

NetApp®

Single Mailbox Recovery 3.0

Administrator's Guide

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Introduction

Welcome to NetApp® Single Mailbox Recovery 3.0, 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.

The Single Mailbox Recovery ExtractWizard lets you restore 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.

About this User Guide

This user 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. See the table of contents or the index to locate the pages on which particular topics are discussed.

Use Adobe Acrobat to open the PDF version of this user guide. After you open the PDF file, click the Hand tool to view the table-of-contents hyperlinks in layout view. Then click a hyperlink to jump to a specific topic in the manual.

Five Major 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.

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

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back up "Very Important Mailboxes" (VIMs) individually as well. Single Mailbox Recovery eliminates this second process.

Single Mailbox Recovery 3.0 Enhancements

Single Mailbox Recovery 3.0 contains all the features and benefits of Single Mailbox Recovery 2.10 plus these exciting new and improved features:

ExtractWizard Agent for IBM Tivoli Storage Manager This latest Agent addition offers IBM Tivoli users ExtractWizard support for Tivoli Storage Manager 5.0, 5.1, and 5.2 tape formats. ExtractWizard for IBM Tivoli catalogs and extracts regular backups, archives, and instant archives including those with software compression.

Command Line Interface Allows users 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.

Single Mailbox Recovery Agent for PST Source New Single Mailbox Recovery Agent allows the user to select any PST file and open it as a source data store, performing all database operations including copying, exporting, and searching. Parent folders are implemented for PST sources to allow copying and pasting from a PST source.

Ability to Open Multiple Source and Target Users have the ability to open multiple sources and targets including EDB and PST files simultaneously. No more being limited to selecting one Source and one Target during a session.

Enable Tamper-Proof Target As an added security feature, when the Enable Tamper-Proof Target option is selected, Single Mailbox Recovery does not allow the user to delete messages or folders in the Target or rename folders in the Target. When this setting is enabled, the user will only have the ability to copy to the Target.

Preferences and Customization Single Mailbox Recovery will allow only those users with administrative rights to change security preferences. These new Single Mailbox Recovery preferences further allow users to easily customize Single Mailbox Recovery to meet their individual and business usage needs.

Save View Settings Single Mailbox Recovery saves the view settings the user selects for each folder. Setting preferences such as sort order and column width will be retained every time the user returns to the folder during the Single Mailbox Recovery session.

No Preview Preference Furthering Single Mailbox Recovery security preferences, users can disallow the opening or previewing of messages in the Source or Target. When selected, Single Mailbox Recovery will close the preview window, and disable the preview menu option and corresponding icon. All attempts to open messages while the preview functionality is disabled will be messaged as the viewing being currently disabled.

Viewing Tasks, Calendar, and Contacts Single Mailbox Recovery will now allow users to view details and content for calendar, contact, and task messages in the preview pane.

System Requirements

To use Single Mailbox Recovery on your computer, you need the following hardware and software:

Windows NT4 Server (SP6), Windows NT4 Workstation (SP6), Windows 2000 Server, Windows 2000 Professional, Windows XP Professional, Windows XP Home, or Windows 2003 Server

***Note:** The Operating Systems listed above are required to have the latest service packs installed.*

Microsoft Outlook 2000 or later

Pentium-class processor

256 MB RAM

5 MB of free hard disk space for the installation of Single Mailbox Recovery. More disk space will be needed for processing log files when opening an EDB file.

Monitor with 800 x 600 or higher screen resolution

***Note:** Single Mailbox Recovery supports Microsoft Exchange Server 5.5, 2000, or 2003.*

Single Mailbox Recovery is designed to run from a Windows workstation and uses native Microsoft Messaging APIs (MAPI) to communicate to the Exchange Server, ensuring reliable and consistent operation of your server. Outlook must be installed and configured on the workstation to connect to an Exchange server for MAPI to initialize properly. Single Mailbox Recovery is not designed to run from an Exchange Server.

Configuring Microsoft Outlook

Single Mailbox Recovery requires that Microsoft Messaging API (MAPI) be installed on your computer. To get full MAPI functionality, do the following:

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.

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 these updates (also known as patches) are available to you, you can download and install them in minutes.

***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. For more information see “Installing Single Mailbox Recovery,” and “Uninstalling Single Mailbox Recovery,” in this chapter.*

To download updates from the NetApp NOW website:

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.

Single Mailbox Recovery 3.0 Editions

Single Mailbox Recovery 3.0 is released in a trial edition and a fully-licensed edition. The trial edition has all the features that the fully-licensed edition has but is enabled for a maximum of 30 days before it expires. To upgrade from a trial edition to fully-licensed edition, you must uninstall the trial edition and install the fully-licensed version. .

In order to determine whether an installed copy of Single Mailbox Recovery 3.0 is a trial edition or fully-licensed edition, select **Help > About**.

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 user 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 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.

Conventions in this Manual

This manual uses the following guidelines for documenting menu commands and shortcuts; commands available on shortcut menu; and notes and tips.

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 panes or the Target panes. 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 Tips¹

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

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 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 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.

¹ The information in this section is taken from the *Microsoft Manual of Style for Technical Publications*, 3rd Edition. Redmond, WA: Microsoft Press, 2002.

Enabling the Licensing Agents

Single Mailbox Recovery is distributed with six ExtractWizard (EW) Agents and one Single Mailbox Recovery (PC) Agent. The EW Agents for Microsoft NT Backup and VERITAS Backup Exec are included with the program at no extra cost, and are enabled by default. All other Agents are shipped with Single Mailbox Recovery in disabled conditions and require a new license .ini file to enable them.

Extract Wizard Agent	Supported Versions of Backup Software	Disk Backup File Format	Tape Backup File Format
EW Agent for Microsoft® NT Backup (included)	All Versions	.BKF Files	Microsoft Tape Format (MTF)
EW Agent for VERITAS Backup Exec™ (included)	7.x, 8.x, and 9.0	.BKF Files	Microsoft Tape Format (MTF)
EW Agent for VERITAS NetBackup™ (priced separately)	3.4.1, 3.4.2 and 4.5	_C1_F* Files	VERITAS NetBackup Tape Format
EW Agent for LEGATO NetWorker® (priced separately)	6.0.1, 6.0.2, 6.1, 6.2, and 7.0	.0 (LEGATO) Files	LEGATO Tape Format
EW Agent for Computer Associates® BrightStor™ ARCserve® (priced separately)	6.x, 2000, 9	.CTF (ARCserve) Files	ARCserve Tape Format
EW Agent for IBM® Tivoli® Storage Manager (priced separately)	5.0, 5.1, and 5.2	.BFS and .OST Files	Tivoli Tape Format
PC Agent for PST Source (priced separately)	Microsoft Outlook 2000 or later	NA	NA

To view the currently enabled Agents

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

To enable additional Agents

1. Contact a sales representative and specify which additional agent or agents that you wish to purchase. You will receive instructions on how to acquire a license.ini file that will enable the agents that you specified.

Note: To contact a sales representative, see the contact information at the beginning of this user guide.

2. Replace the existing .ini file with the new .ini file. The default location for this file is in the Single Mailbox Recovery directory.

The License .ini File

Single Mailbox Recovery requires a License.ini file. The license.ini file is a NetApp-supplied read only text file supplied by Network Appliance to specify license settings. Before Single Mailbox Recovery enables itself, it checks the .ini file for four things:

Mailbox limit. In the default license.ini file for Single Mailbox Recovery 3.0 no limit is imposed on the number of supported mailboxes..

Servename enforcement. Allows users to open .EDB files only from the licensed server names. In the default License.ini file for Single Mailbox Recover 3.0, no server name enforcement is specified.

Agents (ExtractWizard Agents, Single Mailbox Recovery PST Agent)

***Tip:** For information on specifying the location of the .ini file, see the instructions for the Options tab in the Preferences dialog box on page 38.*

About the Exchange Database²

The Exchange database consists of the following files:

.edb file (rich text database file) contains data placed in the store through Messaging Application Programming Interface (MAPI), as well as all the database tables that define mailboxes, messages, folders, and attachments.

.stm file (streaming database file) contains common Internet formatted content, such as Multipurpose Internet Mail Extensions (MIME) content, that protocols other than the MAPI protocol place in the store.

***Note:** The .stm file is new to Exchange 2000. Exchange 5.5 does not contain .stm files.*

.log files (transaction logs) are history files recording 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 (check) files are checkpoint files used for recovering (playing) 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 (patch) files 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.

² 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 the Exchange Database Files for Single Mailbox Recovery

For best results when using an online incremental or differential backup

Put the .edb and .stm files in one directory.

Put the associated log files (e.g., .log, .pat, .chk) in one directory.

***Note:** 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 you are using 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.

Chapter 1: Using the ExtractWizard

If you have not yet restored backed-up Exchange Information Store data, try using Single Mailbox Recovery ExtractWizard. The ExtractWizard restores 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. To run the ExtractWizard, do the following:

1. Start the ExtractWizard and, if desired, request license files for ExtractWizard backup software agents. For more information, see “Enabling the Licensing Agents” on page 7.
2. Tell the wizard where the data is currently located. Single Mailbox Recovery searches the location for data files, and shows you all that it finds.
3. Choose the files you want to restore.
4. Tell the wizard where you want the data restored. The wizard goes to work restoring the data to the location you defined.
5. Click **Finish** when the wizard displays the results of the file extractions.

ExtractWizard: Welcome Page

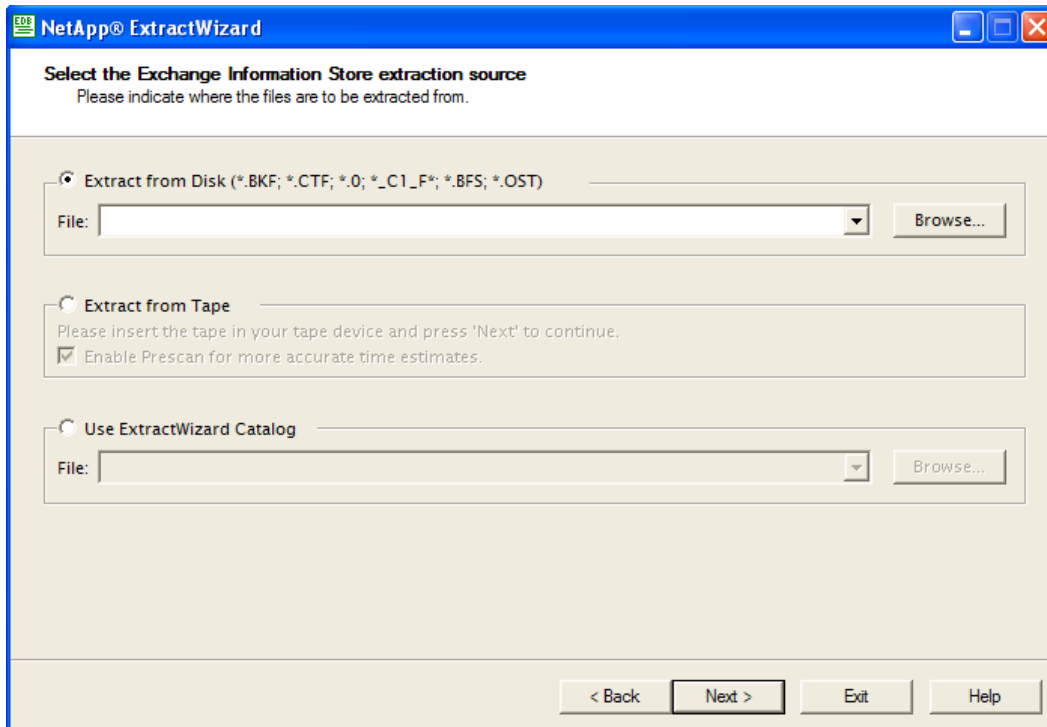
1. Click the **Start** button, and then point to **Programs**. Point to **NetApp**, point to **Single Mailbox Recovery**, and then click **ExtractWizard**. The first page describes the wizard.



2. Click **Next**.

ExtractWizard: Select the Exchange Information Store Extraction Source

On the second 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 23.

Notes:

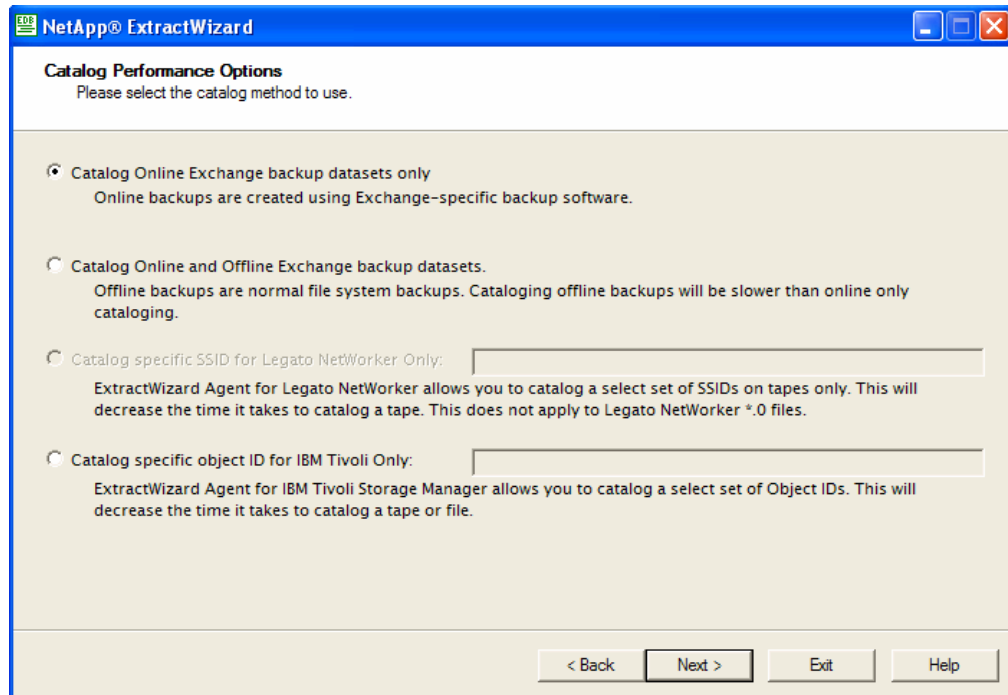
ExtractWizard requires that the tape drive be configured and active in the Device Manager.

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 database files. These types include registry backups, SQL backups, UNIX backups, image backups, NetWare backups, Macintosh backups.



The screenshot shows the 'NetApp® ExtractWizard' window with the 'Catalog Performance Options' tab selected. The window title bar includes standard Windows controls (minimize, maximize, close). The main area contains four radio button options, with the first one selected. Each option has a descriptive text block below it. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

NetApp® ExtractWizard

Catalog Performance Options
Please select the catalog method to use.

- ☒ **Catalog Online Exchange backup datasets only**
Online backups are created using Exchange-specific backup software.
- ☐ **Catalog Online and Offline Exchange backup datasets.**
Offline backups are normal file system backups. Cataloging offline backups will be slower than online only cataloging.
- ☐ **Catalog specific SSID for Legato NetWorker Only:**
ExtractWizard Agent for Legato NetWorker allows you to catalog a select set of SSIDs on tapes only. This will decrease the time it takes to catalog a tape. This does not apply to Legato NetWorker *.0 files.
- ☐ **Catalog specific object ID for IBM Tivoli Only:**
ExtractWizard Agent for IBM Tivoli Storage Manager allows you to catalog a select set of Object IDs. This will decrease the time it takes to catalog a tape or file.

< Back Next > Exit Help

To choose a catalog performance option

1. Do one of the following. Note that all three options will skip known non-Exchange backups (e.g., registry, SQL, Unix, Mac, Netware).

Select **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.

Select **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.

Select **Catalog SSID for Legato Networker Only** and 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.

The third 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).

Select **specific object ID for IBM Tivoli Only** and 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.

The fourth 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).

2. Click **Next**.

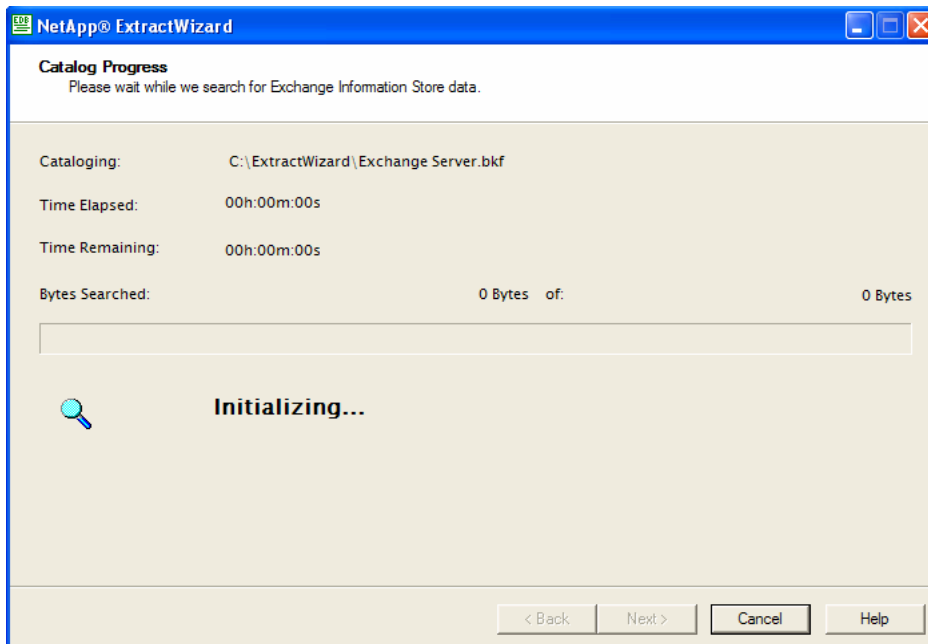
ExtractWizard: Catalog Progress

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.

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 restore from an Exchange backup. This page of the wizard requires you to perform four steps:

Step 1: Viewing an Exchange Backup

Step 2: Restoring an Online or Offline Backup

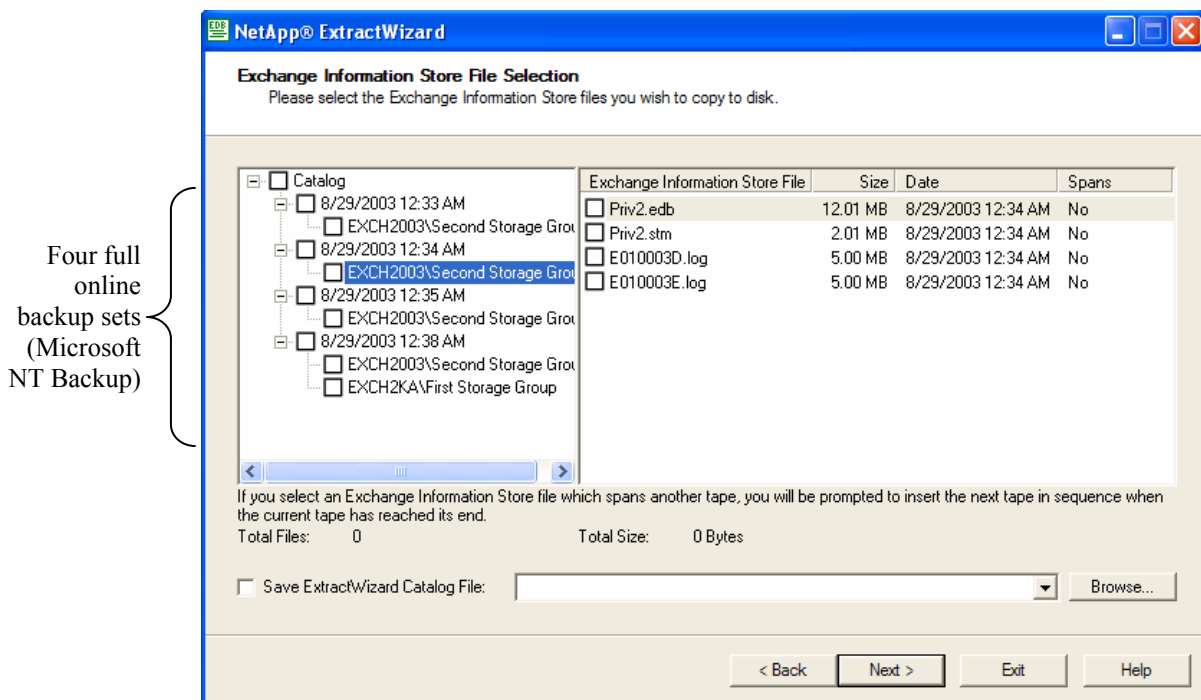
Step 3: Saving an ExtractWizard Catalog File

Step 4: Completing the Exchange Information Store Selection

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: Restoring an Online or Offline Backup

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

Microsoft NT Backup, VERITAS BackupExec, VERITAS NetBackup, and IBM Tivoli Storage Manager can contain multiple backup sets for both disk and tape backups.

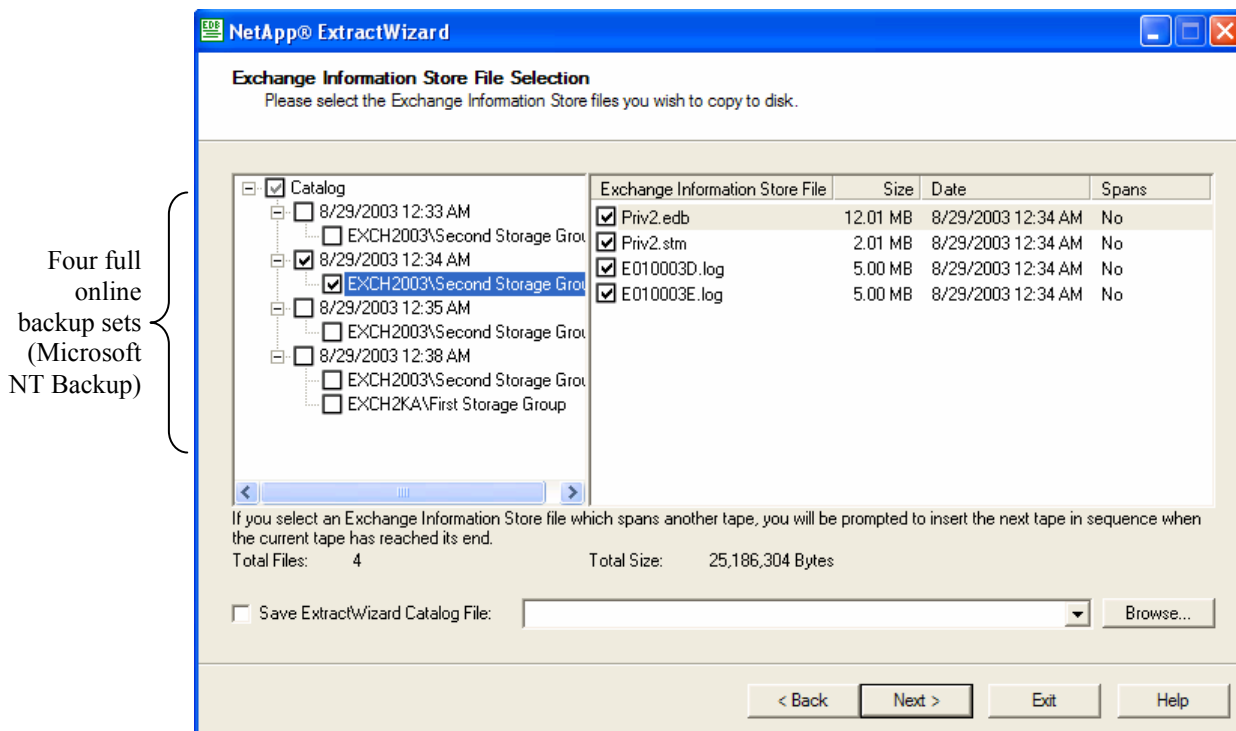
Computer Associates Brightstor ARCserve and LEGATO NetWorker can contain only one backup set for disk, but multiple backup sets for tape.

To restore 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: Restoring 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).

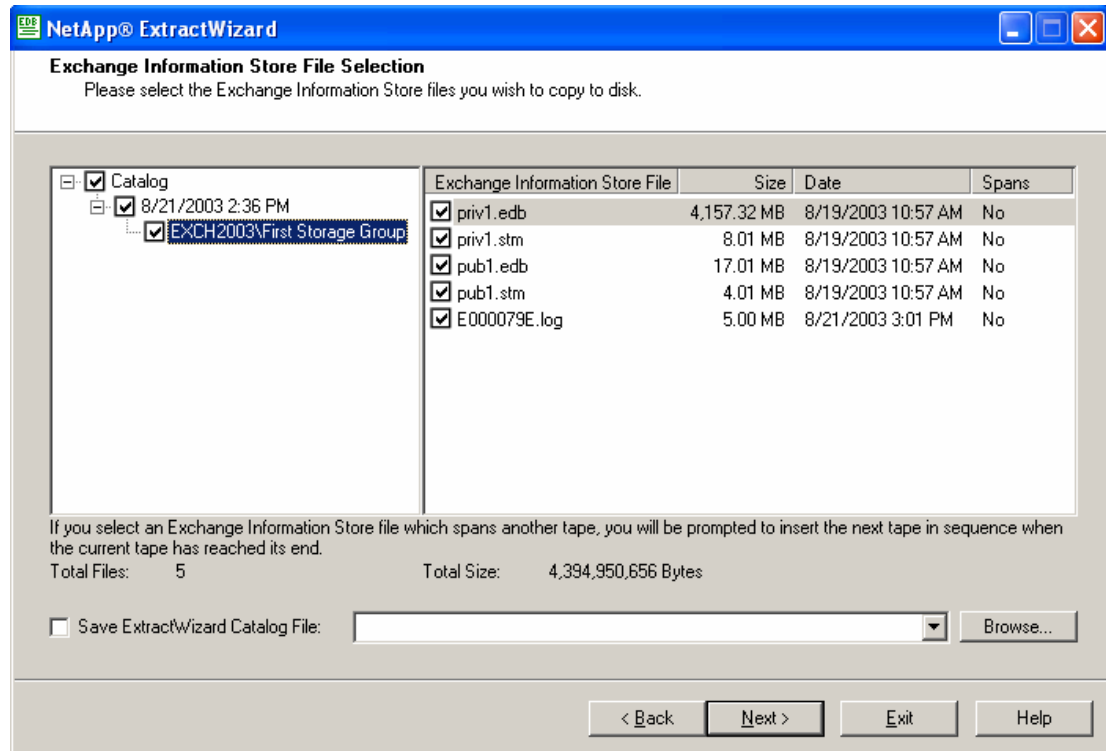


Restoring a full online disk backup (Microsoft NT Backup)

Example 2: Restoring 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).

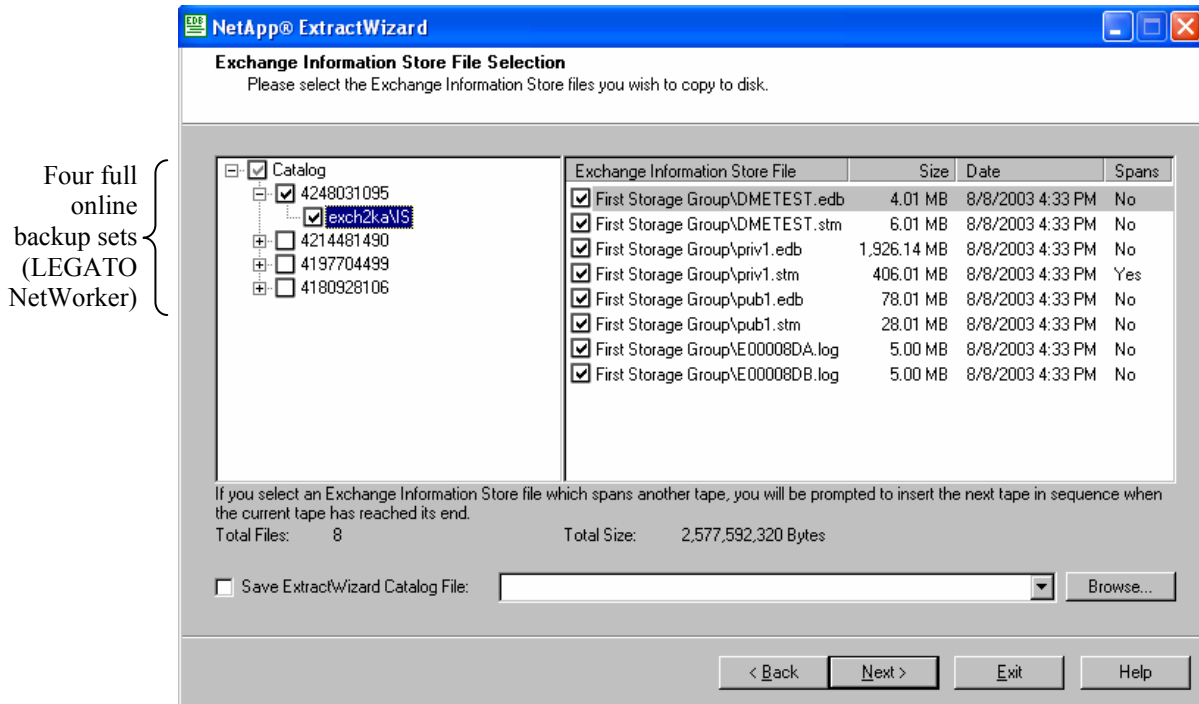
One full
online
backup set
{
(CA Brightstor
ARCserve)



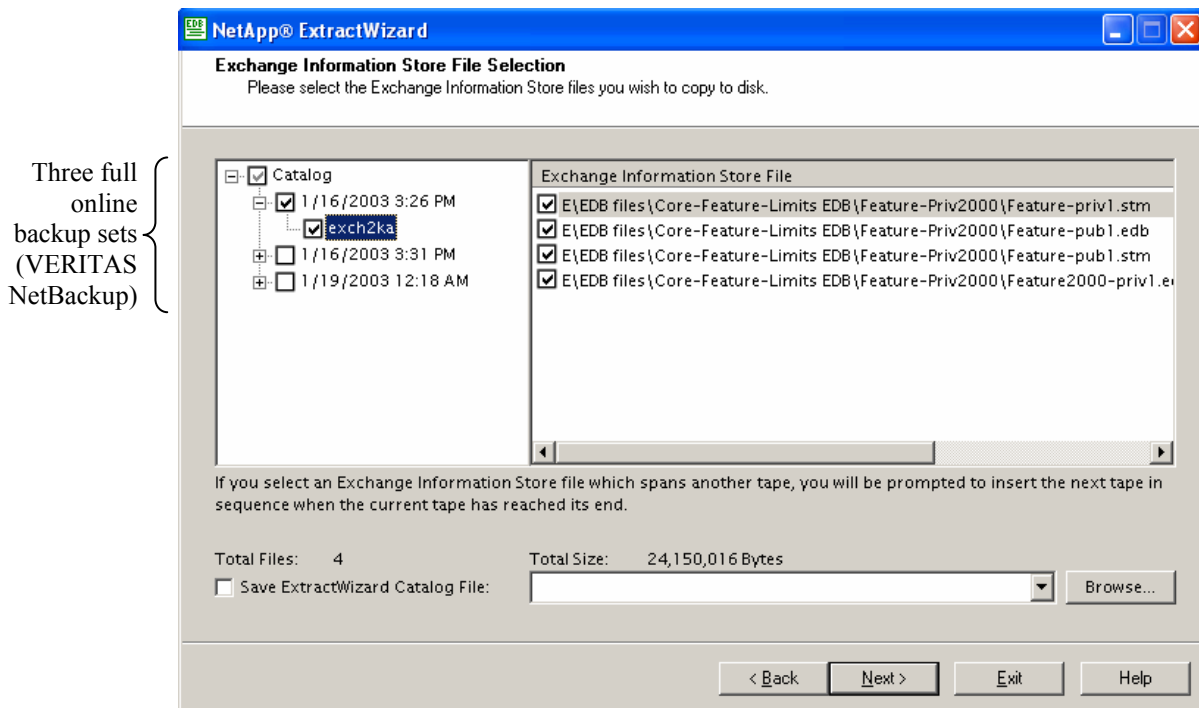
Restoring a full online disk backup (Computer Associates Brightstor ARCserve)

Example 3: Restoring 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., Exch2ka1S).



Restoring a full online tape backup (LEGATO NetWorker)

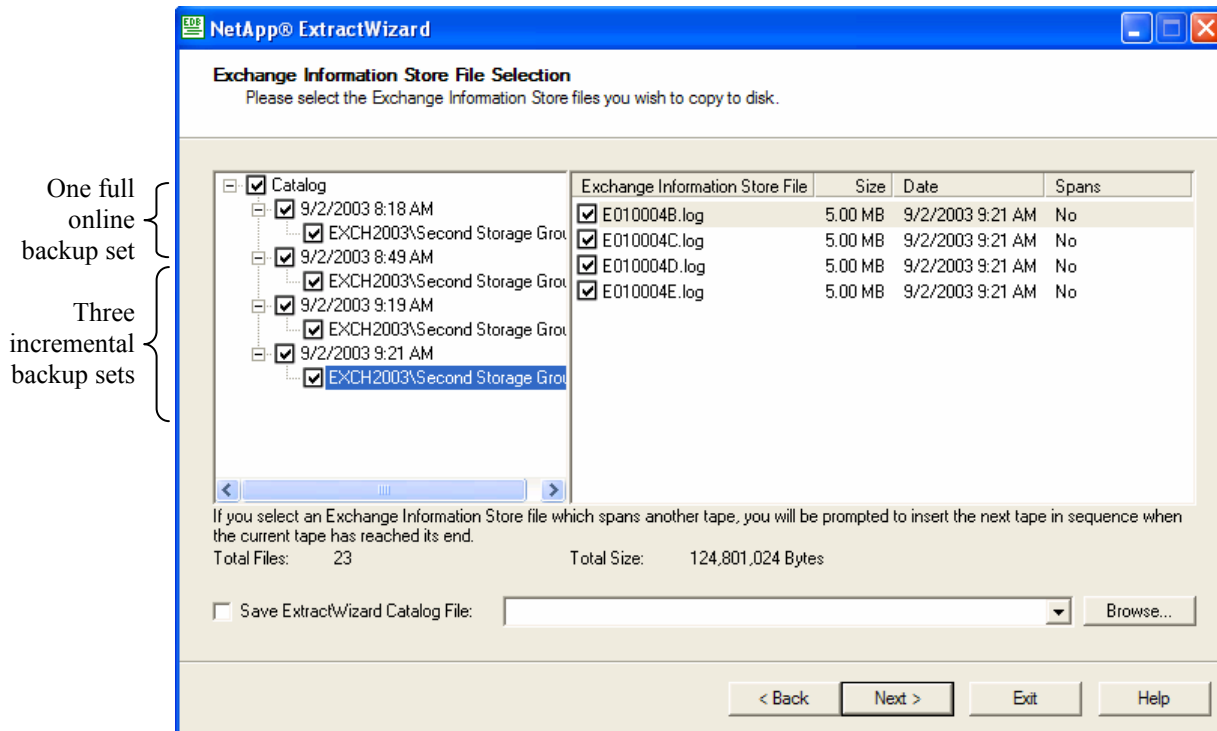


Restoring a full online tape backup (VERITAS NetBackup)

Chapter 1: Using the ExtractWizard

To restore the last full online and every incremental backup

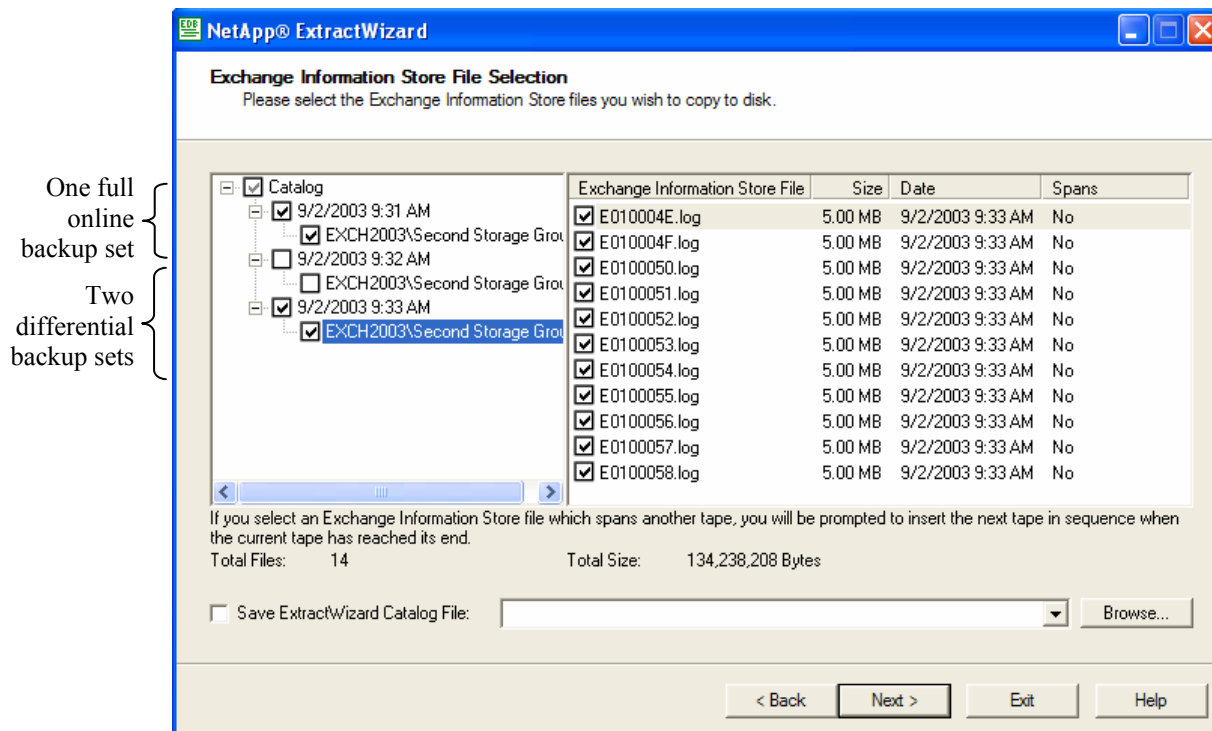
On the **Exchange Information Store File Selection** page of the ExtractWizard, select all of the files (e.g., .edb, .log, .stm, .pat) from the last full online (normal) backup, plus the .log files from every incremental backup.



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

To restore 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.



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

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

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

“To restore a full online (normal) backup” on page 17.

“To restore the last full online and every incremental backup” on page 20.

“To restore the last full online and last differential backup” on page 21.

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.

Chapter 1: Using the ExtractWizard

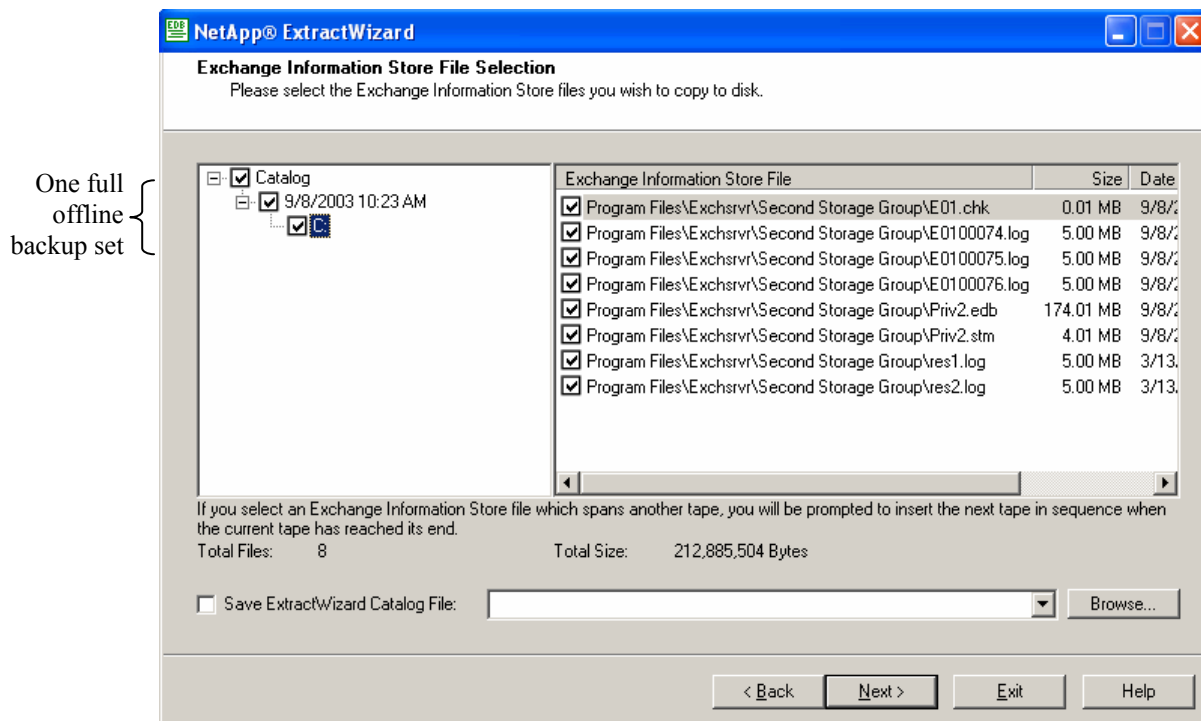
About Restoring a Full Offline Backup

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 restore 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 restores the full path for the Information Store files.

To restore 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.



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

About Restoring a Backup from Exchange 5.5 vs. Exchange 2000/2003

Restoring data from Exchange 5.5 works the same way as restoring data from Exchange 2000/2003. However, when you are selecting files to restore 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.

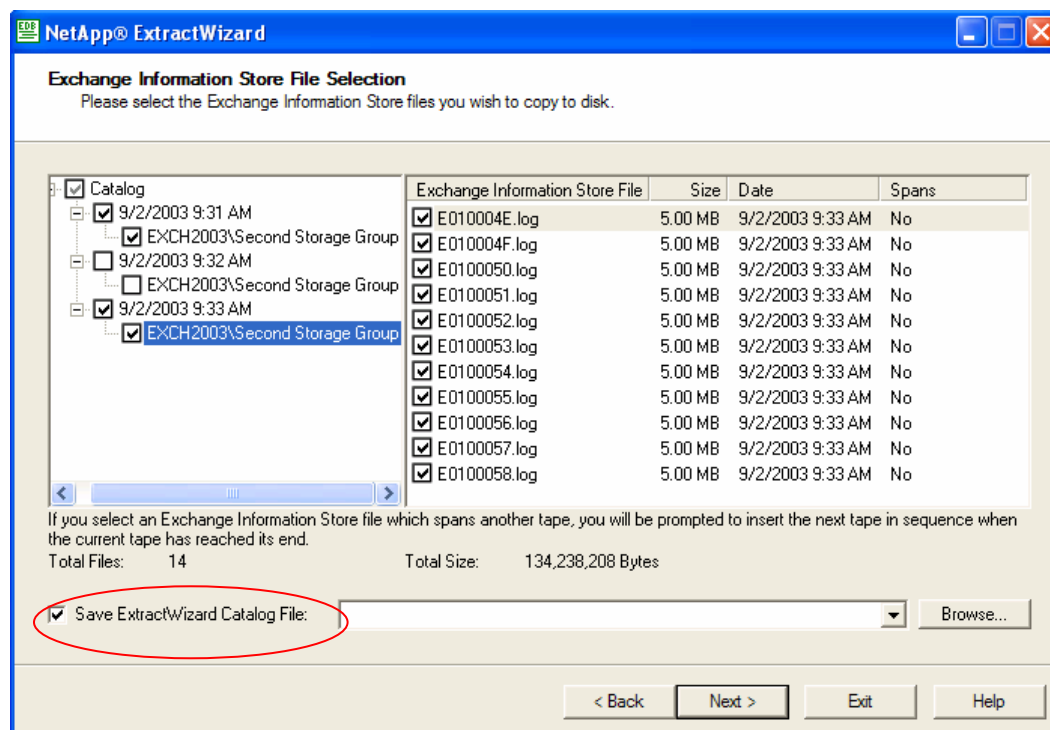
Exchange 2000/2003 information stores contain .STM files in addition to the .EDB files. Exchange 5.5 does not contain .STM files.

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 restore, 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**.

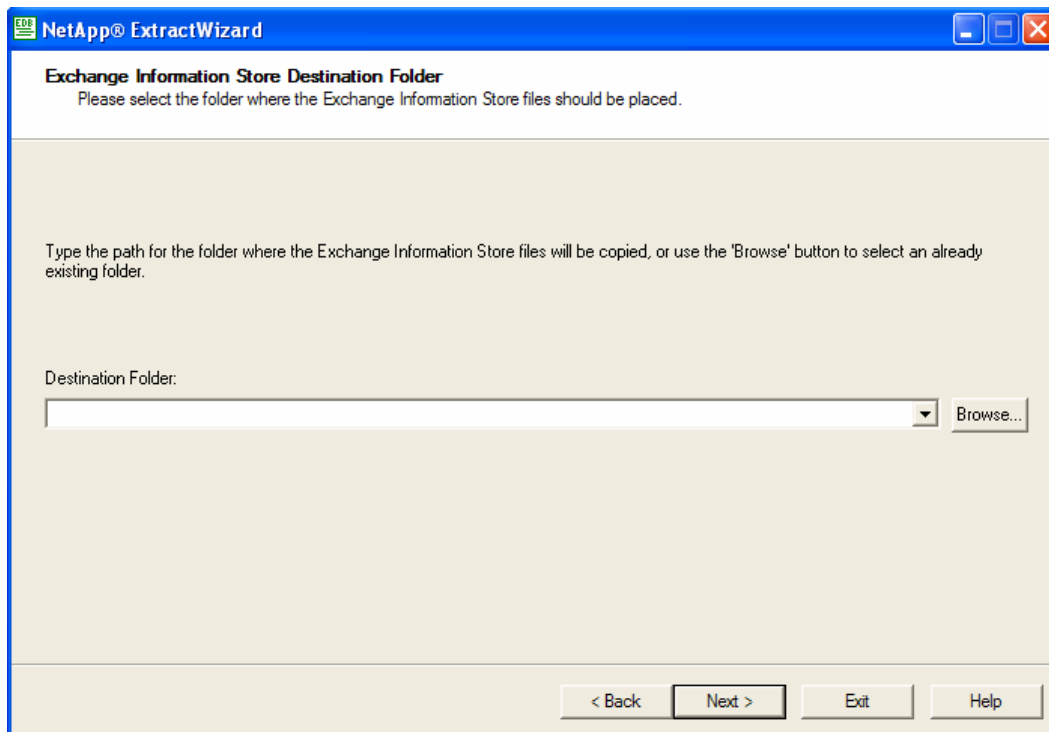


Step 4: Completing the Exchange Information Store Selection

On the **Exchange Information Store File Selection** page of the ExtractWizard, make sure you have selected the Information Store Files that you want to restore, 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 Single Mailbox Recovery to restore 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.

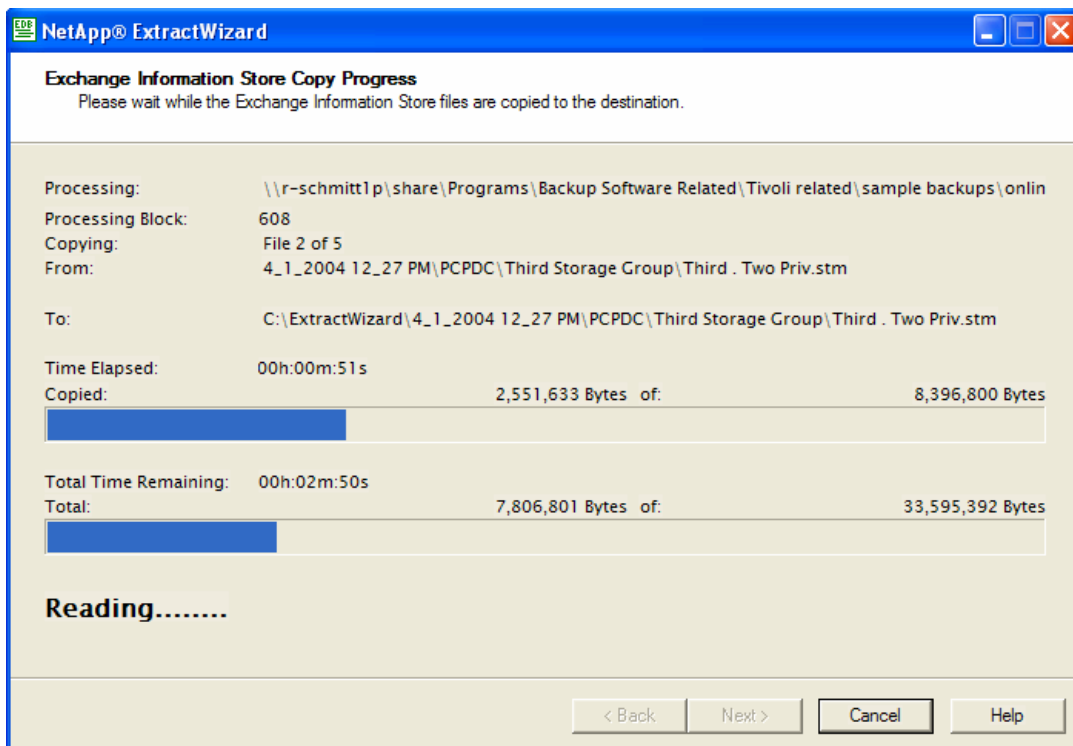


ExtractWizard: Exchange Information Store Copy Progress

The **Exchange Information Store Copy Progress** page of the ExtractWizard shows the progress of the ExtractWizard restoring 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.

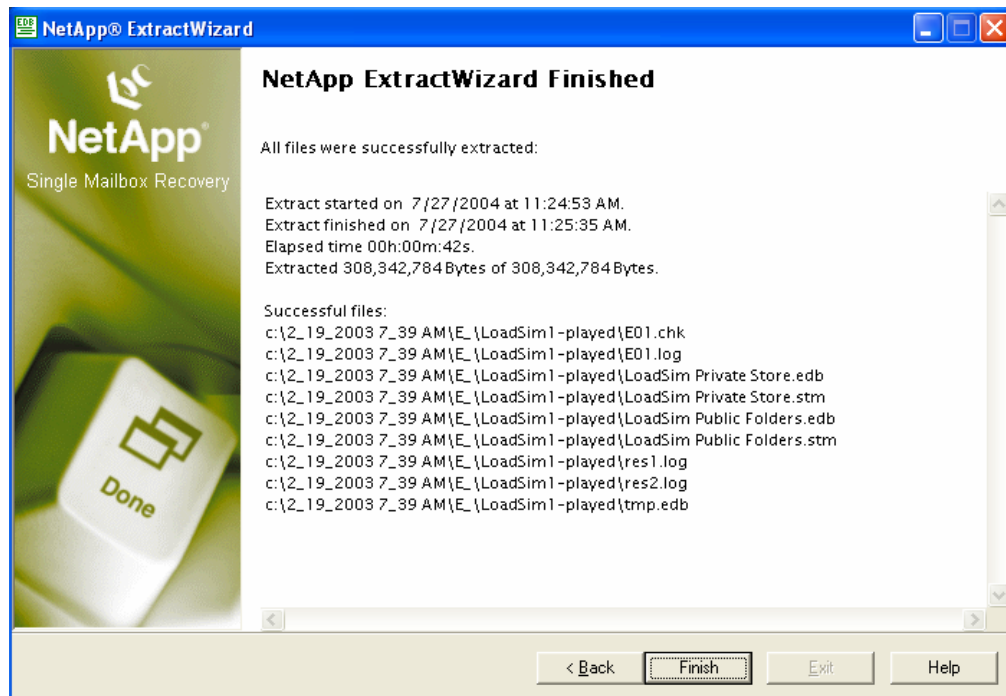
During file extraction, ExtractWizard can be in one of four states: initializing, reading (processing one block at a time), scanning (seeking ahead multiple blocks), and rewinding.



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

For best results when using an online incremental or differential backup

Put the .edb and .stm files in one directory.

Put the associated log files (e.g., .log, .pat, .chk) in one directory.

Note: 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 you are using 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.

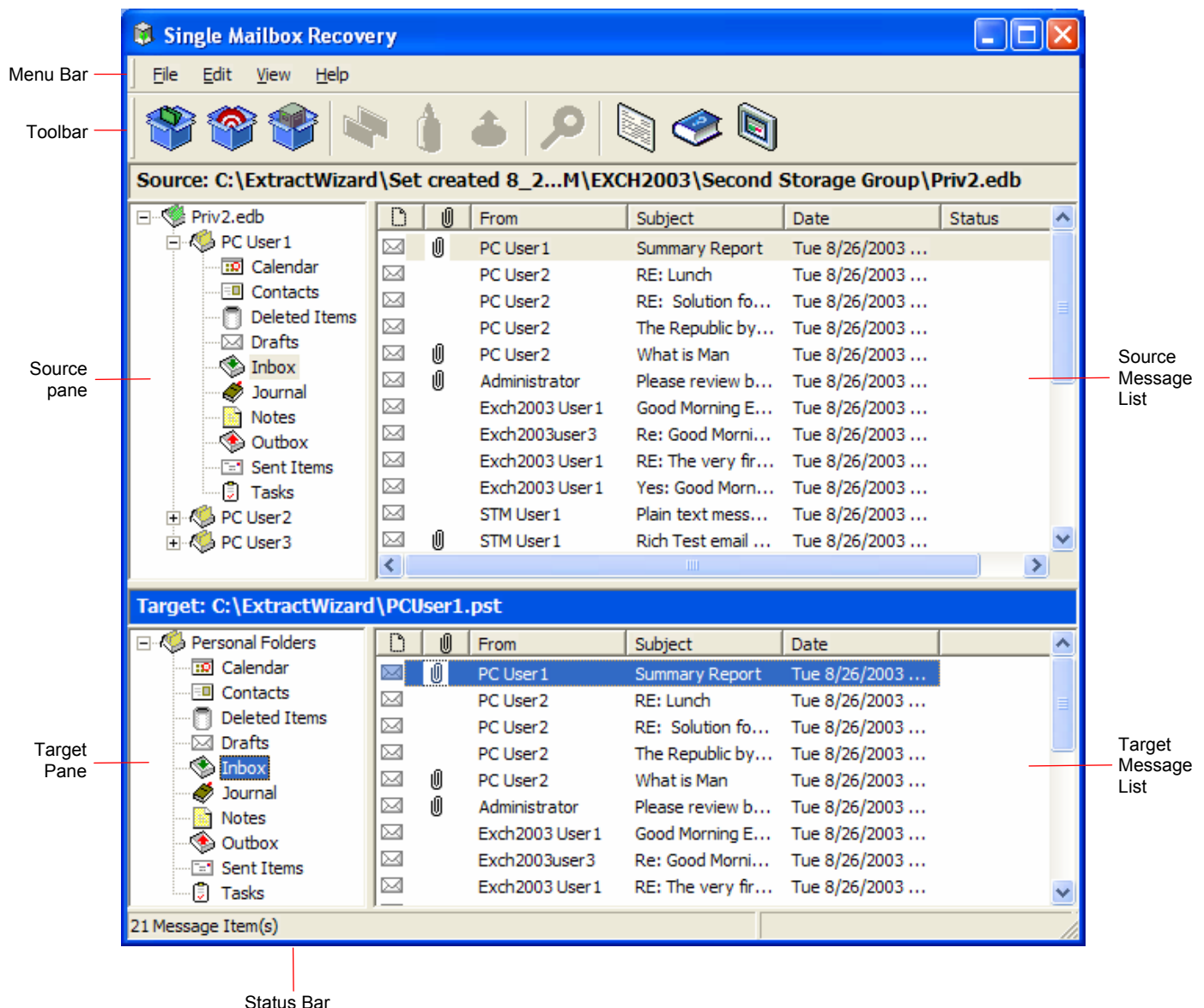
Chapter 2: Looking at the Interface

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

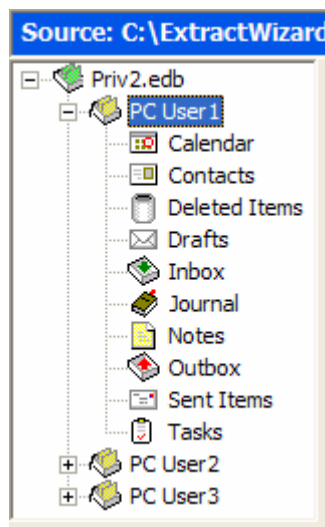
The Single Mailbox Recovery main window is where you do most of your work. This window displays the source EDB or PST file(s) as well as the target PST file(s) or Exchange Server. The target acts as a container for the restored files. The various work areas and controls are described in the following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



 **Source EDB file** (e.g.,  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.

***Notes:** 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

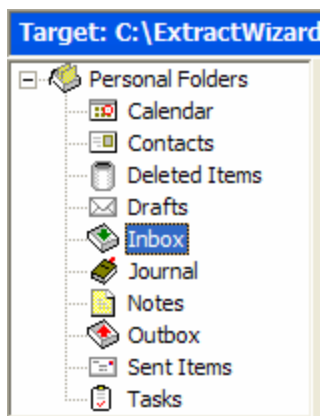
The source message list displays the message items in the Outlook folder that you selected in the Source pane. This folder is one of the Outlook folders (e.g., Inbox, Contacts, Tasks). In the illustration below, the source message list displays the messages in an Inbox.

		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 fir...	Tue 8/26/2003 ...	
		Exch2003 User1	Yes: Good Morni...	Tue 8/26/2003 ...	
		STM User1	Plain text messa...	Tue 8/26/2003 ...	

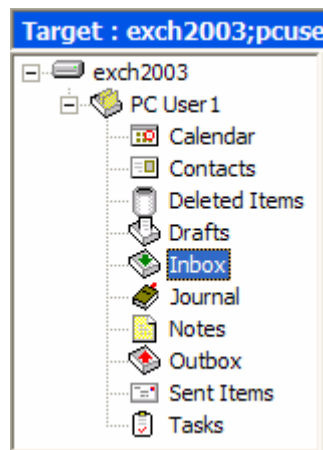
The source message list displays metadata about the message items in six columns. The metadata includes file type; attachments, if any; message sender; subject; date; and status. The **Sent Items** folder also displays the “To” column. For more information on the message list, see “Sorting Messages in the Message Lists” on page 35.

Target Pane

The Target pane can display one or more target PST files and/or one target mailbox 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 6, “Restoring Exchange Data.”



Target Pane for a PST File



Target Pane for an Exchange Server

Target Message List (Restored Messages)

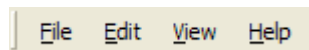
The target message list displays the message items in the Outlook folder that you selected in the Target pane. If the target is a newly created PST file, the Outlook folders and message list will be empty. If the target is an existing PST file or Exchange server, or if you have restored message items 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 35.

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 ten 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.

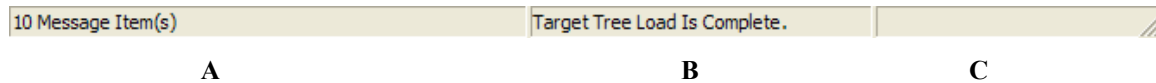


Preview Pane button displays the preview pane on the Single Mailbox Recovery main window so you can read a message without opening it.



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



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 .

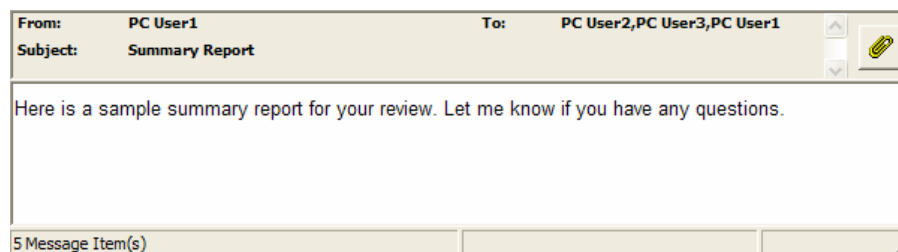
To hide the preview pane

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

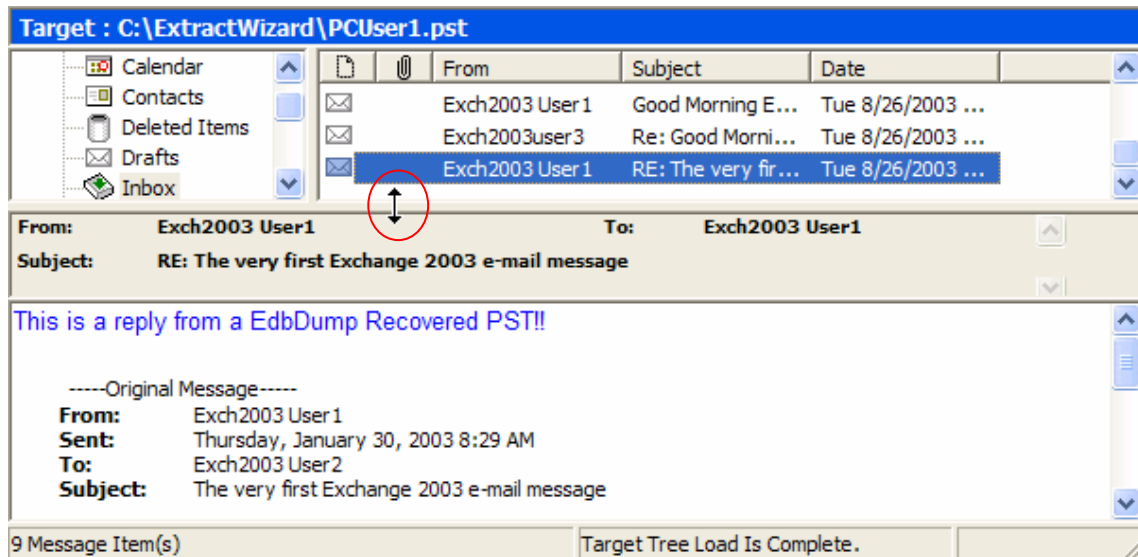
On the **View** menu, click **Toolbar or Status Bar**. The check mark appears next to the name of the toolbar or status bar.

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.

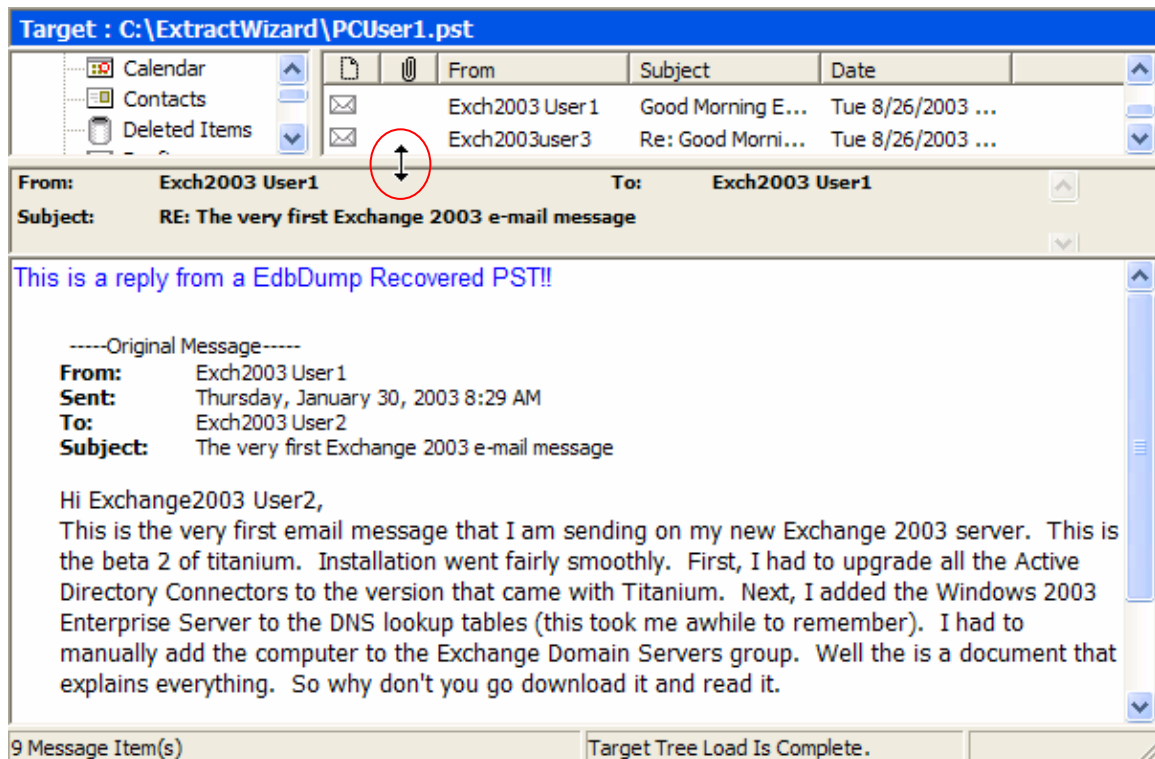
To resize panes separated by a split bar

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

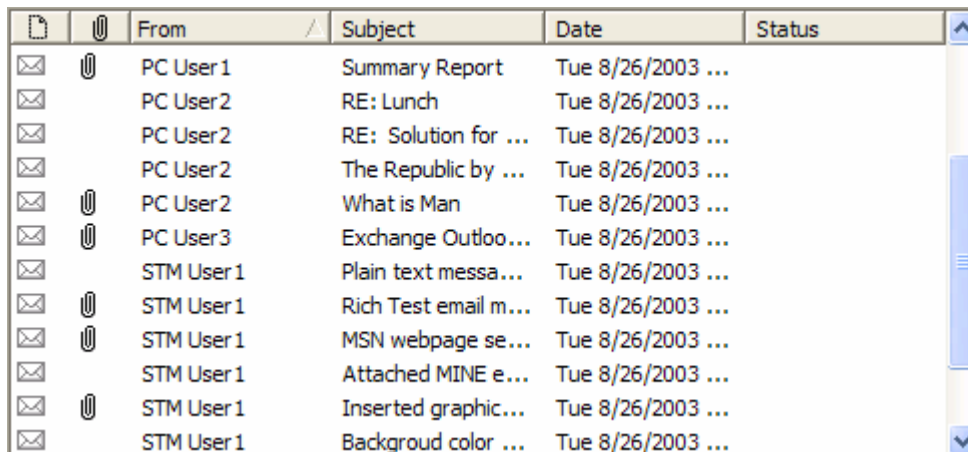
2. Drag the split bar until the two panes are the desired size.



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**.

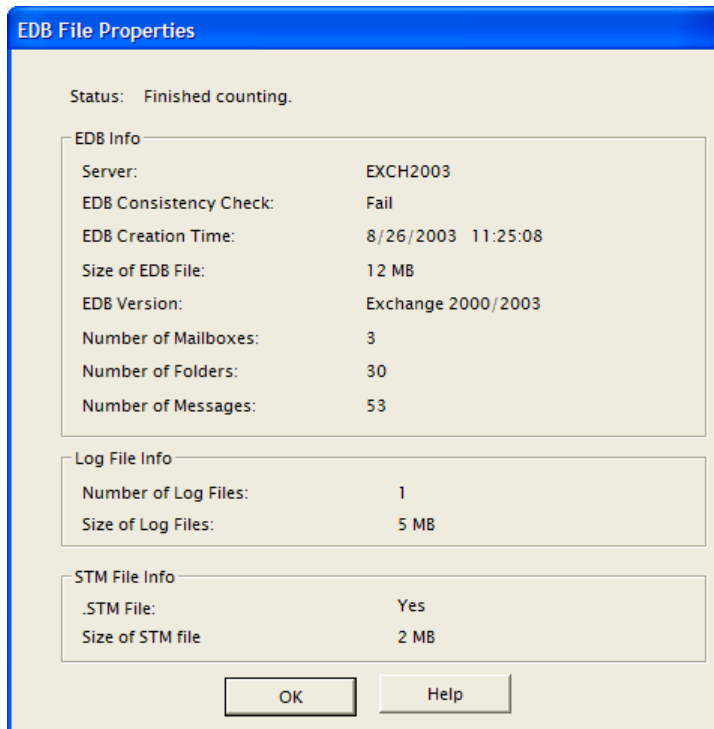
Press the F5 key.

Viewing the Properties of an EDB File, PST File, Folder, or Mailbox

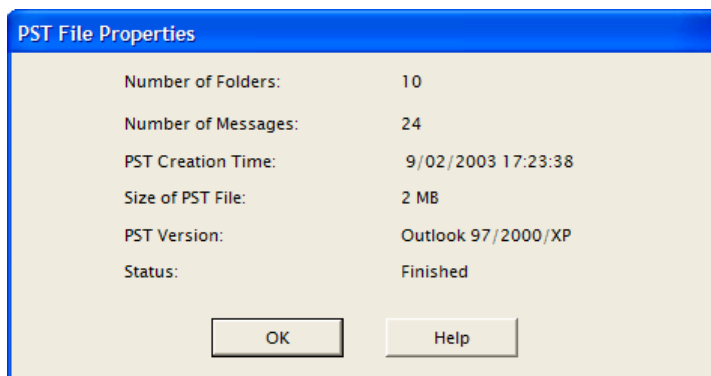
Single Mailbox Recovery makes it easy to view the properties of a source PST file, EDB file, mailbox, or folder.

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

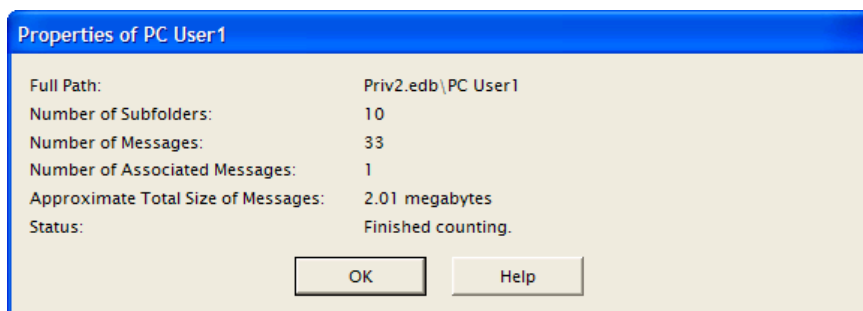
1. In the Source pane, right-click an EDB file, PST file, mailbox, or folder.
2. On the shortcut menu, click **Properties**. A properties dialog box appears.



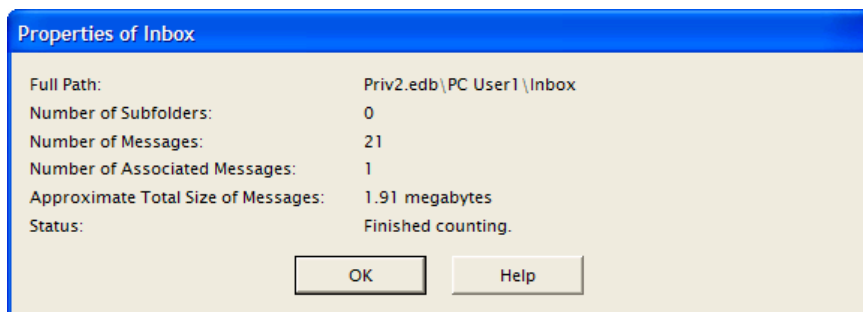
Properties of an EDB File



Properties of a PST File



Properties of a Mailbox

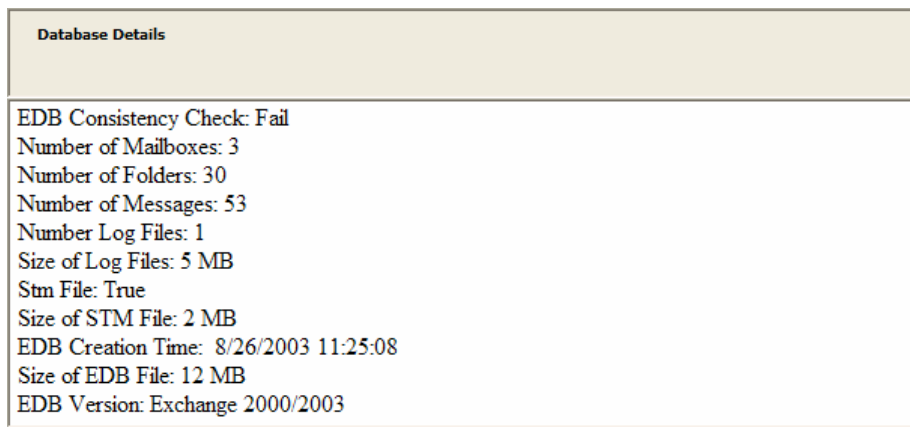


Properties of a Folder

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

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.

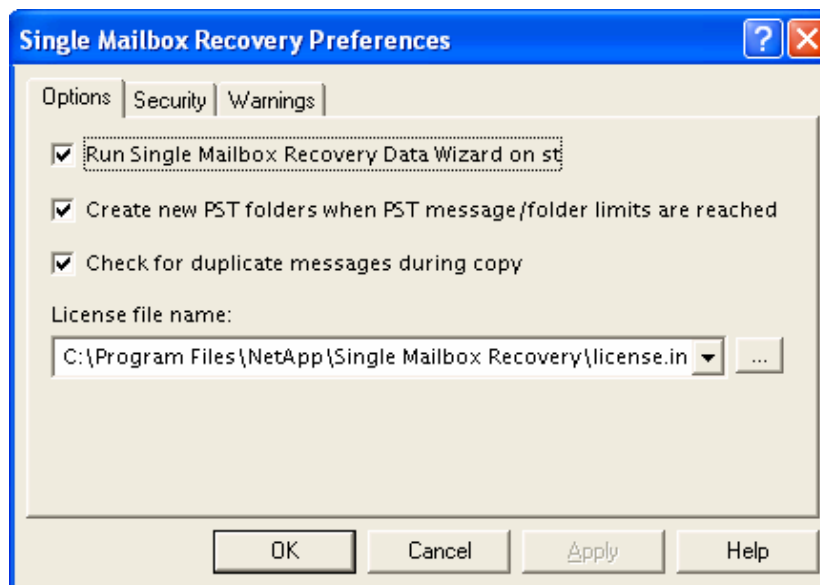
Setting Preferences

The Preferences dialog box allows you to streamline Single Mailbox Recovery operations. All of the preference settings in the three tabs are selected by default. There is one exception: 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 preferences

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 and Folder Targets” on page 70.

Check for duplicate message during copy: Single Mailbox Recovery will check the current destination folder to see if a copy of the message exists. Selecting this preference setting results in slower copy performance.

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:

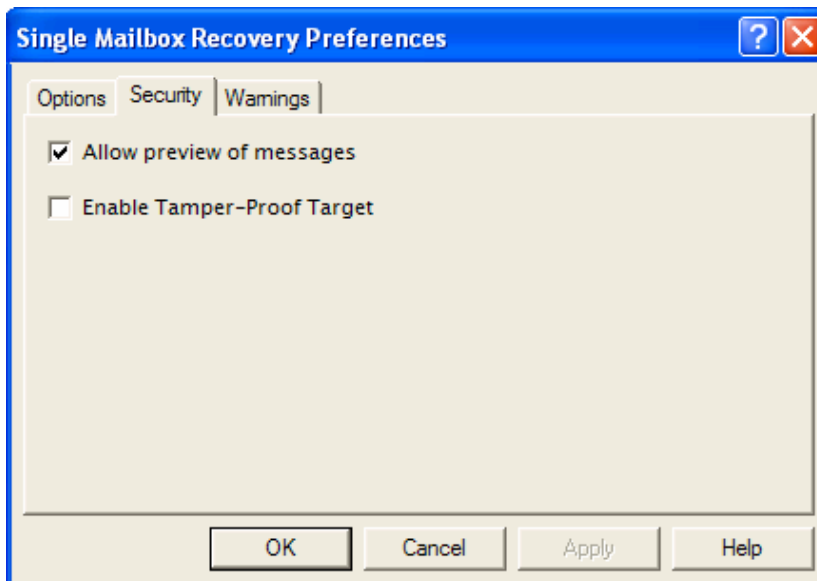
Multiple Copies of Single Mailbox Recovery: Put one license.ini in the Single Mailbox Recovery program directory of each Single Mailbox Recovery installation.

Single Copy of Single Mailbox Recovery: Put one license.ini in a single network folder to which all Single Mailbox Recovery installations make reference.

For more information about the license .ini file, see “The License .ini File” on page 8.

Security Tab

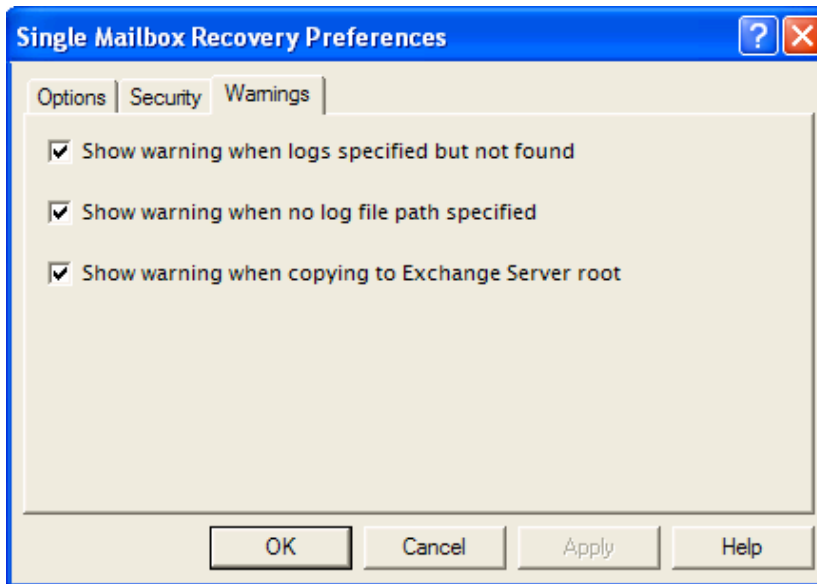
The options in this tab are modifiable by default only by users that belong to the Administrator Group. The options are stored in the registry: HKEY_LOCAL_MACHINE\software\SMBR. The Single Mailbox Recovery Installation program sets this registry key to have read/write access to users in the Administrators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

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 3: Starting Single Mailbox Recovery

You can open a source Exchange Database (EDB) file or PST file and specify a target PST file or target Exchange server by employing one of the following methods:

Use the Single Mailbox Recovery Data Wizard.

Open the source database and target mailboxes from the Single Mailbox Recovery main window.

***Note:** You cannot open the same PST file as both source and target.*

Running the Single Mailbox Recovery Data Wizard

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

***If you are restoring an Exchange database from a LUN in a NetApp storage system snapshot:** First use the NetApp SnapDrive product to connect that LUN to an available drive letter on your PC before you start the Data Wizard procedure to select the source Exchange database. The mounted LUN will be your source drive. Avoid maintaining a connection to a LUN in a snapshot during a period when the filer volume in which that LUN is contained is scheduled for update snapshots. For details see, Appendix A: Connecting to a LUN in a Snapshot.*

***Before Using the Data Wizard:** Use the Single Mailbox Recovery ExtractWizard if you have not yet restored backed-up Exchange Information Store data. The ExtractWizard reads previous Exchange server backups and restores EDB files to any machine, volume, or folder. For more information, see Chapter 1, “Using the ExtractWizard.”*

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.
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.

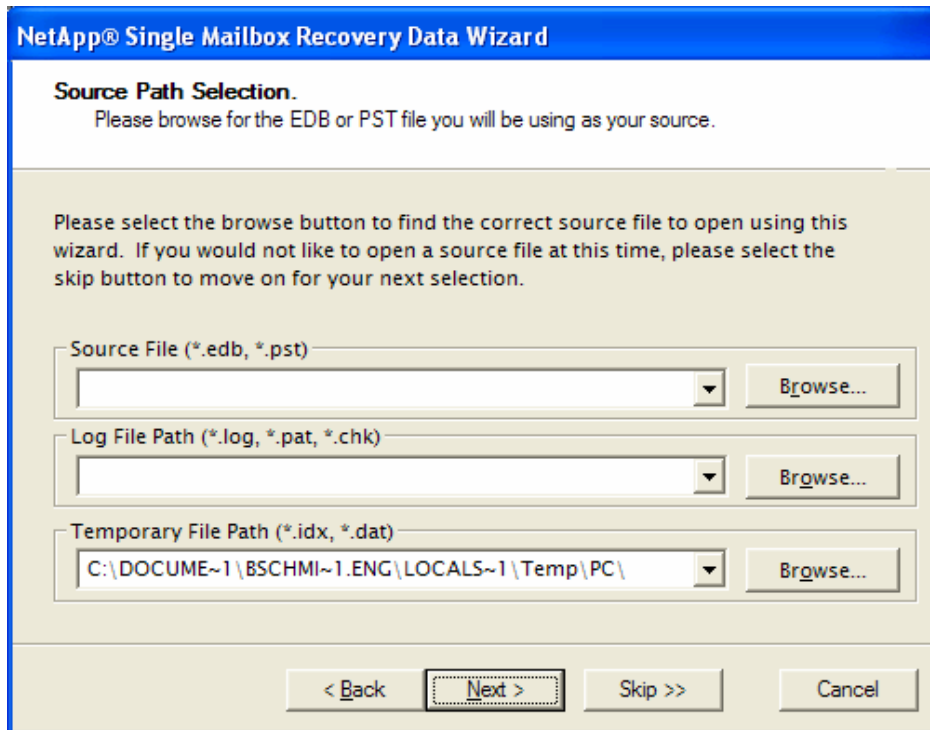
***Note:** If the source EDB file that you want to use is located in a LUN in a NetApp storage system snapshot, you must first have connected this LUN to an available drive letter on your PC with the SnapDrive Connect Disk feature. Avoid maintaining a connection to a LUN in a snapshot during a period when the filer volume in which that LUN is contained is scheduled for update snapshots. For details on this procedure see Appendix A: Connecting to a LUN in a Snapshot.*

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 "Guidelines for Selecting an Exchange Database" on page 44.

5. Click Next.



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.

Source File (*.edb, *.pst)
[Empty text box] [Browse...]

Log File Path (*.log, *.pat, *.chk)
[Empty text box] [Browse...]

Temporary File Path (*.idx, *.dat)
C:\DOCUME~1\BSCHMI~1\ENG\LOCALS~1\Temp\PC\ [Browse...]

< Back **Next >** Skip >> Cancel

Guidelines for Selecting an Exchange Database

1. **For best results when using an online incremental or differential backup:**

Put the .edb and .stm files in one directory.

Put the associated log files (e.g., .log, .pat, .chk) in one directory.

Note: 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.

2. **If you are using 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.

3. **For best results when specifying a temporary file path for .idx and .dat files:** Make 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.

Single Mailbox Recovery never modifies an .edb file or its associated files (e.g., .log, .stm, .pat, .chk); however, it does create .dat and .idx files the first time you open an .edb file from a directory that contains log files. Each time you reopen the .edb file, Single Mailbox Recovery uses the information in the .dat and .idx files so it can open the .edb file quicker.

Note: Exchange 5.5 does not use .stm files.

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.

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.

The screenshot shows a Windows-style dialog box titled "NetApp® Single Mailbox Recovery Data Wizard". The main heading is "Target Type & Path Selection." followed by the instruction: "Please select the type and path of the target file you will be using as your container for the restored data." Below this, a paragraph states: "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." There are two radio button options: "PST File" (which is selected) and "Connect To Exchange Server". Below these options is a section labeled "Target PST File Path" containing a text input field and a "Browse..." button. At the bottom of the dialog are four buttons: "< Back", "Next >", "Skip >>", and "Cancel".

2. Do one of the following:

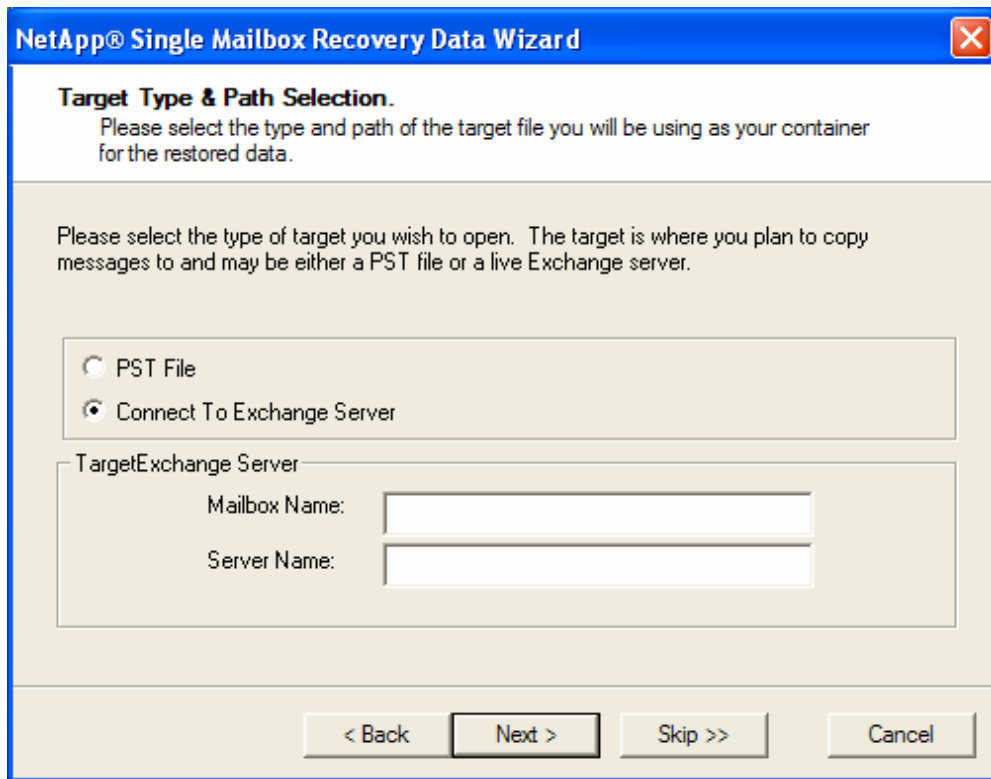
If you know the target PST file path, type it in the **Target PST File Path** box.

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.

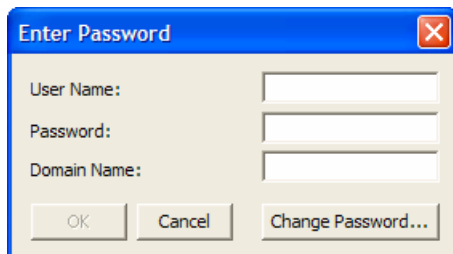


The image shows the 'NetApp® Single Mailbox Recovery Data Wizard' dialog box. The title bar is blue with the text 'NetApp® Single Mailbox Recovery Data Wizard' and a close button. The main area has a white background with the following text: 'Target Type & Path Selection. Please select the type and path of the target file you will be using as your container for the restored data.' Below this, there is a section with the text '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.' There are two radio buttons: 'PST File' and 'Connect To Exchange Server'. The 'Connect To Exchange Server' option is selected. Below the radio buttons, there is a section titled 'TargetExchange Server' with two text boxes: 'Mailbox Name:' and 'Server Name:'. At the bottom of the dialog box, there are four buttons: '< Back', 'Next >', 'Skip >>', and 'Cancel'.

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 **Next**. In the **Check Name** dialog box that appears, select the mailbox from the list, and click **OK**.*

3. 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.

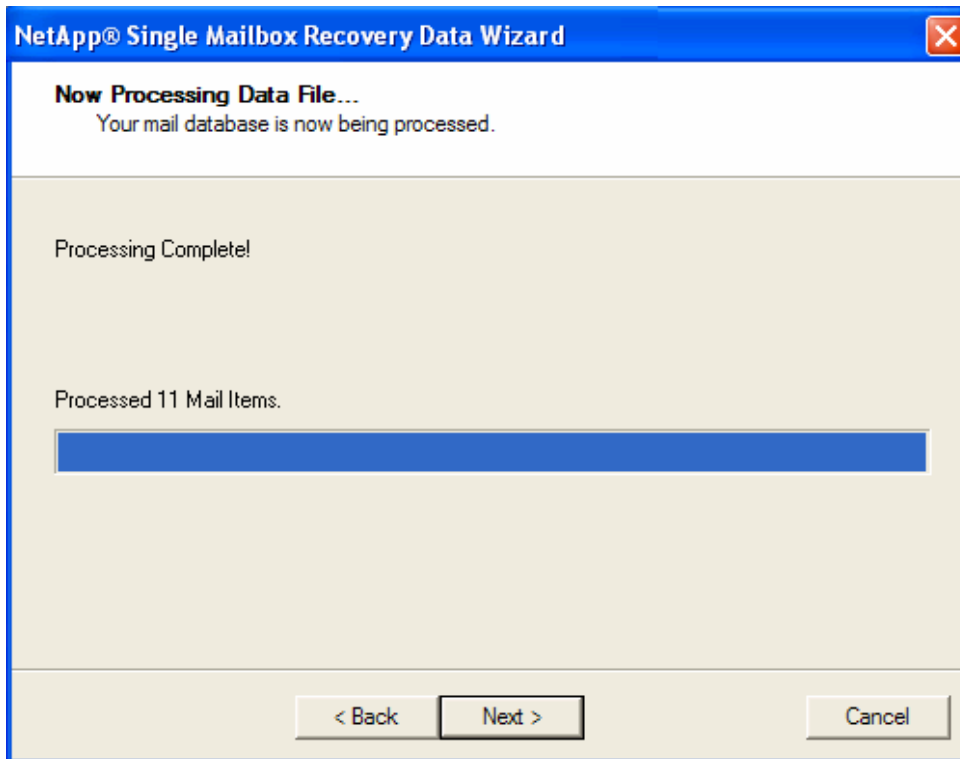


The image shows the 'Enter Password' dialog box. The title bar is blue with the text 'Enter Password' and a close button. The main area has a white background with the following text: 'User Name:', 'Password:', and 'Domain Name:'. There are three text boxes corresponding to these labels. At the bottom of the dialog box, there are three buttons: 'OK', 'Cancel', and 'Change Password...'.

4. Click **Next**.

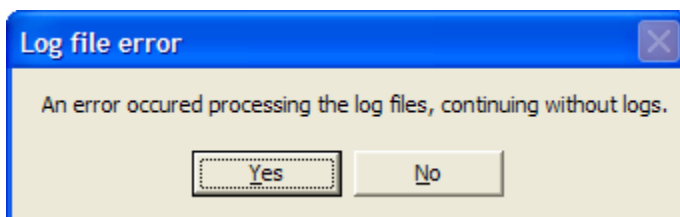
Data Wizard: Now Processing Data File

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.



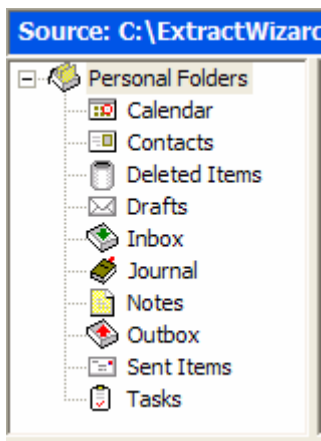
Last page of the Data Wizard for a target PST file



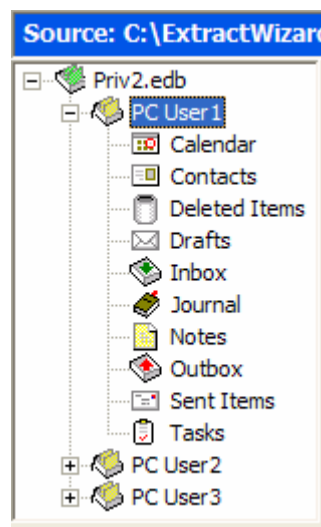
Last page of the Data Wizard for a target Exchange server

Looking at the Single Mailbox Recovery 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.

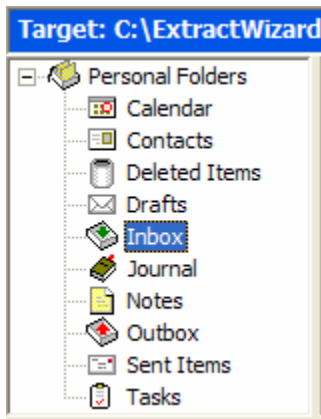


Source pane for a PST file

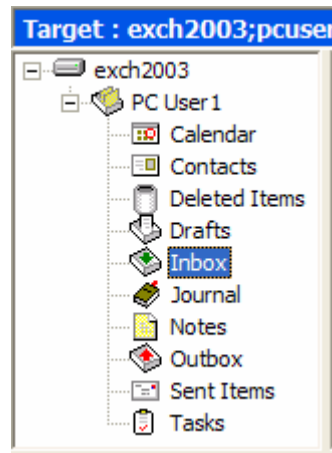


Source pane for an EDB file

Chapter 3: Starting Single Mailbox Recovery



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 Database and Target Mailboxes 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 Proceed: Use the Single Mailbox Recovery ExtractWizard if you have not yet restored backed-up Exchange Information Store data. The ExtractWizard reads previous Exchange server backups and restores EDB files to any machine, volume, or folder. For more information, see Chapter 1, “Using the ExtractWizard.”

Note: Due to the database nature of the PST file and MAPI subsystem, PSTs opened as source will be modified.

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 EDB file in the dialog box below, see “Guidelines for Selecting an Exchange Database” on page 44.

Select Source Files

Please select the browse button to find the correct source files to open.

Source File (*.edb, *.pst)

Log File Path (*.log, *.pat, *.chk)

Temporary File Path (*.idx, *.dat)

C:\DOCUME~1\RPETER~1\LOCALS~1\Temp\PC\

OK Cancel

2. In the **Source File** box, use the **Browse** button to find a source EDB or PST file.

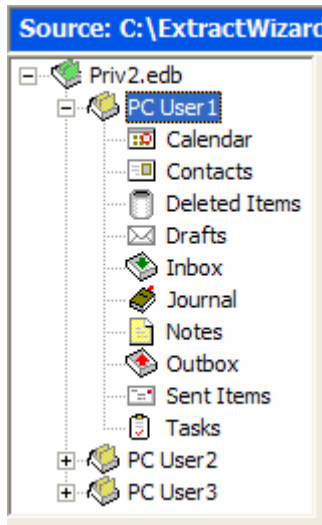
Note: If the source EDB file that you want to use is located in a LUN in a NetApp storage system snapshot, you must first have connected this LUN to an available drive letter on your PC with the SnapDrive Connect Disk feature. Avoid maintaining a connection to a LUN in a snapshot during a period when the filer volume in which that LUN is contained is scheduled for update snapshots. For details on this procedure see Appendix A: Connecting to a LUN in a Snapshot.

3. If you selected a PST file, proceed to step 6. PST files do not require log file or temporary file paths.
4. In the **Log File Path** box, use the **Browse** button to find the log files associated with the source EDB file.

Chapter 3: Starting Single Mailbox Recovery

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 "Guidelines for Selecting an Exchange Database."
6. Click **OK**. 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:

On the **File** menu, point to **Target PST**, and click **Open Existing**.

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.

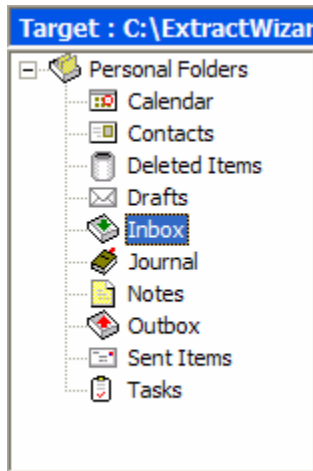
Tip: In Windows Explorer, you can drag a PST file into the Single Mailbox Recovery Target pane. Note that double-clicking a PST file will not open it when using Windows XP, Outlook XP, or Outlook 2003.

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

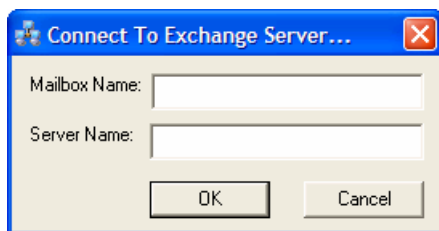
To open a target Exchange Server

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.

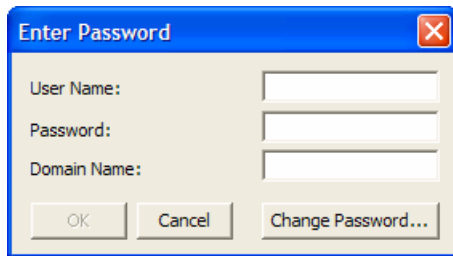


2. In the **Mailbox Name** and **Server Name** boxes, type the mailbox and server names.

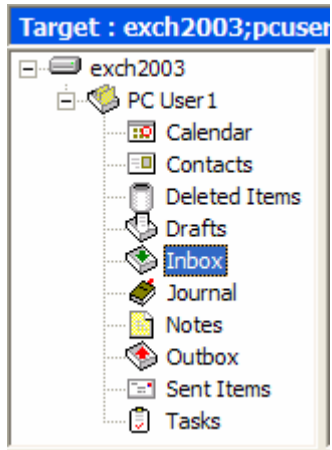
Tip: If you don't know the full name of the mailbox, type a sub-string (e.g., the first letter of the mailbox) in the **Mailbox Name** box, and click **Next**. In the **Check Name** dialog box that appears, select the mailbox from the list, and click **OK**.

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.

Chapter 3: Starting Single Mailbox Recovery



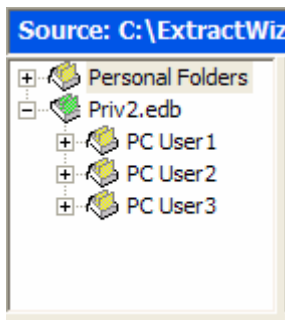
4. Click **OK**. The Exchange server appears in the Single Mailbox Recovery Target pane.



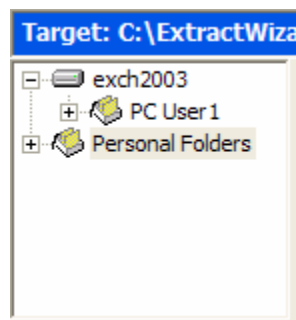
Target pane for an Exchange server

Opening Multiple Sources and Targets

You can display multiple sources in the Source pane and multiple targets in the Target pane. Sources include EDBs and PSTs. 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 Exchange mailbox can be opened at a time.

Closing Sources and Targets

You can close sources and targets from the main window.

To close a source

1. In the Source pane, select an 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**.

To close a target

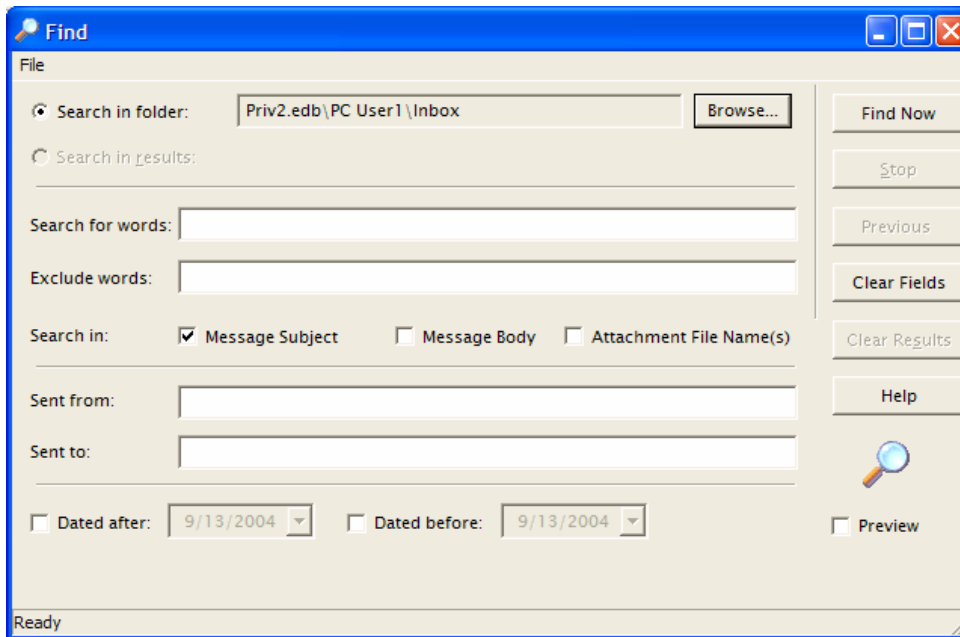
1. In the Target pane, select a PST file or Exchange database.
2. Do one of the following:

On the **File** menu, click **Close Store**.

Right-click the selection, and on the context menu click **Close Store**.

Chapter 4: 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.



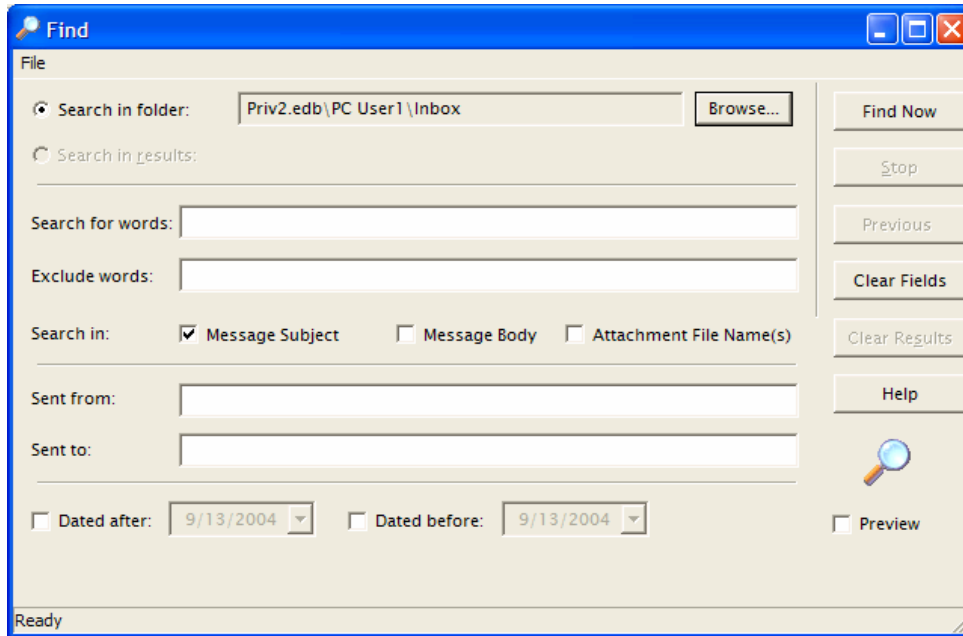
Guidelines for Using the Find Dialog Box

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 only one information store at a time. Single Mailbox Recovery cannot search across multiple sources.

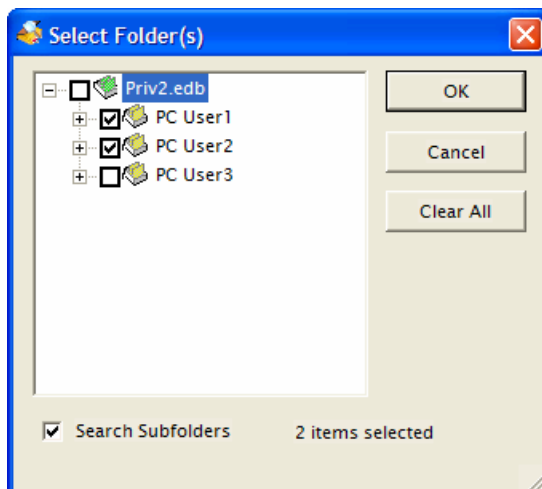
Searching for Messages

1. In the Source pane, select the folder (e.g., EDB or PST file, mailbox, Inbox) you want to search. The folder 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 61.



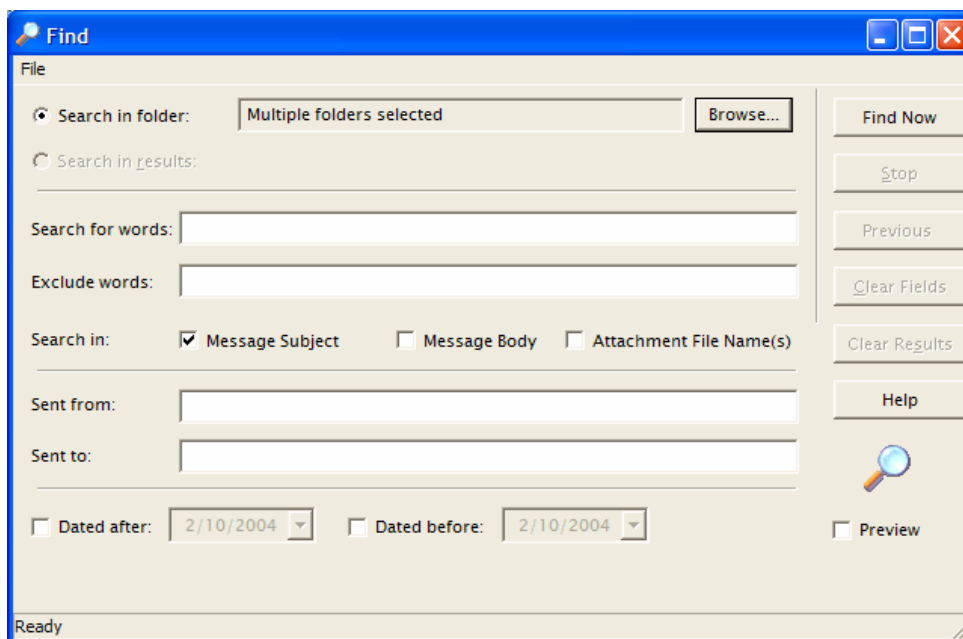
3. If you want to select multiple mailboxes or folders to search, click the **Browse** button. In the **Select Folder(s)** dialog box, select the items you want to search. In the illustration below, two mailboxes have been selected.



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 illustration below, 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.

Chapter 4: Finding Messages

7. For **Search in**, select one or more of the following check boxes: **Message Subject**, **Message Body**, or **Attachment File Name(s)**. 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).
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 58.
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.

The screenshot shows the 'Find' dialog box with the 'Search in results' option selected. The search criteria include the words 'Upgrade' and checkboxes for 'Message Subject' and 'Message Body'. The 'Dated after' and 'Dated before' fields are set to 2/11/2004. The 'Preview' checkbox is checked. The results section shows a single message from 'Exch2003 User1' with the subject 'RE: The very first Exchange 2003 e-mail message'. The message body text is visible below the header.

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 58.

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.

Opening and Saving Attachments in the Find Dialog Box

For instructions on opening and saving attachments, see “Opening Attachments” and “Saving Attachments” on page on page 32.

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 5, “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 6, “Restoring Exchange Data.”

Chapter 5: 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.

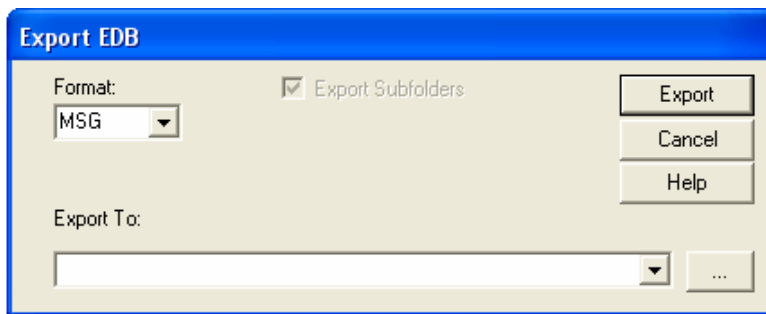
To export an entire EDB file

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

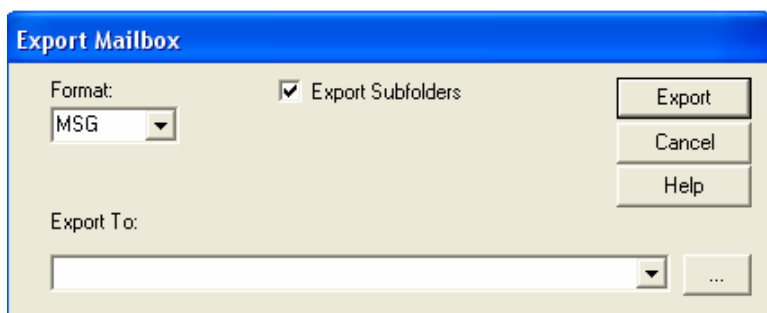
1. In the Source pane, select a PST file, a mailbox or a folder (e.g., Inbox).
2. Do one of the following:

On the **File** menu, click **Export**.

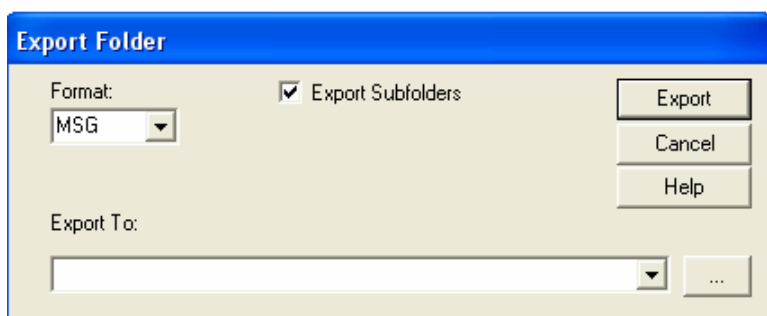
On the toolbar, click the **Export** button .

Right-click the mailbox or folder, and on the shortcut menu, click **Export**.

The **Export Mailbox** or **Export Folder** dialog box appears.



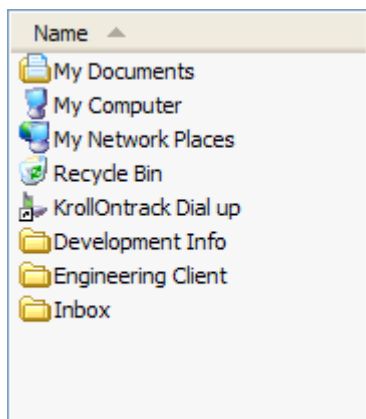
Export Mailbox dialog box



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 5: Exporting Messages

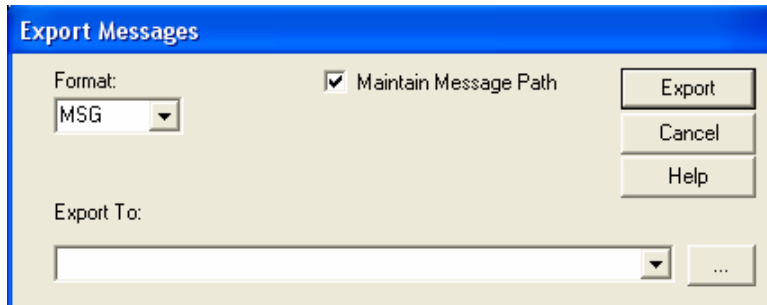
To export individual messages

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**.

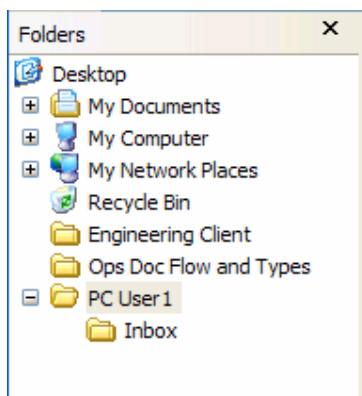
On the toolbar, click the **Export** button .

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

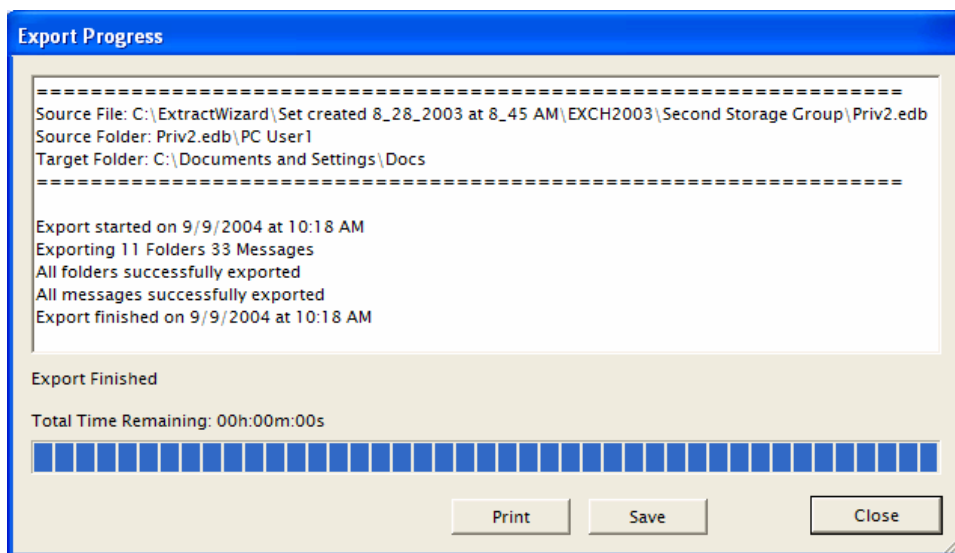
Export start time

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 6: Restoring 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. 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.

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.*

Chapter 6: Restoring Exchange Data

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 and Folder Targets

When restoring Exchange Data to a target PST or 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 (e.g., Inbox) 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:

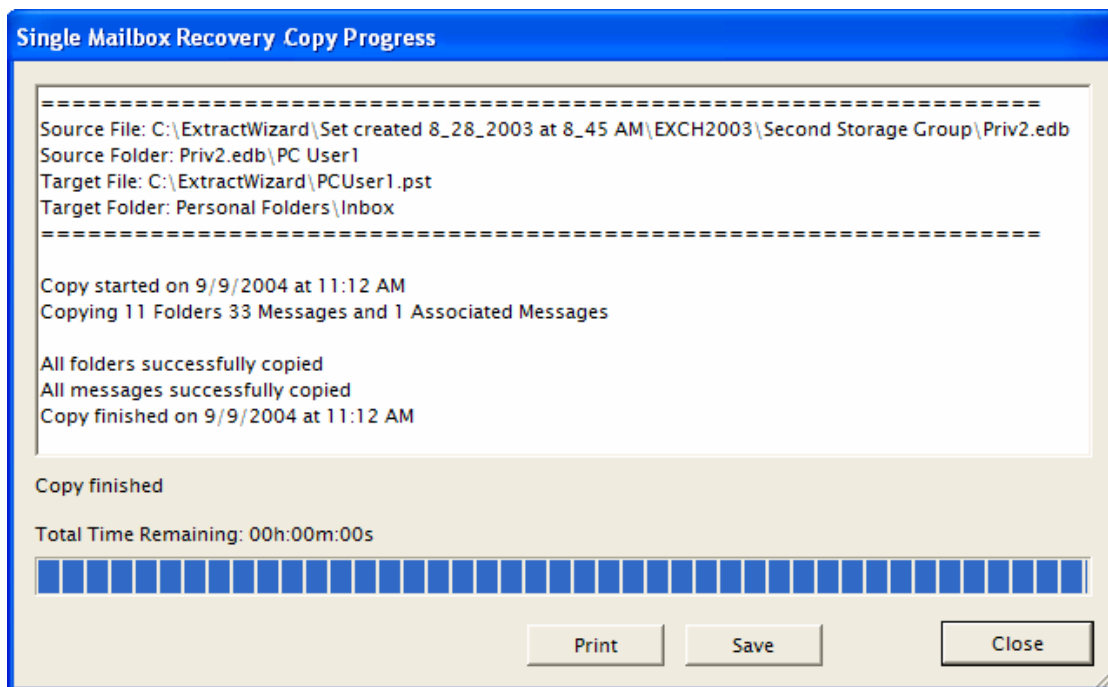
Time of copy operation

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 70.

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 75.

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 75.

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.

***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.

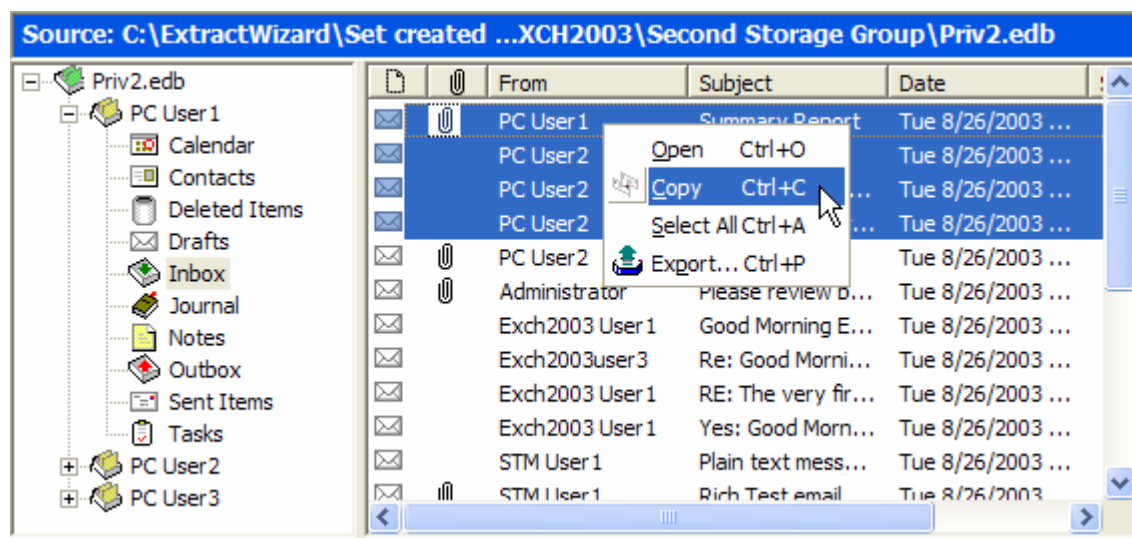
Guidelines for Restoring Messages

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 75.*

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.

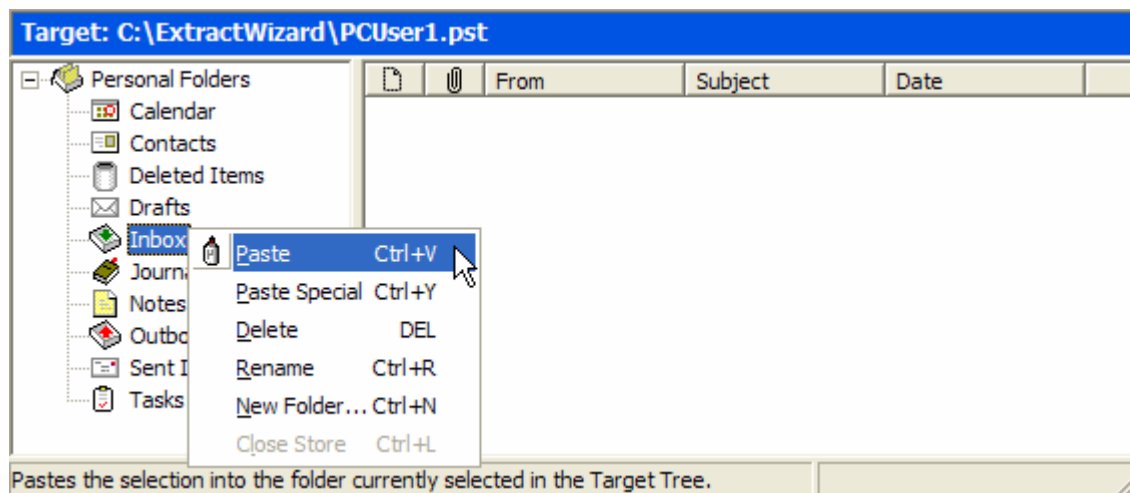
Click **Print** to print the copy report.

Click **Save** to save the copy report as a text file.

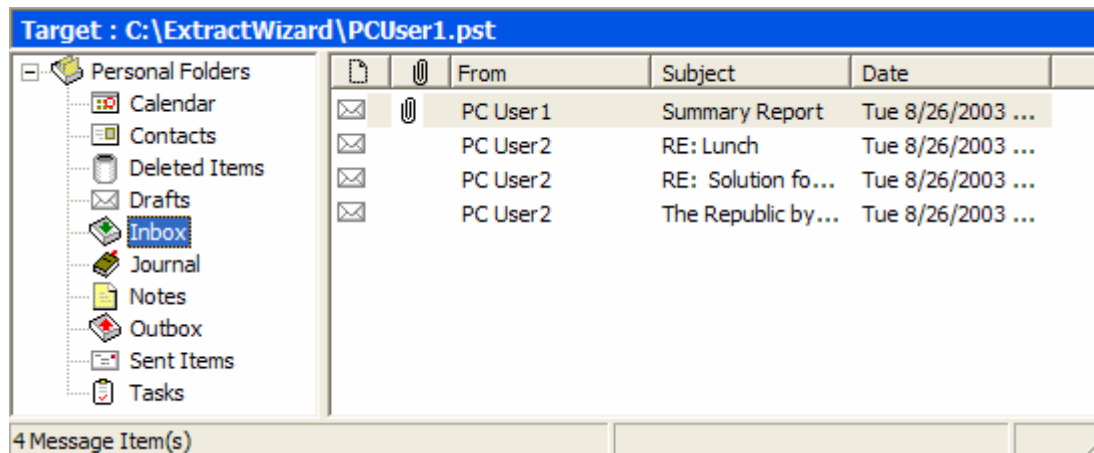
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

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.

Chapter 6: Restoring Exchange Data

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. **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.
4. **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.
5. **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.

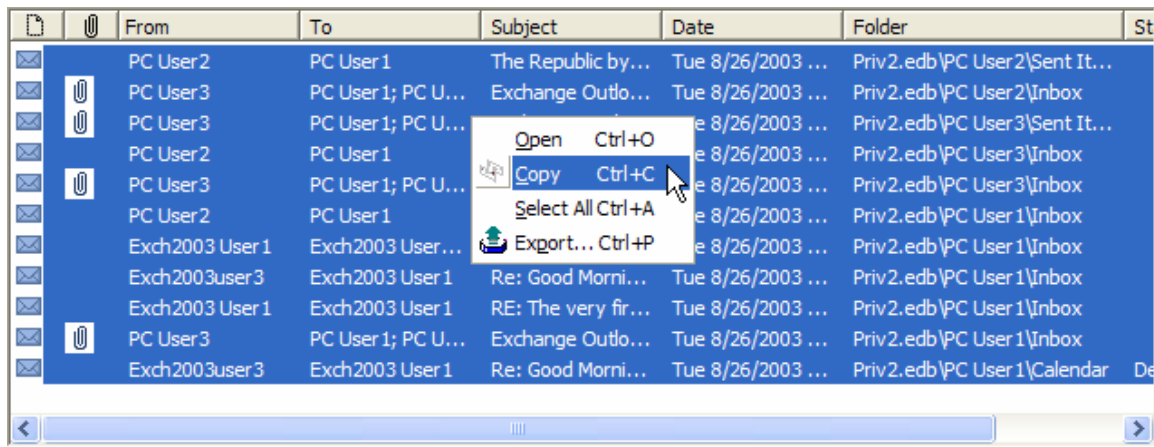
Note: You cannot restore messages from a PST file to an Exchange Server root node.

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.

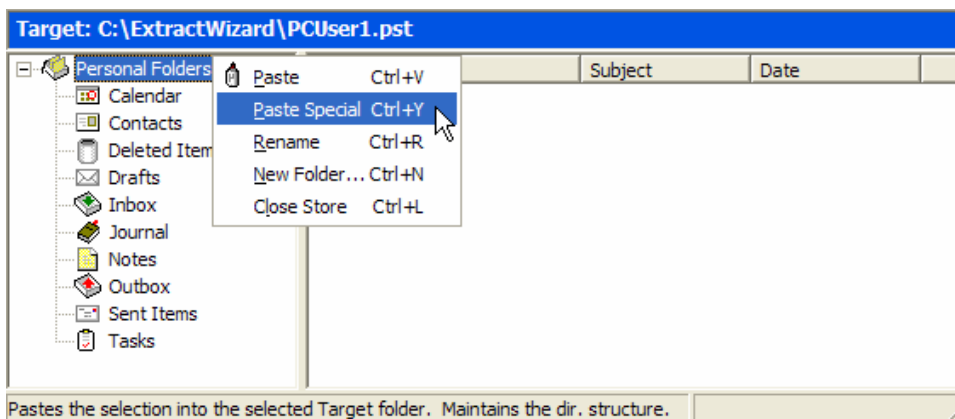
Click **Print** to print the copy report.

Click **Save** to save the copy report as a text file.

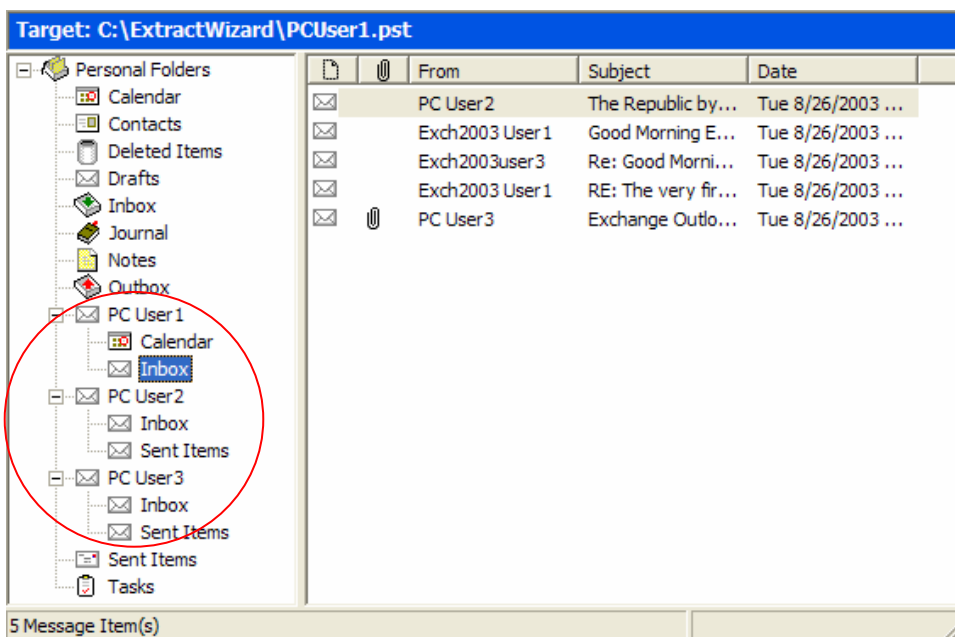
- In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

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.

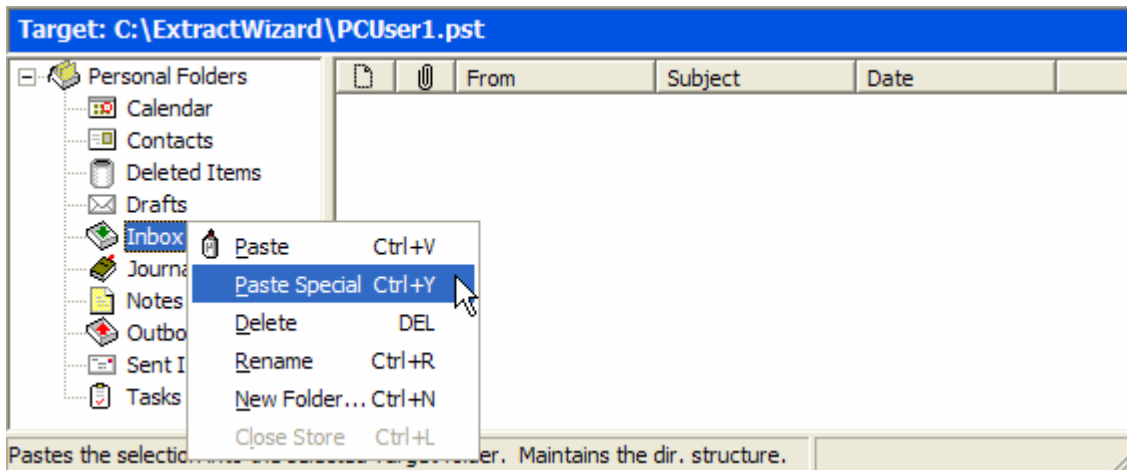


Example 2: Using Paste Special on a target PST root node

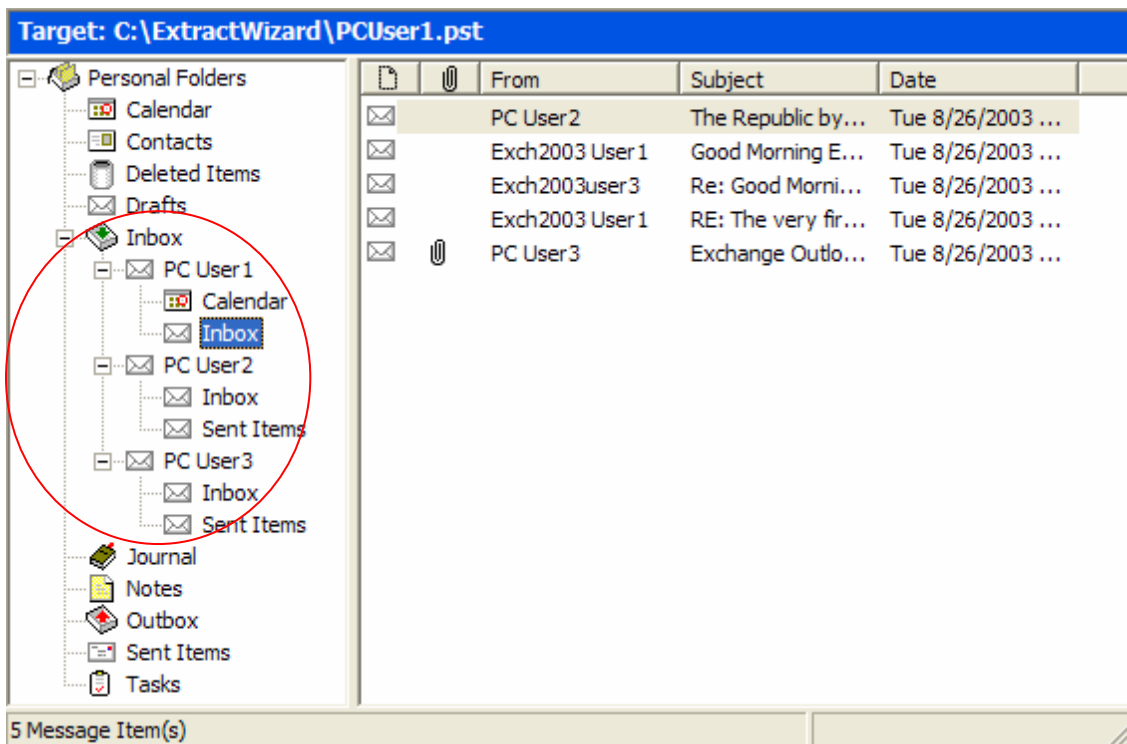


Example 2: Results of using Paste Special on a target PST root node

Chapter 6: Restoring Exchange Data



Example 3: Using Paste Special on a target PST Inbox



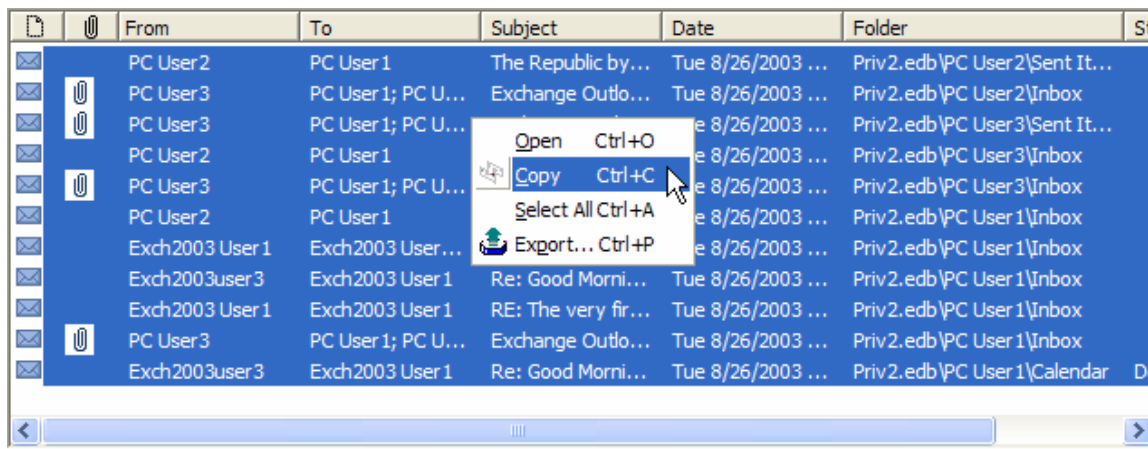
Example 3: Results of using Paste Special on a target PST Inbox

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.

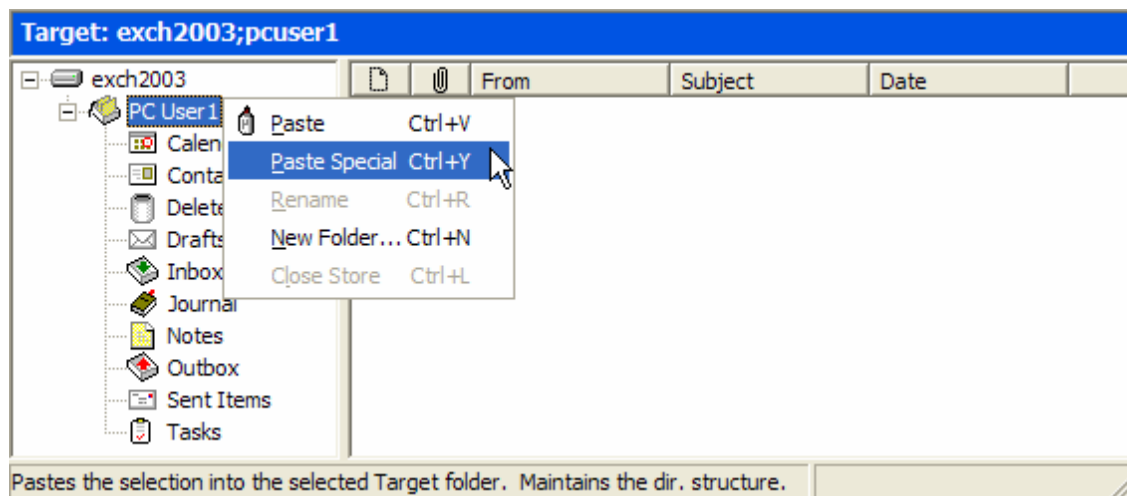
Click **Print** to print the copy report.

Click **Save** to save the copy report as a text file.

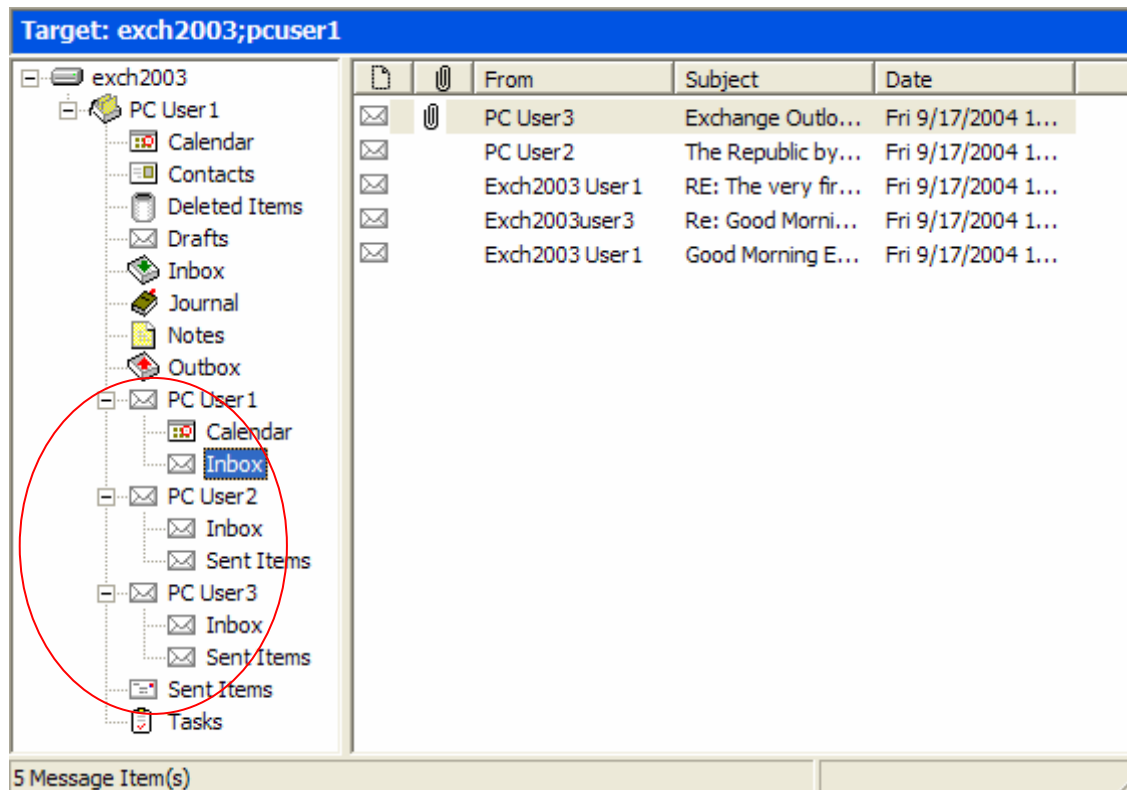
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

Results of Restoring Messages to an Exchange Server Mailbox or Folder with Paste Special

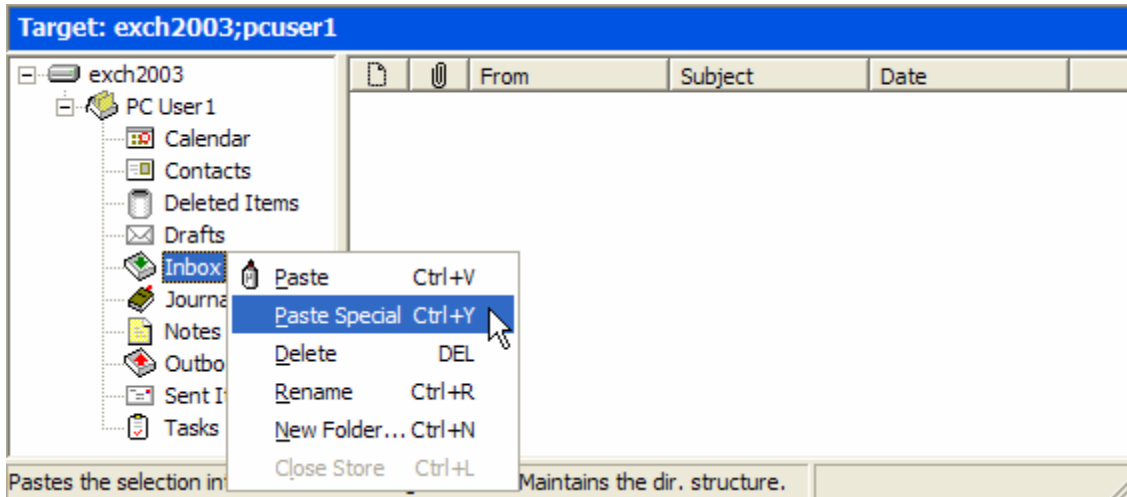
Each mailbox will be a subfolder of the target destination, and all unduplicated messages will be restored. In addition, their directory structure will be preserved.



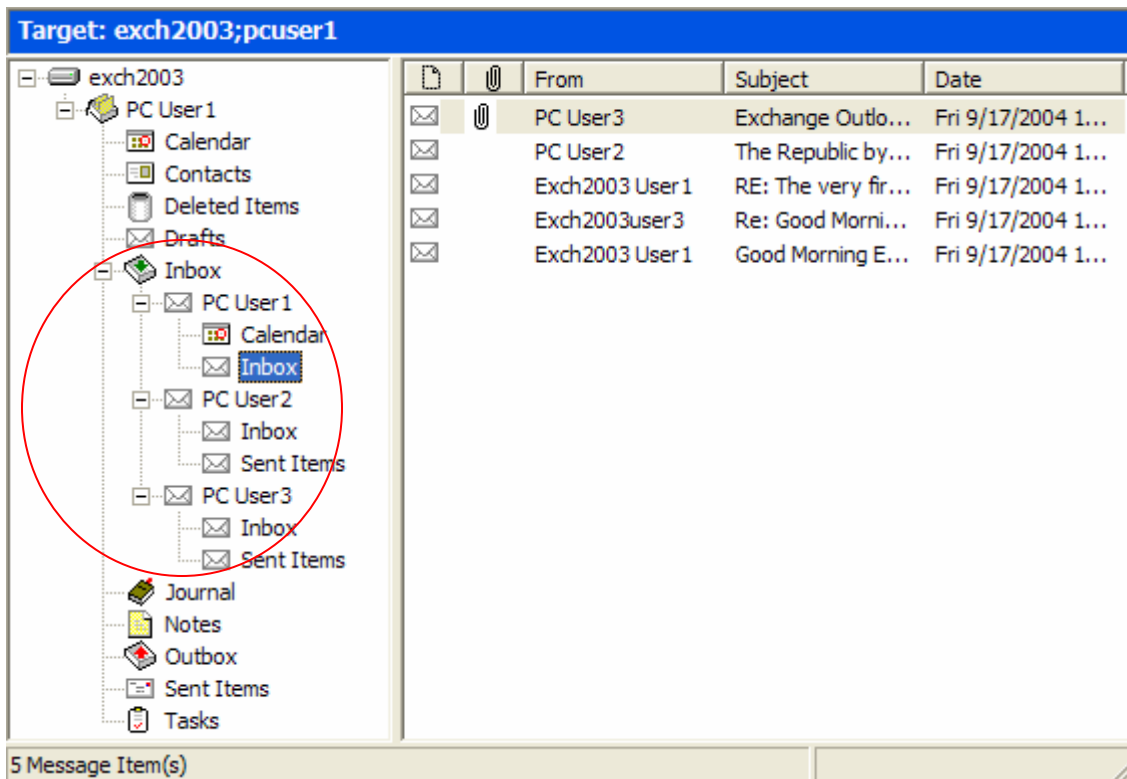
Example 4: Using Paste Special on a target Exchange mailbox



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)

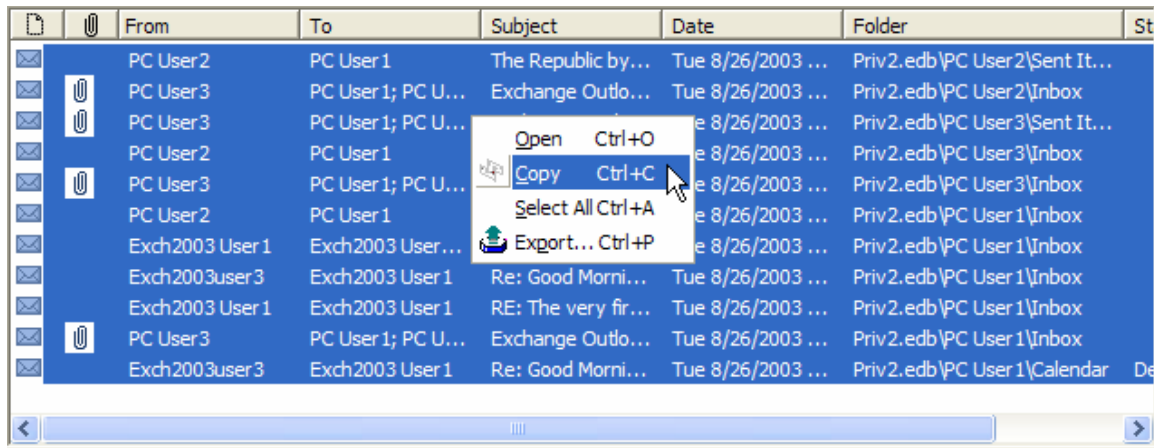
To restore messages to an Exchange server root node with Paste Special

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 70.

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.

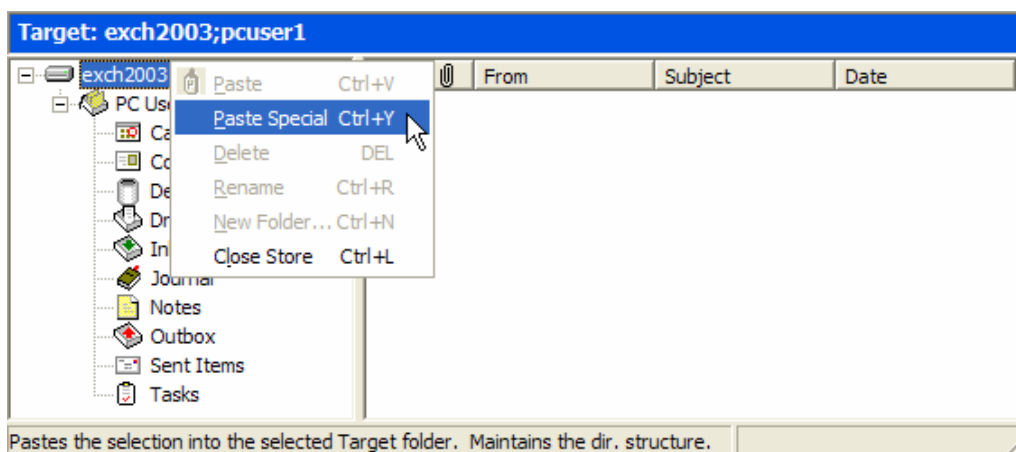


Copying messages from the **Find** dialog box

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.

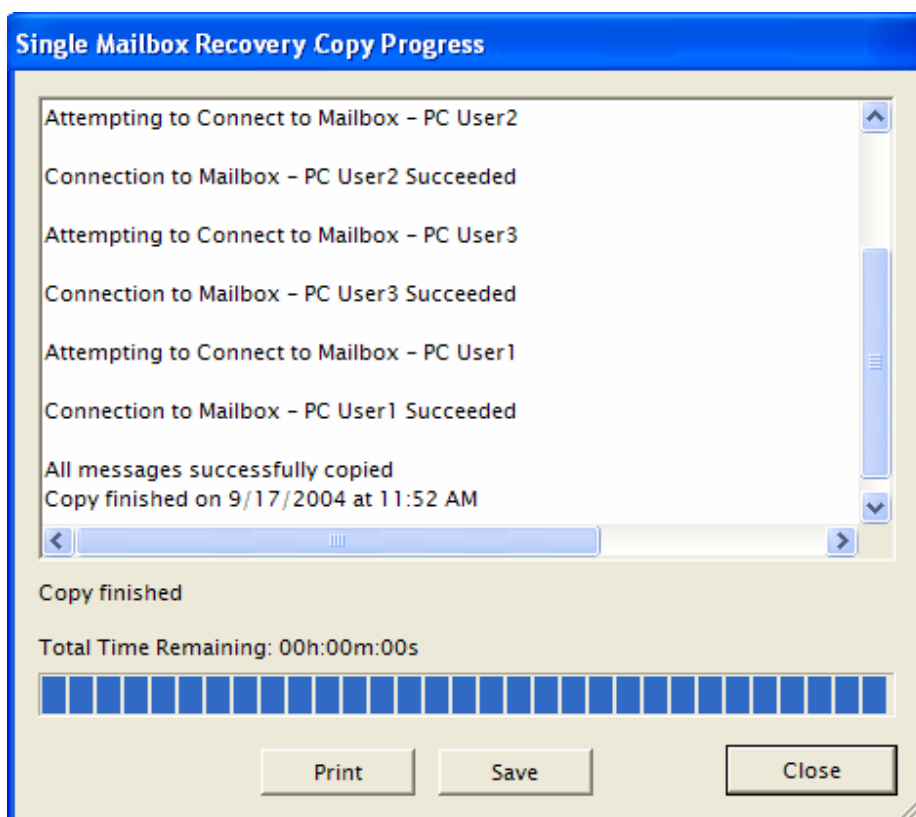
Results of Restoring Messages to an Exchange Server Root Node with Paste Special

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

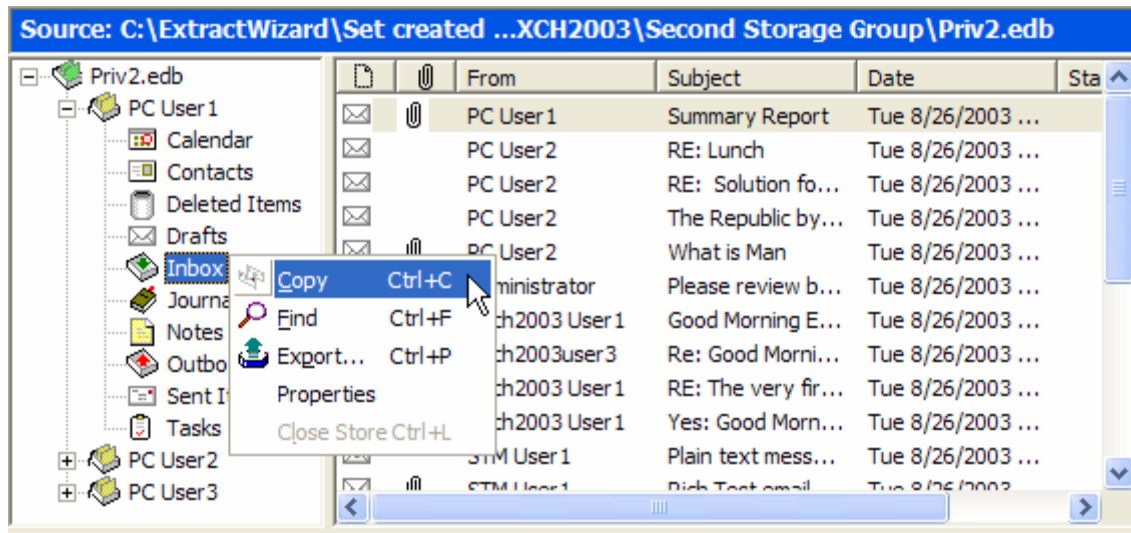
The following instructions show you how to restore a folder to any target destination by using Copy-Paste. Keep in mind that using Drag-and-Drop achieves the same results.

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.

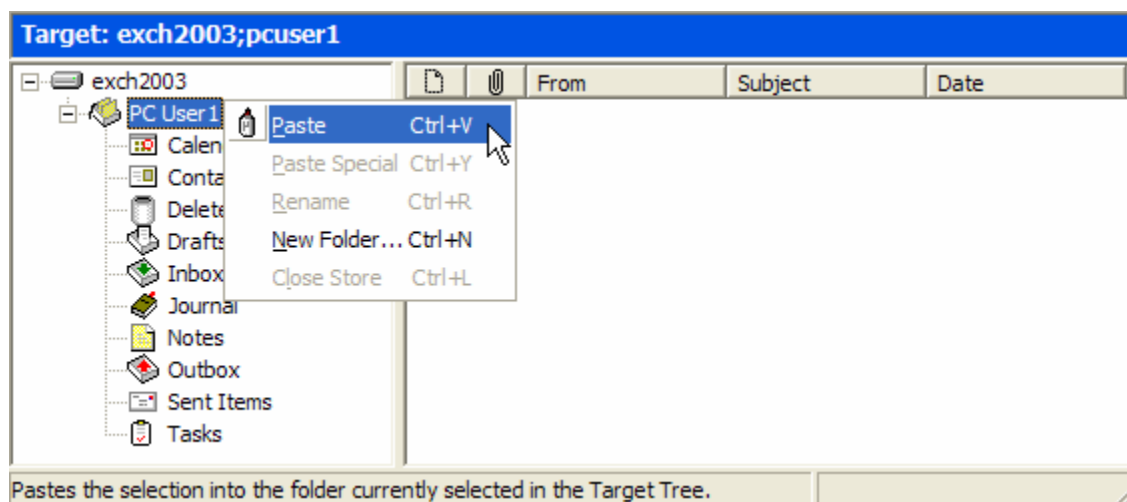
Click **Print** to print the copy report.

Click **Save** to save the copy report as a text file.

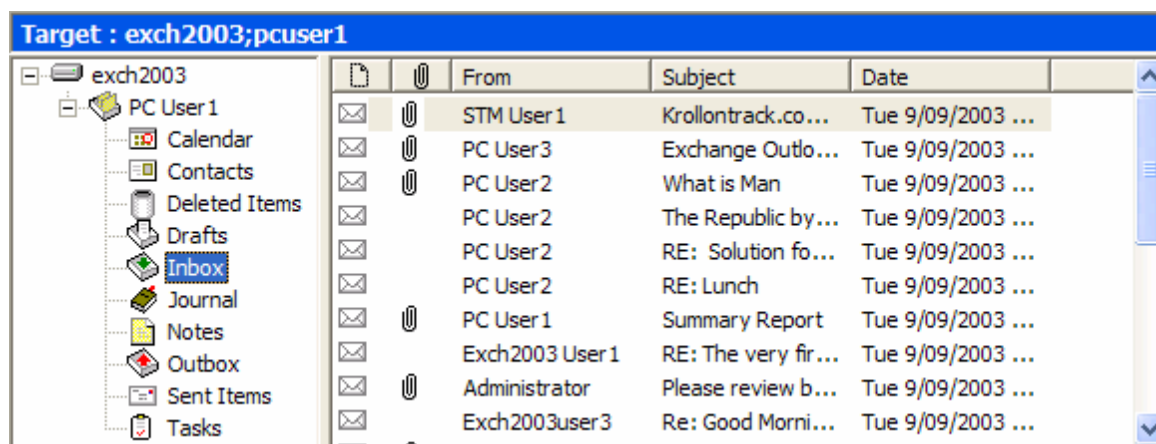
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

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

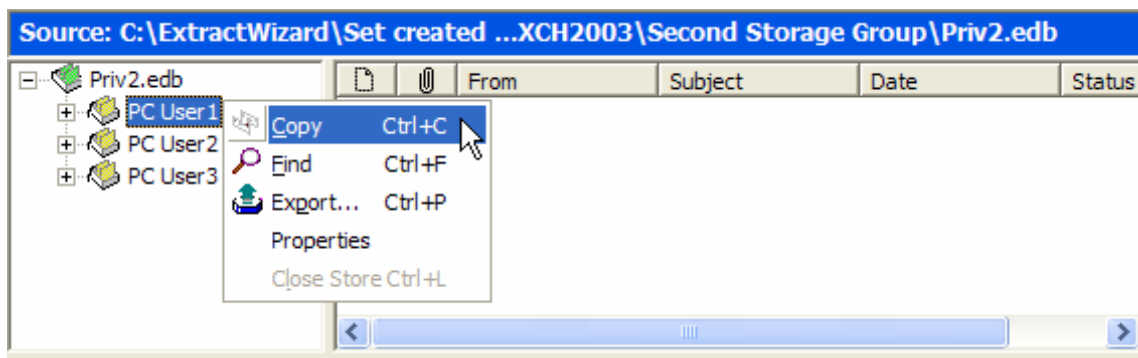
1. You can use **Drag-and-Drop** or **Copy-Paste** to restore a mailbox to a target PST root node or folder, or to an Exchange Server root node, mailbox, or folder. If the mailbox does not exist, a folder with its name will be created.

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 70.

2. 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.

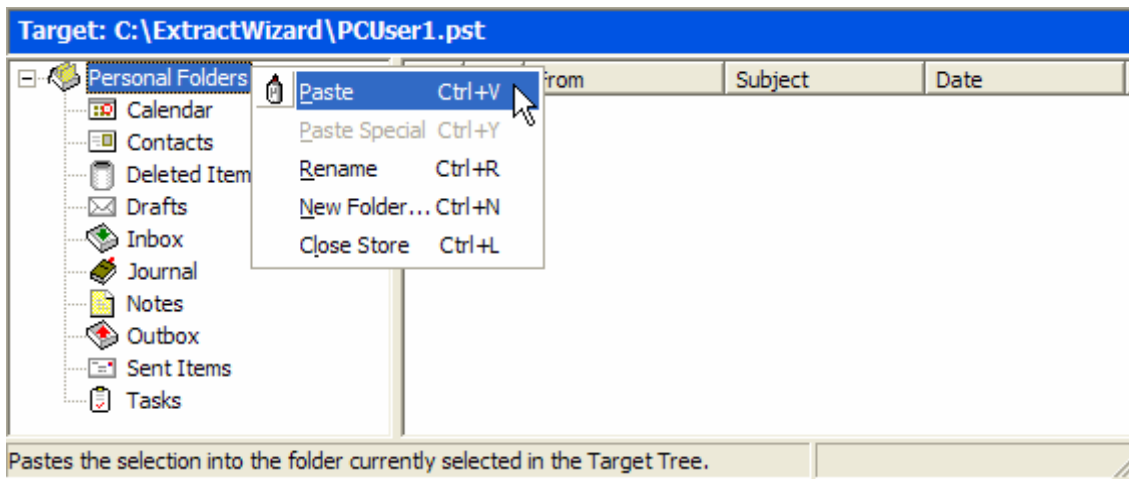
Click **Print** to print the copy report.

Click **Save** to save the copy report as a text file.

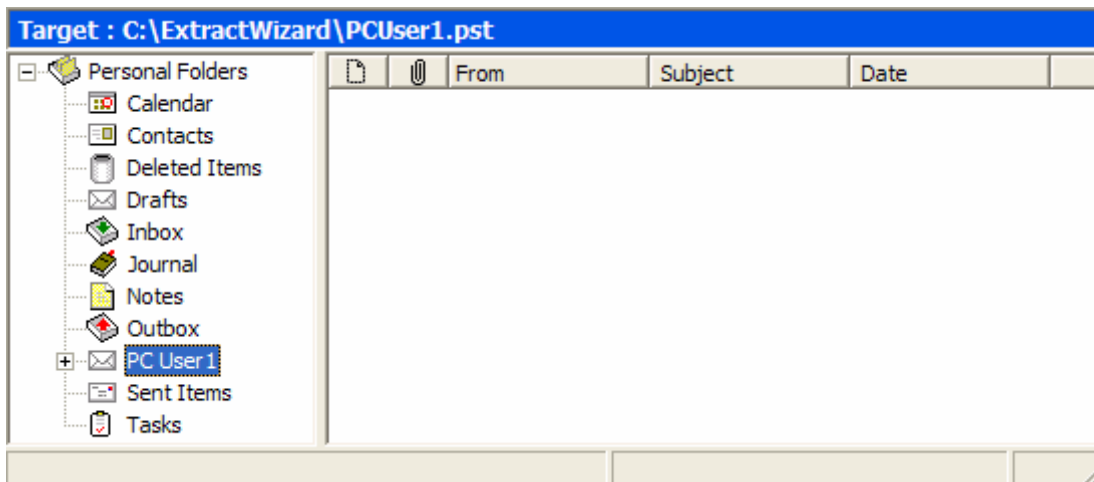
4. In the **Copy Progress** dialog box, click **Close** to return to the Single Mailbox Recovery main window.

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, it will be created.



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.

Important 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 70.*

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.

Chapter 7: 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 Syntax

The syntax is as follows:

<<>> Required for all operations

<> Required for copy/export operations

[] Optional

Command Line Syntax

smb <<Operation>> [*Operation options*] <<Source Store>> [*Source options*]
<Source Folder Path> <Target Store> <Target Folder Path>

<Operation>

- Copy
- Export
- List (report information about the database)

[Operation options]

- f <format>
format:
 - :msg – messages will be exported as .msg (.msg is the default)
 - :txt – message will be exported as .txt
- r
export/copy subfolders
- o <filename>
name of file to output progress information to default is CON

***Note:** If the file exists, Single Mailbox Recovery will append to the output progress file. If the file does not exist, Single Mailbox Recovery will create it.*

- v verbose

<Source Store>

Full path of EDB file or PST file

[Source options]

- l <Log file path>
- t <Temp file path>

<Source Folder Path>

full path, including mailbox to the source folder to be copied/exported or \$ROOT for root datastore folder

<Target Store>

Chapter 7: Using the Command Line

ServerName;mailbox or Full path of PST

Ex. Pcpdc;jJones

Pcpdc;hJohnson

C:\archive.pst

Note: The Target Store is not needed for export.

<Target Folder Path>

Full path, including mailbox to the target folder to be copied/exported to or \$ROOT for root data store folder

Note: 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: Copy pcuser1's inbox and all subfolders from c:\pcdata.edb to the inbox in c:\target.pst. c:\out1.txt will contain the copy report.

smbr -copy -r -o c:\out1.txt c:\pcdata.edb -t c:\ pcuser1\inbox c:\target.pst \$ROOT

<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: Copy pcuser1's inbox and all subfolders from c:\pcdata.edb to user1's inbox on exchange server pcpcdc. c:\out1.txt will contain the copy report.

```
smb-r -copy -r -o c:\out2.txt c:\pcdata.edb -t c:\ pcuser1\inbox pcpcdc;user1 inbox
```

<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 login ID)

<Target Folder Path>	Explanation
inbox	copy to the inbox

Example 3: Export pcuser1's mailbox and all subfolders from pcdata.edb as text to c:\export

```
smb-r -export -r -f:txt -o c:\out3.txt c:\pcdata.edb -t c:\ pcuser1 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

Chapter 7: Using the Command Line

[Source options]	Explanation
-t c:\	temporary file path

<Source Folder Path>	Explanation
pcuser1	source folder to copy

<Target Store>	Explanation
NA	target data store

<Target Folder Path>	Explanation
c:\export	Root folder of the export

Example 4: Provides information on the databases including a list of mailboxes.

smbr -list -o c:\mblist.txt c:\priv1.edb

<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

Important Notes:

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.

Appendix A: Connecting to a LUN in a Snapshot

To restore mailbox data from virtual disk (LUN) in a NetApp storage system snapshot, you must first use the NetApp SnapDrive Connect Wizard feature to connect that LUN to a drive on the PC on which you are running Single Mailbox Recovery. Then use the Single Mailbox Recovery product to access this LUN and restore the mailbox data in question.

Caution: Do not mount a LUN from a NetApp storage system snapshot during a time when you know that a snapshot will be taken of the filer volume containing that LUN. 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 connect to a virtual disk (LUN) in a snapshot using SnapDrive, complete the following steps.

Caution: Do not use the DataONTAP 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.

1. Confirm that the configuration exists to support Single Mailbox Recovery operations

Make sure that the system on which the Exchange server is installed also has SnapManager and SnapDrive installed and has an iSCSI or FCP connection to the NetApp storage disk shelves.

If Single Mailbox Recovery is running on a PC separate from the system running the Exchange server and SnapManager, make sure that that PC also has SnapDrive installed and has an iSCSI or FCP connection to the NetApp storage disk shelves.

2. Using the Microsoft Management Console (MMC) on the system where Single Mailbox Recovery is installed, perform the following actions to launch the SnapDrive Connect Disk wizard:

Expand the Storage option in the left pane of the MMC, if it is not expanded already.

Double-click **SnapDrive** in the left pane of the MMC.

Right-click **Disks** and select **Connect Disk** from the drop-down menu to display the SnapDrive Connect Disk Wizard.

3. In the Connect Disk Wizard, click **Next** to display the Provide Virtual Disk Location panel.

4. In the Provide Virtual Disk Location panel, perform the following actions.

Enter, or use the Browse button to specify, the UNC path to the snapshot and LUN that contains the .EDB file that contains Mailbox data that you want to restore. The syntax of the UNC path that you specify is:

```
\\netapp_device\sharename\~snapshot\exchsnap__exchangeservername_date_time\lunname.lun
```

or

```
\\netapp_device\sharename\~snapshot\exchsnap__exchangeservername_recent\lunname.lun
```

- *netapp_device* is the IP address or hostname of the NetApp appliance that contains the snapshot Mailbox data you want to restore.
- *sharename* is the share containing the .EDB file whose Mailbox data you want to restore.
- *\~snapshot* is the snapshot directory for the share in question.
- *exchsnap__exchangeservername_date_time*

or

```
exchsnap__exchangeservername_recent
```

is the name of the snapshot containing the source .EDB file. The snapshot that you specify must be an Exchange database snapshot for standard backup and management.

Note: If you did not select the Use Unique Name option when you created the SnapManager backup, the most recent snapshot name contains **recent** instead of **date_time**.

- *lunname.lun* is the LUN containing the source .EDB file.

Example:

```
\\fizzle\exchlog1\~snapshot\exchsnap__tm2k302_04-10-2004_07.30.10\tm2k302log.lun
```

Click **Next**.

Result: The Select a Virtual Disk Type panel is displayed.

Notes:

If you cannot see the snapshot directory, make sure that `cifs.show_snapshot` is set to On and `vol option nosnapdir` is set to No on your filer.

In the Select a Virtual Disk Type panel, Dedicated is automatically selected because a snapshot can be connected only as a dedicated virtual disk.

5. Click **Next**.

Result: The Virtual Disk Snapshot Information panel is displayed.

***Note:** In the Virtual Disk Snapshot Information panel, a path is automatically specified where a temporary read-write virtual disk is created when you connect to the disk backed up by the snapshot.*

6. Click **Next**.

Result: The Select Virtual Disk Drive Letter panel is displayed.

7. In the Select Virtual Disk Drive Letter panel, perform the following actions.

Select from the list of available drive letters for the virtual disk you are creating.

Click **Next**.

Result: The Select Initiators panel is displayed.

8. In the Select Initiators panel, perform the following actions.

Select the FCP or iSCSI initiator for the virtual disk you are creating and use the arrows to move it back and forth between the Available Initiators and Selected Initiators list.

Click **Next**.

Result: The Completing the Connect Disk Wizard panel is displayed.

9. In the Completing the Connect Disk Wizard panel, perform the following actions.

Verify all the settings.

If you need to change any settings, click **Back** to go back to the previous Wizard panels.

Click **Finish**.

Result: The MMC is displayed with the newly connected virtual disk now appearing under SnapDrive > Disks in the left panel.

10. After the LUN is mounted, run Single Mailbox Recovery and configure it to use the desired database by browsing to the drive letter of the newly mounted LUN and then to the database file itself. For instructions on restoring data from the mounted LUN, see “Running the Single Mailbox Recovery Data Wizard,” on page 41.

***Caution:** Unmount this LUN as soon as your Single Mailbox Recovery restore operation is completed. 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 this LUN until all the more recent snapshots are deleted.*

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