

# **Cheyenne Backup for Windows 95 User Guide**

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## Preface

This manual is written for people who will use Cheyenne Backup for Windows 95. It contains information about using Cheyenne Backup to back up your data to tape or other removable media, and performing related activities, such as restoring and copying files, managing your backup jobs, and maintaining tapes and tape devices.

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# CONTENTS

## 1 *Getting Started*

What is Cheyenne Backup? . . . . .	1-2
How does Cheyenne Backup work? . . . . .	1-3
Software Preview . . . . .	1-4
Installing Cheyenne Backup . . . . .	1-6
Hardware and software requirements . . . . .	1-7
Installing Cheyenne Backup . . . . .	1-7
Selecting a backup device . . . . .	1-7
Preparing a Recovery Disk . . . . .	1-8
Getting Started in Easy mode . . . . .	1-9
The Cheyenne Backup Wizards . . . . .	1-10
Getting started in Expert mode - a tutorial . . . . .	1-11
Uninstalling Cheyenne Backup . . . . .	1-15

## 2 *Basic Procedures*

Introducing the Cheyenne Backup Manager . . . . .	2-2
The Quick Access bar . . . . .	2-3
The Toolbar . . . . .	2-5
The Cheyenne Backup menu bar . . . . .	2-5
Starting the Cheyenne Backup Engine . . . . .	2-6
Using the Browser . . . . .	2-7
Using the machine tree in the Browser . . . . .	2-8
Selecting an object in the machine tree . . . . .	2-9
Configuring the machine tree Browser . . . . .	2-11
Adding Preferred Shares to the machine tree . . . . .	2-11
Adding objects to the machine tree . . . . .	2-13
Entering security information . . . . .	2-14
Using the tape tree in the Browser . . . . .	2-15
Providing security information . . . . .	2-16
Getting help . . . . .	2-18

---

### 3 Backing Up Data

Basic backup procedure . . . . .	3-2
Selecting a backup method . . . . .	3-4
About Archive Bits . . . . .	3-5
Specifying global default backup options . . . . .	3-7
Compressing data on backup . . . . .	3-7
Verifying data on backup . . . . .	3-7
Applying options to a selected drive . . . . .	3-8
Selecting a backup device . . . . .	3-9
Updating your Recovery Disk . . . . .	3-10
Recovery tips . . . . .	3-11

### 4 Restoring Your Data

Restore basics . . . . .	4-2
Selecting data from tape . . . . .	4-5
Restore by Tree . . . . .	4-5
Choosing a version from tape . . . . .	4-6
Searching for files on tape . . . . .	4-6
Restore by Tape . . . . .	4-8
Restore by Tape Media . . . . .	4-9
Recovering from a disaster . . . . .	4-10
Recovering your machine without a Recovery disk . . . . .	4-10

### 5 Managing Data on Tapes and Disks

Comparing tapes . . . . .	5-2
Tape scanning options . . . . .	5-4
Scanning a tape . . . . .	5-4
Merging a tape into the Cheyenne Backup database . . . . .	5-5
Recovering the Cheyenne Backup database . . . . .	5-6
Copying files . . . . .	5-8
Copying to WORM drives . . . . .	5-9
Counting files . . . . .	5-10
Deleting files . . . . .	5-11

**6 Customizing Your Jobs**

Applying filters. . . . . 6-2

    File Pattern filter . . . . . 6-5

    Directory filter . . . . . 6-6

    File Attributes filter . . . . . 6-7

    File Modified/Created/Accessed filters . . . . . 6-8

    Viewing, modifying, or deleting existing filters. . . . . 6-10

Scheduling a job. . . . . 6-11

    Running a job immediately . . . . . 6-11

    Scheduling your job . . . . . 6-12

    Specifying Repeat Method information . . . . . 6-13

Creating scripts for your jobs . . . . . 6-15

Applying job options . . . . . 6-18

    Destination options--Restore and Copy . . . . . 6-19

        Directory Structure . . . . . 6-19

        File Conflict Resolution . . . . . 6-21

    Log options--General . . . . . 6-22

    Backup Method--Backup and Copy . . . . . 6-22

    Operation options--Backup . . . . . 6-23

        (Basic) Operation options . . . . . 6-23

        Database Operation options . . . . . 6-24

    Operation options--Copy . . . . . 6-25

    Operation options--Restore, Compare, Scan, and Count . . . . . 6-25

    Retry options--Backup and Copy . . . . . 6-26

        Open File Retry options . . . . . 6-27

        File Sharing options . . . . . 6-27

    Tape Options--Backup . . . . . 6-28

        First Tape Options . . . . . 6-29

        Additional Tape Options . . . . . 6-30

    Tape Options--Restore, Compare, and Scan . . . . . 6-31

    Verification options--Backup . . . . . 6-31

    Virus options--Backup, Copy, and Count . . . . . 6-32

**7 The Job Queue**

About the Job Queue Manager . . . . . 7-2

Viewing job information . . . . . 7-3

---

	The Status window . . . . .	7-3
	Information on a selected job . . . . .	7-6
	Printing Detail and Log information . . . . .	7-8
	Searching for text . . . . .	7-8
	Changing the font . . . . .	7-8
	Managing the jobs . . . . .	7-9
	Using the hidden Job Queue menu . . . . .	7-10
	Changing the job status . . . . .	7-10
<b>8</b>	<b>Managing Tapes and Tape Devices</b>	
	Device Manager basics . . . . .	8-2
	Maintaining your tapes . . . . .	8-5
	Formatting a tape . . . . .	8-5
	Erasing a tape . . . . .	8-6
	Retensioning a tape . . . . .	8-7
	Compressing data on tapes . . . . .	8-8
	Ejecting tapes . . . . .	8-9
<b>9</b>	<b>Managing the Cheyenne Backup Database</b>	
	Database basics . . . . .	9-2
	Opening the Database window . . . . .	9-3
	Summary View . . . . .	9-4
	Job View . . . . .	9-5
	Tape View . . . . .	9-7
	Device View . . . . .	9-10
<b>10</b>	<b>Creating and Viewing Reports</b>	
	Report basics . . . . .	10-2
	Viewing the Activity Log . . . . .	10-2
	Viewing the Tape Log . . . . .	10-5
	Using the Report window . . . . .	10-6
	Types of reports available . . . . .	10-7
	Operation Log . . . . .	10-10



**11 The Cheyenne Backup Engine**

About the Cheyenne Backup Engine ..... 11-2  
    Starting the Engine ..... 11-2  
    Stopping the Engine..... 11-3  
Configuring the Cheyenne Backup Engine ..... 11-4  
    Jobs options ..... 11-5  
    Database Options..... 11-7  
    Tape Options..... 11-8  
    QIC Tape Options ..... 11-10  
    Smart Drive options..... 11-12



# 1

## Chapter

# GETTING STARTED

This chapter explains how to get started with Cheyenne Backup.

**In this chapter, you will learn:**

Page	
1-2 >	What Cheyenne Backup is
1-7 >	How to install Cheyenne Backup on your machine
1-8 >	How to prepare a Recovery Disk
1-9 >	How to get started in Easy mode and use the Cheyenne Backup Wizards
1-11 >	How to get started in Expert mode
1-15 >	How to uninstall Cheyenne Backup

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## What is Cheyenne Backup?

Cheyenne Backup for Windows 95 is a data management and backup program that allows you to backup data from your Windows 95 workstation or other machines attached to your network.

Cheyenne Backup's advantages include:

- **Scheduled backups:** schedule repeating backup jobs that are custom-made for your environment.
- **Cheyenne AntiVirus integration:** automatically scan files during a backup operation.
- **User-defined scripts:** configure jobs once and re-use them when needed.
- **Intelligent restore:** the Cheyenne Backup database system allows you to quickly locate and restore your archived data.
- **Media Support:** back up your data to a wide variety of one-quarter inch (QIC) tapes, SCSI tape drives, or removable media such as floppy disks or zip drives.
- **Tape spanning:** large jobs automatically span multiple tapes until the job is complete.
- **Reports:** view job history and activity on the machines, directories, and tapes.
- **Easy-to-use interface.**

## How does Cheyenne Backup work?

1

Cheyenne Backup consists of two main components that work together to perform your data management and backup tasks: the Cheyenne Backup Manager and the Cheyenne Backup Engine.

---

### The Cheyenne Backup Manager

The Cheyenne Backup Manager allows you to submit job requests to the Cheyenne Backup Engine and monitor the status of your requests. You can operate in:

- **EZ (Easy) mode:** to submit basic backup, restore, and compare jobs following easy step-by-step instructions.
- **Expert mode:** to configure your jobs using filtering and scheduling features, and other advanced options. You can configure many jobs at once, by opening a new Manager window, such as the Backup window or the Restore window, each time you wish to submit a new request.

---

### The Cheyenne Backup Engine

The Cheyenne Backup Engine processes the jobs requested by the Cheyenne Backup Manager. The Engine performs the following tasks:

- **Job processing:** The engine constantly scans the job queue to process your jobs at their designated date and time.
- **Media management:** The engine controls your tape or other removable media devices that are needed to process the backup job.
- **Database management:** The engine maintains a database history of backed up files, job information, and tape information.

---

## Software Preview

Cheyenne Backup's main features are:

<hr/> <b>Backup</b>	<p>Back up data to a tape or other removable media. Cheyenne Backup allows you to perform a complete system backup of your Windows 95 machine. The Windows 95 system information is backed up intact, allowing you to completely restore the machine in the event of a system failure.</p> <p>You can also back up files from Windows machines and NetWare volumes that you can access through your network. Cheyenne Backup does not back up: registry information for Windows NT machines or bindery information for NetWare servers. Operating system files specific to Windows NT or to NetWare are backed up as DOS files.</p> <p>Information about each backup job (such as the path and name of each file, as well as the tape used) is logged in the Cheyenne Backup database.</p>
<hr/> <b>Restore</b>	<p>Restore data from tape using a variety of intelligent restore techniques, including rapid lookup and retrieval of lost data.</p>
<hr/> <b>Data Management for Tapes and Disks</b>	<p>Manage data on tapes by comparing files on a tape to files on a machine, scanning a tape for information about one or more tape backup sessions, and adding information from a tape to your existing Cheyenne Backup database. Manage data on disks by copying files and directories from one drive to another, counting and deleting files on a machine.</p>

**Job Queue** Monitor all pending, completed, and active jobs from the Job Queue window. Reschedule pending or completed jobs. Submit new jobs, delete jobs, and stop active jobs. Log information is provided for each completed job.

**Device** View information about your tape devices and tapes, change a tape drive's compression mode, and perform tape maintenance functions such as formatting, erasing, and retensioning.

**Database** View information from the Cheyenne Backup database, such as the jobs processed by Cheyenne Backup, the tapes used by Cheyenne Backup, and the devices you are using with Cheyenne Backup. Generate reports from the database.

---

## Installing Cheyenne Backup

Review the following checklist before you install Cheyenne Backup:

Action	For more information refer to
If you wish to back up to a tape drive: <ul style="list-style-type: none"><li>• When installing the tape drive on your Windows 95 machine, <i>do not install the Windows 95 default driver</i>. Cheyenne Backup installs its own driver.</li><li>• Make sure the tape drive is initialized before turning on your machine, otherwise Windows 95 and Cheyenne Backup will not register its presence.</li><li>• Make sure the tape drive is certified for use by Cheyenne Backup.</li><li>• If you are using a SCSI tape drive, make sure your machine has at least one SCSI board supported by Windows 95 and by Cheyenne Backup.</li></ul>	Call the InfoFax number at the front of this User Guide to receive the latest Certified Device List.
Evaluate Cheyenne Backup hardware and software requirements.	Page 1-7
Install Cheyenne Backup.	Page 1-7
Prepare a recovery disk, to recover your data in the event of system failure.	Page 1-8
Start Cheyenne Backup Manager, and operate in either: <ul style="list-style-type: none"><li>• Easy mode</li><li>• Expert mode</li></ul>	Page 1-9 Page 1-11



## Hardware and software requirements

To install and use Cheyenne Backup, you will need the following hardware and software:

<b>Machine Type</b>	80486 DX or higher computer
<b>Operating System</b>	Windows 95
<b>System Memory</b>	8 megabytes minimum (16 megabytes is recommended)
<b>Disk Space</b>	15-20 megabytes (10 MB for Cheyenne Backup files and 5-10 MB for database when jobs are running)

1

## Installing Cheyenne Backup

### To install Cheyenne Backup for Windows 95:

1. Start Windows 95.
2. Insert the Cheyenne Backup for Windows 95 Installation disk into your drive.
3. Run the Setup program from the installation disk.  
The Setup Welcome dialog opens.
4. Follow the instructions to complete the installation.
5. Go to the next section to select a backup device.

## Selecting a backup device

When the installation is complete, the Cheyenne Backup Tape Setup dialog opens. Use this dialog to select the backup devices that you will be using to back up data.

Select one or more of the following backup devices:

- 
- **SCSI Tape Drives**
  - **QIC Tape Drives:** select the type of QIC Tape drive that you wish to use.  
**Note:** If you select a *Floppy Controller* QIC Tape drive, you should not attempt to select the *Removable Disk Drives* option.
  - **Removable Disk Drives:** specify the range of drives which Cheyenne Backup should scan for a removable drive (i.e. from a: to b:, if a: and b: are both disk drives).

## Preparing a Recovery Disk

Cheyenne Backup prompts you to create a Recovery Disk the first time you run the program. The Recovery Disk allows you to completely restore your machine from the latest full back-up in the event of a system failure.

When you open the Cheyenne Backup Manager for the first time, the program prompts you to insert a *Recovery Diskette*. Cheyenne Backup reformats the disk (as a boot disk) and copies all recovery information to it.

After you create your Recovery Disk, you should update it after each full backup. Refer to Chapter 3, “Backing Up Data” for more information on the Recovery Disk.

## Getting Started in Easy mode

1

After you've installed Cheyenne Backup on your system, you're ready to begin backing up your files. Cheyenne automatically starts you off in Easy mode.

### To run Cheyenne Backup in Easy mode:

1. Open Cheyenne Backup Manager from the Windows 95 Start menu.

The Cheyenne Backup Easy mode dialog opens:



2. Choose one of the following options:
  - **Backup my files:** to open the Backup Wizard
  - **Restore my files:** to open the Restore Wizard
  - **Compare my files:** to open the Compare Wizard
  - **Expert:** to perform more advanced operations.

---

## The Cheyenne Backup Wizards

The Cheyenne Backup Wizards allow you to perform basic backup, restore, and compare operations by following easy step-by-step instructions. You can access a Wizard at any time, while working in either Expert or Easy mode.

**For example, to access the Backup Wizard, either:**

- Click *Backup my files* from the Easy mode dialog.
- Click the Backup Wizard button on the toolbar, when operating in Expert mode.

## Getting started in Expert mode - a tutorial

1

Cheyenne Backup's Expert mode allows you to perform more advanced operations, including scheduling a job and using filters. The following brief tutorial demonstrates how to format a tape and back up files when operating in Expert mode.

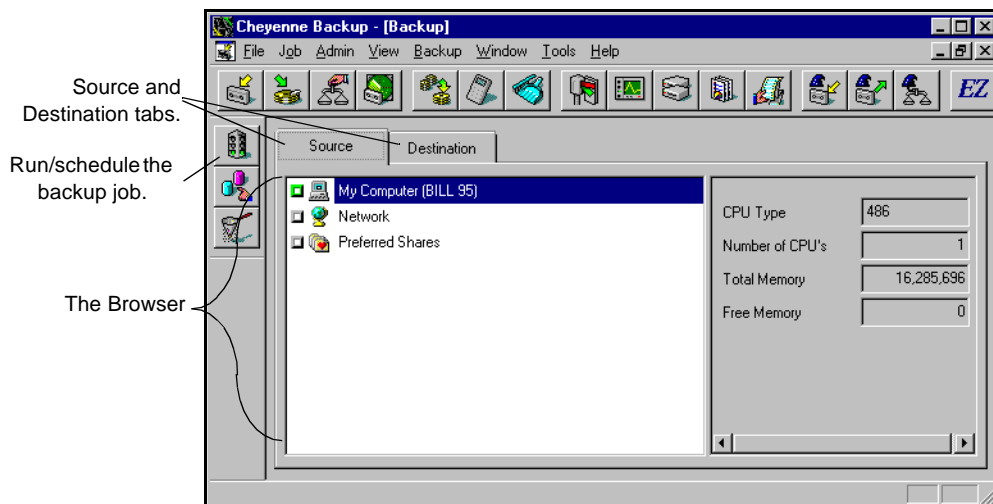
### To back up your files (in Expert mode):

1. Open Cheyenne Backup Manager from the Windows 95 Start menu.

The Easy mode dialog opens.

2. Click Expert.

The main Manager window opens. The Backup window also opens, by default:





### Select your source

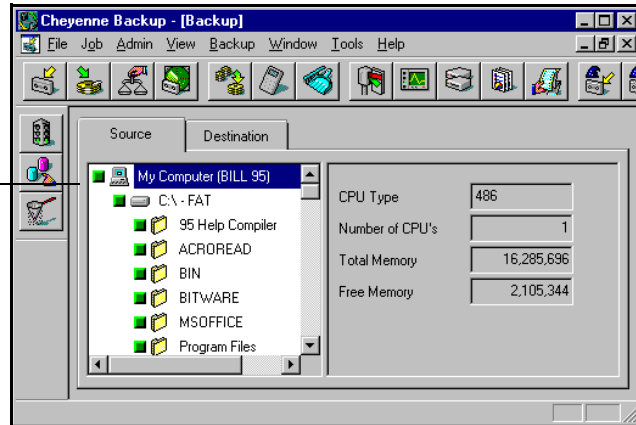
3. Select the Source tab (if it is not already selected).

The Browser displays the machine tree from which you can select machines, volumes (drives), and directories for backup.

- 
- From the Browser, select “My Computer”.

Click the green box  next to “My Computer” so that it is filled . This selects all of the drives, directories, and files on your machine, as shown below:

Clicking the box next to “My Computer” automatically selects all drives, directories, and files on the machine.

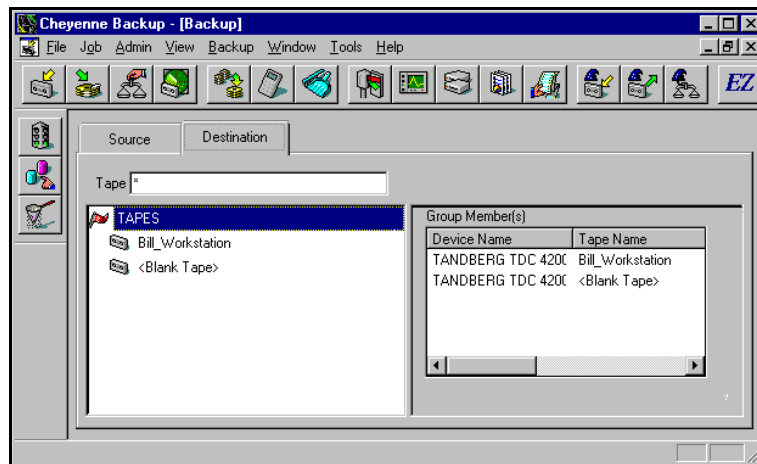


---

Select your destination

- Select the Destination tab.

The Browser displays the backup devices (tapes or removable drives) you can select for your destination.

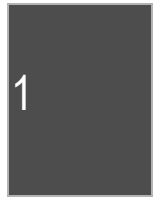
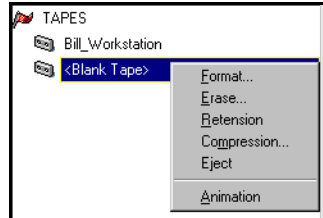


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Format your tape

- Highlight <Blank tape> and click your *right* mouse button.


A pop-up menu opens in the Browser:



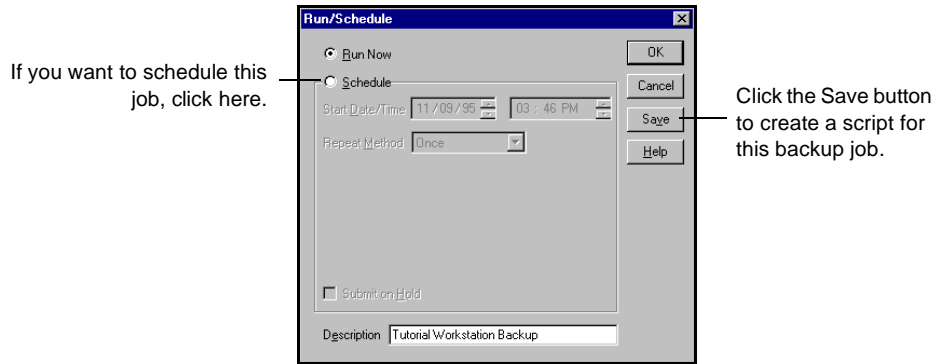
7. Select *Format* from the pop-up menu.

The Format dialog box opens:

8. Enter a tape name and expiration date. Click OK.  
Refer to Chapter 11, “Managing Tapes and Tape Devices”, for more information on tape formatting.

9. Click the Run/Schedule button. 

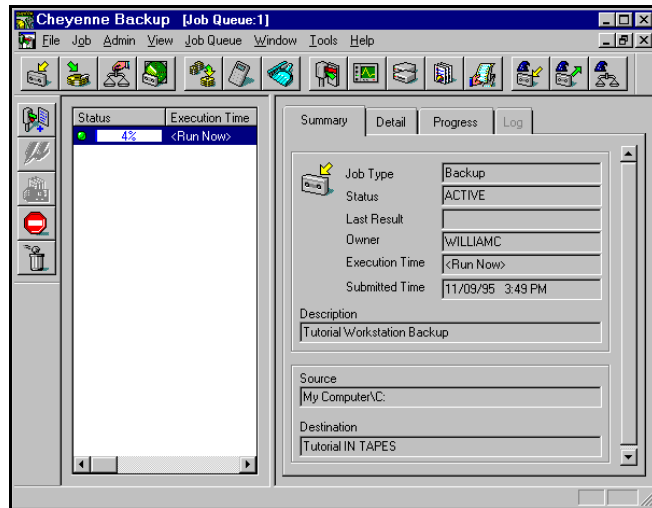
The Run/Schedule dialog box opens:



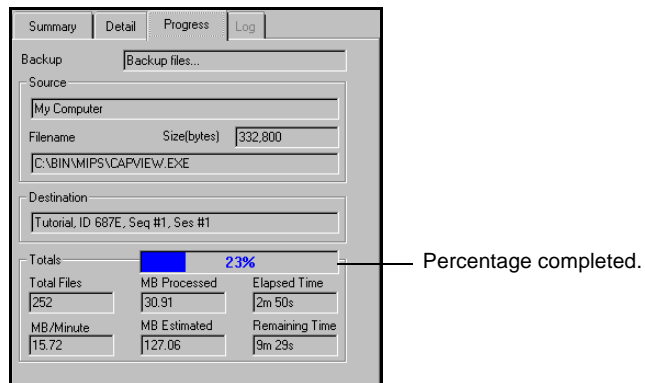
10. Click OK to run this backup job.

---

The job is executed immediately, because the option *Run Now* is selected (by default). The Job Queue window opens:



11. Highlight your job, and select the Progress tab.  
The progress is displayed:



You have submitted your first backup job. Refer to the remaining chapters for further information.



## Uninstalling Cheyenne Backup

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The Uninstall option allows you to remove Cheyenne Backup from your machine. This option removes all directory structures and relevant files.

### To uninstall Cheyenne Backup for Windows 95:

1. Select Uninstall from the Cheyenne Backup folder in the Windows 95 Start menu.

The Cheyenne Backup program is removed from your machine.

2. Reboot your system to completely remove all Cheyenne Backup files from your machine.



# 2

## Chapter

# BASIC PROCEDURES

This chapter explains the basic procedures that you must know in order to operate Cheyenne Backup for Windows 95.

**In this chapter, you will learn:**

<i>Page</i>	
2-2 >	The basic features of the Cheyenne Backup Manager
2-8 >	How to select machines, files, and directories in the Browser
2-11 >	How to add Preferred Shares to the machine tree in the Browser
2-15 >	How to select tapes in the Browser
2-18 >	How to access on-screen and online help

---

## Introducing the Cheyenne Backup Manager

The Cheyenne Backup Manager enables you to perform your backup operations.

### To start the Cheyenne Backup Manager:

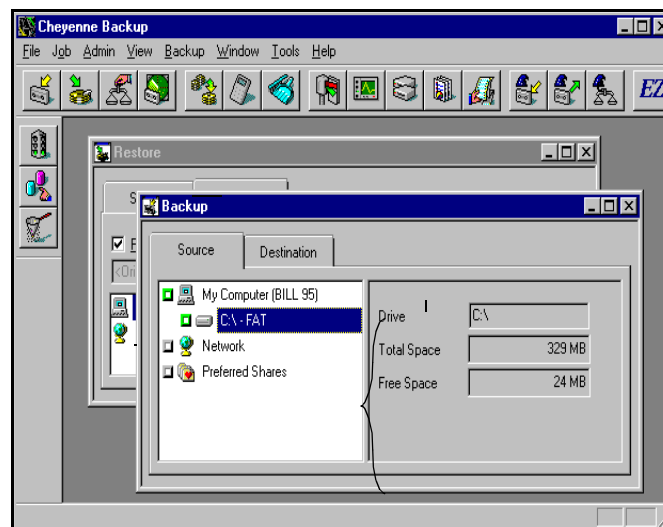
1. Select Cheyenne Backup from the Windows 95 Start menu.

The Cheyenne Backup Manager opens. The Easy mode dialog opens by default.

2. Click Expert to use the more advanced features.










The Backup window opens.

The following figure illustrates the basic features of the Cheyenne Backup Manager (in Expert mode):










The Quick Access bar

The following table describes the buttons on the Quick Access bar.




Button	Function	Description
	<b>Backup</b>	Backup files to tape.
	<b>Restore</b>	Restore files from tape.
	<b>Compare</b>	Compare files on tape to their counterparts on a machine.
	<b>Scan</b>	Report information about one or more tape backup sessions.
	<b>Copy</b>	Copy files and directories from one drive to another.
	<b>Count</b>	Count the files on a machine.
	<b>Delete</b>	Delete files from a machine.
	<b>Job Queue</b>	Monitor the status of all pending, completed, and active jobs.
	<b>Logs</b>	Track Cheyenne Backup activity and monitor tape devices.



Button	Function	Description
	<b>Device</b>	Perform tape maintenance functions such as formatting, erasing, and retensioning.
	<b>Database</b>	View information from the Cheyenne Backup database, such as the jobs processed, and the tapes and devices used by Cheyenne Backup.
	<b>Report</b>	Generate and display reports from the Cheyenne Backup database.
	<b>Backup Wizard</b>	Configure a backup job by following a series of easy steps.
	<b>Restore Wizard</b>	Configure a restore job by following a series of easy steps.
	<b>Compare Wizard</b>	Configure a compare job by following a series of easy steps.
	<b>Easy Backup</b>	Switch to Easy mode to perform basic backup, restore, and compare operations using only the Wizards.

## The Toolbar

The following table describes the buttons on the vertical toolbar.

Button	Function	Description
	<b>Run/Schedule</b>	Run or schedule a job.
	<b>Options</b>	Select configuration options for your job request such as tape time-out and database and log activity.
	<b>Filters</b>	Select screening filters for your backup, restore, or copy jobs.

2

The buttons shown here are the most commonly used tool buttons. Refer to Chapter 7, “The Job Queue”, for information on the tool buttons available for the Job Queue window.

## The Cheyenne Backup menu bar

The Cheyenne Backup menu bar contains drop-down menus. To select an option from a drop-down menu, first click the menu title in the toolbar then select the item from the menu.

---

You can use shortcut keys to select menu items

You can also use shortcut keys to display menus or to select items within a menu. The shortcut key is the underlined letter in the menu or item name.

Use the shortcut keys as follows:

- To display a menu, press ALT+(the shortcut key).

- 
- To select a menu item from a displayed menu, press the shortcut key.

## Starting the Cheyenne Backup Engine

The Cheyenne Backup Engine processes the job requests that are submitted from the Cheyenne Backup Manager. You can configure the engine to start automatically each time that your Windows 95 machine starts. To do this, select *Auto Start Engine* from the Tools menu.

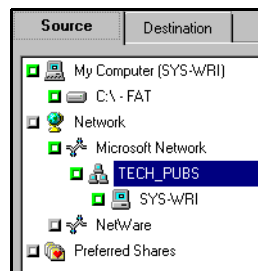
If the engine is not started when Windows 95 starts, it will be started when you open the Cheyenne Backup Manager.



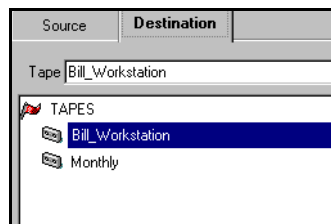
## Using the Browser

The Browser facility is used in many Manager windows to enable you to choose the source and destination for your backup, copy, and restore operations. The Browser operates in two modes:

- **Machine tree:** view and select files, directories, drives, shares, machines, volumes, and servers.



- **Tape tree:** view and select a tape or removable disk.



The Browser mode is determined by the type of operation (e.g. backup or restore) and whether the *Source* or *Destination* tabs are selected.

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








## Using the machine tree in the Browser

The machine tree in the Browser enables you to view and select files, directories, drives, shares, machines, volumes, and servers for your backup, copy, restore, and related operations.

---

### Basic elements of the machine tree

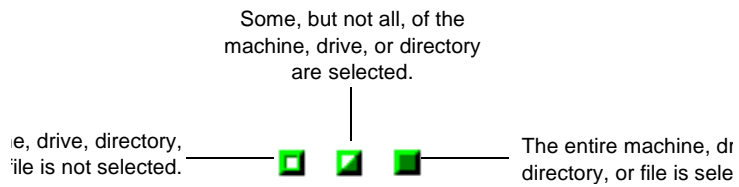
The basic elements of the machine tree are described in the following table:

Symbol	Represents
	Available network on your LAN
	Network Provider (e.g. Microsoft Network or NetWare network)
	Microsoft Network Domain or Workgroup
	Microsoft Network machine
	Novell NetWare file server
	Preferred Shares
	Disk drive
	Directory
	File
	Indicates that the file, directory, or volume is compressed

## Selecting an object in the machine tree

To select an object in the machine tree, fill the green box to the left of the object. (Click the box to fill it.) To deselect an object, clear the green box. (Click the box again to clear it.)

A filled box indicates that the item has been selected. A partially filled box indicates that some files or directories below this level have been selected.



2

### Expanding objects

To expand any object in the machine tree, double-click the object. For example, if you double-click the machine *My Computer*, it will expand to show the drives listed on that machine.

Remote objects in the machine may require you to add security information before they can be expanded. Refer to the 'Entering security information' section on page 2-14 for details.

#### To select your local machine:

1. In the Browser, select *My Computer*.  
Click the green selection box next to *My Computer*. All volumes or drives, directories, and files on your machine are selected.

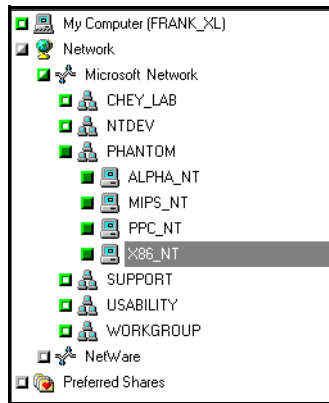
#### To select a Microsoft Network Domain or Workgroup:

1. Expand the Microsoft Network (by double-clicking).
2. Select the domain or workgroup.



---

When you select a domain or workgroup, all the machines that belong to it are selected.



#### To Select a Windows machine:

1. Expand the Microsoft Domain or Workgroup (by double-clicking).



2. Select the machine.

To select a specific Microsoft machine (), expand the tree under the domain or workgroup that it belongs to, and then select the machine.

#### To select a NetWare server:

1. Expand the NetWare Network (by double-clicking).



2. Select the file server.

**Note:** Cheyenne Backup backs up files from a NetWare server, but it does not back up native NetWare (bindery or NDS) information. For a complete backup of NetWare servers, contact Cheyenne Software for information about related products.

#### To select an machine drive (or NetWare volume) or directory:

1. Expand the machine (by double-clicking on it).

For NetWare servers, expand the volume. For directories expand the drive.

2. Select the drive (or directory).

Fill the green box next to the drive (by clicking the box). All directories and files on the drive are selected.

## Configuring the machine tree Browser

You can configure the machine tree browser to display specific types of objects. To specify the types of objects you wish to view in the Browser:

1. Choose Options from the Admin menu.
2. Select the Browser Options tab and check the appropriate options.

Specify the following types of objects that you wish to view in the Browser:

- CD ROM
- Removable disk
- Mapped network drives
- All computers on network

## Adding Preferred Shares to the machine tree

The Preferred Shares are a collection of your favourite backup shares. (A share is a shared drive or directory.) You can manually add individual share points to the Preferred Shares tree. The share point is remembered and displayed regardless of the status of the network connection. This provides quick access to commonly used shares on your machines.

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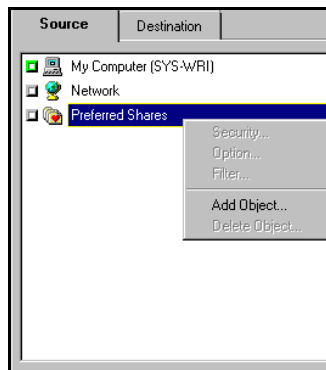
This feature can be used to back up share points provided by other operating systems that are capable of creating “shares” in a Microsoft network, such as UNIX NFS shares or OS/2 LAN Server shares.

This feature is also useful for users that frequently back up “shares” within a network, instead of “machines”. Shares are considered “named” short-cuts or aliases to machine drives and directories on the network. Shares perform the same function as drive mappings, with the advantage of allowing the user to provide a descriptive name to the share.

**To add a Preferred Share to the machine tree:**

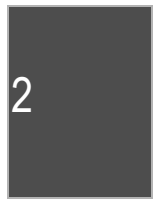
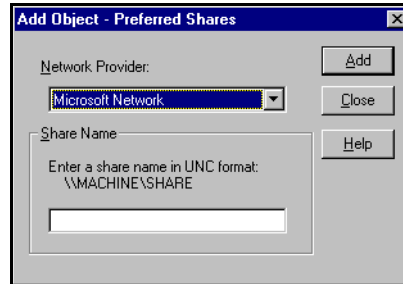
1. In the Browser, click Preferred Shares with your *right* mouse button.

A pop-up menu is displayed:



2. Choose *Add Object...* from the popup menu.

The Add Preferred Shares dialog box opens:



3. Select a Network Provider.
4. Enter a share name in Uniform Naming Convention (UNC) format (e.g. \\MACHINE\SHARE).
5. Click Add.  
The machine is added to the Preferred Shares tree.
6. Repeat steps 3-5 for each machine that you wish to add.
7. When finished adding machines, click Close.

## Adding objects to the machine tree

You can add objects to the machine tree that are unavailable when you set up a job. For example, you can add a machine that is temporarily unavailable and schedule a backup/restore for the machine.

You can add the following types of objects to the machine tree:

- Microsoft Networks domains or workgroups, machines, or shares
- NetWare servers and volumes

**For example, to add a Microsoft domain:**

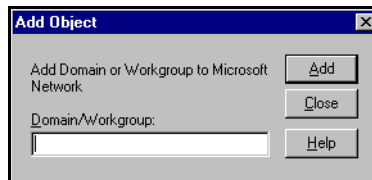
1. In the Browser, click Microsoft Network with your *right* mouse button.

---

A pop-up menu is displayed:



2. Choose *Add Object* from the pop-up menu.  
The Add Object dialog box opens:



3. Enter the Domain name and click Add.  
A new Microsoft domain is added to this node of the machine tree.

## Entering security information

You must provide a valid username and password in order to browse a remote machine. Cheyenne Backup will use your local username and password by default. If this information is not valid, you will be prompted to enter valid information when you try to expand the node for the remote machine.

You can also enter a username and password for a remote machine as follows:

1. In the Browser, click the remote machine with your *right* mouse button.  
A pop-up menu opens.
2. Select *Security...* and enter the information.



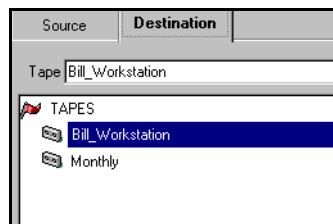
## Using the tape tree in the Browser

The Browser is also used to select the tape or removable disk that you wish to use for your backup or restore jobs. Depending on the job you want to perform, you may need to select a tape as your source or destination.

### To select a tape or removable disk:

1. Expand the Tape tree.

The Browser displays the available tapes and removable disks.



2. Select a tape or removable disk.

You may also enter a tape name in the Tape field.

### Configuring the tape options

You can configure the *tape options* for a backup job so that if the tape name is left blank, Cheyenne Backup will automatically use the next available tape for the back up job.

The tape options also allow you to specify append, overwrite, and time-out procedures for backup jobs, and time-out procedures for restore and other jobs. Refer to Chapter 6, “Customizing Your Jobs”, for more information on tape options.

---

## Providing security information

You must provide a valid username and password for the remote machines or shares that you wish to back up, copy, or restore data to. You can enter the username and password:

- From the Browser, by clicking on the machine or share with your *right* mouse button.
- From the Browser, when attempting to expand the machine or share to view directories. (You will be prompted for the information.)
- When submitting a backup, copy, or restore job. (You will be prompted for the information.)

---

### Browsing

The Browser uses your local username and password by default in order to access machines or shares for browsing. If your local username and password are not valid on the remote machine or share, then you will be prompted to enter the information when you attempt to expand that node.

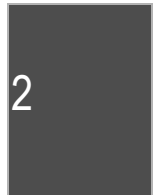
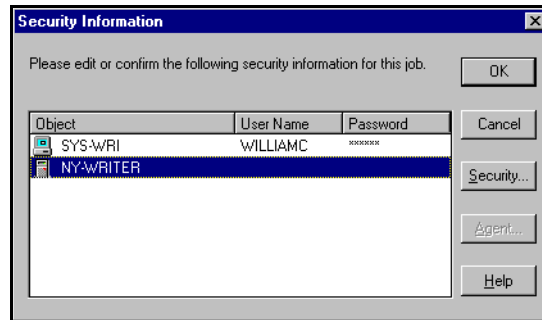
You can also enter a username and password from the Browser by clicking on the machine or share with your *right* mouse button. Refer to the 'Entering security information' section on page 2-14 for a description of this feature.

---

### Submitting a job

You may also change or verify the username and password for a machine or share each time you submit a job. If you have already provided account information for a machine or share, either in the Browse mode or in a previous backup job, Cheyenne Backup will retain this information and simply ask you to verify it. (This information is stored for future sessions.)

When you submit a job, the Security Information dialog box opens:



This dialog box displays the security information for each machine or share that is accessed during this job. To change the account information, select the machine/share, and click the Security button.

---

## Getting help

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### Online help system provides help information and error messages

The online help system provides help information and explanations of the Cheyenne Backup error messages.

To access online help, either:

- Select *Help* from the menu bar.
- Place the cursor on the field or dialog box for which you need help and press F1.

---

### On-screen descriptions of buttons

To display a description of a Quick Access bar button or a toolbar button, hold the cursor over the button. The name of the button is displayed underneath the button. A brief description is displayed in the status bar.

---

### Other sources for help

As you use Cheyenne Backup, you may find that you need additional information that may not be provided in this manual. Other sources for help in using Cheyenne Backup are:

- Microsoft Windows 95 documentation - for any questions you might have about using the Windows 95 interface.

# 3

## Chapter

# BACKING UP DATA

This chapter explains how to back up your data to tape or removable disk.

**In this chapter, you will learn how to:**

<i>Page</i>	
3-2 >	Perform a basic backup
3-4 >	Choose a backup method
3-7 >	Apply global default backup options
3-8 >	Apply options to a selected drive
3-9 >	Select a backup device
3-10 >	Update your recovery disk

---

## Basic backup procedure

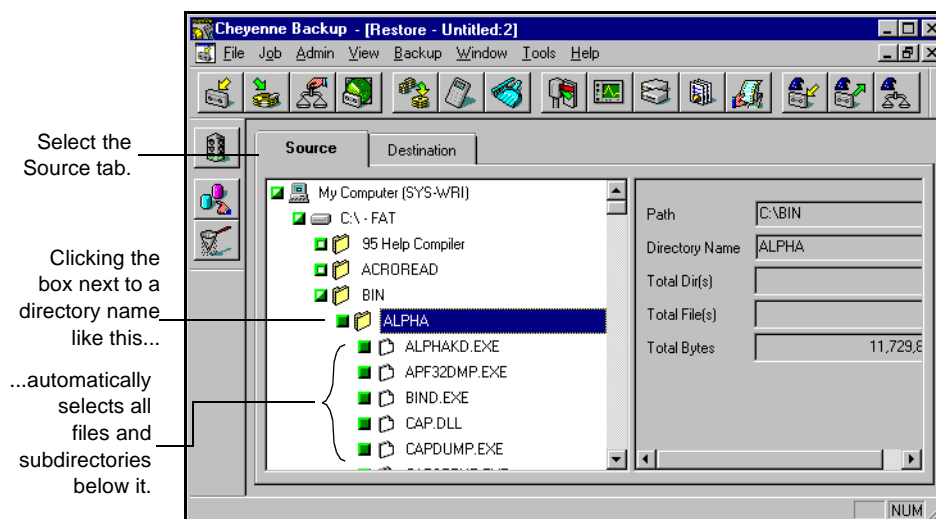
This section describes the basic steps for backing up your data. Additional information on customizing a job by applying options, filters, and scheduling information is provided in Chapter 6, “Customizing Your Jobs”.

Cheyenne Backup allows you to back up:

- Your local Windows 95 machine.
- User shared files from remote machines on your Microsoft Network.
- Files from your NetWare file servers.

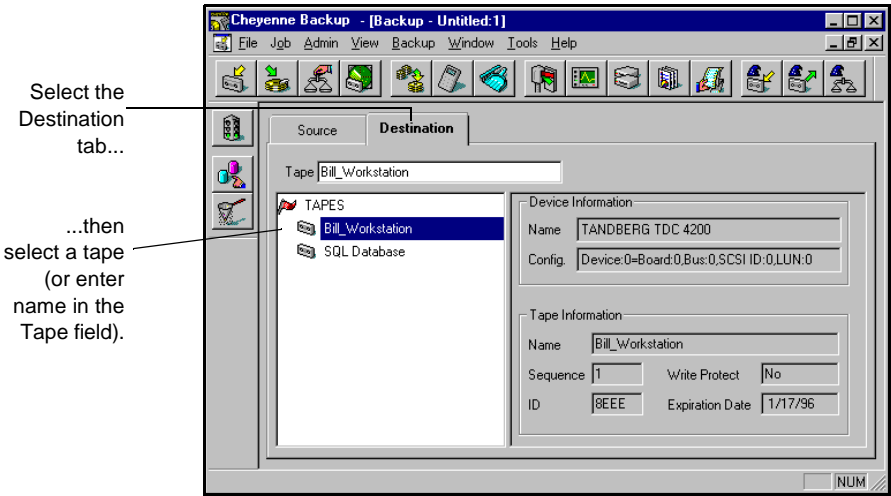
### To back up your data:


1. Click the Backup button on the Quick Access bar. The Backup Manager window opens.
2. Select the files and directories that you wish back up.  
In the Browser, select the Source tab, then select the objects in the machine tree that you wish to back up.



Refer to Chapter 2, “Basic Procedures”, for details on using the machine tree in the Browser

- 3. Select the backup tape or removable disk.  
Select the Destination tab. Then select the tape or disk.



- 4. Select a backup method for this job.  
Click the Options button on the toolbar and select a backup method. Refer to the following section for more information on backup methods.
- 5. (Optional) Select additional options for your backup job.  
From the Options dialog box, you can select a variety of options for the backup job. Refer to Chapter 6, “Customizing Your Jobs” for information about job options.
- 6. (Optional) Click the Filters button on the toolbar if you wish to specify filters for your job.  
Refer to Chapter 6, “Customizing Your Jobs” for information about filters.
- 7. Click the Run/Schedule button.   
The Run/Schedule dialog box opens.

---

The Run/Schedule dialog box enables you to run the job, or schedule the job for a later time. You can also save the job to a script file. Refer to Chapter 6, “Customizing Your Jobs”, for more information.

8. Click OK to submit this job.

After the job is submitted, information about the job is displayed in the job queue.

## Selecting a backup method

You can select a backup method for your job by clicking the Options button while you are setting up the job. Select the Method tab in the Options dialog box and choose the appropriate backup method.

The backup method determines which files in a selected drive or directory are backed up. The following types of backup methods are available:

Method	Which files are included?	Check archive bit?	Reset archive bit?
<b>Full (Keep Archive Bit)</b>	All source files.	No.	No.
<b>Full (Clear Archive Bit)</b>	All source files.	No.	Yes.
<b>Incremental (Archive Bit)</b>	Source files whose archive bit is turned on.	Yes.	Yes.
<b>Differential (Archive Bit)</b>	Source files whose archive bit is turned on.	Yes.	No.

In general, if you have large amounts of data to be backed up every day, running regular differential or incremental backup jobs and an occasional full backup job may be your best solution.



The following table describes the advantages of each method:

Method	Description
Full (Keep Archive Bit)	Includes all the source files. This method does not change the archive bit. You might use this option if you wish to perform an unscheduled full backup that will not affect your incremental or differential backups.
Full (Clear Archive Bit)	Includes all the source files. This method ignores the file's archive bit until after the file is backed up. At that time, Cheyenne Backup turns off the file's archive bit. At the end of the job, all files that have been backed up have their archive bits turned off.
Incremental	Includes only files that have changed since the last <i>Full (Clear Archive Bit)</i> or <i>Incremental</i> backup. Cheyenne Backup checks the file's archive bit. If the archive bit is on, Cheyenne Backup backs up the file, then turns archive bit off. The next time an incremental backup is done, this file is skipped (unless it is modified again).
Differential	Includes files that have been changed since the last <i>Full (Clear Archive Bit)</i> or <i>Incremental</i> backup. Cheyenne Backup checks the file's archive bit. If the archive bit is on, Cheyenne Backup backs up the file, but in this case, Cheyenne Backup <i>does not</i> turn off the archive bit afterwards.



## About Archive Bits

What is an archive bit?

A file's archive bit is a marker that indicates whether the file has been modified. An archive bit that is set (turned on) indicates that the file has changed since it was last backed up or copied.

Why turn off a file's archive bit?

Turning off (resetting) the file's archive bit is a procedure that affects what Cheyenne Backup will back up or copy the next time. An archive bit that is off indicates to Cheyenne Backup that this file has not changed since it was last backed up.

---

The method you select determines whether Cheyenne Backup will back up or copy all files, or only files whose archive bit is on. It also determines whether Cheyenne Backup will turn off the archive bit after the file has been backed up or copied.

Note that a file's archive bit can also be turned on and off by other applications.

**Warning:** Cheyenne Backup's Copy feature can set or clear file archive bits that may effect your Incremental or Differential backups. Plan your copy operations carefully to ensure that they do not interfere with your backup jobs.

## Specifying global default backup options

You can set the default parameters for certain backup options using the global default backup options. You can over-ride the default parameters for a backup job when you are configuring the specific job.

### Compressing data on backup

#### To compress your data on backup:

1. Choose Options from the Admin menu.  
The Properties dialog box opens.
2. Select the Backup Compression tab.
3. Check the option *Always compress files during backup*.
4. Close the Backup window and re-open it.  
The default Compression option is set to compress files on backup.



3

### Verifying data on backup

#### To verify that your data has been correctly written to tape:

1. Choose Options from the Admin menu.  
The Properties dialog box opens.
2. Select the Backup Compression tab.
3. Check the option *Verify that data has been correctly written to tape*.
4. Close the Backup window and re-open it.  
The default Verify option is set to compare the data on tape to the data on your drive for each backup.

---

## Applying options to a selected drive

Cheyenne Backup allows you to specify verification options and a session password for a selected drive that is included in your backup job.

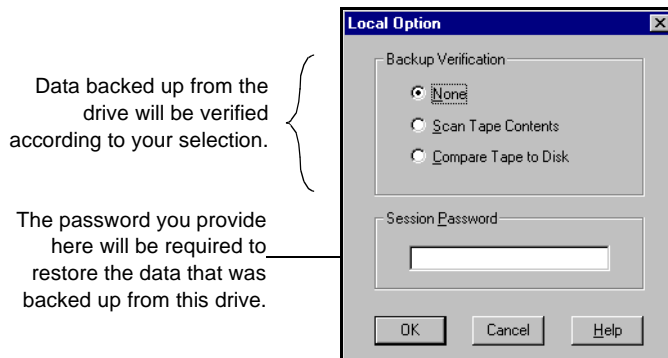
### To apply options to a selected drive:

1. Select the Source tab.
2. Highlight the node or the drive on the node and press the right mouse button.

The Source Context (pop-up) menu opens.

3. Choose *Option...* from the Source Context menu.

The Local Option dialog box appears:



Any options you specify in this dialog box will be applied **ONLY** to the drive you highlighted.

For a description of the Verification options, refer to Chapter 6, “Customizing Your Jobs”.

## Selecting a backup device

You can select the types of tapes or removable disks that Cheyenne Backup back up data to.

### To select the backup devices that you will use to back up data:

1. Exit the Cheyenne Backup Manager.
2. Right-click on the Cheyenne Backup Engine icon in the Windows 95 tray. Choose Shutdown from the pop-up menu.
3. Choose Cheyenne Backup Tape Setup from the Windows 95 Start menu.
4. Select one or more of the following backup devices:

- **SCSI Tape Drives**
- **QIC Tape Drives:** select the type of QIC Tape drive that you wish to use.

**Note:** If you select a *Floppy Controller QIC* Tape drive, you should not attempt to select the *Removable Disk Drives* option.

- **Removable Disk Drives:** specify the range of drives which Cheyenne Backup should scan for a removable drive (i.e. from a: to b:, if a: and b: are both disk drives).
5. Open the Cheyenne Backup Manager.  
The Cheyenne Backup Engine is automatically started when you open the Cheyenne Backup Manager.

Cheyenne Backup searches for device types that were selected in the Tape Setup dialog. The specified devices are displayed in the Destination tab window when you are configuring a backup job.

---

## Updating your Recovery Disk

Cheyenne Backup *automatically updates your Recovery disk* after each full backup. In order to take advantage of this feature you must have the Recovery disk inserted in the correct drive.

The Recovery disk allows you to completely restore your machine from the latest full back-up in the event of a system failure. (You do not have to re-install the operating system.)

### **To create a Recovery disk for your computer:**

- > Select the *Create Recovery Disk* option from the Tools menu.  
If you are you using a SCSI adapter, Cheyenne Backup prompts you to enter or verify SCSI information.  
Cheyenne Backup then prompts you to insert a diskette.  
Cheyenne Backup reformats the disk (as a boot disk) and copies all recovery information to it.

You can manually update the Recovery disk at any time.

### **To manually update the Recovery disk:**

- > Choose *Update Recovery Disk* from the Tools menu.

The Recovery disk stores the following information:

- SCSI Adapter card information or QIC tape drive information.
- Disaster recovery files: recover.exe and support files.
- Recover.dat file: contains the tape and session backup information for each drive on your machine.

The Recover disk uses this information to restore all system files and data from tape (including the operating system files).

## Recovery tips

The most important thing you can do to ensure against data loss is to maintain current backups of your computer and update your Recovery disk after each full backup.

You may wish to create a tape rotation scheme using different backup methods and scheduling as a means of maintaining current backups. If you use a combination of full backups and differential or increment backups, it is sufficient to update the Recovery disk after each full backup. You can recover your machine (in the event of system failure) by using the Recovery disk to restore to the last full backup, and then use Cheyenne Backup to restore the most recent differential or increment backup.

For a full backup, you should configure the backup job with the *Full (Clear Archive Bit)* method selected.





# 4

## Chapter

# RESTORING YOUR DATA

This chapter explains how to restore data from tape.

**In this chapter, you will learn how to:**

Page	
4-2 >	Perform a quick, basic restore operation
4-5 >	Select the data for your restore operation
4-10 >	Recover your system in the event of disaster

---

## Restore basics

This section describes the basic steps to restore data from tape. These steps assume that your Cheyenne Backup database is up-to-date and available. Although the following example uses the “Restore by Tree” source view, the basic steps can be applied using any of the source views.

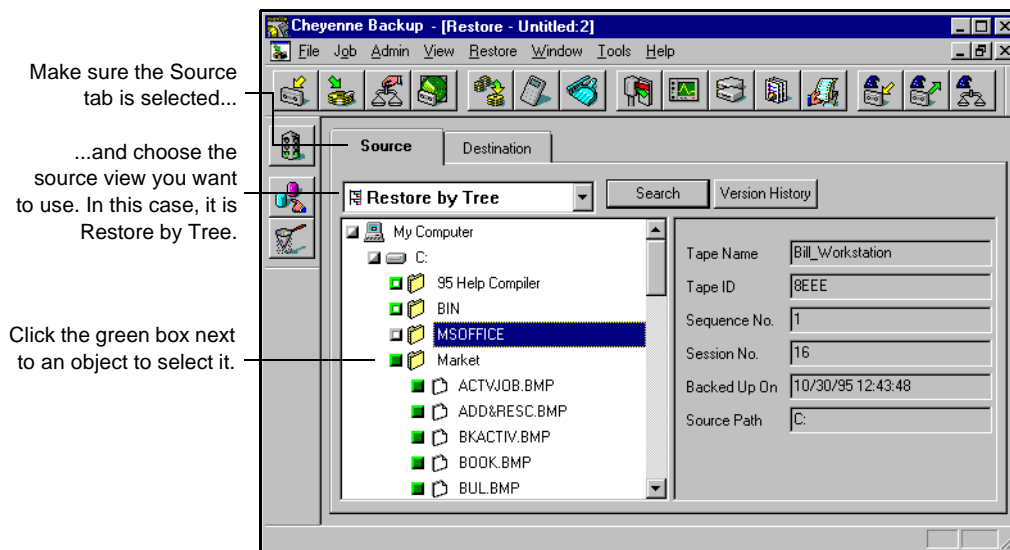


### Follow these steps to restore data from tape:

1. Click the Restore button from the Quick Access bar.  
The Restore Manager opens. The default source view *Restore by Tree* is selected.

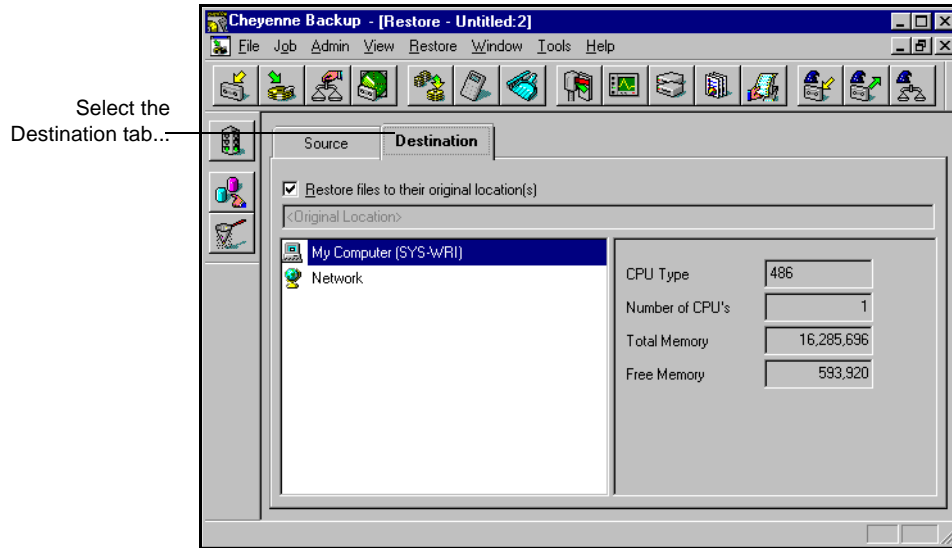
2. Select the data you want to restore.

Select the Source tab and choose the *restore view* you want to use to select the source for your job. Then specify what you want to restore.



3. Specify the destination to restore your files to.

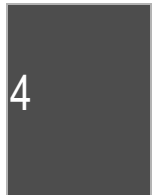
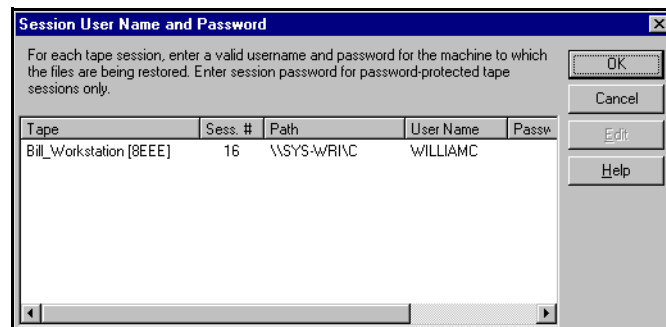
Select the Destination tab.



The option *Restore files to their original location(s)* is selected by default. When this option is selected, your files are restored to their original machine and path. If the original location is on a remote machine, you will be prompted to enter a valid username and password for the remote machine.

4. Click the Run/Schedule button.

The Session User Name and Password dialog box opens:



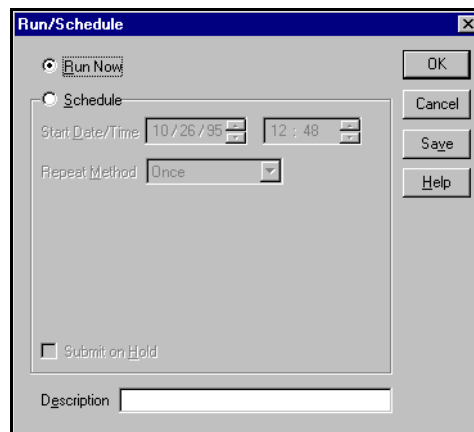
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Enter, change, or verify the username and password for the destination machine for each tape session. If a session password has been assigned, enter the session password as well.

To enter or change the security information for a session, select the session and click the Edit button.

5. Click OK to continue.

The Run/Schedule dialog box opens:



The Run/Schedule dialog box enables you to run the job immediately, or schedule the job for a later time.

To save this job to a script file, click the Save button in this dialog box.

6. Click OK to submit this job.

For information about customizing your job by applying available filters, a schedule, or available job options, refer to Chapter 6, “Customizing Your Jobs”.

## Selecting data from tape

You can use one of the following methods (or *views*) to select the data that you wish to restore from tape:

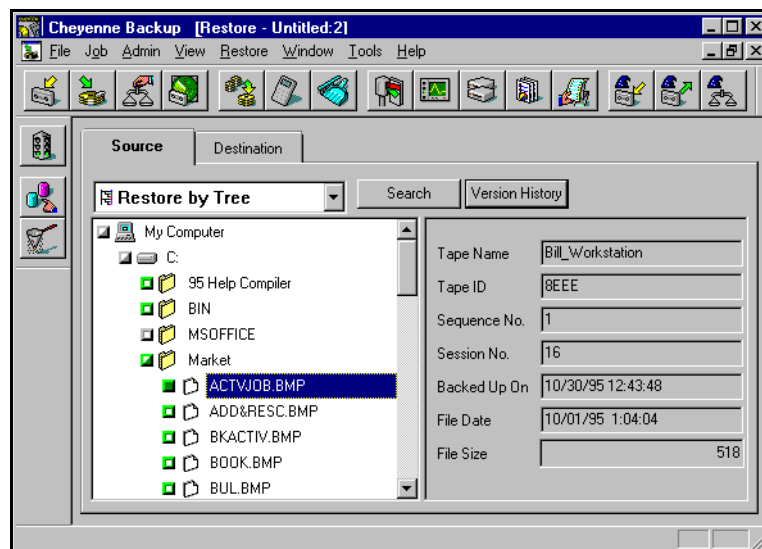
- Restore by Tree
- Restore by Tape
- Restore by Tape Media

### Restore by Tree

The *Restore by Tree* view lets you restore a specific directory or drive. This view displays a machine tree of files and directories that were backed up with Cheyenne Backup.

To select data using the *Restore by Tree* view:


1. Select *Restore by Tree* from the source view drop-down list. The Browser displays a machine tree of the networks and machines that have been backed up by Cheyenne Backup.



- 
2. Select the files you want to restore.

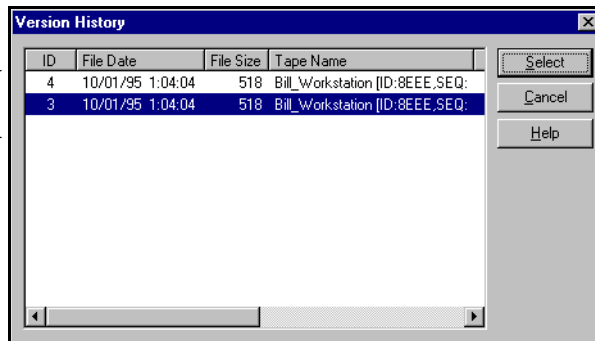
## Choosing a version from tape

**To select the version of the file, directory, or drive you want to restore:**

1. Select the drive, directory, or file you want to restore.
2. Click the Version History button. 

Cheyenne Backup searches its database and returns a list of all the backed up versions of this file, directory, or drive. From this list, you can select the version you want to restore:

A list of all versions of the volume, drive, directory, or file appears. By default, the latest version will be selected. Highlight the version you want, then click the Select button.




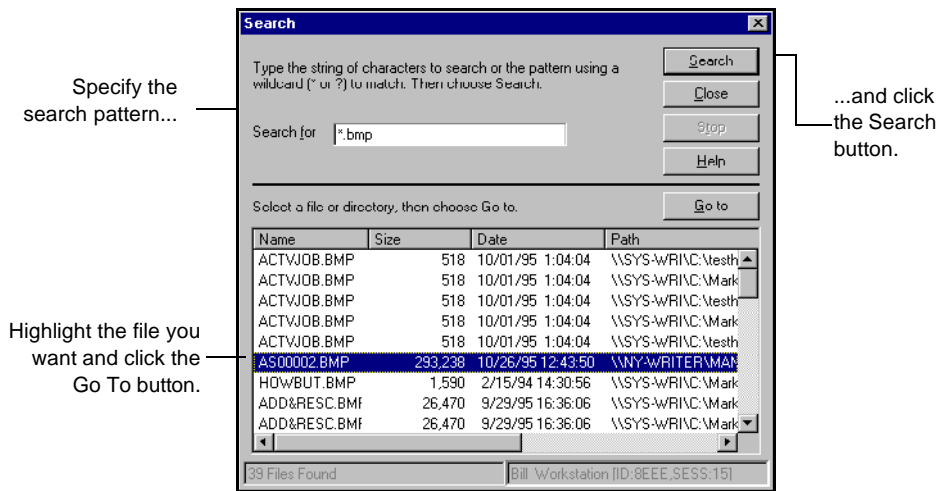
If you try to expand a backup session that has been pruned from the database, you will be asked whether you want to merge the pruned session. Refer to Chapter 11, “The Cheyenne Backup Engine”, for more information on pruning. Refer to Chapter 5, “Managing Data on Tapes and Disks”, for more information on merging.

## Searching for files on tape

**To locate files and directories whose name or location you**

are unsure or unaware of:

1. Click the Search button.  The Search dialog box appears.
2. Enter the search criteria and click Search. Use an asterisk (\*) or question mark (?) as a wildcard symbol, as necessary.



After you click the Search button, Cheyenne Backup searches its database, and displays the files and directories that match the search pattern you specified.

3. Highlight the file you want and click the Go To button. The selected file is displayed in the Browser. The Browser directory tree expands until the file is shown.

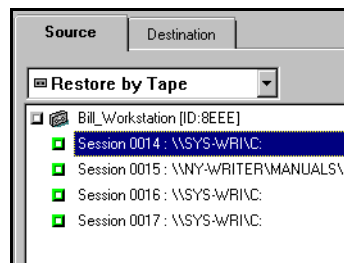
---

## Restore by Tape

The *Restore by Tape* view allows you to select the tape, then the session, and finally, the files and directories you want to restore. This source view is useful if you know the tape that holds the data you want to restore, but you may not be sure which session it is in.

### To select data using the *Restore by Tape* view:

1. In the Restore Manager, select *Restore by Tape* from the source view drop-down list.  
A list of tapes that you have used for backups displays in the Browser.
2. Expand the tree for the tape you want to restore from.  
Double-click on the name of the tape that holds your data to display a list of sessions logged in the database for that tape.



If you try to expand a backup session that has been pruned from the database, you will be asked whether you want to merge the pruned session. Refer to Chapter 11, “The Cheyenne Backup Engine” for more information on pruning. Refer to Chapter 5, “Managing Data on Tapes and Disks” for more information on merging.

3. Select or expand the tree for the session that contains the files you need to restore.



If you only want to restore specific files or directories from a session, expand the tree for the session, and then select the files and directories.

4. Repeat step 2 and 3 for each session on the tape you want to restore from.

## Restore by Tape Media

The *Restore by Tape Media* view allows you to restore complete sessions on a tape in a tape device. All files in the session are restored to the destination, unless filters are added to the job.

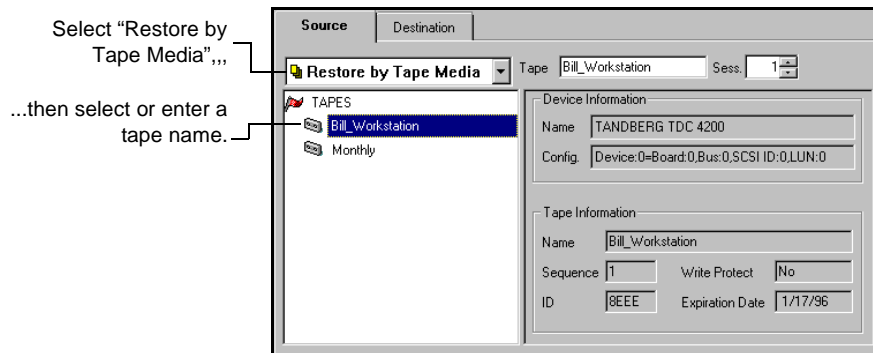
This source view is useful if information from your Cheyenne Backup database is unavailable, or you are trying to recover your network after a disaster.

### To select data using the *Restore by Tape Media* view:

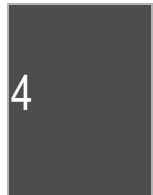
1. Select *Restore by Tape Media* from the source view drop-down list.

Cheyenne Backup will read directly from the tape devices and display your tape groups and tapes in the Browser.

2. Select or enter a tape name.



3. Specify the session number.



---

## Recovering from a disaster

Use the Recovery disk to recover your computer in the event of a system failure.

### **To recover from a system failure:**

1. Shut down your computer.
2. Insert the Recovery disk.
3. Start the computer.

The computer boots from the Recovery disk.

4. Format the drive, if necessary.

Refer to your Microsoft Windows 95 documentation for information on formatting your hard drive.

5. Type `recover`.

You will be prompted for the recovery of each drive on your machine. Follow instructions to recover all files.

## Recovering your machine without a Recovery disk

### **To recover a your machine in the event that your Recovery disk is lost or damaged:**

1. Re-install the Windows 95 operating system.
2. Re-install Cheyenne Backup.
3. Restore the most current Cheyenne Backup database to the Cheyenne Backup machine.

You need to recover the latest version of your database back to the Cheyenne Backup machine. Use the *Recover Database* option in the Scan Manager to perform this step.

4. Use the *Restore by Tree* source view in the Restore Manager to select what data you want to recover.

Now that you have restored the database, use the *Restore by Tree* source view to display the data that was backed up from your machine.

5. Select the machine you want to recover.

Select the Destination tab in the Restore Manager and select the machine to which you will recover the data.

6. Click the Options button to specify destination options.

If you are trying to restore the machine to the state it was in before it crashed, then you should:

- Select a Destination option that overwrites any conflicting files. If you are unsure, you can choose to rename any files that exist on the machine.
- Select the *Restore Registry* option.

7. Click the Run/Schedule button to run the job.

Cheyenne Backup prompts you for the necessary tapes.



# 5

## Chapter

# MANAGING DATA ON TAPES AND DISKS

This chapter explains how to manage your tape data and how to copy, count, and delete files.

**In this chapter, you will learn how to:**

Page	
5-2	➤ Compare the contents of a tape to a hard disk
5-4	➤ Scan a tape
5-5	➤ Merge tape information into your Cheyenne Backup database
5-6	➤ Recover a Cheyenne Backup database from tape
5-8	➤ Copy files from one disk to another
5-10	➤ Count files on a machine
5-11	➤ Delete files from a machine

---

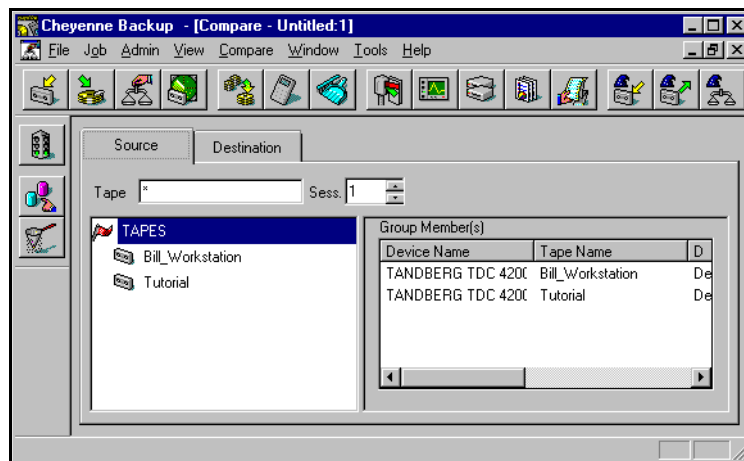
## Comparing tapes

The Compare Tape Manager allows you to compare the contents of a tape session to the files on a machine.



### To compare the contents of a tape to a machine:


1. Click the Compare Tape button from the Quick Access bar.  
The Compare window opens:



2. Select the Source tab, and select or enter a tape name.
3. Specify the session number you want to compare.  
Enter the session number in the *Session* field.  
If you do not know the session number, you can check the Activity Log or the Database Manager (Job View or Tape View). You can also use the Scan Tape option to list the contents of the tape, including all session numbers.
4. Select the Destination tab.  
The Destination tab window opens.
5. Select the domain, machine, directories or files that you wish to compare against.
6. Specify the level of detail to be included in the log report.

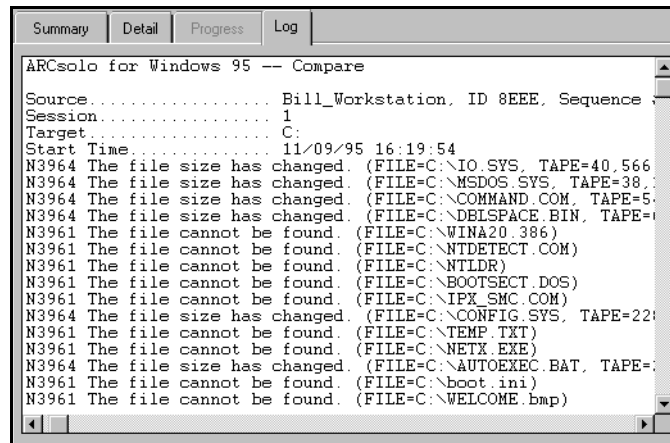
Click the Options button and select the Log tab. Choose the appropriate log options.

7. Run the job.

Click the Run/Schedule button  to run the job.

Results of the Compare operation are stored in the log report for this job. You can view the log report in the Job Queue window or the Database Manager (Job View).

For example, you can view a log report by opening a Job Queue window, selecting the job, and then clicking the Log tab. A sample report is shown:



```
ARCserve for Windows 95 -- Compare
Source..... Bill_Workstation, ID 8EEE, Sequence
Session..... 1
Target..... C:
Start Time..... 11/09/95 16:19:54
N3964 The file size has changed. (FILE=C:\IO.SYS, TAPE=40,566
N3964 The file size has changed. (FILE=C:\MSDOS.SYS, TAPE=38,
N3964 The file size has changed. (FILE=C:\COMMAND.COM, TAPE=5
N3964 The file size has changed. (FILE=C:\DEBSPACE.BIN, TAPE=
N3961 The file cannot be found. (FILE=C:\WINA20.386)
N3961 The file cannot be found. (FILE=C:\NTDETECT.COM)
N3961 The file cannot be found. (FILE=C:\NTLDR)
N3961 The file cannot be found. (FILE=C:\BOOTSECT.DOS)
N3961 The file cannot be found. (FILE=C:\IPX_SMC.COM)
N3964 The file size has changed. (FILE=C:\CONFIG.SYS, TAPE=22
N3961 The file cannot be found. (FILE=C:\TEMP.TXT)
N3961 The file cannot be found. (FILE=C:\NETX.EXE)
N3964 The file size has changed. (FILE=C:\AUTOEXEC.BAT, TAPE=
N3961 The file cannot be found. (FILE=C:\boot.ini)
N3961 The file cannot be found. (FILE=C:\WELCOME.bmp)
```

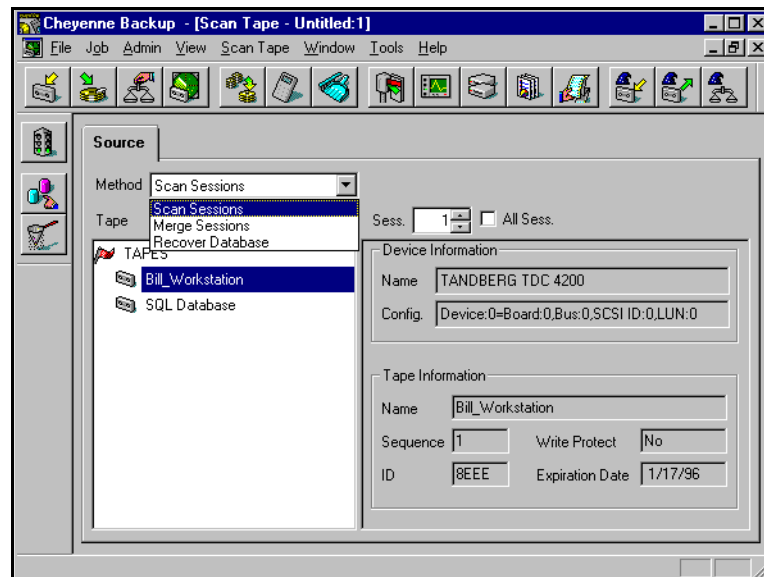
---

## Tape scanning options

The options in the Scan Tape window allow you to:

- Scan a tape for information
- Merge tape information into the Cheyenne Backup database
- Recover an Cheyenne Backup database from tape

To access the Scan Tape window, click the Scan Tape button on the Quick Access bar:




## Scanning a tape

The Scan Session option provides information about the data stored on tape. You can generate a list of sessions or files.





### To scan a tape:

1. Click the Scan Tape button from the Quick Access bar.
2. Select *Scan Sessions* from the Methods drop-down combo box.
3. Specify which tape you want to scan.  
If the tape you want to use is not currently in a tape drive, you must type the information into the *Tape* field.
4. Specify which session(s) you want to scan.
5. Specify the level of detail to be included in the Log report.  
Click the Options button and select the Log tab. Choose the appropriate Log options.
6. Run the job.  
Click the Run/Schedule button  to run the job.

The output of the scan tape operation is stored in the Log Report for this job. You can view the Log Report from either the Job Queue window or the Database Manager window.

To view the Log Report from the Job Queue window, select the job in status window, and click the Log tab.

5

## Merging a tape into the Cheyenne Backup database

The Merge option allows you to merge backup information from a tape to your existing Cheyenne Backup database. The new information is *appended* to the Cheyenne Backup database.




### To merge a tape into the Cheyenne Backup database:

1. Click the Scan Tape button from the Quick Access bar.
2. Select *Merge Sessions* from the Methods drop-down combo box.

- 
3. Select or enter a tape name.
  4. Specify which session(s) you want to merge.



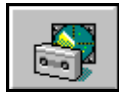
If you do not know the session number, you can check the Activity Log or the Job View or Tape View windows in the database. If they are not available, you can use the Scan Tape option to list the contents of the tape, including all session numbers.

5. Run the job.  
Click the Run/Schedule button  to run the job.

## Recovering the Cheyenne Backup database

The Recover option allows you to restore Cheyenne Backup database files from tape to your Cheyenne Backup database. (The Cheyenne Backup database is backed up each time you back up your Cheyenne Backup home directory.) This option *overwrites* your existing Cheyenne Backup database files with backup information from a tape.

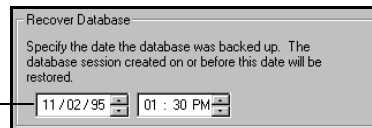
### To recover a database:



1. Click the Scan Tape button from the Quick Access bar.
2. Select *Recover Database* from the Methods combo box.
3. Select or enter a tape name.

- Click the Options button  and specify which database session you want to recover.

Specify the date the database was backed up. The last database session created on or before this date will be restored.



- Specify the Log information to be recorded.  
From the Options dialog box, select the Log tab. Specify the detail to be included in the log report.
- Click the Run/Schedule button to run the job.

---

## Copying files


The Copy feature allows you to copy (or move) files from one hard disk to another.



### To copy data from one drive to another:

1. Click the Copy button from the Quick Access bar.
2. In the Source pane, select the files you want to copy.  
You can only select one drive or volume, but you can select multiple directories or files on that drive or volume.
3. In the Destination pane, specify where you want to copy the files.
4. Click the Options button and select a Copy Method for this job.

**Warning:** Cheyenne Backup's Copy feature can set or clear file archive bits that may effect your Incremental or Differential backups. Plan your copy operations carefully to ensure that they do not interfere with your backup jobs. Refer to Chapter 6, "Customizing Your Jobs" for information on the available Copy Methods.

5. Specify additional options for the job in the Options dialog box.
6. Click the filters button if you wish to specify filters for this job.
7. Click the Run/Schedule button. 

You may be required to enter or verify the username and password for the destination machine. Enter the requested information and click OK.

The Run/Schedule dialog box opens. The Run/Schedule dialog box enables you to run the job, or schedule the job for a later time.

8. Click OK to submit this job.

Refer to Chapter 6, “Customizing Your Jobs” for information on customizing your copy job.

### Copying to WORM drives

A WORM (Write Once Read Many) drive is a storage device that uses an optical medium that can be recorded only once. You can map to a WORM device in the same way that you would map any network drive. But, because it is a *write once* device, if you schedule a full copy of your C drive to your WORM device each day, files can not overwrite older copies of themselves on the drive (the way they would if you copied a file from a diskette to your hard drive). Instead, you will have to make separate full copies of your C drive in separate directories (similar to backing up files and appending the data to a tape).

Therefore, your copy strategy when using WORM devices might be to perform a full copy job once and then use either incremental or differential jobs on subsequent days.

---

## Counting files

This option allows you to count the number of files and directories on a machine.




### To count files:

1. Click the Count button from the Quick Access window.
2. Specify what you want to count.

You can select one or more domains, machines, drives or directories.

3. Add any filters you may need.


You can add filters to include or exclude files or directories from being counted. To add filters, click the Filters  button.

For more information about filtering, refer to Chapter 6, “Customizing Your Jobs”.

4. Determine how detailed you would like the Job Queue Log/Job View Database Log to be for this job.

Click the Options button  and select the Log tab.

5. Run the job.

Click the Run/Schedule button  to run the job.





Results of the Count job can be seen in the Job Queue or Job View Database Manager (by clicking the Log tab).

## Deleting files

This option allows you to delete files and directories from a machine. (Using filters, you can include or exclude files to be deleted.)



### To delete files:

1. Click the Delete button from the Quick Access bar.
2. Specify what you want to delete.  
You can select a drive, directory, or specific files on a machine.
3. Add any filters you may need.  
You can add filters to include or exclude files or directories from being deleted. To add filters, click the Filter  button.
4. Indicate if you would like to delete directories that have had all files deleted.  
Click the Options button  and select *Remove Directories*.
5. Determine how detailed you would like the Job Queue Log/Job View Database Log to be for this job.  
Click the Options button  and select the Log tab.
6. Click the Run/Schedule button to run the job. 

Results of the Delete job can be seen in the Job Queue or Job View Database Manager (by clicking the Log tab).







C h a p t e r

# CUSTOMIZING YOUR JOBS

This chapter explains how to add filters and options to your jobs, how to schedule jobs, and how to create scripts.

**In this chapter, you will learn:**

<i>Page</i>	
6-2 >	How to apply a filter
6-11 >	How to schedule a job
6-15 >	How to create scripts for your job
6-18 >	How to apply job options

---

## Applying filters

---

### About filtering

Filters allow you to include or exclude files and directories from your backup, copy, or restore jobs, as well as from the utilities, such as count and purge.

For backup and count jobs, filtering can be performed on a per machine basis. This means you can include a directory from one machine and exclude the same directory from another machine.

---

### Exclude overinclude

Exclusions always take precedence over inclusions. For example, if you add a File Pattern filter to include only files that have an *.exe* extension, and you add a Directory filter to exclude your *\system* directory, all *.exe* files in the *\system* directory will be excluded.

---

### Include only

Specifying to “Include” files will result in a backup or restore containing only those files which satisfy the filter specifications. For example, suppose in the source area you selected to back up your entire local hard drive, and you then set up a Directory filter to include files in the *\system* directory. The result would be that Cheyenne Backup would only back up files from your *\system* directory. No other files would be backed up.

---

### Available filters

You have the option of including and excluding files based on the following criteria:

- Specific file names or patterns
- Specific directory names or patterns
- File attributes (hidden, system, etc.)
- Files created, modified, or last accessed before, on, or after a specific date or within a date range

**Machine-level filters** Machine-level filters can be created for backup and count jobs. These filters apply to one specific machine, not the entire job. (A backup or count job can have machine-level and job-level filters for the same job.) If you want to add a filter that applies to the whole job, refer to the 'Job-level filters' section below.

### To apply a machine-level filter:

1. Highlight the machine you want to filter.
2. Click your right mouse button.

A pop-up menu opens.

3. Select *Filter*.

The Filters window appears. In it, you will create your machine-level filters. Refer to the 'Job-level filters' section below for information about the Filters window.

**Job-level filters** Job-level filters can be created for backup, copy, and restore jobs, as well as for the utilities, such as count. Job-level filters are applied to the whole job, not to a specific machine.

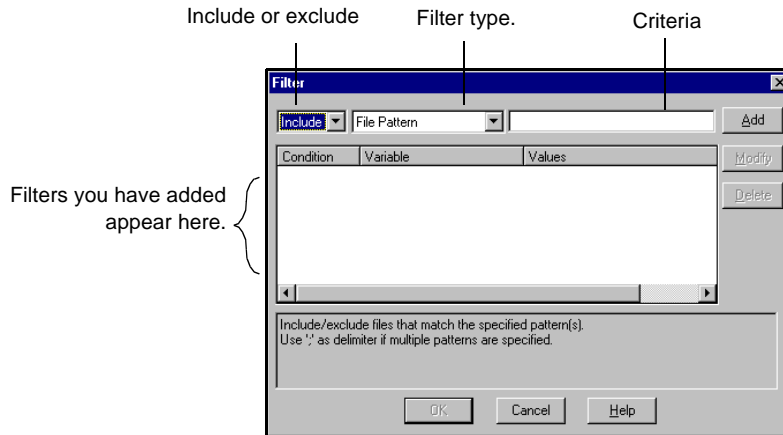
### To apply a job-level filter:

1. Click the Filter button.



---

The Filters window opens:



2. Decide whether to include or exclude the files or directories.

If you select *Include*, only files or directories that match the criteria you specify will be backed up, copied, restored, counted, or deleted.

If you select *Exclude*, all files will be backed up, copied, restored, counted, or deleted EXCEPT for those that match the criteria you specify.

3. Specify the filtering information.

Select the type of filter you want to add and enter the criteria (file pattern, directory, date(s), or file attributes) for that filter.

Refer to the sections that follow in this chapter for information about the various filters.

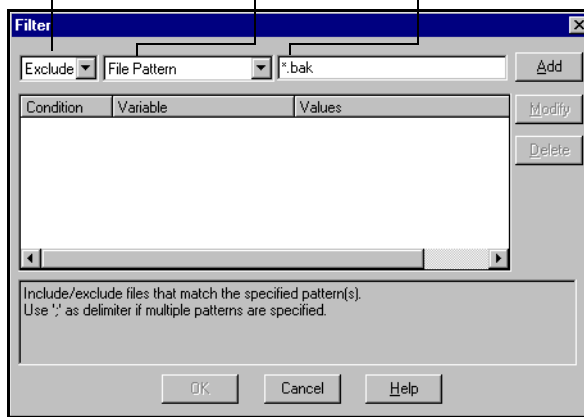
4. Click the Add button.

File Pattern filter

Use a File Pattern filter to include or exclude certain files from a job. You can specify a particular file name or you can use wildcards to specify a file pattern.

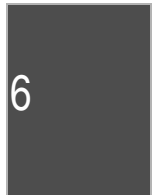
For example, to exclude files with a \*.bak extension:

Select *Exclude* to exclude all files that have a \*.bak extension.



The following table describes the recognized file patterns.

Pattern	What it means	Example
<b>DRIVE:\PATH\FILE</b>	An absolute path on your local hard drive.	C:\SYSTEM*.FOT C:\BAT\AUTOEXEC.BAT
<b>\\MACHINE\PATH\FILE</b>	An absolute path on any network drive.	\\ENG\DOS\SYSTEM.BAT
<b>\PATH\FILE</b>	An absolute path on any network drive.	\WINNT\SYSTEM*.FOT \BAT\AUTOEXEC.BAT
<b>DRIVE:FILE</b>	The file may be in any directory on the specified network drive.	C:*.FOT C:AUTOEXEC.BAT
<b>FILE</b>	The file may be in any directory on any drive.	*.FOT AUTOEXEC.BAT



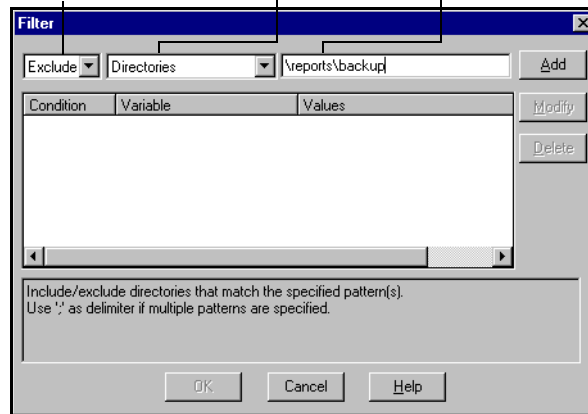
---

## Directory filter

Use a Directory filter to include or exclude specific directories from a job. You can enter an entire directory name or provide a pattern that the directory name follows.

For example, to exclude the directory `\reports\backup` from a job:

Select *Exclude* to exclude the directory `\reports\backup`.



The table on the following page shows you how to specify paths for Microsoft Network machines and NetWare servers.

Pattern	What it means	Example
<b>DRIVE:\PATH</b>	An absolute path on your local hard drive.	C:\WINNT\MSAPPS C:\WIN*
<b>\\MACHINE\PATH</b>	An absolute path on any network drive.	\\ENG\DOS
<b>\PATH</b>	An absolute path on any network drive.	\WINNT\MSAPPS \WIN*

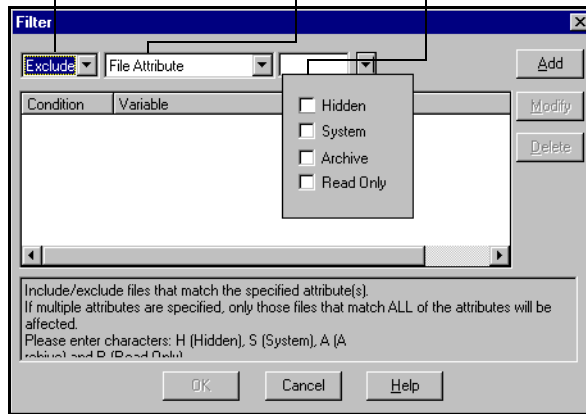
Pattern	What it means	Example
<b>DRIVE:DIR_NAME</b>	The directory may be in any other directory on the specified drive.	C:MSAPPS C:MS*
<b>DIR_NAME</b>	The directory may be in any other directory on any network drive.	MSAPPS *APPS

### File Attributes filter

Use the File Attributes filter to include or exclude specific types of files from a job.

For example, to exclude hidden files:

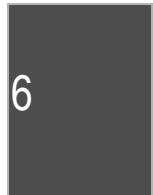
Select *Exclude* to exclude files with the attribute *Hidden*.



### Types of file attributes

There are four types of file attributes you can choose from. Select as many file types as you want.

- *Hidden* - Files not shown in a directory listing. For example, IO.SYS is a hidden file.
- *System* - Files that are unique to the machine you are using.
- *Read Only* - Files that cannot be modified.



- 
- *Archive* - Files whose archive bit is set.

Cheyenne Backup  
uses *exact* match  
only

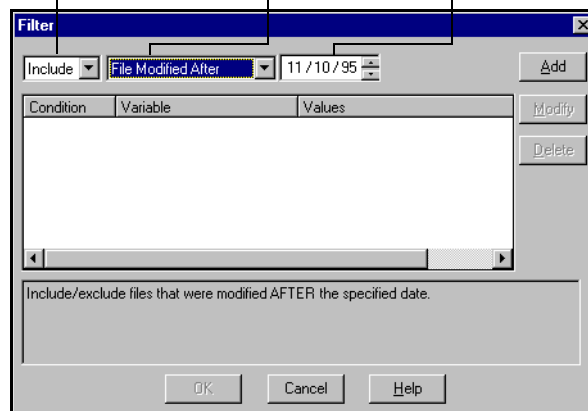
Cheyenne Backup will only back up or restore the files that *exactly* match the requirements you specify. For example, if you want to run a backup job that includes hidden files and system files, you would have to add two File Attributes filters to the job: One with Include and System Files selected and another with Include and Hidden Files selected. If you placed only one File Attributes filter on the job with Include, Hidden Files, and System Files all selected, Cheyenne Backup would only back up files that have 'hidden' *and* 'system' attributes, not hidden files and system files.

## File Modified/Created/Accessed filters

Use the File Modified/Created/Accessed filters to include or exclude files based on a specific date and time or a date range.

For example, to include files that have been modified today:

Select *Include* to include files modified on or after today.





- Filter types** There are three types of filters from which to choose:
- *Modified* - will include or exclude files last modified (changed) on this date.
  - *Created* - will include or exclude files created on this date.
  - *Accessed* - will include or exclude files last accessed (used but not changed) on this date.

- Filter criteria** There are four options from which to choose:
- *Before* - Files whose date matches, or whose date is earlier than, this date will be included or excluded.
  - *After* - Files whose date matches, or whose date is later than, this date will be included or excluded.
  - *Between* - You must specify two dates for this selection. Files whose date falls between the two dates will be included or excluded from the job.
  - *Within* - Selecting this option requires you to enter a number of days, months, or years to be used for the comparison (for example, *within* the past 12 months). Enter a number between 1 and 250, inclusive. Cheyenne Backup will use the current date as the basis from which to count back.

- Specifying dates** You can specify a date in two ways:
- Enter a specific date.
  - Double-click in the date field to display a calendar to select a specific date.



---

## Viewing, modifying, or deleting existing filters

You can view the filters you've created by displaying the Filters window. You can also change or delete a filter from within this window.

### **To modify a filter that has already been added to a job:**

1. Highlight the filter to modify.  
The filter is displayed in the entry field.
2. Make your changes to the filter.  
You can change the values in any field.
3. Click the Modify button.
4. Click OK when done.


### **To delete a filter:**

1. Highlight the filter to delete.
2. Click the Delete button.  
The filter will be deleted from the list of applied filters for the job.

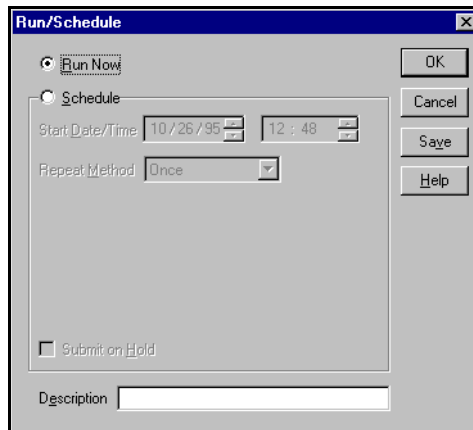
## Scheduling a job

This section describes how to schedule your job to run immediately or at a later date and time. You specify the source and, if required, the destination for your job before you can specify scheduling information.

### To schedule a job:

1. Click the Run/Schedule button. 

The Run/Schedule dialog box opens:



2. Select when you want the job to run.

If you want the job to run immediately, select the *Run Now* option.

If you want the job to run later and/or you want to specify a repeat interval for the job, select the *Schedule* option.

## Running a job immediately

Run your job immediately when:

- 
- The job you are submitting is a “one-shot” job that you want executed immediately.
  - You want to monitor the job as it runs.

---

**When shouldn't you run a job immediately**

If your tape drive is currently busy and you want to run a backup job as soon as the drive is free, you should not select *Run Now*. Instead, you should schedule your backup job, keeping the current date and time. This way, when Cheyenne Backup discovers that the tape drive is busy, it will automatically retry the backup job until the drive becomes free.

If you select *Run Now*, Cheyenne Backup will report that the tape drive is busy and the backup job will not be submitted to the job queue. Instead, you will be asked to wait until the drive is available before you can resubmit the job.

**To run your job immediately:**

1. In the Run/Schedule dialog box, select *Run Now* and click OK.

You will be taken to the Job Queue Manager so that you can watch the progress of your job.

## Scheduling your job

You can schedule your job to run at a specified date and time, and/or to repeat regularly (automatically resubmitted to the job queue).

---

**When should you schedule your job?**

Schedule your job when:

- You are submitting a “one-shot” job, but you don't want it to run now. You want it to run at a specific time, such as 12 am.

- You are submitting a job that should run regularly. This is especially useful for setting up a tape rotation scheme for your network.
- Your tape drive is currently busy and you want to run a backup job as soon as the drive is free. To do this, schedule your backup job with the current date and time. Cheyenne Backup will retry the job until the drive is free.

### To schedule your job:

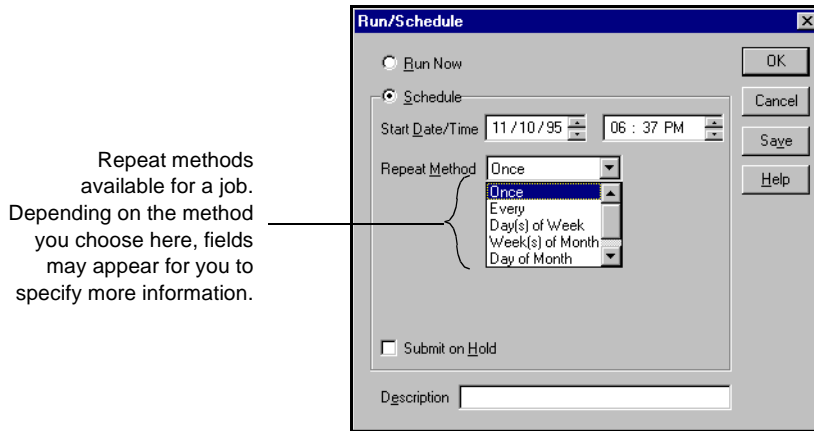
1. In the Run/Schedule dialog box, select *Schedule*.  
The Run/Schedule dialog box opens.
2. Specify the date and time you want the job to run.
3. (Optional) Specify a repeat method.  
If you want this job to be run regularly, you need to provide the information in the *Repeat Method* fields.

## Specifying Repeat Method information

You can specify a repeat interval for a job once and then let Cheyenne Backup handle submitting the job to the queue for execution.

**To specify a repeat interval for your job.**

1. Select a repeat method from the Run/Schedule dialog box:



2. Specify the details required for the repeat method you selected.

The following repeat methods are available:

Repeat Method	Description
Every	Repeat every n minutes, days, hours, weeks or months beginning from the Start Date/Time.
Days of Week	Repeat on selected days of the week.
Weeks of month	Repeat on selected weeks of each month.
Day of month	Repeat on selected day of month.
Custom	Repeat every n minutes, days, hours, weeks <i>and</i> months beginning from the Start Date/Time. Exclude selected days of week.

## Creating scripts for your jobs

Save your job settings like you'd save a file

You can save any type of job as a script. The script will contain the source, destination, and options that you selected, as well as the schedule information. It will also contain any filters you created to include and exclude files and directories.

Creating a script has the following advantages:

- You can re-use the same settings at a later time.
- You can copy your settings to a different Windows 95 machine running *Cheyenne Backup*.
- You can quickly re-submit regularly executed jobs after a job has been accidentally deleted.

To use a script, go to the Job Queue Manager and use the Add Job button. When you specify the job script name, all of the information that you set when you saved the job script will be used, including the files and directories and the scheduling information.

### To create a script:

1. Set up the job.

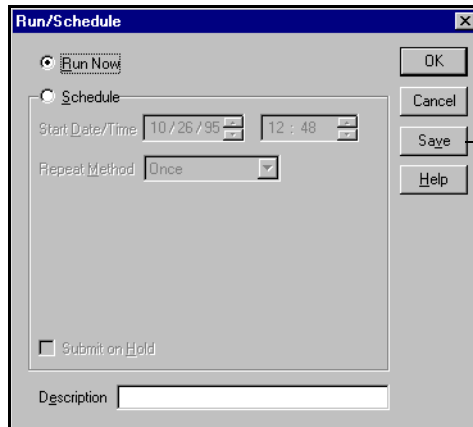
Select the source, destination (if required), and any options or filters. Refer to the appropriate chapter in this manual for more information about setting up a job.

2. Click the Run/Schedule button.



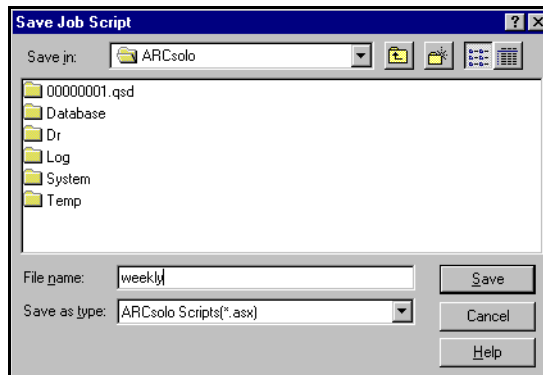
---

The Run/Schedule dialog box opens:



Click to create a script for your copy job.

3. Specify scheduling information for the job.  
Refer to previous sections in this chapter for details about specifying scheduling information.
4. Click the Save button.  
You can also save a script by selecting *Save As* or *Save* from the File menu.  
The Save Job Script dialog box opens:



5. Give the script a name.  
Cheyenne Backup scripts are stored in the Cheyenne Backup home directory by default, extension ".asx". You



can specify a different directory in which to save your script.

6. Click OK.

### **To use a script:**

1. Open the Job Queue Manager.
2. Click the Add Job button.
3. Specify the script file name.

Refer to Chapter 7, “The Job Queue”, for more details about using the Job Queue Manager and the Add Job button.

---

## Applying job options



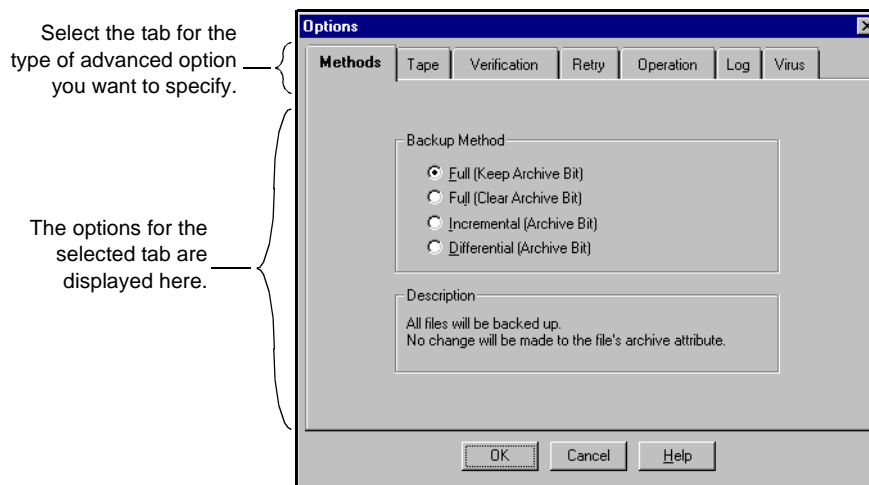
Job options apply to the current job that you are configuring. They can be used to configure any type of job that is submitted to the Cheyenne Backup engine, including backup, copy, and restore jobs.

For backup jobs, the job options will over-ride the global default backup options. Refer to Chapter 3, “Backing Up Data”, for information on the global backup options.

### To apply job options to a job:

1. Set up the job in the appropriate Manager window.
2. Click the Options button on the toolbar.

The Options dialog box opens:

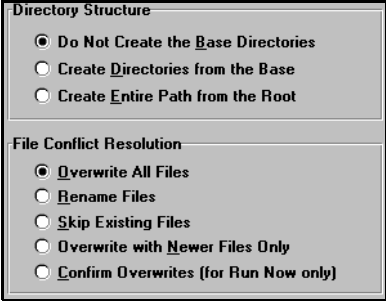


3. Select the tab for the type of option that you wish to change.
4. Select your options.

The rest of this section describes each type of global job option.

### Destination options--Restore and Copy

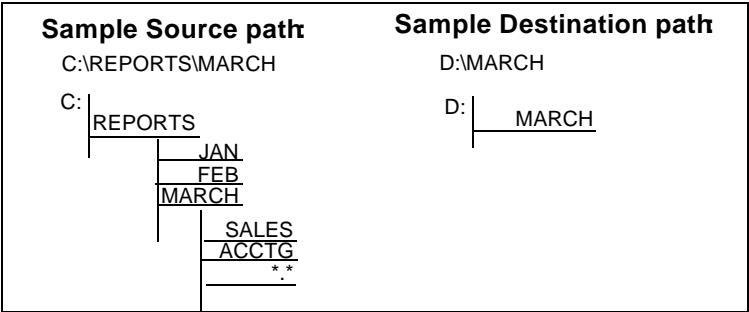
The Destination options determine how the directory structure is created on the destination when files are copied or restored. They also determine which files (if any) can be overwritten.



### Directory Structure

Select the method *Cheyenne Backup* should use to create directories on your destination.

The explanations below consider the following example. You wish to restore the path `C:\REPORTS\MARCH`, as shown:

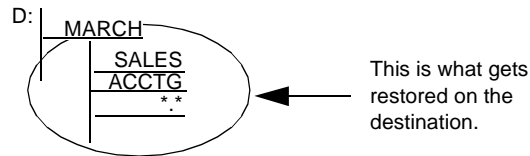


---

**Do Not Create the Base Directories - default**

Do not create the base directory on the destination path, but create all subdirectories below the source base directory. A “base directory” is considered the last directory selected in the source path. Restoring the sample path results in:

*Since MARCH is the base directory, it is not created on the destination.*

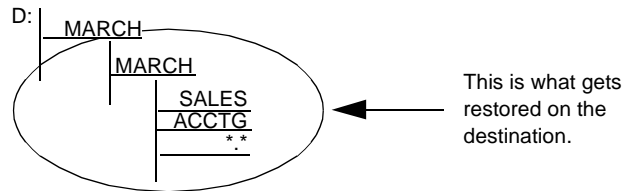


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**Create Directories from the Base**

Create the destination path beginning from the base directory. Restoring the sample path results in:

*MARCH is the base directory. Everything on the source beginning with the MARCH directory is created.*

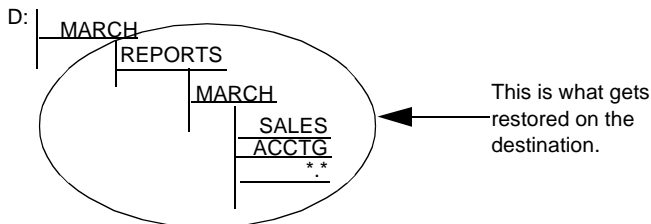


---

**Create Entire Path from the Root**

Create the entire source path (except the root drive or volume name) on the destination. No files from any parent directories are restored. Only the directory path to the base directory is created on the destination. Restoring the sample path results in:

*C: is the root. As a result, the path to the MARCH directory is built beginning from the REPORTS directory.*

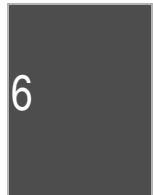


File Conflict Resolution

Select the method Cheyenne Backup should use when there are files on the destination disk that have the same name as files being copied from the source. The default is *Overwrite All Files*.

The File Conflict Resolution options are described in the following table:

Option	Description
Overwrite All Files	Restore all source files to the destination regardless of conflicting file names. Existing files on the destination will be overwritten by the files from the source.
Rename Files	Copy the source file to the destination with the same filename but a different extension. The extension will maintain the first two characters of the original, but the last character will be 1, 2, 3..., depending on how many files Cheyenne Backup has encountered with the same name. Filenames without extensions will be renamed with extensions “._0”, “._1”, “._2”, etc.
Skip Existing Files	Do not restore a source file if a file with the same name already exists on the destination.
Overwrite with Newer Files Only	Only restore source files whose modification date is later than the modification date of the file with the same name on the destination. Source files whose modification date is earlier will not be copied to the destination.
Confirm Overwrites	Applies when submitting an immediate job (if <i>Run Now</i> is selected). Before Cheyenne Backup tries to restore the source file, you will be prompted to confirm that you want the file on the destination to be overwritten.



---

## Log options--General

The Log options determine the level of detail that is included in the log report for the operation. You can view the log report in the Job Queue window or Database Manager window (Job View).

The log options can be set in the following windows:

- Backup
- Restore
- Compare
- Scan
- Copy
- Count
- Delete

The log options are described in the following table:

Option	Description
Log All Activity	Record all of the activity that occurs while the job is running in the Job Log.
<i>Log Summary Only</i> (the default selection)	Record summary information of the job (including source, destination, session number, and totals) and errors.
Log Disabled	Do not record any information about this job in the Job Log.

## Backup Method--Backup and Copy

The Backup Method options determine which files are backed up or copied and if the file's archive bit is reset.

The available backup methods are:

Method	Which files are included?	Check archive bit?	Reset archive bit?
<b>Full (Keep Archive Bit)</b>	All source files.	No.	No.
<b>Full (Clear Archive Bit)</b>	All source files.	No.	Yes.
<b>Incremental (Archive Bit)</b>	Source files whose archive bit is turned on.	Yes.	Yes.
<b>Differential (Archive Bit)</b>	Source files whose archive bit is turned on.	Yes.	No.

In general, if you have large amounts of data to be backed up or copied every day, running regular differential or incremental backup or copy jobs and an occasional full backup or copy job may be your best solution.

Refer to Chapter 3, “Backing Up Data” for more information on the available backup methods.

## Operation options--Backup

The Operation options (for Backup) determine related actions that occur during or after the backup, and the level of information that is recorded in the database.

### (Basic) Operation options

The following table describes the (basic) Operation options:

Option	Description
Eject Tape	Eject the tape from the drive after the job finishes. This helps prevent any other job from overwriting information on this tape.

---

Option	Description
Delete Files After Backup	Delete source files from the source machine after they have been backed up to tape. Use this option to perform disk grooming. Set a filter to back up files that haven't been accessed for a certain period of time (say, 3 months or so), and then select this option to delete these old, unaccessed files from the source disk.
Disable File Estimate	Before any file is backed up to tape, Cheyenne Backup, by default, performs an estimate of how long the job will take. Set this option on if you want Cheyenne Backup to skip this function.
Compress Files	Compress files on backing up.

#### Database Operation options

The following table describes the database operation options:

Option	Description
Record Detail Information	Log all the information pertaining to the source and destination in the database.
Record Job and Session Information Only	Log only job and session information in the Cheyenne Backup database.
Disable Database Recording	Don't log any information about this job in the database. Select this option if you are backing up the Cheyenne Backup database or if you have limited disk space.  You will have to submit a Merge Tape operation before you can use any of the database views to restore this data. Or, you can restore data from this job using the <i>Restore by Tape Media</i> source view.



## Operation options--Copy

The Operation options (for Copy) determine related actions that occur during or after the copy operation, and the level of information that is recorded in the database.

The Operation options for Copy are described in the following table:

Option	Description
Mirror	Create a mirror image of the source machine on the destination. Copy files and directories from source and delete all files and directories that do not appear on source.
Delete Files	Delete files from source machine after copying to destination.
Create Empty Directories	Copy empty directories from source machine to destination machine.
<b>Database options</b>	
Record Job Information Only	Record job information.
Disable Database Recording	Do not record job information.

## Operation options--Restore, Compare, Scan, and Count

The Operation options (for Restore, et al) determine related actions that occur during or after the restore job, and the level of information that is recorded in the database.

---

The Operation options for Restore are described in the following table:

<b>Option</b>	<b>Description</b>
Restore Registry Files	Restore registry files to the machine.
Create Empty Directories	Restore directories that have no files in them.
<b>Database options</b>	
Record Job Information Only	Record job information.
Disable Database Recording	Do not record job information.

## Retry options--Backup and Copy

There are two types of Retry options:

- **Open File Retry:** determines how frequently (if at all) Cheyenne Backup will attempt to back up or copy open files.
- **File Sharing:** determines how Cheyenne Backup shares the files with other applications when backing up or copying a file.

Open File Retry options

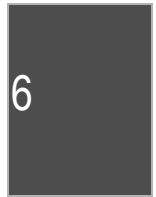
Select the option Cheyenne Backup should take if it attempts to back up or copy an open file:

Option	Description
Retry Immediately	Back up or copy the file again immediately after the first attempt failed. If the file is still unavailable, this information is written to Cheyenne Backup's Activity Log, and the job is labeled "Incomplete".
Retry After Job	Back up or copy the file again after all the other source files have been backed up copy. If the file is <i>still</i> unavailable after these attempts, this information is written to Cheyenne Backup's Activity Log, and the job is labeled "Incomplete".
Number of Retries	Number of times you want Cheyenne Backup to try to back up or copy the file.
Retry Interval	Period of time you want Cheyenne Backup to wait between attempts.

File Sharing options

The file sharing options are described in the following table:

Option	Description
Use Deny None if Deny Write Fails - default	Attempt to place the file in "Deny Write" mode. If this is not possible (because the file is already open), then place the file into "Deny None" mode.
Use Lock Mode if Deny Write Fails	Attempt to place the file in "Deny Write" mode. If this is not possible (because the file is already open), then lock the file completely (prohibiting any user from opening or writing to the file). This option ensures the most recent version of the file is backed up or copied.



---

Option	Description
Deny Write	Prevent another process from writing to the file while Cheyenne Backup has it open. If another process has the file open before Cheyenne Backup can open it, Cheyenne Backup will not back up the file (unless you specified an <i>Open File Retry</i> option).
Deny None	Allow another process to read or write to the file, regardless of whether Cheyenne Backup opens it first or opens it after another process already has it open. This option ensures that your files are up-to-date, although the file that was backed up or copied may not be the most recent version.

---

**Considerations** If you use applications (such as e-mail) that are in operation 24 hours a day, you may want to choose one of the *Deny None* methods. As long as no other process is writing to these files during the job, the backup or copy will be consistent.

If you want to ensure that only the most current version of every file is backed up or copied, you should select a *Deny Write* or *Lock Mode* option.

## Tape Options--Backup

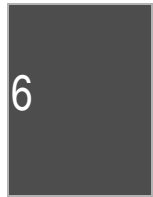
There following types of Tape options are available:

- **Session Password:** specify a Session password that will be required in order to restore this data from tape. *You MUST remember the Session password in order to restore this session!*
- **First Tape Options:** determine the overwrite rules for the first tape that is used for the backup job.
- **Additional Tape Options:** determine the overwrite rules for the additional tapes.

First Tape Options

The *first tape* is the tape you use when the job begins. The following table describes the option for the first tape:

Option	Description
Append to Tape	Append job sessions to the selected tape.
Overwrite Same Tape Name, or Blank Tape	Overwrite the tape in the drive <i>only</i> if it is the one you specified for the job or if the tape is blank. If neither of these conditions is met, Cheyenne Backup prompts you to supply the specific tape name.
Overwrite Same Tape Name or Blank Tape First, then Any Tape	Overwrite <i>any</i> tape found in the drive. If you select this tape option, Cheyenne Backup checks to see if the tape in the drive is the one specified for the job. If it isn't, Cheyenne Backup checks to see if the tape is blank. If the tape isn't blank either, Cheyenne Backup reformats whatever tape it finds in the device and starts backing up files at the beginning of the tape.
Timeout for First Tape	Number of minutes Cheyenne Backup will attempt to write to tape before cancelling job.



---

## Additional Tape Options

These options apply to jobs that require more than one tape. You need to specify which tapes Cheyenne Backup can use when the job spans tapes.

Option	Description
Overwrite Same Tape Name, or Blank Tape	Write to the tape in the device only if it has the same tape name (but a different tape ID) or if it is blank. Cheyenne Backup remembers the name and ID of the job's first tape. When the job requires an additional tape, Cheyenne Backup checks if the new tape has the same name (but different tape ID) or if it is a blank tape. As long as the ID is different, Cheyenne Backup reformats the tape, giving it the same name and ID as the first tape. The sequence number will be different.
Overwrite Same Tape Name or Blank Tape First, then Any Tape	Overwrite <i>any</i> tape found in the device (as long as it has a different ID from the first tape's ID). All subsequent tapes are reformatted with the same name and ID as the first tape. Only the sequence number will be different.
Timeout for Additional Tapes	Number of minutes Cheyenne Backup will attempt to write to tape before cancelling job.

## Tape Options--Restore, Compare, and Scan

The Tape options (for Restore, Compare, and Scan) allow you to specify a timeout period Cheyenne Backup should wait for you to provide the tape you need to restore your data. Available Tape options are:

Option	Description
Timeout for First Tape	Period of time that Cheyenne Backup waits for the first tape required for your restore job. If the time expires and the first tape has not been provided, the job will fail. By default, Cheyenne Backup will wait five minutes.
Timeout for Additional Tape(s)	Period of time that Cheyenne Backup waits for any additional tapes to become available. By default, there is not timeout.

## Verification options--Backup

The Backup Verification options allow you to verify that your data was backed up correctly. (These options may be overridden by specifying local options for individual machines.) Available Verification options are:

Option	Description
None	The backup is not verified.
Scan Tape Contents	Check the header of each file on the backup tape. If the header is readable, Cheyenne Backup assumes the data is reliable. If the header is not readable, the Activity Log is updated with this information. Of the two verification methods, this one is faster.

---

Option	Description
Compare Tape to Disk	Read blocks of data from the tape and compares the data, byte for byte, against the source files on the source machine. This option is more time consuming, but it ensures that all data on the tape is <i>exactly</i> as it is on disk. If Cheyenne Backup finds a mismatch, the Activity Log is updated with this information.

### Virus options--Backup, Copy, and Count

You can automatically scan for viruses during a backup, copy, or count operation using the virus scanning options. Available virus scanning options are:

Option	Description
Enable Virus Scanning	Select this option to enable virus scanning.
Skip	Do not back up the infected file.
Rename	Rename the infected files with the extension AVB. (If a file with the same name and the extension AVB exists, then extension AV1 is used, and so on.)
Delete	Delete the infected file.



# 9

## Chapter

# MANAGING THE CHEYENNE BACKUP DATABASE

This chapter explains how Cheyenne Backup uses its database to store information about the jobs you run through Cheyenne Backup, tapes you use with Cheyenne Backup, and the devices you use for backups.

**In this chapter, you will learn:**

Page	
9-2	➤ About the Database window
9-4	➤ About the Summary View
9-5	➤ About the Job View
9-7	➤ About the Tape View
9-10	➤ About the Device View

---

## Database basics

Cheyenne Backup stores information about the jobs you have run, the tapes you have used for backups, and the devices you use for backups.

---

How is database information used in Cheyenne Backup?

Database information helps when you restore files from tape. The Cheyenne Backup database stores information about every file and directory that has been backed up. When you are looking to restore a specific file, Cheyenne Backup's database helps you determine which tape to use. This eliminates the time it would take to search through tapes looking for files.

Cheyenne Backup's Reports Manager is another place where database information is used. Information for the reports comes from the Cheyenne Backup database. The Reports Manager window allows you to view and print reports with this information. Refer to Chapter 10 for more information.

---

What can you do in the Database window?

You can do the following in the Database window:

- Keep track of the location of your tapes
- Determine the session number of your most recent backup
- Determine if a tape should be retired
- View log information about jobs you have run
- Delete old records from the database

The Database window also displays graphical information about the hard disk on your machine and the amount of space the database takes up.

The remainder of this chapter describes each database view and explains how to use the Database window.

## Opening the Database window

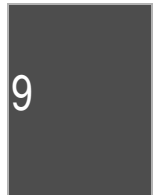
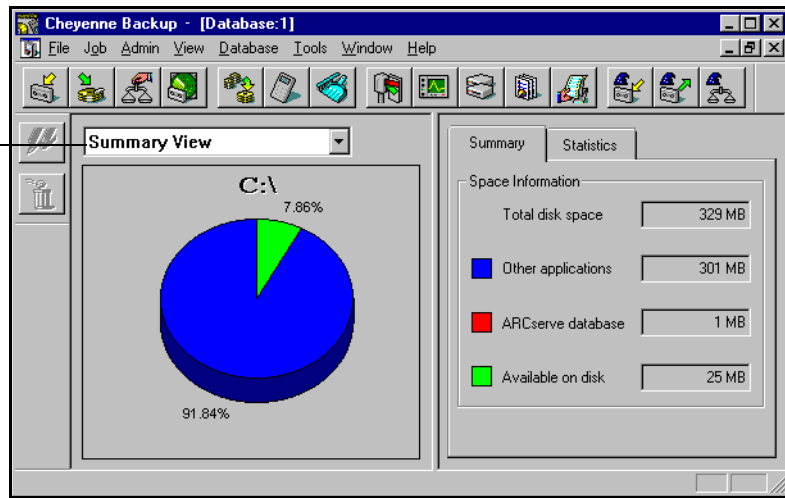
The Database window allows you view different categories of database information.

### To open the Database window:

1. Click the Database button from the Quick Access bar. The Database window opens. The Summary view is displayed by default.



Select the database view



### Selecting a database view

The following database views are available:

- Summary View
- Job View
- Tape View
- Device View

To change the database view, select a new view from the drop-down menu.

---

**Changing the sort order** You can change the sort order of displayed records in the Job View, Tape View, and Device View windows.


**To change the sort order in these windows:**

- > Click on the field name on which you want to sort by.

---

**Deleting a record from the database** In addition to setting Cheyenne Backup to automatically prune old database records (refer to Chapter 11, “The Cheyenne Backup Engine”, for more information), you can manually delete database records. You may want to do this if you’ve replaced a tape device, for example.

**To delete a record:**

1. Highlight the record(s) you want to delete.  
You cannot delete the last Job View record.
2. Click the Delete button. 
3. Confirm the deletion.  
Make sure this is the record you want to delete.

## Summary View

The Summary View shows how much space on your hard disk is being used by the Cheyenne Backup database. This view is displayed by default when you open the Database window.

---

**Pruning your database** You may want to set Cheyenne Backup to prune old records from the database. Refer to Chapter 11, “The Cheyenne Backup Engine”, for more information.

## Job View

The Job View window displays information about all jobs that have been processed by Cheyenne Backup.

For backup jobs, session and file information are all recorded in the database.



Highlight a job to display session information below and to display job information in the right pane.

If you highlight a session, you can select the Session or Files tab to see additional information about that session.

ID	Type	Status	Start Time
1	Backup	Finished	10/30/95
2	Backup	Finished	10/30/95
3	Backup	Finished	10/30/95
4	Copy	Finished	10/30/95
5	Backup	Finished	11/02/95

Sess.#	Type	Path
14	VFAT	\\SYS-WRINC
15	CS NW	\\WNY-WRITER\MANUA

Job Information:

ID: 1  
 Type: Backup  
 Status: Finished  
 Start Time: 10/30/95 12:31:36  
 End Time: 10/30/95 12:32:08  
 Submitter: WILLIAMC  
 Description:

Tape:

Name: Bill\_Workstation  
 ID: 8EEE Sequence No. 1

### Viewing details about a job

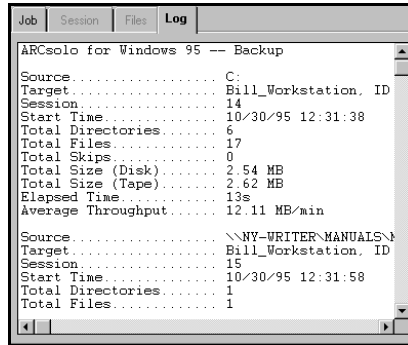
You can view log information for each job. In addition, for each backup job, you can see a list of the sessions that were created on tape and a list of files backed up for each session.

#### To view log information:

1. Highlight a job.

2. Click the Log tab.

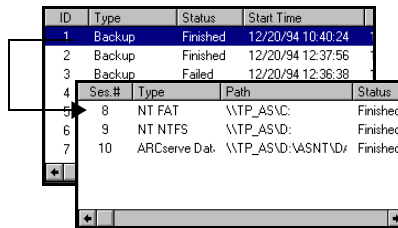
The level of detail in the log is determined when you first set up the job.



To view session information for a backup job:

1. Highlight a backup job.

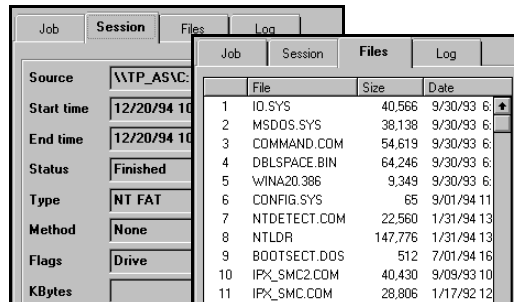
Session information is displayed in the *Sessions* section.



2. Highlight the session you want to know more about.

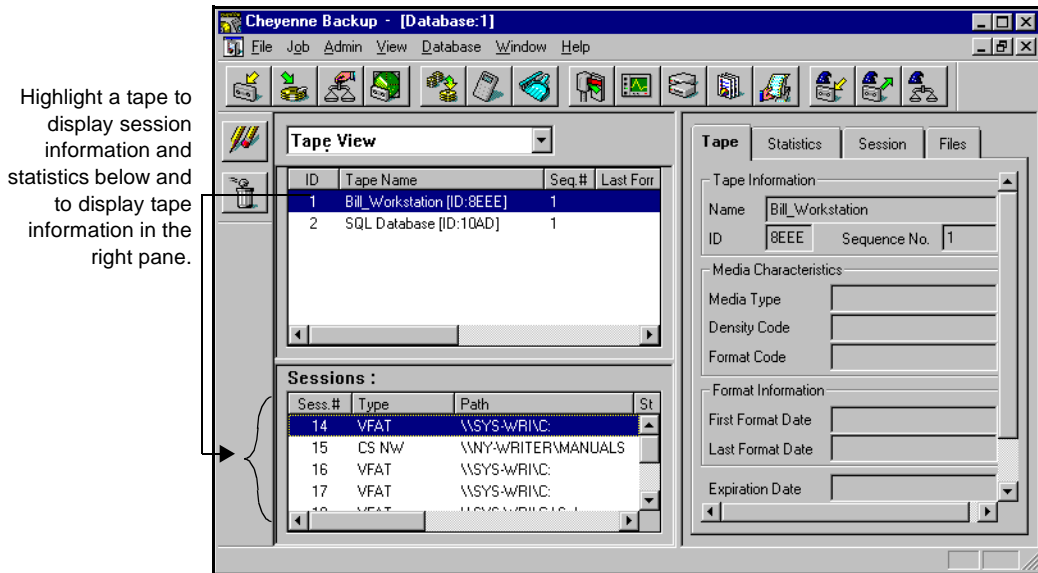
3. Select the Session tab or the Files tab to see additional information about the session.

Select the Session tab to see information about the backup session or select the Files tab to see a listing of files that were backed up.



## Tape View

The Tape View window displays information about the tapes used with Cheyenne Backup. Each time a tape is formatted by Cheyenne Backup, a new record is added to the database.



### Viewing details about a tape

You can view additional details about a tape. This includes how many errors Cheyenne Backup has encountered while reading from or writing to the tape and how much data (total) has been written to the tape. In addition, you can see a list of the sessions that were created on the tape and a list of files backed up for each session.



---

## Viewing statistics

### To view statistical information about a tape:

1. Click the Statistics tab.

*Use this record to determine if a tape should be retired because it has been in use for a long time or if you are getting a high number of errors.*

Category	Media Errors	Soft Read Errors	Soft Write Errors	MBytes Written	Usage Time	Times Formatted
Current Tape Statistics	0	0	21	209	0:28:17	
Total Tape Statistics	0	0	21	209	0:28:17	0

A media error means that some sort of data corruption has occurred on the tape and the read or write operation could not be successfully completed.

A soft error means that the tape drive detected a problem when it was trying to read from/write to the tape but was able to correct the problem by retrying the operation (or, in the case of a read, correcting the data through the use of its Error Correction Code). Use these fields to determine the "quality" of your tape. Remember, it is normal for a tape drive to always generate a certain number of soft read/write errors. The problem occurs when the number of errors is very high in relation to the amount of data being read/written.

---

## Viewing information about what's on a tape

### To view session and file information:

1. Highlight a tape.

Session information is displayed in the *Sessions* section.

ID	Tape Name	Seq.#	Last Format Date
1	ELLENS FULL BACKUP [I: 1]	1	11/15/94 15:16
2	ACCTG3 [ID:F5A0]	1	11/03/94 9:37

Ses.#	Type	Path	Status
8	NT FAT	\WTP_ASVC:	Finish
9	NT NTFS	\WTP_ASVD:	Finish
10	ARCserve Dat.	\WTP_ASVD:\ASNTND:	Finish
11	NT FAT	\WTP_ASVC:\PSP	Finish
12	NT FAT	\WTP_ASVC:	Finish
13	NT FAT	\WTP_ASVC:	Finish

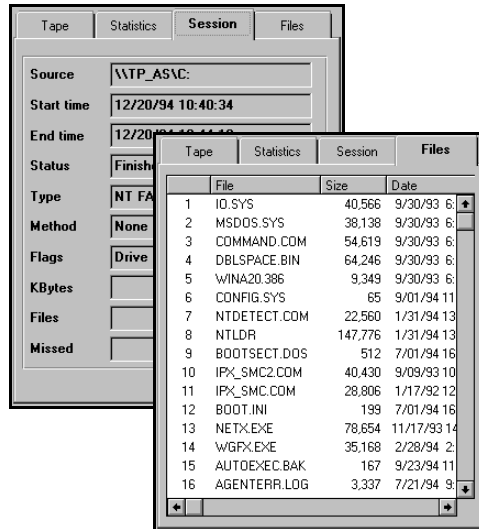
2. Highlight the session you want to know more about.



## Managing the Cheyenne Backup Database

3. Select the Session tab or the Files tab to see additional information about that session.

Select the Session tab to see information about the backup session or select the Files tab to see a listing of files that were backed up on this tape.



---

## Device View

The Device View window displays information about the tape devices used with Cheyenne Backup. This includes the type of device, vendor, SCSI ID, head clean count, and usage time.

---

### Viewing information about a device

To view information about a tape device:

1. Highlight a tape device.
2. Select the Statistics tab or the Error Log tab.

A media error means that some sort of data corruption has occurred on the tape and the read or write operation could not be successfully completed.

Device Usage	
Usage Time	0:42:56
MBytes Written	325

Error Count	
Media	0
Soft Write	36

Block size	512
Head Clean Count	0
Last Head Clean	

A soft error means that the tape drive detected a problem when it was trying to write to the tape but was able to correct the problem by retrying the operation. Use this field to determine the "quality" of your tape. Remember, it is normal for a tape drive to always generate a certain number of soft write errors. The problem occurs when the number of errors is very high in relation to the amount of data being written.

---

### Error Log tab

You will only see information in the Error Log if the tape drive has a critical error. An explanation of the fields in the Error Log appears below:

Field	Description
Code	Type of error - hardware or media (see explanation alongside the Statistics tab above).
Time	Time the error occurred.
Sense Info	SCSI error code.
Media	Number of media errors (see explanation above) that occurred during the job.

## Managing the Cheyenne Backup Database

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Field	Description
Soft Write	Number of soft write errors (see explanation above) that occurred during the job.
Soft Read	Number of soft read errors (see explanation above) that occurred during the job.
Tape Usage	Amount of time the tape was used during the job.
KB written	Amount of data written to the tape during the job.
Times Formatted	Number of times tape has been formatted.



# 8

## Chapter

# MANAGING TAPES AND TAPE DEVICES

This chapter contains information about tapes and tape devices.

**In this chapter, you will learn how to:**

*Page*

- |     |   |   |
|-----|---|---|
| 8-3 | ➤ | Get information about tape devices and the tapes                                      |
| 8-5 | ➤ | Perform maintenance functions on tapes, such as formatting, erasing, and retensioning |

---

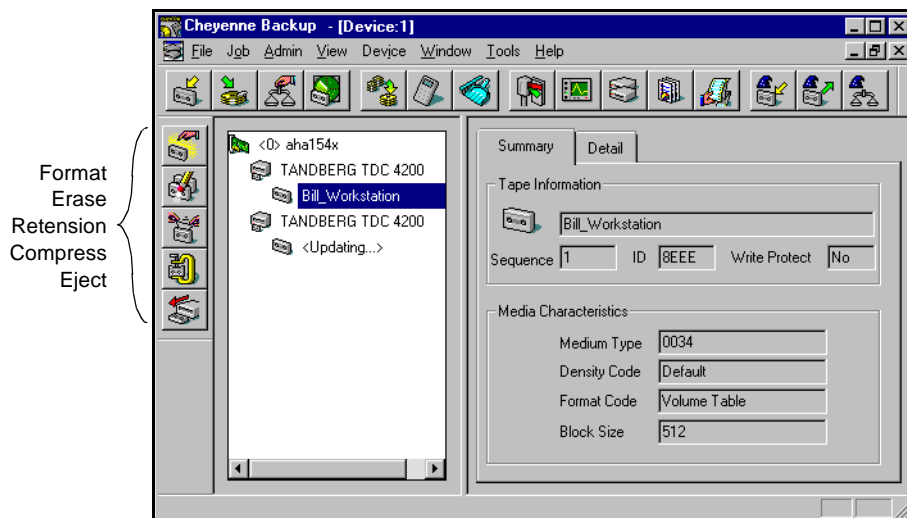
## Device Manager basics

The Device Manager displays information about the tapes and tape devices that are connected to your system. You can format, erase, or retention tapes. You can also change the compression mode for your tape drives, if they support compression.

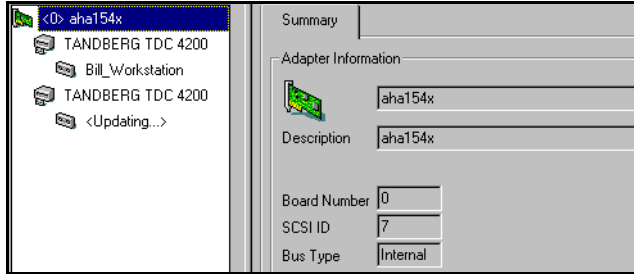
### To access the Device Manager:

1. Click the Device Manager button on the Quick Access bar.

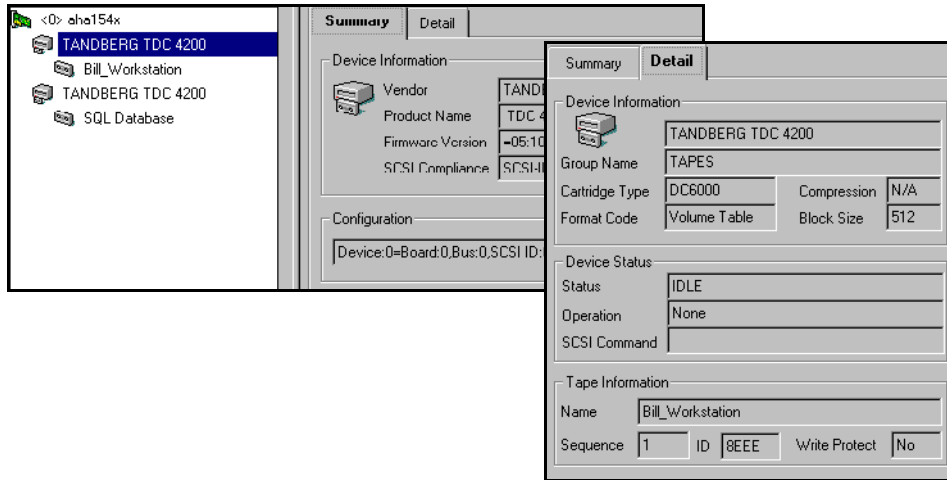
The Device Manager opens:



Adapter card information To view adapter card information, select the adapter card:

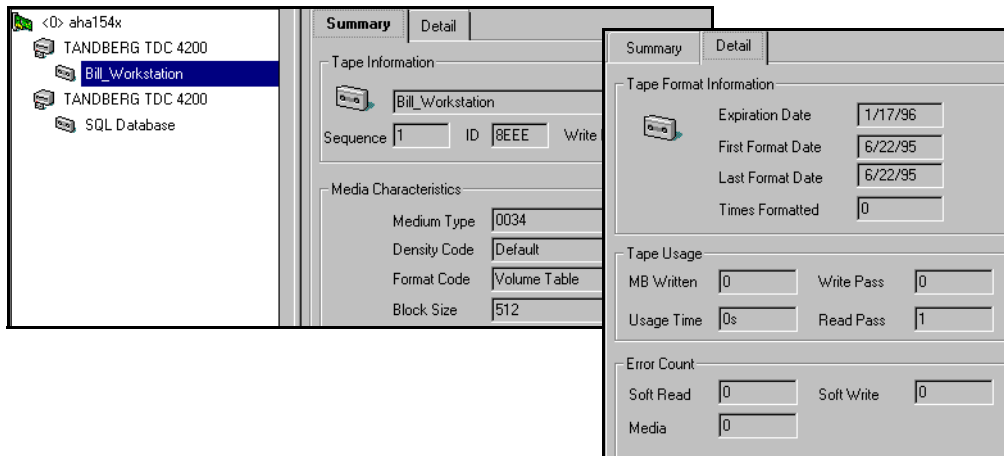


Tape device information To view information about a tape device, highlight the tape device, then select the Summary or Detail tab:



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Tape information To view tape information, highlight the tape, then select the Summary or Detail tab:





## Maintaining your tapes

This section explains the features available for maintaining your tapes.

### Formatting a tape


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#### Format your tapes before you use them

Although Cheyenne Backup automatically formats blank tapes, you can use this option to manually format your tapes. Formatting writes a new label at the beginning of the tape, effectively *destroying all existing data on the tape*.

Low level formatting, as is required on most hard drives and some mini cartridge tape drives, is not required for SCSI tape drives.

#### To format a tape:

1. Insert the tape into a tape drive.
2. In the Browser, select the tape.
3. Click the Format button.   
The Format dialog box appears.
4. Enter a name for this tape and select a date for this tape to be put out of service.
5. Click OK to start formatting the tape.

---

#### Choosing an expiration date

The expiration date is a way of tracking how long a tape has been in service so you can stop using it before it reaches the end of its useful life.

A tape's life is based on passes (the number of times the tape drive head "passes" over a given point on the tape). For example, a backup without verification constitutes one pass, whereas a backup with verification constitutes two

---

passes. Tape manufacturers rate their tapes' useful lives from about 500 to 1500 passes. After this point, the tape is more susceptible to errors.

You should choose an expiration date based on how you will use the tape. If you plan to use the tape a few times a week, you should set the expiration date to a year from now, or sooner. If you plan to use the tape only once or twice a month, you can set the expiration date to two or three years from the current date. When a tape reaches its expiration date, you will still be able to use it, but when you make a backup, for example, a note is made in the Activity Log that this tape is expired.

---

**Formatting a new tape**

If you are formatting a new, blank tape, the default expiration date is one year from the current date.

---

**Re-formatting a tape**


When you re-format a tape, the tape's original expiration date (the date specified the first time the tape was formatted) is carried over. The tape's physical history (read and write passes, etc.) is also carried over. These attributes will carry over even if the tape has been erased using the Cheyenne Backup Erase option.

## Erasing a tape

Use this option to erase all data from a tape. Cheyenne Backup also erases all references to the contents of this tape (if any) from the database. When and if you re-format this tape, its physical history (read and write passes, etc.) will be carried over.

**To erase a tape:**

1. Insert the tape that you want to erase into a tape device.
2. Select the tape.

3. Click the Erase button. 

The Erase dialog box opens.
4. Select *Quick Erase* or *Long Erase*.
5. Click OK to start erasing data from the tape.

The following Erase options are available:

Option	Description
Quick Erase	Only overwrites the current tape label. Although, technically, there is still data on the tape, the data is effectively gone without the tape label.
Long Erase	Completely removes all data from a tape. It takes much longer than a Quick erase, but the tape is considered blank, as if it were just formatted. For security reasons, if you want to make sure that the data on a tape is gone completely, use Long Erase.

### Retensioning a tape

Computer tapes are similar to audio tapes in that the more you use them, rewinding and fast forwarding, the more the tape becomes uneven and loose on the spools. When a tape becomes unevenly wound, it is prone to errors, may jam, or worse yet, break.

Use Cheyenne Backup's Retension feature to make sure a tape is evenly wound and properly tensioned. Retension a tape especially if you are having trouble writing to it or reading from it.





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This feature applies only to Quarter Inch Cartridge tapes. It does not apply to 8mm or 4mm Digital Audio Tapes (DATs).

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### To retension a tape:

1. Insert the tape into a tape device.
2. Select the tape.
3. Click the Retension button. 
4. Click OK.

## Compressing data on tapes

If your tape drive supports compression, you can tell Cheyenne Backup to use it by turning it on.

Normally, you will want to leave compression on. The only time you should turn it off is if you plan to use the tape in another drive that doesn't support compression. The drive that doesn't support compression will not be able to read the compressed data on the tape.




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You can only change compression when a blank tape is in the drive. This prevents the “mixing” of uncompressed and compressed data between sessions on a tape.

---

### To turn compression on or off:

1. Select the tape device that supports data compression.  
Select the Detail tab in the right pane to check that compression is supported by this device.
2. Click the Change Compression Mode button. 
3. Click OK to set the compression mode to Off (if it is On) or On (if it is Off).

### Ejecting tapes

You can eject tapes from a drive using Cheyenne Backup's Device Manager, if your device supports this feature.

#### To eject a tape:

1. Select the tape device you want to eject the tape from.

2. Click the Eject button.



The tape is ejected from the tape drive.



# 11

## Chapter

# THE CHEYENNE BACKUP ENGINE

This chapter explains how to configure the Cheyenne Backup Engine.

**In this chapter, you will learn about:**

<i>Page</i>	
11-2 >	The Cheyenne Backup Engine
11-5 >	Job options
11-7 >	Database options
11-8 >	Tape options
11-10 >	QIC Tape options
11-12 >	Smart Drive options

---

## About the Cheyenne Backup Engine

The Cheyenne Backup Engine performs the following tasks in order to process the operations that you requested in the Cheyenne Backup Manager:

**Job processing:** The engine scans the job queue and executes your jobs at their designated date and time.

**Tape management:** The engine controls your tape devices. It transfers data back and forth to tape as needed for your jobs.

**Database management:** The engine maintains a database history of:

- Files, directories, drives, and machines that Cheyenne Backup has backed up.
- Information about jobs that have been processed by Cheyenne Backup, such as the type, the final result, the start and end time, etc.
- Tapes used by Cheyenne Backup, such as the name, date it was first formatted, date it expires, sessions on it, etc.

By default, everything that happens within Cheyenne Backup is recorded by the Cheyenne Backup database.

## Starting the Engine

You can configure the Cheyenne Backup engine to start each time you start your Windows 95 machine, or the first time you open the Cheyenne Backup Manager. You can use the following methods to specify the startup:



- Use the Windows 95 Setup program to place the Cheyenne Backup Engine in the Startup Group.
- From any Manager window, toggle the *Auto Start Engine* option in the Tools menu.

### Stopping the Engine

#### To shutdown or pause the Cheyenne Backup engine.

1. Double-click on the Cheyenne Backup engine icon in the Windows 95 tray.

The Cheyenne Backup Engine dialog box opens.

2. Choose Shutdown or Pause from the Engine menu.

The engine is shut down or paused.

If you have Paused the engine, choose Resume from the Engine menu to resume operation.

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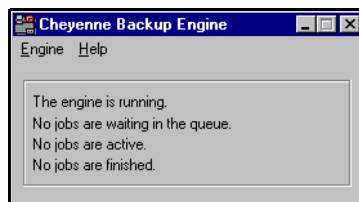
## Configuring the Cheyenne Backup Engine

The Cheyenne Backup Engine Properties dialog box allows you to configure the engine properties.

### To access the Cheyenne Backup Engine Properties dialog box:

1. From the Windows 95 Task bar, double-click the Cheyenne Backup Engine icon.

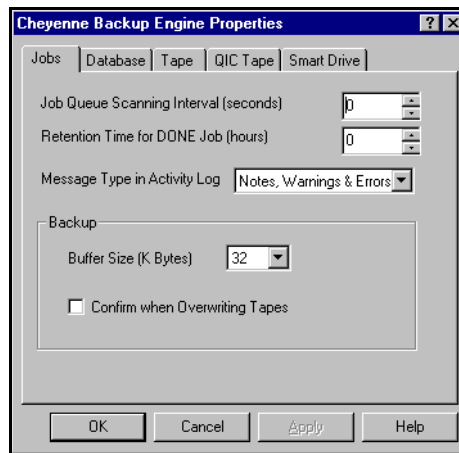
The Cheyenne Backup Engine dialog box opens:



2. Select the *Properties* option from the Engine menu.  
The Cheyenne Backup Engine Properties dialog box opens.  
Refer to the following sections for descriptions of the available properties.
3. Select the appropriate property tab and select your options.
4. Click OK when done.

## Jobs options

The Job options control when jobs in the job queue should be executed. The engine scans the job queue regularly, launching jobs as their execution date and time are reached.



The following options are available:

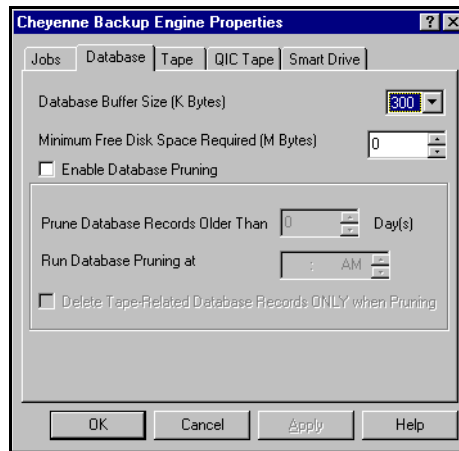
Option	Description
Job Queue Scanning Interval (seconds)	The time interval that the job queue is scanned. Specify a number between one and 9,999. The default is 10 seconds.
Retention Time for DONE Job (hours)	Amount of time that a job with a final status of "DONE" is retained in the job queue. Default is 24 hours (before the DONE jobs are deleted from the queue). Specify a number between 0 and 999.

---

Option	Description
Message Type in Activity Log	<p>Type of messages that are included in the Activity Log. By default, notes, warnings, and errors are included. Specify one of the following values:</p> <ul style="list-style-type: none"> <li>• None - No messages.</li> <li>• Errors - Only errors messages.</li> <li>• Warnings &amp; Errors - Warnings and errors that occur while running Cheyenne Backup.</li> <li>• Notes, Warnings &amp; Errors - The default selection, includes all notes, warnings, and errors.</li> <li>• Debug - Debugging messages are included along with Notes, Warnings, and Errors. This option should only be used for troubleshooting purposes.</li> </ul>
<b>Backup</b>	
Buffer Size (K Bytes)	<p>Buffer size used by Cheyenne Backup when performing a backup. Cheyenne Backup waits for the buffer to fill up with data before it writes to the tape drive. Default is 32 kilobytes. Select a buffer size from the drop-down list box.</p>
Confirm when Overwriting Tapes	<p>Select this option to have Cheyenne Backup prompt you for confirmation before overwriting a file. By default, this option is not set. If you set this option on, Cheyenne Backup will pop up a confirmation dialog box and wait five minutes for you to respond. If you do not respond, the job will be cancelled.</p>

## Database Options

The Database options allow you to specify the buffer size, disk space, and pruning options for the Cheyenne Backup database.



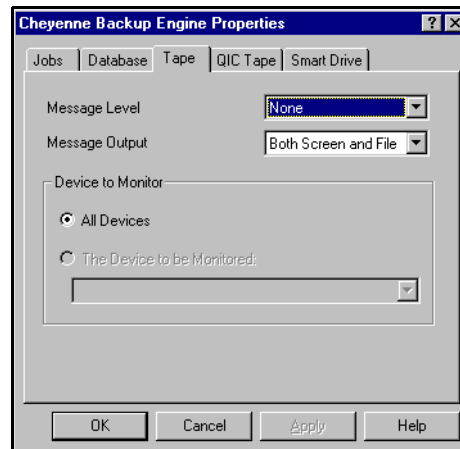
The following Database options are available:

Option	Description
Database Buffer Size (K Bytes)	Buffer size used for recording data to the Cheyenne Backup database. Default is 300 KB.
Minimum Free Disk Space Required (M Bytes)	Minimum amount of disk space (in megabytes) reserved for the Cheyenne Backup database. Default is 2 MB. You can specify a number between 1 and 10.
Enable Database Pruning	Enable pruning to delete data on backed up files and directories. By default, this option is selected. The Cheyenne Backup database may file up quickly if it is not pruned.
Prune Database Records Older Than _ Day(s)	Number of days a record is retained in the database before Cheyenne Backup prunes it. Default is 30 days. Specify a number between one and 365.

Option	Description
Run Database Pruning at _	Time of day the pruning operation is run. Default is 12:00 AM.
Delete Tape-Related Database Records ONLY when Pruning	When you reformat or erase a tape, Cheyenne Backup will also delete the records in the database that pertain to the tape. Performing this extra step, however, can be a time-consuming process. Select this option to postpone deleting these records until pruning is performed.

## Tape Options

The Tape options allow you to generate a Tape Log that can be used for troubleshooting. You should generate a Tape Log for troubleshooting purposes only. The Tape Log can help you to resolve problems with your tape devices.



The following tape options are available:

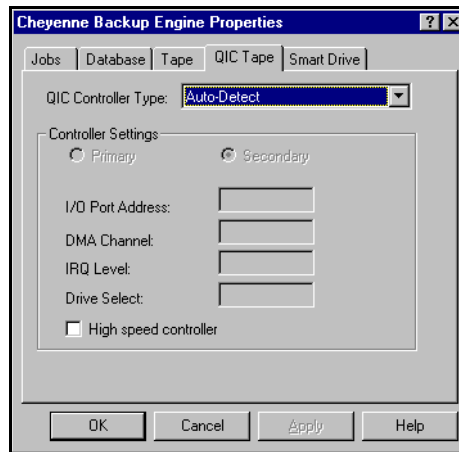
Option	Description
Message Level	<p>Determines the types of messages (if any) that are included in the Tape Log. The Tape Log will appear in the Log Manager window if an options other than <i>None</i> is selected. The following message levels are available:</p> <ul style="list-style-type: none"> <li>• None - The default value, nothing is logged.</li> <li>• Brief - Non-redundant messages sent by the drives are logged.</li> <li>• Detail - Every message sent by the drives is logged.</li> </ul>
Message Output	<p>Where the messages are sent. Specify one of the following:</p> <ul style="list-style-type: none"> <li>• Both Screen and File - The messages are recorded in the Tape Log as well as to a DOS box (the Tape Message window).</li> <li>• Screen Only - The messages are sent to the Tape Message window only.</li> <li>• File Only - The messages are recorded in the Tape Log only. You can view the Tape Log in the Log Manager.</li> </ul>
Device to Monitor	<p>Which device(s) are monitored. Select one of the following:</p> <ul style="list-style-type: none"> <li>• All Devices - All the devices connected to your machine will be monitored.</li> <li>• The Device to be Monitored - Select this option to monitor only one device. Drop down the device list and select the one to monitor.</li> </ul>

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## QIC Tape Options

Cheyenne Backup allows you to back up the commonly used types of floppy-controller based and parallel-port based one quarter inch (QIC) tapes, including Traevan™ tapes.

The Backup Engine Properties QIC Tape tab allows you to configure your system for the type of QIC tape you wish to use.



The following QIC controller types are supported:

Controller Type	Available Settings
Auto-Detect	High speed controller
Standard Floppy Controller	Primary/secondary DMA Channel IRQ Level Drive Select High speed controller

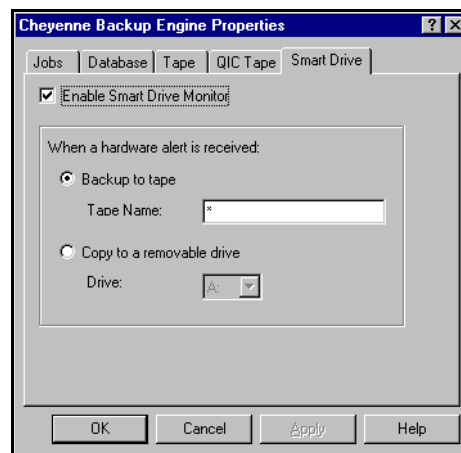


<b>Controller Type</b>	<b>Available Settings</b>
Colorado FC10 & FC20	I/O Port Address DMA Channel IRQ Level High speed controller
Iomega Floppy Controller	Primary/Secondary DMA Channel IRQ Level Drive Select High speed controller
Colorado Trakker	I/O Port Address IRQ Level High speed controller
MicroSolutions Parallel	I/O Port Address IRQ Level High speed controller
Shuttle Parallel	I/O Port Address IRQ Level High speed controller

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## Smart Drive options

The Smart Drive Monitor is available for machines that support the S.M.A.R.T. Drive standard. This option allows you to specify an automatic disaster response when a hardware alert is detected.



The following options are available:

Option	Description
Enable Smart Drive Monitor	Select this option to enable the Smart Drive Monitor.
Backup to tape	Back up hard drive to tape when a hardware alert is received.
Tape name	Name of tape to back up to.
Copy to a removable drive	Copy hard drive to a removable drive when hardware alert is received.
Drive	Alternative disk drive to which problem drive is copied.



# 7



## Chapter

# THE JOB QUEUE

Information about all jobs is stored in Cheyenne Backup's job queue.

**In this chapter, you will learn:**

**Page**

- |     |   |  |
|-----|---|--|
| 7-2 | ➤ | About the Job Queue Manager                          |
| 7-3 | ➤ | How to find job information in the Job Queue Manager |
| 7-9 | ➤ | How to manage jobs in the job queue                  |

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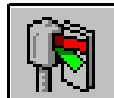
## About the Job Queue Manager

Every time you run or schedule a job with the Cheyenne Backup Manager, you submit it to the Cheyenne Backup job queue. Information about all jobs (such as execution time, status, last result, and owner) is stored here. Cheyenne Backup continuously scans the job queue for jobs that are ready to be executed. At the appropriate date and time, the job is executed.

### To open the Job Queue Manager:

1. Click Job Queue button on the Quick Access bar.

The Job Queue Manager opens:



View information on job selected in the status window.

The screenshot shows the Cheyenne Backup Job Queue Manager window. On the left is the Job Queue Manager toolbar. The main area contains a table of jobs. The selected job is highlighted in blue. On the right is the Status window, which displays details for the selected job. A label 'Job Queue Manager toolbar' points to the toolbar on the left. A label 'Status window' points to the status window on the right. A label 'View information on job selected in the status window.' points to the status window. A label 'Drag this bar to view additional fields in the status window:' points to a horizontal bar at the bottom of the status window.

Status	Execution Time	Job Type
● DONE	<Run Now>	Backup
● DONE	<Run Now>	Count
● DONE	<Run Now>	Count
● DONE	<Run Now>	Backup
● DONE	<Run Now>	Backup
● DONE	<Run Now>	Backup
● 99%	<Run Now>	Backup
● READY	11/03/95 6:00 AM	Backup
● HOLD	11/03/95 6:00 AM	Backup
● READY	12/01/95 5:00 AM	Restore
● READY	12/01/95 10:00 PM	Count

Job Queue Manager toolbar

Status window

Job Type: Backup  
Status: ACTIVE  
Last Result:  
Owner: WILLIAMC  
Execution Time: <Run Now>  
Submitted Time: 11/02/95 12:54 PM  
Description:  
Source: My Computer\C:

Drag this bar to view additional fields in the status window:


## Viewing job information

The Job Queue Manager provides detailed information on each job in the queue.

### The Status window

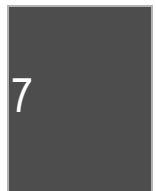
All jobs are listed in the Status window in the order in which they are scheduled to be executed (or have been executed).

Status types    Jobs may have the following status:

Status	Description
Active/Percent complete	Job is active. After initial startup, the percentage complete  is shown.
Ready	Job is waiting to execute. Repeating jobs revert to a <i>Ready</i> status after they have been executed.
Hold	Job is suspended.
Done	Job is complete and will not be repeated. Jobs with a <i>Done</i> status are held in the job queue for a specified number of hours.

Fields in the status window    The following job information is included for each job in the job window (use the scroll bar at bottom of window to see additional information):

Field	Description
Status	Job status.
Execution Time	Time of next scheduled execution (or time of last execution if job status is complete).



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Field	Description
Job Type	Type of job (Backup, Restore, Copy, etc...)
Last Result	Result of last job execution.
Owner	Name of person who submitted the job.
MB Processed	Megabytes processed during job.
Elapsed Time	Time elapsed during job.
MB/minute	Megabytes processed per minute.
Total files	Total files processed.
Description	User-define description of this job.

**The *Last Result* field** The *Last Result* field tells you whether or not your executed job was successful. And, if it wasn't successful, the *Last Result* field helps you figure out why the job may have failed.

Last Result	Explanation	Possible Causes
Completed	All of the nodes and drives/shares were processed.	n/a
Incomplete	Some nodes and/or drives/shares were missed.	A machine was turned off, a share was not available, or some files were missed.
Cancelled	The user cancelled the job.	Someone cancelled the job from the Job Queue, answered NO or CANCEL to a prompt, or the job required the user to answer OK or to insert a tape but the timeout was reached and the job was cancelled. (Timeout is set in the Tape options in the Backup Manager window.)

Last Result	Explanation	Possible Causes
Failed	The job was started but could not be completed.	There was an error reading from or writing to the tape, the tape group was already open, there was no tape in the drive, or a memory allocation error occurred.
Run Failed	The job was started, but the program that runs the job (the Job Runner) failed.	There was not enough memory to run the job or a DLL file was not found.
Crashed	The job was started, but before it was completed, something happened to the Job Runner and Job Runner could not update the job queue.	A system error occurred in the job, such as a memory violation.

**Changing the sort order** You can sort the jobs in the status window by Status, by Execution Time, or by Job Type.

**To change the sort order, either:**

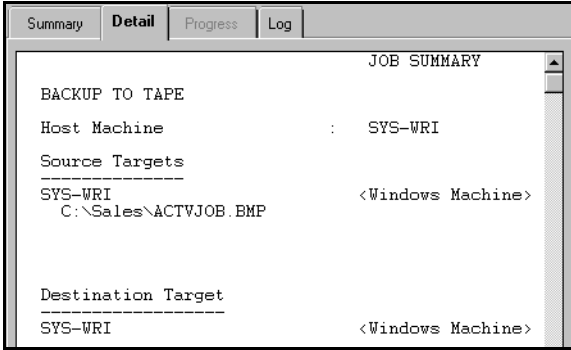
- Click on the field title in the status window, or
- Click in the status window with your right mouse button. Then select *Sort by* from the pop-up menu. Select the field you wish to sort by.



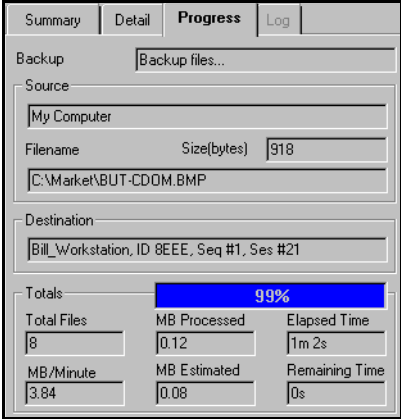
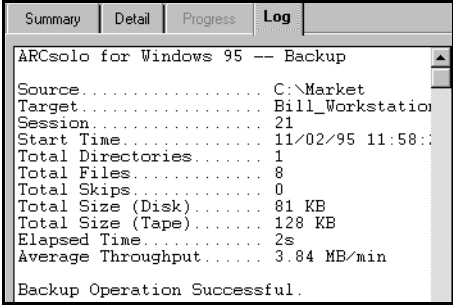
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## Information on a selected job

You can view information on a single job in the job queue by selecting the job in the status window and clicking one of the following tabs:

Tab	Description
Summary	Lists the information from each field in the status window for the selected job. Also includes relevant source and destination information.
Detail	Displays job details, including the source and destination target(s) and tape statistics, such as sequence and session number. 



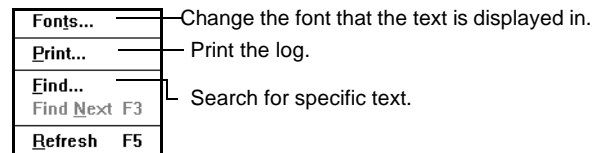
Tab	Description
<p>Progress</p>	<p>Monitors the real-time status of an active job. You can also see the status in the <i>Status</i> field on the left side of the Job Queue Manager.</p> 
<p>Log</p>	<p>Displays the log report for jobs that have been executed. The level of detail in the log is determined when you set up a job. You can select to see all of the activity that occurred while the job was running or just the summary information (which includes source, destination, session number, and totals along with any errors that may have occurred). You also have the ability to disable reporting.</p> 



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## Printing Detail and Log information

To print detail or log information, click your *right* mouse button on the Detail or Log window, then select *Print* from the pop-up menu.



You can also use this menu to change the text font or to search for specific text.

## Searching for text






To search for text on the Detail or Log window, click your *right* mouse button, then select *Find* from the pop-up menu.

## Changing the font

To change the font type on the Detail or Log window, click your *right* mouse button on the window, then select *Font* from the pop-up menu.

## Managing the jobs

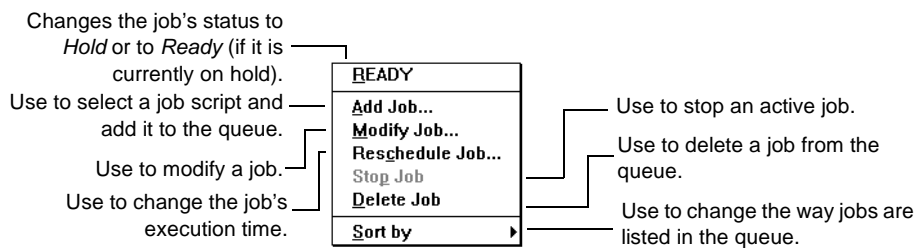
You can manage the jobs in the job queue using the Job Queue Manager toolbar. The available options are described in the following table:

Button	Function	Description
	<b>Add</b>	Add a job to the Job Queue using a previously saved script. To add a job, click the Add button, then select a script from the Add Job dialog box.
	<b>Reschedule</b>	Reschedule a job. You can change its date, time, or status. You can also resubmit a <i>Done</i> job. To reschedule a job, select the job, then click the Reschedule button. Enter the new information in the Reschedule Job dialog box.
	<b>Modify</b>	Modify a job. You can add options or additional sources to an existing job. To modify a job, select the job, then click the Modify button. The Manager window for this job opens. Enter your changes and click the Run/Schedule button.
	<b>Stop</b>	Cancel an active job. A repeating job can be rescheduled for its next regular interval. To stop a job, select the job, then click the Stop button.
	<b>Delete</b>	Delete the job from the job queue. If the job is active, it will be cancelled, then deleted. Note that repeating jobs <i>are not rescheduled</i> once they are deleted from the queue. To delete a job, select the job, then click the Delete button.

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## Using the hidden Job Queue menu

You can also perform job management options using the hidden menu in the Status window. In the status window, click the job with your *right* mouse button. The following pop-up menu opens:



## Changing the job status

To change the status of a job, either:

- Select the job, then click the Reschedule button. Select a new status.
- Select the job with your *right* mouse button, then select *Hold* (if the current status is Ready) or *Ready* (if the current status is Hold).

# 10

## Chapter

# CREATING AND VIEWING REPORTS

This chapter explains how to access, view, or generate the available logs and reports.

**In this chapter, you will learn:**

<i>Page</i>	
10-2	➤ About the Activity Log
10-5	➤ About the Tape Log
10-6	➤ About the reports in the Reports Manager
10-10	➤ How to configure and view the Operation Log for a job

---

## Report basics

Cheyenne Backup provides the following options for displaying logs and reports:

- **Activity Log:** Logs all Cheyenne Backup activity.
- **Tape Log:** Logs all tape activity (for debugging purposes only)
- **Reports Manager:** Generates reports from the Cheyenne Backup database for viewing or printing.
- **Operation Logs:** Logs activity related to a specific job.

## Viewing the Activity Log

The Activity Log contains comprehensive information about the operations performed by Cheyenne Backup. It provides an audit trail of all Cheyenne Backup activity, including every job that is run.

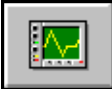
For each job, the log includes the following:

- Time the job started and ended
- Type of job
- Average throughput of the data
- Number of directories and files processed (backed up, copied, etc.)
- Job session number and Job ID
- Result of the job
- Errors and warnings that occurred

You can scan this log every day to see if any errors have occurred. You can also use it to find out a session number in case you need to restore a specific session.

To access the Activity Log:

- 1. Click the Log button on the Quick Access bar.  
The Logs window opens:



Refresh screen  
Print log  
Delete entry


The icon indicates the severity of the message:  
 i = Informational  
 ! = Warning  
 E = Error

This is the Job ID. (Each job has a unique Job ID.)

Timestamp	Message
11/02/95 12:55:58	14 Back up Session 14 on tape SQL Data
11/02/95 12:56:05	14 1 Directories 7 Files (80 KB) Backe
11/02/95 12:56:05	14 96 KB Written to Tape.
11/02/95 12:56:05	14 Elapsed Time: 3s
11/02/95 12:56:05	14 Average Throughput: 1.92 MB/min
11/02/95 12:56:44	14 Backup Operation Successful.
11/02/95 13:18:05	15 Run Scan Job Now.
11/02/95 13:18:06	15 Start Scan Operation. (QUEUE=1, JOB:
11/02/95 13:18:16	15 Use tape Bill_Workstation, ID 8EEE.
11/02/95 13:18:16	15 Source Session 1 on tape Bill_Works
11/02/95 13:21:19	15 44 Directories 857 Files (49.95 MB
11/02/95 13:21:19	15 52.48 MB Read from Tape.
11/02/95 13:21:19	15 Elapsed Time: 3m 3s
11/02/95 13:21:19	15 Average Throughput: 17.20 MB/min
11/02/95 13:22:48	15 Scan Operation Successful.




To print the Activity Log:


- 1. (Optional) Select the records you want to print.  
If you only want to print selected records, highlight the first record that you want, press and hold down your Shift key while you select the remaining records.
- 2. Click the Print button.   
You can also click your right mouse button.
- 3. Select your print options and click OK.

---

### To Refresh the Activity Log:

- > Click the Refresh button  if you have been looking at the Activity Log for awhile and you want to update the information in the log without having to close the Manager window and then re-open it. You can then press the END key to move to the end of the log to see the latest information.

### To Delete the Activity Log:

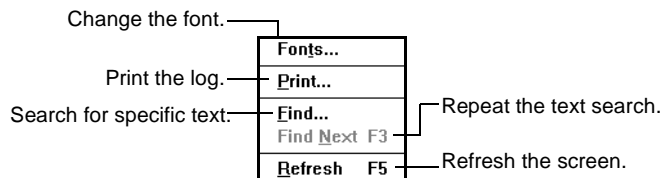
- > Click the Delete button  to delete all of the information from the Activity Log.

### To Search for text:

- > To search for a text string, click the Activity Log with your right mouse button. Then select Find from the pop-up menu.

### To use the hidden menu:

- > If you click your right mouse button in the Activity Log, the following pop-up menu opens:





## Viewing the Tape Log

The Tape Log contains messages sent by the tape drives to Cheyenne Backup. This log is not generated for normal operation. It is designed for debugging purposes only. To generate a Tape Log, you must configure the Tape options for the Cheyenne Backup Engine. Refer to Chapter 11, “The Cheyenne Backup Engine”, for more information.

To view the Tape Log, click the Log button from the Quick Access bar. If a Tape Log has been generated, a Log tab is displayed. Click the Log tab.

---

## Using the Report window

The Report window offers several reports that contain information from Cheyenne Backup's database.

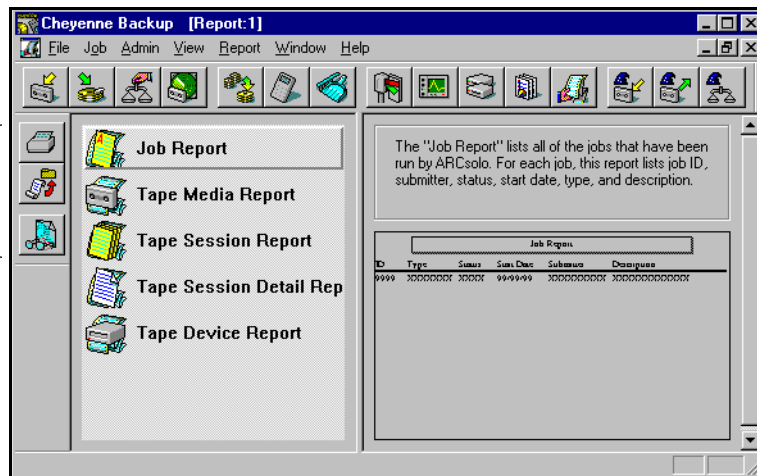
### To open the Report window:

1. Click the Reports button from the Quick Access bar.

The Reports Manager window opens:



Send to printer  
Send to print file  
View




---

### Printing a report


You can print any report that is listed in the Reports Manager.

### To print a report:

1. Highlight the report you want to print.  
You can also print a report that you are currently viewing.
2. Click the Print to Printer button. 
3. Select the print options you want.
4. Click OK.


Printing a report to a file


To print a report to an ASCII print file:

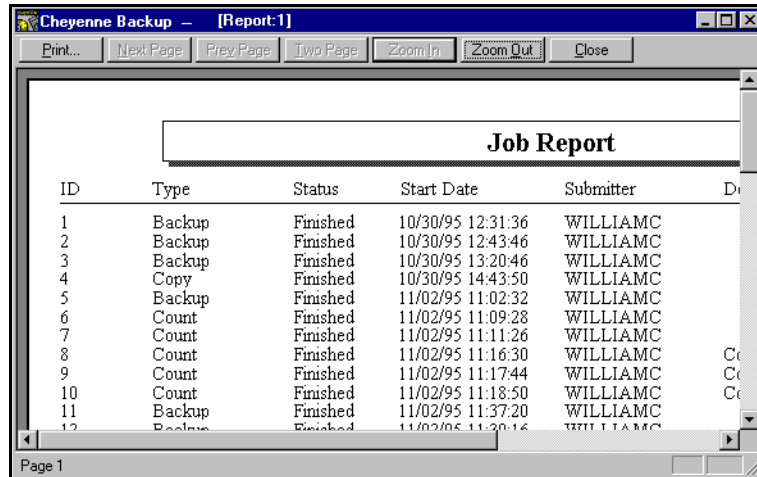
1. Highlight the report you want to print.
2. Click the Print to File button. 
3. Enter a name for the report file.
4. Click OK.

Viewing a report

To view a report:

1. Highlight the report you want to view.
2. Click the Print Preview button. 

You can also double-click on the report name.
3. If applicable, select the tape, session, or device you want to view information about.
4. Click your cursor, which now looks like , to enlarge the text on the report.



Types of reports available

This section describes the different types of reports that can be generated from the Report Manager.

---

<u>Job Report</u>	<p>This report provides a brief listing of all jobs that have been run by Cheyenne Backup. It contains the information that is found in the Database Manager on the Job View window.</p> <p>For each job, this report lists the following information: Job ID, Job type, Job status, Start time, Submitter, and Description.</p>
<u>Tape Media Report</u>	<p>This report provides information about the tapes you use with Cheyenne Backup. It contains the information that is found in the Database Manager on the Tape View window. You must select a tape before you can generate this report.</p> <p>This report includes the following: tape name, ID, and sequence number; media type; usage time; creation, format, and expiration date; amount of data written to the tape; number of errors; tape usage statistics.</p>
<u>Tape Session Report</u>	<p>This report provides information about all of the backup sessions that are on tape. (Each source you select to back up is saved on tape as an individual session.) The report contains the session information that is found in the Database Manager on the Job View or Tape View window when you highlight a record and click the Session tab.</p> <p>When you go to view this report you will be asked if you want the report to include all tapes or just one that you select. For each tape session, this report includes the following: Session number, Status, Source selected, Start time, End time, Session method, Flags, Total files/KB in the session.</p>
<u>Tape Session Detail Report</u>	<p>This report includes all of the information found in the Tape Session Report and also lists every file that was backed up in each session. The report contains the session</p>

information that is found in the Database Manager on the Job View or Tape View windows when you highlight a record and click the *Files* tab.

When you go to view this report you will be asked to select a tape and a session from that tape.

---

### Tape Device Report

This report provides information about all of the tape devices you are using with Cheyenne Backup. It contains the information that is found in the Database Manager on the Device View window. This report gives you a convenient way of getting a hard copy printout of your Device View information.


When you go to view this report you will be asked to select a tape device. For each tape device, this report includes the following: vendor, firmware revision, SCSI ID, device type, last head cleaning date, head cleaning count, amount of usage, and errors.

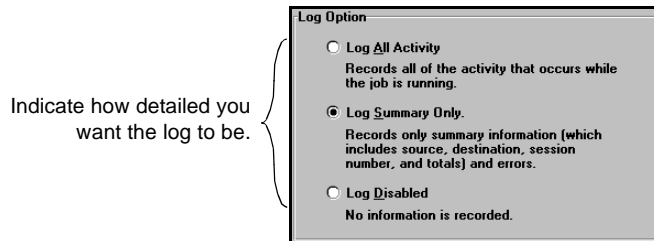
---

## Operation Log

An Operation Log is generated for each job that is run by Cheyenne Backup. You can specify the level of detail in the log by choosing the Log options before you submit the job.

### To configure the log options for a job:

1. Click the Options button  in the open window.  
The Options dialog box opens.
2. Click the Log tab.



3. Select an option.

The log options are described in the following table:

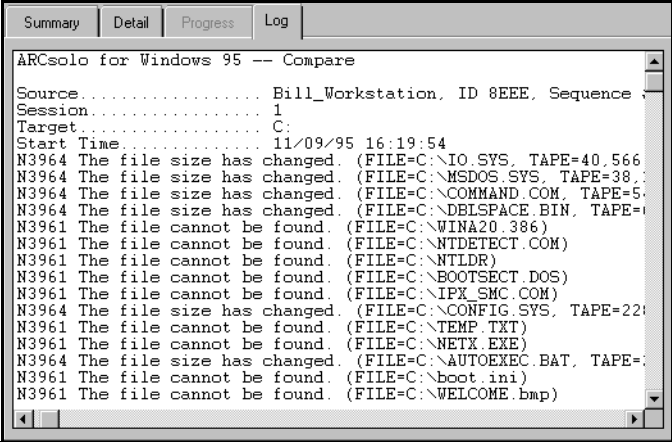
Option	Description
Log All Activity	Record all of the activity that occurs while the job is running.
<i>Log Summary Only</i> (the default selection)	Record summary information of the job (including source, destination, session number, and totals) and errors.
Log Disabled	Do not record any information about this job

---

### Viewing the Log Report

You can view the Log report for a job from the Job Queue window or Database Manager (Job View).

To view the report in the Job Queue window, select (highlight) the job in the status window, and click the Log tab. A sample Log Report is shown below:







## A

- Activity Log 10-2
  - Configuring 11-6
  - Deleting 10-4
  - Printing 10-3
  - Refreshing 10-4
- Adapter card 8-3
- Adding a job 6-17, 7-9
- Append to Tape 6-29
- Archive bit 3-5

## B

- Backup 3-1 to 3-11
  - Append to tape 6-29
  - Basics 3-2
  - Compare tape to disk 6-32
  - Compress file 6-24
  - Database recording options 6-24
  - Delete files after backup 6-24
  - Deny none 6-28
  - Deny write 6-28
  - Destination 3-3
  - Device, selecting 1-7, 3-9
  - Differential 3-4, 6-23
  - Disable file estimate 6-24
  - Eject tape 6-23
  - Features 1-4
  - File sharing options 6-27
  - First tape options 6-29
  - Full 3-4, 6-23
  - Incremental 3-4, 6-23
  - Log options 6-22
  - Method options 6-22
  - Open file retry 6-27
  - Operation options 6-23
  - Overwrite tape 6-29
  - Recording options 6-24

- Retry options 6-26
- Running 3-3
- Scan tape contents 6-31
- Selecting a source 3-2
- Session password 6-28
- Tape options 6-28
- Timeout for tape 6-29
- Verification options 6-31
- Virus options 6-32
- Base directory 6-20
- Browser
  - Introducing 2-7
  - Machine tree 2-8
  - Preffered shares 2-11
  - Selecting Windows machines 2-10
  - Tape tree 2-15
- Busy device 6-12, 6-13

## C

- Checklist for getting started 1-6
- Cheyenne Backup
  - About 1-2
  - Database 9-1
  - Installing 1-7
  - Starting 2-2
  - What is Cheyenne Backup 1-2
- Compare
  - Log options 6-22
  - Operation options 6-25
  - Tape options 6-31
  - Timeout for tape 6-31
- Compare tape to disk 6-32
- Comparing tapes 5-2
- Compress files on backing up 6-24
- Compression 8-8
- Copy
  - Create empty directories 6-25
  - Database options 6-25
  - Delete files 6-25
  - Deny none 6-28

# I N D E X

- Deny write 6-28
- Destination options 6-19
- File sharing options 6-27
- Log options 6-22
- Method options 6-22
- Mirror image 6-25
- Open file retry 6-27
- Operation options 6-25
- Retry options 6-26
- Virus options 6-32
- Copying files
  - Basics 5-8
  - To WORM drives 5-9
- Count
  - Files 5-10
  - Log options 6-22
  - Manager 5-10
  - Operation options 6-25
  - Virus options 6-32
- D**
- Database 9-1
  - Basics 9-2
  - Deleting records 9-4
  - Device statistics 9-10
  - Device View 9-10
  - Error Log tab 9-10
  - Files tab 9-6, 9-9
  - Job View 9-5
  - Log tab 9-6
  - Options for backup 6-24
  - Session information 9-6
  - Session tab 9-6, 9-9
  - Statistics tab 9-8, 9-10
  - Summary View 9-4
  - Tape information 9-8
  - Tape statistics 9-8
  - Tape View 9-7
- Database management 1-3
- Database Manager
  - Deleting records 9-4
  - Opening 9-3
  - Selecting a view 9-3
  - Sorting 9-4
- Database options 11-7
- Database processing 11-2
- Database Pruning 11-7
- Delete
  - Files 5-11
  - Files after backup 6-24
  - Job 7-9
  - Log options 6-22
  - Manager 5-11
- Deny none 6-28
- Deny write 6-28
- Destination
  - Selecting 1-12
  - Selecting for backup jobs 3-3
  - Tape 2-15
- Destination options 6-19
  - Directory Structure 6-19
  - File Conflict Resolution 6-21
- Detail window 7-6
- Device busy 6-12, 6-13
- Device Manager 8-1 to 8-9
  - Adapter card information 8-3
  - Basics 8-2
  - Tape device information 8-3
  - Tape information 8-4
- Device View 9-10
  - Error Log tab 9-10
  - Statistics tab 9-10
- Device, selecting for backup 1-7, 3-9
- Differential backup 3-4, 6-23
- Directory filter 6-6
- Directory Structure options 6-19
- Disable database recording 6-24
- Disable file estimate 6-24
- Disaster recovery 4-10
- Drive busy 6-12, 6-13

# I N D E X

## E

- Eject tape 6-23, 8-9
- Engine 11-1 to 11-12
  - Database options 11-7
  - Database processing 11-2
  - Job options 11-5
  - Job processing 11-2
  - Properties 11-4
  - Smart Drive options 11-12
  - Starting 2-6, 11-2
  - Tape options 11-8
- Erasing a tape 8-6
- Error Log 9-10
- Error messages 2-18
- Errors
  - Tape 9-8, 9-10

## F

- File Attributes filter 6-7
- File Conflict Resolution options 6-21
- File Pattern filter 6-5
- File sharing options 6-27
- Filters
  - Available filters 6-2
  - Basic information 6-2
  - Directory 6-6
  - Exclude vs Include 6-2
  - File Attributes 6-7
  - File Modified/Created/Accessed filters 6-8
  - File Pattern 6-5
  - Files Accessed 6-9
  - Files Created 6-9
  - Files Modified 6-9
  - Include vs Exclude 6-2
  - Modifying 6-10
  - Specifying dates 6-9
  - Viewing existing 6-10
- Find 7-8

- Find Next 7-8
- First Tape options 6-29
- Fonts
  - Changing 7-8, 10-4
  - Job Queue 7-8
- Formatting a tape 1-12, 8-5
  - Expiration date 8-5
- Full backup 3-4, 6-23

## G

- Global options, applying 6-18

## H

- Hardware requirements 1-7
- Help
  - Error messages 2-18
  - Online help system 2-18

## I

- Incremental backup 3-4, 6-23
- Installing 1-7

## J

- Job fails 6-12, 6-13
- Job options 11-5
- Job processing 1-3, 11-2
- Job Queue 7-1
  - Adding a job 7-9
  - Deleting a job 7-9
  - Detail information 7-6
  - Features 1-5
  - Fonts 7-8
  - Hidden menu 7-10
  - Information on a selected job 7-6
  - Last Result field 7-4
  - Log information 7-7
  - Managing jobs 7-9

# I N D E X

- Modifying a job 7-9
  - Printing Detail and Log information 7-8
  - Progress information 7-7
  - Rescheduling a job 7-9
  - Searching for text 7-8
  - Sort order 7-5
  - Status window 7-3
  - Stopping a job 7-9
  - Summary information 7-6
  - Viewing job information 7-3
  - Job Report 10-7
  - Job script 6-15
  - Job View 9-5
    - Files tab 9-6
    - Log tab 9-6
    - Session tab 9-6
- L**
- Last Result field 7-4
  - Log
    - Activity Log 10-2
    - Operation log for a job 10-10
    - Window in Job Queue 7-7
  - Log options 6-22, 10-10
  - Login name
    - For remote machines 2-16
  - Logs Manager
    - Deleting the Activity Log 10-4
    - Hidden menu 10-4
    - Opening 10-3
    - Printing 10-3
    - Refreshing 10-4
    - Searching for text 10-4
  - Long Erase 8-7
- M**
- Managing Databases 9-1
  - Media error 9-8
- Menu bar 2-5
  - Merging a tape 5-5
  - Method options 6-22
  - Mirror 6-25
  - Modifying a job 7-9
- O**
- Online help 2-18
  - Operation Log 10-10
  - Operation options
    - Backup 6-23
    - Compare 6-25
    - Copy 6-25
    - Count 6-25
    - Database 6-25, 6-26
    - Restore 6-25
    - Scan 6-25
  - Overwrite tape 6-29
- P**
- Password
    - For remote machines 2-16
  - Preferred shares 2-11
  - Printing
    - Activity Log 10-3
    - Job Queue 7-8
  - Progress window 7-7
  - Pruning the ARCSolo database 11-7
- Q**
- Quick Erase 8-7
- R**
- Record
    - Detail information 6-24
    - Disable database recording 6-24, 6-25, 6-26

- Job and session information 6-24
    - Job information 6-25, 6-26
  - Recovering from a disaster 4-10
  - Recovering the ARCSolo database 5-6
  - Recovery Disk
    - Preparing 1-8, 3-10
    - Recovering from a disaster 4-10
  - Recovery disk 4-10
  - Refreshing the Activity Log 10-4
  - Registry files, restoring 6-26
  - Repeat Method in scheduling 6-13
  - Report Manager 10-6
  - Reports
    - Job Report 10-7
    - Printing 10-6
    - Printing to file 10-7
    - Tape Device Report 10-9
    - Tape Media Report 10-8
    - Tape Session Detail Report 10-8
    - Tape Session Report 10-8
    - Viewing 10-7
  - Rescheduling a job 7-9
  - Restore
    - Basics 4-2
    - Create empty directories 6-26
    - Database options 6-26
    - Destination 4-2
    - Destination options 6-19
    - Features 1-4
    - File Conflict Resolution options 6-21
    - Log options 6-22
    - Operation options 6-25
    - Registry Files 6-26
    - Restore by Tape 4-8
    - Restore by Tape Media 4-9
    - Restore by Tree 4-5
    - Selecting data from tape 4-5
    - Source views 4-5
    - Tape options 6-31
    - Timeout for tape 6-31
  - Restore by Tape 4-8
  - Restore by Tape Media 4-9
  - Restore by Tree 4-5
  - Retry options
    - Backup 6-26
    - Copy 6-26
    - File sharing 6-27
    - Open file retry 6-27
  - Run/Schedule button 6-11
- 
- ## S
- Save button 6-16
  - Scan
    - Log options 6-22
    - Operation options 6-25
    - Scanning options 5-4
    - Tape 5-4
    - Tape options 6-31
    - Timeout for tape 6-31
  - Scan tape contents 6-31
  - Scheduling
    - Basic steps 6-11
    - Calendar 6-13
    - Repeat Method 6-13
    - Scheduling your job 6-12
    - Specifying date/time 6-13
  - Script 6-15
    - Add job to queue 6-17
    - Creating 6-16
  - Search 4-6, 7-8
  - Searching for text
    - Job Queue 7-8
  - Security
    - Dialog box 2-16
  - Selecting a backup device 1-7, 3-9
  - Session password 6-28
  - Shares, preferred 2-11
  - Smart Drive options 11-12
  - Soft read/write error 9-8, 9-10
  - Software requirements 1-7
  - Sort

# I N D E X

- Job Queue 7-5
  - Source
    - Selecting 1-11, 3-2
    - Tape 2-15
  - Starting Cheyenne Backup 2-2
  - Stopping a job 7-9
  - Summary View 9-4
  - Summary window 7-6
- T**
- Tape
    - Comparing tapes 5-2
    - Compressing data 8-8
    - Devices 8-3
    - Eject 8-9
    - Erasing 8-6
    - Expiration date 8-5
    - Formatting 8-5
    - Life 8-5
    - Merging 5-5
    - Overwrite 6-29
    - Recovering the ARCsolo database 5-6
    - Scan Tape option 5-4
    - Scanning 5-4
    - Scanning options 5-4
    - Selecting for a job 2-15
    - Statistics 8-4
    - Timeout 6-29
  - Tape Device Report 10-9
  - Tape errors
    - Media 9-8
    - Soft read/write 9-8, 9-10
  - Tape Log 11-8, 11-9
  - Tape Media Report 10-8
  - Tape options 11-8
    - Additional tape options 6-30
    - Backup 6-28
    - Compare 6-31
    - Restore 6-31
    - Scan 6-31
  - Tape Session Detail Report 10-8
  - Tape Session Report 10-8
  - Tape View 9-7
    - Files tab 9-9
    - Session tab 9-9
    - Statistics tab 9-8
  - Text search 7-8
  - Timeout for tape 6-29
  - Tutorial
    - Formatting a tape 1-12
- U**
- Use Deny None if Deny Write Fails 6-27
  - Use Lock Mode if Deny Write Fails 6-27
- V**
- Verification options 6-31
  - Version History 4-6
  - Virus options 6-32

# I N D E X