

# Ontrack® PowerControls™ 4.0 | User Guide

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PowerControls™ Offers Flexibility and Saves Time, Money and Resources When Recovering Exchange Data



# **Ontrack® PowerControls™ 4.0 | User Guide**

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# Introduction

Welcome to Ontrack® PowerControls™ 4.0, the mailbox recovery software that saves time, money, and resources when recovering Microsoft Exchange data.

PowerControls 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 PowerControls 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 PowerControls, 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 PowerControls

There are five primary ways you can benefit from using PowerControls:

**Minimize the time to restore an individual mailbox.** PowerControls 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.** PowerControls 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.** PowerControls 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.** PowerControls eliminates the need to back up mailboxes individually. Normally, companies do a full Exchange backup, and then run a second process to back up "Very Important Mailboxes" (VIMs) individually as well. PowerControls eliminates this second process.

## PowerControls 4.0 Enhancements

PowerControls 4.0 contains all the features and benefits of PowerControls 3.10 plus these exciting new and improved features:

- **ExtractWizard Agent for CommVault Galaxy** – This new Agent offers ExtractWizard support for CommVault Galaxy 5.0 and 5.9. It provides the direct method for cataloging/extracting offline and online Exchange backups and the advanced method to catalog/extract online Exchange backups.
- **ExtractWizard Agent for UltraBac** – This new Agent offers ExtractWizard support for UltraBac 7.1 and 8.0. It provides the direct method for cataloging/extracting offline and online Exchange backups and the advanced method to catalog/extract online Exchange backups.
- **PowerControls Agent for Search Within Attachments** – PowerControls allows you to search attachment text for user-defined keywords or phrases. The Find dialog box has a new “Attachment Text” check box allowing you to search any combination of Attachment Text, Message Subject, Message Body, and Attachment File Name(s).
- **Public Folders as Target** – PowerControls allows you to open public folders as a target for restoring public folders or messages. When restoring folders from a pub.edb database to a public folder target, all folder permissions and messages are transferred to the target folders. In addition, you can restore messages from any database source or search results to a public folder target.
- **Data Store Reporting Capabilities** – PowerControls can now create data store reports. The reports contain statistics about the data store such as sizes and counts for attachments and messages, and may be generated per domain, mailbox, database, and date. The reports may be saved as tab-delimited or comma-delimited text files. Any data store opened as a source can be the source of a report.
- **Save Search Criteria** – PowerControls now allows you to save search criteria to a file for later retrieval. Once you select a saved search profile, the Find dialog box populates all fields with the appropriate values. You can also open and edit previously saved search profiles.
- **Multiple Search Session Capabilities** – PowerControls now lets you open multiple instances of the Find dialog box to search any combination of information stores at the same time. There is no limit other than system resources for the number of concurrent searches you can initiate.
- **Database Integrity Check** – PowerControls now has the Database Integrity Check feature in all versions, which was previously available only in the Free edition. This feature allows you to perform a recursive read of all properties of folders and messages contained in an EDB, mailbox, or folder. It also allows you to perform a database structure test.
- **Command Line Date Filtering** – PowerControls offers you the ability to enter a date range at the command line. During a restore or export operation, PowerControls restores or exports only those messages that fall within the specified date range.
- **Improved ExtractWizard Agent for VERITAS Backup Exec** – ExtractWizard now supports VERITAS Backup Exec 10.0 in both Direct and Advanced modes. This brings the total support for VERITAS Backup Exec to include versions 8.x, 9.x, and 10.0.
- **Improved ExtractWizard Agent for HP Data Storage Protector** – ExtractWizard now supports HP Data Storage Protector 5.5 in both Direct and Advanced modes. This brings the total support for HP Data Storage Protector to include versions 4.1, 5.0, 5.1, and 5.5.
- **Improved ExtractWizard Agent for Tivoli Storage Manager** – ExtractWizard now supports Tivoli Storage Manager 5.3 in both Direct and Advanced modes. This brings the total support for Tivoli Storage Manager to include versions 5.1, 5.2, and 5.3.

## System Requirements

To use PowerControls on your computer, you need the following hardware and software:

- Windows 2000 Server, Windows 2000 Professional, Windows XP Professional, Windows XP Home, or Windows 2003 Server
- Microsoft Outlook 2000 or later

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

- Pentium-class processor
- 256 MB RAM
- 50 MB of free hard disk space for the installation of PowerControls. 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:** PowerControls supports Microsoft Exchange Server 5.5, 2000, or 2003.*

*PowerControls 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. PowerControls is not designed to run from an Exchange Server.*

## Configuring Microsoft Outlook

PowerControls requires that Microsoft Messaging API (MAPI) be installed on your computer. To get full MAPI functionality, do the following before installing PowerControls:

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 PowerControls

Follow these steps to install PowerControls:

1. Install and configure Microsoft Outlook as described in “Configuring Microsoft Outlook.”
2. Turn off any disk utility or antivirus program running in the background.
3. Insert the PowerControls CD-ROM into your CD-ROM drive.
4. 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**.
5. Follow the on-screen instructions.

## PowerControls Editions

PowerControls software editions are licensed based on the number of servers and mailboxes in your environment. The Standard Edition is licensed for use on a single server with up to 100 mailboxes and the Business Edition is licensed for use on a single server with up to 250 mailboxes. The Enterprise Edition is licensed for a customized number of servers and mailboxes. The Commercial Edition is licensed based on an unlimited number of servers and mailboxes for a specified period of time.

PowerControls also offers a free edition. With this edition, you can open an Exchange database (EDB) file, search mailboxes one at a time, and view messages.

PowerControls Edition	PowerControls Feature	Agents Feature EW = ExtractWizard PC = PowerControls
PowerControls 4.0 Standard Edition	100 mailbox enforcement	<ul style="list-style-type: none"> <li>EW Agent for Microsoft® NT Backup (included)</li> <li>EW Agent for VERITAS Backup Exec™ (priced separately)</li> <li>EW Agent for LEGATO NetWorker® (priced separately)</li> <li>EW Agent for Computer Associates® BrightStor™ ARCserve® (priced separately)</li> <li>EW Agent for VERITAS NetBackup™ (priced separately)</li> <li>EW Agent for IBM® Tivoli® Storage Manager (priced separately)</li> <li>EW Agent for HP OpenView® Storage Data Protector (priced separately)</li> <li>EW Agent for CommVault® Galaxy™ Backup &amp; Recovery (priced separately)</li> <li>EW Agent for UltraBac (priced separately)</li> <li>PC Agent for PST Source (priced separately)</li> <li>PC Agent for Advanced Searching (priced separately)</li> </ul>
PowerControls 4.0 Business Edition	250 mailbox and server name enforcement	
PowerControls 4.0 Enterprise Edition	Server name enforcement	
PowerControls 4.0 Commercial Edition	Subscription enforcement	<ul style="list-style-type: none"> <li>All Agents included and fully enabled</li> </ul>
PowerControls 4.0 Free	All features included and partially enabled (open any .edb file, view all mailboxes, search one, copy none)	<ul style="list-style-type: none"> <li>For Direct Method: All Agents included and partially enabled (each Agent allows you to read and view from any source but cannot extract or copy any data out)</li> <li>For Advanced Method: No agents are enabled</li> <li>EW Agents will allow you to save the catalog file</li> </ul>

**Technical Note:** PowerControls can process both Private Information Stores (priv.edb, containing mailboxes) and Public Information Stores (pub.edb, containing public folders). In PowerControls, a private store mailbox = public store root folder. PowerControls will not open either type of .edb file with more mailboxes than originally licensed for. For example, if you purchased the Standard Edition (for 100 mailboxes per server), and try to open an .edb file with 101 mailboxes, the product will refuse to open the file because it exceeds 100 mailboxes.

## Enabling the Licensing Agents

Each edition of PowerControls is distributed with nine ExtractWizard Agents and two PowerControls Agents. The ExtractWizard Agent for Microsoft NT Backup is included with the program at no extra cost, and is enabled by default. All other Agents are shipped with all PowerControls editions in disabled conditions and require a new license .ini file to enable them.

ExtractWizard Agent	Versions Supported	Disk Backup	Tape Backup
Agent for Microsoft® NT Backup	All Versions	.BKF Files*	Microsoft Tape Format (MTF)
Agent for VERITAS Backup Exec™	8.x, 9.x, and 10.0	.BKF Files*	Microsoft Tape Format (MTF)
Agent for LEGATO NetWorker®	6.x and 7.x**	.0 (LEGATO) Files	LEGATO Tape Format
Agent for Computer Associates® BrightStor™ ARCserve®	9.x and 11.x ***	.CTF (ARCserve) Files	ARCserve Tape Format
Agent for VERITAS NetBackup™	4.5 and 5.x	_C1_F (NetBackup) Files	VERITAS NetBackup Tape Format
Agent for IBM® Tivoli® Storage Manager	5.1, 5.2, and 5.3	.BFS and .OST Files	Tivoli Tape Format
Agent for Hewlett-Packard OpenView® Storage Data Protector	4.1 (OmniBack II), 5.0, 5.1, and 5.5	User-Defined File Extension	Hewlett-Packard OpenView Storage Data Protector Tape Format
Agent for CommVault® Galaxy™ Backup & Recovery	5.0 and 5.9	BackupPath	CommVault Galaxy Tape Format
Agent for UltraBac	7.1 and 8.0	Magnetic Library	UltraBac Software Tape Format
PowerControls Agent	Versions Supported	Disk Backup	Tape Backup
Agent for PST as Source	Microsoft Outlook 2000 or later	NA	NA
Agent for Advanced Searching	NA	NA	NA

\* Microsoft NT Backup BKF files and VERITAS Backup Exec BKF files are proprietary to each respective program and are not interchangeable.

\*\* For Legato NetWorker 7.x backups created using Advanced File Backup, Ontrack recommends the Advanced Method for extraction.

\*\*\* For ARCserve 11.x multiplexed backup tapes, Ontrack recommends the Advanced Method for extraction.

### To view the currently enabled Agents

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

## Introduction

### To enable an Agent

1. Contact a sales representative and specify which agent you wish to purchase. A license.ini file containing the newly enabled agent will be sent to you.

***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 PowerControls directory.

### The License .ini File

All PowerControls editions require a license .ini file. The purpose of this file is to let you buy the edition that contains only those features you need. Each edition has a specific .ini file. Before PowerControls enables itself, it checks the .ini file for five things:

- The license .ini file must be valid for PowerControls 4.0. You cannot use a PowerControls 3.10 license .ini file with PowerControls 4.0. Neither can you use a PowerControls 4.0 license .ini file with PowerControls 3.10.
- Mailbox limit if applicable. Applies to the Standard and Business editions.
- Server name enforcement if applicable. Allows users to open EDB files only from the licensed server names. Applies to the Enterprise and Business editions.
- Subscription length if applicable. Example is customers who run computer forensics. Applies to the Commercial edition.
- Agents (ExtractWizard Agents, PowerControls PST Agent)

***Note:** If you have the PowerControls Standard Edition (100 mailboxes), and you attempt to open an EDB file with 101 mailboxes, PowerControls will not open the file.*

***Tip:** To view and/or change the location of the .ini file, see “Setting Preferences” on page 125. In the PowerControls Preferences dialog box, click the Options tab and read the instructions for the “License file name” preference.*

### Example of a license file: PowerControls license.ini file – Standard Edition with 3 Agents enabled

```
=====
;Kroll Ontrack License File
;Any modification will invalidate this file
;Copyright Kroll Ontrack Inc. 2005
;=====
```

```
[Product]
Product=Ontrack PowerControls 4.0
```

```
[Edition]
Standard 8cb9=7OVGKkRQnAutC3kdS3Vy5uti3qz95nM4SAimfw==
```

```
[SLN]
SLN=08 2004 Company A
```

```
[Licensed Mailboxes]
100=juUCKhVQ8gs=
```



[Licensed Agents]

PCA3132-E943F4=7+VxKmRQwQv5CysdC3U75ohi3Ayq5il4nwiSfwmB  
 PCA3162-XAD9GL=7+VxKmRQwQv5Cy4dC3u75pzpaza5ig4NgjqfwmB  
 PCA3192-99XW9E=7+VxKmRQwQv5CyEdC3u75v3i3Azg5kY4SAjjfwmB  
 ;PCA3132-E943F4 = Agent for NT Backup  
 ;PCA3162-XAD9GL = Agent for CA BrightStor ARCserve  
 ;PCA3192-99XW9E = Agent for PST Source  
 ;

[AUTHENTICATION]

Checksum=641e

## About the Exchange Database<sup>1</sup>

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.

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<sup>1</sup> 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 PowerControls

### 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.*

PowerControls 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. PowerControls performs its own verification process and will include the .log and .pat files to determine if it needs them to recover the data.

## Getting Help


Ontrack provides you with the following ways to get help with PowerControls: online Help and technical support.

### Online Help

Online Help includes all of the information in the user 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 user guide. The Search tab offers a full-text search of the user 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 our Technical Support group. 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 PowerControls 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.

### Contact Information

See “U.S. Contact Information” and “International Contact Information” at the beginning of this user guide.

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

### Shortcut Menu

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

### Notes and Tips<sup>2</sup>

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.

**Caution** advises users that failure to take or avoid a specified action could result in loss of data.

## Updating PowerControls

Ontrack periodically improves PowerControls—adding features, making changes based on customer requests, and fixing problems. When these updates (also known as patches) are available to you, EasyUpdate™ can download and install them in minutes.

If there are multiple components for updating, EasyUpdate provides you with a list of options—you can update everything, or select a subset of options.

We recommend running EasyUpdate as soon as you purchase and install PowerControls, just in case there is a program patch that was not included with your version.

### To run EasyUpdate

1. Do one of the following:
  - In PowerControls: On the **Help** menu, click **EasyUpdate**.
  - In Windows: Click the **Start** button, and then point to **Programs**. Point to **Ontrack**, point to **PowerControls**, and then click **EasyUpdate**.
2. Follow the on-screen instructions.

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

# Chapter 1: Using the ExtractWizard Direct Method

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

The Direct Method of extracting backed-up Exchange data reads the tape or disk file directly without needing the original backup software installed. This method is useful if the original backup software is unavailable and you know the tapes on which the Exchange Information Store backups reside. For more information, see “ExtractWizard: Method of Extraction” on page 12.

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

## ExtractWizard: Welcome Page

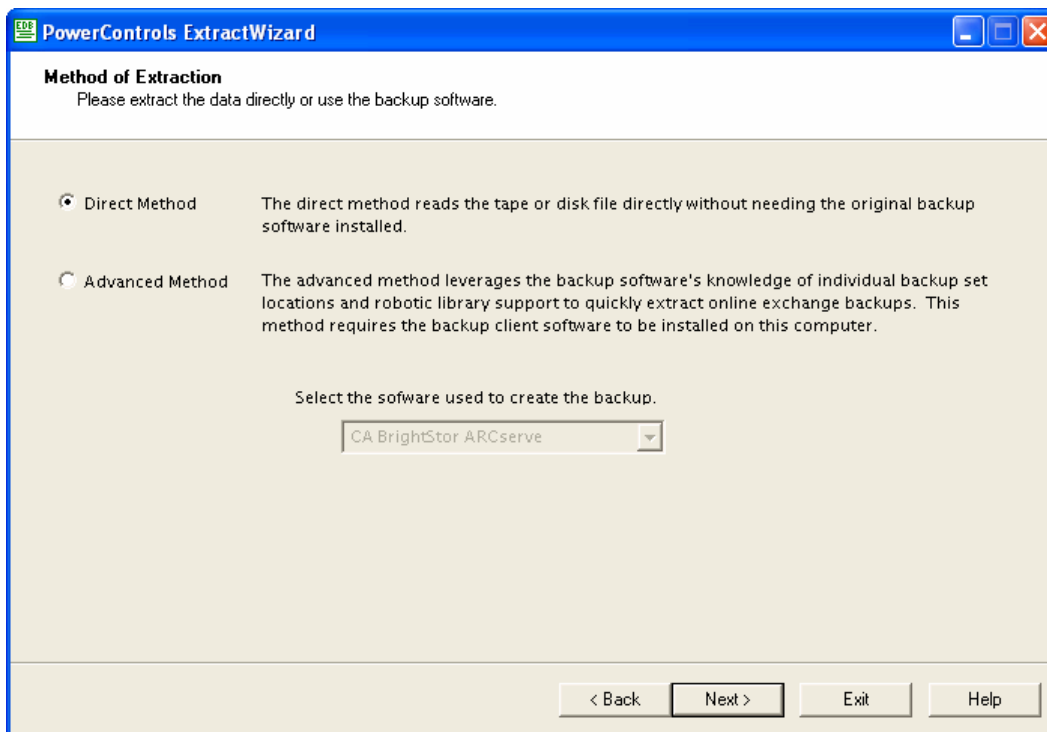
1. Click the **Start** button, and then point to **Programs**. Point to **Ontrack**, point to **PowerControls**, and then click **ExtractWizard**. The first page describes the wizard.



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

## ExtractWizard: Method of Extraction

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



### Direct Method

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

The Direct Method has the following requirements:

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

**Advanced Method**

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

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

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

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

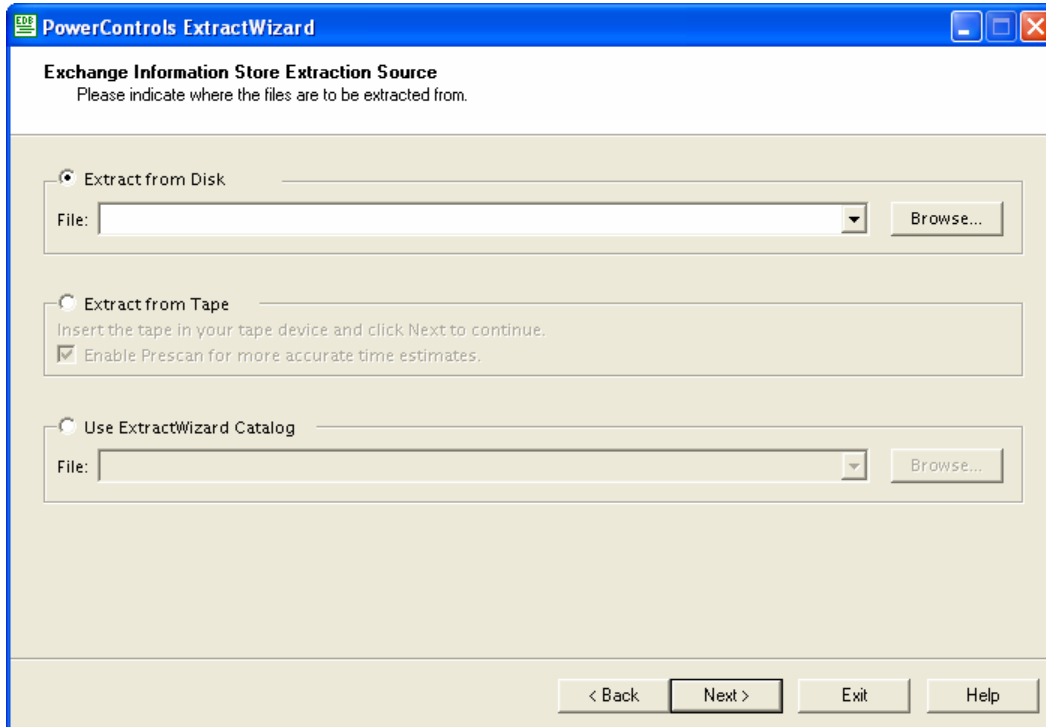
***Note:** The Exchange Emulation method has additional requirements. For information on using the Advanced Method of extracting backed-up Exchange data, see Chapter 2: "Using the ExtractWizard Advanced Method."*

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

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

## ExtractWizard: Exchange Information Store Extraction Source

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



Do one of the following:

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

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

- Select **Use ExtractWizard Catalog**. Then browse to a previously created catalog file, or use the history drop-down menu. Look for the .ewc extension on the file. Click **Next**. In order to select this option, you must have previously created one or more ExtractWizard catalog files. For information on creating an ExtractWizard catalog file, see “Saving an ExtractWizard Catalog File” on page 26.

### Notes:

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



## ExtractWizard: Catalog Performance Options

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

The screenshot shows the 'Catalog Performance Options' dialog box from the PowerControls ExtractWizard. The title bar reads 'PowerControls ExtractWizard'. The main heading is 'Catalog Performance Options' with a sub-instruction: 'Please select the catalog method to use.' There are five radio button options, each with a descriptive text block below it. The first option is selected. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

**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
- ☐ **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.
- ☐ **Catalog specific Job ID for CommVault Galaxy Only:**   
ExtractWizard Agent for CommVault Galaxy allows you to catalog a select set of Job 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. Select one of the following options. Note that all four options will skip known non-Exchange backups (e.g., registry, SQL, Unix, Mac, Netware).
  - **Catalog Online Exchange backup datasets only:** This option will catalog only known online Exchange backup datasets. It will skip all other types of backups. If the backup type is unknown, it will be skipped.
  - **Catalog Online and Offline Exchange backup datasets:** This option will catalog known online and offline Exchange backup datasets. If an unknown backup type is encountered, Extract Wizard will catalog it just in case it is a new backup identifier for Exchange backups. This option is slower because it will catalog more types of backups.
  - **Catalog SSID for Legato NetWorker only:** Enter a specific SSID or a list of SSIDs, separated by commas, in the box. This option is available only if the Legato agent is installed and you selected a tape source. ExtractWizard will catalog only the SSIDs listed. When ExtractWizard detects the end of the SSIDs in the list, it will stop immediately and rewind the tape.

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).

- **Catalog specific object ID for IBM Tivoli only:** Enter a specific object ID or a list of object IDs, separated by commas, in the box. This option is available only if the IBM Tivoli agent is installed. ExtractWizard will catalog only the object IDs listed. When ExtractWizard detects the end of the object IDs in the list, it will immediately stop processing.

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).

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

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

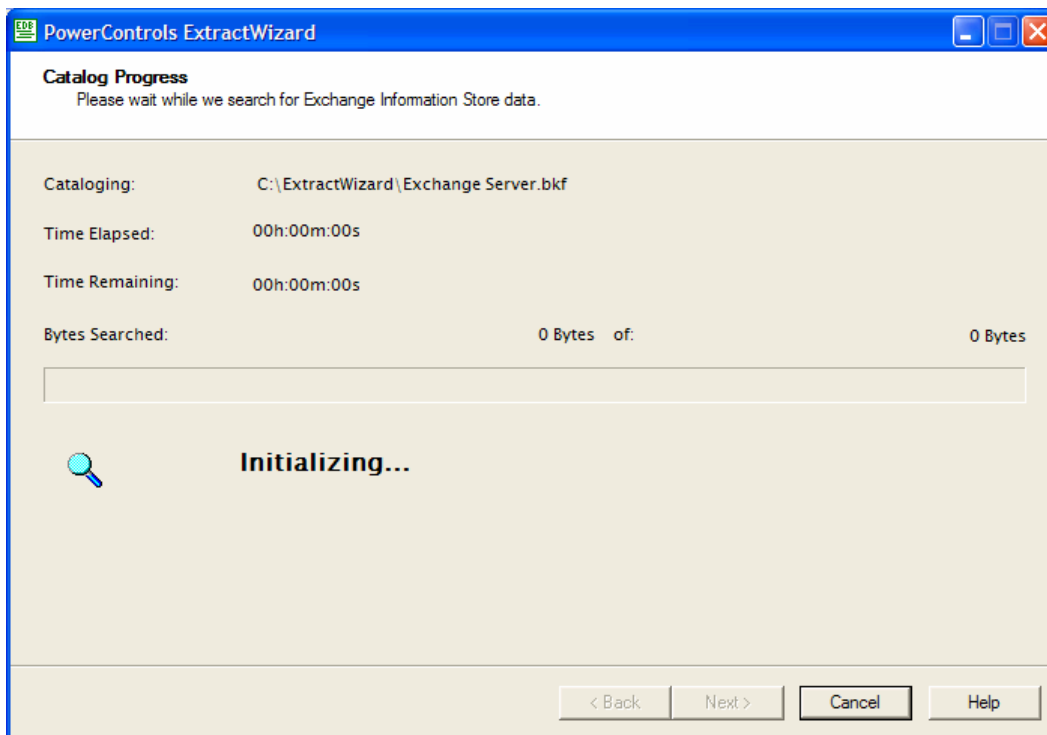
2. Click **Next**.

## 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. In addition, CommVault Galaxy Backup & Recovery displays a pre-cataloging stage (i.e., reading session information from the backup) after the initializing stage.

Do one of the following:

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



## ExtractWizard: Exchange Information Store Selection

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

Step 1: Viewing an Exchange Backup

Step 2: Extracting an Online or Offline Backup

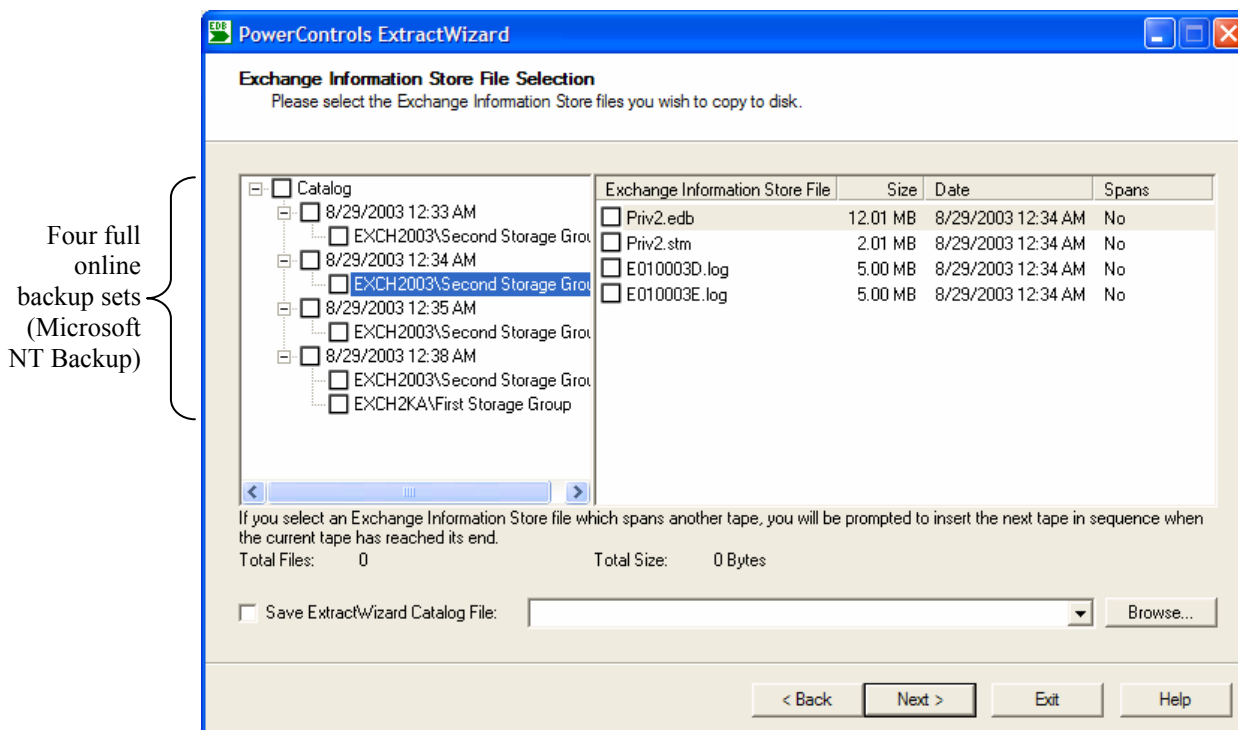
Step 3: Saving an ExtractWizard Catalog File

Step 4: Completing the Exchange Information Store Selection

### Step 1: Viewing an Exchange Backup

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

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



*Viewing a full online disk backup (Microsoft NT Backup)*

## Step 2: Extracting an Online or Offline Backup

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

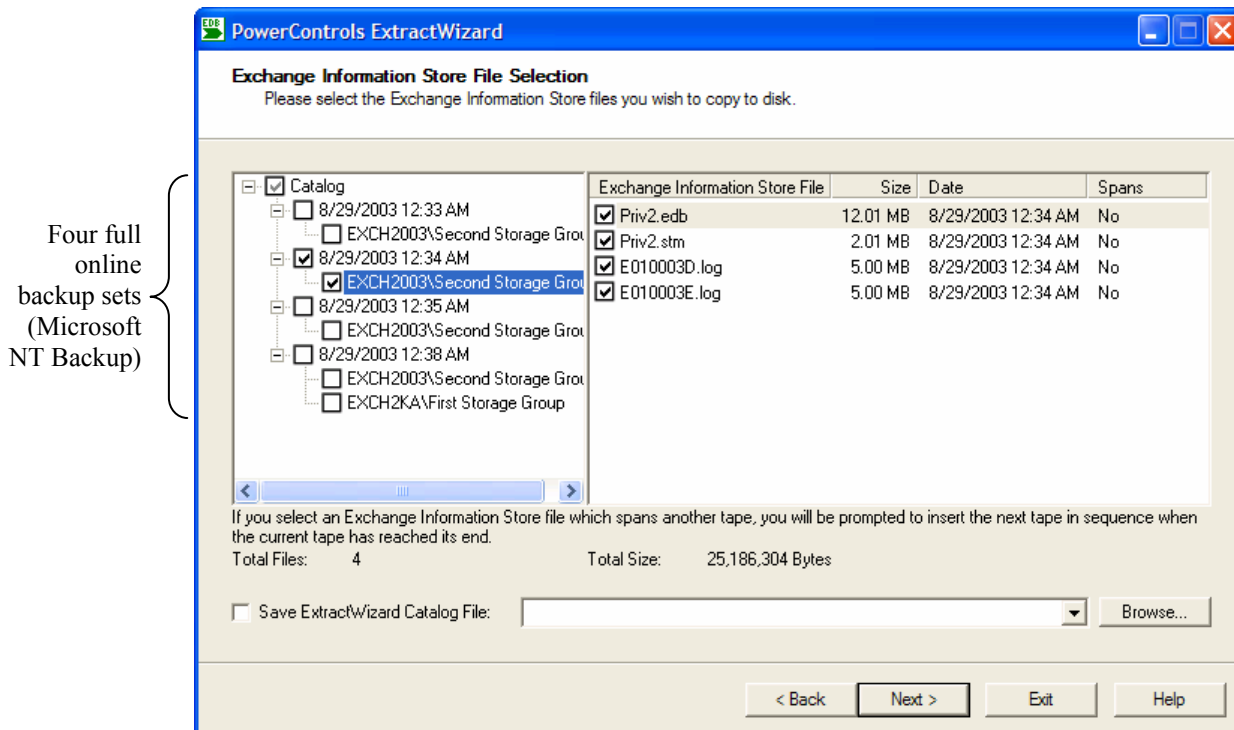
- Microsoft NT Backup, VERITAS Backup Exec, VERITAS NetBackup, and IBM Tivoli Storage Manager can contain multiple backup sets for both disk and tape backups.
- Computer Associates BrightStor ARCserve and LEGATO NetWorker can contain only one backup set for disk, but multiple backup sets for tape.

### To extract a full online (normal) backup

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

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

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



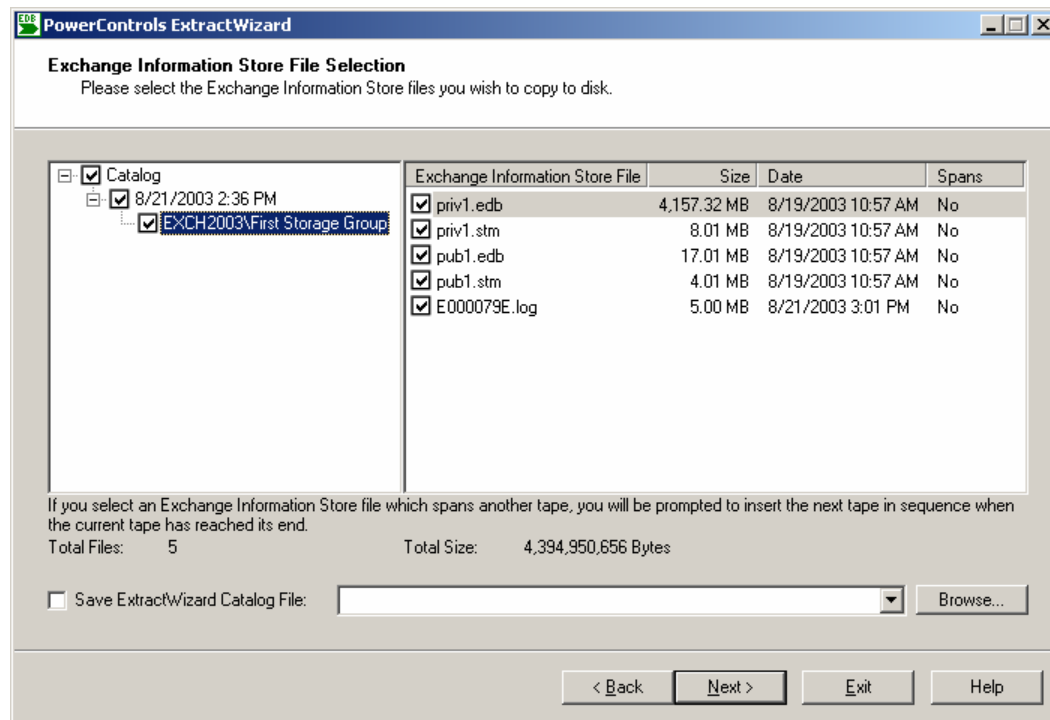
*Extracting a full online disk backup (Microsoft NT Backup)*

## Chapter 1: Using the ExtractWizard Direct Method

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

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

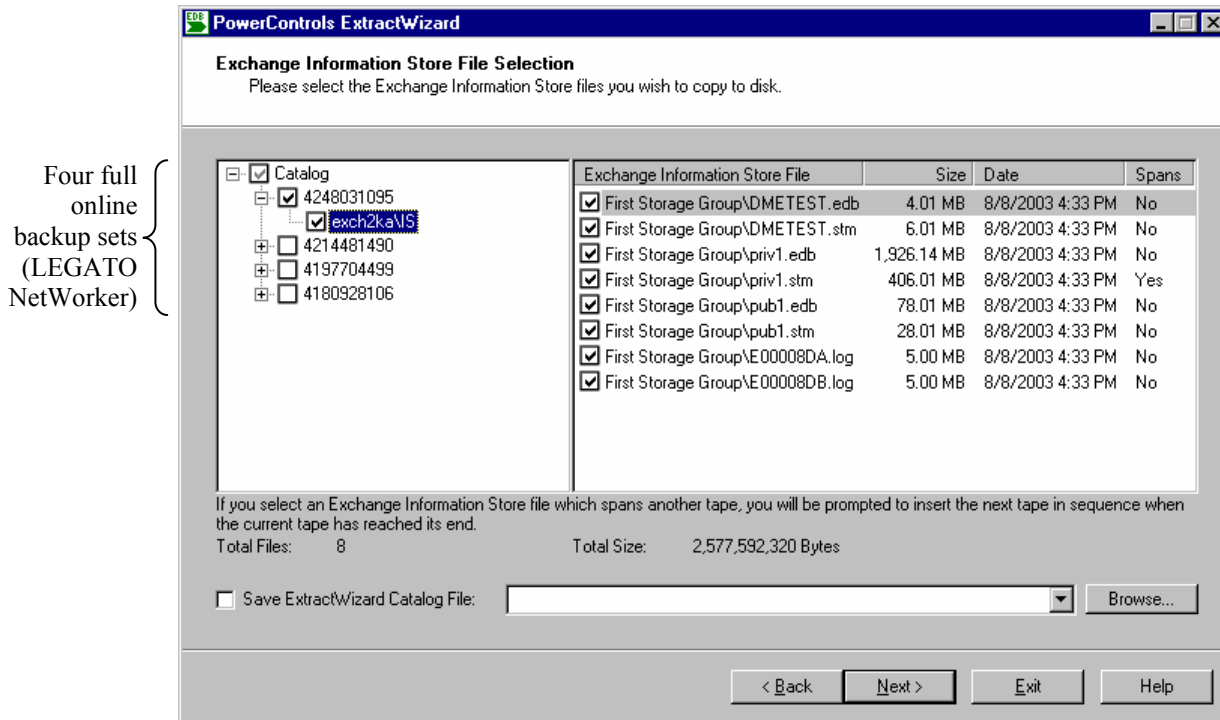
One full  
online  
backup set  
{  
(CA BrightStor  
ARCserve)



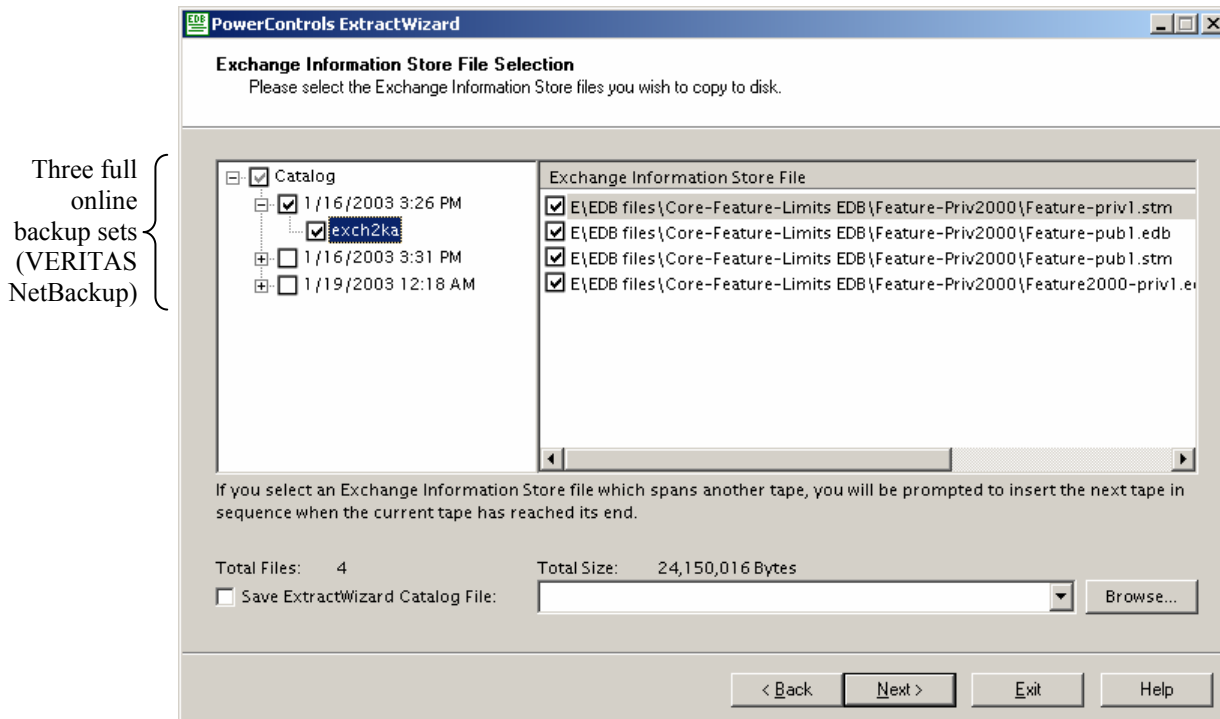
*Extracting a full online disk backup (Computer Associates BrightStor ARCserve)*

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

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



Extracting a full online tape backup (LEGATO NetWorker)

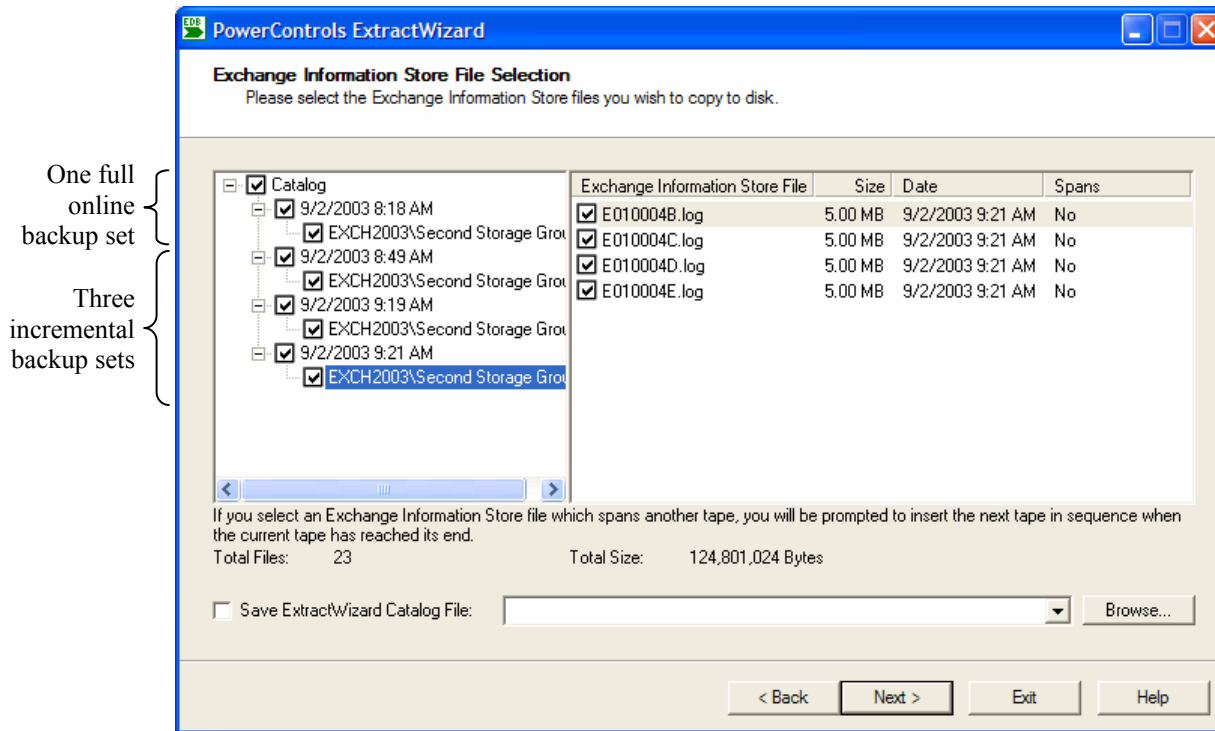


Extracting a full online tape backup (VERITAS NetBackup)

## Chapter 1: Using the ExtractWizard Direct Method

### To extract the last full online and every incremental backup

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

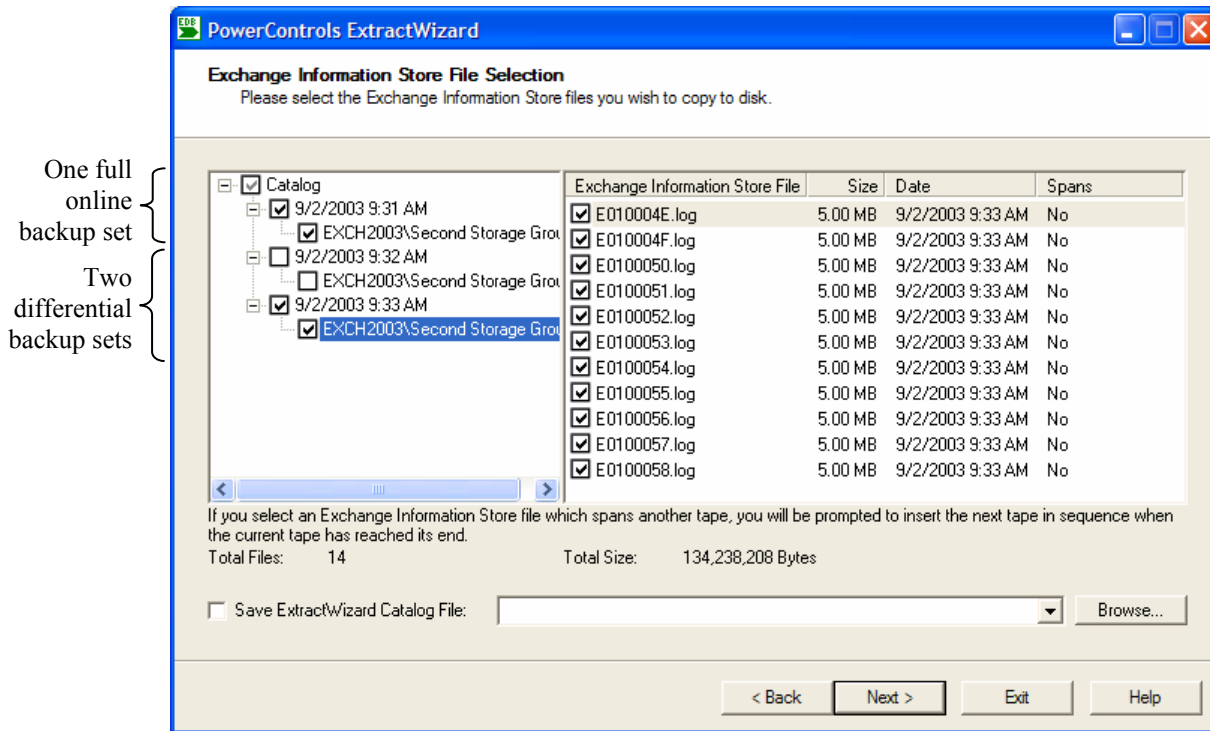


*Extracting the last full online plus every incremental backup to disk (Microsoft NT Backup)*



**To extract the last full online and last differential backup**

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



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

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

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

- “To extract a full online (normal) backup” on page 19.
- “To extract the last full online and every incremental backup” on page 22.
- “To extract the last full online and last differential backup” on page 23.

**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 Direct Method

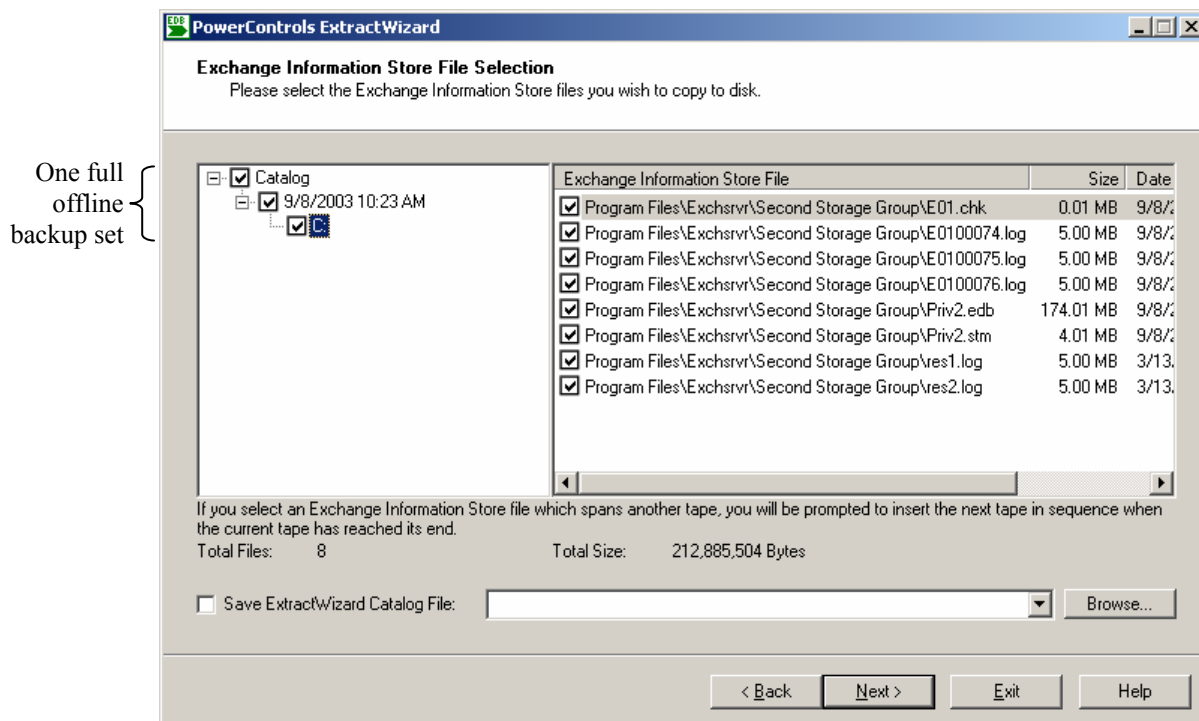
### About Extracting a Full Offline Backup

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

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

### To extract a full offline backup

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



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

### About Extracting a Backup from Exchange 5.5 vs. Exchange 2000/2003

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

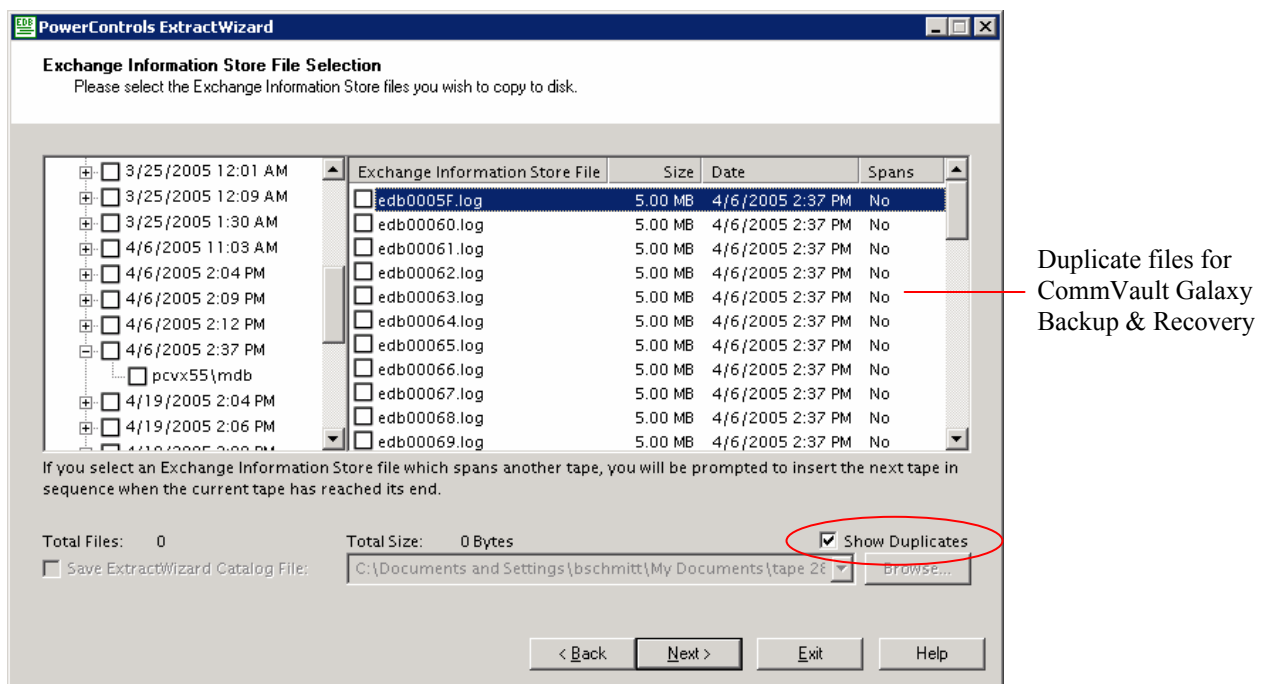
- Exchange 5.5 through Exchange 2000 (SP1) contain .pat (patch) files in their information stores, whereas Exchange 2000 (SP2) and later do not contain .pat files in their information stores.

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

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

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

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



Selecting the “Show Duplicates” check box for CommVault users

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

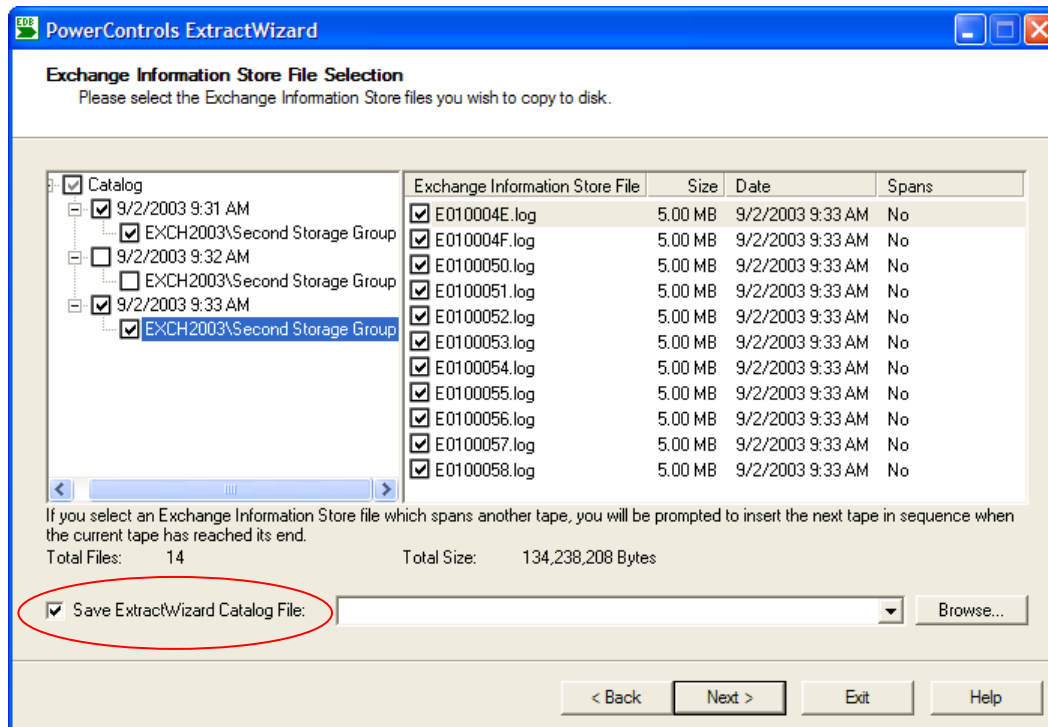
1. Select the **Show Duplicates** check box. If duplicates exist, they will appear on the right side of the ExtractWizard window.
2. Select the duplicate(s) of the file(s) that encountered problems in ExtractWizard or PowerControls, and click **Next**.
3. Complete the remaining steps of the ExtractWizard.

### Step 3: Saving an ExtractWizard Catalog File

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

#### To save an ExtractWizard Catalog File

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

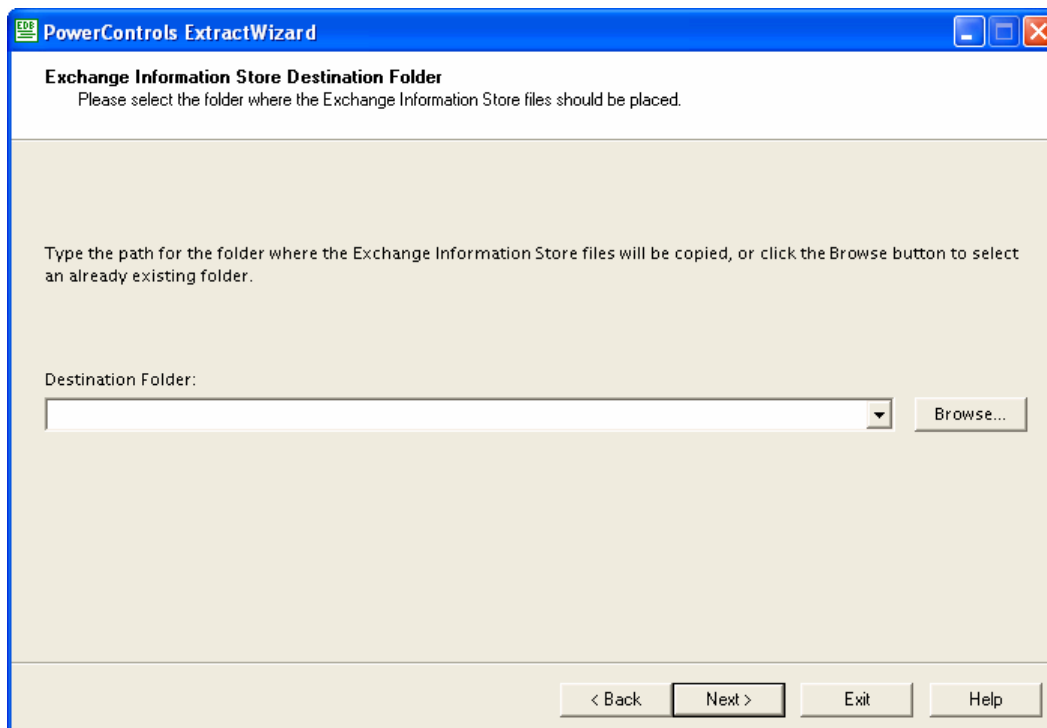


### Step 4: Completing the Exchange Information Store Selection

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

## ExtractWizard: Exchange Information Store Destination Folder

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

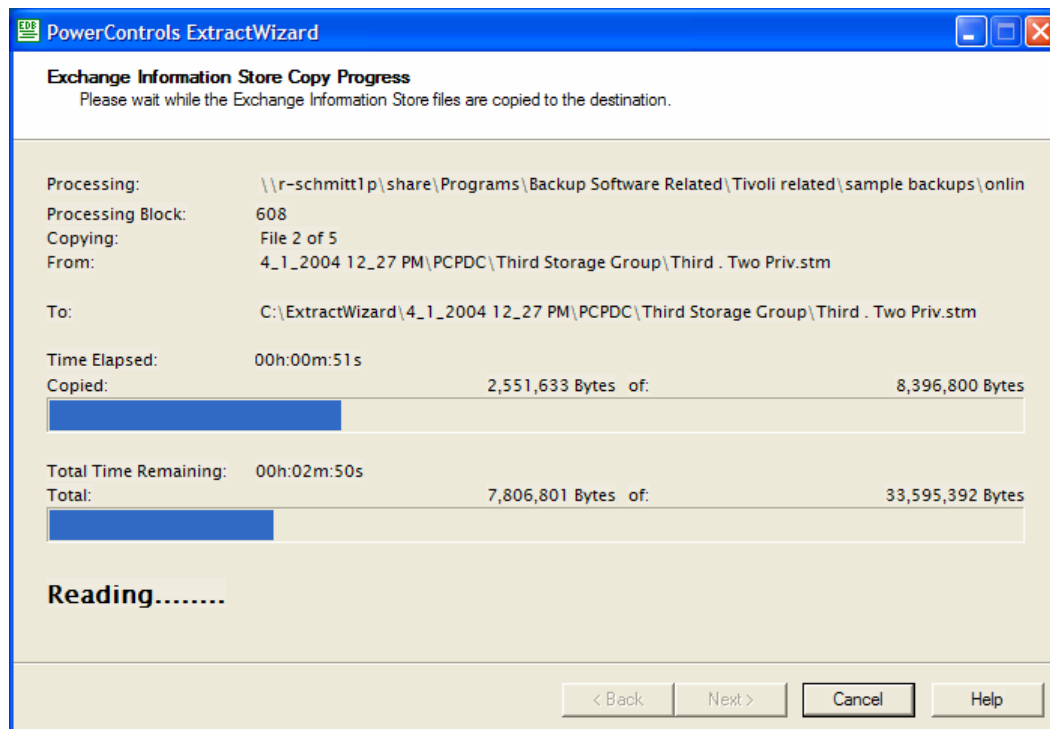


## ExtractWizard: Exchange Information Store Copy Progress

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

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

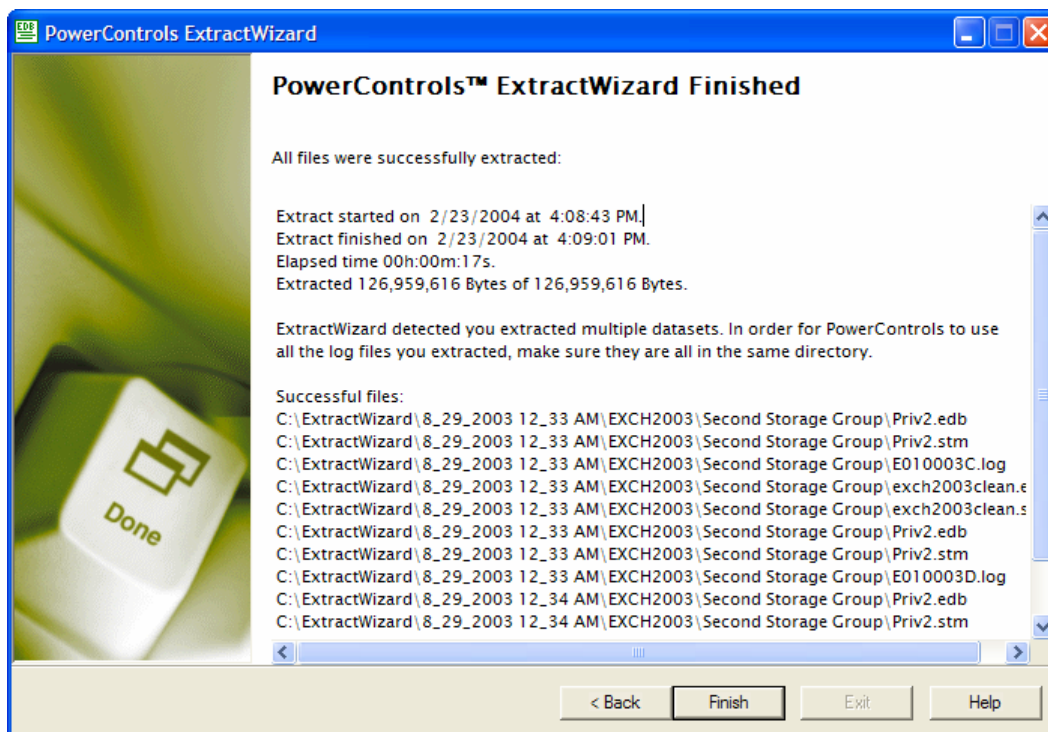
During file extraction, ExtractWizard can be in one of four states: initializing, reading (processing one block at a time), scanning (seeking ahead multiple blocks), and rewinding.



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

## ExtractWizard: Completing the Wizard

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



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

## Organizing the Extracted Files for PowerControls

### 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.

PowerControls 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. PowerControls 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: Using the ExtractWizard Advanced Method

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

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

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

## **ExtractWizard Advanced Method: Two Modes of Operation**

The ExtractWizard Advanced Method offers you two choices:

- **API Method:** ExtractWizard communicates directly with the backup software server through methods provided by the client side .dll files. The API method is used for these types of backup software:
  - ⇒ IBM Tivoli Storage Manager
  - ⇒ Legato NetWorker
- **Exchange Emulation:** ExtractWizard appears as an Exchange server to the backup software. You run the backup software and extract the Exchange data to the computer running ExtractWizard. The Exchange Emulation method is used for these types of backup software:
  - ⇒ Microsoft NT Backup
  - ⇒ HP OpenView Storage Data Protector
  - ⇒ VERITAS Backup Exec
  - ⇒ VERITAS NetBackup
  - ⇒ Computer Associates BrightStor ARCserve

## **Requirements for Using the ExtractWizard Advanced Method**

The API and Exchange Emulation advanced methods share two main requirements:

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

***Note:** The Exchange Emulation method has additional requirements. For more information, see page 44.*

## Using the API Method

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

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

- IBM Tivoli Storage Manager
- Legato NetWorker

### Using the API Method for IBM Tivoli Storage Manager

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

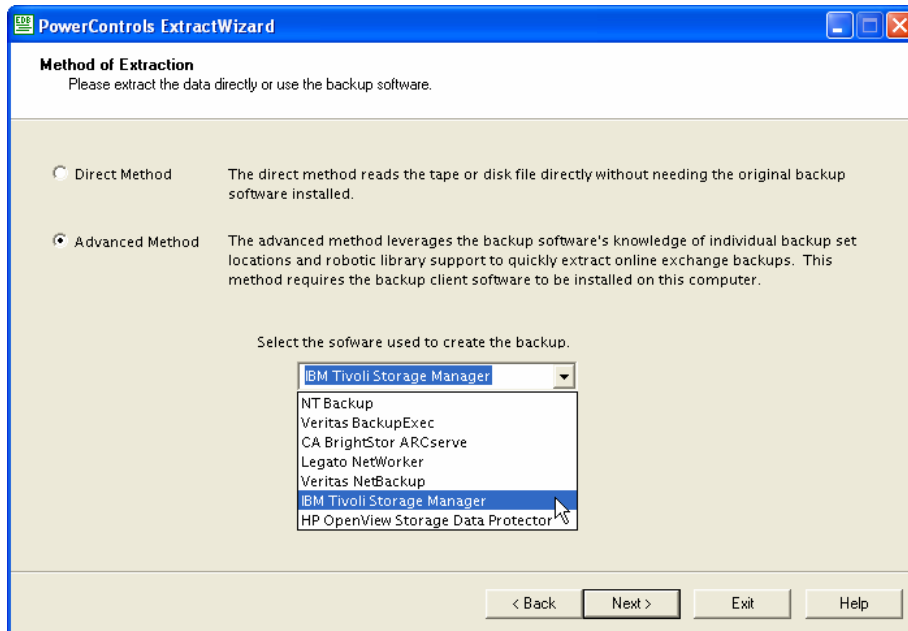


3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location.

The license file controls which ExtractWizard agents are active. For more information, see “Enabling the Licensing Agents” on page 5.

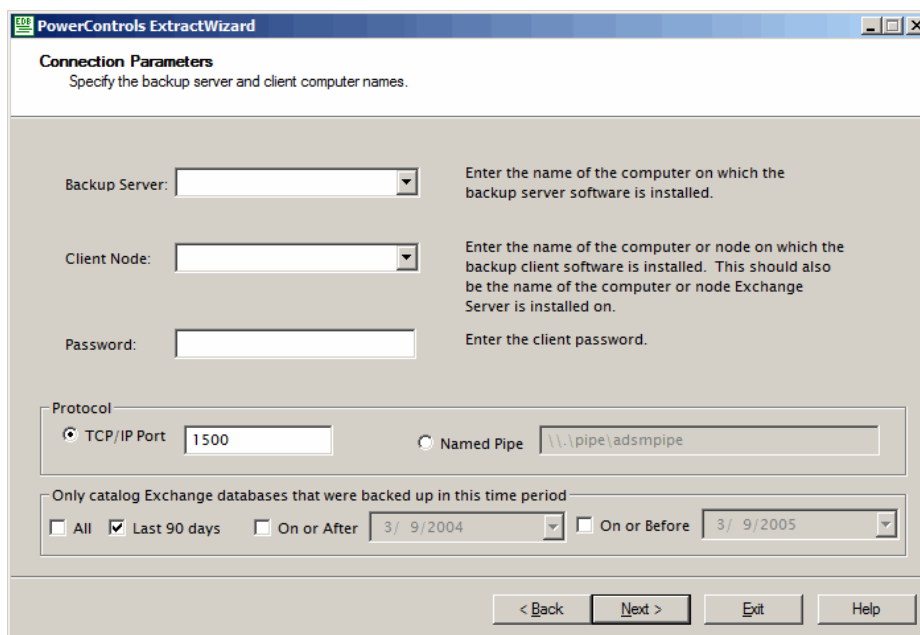
4. Click **Next**.

The **Method of Extraction** page of the ExtractWizard offers two methods of extracting backed-up Exchange data. For more information on these two methods, see page 12.



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

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



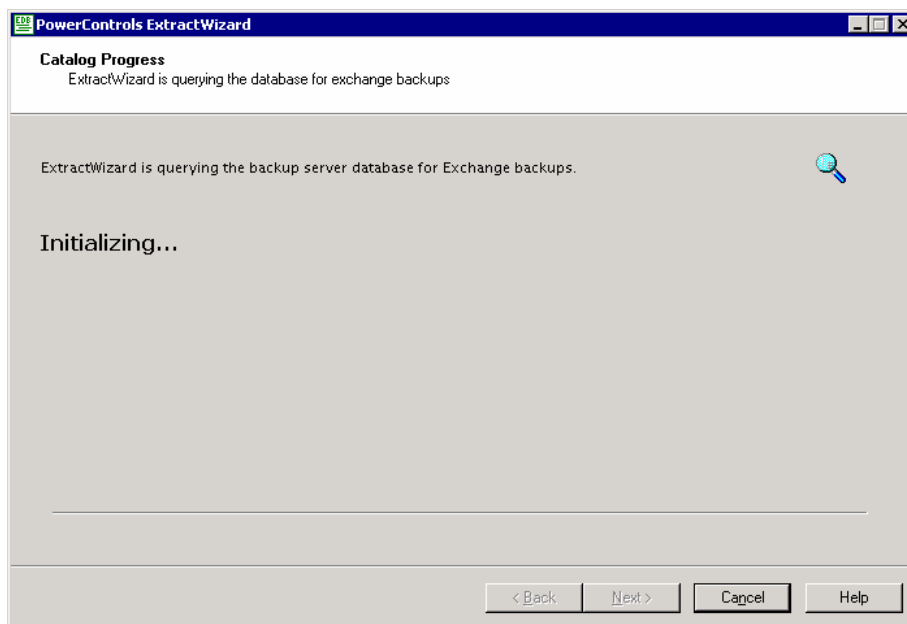
*Connection parameters for IBM Tivoli Storage Manager*

## Chapter 2: Using the ExtractWizard Advanced Method

8. Specify the connection parameters:

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

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



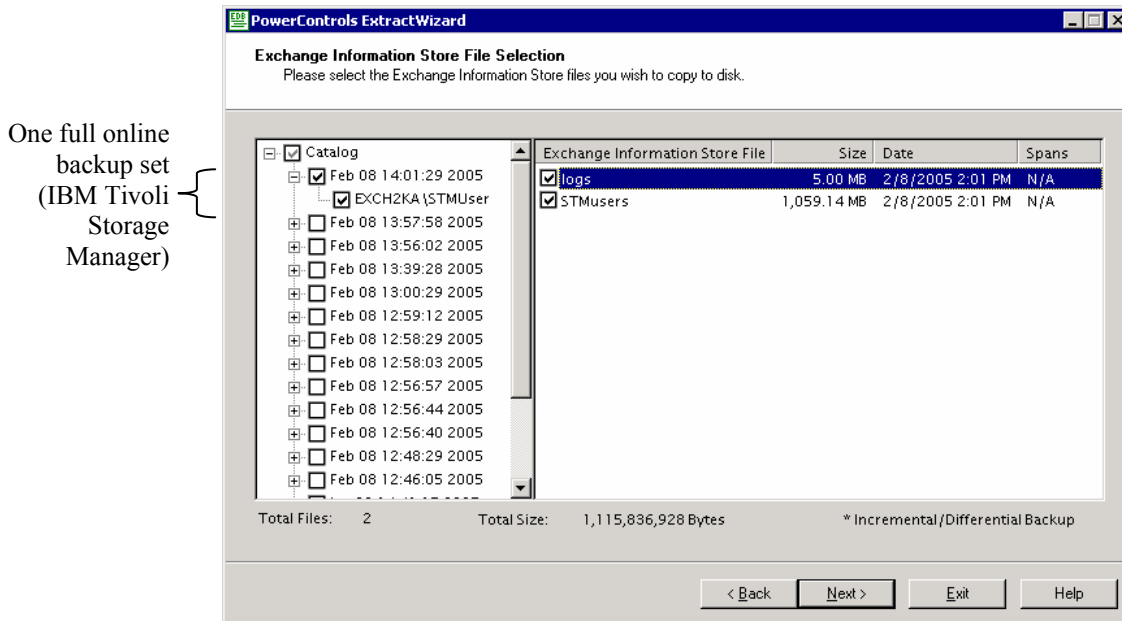
9. Do one of the following:

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

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

In the following example, IBM Tivoli Storage Manager contains multiple backup sets and volumes. Each backup set lists the session day and time (e.g., Feb 08 14:01:29 2005). Each volume lists the computer name and volume name (e.g., EXCH2KA\STMUser). The objects belonging to the volume appear on the right side of the window. One object contains the log files, and the other object contains the .edb and .stm files.

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

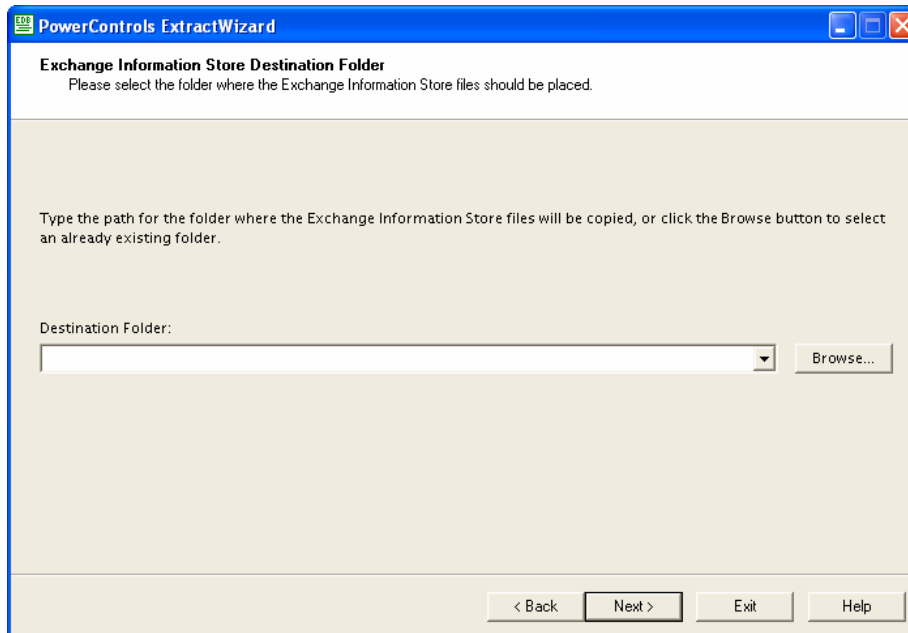


*Extracting a full online disk backup (IBM Tivoli Storage Manager)*

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

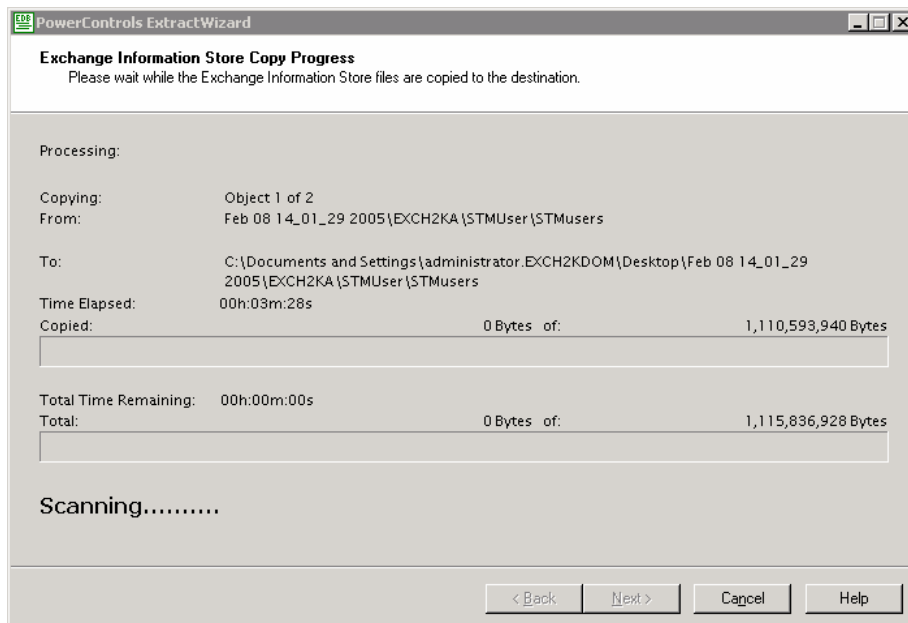
## Chapter 2: Using the ExtractWizard Advanced Method

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



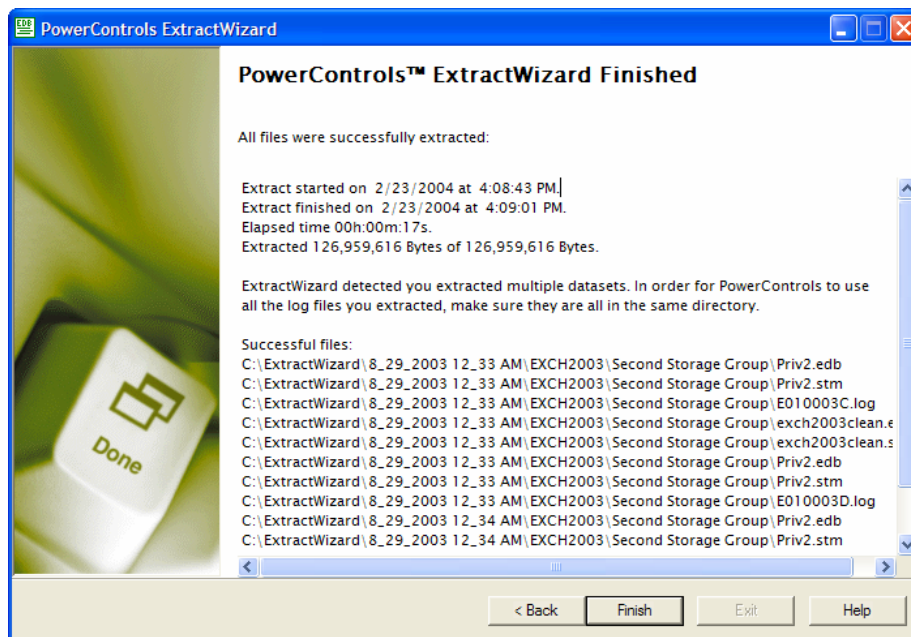
14. Under **Destination Folder**, specify a location for the extracted files.
15. Click **Next**. The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

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



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

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



17. If you are satisfied with the results, click **Finish**.
18. If you extracted multiple data sets, see “Organizing the Extracted Files for PowerControls” on page 29.

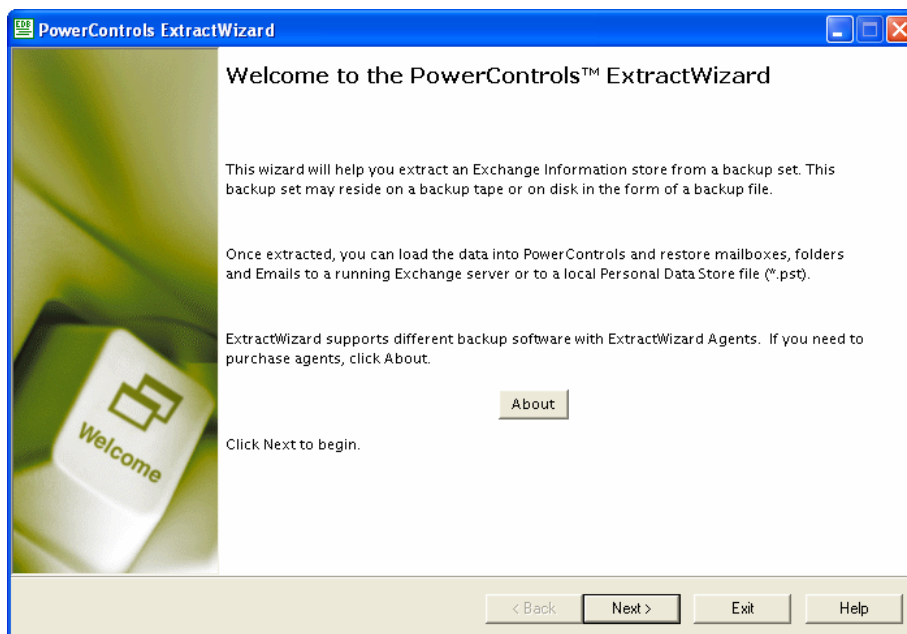
### Using the API Method for Legato NetWorker

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

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

#### To use the API Method for Legato NetWorker

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



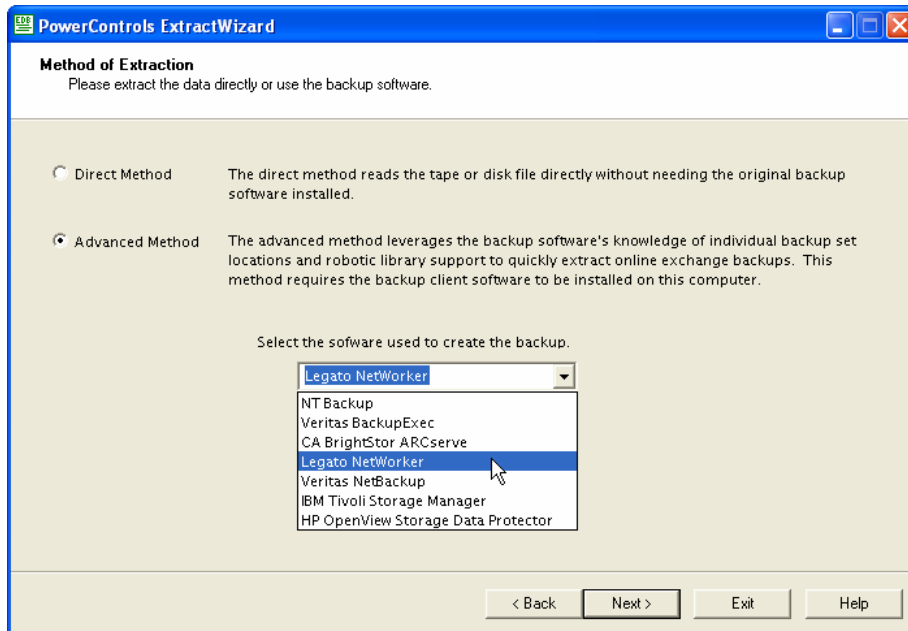
3. (Optional) To change the location of the license file, click **About** and then click **License Info**. Under **License File Name**, specify a new location.

The license file controls which ExtractWizard agents are active. For more information, see “Enabling the Licensing Agents” on page 5.

4. Click **Next**.

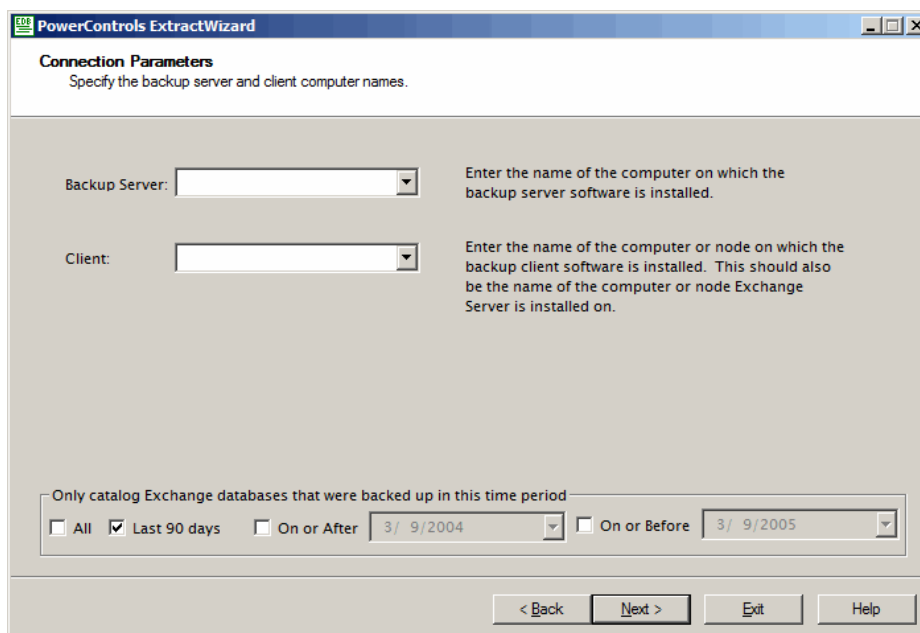


The **Method of Extraction** page of the ExtractWizard offers two methods of extracting backed-up Exchange data. For more information on these two methods, see page 12.



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

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



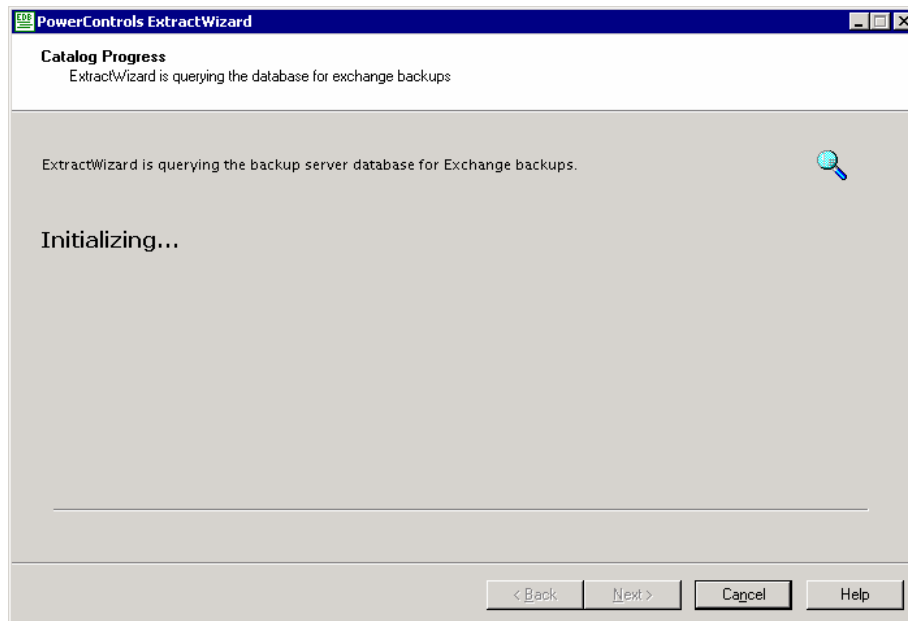
*Connection parameters for Legato NetWorker*

## Chapter 2: Using the ExtractWizard Advanced Method

8. Specify the connection parameters:

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

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



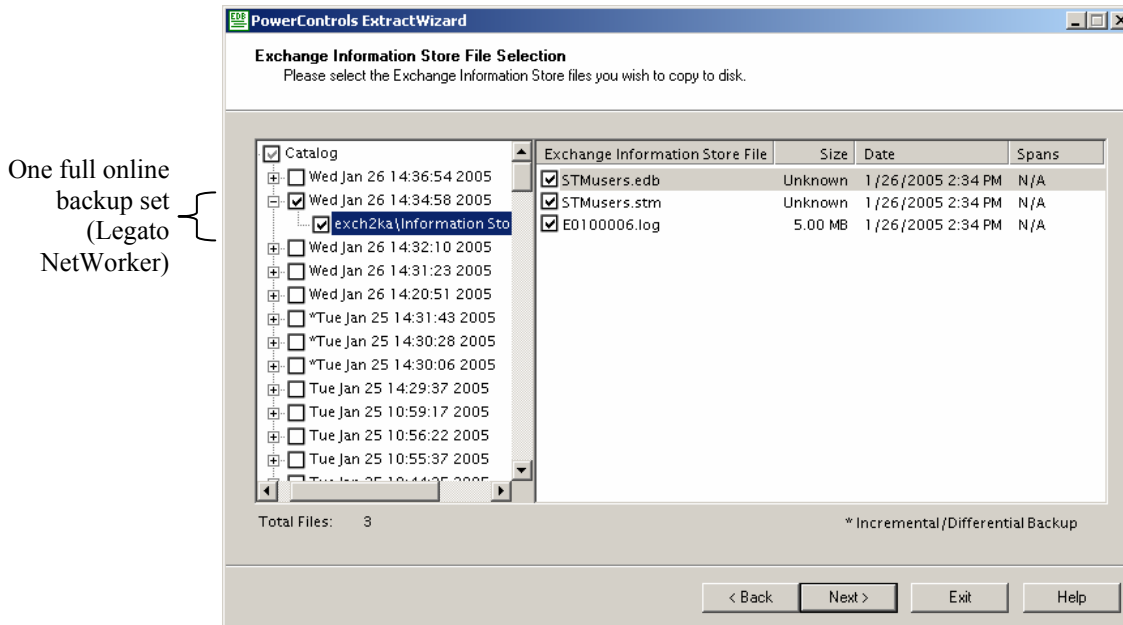
9. Do one of the following:

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

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

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

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

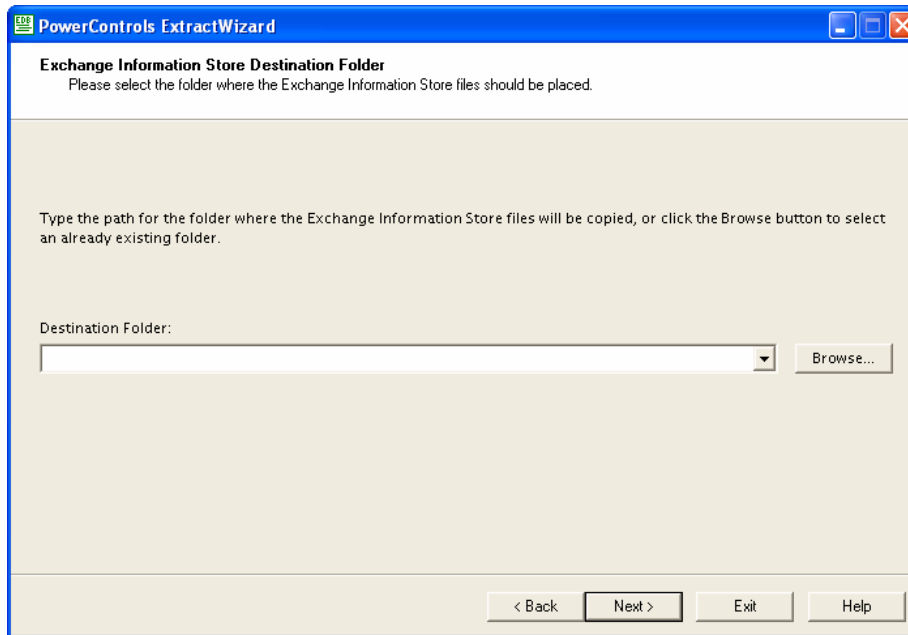


*Extracting a full online disk backup (Legato NetWorker)*

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

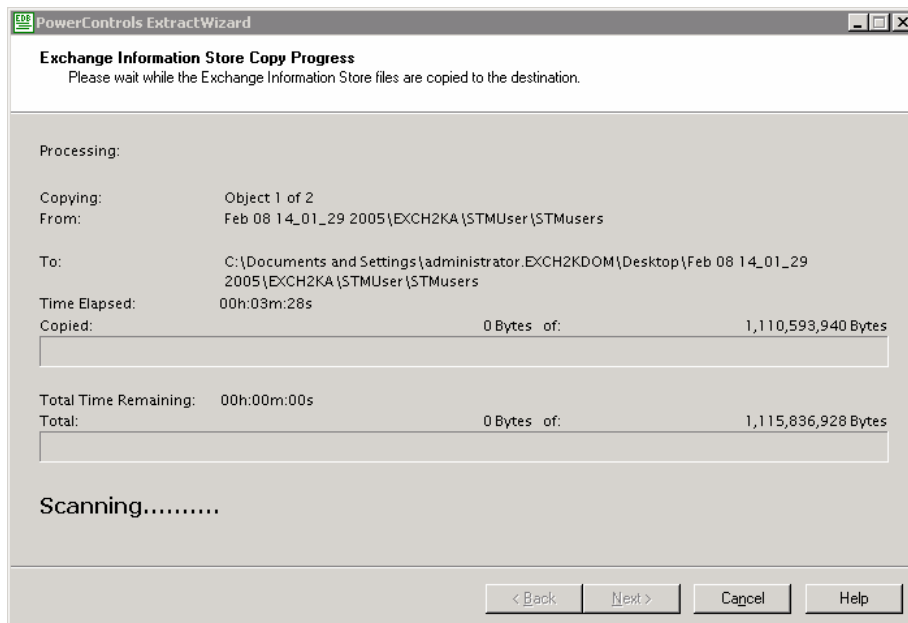
## Chapter 2: Using the ExtractWizard Advanced Method

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

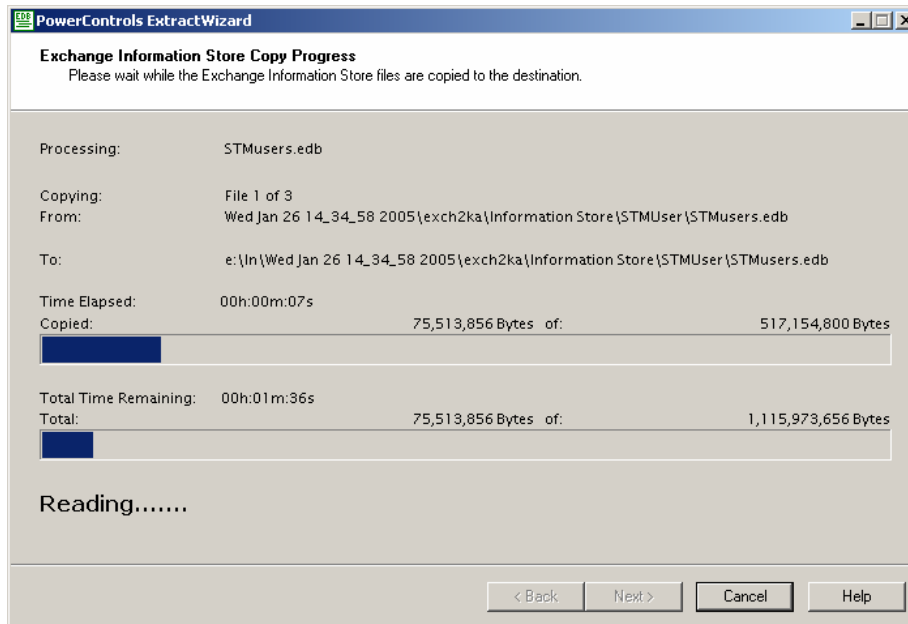


14. Under **Destination Folder**, specify a location for the extracted files.
15. Click **Next**. The ExtractWizard verifies that you have enough disk space as well as access rights to create files and directories, and then begins to extract the Exchange Information Store files you have selected.

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

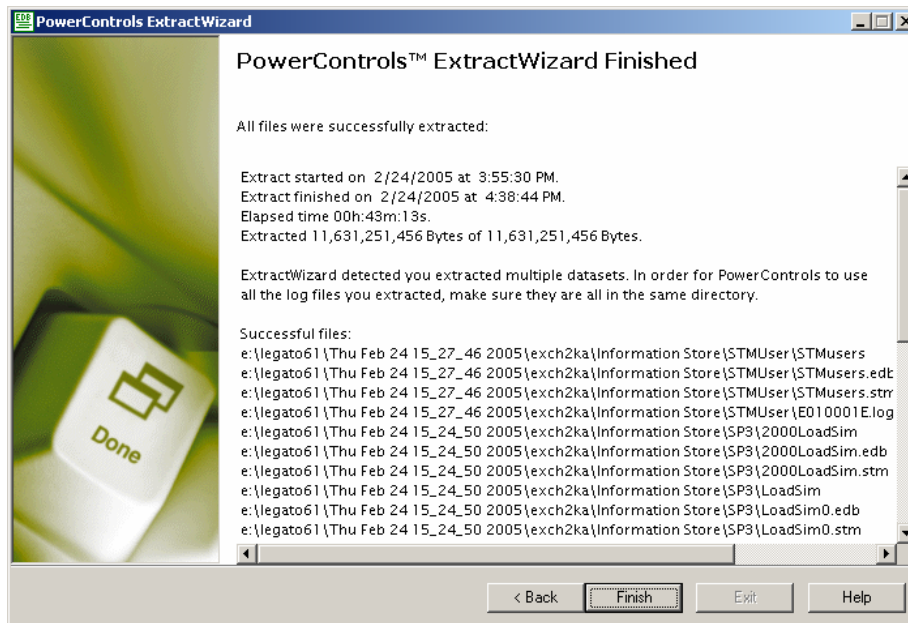


16. (Optional) Click **Cancel** only if you want to stop the process. The file currently being extracted will be deleted, but you can access any files that have completed extraction.



*Copy Progress for Legato NetWorker*

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



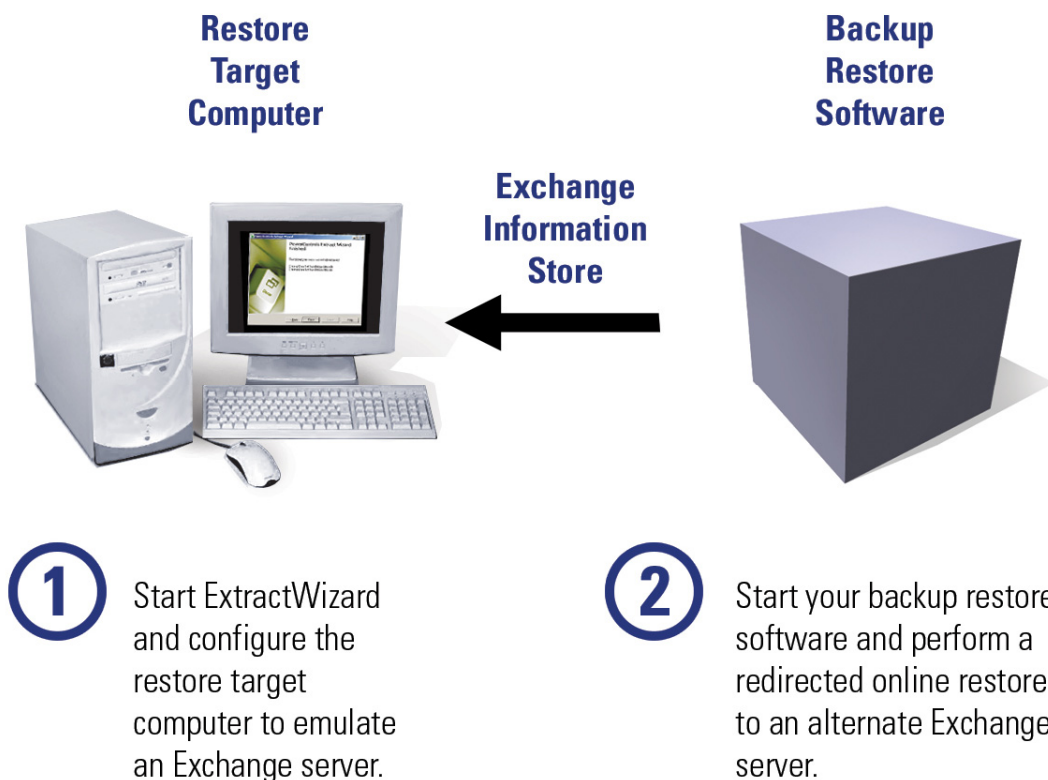
17. If you are satisfied with the results, click **Finish**.
18. If you extracted multiple data sets, see “Organizing the Extracted Files for PowerControls” on page 112.

## Using the Exchange Emulation Method

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

### Two Basic Steps for Using the Exchange Emulation Method

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



### Terms

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

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

### Requirements for Using the Exchange Emulation Method

The Advanced Method for Exchange Emulation has five requirements:

- Only online Exchange backups are supported. This includes full, copy, incremental, and differential backups.
- The backup client software must be installed on the computer running ExtractWizard.
- ExtractWizard cannot be run on an Exchange server.
- Backup restore .dll files must be in the system path on the computer running ExtractWizard. For Exchange 2000/2003, esecli2.dll is required as well as a registry key pointing to it. For Exchange 5.5, edbbcli.dll is required. For more information, see the instructions for each type of backup software discussed in this section.
- You must have the rights to create and start services on the computer running ExtractWizard.

### Exchange Emulation for Microsoft NT Backup

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

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

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

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

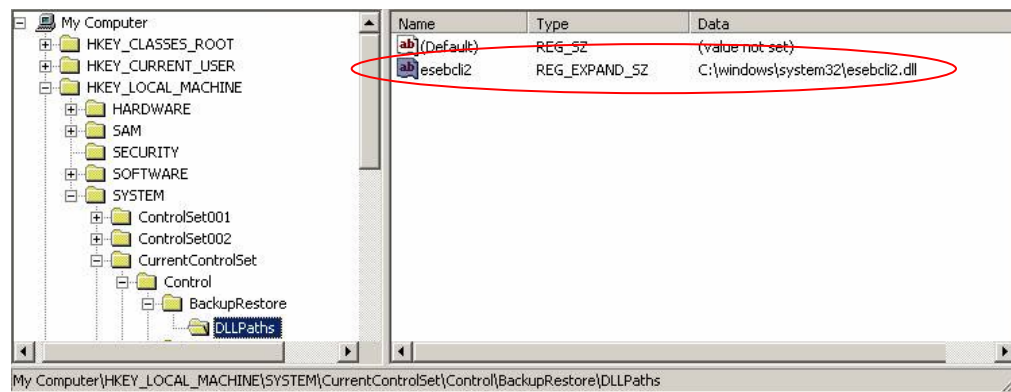
## Chapter 2: Using the ExtractWizard Advanced Method

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

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

- **Option 1:** Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
- **Option 2:** Copy esebcli2.dll to the system path: winnt\system32 or windows\system32.  
(The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.)  
Then set the registry key:  
**HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths**  
with Value Name **Esebcli2**, Data Type **REG\_EXPAND\_SZ**, String **Drive\Path\Esebcli2.dll**

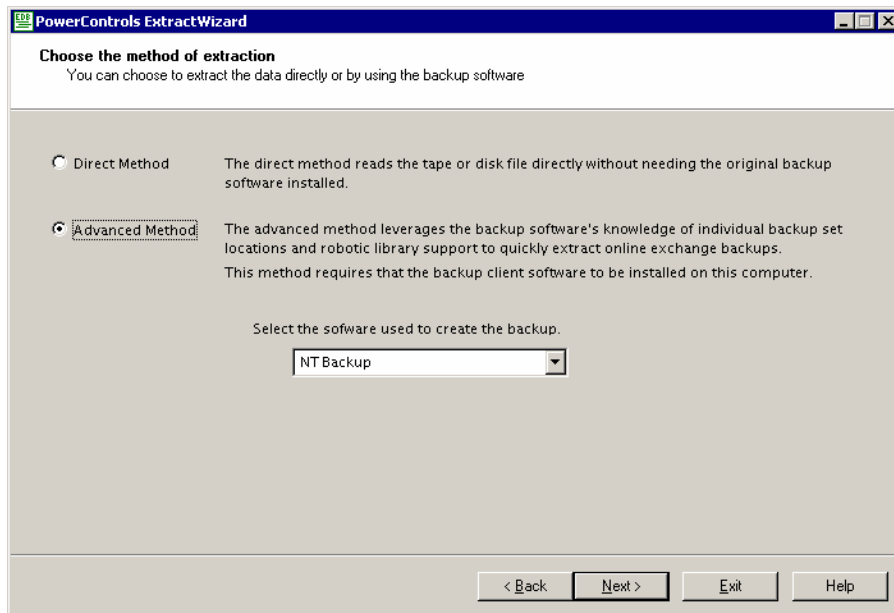
*Note for Windows 2000: Use regedt32.exe to create a REG\_EXPAND\_SZ value.*



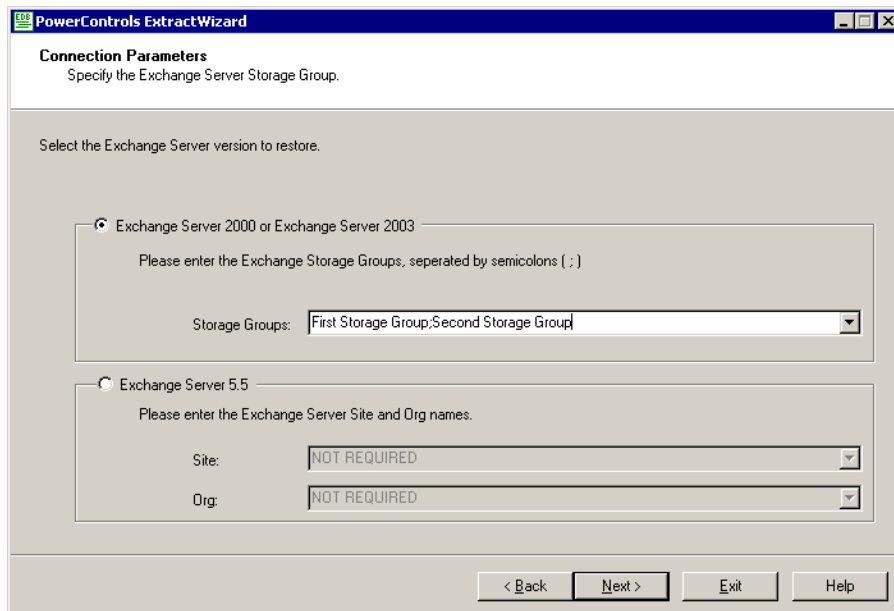
*Example of Setting the Registry Key*

2. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.
4. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **NT Backup**. Then click **Next**.



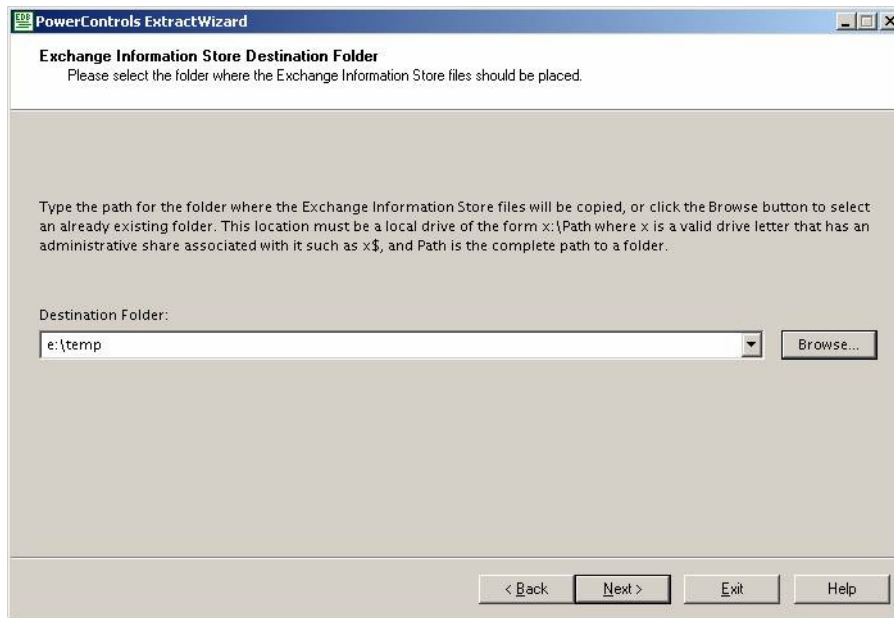


The **Connection Parameters** page of the ExtractWizard appears.

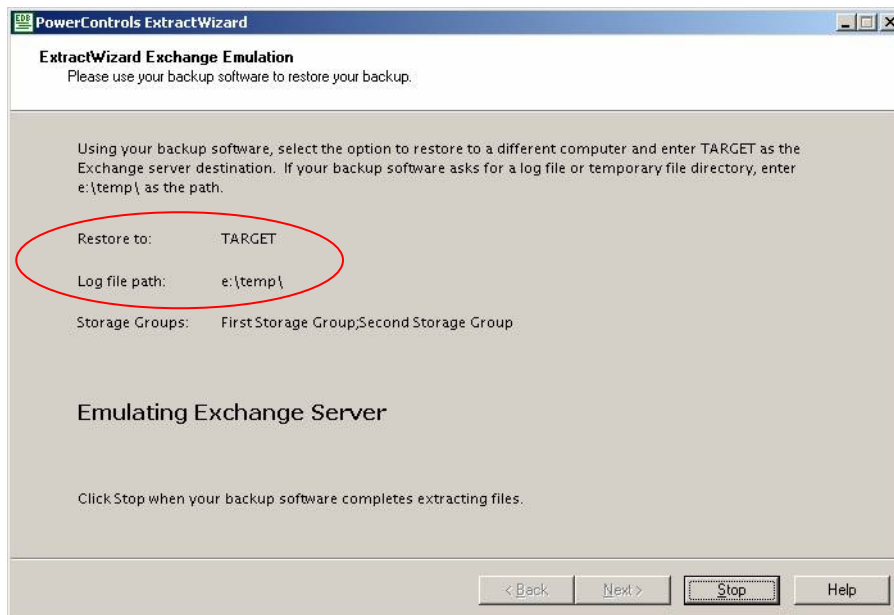


5. Select the **Exchange Server 2000 or Exchange Server 2003** option.
6. In the **Storage Groups** box, enter the name of the storage group you will be extracting. The storage group name is case sensitive and must match exactly the name that appears in the Exchange System Manager. You can enter multiple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

## Chapter 2: Using the ExtractWizard Advanced Method



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



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

10. Start NT Backup (Backup Utility in Windows XP and 2003) on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
11. Do one of the following:
- If NT Backup is on a different computer than ExtractWizard, proceed to step 12.
  - If NT Backup is on the same computer as ExtractWizard, skip steps 12-15 and proceed to step 16.

12. In NT Backup, click the **Backup** tab.
13. On the **Tools** menu, click **Remote Store**.
14. In the **Remote Store** dialog box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). The name must be in all capital letters. See previous step 9 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard. Click **OK**.
15. If you receive an error stating that the Microsoft Exchange Server does not appear in the **Backup** tree (i.e., it does not appear in the left pane in the **Backup** tab), this means that NT Backup is not able to verify the ExtractWizard emulation. Therefore, you must follow the steps outlined in this article from the Microsoft Knowledge Base: “XADM: Troubleshooting a Remote Online Backup of Exchange 2000”: <http://support.microsoft.com/?kbid=275676>

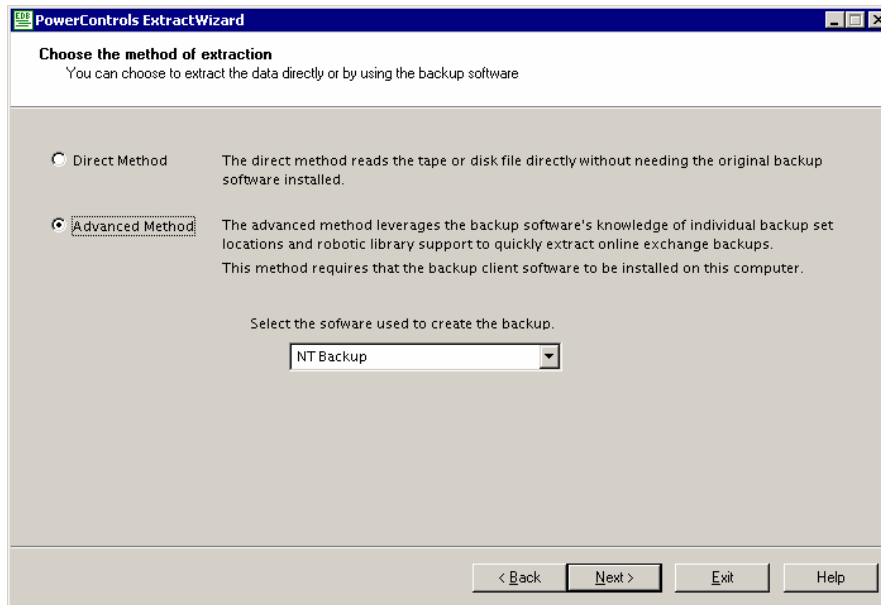
When NT Backup has finished verifying the computer, the Restore Target computer appears under the **Microsoft Exchange Server** node.

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

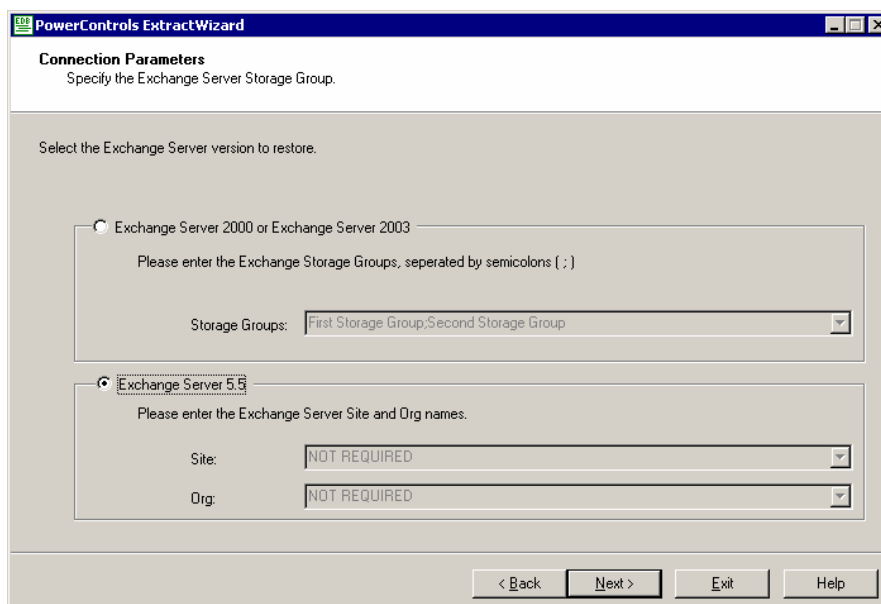
## Chapter 2: Using the ExtractWizard Advanced Method

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

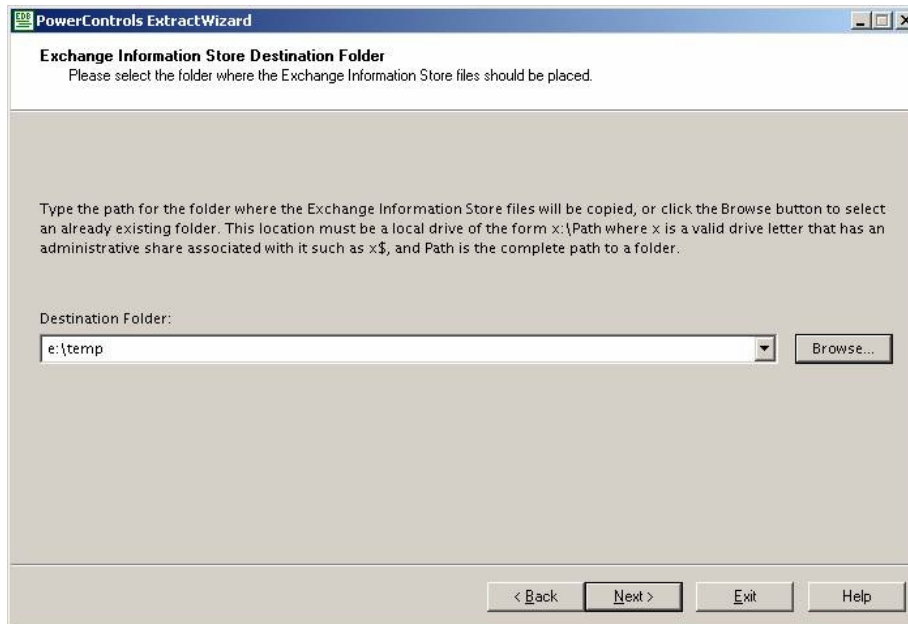
1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.
4. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **NT Backup**. Then click **Next**.



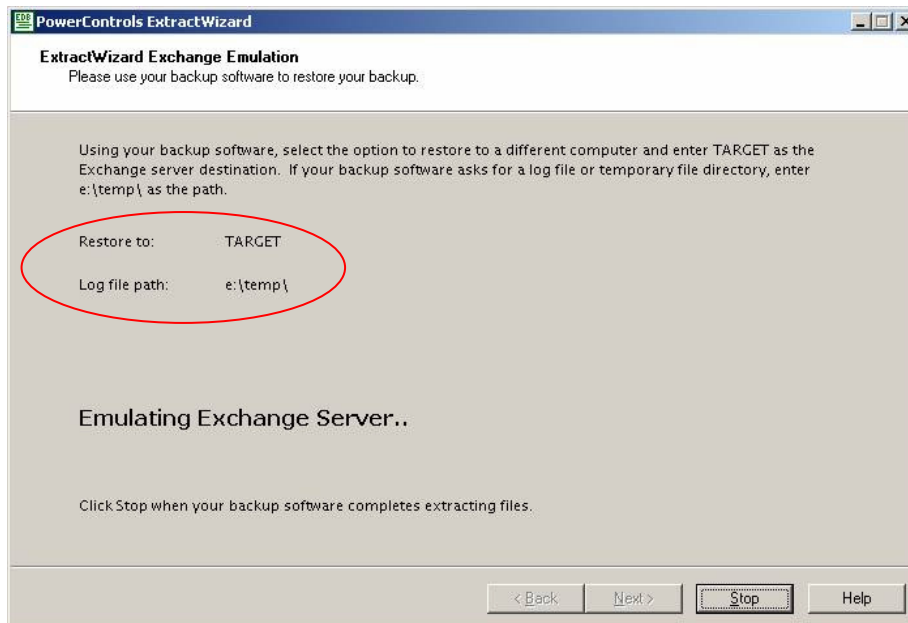
5. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option and click **Next**.



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



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



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

## Chapter 2: Using the ExtractWizard Advanced Method

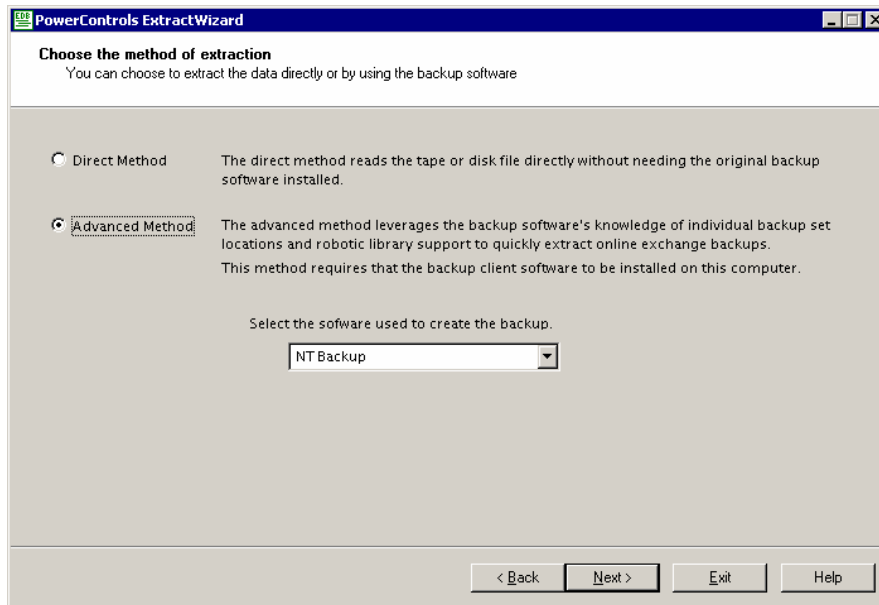
8. Start NT Backup (Backup Utility in Windows XP and 2003) on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
9. In NT Backup, click the **Restore** tab (the **Restore and Manage Media** tab in Windows 2003).
10. In the tree view, select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

***Note:** You cannot restore the Directory.*

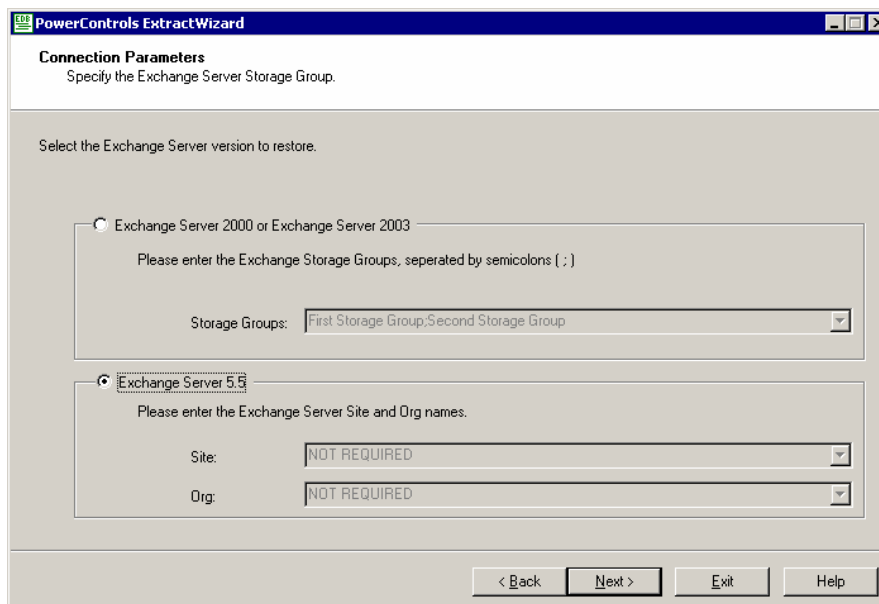
11. Click the **Start Restore** button. The **Restoring Microsoft Exchange** dialog box appears.
12. Select the **Erase all existing data** check box.
13. In the **Restore To** box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). The name must be in all capital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

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

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.
4. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **NT Backup**. Then click **Next**.

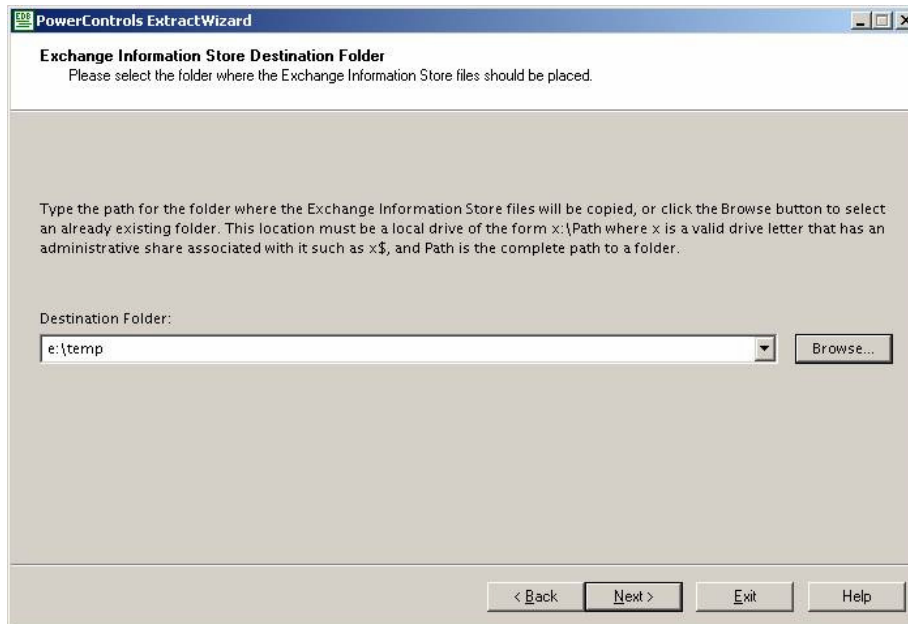


5. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option and click **Next**.

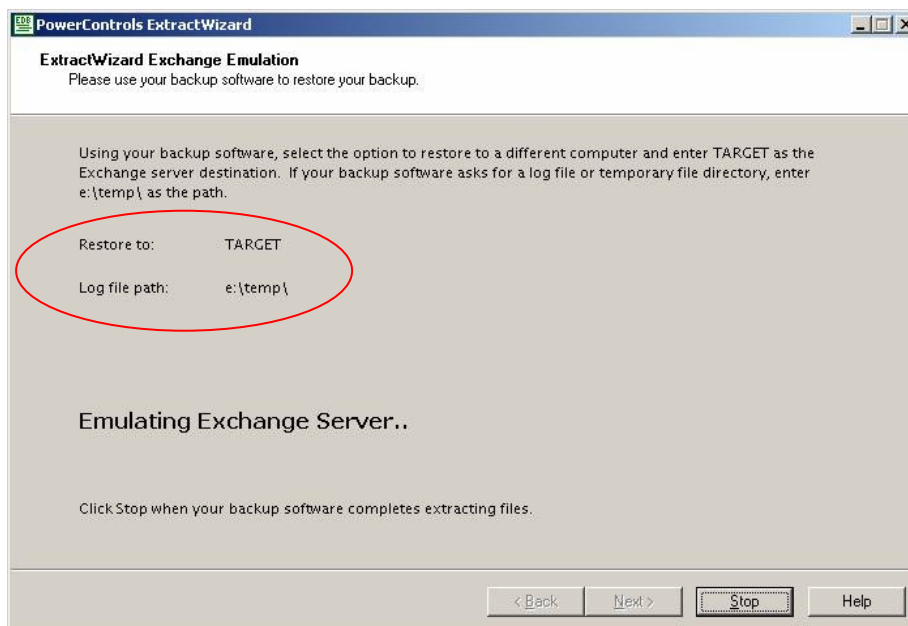


## Chapter 2: Using the ExtractWizard Advanced Method

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



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



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



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

***Note:** You cannot restore the Directory.*

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

## Exchange Emulation for HP OpenView Storage Data Protector

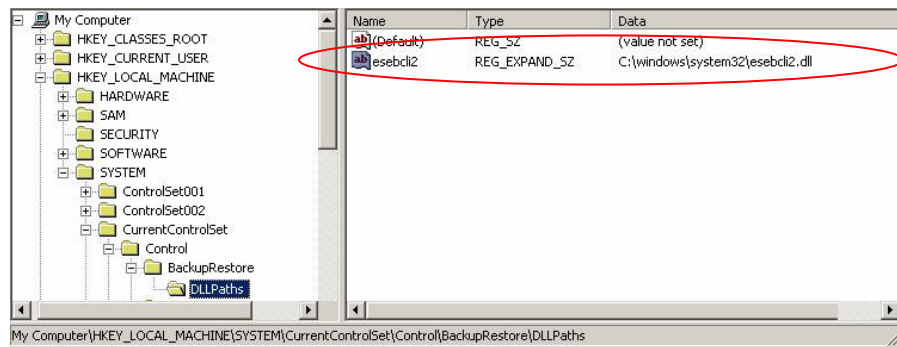
### Exchange Emulation for HP OpenView Storage Data Protector and Exchange 2000/2003

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

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

2. On the computer that will be running ExtractWizard, do one of the following:
  - **Option 1:** Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
  - **Option 2:** Copy esebcli2.dll to the system path: winnt\system32 or windows\system32.  
(The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.)  
Then set the registry key:  
**HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths**  
with Value Name **Esebcli2**, Data Type **REG\_EXPAND\_SZ**, String **Drive\Path\Esebcli2.dll**

*Note for Windows 2000: Use regedt32.exe to create a REG\_EXPAND\_SZ value.*



*Example of Setting the Registry Key*

3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.
4. On the first page of the ExtractWizard, click **Next**.

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

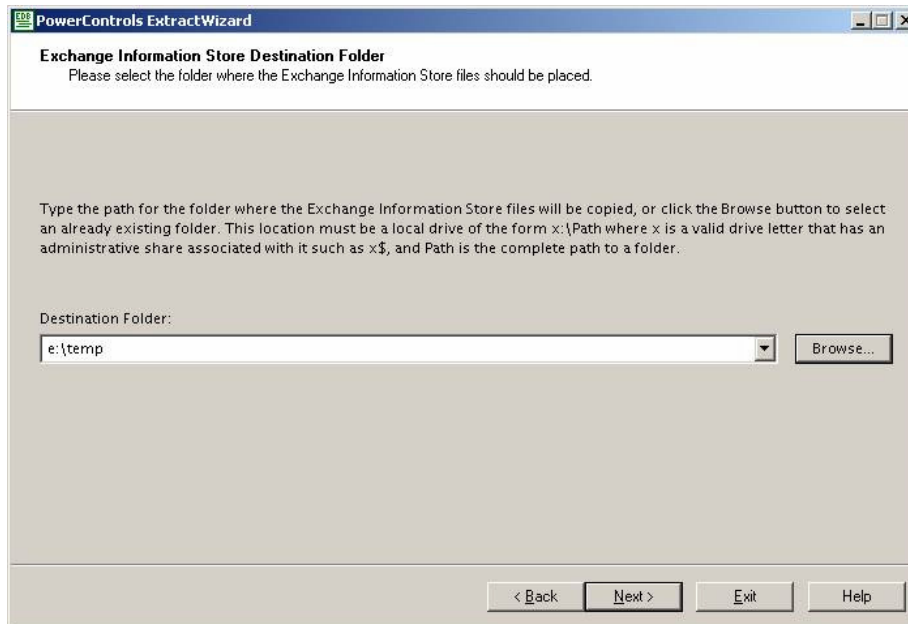
The screenshot shows the 'PowerControls ExtractWizard' window with the title bar. The main heading is 'Choose the method of extraction' with a subtitle 'You can choose to extract the data directly or by using the backup software'. There are two radio button options: 'Direct Method' and 'Advanced Method'. The 'Advanced Method' is selected. Below the options, there is a text box for 'Select the software used to create the backup.' with a dropdown menu showing 'HP OpenView Storage Data Protector'. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

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

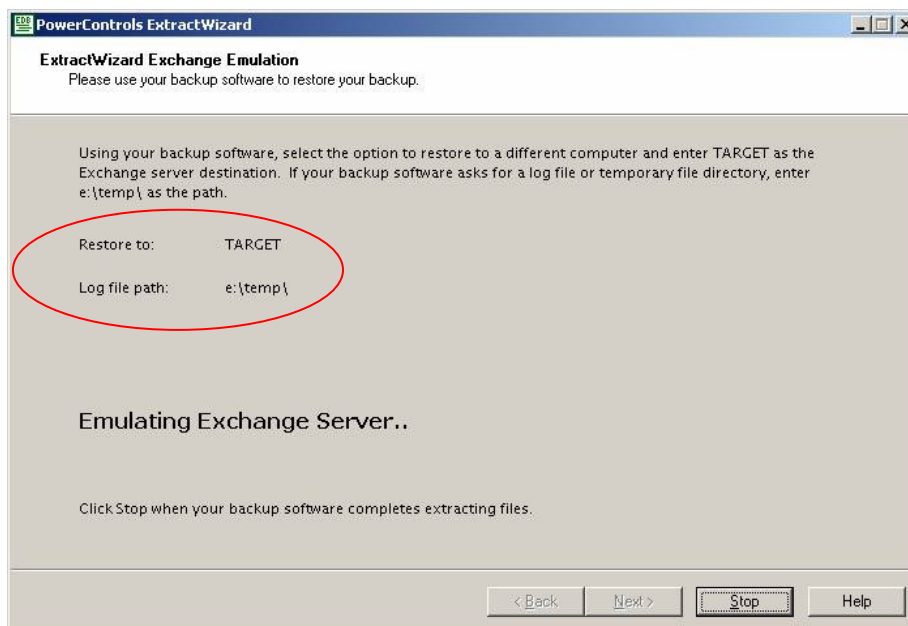
The screenshot shows the 'PowerControls ExtractWizard' window with the title bar. The main heading is 'Connection Parameters' with a subtitle 'Specify the Exchange Server Storage Group.'. The instruction 'Select the Exchange Server version to restore.' is present. There are two radio button options: 'Exchange Server 2000 or Exchange Server 2003' and 'Exchange Server 5.5'. The first option is selected. Below the first option, there is a text box 'Please enter the Exchange Storage Groups, seperated by semicolons ( ; )' and a dropdown menu labeled 'Storage Groups:' with 'NOT REQUIRED' selected. Below the second option, there is a text box 'Please enter the Exchange Server Site and Org names.' with two dropdown menus: 'Site:' and 'Org:', both with 'NOT REQUIRED' selected. At the bottom, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

## Chapter 2: Using the ExtractWizard Advanced Method

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



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



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

9. Start HP OpenView Storage Data Protector on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
10. Select **Restore** from the drop-down list at the top left of the window.
11. In the left pane, expand the MS Exchange 2000 Server tree node and select the appropriate Exchange Server.
12. In the right pane, click the **Source** tab and then select the Exchange backup you want to restore.
13. In the right pane, click the **Options** tab.
14. Select the **Restore to another client** check box.
15. Select the name of the Restore Target Computer from the drop-down menu. See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
16. In the **Directory for temporary log files** box, enter the log file path. See previous step 8 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
17. Do not select the **Last resort set (start recovery)** check box.  
  
***Note:** If this check box is selected, HP OpenView Storage Data Protector will display a message stating the restore failed. Click OK. The files will still be extracted and usable.*
18. Click the **Devices** tab, and verify your devices are properly configured
19. Click the **Media** tab, and verify the required media is available.
20. Click the **Restore** button. The **Start Restore Session** dialog box appears.
21. Do one of the following:
  - Click **Next** to specify options on Report level and Network load, and then click **Finish**.
  - Click **Finish**.
22. When HP OpenView Storage Data Protector says it has finished, close the program.
23. In ExtractWizard, click **Stop** and then click **Finish**.

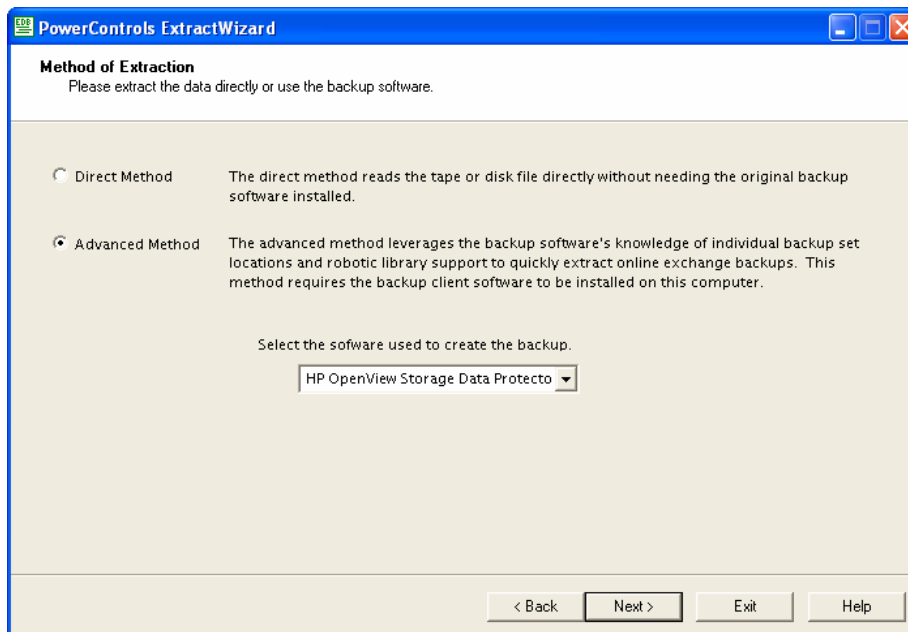
## Chapter 2: Using the ExtractWizard Advanced Method

### Exchange Emulation for HP OpenView Storage Data Protector and Exchange 5.5

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

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

2. On the computer running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.
4. On the first page of the ExtractWizard, click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **HP OpenView Storage Data Protector**. Then click **Next**.



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

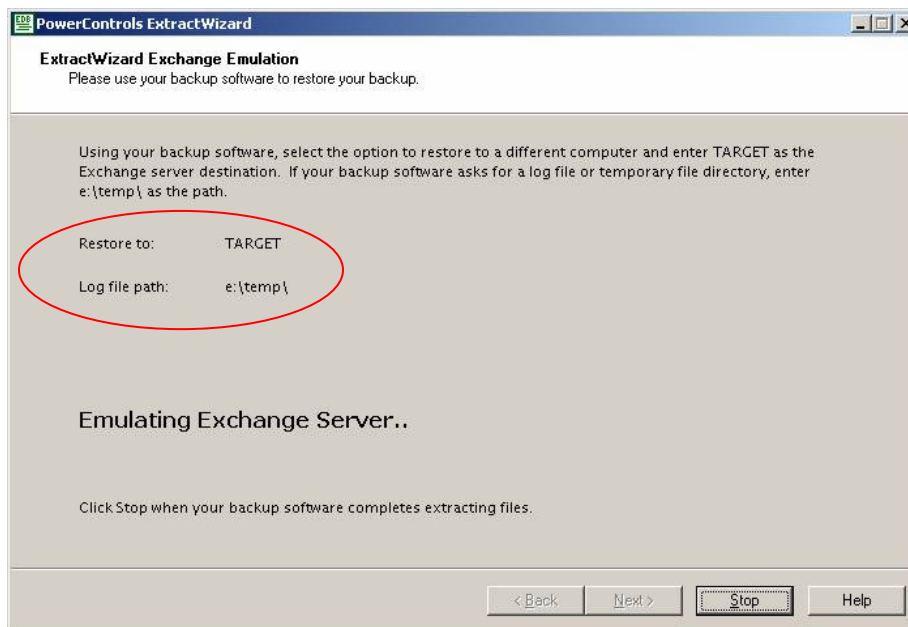
The screenshot shows the 'PowerControls ExtractWizard' window with the 'Connection Parameters' tab selected. The title bar reads 'PowerControls ExtractWizard'. Below the title bar, the text 'Specify the Exchange Server Storage Group.' is displayed. The main area contains the instruction 'Select the Exchange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

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

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

## Chapter 2: Using the ExtractWizard Advanced Method

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



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

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

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



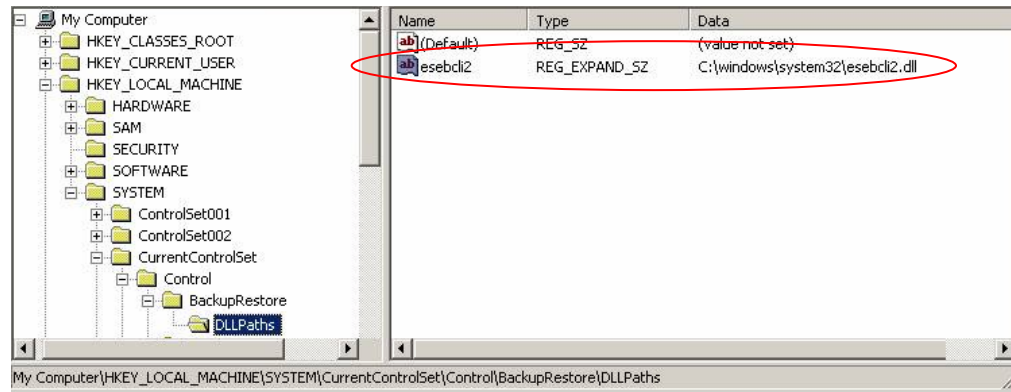
17. Under **Restore actions**, select the action you want to perform:
  - Restore both databases
  - Restore private database only
  - Restore public database only
18. Click the **Devices** tab, and verify your devices are properly configured
19. Click the **Media** tab, and verify the required media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

## Exchange Emulation for Veritas Backup Exec 8.6 and 9.1/10.0

### Exchange Emulation for Veritas Backup Exec 9.1/10.0 and Exchange 2000/2003

1. Install “Backup Exec Remote Agent for Windows Servers” client software on the computer that will be running ExtractWizard.
2. On the computer that will be running ExtractWizard, do one of the following:
  - **Option 1:** Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
  - **Option 2:** Copy esebcli2.dll to the system path: winnt\system32 or windows\system32.  
(The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.)  
Then set the registry key:  
**HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths**  
with Value Name **Esebcli2**, Data Type **REG\_EXPAND\_SZ**, String *Drive\Path\Esebcli2.dll*

*Note for Windows 2000: Use regedt32.exe to create a REG\_EXPAND\_SZ value.*



*Example of Setting the Registry Key*

3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.
4. On the first page of the ExtractWizard, click **Next**.

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

The screenshot shows the 'PowerControls ExtractWizard' window with the title 'Choose the method of extraction'. Below the title is a subtitle: 'You can choose to extract the data directly or by using the backup software'. There are two radio button options: 'Direct Method' and 'Advanced Method'. The 'Advanced Method' is selected. To the right of the 'Advanced Method' radio button is a text block explaining that this method leverages backup software's knowledge of individual backup set locations and robotic library support to quickly extract online exchange backups, and that it requires the backup client software to be installed on this computer. Below this text is a label 'Select the software used to create the backup.' followed by a dropdown menu showing 'Veritas BackupExec'. At the bottom of the window are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

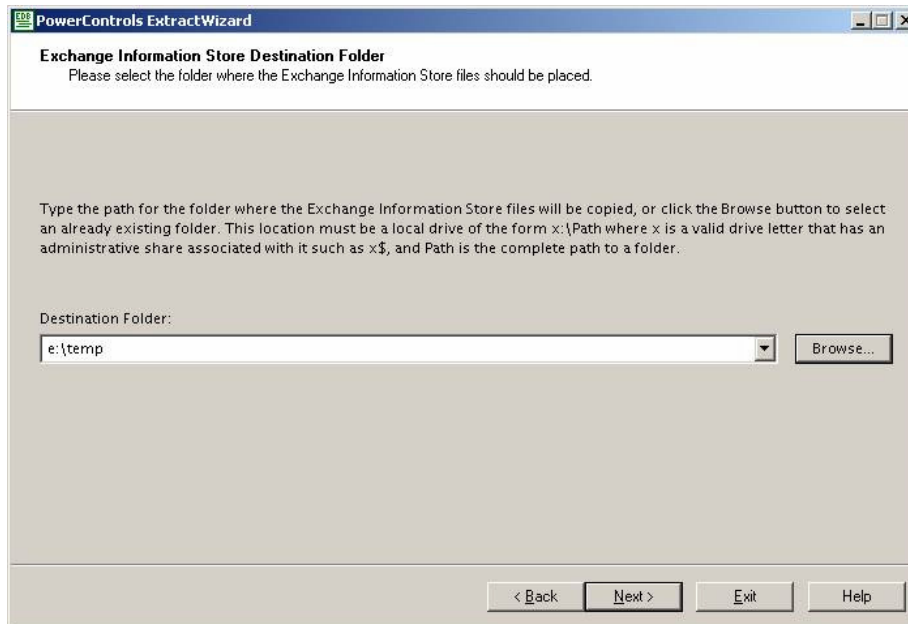
The **Connection Parameters** page of the ExtractWizard appears.

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

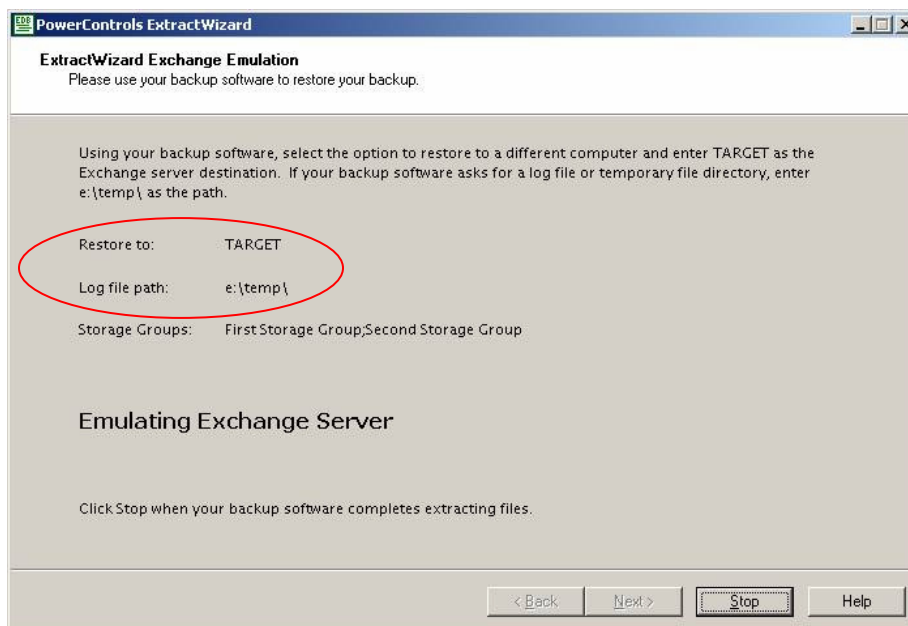
- Select the **Exchange Server 2000 or Exchange Server 2003** option.
- In the **Storage Groups** box, enter the name of the storage group you will be extracting. The storage group name is case sensitive and must match exactly the name that appears in the Exchange System Manager. You can enter multiple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

## Chapter 2: Using the ExtractWizard Advanced Method

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



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



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

- Start Veritas Backup Exec 9.1 on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
- Click the **Restore** button. The **Restore Job Properties** window appears.

12. In the **Properties** pane, select **Selections** under the **Source** heading.
13. In the **All Resources** tree, select the Exchange backup you want to restore.
14. In the **Properties** pane, select **Exchange Redirection** under the **Destination** heading.
15. Select the **Redirect Exchange sets** check box.
16. In the **Restore to server** box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). See previous step 9 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
17. In the **Server logon account**, change the logon account if necessary. The account you select must have backup operator rights to the Restore Target Computer.
18. In the **Properties** pane, select **Exchange** under the **Settings** heading.
19. In the **Exchange 2000 and Exchange 2003** area, clear the **No Loss Restore** check box.

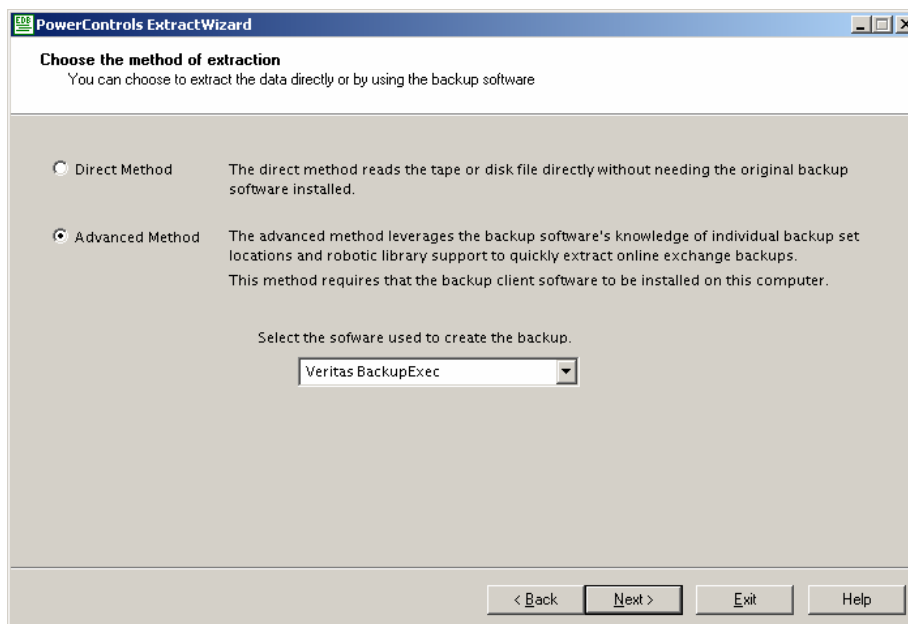
**IMPORTANT NOTE:** *If the **No Loss Restore** check box is selected, the restore will fail.*

20. In the **Temporary location for log and path files** box, enter the log file path. See previous step 9 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
  21. Clear the **Commit after restore completes** check box.
- CAUTION:** *Make sure to clear the **Commit after restore completes** check box. If this check box remains selected, Backup Exec will automatically delete the restored files after completing the restore.*
22. Click **Run Now**. Backup Exec will display a warning about restoring a server with different Site and Organization names. You can safely click **Yes**. ExtractWizard and PowerControls do not depend on the Site and Organization names. Backup Exec will start to restore Exchange files to the ExtractWizard
  23. When Backup Exec has finished, click **OK** and close Backup Exec.
  24. In ExtractWizard, click **Stop** and then click **Finish**.

## Chapter 2: Using the ExtractWizard Advanced Method

### Exchange Emulation for Veritas Backup Exec 9.1/10.0 and Exchange 5.5

1. Install “Backup Exec Remote Agent for Windows Servers” client software on the computer that will be running ExtractWizard.
2. On the computer running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.
4. On the first page of the ExtractWizard, click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **Veritas Backup Exec**. Then click **Next**.



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

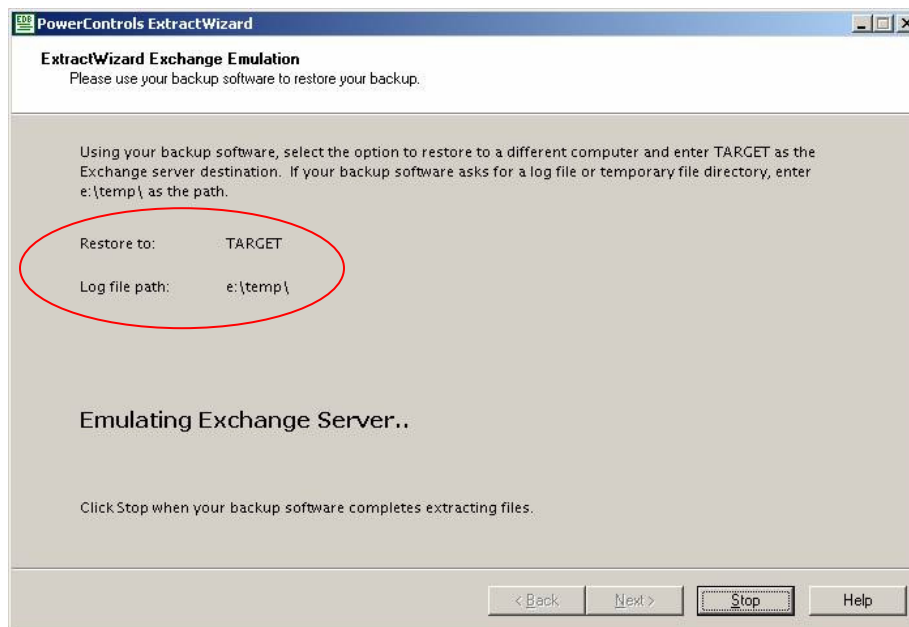
The screenshot shows the 'PowerControls ExtractWizard' window with the 'Connection Parameters' tab selected. The title bar reads 'PowerControls ExtractWizard'. Below the title bar, the text 'Specify the Exchange Server Storage Group.' is displayed. The main area contains the instruction 'Select the Exchange Server version to restore.' followed by two radio button options. The first option is 'Exchange Server 2000 or Exchange Server 2003', which is unselected. Below it is a text box labeled 'Please enter the Exchange Storage Groups, separated by semicolons ( ; )' and a 'Storage Groups:' dropdown menu. The second option is 'Exchange Server 5.5', which is selected. Below it is a text box labeled 'Please enter the Exchange Server Site and Org names.' containing two dropdown menus: 'Site:' and 'Org:', both showing 'NOT REQUIRED'. At the bottom of the window are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

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

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

## Chapter 2: Using the ExtractWizard Advanced Method

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



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

- Start Veritas Backup Exec 9.1 on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
- Click the **Restore** button at the top left of the Backup Exec window. The **Restore Job Properties** window appears.
- In the **Properties** pane, select **Selections** under the **Source** heading.
- In the **All Resources** tree, select the Exchange backup you want to restore.
- Note:** You cannot restore the Microsoft Exchange Directory.
- In the **Properties** pane, select **Exchange Redirection** under the **Destination** heading.
- Select the **Redirect Exchange sets** check box.
- In the **Restore to server** box, enter the name of the Restore Target Computer (i.e., the computer running ExtractWizard). See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
- In the **Server logon account**, change the logon account if necessary. The account you select must have backup operator rights to the Restore Target Computer.
- In the **Properties** pane, select **Exchange** under the **Settings** heading.
- In the **Exchange v5.5** area, clear the **No Loss Restore** check box.

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



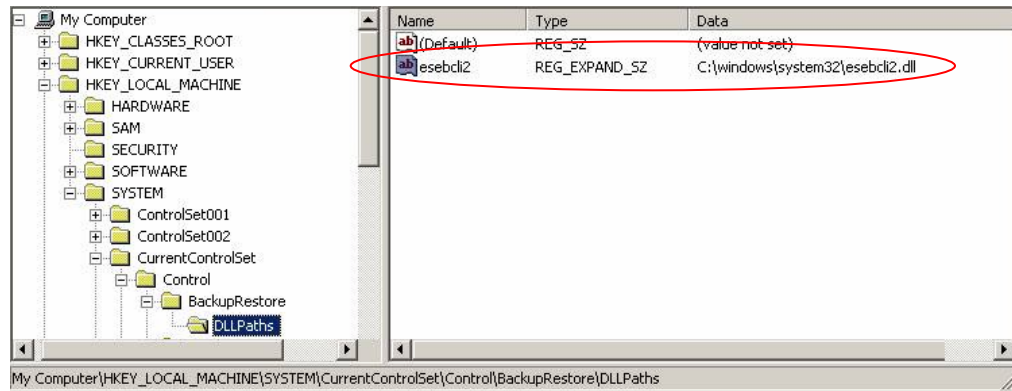
19. Select one or both of the following check boxes: Select the **Restore public folder** if you would like to restore the pub.edb. Select the **Restore private mailboxes** if you would like to restore the priv.edb.
20. Click **Run Now**. Backup Exec will display a warning about restoring a server with different Site and Organization names. You can safely click **Yes**. ExtractWizard and PowerControls do not depend on the Site and Organization names. Backup Exec will start to restore Exchange files to the ExtractWizard.
21. When Backup Exec has finished, click **OK** and close Backup Exec.
22. In ExtractWizard, click **Stop** and then click **Finish**.

## Chapter 2: Using the ExtractWizard Advanced Method

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

1. Install “Backup Exec Remote Agent for Windows Servers” client software on the computer that will be running ExtractWizard.
2. On the computer that will be running ExtractWizard, do one of the following:
  - Option 1: Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
  - Option 2: Copy esebcli2.dll to the system path: winnt\system32 or windows\system32.  
(The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.)  
Then set the registry key:  
**HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths**  
with Value Name **Esebcli2**, Data Type **REG\_EXPAND\_SZ**, String **Drive\Path\Esebcli2.dll**

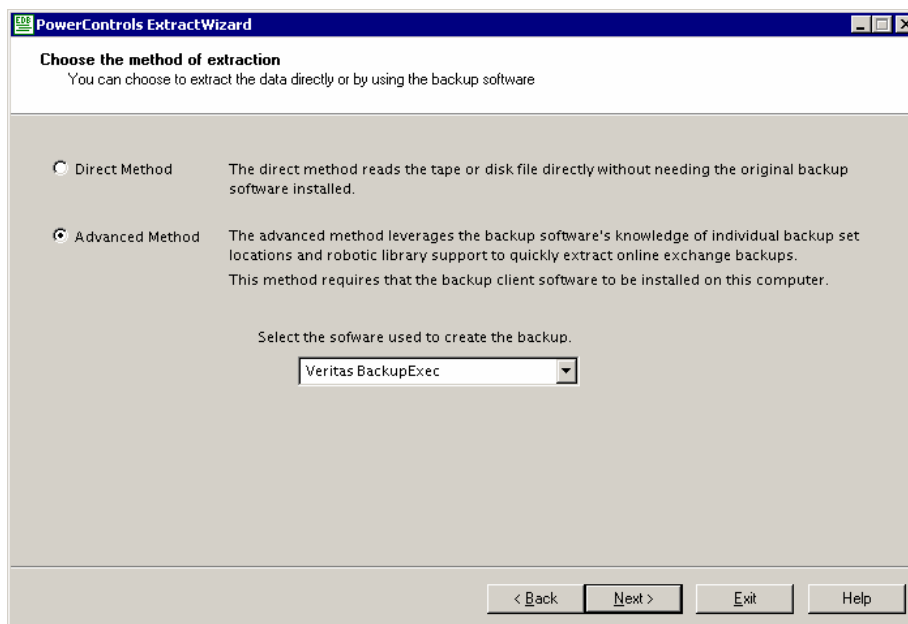
*Note for Windows 2000: Use regedt32.exe to create a REG\_EXPAND\_SZ value.*



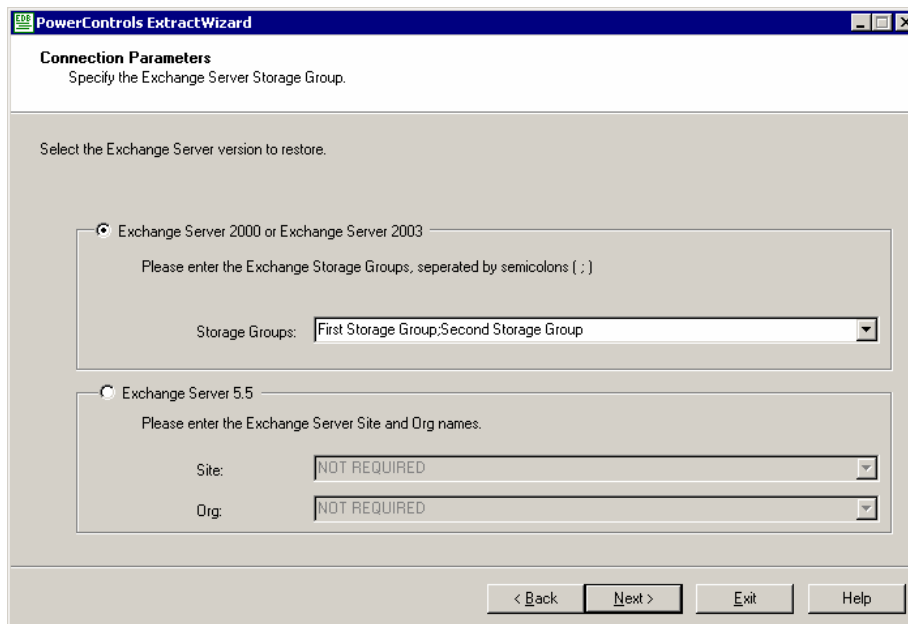
*Example of Setting the Registry Key*

3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.
4. On the first page of the ExtractWizard, click **Next**.

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



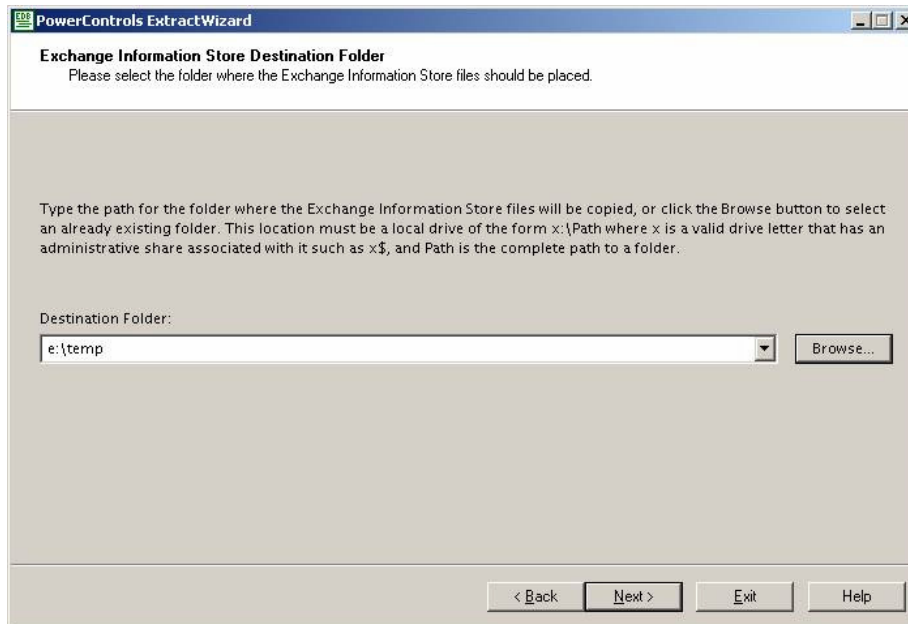
The **Connection Parameters** page of the ExtractWizard appears.



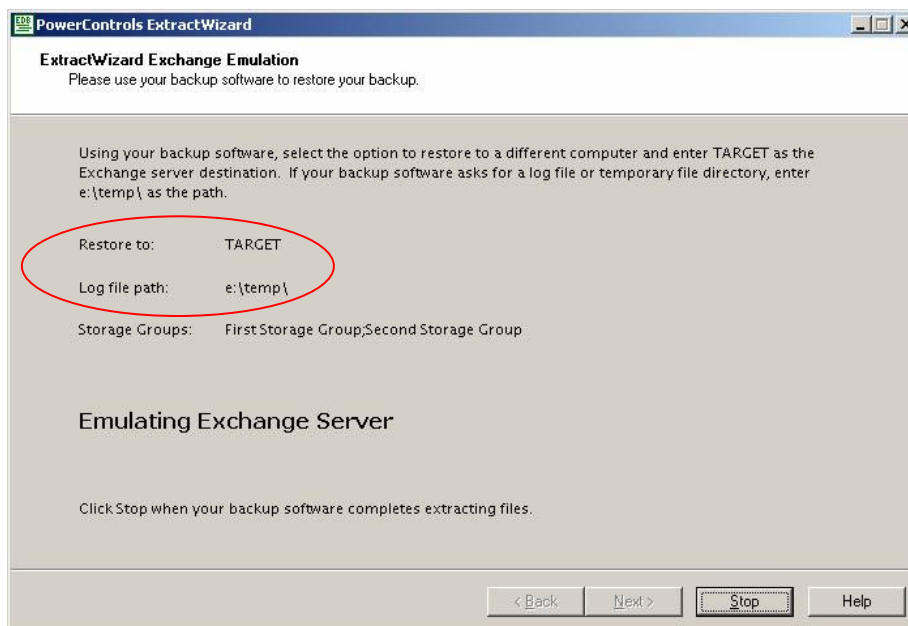
- Select the **Exchange Server 2000 or Exchange Server 2003** option.
- In the **Storage Groups** box, enter the name of the storage group you will be extracting, exactly as it appears in the Exchange System Manager. Backup Exec will check this name, which is case sensitive, and it must match exactly.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

## Chapter 2: Using the ExtractWizard Advanced Method

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



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



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

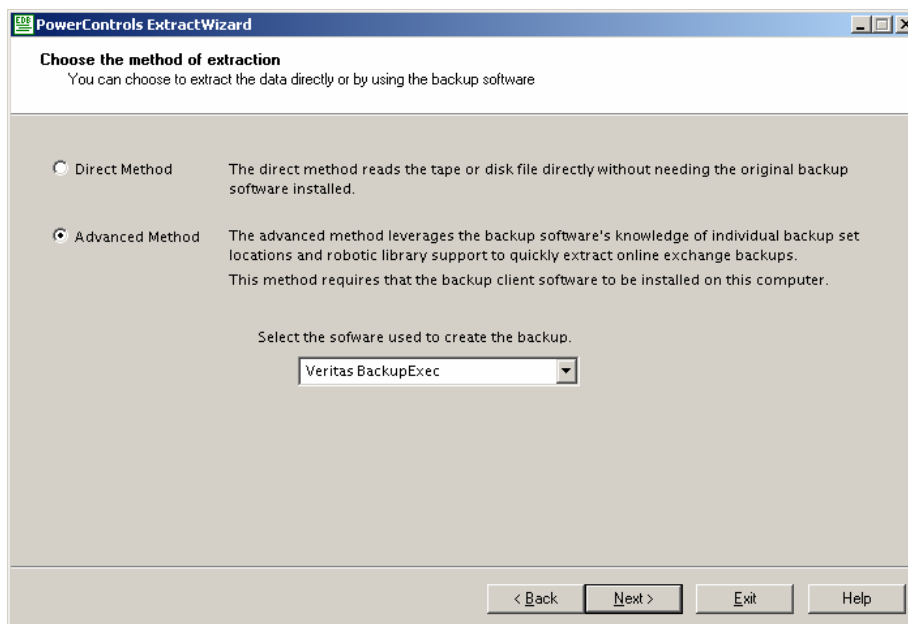
- Start Veritas Backup Exec 8.6 on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.

11. On the toolbar at the top of the Backup Exec window, click the **Restore** button. The **Restore Job Properties** dialog box appears.
12. In the **Restore Job Properties** dialog box, click the **Selections** tab.
13. In the **All Volumes** tree, select the Exchange backup you want to restore.
14. Click the **Redirection** tab.
15. Select the **Redirect Exchange sets** check box.
16. In the **Restore to server** box, enter the name of the Restore Target Computer. See previous step 9 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
17. Select the **Exchange** tab.
18. In the **Exchange 2000** area, clear the **No Loss Restore** check box.  
  
***IMPORTANT NOTE:** If the **No Loss Restore** check box is selected, the restore will fail.*
19. In the **Temporary location for log and path files** box, enter the log file path. See previous step 9 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
20. Clear the **Commit after restore completes** check box.  
  
***CAUTION:** Make sure to clear the **Commit after restore completes** check box. If this check box remains selected, Backup Exec will automatically delete the restored files after completing the restore.*
21. Click **Run Now**. Backup Exec will display a warning about restoring a server with different Site and Organization names. You can safely click **Yes**. ExtractWizard and PowerControls do not depend on the Site and Organization names. Backup Exec will start to restore Exchange files to the ExtractWizard.
22. When Backup Exec has finished, click **OK** and close Backup Exec.
23. In ExtractWizard, click **Stop** and then click **Finish**.

## Chapter 2: Using the ExtractWizard Advanced Method

### Exchange Emulation for Veritas Backup Exec 8.6 and Exchange 5.5

1. Install “Backup Exec Remote Agent for Windows Servers” client software on the computer that will be running ExtractWizard.
2. On the computer running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
3. Start ExtractWizard. The computer running ExtractWizard is known as the Restore Target Computer.
4. On the first page of the ExtractWizard, click **Next**.
5. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **Veritas Backup Exec**. Then click **Next**.



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

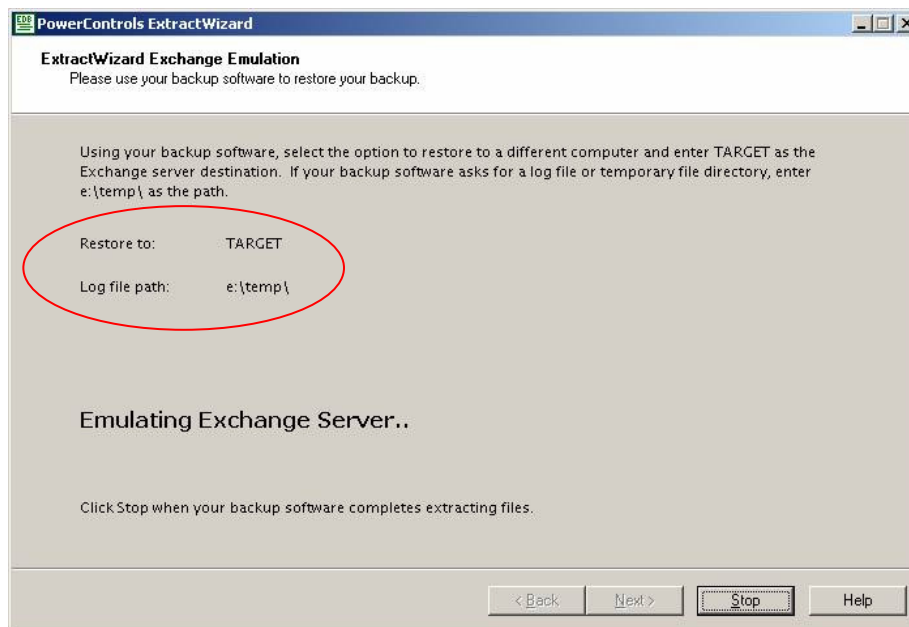
The screenshot shows the 'PowerControls ExtractWizard' window with the 'Connection Parameters' tab selected. The title bar reads 'PowerControls ExtractWizard'. Below the title bar, the text 'Specify the Exchange Server Storage Group.' is displayed. The main area contains the instruction 'Select the Exchange Server version to restore.' followed by two radio button options. The first option is 'Exchange Server 2000 or Exchange Server 2003', which is unselected. Below it is a text box labeled 'Please enter the Exchange Storage Groups, separated by semicolons [ ; ]' and a 'Storage Groups:' label with an empty text field. The second option is 'Exchange Server 5.5', which is selected. Below it is a text box labeled 'Please enter the Exchange Server Site and Org names.' followed by 'Site:' and 'Org:' labels, each with a dropdown menu currently showing 'NOT REQUIRED'. At the bottom of the dialog are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

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

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

## Chapter 2: Using the ExtractWizard Advanced Method

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



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

- Start Veritas Backup Exec 8.6 on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard.
- Click the **Restore** button at the top left of the Backup Exec window. The **Restore Job Properties** dialog box appears.
- In the **Restore Job Properties** dialog box, click the **Selections** tab.
- In the **All Volumes** tree, select the Exchange backup you want to restore.
- Note:** You cannot restore the Microsoft Exchange Directory.
- Click the **Redirection** tab.
- Select the **Redirect Exchange sets** check box.
- In the **Restore to server** box, enter the name of the Restore Target Computer. See previous step 8 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
- Select the **Exchange** tab.
- In the Exchange v5.5 area, clear the **No Loss Restore** check box.

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

- Select one or both of the following check boxes: Select the **Restore public folder** if you would like to restore the pub.edb. Select the **Restore private mailboxes** if you would like to restore the priv.edb.



19. Click **Run Now**. Backup Exec will display a warning about restoring a server with different Site and Organization names. You can safely click **Yes**. ExtractWizard and PowerControls do not depend on the Site and Organization names. Backup Exec will start to restore Exchange files to the ExtractWizard.
20. When Backup Exec has finished, click **OK** and close Backup Exec.
21. In ExtractWizard, click **Stop** and then click **Finish**.

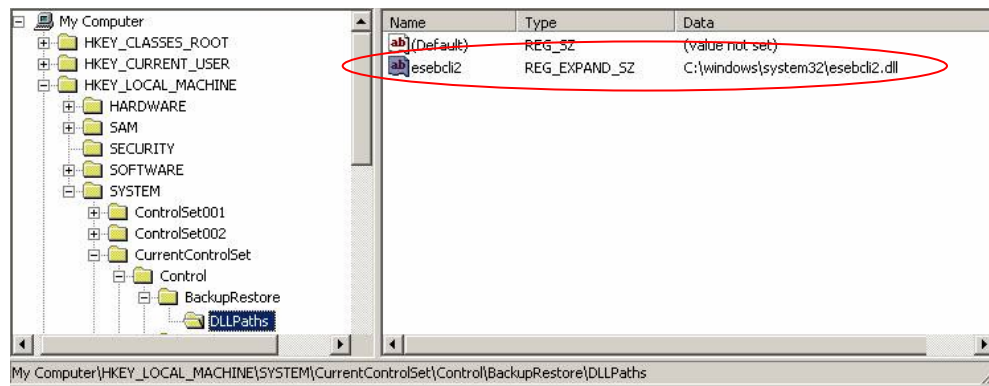
## Exchange Emulation for CA BrightStor ARCserve

### Exchange Emulation for CA BrightStor ARCserve and Exchange 2000/2003

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

- Option 1: Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
- Option 2: Copy esebcli2.dll to the system path: winnt\system32 or windows\system32.  
(The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.)  
Then set the registry key:  
**HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths**  
with Value Name **Esebcli2**, Data Type **REG\_EXPAND\_SZ**, String **Drive\Path\Esebcli2.dll**

*Note for Windows 2000: Use regedt32.exe to create a REG\_EXPAND\_SZ value.*



*Example of Setting the Registry Key*

2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.

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

The screenshot shows the 'Method of Extraction' window of the PowerControls ExtractWizard. The title bar reads 'PowerControls ExtractWizard'. The main heading is 'Method of Extraction' with the instruction 'Please extract the data directly or use the backup software.' Below this, there are two radio button options: 'Direct Method' and 'Advanced Method'. The 'Advanced Method' is selected. To the right of the radio buttons, there is descriptive text for each method. Below the options, a label says 'Select the software used to create the backup.' followed by a dropdown menu currently showing 'CA BrightStor ARCserve'. At the bottom of the window are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

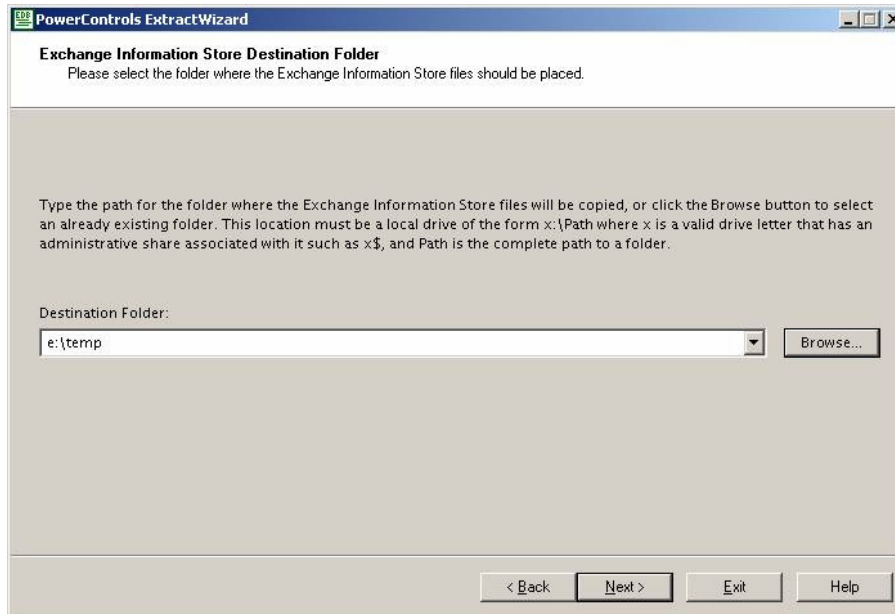
The **Connection Parameters** page of the ExtractWizard appears.

The screenshot shows the 'Connection Parameters' window of the PowerControls ExtractWizard. The title bar reads 'PowerControls ExtractWizard'. The main heading is 'Connection Parameters' with the instruction 'Specify the Exchange Server Storage Group.' Below this, a label says 'Select the Exchange Server version to restore.' There are two radio button options: 'Exchange Server 2000 or Exchange Server 2003' and 'Exchange Server 5.5'. The first option is selected. Below the first option, there is a text box labeled 'Please enter the Exchange Storage Groups, separated by semicolons (;)' and a dropdown menu labeled 'Storage Groups:' containing the text 'First Storage Group;Second Storage Group'. Below the second option, there is a text box labeled 'Please enter the Exchange Server Site and Org names.' with two sub-fields: 'Site:' and 'Org:', each with a dropdown menu showing 'NOT REQUIRED'. At the bottom of the window are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

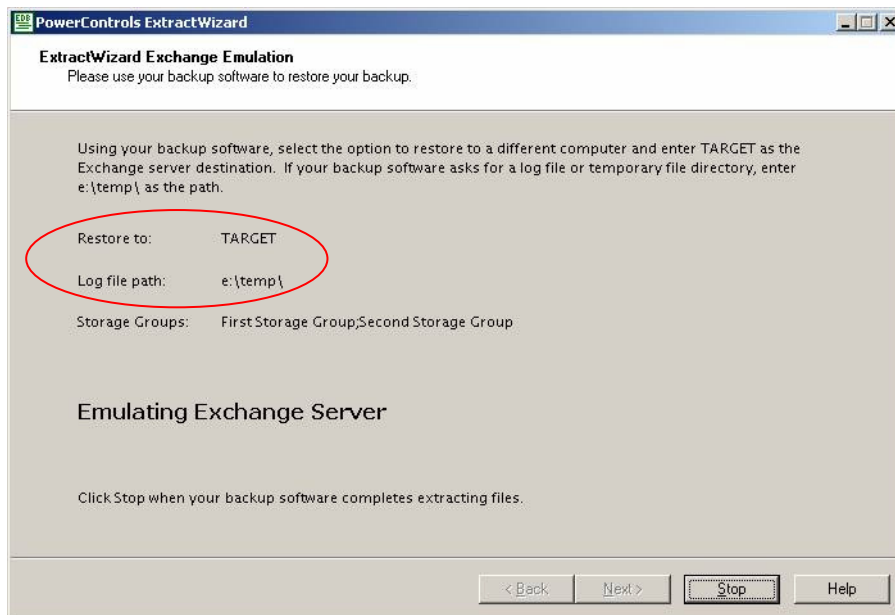
- Select the **Exchange Server 2000 or Exchange Server 2003** option.
- In the **Storage Groups** box, enter the name of the storage group you will be extracting. The storage group name is case sensitive and must match exactly as it appears in the Exchange System Manager. You can enter multiple storage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

## Chapter 2: Using the ExtractWizard Advanced Method

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



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



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

11. Make sure “BrightStor ARCserve Client Agent for Windows” software and “Backup Agent for Microsoft Exchange” software are installed on the computer running ExtractWizard.
  12. If you have already installed the Backup Agent for Exchange 5.5 and you wish to emulate Exchange 2000/2003, you must do one of the following:
    - Option 1: Reinstall the Backup Agent for Microsoft Exchange with ExtractWizard, running the correct emulation type.
    - Option 2: Manually edit the registry setting for the ARCserve Exchange client. Make sure the following key exists:  
**HKEY\_LOCAL\_MACHINE\SOFTWARE\ComputerAssociates\BrightStor ARCserve Backup\DSAgent\CurrentVersion\agent\dbaexch**. In this key, make sure the **REG\_DWORD** value “**isExch2000**” exists with a value of “1”.
  13. Start BrightStor ARCserve on the computer you normally run your restores on. This can be the same computer as the one running ExtractWizard. The **BrightStor ARCserve** window appears.
  14. On the **Quick Start** menu, click **Restore**. A **Server** tree appears in the **Source** tab.
  15. In the **Source** tab, select the Exchange backup you want to restore.
  16. Right-click the storage group you want to restore and click **Backup Agent Option**. The **Backup Agent Restore Options** dialog box appears.
  17. In the **Temporary location for log and path files** box, enter the log file path. See previous step 10 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
  18. Click **OK** to close the **Backup Agent Restore Options** dialog box.
  19. Click the **Destination** Tab.
  20. Clear the **Restore files to their original location** check box.
- Important Note:** For the following two steps, use the **Network** tree. Do not use the **Windows NT/2000/XP/2003 Systems** tree.
21. In the **Network** tree, expand the **Microsoft Windows Network** node, and locate the Restore Target Computer. If the Restore Target Computer does not appear, do one or both of the following:
    - If the domain or workgroup that the Restore Target Computer belongs to does not appear in the Microsoft Windows Network node, right-click the Microsoft Windows Network node and click **Add Machine/Object**. In the **Add Object** dialog box, enter the domain or workgroup and click **Add**.
    - If the Restore Target Computer does not appear in the domain or workgroup it belongs to, right-click the domain or workgroup node, and click **Add Machine/Object**. In the **Add Object** dialog box, enter the name of the Restore Target Computer and click **Add**. See previous step 10 to verify that you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
  22. Expand the Restore Target Computer node and select the **Microsoft Information Store** node.

**Note:** If the **Microsoft Information Store** node does not appear under the Restore Target Computer, select the Restore Target Computer node so that its name appears in the Address box above the

## Chapter 2: Using the ExtractWizard Advanced Method

*Destination tree. Then append \dbaexchis to the Restore Target Computer name. This signals ARCserve you are restoring an Information Store.*

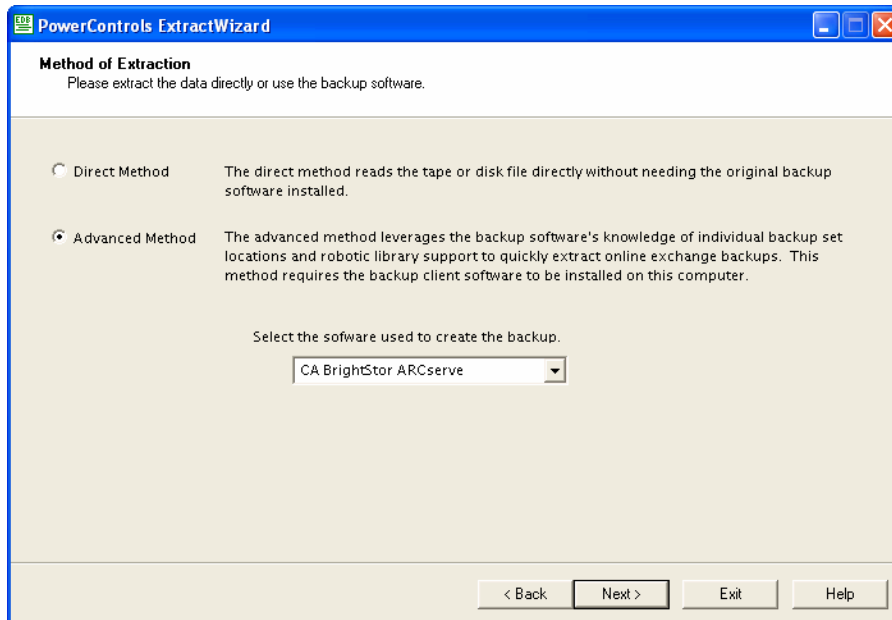
23. On the toolbar, click the **Start** button.
24. If the Remote Agent Security is *not* properly configured, the **Security** dialog box appears. Make sure your Server logon account (User Name and Password) is correct. The account you use must have backup operator rights to the Restore Target Computer.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

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

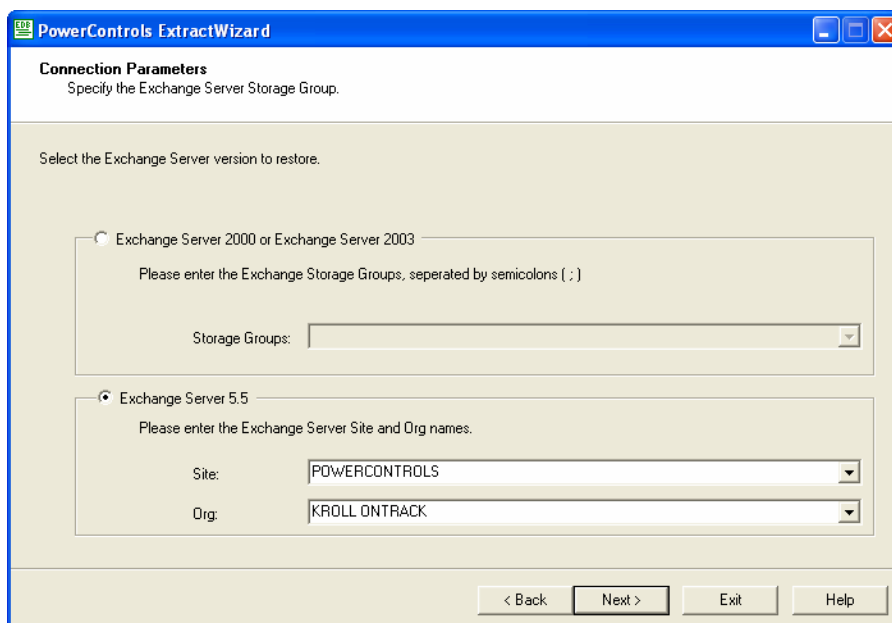
25. Verify the session information is correct.
26. Click **OK**. The **Submit Job** dialog box appears.
27. In the **Description** box, enter a description if desired, and click **OK**. ARCserve will start to restore Exchange files to the ExtractWizard.
28. When ARCserve has finished, click **OK** and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

**Exchange Emulation for CA BrightStor ARCserve and Exchange 5.5**

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.
4. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **CA BrightStor ARCserve**. Then click **Next**.

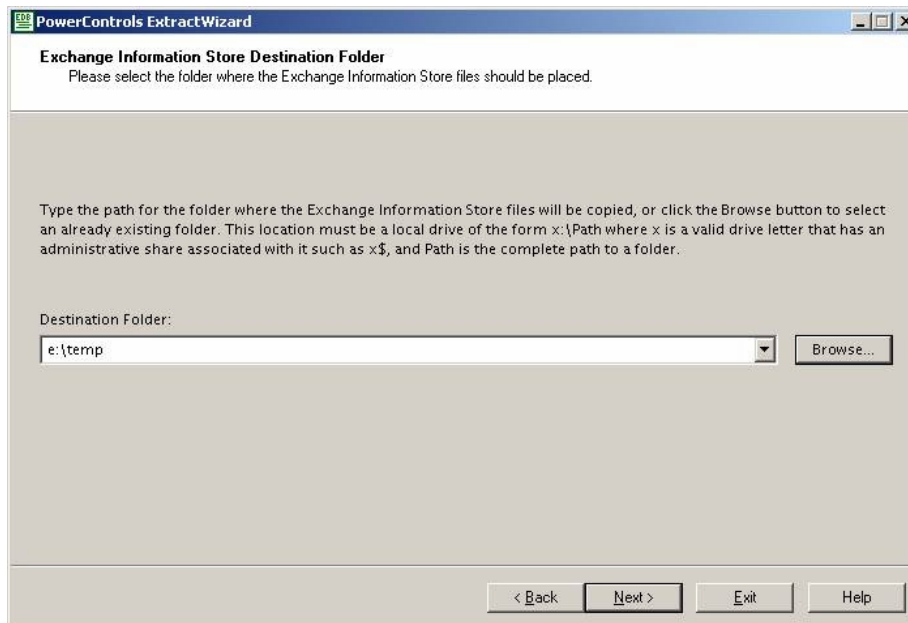


5. On the **Connection Parameters** page of the ExtractWizard, select the **Exchange Server 5.5** option.



## Chapter 2: Using the ExtractWizard Advanced Method

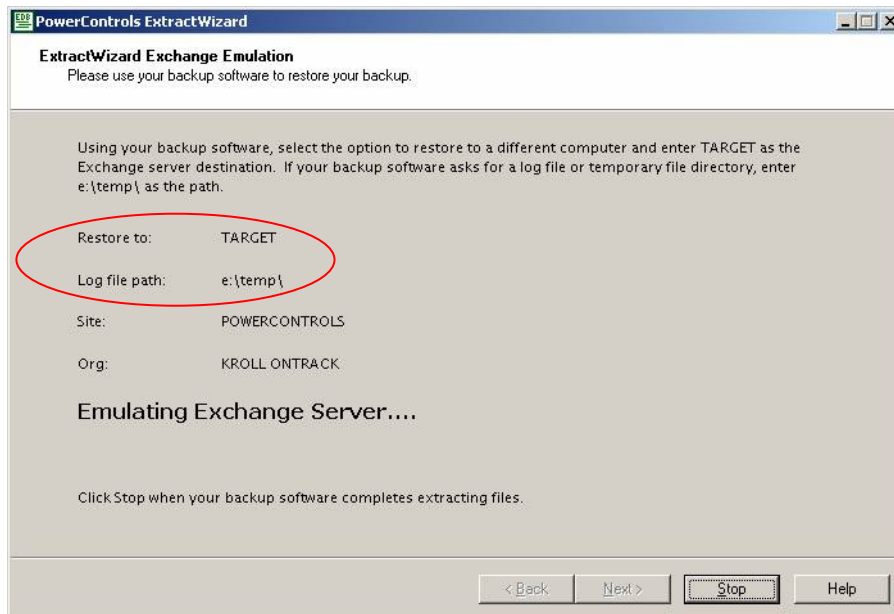
6. In the **Site** and **Org** boxes, enter the Site and Org for the Exchange Information Store files you are preparing to restore. The Site and Org names are case sensitive and must match exactly as they appear in the Exchange System Manager.
7. Click **Next**.
8. If ExtractWizard displays a warning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



The screenshot shows a Windows-style dialog box titled "PowerControls ExtractWizard". The main heading is "Exchange Information Store Destination Folder". Below the heading is a sub-instruction: "Please select the folder where the Exchange Information Store files should be placed." The main area of the dialog contains a text box with the instruction: "Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as x\$, and Path is the complete path to a folder." Below this text is a text input field labeled "Destination Folder:" containing the text "e:\temp". To the right of the input field is a "Browse..." button. At the bottom of the dialog are four buttons: "< Back", "Next >", "Exit", and "Help".



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



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

11. Make sure “BrightStor ARCserve Client Agent for Windows” software and “Backup Agent for Microsoft Exchange” software are installed on the computer running ExtractWizard.
12. If you have already installed the Backup Agent for Exchange 2000/2003 and you wish to emulate Exchange 5.5, you must do one of the following:

- Option 1: Reinstall the Backup Agent for Microsoft Exchange with ExtractWizard, running the correct emulation type.
- Option 2: Manually edit the registry setting for the ARCserve Exchange client. Make sure the following key exists:  
**HKEY\_LOCAL\_MACHINE\SOFTWARE\ComputerAssociates\BrightStor ARCserve Backup\DSAgent\CurrentVersion\agent\dbaexch.** In this key, make sure the **REG\_DWORD** value “isExch2000” does not exist.

***Important Note:** If **REG\_DWORD** value “isExch2000” exists, delete it.*

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

***Note:** You cannot restore the Directory.*

16. Click the **Destination** tab.
17. Clear the **Restore files to their original location** check box.

## Chapter 2: Using the ExtractWizard Advanced Method

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

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

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

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

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

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

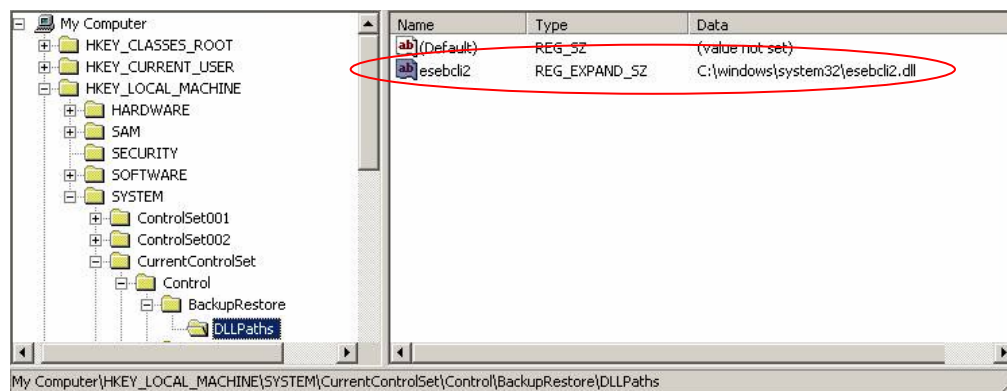
## Exchange Emulation for Veritas NetBackup

### Exchange Emulation for Veritas NetBackup and Exchange 2000/2003

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

1. Install NetBackup client software for Windows on the computer that will be running ExtractWizard.
2. Allow the computer running ExtractWizard to restore backups created by the Exchange server client. Follow the instructions for allowing redirected restores in the NetBackup Administrators Guide.
3. On the computer that will be running ExtractWizard, do one of the following:
  - **Option 1:** Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
  - **Option 2:** Copy esebcli2.dll to the system path: winnt\system32 or windows\system32. (The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.) Then set the registry key:  
**HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths**  
 with Value Name **Esebcli2**, Data Type **REG\_EXPAND\_SZ**, String **Drive\Path\Esebcli2.dll**

**Note for Windows 2000:** Use regedt32.exe to create a REG\_EXPAND\_SZ value.



*Example of Setting the Registry Key*

4. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
5. On the first page of the ExtractWizard, click **Next**.

## Chapter 2: Using the ExtractWizard Advanced Method

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

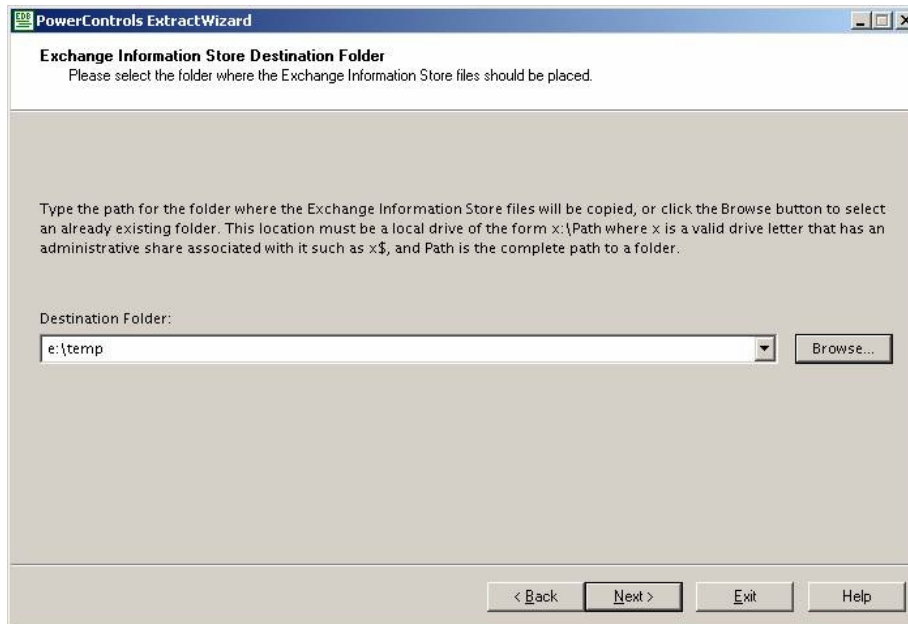
The screenshot shows the 'Method of Extraction' window of the PowerControls ExtractWizard. The title bar reads 'PowerControls ExtractWizard'. The main heading is 'Method of Extraction' with the instruction 'Please extract the data directly or use the backup software.' Below this, there are two radio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

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

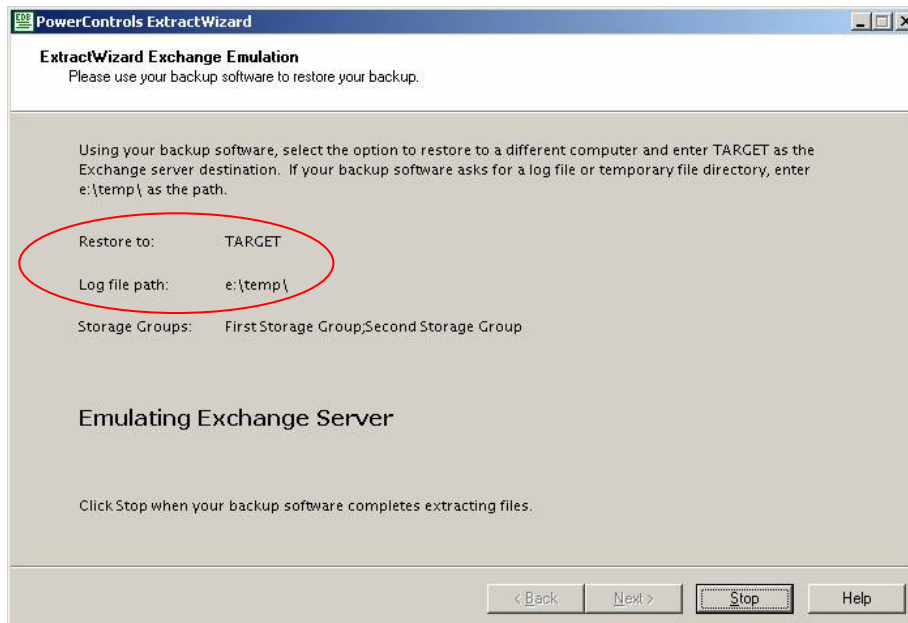
The screenshot shows the 'Connection Parameters' window of the PowerControls ExtractWizard. The title bar reads 'PowerControls ExtractWizard'. The main heading is 'Connection Parameters' with the instruction 'Specify the Exchange Server Storage Group.' Below this, there is a label 'Select the Exchange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

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

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



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



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

12. Start the NetBackup client on the computer running ExtractWizard.
13. On the **File** menu, click **Specify NetBackup Machines and Policy Type**. (For NetBackup 4.5, click **Specify NetBackup Machines**.)

## Chapter 2: Using the ExtractWizard Advanced Method

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

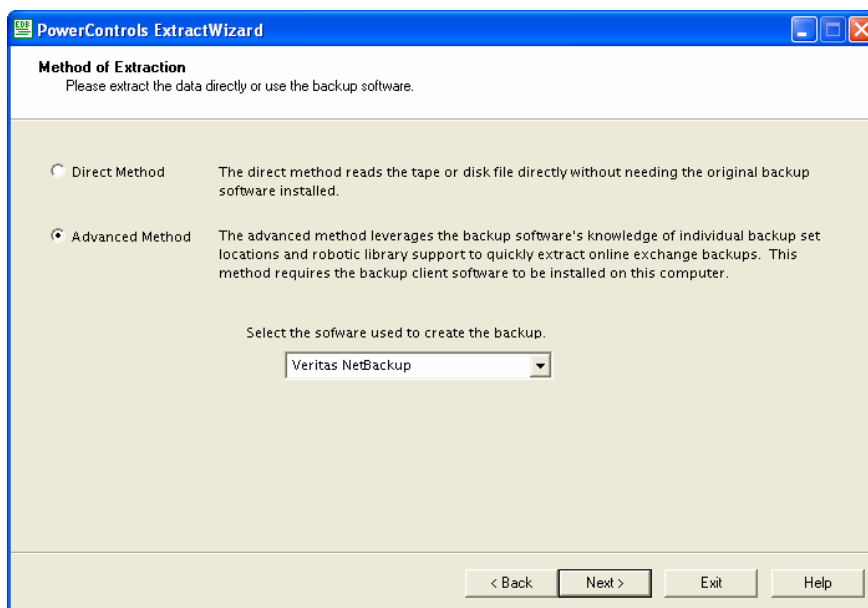
***CAUTION:** If the **Commit after restore completes** check box is selected, NetBackup will automatically delete the restored files after completing the restore.*

19. In the **Temporary location for log and patch files** box, enter the log file path. See previous step 11 to verify that you are using the “Log file path” value from the Exchange Emulation page of the ExtractWizard.
20. Click the **Start Restore** button.
21. When NetBackup has finished, click **OK** and close NetBackup.
22. In ExtractWizard, click **Stop** and then click **Finish**.

## Exchange Emulation for Veritas NetBackup and Exchange 5.5

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

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



## Chapter 2: Using the ExtractWizard Advanced Method

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

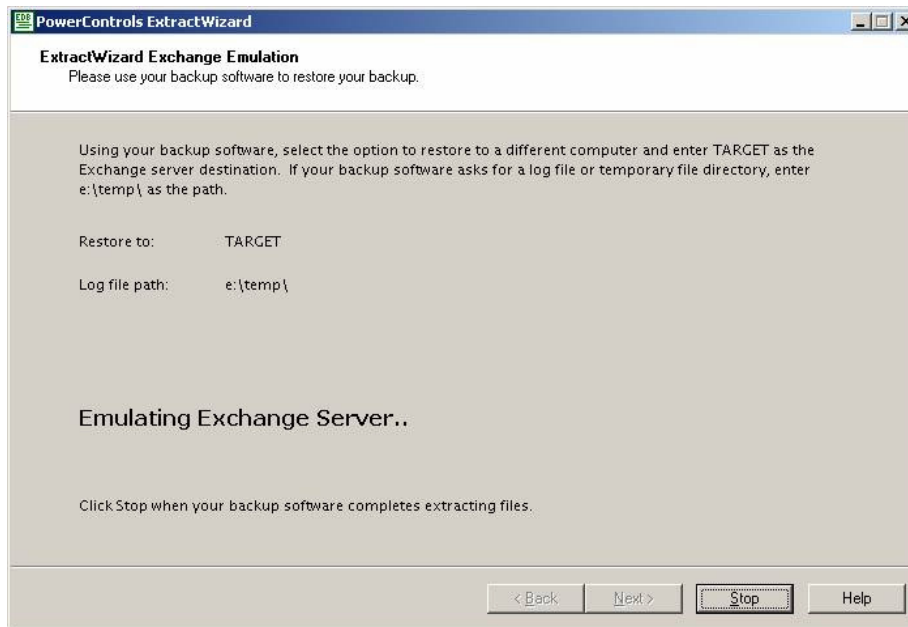
The screenshot shows the 'PowerControls ExtractWizard' window with the 'Connection Parameters' tab selected. The title bar reads 'PowerControls ExtractWizard'. Below the title bar, the text 'Specify the Exchange Server Storage Group.' is displayed. The main area contains the instruction 'Select the Exchange Server version to restore.' followed by two radio button options. The first option, 'Exchange Server 2000 or Exchange Server 2003', is unselected. Below it is a text box labeled 'Please enter the Exchange Storage Groups, seperated by semicolons ( ; )' and a 'Storage Groups:' dropdown menu. The second option, 'Exchange Server 5.5', is selected. Below it is a text box labeled 'Please enter the Exchange Server Site and Org names.' followed by 'Site:' and 'Org:' dropdown menus, both showing 'NOT REQUIRED'. At the bottom are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

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

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



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



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

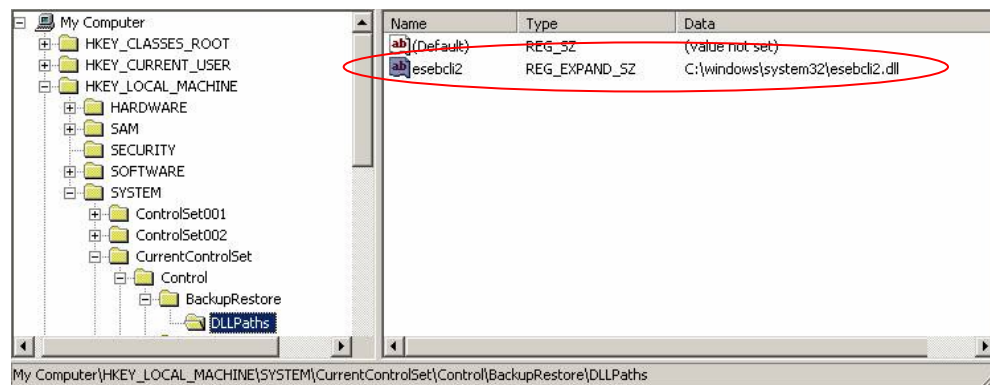
## Exchange Emulation for CommVault Galaxy Backup & Recovery

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

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

1. On the computer that will be running ExtractWizard, do one of the following:
  - **Option 1:** Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
  - **Option 2:** Copy esebcli2.dll to the system path: winnt\system32 or windows\system32. (The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.) Then set the registry key:  
**HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths** with Value Name **Esebccli2**, Data Type **REG\_EXPAND\_SZ**, String **Drive\Path\Esebccli2.dll**

**Note for Windows 2000:** Use regedt32.exe to create a REG\_EXPAND\_SZ value.



*Example of Setting the Registry Key*

2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.

4. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **CommVault Galaxy Backup & Recovery**. Then click **Next**.

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

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

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

Select the software used to create the backup.

CommVault Galaxy Backup & Recovery

< Back    Next >    Exit    Help

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

**Connection Parameters**  
Specify the Exchange Server Storage Group.

Select the Exchange Server version to restore.

The Storage Group, Site, and Org names are case sensitive and must match exactly as they appear in Exchange System Manager.

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

Storage Groups:    NOT REQUIRED

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

Site:    NOT REQUIRED

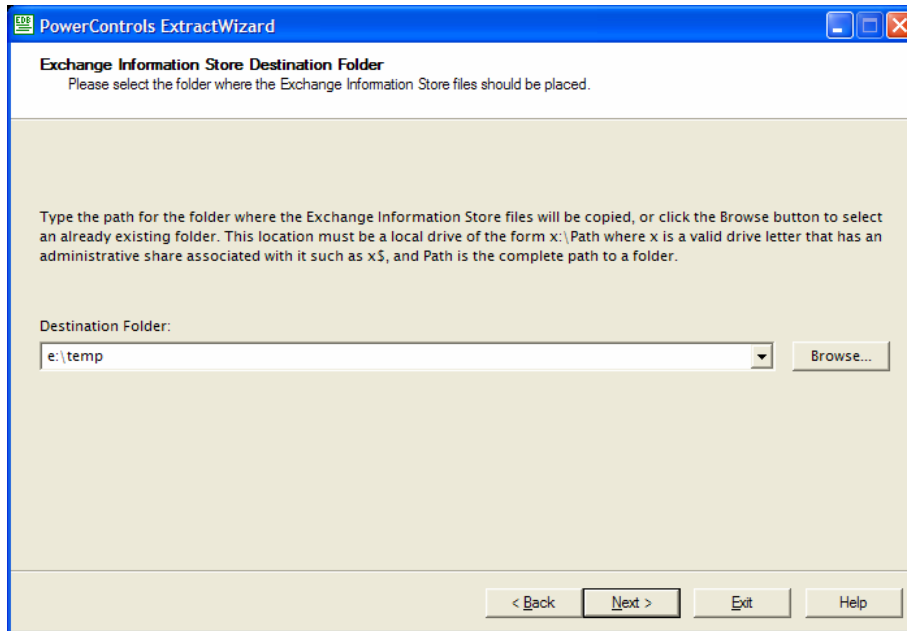
Org:    NOT REQUIRED

< Back    Next >    Exit    Help

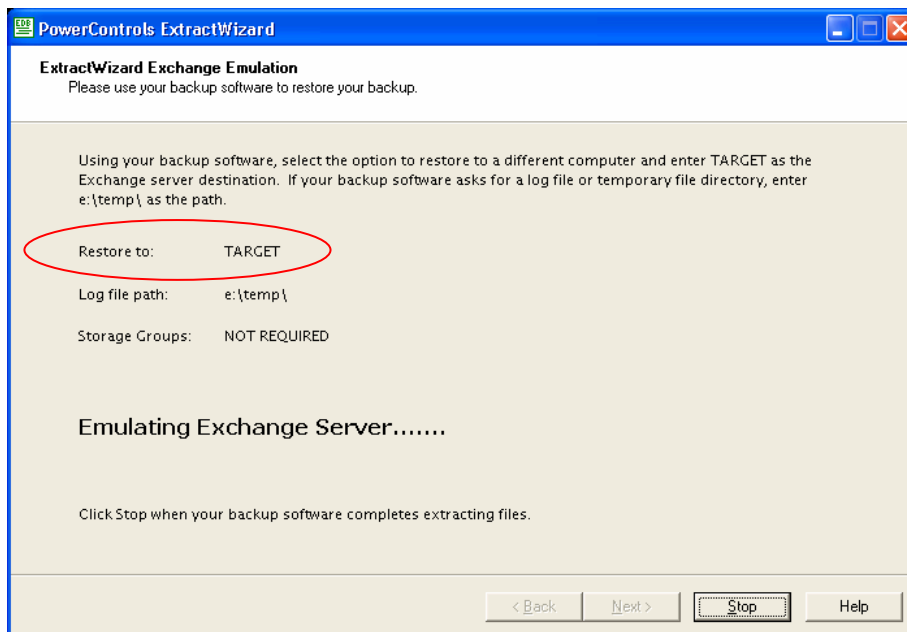
5. Select the **Exchange Server 2000 or Exchange Server 2003** option.
6. Click **Next**.

## Chapter 2: Using the ExtractWizard Advanced Method

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



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



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

9. Do one of the following:

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

**Notes:**

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

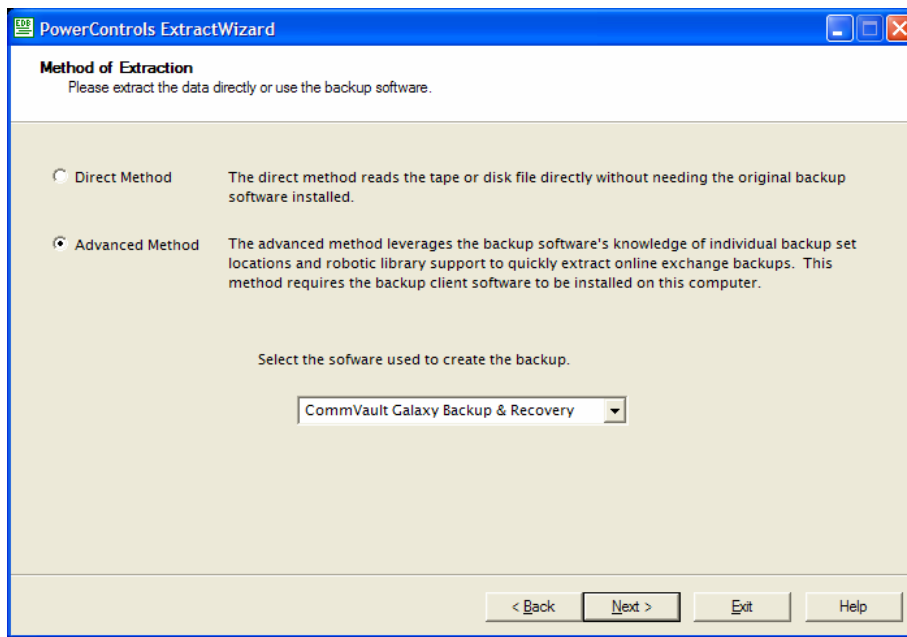
***Note:** You can only restore data from under the Exchange Database tree node.*
  17. Click the **Recover All Selected** button.
  18. The **Restore Options for All Selected Items** dialog box appears.
  19. Select the **Restore to a Different Client** option.
  20. Select the **Restore Target Computer**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

## Chapter 2: Using the ExtractWizard Advanced Method

### Exchange Emulation for CommVault Galaxy Backup & Recovery and Exchange 5.5

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

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.
4. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **CommVault Galaxy Backup & Recovery**. Then click **Next**.



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

**PowerControls ExtractWizard**

**Connection Parameters**  
Specify the Exchange Server Storage Group.

Select the Exchange Server version to restore.

The Storage Group, Site, and Org names are case sensitive and must match exactly as they appear in Exchange System Manager.

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

Storage Groups:

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

Site:

Org:

< Back   Next >   Exit   Help

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

**PowerControls ExtractWizard**

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

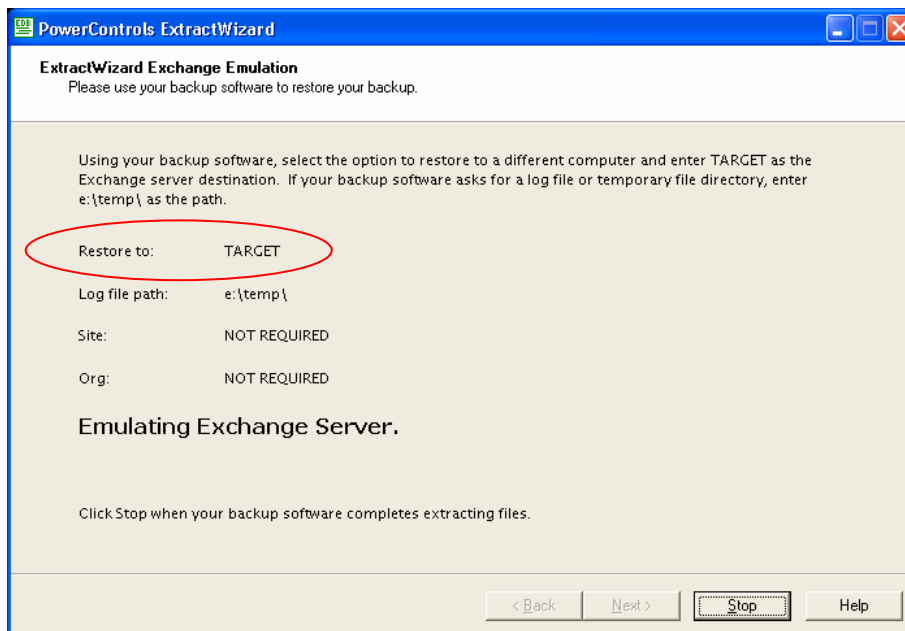
Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as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

Destination Folder:

< Back   Next >   Exit   Help

## Chapter 2: Using the ExtractWizard Advanced Method

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



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

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

### **Notes:**

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



14. In the **Browse Options** dialog box, select your Exchange server from the **Client Computer** drop-down menu.
15. Click **OK** to show the browse data for your Exchange server.
16. Select the Exchange backup you want to restore.

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

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

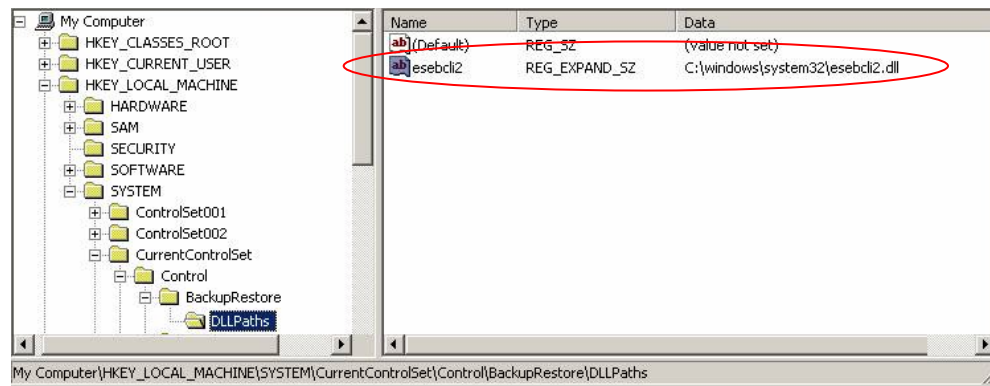
## Exchange Emulation for UltraBac

### Emulation for UltraBac and Exchange 2000/2003

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

- Option 1: Install the Exchange System Management Tools and update the system path to include the Exchsrvr\bin\ directory.
- Option 2: Copy esebcli2.dll to the system path: winnt\system32 or windows\system32.  
(The esebcli2.dll file is located on the Exchange Server in the Exchange Server\bin directory.)  
Then set the registry key:  
**HKEY\_LOCAL\_MACHINE\System\CurrentControlSet\Control\BackupRestore\DLLPaths**  
with Value Name **Esebcli2**, Data Type **REG\_EXPAND\_SZ**, String **Drive\Path\Esebcli2.dll**

*Note for Windows 2000: Use regedt32.exe to create a REG\_EXPAND\_SZ value.*



*Example of Setting the Registry Key*

2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.

4. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **UltraBac**. Then click **Next**.

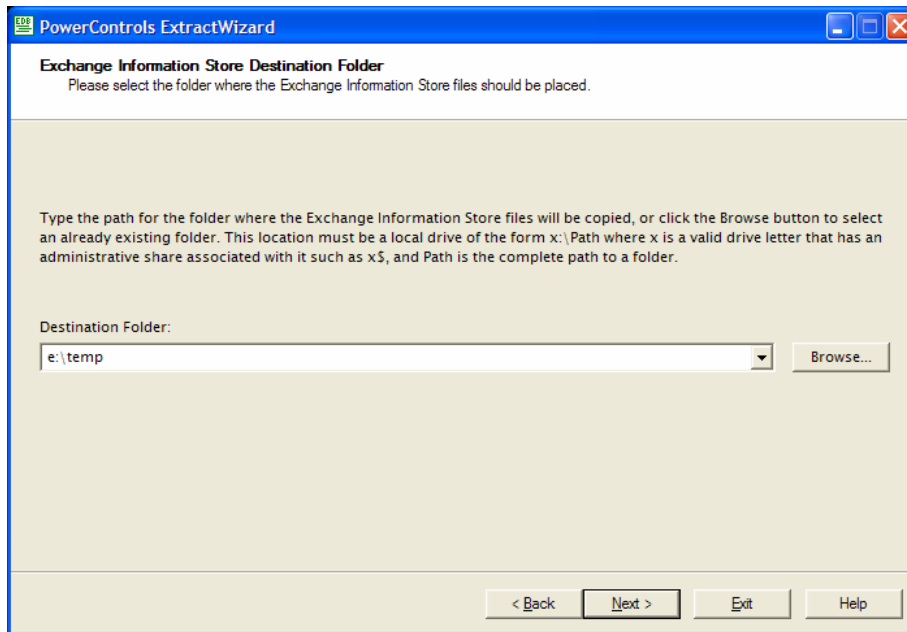
The screenshot shows the 'Method of Extraction' dialog box in the PowerControls ExtractWizard. The title bar reads 'PowerControls ExtractWizard'. Below the title bar, the text 'Method of Extraction' is followed by the instruction 'Please extract the data directly or use the backup software.' There are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

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

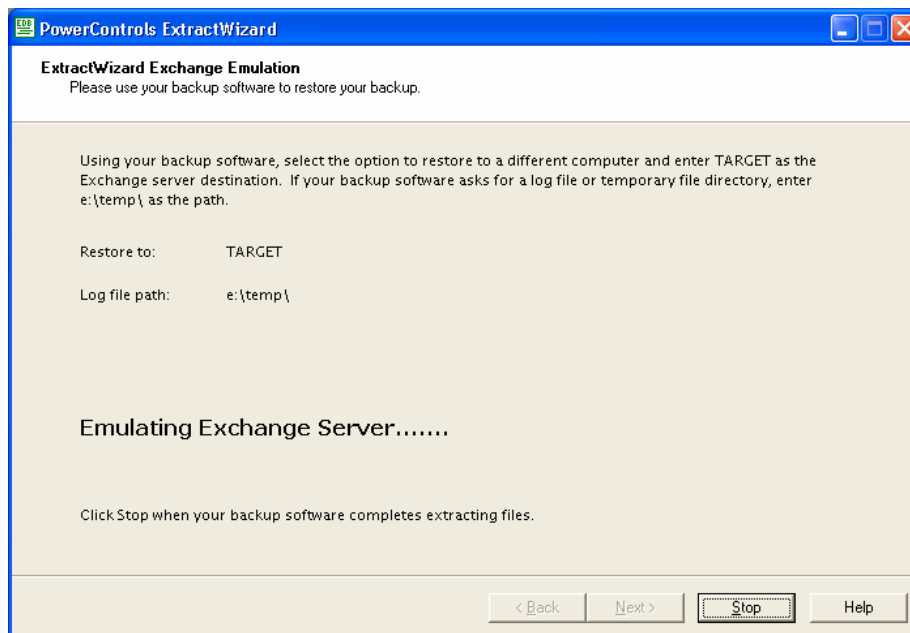
The screenshot shows the 'Connection Parameters' dialog box in the PowerControls ExtractWizard. The title bar reads 'PowerControls ExtractWizard'. Below the title bar, the text 'Connection Parameters' is followed by the instruction 'Specify the Exchange Server Storage Group.' There is a label 'Select the Exchange Server version to restore.' and a note: 'The Storage Group, Site, and Org names are case sensitive and must match exactly as they appear in Exchange System Manager.' There are two radio button options: 'Exchange Server 2000 or Exchange Server 2003' and 'Exchange Server 5.5'. The 'Exchange Server 2000 or Exchange Server 2003' option is selected. Below this option, there is a label 'Please enter the Exchange Storage Groups, separated by semicolons (;)' and a dropdown menu labeled 'Storage Groups:' showing 'NOT REQUIRED'. Below the 'Exchange Server 5.5' option, there is a label 'Please enter the Exchange Server Site and Org names.' and two dropdown menus: 'Site:' showing 'NOT REQUIRED' and 'Org:' showing 'NOT REQUIRED'. At the bottom of the dialog box, there are four buttons: '< Back', 'Next >', 'Exit', and 'Help'.

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

## Chapter 2: Using the ExtractWizard Advanced Method



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



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

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

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

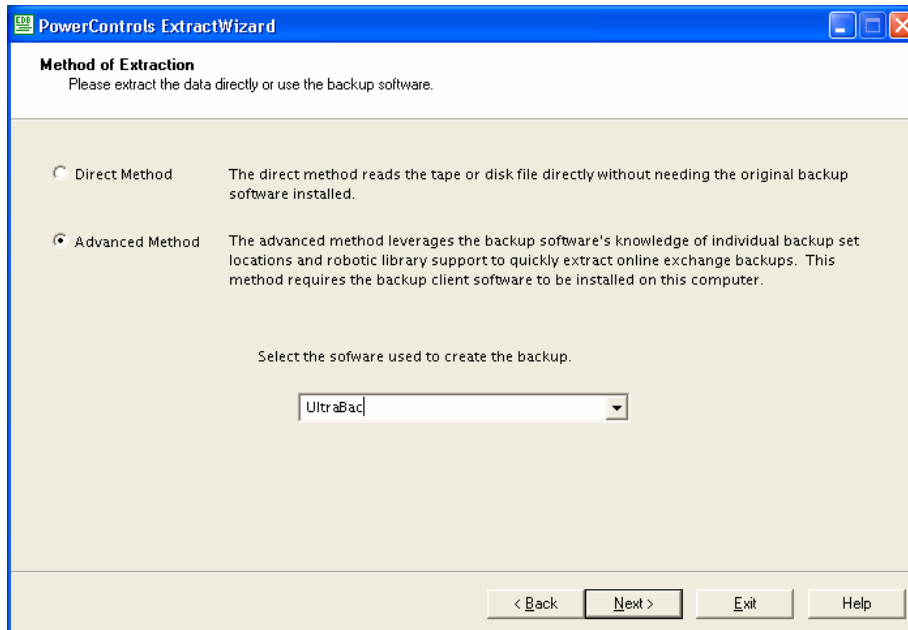
***Note:** You can only restore data from under the Exchange Agent tree node.*

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

## Chapter 2: Using the ExtractWizard Advanced Method

### Exchange Emulation for UltraBac and Exchange 5.5

1. On the computer that will be running ExtractWizard, make sure edbbcli.dll is in the system path. The easiest way to ensure this is to copy edbbcli.dll to winnt\system32 or windows\system32. The edbbcli.dll file can be found on the Exchange Server in the Exchange Server\bin directory.
2. Start ExtractWizard. The computer running ExtractWizard is the Restore Target Computer.
3. On the first page of the ExtractWizard, click **Next**.
4. On the **Method of Extraction** page of the ExtractWizard, select **Advanced Method** and **UltraBac**. Then click **Next**.



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

**PowerControls ExtractWizard**

**Connection Parameters**  
Specify the Exchange Server Storage Group.

Select the Exchange Server version to restore.

The Storage Group, Site, and Org names are case sensitive and must match exactly as they appear in Exchange System Manager.

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

Storage Groups:

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

Site:

Org:

< Back   Next >   Exit   Help

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

**PowerControls ExtractWizard**

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

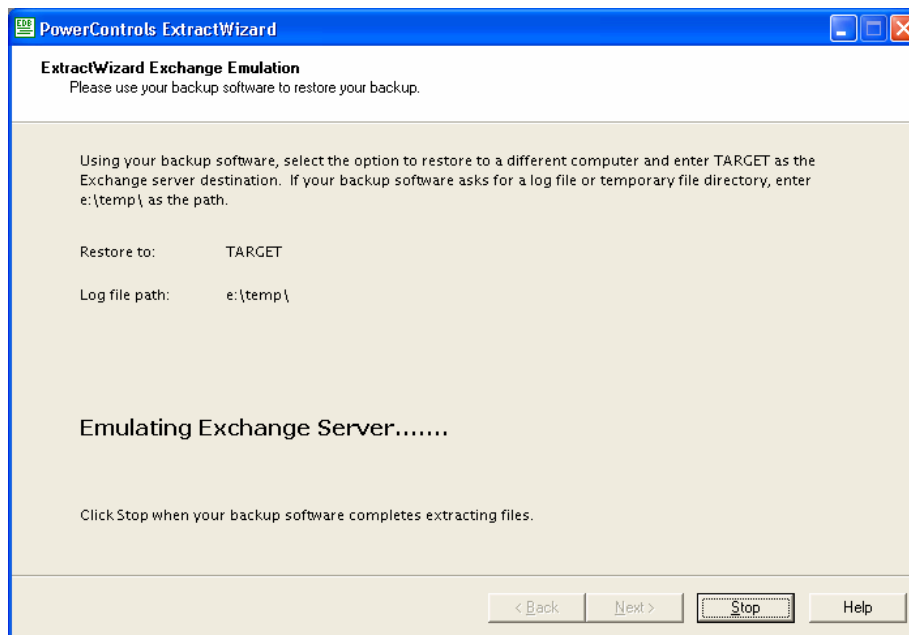
Type the path for the folder where the Exchange Information Store files will be copied, or click the Browse button to select an already existing folder. This location must be a local drive of the form x:\Path where x is a valid drive letter that has an administrative share associated with it such as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

Destination Folder:

< Back   Next >   Exit   Help

## Chapter 2: Using the ExtractWizard Advanced Method

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



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

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

### Notes:

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

- Click the **Restore** button. The **General Restore Options** dialog box appears.
- Click the **Exchange 5 Options** button. The **Exchange 5-Specific Options** dialog box appears.
- Select the **Restore to Alternate Server** option. In its **Restore to** box, enter the name of the **Restore Target Computer** (i.e., the computer running ExtractWizard). See previous step 7 to verify you are using the “Restore to” value from the Exchange Emulation page of the ExtractWizard.
- Under **Databases to Restore**, select the appropriate option: Public Store, Private Store, or Both.
- Click **OK**.



18. In the **General Restore Options** dialog box, click **Next**.
19. In the **Restore Options** dialog box, click the **Restore** button.
20. When UltraBac has finished the restore, click **Exit** to close UltraBac.
21. In ExtractWizard, click **Stop** and then click **Finish**.

## Organizing the Extracted Files for PowerControls

**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.*

PowerControls 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.

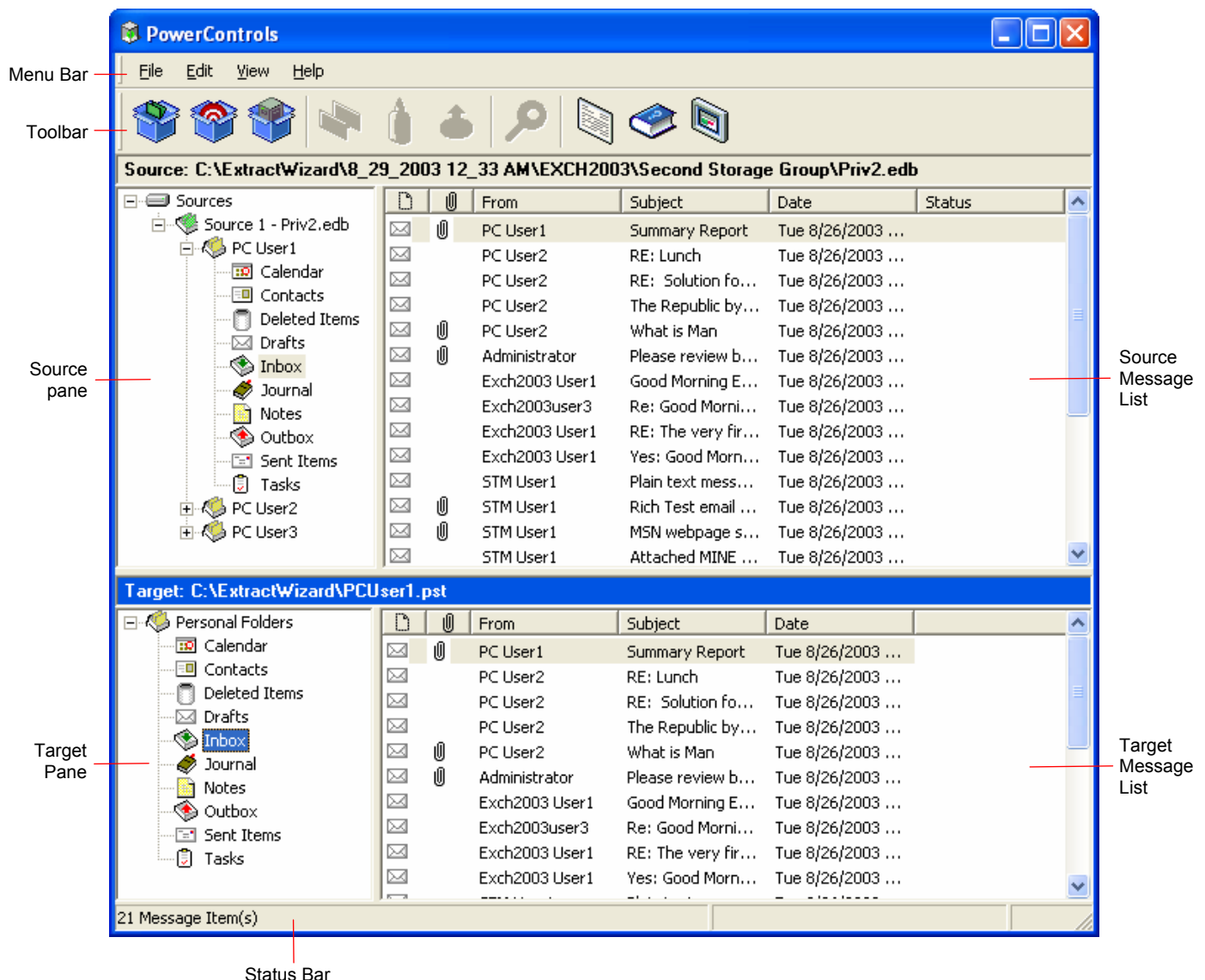
# Chapter 3: Looking at the Interface

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

## PowerControls Main Window

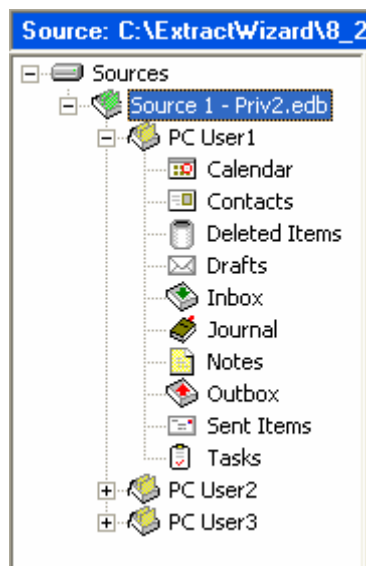
The PowerControls main window is where you do most of your work. This window displays the source EDB or PST file(s) as well as the target PST file(s) or Exchange Server. The target acts as a container for the restored files. The various work areas and controls are described in the following sections.

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



## Source Pane

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



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

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

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

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

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

## Source Message List

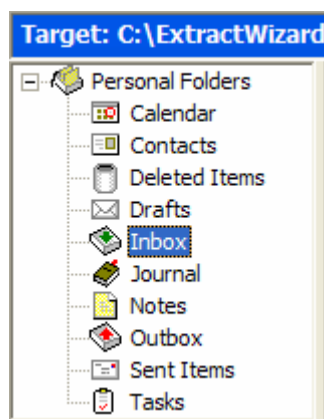
The source message list displays the message items in the Outlook folder that you selected in the Source pane. This folder is one of the Outlook folders (e.g., Inbox, Contacts, Tasks). In the illustration below, the source message list displays the messages in an Inbox.

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

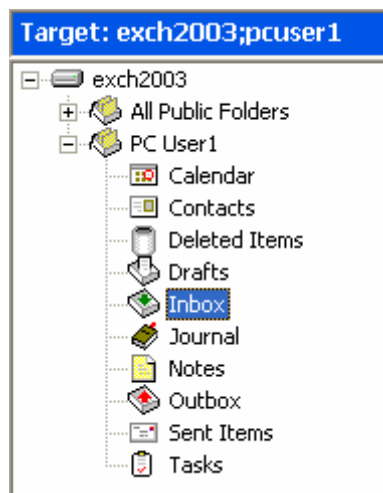
The source message list displays metadata about the message items in six columns. The metadata includes file type; attachments, if any; message sender; subject; date; and status. The **Sent Items** folder also displays the “To” column. For more information on the message list, see “Sorting Messages in the Message Lists” on page 121.

## Target Pane

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



*Target Pane for a PST File*



*Target Pane for an Exchange Server*

## Target Message List (Restored Messages)

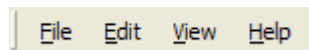
The target message list displays the message items in the Outlook folder that you selected in the Target pane. If the target is a newly created PST file, the Outlook folders and message list will be empty. If the target is an existing PST file or Exchange server, or if you have restored message items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

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

*Target Message List Displaying Restored Messages*

The target message list displays metadata about the message items in five columns (instead of six columns in the source message list). The metadata includes file type; attachments, if any; message sender; subject; and date. The **Sent Items** folder also displays the “To” column. For more information on the message list, see “Sorting Messages in the Message Lists” on page 121.

### Menu Bar













The menu bar contains most of the PowerControls 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.

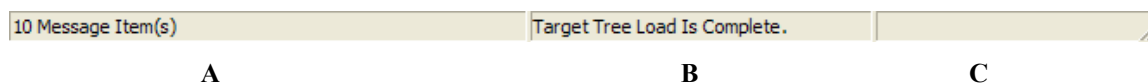
### Toolbar



The ten buttons on the toolbar perform the following functions:

	<b>Open Source</b> 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.
	<b>Open Target PST</b> 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.
	<b>Open Target Exchange Server</b> 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.
	<b>Copy</b> 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.
	<b>Paste</b> 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.
	<b>Export</b> 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).
	<b>Search</b> button displays the Find dialog box, which lets you specify the desired search criteria for finding messages in the Source pane.
	<b>Preview Pane</b> button displays the preview pane on the PowerControls main window so you can read a message without opening it.
	<b>View Help</b> button displays PowerControls 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.
	<b>Ontrack Web Site</b> button takes you to the Ontrack Web site ( <a href="http://www.ontrack.com">www.ontrack.com</a> ), providing you with additional information on products and services by Kroll Ontrack Inc.

## 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 .

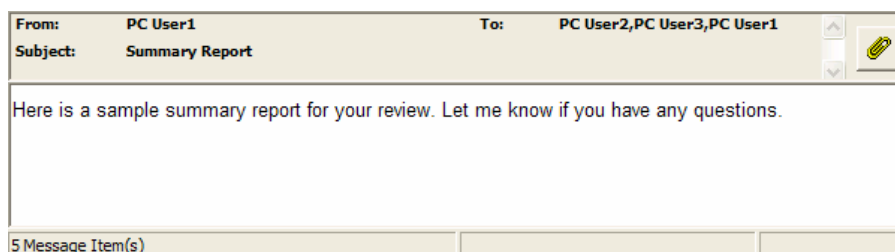
### To hide the preview pane

- 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, PowerControls will load the application to view the selected attachment (e.g., to view an .xls file attachment, PowerControls will launch MS Excel). If no associated program is available for the attachment file type, PowerControls will present a message dialog box saying the attachment cannot be viewed.

*Note: PowerControls 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 PowerControls 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 PowerControls 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 PowerControls 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**

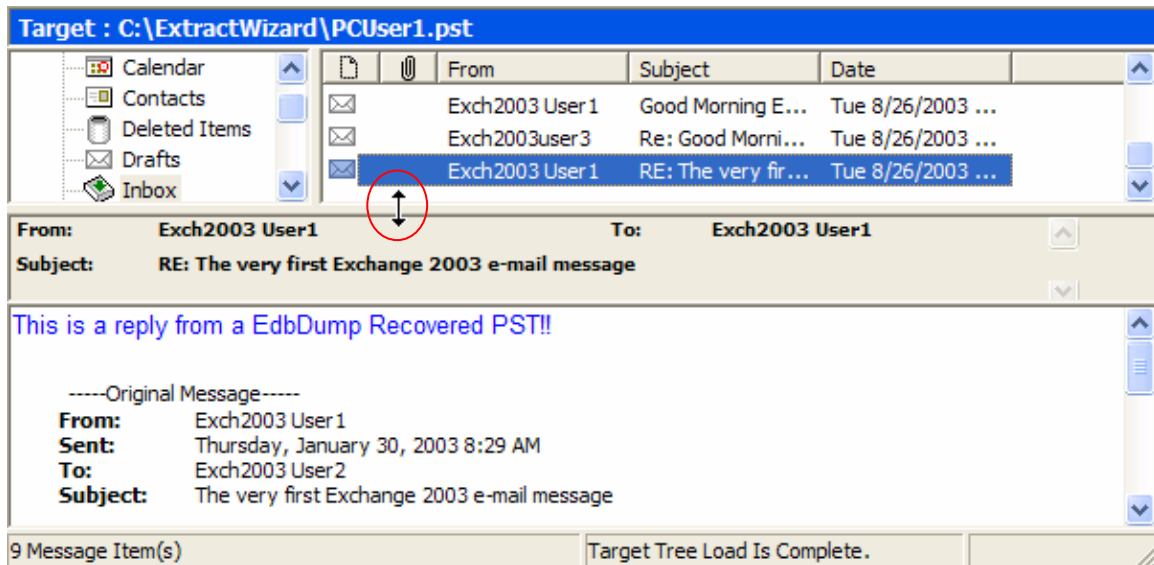
- On the **View** menu, click **Toolbar or Status Bar**. The check mark appears next to the name of the toolbar or status bar.

### 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.

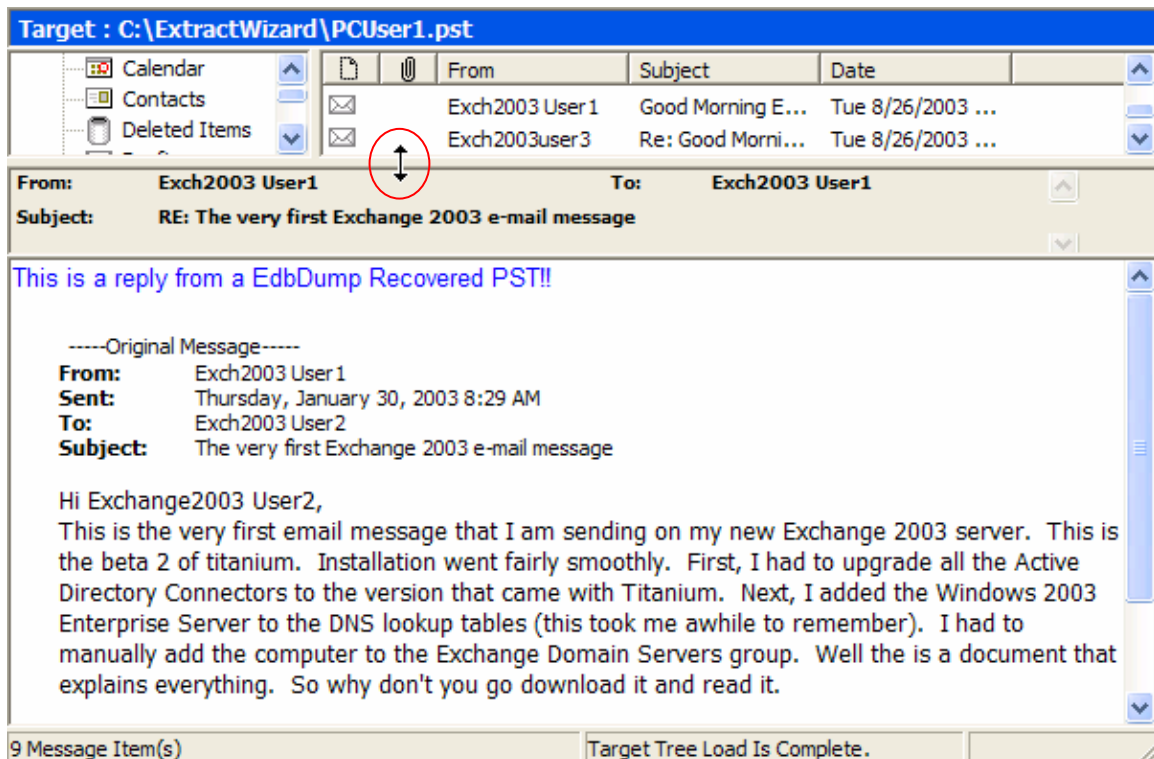
**To resize panes separated by a split bar**

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*

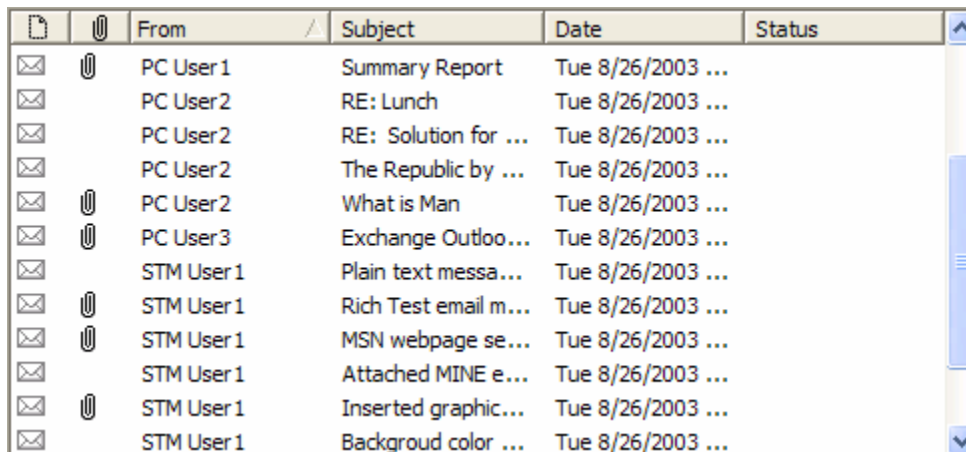
2. Drag the split bar until the two panes are the desired size.



*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:

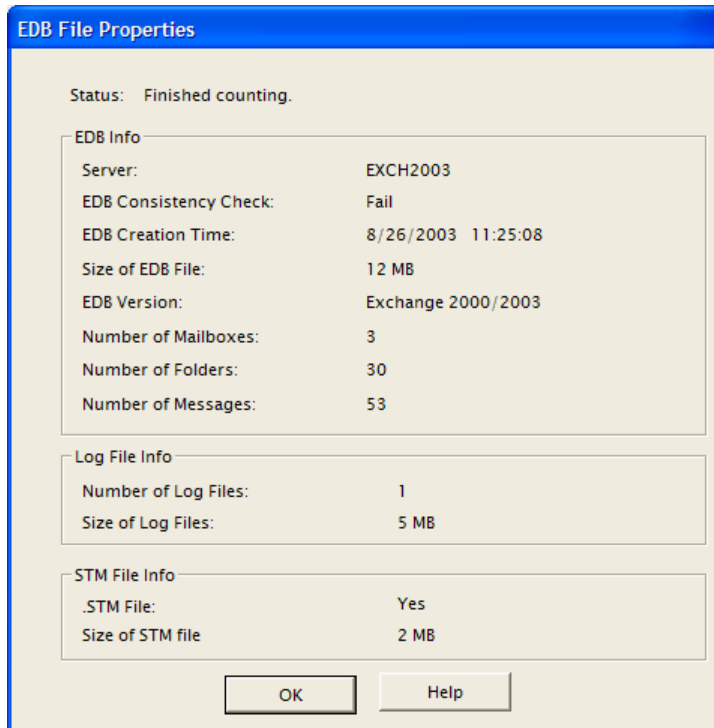
- On the **View** menu, click **Refresh**.
- Press the F5 key.

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

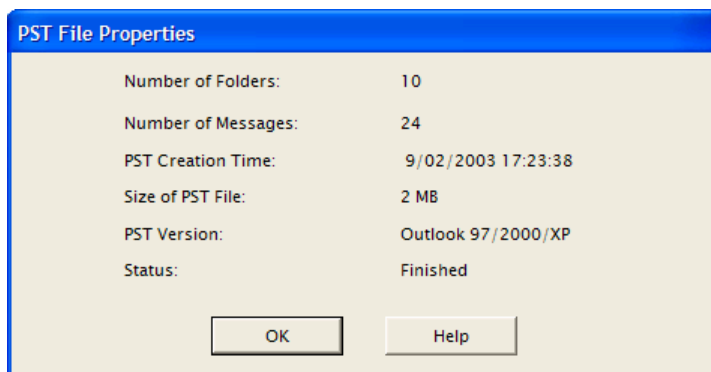
PowerControls makes it easy to view the properties of a source PST file, EDB file, mailbox, or folder.

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

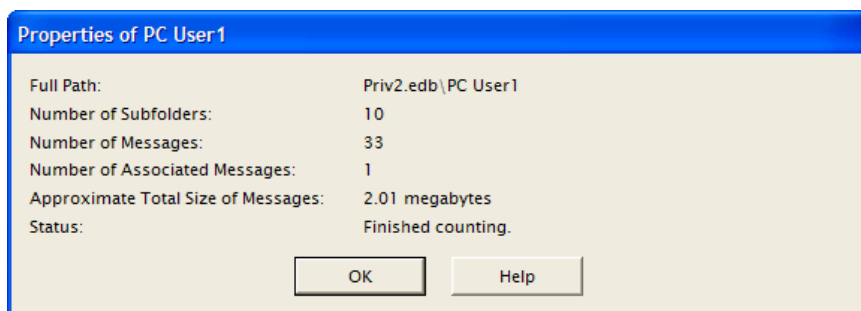
1. In the Source pane, right-click an EDB file, PST file, mailbox, or folder.
2. On the shortcut menu, click **Properties**. A properties dialog box appears.



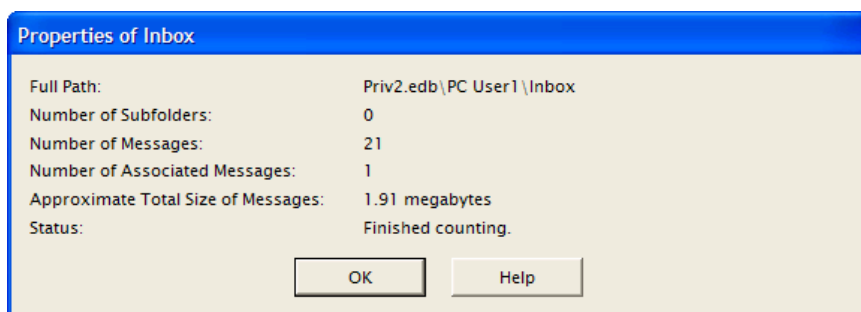
*Properties of an EDB File*



*Properties of a PST File*



*Properties of a Mailbox*

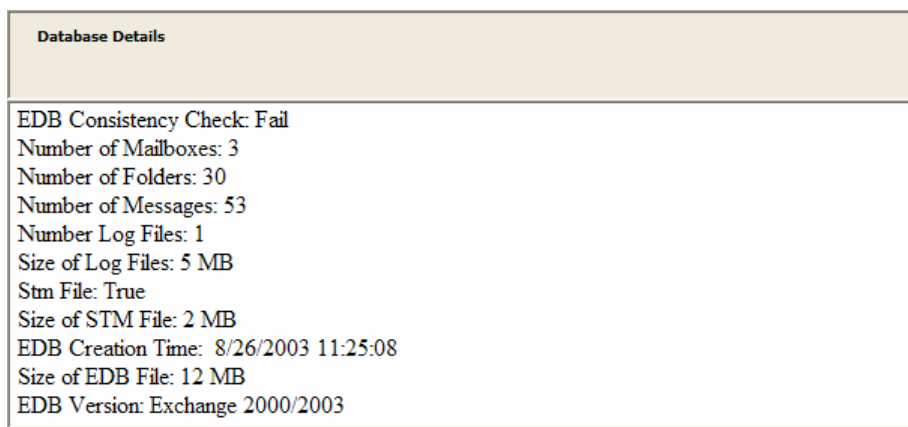


*Properties of a Folder*

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

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

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



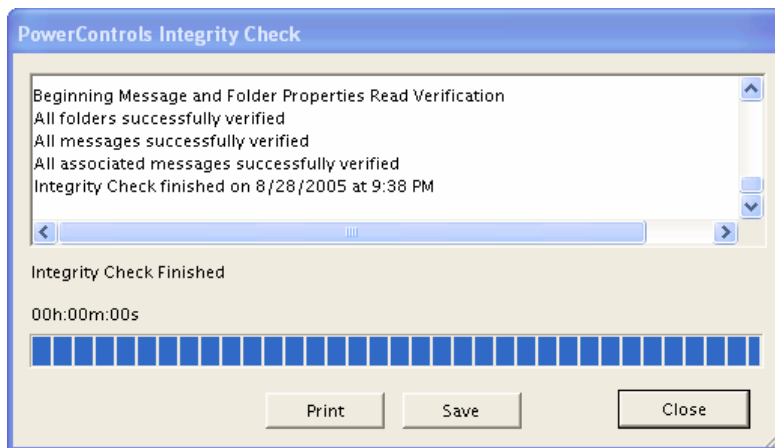
*Properties of an EDB File*

## Performing an Integrity Check

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

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

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



*An integrity check of an EDB file*

## Viewing Deleted Messages

PowerControls 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, PowerControls cannot view or restore these messages.

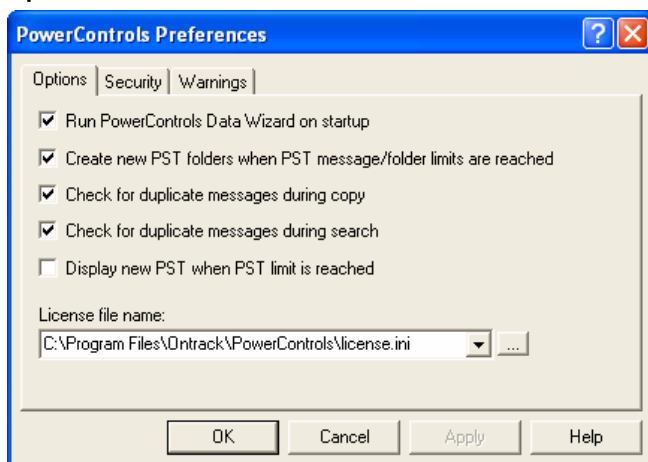
## Setting Preferences

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

### To change preference settings

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

### Options Tab



- **Run PowerControls Data Wizard on startup:** The Data Wizard will launch every time you open PowerControls.
- **Create new PST folders when PST message/folder limits are reached:** PowerControls will automatically create new folders (e.g., Inbox) when the 16,383 messages/folder limit is reached. After PowerControls 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 160.
- **Check for duplicate messages during copy:** When restoring Exchange data, PowerControls will not copy duplicates of a message to the destination folder if a message already exists in the destination folder. Selecting this preference setting results in slower copy performance.
- **Check for duplicate messages during search:** PowerControls will not return duplicates of a message during a search. For example, if the same message exists in two or more data stores, only the first message found will be listed in the search results. Selecting this preference setting results in slower search performance.
- **Display new PST when PST limit is reached:** When the limit for a PST is reached in the Target pane, PowerControls automatically displays the overflow PST.
- **License file name:** This box displays the current location of the license .ini file. To put this file in a different location, click the Browse button and navigate to the desired location. There are two ways to manage the location of the license.ini file:

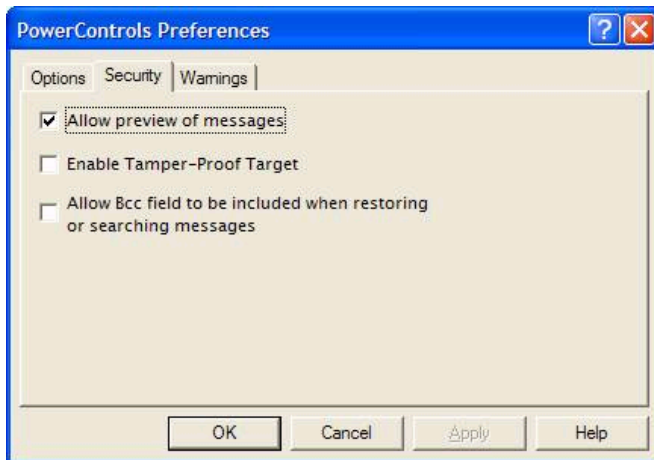
## Chapter 3: Looking at the Interface

- ⇒ **Multiple Copies of PowerControls:** Put one license.ini in the PowerControls program directory of each PowerControls installation.
- ⇒ **Single Copy of PowerControls:** Put one license.ini in a single network folder to which all PowerControls installations make reference.

For more information about the license .ini file, see “The License .ini File” on page 6.

### Security Tab

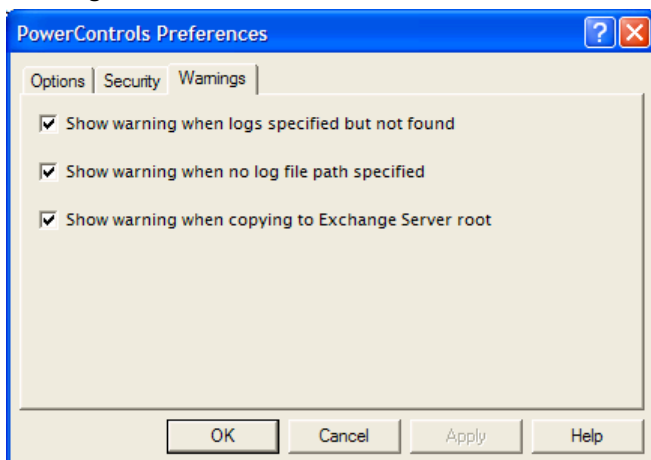
The options in this tab are modifiable by default only by users that belong to the Administrator Group. The options are stored in the registry: HKEY\_LOCAL\_MACHINE\software\ontrack\powercontrols. The PowerControls Installation program sets this registry key to have read/write access to users in the 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, PowerControls will not allow you to delete messages or folders in the target or have the ability to rename folders in the target. You will only have the ability to add (copy) to the target.
- **Allow Bcc field to be included when restoring messages:** If this option is selected, PowerControls will include Bcc information when restoring messages. This means that a recipient will be able to see Bcc recipients that he or she was not intended to see. It also means that searching with the “Sent to” option will return messages for Bcc recipients.



### Warnings Tab



- **Show warning when logs specified but not found:** PowerControls 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:** PowerControls 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:** PowerControls will warn you when you are about to copy a large amount of data to the Exchange server root.



# Chapter 4: Starting PowerControls

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 PowerControls Data Wizard.
- Open the source database and target mailboxes from the PowerControls main window.

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

## Running the PowerControls Data Wizard

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

***Before Using the Data Wizard:** Use the PowerControls 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 Direct Method.”*

### Data Wizard: Welcome Page

1. Click the **Start** button, and then point to **Programs**. Point to **Ontrack**, point to **PowerControls**, and then click **PowerControls**. The **PowerControls Data Wizard** appears.
2. If you do not want to run the Data Wizard every time you start PowerControls, clear the **Run On Startup** check box. Click **Next**.



### Data Wizard: Source Path Selection

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

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

#### To specify a source file

1. In the **Source File** box, use the **Browse** button to find the source EDB file or the source PST file.
2. If you specified a PST file path, proceed to step 5. PST files do not require log file or temporary file paths.
3. In the **Log File Path** box, use the **Browse** button to find the log files associated with the source EDB file.

***Important Note:** After you select an EDB file, the **Log File Path** box defaults to the source EDB file path, even if the log files are not in the same directory as the source EDB file. Therefore, make sure you enter the correct log file path in the **Log File Path** box.*

4. In the **Temporary File Path** box, accept the default location for .idx and .dat files, or specify a new location if they require more hard drive space. For more information, see "Guidelines for Selecting an Exchange Database" on page 131.
5. Click **Next**.

The screenshot shows the 'PowerControls Data Wizard' dialog box, specifically the 'Source Path Selection' page. The title bar is blue with the text 'PowerControls Data Wizard'. The main area has a light beige background. At the top, it says 'Source Path Selection.' followed by 'Please browse for the EDB or PST file you will be using as your source.' Below this, there is a paragraph: '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.' There are three input sections, each with a text box and a 'Browse...' button: 1. 'Source File (\*.edb, \*.pst)' with an empty text box. 2. 'Log File Path (\*.log, \*.pat, \*.chk)' with an empty text box. 3. 'Temporary File Path (\*.idx, \*.dat)' with a text box containing 'C:\DOCUME~1\BSCHMI~1\ENG\LOCALS~1\Temp\PC\'. At the bottom, there are four buttons: '< Back', 'Next >' (which is highlighted with a dashed border), 'Skip >>', and '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.*

PowerControls 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. PowerControls 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.

PowerControls 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, PowerControls 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. An option to open Public Folders is available upon connection to an Exchange server.

***Note:** Click the **Skip** button if you do not want to select a target file at this time.*

#### To specify a PST File as the target for restored data

1. Select the **PST File** option.

The screenshot shows the 'PowerControls Data Wizard' dialog box with the 'Target Type & Path Selection' tab selected. The dialog has a blue title bar with a close button. The main area is light beige. At the top, it says 'Target Type & Path Selection.' followed by 'Please select the type and path of the target file you will be using as your container for the restored data.' Below this, a message 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 is a text box labeled 'Target PST File Path' with a 'Browse...' button to its right. 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.

**PowerControls Data Wizard**

**Target Type & Path Selection**  
Please select the type and path of the target file you will be using as your container for the restored data.

Please select the type of target you wish to open. The target is where you plan to copy messages to and may be either a PST file or a live Exchange server.

☐ PST File  
☒ Connect To Exchange Server      ☒ Connect To Public Folders

Target Exchange Server

Mailbox:

Server Name:

< Back    Next >    Skip >>    Cancel

2. The **Connect to Public Folders** check box is selected by default. This feature allows you to open public folders as a target for restoring public folders or messages. If you do not want to restore to public folders, clear this check box. For more information, see “Restoring to Public Folders” on page 179.
3. For **Mailbox** and **Server Name** boxes, type the mailbox and server names.

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

4. If you are not connected to a domain, the **Enter Password** dialog box appears. In this dialog box, type a user name that has full rights to the mailbox, a password, and a domain name. Then click **OK**. This dialog box may appear again, which will require you to reenter this information.

**Enter Password**

User Name:

Password:

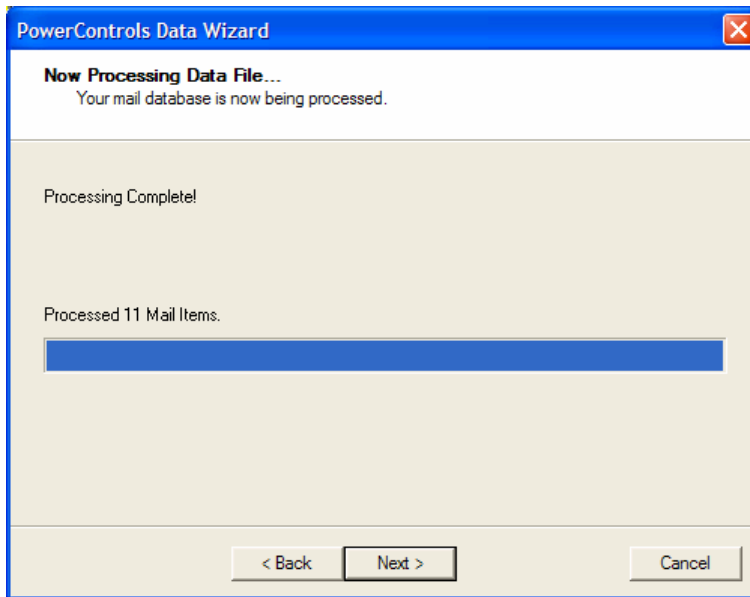
Domain Name:

OK    Cancel    Change Password...

5. Click **Next**.

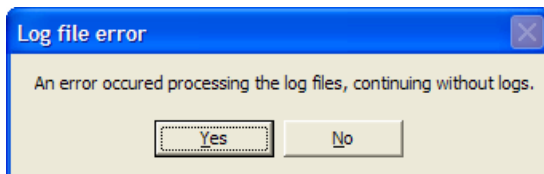
### Data Wizard: Now Processing Data File

The **Now Processing Data File** page of the Data Wizard reports the processing of the EDB file in three stages: *pre-scanning the log files* (integrity check); *scanning the log files*, (i.e., playing the log files); and *hashing the EDB file* (building a folder hierarchy).



When the processing is complete, PowerControls automatically proceeds to the next page.

**Note:** If PowerControls 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, PowerControls 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.



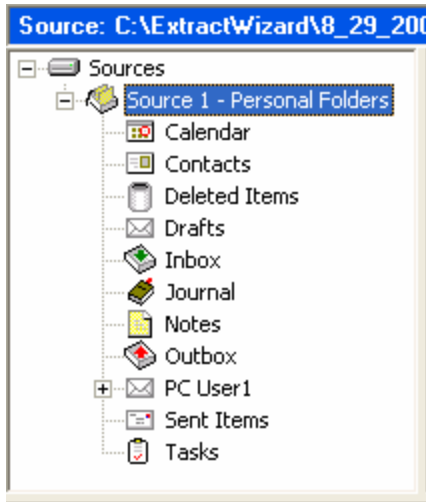
*Last page of the Data Wizard for a target PST file*



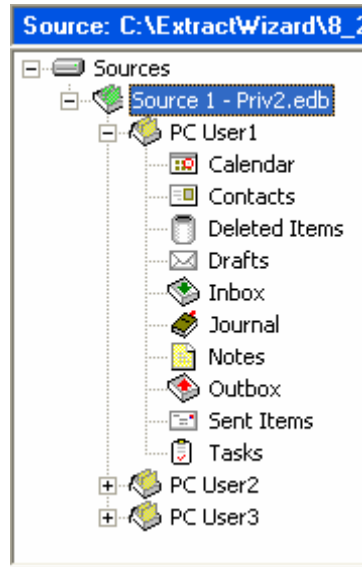
*Last page of the Data Wizard for a target Exchange server*

### Looking at the PowerControls Main Window after Using the Data Wizard

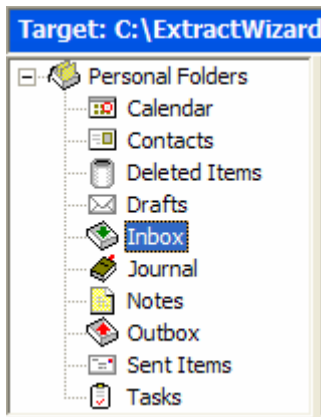
In the PowerControls main window, the Source and Target panes will now contain a source EDB file and/or PST file and a target PST file and/or a target Exchange server.



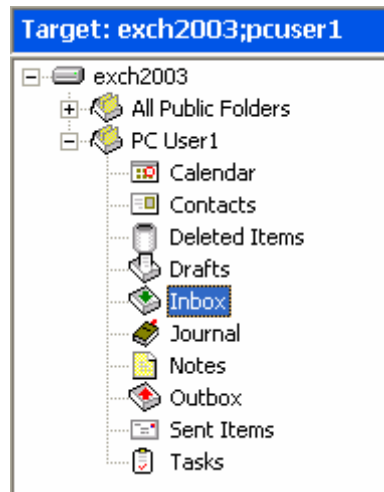
Source pane for a PST file



Source pane for an EDB file



Target pane for a PST file



Target pane for an Exchange server

### Returning to the PowerControls Data Wizard

When working in the PowerControls main window, you can return to the Data Wizard at any time.

To open the Data Wizard from the PowerControls 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 PowerControls main window.

**Before You Proceed:** Use the PowerControls 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 Direct Method.”

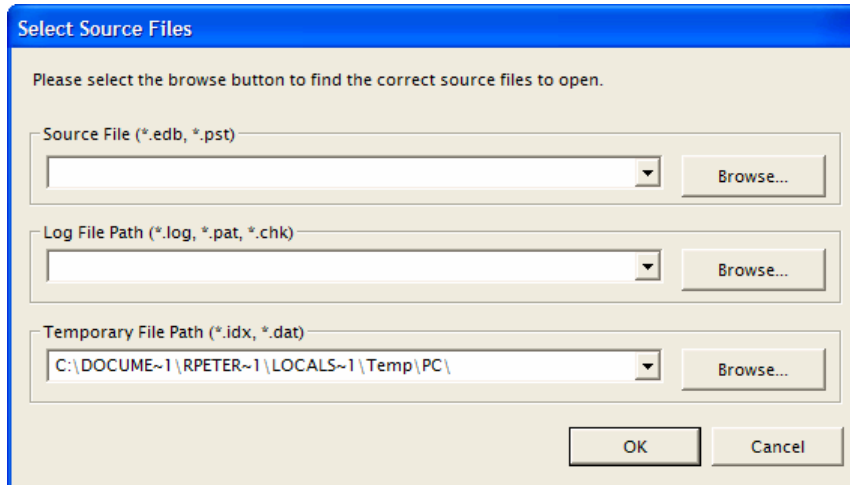
**Note:** Due to the database nature of the PST file and MAPI subsystem, PSTs opened as source will be modified.

### 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 131.



The dialog box titled "Select Source Files" has a blue header bar. Below the header, it says "Please select the browse button to find the correct source files to open." There are three input fields, each with a "Browse..." button to its right:

- Source File (\*.edb, \*.pst):** The input field is empty.
- Log File Path (\*.log, \*.pat, \*.chk):** The input field is empty.
- Temporary File Path (\*.idx, \*.dat):** The input field contains the path "C:\DOCUME~1\RPETER~1\LOCALS~1\Temp\PC\".

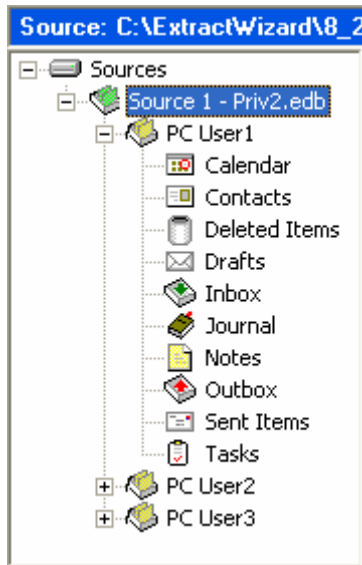
At the bottom right of the dialog box are "OK" and "Cancel" buttons.

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

**Important Note:** After you select an EDB file, the **Log File Path** box defaults to the source EDB file path, even if the log files are not in the same directory as the source EDB file. Therefore, make sure you enter the correct log file path in the **Log File Path** box.

## Chapter 4: Starting PowerControls


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" on page 131.
6. Click **OK**. The EDB or PST file appears in the PowerControls 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 PowerControls Source pane.

### To open an existing target PST

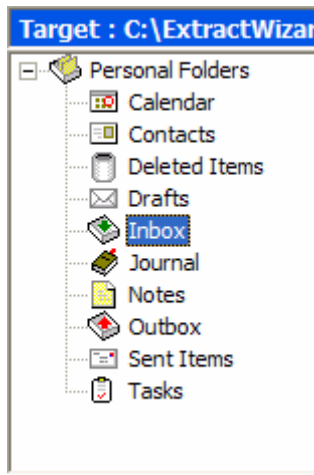
1. Do one of the following:
  - On the **File** menu, point to **Target PST**, and click **Open Existing**.
  - On the toolbar, click the **Open Target PST** button .
2. In the **Open Existing PST** dialog box, navigate to the desired location, and select an existing PST file.
3. Click **Open**. The PST file appears in the PowerControls Target pane.

**Tip:** In Windows Explorer, you can drag a PST file into the PowerControls 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 PowerControls Target pane.


*Note: With Outlook 2003, you will have to choose between the 97 and 2003 version of the PST.*



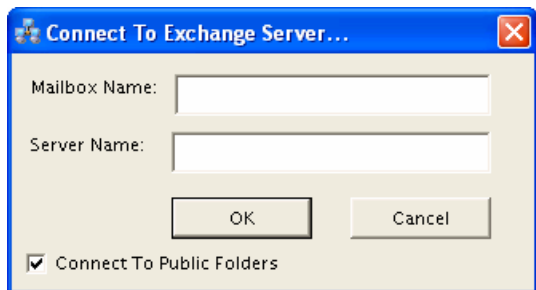
Target pane for a PST file

#### 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.



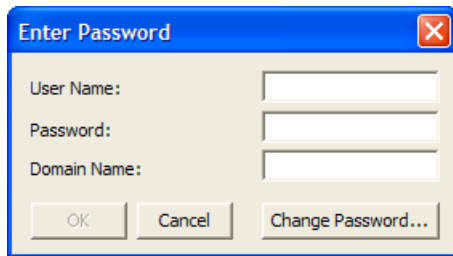
2. The **Connect to Public Folders** check box is selected by default. This feature allows you to open public folders as a target for restoring public folders or messages. If you do not want to restore to public folders, clear this check box. For more information, see “Restoring to Public Folders” on page 179.

3. For **Mailbox** and **Server Name** boxes, type the mailbox and server names.

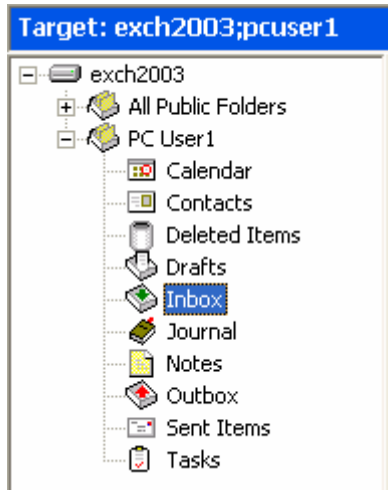
***Tip:** If you don't know the full name of the mailbox, type a sub-string (e.g., the first letter of the mailbox) in the **Mailbox Name** box, and click **OK**. (Log on to the Exchange server if prompted; see step 3.) In the **Check Name** dialog box that appears, select the mailbox from the list, and click **OK**.*

4. 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 4: Starting PowerControls



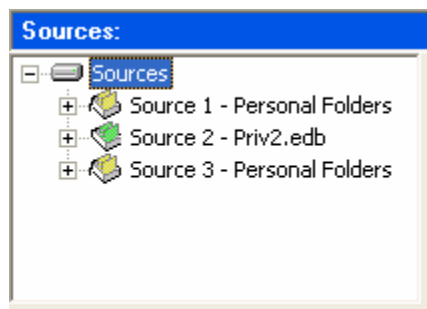
5. Click **OK**. The Exchange server appears in the PowerControls Target pane.



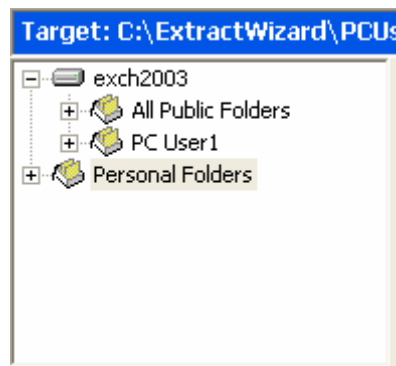
*Target pane for an Exchange server*

## Opening Multiple Sources and Targets

You can display multiple sources in the Source pane and multiple targets in the Target pane. Sources include EDB and PST files. Targets include PSTs and Exchange servers. See the instructions for using the Data Wizard or the PowerControls main window to open one source or one target at a time.



*Multiple sources*



*Multiple targets*

**Note:** Only one target Exchange mailbox can be opened at a time.

## Closing Sources and Targets

You can close sources and targets from the PowerControls main window.

### To close a source

1. In the Source pane, select a source EDB or PST file.
2. Do one of the following:
  - On the **File** menu, click **Close Store**.
  - Right-click the selection, and on the context menu click **Close Store**.

### To close all sources

1. In the Source pane, right-click the **Sources** root node.
2. On the context menu, click **Close All Stores**.

### To close a target

1. In the Target pane, select a PST file or Exchange database.
2. Do one of the following:
  - On the **File** menu, click **Close Store**.
  - Right-click the selection, and on the context menu click **Close Store**.

## Deleting Items in the Target Pane

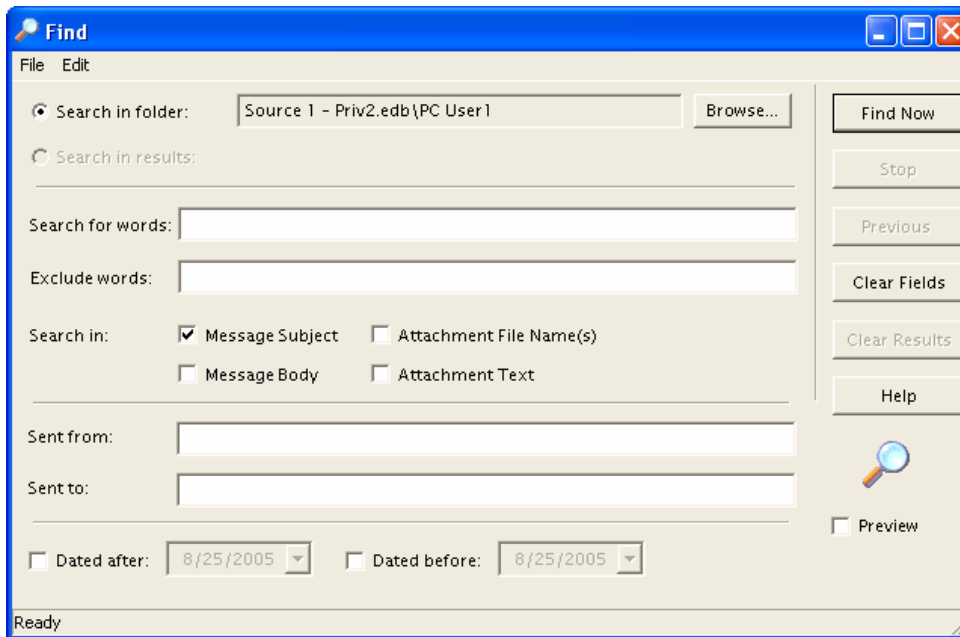
Using the Delete key to remove an item (e.g., folder, message) from the PowerControls target pane will permanently delete the item, similar to using Shift+Delete in Microsoft Outlook.





# Chapter 5: Finding Messages

The **Find** dialog box lets you search a source EDB or PST file for message items that are defined by such criteria as keywords, message senders and recipients, and message creation dates. In addition, this dialog box lets you define the scope of your search: an EDB or PST file, one or more mailboxes or folders (e.g., Inbox), dates, or even previous search results.




## Guidelines for Using the Find Dialog Box

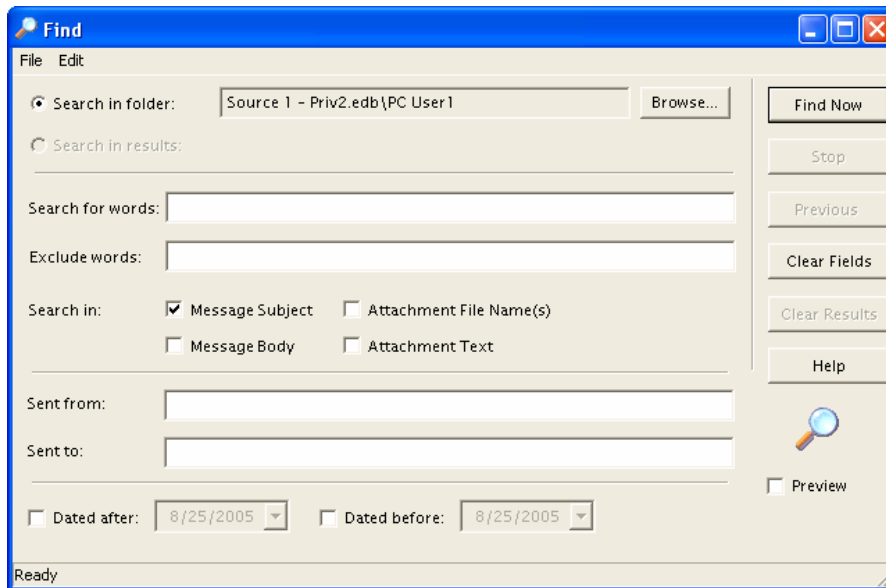
1. The **Find Now** Button only becomes available if *at least one* of the following conditions is met:
  - At least one **Search in** check box is selected.
  - The **Sent from** or **Sent to** box contains at least one character.
  - The **Dated after** or **Dated before** check box is selected.
2. Each **Search in** check box that you select is run as a separate query, and the results of the query are combined (i.e., OR'd together). For example, if you enter "solution" in the **Search for words** box, and then select the **Message Subject** and **Message Body** check boxes, PowerControls 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, PowerControls will return all of the messages in the folder(s) undergoing the search.
4. PowerControls can search multiple information stores at the same time. In the Find dialog box, click Browse and you will see a tree view of all of the open source data stores. You can then select multiple mailboxes or folders to include in your search.

5. PowerControls will not return duplicates of a message during a search as long as the “Check for duplicate messages during search” preference is selected. For example, if the same message exists in two or more data stores, only the first message found will be listed in the search results. For more information, see “Setting Preferences” on page 125.

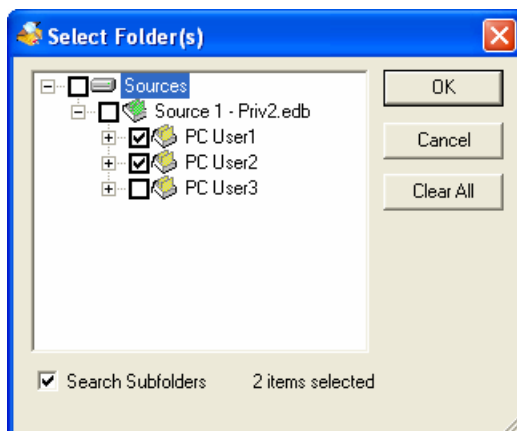
## Searching for Messages

1. In the Source pane, select the folder (e.g., EDB or PST file, mailbox, Inbox) you want to search. The folder(s) you select defines the scope of your search.
2. Click the **Search** button  to display the **Find** dialog box. The name of the folder you selected appears next to the **Search in folder** box.

The first time you search for messages, the **Search in folder** option is automatically selected. For information on using the **Search in results** option, see “Searching Within Results” on page 147.



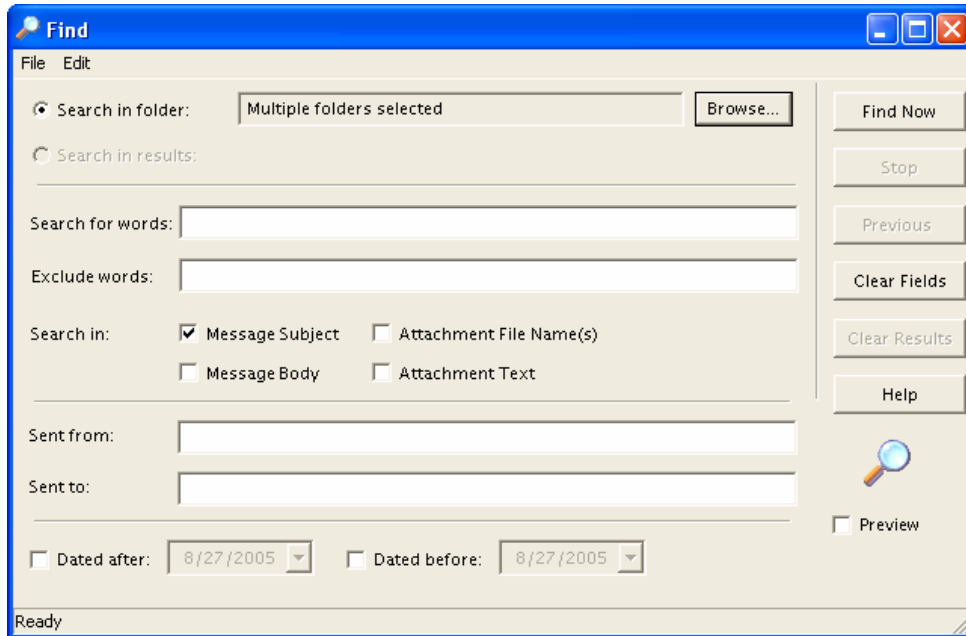
3. If you want to select multiple mailboxes or folders to search, click the **Browse** button. In the **Select Folder(s)** dialog box, select the items you want to search. In the illustration below, two mailboxes have been selected.



*Note: If you select the **Search Subfolders** check box, PowerControls will include subfolders in the search.*

4. Click **OK** to return to the **Find** dialog box.

In the following illustration, the **Search in folder** box now displays “Multiple folders selected.”



5. In the **Search for words** box, enter one or more words or phrases if you want to execute a keyword search. Keep in mind the following points:
  - Put a space between words or phrases to perform an AND operation (i.e., all words must be matched in order to include a message with the search results).
  - Put a comma between words or phrases to perform an OR operation (i.e., only one of the words must be matched in order to include a message with the search results).
  - Put quotation marks around word phrases (i.e., the exact phrase must be matched in order to include a message with the search results).

**Example:**    **Search for words:** dog cat mouse, rat

**Search results:** Messages that contain [“dog” AND “cat” AND “mouse”] OR [“rat”] are included in the search results.

6. In the **Exclude words** box, enter words or phrases if you want to perform a NOT operation. If matched, these words or phrases will exclude a message from the search results. The rules for using spaces, commas, and quotation marks apply when excluding words from a search.

**Example:**    **Search for words:** dog cat mouse, rat

**Exclude words:** bird

**Search results:** Messages that contain [“dog” AND “cat” AND “mouse”] OR [“rat”] BUT NOT [“bird”] are included in the search results.

## Chapter 5: Finding Messages

- For **Search in**, select one or more of the following check boxes: **Message Subject**, **Message Body**, **Attachment File Name(s)**, or **Attachment Text**. Each **Search in** check box that you select is run as a separate query, and the results of the query are combined (i.e., OR'd together).

***Note about searching within attachments:** PowerControls does not search within archive file types such as .zip or .rar files. For more information, see "Searching Within Attachments" on page 150.*

- 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.
- 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.

- When you have finished specifying search criteria, click **Find Now**. The results of your search appear in the message list.
- To preview the messages returned by the search, click the **Preview** check box.

**Find**

File Edit

☒ Search in folder: Multiple folders selected

☐ Search in results:

Search for words: summary report

Exclude words:

Search in: ☒ Message Subject ☐ Attachment File Name(s)  
☐ Message Body ☐ Attachment Text

Sent from:

Sent to:

☐ Dated after: 10/ 1/2005 ☐ Dated before: 10/ 1/2005

☒ Preview

**Results**

	From	To	Subject	Date	Source #	Folder
	PC User1	PC User2; PC U...	Summary Report	Tue 8/26/2003 ...	1	Priv2.edb\PC U...
	PC User1	PC User2; PC U...	Summary Report	Tue 8/26/2003 ...	1	Priv2.edb\PC U...
	PC User1	PC User2; PC U...	Summary Report	Tue 8/26/2003 ...	1	Priv2.edb\PC U...
	PC User1	PC User2; PC U...	Summary Report	Tue 8/26/2003 ...	1	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 - 4 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 144.
3. Select the **Search in results** option at the top left of the **Find** dialog box.
4. Click **Find Now**. The results of your new search appear in the message list.
5. To preview the messages returned by the search, click the **Preview** check box.

**Find**

File Edit

Search in folder: Multiple folders selected Browse... Find Now

Search in results: Stop

Search for words: exchange Previous

Exclude words: Clear Fields

Search in: ☒ Message Subject ☐ Attachment File Name(s) Clear Results

☒ Message Body ☐ Attachment Text Help

Sent from: ☒ Preview

Sent to:

☐ Dated after: 10/ 1/2005 ☐ Dated before: 10/ 1/2005

**Results**

	From	To	Subject	Date	Source #	Folder
✉	PC User3	PC User1; PC U...	Exchange Outlo...	Tue 8/26/2003 ...	1	Priv2.edb\PC U.
✉	PC User3	PC User1; PC U...	Exchange Outlo...	Tue 8/26/2003 ...	1	Priv2.edb\PC U.
✉	PC User3	PC User1; PC U...	Exchange Outlo...	Tue 8/26/2003 ...	1	Priv2.edb\PC U.
✉	Exch2003 User1	Exch2003 User1	RE: The very fir...	Tue 8/26/2003 ...	1	Priv2.edb\PC U.

**From:** Exch2003 User1 **To:** Exch2003 User1

**Subject:** RE: The very first Exchange 200...

This is a reply from a EdbDump Recovered PST!!

5 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

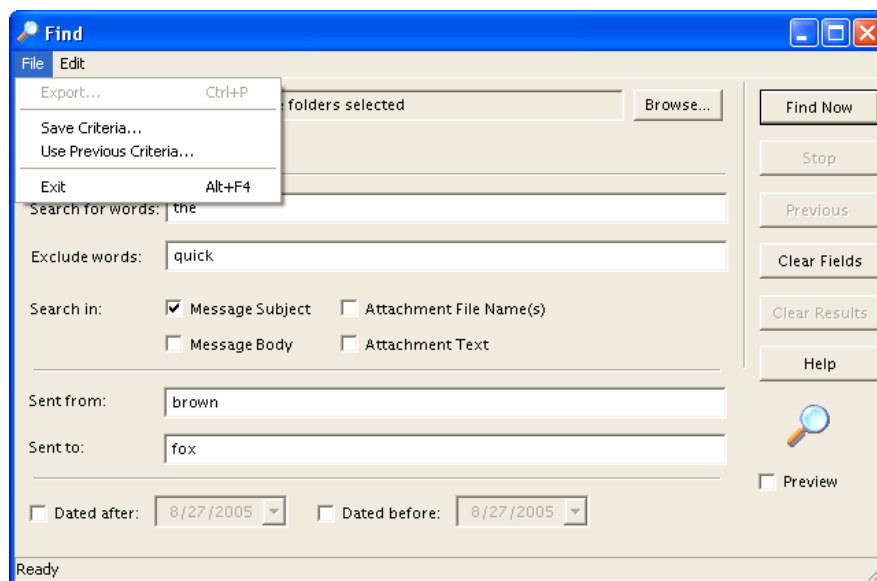
1. Perform at least two searches so the **Previous** button becomes available.
2. Click **Previous**. The results of the previous search appear in the in the message list.
3. You can now view the previous search, or you can modify the search criteria and conduct a new search. For information on specifying search criteria, see “Searching for Messages” on page 144.

### Clearing Fields and Clearing Results

If you click the **Clear Fields** button, all of the search criteria that you entered in the **Find** dialog box are returned to the default settings. If you click the **Clear Results** button, all current and past search results are cleared.

### Saving and Using Search Profiles

PowerControls allows you to save search criteria to a text file for the purpose of using the search criteria in future searches. There are two menu commands that allow you to perform these functions: “Save Criteria” and “Use Previous Criteria.” In addition, if you want to modify the search criteria in a search profile, you can edit the text file with a text editor.



When creating a search profile, you can save the following search criteria. The “Search For,” “Exclude Words,” “Sent from,” and “Sent to” fields have a maximum of 4,095 characters.

- Search for words
- Exclude words
- Search in

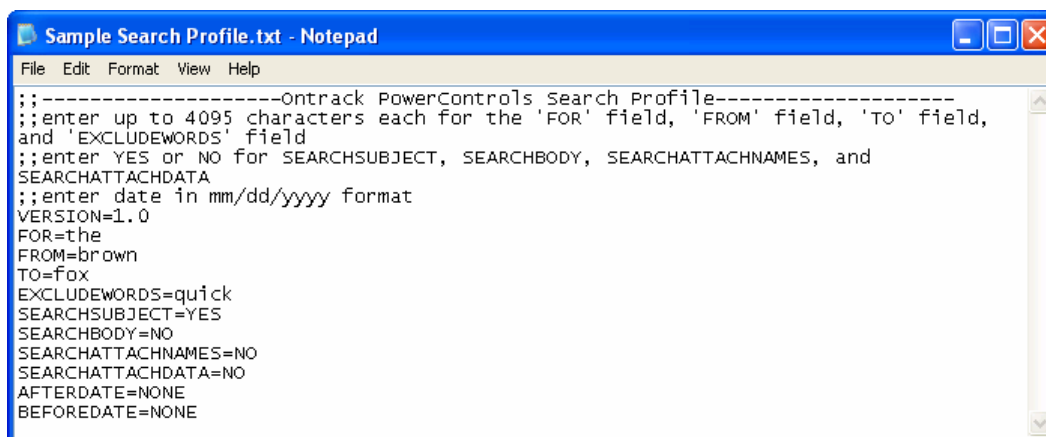
- Sent from
- Sent to
- Dated after
- Dated before

#### To create a search profile

1. Open the **Find** dialog box, and enter search criteria.
2. On the **File** menu in the **Find** dialog box, click **Save Criteria**.
3. In the **Save As** dialog box, specify a name and location for the search profile text file.
4. Click **Save**.

#### To edit a search profile

1. Locate and open the search profile that you want to edit.



2. Modify the search criteria as desired and save the text file.

#### To use a search profile when performing a search

1. Open the **Find** dialog box.
2. On the **File** menu in the **Find** dialog box, click **Use Previous Criteria**.
3. In the **Open** dialog box, locate and open the search profile that you want to use for your search.
4. Click **Open**. The **Find** dialog box will be populated with the search criteria specified in the search profile.

## Using Multiple Search Windows

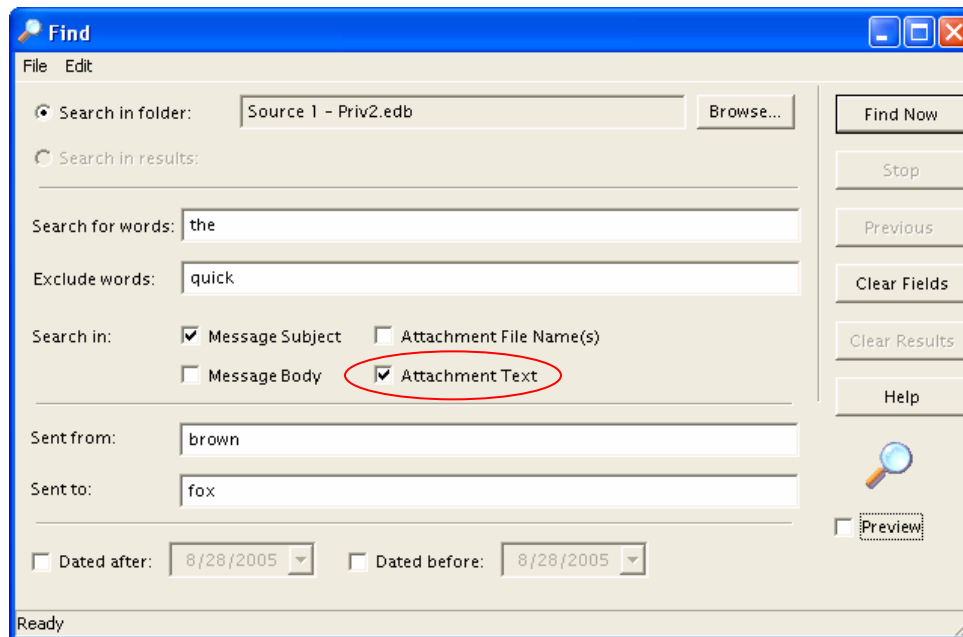
PowerControls allows you to open multiple instances of the Find dialog box to search any combination of information stores at the same time. There is no limit other than system resources for the number of concurrent searches you can initiate.

***Note:** If you are using multiple instances of the Find dialog box to search within the same mailbox, you may notice a slowdown in performance.*

## Searching Within Attachments

In the Find dialog box, you can search the text of email attachments. The Searching within Attachments feature supports Unicode text and is available for both EDB and PST sources. PowerControls supports Microsoft Office documents and many other popular file types. For a list of supported file types, see the FAQs at [www.ontrack.com/powercontrols/](http://www.ontrack.com/powercontrols/).

***Note about the licensing agent:** The “PC Agent for Advanced Searching” must be enabled in order to search attachments. For more information, see “Enabling the Licensing Agents” on page 5.*



### To search within attachments

1. In the **Find** dialog box, select the **Attachment Text** check box.
2. Specify other desired search criteria. For more information, see “Searching for Messages” on page 144.
3. Click **Find Now**. If PowerControls matches a keyword or phrase in the text of the attachment, it will return a “Hit” just as it would if it found a keyword or phrase in the body or subject of a message.



## Exceptions When Searching Within Attachments

When searching within attachments, PowerControls searches only for embedded messages one level deep. It does *not* search for the following items:

- Attachments (or other embedded objects) within attachments
- Archive files (e.g., .zip, .rar)
- Embedded OLE objects (e.g., spreadsheet embedded in a message body)
- Binary files (e.g., .dll, .exe, .jpg, .mp3)
- Metadata associated with files (e.g., author and company information in an .xls file)

## Other PowerControls Features Available Through the Find Dialog Box

In addition to the search features described in the previous sections, there are several PowerControls features available through the Find dialog box.

### Opening and Saving Attachments in the Find Dialog Box

To open an attachment's file type in the Find dialog box, you must have an application installed on your computer that can perform this function. If no associated program is available for the attachment file type, PowerControls will present a message dialog box saying the attachment cannot be viewed.

For instructions on opening and saving attachments, see “Opening Attachments” and “Saving Attachments” on page 118.

### 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).

#### To export messages from the Find dialog box

1. In the **Find** dialog box, perform a search.
2. In the **Results** area, select the messages you want to export.
3. On the **File** menu in the **Find** dialog box, click **Export**.
4. In the **Export** dialog box, specify options and click **Export**. For more information on the export options, see Chapter 6, “Exporting Messages.”

### Restoring Messages from the Find Dialog Box

The results of conducting a search appear in the message list in the Find dialog box. You can restore the messages in this list by dragging them or copying and pasting them into the target folder. If you want to maintain the directory structure of restored individual messages, use the Paste Special command.

You can also restore messages by browsing in the PowerControls main window and dragging and dropping or copying and pasting from the main window to the target. You do not need to search to restore messages. For more information, see Chapter 7, “Restoring Exchange Data.”

### Performing an Integrity Check on Messages in the Find Dialog Box

The Find dialog box allows you to perform an integrity check on one or more messages in the Results area. During the integrity check, PowerControls will verify that it can read all of the properties of the messages.

#### To perform an integrity check on messages in the Find dialog box

1. In the **Find** dialog box, perform a search.
2. In the **Results** area, select the messages for which you want to perform an integrity check.
3. On the **Edit** menu in the **Find** dialog box, click **Integrity Check**. The **Integrity Check** dialog box appears.

For instructions on performing integrity checks on messages, folders, mailboxes, PST files, and EDB files in the main PowerControls window, see “Performing an Integrity Check” on page 124.

# Chapter 6: Exporting Messages

The Export feature allows you to export mail from an EDB or PST source file to a local or network drive destination. You can save exported messages as Microsoft Outlook files (.msg) or plain text files (.txt). This feature can assist customers who want to copy old email backups into an alternate or non-email system. You can export at all levels: an EDB file, a PST file, a mailbox, a folder, and individual messages.

## General Information about Exporting Messages

- The **file name** for an exported message is its subject. A duplicate subject name will create a file with the same name but with an (x) appended to the filename: x = 1 for the first duplicate, x = 2 for the next duplicate, and so on. If the subject contains illegal file name characters, the offending characters will be replaced with an underscore.
- **Associated messages** and **folder properties** will not be exported.
- When **exporting individual messages**, you have the option to keep the folder/mailbox hierarchy, similar to the paste special feature. When **exporting a mailbox or folder**, you have the option to also export the subfolders.

## About Message (.msg) and Text (.txt) Export

The file type for an exported message can be either Microsoft Outlook (.msg) or plain text (.txt).

### Message (.msg) export

A .msg file (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.

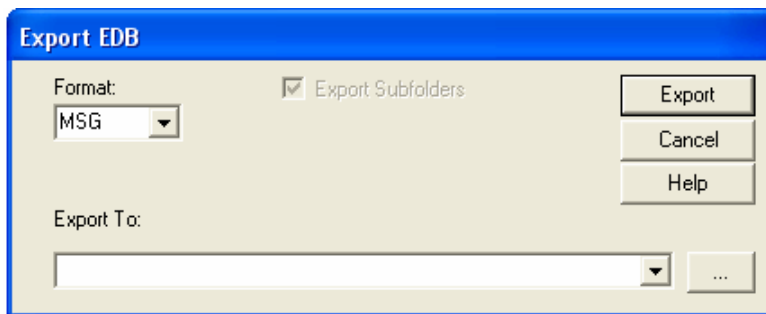
Distribution List	Calendar Item	Contact Item	Task Item	Message and All Other Items
<b>List Name:</b>	<b>Subject:</b> <b>Location:</b>	<b>Last Name:</b> <b>First Name:</b>	<b>Subject:</b> <b>Due Date:</b> <b>Priority:</b>	<b>From:</b> <b>Sent: (created date)</b> <b>To:</b> <b>CC: (if present)</b> <b>BCC: (if present)</b>
<b>Creator Date:</b>	<b>Start:</b> <b>End:</b>	<b>Business Address:</b>	<b>Status:</b> <b>Percent Complete:</b>	<b>Subject:</b>
<b>Creation Name:</b>	<b>Recurrence:</b> (if present)	<b>Home:</b>	<b>Total Work:</b> <b>Actual Work:</b>	<b>Attachment file names:</b>
<b>Members of List:</b>	<b>Required Attendees:</b> <b>Resources:</b> <b>Body:</b>	<b>Category:</b>	<b>Owner:</b>	<b>Message Body</b>

## 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 PowerControls main window. They also show you how to export messages from the Find dialog box.


### To export an entire EDB file

1. In the Source pane, select the EDB file.
2. Do one of the following:
  - On the **File** menu, click **Export**.
  - On the toolbar, click the **Export** button .
  - Right-click the EDB file, and on the shortcut menu, click **Export**.

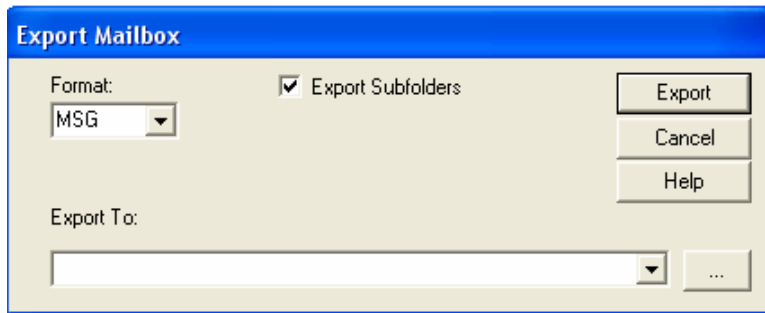


3. In the **Format** box, select MSG or TXT.
4. In the **Export To** box, specify the location for the exported EDB file.
5. Click **Export**.
6. In the **Export Progress** dialog box, verify the EDB file was successfully exported, and click **Close**.

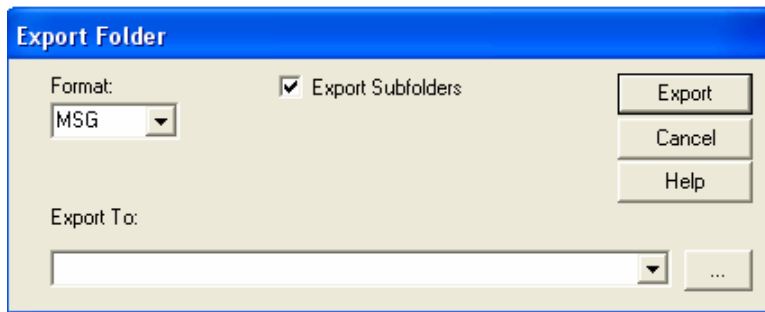
### To export a PST file, a mailbox, or a folder

1. In the Source pane, select a PST file, a mailbox or a folder (e.g., Inbox).
2. Do one of the following:
  - On the **File** menu, click **Export**.
  - On the toolbar, click the **Export** button .
  - Right-click the mailbox or folder, and on the shortcut menu, click **Export**.

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



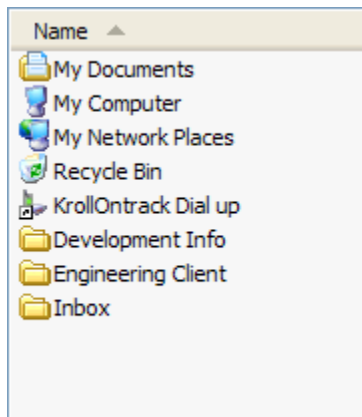
*Export Mailbox dialog box*



*Export Folder dialog box*


3. In the **Format** box, select MSG or TXT.
4. In the **Export To** box, specify the location for the exported mailbox or folder.
5. Select the **Export Subfolders** check box if you want to export all of the subfolders for the selected mailbox or folder.
6. Click **Export**.
7. In the **Export Progress** dialog box, verify the mailbox or folder was successfully exported, and click **Close**.

The mailbox or folder appears in the specified location. In the illustration below, the exported folder is the Inbox.



## Chapter 6: Exporting Messages

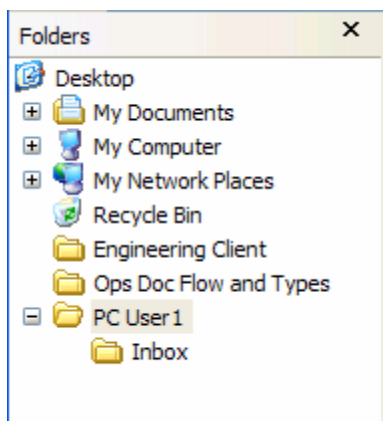
### To export individual messages

1. In the Source pane, select one or more messages from the message list.
2. Do one of the following:
  - On the **File** menu, click **Export**.
  - On the toolbar, click the **Export** button .
  - Right-click the selection, and on the shortcut menu, click **Export**.



3. In the **Format** box, select MSG or TXT.
4. In the **Export To** box, specify the location for the exported messages.
5. Select the **Maintain Message Path** check box if you want to maintain the directory structure of the exported messages.
6. Click **Export**.
7. In the **Export Progress** dialog box, verify your messages were successfully exported, and click **Close**.

The messages appear in the specified location. In the illustration below, the exported messages come from the “PC User 1” mailbox.



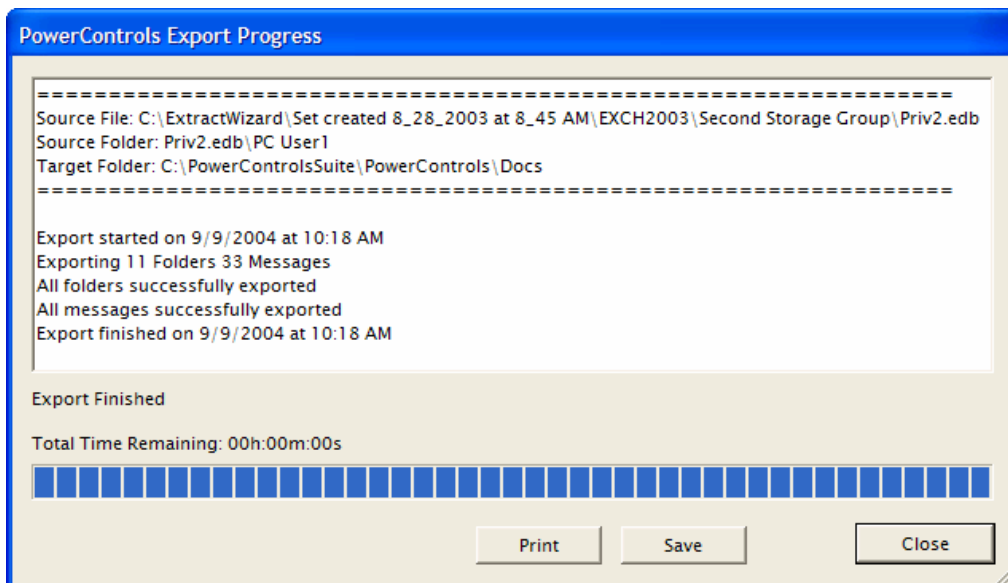
**To export individual messages from the Find dialog box**

1. In the **Find** dialog box, select one or more messages from the message list.
2. Right-click the selection, and on the shortcut menu, click **Export**.
3. Perform steps 3-7 in the preceding section.

## About the Export Progress Dialog Box

Each time you attempt to export messages, the **Export Progress** dialog box appears. This dialog box displays the following information:

- Source and target
- Export start time
- Number of folders to export
- Number of messages to export
- Warnings or errors encountered during the export process. If an error occurs on a message, the message subject and source path along with an error message will be displayed. If the message does not have a subject, the date (created) and message sender will be displayed instead.
- Total folders and messages successfully exported

**Notes:**

- If an error occurs that PowerControls can recover from, such as a corruption that prevents it from getting a message property, PowerControls will log an error, stop processing that message, and continue.
- If an error occurs from which PowerControls cannot recover, such as a major corruption error, PowerControls will log an error to the Export Progress dialog box and stop exporting.





# Chapter 7: 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 PowerControls 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 of sources 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, PowerControls will preserve the directory structure of all restored messages. When restoring individual messages, you must use the Paste Special command to preserve their directory structure.

#### To restore individual messages with Copy-Paste

1. In the Source pane or **Find** dialog box, copy messages from the message list.
2. In the Target pane, paste the messages into a folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied, and click **Close**.

#### To restore individual messages with Copy-Paste Special

1. In the Source pane or **Find** dialog box, copy messages from the message list.
2. In the Target pane, use **Paste Special** to paste the messages into a folder, mailbox, PST root, or Exchange server root.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied, and click **Close**.

***Tip:** Use the **Paste Special** command to retain the directory structure of messages copied from the **Find** dialog box, because messages in this dialog box often come from several source locations.*

#### To restore a folder, a mailbox, an EDB file, or a PST file

1. In the Source pane, copy a folder, a mailbox, an EDB file, or a PST file.
2. In the Target pane, paste the copied item into a folder, mailbox, PST root, or Exchange server root.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied, and click **Close**.

***Note:** You cannot open the same PST as a Source and Target. In addition, you cannot restore messages from a PST file to an Exchange Server root node.*

#### To restore data even faster, use drag-and-drop

- Example: To restore an entire EDB file, drag it to the target Exchange server root.

### Limits for PST 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, PowerControls 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. PowerControls 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, PowerControls 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. PowerControls 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, PowerControls 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 PowerControls 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 **PowerControls 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.

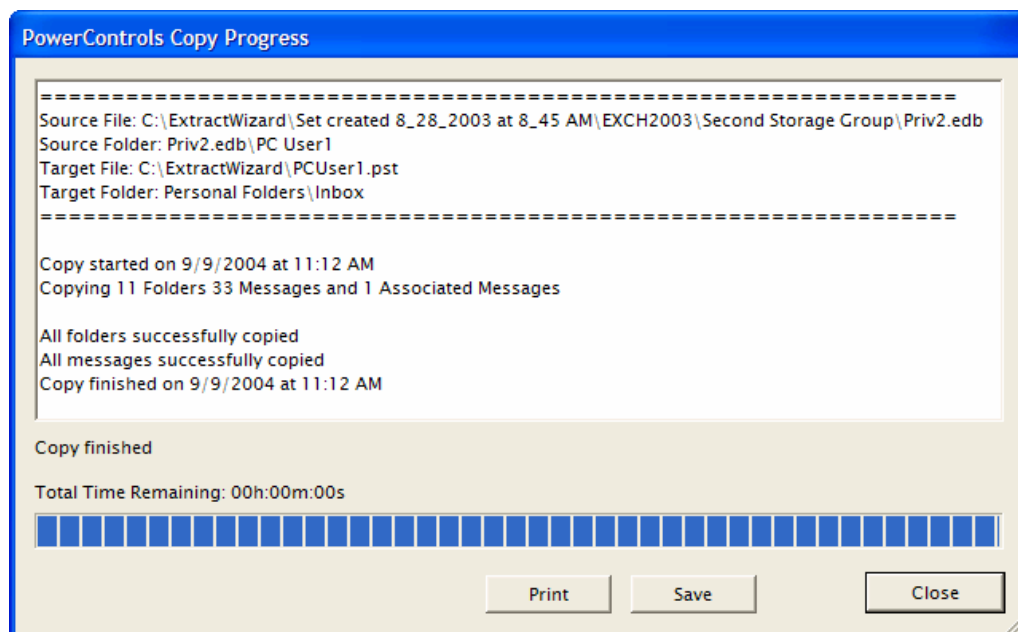
#### Restoring Messages to Exchange 5.5

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 PowerControls 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 PowerControls 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, PowerControls will be unable to connect to the mailboxes. For more information, see "About Restoring Messages to an Exchange Server" on page 160.

### 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 PowerControls, 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 166.
- 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 166.

## 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.

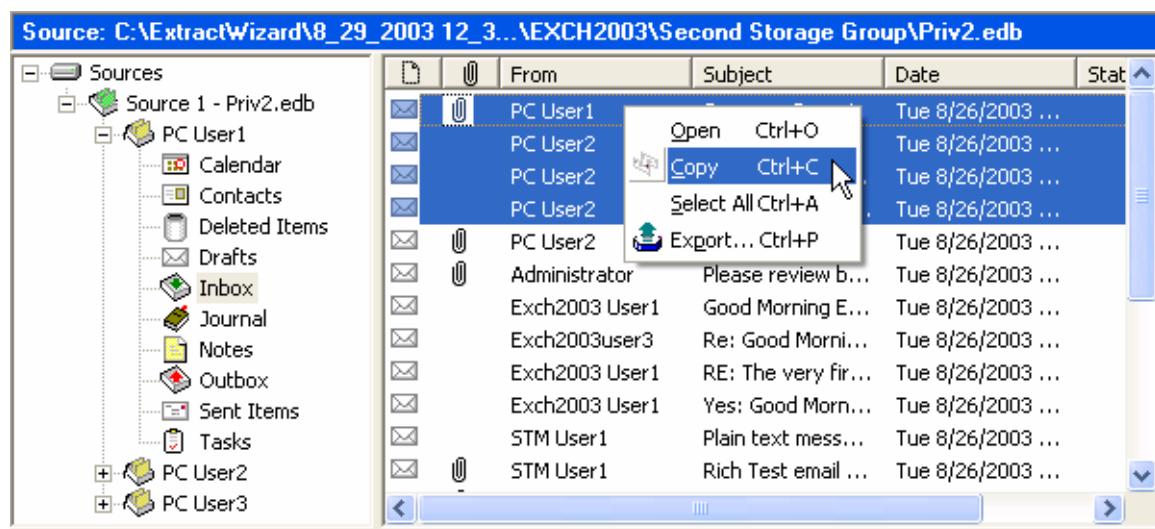
#### Guidelines for Restoring Messages

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 166.

#### To restore messages with Copy-Paste

1. In the Source pane or **Find** dialog box, copy messages from the message list.

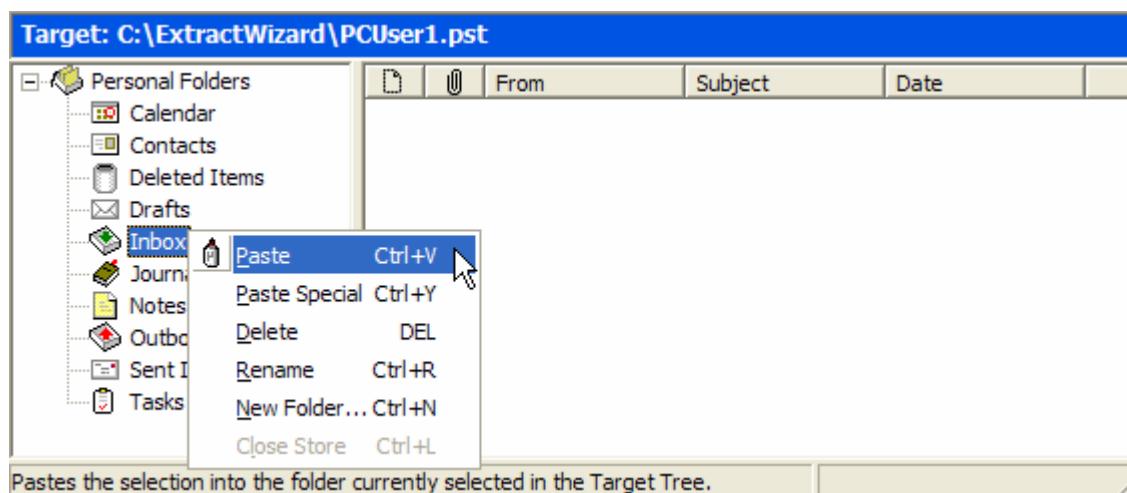


2. In the Target pane, paste the messages into a folder (e.g., Inbox) in the target PST file or Exchange Server.

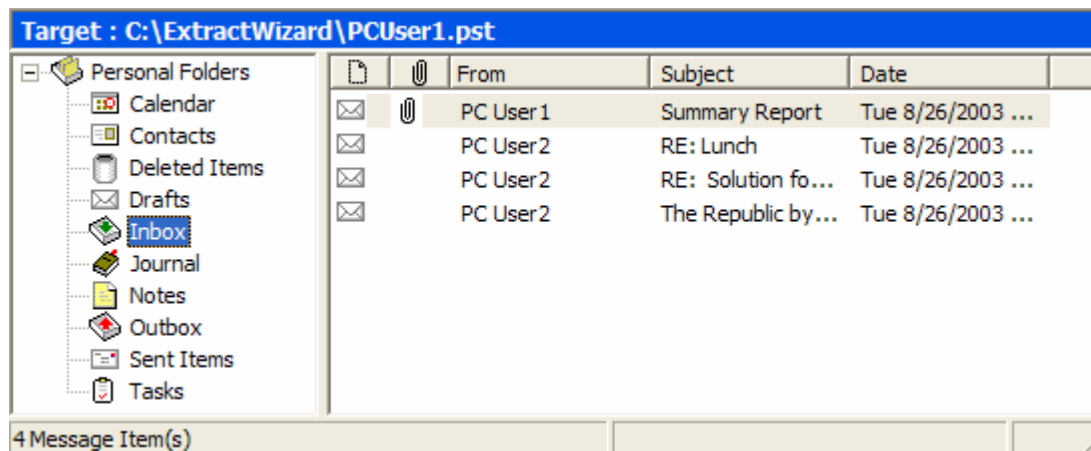
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
  - Click **Print** to print the copy report.
  - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the PowerControls main window.

### Results of Restoring Messages with Copy-Paste

All unduplicated messages will appear in the target folder.



*Example 1: Pasting messages into a folder (Inbox) in the Target pane*



*Example 1: Results of pasting messages into a folder (Inbox) in the Target pane*

### Restoring Messages with Paste Special

You can use the Paste Special command to preserve the directory structure of restored individual messages. The Paste Special command is especially useful when restoring messages from the message list in the Find dialog box, since these messages often come from several source locations.

#### Guidelines for Restoring Messages with Paste Special

1. You can use the Paste Special command to restore individual messages to any target destination. Using the Paste Special command preserves the directory structure of the restored messages.
2. You can use the Paste Special command to restore *individual messages* only. You cannot use the Paste Special command to restore an entire EDB file, a mailbox, or a folder.
3. You *cannot* use Paste Special to restore messages to a public folder.
4. **If the target is a PST root node or folder**, PowerControls will create a folder to represent each mailbox. Each mailbox will be a subfolder of the folder the user selected for the Paste Special operation.
5. **If the target is an Exchange Server mailbox or folder**, PowerControls will copy all messages to the target. Each mailbox will be a subfolder of the folder the user selected for the Paste Special operation.
6. **If the target is an Exchange Server root node**, the Paste Special code will attempt to connect to each mailbox one at a time and copy each message to its corresponding mailbox and folder. If the folder does not exist, it will be created. If the mailbox does not exist, PowerControls will log an error in the copy results, skip the entire mailbox, and continue the Paste Special operation.

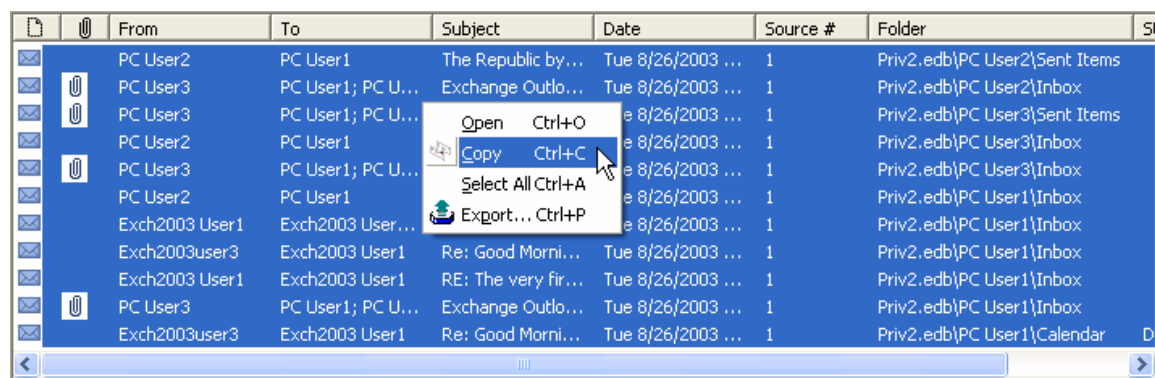
**Note:** You cannot restore messages from a PST file to an Exchange Server root node.

#### To restore messages to a PST root or folder with Paste Special

If the target is a PST root node or folder, PowerControls will create a folder to represent each mailbox. Each mailbox will be a subfolder of the folder the user selected for the Paste Special operation.

1. In the Source pane or **Find** dialog box, copy messages from the message list.

In this example, messages from three different mailboxes (PC User 1, PC User 2, and PC User 3) are copied from the message list in the **Find** dialog box.



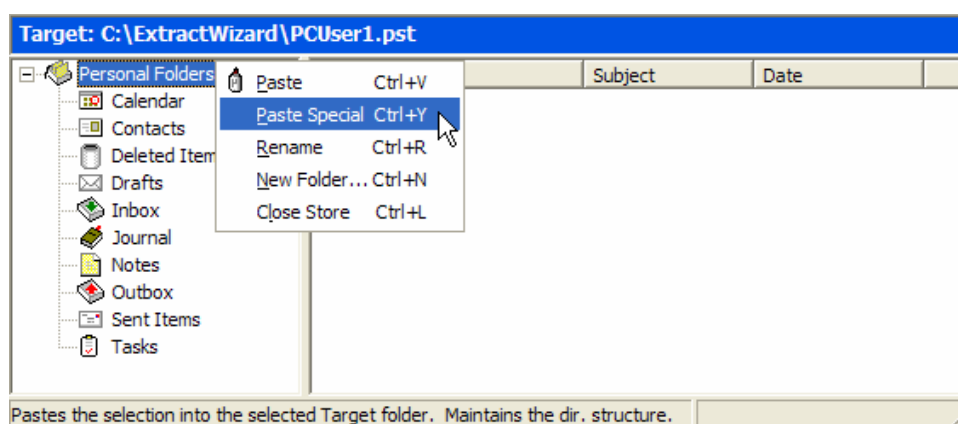
Copying messages from the **Find** dialog box



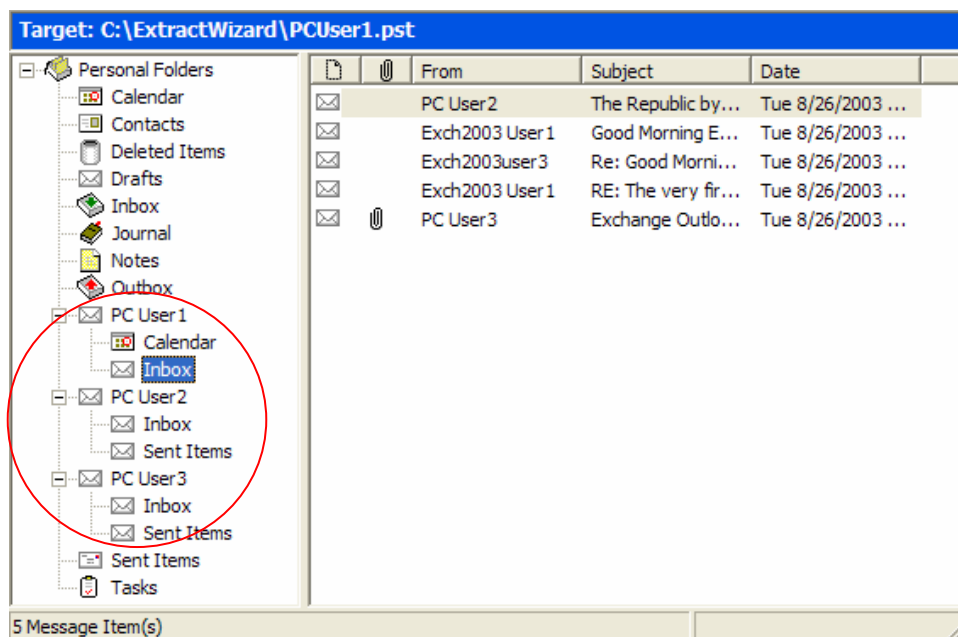
2. In the Target pane, use **Paste Special** to paste the messages into a PST root node or folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
  - Click **Print** to print the copy report.
  - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the PowerControls main window.

#### Results of Restoring Messages to a PST Root Node or Folder with Paste Special

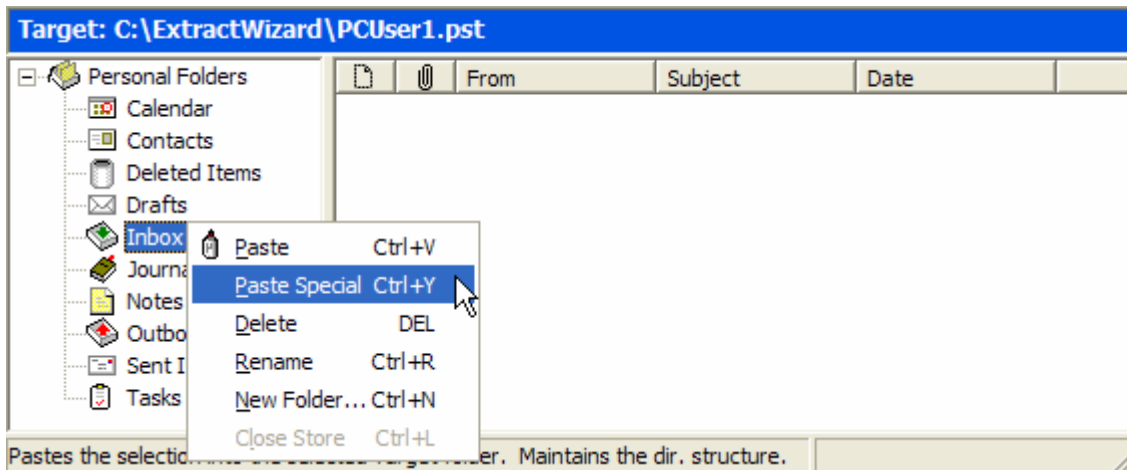
All unduplicated messages will appear in the target destination, and their directory structure will be preserved.



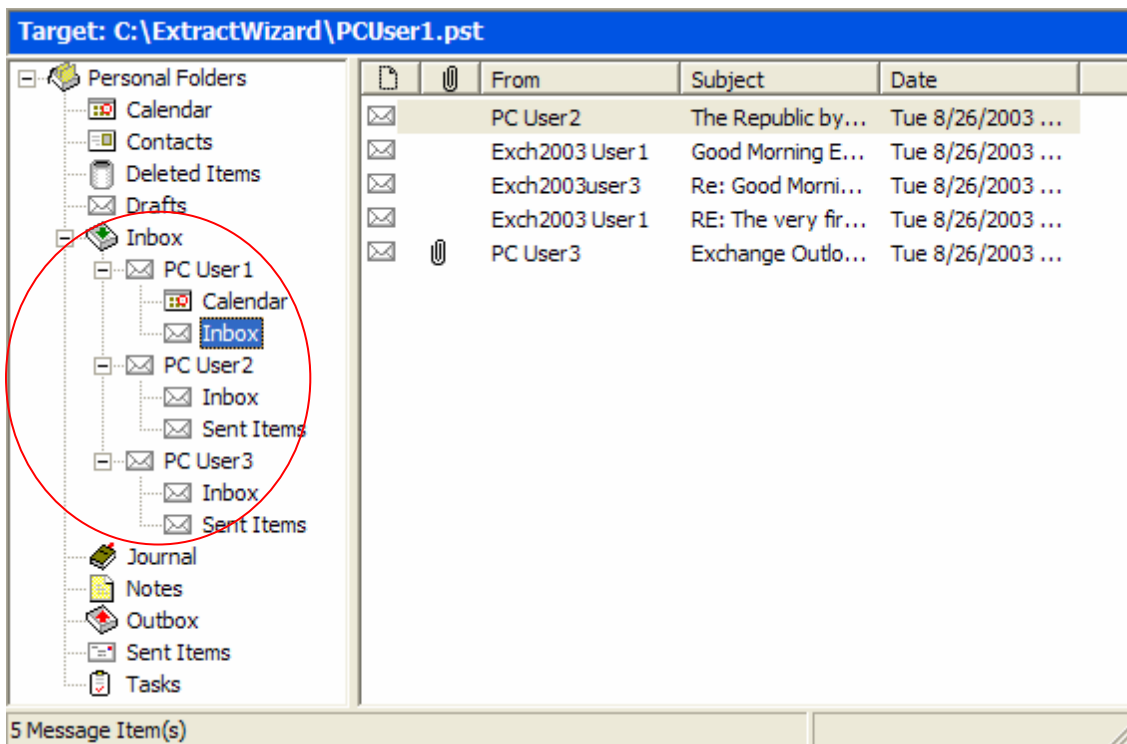
Example 2: Using Paste Special on a target PST root node



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



Example 3: Using Paste Special on a target PST Inbox



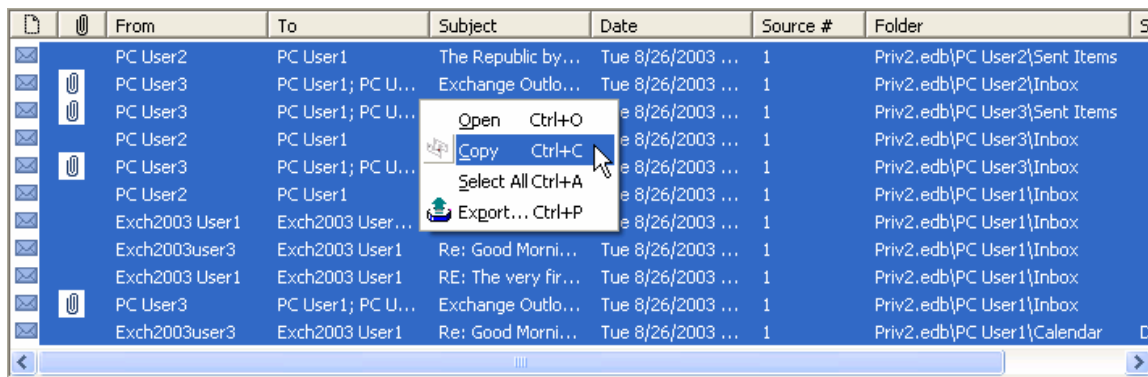
Example 3: Results of using Paste Special on a target PST Inbox

**To restore messages to an Exchange server mailbox or folder with Paste Special**

If the target is an Exchange Server mailbox or folder, PowerControls 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.

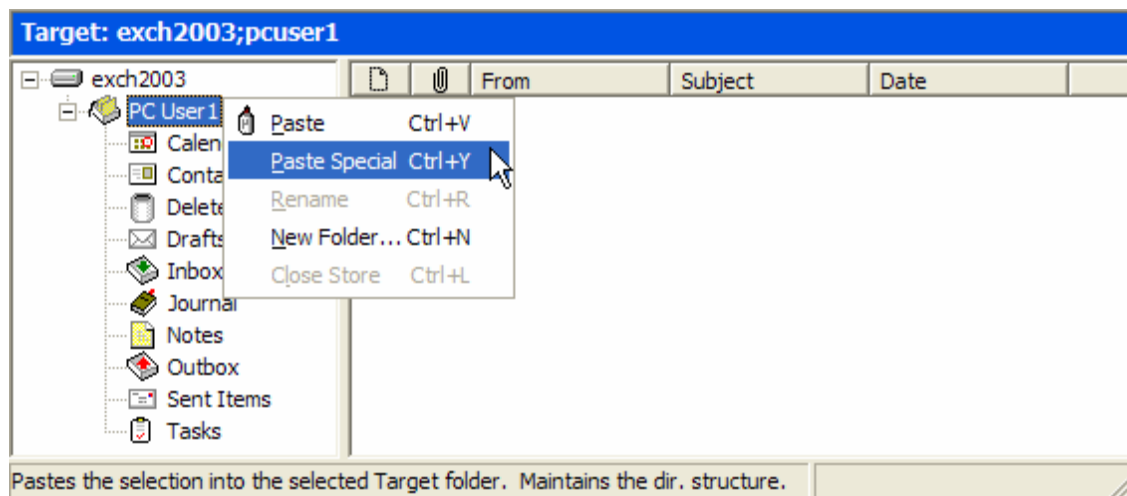


*Copying messages from the **Find** dialog box*

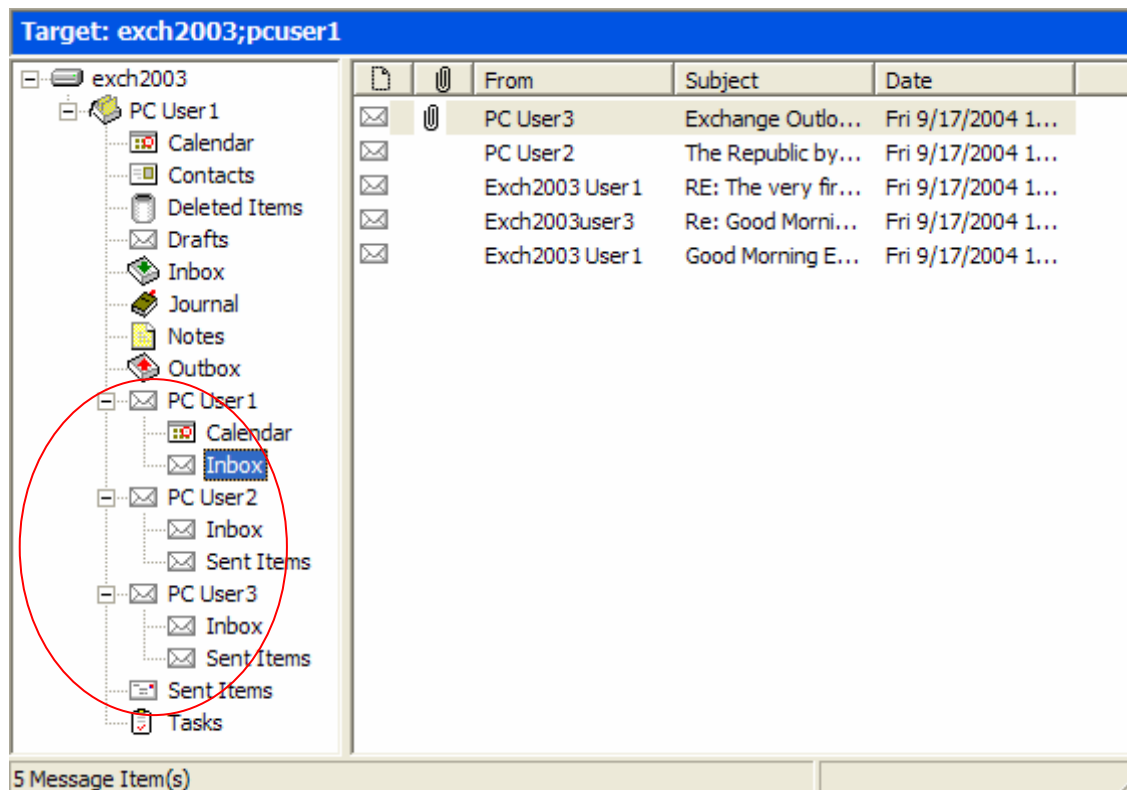
2. In the Target pane, use **Paste Special** to paste the messages into an Exchange mailbox or folder.
3. In the **Copy Progress** dialog box, review your results to make sure all the messages were copied to the target destination. You can also print or save the copy report by doing one of the following.
  - 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 PowerControls main window.

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

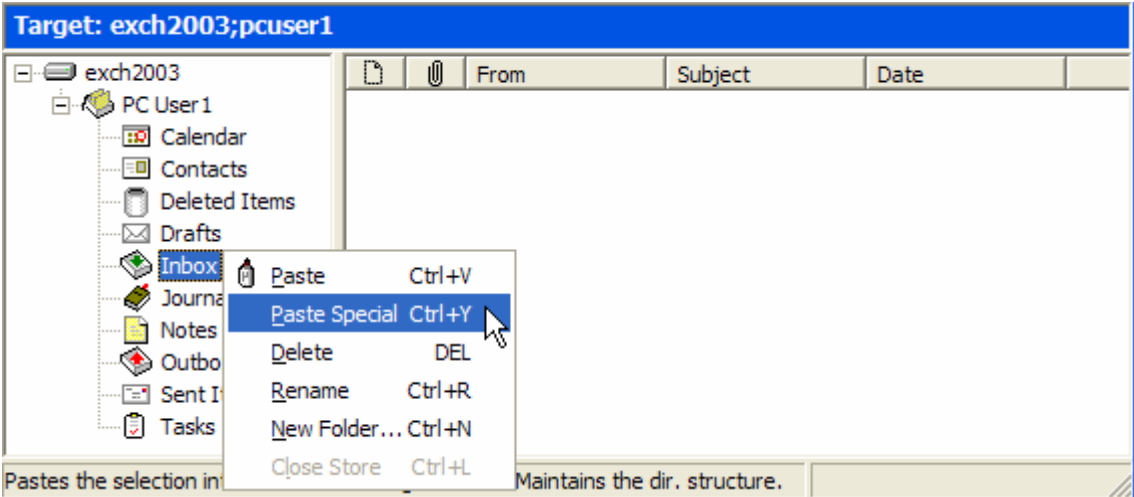
Each mailbox will be a subfolder of the target destination, and all unduplicated messages will be restored. In addition, their directory structure will be preserved.



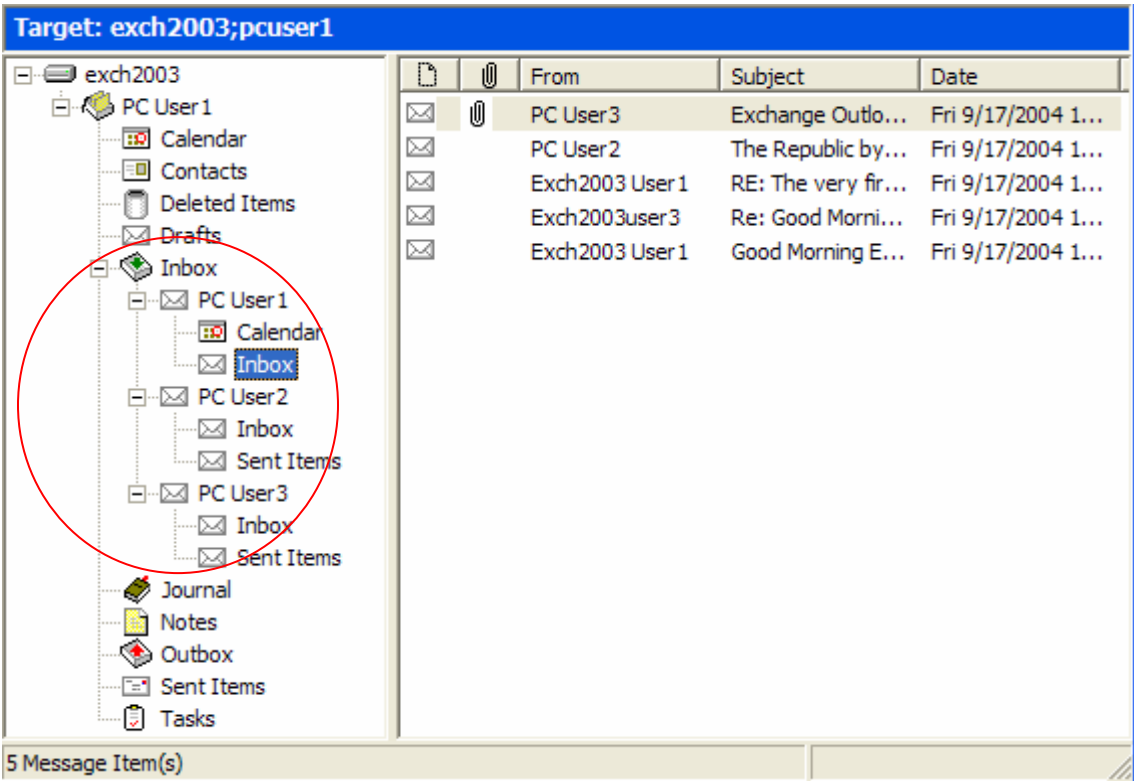
Example 4: Using Paste Special on a target Exchange mailbox



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)

## Chapter 7: Restoring Exchange Data

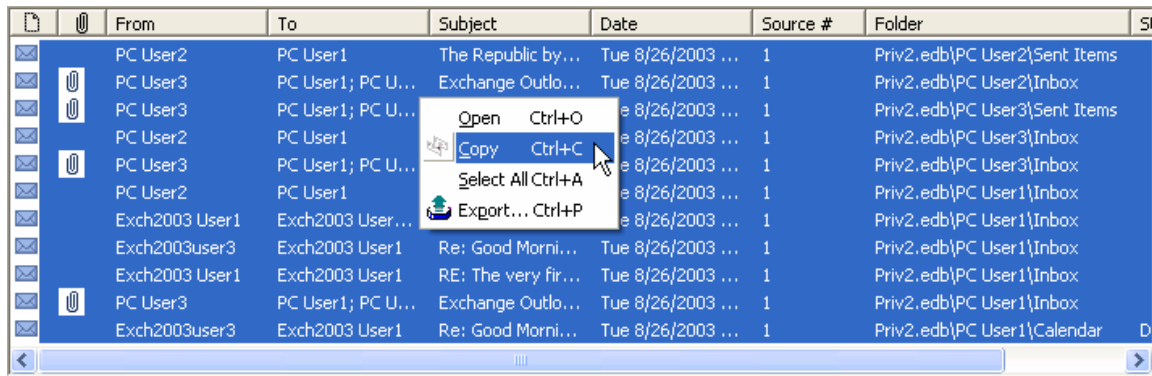
### To restore messages to an Exchange server root node with Paste Special

If the target is an Exchange Server root node, PowerControls 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, PowerControls 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 160.

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.

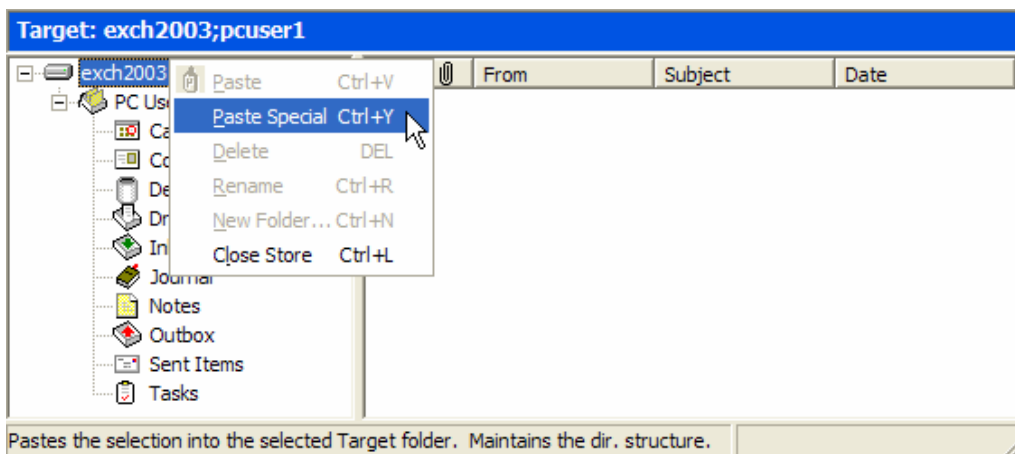


*Copying messages from the **Find** dialog box*

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 PowerControls main window.

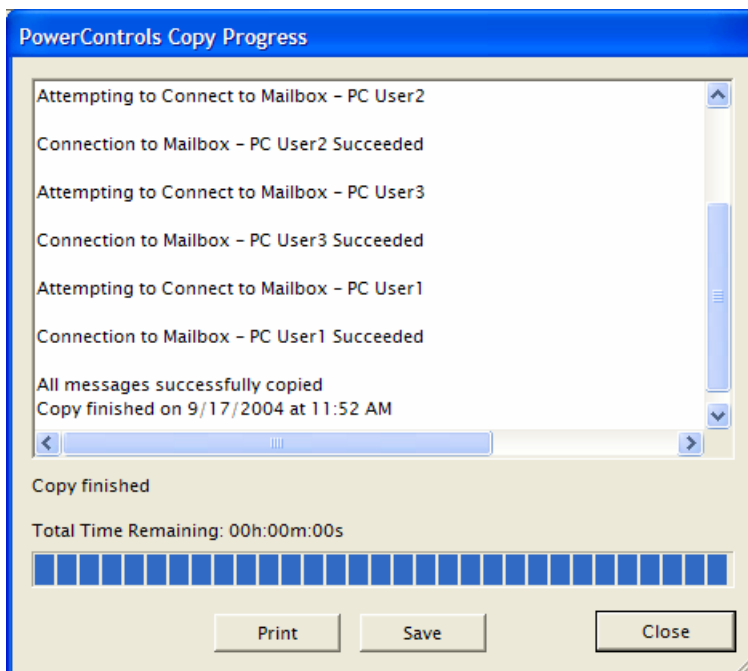
### Results of Restoring Messages to an Exchange Server Root Node with Paste Special

All unduplicated messages will be restored in each mailbox that PowerControls 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 PowerControls displays only one mailbox at a time in the Target pane.



*Example 6: The **Copy Progress** dialog box reports that PowerControls was able to connect to all mailboxes and successfully copy all messages to Exchange server*

### Restoring a Folder

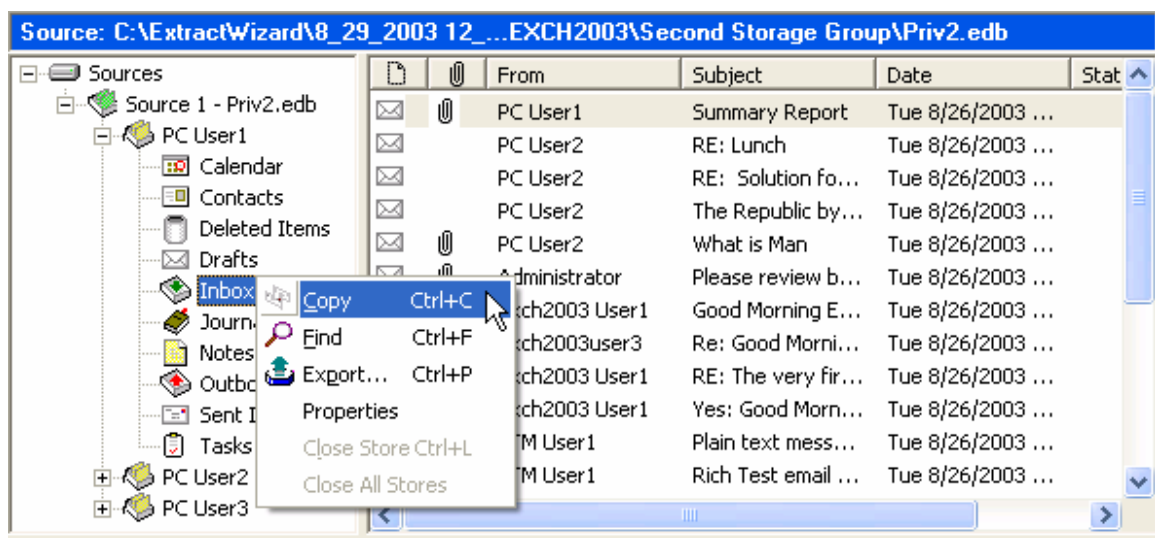
The following instructions show you how to restore a folder to any target destination by using Copy-Paste. Keep in mind that using Drag-and-Drop achieves the same results.

#### 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 in the target destination, it will be created.
2. You *cannot* restore a folder to an Exchange server root node.
3. You *cannot* restore a priv folder to a public folder. But you *can* restore messages from a priv folder to a public folder.
4. 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).

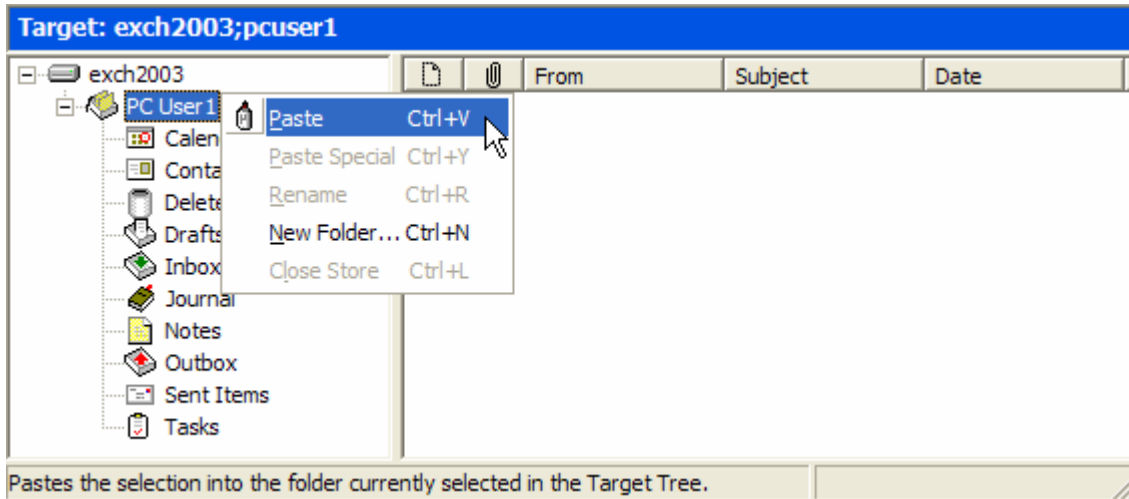


2. In the Target pane, paste the folder into a folder, mailbox, or PST root node.
3. In the **Copy Progress** dialog box, verify your results to make sure that your messages from all mailboxes were copied to the target destination. You can also print or save the copy report by doing one of the following.
  - 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 PowerControls main window.

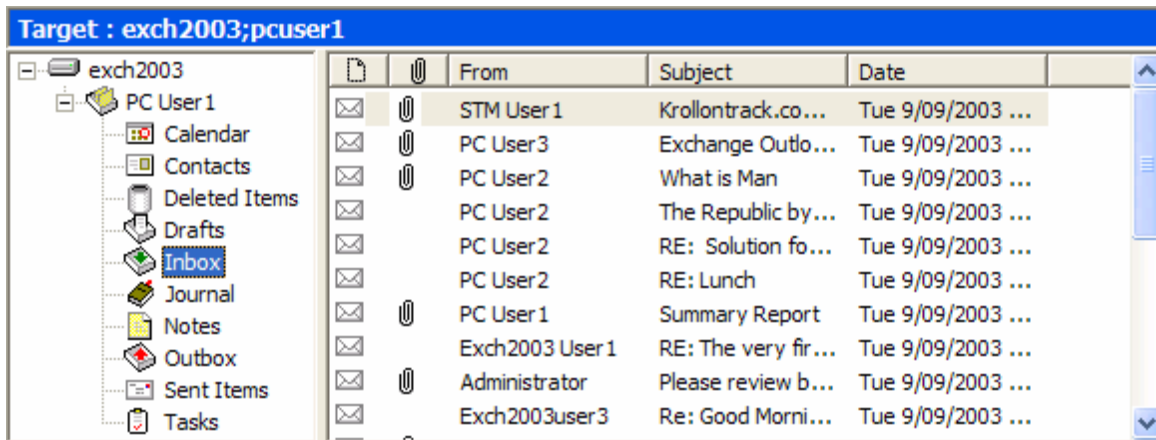


### Results of Restoring a Folder

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

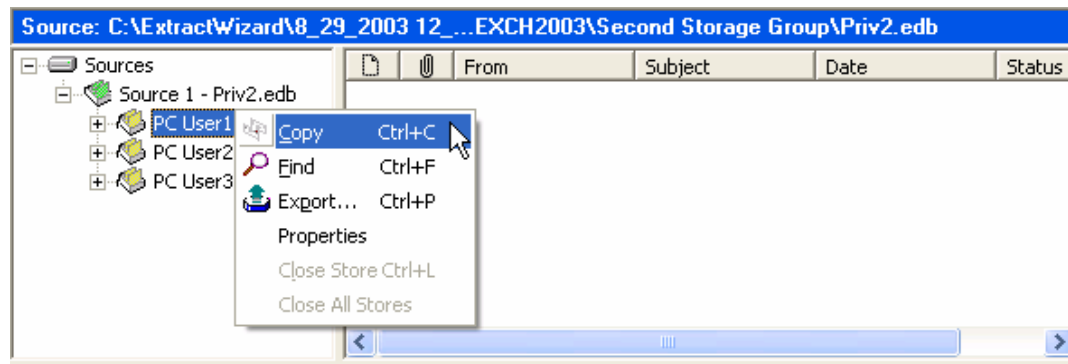
1. You can use **Drag-and-Drop** or **Copy-Paste** to restore a mailbox to a target PST root node or folder, or to an Exchange Server root node, mailbox, or folder.
2. **If you restore a mailbox to a target PST root node:** Messages from folders in the source PST are restored to corresponding folders in the target PST (e.g., messages from the source Inbox are restored to the target Inbox). If a corresponding folder does not exist in the target destination, it will be created.
3. **If you restore a mailbox to a target PST folder, or to an Exchange Server, mailbox, or folder:** If the mailbox does not exist in the target destination, a folder with its name will be created.

***Important Note:** If you want to restore a mailbox to a target Exchange server root node, the source mailbox must exist on the target Exchange server, and you must have full mailbox access rights to all of the Exchange mailboxes you are trying to restore messages to. For more information on access rights, see “About Restoring Messages to an Exchange Server” on page 160.*

4. You cannot restore a mailbox to a public folder. But you *can* restore messages from a mailbox to a public folder.
5. You cannot use the **Paste Special** command to restore a mailbox. You can use the **Paste Special** command to restore individual messages only.

#### To restore a mailbox

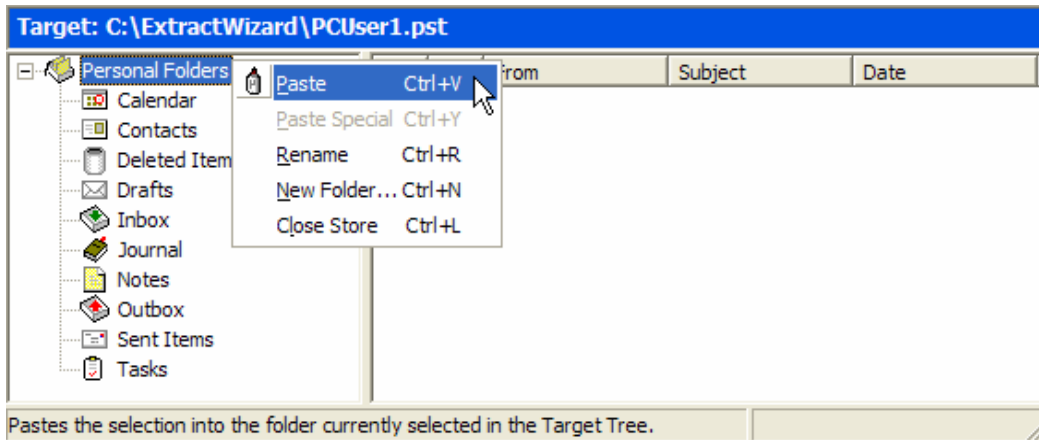
1. In the Source pane, copy a mailbox (e.g., PC User 1).



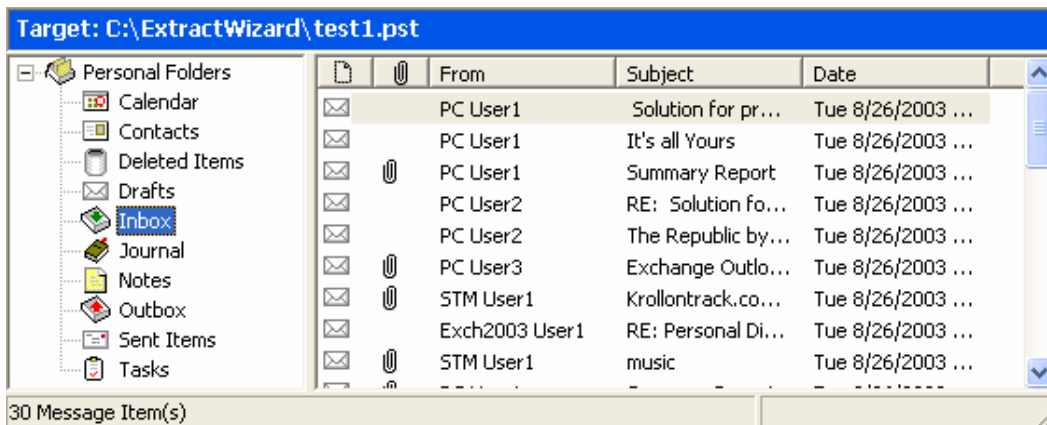
2. In the Target pane, paste the mailbox into a folder, mailbox, PST root node, or Exchange server root node.
3. In the **Copy Progress** dialog box, verify your results to make sure that your messages from all mailboxes were copied to the target destination. You can also print or save the copy report by doing one of the following.
  - Click **Print** to print the copy report.
  - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the PowerControls main window.

### Results of restoring a mailbox

All unduplicated messages in a mailbox will be restored and their directory structure will be preserved. If the mailbox does not exist in the target destination, a folder with its name will be created. However, if you restore a mailbox to a target PST root node, a mailbox will not be created. Instead, messages from folders in the source PST are restored to corresponding folders in the target PST.



Example 8: Pasting a mailbox into a PST root node



Example 8: Results of pasting a mailbox into a PST root node: Messages from folders in the source PST are restored to corresponding folders in the target PST.

### 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 160.*

#### 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 PowerControls main window.

#### Results of restoring an EDB file

PowerControls 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, PowerControls will log an error in the Copy Progress dialog box, skip the entire mailbox, and continue the operation.

## Restoring to Public Folders

The following instructions show you how to restore messages or public folders to a public folder target. An option to open public folders is available upon connection to an Exchange server.

**Important Note:** *PowerControls will open public folders and your mailbox when you connect to an Exchange target. You will see those folders that you have permission to see.*

### Guidelines for Restoring to Public Folders

1. You can restore folders from a pub.edb database to a public folder target. All public folder permissions will be transferred to the target folders. However, folder permissions may not transfer if the version of the source Exchange server is different than the version of the target Exchange server.
2. You can restore messages from any database source or search results to a public folder target.
3. You cannot restore a folder or mailbox from a priv database to a public folder target. But you *can* restore messages in a folder or mailbox to a public folder.
4. You cannot use Paste Special when restoring messages to a public folder target.

**Note:** *The ability to restore to public folders is also available at the command line.*

### To restore messages to a target Public Folders

1. In the Source pane or **Find** dialog box, copy messages from the message list.
2. In the Target pane, paste the messages into the target root public folder or a folder in the public folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
  - Click **Print** to print the copy report.
  - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the PowerControls main window.

### To restore a folder from a public database to a target Public Folders

1. In the Source pane copy a folder from a public database.
2. In the Target pane, paste the folder into the target root public folder or a folder in the public folder.
3. In the **Copy Progress** dialog box, verify that your messages were successfully copied. You can also print or save the copy report by doing one of the following.
  - Click **Print** to print the copy report.
  - Click **Save** to save the copy report as a text file.
4. In the **Copy Progress** dialog box, click **Close** to return to the PowerControls main window.

### Results of restoring to Public Folders

When you restore folders from a pub.edb database to a public folder target, the following occurs:

- All public folder permissions are transferred to the target folders. However, folder permissions may not transfer if the version of the source Exchange server is different than the version of the target Exchange server.
- The Exchange user doing the restore will be added to all public folder permissions with owner rights.
- If you have IFS (also known as “M:drive”) enabled on your Exchange server, permissions for child folders may be merged with permissions for parent folders.

# Chapter 8: Using the Command Line

The command line feature allows you to easily batch repetitive processes such as multiple copy and export tasks without initiating the PowerControls user interface. This feature is extremely beneficial in PowerControls production environment implementations.

## Command Line Syntax

The syntax is as follows:

<< >> Required for all operations

< > Required for copy/export operations

[ ] Optional

### Command Line Syntax

PowerControls <<Operation>> [Operation options] <<Source Store>> [Source options] <Source Folder Path> <Target Store> <Target Folder Path>

#### <Operation>

- Copy
- Export
- List (report information about the database)
- Integ (Integrity Check)
- h (help)

#### [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, PowerControls will append to the output progress file. If the file does not exist, PowerControls will create it.

- da <mm/dd/yyyy>
  - Process messages dated on or after this date
- db <mm/dd/yyyy >
  - Process message dated on or before this date
- v
  - verbose

#### <Source Store>

Full path of EDB file or PST file

## Chapter 8: Using the Command Line

### [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>

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 options]

-pub public folders

### <Target Folder Path>

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

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

<Operation>	Explanation
<b>-copy</b>	<b>Perform a copy operation</b>

[Operation options]	Explanation
<b>-r</b>	<b>copy subfolders</b>
<b>-o c:\out1.txt</b>	<b>output report file name</b>

<Source Store>	Explanation
<b>c:\pcdata.edb</b>	<b>path to the database file name</b>

[Source options]	Explanation
<b>-t c:\</b>	<b>temporary file path</b>

<Source Folder Path>	Explanation
<b>pcuser1\inbox</b>	<b>source folder to copy</b>

<Target Store>	Explanation
<b>c:\target.pst</b>	<b>target data store</b>

<Target Folder Path>	Explanation
<b>\$ROOT</b>	<b>copy to the root folder of the data store</b>



**Example 2:** Copy pcuser1's inbox and all subfolders from c:\pcdata.edb to user1's inbox on exchange server pcpdc. c:\out1.txt will contain the copy report.

**powercontrols -copy -r -o c:\out2.txt c:\pcdata.edb -t c:\ pcuser1\inbox pcpdc;user1 inbox**

<Operation>	Explanation
<b>-copy</b>	<b>perform a copy operation</b>
[Operation options]	Explanation
<b>-r</b>	<b>copy subfolders</b>
<b>-o c:\out2.txt</b>	<b>output report file name</b>
<Source Store>	Explanation
<b>c:\pcdata.edb</b>	<b>path to the database file name</b>
[Source options]	Explanation
<b>-t c:\</b>	<b>temporary file path</b>
<Source Folder Path>	Explanation
<b>pcuser1\inbox</b>	<b>source folder to copy</b>
<Target Store>	Explanation
<b>pcpdc;user1</b>	<b>target data store (Exchange server name and logon ID)</b>
<Target Folder Path>	Explanation
<b>inbox</b>	<b>copy to the inbox</b>

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

**powercontrols -export -r -f:txt -o c:\out3.txt c:\pcdata.edb -t c:\ pcuser1 c:\export**

<Operation>	Explanation
<b>-export</b>	<b>perform an export operation</b>
[Operation options]	Explanation
<b>-r</b>	<b>export subfolders</b>
<b>-f:txt</b>	<b>messages will be exported as .txt</b>
<b>-o c:\out3.txt</b>	<b>export report file name</b>
<Source Store>	Explanation
<b>c:\pcdata.edb</b>	<b>path to the database file name</b>
[Source options]	Explanation
<b>-t c:\</b>	<b>temporary file path</b>
<Source Folder Path>	Explanation
<b>pcuser1</b>	<b>source folder to copy</b>
<Target Store>	Explanation
<b>NA</b>	<b>target data store</b>
<Target Folder Path>	Explanation
<b>c:\export</b>	<b>Root folder of the export</b>

## Chapter 8: Using the Command Line

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

*Tip:* When performing the `-list` operation, use the `-o filename` option in order to see the mailboxes. Otherwise, the operation will proceed so fast that you won't be able to see the mailboxes.

**powercontrols -list -o c:\mblist.txt c:\priv1.edb**

<Operation>	Explanation
<b>-list</b>	<b>perform a list operation</b>
[Operation options]	Explanation
<b>-o c:\mblist.txt</b>	<b>output report file name</b>
<Source Store>	Explanation
<b>c:\priv1.edb</b>	<b>path to the database file name</b>

**Example 5:** Perform an integrity check on and entire EDB.

**-integ -r -o c:\output.txt c:\priv1.edb \$ROOT**

<Operation>	Explanation
<b>- integ</b>	<b>Perform an integrity check on a database</b>
[Operation options]	Explanation
<b>-o c:\\output.txt</b>	<b>output report file name</b>
<Source Store>	Explanation
<b>c:\priv1.edb</b>	<b>path to the database file name</b>
<Source Folder Path>	Explanation
<b>\$ROOT</b>	<b>Root of the EDB (entire EDB)</b>

**Example 6:** Copy a folder from a pub EDB to public folders (only copy messages dated after 01/01/2000)

**powercontrols -copy -r -o c:\out2.txt -da 01/01/2000 c:\pub1.edb newsgroups  
"pcvx2000;administrator" -pub \$ROOT**

<Operation>	Explanation
<b>-copy</b>	<b>perform a copy operation</b>
[Operation options]	Explanation
<b>-r</b>	<b>copy subfolders</b>
<b>-o c:\out2.txt</b>	<b>output report file name</b>
<b>-da 01/01/2000</b>	<b>Only copy messages that were created after this date</b>
<Source Store>	Explanation
<b>c:\pub1.edb</b>	<b>path to the database file name</b>
<Source Folder Path>	Explanation
<b>newsgroups</b>	<b>source folder to copy</b>
<Target Store>	Explanation
<b>pcvx2000;administrator</b>	<b>target data store (Exchange server name and logon ID)</b>

<Target Options>  
**-pub**

Explanation  
**Copy to public folders**

<Target Folder Path>	Explanation
\$ROOT	<b>Public folders root</b>

***Important Notes:***

- *All paths with spaces need to be in quotes.*
- *If a PST does not exist in the target, PowerControls will create a PST file compatible with Outlook 97, 98, 2000, and 2002.*



# Chapter 9: Reporting

This chapter shows you how to create reports, view the statistics in the generated reports, and save the reports as either tab-delimited or comma-delimited text files. Any data store opened as a source can be the source of a report.

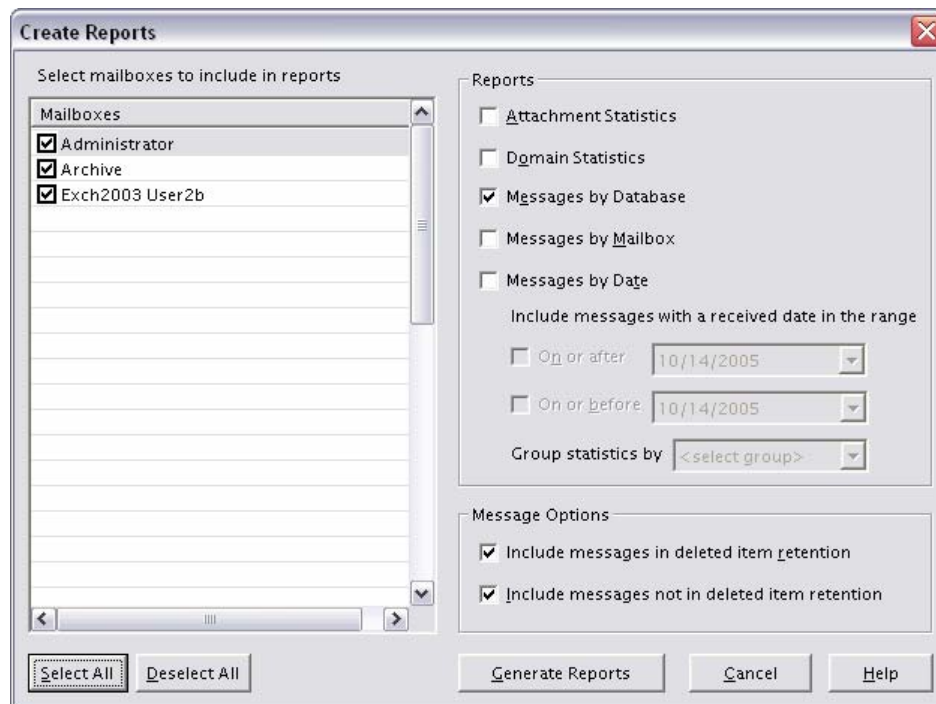
## Creating Reports

PowerControls allows you to generate reports on either an EDB or a PST source data store. The reports contain statistics about the data store such as sizes and counts for attachments and messages, and may be generated per attachment type, domain, mailbox, database, and date. The Mailbox and Date reports are available for Priv EDB data sources only.

### To create one or more reports

1. In the Source pane, select an EDB or PST data source.
2. On the **File** menu, click **Create Reports**. The **Create Reports** dialog box appears.

If you selected a Priv EDB as the source for the report, the list view will display all mailboxes in the EDB. If you selected a PST or Pub EDB as the source, the list view will display all folders immediately under the root of the PST or Pub EDB.



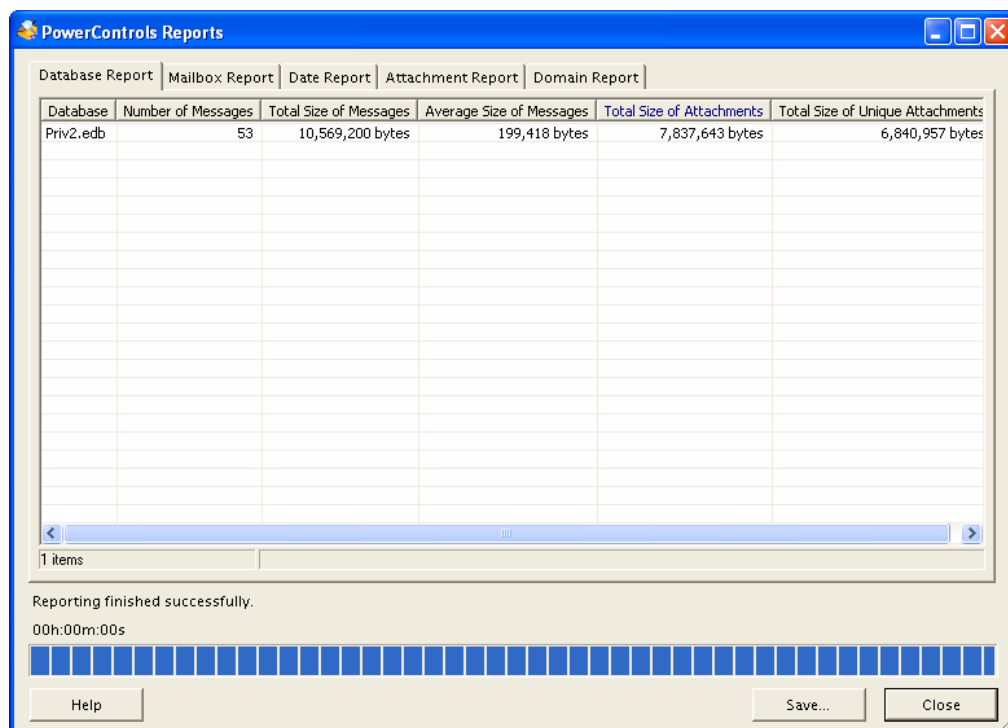
*Create Reports dialog box for a Priv EDB source*

## Chapter 9: Reporting

3. Do one of the following:
  - For Priv EDB: Under **Mailboxes**, select the mailboxes to be included in the report(s). All mailboxes are selected by default.
  - For Pub EDB or PST: Under **Folders**, select the folders to be included in the report(s). All folders are selected by default.
4. Under **Reports**, select one or more reports that you would like to create:
  - **Attachment Statistics**
  - **Domain Statistics**
  - **Messages by Database**
  - **Messages by Mailbox**: This report is available for Priv EDB data sources only.
  - **Messages by Date**: If you select this report, then specify the appropriate options for received date range and date unit (e.g., hour, day, week, month). This report is available for Priv EDB data sources only.
5. Under **Message Options**, select the appropriate deleted item retention option(s). Both options are selected by default. For PST sources, the first option is unselected. You cannot modify the default options for PST sources.
  - **Include messages in deleted item retention**: Select this option to include messages in deleted item retention.
  - **Include messages not in deleted item retention**: Select this option to include messages that are not in deleted item retention. In most cases, this option represents most of the messages in the source data store.
6. Click the **Generate Reports** button. The **PowerControls Reports** dialog box appears. For more information the contents of the reports, see “Viewing Reports” on page 189.

## Viewing Reports

The PowerControls Reports dialog box shows the progress of the report generation and also shows the reports themselves. This dialog box consists of a tabbed view of the reports, with each tab containing a single report. For information on the statistics provided in each report, see the following sections.



### Single Instance Storage (SIS) vs. Cumulative Counts

The Attachment Statistics and Messages by Database reports use the terms “SIS” (Single Instance Storage) and “Cumulative” when referring to the number and size of attachments in the data store. The term “SIS” counts attachments only once and does *not* include their duplicates. The term “cumulative” refers to all of the attachments or messages, including their duplicates.

**Example:** An attachment of type .DOC of size 100 KB is being shared by three messages. As the table shows, the SIS size more closely estimates how much of the EDB size is attributed to the attachment. The cumulative size more closely estimates how much of the EDB size is attributed to attachments if the data store did not have SIS.

Method of Counting Attachments/Messages	Total # of .DOC Attachments	Total Size of .DOC Files
SIS Count	1	100 KB
Cumulative Count	3	300 KB

**Attachment Statistics Report**

The Attachment Statistics report provides statistics on all of the attachments contained in messages in the selected source. The attachments are categorized by extension, which appears in upper case letters (e.g., .DOC, .XLS). Attachments without extensions are put into a separate row called “No Extension.”

Column Heading	Description
Attachment Extension	Attachment type by extension (e.g., .DOC, .PPT, .PDF)
Cumulative Number of Attachments Found in Messages	Cumulative number of attachments of each type found in the processed messages
Cumulative Size of Attachments	Cumulative size of attachments of each type found in messages
Average Attachment Size	Cumulative size of attachments of each type divided by the cumulative number of attachments found in messages
Percent of Total by Number	Number of attachments of each type divided by total attachments of all types
Percent of Total by Size	Total size of attachments of each type divided by the total size of attachments of all types
SIS Number of Attachments	SIS number of attachments of each type. NA for PST sources.
SIS Size of Attachments	SIS size of attachments of each type. NA for PST sources.
SIS Percent of Total by Size	SIS size of attachments of each type divided by SIS size of attachments of all types in attachment table. NA for PST sources.



## Domain Statistics Report

The Domain Statistics report provides statistics on messages grouped by the domain from which the messages were sent.

The domain is determined using the PR\_SENDER\_ADDRTYPE in combination with the PR\_SENDER\_EMAIL\_ADDRESS as follows:

- If PR\_SENDER\_ADDRTYPE is “EX” or “SYSTEM,” then it is an exchange message and the domain is “internal.”
- If PR\_SENDER\_ADDRTYPE is “SMTP,” then the domain is whatever follows the @ in the PR\_SENDER\_EMAIL\_ADDRESS property.
- If PR\_SENDER\_ADDRTYPE is something else, then the domain is “unknown.”

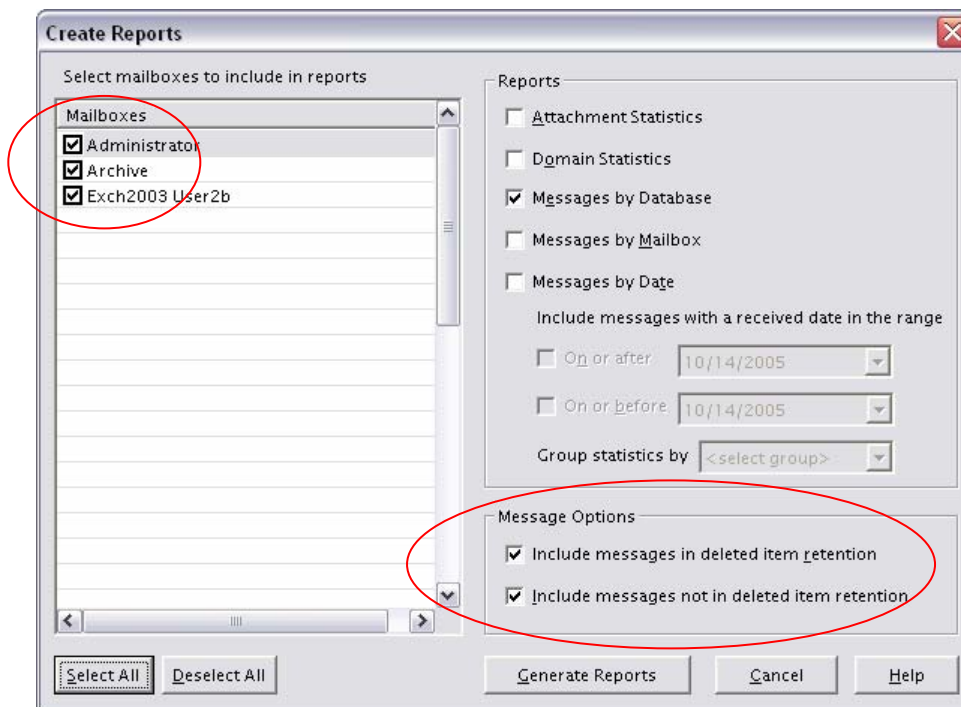
Column Heading	Description
Domain	The name of the domain (e.g., ontrack.com) from which the message was sent. All messages whose domain cannot be determined are placed into an “unknown” domain. All Exchange messages are placed into an “internal” domain.
Number of Messages	Total count of messages that were received from each domain
Total Size of Messages	Total size of all messages that were received from each domain
Percent of Total by Number	Number of messages from each domain divided by the total number of messages from all domains
Percent of Total by Size	Total size of messages from each domain divided by the total size of messages from all domains

## Messages by Database Report

The Messages by Database report provides statistics on the database that contains the processed messages. In the current version of PowerControls, reports are limited to a single EDB or PST, which means the database report has only one row of information. For example, the database report for Priv1.edb has one row of information listing all message statistics for Priv1.edb and its mailboxes.

Column Heading	Description
Database (EDB or PST)	The database name (e.g., Priv1.edb, Pub1.edb, Outlook XP.pst)
Cumulative Number of Messages	Cumulative number of messages
Cumulative Size of Messages	Cumulative size of all messages processed
Average Size of Messages	Cumulative size of messages divided by cumulative number of messages
Cumulative Size of Attachments	Cumulative size of attachments in all messages processed
SIS Size of Attachments	SIS total size of attachments. This column applies only to EDB sources. For PST data stores, this column is NA.

**Important Note:** The statistics in the Database report refer only to the mailboxes (for a Priv EDB) or the folders (for a PST or Pub EDB) you selected in the Create Reports dialog box. The statistics also depend on the options you specified in the Message Options area. In other words, unless all mailboxes/folders are selected, the Database report will not provide statistics for the entire database.



Create Reports dialog box for a Priv EDB source

## Messages by Mailbox Report

The Messages by Mailbox report provides message statistics for all selected mailboxes in a Priv EDB data store.

**Note:** This report is available only for a Priv EDB.

Column Heading	Description
Mailbox	Name of the mailbox: Display name (alias)
Number of Messages	Total number of messages in the mailbox
Total Size of Messages	Total size of all messages in the mailbox
Average Size of Messages	Total size of messages divided by number of messages
Total Attachment Size	Total size of attachments in all messages in this mailbox. Attachments in messages in this mailbox that are also in messages in another mailbox are counted in both mailboxes.
Shared Attachment Size	Size of attachments that are found more than once, either multiple times in this mailbox or in this mailbox and other mailboxes. Calculated as total size of attachments minus the non-shared attachment size.
Non-shared Attachment Size	Size of attachments that are not shared with other messages
Internal Received Messages	Received messages of type “EX” or “SYSTEM”
SMTP Received Messages	Received messages of type “SMTP”
Other Received Messages	Received messages <i>not</i> of type “EX,” “SMTP,” or “SYSTEM”

**Note:** For a definition of “received message,” see the glossary.

## Messages by Date Report

The Messages by Date report provides statistics for messages in a date range, such as 1/1/2004 to 1/1/2005, and a unit of hours, days, weeks, or months. The report is keyed off of the received date of the message.

*Note: This report is available only for a Priv EDB.*

Column Heading	Description
Hour/Day/Week/Month	The date unit that was selected in the Create Reports dialog box. Examples are: Hour: "12/25/2004 – 9 PM" Day: "12/25/2004" Week: "12/26/2004 – 1/1/2005" (Weeks start on Sunday and end on Saturday.) Month: "12/2004"
Internal Received Messages	Received messages of type "EX" or "SYSTEM"
Total Size of Internal Received Messages	The sum of the internal received message sizes
SMTP Received Messages	Received messages of type "SMTP"
Total Size of SMTP Received Messages	The sum of the SMTP received message sizes
Other Received Messages	Received messages <i>not</i> of type "EX," "SMTP," or "SYSTEM"
Total Size of Other Received Messages	The sum of the other received message sizes

*Note: For a definition of "received message," see the glossary.*

## Sorting Reports

Sorting of reports is available after the reporting process has finished. The order in which statistics first appear in the PowerControls Reports dialog box is based on the ascending order of statistics in the first column (e.g., for the Attachment Statistics column, .DOC precedes .TXT). However, you can sort statistics based on any column heading.

### To sort the statistics in a report

3. Click a column heading to sort the statistics based on that heading. An arrow appears indicating the sort direction. An up arrow indicates the statistics appear in ascending (A-Z) order. A down arrow indicates that the statistics appear in descending (Z-A) order.
4. To reverse the order of the statistics based on that column heading, click the column heading again. Notice that the arrow reverses directions.

### An Example of Sorting

The Attachment Statistics report is originally sorted based on the ascending order of attachment extensions (e.g., .DOC precedes .TXT). If you click the Attachment Extension heading, the down arrow appears and statistics are sorted in descending order (e.g., .TXT precedes .DOC).

If you click the “Number of Attachments Found in Messages” column heading, the up arrow appears and statistics are sorted based on ascending order. This means that the attachment extension occurring least frequently in the data source appears first in the report.

## Saving Reports

You may save the currently active report as either a tab-separated or comma-separated text file. The report name defaults to the name shown on the report tab, without the spaces and with a txt extension (e.g., MailboxReport.txt). The file type defaults to a tab-separated text file.

### To save a report

1. In the **PowerControls Reports** dialog box, make the desired report active by clicking its tab (e.g., Attachment Report, Database Report).
2. Click **Save**.
3. In the **Save Report** dialog box, specify the name, location, and file type for the report. You may save the report as either a tab-separated or comma-separated text file.
4. Click **Save** to return to the **PowerControls Reports** dialog box.
5. Repeat steps 1-4 for each report you want to save.



# Glossary

<b>BKF</b>	An .MTF format backup-to-disk file, which is similar to other archive formats such as ZIP or ARJ. Backup software applications that output this file format are NT Backup (the version that shipped with Windows 2000), Windows Backup 2003 and XP, and Backup Exec.
<b>CHK</b>	Checkpoint files (.chk files) are 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).
<b>Data Store</b>	A unified collection of folders and messages contained in a single storage medium. A PST file is a data store. An Exchange Information Store is also a data store. In a basic case, Exchange has two live data stores, one for the private mailboxes and one for the public folders.
<b>EDB</b>	See Exchange Database.
<b>EIS</b>	See Exchange Information Store.
<b>Exchange Database</b>	This file, which usually has an EDB extension, contains the mailbox, folders, and messages you see when connecting to an Exchange server. The Exchange Server reads and writes to this file in response to incoming email and events from the clients. On Exchange 2000, this is one of the two files that make up the Exchange Information Store, the other being the STM file.
<b>Exchange Information Store</b>	This is the set of files that make up the data store for private mailboxes and public folders on an Exchange Server. For Exchange 5.5, this is the single Exchange Database file usually named priv1.edb and pub1.edb. On Exchange 2000 and 2003, the private mailbox data store will consist of the files priv1.edb and priv1.stm, and the public folder data store will consist of pub1.edb and pub2.stm.
<b>Log Files</b>	<p>Transaction log files (.log files) 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.</p> <p>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.</p>
<b>Messages</b>	Messages are found in the folders of an Exchange Information Store. Messages can mean “email,” but Outlook <i>Contacts</i> are also messages, as are <i>Appointments</i> , <i>Journal Entries</i> , <i>Sticky Notes</i> , and <i>Tasks</i> .
<b>MTF</b>	Microsoft Tape Format. This is the Microsoft defined format for data on a backup tape. It is issued by NT Backup, Windows Backup, and Backup Exec.

## Glossary

<b>PAT</b>	Patch files (.pat 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.
<b>PST</b>	Personal Storage file. This file, used by Outlook, contains folders and messages that have been retrieved from a user's Exchange mailbox and copied locally.
<b>Received Messages</b>	<p>Messages that have been sent through an Exchange Server to another mailbox. Messages in the "Sent Items" folder are copies of messages sent through an Exchange Server and are not considered to be "received messages." Because messages in the "Drafts" folder, "Notes" folder, and other similar items are not sent through an Exchange server, they too are not considered to be "received."</p> <p><i><b>Note:</b> Because recovery software such as PowerControls restores messages from a source to an Exchange mailbox without sending them, the messages that PowerControls restores are not considered to be "received messages."</i></p>
<b>Source Data Store</b>	This is the data store from which folders and messages are copied. The source is read-only, so items cannot be copied into, deleted from, or changed in the Source.
<b>STM</b>	For Exchange 2000 and 2003, this is one of the two files that make up the Exchange Information Store, the other being the EDB file. The STM file stores certain data for emails that come into the Exchange Server through the POP or SMTP port. This email data may eventually get moved into the EDB file over time.
<b>Target Data Store</b>	This is the data store to which folders and messages are copied. The target is read-write allowing items to be added, deleted, and changed. The target data store can be an Exchange server or PST file.



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