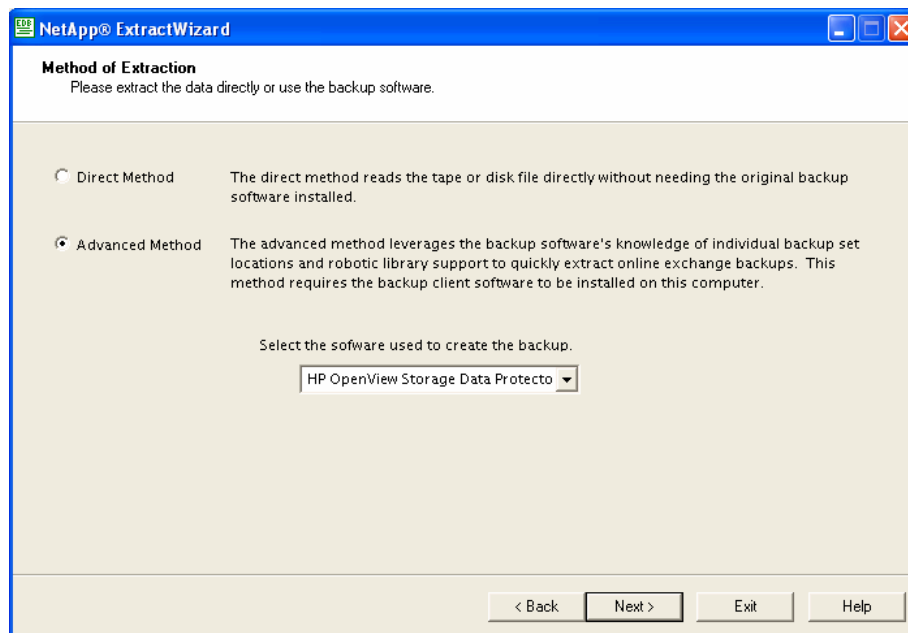
NOTE: If the computer running ExtractWizard already has the HP client software installed, make sure the MS Exchange 5.x Integration component has been included in the installation.

2. On the computer running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.

3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 4.

4. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
5. Click **Next**.
6. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **HP OpenView Storage Data Protector**. Then click **Next**.



7. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option, and then click **Next**.

The screenshot shows the 'Connection Parameters' dialog box in the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Connection Parameters' with the instruction 'Specify the Exchange Server Storage Group.' Below this, it says 'Select the Exchange Server version to restore.' There are two radio button options: 'Exchange Server 2000 or Exchange Server 2003' (which is unselected) and 'Exchange Server 5.5' (which is selected). Under the first option, it says 'Please enter the Exchange Storage Groups, separated by semicolons (:)' and there is a text box containing 'NOT REQUIRED'. Under the second option, it says 'Please enter the Exchange Server Site and Org names.' and there are two text boxes, one for 'Site:' and one for 'Org:', both containing 'NOT REQUIRED'. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

8. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive and of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).

The screenshot shows the 'Exchange Information Store Destination Folder' dialog box in the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Exchange Information Store Destination Folder' with the instruction 'Please select the folder where the Exchange Information Store files should be placed.' Below this, it says 'Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder.' There is a text box labeled 'Destination Folder:' containing 'e:\temp' and a 'Browse...' button. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

9. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

Chapter 2: Using the Extract Wizard Advanced Method

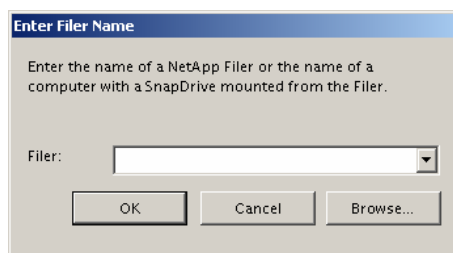
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

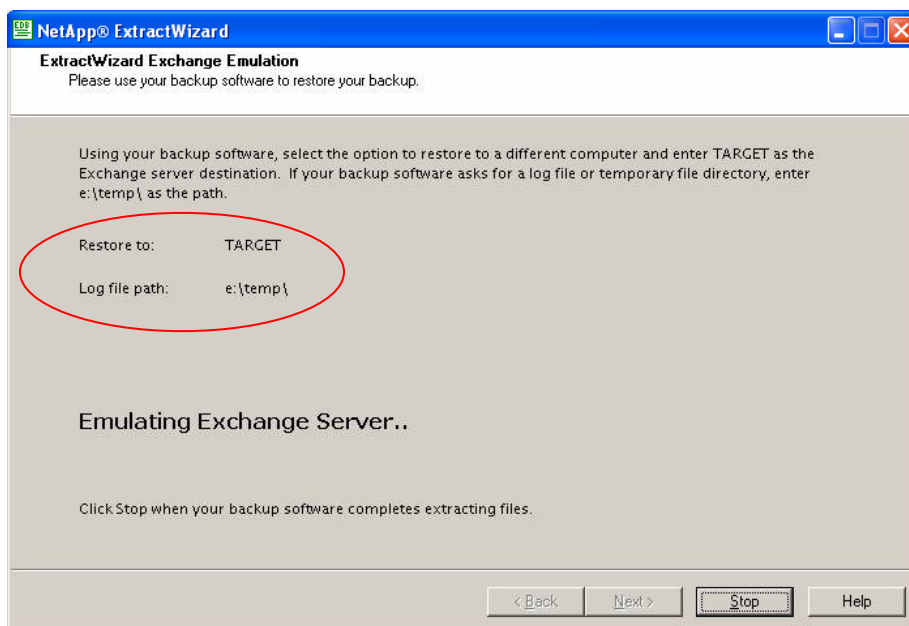
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start HP OpenView Storage Data Protector.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



10. Start HP OpenView Storage Data Protector on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
11. Select **Restore** from the drop-down list at the top left of the window.
12. In the left pane, expand the **MS Exchange 5.x Server** folder and select the appropriate Exchange Server.
13. In the right pane, select the Exchange backup you would like to restore.
NOTE: You cannot restore the DS object.
14. In the right pane, click the **Options** tab.
15. Select the **Restore to another client** checkbox.
16. Select the name of the Restore Target Computer from the drop-down menu. See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
17. Do not select either the **Stop services before restore** check box or the **Start services after restore** check box.

NOTE: If these check boxes are selected, HP OpenView Storage Data Protector will display a message stating the restore failed. Click OK. The files will still be extracted and usable.

Chapter 2: Using the Extract Wizard Advanced Method

18. Under **Restore actions**, select the action you want to perform:
 - a. Restore both databases
 - b. Restore private database only
 - c. Restore public database only
19. Click the **Devices** tab, and verify your devices are properly configured
20. Click the **Media** tab, and verify the required media is available.
21. Click the **Restore** button. The **Start Restore Session** dialog box appears.
22. Do one of the following:
 - a. Click **Next** to specify options on Report level and Network load, and then click **Finish**.
 - b. Click **Finish**.
23. When HP OpenView Storage Data Protector says it has finished, close the program.
24. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for Veritas Backup Exec 8.6 and 9.1

Exchange Emulation for Veritas Backup Exec 9.1 and Exchange 2000/2003

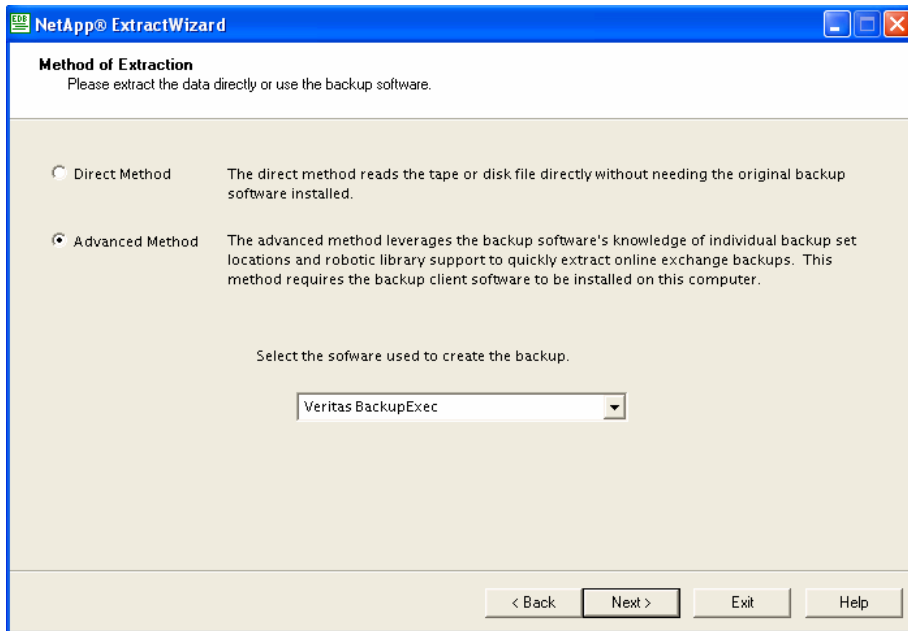
1. Install “Backup Exec Remote Agent for Windows Servers” client software on the computer that will be running ExtractWizard.
2. On the computer that will be running ExtractWizard, do the following:
 - a. Install the Exchange System Management Tools.
 - b. Add the path **C:\Program Files\Exchsrvr\bin** to the system path:
winnt\system32 or windows\system32.
3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 4.

4. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
5. Click **Next**.

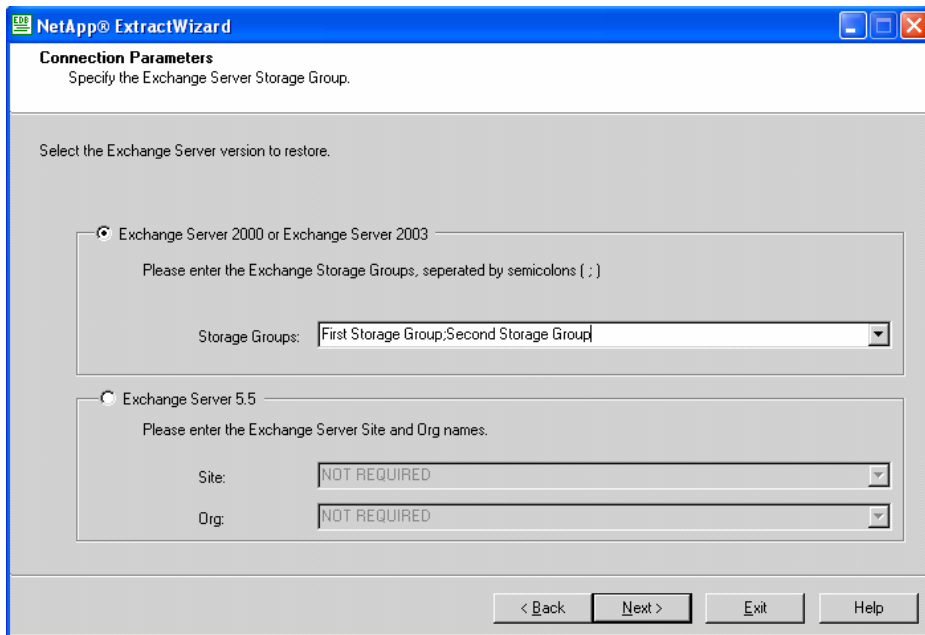
Chapter 2: Using the Extract Wizard Advanced Method

- On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **Veritas Backup Exec**. Then click **Next**.



The screenshot shows the 'Method of Extraction' window of the NetApp® ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Method of Extraction' with the instruction 'Please extract the data directly or use the backup software.' Below this, there are two radio button options: 'Direct Method' and 'Advanced Method'. The 'Advanced Method' is selected. The description for 'Advanced Method' states: 'The advanced method leverages the backup software's knowledge of individual backup set locations and robotic library support to quickly extract online exchange backups. This method requires the backup client software to be installed on this computer.' Below the options, there is a text prompt 'Select the software used to create the backup.' followed by a dropdown menu currently showing 'Veritas BackupExec'. At the bottom right, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

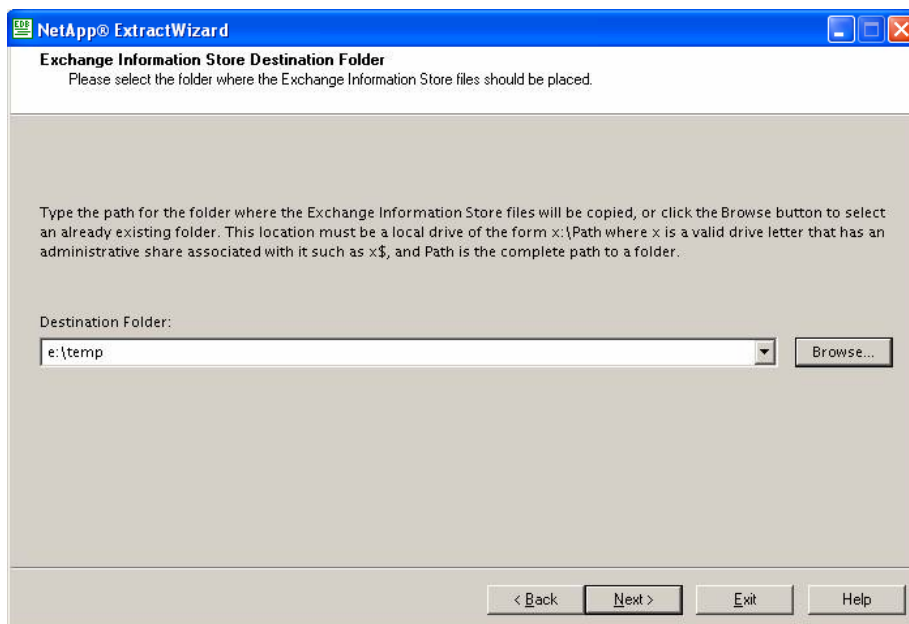
The **Connection Parameters** page of the ExtractWizard appears.



The screenshot shows the 'Connection Parameters' window of the NetApp® ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Connection Parameters' with the instruction 'Specify the Exchange Server Storage Group.' Below this, there is a text prompt 'Select the Exchange Server version to restore.' followed by two radio button options: 'Exchange Server 2000 or Exchange Server 2003' and 'Exchange Server 5.5'. The 'Exchange Server 2000 or Exchange Server 2003' option is selected. Below this option, there is a text prompt 'Please enter the Exchange Storage Groups, seperated by semicolons (:)' followed by a text box labeled 'Storage Groups:' containing the text 'First Storage Group;Second Storage Group'. Below the 'Exchange Server 5.5' option, there is a text prompt 'Please enter the Exchange Server Site and Org names.' followed by two text boxes: 'Site:' and 'Org:', both containing the text 'NOT REQUIRED'. At the bottom right, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

- Select the **Exchange Server 2000 or Exchange Server 2003** option.
- In the **Storage Groups** box, enter the name of the storage group you will be extracting. The storage group name is case sensitive and must match exactly the name that appears in the Exchange System Manager. You can enter multiple storage groups, separated by semicolons (;). Click **Next**.

9. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



10. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

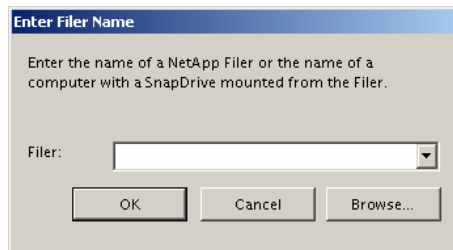
A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.

Chapter 2: Using the Extract Wizard Advanced Method



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

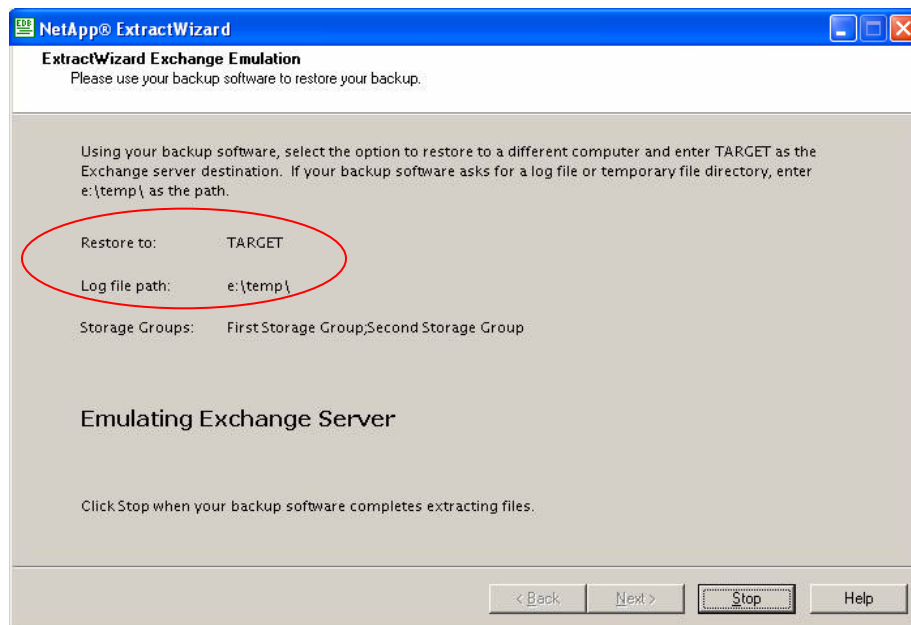
Click **OK** to proceed to the next verification.

- b. **Second verification:** The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start Backup Exec.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Restore to” and “Log file path” information on this page and paste it into Backup Exec when prompted later in this

11. Start Veritas Backup Exec 9.1 on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
12. Click the **Restore** button. The **Restore Job Properties** window appears.
13. In the **Properties** pane, select **Selections** under the **Source** heading.

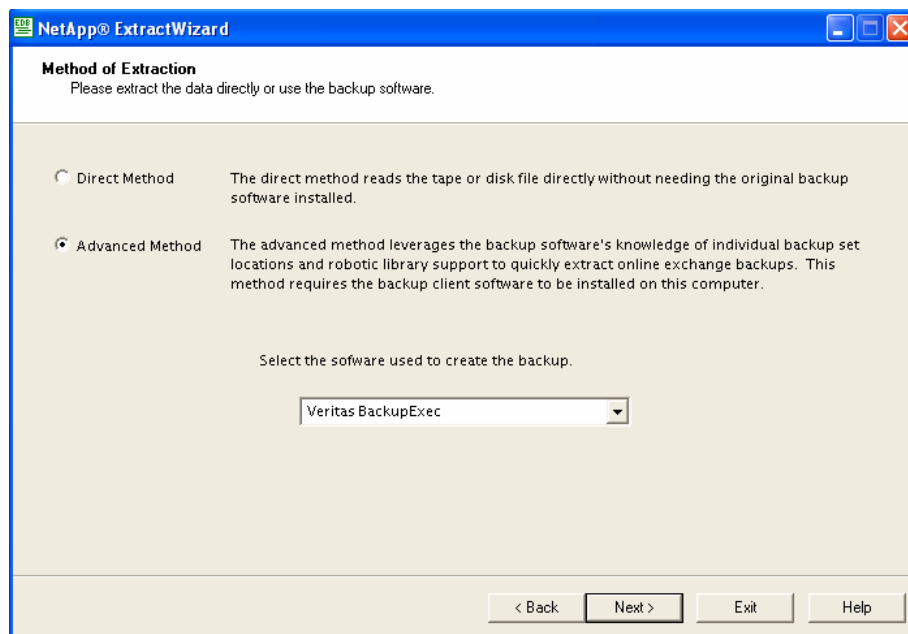
14. In the **All Resources** tree, select the Exchange backup you want to restore.
15. In the **Properties** pane, select **Exchange Redirection** under the **Destination** heading.
16. Select the **Redirect Exchange sets** check box.
17. In the **Restore to server** box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). See previous step 9 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
18. In the **Server logon account**, change the logon account if necessary. The account you select must have backup operator rights to the Restore Target Computer.
19. In the **Properties** pane, select **Exchange** under the **Settings** heading.
20. In the **Exchange 2000 and Exchange 2003** area, clear the **No Loss Restore** check box.
IMPORTANT NOTE: If the **No Loss Restore** check box is selected, the restore will fail.
21. In the **Temporary location for log and path files** box, enter the log file path. See previous step 9 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
22. Clear the **Commit after restore completes** check box.
CAUTION: Make sure to clear the **Commit after restore completes** check box. If this check box remains selected, Backup Exec will automatically delete the restored files after completing the restore.
23. Click **Run Now**. Backup Exec will display a warning about restoring a server with different Site and Organization names. You can safely click **Yes**. ExtractWizard and Single Mailbox Recovery do not depend on the Site and Organization names. Backup Exec will start to restore Exchange files to the ExtractWizard.
24. When Backup Exec has finished, click **OK** and close Backup Exec.
25. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for Veritas Backup Exec 9.1 and Exchange 5.5

1. Install “Backup Exec Remote Agent for Windows Servers” client software on the computer that will be running ExtractWizard.
2. On the computer running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 4.

4. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
5. Click **Next**.
6. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **Veritas Backup Exec**. Then click **Next**.



7. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option, and click **Next**.

The screenshot shows the 'Connection Parameters' window of the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Connection Parameters' with the instruction 'Specify the Exchange Server Storage Group.' Below this, it says 'Select the Exchange Server version to restore.' There are two radio button options: 'Exchange Server 2000 or Exchange Server 2003' (unselected) and 'Exchange Server 5.5' (selected). Under the first option, it says 'Please enter the Exchange Storage Groups, separated by semicolons (:)' and there is a text box containing 'NOT REQUIRED'. Under the second option, it says 'Please enter the Exchange Server Site and Org names.' and there are two text boxes, one for 'Site:' and one for 'Org:', both containing 'NOT REQUIRED'. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

8. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).

The screenshot shows the 'Exchange Information Store Destination Folder' window of the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Exchange Information Store Destination Folder' with the instruction 'Please select the folder where the Exchange Information Store files should be placed.' Below this, it says 'Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder.' There is a text box labeled 'Destination Folder:' containing 'e:\temp' and a 'Browse...' button. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

9. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

Chapter 2: Using the Extract Wizard Advanced Method

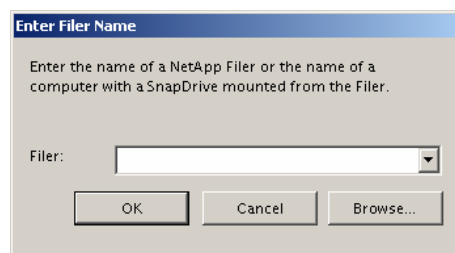
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

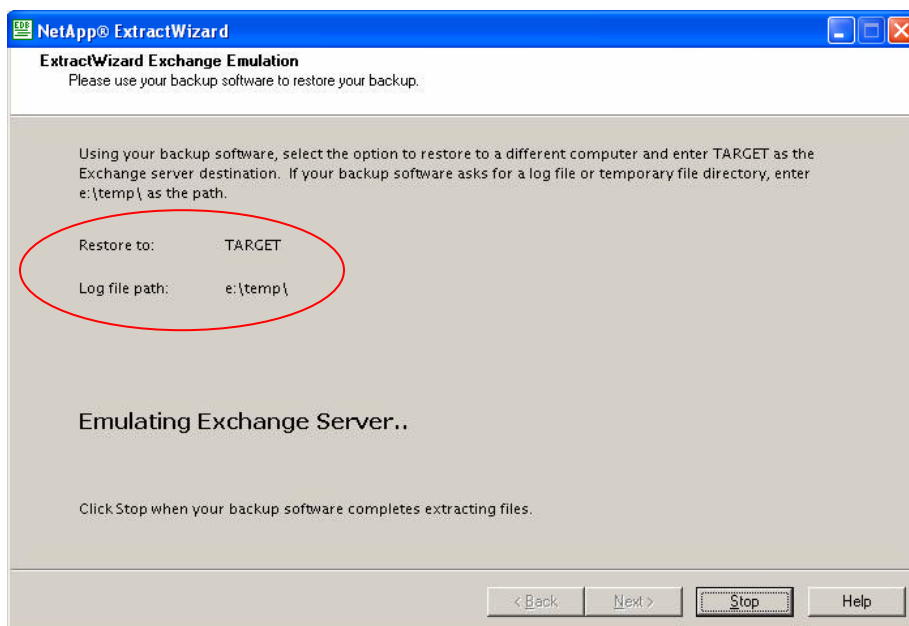
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start Backup Exec.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Restore to” information on this page and paste it into Backup Exec when prompted later in this section.

10. Start Veritas Backup Exec 9.1 on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
11. Click the **Restore** button at the top left of the Backup Exec window. The **Restore Job Properties** window appears.
12. In the **Properties** pane, select **Selections** under the **Source** heading.
13. In the **All Resources** tree, select the Exchange backup you want to restore.
NOTE: You cannot restore the Microsoft Exchange Directory.
14. In the **Properties** pane, select **Exchange Redirection** under the **Destination** heading.
15. Select the **Redirect Exchange sets** check box.
16. In the **Restore to server** box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
17. In the **Server logon account**, change the logon account if necessary. The account you select must have backup operator rights to the Restore Target Computer.
18. In the **Properties** pane, select **Exchange** under the **Settings** heading.
19. In the **Exchange v5.5** area, clear the **No Loss Restore** check box.
IMPORTANT NOTE: If the **No Loss Restore** check box is selected, the restore will fail.
20. Select one or both of the following check boxes: Select the **Restore public folder** if you would like to restore the pub.edb. Select the **Restore private mailboxes** if you would like to restore the priv.edb.
21. Click **Run Now**. Backup Exec will display a warning about restoring a server with different Site and Organization names. You can safely click **Yes**. ExtractWizard and Single Mailbox Recovery do not depend on the Site and Organization names. Backup Exec will start to restore Exchange files to the ExtractWizard.
22. When Backup Exec has finished, click **OK** and close Backup Exec.

Chapter 2: Using the Extract Wizard Advanced Method

23. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for Veritas Backup Exec 8.6 and Exchange 2000/2003

1. Install “Backup Exec Remote Agent for Windows Servers” client software on the computer that will be running ExtractWizard.
2. On the computer that will be running ExtractWizard, do the following:
 - a. Install the Exchange System Management Tools.
 - b. Add the path **C:\Program Files\Exchsrvr\bin** to the system path:
winnt\system32 or windows\system32.
3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 4.

4. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
5. Click **Next**.

- On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **Veritas Backup Exec**. Then click **Next**.

NetApp® ExtractWizard

Method of Extraction
Please extract the data directly or use the backup software.

☐ Direct Method The direct method reads the tape or disk file directly without needing the original backup software installed.

☒ Advanced Method The advanced method leverages the backup software's knowledge of individual backup set locations and robotic library support to quickly extract online exchange backups. This method requires the backup client software to be installed on this computer.

Select the software used to create the backup.

Veritas BackupExec

< Back Next > Exit Help

The **Connection Parameters** page of the ExtractWizard appears.

NetApp® ExtractWizard

Connection Parameters
Specify the Exchange Server Storage Group.

Select the Exchange Server version to restore.

☒ Exchange Server 2000 or Exchange Server 2003

Please enter the Exchange Storage Groups, seperated by semicolons (:)

Storage Groups: First Storage Group;Second Storage Group

☐ Exchange Server 5.5

Please enter the Exchange Server Site and Org names.

Site: NOT REQUIRED

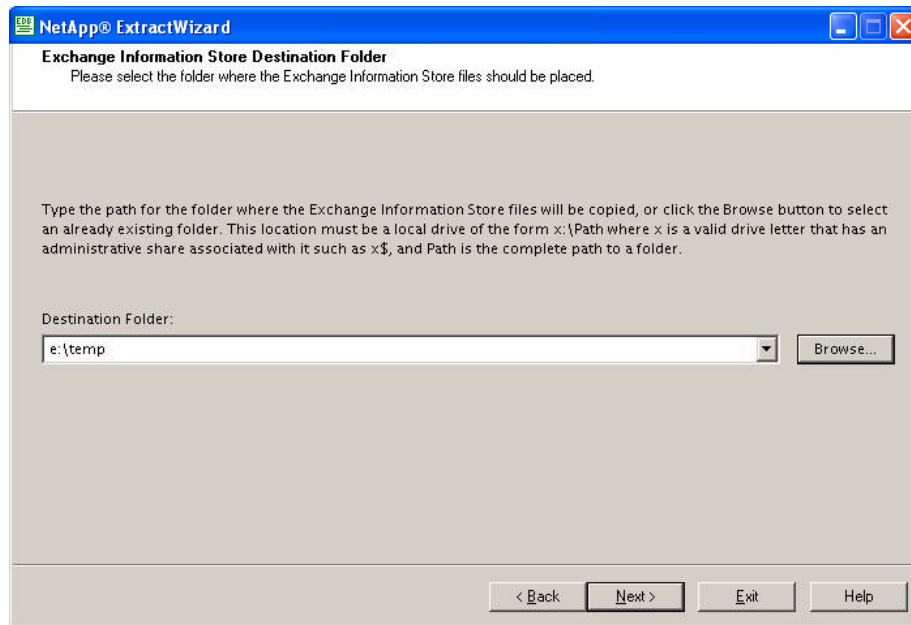
Org: NOT REQUIRED

< Back Next > Exit Help

- Select the **Exchange Server 2000 or Exchange Server 2003** option.
- In the **Storage Groups** box, enter the name of the storage group you will be extracting, exactly as it appears in the Exchange System Manager. Backup Exec will check this name, which is case sensitive, and it must match exactly. You can enter multiple storage groups, separated by semicolons (;). Click **Next**.
- On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a

Chapter 2: Using the Extract Wizard Advanced Method

valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



10. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.

a. **First verification:** The ExtractWizard checks for the following conditions:

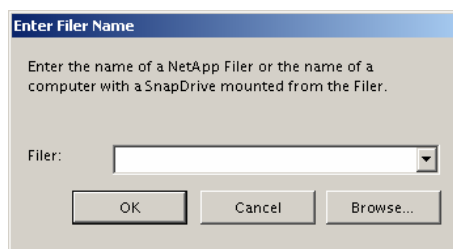
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in "ExtractWizard: Pointing to a NetApp device" on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

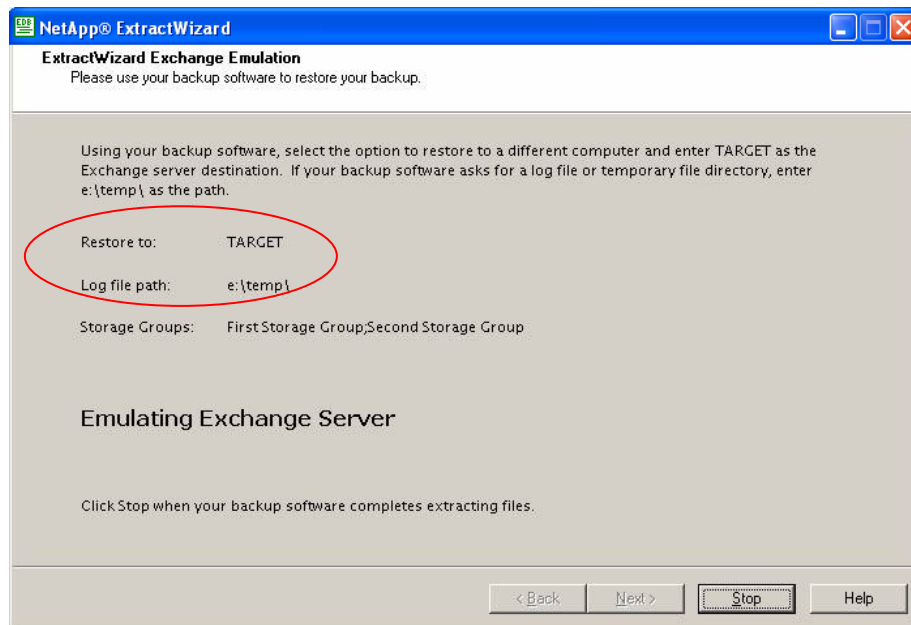
Click **OK** to proceed to the next verification.

- b. **Second verification:** The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start Backup Exec.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Restore to” and “Log file path” information on this page and paste it into Backup Exec when prompted later in this

11. Start Veritas Backup Exec 8.6 on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
12. On the toolbar at the top of the Backup Exec window, click the **Restore** button. The **Restore Job Properties** dialog box appears.
13. In the **Restore Job Properties** dialog box, click the **Selections** tab.
14. In the **All Volumes** tree, select the Exchange backup you want to restore.
15. Click the **Redirection** tab.
16. Select the **Redirect Exchange sets** check box.
17. In the **Restore to server** box, enter the name of the Restore Target Computer. See previous step 9 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
18. Select the **Exchange** tab.

Chapter 2: Using the Extract Wizard Advanced Method

19. In the **Exchange 2000** area, clear the **No Loss Restore** check box.

IMPORTANT NOTE: If the **No Loss Restore** check box is selected, the restore will fail.

20. In the **Temporary location for log and path files** box, enter the log file path. See previous step 9 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.

21. Clear the **Commit after restore completes** check box.

CAUTION: Make sure to clear the **Commit after restore completes** check box. If this check box remains selected, Backup Exec will automatically delete the restored files after completing the restore.

22. Click **Run Now**. Backup Exec will display a warning about restoring a server with different Site and Organization names. You can safely click **Yes**. ExtractWizard and Single Mailbox Recovery do not depend on the Site and Organization names. Backup Exec will start to restore Exchange files to the ExtractWizard.

23. When Backup Exec has finished, click **OK** and close Backup Exec.

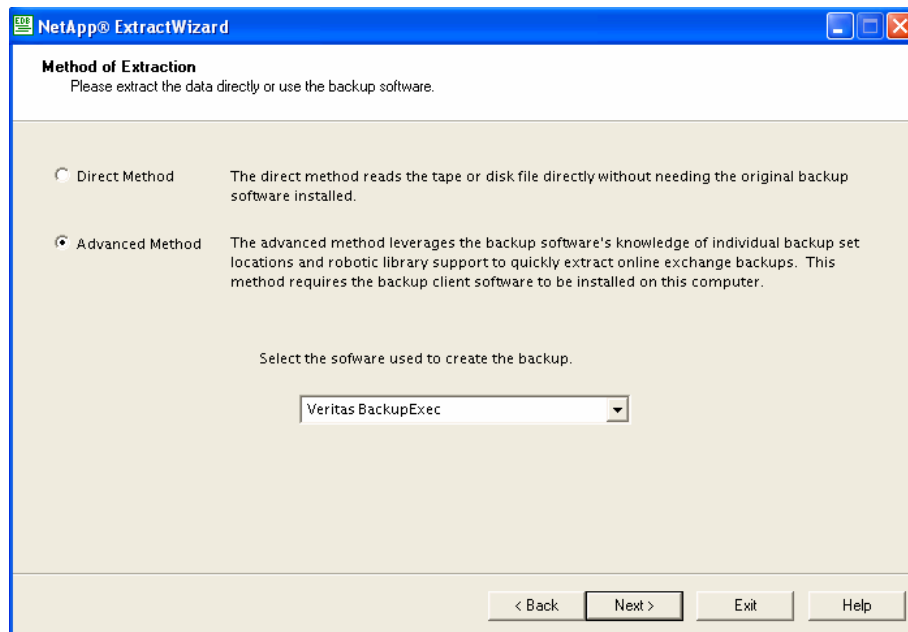
24. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for Veritas Backup Exec 8.6 and Exchange 5.5

1. Install “Backup Exec Remote Agent for Windows Servers” client software on the computer that will be running ExtractWizard.
2. On the computer running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 4.

4. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
5. Click **Next**.
6. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **Veritas Backup Exec**. Then click **Next**.



Chapter 2: Using the Extract Wizard Advanced Method

- On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option, and click **Next**.

The screenshot shows the 'Connection Parameters' dialog box of the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Connection Parameters' with the instruction 'Specify the Exchange Server Storage Group.' Below this, it says 'Select the Exchange Server version to restore.' There are two radio button options: 'Exchange Server 2000 or Exchange Server 2003' (unselected) and 'Exchange Server 5.5' (selected). Under the first option, it says 'Please enter the Exchange Storage Groups, separated by semicolons (:)' and there is a text box containing 'NOT REQUIRED'. Under the second option, it says 'Please enter the Exchange Server Site and Org names.' There are two text boxes: 'Site:' containing 'NOT REQUIRED' and 'Org:' containing 'NOT REQUIRED'. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

- On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).

The screenshot shows the 'Exchange Information Store Destination Folder' dialog box of the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Exchange Information Store Destination Folder' with the instruction 'Please select the folder where the Exchange Information Store files should be placed.' Below this, it says 'Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder.' There is a text box labeled 'Destination Folder:' containing 'e:\temp' and a 'Browse...' button. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

- Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - First verification: The ExtractWizard checks for the following conditions:

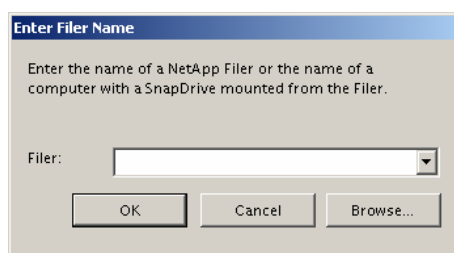
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

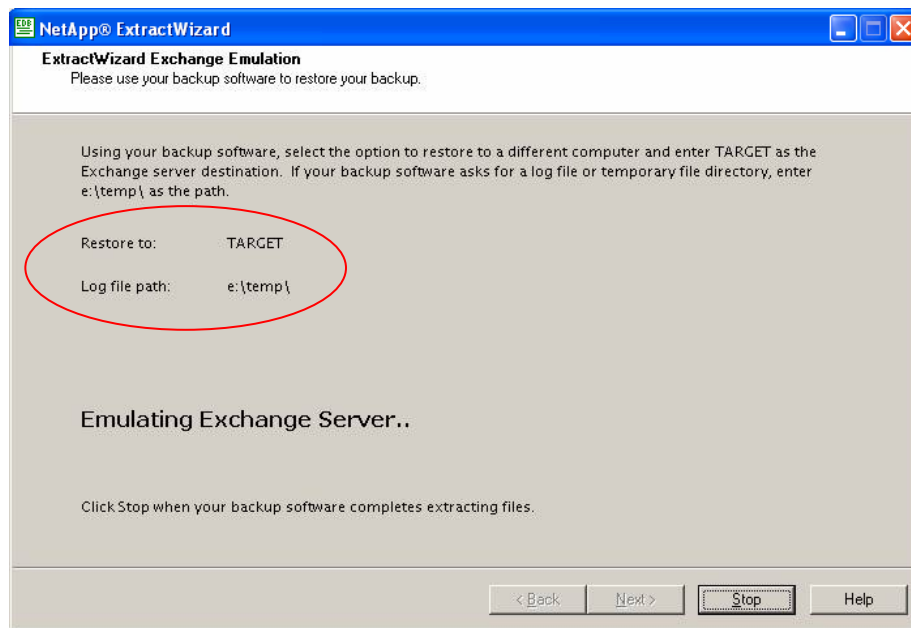
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start Backup Exec.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Restore to” information on this page and paste it into Backup Exec when prompted later in this section.

10. Start Veritas Backup Exec 8.6 on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
11. Click the **Restore** button at the top left of the Backup Exec window. The **Restore Job Properties** dialog box appears.
12. In the **Restore Job Properties** dialog box, click the **Selections** tab.
13. In the **All Volumes** tree, select the Exchange backup you want to restore.
NOTE: You cannot restore the Microsoft Exchange Directory.
14. Click the **Redirection** tab.
15. Select the **Redirect Exchange sets** check box.
16. In the **Restore to server** box, enter the name of the Restore Target Computer. See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
17. Select the **Exchange** tab.
18. In the Exchange v5.5 area, clear the **No Loss Restore** check box.
IMPORTANT NOTE: If the **No Loss Restore** check box is selected, the restore will fail.
19. Select one or both of the following check boxes: Select the **Restore public folder** if you would like to restore the pub.edb. Select the **Restore private mailboxes** if you would like to restore the priv.edb.
20. Click **Run Now**. Backup Exec will display a warning about restoring a server with different Site and Organization names. You can safely click **Yes**. ExtractWizard and Single Mailbox Recovery do not depend on the Site and Organization names. Backup Exec will start to restore Exchange files to the ExtractWizard.
21. When Backup Exec has finished, click **OK** and close Backup Exec.
22. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for CA BrightStor ARCserve

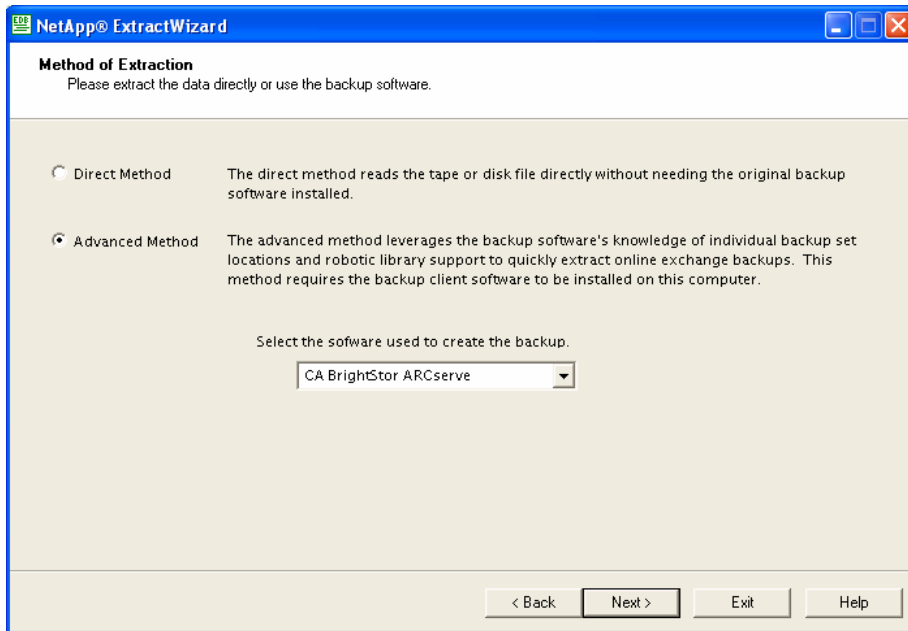
Exchange Emulation for CA BrightStor ARCserve and Exchange 2000/2003

1. On the computer that will be running ExtractWizard, do the following:
 - a. Install the Exchange System Management Tools.
 - b. Add the path **C:\Program Files\Exchsrvr\bin** to the system path:
winnt\system32 or windows\system32.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 3.
3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.

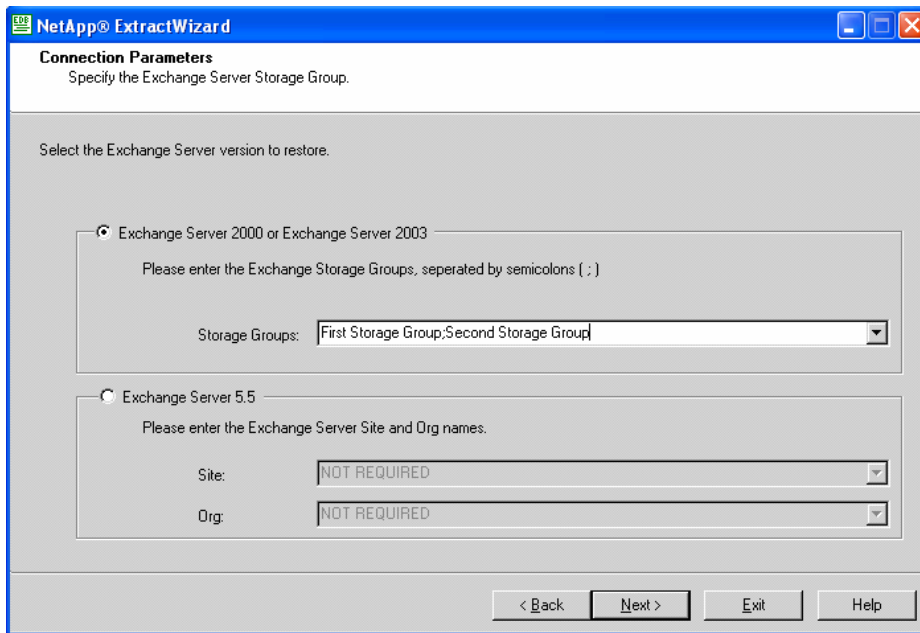
Chapter 2: Using the Extract Wizard Advanced Method

- On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **CA BrightStor ARCserve**. Then click **Next**.



The screenshot shows the 'Method of Extraction' window of the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Method of Extraction' with the instruction 'Please extract the data directly or use the backup software.' Below this, there are two radio button options: 'Direct Method' and 'Advanced Method'. The 'Advanced Method' is selected. To the right of the 'Advanced Method' radio button, there is a descriptive text: 'The advanced method leverages the backup software's knowledge of individual backup set locations and robotic library support to quickly extract online exchange backups. This method requires the backup client software to be installed on this computer.' Below the radio buttons, there is a label 'Select the software used to create the backup.' followed by a dropdown menu that currently displays 'CA BrightStor ARCserve'. At the bottom of the window, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

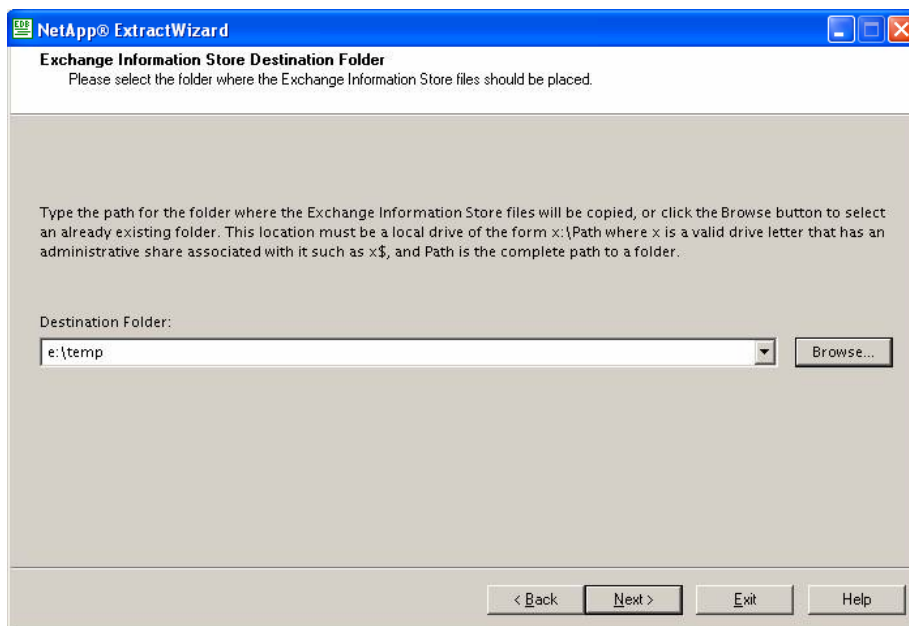
The **Connection Parameters** page of the ExtractWizard appears.



The screenshot shows the 'Connection Parameters' window of the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. The main heading is 'Connection Parameters' with the instruction 'Specify the Exchange Server Storage Group.' Below this, there is a label 'Select the Exchange Server version to restore.' followed by two radio button options: 'Exchange Server 2000 or Exchange Server 2003' and 'Exchange Server 5.5'. The 'Exchange Server 2000 or Exchange Server 2003' option is selected. Below the first radio button, there is a text box with the instruction 'Please enter the Exchange Storage Groups, seperated by semicolons (:)'. Below this text box, there is a label 'Storage Groups:' followed by a dropdown menu that currently displays 'First Storage Group;Second Storage Group'. Below the second radio button, there is a text box with the instruction 'Please enter the Exchange Server Site and Org names.' Below this text box, there are two labels: 'Site:' and 'Org:'. Each label is followed by a dropdown menu that currently displays 'NOT REQUIRED'. At the bottom of the window, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

- Select the **Exchange Server 2000 or Exchange Server 2003** option.
- In the **Storage Groups** box, enter the name of the storage group you will be extracting. The storage group name is case sensitive and must match exactly as it appears in the Exchange System Manager. You can enter multiple storage groups, separated by semicolons (;).
- Click **Next**.

9. If ExtractWizard displays a warning about the ARCserve Exchange client not being properly configured for emulating Exchange 2000/2003, click **OK** to continue. You can configure the ARCserve Exchange client when you get to step 12 later in this section.
10. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



11. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.

- a. **First verification:** The ExtractWizard checks for the following conditions:

You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

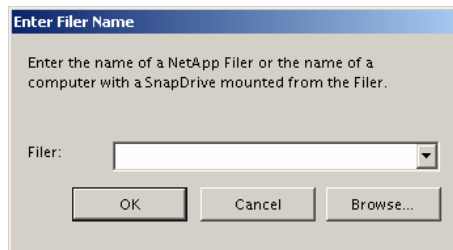
A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter File Name** dialog box appears and prompts you to enter the name of a NetApp storage system.

Chapter 2: Using the Extract Wizard Advanced Method



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

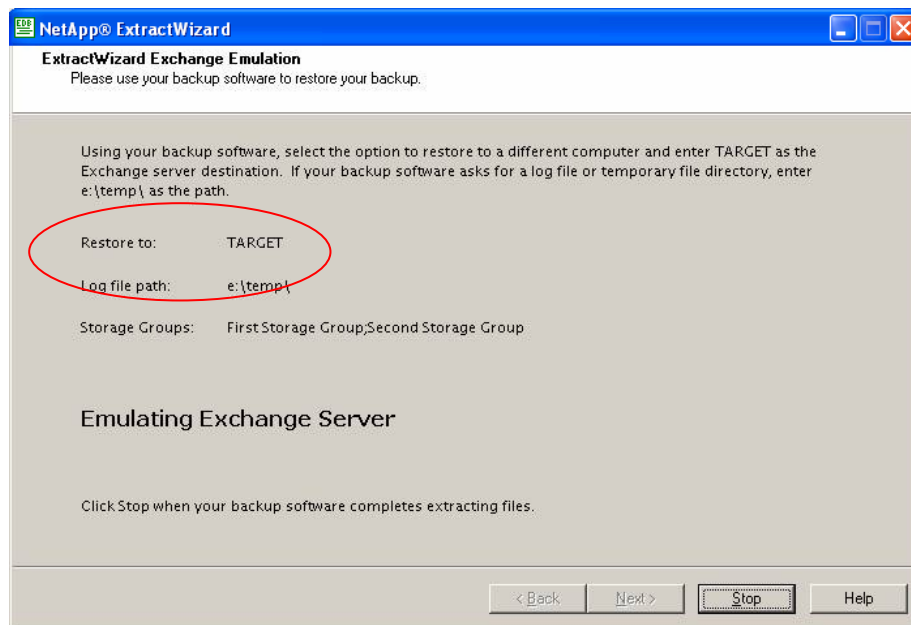
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start BrightStor ARCserve.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Restore to” and “Log file path” information on this page and paste it into BrightStor ARCserve when prompted later in this section.

12. Make sure “BrightStor ARCserve Client Agent for Windows” software and “Backup Agent for Microsoft Exchange” software are installed on the computer running ExtractWizard.
13. If you have already installed the Backup Agent for Exchange 5.5 and you wish to emulate Exchange 2000/2003, you must do one of the following:
 - Option 1: Reinstall the Backup Agent for Microsoft Exchange with ExtractWizard, running the correct emulation type.
 - Option 2: Manually edit the registry setting for the ARCserve Exchange client. Make sure the following key exists:

HKEY_LOCAL_MACHINE\SOFTWARE\ComputerAssociates\BrightStor ARCserve Backup\DSAgent\CurrentVersion\agent\dbaexch.

In this key, make sure the **REG_DWORD** value “**isExch2000**” exists with a value of “**1**”.

14. Start BrightStor ARCserve on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard. The **BrightStor ARCserve** window appears.
15. On the **Quick Start** menu, click **Restore**. A **Server** tree appears in the **Source** tab.
16. In the **Source** tab, select the Exchange backup you want to restore.
17. Right-click the storage group you want to restore and click **Backup Agent Option**. The **Backup Agent Restore Options** dialog box appears.
18. In the **Temporary location for log and path files** box, enter the log file path. See previous step 10 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
19. Click **OK** to close the **Backup Agent Restore Options** dialog box.
20. Click the **Destination** Tab.
21. Clear the **Restore files to their original location** check box.

IMPORTANT NOTE: For the following two steps, use the **Network** tree. Do not use the **Windows NT/2000/XP/2003 Systems** tree.

22. In the **Network** tree, expand the **Microsoft Windows Network** node, and locate the Restore Target Computer. If the Restore Target Computer does not appear, do one or both of the following:
 - a. If the domain or workgroup that the Restore Target Computer belongs to does not appear in the Microsoft Windows Network node, right-click the Microsoft Windows Network node and click **Add Machine/Object**. In the **Add Object** dialog box, enter the domain or workgroup and click **Add**.
 - b. If the Restore Target Computer does not appear in the domain or workgroup it belongs to, right-click the domain or workgroup node, and click **Add Machine/Object**. In the **Add Object** dialog box, enter the name of the Restore Target Computer and click **Add**. See previous step 10 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
23. Expand the Restore Target Computer node and select the **Microsoft Information Store** node.

NOTE: If the **Microsoft Information Store** node does not appear under the Restore Target Computer, select the Restore Target Computer node so that its name appears in the Address box above the Destination tree. Then append \dbaexchis to the Restore Target Computer name. This signals ARCserve you are restoring an Information Store.

Chapter 2: Using the Extract Wizard Advanced Method

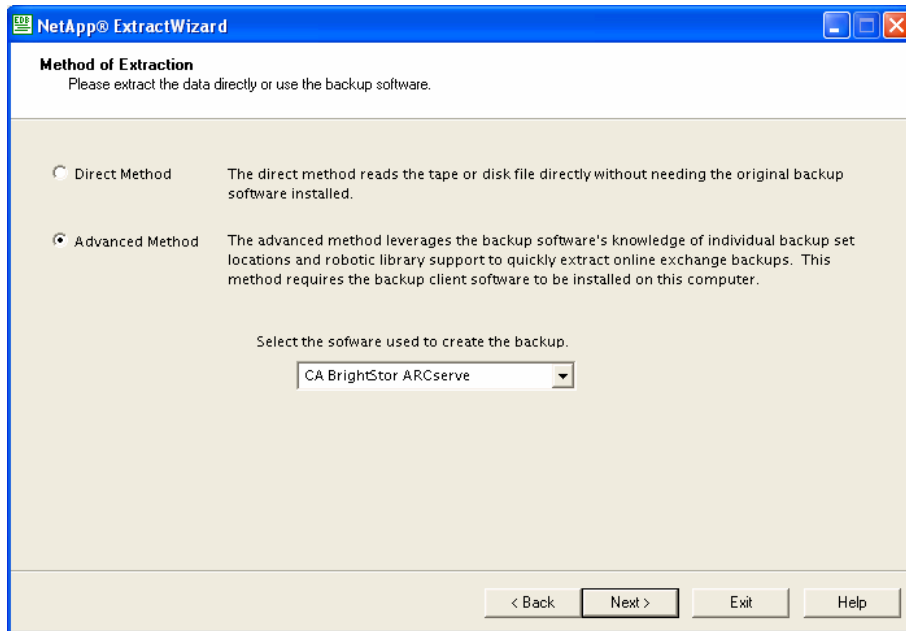
24. On the toolbar, click the **Start** button.
25. If the Remote Agent Security is *not* properly configured, the **Security** dialog box appears. Make sure your Server logon account (User Name and Password) is correct. The account you use must have backup operator rights to the Restore Target Computer. Click **OK**.

The Session User Name and Password dialog box appears.

26. Verify the session information is correct.
27. Click **OK**. The **Submit Job** dialog box appears.
28. In the **Description** box, enter a description if desired, and click **OK**. ARCserve will start to restore Exchange files to the ExtractWizard.
29. When ARCserve has finished, click **OK** and close ARCserve.
30. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for CA BrightStor ARCserve and Exchange 5.5

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 3.
3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **CA BrightStor ARCserve**. Then click **Next**.

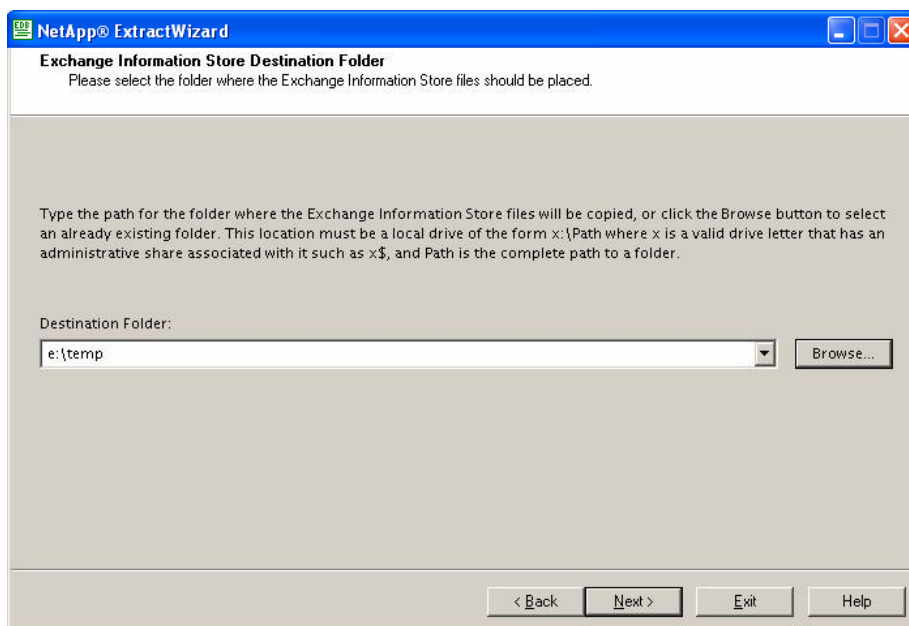


6. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option.

Chapter 2: Using the Extract Wizard Advanced Method

The screenshot shows the 'NetApp® ExtractWizard' window with the 'Connection Parameters' tab selected. The window title bar includes standard Windows window controls. The main area is titled 'Specify the Exchange Server Storage Group.' and contains the instruction 'Select the Exchange Server version to restore.' There are two radio button options: 'Exchange Server 2000 or Exchange Server 2003' (unselected) and 'Exchange Server 5.5' (selected). Under the 'Exchange Server 2000 or Exchange Server 2003' option, there is a text box for 'Storage Groups' with a dropdown arrow, preceded by the instruction 'Please enter the Exchange Storage Groups, separated by semicolons (;)'. Under the 'Exchange Server 5.5' option, there are two text boxes: 'Site' with the value 'SINGLEMAILBOXRESTORE' and 'Org' with the value 'NETAPP', preceded by the instruction 'Please enter the Exchange Server Site and Org names.' At the bottom of the window are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

7. In the **Site** and **Org** boxes, enter the Site and Org for the Exchange Information Store files you are preparing to restore. The Site and Org names are case sensitive and must match exactly as they appear in the Exchange System Manager.
8. Click **Next**.
9. If ExtractWizard displays a warning about the ARCserve Exchange client not being properly configured for emulating Exchange 5.5, click **OK** to continue. You can configure the ARCserve Exchange client when you get to step 12 later in this section.
10. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



11. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.

- a. First verification: The ExtractWizard checks for the following conditions:

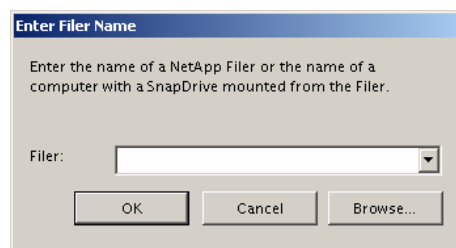
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

Chapter 2: Using the Extract Wizard Advanced Method

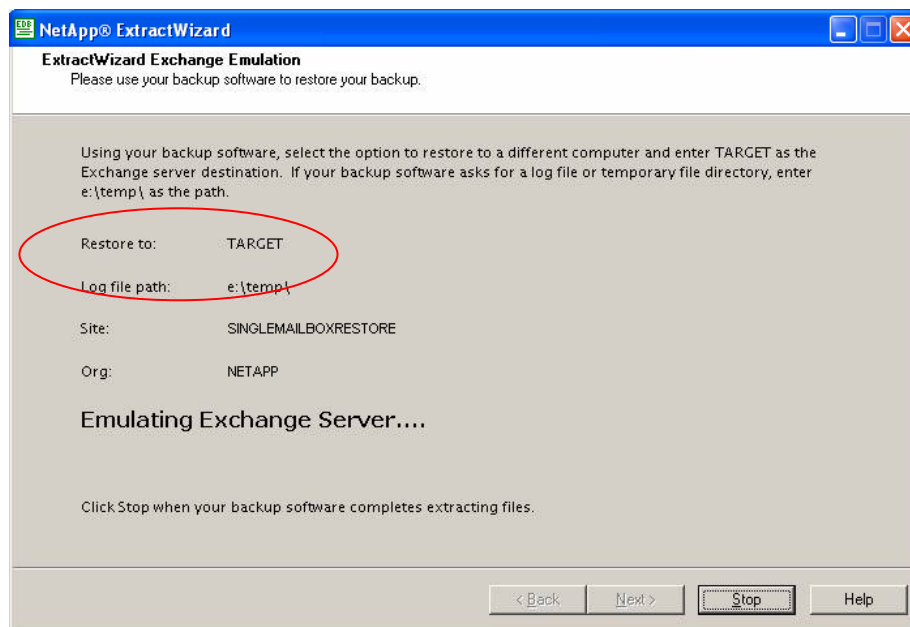
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start BrightStor ARCserve.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



12. Make sure “BrightStor ARCserve Client Agent for Windows” software and “Backup Agent for Microsoft Exchange” software are installed on the computer running ExtractWizard.
13. If you have already installed the Backup Agent for Exchange 2000/2003 and you wish to emulate Exchange 5.5, you must do one of the following:
 - Option 1: Reinstall the Backup Agent for Microsoft Exchange with ExtractWizard, running the correct emulation type.
 - Option 2: Manually edit the registry setting for the ARCserve Exchange client. Make sure the following key exists:

HKEY_LOCAL_MACHINE\SOFTWARE\ComputerAssociates\BrightStor ARCserve Backup\DSAgent\CurrentVersion\agent\dbaexch.

In this key, make sure the **REG_DWORD** value “isExch2000” does not exist.

IMPORTANT NOTE: If **REG_DWORD** value “isExch2000” exists, delete it.

14. Start BrightStor ARCserve on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard. The **BrightStor ARCserve** window appears.
15. On the **Quick Start** menu, click **Restore**. A **Server** tree appears in the **Source** tab.

16. Select the Exchange backup you want to restore.

NOTE: You cannot restore the Directory.

17. Click the **Destination** tab.

18. Clear the **Restore files to their original location** check box.

IMPORTANT NOTE: For the following two steps, use the **Network** tree. Do not use the **Windows NT/2000/XP/2003 Systems** tree.

19. In the **Network** tree, expand the **Microsoft Windows Network** node, and locate the Restore Target Computer. If the Restore Target Computer does not appear, do one or both of the following:
 - a. If the domain or workgroup that the Restore Target Computer belongs to does not appear in the Microsoft Windows Network node, right-click the Microsoft Windows Network node and click **Add Machine/Object**. In the **Add Object** dialog box, enter the domain or workgroup and click **Add**.
 - b. If the Restore Target Computer does not appear in the domain or workgroup it belongs to, right-click the domain or workgroup node, and click **Add Machine/Object**. In the **Add Object** dialog box, enter the name of the Restore Target Computer and click **Add**. See previous step 10 to verify that you are using the "Restore to" value from the Exchange Emulation page of the ExtractWizard.
20. Expand the Restore Target Computer node and select the **Microsoft Exchange Server** node.

NOTE: If the **Microsoft Exchange Server** node does not appear under the Restore Target Computer, select the Restore Target Computer node so that its name appears in the Address box above the Destination tree. Then append \dbaexch to the Restore Target Computer name. This signals ARCserve you are restoring an Information Store.

21. On the toolbar, click the **Start** button.
22. If the Remote Agent Security is *not* properly configured, the **Security** dialog box appears. Make sure your Server logon account (User Name and Password) is correct. The account you use must have backup operator rights to the Restore Target Computer. Click **OK**.

The **Session User Name and Password** dialog box appears.

23. Verify the session information is correct.
24. Click **OK**. The **Submit Job** dialog box appears.
25. In the **Description** box, enter a description if desired, and click **OK**. ARCserve will start to restore Exchange files to the ExtractWizard.
26. When ARCserve has finished, click **OK** and close ARCserve.
27. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for Veritas NetBackup

Exchange Emulation for Veritas NetBackup and Exchange 2000/2003

NOTE: For NetBackup 4.5, you must install the NetBackup client and the Exchange agent on the computer running ExtractWizard.

1. Install NetBackup client software for Windows on the computer that will be running ExtractWizard.
2. Allow the computer running ExtractWizard to restore backups created by the Exchange server client. Follow the instructions for allowing redirected restores in the NetBackup Administrators Guide.
3. On the computer that will be running ExtractWizard, do the following:
 - a. Install the Exchange System Management Tools.
 - b. Add the path **C:\Program Files\Exchsrvr\bin** to the system path: winnt\system32 or windows\system32.

4. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 5.

5. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
6. Click **Next**.

7. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **Veritas NetBackup**. Then click **Next**.

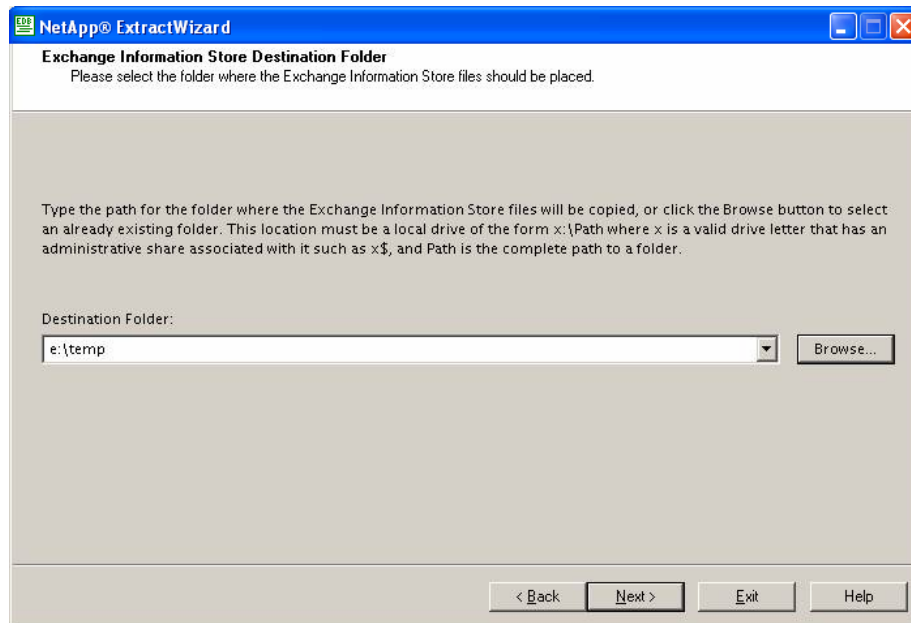
The screenshot shows the 'Method of Extraction' window of the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. Below the title bar, the text 'Method of Extraction' is followed by the instruction 'Please extract the data directly or use the backup software.' There are two radio button options: 'Direct Method' and 'Advanced Method'. The 'Advanced Method' is selected. To the right of the 'Advanced Method' radio button, a description states: 'The advanced method leverages the backup software's knowledge of individual backup set locations and robotic library support to quickly extract online exchange backups. This method requires the backup client software to be installed on this computer.' Below this, a label 'Select the software used to create the backup.' is followed by a dropdown menu showing 'Veritas NetBackup'. At the bottom of the window are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

The **Connection Parameters** page of the ExtractWizard appears.

The screenshot shows the 'Connection Parameters' window of the NetApp ExtractWizard. The title bar reads 'NetApp® ExtractWizard'. Below the title bar, the text 'Connection Parameters' is followed by the instruction 'Specify the Exchange Server Storage Group.' There is a label 'Select the Exchange Server version to restore.' followed by two radio button options: 'Exchange Server 2000 or Exchange Server 2003' (which is selected) and 'Exchange Server 5.5'. Under the 'Exchange Server 2000 or Exchange Server 2003' option, the instruction 'Please enter the Exchange Storage Groups, seperated by semicolons (:)' is followed by a text box labeled 'Storage Groups:' containing the text 'First Storage Group;Second Storage Group'. Under the 'Exchange Server 5.5' option, the instruction 'Please enter the Exchange Server Site and Org names.' is followed by two text boxes: 'Site:' and 'Org:', both containing the text 'NOT REQUIRED'. At the bottom of the window are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

8. Select the **Exchange Server 2000 or Exchange Server 2003** option.
9. In the **Storage Groups** box, enter the name of the storage group you will be extracting. The storage group name is case sensitive and must match exactly the name that appears in the Exchange System Manager. You can enter multiple storage groups, separated by semicolons (;).
10. Click **Next**.

11. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



12. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. **First verification:** The ExtractWizard checks for the following conditions:

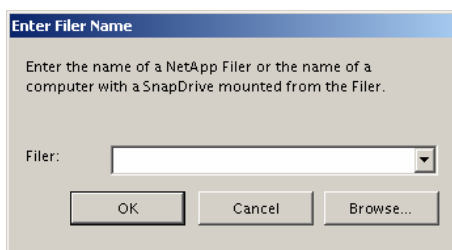
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in "ExtractWizard: Pointing to a NetApp device" on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

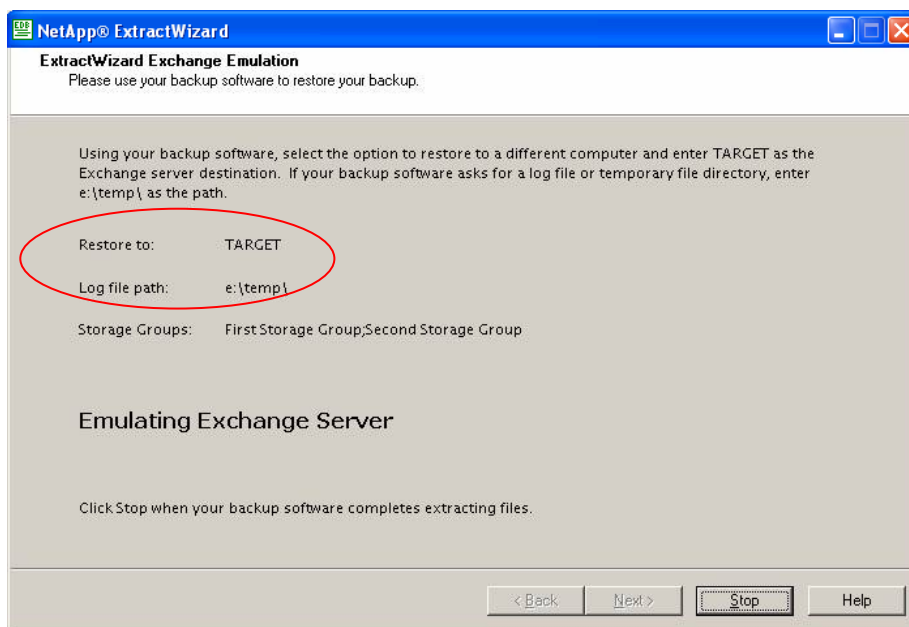
Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start NetBackup.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Log file path” information on this page and paste it into NetBackup when prompted later in this section.

13. Start the NetBackup client on the computer running ExtractWizard.
14. On the **File** menu, click **Specify NetBackup Machines and Policy Type**. (For NetBackup 4.5, click **Specify NetBackup Machines**.)
15. In the **Specify NetBackup Machines and Policy Type** dialog box, click the **Client/Policy Type** tab.

Chapter 2: Using the Extract Wizard Advanced Method

16. Under **Client List**, select the Exchange client you wish to restore from and make it the current client. Click **OK**.
17. On the toolbar, click the **Select for Restore** button, and then select the Exchange backup you wish to restore.
18. On the **Actions** menu, click **Start Restore of Marked Files**.
19. In the **Restore Marked Files** dialog box, clear the **Commit after restore completes** check box.

CAUTION: If the **Commit after restore completes** check box is selected, NetBackup will automatically delete the restored files after completing the restore.
20. In the **Temporary location for log and patch files** box, enter the log file path. See previous step 11 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
21. Click the **Start Restore** button.
22. When NetBackup has finished, click **OK** and close NetBackup.
23. In ExtractWizard, click **Stop** and then click **Finish**.

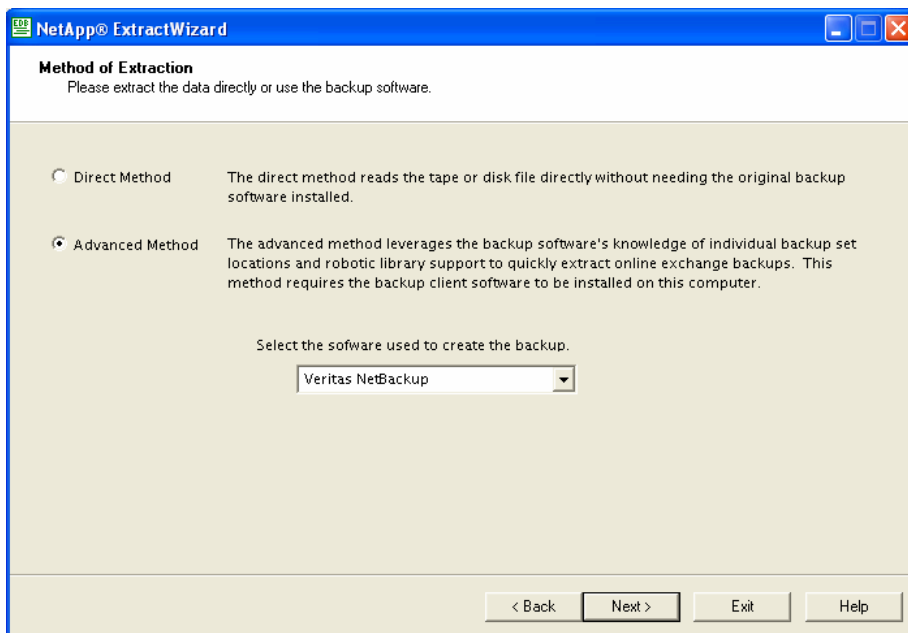
Exchange Emulation for Veritas NetBackup and Exchange 5.5

NOTE: For NetBackup 4.5, you must install the NetBackup client and the Exchange agent on the computer running ExtractWizard.

1. Install NetBackup client software for Windows on the computer that will be running ExtractWizard.
2. Allow the computer running ExtractWizard to restore backups created by the Exchange server client. Follow the instructions for allowing redirected restores in the NetBackup Administrators Guide.
3. On the computer running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
4. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 5.

5. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
6. Click **Next**.
7. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **Veritas NetBackup**. Then click **Next**.



Chapter 2: Using the Extract Wizard Advanced Method

8. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option and click **Next**.

The screenshot shows the 'NetApp® ExtractWizard' window with the 'Connection Parameters' tab selected. The title bar says 'NetApp® ExtractWizard'. The main heading is 'Connection Parameters' with the subtitle 'Specify the Exchange Server Storage Group.' Below this, it says 'Select the Exchange Server version to restore.' There are two radio button options: 'Exchange Server 2000 or Exchange Server 2003' (unselected) and 'Exchange Server 5.5' (selected). Under the first option, it says 'Please enter the Exchange Storage Groups, separated by semicolons (:)' and there is a text box labeled 'Storage Groups:' containing 'NOT REQUIRED'. Under the second option, it says 'Please enter the Exchange Server Site and Org names.' There are two text boxes: 'Site:' containing 'NOT REQUIRED' and 'Org:' containing 'NOT REQUIRED'. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

9. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).

The screenshot shows the 'NetApp® ExtractWizard' window with the 'Exchange Information Store Destination Folder' tab selected. The title bar says 'NetApp® ExtractWizard'. The main heading is 'Exchange Information Store Destination Folder' with the subtitle 'Please select the folder where the Exchange Information Store files should be placed.' Below this, it says 'Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder.' There is a text box labeled 'Destination Folder:' containing 'e:\temp' and a 'Browse...' button. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

10. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

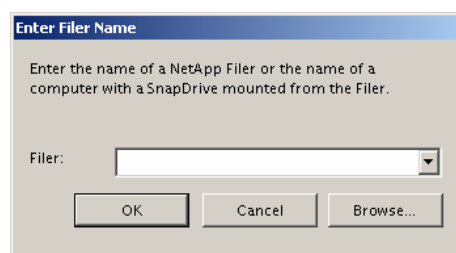
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

Click **OK** to proceed to the next verification.

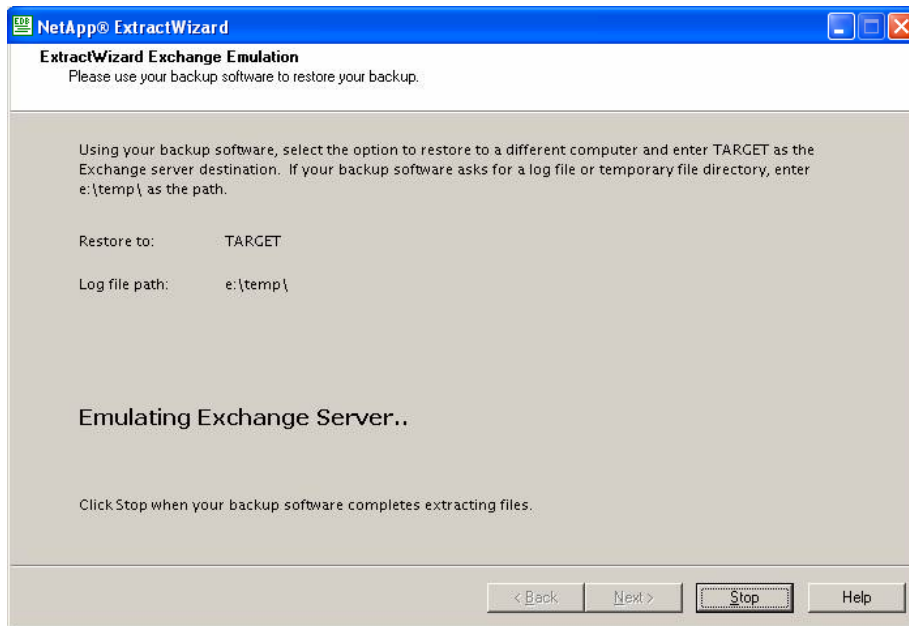
- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start NetBackup.

NOTE: Do not click the **Stop** button until you reach the end of these instructions.

Chapter 2: Using the Extract Wizard Advanced Method



11. Start the NetBackup client on the computer running ExtractWizard.
12. On the **File** menu, click **Specify NetBackup Machines and Policy Type**. (For NetBackup 4.5, click **Specify NetBackup Machines**.)
13. In the **Specify NetBackup Machines and Policy Type** dialog box, click the **Client/Policy Type** tab.
14. Under **Client List**, select the Exchange client that you want to restore from and make it the current client. Click **OK**.
15. On the toolbar, click the **Select for Restore** button, and then select the Exchange backup you wish to restore.
16. On the **Actions** menu, click **Start Restore of Marked Files**.
17. In the **Restore Marked Files** dialog box, click the **Start Restore** button.
18. When NetBackup has finished, click **OK** and close NetBackup.
19. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for CommVault Galaxy Backup & Recovery

Exchange Emulation for CommVault Galaxy Backup & Recovery and Exchange 2000/2003

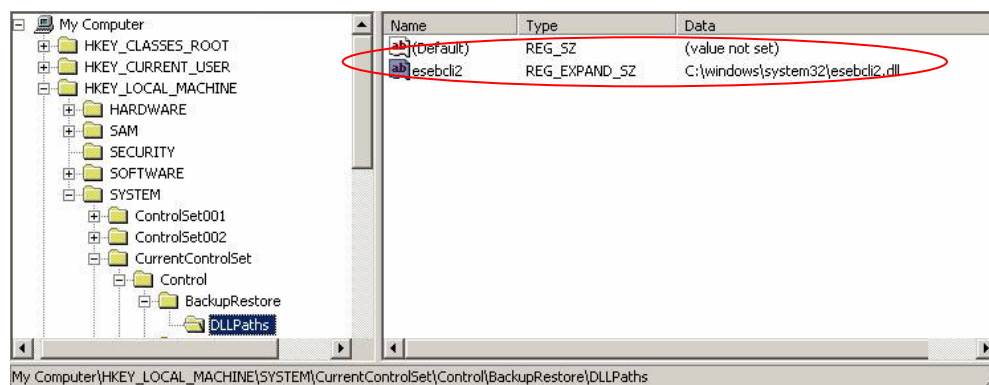
NOTE: CommVault Galaxy will not install the Exchange agent onto a non-server OS. The Exchange agent is required for ExtractWizard to work.

1. On the computer that will be running ExtractWizard, do one of the following:

- Option 1: Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
- Option 2: Copy esebcli2.dll to the system path: winnt\system32 or windows\system32. (The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.) Then set the registry key:

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths with Value Name Esebcli2, Data Type REG_EXPAND_SZ, String Drive\Path\Esebcli2.dll

Note for Windows 2000: Use regedt32.exe to create a REG_EXPAND_SZ value.



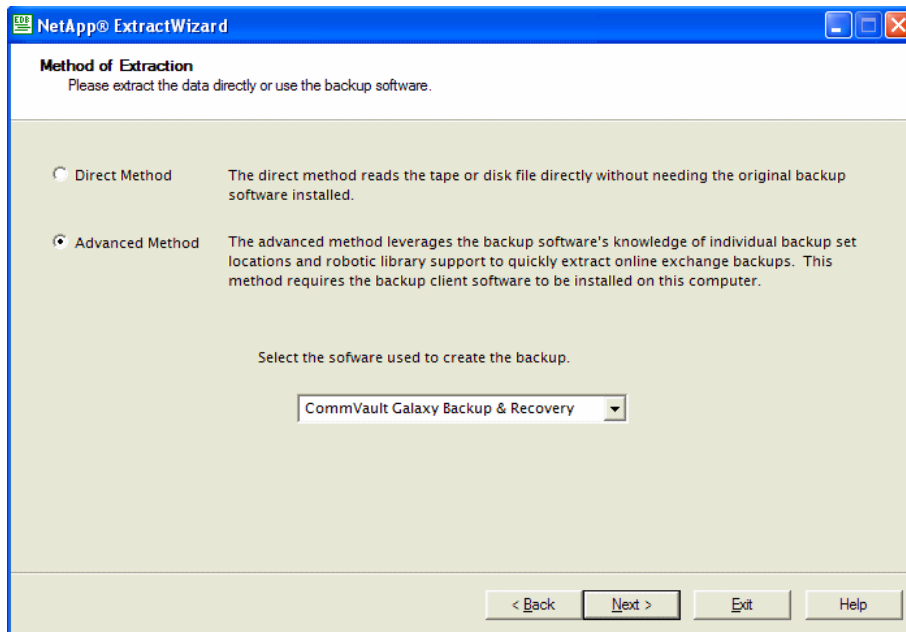
Example of Setting the Registry Key

2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.

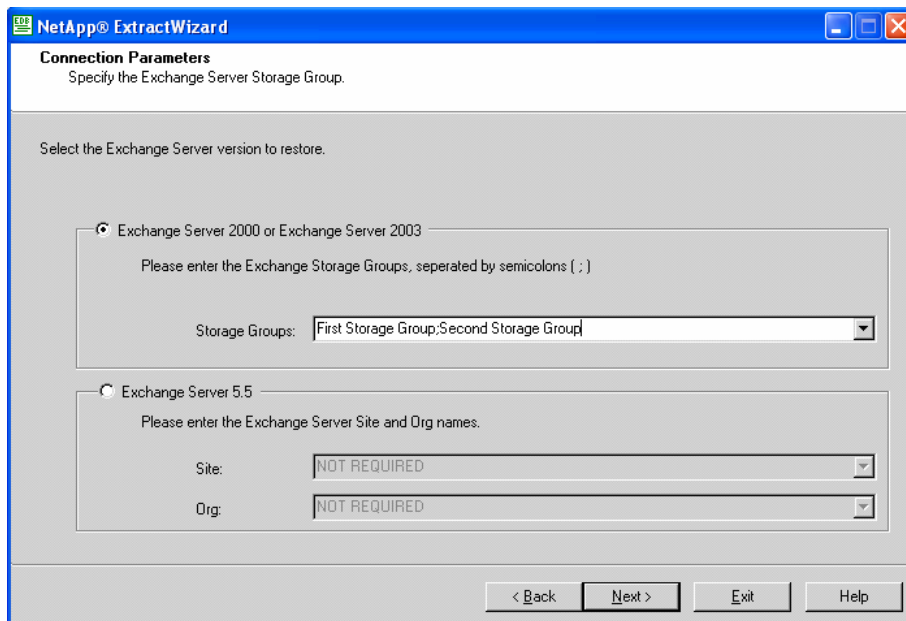
Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 3.

3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.
5. On the Method of Extraction page of the ExtractWizard, select **Advanced Method and CommVault Galaxy Backup & Recovery**. Then click Next.

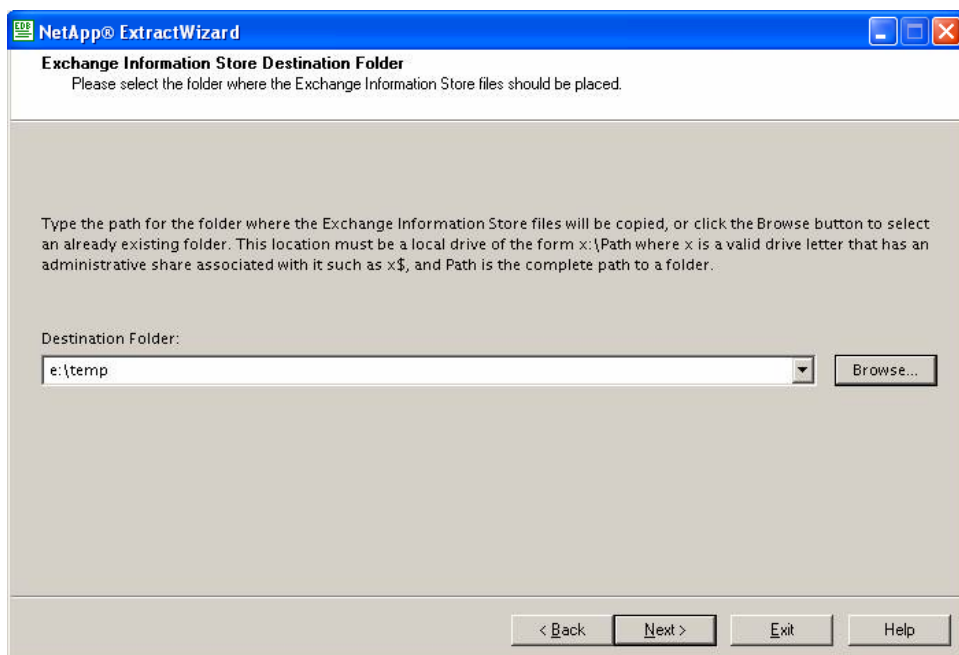
Chapter 2: Using the Extract Wizard Advanced Method



The **Connection Parameters** page of the ExtractWizard appears.



6. Select the **Exchange Server 2000** or **Exchange Server 2003** option.
7. Click **Next**.
8. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be of the form `x:\Path`, where `x` is a valid drive letter that has an administrative share associated with it (such as `x$`) and `Path` is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



9. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.

- a. First verification: The ExtractWizard checks for the following conditions:

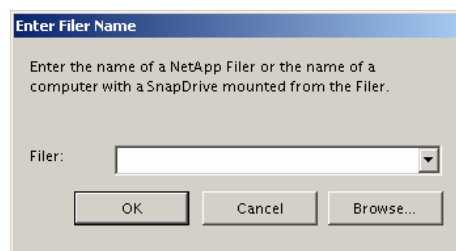
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

- o Enter or browse to the host name of a NetApp storage system.

Chapter 2: Using the Extract Wizard Advanced Method

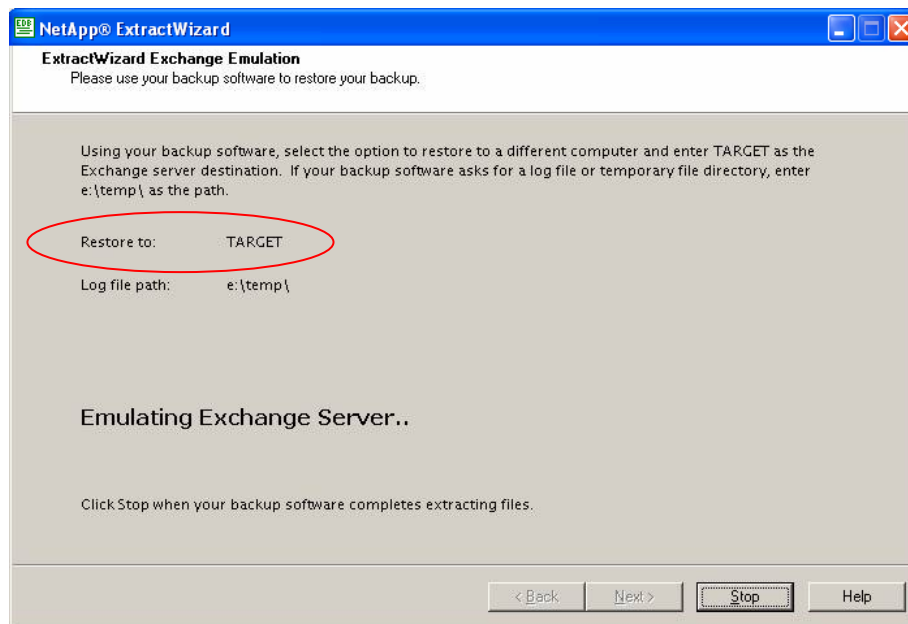
- o Enter the IP address of a NetApp storage system.

Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

10. When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start CommVault Galaxy. Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can refer to the “Restore to” information on this page when verifying it in CommVault Galaxy Backup & Restore later in this section.

11. Do one of the following:

For CommVault Galaxy 5.9: Make sure “iDA for Windows File Systems” software and “iDA for Exchange Database” software are installed on the computer running ExtractWizard.

For CommVault Galaxy 5.0: Make sure “CommVault Systems File System iDataAgent” software and “CommVault Systems Exchange Database iDataAgent” software are installed on the computer running ExtractWizard.

Notes:

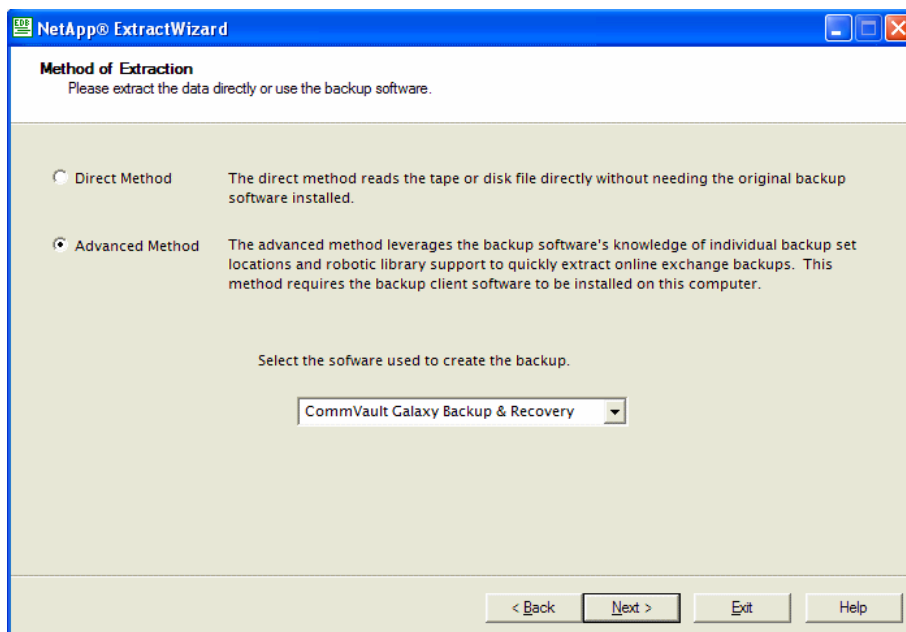
- You must run ExtractWizard in Advanced mode while running the CommVault installer.
 - CommVault Galaxy will not install the Exchange agent onto a non-server OS. The Exchange agent is required for ExtractWizard to work.
12. If you have already installed the Exchange Database iDataAgent for Exchange 5.5 and you wish to emulate Exchange 2000/2003, you must reinstall the Exchange Database iDataAgent with ExtractWizard running the correct emulation type. That is, the **Exchange Server 2000 or Exchange Server 2003** option must be selected on the **Connection Parameters** page).
 13. Start CommCell Console on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard. The **CommCell Console** window appears.
 14. In the **CommCell Browser**, right-click the Exchange server you want to restore and click **Browse & Recover**. The **Browse Options** dialog box appears.
 15. Specify the appropriate browse time for your recovery:
 - Browse the Latest Data
 - Specify Browse Time
 16. In the **Browse Options** dialog box, select your Exchange server from the **Client Computer** drop-down menu.
 17. Click **OK** to show the browse data for your Exchange server.
 18. Select the storage groups to restore.

Note: You can only restore data from under the Exchange Database tree node.
 19. Click the **Recover All Selected** button.
 20. The Restore Options for All Selected Items dialog box appears.
 21. Select the **Restore to a Different Client** option.
 22. Select the **Restore Target Computer from the Select a Client** drop-down menu. See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
 23. Click **OK** to close the Restore Options for All Selected Items dialog box.
 24. When CommVault has finished the restore, you can close CommCell Console.
 25. In ExtractWizard, click **Stop** and then click **Finish**.

Exchange Emulation for CommVault Galaxy Backup & Recovery and Exchange 5.5

NOTE: CommVault Galaxy will not install the Exchange agent onto a non-server OS. The Exchange agent is required for ExtractWizard to work.

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 3.
3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **CommVault Galaxy Backup & Recovery**. Then click **Next**.



6. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option.

NetApp® ExtractWizard

Connection Parameters
Specify the Exchange Server Storage Group.

Select the Exchange Server version to restore.

☐ Exchange Server 2000 or Exchange Server 2003
Please enter the Exchange Storage Groups, separated by semicolons (;)

Storage Groups:

☒ Exchange Server 5.5
Please enter the Exchange Server Site and Org names.

Site:

Org:

< Back Next > Exit Help

7. Click **Next**.
8. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be of the form `x:\Path`, where `x` is a valid drive letter that has an administrative share associated with it (such as `x$`) and `Path` is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).

NetApp® ExtractWizard

Exchange Information Store Destination Folder
Please select the folder where the Exchange Information Store files should be placed.

Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form `x:\Path` where `x` is a valid drive letter that has an administrative share associated with it such as `x$`, and `Path` is the complete path to a folder.

Destination Folder:

< Back Next > Exit Help

9. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

Chapter 2: Using the Extract Wizard Advanced Method

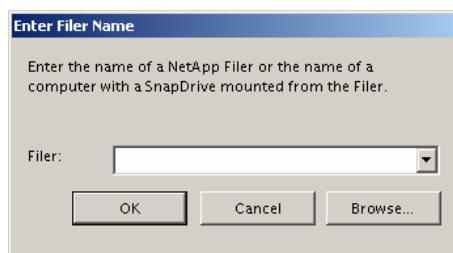
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

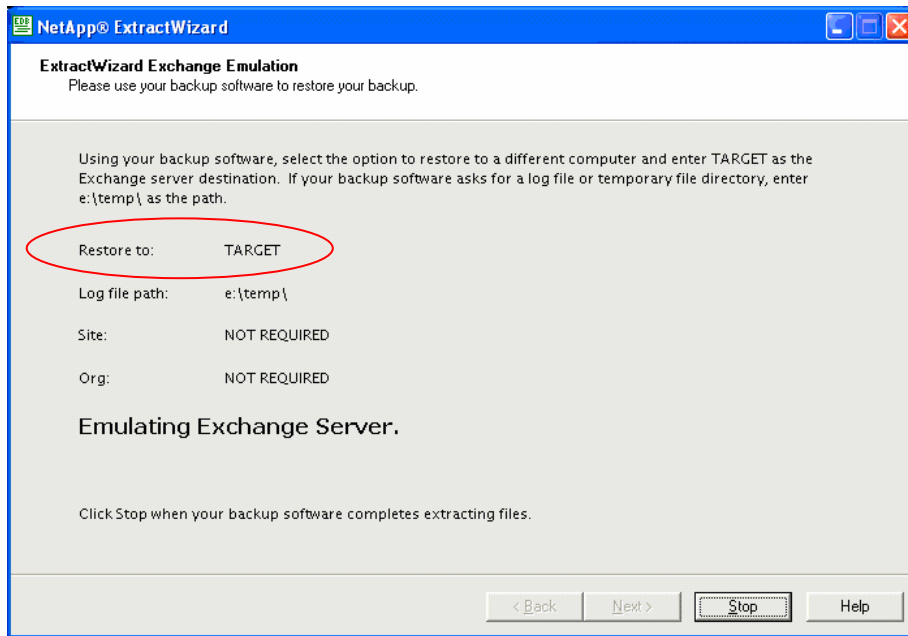
- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

Click **OK** to proceed to the next verification.

- b. Second verification: The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

10. When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start CommVault Galaxy. Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can refer to the “Restore to” information on this page when verifying it in CommVault Galaxy Backup & Restore later in this section.

11. Do one of the following:

- For CommVault Galaxy 5.9: Make sure “iDA for Windows File Systems” software and “iDA for Exchange Database” software are installed on the computer running ExtractWizard.
- For CommVault Galaxy 5.0: Make sure “CommVault Systems File System iDataAgent” software and “CommVault Systems Exchange Database iDataAgent” software are installed on the computer running ExtractWizard.

Notes:

- You must run ExtractWizard in Advanced mode while running the CommVault installer.
- CommVault Galaxy will not install the Exchange agent onto a non-server OS. The Exchange agent is required for ExtractWizard to work.

12. If you have already installed the Exchange Database iDataAgent for Exchange 2000/2003 and you wish to emulate Exchange 5.5, you must reinstall the Exchange Database iDataAgent with ExtractWizard running the correct emulation type. That is, the **Exchange Server 5.5** option must be selected on the **Connection Parameters** page).
13. Start CommCell Console on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard. The **CommCell Console** window appears.
14. In the **CommCell Browser**, right-click the Exchange server you want to restore and click **Browse & Recover**. The **Browse Options** dialog box appears.
15. Specify the appropriate browse time for your recovery:
 - Browse the Latest Data
 - Specify Browse Time
16. In the **Browse Options** dialog box, select your Exchange server from the **Client Computer** drop-down menu.
17. Click **OK** to show the browse data for your Exchange server.

Chapter 2: Using the Extract Wizard Advanced Method

18. Select the Exchange backup you want to restore.

Note: You can only restore data from under the Exchange Database tree node. You cannot restore the Directory (DSA item).

19. Click the **Recover All Selected** button. The **Restore Options for All Selected Items** dialog box appears.
20. Select the **Restore to a Different Client** option.
21. Select the **Restore Target Computer** from the **Select a Client** drop-down menu. See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
22. Click **OK**.
23. When CommVault has finished the restore, you can close CommCell Console.
24. In ExtractWizard, click **Stop** and then click **Finish**.

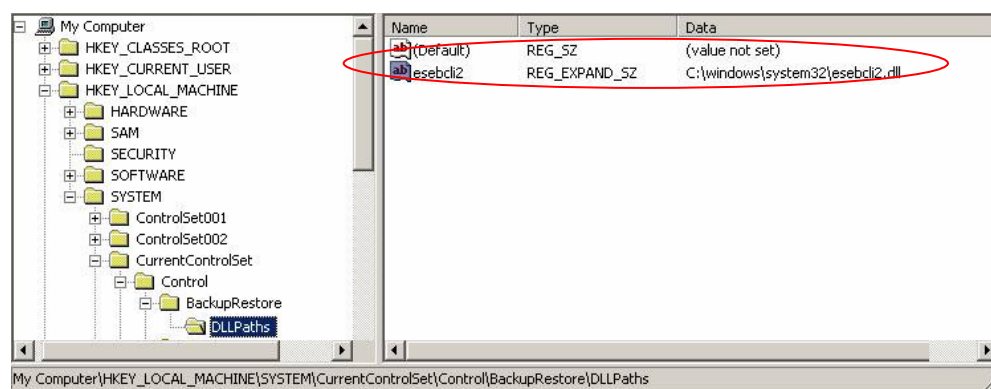
Exchange Emulation for UltraBac

Emulation for UltraBac and Exchange 2000/2003

1. On the computer that will be running ExtractWizard, do one of the following:
 - Option 1: Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
 - Option 2: Copy esebcli2.dll to the system path: winnt\system32 or windows\system32. (The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.) Then set the registry key:

HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths with Value Name Esebcli2, Data Type REG_EXPAND_SZ, String *Drive\Path\Esebcli2.dll*

Note for Windows 2000: Use regedt32.exe to create a REG_EXPAND_SZ value.



Example of setting the registry key

2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.

Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 3.

3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **UltraBac**. Then click **Next**.

NetApp® ExtractWizard

Method of Extraction
Please extract the data directly or use the backup software.

☐ Direct Method The direct method reads the tape or disk file directly without needing the original backup software installed.

☒ Advanced Method The advanced method leverages the backup software's knowledge of individual backup set locations and robotic library support to quickly extract online exchange backups. This method requires the backup client software to be installed on this computer.

Select the software used to create the backup.

UltraBac

< Back Next > Exit Help

The **Connection Parameters** page of the ExtractWizard appears.

NetApp® ExtractWizard

Connection Parameters
Specify the Exchange Server Storage Group.

Select the Exchange Server version to restore.

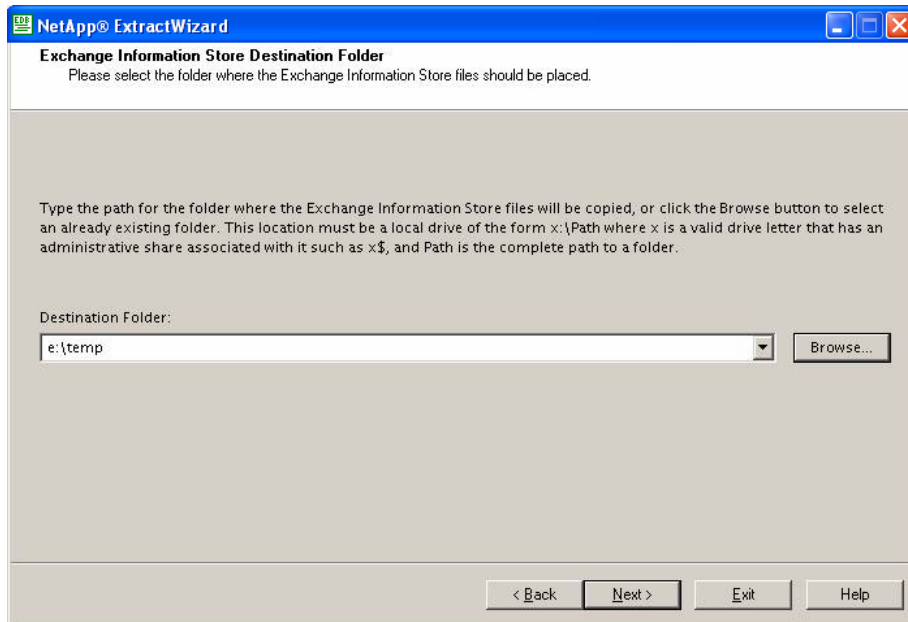
☒ Exchange Server 2000 or Exchange Server 2003
Please enter the Exchange Storage Groups, separated by semicolons (;)
Storage Groups: NOT REQUIRED

☐ Exchange Server 5.5
Please enter the Exchange Server Site and Org names.
Site: NOT REQUIRED
Org: NOT REQUIRED

< Back Next > Exit Help

Chapter 2: Using the Extract Wizard Advanced Method

6. Select the Exchange Server 2000 or Exchange Server 2003 option and click Next.
7. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be of the form `x:\Path`, where `x` is a valid drive letter that has an administrative share associated with it (such as `x$`) and `Path` is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



8. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.
 - a. First verification: The ExtractWizard checks for the following conditions:

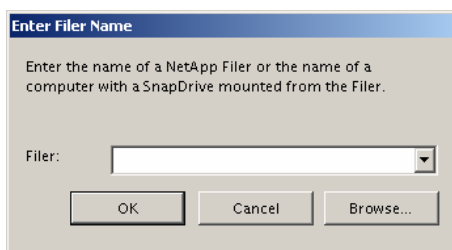
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in “ExtractWizard: Pointing to a NetApp device” on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

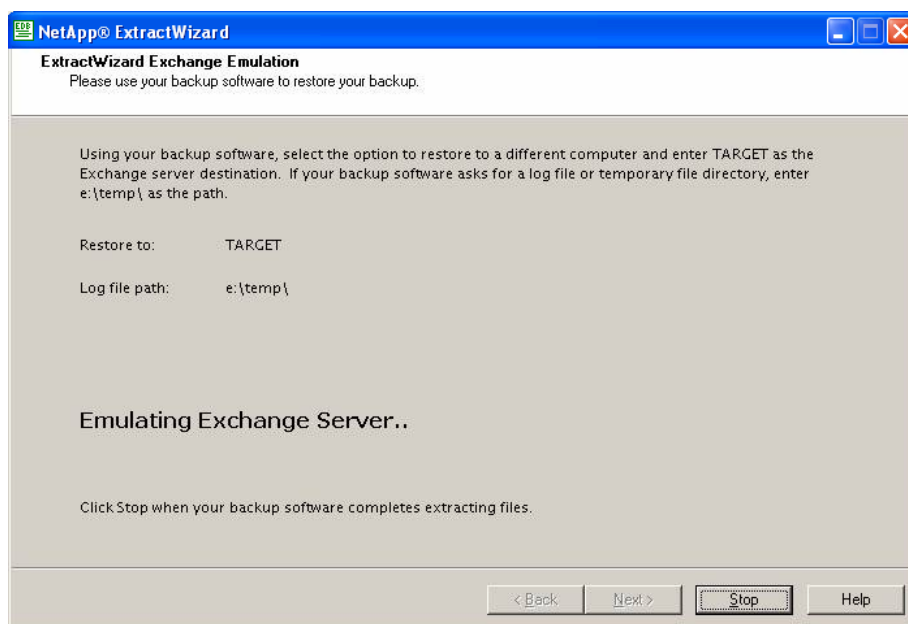
- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

Click **OK** to proceed to the next verification.

- b. **Second verification:** The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

9. When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start UltraBac. Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Restore to” and “Log file path” information on this page and paste it into UltraBac when prompted later in this section.

10. Start **UltraBac Management Console** on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard. The UltraBac window appears.
11. In UltraBac, click the Restore Wizard button on the toolbar. The **Select Index Source** dialog box appears.
12. Select the appropriate source for your backup index, and click **Next**. The **Select Online Index** dialog box appears.

Chapter 2: Using the Extract Wizard Advanced Method

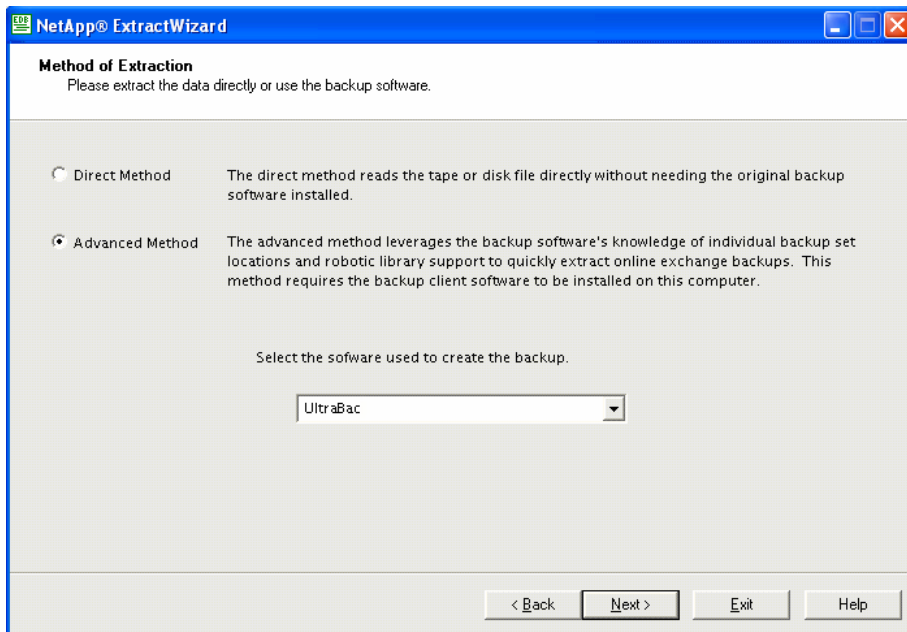
13. Select the correct online index to load for your backup. Click **Next** to return to the UltraBac window.
14. In UltraBac, select the appropriate backup item to restore from the tree and list views. You can only restore one storage group at a time.

Note: You can only restore data from under the Exchange Agent tree node.
15. Click the **Restore** button. The **General Restore Options** dialog box appears.
16. Click the **Exchange 2000, 2003 Options** button. The **Exchange 2000, 2003-Specific Options** dialog box appears.
17. Select the **Restore to Alternate Server** option. In its **Restore to** box, enter the name of the **Restore Target Computer** (i.e., the computer running ExtractWizard). See previous step 7 to verify you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
18. Select the **Alternate Temporary Log File Directory** option. In its **Restore to** box, enter the log file path. See previous step 7 to verify you are using the “Log file path” value from the Exchange Server Emulation page of the ExtractWizard.
19. Click **OK**.
20. In the **General Restore Options** dialog box, click **Next**. The **Restore Options** dialog box appears.
21. Click the **Restore** button.
22. When UltraBac has finished the restore, click **Exit** to close UltraBac.
23. In ExtractWizard, click **Stop** and then click **Finish**.

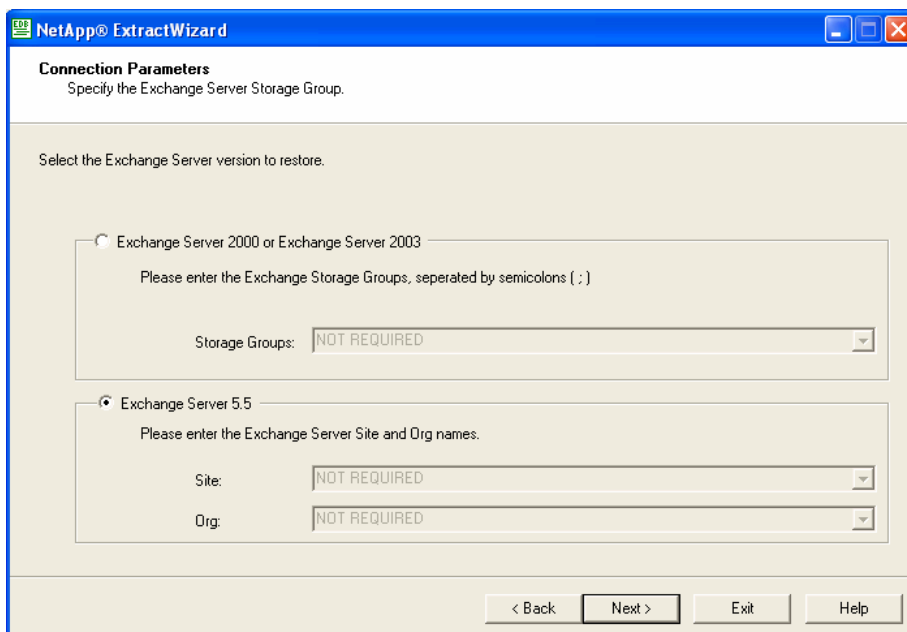
Exchange Emulation for UltraBac and Exchange 5.5

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.

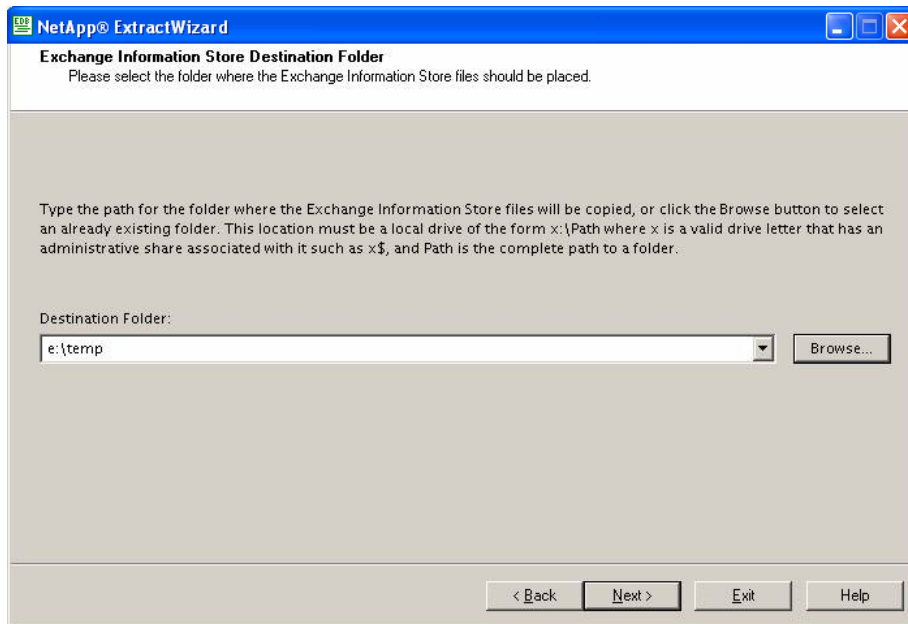
Note: If you have not already done so, click **About** and **License Info** to specify the name or address of a NetApp storage device as described in ExtractWizard: Pointing to a NetApp device on page 14; otherwise, continue to Step 3.
3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location. The license file controls which ExtractWizard agents are active. For more information, see “ExtractWizard Agents” on page 4.
4. Click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **UltraBac**. Then click **Next**.



6. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option and click **Next**.



7. On the **Exchange Information Store Destination Folder** page of the ExtractWizard, specify a location for the extracted files. This location must be of the form `x:\Path`, where `x` is a valid drive letter that has an administrative share associated with it (such as `x$`) and `Path` is the complete path to a folder (if a folder doesn't exist, ExtractWizard will create it).



8. Click **Next**. Before proceeding to extract the Exchange Information Store data to the destination folder, ExtractWizard performs two verification steps.

- a. First verification: The ExtractWizard checks for the following conditions:

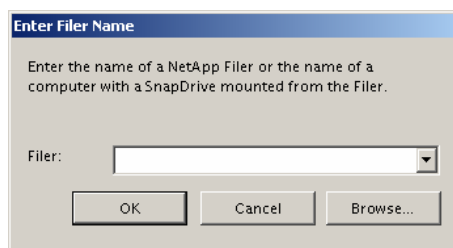
You have specified the name or address of a NetApp storage system that exists in your network environment in the License information box of the ExtractWizard as described in "ExtractWizard: Pointing to a NetApp device" on page 14.

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

If ExtractWizard does not find any of the above conditions, the **Enter Filer Name** dialog box appears and prompts you to enter the name of a NetApp storage system.



If the **Enter Filer Name** dialog box appears, do one of the following:

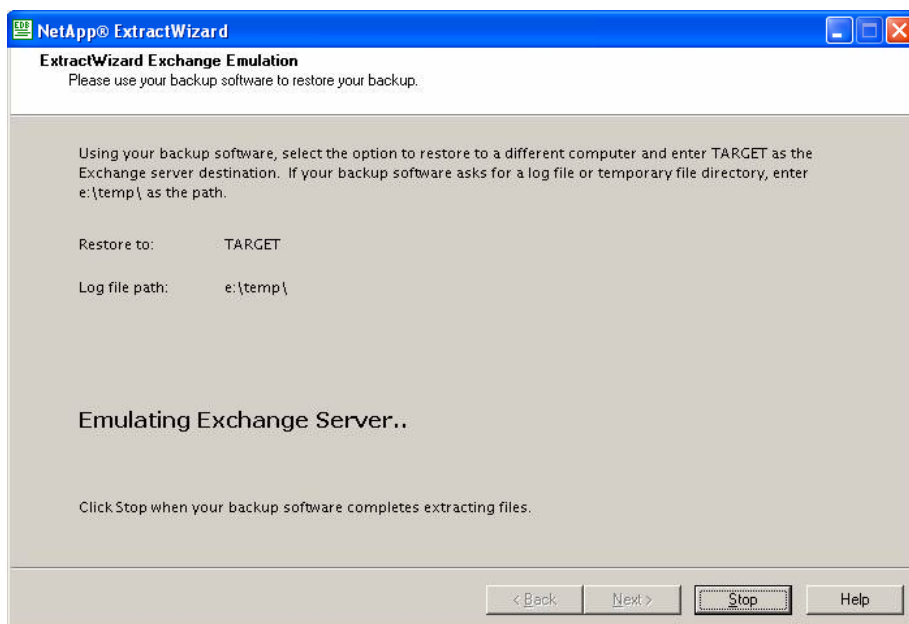
- o Enter or browse to the host name of a NetApp storage system.
- o Enter the IP address of a NetApp storage system.

Click **OK** to proceed to the next verification.

- b. **Second verification:** The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

After both checkpoints have been passed successfully, the **ExtractWizard Exchange Emulation** page of the ExtractWizard shows the progress of your backup software extracting the Exchange Information Store data to the destination folder.

9. When the **ExtractWizard Exchange Emulation** page changes from “Initializing” to “Emulating Exchange Server,” you are ready to start UltraBac. Do not click the **Stop** button until you reach the end of these instructions.



Tip: You can copy the “Restore to” information on this page and paste it into UltraBac when prompted later in this section.

10. Start **UltraBac Management Console** on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard. The **UltraBac** window appears.
11. In UltraBac, click the **Restore Wizard** button on the toolbar. The **Select Index Source** dialog box appears.
12. Select the appropriate source for your backup index. Click **Next**. The **Select Online Index** dialog box appears.
13. Select the correct online index to load for your backup. Click **Next** to return to the UltraBac window.
14. Select the appropriate backup item to restore from the tree and list views.

Notes:

- You can only restore data from under the Exchange Agent tree node.
- You cannot restore the Directory Store.

15. Click the **Restore** button. The **General Restore Options** dialog box appears.
16. Click the **Exchange 5 Options** button. The **Exchange 5-Specific Options** dialog box appears.

17. Select the **Restore to Alternate Server** option. In its **Restore to** box, enter the name of the **Restore Target Computer** (i.e., the computer running ExtractWizard). See previous step 7 to verify you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
18. Under **Databases to Restore**, select the appropriate option: Public Store, Private Store, or Both.
19. Click **OK**.
20. In the **General Restore Options** dialog box, click **Next**.
21. In the **Restore Options** dialog box, click the **Restore** button.
22. When UltraBac has finished the restore, click **Exit** to close UltraBac.
23. In ExtractWizard, click **Stop** and then click **Finish**.

Organizing the extracted files for Single Mailbox Recovery

Before using the extracted files to restore Exchange mail items, you will need to organize the extracted files for Single Mailbox Recovery if the backup was created using one of the following backup methods:

- Online incremental backup
- Online differential backup

For detailed information, see “Organizing files extracted from other backup applications” on page 224.

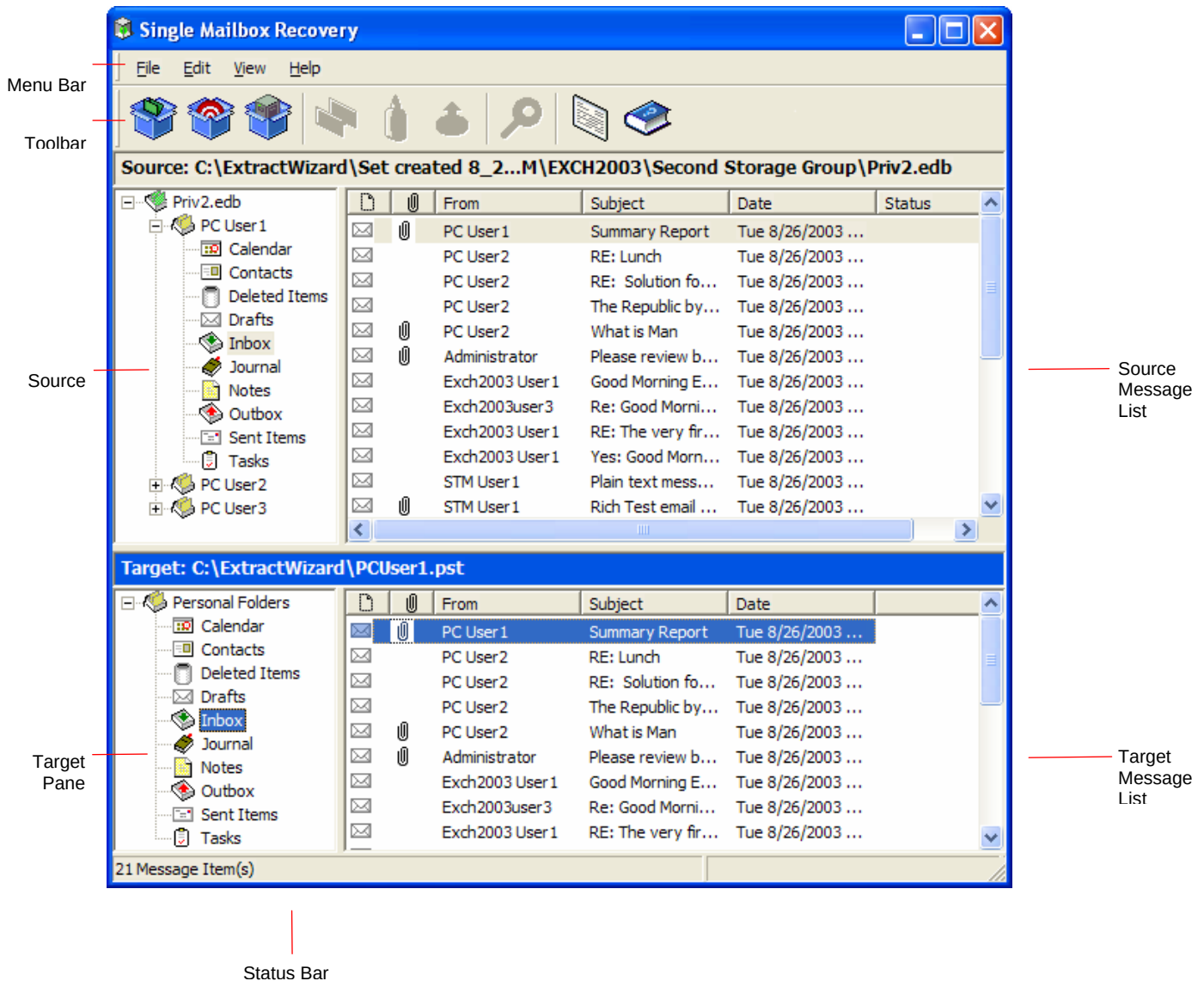
Chapter 3: Looking at the Interface

This chapter describes the parts of the main Single Mailbox Recovery window, and shows you how to preview messages, view details of an EDB or PST file, and change the view.

Single Mailbox Recovery main window

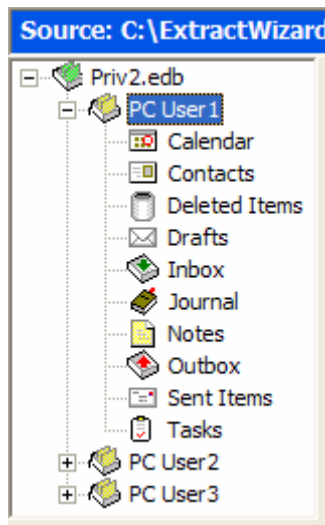
The Single Mailbox Recovery main window is where you do most of your work. This window displays the source EDB or PST file(s) as well as the target PST file(s) or Exchange Server. The target acts as a container for the restored files. The various work areas and controls are described in the following sections.

NOTE: In the illustration below, the Target pane displays a PST that acts as a container for restored files. Keep in mind that the Target pane could just as easily display an Exchange server.



Source pane

The Source pane displays the EDB file(s) that you extracted from a disk or tape backup. The Source pane can also display one or more PST files if you have purchased the “PST as Source File” Agent. If you have not yet extracted Exchange data from a backup tape or disk, see “Chapter 1: Using the ExtractWizard Direct Method,” or “Chapter 2: Using the ExtractWizard Advanced Method.”



Sources Root Node contains one or more source data stores that are pre-pended with a “SourceX” where X is a number starting with 1 and is incremented for each additional source opened. You can select the Sources root node as your search source.

Source EDB File (e.g., **Source 1 - Priv2.edb**) contains the Exchange Information Store data that you extracted from a tape or disk backup. Click the plus sign (+) next to an EDB file to expand its contents.

Mailbox (e.g., **PC User1**) contains the Outlook folders. Click the plus sign (+) next to a mailbox to expand its contents.

Outlook Folders (e.g., **Inbox**, **Contacts**, **Tasks**) contain Outlook message items. Select a folder to view its contents in the source message list.

NOTE: In the illustration on the left, the Source pane displays an EDB file, but it could just as easily display a PST file or even multiple EDB and PST files.

Source message list

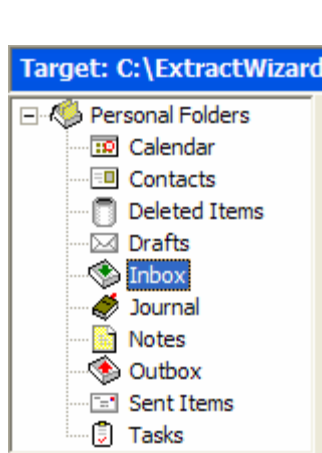
The source message list displays the message items in the Outlook folder that you selected in the Source pane. This folder is one of the Outlook folders (e.g., **Inbox**, **Contacts**, **Tasks**). In the illustration below, the source message list displays the messages in an **Inbox**.

		From	Subject	Date	Status
✉	📎	PC User1	Summary Report	Tue 8/26/2003 ...	
✉		PC User2	RE: Lunch	Tue 8/26/2003 ...	
✉		PC User2	RE: Solution for ...	Tue 8/26/2003 ...	
✉		PC User2	The Republic by ...	Tue 8/26/2003 ...	
✉	📎	PC User2	What is Man	Tue 8/26/2003 ...	
✉	📎	Administrator	Please review by...	Tue 8/26/2003 ...	
✉		Exch2003 User1	Good Morning Ex...	Tue 8/26/2003 ...	
✉		Exch2003user3	Re: Good Mornin...	Tue 8/26/2003 ...	
✉		Exch2003 User1	RE: The very firs...	Tue 8/26/2003 ...	
✉		Exch2003 User1	Yes: Good Morni...	Tue 8/26/2003 ...	
✉		STM User1	Plain text messa...	Tue 8/26/2003 ...	

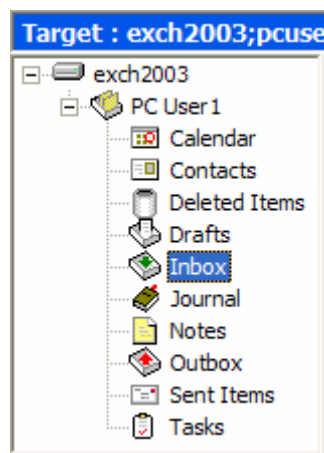
The source message list displays metadata about the message items in six columns. The metadata includes file type; attachments, if any; message sender; subject; date; and status. The **Sent Items** folder also displays the “To” column. For more information on the message list, see “Sorting messages in the message lists” on page 141.

Target pane

The Target pane can display one or more target PST files and/or one target mailbox and public folders from an Exchange Server. The target acts as a container for your restored files. If a target is a newly created PST file, it defaults to 10 Outlook folders. If a target is an existing PST file or Exchange server, it shows whatever folders are in the target. It is into these folders that you paste and thus restore your message items. For information on restoring message items, see “Chapter 7: Restoring Exchange Data.”



Target pane for a PST file



Target pane for an Exchange server

Target message list (restored messages)

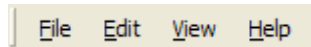
The target message list displays the message items in the Outlook folder that you selected in the Target pane. If the target is a newly created PST file, the Outlook folders and message list will be empty. If the target is an existing PST file or Exchange server, or if you have restored message items to a newly created PST file, you can select a folder in the Target pane to display messages in the target message list.

		From	Subject	Date	
✉	📎	PC User1	Summary Report	Tue 8/26/2003 ...	
✉		PC User2	RE: Lunch	Tue 8/26/2003 ...	
✉		PC User2	RE: Solution fo...	Tue 8/26/2003 ...	
✉		PC User2	The Republic by...	Tue 8/26/2003 ...	
✉	📎	PC User2	What is Man	Tue 8/26/2003 ...	
✉	📎	Administrator	Please review b...	Tue 8/26/2003 ...	
✉		Exch2003 User1	Good Morning E...	Tue 8/26/2003 ...	
✉		Exch2003user3	Re: Good Morni...	Tue 8/26/2003 ...	
✉		Exch2003 User1	RE: The very fir...	Tue 8/26/2003 ...	

Target message list displaying restored messages

The target message list displays metadata about the message items in five columns (instead of six columns in the source message list). The metadata includes file type; attachments, if any; message sender; subject; and date. The **Sent Items** folder also displays the “To” column. For more information on the message list, see “Sorting messages in the message lists” on page 141.

Menu bar



The menu bar contains most of the Single Mailbox Recovery commands. The menu commands, submenu commands, and resulting dialog boxes are discussed fully in the chapters that focus on those specific commands. See the index to quickly locate the pages on which a menu command is discussed.

Toolbar



The nine buttons on the toolbar perform the following functions:



Open Source button displays the **Open** dialog box, which lets you navigate to and select a source Exchange Database (EDB) or PST file. This EDB or PST file contains the message items you want to restore.



Open Target PST button displays the **Open** dialog box, which lets you navigate to and select a target Personal Folders (PST) file. The target PST file is a container for restored message items.



Open Target Exchange Server button displays the **Connect to Exchange Server** dialog box, which lets you connect to a target Exchange server. The target Exchange server is a container for restored message items.



Copy button copies into the Clipboard the selected message(s) in the source message list; or the selected folder, mailbox, or EDB file in the Source pane.



Paste button pastes the items from the Clipboard into the selected folder in the Target pane. If you wish to retain the directory structure of the restored messages, you must use the **Paste Special** command instead of the **Paste** command or **Paste** button.



Export button displays the **Export** dialog box, which lets you export messages to a local or network drive destination. You can choose to save exported messages as plain text files (.txt) or as Microsoft Outlook files (.msg).



Search button displays the **Find** dialog box, which lets you specify the desired search criteria for finding messages in the Source pane.

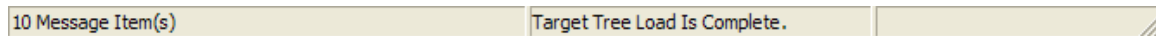


Preview Pane button displays the preview pane on the Single Mailbox Recovery main window so you can read a message without opening it.



View Help button displays Single Mailbox Recovery Online Help, which includes all of the information in this user guide and more. Online Help lets you quickly access this information by using a Contents, Search, or Index tab.

Status bar



A

B

C

The sections in the status bar provide the following information:

- A** One of the following: total number of message items in the selected folder, error messages, copy information, or description of selected menu command.
- B** Status while loading a source EDB file, a target PST file, or a target Exchange server.
- C** Status while displaying the contents of a folder (e.g., Inbox).

Previewing and opening messages

In the preview pane, you can read the contents of a message item and open attachments. You can preview a message located in either the source message list or the target message list. The information displayed in the Message Header is different for messages, calendars, contacts, tasks, and distribution lists.

To open the preview pane

Do one of the following:

- On the **View** menu, click **Preview Pane**.
- On the toolbar, click the **Preview Pane** button .

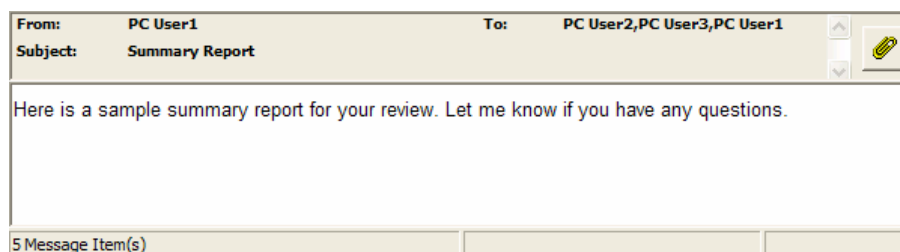
To hide the preview pane

- Repeat one of the previous steps.

TIP: Hiding the preview pane will allow you to scroll through messages faster.

To display a message in the preview pane

1. In the source or target message list, select a message.
2. Open the preview pane.



Preview pane for a message

To open a message in its own window

- In the source or target message list, double-click a message.

Opening attachments

If you have the appropriate program installed on your computer, Single Mailbox Recovery will load the application to view the selected attachment (e.g., to view an .xls file attachment, Single Mailbox Recovery will launch MS Excel).

If no associated program is available for the attachment file type, Single Mailbox Recovery will present a message dialog box saying the attachment cannot be viewed.

NOTE: Single Mailbox Recovery cannot view attached embedded graphics in HTML messages.

To open an attachment in an open message

1. In the message list, double-click a message that has the Attachment icon  next to its name.
2. Click the **Attachment** button  on the right side of the message header. A pop-up window lists the attachments for the selected message.
3. Click the name of the attachment you want to view.

To open an attachment in the preview pane

1. In the message list, select a message that has the Attachment icon  next to its name.
2. Open the preview pane. In the Single Mailbox Recovery main window, click the **Preview Pane** button . In the **Find** dialog box, select the **Preview** check box.
3. Click the **Attachment** button  on the right side of the message header in the preview pane. A pop-up window lists the attachments for the selected message.
4. Click the name of the attachment you want to view.

Saving attachments

A “save attachments” option is available on the File menu and paperclip menu of an open message, as well as on the paperclip menu of the preview pane. The Save Attachments dialog box lists the attachments for the selected message and lets you select the attachments you want to save.

To save attachments in an open message

1. In the source or target message list, double-click a message that has the Attachment icon  next to its name.
2. In the open message, do one of the following:
 - On the File menu, click Save Attachments.

- Click the Attachment button  on the right side of the message header, and then click Save Attachments.
3. In the **Save Attachments** dialog box, select one or more attachments, and click **OK**.
 4. In the **Browse For Folder** dialog box, select a location for the attachment(s), and click **OK**.

To save attachments in the preview pane

1. In the source or target message list, select a message that has the Attachment icon  next to its name.
2. In the preview pane, click the **Attachment** button  on the right side of the message header, and then click **Save Attachments**.
3. In the **Save Attachments** dialog box, select one or more attachments, and click **OK**.
4. In the **Browse For Folder** dialog box, select a location for the attachment(s), and click **OK**.

Changing the view

You can change the view in the Single Mailbox Recovery window by hiding the toolbar or status bar, by using split bars; by sorting message lists; and by refreshing the screen.

Viewing or hiding the toolbar and status bar

The toolbar and status bar appear by default in the main Single Mailbox Recovery window, but you can easily hide them.

To hide the toolbar or status bar

- On the **View** menu, click **Toolbar** or **Status Bar**. The check mark no longer appears next to the name of the toolbar or status bar.

To view the toolbar or status bar

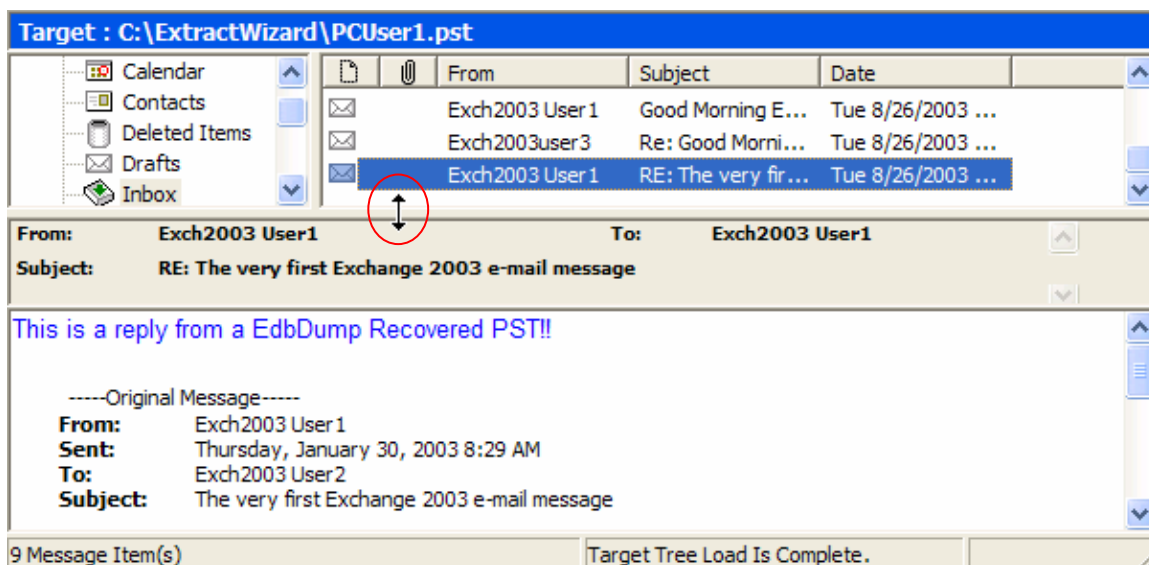
- On the **View** menu, click **Toolbar** or **Status Bar**. The check mark appears next to the name of the toolbar or status bar.

Resizing panes separated by a split bar

You can use a split bar (the horizontal or vertical double line that separates two panes) to increase the area within one pane while simultaneously decreasing the area within the adjacent pane. The Source pane, source message list, Target pane, target message list, and preview pane all border a split bar.

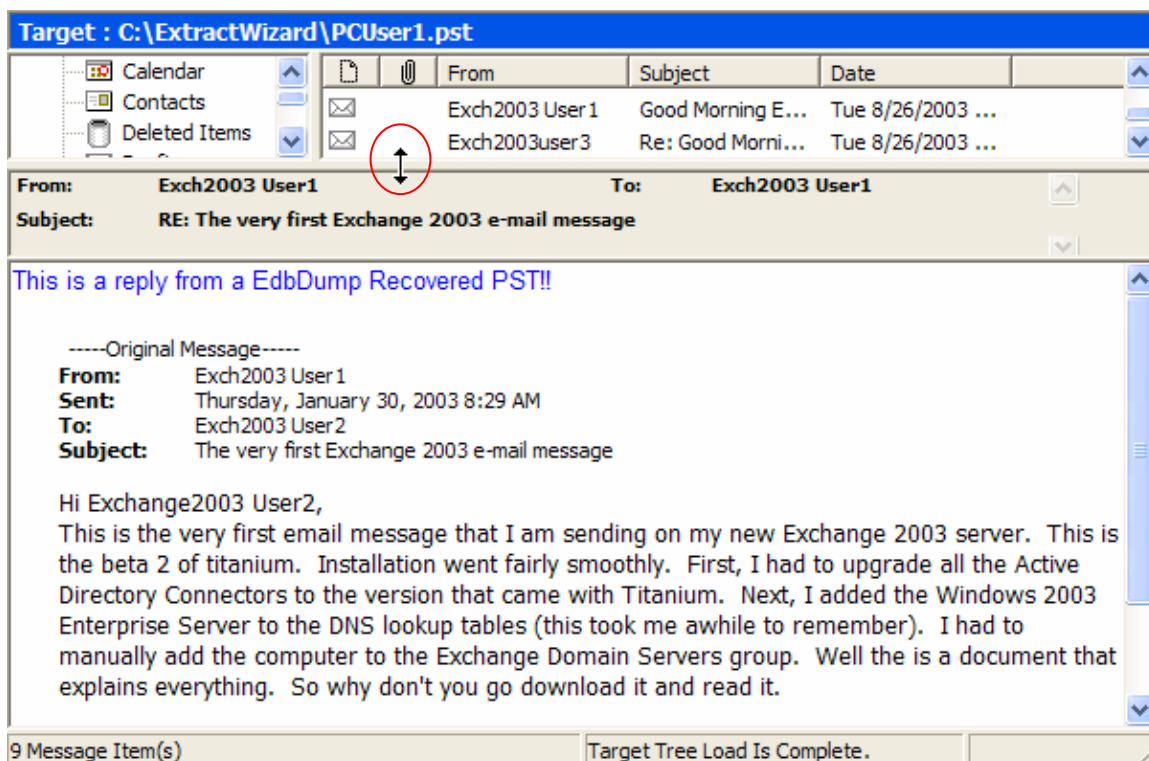
To resize panes separated by a split bar

1. Position the cursor over a split bar between two panes until a double arrow  appears. A vertical double arrow  appears if you position the cursor over a horizontal split bar.



Before dragging the split bar between the target message list and the preview pane

2. Drag the split bar until the two panes are the desired size.



After dragging the split bar upwards

Sorting messages in the message lists

You can sort messages in the source and target message lists based on attachments, message sender, subject, date, and status. In addition, the source message list lets you sort messages based on status, and the **Sent Items** folder lets you sort items based on the “To” heading. Sorting messages on the **From** column, for example, can help to identify messages from a specific sender.

		From	Subject	Date	Status
✉	📎	PC User1	Summary Report	Tue 8/26/2003 ...	
✉		PC User2	RE: Lunch	Tue 8/26/2003 ...	
✉		PC User2	RE: Solution for ...	Tue 8/26/2003 ...	
✉		PC User2	The Republic by ...	Tue 8/26/2003 ...	
✉	📎	PC User2	What is Man	Tue 8/26/2003 ...	
✉	📎	PC User3	Exchange Outloo...	Tue 8/26/2003 ...	
✉		STM User1	Plain text messa...	Tue 8/26/2003 ...	
✉	📎	STM User1	Rich Test email m...	Tue 8/26/2003 ...	
✉	📎	STM User1	MSN webpage se...	Tue 8/26/2003 ...	
✉		STM User1	Attached MINE e...	Tue 8/26/2003 ...	
✉	📎	STM User1	Inserted graphic...	Tue 8/26/2003 ...	
✉		STM User1	Backgroud color ...	Tue 8/26/2003 ...	

To sort a message list

1. Click a column heading to sort the messages based on that heading. For most headings, an arrow appears indicating the sort direction. An up arrow indicates that the messages appear in ascending (A-Z) order. A down arrow indicates that the messages appear in descending (Z-A) order.
2. To reverse the order of the messages based on that column heading, click the column heading again. Notice the arrow reverses directions.

An example of sorting messages

- If you click the attachment  column heading, messages are sorted in ascending order based on this heading, even though no arrow appears. This means that messages with attachments appear at the top of the message list, while messages with no attachments appear at the bottom of the document list. If you click the attachment  column heading again, the order is reversed.

NOTE: The view settings (sort order and column width) for a folder or mailbox are saved until you close the data store.

Refreshing the screen

You may wish to refresh the screen occasionally when you are connected to a target Exchange server. That's because the information on the server may change while you are connected.

To refresh the screen

Do one of the following:

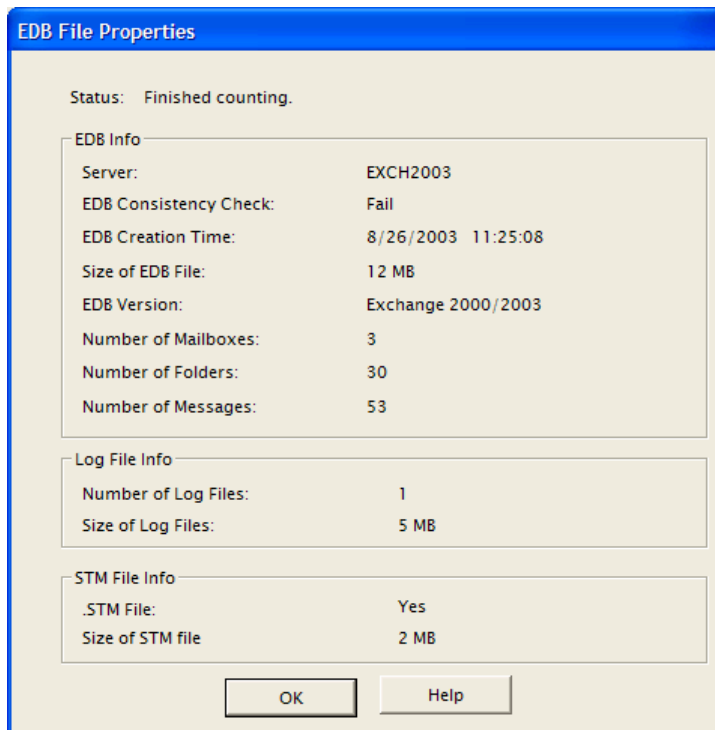
- On the **View** menu, click **Refresh**.
- Press the F5 key.

Viewing the properties of an EDB file, PST file, folder, or mailbox

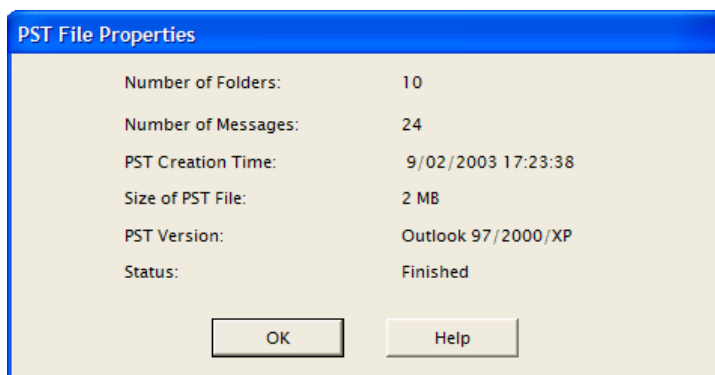
Single Mailbox Recovery makes it easy to view the properties of a source PST file, EDB file, mailbox, or folder.

To view the properties of an EDB file, PST file, mailbox, or folder

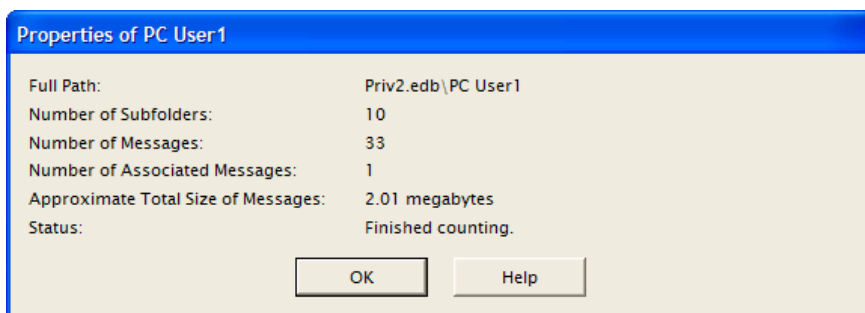
1. In the Source pane, right-click an EDB file, PST file, mailbox, or folder.
2. On the shortcut menu, click **Properties**. A properties dialog box appears.



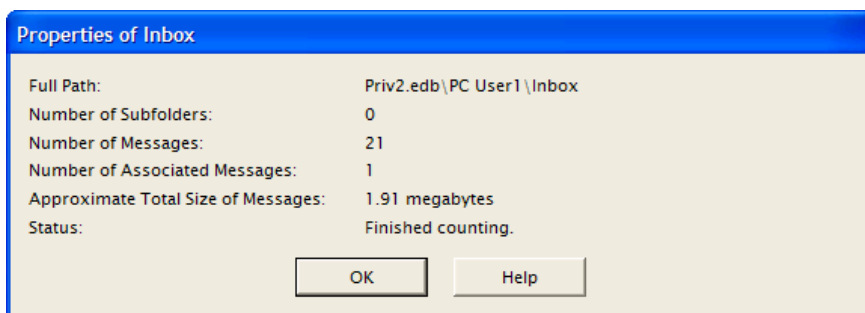
Properties of an EDB File



Properties of a PST File



Properties of a Mailbox

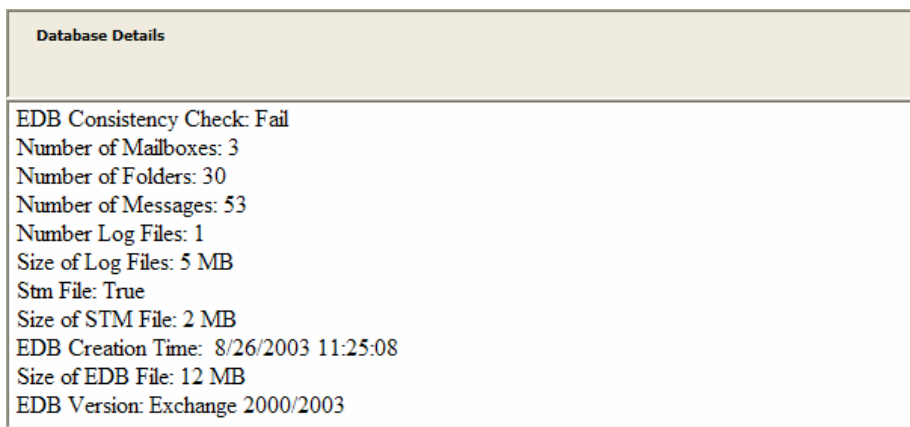


Properties of a Folder

An alternate way to view the properties of an EDB or PST file

Once you have viewed the properties of the source EDB or PST file as described above, you can then display the properties in the preview pane.

1. In the Source pane, select the source EDB or PST file.
2. Open the preview pane to display the properties.



Properties of an EDB File

Performing an integrity check

You can perform an integrity check on messages, folders, mailboxes, PST files, and EDB files. During the integrity check, Single Mailbox Recovery will verify that it can read all folder and message properties from the selected source. If the selected source is an EDB file, Single Mailbox Recovery will perform a database structure and checksum scan prior to the property verification.

To perform an integrity check of an EDB file, PST file, mailbox, folder, or message

1. In the Source pane, select an EDB file, PST file, mailbox, folder, or message(s).
2. On the Edit menu, click Integrity Check. The Single Mailbox Recovery Integrity Check dialog box appears.
3. Click Print to print a copy of the integrity check.
4. Click Save to save a copy of the integrity check to file.



An integrity check of an EDB file

Viewing deleted messages

Single Mailbox Recovery can view and restore deleted messages that are held in the EDB file. These messages appear under the **Status** column in the source message list. If deleted messages have been purged from the EDB file due to the deleted retention schedule, Single Mailbox Recovery cannot view or restore these messages.

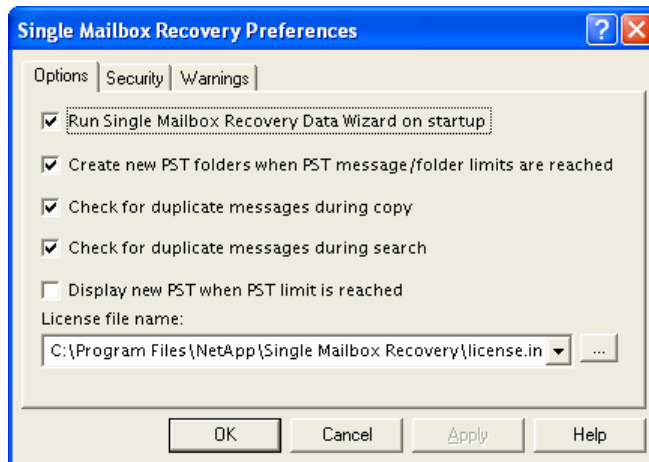
Setting preferences

The Preferences dialog box allows you to streamline Single Mailbox Recovery operations. Most of the preference settings in the three tabs are selected by default. There are two exceptions: the "Display new PST when PST limit is reached" setting in the Options tab, and the "Enable Tamper-Proof Target" setting in the Security tab. If you change the settings, they are stored and reloaded on the next run of Single Mailbox Recovery.

To change preference settings

1. On the **Edit** menu, click **Preferences**.
2. Select or clear the check boxes in the three tabs, as desired.

Options tab



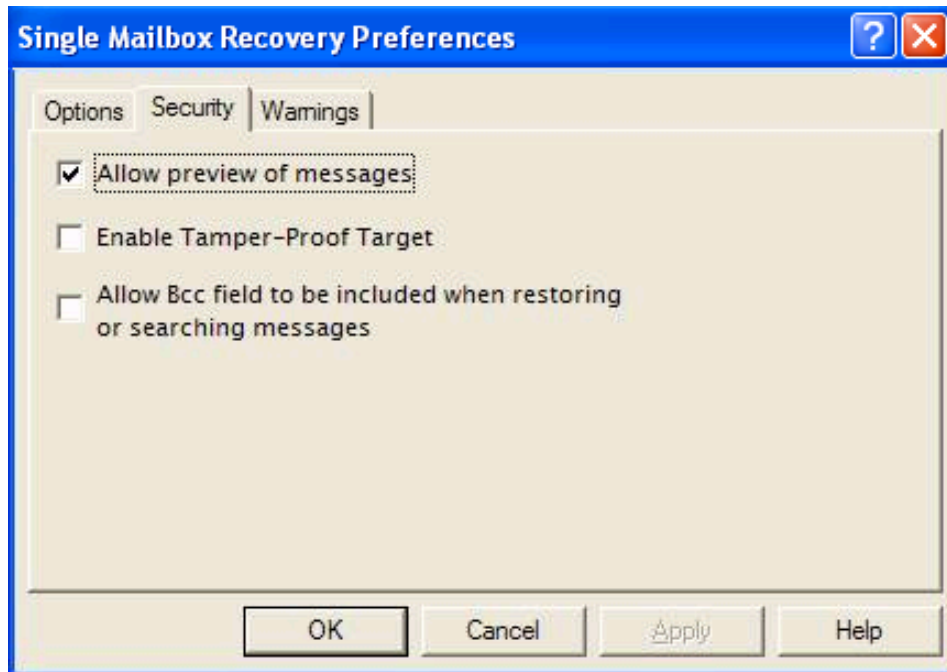
- **Run Single Mailbox Recovery Data Wizard on startup:** The Data Wizard will launch every time you open Single Mailbox Recovery.
- **Create new PST folders when PST message/folder limits are reached:** Single Mailbox Recovery will automatically create new folders (e.g., Inbox) when the 16,383 messages/folder limit is reached. After Single Mailbox Recovery creates a new folder, it will continue to restore Exchange data where it left off. For more information, see “Limits for PST targets and folder targets” on page 182.
- **Check for duplicate messages during copy:** When restoring Exchange data, Single Mailbox Recovery will not copy duplicates of a message to the destination folder if a message already exists in the destination folder. Selecting this preference setting results in slower copy performance.
- **Check for duplicate messages during search:** Single Mailbox Recovery will not return duplicates of a message during a search. For example, if the same message exists in two or more data stores, only the first message found will be listed in the search results. Selecting this preference setting results in slower search performance.
- **Display new PST when PST limit is reached:** When the limit for a PST is reached in the Target pane, Single Mailbox Recovery automatically displays the overflow PST.
- **License file name:** This box displays the current location of the license.ini file. To put this file in a different location, click the Browse button and navigate to the desired location. There are two ways to manage the location of the license.ini file:
 - **Multiple Copies of Single Mailbox Recovery:** Put one license.ini in the Single Mailbox Recovery program directory of each Single Mailbox Recovery installation.
 - **Single Copy of Single Mailbox Recovery:** Put one license.ini in a single network folder to which all Single Mailbox Recovery installations make reference.

Chapter 3: Looking at the Interface

For more information, see “About the license.ini file” on page 12.

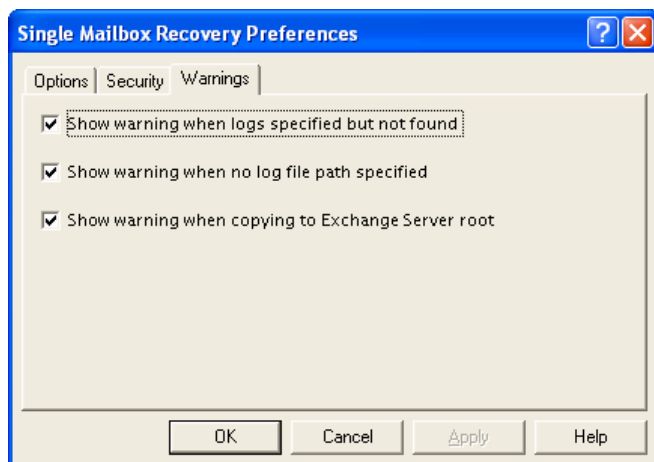
Security tab

The options in this tab are modifiable by default only by users that belong to the Administrator Group. The options are stored in the registry: HKEY_LOCAL_MACHINE\software\SMBR. The Single Mailbox Recovery Installation program sets this registry key to have read/write access to users in the Administrators group and read-only access by any user in the Users group.



- **Allow preview of messages:** If this option is not checked, you will not have the ability to open or preview messages in the source or target.
- **Enable Tamper-Proof Target:** If this option is selected, Single Mailbox Recovery will not allow you to delete messages or folders in the target or have the ability to rename folders in the target. You will only have the ability to add (copy) to the target.
- **Allow Bcc field to be included when restoring or searching messages:** If this option is selected, Single Mailbox Recovery will include Bcc information when restoring or searching messages. This means that a recipient will be able to see Bcc recipients that he or she was not intended to see. It also means that searching with the “Sent to” option will return messages for Bcc recipients.

Warnings tab



- **Show warning when logs specified but not found:** Single Mailbox Recovery will warn you when opening an EDB file if no .logs files were found at the specified directory.
- **Show warning when no log file path specified:** Single Mailbox Recovery will warn you when opening an EDB file if a .log file path has not been specified.
- **Show warning when copying to Exchange Server root:** Single Mailbox Recovery will warn you when you are about to copy a large amount of data to the Exchange server root.

Chapter 4: Starting Single Mailbox Recovery

This chapter describes how to open a source EDB file or PST file and specify a target PST file or target Exchange server. The following topics are covered:

Pointing Single Mailbox Recovery to a NetApp device. In order for Single Mailbox Recovery to operate, you must point it to a NetApp storage system that exists in the same network environment.

Running the Single Mailbox Recovery Data Wizard. The first time you start Single Mailbox Recovery, the Single Mailbox Recovery Data Wizard starts. This section describes the Data Wizard, which guides you through the reading of EDB files or PST files into Single Mailbox Recovery and shows you how to specify the target PST file or Exchange server.

Opening the source and target from the main window. Instead of using the Data Wizard to open the source databases and target mailboxes, you can use individual commands from the Single Mailbox Recovery main window.

Opening multiple sources and targets. This section describes how you can display multiple sources in the Source pane Single Mailbox Recovery main window and how you can display multiple targets in the Target pane of the Single Mailbox Recovery main window.

Closing sources and targets. This section describes how to close sources and targets from the Single Mailbox Recovery main window.

Pointing Single Mailbox Recovery to a NetApp device

In order for Single Mailbox Recovery to operate, one or more NetApp storage systems must be present on the same network as the one on which Single Mailbox Recovery is installed.

The first time you start Single Mailbox Recovery, NetApp recommends that you complete the following steps to point Single Mailbox Recovery to the presence of a NetApp storage system that is running in the same network environment.

1. Click the **Start** button, and then point to **Programs**. Point to **NetApp**, point to **Single Mailbox Recovery**, and then click **Single Mailbox Recovery**.
2. When the **Single Mailbox Recovery Data Wizard** appears, click **Close** to close it. And display your blank Single Mailbox Recovery panes.
3. Click **Help** and **About** and then click **License Info** to display the License Information page.
4. Locate the **Storage appliance name or IP address** field. Type or browse and select the name or IP address of any NetApp storage system on the network and press the **Enter** key.

Note: The name or IP address of any NetApp storage system in the environment will suffice, whether or not you intend to carry out SMBR operations on it.

5. After you press the **Enter** key, click the **Close** button (Be sure to press the **Enter** key first) to close the License information box.
6. Click **OK** to close the About box.
7. If you want to restart the Single Mailbox Recovery Data Wizard, open the **File** menu and select **Use Wizard**.

Note: After you have specified the name or IP address of a NetApp storage system in the environment once, you do not need to enter it again, as long as the specified storage system exists in this network environment.

Alternative ways to specify a NetApp device

In addition to your entering the name or IP Address of a NetApp storage system on the License Information page, the following alternative conditions also satisfy the requirement for the presence of a NetApp storage system:

A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.

The Destination Folder resides on CIFS share on a NetApp storage system, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

The Destination Folder resides on a CIFS share on a Windows server that has a NetApp LUN connected to it, and the CIFS share is either mapped to a drive letter on the Single Mailbox Recovery server or is accessed by a specified UNC path.

Running the Single Mailbox Recovery Data Wizard

The Data Wizard guides you through the loading of EDB or PST files into Single Mailbox Recovery, and shows you how to specify the target PST file or Exchange server.

Before you use the Data Wizard

The following information describes what you need to do in order to be able to select the source of the mail items you want to recover.

If the source file is...	Then do this:
An EDB file stored in a LUN on a NetApp storage system NOTE: This includes SnapVault secondary storage system configurations	1. Use the NetApp SnapDrive Connect Wizard to connect that LUN to an available drive letter on the Single Mailbox Recovery server. For details, see “Connecting Virtual Disks” in <i>SnapDrive Installation and Administration Guide</i>. When you select the source Exchange database, the mounted LUN will be your source drive. NOTE: Do not use the Data ONTAP LUN cloning feature to clone a virtual disk backed by a snapshot that is connected using SnapDrive. SnapDrive considers such a disk to be temporary, and it deletes the disk upon disconnect. 2. Verify that there is sufficient hard drive space available to store temporary files that Single Mailbox Recovery creates. For details, see “Verifying hard drive space for .idx and .dat files” on page 224. CAUTION: Unmount this LUN as soon as your Single Mailbox Recovery restore operation is completed. Avoid maintaining a connection to a LUN in a snapshot during a period when the NetApp storage system volume containing that LUN is scheduled for update snapshots. While a LUN in a snapshot is mounted, if one or more snapshots are taken of the volume containing the LUN, a “busy snapshot” will result, and you will be unable to unmount or delete that LUN until all the more recent snapshots are deleted.
An EDB file in a backup created using a supported backup application other than SnapManager	1. Use ExtractWizard to restore the files to a location accessible from the Single Mailbox Recovery server. 2. If the backup is an offline backup or in an online incremental or differential backup, organize the files for use by Single Mailbox Recovery. For details, see “Organizing files extracted from other backup applications” on page 224. 3. Verify that there is sufficient hard drive space available to store temporary files that Single Mailbox Recovery creates. For details, see “Verifying hard drive space for .idx and .dat files” on page 224.
A PST file	Enable the PST source agent. For details, see “PST source agent” on page 4 and “Task III: Enable any optional agents” on page 12. NOTE: You cannot open the same PST file as both source and target. Also, due to the database nature of the PST file and MAPI subsystem, PSTs opened as source will be modified.

Data Wizard: Welcome Page

1. Click the **Start** button, and then point to **Programs**. Point to **NetApp**, point to **Single Mailbox Recovery**, and then click **Single Mailbox Recovery**. The **Single Mailbox Recovery Data Wizard** appears.

Chapter 4: Starting Single Mailbox Recovery

Note: Because Single Mailbox Recovery requires a NetApp storage system in the same network environment in order to carry out its operations, NetApp recommends that the first time you start Single Mailbox Recovery that you click **Cancel** to close the Single Mailbox Recovery Data Wizard. Then complete the steps described in “Pointing Single Mailbox Recovery to a NetApp device” on page 150 to specify an instance of a NetApp device. After completing this task, you can then restart the Wizard by opening the **File** menu and selecting **Use Wizard**.

2. If you do not want to run the Data Wizard every time you start Single Mailbox Recovery, clear the **Run On Startup** check box. Click **Next**.



Data Wizard: Source Path Selection

On the Source Path Selection page of the Data Wizard, specify the source EDB file path along with its log file path and temporary file path. Or specify the source PST file path. If you do not want to open a source EDB or PST file at this time, click the **Skip** button.

NOTE: Due to the database nature of the PST file and MAPI subsystem, PSTs opened as source will be modified.

To specify a source file

1. In the **Source File** box, use the **Browse** button to find the source EDB file or the source PST file.
2. If you specified a PST file path, proceed to step 5. PST files do not require log file or temporary file paths.
3. In the **Log File Path** box, use the **Browse** button to find the log files associated with the source EDB file.

IMPORTANT NOTE: After you select an EDB file, the **Log File Path** box defaults to the source EDB file path, even if the log files are not in the same directory as the source EDB file. Therefore, make sure you enter the correct log file path in the **Log File Path** box.

4. In the **Temporary File Path** box, accept the default location for .idx and .dat files, or specify a new location if they require more hard drive space. For more information, see “Verifying hard drive space for .idx and .dat files” on page 224.

NetApp® Single Mailbox Recovery Data Wizard

Source Path Selection.
Please browse for the EDB or PST file you will be using as your source.

Please select the browse button to find the correct source file to open using this wizard. If you would not like to open a source file at this time, please select the skip button to move on for your next selection.

The EDB or PST files must be on a NetApp Filer or on a machine with a SnapDrive.

Source File (*.edb, *.pst) Browse...

Log File Path (*.log, *.pat, *.chk) Browse...

Temporary File Path (*.idx, *.dat) Browse...

< Back **Next >** Skip >> Cancel

5. Click **Next**.

Before you can open a source, Single Mailbox Recovery checks for the following conditions:

- A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.
- An EDB file exists on either a drive letter on the SMBR server that is mapped to CIFS share on a NetApp storage system or on a direct UNC path to a CIFS share on a NetApp storage system.

If Single Mailbox Recovery does not find any of the above conditions to be true, you cannot open a source file.

Data Wizard: Target Type and Path Selection

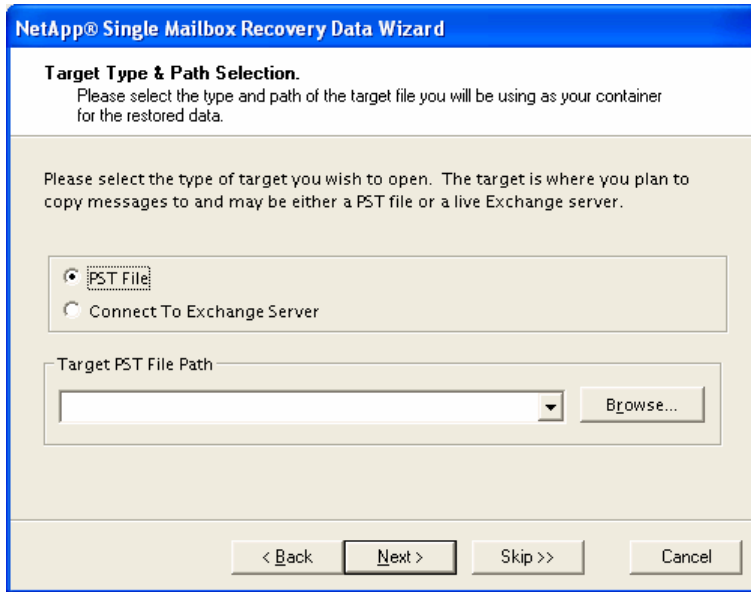
On the **Target Type and Path Selection** page of the Data Wizard, specify the type and path of the target file you will be using as the container for your restored data. You have two choices: 1) specify a PST File as the target for restored data; or 2) specify an Exchange server as the target for restored data. An option to open Public Folders is available upon connection to an Exchange server.

NOTE: Click the **Skip** button if you do not want to select a target file at this time.

To specify a PST File as the target for restored data

1. Select the **PST File** option.

Chapter 4: Starting Single Mailbox Recovery



NetApp® Single Mailbox Recovery Data Wizard

Target Type & Path Selection.
Please select the type and path of the target file you will be using as your container for the restored data.

Please select the type of target you wish to open. The target is where you plan to copy messages to and may be either a PST file or a live Exchange server.

☒ **PST File**
☐ Connect To Exchange Server

Target PST File Path

< Back **Next >** Skip >> Cancel

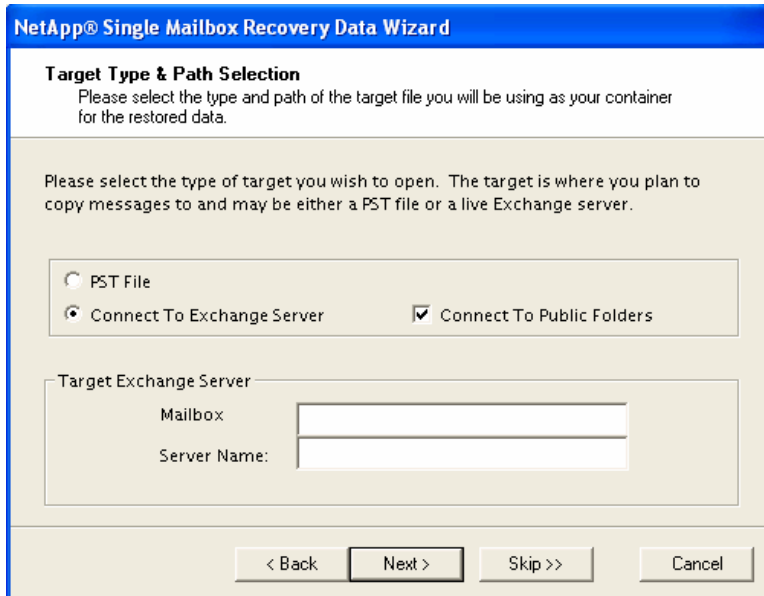
2. Do one of the following:

- If you know the target PST file path, type it in the Target PST File Path box.
- Click the Browse button to open the **Create PST File** dialog box, and navigate to the desired location. Then create a new PST file by typing a name in the **File name** box, or select an existing PST file. Next, click **Open**. The path of the target PST file will appear in the **Target PST File Path** box.

3. Click **Next**.

To specify an Exchange server as the target for restored data

1. Select the **Connect to Exchange Server** option.



NetApp® Single Mailbox Recovery Data Wizard

Target Type & Path Selection
Please select the type and path of the target file you will be using as your container for the restored data.

Please select the type of target you wish to open. The target is where you plan to copy messages to and may be either a PST file or a live Exchange server.

☐ PST File
☒ **Connect To Exchange Server** ☒ Connect To Public Folders

Target Exchange Server
Mailbox:
Server Name:

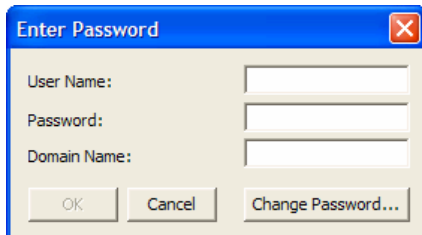
< Back **Next >** Skip >> Cancel

2. The **Connect to Public Folders** check box is selected by default. This feature allows you to open public folders as a target for restoring public folders or messages. If you do not want to restore to public folders, clear this check box. For more information, see “Restoring to Public Folders” on page **Error! Bookmark not defined.**

3. For **Mailbox** and **Server Name** boxes, type the mailbox and server names.

TIP: If you don't know the full name of the mailbox, type a sub-string (e.g., the first letter of the mailbox) in the **Mailbox Name** box, and click **Next**. In the **Check Name** dialog box that appears, select the mailbox from the list, and click **OK**.

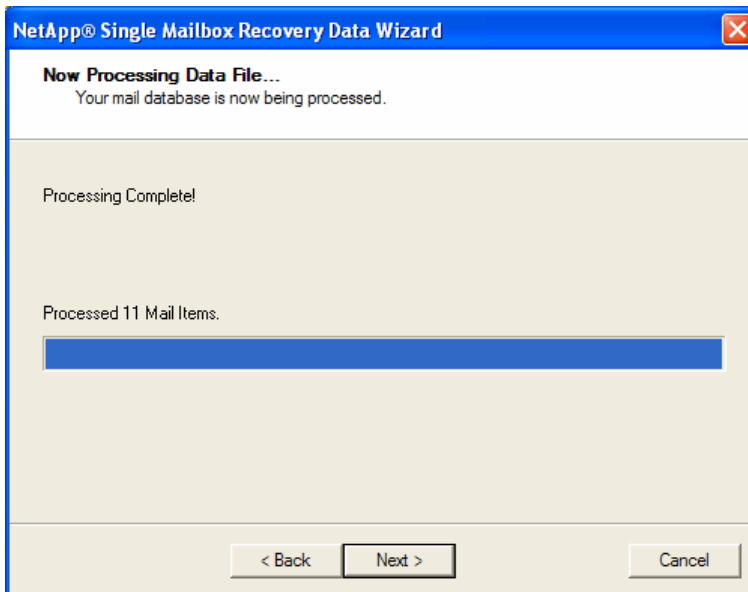
4. If you are not connected to a domain, the **Enter Password** dialog box appears. In this dialog box, type a user name that has full rights to the mailbox, a password, and a domain name. Then click **OK**. This dialog box may appear again, which will require you to reenter this information.



5. Click **Next**.

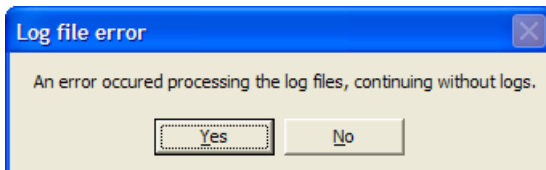
Data Wizard: Now Processing Data File

The **Now Processing Data File** page of the Data Wizard reports the processing of the EDB file in three stages: *pre-scanning the log files* (integrity check); *scanning the log files*, (i.e., playing the log files); and *hashing the EDB file* (building a folder hierarchy).



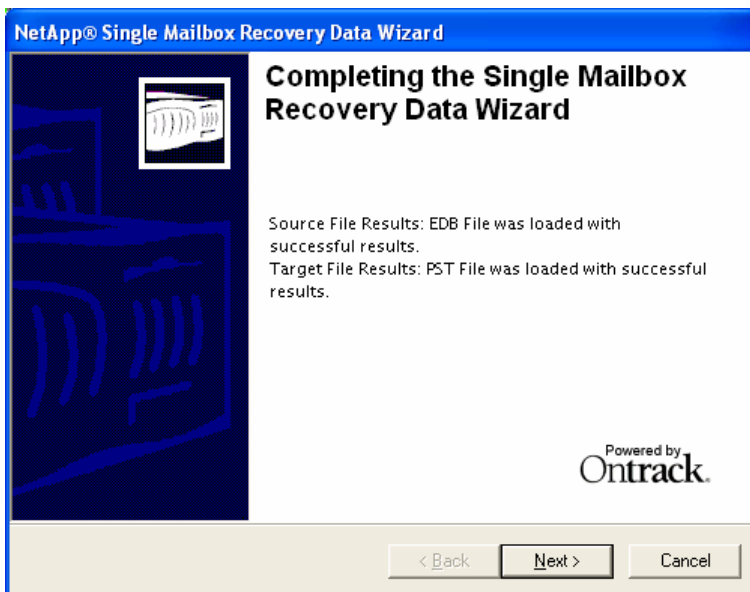
When the processing is complete, Single Mailbox Recovery automatically proceeds to the next page.

NOTE: If Single Mailbox Recovery encounters bad or missing log files during log playing, you will be given the option to continue without playing the logs. If you choose to continue, Single Mailbox Recovery will process the EDB without logs.

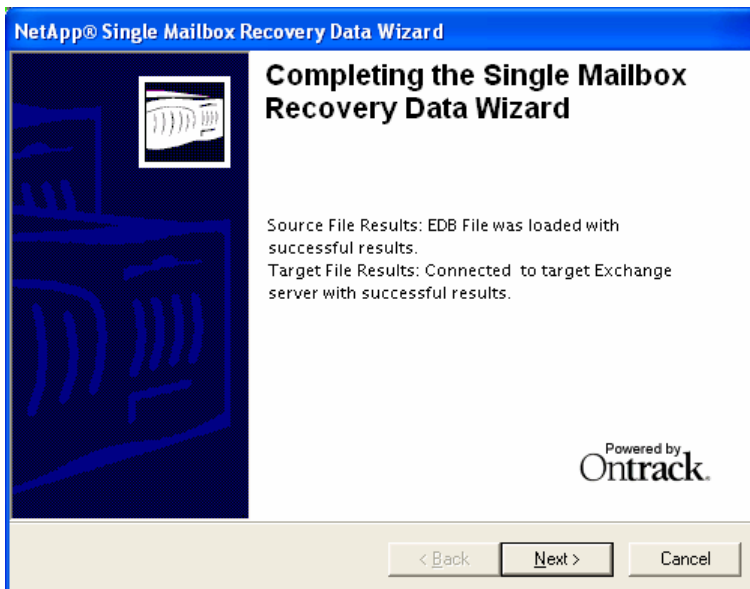


Data Wizard: Completing the Data Wizard

On the last page of the Data Wizard, click **Finish**. This page of the Data Wizard lists the source file results and the target file results.



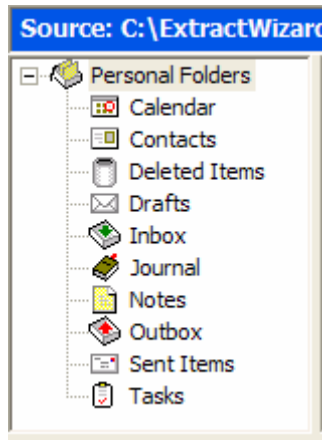
Last page of the Data Wizard for a target PST file



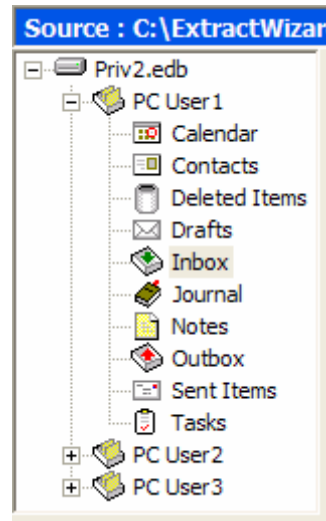
Last page of the Data Wizard for a target Exchange server

Looking at the main window after using the Data Wizard

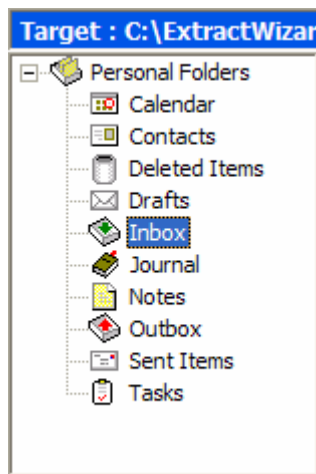
In the Single Mailbox Recovery main window, the Source and Target panes will now contain a source EDB file and either a target PST file or a target Exchange server.



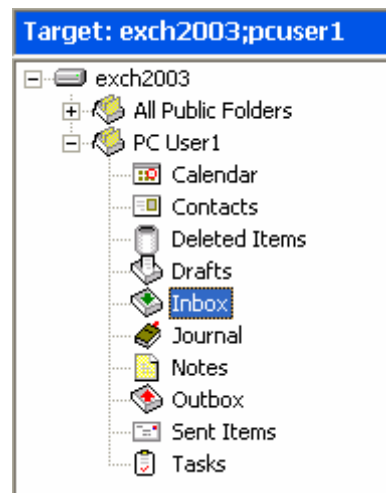
Source pane for a PST file



Source pane for an EDB file



Target pane for a PST file



Target pane for an Exchange server

Returning to the Single Mailbox Recovery Data Wizard

When working in the Single Mailbox Recovery main window, you can return to the Data Wizard at any time.

To open the Data Wizard from the Single Mailbox Recovery main window

- On the **File** menu, click **Use Wizard**.

Opening the source and target from the main window

Instead of using the Data Wizard to open the source databases and target mailboxes, you can open them from the Single Mailbox Recovery main window.

Before you open the source database from the main window

The following information describes what you need to do in order to be able to select the source of the mail items you want to recover.

If the source file is...	Then do this:
An EDB file stored in a LUN on a NetApp storage system NOTE: This includes SnapVault secondary storage system configurations	1. Use the NetApp SnapDrive Connect Wizard to connect that LUN to an available drive letter on the Single Mailbox Recovery server. For details, see “Connecting Virtual Disks” in <i>SnapDrive Installation and Administration Guide</i>. When you select the source Exchange database, the mounted LUN will be your source drive. NOTE: Do not use the Data ONTAP LUN cloning feature to clone a virtual disk backed by a snapshot that is connected using SnapDrive. SnapDrive considers such a disk to be temporary, and it deletes the disk upon disconnect. 2. Verify that there is sufficient hard drive space available to store temporary files that Single Mailbox Recovery creates. For details, see “Verifying hard drive space for .idx and .dat files” on page 224. CAUTION: Unmount this LUN as soon as your Single Mailbox Recovery restore operation is completed. Avoid maintaining a connection to a LUN in a snapshot during a period when the NetApp storage system volume containing that LUN is scheduled for update snapshots. While a LUN in a snapshot is mounted, if one or more snapshots are taken of the volume containing the LUN, a “busy snapshot” will result, and you will be unable to unmount or delete that LUN until all the more recent snapshots are deleted.
An EDB file in a backup created using a supported backup application other than SnapManager	1. Use ExtractWizard to restore the files to a location accessible from the Single Mailbox Recovery server. 2. If the backup is an offline backup or in an online incremental or differential backup, organize the files for use by Single Mailbox Recovery. For details, see “Organizing files extracted from other backup applications” on page 224. 3. Verify that there is sufficient hard drive space available to store temporary files that Single Mailbox Recovery creates. For details, see “Verifying hard drive space for .idx and .dat files” on page 224.
A PST file	Enable the PST source agent. For details, see “PST source agent” on page 4 and “Task III: Enable any optional agents” on page 12. NOTE: You cannot open the same PST file as both source and target. Also, due to the database nature of the PST file and MAPI subsystem, PSTs opened as source will be modified.

Specifying a source and a target from the main window

The following topics are covered:

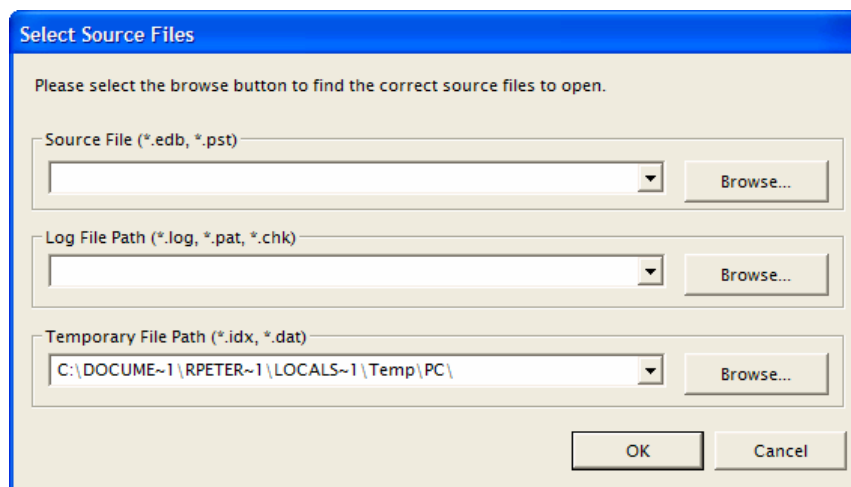
- “To open a source file” on page 159
- “To open an existing target PST” on page 161
- “To create a new target PST” on page 162
- “To open a target Exchange Server” on page 162

To open a source file

1. Do one of the following:

- On the **File** menu, click Open Source.
- On the toolbar, click the **Open Source** button .

IMPORTANT NOTE: Before you select a source file in the dialog box below, see “Before you open the source database from the main window” on page 159.



2. In the **Source File** box, use the **Browse** button to find a source EDB or PST file.
3. If you selected a PST file, proceed to step 6. PST files do not require log file or temporary file paths.

NOTE: Due to the database nature of the PST file and MAPI subsystem, PSTs opened as source will be modified.

4. In the **Log File Path** box, use the **Browse** button to find the log files associated with the source EDB file.

IMPORTANT NOTE: After you select an EDB file, the **Log File Path** box defaults to the source EDB file path, even if the log files are not in the same directory as the source EDB file. Therefore, make sure you enter the correct log file path in the **Log File Path** box.

5. In the **Temporary File Path** box, accept the default location for .idx and .dat files, or specify a new location if they require more hard drive space. For more information, see “Verifying hard drive space for .idx and .dat files” on page 224.

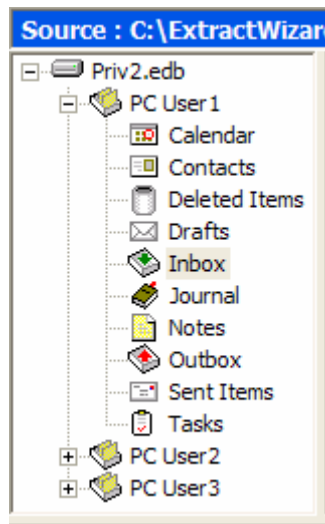
6. Click **OK**.

Before you can open a source, Single Mailbox Recovery checks for the following conditions:

- A LUN on a NetApp storage system is connected to an available drive letter on the Single Mailbox Recovery server. You do not need to use this LUN as the Destination Folder.
- An EDB file exists on either a drive letter on the SMBR server that is mapped to CIFS share on a NetApp storage system or on a direct UNC path to a CIFS share on a NetApp storage system.

If Single Mailbox Recovery does not find any of the above conditions to be true, you cannot open a source file.

If one or more of the above conditions to be true, the EDB or PST file appears in the Single Mailbox Recovery Source pane.



Source pane for an EDB file

TIP: You can use Windows Explorer to open an EDB file. In Windows Explorer, double-click the EDB file or drag into the Single Mailbox Recovery Source pane.

To open an existing target PST

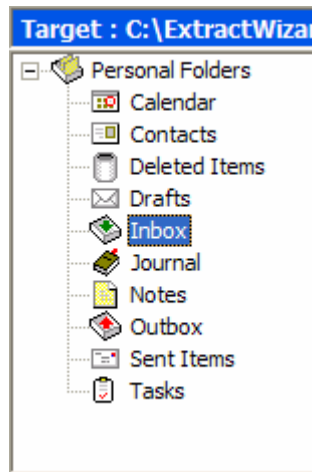
1. Do one of the following:
 - a. On the **File** menu, point to **Target PST**, and click **Open Existing**.
 - b. On the toolbar, click the **Open Target PST** button .
2. In the **Open Existing PST** dialog box, navigate to the desired location, and select an existing PST file.
3. Click **Open**. The PST file appears in the Single Mailbox Recovery Target pane.

TIP: In Windows Explorer, you can drag a PST file into the Single Mailbox Recovery Target pane. Note that double-clicking a PST file will not open it when using Windows XP, Outlook XP, or Outlook 2003.

To create a new target PST

1. On the **File** menu, point to **Target PST**, and click **Create New**.
2. In the **Create PST File** dialog box, navigate to the desired location. You may want to create a new folder.
3. In the **File name** box, type a name for the new PST file.
4. Click **New**. The PST file appears in the Single Mailbox Recovery Target pane.

NOTE: With Outlook 2003, you will have to choose between the 97 and 2003 version of the PST.

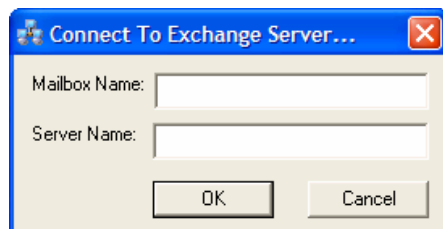


Target pane for a PST file

To open a target Exchange Server

1. Do one of the following:
 - On the **File** menu, click Open Target Exchange Server.
 - On the toolbar, click the **Open Target Exchange Server** button .

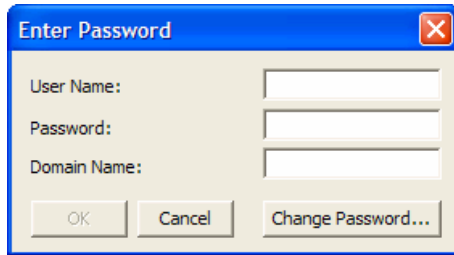
The **Connect to Exchange Server** dialog box appears.



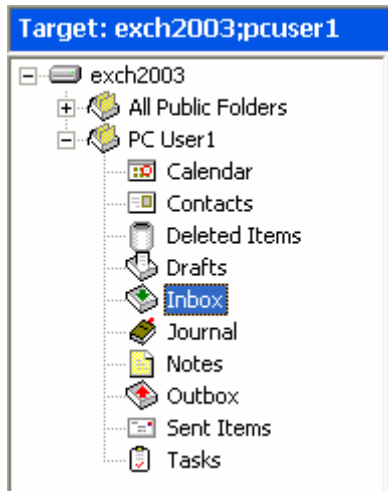
2. In the **Mailbox Name** and **Server Name** boxes, type the mailbox and server names.

TIP: If you don't know the full name of the mailbox, type a sub-string (e.g., the first letter of the mailbox) in the **Mailbox Name** box, and click **OK**. (Log on to the Exchange server if prompted; see step 3.) In the **Check Name** dialog box that appears, select the mailbox from the list, and click **OK**.

3. If you are not authenticated to the domain, the **Enter Password** dialog box appears. In this dialog box, type a user name that has full rights to the mailbox, a password, and a domain name. Then click **OK**. This dialog box may appear again, which will require you to reenter this information.



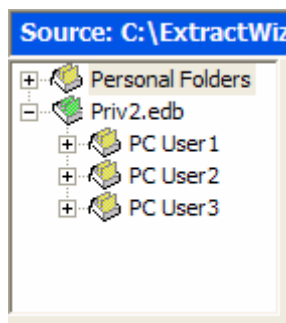
4. Click **OK**. The Exchange server appears in the Single Mailbox Recovery Target pane.



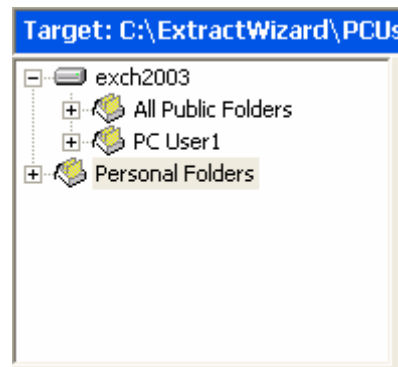
Target pane for an Exchange server

Opening multiple sources and targets

You can display multiple sources in the Source pane and multiple targets in the Target pane. Sources include EDB and PST files. Targets include PSTs and Exchange servers. See the instructions for using the Data Wizard or the Single Mailbox Recovery main window to open one source or one target at a time.



Multiple sources



Multiple targets

NOTE: Only one target Exchange mailbox can be opened at a time.

Closing sources and targets

You can close sources and targets from the Single Mailbox Recovery main window.

Avoid maintaining a connection to a LUN in a snapshot during a period when the NetApp storage system volume in which that LUN is contained is scheduled for update snapshots.

CAUTION: If a LUN in a snapshot is mounted, and while it is mounted one or more snapshots are taken of the filer volume in which it is contained, a “busy snapshot” will result, and you will not be able to unmount or delete that LUN until all the more recent snapshots are deleted. The chances of this situation are increased in configurations where a single secondary storage volume is used to coalesce snapshots from numerous primary storage qtrees.

To close a source

1. In the Source pane, select a source EDB or PST file.
2. Do one of the following:
 - On the File menu, click Close Store.
 - Right-click the selection, and on the context menu click **Close Store**.
3. If the source is an EDB file in a SnapManager-based backup snapshot, unmount the LUN as soon as your Single Mailbox Recovery restore operation is completed.

To close all sources

1. In the Source pane, right-click the **Sources** root node.
2. On the context menu, click **Close All Stores**.
3. If any source is an EDB file in a SnapManager-based backup snapshot, unmount the LUN as soon as your Single Mailbox Recovery restore operation is completed.

To close a target

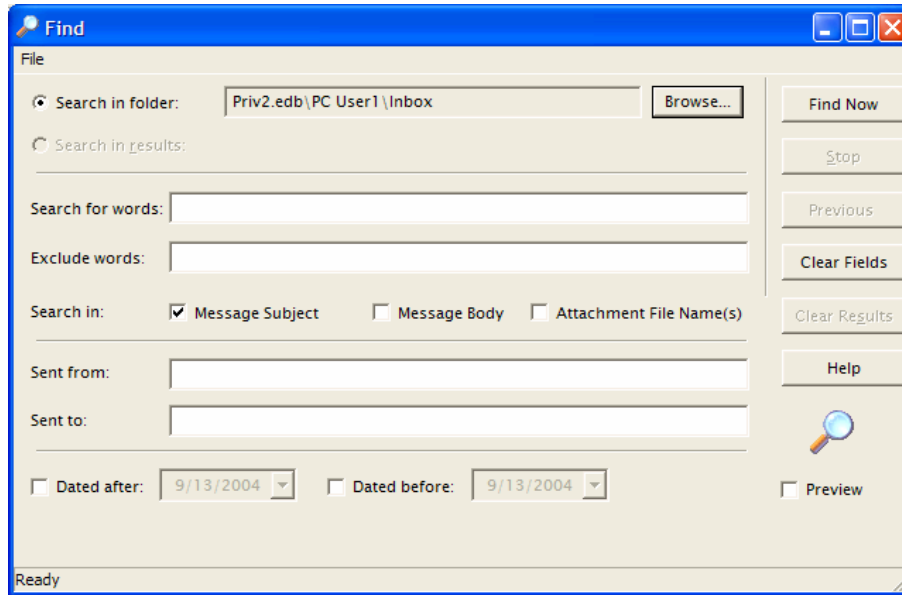
1. In the Target pane, select a PST file or Exchange database.
2. Do one of the following:
 - On the File menu, click Close Store.
 - Right-click the selection, and on the context menu click **Close Store**.

Deleting Items in the Target Pane

Using the Delete key to remove an item (e.g., folder, message) from the Single Mailbox Recovery target pane will permanently delete the item, similar to using Shift+Delete in Microsoft Outlook.

Chapter 5: Finding Messages

The **Find** dialog box lets you search a source EDB or PST file for message items that are defined by such criteria as keywords, message senders and recipients, and message creation dates. In addition, this dialog box lets you define the scope of your search: an EDB or PST file, one or more mailboxes or folders (e.g., Inbox), dates, or even previous search results.



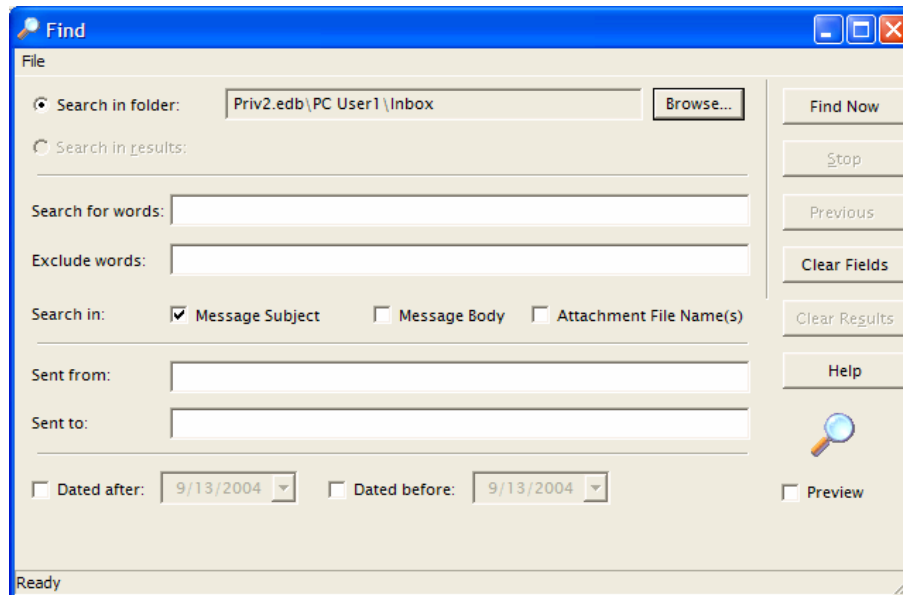
Guidelines for using the Find dialog box

1. The **Find Now** Button only becomes available if *at least one* of the following conditions is met:
 - At least one **Search in** check box is selected.
 - The Sent from or Sent to box contains at least one character.
 - The Dated after or Dated **before** check box is selected.
2. Each **Search in** check box that you select is run as a separate query, and the results of the query are combined (i.e., OR'd together). For example, if you enter "solution" in the **Search for words** box, and then select the **Message Subject** and **Message Body** check boxes, Single Mailbox Recovery will return messages that contain "solution" in either their message subject or message body.
3. If you select one or more **Search in** check boxes, but specify no additional search criteria, Single Mailbox Recovery will return all of the messages in the folder(s) undergoing the search.
4. Single Mailbox Recovery can search multiple information stores at the same time. In the Find Dialog, click Browse and you will see a tree view of all of the open source data stores. You can then select multiple mailboxes or folders to include in your search.
5. Single Mailbox Recovery will not return duplicates of a message during a search as long as the "Check for duplicate messages during search" preference is selected. For example, if the same message exists in two or more data stores, only the first message found will be listed in the search results. For more information, see "Setting preferences" on page 144.

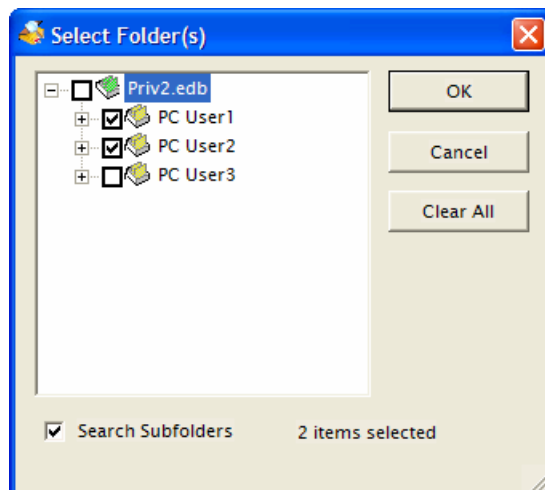
Searching for messages

1. In the Source pane, select the folder (e.g., EDB or PST file, mailbox, Inbox) you want to search. The folder(s) you select defines the scope of your search.
2. Click the **Search** button  to display the **Find** dialog box. The name of the folder you selected appears next to the **Search in folder** box.

The first time you search for messages, the **Search in folder** option is automatically selected. For information on using the **Search in results** option, see “Searching within results” on page 169.



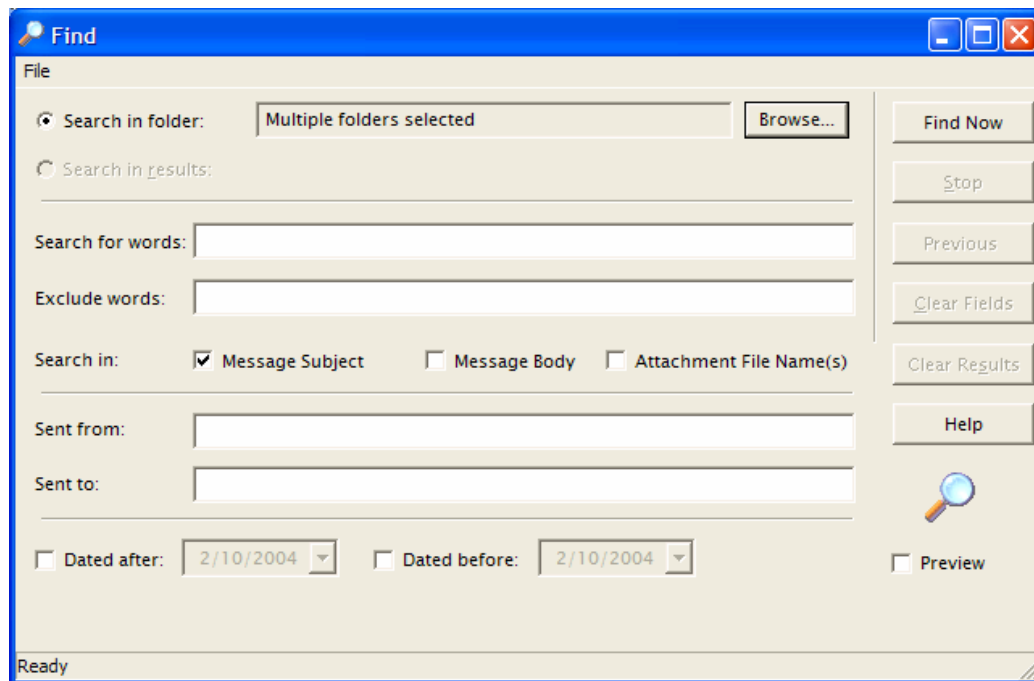
3. If you want to select multiple mailboxes or folders to search, click the **Browse** button. In the **Select Folder(s)** dialog box, select the items you want to search. In the illustration below, two mailboxes have been selected.



NOTE: If you select the **Search Subfolders** check box, Single Mailbox Recovery will include subfolders in the search.

4. Click **OK** to return to the **Find** dialog box.

In the following illustration, the **Search in folder** box now displays “Multiple folders selected.”



5. In the **Search for words** box, enter one or more words or phrases if you want to execute a keyword search. Keep in mind the following points:

- Put a space between words or phrases to perform an AND operation (i.e., all words must be matched in order to include a message with the search results).
- Put a comma between words or phrases to perform an OR operation (i.e., only one of the words must be matched in order to include a message with the search results).
- Put quotation marks around word phrases (i.e., the exact phrase must be matched in order to include a message with the search results).

Example: Search for words: dog cat mouse, rat

Search results: Messages that contain [“dog” AND “cat” AND “mouse”] OR [“rat”] are included in the search results.

6. In the **Exclude words** box, enter words or phrases if you want to perform a NOT operation. If matched, these words or phrases will exclude a message from the search results. The rules for using spaces, commas, and quotation marks apply when excluding words from a search.

Example: Search for words: dog cat mouse, rat

Exclude words: bird

Search results: Messages that contain [“dog” AND “cat” AND “mouse”] OR [“rat”] BUT NOT [“bird”] are included in the search results.

7. For **Search in**, select one or more of the following check boxes: **Message Subject**, **Message Body**, **Attachment File Name(s)**, or **Attachment Text**. Each **Search in** check box that you select is run as a separate query, and the results of the query are combined (i.e., OR'd together).

Chapter 5: Finding Messages

Note about searching within attachments: Single Mailbox Recovery does not search within archive file types such as .zip or .rar files. For more information, see “Searching Within Attachments” on page 150.

8. In the **Sent from** and **Sent to** boxes, enter the appropriate names, if desired. Using the **Sent to** box is particularly useful if you are trying to find a message sent to multiple people. The rules for using spaces, commas, and quotation marks apply when using the **Sent from** and **Sent to** boxes.
9. For **Dated after** and **Dated before**, select the appropriate check box, if desired. You may select both check boxes. Then type or select the part of the date you want to change.
 - **Dated after:** Searches for documents dated on or after the selected date.
 - **Dated before:** Searches for documents dated on or before the selected date.
10. When you have finished specifying search criteria, click **Find Now**. The results of your search appear in the message list.
11. To preview the messages returned by the search, click the **Preview** check box.

Find

File

☒ Search in folder: Multiple folders selected

☐ Search in results:

Search for words: summary report

Exclude words:

Search in: ☒ Message Subject ☒ Message Body ☐ Attachment File Name(s)

Sent from:

Sent to:

☐ Dated after: 9/ 8/2004 ☐ Dated before: 9/ 8/2004

☒ Preview

Results

	From	To	Subject	Date	Folder	Status
	PC User1	PC User2; PC U...	Summary Report	Tue 8/26/2003 ...	Priv2.edb\PC U...	
	PC User1	PC User2; PC U...	Summary Report	Tue 8/26/2003 ...	Priv2.edb\PC U...	
	PC User1	PC User2; PC U...	Summary Report	Tue 8/26/2003 ...	Priv2.edb\PC U...	

From: PC User1 **To:** PC User2; PC User3

Subject: Summary Report

Here is a sample summary report for your review. Let me know if you have any questions.

Search Complete - 3 Message Item(s) Matched Criteria

Searching within results

The **Search in results** option lets you refine the search process using the previous search results.

To search within results

1. To make the **Search in results** option available, you must perform at least one search.
2. Modify the search criteria as desired. For information on specifying search criteria, see “Searching for messages” on page 166.
3. Select the **Search in results** option at the top left of the **Find** dialog box.
4. Click **Find Now**. The results of your new search appear in the message list.
5. To preview the messages returned by the search, click the **Preview** check box.

Find

File

☐ Search in folder: Multiple folders selected

☒ Search in results:

Search for words: Upgrade

Exclude words:

Search in: ☒ Message Subject ☒ Message Body ☐ Attachment File Name(s)

Sent from:

Sent to:

☐ Dated after: 2/11/2004 ☐ Dated before: 2/11/2004

☒ Preview

Results

	From	Subject	Date	Folder	Status
✉	Exch2003 User1	RE: The very fir...	Tue 8/26/2003 ...	PC User1\Inbox	

From: Exch2003 User1 **To:** Exch2003 User1

Subject: RE: The very first Exchange 2003 e-mail message

This is a reply from a EdbDump Recovered PST!!

-----Original Message-----

From: Exch2003 User1

Sent: Thursday, January 30, 2003 8:29 AM

To: Exch2003 User2

Subject: The very first Exchange 2003 e-mail message

1 Message Item(s) Matched Criteria

Viewing previous search results

You can click the **Previous** button multiple times to return to any previous search criteria and search results. This button becomes unavailable when there are no more previous results.

To view previous search results

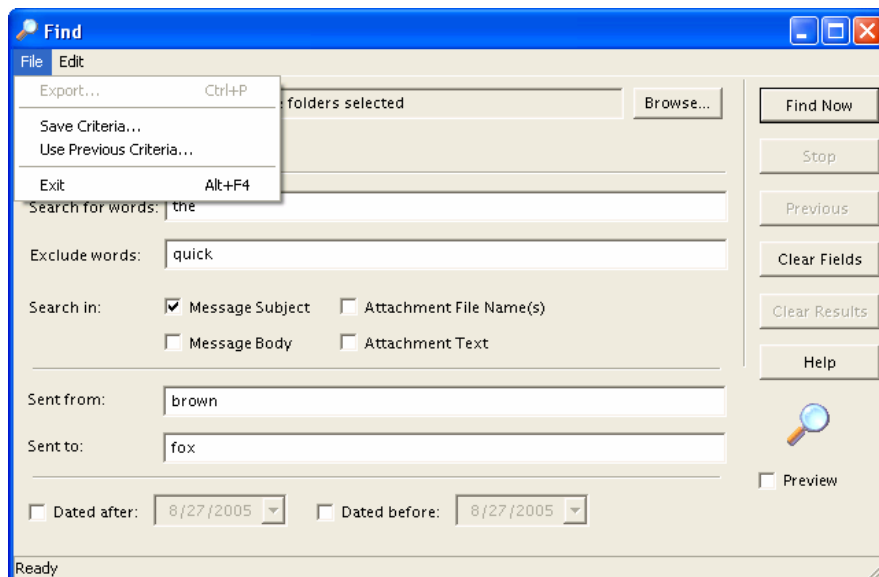
1. Perform at least two searches so the **Previous** button becomes available.
2. Click **Previous**. The results of the previous search appear in the in the message list.
3. You can now view the previous search, or you can modify the search criteria and conduct a new search. For information on specifying search criteria, see “Searching for messages” on page 166.

Clearing fields and clearing results

If you click the **Clear Fields** button, all of the search criteria that you entered in the **Find** dialog box are returned to the default settings. If you click the **Clear Results** button, all current and past search results are cleared.

Saving and using search profiles

Single Mailbox Recovery allows you to save search criteria to a text file for the purpose of using the search criteria in future searches. There are two menu commands that allow you to perform these functions: “Save Criteria” and “Use Previous Criteria.” In addition, if you want to modify the search criteria in a search profile, you can edit the text file with a text editor.



When creating a search profile, you can save the following search criteria. The “Search For,” “Exclude Words,” “Sent from,” and “Sent to” fields have a maximum of 4,095 characters.

- Search for words

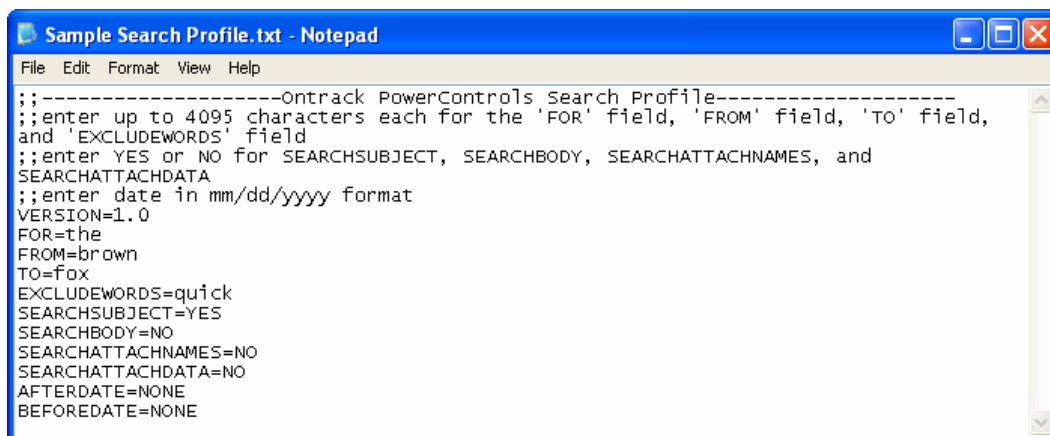
- Exclude words
- Search in
- Sent from
- Sent to
- Dated after
- Dated before

To create a search profile

1. Open the **Find** dialog box, and enter search criteria.
2. On the **File** menu in the **Find** dialog box, click **Save Criteria**.
3. In the **Save As** dialog box, specify a name and location for the search profile text file.
4. Click **Save**.

To edit a search profile

1. Locate and open the search profile that you want to edit.



2. Modify the search criteria as desired and save the text file.

To use a search profile when performing a search

1. Open the **Find** dialog box.
2. On the **File** menu in the **Find** dialog box, click **Use Previous Criteria**.
3. In the **Open** dialog box, locate and open the search profile that you want to use for your search.
4. Click **Open**. The **Find** dialog box will be populated with the search criteria specified in the search profile.

Using multiple search windows

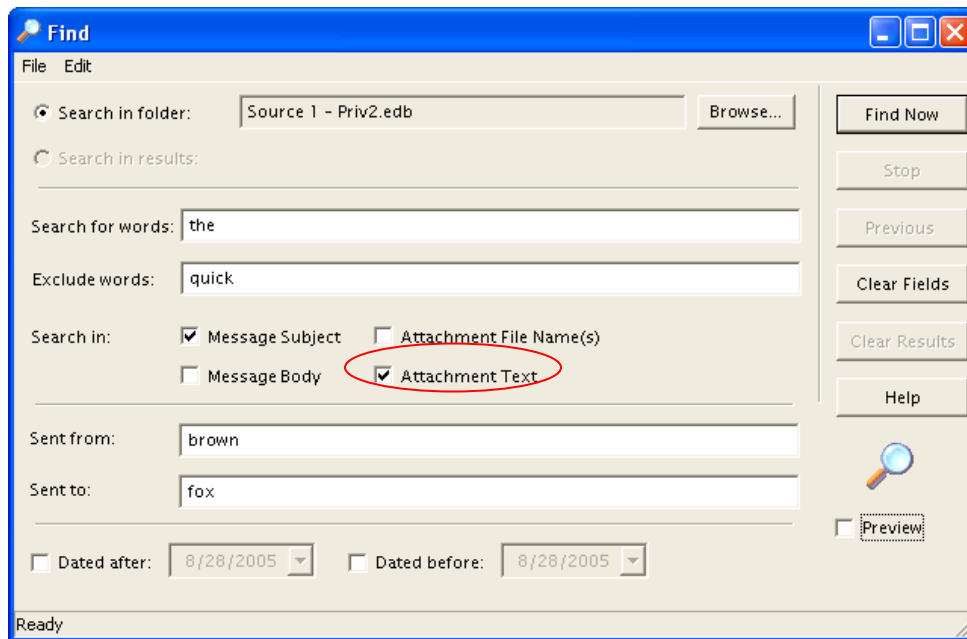
Single Mailbox Recovery allows you to open multiple instances of the Find dialog box to search any combination of information stores at the same time. There is no limit other than system resources for the number of concurrent searches you can initiate.

Note: If you are using multiple instances of the Find dialog box to search within the same mailbox, you may notice a slowdown in performance.

Searching within attachments

In the Find dialog box, you can search the text of email attachments. The Searching within Attachments feature supports Unicode text and is available for both EDB and PST sources. Single Mailbox Recovery supports Microsoft Office documents and many other popular file types. For a list of supported file types, see the FAQs at www.ontrack.com/powercontrols/.

Note about the licensing agent: The “PC Agent for Advanced Searching” must be enabled in order to search attachments. For more information, see “Task III: Enable any optional agents” on page 12.



To search within attachments

1. In the **Find** dialog box, select the **Attachment Text** check box.
2. Specify other desired search criteria. For more information, see “Searching for Messages” on page 166.
3. Click **Find Now**. If Single Mailbox Recovery matches a keyword or phrase in the text of the attachment, it will return a “Hit” just as it would if it found a keyword or phrase in the body or subject of a message.

Exceptions when searching within attachments

When searching within attachments, Single Mailbox Recovery searches only for embedded messages one level deep. It does *not* search for the following items:

- Attachments (or other embedded objects) within attachments
- Archive files (e.g., .zip, .rar)
- Embedded OLE objects (e.g., spreadsheet embedded in a message body)
- Binary files (e.g., .dll, .exe, .jpg, .mp3)
- Metadata associated with files (e.g., author and company information in an .xls file)

Other Single Mailbox Recovery features available through the Find dialog box

Opening and saving attachments in the Find dialog box

For instructions on opening and saving attachments, see “Opening attachments” and “Saving attachments” on page 138.

Keep in mind that you must have an application on your computer that can open the attachment's file type. If no associated program is available for the attachment file type, Single Mailbox Recovery will present a message dialog box saying the attachment cannot be viewed.

Exporting messages from the Find dialog box

The Export feature allows you to copy individual messages from the Find dialog box to a local or network drive destination. You can choose to save exported messages as plain text files (.txt) or Microsoft Outlook files (.msg). For more information, see “Chapter 6: Exporting Messages.”

Restoring messages from the Find dialog box

The results of conducting a search appear in the message list in the **Find** dialog box. You can restore the messages in this list by dragging them or copying and pasting them into the target folder. If you want to maintain the directory structure of restored individual messages, use the Paste Special command.

Note that you can also restore messages simply by browsing in the Single Mailbox Recovery main window and dragging and dropping or copying and pasting from the main window to the target. You do not need to search to restore messages. For more information, see “Chapter 7: Restoring Exchange Data.”

Performing an integrity check on messages in the Find dialog box

The Find dialog box allows you to perform an integrity check on one or more messages in the Results area. During the integrity check, Single Mailbox Recovery will verify that it can read all of the properties of the messages.

To perform an integrity check on messages in the Find dialog box

1. In the **Find** dialog box, perform a search.

Chapter 5: Finding Messages

2. In the **Results** area, select the messages for which you want to perform an integrity check.
3. On the **Edit** menu in the **Find** dialog box, click **Integrity Check**. The **Integrity Check** dialog box appears.

For instructions on performing integrity checks on messages, folders, mailboxes, PST files, and EDB files in the main Single Mailbox Recovery window, see “Performing an integrity check” on page 144

Chapter 6: Exporting Messages

The Export feature allows you to export mail from an EDB or PST source file to a local or network drive destination. You can save exported messages as Microsoft Outlook files (.msg) or plain text files (.txt). This feature can assist customers who want to copy old email backups into an alternate or non-email system. You can export at all levels: an EDB file, a PST file, a mailbox, a folder, and individual messages.

General information about exporting messages

- The **file name** for an exported message is its subject. A duplicate subject name will create a file with the same name but with an (x) appended to the filename: x = 1 for the first duplicate, x = 2 for the next duplicate, and so on. If the subject contains illegal file name characters, the offending characters will be replaced with an underscore.
- **Associated messages** and **folder properties** will not be exported.
- When **exporting individual messages**, you have the option to keep the folder/mailbox hierarchy, similar to the paste special feature. When **exporting a mailbox or folder**, you have the option to also export the subfolders.

About message (.msg) and text (.txt) export

The file type for an exported message can be either Microsoft Outlook (.msg) or plain text (.txt).

Message (.msg) export

An .msg (OLE compound document) can be imported directly into Microsoft Outlook. This file type encapsulates the entire message including attachments.

Text (.txt) export

A .txt file will be created with the following information. Note that neither message attachments nor message properties will be exported.

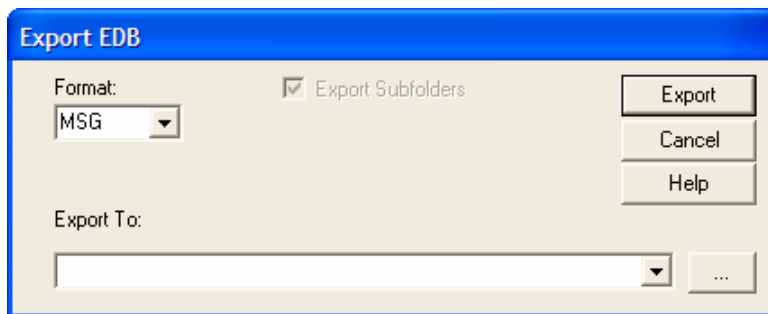
Distribution List	Calendar Item	Contact Item	Task Item	Message and All Other Items
List Name:	Subject: Location:	Last Name: First Name:	Subject: Due Date: Priority:	From: Sent: (created date) To: CC: (if present) BCC: (if present)
Creator Date:	Start: End:	Business Address:	Status: Percent Complete:	Subject:
Creation Name:	Recurrence: (if present)	Home:	Total Work: Actual Work:	Attachment file names:
Members of List:	Required Attendees: Resources: Body:	Category:	Owner:	Message Body

Exporting messages

The following instructions show you how to export an EDB file, a PST file, mailboxes, folders, and messages from the source pane in the Single Mailbox Recovery main window. They also show you how to export messages from the Find dialog box.

To export an entire EDB file

1. In the Source pane, select the EDB file.
2. Do one of the following:
 - On the **File** menu, click Export.
 - On the toolbar, click the Export button .
 - Right-click the EDB file, and on the shortcut menu, click **Export**.

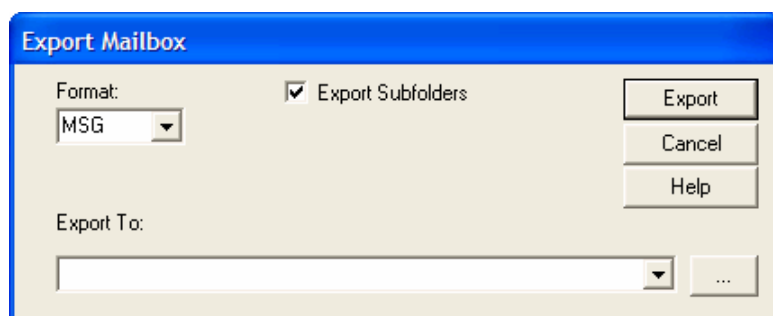


3. In the **Format** box, select MSG or TXT.
4. In the **Export To** box, specify the location for the exported EDB file.
5. Click **Export**.
6. In the **Export Progress** dialog box, verify the EDB file was successfully exported, and click **Close**.

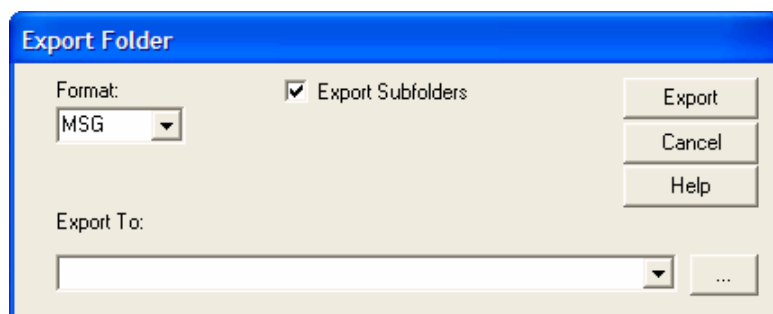
To export a PST file, a mailbox, or a folder

1. In the Source pane, select a PST file, a mailbox or a folder (e.g., Inbox).
2. Do one of the following:
 - On the File menu, click Export.
 - On the toolbar, click the Export button .
 - Right-click the mailbox or folder, and on the shortcut menu, click Export.

The **Export Mailbox** or **Export Folder** dialog box appears.



Export Mailbox dialog box

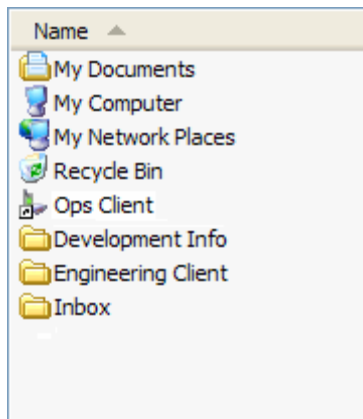


Export Folder dialog box

3. In the **Format** box, select MSG or TXT.
4. In the **Export To** box, specify the location for the exported mailbox or folder.
5. Select the **Export Subfolders** check box if you want to export all of the subfolders for the selected mailbox or folder.
6. Click **Export**.
7. In the **Export Progress** dialog box, verify the mailbox or folder was successfully exported, and click **Close**.

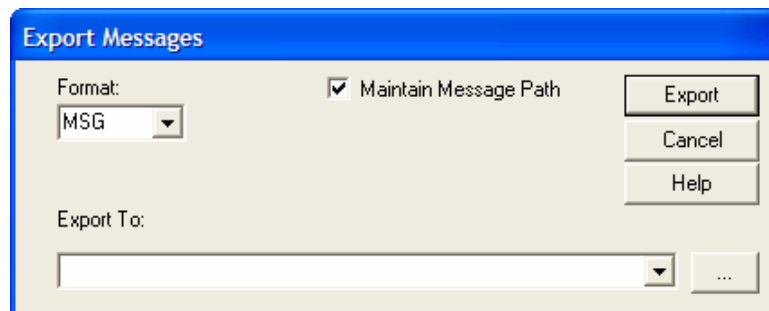
The mailbox or folder appears in the specified location. In the illustration below, the exported folder is the Inbox.

Chapter 6: Exporting Messages



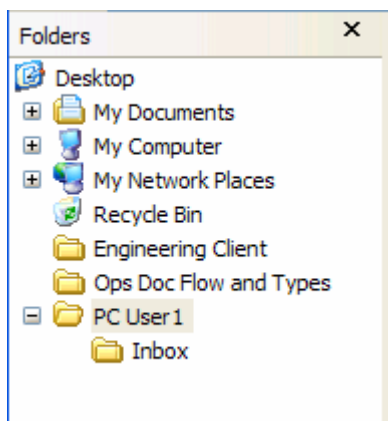
To export individual messages

1. In the Source pane, select one or more messages from the message list.
2. Do one of the following:
 - On the **File** menu, click Export.
 - On the toolbar, click the Export button .
 - Right-click the selection, and on the shortcut menu, click **Export**.



3. In the **Format** box, select MSG or TXT.
4. In the **Export To** box, specify the location for the exported messages.
5. Select the **Maintain Message Path** check box if you want to maintain the directory structure of the exported messages.
6. Click **Export**.
7. In the **Export Progress** dialog box, verify your messages were successfully exported, and click **Close**.

The messages appear in the specified location. In the illustration below, the exported messages come from the “PC User 1” mailbox.



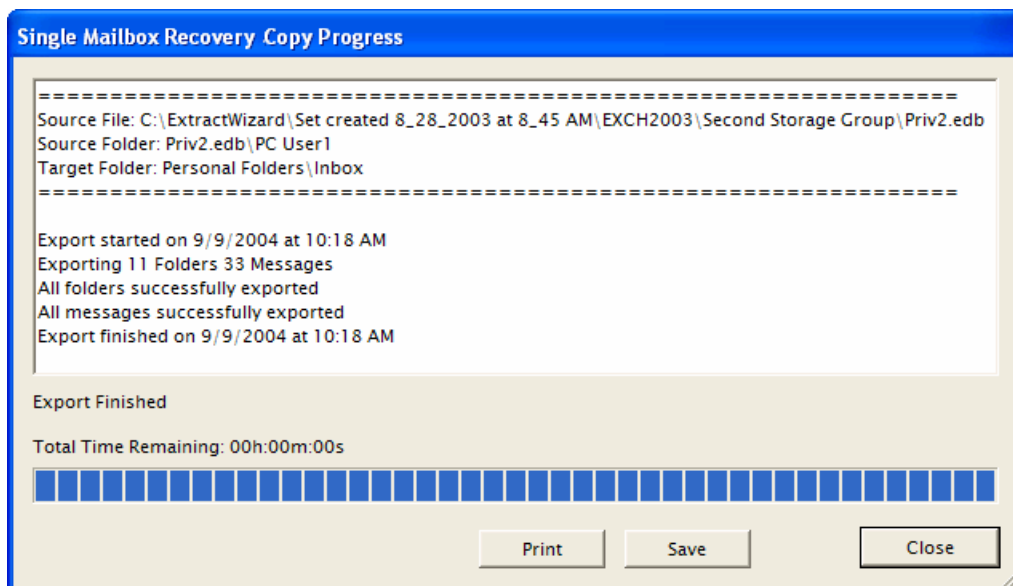
To export individual messages from the Find dialog box

1. In the **Find** dialog box, select one or more messages from the message list.
2. Right-click the selection, and on the shortcut menu, click **Export**.
3. Perform steps 3-7 in the preceding section.

About the Export Progress dialog box

Each time you attempt to export messages, the **Export Progress** dialog box appears. This dialog box displays the following information:

- Source and target
- Export start time
- Number of folders to export
- Number of messages to export
- Warnings or errors encountered during the export process. If an error occurs on a message, the message subject and source path along with an error message will be displayed. If the message does not have a subject, the date (created) and message sender will be displayed instead.
- Total folders and messages successfully exported



NOTES:

- If an error occurs that Single Mailbox Recovery can recover from, such as a corruption that prevents it from getting a message property, Single Mailbox Recovery will log an error, stop processing that message, and continue.
- If an error occurs from which Single Mailbox Recovery cannot recover, such as a major corruption error, Single Mailbox Recovery will log an error to the Export Progress dialog box and stop exporting.

Chapter 7: Restoring Exchange Data

This chapter describes how to restore Exchange data (an EDB file, a PST file, a mailbox, or a folder) to an Exchange server. The following topics are covered:

Quick look at restoring your Exchange data. The first part of this chapter provides you with a quick look at restoring your Exchange database, so you can begin to use Single Mailbox Recovery immediately.

Examples of restoring your Exchange data. The second part of this chapter provides examples of restoring messages, folders, mailboxes, and even an entire EDB file to the desired destination.

NOTE: The concepts in this chapter apply to both EDB and PST files (unless otherwise noted), even though all of the examples are EDB files.

Quick look at restoring your Exchange data

Restoring data from a source EDB or PST file to a target destination is a simple process. Just drag and drop or use the Copy and Paste/Paste Special commands. This section contains the following topics:

- “Restoring your Exchange data in three easy steps” on page 181
- “Limits for PST targets and folder targets” on page 182
- “About restoring messages to an Exchange server” on page 183
- “About the Copy Progress dialog box” on page 184
- “Creating, renaming, and deleting folders in the Target pane” on page 185
- “Copying and pasting or dragging and dropping” on page 186

Restoring your Exchange data in three easy steps

If you copy an EDB file, a PST file, a mailbox, or a folder from the Source pane and paste it to any target destination, Single Mailbox Recovery will preserve the directory structure of all restored messages. When restoring individual messages, you must use the Paste Special command to preserve their directory structure.

To restore individual messages with Copy-Paste

1. In the Source pane or **Find** dialog box, copy messages from the message list.
2. In the Target pane, paste the messages into a folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied, and click **Close**.

To restore individual messages with Copy-Paste Special

1. In the Source pane or **Find** dialog box, copy messages from the message list.
2. In the Target pane, use **Paste Special** to paste the messages into a folder, mailbox, PST root, or Exchange server root.

3. In the **Copy Progress** dialog box, verify that your messages were successfully copied, and click **Close**.

TIP: Use the **Paste Special** command to retain the directory structure of messages copied from the **Find** dialog box, because messages in this dialog box often come from several source locations.

To restore a folder, a mailbox, an EDB file, or a PST file

1. In the Source pane, copy a folder, a mailbox, an EDB file, or a PST file.
2. In the Target pane, paste the copied item into a folder, mailbox, PST root, or Exchange server root.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied, and click **Close**.

NOTE: You cannot open the same PST as a Source and Target. In addition, you cannot restore messages from a PST file to an Exchange Server root node.

To restore data even faster, use drag-and-drop

- Example: To restore an entire EDB file, drag it to the target Exchange server root.

Limits for PST targets and folder targets

When restoring Exchange data to a target PST or a target folder, PSTs have the following limits:

- **2 GB PST limit.** When a target PST file reaches 1.8 GB, Single Mailbox Recovery will create a new PST for the additional messages. The new PST file will have the same name as the original target PST file, plus an appended number in parentheses: Personal Folders (1), Personal Folders (2), and so on. Single Mailbox Recovery will create the folder path in the new PST and continue to restore Exchange data where it left off.

NOTE: The 1.8 GB limit applies only to PST files created by Microsoft Outlook XP and earlier. This limit does not apply to the new type of PST files created by Microsoft Outlook 2003.

- **16,383 messages per folder limit.** When a target folder (e.g., Inbox) reaches 16,383 messages, Single Mailbox Recovery will create a new PST folder for the additional messages. The new folder will have the same name as the original target folder plus an appended number in parentheses: Inbox (1), Inbox (2), and so on. Single Mailbox Recovery will create the folder path in the new folder and continue to restore Exchange data where it left off.

Note: If you have upgraded the PST file to a large table format, the PST can hold 64,000 messages per folder. However, when a target folder (e.g., Inbox) reaches 16,383 messages, Single Mailbox Recovery will still create a new PST folder for the additional messages.

To turn off the preference setting for the PST messages per folder limit

If you do not want Single Mailbox Recovery to create new folders when the number of messages reaches 16,383, do the following:

1. On the **Edit** menu, click **Preferences**.
2. In the **Single Mailbox Recovery Preferences** dialog box, click the **Options** tab, and then clear the **Create new PST folders when PST message/folder limits are reached** check box.

NOTE: If you turn off the preference, all messages above the messages per folder limit will fail to copy correctly, and the PST file may become corrupt.

About restoring messages to an Exchange server

You must have sufficient access rights to all of the Exchange mailboxes you are trying to restore messages to. Keep in mind that you can connect to only one mailbox at a time.

Restoring messages to Exchange 2000/2003

In Exchange 2000/2003, the permission that controls whether or not any mailbox can be copied to is Full Mailbox Access. You must have Full Mailbox Access set to “Allow” in order to copy to a mailbox other than the one you logged in under.

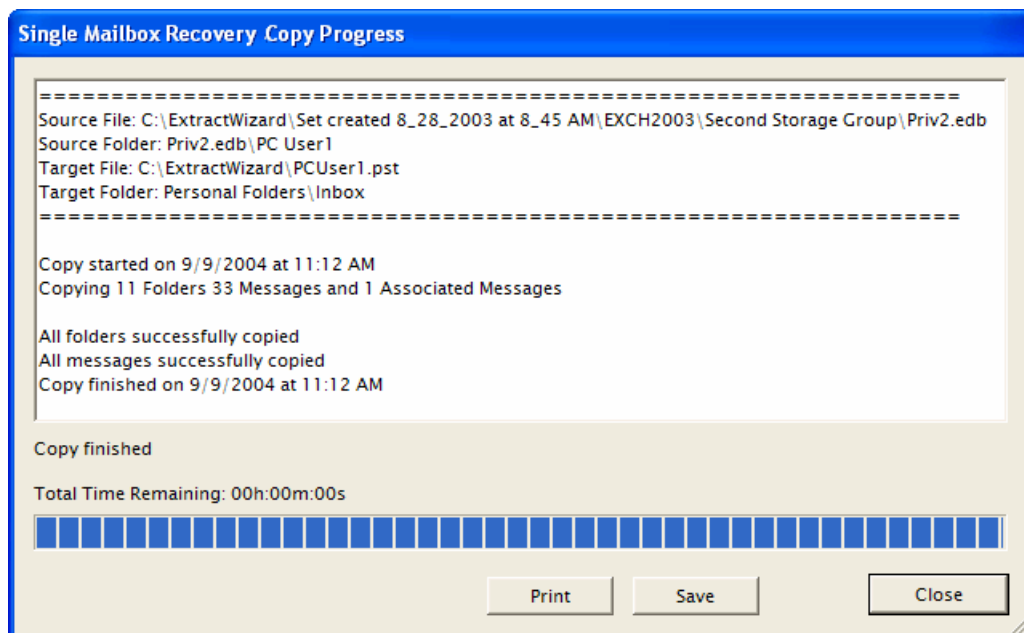
Restoring messages to Exchange 5.5

In Exchange 5.5, the account you are logged in under needs an Exchange Service Account Administrator rights or role. As long as you copy this role to your account, you can restore messages to any mailbox.

About the Copy Progress dialog box

Each time you attempt to restore messages to the Target pane, the **Copy Progress** dialog box appears. This dialog box displays the following information about the copy operation:

- Time of copy operation
- Number of messages, associated messages, and folders
- Errors, if any
- Mailboxes that Single Mailbox Recovery connected to or failed to connect to when copying to an Exchange server
- Copy results



IMPORTANT NOTE: Viewing the copy results in Copy Progress dialog box is especially important when attempting to restore multiple mailboxes to an Exchange server root node. That's because Single Mailbox Recovery displays only one mailbox at a time in the Target pane; therefore, the only way you will know if all of the mailboxes were successfully copied to the Exchange server will be to look at the copy results listed in this dialog box.

If you do not have full access rights to the mailboxes you are trying to restore messages to, Single Mailbox Recovery will be unable to connect to the mailboxes. For more information, see "About Restoring Messages to an Exchange Server" on page 183.

Creating, renaming, and deleting folders in the Target pane

The Target pane has folders in which you can place your restored messages. However, you may wish to create new folders for your messages. You can also rename or delete any folder in the Target pane.

To create a new folder in the Target pane

1. In the Target pane, select a folder, a PST root node, or an Exchange mailbox.
2. Do one of the following:
 - On the Edit menu, click New Folder.
 - Right-click and on the shortcut menu, click New Folder.
 - Press Ctrl+N.
3. In the **Create New Mail Folder** dialog box, name the folder and click **OK**. A subfolder is created in the target folder.

To rename a folder in the Target pane

1. In the Target pane, select a folder.
2. Do one of the following:
 - On the Edit menu, click Rename.
 - Right-click and on the shortcut menu, click Rename.
 - Press Ctrl+R.
3. Type a new name for the folder.

NOTE: You can also rename a PST root.

To delete a folder in the Target pane

1. In the Target pane, select a folder.
2. Do one of the following:
 - On the **Edit** menu, click Delete.
 - Press the Delete key.

Copying and pasting or dragging and dropping

In Single Mailbox Recovery, you can restore data to the Target pane by using Copy-Paste, Copy-Paste Special, or Drag-and-Drop.

To copy an item in the Source pane or Find dialog box

1. In the Source pane or **Find** dialog box, select messages, a folder, a mailbox, or the entire EDB file.

NOTE: In the **Find** dialog box, you can only select messages.

2. Do one of the following:

- On the Edit menu, click Copy.
- Right-click the selected item(s), and on the shortcut menu, click Copy.
- Click the Copy Mail Item button  on the toolbar.
- Press Ctrl +C.

To paste an item in the Target pane

1. In the Target pane, select a folder, a mailbox, the PST root node, or the Exchange root node.

2. Do one of the following:

- On the **Edit** menu, click Paste.
- Right-click the selected item, and on the shortcut menu, click Paste or Paste Special. For more information on using the Paste Special command, see “Restoring messages with Paste Special” on page 190.
- Click the Paste button  on the toolbar.
- Press Ctrl + V (Paste) or Ctrl-Y (Paste Special).

To use drag-and-drop

- Drag an item from the Source pane into a folder in the Target pane. Dragging and dropping achieves the same results as copying and pasting.

To use drag-and-drop when right-clicking a source item

1. In the Source pane, select one or more messages.
2. Right-click the selected messages and drag them to a folder in the Target pane.
3. When you let go of the mouse, a shortcut menu appears. On the shortcut menu, click **Paste** or **Paste Special**. For more information on using the Paste Special command, see “Restoring messages with Paste Special” on page 190.

Examples of restoring your Exchange data

This section provides examples of restoring messages, folders, mailboxes, and even an entire EDB file to the desired destination. In each case, it provides guidelines for restoring messages.

- “Restoring messages with Copy-Paste” on page 187
- “Restoring messages with Paste Special” on page 190
- “Restoring a folder” on page 199
- “Restoring a mailbox” on page 201
- “Restoring an EDB file” on page 202

NOTE: The concepts in this chapter apply to both EDB and PST files (unless otherwise noted), even though all of the following examples are EDB files.

Restoring messages with Copy-Paste

The following instructions show you how to restore individual messages to a *folder* in a target PST file or Exchange Server by using Copy-Paste. Keep in mind that using Drag-and-Drop achieves the same results.

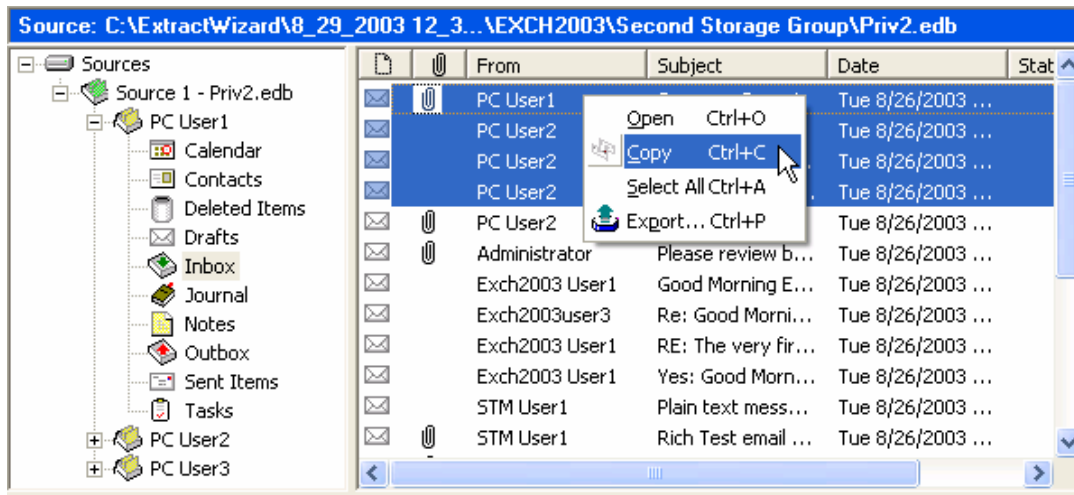
Guidelines for restoring messages

1. You can copy messages from the message list in the Source pane or the **Find** dialog box.
2. You can use **Drag-and-Drop** or **Copy-Paste** to restore individual messages to a *folder* in the Target pane.
3. You cannot use **Drag-and-Drop** or **Copy-Paste** to restore individual messages to a PST root node, an Exchange server root node, or an Exchange mailbox. However, you can use **Paste Special** to restore individual messages to these locations.
4. Using **Drag-and-Drop** or **Copy-Paste** to restore individual messages does not preserve the directory structure of the restored messages. If you want to preserve the directory structure of restored individual messages, use **Paste Special**.

TIP: For information on **Paste Special**, see “Restoring messages with Paste Special” on page 190.

To restore messages with Copy-Paste

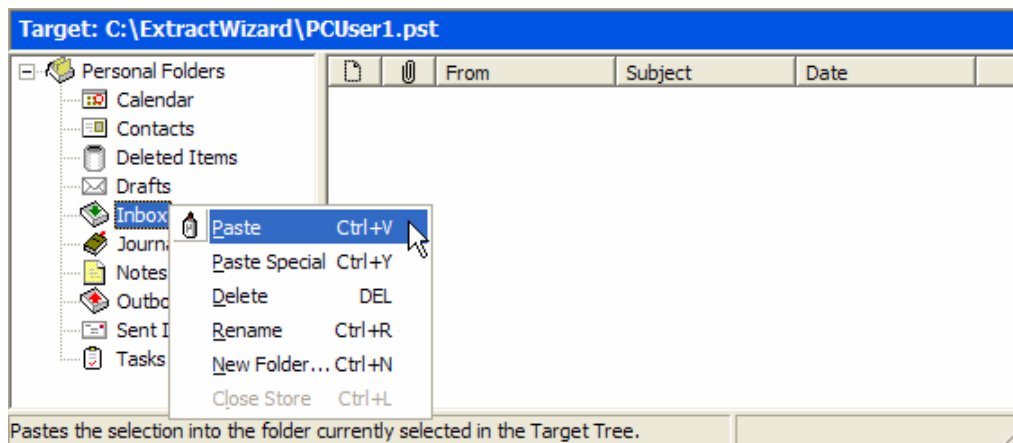
1. In the Source pane or **Find** dialog box, copy messages from the message list.



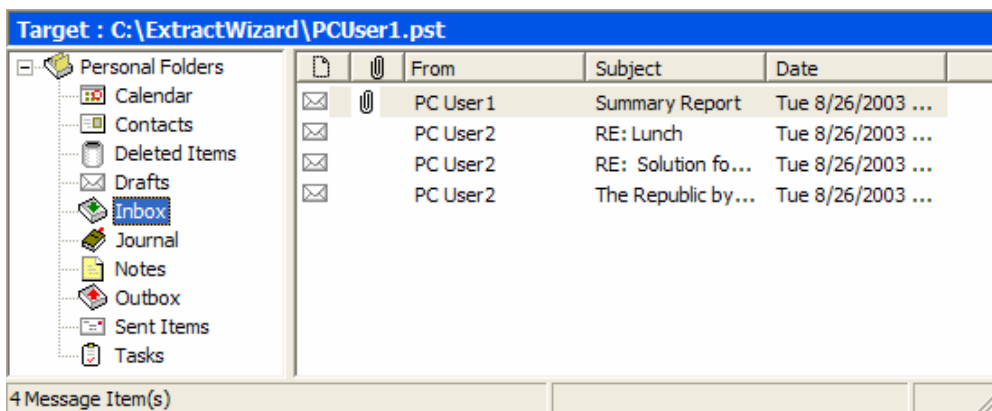
2. In the Target pane, paste the messages into a folder (e.g., Inbox) in the target PST file or Exchange Server.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of restoring messages with Copy-Paste

All unduplicated messages will appear in the target folder.



Example 1: Pasting messages into a folder (Inbox) in the Target pane



Example 1: Results of pasting messages into a folder (Inbox) in the Target pane

Restoring messages with Paste Special

You can use the Paste Special command to preserve the directory structure of restored individual messages. The Paste Special command is especially useful when restoring messages from the message list in the Find dialog box, since these messages often come from several source locations.

Guidelines for restoring messages with Paste Special

1. You can use the Paste Special command to restore individual messages to any target destination. Using the Paste Special command preserves the directory structure of the restored messages.
2. You can use the Paste Special command to restore *individual messages* only. You cannot use the Paste Special command to restore an entire EDB file, a mailbox, or a folder.
3. You *cannot* use Paste Special to restore messages to a public folder.
4. **If the target is a PST root node or folder**, Single Mailbox Recovery will create a folder to represent each mailbox. Each mailbox will be a subfolder of the folder the user selected for the Paste Special operation.
5. **If the target is an Exchange Server mailbox or folder**, Single Mailbox Recovery will copy all messages to the target. Each mailbox will be a subfolder of the folder the user selected for the Paste Special operation.
6. **If the target is an Exchange Server root node**, the Paste Special code will attempt to connect to each mailbox one at a time and copy each message to its corresponding mailbox and folder. If the folder does not exist, it will be created. If the mailbox does not exist, Single Mailbox Recovery will log an error in the copy results, skip the entire mailbox, and continue the Paste Special operation.

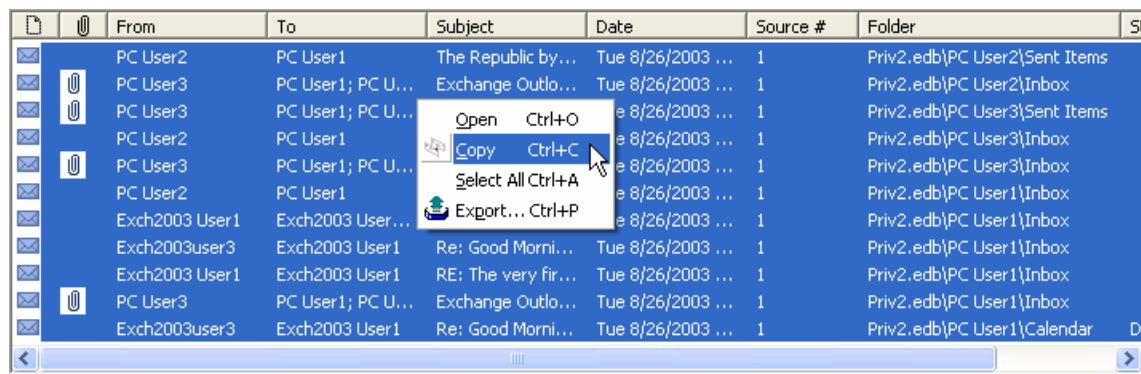
NOTE: You cannot restore messages from a PST file to an Exchange Server root node.

To restore messages to a PST root or folder with Paste Special

If the target is a PST root node or folder, Single Mailbox Recovery will create a folder to represent each mailbox. Each mailbox will be a subfolder of the folder the user selected for the Paste Special operation.

1. In the Source pane or **Find** dialog box, copy messages from the message list.

In this example, messages from three different mailboxes (PC User 1, PC User 2, and PC User 3) are copied from the message list in the **Find** dialog box.

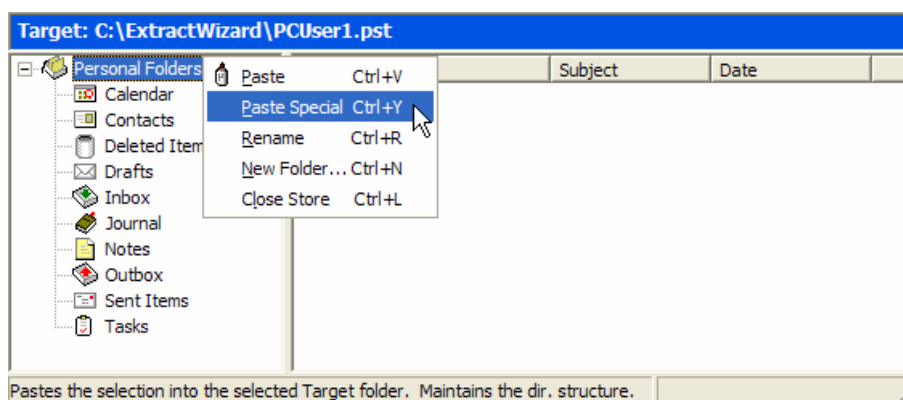


Copying messages from the **Find** dialog box

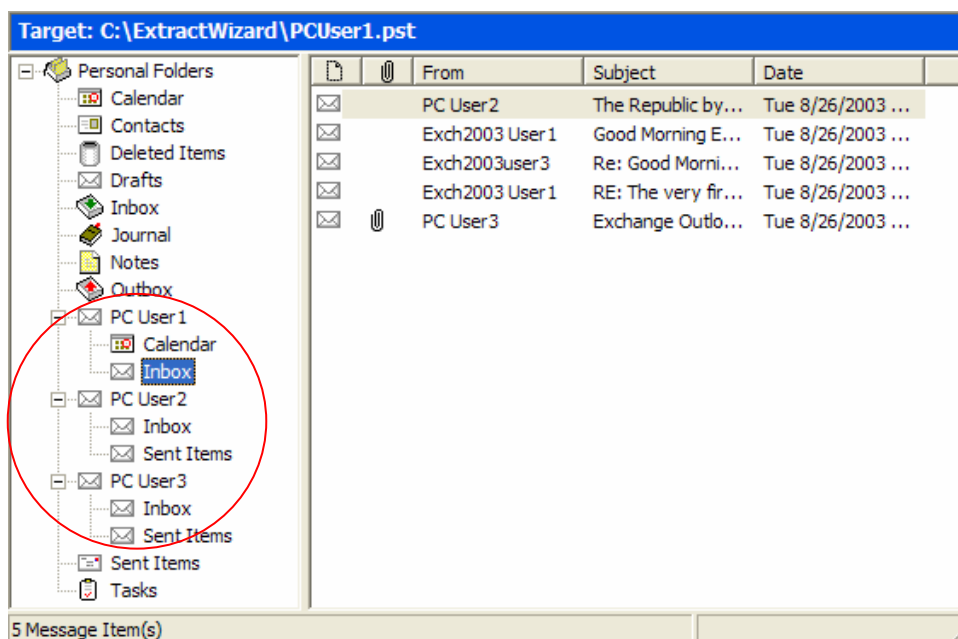
2. In the Target pane, use **Paste Special** to paste the messages into a PST root node or folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of restoring messages to a PST root node or folder with Paste Special

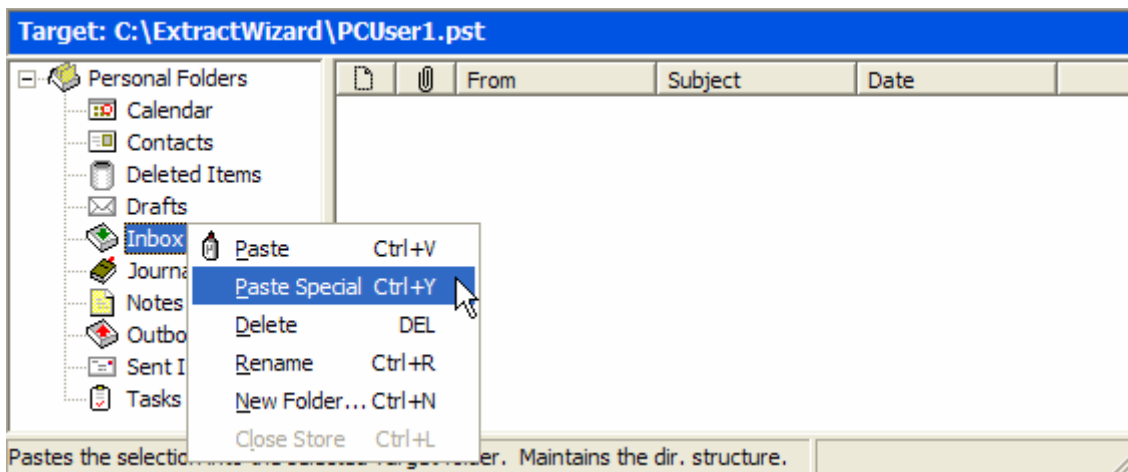
All unduplicated messages will appear in the target destination, and their directory structure will be preserved.



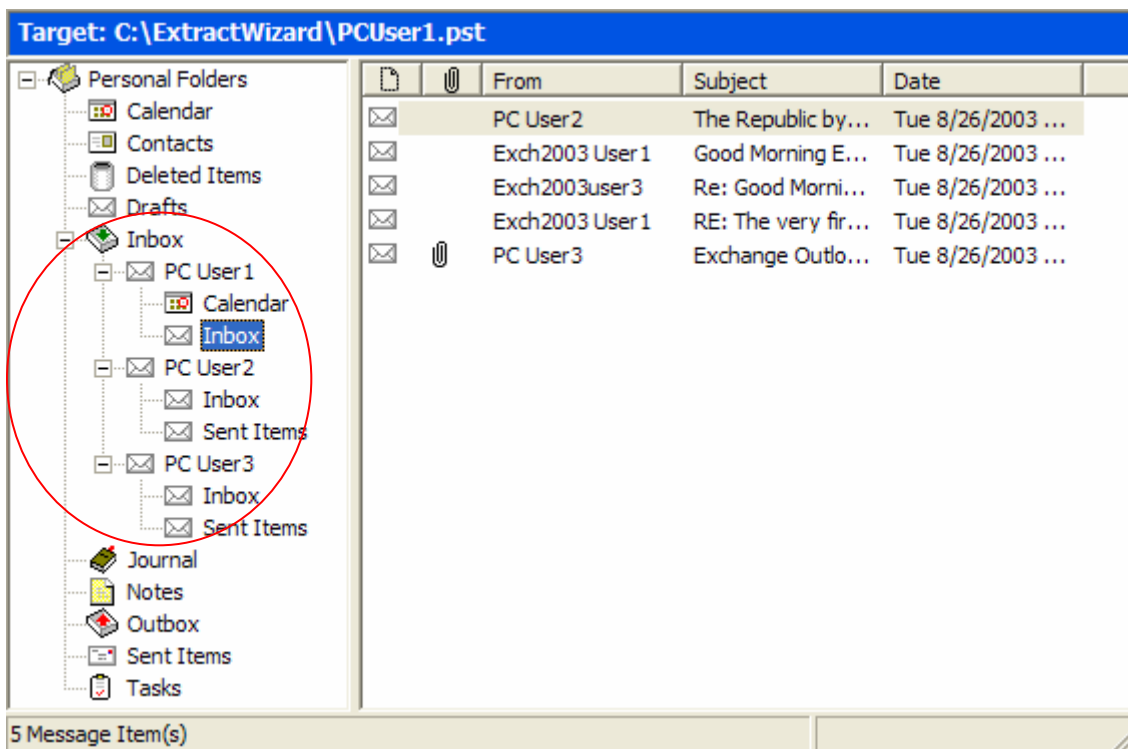
Example 2: Using Paste Special on a target PST root node



Example 2: Results of using Paste Special on a target PST root node



Example 3: Using Paste Special on a target PST Inbox



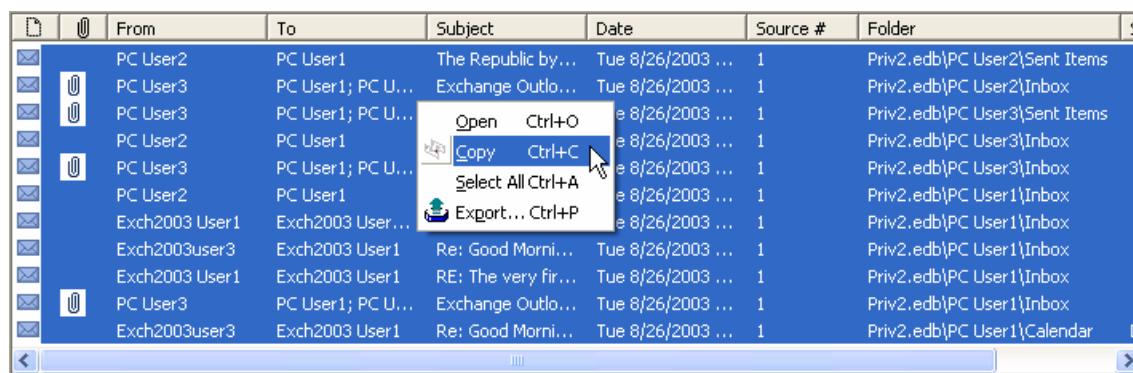
Example 3: Results of using Paste Special on a target PST Inbox

To restore messages to an Exchange server mailbox or folder with Paste Special

If the target is an Exchange Server mailbox or folder, Single Mailbox Recovery will copy all messages to the target. Each mailbox will be a subfolder of the folder the user selected for the Paste Special operation.

1. In the Source pane or **Find** dialog box, copy messages from the message list.

In this example, messages from three different mailboxes (PC User 1, PC User 2, and PC User 3) are copied from the message list in the **Find** dialog box.

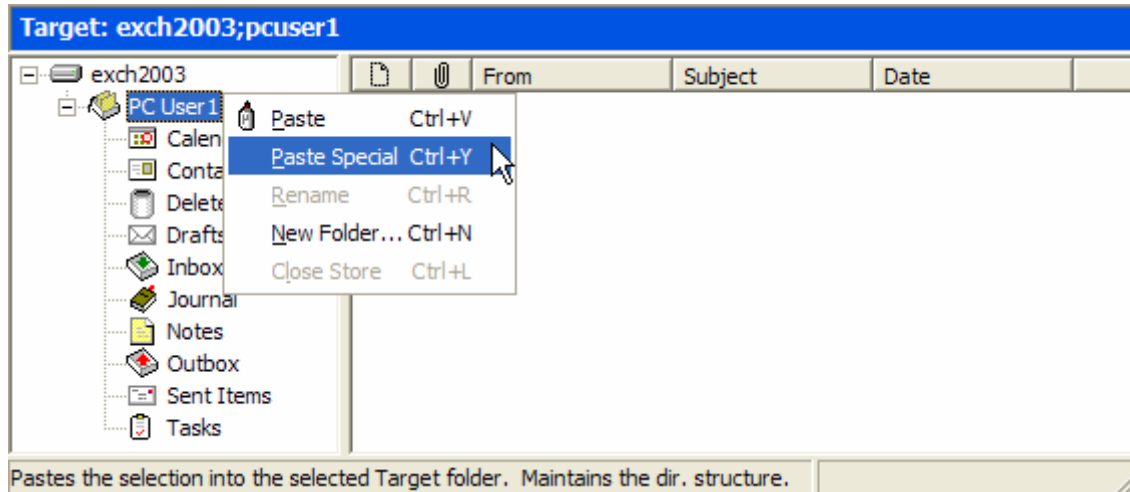


*Copying messages from the **Find** dialog box*

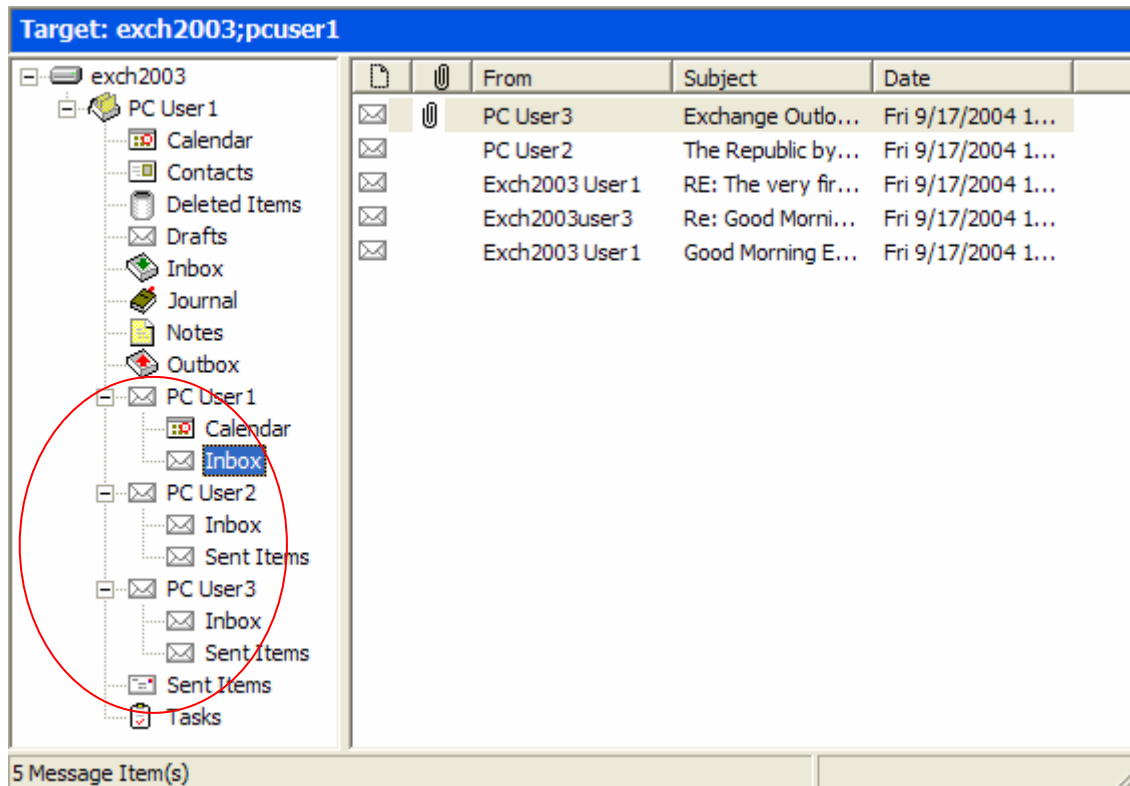
2. In the Target pane, use **Paste Special** to paste the messages into an Exchange mailbox or folder.
3. In the **Copy Progress** dialog box, review your results to make sure all the messages were copied to the target destination. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of restoring messages to an Exchange Server mailbox or folder with Paste Special

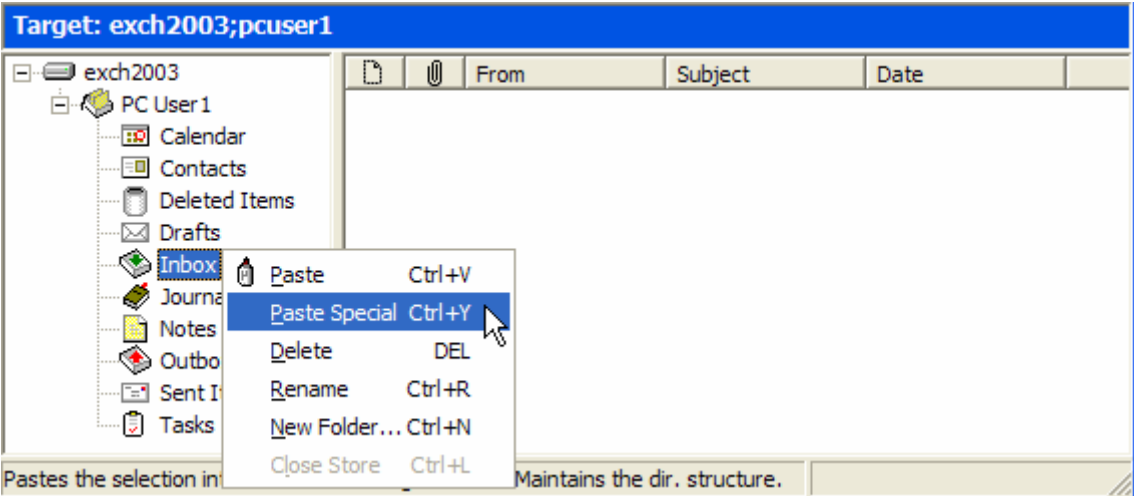
Each mailbox will be a subfolder of the target destination, and all unduplicated messages will be restored. In addition, their directory structure will be preserved.



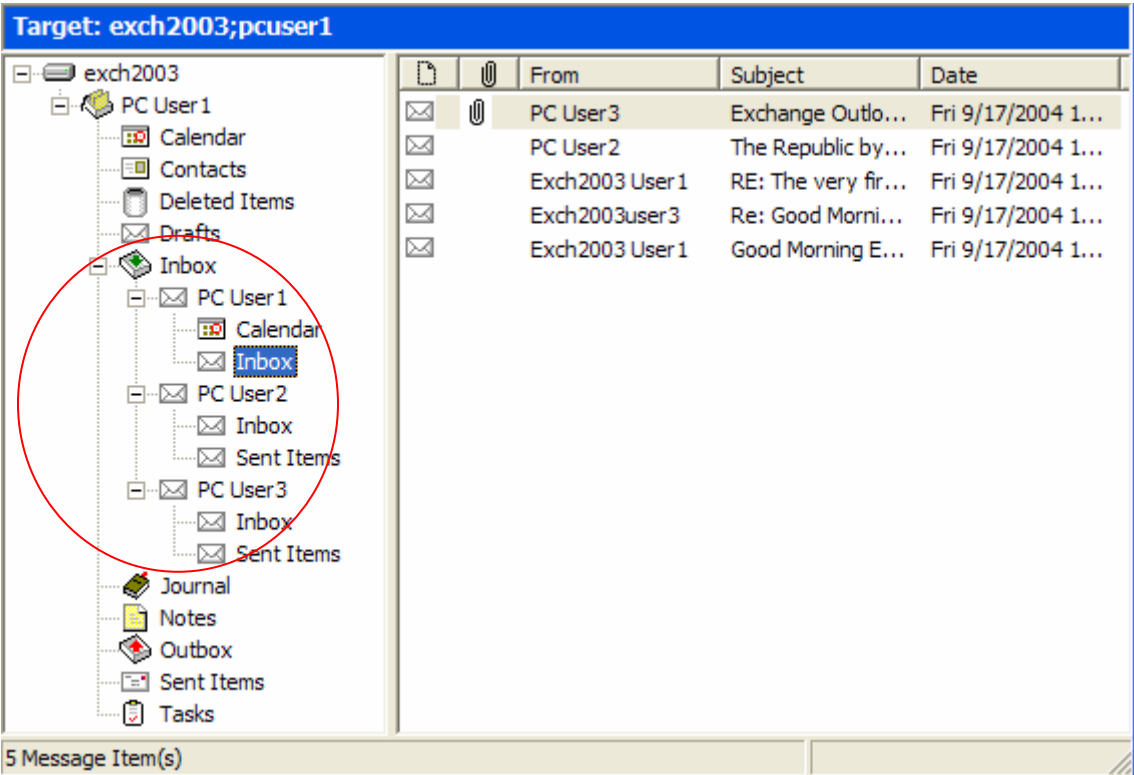
Example 4: Using Paste Special on a target Exchange mailbox



Example 4: Results of using Paste Special on a target Exchange mailbox



Example 5: Using Paste Special on a target Exchange folder (e.g., Inbox)



Example 5: Results of using Paste Special on a target Exchange folder (e.g., Inbox)

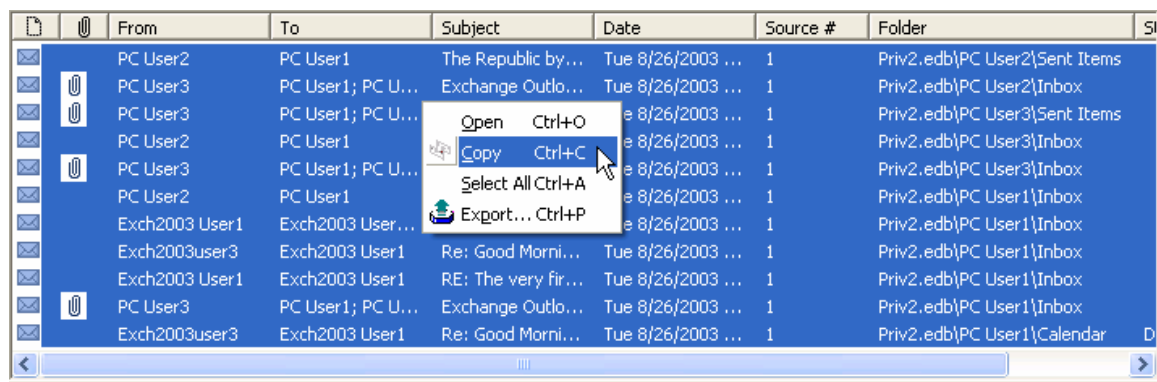
To restore messages to an Exchange server root node with Paste Special

If the target is an Exchange Server root node, Single Mailbox Recovery will attempt to connect to each mailbox one at a time and copy each message to its corresponding mailbox and folder. If the folder does not exist, it will be created. If the mailbox does not exist, Single Mailbox Recovery will log an error in the **Copy Progress** dialog box, skip the entire mailbox, and continue the Paste Special operation.

IMPORTANT NOTE: The source mailbox must exist on the target Exchange server, and you must have full mailbox access rights to all of the Exchange mailboxes you are trying to restore messages to. For more information on access rights, see “About restoring messages to an Exchange server” on page 183.

1. Select one or more messages from the message list in the **Find** dialog box or the Source pane.
2. In the Source pane or **Find** dialog box, copy messages from the message list.

In this example, messages from three different mailboxes (PC User 1, PC User 2, and PC User 3) are copied from the message list in the **Find** dialog box.

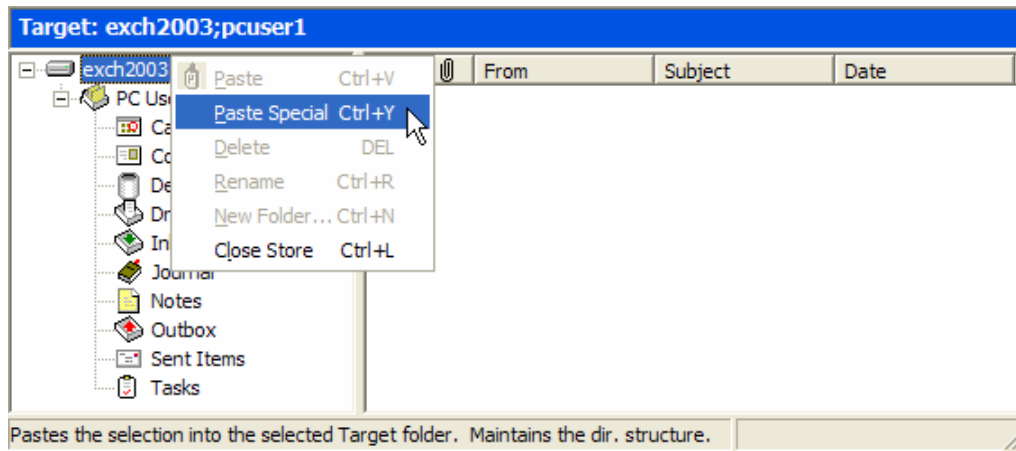


*Copying messages from the **Find** dialog box*

3. In the Target pane, use **Paste Special** to paste the messages into an Exchange Server root node.
4. In the **Copy Progress** dialog box, verify your results to make sure that your messages from all mailboxes were copied to the target destination. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
5. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

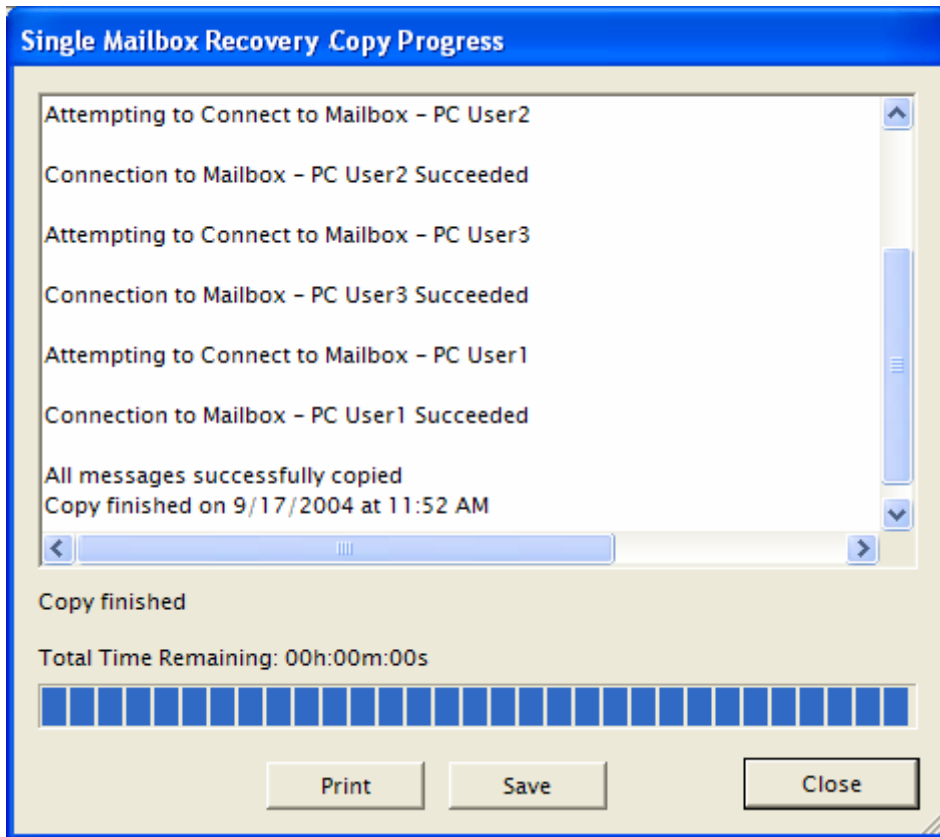
Results of Restoring Messages to an Exchange Server Root Node with Paste Special

All unduplicated messages will be restored in each mailbox that Single Mailbox Recovery can connect to, and the directory structure of the messages will be preserved.



Example 6: Using Paste Special on a target Exchange server root node

When attempting to restore multiple mailboxes to an Exchange server root node, you must look at the **Copy Progress** dialog box to verify that your messages from all mailboxes were successfully copied to the Exchange server. That's because Single Mailbox Recovery displays only one mailbox at a time in the Target pane.



*Example 6: The **Copy Progress** dialog box reports that Single Mailbox Recovery was able to connect to all mailboxes and successfully copy all messages to Exchange server*

Restoring a folder

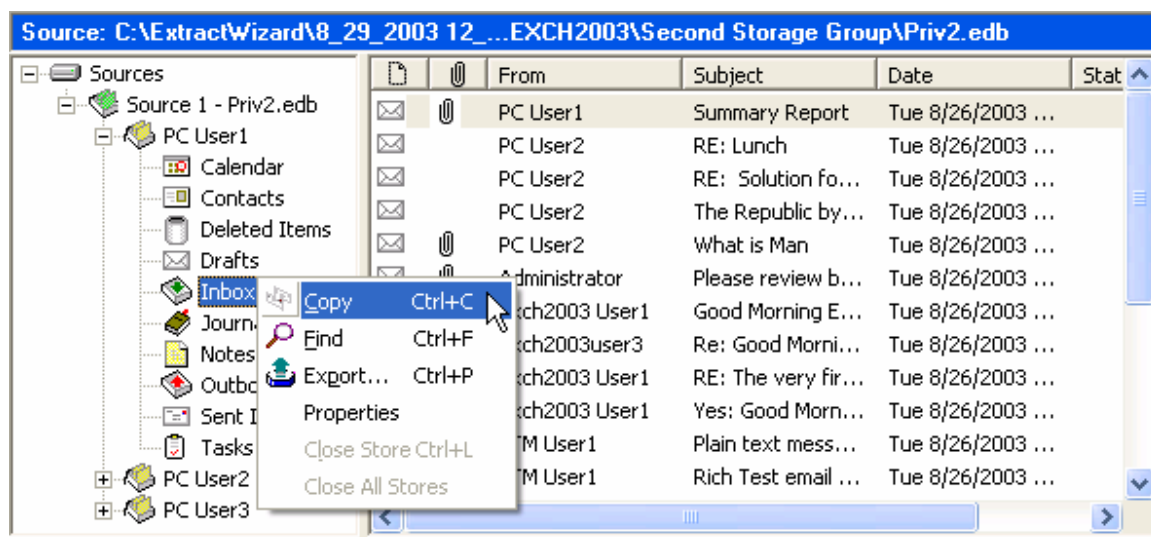
The following instructions show you how to restore a folder to any target destination by using Copy-Paste. Keep in mind that using Drag-and-Drop achieves the same results.

Guidelines for restoring a folder

1. You can use **Drag-and-Drop** or **Copy-Paste** to restore a folder to a target PST root node or folder, or to an Exchange server mailbox or folder. If the folder does not exist, it will be created.
2. You cannot restore a folder to an Exchange server root node.
3. You cannot use the **Paste Special** command to restore a folder. You can use the **Paste Special** command to restore individual messages only.

To restore a folder

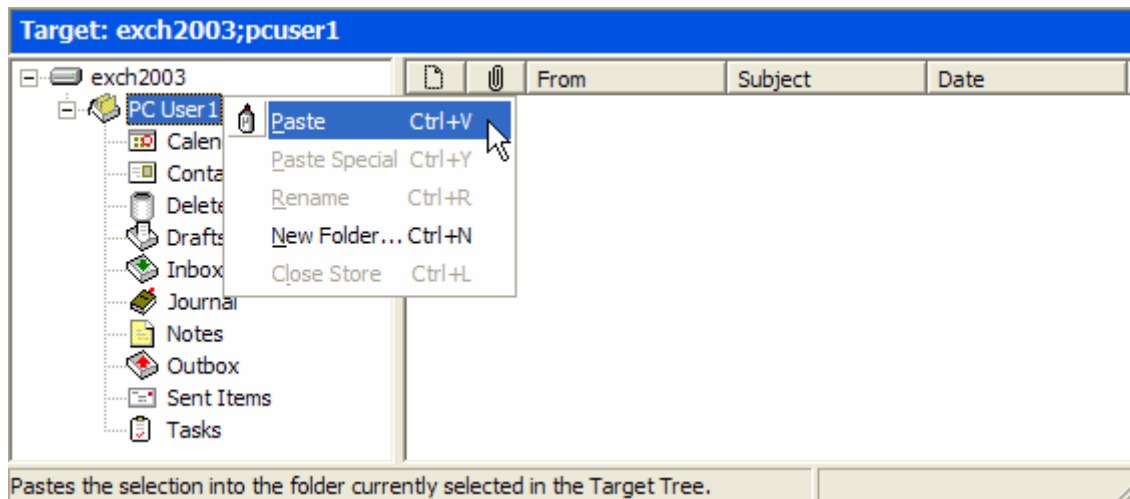
1. In the Source pane, copy a folder (e.g., Inbox).



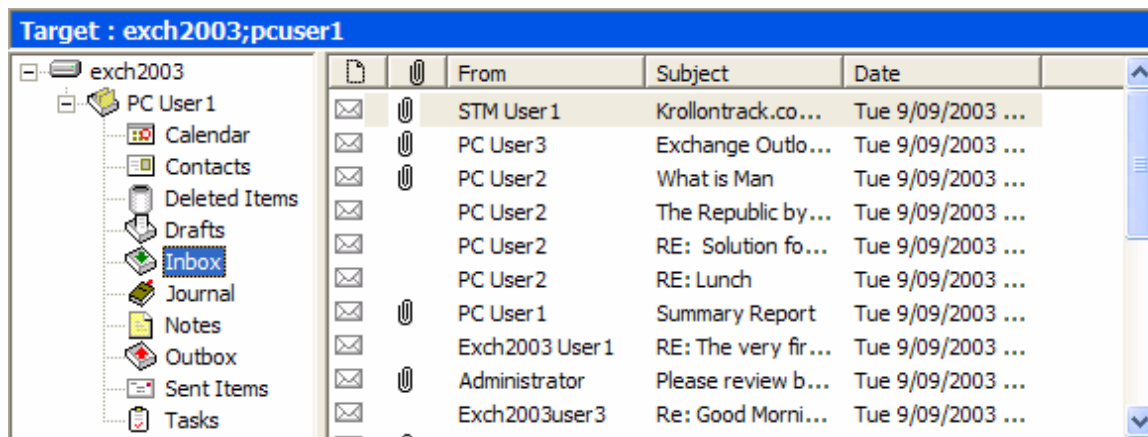
2. In the Target pane, paste the folder into a folder, mailbox, or PST root node.
3. In the **Copy Progress** dialog box, verify your results to make sure that your messages from all mailboxes were copied to the target destination. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of restoring a folder

All unduplicated messages in the folder will be restored and their directory structure will be preserved. If the folder does not exist in the target destination, it will be created.



Example 7: Pasting a folder in a target destination (e.g., Exchange mailbox)



Example 7: Results of pasting a folder in a target destination (e.g., Exchange mailbox)

NOTE: No folder is created because the copied folder (Inbox) already exists in the target Exchange mailbox.

Restoring a mailbox

The following instructions show you how to restore a mailbox to any target destination by using Copy-Paste. Keep in mind that using Drag-and-Drop achieves the same results.

Guidelines for restoring a mailbox

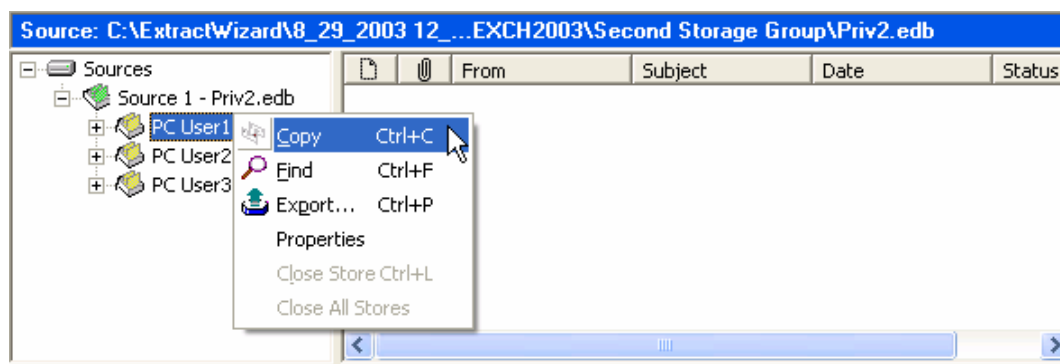
1. You can use **Drag-and-Drop** or **Copy-Paste** to restore a mailbox to a target PST root node or folder, or to an Exchange Server root node, mailbox, or folder. If the mailbox does not exist, a folder with its name will be created.
2. **If you restore a mailbox to a target PST root node:** Messages from folders in the source PST are restored to corresponding folders in the target PST (e.g., messages from the source Inbox are restored to the target Inbox). If a corresponding folder does not exist in the target destination, it will be created.
3. **If you restore a mailbox to a to a target PST folder, or to an Exchange Server, mailbox, or folder:** If the mailbox does not exist in the target destination, a folder with its name will be created.

IMPORTANT NOTE: If you want to restore a mailbox to a target Exchange server root node, the source mailbox must exist on the target Exchange server, and you must have full mailbox access rights to all of the Exchange mailboxes you are trying to restore messages to. For more information on access rights, see “About restoring messages to an Exchange server” on page 183.

4. You cannot restore a mailbox to a public folder. But you *can* restore messages from a mailbox to a public folder.
5. You cannot use the **Paste Special** command to restore a mailbox. You can use the **Paste Special** command to restore individual messages only.

To restore a mailbox

1. In the Source pane, copy a mailbox (e.g., PC User 1).

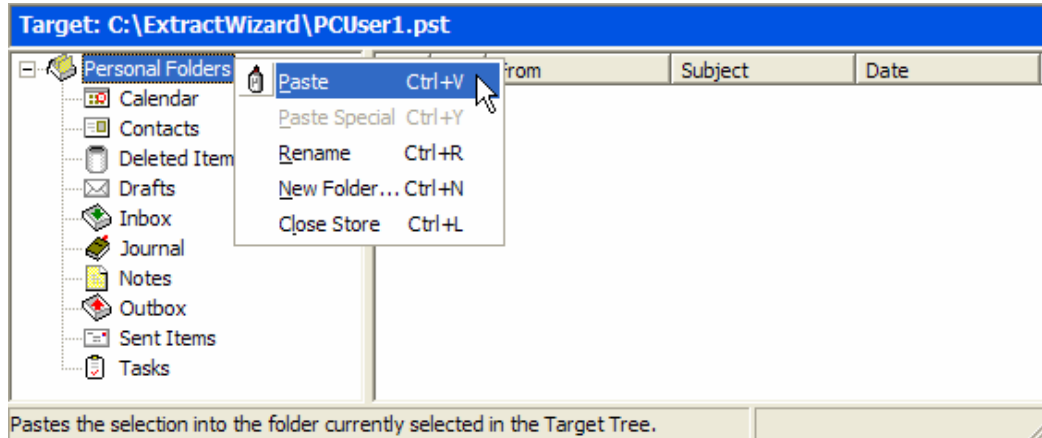


2. In the Target pane, paste the mailbox into a folder, mailbox, PST root node, or Exchange server root node.
3. In the **Copy Progress** dialog box, verify your results to make sure that your messages from all mailboxes were copied to the target destination. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.

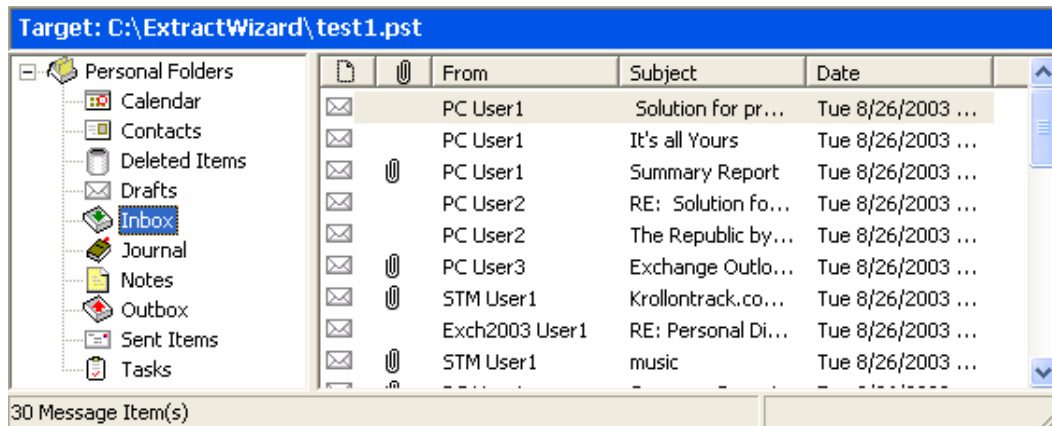
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of restoring a mailbox

All unduplicated messages in the folder will be restored and their directory structure will be preserved. If the mailbox does not exist in the target destination, a folder with its name will be created. However, if you restore a mailbox to a target PST root node, a mailbox will not be created. Instead, messages from folders in the source PST are restored to corresponding folders in the target PST.



Example 8: Pasting a mailbox into a PST root node



Example 8: Results of pasting a mailbox into a PST root node

NOTE: A folder is created because the copied mailbox (PC User 1) does not exist in the target PST file

Restoring an EDB file

The following instructions show you how to restore an entire EDB file to any target destination with Copy-Paste. Keep in mind that using Drag-and-Drop achieves the same results.

Guidelines for restoring an EDB file

1. It is recommended that you restore an EDB file to a target Exchange Server root node.

2. You can use **Drag-and-Drop** or **Copy-Paste** to restore an entire EDB file. You cannot use the **Paste Special** command to restore an EDB file. You can use the Paste Special command to restore individual messages only.

NOTE: If you restore an EDB file to a target Exchange server root node, the source mailbox must exist on the target Exchange server, and you must have full mailbox access rights to all of the Exchange mailboxes you are trying to restore messages to. For more information on access rights, see “About restoring messages to an Exchange server” on page 183.

To restore an EDB file

1. In the Source pane, select the EDB file.
2. On the **Edit** menu, click **Copy**.
3. In the Target pane, select the Exchange Server root node.
4. On the **Edit** menu, click **Paste**.
5. In the **Copy Progress** dialog box, review your results to make sure all the messages were copied to the target destination. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
6. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of restoring an EDB file

Single Mailbox Recovery will attempt to connect to each mailbox in the Target pane one at a time and copy each message to its corresponding mailbox and folder. If the folder does not exist, it will be created. If the mailbox does not exist, Single Mailbox Recovery will log an error in the Copy Progress dialog box, skip the entire mailbox, and continue the operation.

Restoring to public folders

The following instructions show you how to restore messages or public folders to a public folder target. An option to open public folders is available upon connection to an Exchange server.

NOTE: Single Mailbox Recovery will open public folders and your mailbox when you connect to an Exchange target. You will see those folders that you have permission to see.

Guidelines for restoring to public folders

- You can restore folders from a pub.edb database to a public folder target. All public folder permissions will be transferred to the target folders. However, folder permissions may not transfer if the version of the source Exchange server is different than the version of the target Exchange server.
- You can restore messages from any database source or search results to a public folder target.
- You cannot restore a folder or mailbox from a priv database to a public folder target. But you *can* restore messages in a folder or mailbox to a public folder.
- You cannot use Paste Special when restoring messages to a public folder target.

NOTE: The ability to restore to public folders is also available at the command line.

To restore messages to a target Public Folders

1. In the Source pane or **Find** dialog box, copy messages from the message list.
2. In the Target pane, paste the messages into the target root public folder or a folder in the public folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

To restore a folder from a public database to a target Public Folders

1. In the Source pane copy a folder from a public database.
2. In the Target pane, paste the folder into the target root public folder or a folder in the public folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of restoring to public folders

When you restore folders from a pub.edb database to a public folder target, the following occurs:

- All public folder permissions are transferred to the target folders. However, folder permissions may not transfer if the version of the source Exchange server is different than the version of the target Exchange server.
- The Exchange user doing the restore will be added to all public folder permissions with owner rights.
- If you have IFS (also known as “M:drive”) enabled on your Exchange server, permissions for child folders may be merged with permissions for parent folders.

NOTE: The ability to restore to public folders is also available at the command line.

To restore messages to a target public folders

1. In the Source pane or **Find** dialog box, copy messages from the message list.
2. In the Target pane, paste the messages into the target root public folder or a folder in the public folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

To restore a folder from a public database to a target public folders

1. In the Source pane copy a folder from a public database.
2. In the Target pane, paste the folder into the target root public folder or a folder in the public folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
 - Click **Print** to print the copy report.
 - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of restoring to public folders

When you restore folders from a pub.edb database to a public folder target, the following occurs:

- All public folder permissions are transferred to the target folders. However, folder permissions may not transfer if the version of the source Exchange server is different than the version of the target Exchange server.
- The Exchange user doing the restore will be added to all public folder permissions with owner rights.
- If you have IFS (also known as “M:drive”) enabled on your Exchange server, permissions for child folders may be merged with permissions for parent folders

Chapter 8: Using the Command Line

The command line feature allows you to easily batch repetitive processes such as multiple copy and export tasks without initiating the Single Mailbox Recovery user interface. This feature is extremely beneficial in Single Mailbox Recovery production environment implementations.

Command line grammar

The syntax is as follows:

<< >> Required for all operations

< > Required for copy/export operations

[] Optional

Command line syntax

smbr <<Operation>> [Operation options] <<Source Store>> [Source options] <Source Folder Path>
<Target Store> <Target Folder Path>

Command line parameters

Parameter	Description
<Operation> — required for all operations	
-Copy	
-Export	
-List	Report information about the database
-Integ	Database integrity check
-h	Help
[Operation options]	
-f :msg	Messages will be exported as .msg (the default)
-f :txt	Messages will be exported as .txt
-r	Export/copy subfolders
-O <filename>	Name of file to output progress information to default is CON <i>NOTE:</i> If the file exists, Single Mailbox Recovery appends to the output progress file. If the file does not exist, Single Mailbox Recovery creates it.
-da <dd/mm/yyyy>	Process messages dated on or after this date
-db <dd/mm/yyyy>	Process messages dated on or before this date
-v	Verbose
<Source Store> — required for all operations	
Full path of EDB file or PST file	
[Source options]	
-l <Log file path>	
-t <Temp file path>	
<Source Folder Path> — required for copy and export operations	
full path, including mailbox to the source, folder to be copied/exported or \$ROOT for root datastore folder	
<Target Store>	
ServerName;mailbox or Full path of PST	Examples. Pcpdc;jJones, Pcpdc;hJohnson, C:\archive.pst <i>NOTE:</i> The Target Store is not needed for export.
[Target Options]	
-pub public folders	
<Target Folder Path> — required for copy and export operations	
Full path, including mailbox, to the target folder to be copied/exported to or \$ROOT for root datastore folder	<i>NOTE:</i> Only message containers (i.e., mailboxes, folders, entire EDB) can be selected for copy/export. All messages contained will be copied/exported. Individual messages can not be selected from the command line.

Examples of using the command line

The following examples are for copy, export, and list (i.e., report information about the database).

Example 1

```
smbr -copy -r -o c:\out1.txt c:\pcdata.edb -t c:\ pcuser1\inbox c:\target.pst $ROOT
```

This command copies **pcuser1**'s inbox and all subfolders from **c:\pcdata.edb** to the inbox in **c:\target.pst**. The file **c:\out1.txt** will contain the copy report.

<Operation>	Explanation
-copy	Perform a copy operation

[Operation options]	Explanation
-r	Copy subfolders
-o c:\out1.txt	Output report file name

<Source Store>	Explanation
c:\pcdata.edb	Path to the database file name

[Source options]	Explanation
-t c:\	Temporary file path

<Source Folder Path>	Explanation
pcuser1\inbox	Source folder to copy

<Target Store>	Explanation
c:\target.pst	Target data store

<Target Folder Path>	Explanation
\$ROOT	Copy to the root folder of the data store

Example 2

```
smbr -copy -r -o c:\out2.txt c:\pcdata.edb -t c:\ pcuser1\inbox pcpcdc;user1 inbox
```

This command copies **pcuser1**'s inbox and all subfolders from **c:\pcdata.edb** to the inbox in **c:\target.pst**. The file **c:\out1.txt** will contain the copy report.

<Operation>	Explanation
-copy	Perform a copy operation

[Operation options]	Explanation
-r	Copy subfolders
-o c:\out2.txt	Output report file name

<Source Store>	Explanation
c:\pcdata.edb	Path to the database file name

[Source options]	Explanation
-t c:\	Temporary file path

<Source Folder Path>	Explanation
pcuser1\inbox	Source folder to copy

<Target Store>	Explanation
pcpcdc;user1	Target data store (Exchange server name and logon ID)

<Target Folder Path>	Explanation
inbox	Copy to the inbox

Example 3

```
smbr -export -r -f:txt -o c:\out3.txt c:\pcdata.edb -t c:\ pcuser1 c:\export
```

This command exports `pcuser1`'s mailbox and all subfolders from `pcdata.edb` as text to `c:\export`.

<Operation>	Explanation
-export	Perform an export operation

[Operation options]	Explanation
-r	Export subfolders
-f:txt	Messages will be exported as .txt
-o c:\out3.txt	Export report file name

<Source Store>	Explanation
c:\pcdata.edb	Path to the database file name

[Source options]	Explanation
-t c:\	Temporary file path

<Source Folder Path>	Explanation
pcuser1	Source folder to copy

<Target Store>	Explanation
N?A	Target data store

<Target Folder Path>	Explanation
c:\export	Root folder of the export

Example 4

```
smbr -list -o c:\mbList.txt c:\priv1.edb
```

This command provides information on the databases including a list of mailboxes.

TIP: When performing the -list operation, use the -o filename option in order to see the mailboxes. Otherwise, the operation will proceed so fast that you won't be able to see the mailboxes.

<Operation>	Explanation
-list	Perform a list operation

[Operation options]	Explanation
-o c:\mbList.txt	Output report file name

<Source Store>	Explanation
c:\priv1.edb	Path to the database file name

NOTE:

- All paths with spaces need to be in quotes.
- If a PST does not exist in the target, Single Mailbox Recovery will create a PST file compatible with Outlook 97, 98, 2000, and 2002.

Example 5

```
smb -integ -r -o c:\output.txt c:\priv1.edb $ROOT
```

This command performs an integrity check on an entire EDB.

<Operation>	Explanation
-integ	Perform an integrity check on a database

[Operation options]	Explanation
-o c:\output.txt	Output report file name

<Source Store>	Explanation
c:\priv1.edb	Path to the database file name

[Operation options]	Explanation
\$ROOT	Root of the EDB (entire EDB)

Example 6

```
smb -copy -r -o c:\out2.txt -da 01/01/2000 c:\pub1.edb newsgroups
"pcvx2000;administrator" -pub $ROOT
```

This command copies a folder from a pub EDB to public folders (only copy messages dated after 01/01/2000)

<Operation>	Explanation
-copy	perform a copy operation

[Operation options]	Explanation
-r	Copy subfolders
-o c:\out2.txt	Output report file name
-da 01/01/2000	Only copy messages that were created after this date

<Source Store>	Explanation
c:\pub1.edb	Path to the database file name

<Source Folder Path>	Explanation
newsgroups	Source folder to copy

<Target Store>	Explanation
pcvx2000;administrator	Target data store (Exchange server name and logon ID)

<Target Options>	Explanation
-pub	Copy to public folders

<Target Folder Path>	Explanation
\$ROOT	Public folders root

NOTE:

All paths with spaces need to be in quotes.

If a PST does not exist in the target, Single Mailbox Recovery will create a PST file compatible with Outlook 97, 98, 2000, and 2002.

Chapter 9: Reporting

This chapter shows you how to create reports, view the statistics in the generated reports, and save the reports as either tab-delimited or comma-delimited text files. Any data store opened as a source can be the source of a report.

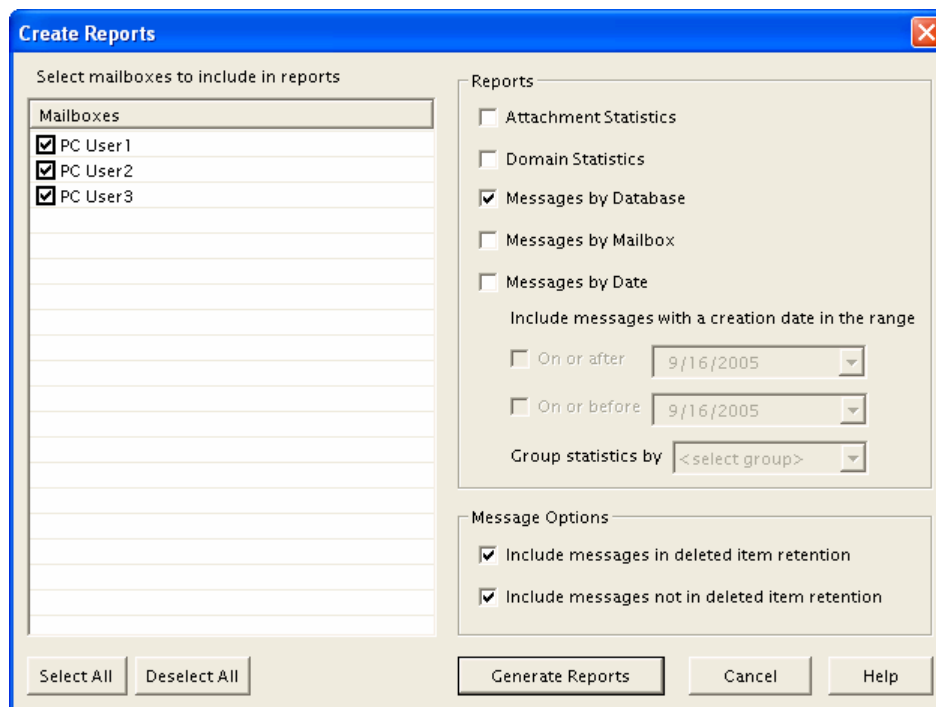
Creating reports

Single Mailbox Recovery allows you to generate reports on either an EDB or a PST source data store. The reports contain statistics about the data store such as sizes and counts for attachments and messages, and may be generated per attachment type, domain, mailbox, database, and date. The Mailbox and Date reports are available for Priv EDB data sources only.

To create one or more reports

1. In the Source pane, select an EDB or PST data source.
2. On the **File** menu, click **Create Reports**. The **Create Reports** dialog box appears.

If you selected a Priv EDB as the source for the report, the list view will display all mailboxes in the EDB. If you selected a PST or Pub EDB as the source, the list view will display all folders immediately under the root of the PST or Pub EDB.



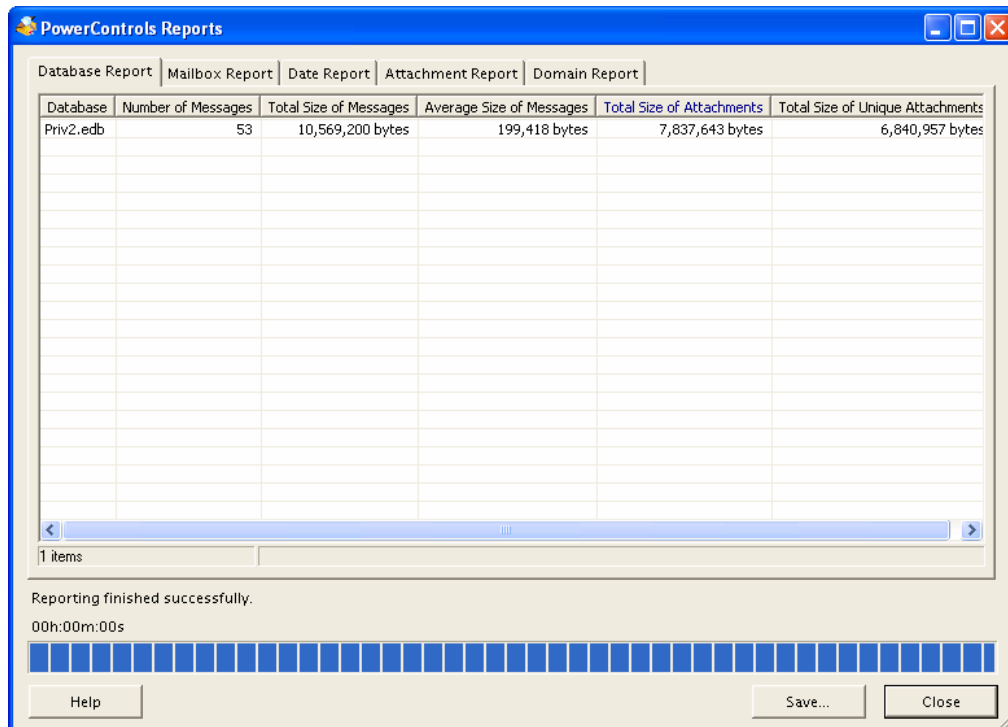
Create Reports dialog box for a Priv EDB source

Appendix A: Before You Open an EDB File as a Source

3. Do one of the following:
 - For Priv EDB: Under **Mailboxes**, select the mailboxes to be included in the report(s). All mailboxes are selected by default.
 - For Pub EDB or PST: Under **Folders**, select the folders to be included in the report(s). All folders are selected by default.
4. Under **Reports**, select one or more reports that you would like to create:
 - Attachment Statistics
 - Domain Statistics
 - Messages by Database
 - Messages by Mailbox: This report is available for Priv EDB data sources only.
 - Messages by Date: If you select this report, then specify the appropriate options for received date range and date unit (e.g., hour, day, week, month). This report is available for Priv EDB data sources only.
5. Under **Message Options**, select the appropriate deleted item retention option(s). Both options are selected by default for EDB sources. For PST sources, the first option is unselected. You cannot modify the default options for PST sources.
 - **Include messages in deleted item retention**: Select this option to include messages in deleted item retention.
 - **Include messages not in deleted item retention**: Select this option to include messages that are not in deleted item retention. In most cases, this option represents most of the messages in the source data store.
6. Click the **Generate Reports** button. The **Single Mailbox Recovery Reports** dialog box appears. For more information the contents of the reports, see “Viewing reports” on page 217.

Viewing reports

The Single Mailbox Recovery Reports dialog box shows the progress of the report generation and also shows the reports themselves. This dialog box consists of a tabbed view of the reports, with each tab containing a single report. For information on the statistics provided in each report, see the following sections.



Single Mailbox Recovery Reports dialog box

Single Instance Storage (SIS) vs. Cumulative Counts

The Attachment Statistics and Messages by Database reports use the terms “SIS” (Single Instance Storage) and “Cumulative” when referring to the number and size of attachments in the data store. The term “SIS” counts attachments only once and does *not* include their duplicates. The term “cumulative” refers to all of the attachments or messages, including their duplicates.

Example: An attachment of type .DOC of size 100 KB is being shared by three messages. As the table shows, the SIS size more closely estimates how much of the EDB size is attributed to the attachment. The cumulative size more closely estimates how much of the EDB size is attributed to attachments if the data store did not have SIS.

Method of counting attachments or messages	Total number of .DOC attachments	Total size of .DOC files
SIS Count	1	100 KB
Cumulative Count	3	300 KB

Attachment Statistics report

The Attachment Statistics report provides statistics on all of the attachments contained in messages in the selected source. The attachments are categorized by extension, which appears in upper case letters (e.g., .DOC, .XLS). Attachments without extensions are put into a separate row called “No Extension.”

Column heading	Description
- Attachment Extension	Attachment type by extension (e.g., .DOC, .PPT, .PDF)
Cumulative Number of Attachments Found in Messages	Cumulative number of attachments of each type found in the processed messages
Cumulative Size of Attachments	Cumulative size of attachments of each type found in messages
Average Attachment Size	Cumulative size of attachments of each type divided by the cumulative number of attachments found in messages
Percent of Total by Number	Number of attachments of each type divided by total attachments of all types
Percent of Total by Size	Total size of attachments of each type divided by the total size of attachments of all types.
SIS Number of Attachments	SIS number of attachments of each type. NA for PST sources.
SIS Size of Attachments	SIS size of attachments of each type. NA for PST sources.
SIS Percent of Total by Size	SIS size of attachments of each type divided by SIS size of attachments of all types in attachment table. NA for PST sources.

Domain Statistics report

The Domain Statistics report provides statistics on messages grouped by the domain from which the messages were sent.

The domain is determined using the PR_SENDER_ADDRTYPE in combination with the PR_SENDER_EMAIL_ADDRESS as follows:

- If PR_SENDER_ADDRTYPE is “EX” or “SYSTEM,” then it is an exchange message and the domain is “internal.”
- If PR_SENDER_ADDRTYPE is “SMTP,” then the domain is whatever follows the @ in the PR_SENDER_EMAIL_ADDRESS property.
- If PR_SENDER_ADDRTYPE is something else, then the domain is “unknown.”

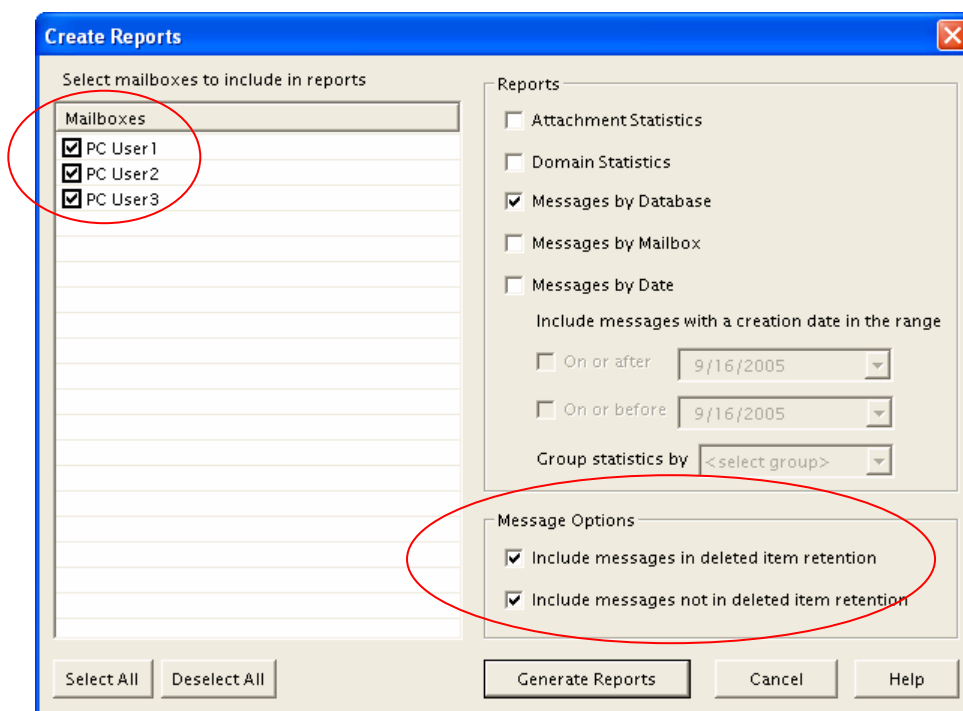
Column heading	Description
Domain	The name of the domain (e.g., ontrack.com) from which the message was sent. All messages whose domain cannot be determined are placed into an “unknown” domain. All Exchange messages are placed into an “internal” domain.
Number of Messages	Total count of messages that were received from each domain
Total Size of Messages	Total size of all messages that were received from each domain
Percent of Total by Number	Number of messages from each domain divided by the total number of messages from all domains
Percent of Total by Size	Total size of messages from each domain divided by the total size of messages from all domains

Messages by Database report

The Messages by Database report provides statistics on the database that contains the processed messages. In the current version of Single Mailbox Recovery, reports are limited to a single EDB or PST, which means the database report has only one row of information. For example, the database report for Priv1.edb has one row of information listing all message statistics for Priv1.edb and its mailboxes.

Column heading	Description
Database (EDB or PST)	The database name (e.g., Priv1.edb, Pub1.edb, Outlook XP.pst)
Cumulative Number of Messages	Cumulative number of messages
Cumulative Size of Messages	Cumulative size of all messages processed.
Average Size of Messages	Cumulative size of messages divided by cumulative number of messages
Cumulative Size of Attachments	Cumulative size of attachments in all messages processed
SIS Size of Attachments	SIS total size of attachments. This column applies only to EDB sources. For PST data stores, this column is NA.

NOTE: The statistics in the Database report refer only to the mailboxes (for a Priv EDB) or the folders (for a PST or Pub EDB) you selected in the Create Reports dialog box. The statistics also depend on the options you specified in the Message Options area. In other words, unless all mailboxes/folders are selected, the Database report will not provide statistics for the entire database.



Create Reports dialog box for a Priv EDB source

Messages by Mailbox report

The Messages by Mailbox report provides message statistics for all selected mailboxes in a Priv EDB data store.

NOTE: This report is available only for a Priv EDB.

Column heading	Description
Mailbox	Name of the mailbox: Display name (alias)
Number of Messages	Total number of messages in the mailbox
Total Size of Messages	Total size of all messages in the mailbox
Average Size of Messages	Total size of messages divided by number of messages
Total Attachment Size	Total size of attachments in all messages in this mailbox. Attachments in messages in this mailbox that are also in messages in another mailbox are counted in both mailboxes.
Shared Attachment Size	Size of attachments that are found more than once, either multiple times in this mailbox or in this mailbox and other mailboxes. Calculated as total size of attachments minus the non-shared attachment size.
Non-shared Attachment Size	Size of attachments that are not shared with other messages
Internal Received Messages	Received messages of type “EX” or “SYSTEM”
SMTP Received Messages	Received messages of type “SMTP”
Other Received Messages	Received messages <i>not</i> of type “EX,” “SMTP,” or “SYSTEM”

NOTE: For a definition of “received message,” see the Glossary on page xxx.

Messages by Date report

The Messages by Date report provides statistics for messages in a date range, such as 1/1/2004 to 1/1/2005, and a unit of hours, days, weeks, or months. The report is keyed off of the received date of the message.

NOTE: This report is available only for a Priv EDB.

Column heading	Description
Hour/Day/Week/Month	The date unit that was selected in the Create Reports dialog box. Examples are: Hour: "12/25/2004 – 9 PM" Day: "12/25/2004" Week: "12/26/2004 – 1/1/2005" Weeks start on Sunday and end on Saturday. Month: "12/2004"
Internal Received Messages	Received messages of type "EX" or "SYSTEM"
Total Size of Internal Received Messages	The sum of the internal received message sizes
SMTP Received Messages	Received messages of type "SMTP"
Total Size of SMTP Received Messages	The sum of the SMTP received message sizes
Other Received Messages	Received messages <i>not</i> of type "EX," "SMTP," or "SYSTEM"
Total Size of Other Received Messages	The sum of the other received message sizes

NOTE: For a definition of "received message," see the Glossary on page xxx.

Sorting reports

The Attachment Statistics and Messages by Database reports use the terms "SIS" (Single Instance Storage) and "Cumulative" when referring to the number and size of attachments in the data store. The term "SIS" counts attachments only once and does *not* include their duplicates. The term "cumulative" refers to all of the attachments or messages, including their duplicates.

Example: An attachment of type .DOC of size 100 KB is being shared by three messages. As the table shows, the SIS size more closely estimates how much of the EDB size is attributed to the attachment. The cumulative size more closely estimates how much of the EDB size is attributed to attachments if the data store did not have SIS.

To sort the statistics in a report

1. Click a column heading to sort the statistics based on that heading. An arrow appears indicating the sort direction. An up arrow indicates the statistics appear in ascending (A-Z) order. A down arrow indicates that the statistics appear in descending (Z-A) order.
2. To reverse the order of the statistics based on that column heading, click the column heading again. Notice that the arrow reverses directions.

An Example of Sorting

The Attachment Statistics report is originally sorted based on the ascending order of attachment extensions (e.g., .DOC precedes .TXT). If you click the Attachment Extension heading, the down arrow appears and statistics are sorted in descending order (e.g., .TXT precedes .DOC).

If you click the “Number of Attachments Found in Messages” column heading, the up arrow appears and statistics are sorted based on ascending order. This means that the attachment extension occurring least frequently in the data source appears first in the report.

Saving reports

You may save the currently active report as either a tab-separated or comma-separated text file. The report name defaults to the name shown on the report tab, without the spaces and with a txt extension (e.g., MailboxReport.txt). The file type defaults to a tab-separated text file.

To **save** a report

1. In the **Single Mailbox Recovery Reports** dialog box, make the desired report active by clicking its tab (e.g., Attachment Report, Database Report).
2. Click **Save**.
3. In the **Save Report** dialog box, specify the name, location, and file type for the report. You may save the report as either a tab-separated or comma-separated text file.
4. Click **Save** to return to the **Single Mailbox Recovery Reports** dialog box.
5. Repeat steps 1-4 for each report you want to save.

Appendix A: Before You Open an EDB File as a Source

This section describes information you need to know and tasks you need to perform before you restore Exchange mail items from an EDB file:

About the Exchange database³

The Exchange database consists of the following files:

File(s)	Description
.edb file	This is a rich text database file that contains data placed in the store through MAPI, as well as all the database tables that define mailboxes, messages, folders, and attachments.
.stm file	This is a streaming database file that contains common Internet formatted content, such as Multipurpose Internet Mail Extensions (MIME) content, that protocols other than the MAPI protocol place in the store. <i>NOTE:</i> The .stm file is new to Exchange 2000. Exchange 5.5 does not contain .stm files.
.log files	These are transaction logs , or history files that record server activity. These files are useful in restoring and backing up Exchange data. All Exchange 2000 transaction logs are 5 MB in size. Each storage group uses its own set of transaction log files. For example, if a storage group contains five stores, all transactions for all five stores are recorded in a single series of transaction log files. You can determine where to locate the transaction log files for each storage group.
.chk files	These are checkpoint files used for recovering (playing back) data from transaction logs into EDB files. The checkpoint is the place marker in the EDB.CHK file that indicates which transactions have been committed. Whenever data is written to an EDB file from the transaction log, the EDB.CHK file is updated with information specifying that the transaction was successfully committed to the respective EDB file. Separate Exx.chk files are maintained for each storage group using ESE (Extensible Storage Engine).
.pat files	These are patch files that are used to record information on page splits in Exchange 5.5 through Exchange 2000 (SP1). In Exchange 2000 (SP2) and later, the functionality provided by .pat files is incorporated into Exchange log files.

³ The information in this section is taken from *Microsoft Training and Certification: Implementing and Managing Microsoft Exchange 2000. Workbook*. Redmond, WA: Microsoft Press, 2001.

Organizing files extracted from other backup applications

If the source EDB is in an offline backup or in an online incremental or differential backup (as opposed to a full online backup) created by an application other than SnapManager, then—after you have extracted the files to a location accessible from the Single Mailbox Recovery server—use the following guidelines for organizing the files according to the backup type.

- **If the source EDB is contained in an online incremental or differential backup.** For best results, do the following:
 - Put the .edb and .stm files in one directory.
 - Put the associated log files (e.g., .log, .pat, .chk) in one directory.

The two directories can be different.

Single Mailbox Recovery does not require .stm or .log files, but you should include them to ensure that all email data is recovered. You may get corruption errors if these files are not present. In other words, the quality of the recovery is better if you include the .stm and log files.

- **If the source EDB is contained in an offline backup:** You need to use the .edb and .stm files. To ensure that all email data is recovered, you should also include all .log files, as well as .pat and .chk files if they exist. Single Mailbox Recovery performs its own verification process and will include the .log and .pat files to determine if it needs them to recover the data.

NOTE: Exchange 5.5 does not use .stm files.

Verifying hard drive space for .idx and .dat files

Single Mailbox Recovery never modifies an .edb file or its associated files (.log, .stm, .pat, or .chk files). However, it does create **.idx** and **.dat** files the first time you open an .edb file from a directory that contains log files; the interface prompts you to accept the default location for .idx and .dat files or specify a new location if the files require more hard drive space. Be sure you have a sufficient amount of hard drive space for .dat and .idx files. These files may require hard drive space **equal to the size of the .log files**. Therefore, you may need to change the default file path for .idx and .dat files if you need more space.

Each time you reopen the .edb file, Single Mailbox Recovery uses the information in the .idx and .dat files so it can open the .edb file quicker.

Appendix B: Known Issues

The following are issues known to exist in Single Mailbox Recovery 4.0:

Duplicated message

If you have ever copied or moved a message using Outlook, and later restored that same item with Single Mailbox Recovery, the message may be duplicated. This is because the message ID numbers differ between Single Mailbox Recovery and the Exchange Server.

New mailbox not visible

Newly created mailboxes on the Exchange Server do not become visible within Single Mailbox Recovery until someone has logged onto the mailboxes with Outlook, or at least one message is delivered (or copied) to the mailbox. Until one of these two events occurs, there is no physical mailbox, only directory information.

No virus checking

Single Mailbox Recovery does not check messages or attachments for viruses when restoring them from the database. If your server antivirus program has current signature files, it should identify and protect against infected messages when the restored messages are on the live server.

ExtractWizard requires Windows drivers

The Single Mailbox Recovery ExtractWizard requires that the Windows drivers be installed and configured for the tape device.

ExtractWizard support of tape block sizes greater than 64 Kb

The Single Mailbox Recovery ExtractWizard can support tape block sizes greater than 64 Kb as long as the SCSI HBA and its associated Windows drivers and settings support block transfers greater than 64 Kb.

PST files do not support HTML message bodies

When Single Mailbox Recover restores an HTML message from an EDB to a PST file, the message does not appear as anticipated when opened in Outlook. When you view the PST file in Outlook, the message will display **plain text** or it will display the **HTML tags**. Whether you get plain text or HTML tags depends on the email client that sent the original message. In any case, the copied message will not resemble the original HTML message because PST files don't support HTML message bodies.

To overcome this issue, copy the message back to the Exchange 2000 Server. This will correctly generate the HTML message body as it appeared in the original message. Copying to an Exchange 5.5 Server will not generate the correct HTML message body.

Automatic renaming of mailboxes

Single Mailbox Recovery might not display mailbox names as expected if there is a dash (-) in the mailbox name. As initially installed, Single Mailbox Recovery displays mailbox names as follows:

- If the text string “Mailbox - ” is contained in the mailbox name, Single Mailbox Recovery will remove the string.
- If the text string “Mailbox - ” is not found, Single Mailbox Recovery will look for a dash (-). If a dash is found, Single Mailbox Recovery will remove the dash and the text before it.

Examples:

If the mailbox name is...	Single Mailbox Recovery might display it as:
Mailbox – Joe Smith	Joe Smith
New York – Joe Smith	Joe Smith
Joe Smith - Princeton	Princeton

To modify the way Single Mailbox Recovery handles mailbox names, you can create a string value registry entry under the registry key: **HKCU\Software\NetApp\SMBR**. There are two possible solutions:

- **Create a registry entry with a value.** This causes Single Mailbox Recovery to remove the specified text string if it exists in the mailbox name. For example, if you only want the text string “Mailbox - ” removed from mailbox names, you would create a registry entry as follows:

Name: MailboxParseString
Type: REG_SZ
Value: “Mailbox – ” (without quotes and with a trailing space after the dash)

In this example, Single Mailbox Recovery will NOT remove “New York - ”, for example, if it exists in the mailbox name.

- **Create a registry entry with no value.** This causes Single Mailbox Recovery to not remove any text strings from mailbox names. The registry entry would be as follows:

Name: MailboxParseString
Type: REG_SZ
Value: (no value entered)

General procedure

1. Refer to the following Microsoft article for instructions and cautions on editing the Windows Registry: <http://support.microsoft.com/default.aspx?scid=kb;en-us;136393>.
2. Start Regedit.
3. In HKeyCurrentUser, highlight **NetApp\SMBR**, then right-click and select **New**, then **String Value**.
4. Rename the NewValue to MailboxParseString.
5. Highlight **MailboxParseString**, then right-click and select **Modify**.
6. In the Value Data field, enter the text string that you want Single Mailbox Recovery to remove from mailbox names.

Index

A

API Method. *See also* ExtractWizard Advanced Method
 requirements for using, 35
 using, 36
attachments
 opening and saving, 138
 opening and saving in Find dialog box, 173
 searching for, 168

C

Catalog Performance Options, 18
Catalog Progress page of the ExtractWizard, 19
CHK file, 28
clearing fields and results, 170
closing sources and targets, 164
Command Line
 examples, 208
 syntax, 206
completing
 the Data Wizard, 157
 the ExtractWizard, 33
Connect to Exchange Server dialog box, 162
continue loading EDB file without logs, 156
conventions in this manual
 notes and tips, 6
 shortcut menu, 6
copy backup, 27
Copy Progress dialog box, 184
copying and pasting, 186
Create New Mail Folder dialog box, 185
Create New Target PST command, 162
creating a new folder in the Target pane, 185

D

Data Wizard
 Completing the Data Wizard, 157
 Now Processing Data File, 156
 returning to, 158
 Source Path Selection, 152
 Target Type and Path Selection, 153
 Welcome page, 151
deleting a folder in the Target pane, 185
differential backup, 27
displaying a message in the preview pane, 137

dragging and dropping, 186

E

EDB file
 about restoring to an Exchange server, 183
 exporting, 176
 in Source pane, 134, 158
 restoring a folder, 199
 restoring a mailbox, 201
 restoring an entire EDB file, 202
 restoring in three easy steps, 181
 restoring messages with Copy-Paste, 187
 restoring messages with Paste Special, 190
 searching for messages, 166
Enter Password dialog box, 155, 163
Exchange database
 about, 223
Exchange Emulation. *See also* ExtractWizard Advanced Method
 requirements for using, 51
 two steps for using, 50
Exchange Information Store File Selection, 20
 Completing the Exchange Information Store Selection, 30
 Restoring an Online or Offline Backup, 21
 Saving an ExtractWizard Catalog File, 30
 Viewing an Exchange Backup, 20
Exchange server
 opening a target, 162
 specifying as target for restored data, 154
exporting
 an EDB file, 176
 individual messages, 178
 individual messages from the Find dialog box, 179
 messages from the Find dialog box, 173
exporting messages
 about MSG and TXT files, 175
 about the Export Progress dialog box, 180
 general information, 175, 176
Extract from Disk option, 17
Extract from Tape option, 17
ExtractWizard
 enabling license agent for, 12
 organizing the extracted files for Single Mailbox Recovery, 132
 restoring a full online backup, 21
 Use ExtractWizard Catalog, 17
ExtractWizard Advanced Method

- API Method for IBM Tivoli Storage Manager, 36
- API Method for Legato NetWorker, 42
- Exchange Emulation for CA Brightstor ARCserve and Exchange 2000/2003, 95, 119, 123
- Exchange Emulation for CA Brightstor ARCserve and Exchange 5.5, 101
- Exchange Emulation for HP OpenView Storage Data Protector and Exchange 2000/2003, 67
- Exchange Emulation for HP OpenView Storage Data Protector and Exchange 5.5, 72
- Exchange Emulation for NT Backup and Exchange 2000/2003 on Windows 2000/XP/2003, 52
- Exchange Emulation for NT Backup and Exchange 5.5 on Windows 2000/XP/2003, 57
- Exchange Emulation for NT Backup and Exchange 5.5 on Windows NT 4, 62
- Exchange Emulation for UltraBac and Exchange 2000/2003, 124
- Exchange Emulation for Veritas BackupExec 8.6 and Exchange 2000/2003, 86
- Exchange Emulation for Veritas BackupExec 8.6 and Exchange 5.5, 91
- Exchange Emulation for Veritas BackupExec 9.1 and Exchange 2000/2003, 77
- Exchange Emulation for Veritas BackupExec 9.1 and Exchange 5.5, 82
- Exchange Emulation for Veritas NetBackup and Exchange 2000/2003, 106, 111, 115, 120
- ExtractWizard Direct Method
 - Catalog Performance Options, 18
 - Catalog Progress, 19
 - Exchange Information Store Copy Progress, 32
 - Exchange Information Store Destination Folder, 31
 - Exchange Information Store Extraction Source, 17
 - Exchange Information Store File Selection, 20
 - Method of Extraction, 14
 - organizing the extracted files for Single Mailbox Recovery, 33, 132
 - restoring a backup from Exchange 5.5 vs. Exchange 2000/2003, 29
 - restoring a full offline backup, 28
 - restoring an online copy backup, 27
 - restoring the last full online and every incremental backup, 25
 - restoring the last full online and last differential backup, 27
 - Saving an ExtractWizard Catalog File, 30
 - Single Mailbox Recovery ExtractWizard Finished, 33
 - Welcome page, 13

F

- Find dialog box
 - exporting messages from the Find dialog box, 173
 - guidelines for using, 165
 - opening and saving attachments, 173
 - performing an integrity check on messages, 174
 - saving search profiles, 170
 - searching for attachments, 168
 - searching within results, 169
 - selecting multiple mailboxes or folders to search, 166
 - viewing previous results, 170

G

- guidelines
 - for restoring a folder, 199
 - for restoring a mailbox, 201
 - for restoring an EDB file, 202
 - for restoring messages, 187
 - for restoring messages with Paste Special, 190
 - for restoring to Public Folders, 203
 - for using the Find dialog box, 165

H

- Help
 - online Help, 8
 - technical support, 8
- hiding the preview pane, 137
- hiding the toolbar or status bar, 139

I

- incremental backup, 25
- installing Single Mailbox Recovery, 11

L

- license agents for Single Mailbox Recovery, 4
- log file error, 156
- log files
 - organizing the extracted files for Single Mailbox Recovery, 33, 132
 - restoring an online or offline backup, 21
 - viewing an Exchange backup, 20

M

- menu bar, 136
- messages
 - exporting, 175, 178

N

Now Processing Data File, 156

O

- offline backup, 28
- online backup, 21
- online Help, 8
- Open Existing Target PST command, 161
- Open Source command, 160
- Open Target Exchange Server command, 162
- opening
 - a target Exchange Server, 162
 - an Exchange database (EDB) file or PST file, 160
 - an existing target PST, 161
 - attachments, 138
 - attachments in Find dialog box, 173
 - messages, 138
 - multiple sources, 163
 - the Data Wizard, 158
 - the ExtractWizard, 14
 - the preview pane, 137
 - the source database and target mailboxes, 159
- organizing the extracted files for Single Mailbox Recovery, 33, 132

P

- PAT (patch) file, 29
- permissions of public folders, 203, 204, 205
- preferences, 144
- preview pane
 - displaying a message in, 137
 - hiding, 137
 - opening, 137
 - opening attachments in, 138
 - saving attachments in, 139
- previewing and opening messages, 137
- properties of a PST file, EDB file, mailbox, or folder, 142
- PST and folder limits, 182
- PST file
 - as displayed in Target pane, 135
 - creating a new target, 162
 - in Source pane, 158
 - opening an existing target, 161
 - restoring in three easy steps, 181
 - searching for messages, 166
 - specifying as target for restored data, 153
- public folders
 - permissions, 203, 204, 205

R

- refreshing the screen, 141
- renaming a folder in the Target pane, 185
- resizing panes separated by a split bar, 139
- restoring backup Exchange data with ExtractWizard
 - restoring a full online backup, 21
 - restoring the last full online and last differential backup, 27
- restoring backup Exchange data with ExtractWizard Direct Method
 - restoring a backup from Exchange 5.5 vs. Exchange 2000/2003, 29
 - restoring a full offline backup, 28
 - restoring an online copy backup, 27
 - restoring the last full online and every incremental backup, 25
- restoring Exchange data
 - looking at the Target pane, 135
- restoring Exchange data to a PST file
 - about the Copy Progress dialog box, 184
 - looking at the Target message list, 135
 - restoring a folder, 199
 - restoring a folder, a mailbox, or an EDB file, 182
 - restoring a mailbox, 201
 - restoring an EDB file, 202
 - restoring individual messages with Copy-Paste, 181, 187
 - restoring individual messages with Paste Special, 181, 190
- restoring Exchange data to an Exchange server
 - about the Copy Progress dialog box, 184
 - restoring a folder, 199
 - restoring a folder, a mailbox, or an EDB file, 182
 - restoring a mailbox, 201
 - restoring an EDB file, 202
 - restoring an Exchange server mailbox or folder with Copy-Paste, 193
 - restoring individual messages to an Exchange server root node with Paste Special, 196
 - restoring individual messages with Copy-Paste, 181, 187
 - restoring individual messages with Paste Special, 181, 191
 - restoring messages to Exchange 2000/2003, 183
 - restoring messages to Exchange 5.5, 183
 - restoring to public folders, 203
- restoring to public folders, 203
- restoring your Exchange data in three easy steps, 181

S

- Save ExtractWizard Catalog File, 30
- saving

Index

- attachments, 138
 - attachments in Find dialog box, 173
 - reports, 222
 - saving search profiles, 170
 - searching
 - for attachments, 168
 - searching
 - for messages, 166
 - searching
 - within results, 169
 - searching
 - using multiple search windows, 172
 - searching
 - within attachments, 172
 - single instance storage vs. cumulative counts, 217, 221
 - Single Mailbox Recovery
 - enhancements, 2
 - five reasons for using, 1
 - getting help, 8
 - installing, 11
 - preferences, 144
 - uninstalling, 11
 - updating, 11
 - Single Mailbox Recovery Data Wizard. *See* Data Wizard
 - Single Mailbox Recovery editions, 3
 - Single Mailbox Recovery ExtractWizard. *See* ExtractWizard Direct Method and ExtractWizard Advanced Method
 - Single Mailbox Recovery license agents, 4
 - Single Mailbox Recovery main window
 - after using the Data Wizard, 158
 - illustration of, 133
 - menu bar, 136
 - Source message list, 134
 - Source pane, 134
 - status bar, 137
 - Target message list, 135
 - Target pane, 135
 - toolbar, 136
 - sorting messages in the message list, 139, 141
 - Source
 - EDB or PST file, 134
 - message list, 134
 - pane, 134
 - source file
 - opening, 160
 - Source Path Selection, 152
 - split bar, using to resize panes, 139
 - status bar, 137
 - viewing or hiding, 139
 - STM file, 29
 - system requirements
 - configuring Microsoft Outlook for MAPI functionality, 10
- ## T
- Target message list, 135
 - Target pane
 - creating a new folder, 185
 - deleting a folder, 185
 - in Single Mailbox Recovery main window, 135
 - renaming a folder, 185
 - Target Type and Path Selection, 153
 - technical support, 8
 - toolbar
 - in Single Mailbox Recovery main window, 136
 - viewing or hiding, 139
 - trial edition of Single Mailbox Recovery, 3
- ## U
- uninstalling Single Mailbox Recovery, 11
 - updating Single Mailbox Recovery, 11
 - Use ExtractWizard Catalog option, 17
 - Use Wizard command, 158
- ## V
- viewing
 - deleted messages, 144
 - previous search results, 170
 - the properties of a PST file, EDB file, folder, or mailbox, 142
 - the toolbar or status bar, 139