

ARCserve® Server Guide

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USING THIS GUIDE

This chapter provides you with an overview of the manual and shows you how to find and use the information you need.

In this chapter, you will learn:

Page

- | | |
|--------|--|
| 1-2 ➤ | What the purpose of this guide is and how to use it |
| 1-4 ➤ | How to find information in this guide and how to use it once you've found it |
| 1-8 ➤ | The basics of using ARCserve menus and screens |
| 1-12 ➤ | How to switch between ARCserve and NetWare screens |

Using this guide

What is the purpose of this guide?	The purpose of this guide is to show you how to use the ARCserve Server, the “backend”. The ARCserve Server consists of two major components: ARCserve Server and ARCserve Tape Server.
Who should read this guide?	Supervisors should read this guide. All of the functions described in this guide are for people responsible for maintaining and administering the server based components of ARCserve.
What’s in this guide?	<p>There are nine chapters and one appendix in this guide. The first two chapters provide overview information about this guide and ARCserve’s server based components and how they work together.</p> <p>The rest of the chapters teach you the specifics of using the ARCserve Server. These chapters include:</p> <ul style="list-style-type: none">➤ “Loading ARCserve” - provides procedures for loading the ARCserve NLMs on the server. It also details the NLM Loader screen, which appears when ARCserve is first loaded.➤ “Running Jobs from the Server Console” - includes information about performing backup and restore jobs from the backend.➤ “Managing ARCserve from the Server Console” - includes information about setting ARCserve configuration options, and performing management functions from the backend.➤ “Managing Hardware at the Server Console” - explains how to get information about your system’s adapter cards, tape devices and tape

groups, how to set data compression, and how to clean the heads of your tape drives. This chapter also includes information for performing tape operations such as tape formatting, erasing and copying.

- “Disaster Recovery” - contains important information on preparing your system for a disastrous data loss. This chapter will show you how to use ARCserve’s disaster recovery module.
- “Setting Up Alert Messaging” - contains information about the Alert NLM. This NLM alerts ARCserve users about troubles with the operation of the system.
- “Troubleshooting and System Messages” - contains typical problems that you might encounter while using ARCserve and solutions to those problems. A list of ARCserve related error messages, possible causes for the errors, and possible solutions to the errors is included in this chapter.
- “Using ASCONFIG.INI and TAPESVR.CFG” - provides information about modifying ARCserve parameters.

What should you already know?

All of the menus and screens associated with the ARCserve Server are character based. If you’ve used menu driven server based NLMs before, you will have all the skills you need to use the ARCserve Server.

For more information about using the ARCserve Server screens and menus, refer to the ‘Software Basics’ section of this chapter.

You should also be familiar with NetWare and the configuration of your server’s hardware.

Finding information in this guide (Style conventions)

Scanning the left column of each page

You'll notice that this guide uses a two column layout. The purpose of this is to increase your ability to scan a page. In the left column of each page, you will find three pieces of information:

- Margin headings
- Figure captions
- Notes and warnings

You can scan these items and get a summary of the information that is presented on each page.

The margin headings serve two purposes: they divide the page into sections (normal header function) and they act as a short summary for the section (paragraphs) that they represent.

The figure captions also serve two purposes: they identify a figure and they provide additional information about concepts being discussed on that page.

The notes and warnings each have an associated icon that appears in the left column. You can scan these icons for information that is critical to using ARCserve.

This is the icon for a note. Its purpose is to remind you to do something or to emphasize some important information.



This is the warning icon. Its purpose is to draw your attention to critical information, such as something that might cause damage to your files or directories



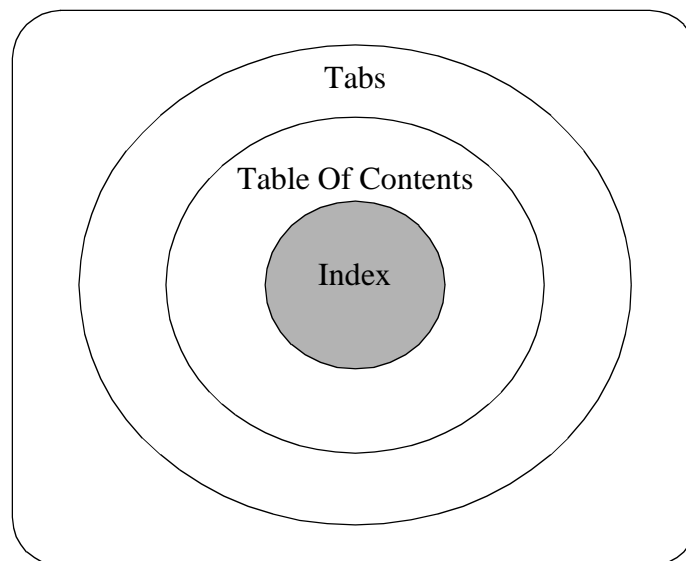
1

Using the Tabs, Contents, and Index

In addition to scanning the left column on each page, you can use the Tabs, Table of Contents, and Index to search for specific information.

Use the Tabs to find the chapter you want, use the Table of Contents to find specific sections within a chapter, use the Index to search for information by specific words or phrases, such as “Getting information about drives and tapes”.

Think of using the Tabs, Table Of Contents (TOC), and Index as aiming at a target. Tabs get close, the TOC gets you closer, and the Index should get you a bull'seye.



Using the information once you've found it

Each chapter contains typographic elements that are designed to increase your understanding of the information you are reading. For example, procedures are clearly divided into steps, supporting information is separated from the steps, and we've provided examples of procedures wherever possible.

Steps and substeps

Information you are to enter, or tasks you are to perform, are clearly separated into steps:

3. Select the Restore method that you'd like to use.

Each step contains the minimum amount of information you need to get the job done.

After most steps, you will find "sub-step" information. The purpose of the sub-steps is to provide you with more details about the operation you are going to perform:

3. Select the Restore method that you'd like to use.

You have four Restore methods from which to choose (refer to the methods on the previous page). You choose the method by clicking on the appropriate button...

If you are a more experienced user, you can simply read through the steps and follow the short concise directions that they give. If you need (or want) more information, read the sub-steps.

**Terms used in
this guide**

Most of the terms in this document are explained when we use them. For example, if you are reading the backup section of the document, and there is a concept that is critical to your understanding of backup, you will find it then and there, when you need it.

Software basics

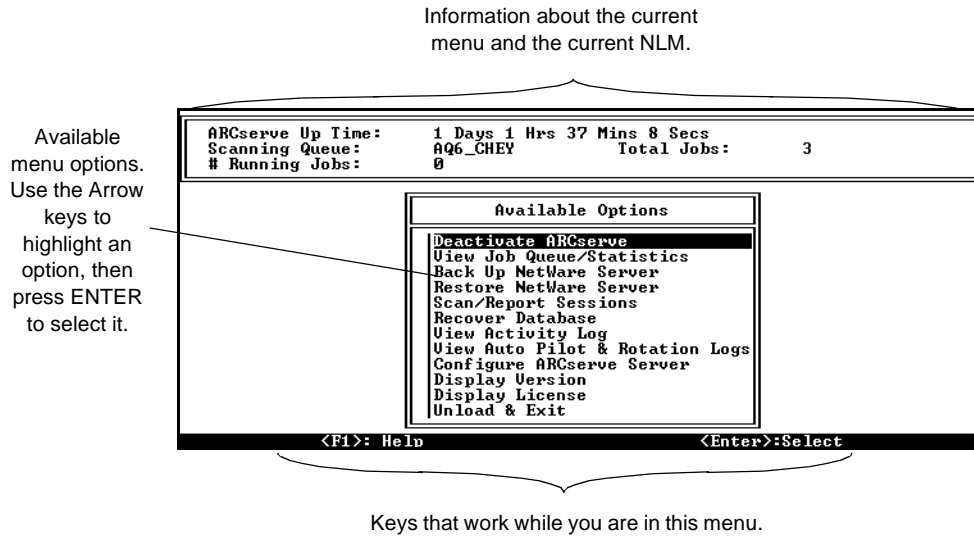
The interface to the ARCserve Server has some basic features that you should be familiar with before doing anything. Since the ARCserve Server NLM and the Tape Server NLM both use the same type of interface, the concepts in this section apply to both.

In this section, you will learn:

- How to use the menus
- How to use the screens
- How to move between NLMs that are loaded on the server

Basic menu features

The following figure shows a typical ARCserve Server menu, identifies its basic parts, and briefly describes them:



Basic screen features

The ARCserve Server uses two types of screens: informational and configurable.

The informational screens include reports and activity logs:

This screen is for information only. You can read what is in the log, but you can't change it.

Activity Log			
Nov-15 14:31:31 Job Summary:			
Start Time:	11/15/95 14:23:06	End Time:	11/15/95 14:31:31
Job Type:	Backup	Tape Name:	3718343572
#Nodes Requested:	1	#Nodes Missed:	0
#Errors:	0	#Warnings:	1
#Vol. Missed:	0	#Succ./Incomp:	1
#Failed:	0	#Miscompared:	0

Source:	NV-WRITER/SYS:	Session No:	2
Backup Status:	Successful	Reason:	
Compare Status:	Compare OK	Reason:	
#Estimated Files:	138	#Actual Files:	138
#Open Files:	0	#Files Miscompared:	0
#Errors:	0	#Warnings:	0
Backup ended with 0 errors and 1 warnings.			
Nov-15 16:04:10 ASDB 13644 KB disk space available			
<F1>:Help <Esc>:Exit <↑> <↓> <PgUp> <PgDn> <Ctrl PgUp> <Ctrl PgDn>			

Keys that work while you are using this screen. Normally the Up and Down Arrows and the PGUP and PGDN keys move you up and down through the screen, the ESC key returns you to the menu, and the F1 key gives you help for the screen.

The configurable screens are where you set options such as the maximum number of processes you can have running at once and whether to overwrite any tape in the drive.

Use the Arrows to highlight the field you want to change, then press ENTER to select it.

Type Y or N to change Yes or No answers.

Type numbers directly.

Press ENTER to leave a field after you've changed it.

Configuration	
Maximum # Concurrent Jobs:	16
Statistics broadcast & update frequency (seconds):	1
Minimum Cache Buffers Required to Start Jobs (<N>):	10
Preserve Log File Information For <n> Days:	30
Notify Owner at end of job:	Yes
Turn off all messages to workstations:	No
Overwrite ANY tape in drive:	No
Use SMS logic for DOS and MAC files also:	No
Change to ARCserve Realtime Message screen on alerts:	No
Disable Writing to the ARCserve Database:	No
Disable Writing to the ARCserve Activity Log:	No
Skip files Larger than 2 GB:	No
Preferred File Interleaving Protocol:	Automatic
File Interleaving Buffer Size (in K):	128
File Interleaving Maximum Nodes:	4
File Interleaving Timeout (in minutes):	15
Use 512 Byte Packet to Communicate with WS Agent:	No
<F1>:Help <F2>:Save/Done <Esc>:Exit	

Keys that work while you are using this screen. Enter the information in the fields on the right, then press F2 to save the screen or ESC to abandon your changes. Use the Arrow keys and PGUP/PGDN to move up and down through the options.

ARCserve and NetWare

Since the ARCserve Server consists of two key components (ARCserve Server NLM (ARCSERVE.NLM) and Tape Server NLM TAPESVR.NLM)), you will need to use NetWare commands to move between the various screens.

For example, if you are at the ARCserve Server Main Menu...

ARCserve Up Time:	1 Days 1 Hrs 49 Mins 24 Secs		
Scanning Queue:	AQ6_CHEY	Total Jobs:	3
# Running Jobs:	0		

Available Options

- Deactivate ARCserve
- View Job Queue/Statistics
- Back Up NetWare Server
- Restore NetWare Server
- Scan/Report Sessions
- Recover Database
- View Activity Log
- View Auto Pilot & Rotation Logs
- Configure ARCserve Server
- Display Version
- Display License
- Unload & Exit

<F1>: Help<Enter>: Select

...and you want to switch to the Tape Server Main Menu...

Tape Server Up Time:	1 Day 1 Hour 49 Minutes 28 Seconds
Active Operations:	0
I/O Buffers:	0 Bytes

Available Options

- Configuration
- Tape Device Management
- Changer Management
- Real-Time Statistics
- Tape Server Log
- Display Version
- Unload & Exit

<F1>: Help<Enter>: Select

...you have two choices:

1. Press ALT + ESC until you get to the screen that you want.

Or,

1. Press CTRL + ESC to get a list of all NLMs that are currently running
2. Select the screen that you want to use.
Type the number of the screen, then press ENTER.



These methods for switching between screens on a server are all features of NetWare. For more information about Novell's NetWare, check your NetWare User Guides.



INTRODUCTION TO THE ARCSERVE SERVER

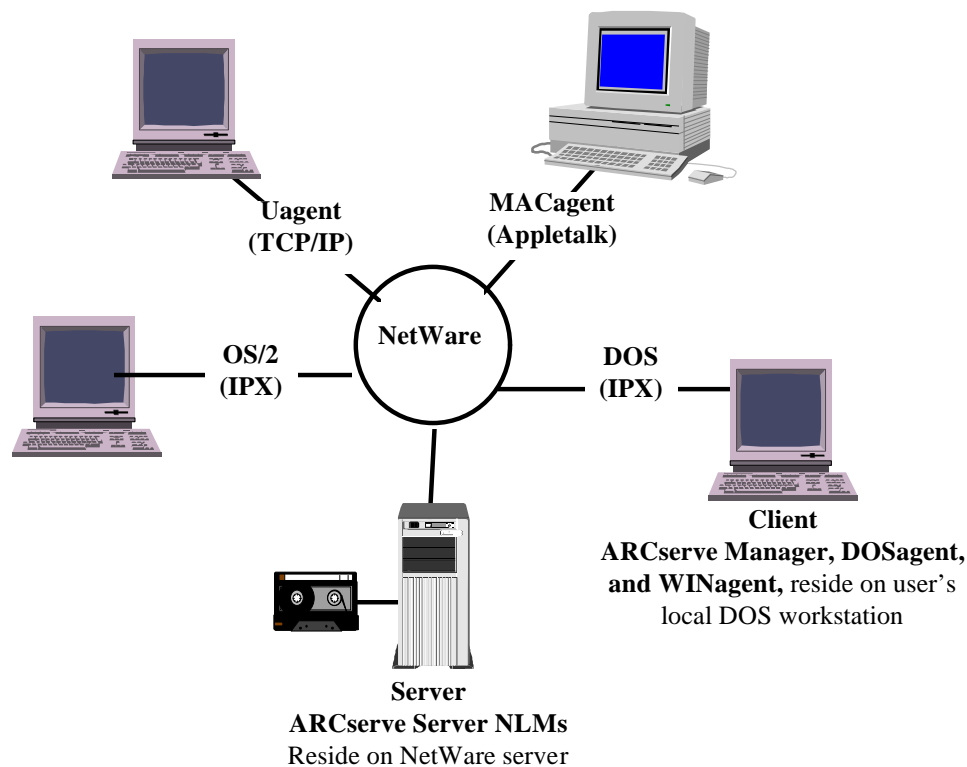
This chapter introduces the ARCserve Server and describes how it works.

In this chapter, you will learn:

Page	
2-2 ➤	About ARCserve's client/server architecture and the three basic modules that make up the ARCserve Server software
2-6 ➤	How the ARCserve Server modules are each made up of several NLMs (NetWare Loadable Modules)
2-8 ➤	How the ARCserve Server processes jobs
2-15 ➤	About the four ARCserve Server console screens

What is the ARCserve Server?

ARCserve uses a modular client/server architecture. The client component of ARCserve - the ARCserve Manager (Windows interface) - runs on the user's local workstation. The server component of ARCserve - the ARCserve Server modules - runs on a Novell NetWare server.



The ARCserve Manager and Agents use your Novell network to communicate with the ARCserve Server. The ARCserve Server consists of three functional modules: Job Processing, Database, and Tape Server. Each of these modules is introduced below.

Job processing



Jobs that you schedule to run at the ARCserve Server are processed by the ARCserve Server NLMs. ARCserve uses standard NetWare queueing services (Queue Management Services) to manage queued jobs, similar to the way print queues work under NetWare.

The Job Processing Module is constantly scanning the ARCserve job queue. When a job is ready to be run, the job processing module takes the job and runs it with the help of some dynamically loaded NLMs. For more information about the ARCserve job queue, refer to Chapter 11 in the *ARCserve Manager Guide*. For more information about the dynamically loaded NLMs associated with the job processing module, refer to the section “The ARCserve Server modules consist of NLMs”.

Database



The following information is recorded in the ARCserve database:

- Files and directories that have been backed up and copied by ARCserve.
- Information such as job type, status, start time, and end time for each job that ARCserve has processed.
- Information such as tape name, format date, and expiration date for each tape that has been used for ARCserve backups.
- Information such as node address, node name, and login name for each workstation on the network.

-
- Media pools and media tracking.

Information is written to the ARCserve database files by various NLMs, depending on the type of job ARCserve is performing.

For backup jobs (server only), FSTAPE.NLM is responsible for writing information about files and directories that are processed to the database.

The TAPESVR.NLM is responsible for writing information about tapes, tape devices, and any errors that occurred during an operation to the database.

The CLIENTS.NLM runs in the background and is the “client tracker”, responsible for collecting and updating information about workstations on the network. Client information is updated at regular intervals, which you can set through the Database Manager on the workstation.



If you do not backup workstations or do not want the overhead on your network, you do not need to load the CLIENTS.NLM module.

Tape Server

The Tape Server is the link between the ARCserve Server and the tape drives. It knows how to communicate with the hardware that you selected while installing ARCserve. There are three primary NLMs associated with the tape server module: TAPESVR.NLM, STANDARD.NLM, and TAPEBD.NLM. TAPEBD.NLM exists on your host file server with the name of the host adapter card you chose when you installed ARCserve (e.g. BUSTEK.NLM). If you are using a changer another important NLM is CHANGER.NLM.

The tape server module processes jobs by establishing a connection with either the job processing module on the ARCserve server or the ARCserve Manager.

The TAPESVR.NLM is responsible for establishing the initial connection with whoever is making the request for a connection. After the connection is made, TAPESVR.NLM communicates with the appropriate STANDARD.NLM, based on the tape group requested for this job (there is one STANDARD.NLM for each tape group attached to your server). If the changer option is used, TAPESVR.NLM communicates with the CHANGER.NLM.

After this, the tape board NLM handles the job of communicating with the tape drive. If you have an ASPI supported adapter installed in your system, the tape board NLM is ASPIBD.NLM. The name of this NLM corresponds to the name of the host adapter card you chose when ARCserve was installed. The NLM that actually performs the role of communicating with the tape drive depends entirely on the type of host adapter you selected when you installed ARCserve.

For examples of how the ARCserve Server processes jobs, refer to 'An example of how the ARCserve Server functions' later in this chapter.

The ARCserve Server modules consist of NLMs

The ARCserve Server is made up of several NLMs for the best performance

When you install ARCserve on the host file server, there are several NLMs that are installed with the package. Some of these NLMs are always running, like the ARCSERVE.NLM itself. Other NLMs are dynamically loaded as job requests come in.

ARCserve dynamically loads NLMs to run jobs

When an NLM is loaded and used “as required”, it is called a *spawned* NLM. For example, if you schedule a backup, the ARCSERVE.NLM starts (or spawns) specific NLMs for the job. When the job completes, the spawned NLMs unload as well.

Benefits of dynamically loading NLMs

Dynamically loading NLMs, rather than automatically loading them, offers several advantages:

- ARCserve can run multiple concurrent jobs quickly and efficiently.
- When an NLM is dynamically loaded for a specific job, once the job completes, the NLM unloads. You don’t have the overhead of the NLM running in the background and taking up memory.
- Modifications and additions to ARCserve are easier. You can update a specific NLM rather than having to update ARCserve as a whole.

For a complete list of ARCserve NLMs, refer to the end of this chapter.

An example of how the ARCserve Server functions

When the ARCserve Manager submits jobs to the ARCserve queue, they are processed by the ARCserve Server. For example, when a backup job is scheduled to run from the ARCserve Server, the Job Processing Module picks up the job from the queue then spawns APROCESS.NLM (the “backup” NLM).

ARCserve uses the server's resources

All ARCserve jobs are processed from the ARCserve Host Server. This means that the resources of the server, rather than the resources of your local machine, are used to perform the tasks of the job. After the job has been run, ARCserve updates the databases with information such as the volume, directories, and files that were backed up as well as the tapes that were used.

Following is an example of how ARCserve processes a job. In the example, we'll use a backup to illustrate the job. Copy and restore jobs work basically the same way as a backup, except there are different NLMs involved, and in the case of restore, the direction is reversed (**from** tape rather than **to** tape).

Backup job example

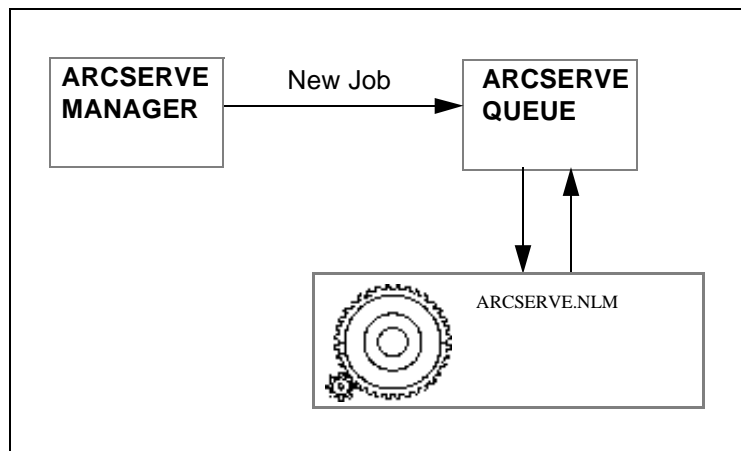
Let's say the source for your backup job is the following:

- NetWare 3.12 files server (called FINANCE)
- A DOS workstation (Tom's at 00000002-0000C064AD57)
- UNIX Workstation (Joe @ 192.35.101.12)
- Macintosh Workstation (supervisor@ZONE_21)

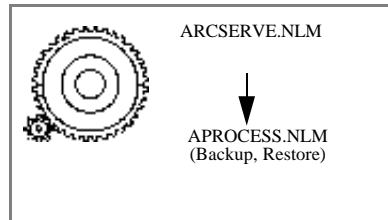
2

As soon as you run a job from the ARCserve Manager window (if you haven't changed the run date and time from the current time) the job is submitted to the ARCserve queue on the host.

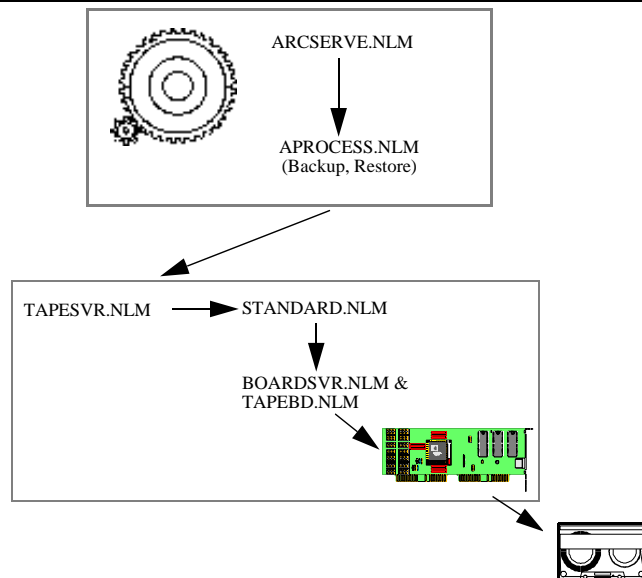
Since ARCSERVE.NLM is continuously scanning the queue, it picks up the backup job when it is submitted.



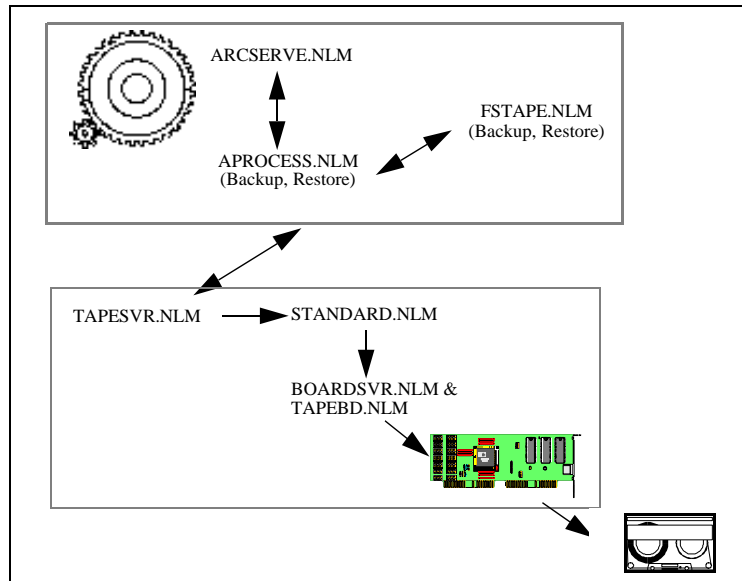
ARCserve.NLM sees that this is a backup job and spawns APROCESS.NLM, which is responsible for all backup and restore jobs.



APROCESS.NLM connects to the Tape Server Module, and positions the tape for this new job. After the tape is positioned, APROCESS.NLM checks the list of things to be backed up. The first item on the list is a NetWare 3.12 file server called FINANCE.

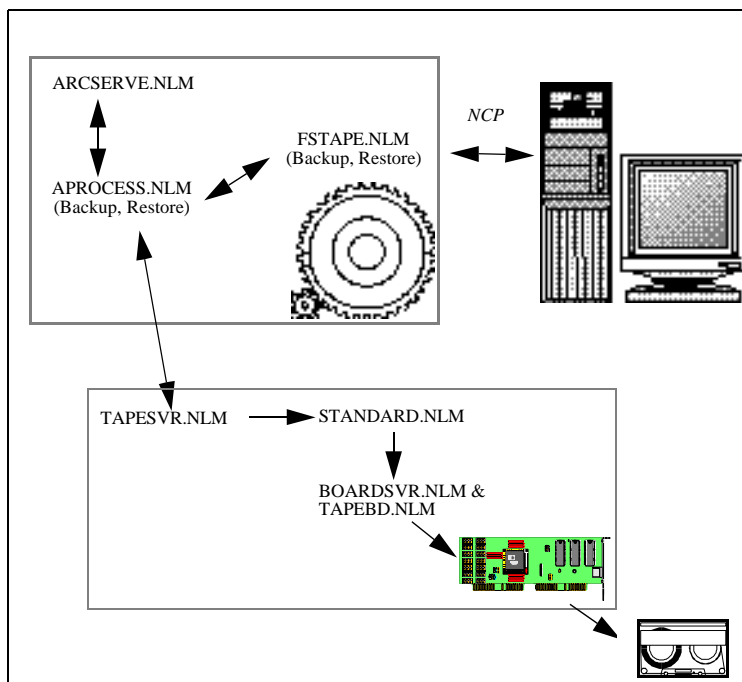


*APROCESS.NLM
spawns
FSTAPE.NLM,
which is the NLM
responsible for
backing up all
NetWare servers.*

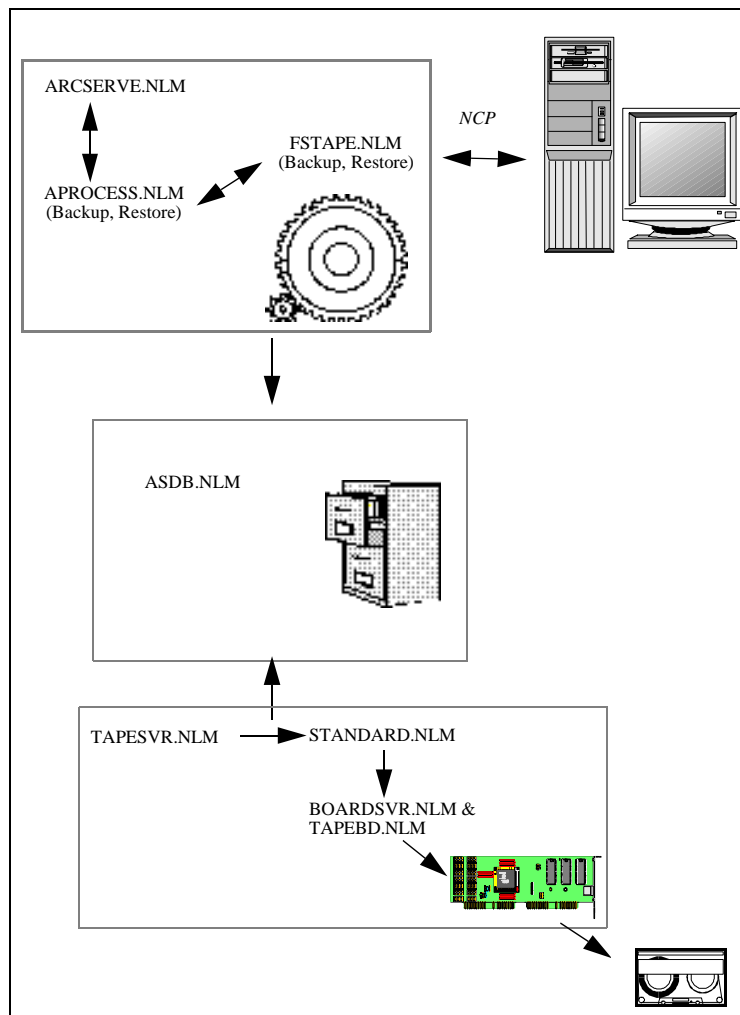


2

*FSTAPE.NLM
connects to the remote
File Server, reads the
data from the servers
hard disk, sends the
data to the Tape
Driver Module, which
in turn writes it to
tape.*



During the backup, information about the volume, directories, and files backed up to tape is recorded in the ARCserve database. Information about the tape drive and tape is also updated in the database.



After the server backup is finished, FSTAPE.NLM unloads.

Session 2 - DOS
Workstation
Backup

APROCESS.NLM checks the job list that was submitted and sees that a DOS workstation is next in line to be backed up.

The DOS workstation is still part of the original job, but it will be a new session on the tape (unless file interleaving is enabled). The NetWare server was session 1 and this will be session 2. At this point, the tape is positioned to accept the new session.

APROCESS.NLM then spawns WSTAPE.NLM, which is the NLM responsible for backing up remote DOS workstations. WSTAPE.NLM establishes a connection with the DOSagent on the workstation, which then starts sending data to WSTAPE. The rest of the process is the same as for the NetWare server.

Session 3
Macintosh
Workstation
Backup

APROCESS.NLM checks the job list that was submitted and sees that a Macintosh workstation is next in line to be backed up.

The Macintosh workstation is still part of the original job, but it will be a new session on the tape. The NetWare server was session 1, the DOS workstation was session 2, the UNIX workstation was session 3, and the Macintosh workstation will be session 4. At this point, the tape is positioned to accept the new session.

For the Macintosh workstation, APROCESS.NLM spawns MACSERV6.NLM. Then MACSERV6.NLM establishes a connection with the Client Agent for Macintosh on the workstation, which then starts sending data to MACSERV6. The rest of the process is the same as for the NetWare server.

Session 4 - UNIX
Workstation
Backup

APROCESS.NLM checks the job list that was submitted and sees that a UNIX workstation is next in line to be backed up.

The UNIX workstation is still part of the original job, but it will be a new session on the tape. The NetWare server was session 1, the DOS workstation was session 2, the Macintosh workstation was session 3, and the UNIX workstation will be session 4. At this point, the tape is positioned to accept the new session.

For the UNIX workstation, APROCESS.NLM spawns USERVE6.NLM. USERVE6.NLM establishes a connection with the Client Agent for UNIX on the workstation, which then starts sending data to USERVE6. The rest of the process is the same as for the NetWare server.

The backup contents are now compared to the originals on disk

At this point, all of the sources have been backed up to tape and it's time for the compare to disk, if you had elected this option when you submitted the backup job. APROCESS.NLM rewinds the tape to the beginning of session 1, spawns FSTAPE.NLM and compares the contents of the tape with the actual contents on the hard disk.

When the compare operation for session 1 is finished, FSTAPE.NLM unloads and APROCESS.NLM spawns WSTAPE.NLM. This process is repeated, spawning USERVE6.NLM and MACSERV6.NLM until all 4 sessions have been verified.

After the compare tape to disk is finished, all spawned NLMs unload and ARCSERVE.NLM continues to scan the queue.

ARCserve server screens

There are four separate console screens for the ARCserve server. These “backend” screens allow you to perform all of the necessary ARCserve tasks and to get information about ARCserve’s functioning.

The four ARCserve server screens are:

- ARCserve Scheduler - for overall management and use of ARCserve.
- ARCserve Tape Server - for managing your ARCserve tape devices.
- Runtime Message screen - for viewing system messages about the operation of ARCserve.
- NLM Loader screen - for viewing load time information about ARCserve.

Each of these screens is introduced in the following pages. You will be seeing how to use these screens throughout this guide.

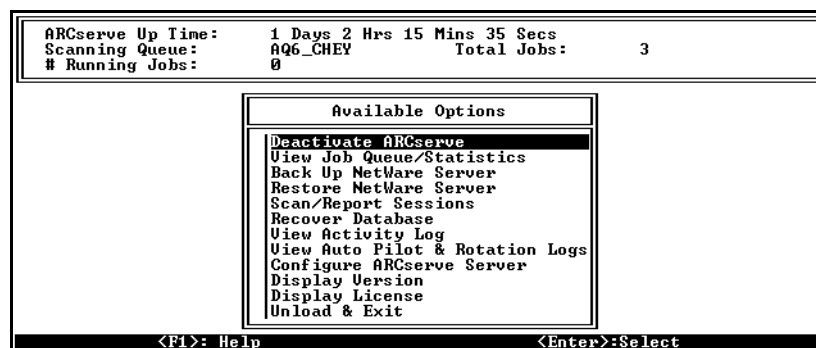
The ARCserve Scheduler screen

The ARCserve Scheduler screen is the main screen of the ARCserve Server console. From this screen you can perform tasks or view information about ARCserve from the file server.

There are twelve options available from the ARCserve Scheduler menu:

- Activate/Deactivate ARCserve
- View real-time statistics about jobs currently being processed
- Perform a backup from the server console
- Perform a restore from the server console
- Scan and report on tape sessions
- Restore the ARCserve database
- View the ARCserve Activity Log
- View the ARCserve Auto Pilot Logs
- Change configuration options for ARCserve
- Display version and license information
- Unload ARCserve

The ARCserve Scheduler screen is shown below:



The ARCserve Tape Server screen

While using ARCserve, there may be times that you need to perform tasks or view information related to the tape drives attached to your ARCserve host server. The ARCserve Tape Server screen provides you with access to all tape drive related activities.

Tape Server has all the information about your tape drives

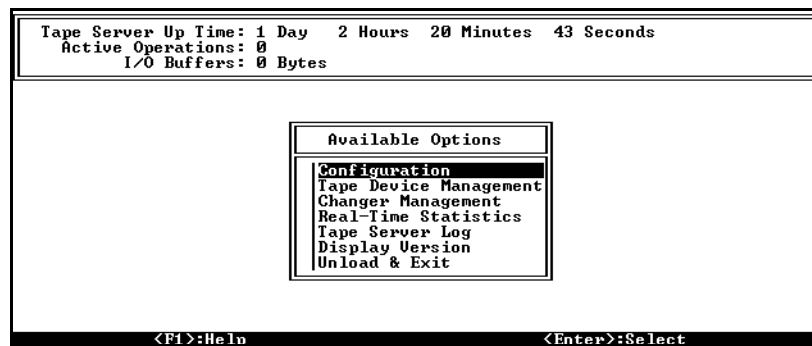
You can select the following seven options from the ARCserve Tape Server menu:

- Viewing and configuring information about your installed host adapter card(s), tape devices, tape groups, and tapeserver configuration parameters
- Device management, including formatting, erasing, and copying tapes
- Changer management (if you have purchased and installed the ARCserve changer option)
- Viewing real-time statistics about Tape Server
- Viewing Tape Server's activity log
- Viewing information about the Tape Server NLM
- Unloading the Tape Server NLM



If the Tape Server screen isn't shown on the file server monitor, press the ALT and ESC keys simultaneously until it does appear. If you need more help to bring up this screen at the file server, refer to Chapter 1 of this guide.

The ARCserve Tape Server screen is shown below:



You will be seeing how to use the features of the Tape Server screen throughout this guide.

The Runtime Message screen

The ARCserve Runtime Message screen allows you to view real-time information about ARCserve jobs currently being processed. The display of the screen will change according to the processing of the job.



If the Runtime Message screen isn't shown on the file server monitor, press the ALT and ESC keys simultaneously until it does appear. If you need more help to bring up this screen at the file server, refer to Chapter 1 of this guide.

2

An example of a Runtime Message screen is shown below:

ARCserve Runtime Message Screen			
14:26:44	4	Compare NY-WRITER/SYS: with 3718343572 sequence 1 session 2 ~\138 files, 10,227 KB	
14:26:45	4	Compare Operation is limited to first 10 MB !	
14:31:13	4	138 files 10,205 KB compared @ 2,276 KB/Min, 0 mismatch(es)	
14:31:30	4	Backup Operation Successful	
14:31:31		Job Summary:	
		Start Time: 11/15/95 14:23:06	End Time: 11/15/95 14:31:31
		Job Type: Backup	Tape Name: 3718343572
		#Nodes Requested: 1	#Nodes Missed: 0
		#Errors: 0	#Warnings: 1
		#Vol. Missed: 0	#Succ./Incomp: 1
		#Failed: 0	#Miscompared: 0
Source: NY-WRITER/SYS:		Session No:	2
Backup Status: Successful		Reason:	
Compare Status: Compare OK		Reason:	
#Estimated Files: 138		#Actual Files:	138
#Open Files: 0		#Files Miscompared:	0
#Errors: 0		#Warnings:	0
Backup ended with 0 errors and 1 warnings.			

The NLM Loader screen

When ARCserve is loaded, a log file is created detailing the steps involved in the loading process. This log file, named CSLOADER.LOG, is stored in the ARCserve home directory of your ARCserve host server. The log file contains information about each NLM that was loaded by ARCserve and any warning or error messages related to their loading and initialization.



If the NLM Loader screen isn't shown on the file server monitor, press the ALT and ESC keys simultaneously until it does appear. If you need more help to bring up this screen at the file server, refer to Chapter 1 of this guide.

The NLM Loader is an intelligent loader that checks to make sure the dependent NLM's are loaded in their proper order. It also ensures the successful loading of the NLM's one at a time.

You can view the NLM Loader log file from the ARCserve server console in the Loader screen.



If you encounter any problems during startup, carefully review the CSLOADER.LOG file. In most cases, this log file will display the exact cause of the problem. The CSLOADER screen automatically closes after five minutes.

ARCserve NLMs

The following table is a list of all the ARCserve NLMs and a brief explanation for each one. These NLMs can be found in the NLM subdirectory of the ARCserve home directory (e.g. SYS:ARCSERVE\NLM).

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NLM	Description
APROCESS	This is the job processing module, responsible for Auto Pilot jobs, backup, restore, compare, merge, and verify
ARCCOPY	Responsible for server and workstation copy
ARCSERVE	Scheduler module of ARCserve. This NLM is responsible for starting jobs, viewing logs, and real-time statistics
ASDB	Responsible for reading and writing to ARCserve's databases via Btrieve
ASIDF	Restores SIDF format tapes
CDR	Disaster recovery module. Restores the host server using the floppy created by the CDRPREP.NLM
CDRPREP	Disaster recovery preparation module. Creates a floppy that can be used in case the host server needs to be completely restored
CHANGER	This optional NLM provides ARCserve with Changer support
CLIENTS	Client Tracker module of ARCserve. Maintains the database of nodes on your network
CSLOADER	Loads ARCserve and maintains the ARCserve loader log file
FAXLIB	Allows reports to be faxed out via Cheyenne's FaxServe product

NLM	Description
FSTAPE	File server backup, restore, and compare
INTERLEAV	Responsible for File Interleaving and the Push Agent for NetWare.
MACSERV6	Allows for backup, restore and compare jobs on Macintosh workstations
NWAGENT	Responsible for the Push Agent for NetWare.
PFC	Pre-flight check NLM
STANDARD	Loaded with regular tape drives. Allows for parallel streaming
TAPEBD	Controller card driver. This file will exist as the name of your adapter card (e.g. bustek.nlm)
TCC	Responsible for tape cleaning utility AND tape copy utility
TAPESVR	Responsible for tape drive support
USERVE6	Allows for backup restore and compare jobs on UNIX workstations
VALIDATE	Validates tape drives used with ARCserve
WSTAPE	IPX workstation backup, restore and compare

ARCserve NLM console commands

A list of NLM console commands will appear on the server console screen when you type:

```
arcserve hel p
```

You will see the following commands:

Command	Description
Version	Displays ARCserve version information
Deactivate	Stop processing ARCserve jobs

Command	Description
Activate	Starts processing ARCserve jobs
Help	Displays this screen
Debug <On:Off>	Turn On/Off display of debug information
Config	Displays ARCserve's current configuration

High Performance Push Agent for NetWare

In addition to the NLMs previously mentioned, ARCserve also uses the NWAGENT.NLM. NWAGENT.NLM is used by the ARCserve High Performance Push Agent for NetWare (referred to as the Push Agent), which can be purchased separately through your software reseller. The Push Agent for NetWare maximizes the use of your NetWare servers and increase the speed at which your jobs are processed.

The Push Agent for NetWare runs on NetWare servers and enables you to back up remote NetWare servers, speeding up file transfers. The ARCserve Setup program gives you the option of installing the Push Agent for NetWare to selected remote servers.

The Push Agent for NetWare can also be used with the File Interleaving option. Using the Push Agent with the File Interleaving option provides for greater speed and flexibility during backup jobs and allows you to get faster throughput over your network. Refer to Chapter 6, “Customizing Your Backup” in the *ARCserve Manager Guide* for more information on File Interleaving and the Push Agent for NetWare.

How the Push agent works

The Push Agent for NetWare utilizes push agent technology to accomplish backup jobs. The advantage of this technology is that it requires the server being backed up to perform the necessary filtering of files and directories prior to “pushing” them to the host server (i.e. the server running ARCserve) for processing. The host server is more efficient because it no longer has to process the files or directories that were flagged for the job.

If you want to use ARCserve’s file interleaving feature during a backup to interleave data from a NetWare server, you must load the Push Agent for NetWare on the target server. For

other backup jobs (i.e. jobs not using file interleaving), you can elect not to load the Push Agent for NetWare. However, if you do not load the Push Agent for these jobs, your jobs will run more slowly and you will not take advantage of the maximum utilization of your remote server, since the host server will be required to do more processing.



In order to load the Push Agent for NetWare on a server, you must have installed the NWAGENT.NLM file to the server during ARCserve setup. If you have not installed the NWAGENT.NLM, you can do so now. Refer to Chapter 3 in the *ARCserve Installation Guide* for instructions on running the setup program and installing the Push Agent for NetWare.

2

To load the NWAGENT.NLM:

1. Type “load NWAGENT.NLM” at the server’s console screen.
2. Press ENTER.

The NWAGENT.NLM will proceed to load. While this process takes place, you will see the ARCserve NLM Loader screen and then the main screen for the NLM will appear:



Using Push
Agent for
NetWare

The main screen of the NWAGENT.NLM contains four menu choices:

- Real-time Statistics - allows you to view the real-time processing of backup jobs from the server.
- View Activity Log - allows you to view information about the operation of the Push Agent for NetWare on the server.
- Configurations - allows you to change various operating parameters of the Push Agent for NetWare. Refer to the online help for a definition of each field in this screen.
- Unload and Exit - allows you to exit the main screen and unload the NLM.



LOADING ARCSERVE

When loading ARCServe on to your server, several steps are taken to ensure smooth operation of the program.

In this chapter, you will learn:

Page

3-2 ➤ | How to start ARCServe on the Server

Starting ARCserve



It is very important that you do not have different versions of ARCserve running at the same time. Make sure that you do not have ANY ARCserve 4.x or 5.x NLMs (including tape server NLMs) loaded before starting ARCserve 6.

Loading
ARCserve on the
server

In order to run ARCserve, you must have ARCserve installed on your file server. To do this:

1. Type ASTART6 at the file server command line.



If you will be using a SCSI board driver such as ASPI or CAM (Common Access Method), you must load that driver first (for example, Adaptec 1540 uses AHA1540.DSK).

The NLM Loader screen will appear on your server. For information about this screen, refer to Chapter 2 of this guide.

4

Chapter

RUNNING JOBS FROM THE SERVER CONSOLE

This chapter explains how to run backup and restore jobs from the server console using the ARCserve Scheduler.

In this chapter, you will learn:

Page:

- | | |
|--------|--|
| 4-3 ➤ | How to run a backup job from the server console |
| 4-12 ➤ | How to check the ARCserve Job Queue |
| 4-14 ➤ | How to view the ARCserve Activity Log |
| 4-19 ➤ | How to run a restore job from the server console |

Using the server console to submit jobs

Most of the tasks of ARCserve, including backing up and restoring files, can be performed from the server console. In this chapter you will see how to run backup and restore jobs from the server console using the ARCserve Scheduler.

You will also see how to use the ARCserve job queue to view a list of pending jobs, and how to use the ARCserve Activity Log to view the processing of in-progress jobs.

Backing up from the server console

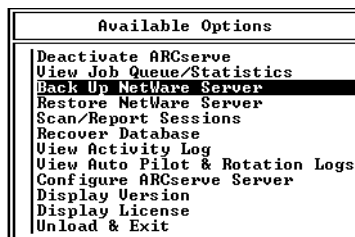
Running a backup job from the server console is much the same as backing up from the ARCserve Manager. You will be able to select the servers, volumes and/or directories that you want to backup, and will have a choice of tape destinations. All these tasks are performed from the ARCserve Scheduler NLM.

As stated earlier, you can backup any server, volume or directory (or combination of these) from the ARCserve server console. The principles involved in this kind of backup are the same as those for backing up from the ARCserve Manager. If you are unclear about the process of running backup jobs, refer to the *ARCserve Manager Guide* for clarification. All of the details about ARCserve backup jobs are explained therein.

To submit the backup job:

Open the Backup screen

1. If necessary, switch to the ARCserve Scheduler console.
Console backup jobs are submitted from the ARCserve Scheduler console. If you are not in this screen, switch to it now by pressing CTRL + ESC at the server console, then select the number for the ARCserve Scheduler NLM.
2. From the ARCserve Scheduler console select Back Up NetWare Server from the Available Options menu.



You will be prompted to log into the server.

-
3. Enter a login name and password and press F2.

The console Backup screen appears:

Backup		
[Source]		
Source	Filters	Options
Report File Name:		
[Destination]		
Group Name:	ARCSERVE	
Script Name:		
Session Password:		
Custom Setup		Auto Pilot Setup

The Backup screen is used to enter all the information for the backup job, such as the backup source and destination.

Select the backup source

4. With the cursor in the Source field, press ENTER to view a list of your network's servers:

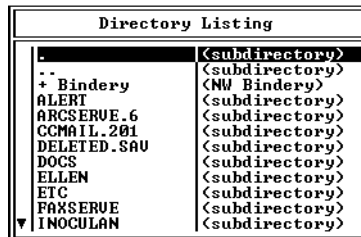
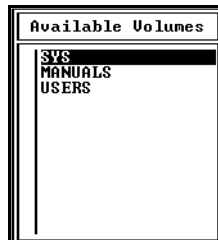
Novell Servers
▲ NY-PUB410
NY-QA
NY-QA401
NY-TEACHER
NY-WRITER
NY-WRITER2
PA-PHOENIX
PA-PROLIANT
PA-STEPH
PR-ADMIN
TX-410
TX-DEMO

5. To select an entire server for backup, highlight the server name and press F5.

The server name will appear in yellow. Continue to highlight and select entire servers for backup, by following this step.



To mark any highlighted item from any of the screens shown here, press the F5 key. To save a selected item from any of the screens shown here, press the F2 key.



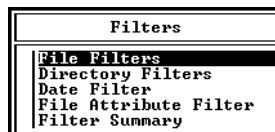
Select your file
filters (optional)

You can select filters to include/exclude specific directories and/or files from the backup.

To add filters to the backup:

1. From the Backup screen, place the cursor in the Filters field and press ENTER.

The Filters window appears:



Use the options on this menu to set any file, directory, date, or attribute filters for the backup job. Refer to Chapter 10, “Applying Filter” of the *ARCserve Manager Guide* for further information.

2. Specify any backup filters that you want for the job.

Use the navigation keys at the bottom of the appropriate screens to choose and set the filters you want. Remember to press F2 to set the filters.

You can view a list of the filters you have set by selecting *View/Delete Filters* from the *Modify Filters* menu.

3. When you have finished setting filters, press ESC to return to the Backup screen.

Setting backup options

You can specify options to add to the backup job from the ARCserve server.

1. From the Backup screen, place the cursor in the Options field, press ENTER.

A screen appears in which you can set certain backup options for the job:

Options			
Backup Verification:	Compare First	10 MB of Media to Disk	
Record History in Database:	Yes	Clear Archive Bit:	No
Eject Tape:	No	Clear User Connections:	No
Del. Source Files After Backup:	No	Perform CRC Check:	No
Disaster Recovery:	No	Disable Logins:	No
Force De-migration of HSM Files:	No	Inoculan Action:	Off
Push Agent/File Interleaving:	None		
Open File Method:	Use Deny None if Deny Write Fails		
Retry Open Files Immediately:	Yes	Retry Count:	5 Interval (Sec): 5
Retry Open Files After Job:	No		
Pre Execution:			
Post Execution:			
Delay Before Execution (Mins):	5 Mins		
<F1>:Help <F2>:Save/Done <Esc>:Exit			

The options in this screen can be changed by pressing ENTER when the cursor is positioned in the appropriate field. Sometimes a pre-set group of options for the field will pop-up; other fields require you to type in the information manually. For information regarding the individual fields, refer to the online help by clicking F1, or refer to Chapter 5, “Backing Up to Media” in the *ARCserve Manager Guide* for more information Backup Options.

2. When you have finished entering backup options, press F2.

The options will be saved and you will be returned to the Backup screen.

Assign a report
file name

The job report will list important information about the backup job, such as the files that have been backed up and the time the job completed.

1. In the Report File Name field of the Backup screen, enter a file name for the job report.

You can view the report by accessing the file name you entered.

**Enter destination
information**

Once you have selected a source for the backup, you must specify the destination:

1. From the Backup screen, specify backup destination information, in the appropriate fields.

Use the following fields to enter you destination information:

Field	Description
<i>Group Name</i>	Enter the name of the tape group in this field.
<i>Script Name</i>	If you want to save the backup parameters as a script for later use, enter a script name in this field. The script will be stored in your mail directory on the ARCserve host server.
<i>Session Password</i>	If you want to protect the backup session with a password, enter the password here.



For more information on tape groups, backup scripts, and tape session passwords, refer to the *ARCserve Manager Guide*.

Custom or Auto Pilot?

To schedule a Custom backup job:

1. Press ENTER in the Custom Setup field of the Backup screen.

The Schedule Custom Job screen appears:

Custom Setup					
Automatic Repeat	Interval				
Months:	Days:	0	Hours:	0	Minutes:
Exclude	Monday	No			
	Tuesday	No			
	Wednesday	No			
	Thursday	No			
	Friday	No			
	Saturday	No			
	Sunday	No			
Media Pool:	DEFAULT				
Tape Name:	3718343572				
First Tape Option:	Append				
Tape Spanning Option:	Overwrite Same or Blank				
First Tape Timeout:	5 Minutes				
Span Tape Timeout:	9999 Minutes				
<F1>:Help <F2>:Save/Done <Esc>:Exit					

Use this screen to schedule the backup job as a custom job. Refer to Chapter 5, “Backing Up to Media” of the *ARCserve Manager Guide* for more information about custom jobs.

2. When you have finished setting your custom parameters, press F2 to save them.

Scheduling an Auto Pilot job

If you want to schedule an Auto Pilot backup job:

1. Press ENTER in the Auto Pilot Setup field of the Backup screen.

The Auto Pilot Setup screen appears:

Auto Pilot Setup			
Set Name: XXXXXXXXXX			
Method:	Full Backups	Off	Media Recycle:
	Sunday	Full	Preserve Daily: 4
	Monday	Full	Preserve Weekly: 5
	Tuesday	Full	Preserve Monthly: 12
	Wednesday	Full	
	Thursday	Full	Grooming Options:
	Friday	Full	Enable Grooming: No
	Saturday	Off	Months Not Accessed: 6
			# Copies to Save: 3
Reschedule Missed Targets:		No	
<F1>:Help <F2>:Save/Done <Esc>:Exit			

Use this screen to schedule the backup job as an Auto Pilot job. Refer to Chapter 5, “Backing Up to Media” and Chapter 7, “Using Auto Pilot” of the *ARCserve Manager Guide* for more information about Auto Pilot jobs.

2. When you have finished setting your Auto Pilot parameters, press F2 to save them .

Schedule the job

To schedule the backup job, after you have specified the backup source, destination, and other options:

1. From the Backup screen press F2.

The Schedule Job screen appears:

Schedule Job			
Run Job at: 12:50 PM	On:	11/16/95	
Submit Job on Hold:	No	Save Script Only:	No
Broadcast:	Yes	SNMP:	No
Description:			

2. Enter the schedule parameters for the job in the fields of this screen.

For details on scheduling a backup job, refer to Chapter 5, “Backing Up to Media” and Chapter 6, “Customizing Your Backup Job” in the *ARCserve Manager Guide*.

There are two “Yes/No” fields used to inform ARCserve about whether or not to send broadcast or SMNP alerts. Refer to Chapter 8, “Setting Up Alert Messaging” for more information.

3. When you have set the schedule parameters, press F2.
The job will be submitted to the ARCserve queue.

Checking the ARCserve Job Queue

Once you schedule a job, you can check the ARCserve job queue to make sure that the job has been submitted properly. You can also use the Job Queue to change its scheduled run time and status (for example, you can select a job that was placed on hold and give it a Ready status so that it will begin). If a job is active, you can use the Job Queue to view the Real-time status of the job.

To view the ARCserve Job Queue from the ARCserve Scheduler console:

1. Select View Job Queue/Statistics from the Available Options menu.

The ARCserve Job Queue appears, listing the jobs currently submitted:

Status	Start Time	Owner	Job Type	Group Name
READY	Nov-19 15:53	LYNETTE	Restore From 3718343572	ARCserve
READY	Jan-12 04:50	JOHN	Backup to *	ARCserve
HOLD	Oct-10 14:36	JOHN	Backup to *	ARCserve

<F1>:Help <Esc>:Exit :Cancel Job <Enter>:Select <F10>:Load Script

You can modify the run time or status of a job:

1. Select the job you want to modify and press ENTER.

The following screen appears:

Change Status and Execution Time	
Job Status	READY
Execution Date:	11/19/95
Execution Time:	03:53 PM

From this screen you can modify job status and schedule information. For more information refer to Chapter 6, “Customizing Your Backup Job” in the *ARCserve Manager Guide* for more information.

If the job is active, you will be able to view its Real-time status.



The *Est KB* field on the Real-time Job Statistics screen indicates the approximate number of KB ARCserve anticipates will be backed up. The *KB DONE* field displays the actual number of KB backed up. Because the actual file sizes may differ during backup (someone changes the file after ARCserve does its estimate but before the actual file is backed up), these numbers may not be exactly the same when the job is complete.

2. Press F2 when done.

You can also delete any scheduled jobs from this screen:

1. Select the job you want to remove from the job queue and press DELETE.

You will be prompted to confirm the deletion of the job.

Viewing the Activity Log

The Activity Log contains information about all ARCserve-processed jobs. It contains the following information:

- Time and date in which the job ran
- Job id number, task performed (if file interleaving is used, the session number is appended to the job id)
- The source directory used
- Average throughput of the data
- Whether the operation was completed or if an error occurred

If you want to see information about each job that ARCserve has processed:

1. Select View Activity Log from the Available Options menu.

The following screen appears:

Date and time stamp of message		Job ID	Throughput of job
Activity Log			
Status of operation: successful, failed, incomplete, cancelled	Nov-15 10:45:47	[61EE]	Source Directory: NY-WRITER2/SYS:\ALERT
	Nov-15 10:45:47	[61EE]	Target Directory: C:\WKSAGENT
	Nov-15 10:45:49	[61EE]	0 Directories 6 Files (28 Kbytes) Copied to Disk.
	Nov-15 10:45:49	[61EE]	Elapsed Time: 5s
	Nov-15 10:45:49	[61EE]	Average Throughput: 336 Kbytes/Minute
	Nov-15 10:45:51	[61EE]	Copy Operation Successful.
	Nov-15 13:50:20		Start Copy Operation, Queue AQ6_CHEY Client LYNETTE
	Nov-15 13:50:22	3	Attach to NY-WRITER U3.11 as LYNETTE (ID:1 Connection:10)
	Nov-15 13:50:24	3	File System TSA not loaded on server NY-WRITER
	Nov-15 13:50:24	3	Not Using SMS Engine
	Nov-15 13:50:28	3	Estimates: 62300 KBytes, 272 Files Will Be Copied
	Nov-15 13:50:28	3	Source Directory: NY-WRITER/SYS:\ALERT (MAC Supported)
	Nov-15 13:50:28	EE3	Destination Directory: NY-WRITER2/SYS:\ETC
<F1>:Help <Esc>:Exit <T> <I> <PgUp> <PgDn> <Ctrl PgUp> <Ctrl PgDn>			

Keys that are available while you are in this log

**Moving around
within the log**

You can use the following keys to move within the Activity Log:

- CTRL-PGUP moves to the beginning of the log.
- CTRL-PGDN moves to the end of the log.
- UP and DOWN ARROW keys move up or down through the log line by line.
- PGUP/PGDN move up or down through the log screen by screen.

When you are finished viewing the Activity log:

2. **Press ESC.**

You will be prompted to delete the log. You might want to delete the Activity Log if it is getting very large and taking up too much disk space.

3. **Select No, if you do not want to delete the Activity log.**

You will be returned to the ARCserve Scheduler screen.

4

Job status

Use the Activity Log to view the status of all ARCserve jobs that have been processed. The following table lists and describes each type of job status and provides an example of what causes each status:

Status	Description	Example
Successful	All the targets were successfully backed up	You scheduled a backup of three volumes and two workstations. All five sessions were backed up without any problems.

Status	Description	Example
Incomplete	Some targets were not backed up completely.	You scheduled a backup of three volumes and two workstations. The three volumes and one of the workstations were backed up successfully, but the final workstation was skipped because its Agent wasn't loaded.
Cancelled	The job was cancelled by the user.	You scheduled a backup for 5:00 pm, but realized you didn't have any tapes.
Failed	The job couldn't complete because of some problem accessing the tape drive or retrieving the job from the queue.	You scheduled a backup for 5:00 pm, but someone accidentally turned off the tape drive.

A summary of files processed, as well as the average throughput (KB/min written) value for the job, also is displayed. All errors, warnings, and the names of files that weren't backed up, or skipped, are displayed as well.

All error messages are preceded by the letter E followed by the error number, for example: *E1001*. A table of system messages can be found in Chapter 9, "Troubleshooting and System Messages". The messages are in ascending numerical order to make the task of looking them up easier.

If the Activity Log file is too large to be completely displayed (larger than 64K), a message appears explaining that only the last section of the log will be displayed. You must use the Page Up key to move back through the log so that ARCserve will display the rest of the log.

Grooming the Log

The ARCserve Server Configuration screen has an option that allows you to delete entries after a specified number of days. The default for this option is thirty days.

You can change when the log's entries will be groomed (removed) by entering the number of days to preserve the file. When the time you set has passed, the log will be groomed. For example:

Let's assume that today is April 27 and you specified to preserve log file entries for 10 days in the Configuration screen. If the Activity Log contains entries for the dates: April 16, April 17, April 21, April 26, and April 27, the following grooming will take place: ARCserve will delete all information logged prior to April 17 (10 days before today - April 27). If there is no activity for April 17 in the log, then no grooming will take place. If on April 18 there is activity entered in the log, then on April 28 grooming will take place.

To groom the Activity Log from the ARCserve Scheduler screen:

1. Select Configure ARCserve Server from the Available Options menu.

The following Configuration screen appears:

Configuration	
Maximum # Concurrent Jobs:	16
Statistics broadcast & update frequency (seconds):	1
Minimum Cache Buffers Required to Start Jobs (%):	10
Preserve Log File Information For <n> Days:	30
Notify Owner at end of job:	Yes
Turn off all messages to workstations:	No
Overwrite ANY tape in drive:	No
Use SMS logic for DOS and MAC files also:	No
Change to ARCserve Realtime Message screen on alerts:	No
Disable Writing to the ARCserve Database:	No
Disable Writing to the ARCserve Activity Log:	No
Skip files Larger than 2 GB:	No
Preferred File Interleaving Protocol:	Automatic
File Interleaving Buffer Size (in K):	128
File Interleaving Maximum Nodes:	4
File Interleaving Timeout (in minutes):	15
Use 512 Byte Packet to Communicate with WS Agent:	No
<F1>:Help <F2>:Save/Done <Esc>:Exit	

2. Highlight the value next to Preserve Log File Information For <n> Days.

Enter a new value (in days) for which the Activity Log will be preserved.

-
3. Press F2 to save any changes.
 4. Press ESC, when done, to return to the Available Options menu.

Restoring from the server console

You can restore from the server console in much the same way as restoring from the ARCserve Manager, with one important difference: You can only restore files on a tape by tape basis from the server. That is, there are no Tree View or Tape View options for restoring from the server console. You must select the tape that you want to select from, as well as the session number. This means that you will be unable to select several different sources to restore, as you can from the Manager.

Refer to the *ARCserve Manager Guide* Chapter 8, “Restoring From Media” for more information on the concepts and details regarding restore jobs.

Specifying a destination

Once you have selected the tape session that you want to restore, you must select a destination for the restored files. This may be a server, server volume, or directory.

Customizing the restore job

As with restoring from the Manager, restore jobs run from the server console can have filters and restore job options added to them to customize each restore job that you create. Filter your job to include or exclude files and directories based on files and directory names or patterns, file attributes, and/or a specific date or date range. Restore job options include whether to preserve space restrictions on the destination volume or drive.

Submitting the restore job

You can submit Restore jobs from the ARCserve Scheduler console.

To submit the restore job from the ARCserve Scheduler console:

1. Select Restore NetWare Server from the Available Options menu.
2. In the Login screen that appears, enter your name and password for the ARCserve host server and press F2.

The console Restore screen appears:

Restore	
[Source]	
Group Name:	ARCserve
Media Pool:	DEFAULT
Tape Name:	3718343572
Session#:	1
Session Password:	
[Destination]	
Restore Path:	
	Filters Options
Destination Options:	
Directory Structure:	Do not create base directories
File Conflict Resolution:	Overwrite all files
Report File Name:	
Script Name:	
<F1>:Help <F2>:Schedule Job <Esc>:Exit	

This screen is used to enter all the necessary information for the restore job, such as the name and session number of the tape from which files are to be restored.

Select the restore source

You must select a source for the restore job.

1. In the appropriate fields, enter the source information for the media from which you want to restore files.

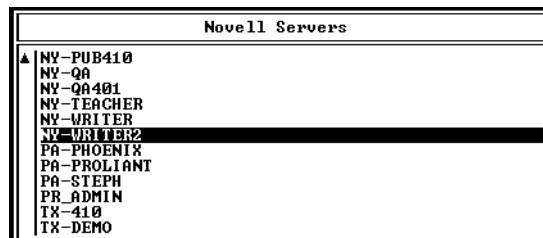
The source fields are explained below:

Field	Description
<i>Group Name</i>	The name of the tape group to which the tape belongs.
<i>Media Pool</i>	The name of the media pool to which the tape belongs.
<i>Tape Name</i>	The name of the tape that contains the backup session that you want to restore.
<i>Session #</i>	The number of the backup session that you want to restore.
<i>Session Password</i>	The password protecting the backup session on the tape (if applicable).

Enter destination
information

You can manually type the path into the *Restore Path* field by pressing ENTER or you can select the path in the following way:

1. With the cursor in the Restore Path field, press INSERT.
A list of your network's servers appears:



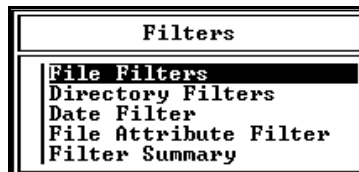
You can select an entire server to restore by pressing F5, or you can continue to select specific volumes, directories, and/or files to restore by continuing to press ENTER.

2. Mark the destination that you want to restore with the F5 key, then press F2 to save your selection.

You can now proceed to setting filters (optional).

3. With the cursor in the Filters field, press ENTER.

The Filters window appears:



Use the options on this menu to set any file, directory, date, or attribute filters for the restore job. Each of these filters is discussed in detail in Chapter 10, "Using Filters" of the *ARCserve Manager Guide*. Refer to that guide for any questions you have regarding the use of these filters.

4. Set any filters that you want for the restore job.

Use the navigation keys at the bottom of the appropriate screens to choose and set the filters you want. Remember to press F2 to set the filters.

You can view a list of the filters you have set by selecting *View/Delete Filters* from the *Modify Filters* menu.

5. When you have finished setting filters, press ESC to return to the Restore screen.

You can now proceed to setting restore options (optional).

6. With the cursor in the Options field, press ENTER.

A screen appears in which you can set certain restore options for the job:

Options	
Preserve User Space Restrictions:	Yes
Preserve Directory Space Restrictions:	Yes
Create Empty Directories:	Yes
Pre Execution:	
Post Execution:	
Delay Before Execution <Mins>:	5 Mins

The options in this screen can be changed by pressing ENTER when the cursor is positioned in the appropriate field. For information regarding the individual fields, refer to the online help by clicking the F1 key or refer to the *ARCserve Manager Guide* for more information about Restore Options.

7. When you have finished entering restore options, press F2.

Pressing F2 saves the options and returns you to the Backup screen.

Enter your destination options

You can specify options for how the files will be restored to the destination you selected.

1. Press ENTER in the Directory Structures field.

You can then choose from the following three options:

- Create directories from base.
- Create entire path from root.
- Do not create base directories.

Refer to the *ARCserve Manager Guide*, Chapter 8, “Restoring From Media” for more information about Destination Options.

-
2. Choose the option that you want and press ENTER.

You can then select how you want the restore job to resolve file conflicts.

3. In the File Conflict Resolution field, press ENTER.

The following menu appears:

File Conflict Resolution
Overwrite all files
Rename files
Skip existing files
Overwrite with newer files

Select one of these options to determine how ARCserve will resolve and file conflicts (if there are files on the destination node that have the same name as files being restored from the source file). The default selection, *Overwrite all files*, will simply overwrite the existing file on the destination node with the file from the source node.

Refer to the *ARCserve Manager Guide* for an explanation of these options.

4. Choose the option that you want and press ENTER.

Assign a report
file name

You can assign a name to the report that is generated about the restore job.

1. In the Report File Name field, enter a file name for the job report.

This report will be saved, with the name you assign, to your mail directory on the ARCserve host server. The job report will list important information about the restore job, such as the files that have been restored and the time the job completed.

Schedule the job

When you have finished selecting the restore source, destination, and other options, you can schedule the job to run.

1. From the Restore screen, press F2.

The Schedule Job screen appears:

Schedule Job			
Run Job at:	3:34 PM	On:	11/16/95
Submit Job on Hold:	No	Save Script Only:	No
Broadcast:	Yes	SNMP:	No
Description:			

2. Enter the schedule parameters for the job in the fields of the screen and press F2.

The job will be submitted to the ARCserve Queue.

For details on scheduling a restore job, refer to the *ARCserve Manager Guide*.

Repairing the database from the server console

You may see a message informing you that one of your databases files is corrupted (for example, you may see a message about “failed integrity”). You can automatically repair a corrupted database file by selecting the *Auto-repair database option* from the Database Configuration screen of the ARCserve Database Manager (refer to Chapter 14, “Managing Databases” in the ARCserve Manager Guide for more information on this) or you can manually run the ASDB repair command from the server console.



You must wait for all jobs to finish before you repair a corrupted database. You cannot have any jobs running when you begin this repair process.

To repair a corrupted database, from the server console:

1. Type: `load asdb r=<database file to be repaired>`

For example, to repair the Password List database, you would type the following at the server console:

```
load asdb r=aspasswd.d b
```

The corrupted database file will be repaired.

5

Chapter

MANAGING ARCserve FROM THE SERVER CONSOLE

In this chapter, you will learn:

Page:

- | | | |
|------|---|---|
| 5-3 | ➤ | How to activate and deactivate ARCserve from the server console |
| 5-5 | ➤ | How to scan and report on tape sessions |
| 5-10 | ➤ | How to view Auto Pilot logs |
| 5-13 | ➤ | How to configure ARCserve's settings |
| 5-20 | ➤ | How to unload and exit ARCserve |

Managing ARCserve at the server console

While using ARCserve, there may be times when you will need to perform tasks or view information about ARCserve from the file server. At these times you can use the ARCserve Scheduler NLM. The ARCserve Scheduler NLM allows for a number of management tasks to be performed from the server console.

There are twelve separate options available from the ARCserve Scheduler menu. These options are:

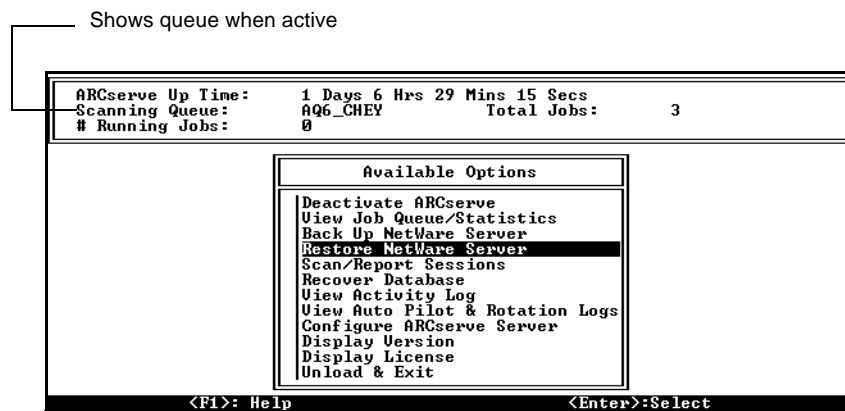
- Activate/Deactivate ARCserve
- View the job queue and real-time statistics about jobs currently processing
- NetWare Server Backup
- NetWare Server Restore
- Scan and report on tape sessions
- Recover database
- View Activity Logs
- View Auto Pilot Logs
- Change ARCserve configurations
- Display ARCserve version and license information
- Unload ARCserve

Four of these options (backup, restore, and viewing job statistics and the Activity Log) have been covered previously in Chapter 4. Therefore, the remainder of this chapter will only deal with those Scheduler options not already discussed.

Activating/Deactivating ARCserve

If you need to either activate or deactivate ARCserve, use the first option on the ARCserve Server's Available Options menu.

You can verify whether ARCserve is active or inactive by looking at the status bar at the top of the screen, next to the line "Scanning Queue:". When ARCserve has been deactivated, the message will read "ARCserve is Inactive - No job will be processed".



You can deactivate ARCserve if you want to stop processing jobs for any reason, but remember that if you deactivate ARCserve, no jobs can run. All active jobs will be cancelled. If a job was scheduled to run during the time that ARCserve is deactivated (or if you terminated the job), and the job has been set up to repeat, the job will be rescheduled to the next repeat interval. You will have to resubmit any (non-repeating) jobs that were running when ARCserve was deactivated, otherwise the job will start as soon as ARCserve is activated.

<hr/> Deactivating ARCserve	<p>To deactivate ARCserve (when the line reads <i>Deactivate ARCserve</i>):</p> <ol style="list-style-type: none"> 1. Select Deactivate ARCserve from the Available Options menu. You will be prompted to confirm this process. 2. Confirm the process. ARCserve will prompt you to confirm that you actually want to deactivate the NLM. Select <i>YES</i> to deactivate, or <i>NO</i> to return to the ARCserve Server menu. The menu option now reads <i>Activate ARCserve</i>.
<hr/> Activating ARCserve	<p>To activate ARCserve (when the line reads <i>Activate ARCserve</i>), perform the following step:</p> <ol style="list-style-type: none"> 1. Select Activate ARCserve from the Available Options menu. The field next to the line reading <i>Scanning Queue</i> shows the queue being scanned. The menu option now reads <i>Deactivate ARCserve</i>.

Scanning and reporting on tape sessions

The ARCserve Server includes a menu option allowing you to scan and report on sessions that have been written to tape. Remember that a session is any source that you have backed up to tape. For example, if you select three volumes for backup all at once, each volume will be written to tape as a separate session. There will be only one job, but multiple sessions based on the number of different volumes you select.

By scanning a tape for its sessions, you can quickly discover what sessions are recorded on the tape, as well as what directories/files were backed up in each session.

To scan a tape for its tape sessions:

1. Select Scan/Report Sessions from the ARCserve Scheduler's Available Options menu.

You are prompted to log into the ARCserve host server.

2. Log into the ARCserve host server.

The Scan/Report Sessions screen appears:

```

Scan/Report Sessions

[Source]
Group Name:      ARCserve
Media Pool:     DEFAULT
Tape Name:      3718343572
Session#:       0  <Use 0 to Scan All Sessions>
Sequence#:      1

[Destination]
Scan Type:      Summary Tape Session
Report File Name:

<F1>:Help  <F2>:Schedule Job  <Esc>:Exit
    
```

Enter job information on this screen. You must specify what tape you want to scan, the session number(s) in

which you want to report, and the destination for the report.

3. Enter the Source information for the job.

The following fields are used to enter source information:

Field	Description
<i>Group Name</i>	The name of the tape group to which the applicable tape belongs.
<i>Media Pool</i>	The name of the media pool to which the tape belongs. By default this field will read <i>Default</i> .
<i>Tape Name</i>	The name of the tape that you want to scan.
<i>Session number</i>	The number of the tape's session that you want to scan and report on. You can enter a single session number here, or you can enter 0 to report on all sessions on the tape.
<i>Sequence number</i>	The sequence number on the tape that you want scanned.

4. Enter the Destination information for the job.

The following fields are used to enter destination information:

Field	Destination
<i>Scan Type</i>	You can create either of two types of session reports:
	A <i>Summary Tape Session</i> only includes the date, time and backup source of the session.
	A <i>Detailed Tape Session Report</i> includes the information in the summary report as well as additional information about the session such as its owner, session type and session method.

Field	Destination
<i>Path for session report</i>	In this field, enter a name and path for the session report that you are generating. You will use the path and file name later to locate and view the report. By default the report will be saved to your Mail directory.

5. Press F2 to save your settings and then schedule the job .

After completing the source and destination information, you must schedule the job just as you would a backup or restore job. Enter the desired time and date parameters for the job in the Schedule Job screen.

6. Press F2 to submit the job, once all settings have been specified.

Once the job is submitted to the job queue, you can view or modify the job using the job queue's capabilities (described previously).

After the job completed, you can view the session scan report using any text editor available to you, or use the edit.nlm.

Recovering the ARCserve database

The ARCserve Scheduler NLM contains an option that allows you to restore the system's database of files. In order for the rebuild to work, you must know which session on the specified tape contains the database information you want to restore. You can run a Session Summary report prior to recovering the database to obtain this information.

To use the recover database feature, follow the procedure below:

1. Select Recover Database from the ARCserve Scheduler's Available Options menu.

You are prompted to log into the ARCserve host server.

2. Log into the ARCserve host server.

The Recover Database screen appears:

Recover Database	
[Source]	
Group Name:	ARCserve
Media Pool:	DEFAULT
Tape Name:	3718343572
Session#:	1
Session Password:	
[Destination]	
Report File Name:	
<F1>:Help <F2>:Schedule Job <Esc>:Exit	

3. Enter the appropriate information in the fields provided.

Specify information for the exact tape session containing the database information you want to restore. If you want to print a report file, enter path information for that file. By default the report will be saved to your Mail directory.

4. Press F2 to schedule the job.

The Schedule Job screen appears:

Schedule Job			
Run Job at:	11:18 PM	On:	11/16/95
Submit Job on Hold:	No		
Broadcast:	Yes	SNMP:	No
Description:			

5. Schedule the job and press F2.

ARCserve will submit the job to the job queue. The database information will be recovered from the tape you specified.

Viewing the Auto Pilot and Rotation Logs

What are the Auto Pilot and Rotation logs?

ARCserve stores information about Auto Pilot jobs in two logs: the Daily Log and the Full Log.

The Daily Log contains the following information:

- A tape label for the last backup
- Information about the tape used
- When the next Auto Pilot session is scheduled, and the tape that is needed
- Detailed activities about the job, including whether the job was successful, whether a make-up job has been scheduled, and any errors that might have occurred during the job.

The Full Log contains a collection of daily logs, except the most recent Daily Log. All the Daily Logs for a set (a collection of file servers and workstations managed as one unit for an Auto Pilot or Rotation backup) are stored in their own Full Log. If you have more than one Auto Pilot or Rotation set, there will be a Daily Log and a Full Log for each set.

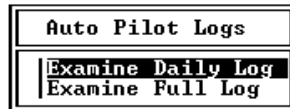
Rotation logs track information about Rotation backup jobs. Rotation backup jobs enable you to create a backup scheme where you control the names of media, the days those media are used, at what interval, and what type of backup is performed. Rotation jobs are like Auto Pilot jobs since they are scheduled on a specific rotation basis, and have a specific log kept of their activity.

How to view the logs

To view the Auto Pilot logs, perform the following steps:

1. Select View Auto Pilot & Rotation Logs from the Available Options menu.

The following screen appears:

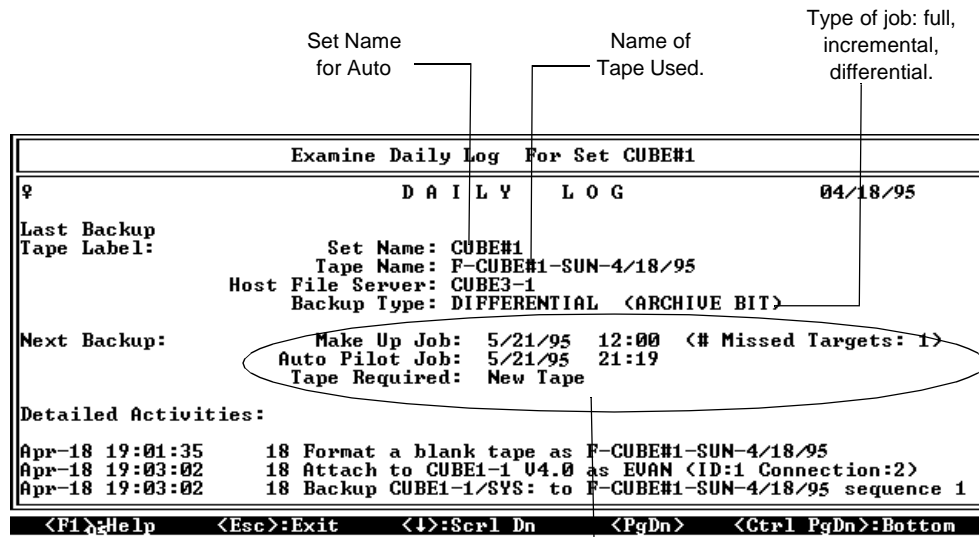


Viewing the Auto Pilot Daily Log

To view the Daily Log:

1. Select Examine Daily Log from the menu.
If one Auto Pilot set exists, the Daily Log screen appears.
If there is more than one set, then a small menu appears, showing the different sets for you to choose from.
2. Select the set that you want to view.

The Daily Log for that set appears:



5

Viewing the Full Log

To view the Full Log:

1. Select Examine Full Log from the menu.

If one Auto Pilot set exists, the Full Log screen appears. If there is more than one set, then a small menu appears, showing the different sets for you to choose from.

2. Select the set that you want to view.

The Full Log screen will appear.

Moving around within the logs

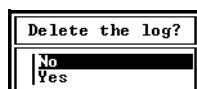
When the Auto Pilot Log first appears, you will see the beginning of the file, the oldest items written. To see the most recent entries, use the DOWN ARROW key. You can also use PGDN, or the END keys to move through the log, screen by screen.

Escaping from the logs

To escape from viewing the log, perform the following steps:

1. Press ESC.

ARCserve will prompt you to delete the log. You might want to delete the log if it is very large and takes up too much disk space.



2. Select whether you want to delete the log.

Select YES to delete the log, NO to save it.

Configuring ARCserve's settings

About ARCserve Server's settings

You can modify the following settings using the *Configure ARCserve Server* option from the ARCserve Server menu:

- Maximum number of concurrent jobs
- Statistics broadcast and update frequency
- Minimum server memory free to start jobs
- How long to preserve information written to the ARCserve Logs
- Notify the Owner at the end of a job
- Turn off all messages to workstation
- Overwrite ANY tape in drive
- Use SMS logic for DOS and MAC files
- Change to ARCserve message screen on Alerts
- Disable writes to the ARCserve Database
- Disable writing to the ARCserve Activity Log
- Skip files that are greater than 2GB
- Preferred File Interleaving protocol and settings such as buffer size, maximum number of nodes, and timeout period
- Use 512 byte packet to communicate with the Workstation Agent



It is important that you understand these settings and their relationship to ARCserve's performance. Under most circumstances, the default settings will work fine. We recommend that you do not change these settings unless you completely understand how they will effect ARCserve's performance.

If you want to change any of the settings or just view the current settings:

1. Select Configure ARCserve Server from the ARCserve Scheduler's Available Options menu.

The following screen appears:

Configuration	
Maximum # Concurrent Jobs:	16
Statistics broadcast & update frequency (seconds):	1
Minimum Cache Buffers Required to Start Jobs (%):	10
Preserve Log File Information For (n) Days:	30
Notify Owner at end of job:	Yes
Turn off all messages to workstations:	No
Overwrite ANY tape in drive:	No
Use SMS logic for DOS and MAC files also:	No
Change to ARCserve Realtime Message screen on alerts:	No
Disable Writing to the ARCserve Database:	No
Disable Writing to the ARCserve Activity Log:	No
Skip files Larger than 2 GB:	No
Preferred File Interleaving Protocol:	Automatic
File Interleaving Buffer Size (in K):	128
File Interleaving Maximum Nodes:	4
File Interleaving Timeout (in minutes):	15
Use 512 Byte Packet to Communicate with WS Agent:	No
<F1>:Help <F2>:Save/Done <Esc>:Exit	

Changing settings on the configuration menu

Changing the configuration

To change any of the settings on the configuration screen:

1. Highlight the field for the configuration you want to modify.

Use the ARROW keys to move to the field that you want to change.

2. Change the setting.

If you are on a numeric field, enter the new number. If you are on a YES or NO field, enter the new option by pressing “Y” for Yes or “N” for No.

3. Press ENTER.

You must press ENTER to leave the field before you can save your changes.

4. Press F2 to save your changes.

The ARCserve Server menu will be displayed.


Fields on the Configuration screen

About the fields
on the
configuration
screen

The following table describes the settings on the configuration screen, and where appropriate, provides an example to help illustrate how the option is used.

Field	Description	Example
Maximum # of Concurrent Jobs	The maximum number of jobs that can be running at the same time The maximum number is 16. You may want to reduce this number if you have memory constraints or do not wish to load the server with many jobs at the same time. The default is 16	You could have eight copy jobs, five backup jobs, and two restore jobs all running at the same time
Statistics broadcast & update frequency <seconds>	How many seconds ARCserve will wait before updating any statistical figures for ARCserve Server and ARCserve Manager. The default is one second If you change this setting to a higher number, it will reduce network traffic if someone is viewing jobs from the front end.	If this option was set to 10, then every 10 seconds ARCserve will update the information.
Minimum Cache Buffers Required to Start Jobs (%)	This setting is directly related to the cache buffers value that you can see from NetWare's MONITOR utility. The default is 10%. If you are getting errors that state: "There is not enough memory to start jobs", then you will have to increase this setting. Consider adding memory if this problem is a recurrent one.	_____
Preserve Log File Information For <n> days	This setting is an automatic grooming feature for the ARCserve Log files. ARCserve keeps log entries for the specified number of days (the default is 30), then deletes any old information from its Auto Pilot Logs and Activity Logs. This feature will help you automatically save disk space.	You can set this to seven days if you do not care to keep information more than seven days old.

Managing ARCserve from the Server Console

Field	Description	Example
Notify owner at end of job	ARCserve will notify the person who submitted the job, via a broadcast message, that the job has completed. The default is YES. You may want to set this to NO if you do not want a broadcast message to disrupt processing going on at the workstation	If this option is set to yes, when a user schedules a job to run at 12:00 P.M., at 12:20 PM when the job finishes, a broadcast message is sent from the file server to the user's workstation
Turn off all messages to workstations	This option allows you to block ARCserve from sending any broadcast messages to workstations. The default is NO.	You may want to change this to YES if you are working on other projects, because when messages are sent, it requires you to hit CTRL-ENTER to clear the message and continue working
Overwrite ANY tape in drive 	Allows tapes in drives to be overwritten according to the following criteria When set to NO (the default value), tapes will only be overwritten if the tape name matches the criteria of the job and it is in the scratch set of the corresponding media pool. When set to YES, ARCserve will first try to find a tape that matches the above criteria. If none is found, and there is a tape in the drive (on-line), then this tape will be overwritten. The only exception is during a tape span, when tapes belonging to the same sequence as the first tape will not be overwritten	_____
Use SMS logic for DOS and MAC files also	Have ARCserve use SMS logic to back up DOS and MAC files. SMS is usually only used for other types of files (i.e. the NFS, HPFS, and FTAM name space modules on the server) If you change this to YES, you should load the TSAs (Target Service Agents) at the server where you are accessing the files. The default is NO.	_____
Change to ARCserve Realtime Message screen on alerts	ARCserve will switch to the Realtime Message screen when an Alert message is generated. The default is YES.	If you have many applications with screens on the server and do not want ARCserve to automatically switch screens, set this to NO

Field	Description	Example
Disable Writing to the ARCserve Database	ARCserve will not update its databases with detailed information about files that are backed up. The default is NO.	In case you do not have enough disk space to store the database files or do not care about the ARCserve databases, then set this to YES. If this is YES, then detailed information will not be recorded.
Disable Writing to the ARCserve Activity Log	Choose whether you want messages written to the Activity Log. The default is to write messages to the Activity Log.	You might change this setting to NO because you have scheduled a copy job to run several times a day. The messages created by running this job may clutter the Activity Log, outweighing the benefits derived from writing messages to the Activity Log.
Skip files larger than 2GB	Use this option to skip files greater than 2GB. The default is NO. Some applications erroneously create large sparse files on the server.	If you have limited tape capacity you may want to change this option to YES.
Preferred File Interleaving Protocol	This option allows you to set the preferred file interleaving protocol. You can select from: Automatic - ARCserve will select the best available protocol SPX (NetWare 3.1.x)/SPX2 (NetWare 4.x) TCP/IP (You must load the TCPIP.NLM and bind IP to board with proper address)	If you are working with a specific protocol in which you must alter the settings for File Interleaving.
File Interleaving Buffer Size	This option sets the size of the buffer used for file interleaving jobs or using the push agent. This amount is entered in kilobytes. The default is 128 kilobytes.	You may want to modify the buffer size to allocate more or less for processing the job using the File Interleaving function.
File Interleaving Maximum Nodes	This option lets you set the maximum number of file interleaving nodes that can be processed concurrently. Valid values are 1-8. The default value is 4.	You may want to modify the number to get better performance.
File Interleaving Timeout	This option lets you enter the maximum amount of time ARCserve should wait when attempting to receive data from remote file interleaving nodes. Valid values are 1-60 minutes. The default is 15 minutes.	_____

Managing ARCserve from the Server Console

Field	Description	Example
Use 512 byte packet to Communicate with the WS Agent	This option will force ARCserve to use 512 byte packets to communicate with the Agents running on the workstations Usually, ARCserve uses the largest packet size available.	You might want to change this setting to YES if ARCserve is having problems communicating (backing up or restoring files) with the ARCserve Agents running at the workstation.

Display version

To display version information from the ARCserve Scheduler screen:

1. Select Display Version from the Available Options menu.
The following screen appears:

Version Information	
NLM:	ARCserve.NLM
NLM VERSION:	6.00
NLM DATE:	Nov 7, 1995
DESCRIPTION:	ARCserve 6 Scheduler <Beta Build 28>
NLM:	APROCESS.NLM
NLM VERSION:	6.00
NLM DATE:	Nov 6, 1995
DESCRIPTION:	ARCserve 6 Device Activity Dispatcher <Beta Build 28>
NLM:	ASDB.NLM
NLM VERSION:	6.00
NLM DATE:	Nov 6, 1995
DESCRIPTION:	ARCserve 6 Database API <Beta Build 28>
<Pg Up>: Previous <Esc>: Exit <Pg Dn>: More	

This screen displays version information for each device currently used by ARCserve.

The following information is displayed on this screen:

Field	Description
<i>NLM</i>	This is the name of the NLM used by the displayed device.
<i>NLM Version</i>	This is the version of the NLM in use.
<i>NLM Date</i>	This is the date the NLM was loaded into the ARCserve home directory's NLM subdirectory.
<i>Description</i>	This is the description of what function the module supports. For example, for the TAPESVR.NLM for Cheyenne, the description is ARCserve 6 SCSI Tape Driver. This means that this module supports the SCSI Tape Driver.

Display license

To display license information from the ARCserve Scheduler screen:

1. Select Display License from the Available Options menu.

The following screen appears:

License Information			
License Version:	BETA license		
Provided By:	Cheyenne		
Licensed To:	Cheyenne Software Inc.		
Serial Number:	12345678	User Level:	Unlimited
Press any key to continue			

This screen contains the following information:

Field	Description
<i>License Version</i>	This is the current version of ARCserve being used (version 6).
<i>Provided By</i>	This is the name of the licensed reseller.
<i>Licensed To</i>	This is the name of the user that ARCserve is licensed to.
<i>Serial Number</i>	This is the serial number of the software.
<i>User Level</i>	This is the number of users that are limited to the use of this product, according to the license purchased.

Unloading and exiting

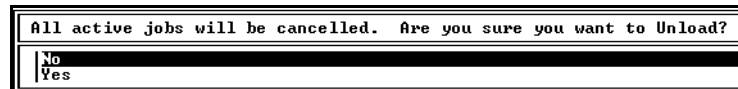
If you need to unload the ARCserve NLM, you can use the *Unload & Exit* option from the ARCserve Server menu.



Before unloading the ARCserve NLM allow any currently running jobs to stop.

1. Select *Unload & Exit* from the Available Options menu .

Move the highlight bar to the last option on the menu, labeled *Unload & Exit*.



2. Confirm that you want to unload and exit .

When you select *Unload & Exit*, the system will prompt you to confirm that you actually want to unload the NLM. Select YES.

Note that if you unload the ARCserve NLM, Tape Server is still loaded. You will have to unload the Tape Server NLM as a separate step.

If you attempt to unload ARCserve while there are active jobs, ARCserve will wait for all active jobs to stop before unloading itself.

To completely unload ARCserve

If you unload ARCserve Server and Tape Server, you will still have to unload the other NLMs used by ARCserve. To completely stop ARCserve and unload its NLMs, you need to type `ASTOP6` at the system console.



Make sure that there are no jobs running when you type `ASTOP6`. If there are any jobs running, Deactivate ARCserve first, wait for the jobs to finish, and then type `ASTOP6`.

To load
ARCserve after
you have
unloaded

To load ARCserve from the file server console, type:

`ASTART6`

The system console will load and activate ARCserve and Tape Server on the file server.



C h a p t e r

MANAGING HARDWARE AT THE SERVER CONSOLE

The ARCserve Tape Server menu provides you with access to all tape drive related activities.

In this chapter, you will learn:

Page:

- | | | |
|------|---|---|
| 6-2 | ➤ | How to get information related to your tape devices |
| 6-5 | ➤ | How to set Configuration information |
| 6-14 | ➤ | How to set Tape Device Management information |
| 6-32 | ➤ | How to view Real-Time Statistics |
| 6-34 | ➤ | How to manage the Tape Server Log |
| 6-39 | ➤ | How to Display Version information |

Using the ARCserve Tape Server

While using ARCserve, there may be times that you need to view information related to the tape drives attached to your ARCserve host server. The ARCserve Tape Server menu provides you with access to all tape drive related activities.



When you load the Tape Server, you may see an error message stating “No device found” or “Device not Supported”. This error can occur when you are using a device not supported by ARCserve or if your device is not connected. If you receive this error make sure you are using a device supported by ARCserve (for example an OEM), check the cable connection to the device, and verify that the device is turned on.

Tape Server

The Tape Server is the link between the ARCserve Server and the tape drives. It knows how to communicate with the hardware that you selected while installing ARCserve. There are two primary NLMs associated with the tape server module: TAPESVR.NLM, STANDARD.NLM. If you are using ARCserve with the Changer option, another important NLM is CHANGER.NLM.

The tape server module processes jobs by establishing a connection with either the job processing module on the ARCserve server or the ARCserve Manager.

The TAPESVR.NLM is responsible for establishing the initial connection with any users requesting a connection. After the connection is made, TAPESVR.NLM communicates with the appropriate STANDARD.NLM, based on the tape group requested for this job (there is one STANDARD.NLM for each tape group attached to your server). If the changer option is used, TAPESVR.NLM communicates with the CHANGER.NLM.

The tape board NLM handles the job of communicating with the tape drive. If you have an ASPI supported adapter installed in your system, the tape board NLM is ASPIBD.NLM. The name of this NLM corresponds to the name of the host adapter card you chose when ARCserve was installed. For example, if you were using a Bustek card, the NLM used would be BUSTEKBD.NLM. The NLM that actually performs the role of communicating with the tape drive depends entirely on the type of host adapter you selected when you installed ARCserve.

Tape Server has all the information about your tape drives

There are four types of information available from the ARCserve Tape Server Console:

- Configuration information, which includes information about your installed host adapter cards (tape server supports up to eight (8) cards), devices, device groups, and Tape Server configuration parameters
- Device information/operations
- Real-time device and activity information
- Tape Server log



EXCEPT for the information you enter on the Advanced Configuration screen (the *TAPESVR Parameters* option), information modified for the Tape Server is temporary. Each time you load Tape Server, your changes will be lost (except for the changes made on the Advanced Configuration screen). To make any permanent changes to the Tape Server, you must modify the TAPESVR.CFG file. Refer to Appendix A, “Using ASCONFIG.INI and TAPESVR.CFG” from more information on this.

You can view Tape Server information from the ARCserve
Tape Server screen:

View Tape Server information such as how long the Tape
Server has been up-and-running, how many active operations
are being processed and the size of the I/O Buffers (in bytes).

The screenshot displays the ARCserve Tape Server interface. At the top, a status bar shows: "Tape Server Up Time: 0 Day 9 Hours 27 Minutes 21 Seconds", "Active Operations: 0", and "I/O Buffers: 0 Bytes". Below this, a central menu titled "Available Options" lists: "Configuration" (highlighted), "Tape Device Management", "Real-Time Statistics", "Tape Server Log", "Display Version", and "Unload & Exit". The bottom of the screen features a black bar with "<F1>:Help" on the left and "<Enter>:Select" on the right. A curved line connects the status bar to the introductory text above, and a straight line connects the menu to the instruction below.

Tape Server Up Time: 0 Day 9 Hours 27 Minutes 21 Seconds	
Active Operations: 0	
I/O Buffers: 0 Bytes	

Available Options

Configuration

Tape Device Management

Real-Time Statistics

Tape Server Log

Display Version

Unload & Exit

<F1>:Help<Enter>:Select

Select Tape Server options from this
menu.

Configuration

The Configuration menu allows you to view information about the host adapter card that is currently in use, all devices connected to this adapter card, and all tape groups that have been configured.

What's on the Configuration menu

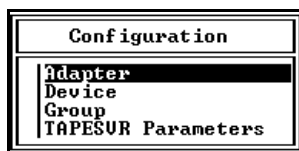
Tape Server's Configuration screen displays information about:

- The type of adapter card in the file server
- Configured devices
- Configured device groups

To view Configuration information from the ARCserve Tape Server screen:

1. Select Configuration from the Available Options menu.

The Configuration menu appears:



2. Select the desired option.

The four choices are discussed in detail on the following pages.

Adapter information

To view information about the host adapter card that is currently in use:

1. Select Adapter from the Configuration menu.

ARCserve supports up to eight adapters. If you are using more than one adapter, you will see a screen which displays all your adapters. Highlight the adapter you want to use and press ENTER. A detailed screen appears:

Tape Server Up Time: 0 Day 6 Hours 55 Minutes 22 Seconds
Active Operations: 0
I/O Buffers: 0 Bytes
Board #: 0 Driver: AHABD.NLM
Cheyenne AHA Board Driver for Adaptec 1540 card
BOARD NAME: BOARD0
SCSI ID: 7
PORT: 130
MEMORY ADDRESS: N/A
DMA: N/A
IRQ: N/A
SLOT NUMBER: N/A
ARCserve Version 5.0 Compatible
Memory above 16 MB cannot be used
Concurrent tape operations supported

This screen lists any board driver that is in use, the board number (Board #), and the adapter card name. You configure how many boards will be used and the adapter card name during the ARCserve installation. Each board used is numbered, beginning with 0. Refer to the *ARCserve Installation Guide* for more information about configuring your board driver. From this screen you can also view the SCSI ID, adapter number, whether or not memory above 16 MB can be accessed, and whether or not concurrent tape operations are supported. When applicable, this screen displays the Port and Memory addresses, IRQ level, and DMA channel.

Device information

To view information about all devices connected to all the host adapter cards on the ARCserve server:

- 1. Select Device from the Configuration menu.
If you have more than one device attached to your ARCserve server, each device will be displayed:

To view status information for a device, highlight the device and press ENTER.

Tape Server Up Time: 12 Days 4 Hours 1 Minute 16 Seconds							
Active Operations: 0							
I/O Buffers: 0 Bytes							
Device	Board	ID-LUN	Device Type	Vendor	Product	Rev	Group
0	0	3-0	Tape Drive	HP	C1533A	9406	ARCserve
1	0	4-0	Tape Drive	ARCHIVE	4586XX 28887-XXX	4BGD	TECH_PUB
2	0	4-1	Changer	ARCHIVE	4586XX 28887-XXX	4BGD	N/A

<F1>:Help<Esc>:Exit<Enter>:Select

This screen contains the following information:

Field	Description
Device	The device number assigned to the tape device. The device number will change when you add or remove devices.
Board	The tape board number.
ID-LUN	The SCSI ID and Logical Unit Number (LUN).
Device Type	The type of device (tape device, changer).
Vendor	The vendor name (HP, etc.).
Product	The product number.
Rev	The firmware revision number.



Field	Description
<i>Group</i>	Name of the group in which the device is contained (If a device has been assigned to a group).



If you are using a QIC-02 drive, only one device will be displayed. This device will have an ID of 0.

To see the status of one of the devices listed on the Device Configuration screen:

1. Highlight the device and press ENTER.

The following Status Information screen appears:

STATUS INFORMATION	
SCSI ID-LUN: 3-0	Default Block Size: 512
Vendor: HP	Compression Drive: YES
Product: C1533A	Compression Enabled: YES
Revision: 9406	Format Type: FSTSEEK
Serial Number: 3718343572	Tape Block Size: 512
Tape Name: 3718343572	Tape Format: CHEYENNE
Tape ID: 8F34	Application: ARCSERVE
Sequence #: 1	Group: No Group
Write Protected: NO	Job: *NONE*
The following is recorded in the Database	
First Format Date: Wed Sep 6, 1995	Expiration Date: Fri Sep 6, 1996
Header Accesses: 3	Media Errors: 0
Usage Time: 0:0 <HH:MM>	Recovered Read Errors: 0
KB Used: 0	Recovered Write Errors: 0
Pool Name: DEFAULT	Save Set: YES

This screen displays information about the tape drive, the tape in the drive, and all information stored in the ARCserve database, about the drive and the tape. The top of this screen contains information about the device, the middle of the screen contains information about the tape, and the bottom of the screen contains information contained in the database.

This screen will also appear when you select Tape Drive Status from the Tape Device Management list of available options. Refer to the ‘Tape Device Management’ section on page 6-14 for more information.

Group information

Device group information is configured in the TAPESVR.CFG file. To view information about all tape groups that have been configured:

1. Select Group from the Configuration menu.

The following screen appears:

Tape Server Up Time: 12 Days 4 Hours 3 Minutes 52 Seconds		
Active Operations: 0		
I/O Buffers: 0 Bytes		
Group	Type	Device #
ARCserve	Tape Drive	0
TECH_PUB	Changer	1

<F1>:Help :Delete <Unload Group> <Esc>:Exit

This screen lists the group's name, the device number, and the type of every device in the group. Use the DELETE key to unload a tape group.

Why would I want to unload a tape group?

You may want to unload a group if you have several groups set up, each with its own device, and you need to move a device to a different group. Whenever you want to move or re-configure any of your devices you must first unload the group to which the device is configured.

To unload a group:

1. Highlight the group you want to unload and press DELETE.

The group will be unloaded.

2. Load STANDARD.NLM.

How do I load a group manually?

To load a group manually, type the following at the server console (note the following should be entered on one line):

```
load sys:\arcserve.6\nlm\standard  
group=group1 board=[board name] SCSI IID=[SCSI  
ID device(s) ]
```

If you are loading more than one device together, type each device number next to the “SCSIID =”. For example:

Tom is loading two devices, The SCSI ID for one device is 1 and the SCSI ID for the other device is 3. Tom types the following: “SCSIID=13”.

The process of unloading a group is more easily managed through the Device Management manager. For more information refer to Chapter 13, “Device Management” in the *ARCserve Manager Guide*.



Remember, unloading a group will make all devices controlled by this group inaccessible for backup, restore, merge, and compare functions.

To group two devices, both devices must be of the same type and should be on the same host adapter.

Tape Server parameters

The last option on the Configuration menu lets you set configuration information for the Tape Server NLM:

1. Select TAPESVR Parameters from the Configuration menu.

The following screen appears:

Advanced Configuration	
Disable TAPESVR Logging to Database:	No
QFA Locate Tolerance Level:	100
Disable Tape Scanner:	No
Tape Scan Interval (seconds):	5
Real-time Update Interval (100 ms):	10

2. Enter the appropriate information in the fields provided.

If you wish to change the default information for any of the screens, you can do so by positioning the cursor in the field and entering the applicable information.



The options on the Advanced Configuration screen control settings which should only be modified under specific conditions. You should only change the information on the Advanced Configuration screen upon advice from a Technical Support representative.

Field	Description
<i>Disable TAPESVR writes to Database</i>	This option will prevent TAPESVR from writing information to the ARCserve database.

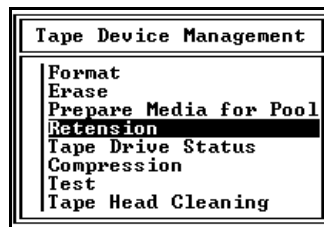
Field	Description
<i>QFA Locate tolerance level</i>	This option sets the algorithm used by QFA operations for positioning the tape. The Tape Server uses two methods for reposition a tape, READ or SPACE.
<i>Disable Tape scanner</i>	This selection disables TAPESVR.NLM from checking the media status of a tape drive. The scanner detects when a tape is taken out from a drive or if a new tape was inserted into the drive. If the tape is new to tape server, the Tape Server will begin reading and initializing itself according to the data on the tape.
<i>Tape Scan Interval (seconds)</i>	This option allows you to set the frequency at which the Tape Scanner will check the status of its drives. The interval is always given in seconds.
<i>Real-Time Update Interval (100 ms)</i>	This option allows you to set the frequency on how often to update the status on the Real-Time Statistics screen.

Tape Device Management

The Tape Device Management menu allows you to manage all tape and devices.

1. Select Tape Device Management from the Available Options menu of the Tape Server screen .

The Tape Device Management menu appears:



From this screen, you can perform the following tape device management functions:

Option	Function
<i>Format</i>	This will format tape for use with ARCserve for NetWare. A new header will be written to the tape and any data on the tape will be lost
<i>Erase</i>	This will erase all data stored on the tape current in the drive.
<i>Retension</i>	This will ensure that the proper tension exists over the entire length of a Quarter Inch Cartridge (QIC). DAT and 8 mm tape do not require retensioning.
<i>Tape Drive Status</i>	This screen displays information about the tape drive, the tape, and all database information about the tape and the drive.

Option	Function
<i>Assign media to Pool</i>	Use this option to move media in a pool to the scratch set. Since the Default tape pool has no scratch set, you will only see this option if you have created tape pools in addition to the Default. Refer to the 'Media Pooling' section in Chapter 6, "Customizing Your Backup" of the <i>ARCserve Manager Guide</i> .
<i>Compression</i>	Use this option to enable or disable the hardware data compression mode of a tape drive. This option will only be displayed if at least one of the attached devices support compression.
<i>Test</i>	This option will overwrite all data on the tape. Do not use this feature unless you are prepared to lose all of the tape's data. Use this option if you are receiving errors on your jobs (backup, restore, etc.) and you want to verify if the errors are due to the tape and/or drive.
<i>Tape Head Cleaning</i>	This option will record the history of tape head cleaning into the ARCserve database for future reference.

Format

When you select *Format* from the Tape Device Management menu the following screen appears:

Device #	Tape Name	Sq	WP	Model	Product	Group
0	ARC1	1	NO	HP	C1533A	No Group
1	*TAPE NOT IN DRIVE*			ARCHIVE	4586XX 288	TECH_PUB

If you have more than one device attached to your ARCserve server, each device will be listed.

1. Highlight the device which contains the tape you want to format and press ENTER.

The following screen appears:

Information about the tape currently in the drive is displayed. This section of the screen is informational only (you can not change any of this information).

Format

WARNING - This operation will destroy all data on the tape!

Tape Drive: HP C1533A SCSI ID-LUN: 3-0

Current Name: ARC1 Sequence Number: 1

Tape Pool: DEFAULT

Media Serial #: 3718343572 Group: No Group

Tape Name: XXXXXXXXXX

Tape Pool: DEFAULT

Media Serial #: 3718343572

Expiration Date: November 13 1996

<F1>:Help

<F2>:Done

<Esc>:Exit

You can modify some of information on the bottom section of this screen.

The following information is displayed on the Format Tape screen.

Option	Function
<i>Tape Name</i>	This name will be assigned to a tape. Enter a name up to 23 characters.
<i>Media Pool</i>	This is the media pool the tape will be assigned to.
<i>Serial Number</i>	The serial number displayed is the next available serial number from the media pool you have selected. A serial number can not be changed once it has been assigned to media.
<i>Expiration Date</i>	<p>This is the date the media is scheduled to be taken out of service. When the date is reached, ARCserve will indicate that the tape should no longer be used, by flashing the expiration date. You can still, however continue to use the tape for backups, etc.</p> <p>The expiration date should be based on expected use. If the tape is used more frequently, set a shorter expiration date (a few months). If the tape is used less frequently, set a longer expiration date (a few years).</p> <p>The default expiration date is one year.</p>



You will only be able to modify the Expiration Date if a valid expiration date does not exist (the tape is new) or if the Expiration Date has passed.

To format tape from the Format Tape screen:

1. Enter a name for the tape, then press ENTER.

The name should consist of alphanumeric characters. It can contain up to 23 characters.

-
2. Enter an expiration date for the tape.

The Expiration date consists of a month, day, and year.
Use ENTER to call up a list of months and years, as well
as to set each component of the date.

3. Press F2 to begin formatting the tape.
4. Press ESC after the formatting is complete to exit the utility.

Erase

When you select *Erase* from the Tape Device Management menu the following screen appears:

Group	Dev#	BD#	ID	Type	Tape Name	Tape ID	Serial #	Seq
ARCHIVE	1	0	4	Tape	*TAPE NOT IN DRIVE*			
ARCSEVER	0	0	3	Tape	NY-WRITER	2330	1775328702	1

If you are using more than one device each device will appear on the screen. To view more information:

1. Highlight the device which contains the tape you want to erase and press ENTER.

The following screen appears:

Erase

WARNING - Erasing will destroy all data on the tape!!!!

Tape Drive: HP

C1533A

SCSI ID-LUN: 3-0

Current Name: ARC1

Sequence Number: 1

Tape Pool: DEFAULT

Media Serial #: 3718343572

Group: No Group

Erase Mode: Quick Erase <Only destroy tape label>

Information about the tape currently in the drive is displayed on the Erase Tape screen.



Erasing a tape completely removes all data from the tape. Make sure that the name of the tape displayed is the tape you want to erase for you will not be able to recover data once it is erased.

You can select one of the following erase modes from the Erase Tape screen.

Option	Function
<i>Quick Erase</i>	A Quick Erase takes much less time than a Full Erase because it only overwrites the current media label, it doesn't remove all the contents of the media. Quick Erase is useful if you want to re-use ARCserve media, but you don't have time to wait for a Full Erase.
<i>Quick Erase Plus</i>	This option will destroy both the tape name and serial number.
<i>Full Erase</i>	A Full Erase completely removes all data from a tape. It takes much longer than a Quick Erase, but the media 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 Full Erase.

To erase the tape from the Erase Tape screen:

1. Press SPACE BAR to view your erase mode choices .

The Erase Mode menu appears:

Available Options
Full Erase <Destroy all data and tape label>
Quick Erase <Only destroy tape label>
Quick Erase Plus <Destroy tape label and serial number>

2. Highlight the erase mode you want, then press ENTER to select it.

Select *Full Erase* to perform a SCSI erase, which overwrites the entire tape. This method can take from a few minutes (for cartridge drives) to a few hours (4mm and 8mm drives) to complete. Choose this method if you want to be sure the contents of the tape will be completely destroyed.

Select *Quick Erase* to overwrite the tape header, which causes the tape to appear blank to ARCserve.

Select *Quick Erase Plus* to overwrite the tape header and remove the serial number, which causes the tape to appear blank to ARCserve and Serial Number.

3. Press F2 to begin erasing the tape.
4. Press ESC after the tape is erased to exit the utility .

Retension

An improperly tensioned QIC tape may cause read and write errors which could be a big problem when you are trying to restore some critical data.

Retensioning a tape winds the tape so that it has the correct tension. This may correct any problem you were having reading from or writing to the tape.

To retension a tape:

1. Select Retension from the Tape Device Management menu.

The following screen appears:

Device #	Tape Name	Sq	WP	Model	Product	Group
0	ARC1	1	NO	HP	C1533A	No Group
1	*TAPE NOT IN DRIVE*			ARCHIVE	4586XX 288	TECH_PUB

If you are using more than one device each device will appear on the screen. To view more information:

1. Highlight the device which contains the tape you want to retension and press ENTER.

The following screen appears:

Retension		
Tape Drive:	HP C1533A	SCSI ID-LUN: 3-0
Current Name:	ARC1	Sequence Number: 1
Tape Pool:	DEFAULT	
Media Serial #:	3718343572	Group: No Group

2. Press F2 to begin retensioning the tape.

3. Press ESC after the tape is retensioned to exit the utility .

Tape drive status

When you select *Tape Drive Status* from the Tape Device Management menu the following screen appears:

Group	Dev#	BD#	ID Type	Tape Name	Tape ID	Serial #	Seq
ARCHIVE	1	0	4	Tape	*TAPE NOT IN DRIVE*		
A	ARCserve	0	0	3	Tape	NY-WRITER	2330 1775328702
							1

If you are using more than one device each device will appear on the screen. To view more information:

1. Highlight the device which contains the tape you want to view and press ENTER.

The following screen appears:

STATUS INFORMATION	
SCSI ID-LUN: 3-0	Default Block Size: 512
Vendor: HP	Compression Drive: YES
Product: C1533A	Compression Enabled: YES
Revision: 9406	Format Type: FSTSEEK
Serial Number: 3718343572	Tape Block Size: 512
Tape Name: ARC1	Tape Format: CHEYENNE
Tape ID: EEE8	Application: ARCserve
Sequence #: 1	Group: No Group
Write Protected: NO	Job: *NONE*
The following is recorded in the Database	
First Format Date: Wed Sep 6, 1995	Expiration Date: Fri Sep 6, 1996
Header Accesses: 1	Media Errors: 0
Usage Time: 0:0 <HH:MM>	Recovered Read Errors: 0
KB Used: 0	Recovered Write Errors: 0
Pool Name: DEFAULT	Save Set: YES

Information about the tape currently in the drive is displayed on the Tape Drive Status screen. The top of this screen displays information about the tape device such as the SCSI ID of the device, the vendor, product, and firmware identification. This screen also displays information relating to the block size, whether or not hardware compression is available (and if it is enabled), and the ARCserve tape format type.

The middle section of this screen displays information about the tape in the device. It displays label information about the tape that is currently loaded in the drive, its name, tape ID, and sequence number. Write protection and expiration date status is displayed. The expiration date indicates when the tape should be retired from service, although, backups and restores may still be performed on the tape.

The bottom of this screen displays the following information stored in the ARCserve database:

Option	Function
<i>Header Accesses</i>	This is the total number of times the tape header has been read or written.
<i>Usage Time</i>	This is the time in hours and minutes that the current tape has been accessed either for backup or restore operations.
<i>Kilobytes Used:</i>	This is the total used space on this tape (in KB).
<i>Pool Name</i>	The name of the media pool in which the current tape belongs.
<i>Save Set</i>	This indicates whether or not the tape is located in the save set of the media pool. Refer to Chapter 6, “Customizing Your Backup” of the <i>ARCserve Manager Guide</i> for more information on media pool concepts.
<i>Media Errors</i>	Every time a tape operation fails and the drive reports a flaw in the tape, this counter is incremented by one (1).
<i>Recovered Read and Write Errors</i>	These two accumulating fields display the total number of times the tape drive had to either re-read or re-write a block on tape. In either case, the block was successfully read or written.

Compression

Compression, in relation to tape drives, is hardware driven, meaning that it is dictated by the tape drive vendor, or the type of tape device you are using. ARCserve does not use or add any compression logic when backing up files; it simply enables or disables the hardware compression that the tape drive supports. If you are using a tape device that supports compression, and the compression is enabled through ARCserve, then the data will be compressed on the tape.

When you select *Compression* from the Tape Device Management menu the following screen appears:

Group	Dev#	BD#	ID	Type	Tape Name	Tape ID	Serial #	Seq
ARCHIVE	1	0	4	Tape	*TAPE NOT IN DRIVE*			
ARCserve	0	0	3	Tape	NY-WRITER	2330	1775328702	1

If you are using more than one device each device will appear on the screen. To view more information:

1. Highlight the device which contains the tape you want to compress and press ENTER.

The following screen appears:

Compression		
Tape Drive Compression Mode is currently On		
Tape Drive: HP	C1533A	SCSI ID-LUN: 3-0
Current Name: ARC1		Sequence Number: 1
Tape Pool: DEFAULT		
Media Serial #: 3718343572		Group: No Group
Compression:	Compression ON	

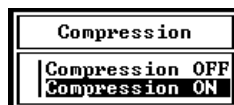
Information about the tape currently in the drive is displayed on the Compression screen.

Data compression increases the storage capacity of a tape by reducing the amount of tape required to hold data.

To compress files from the Tape Compression screen:

1. Press SPACE BAR to view your compression choices .

The following menu appears:



2. Highlight the compression mode you want, then press ENTER to select it.

Select *Compression OFF* to turn off compression. Select *Compression ON* to turn on compression.

A blank tape must be in the drive in order to change compression.

3. Press F2 to save the compression setting .
4. Press ESC to exit this utility .

Test

If you are experiencing problems with a tape or a tape drive, you can use this feature to test whether or not information can be written to a tape.

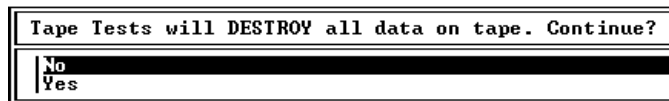


Performing a Tape Test destroys all information on the tape. Make sure the tape displayed is the one you want to test and that data loss is acceptable for this tape.

To test a tape:

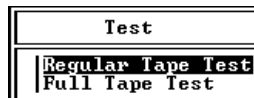
1. Select Test from the Tape Device Management menu.

The following message box appears:



2. Select Yes.

The following Test menu appears:



Regular Tape Test attempts to write and verify a series of “sessions” of data based upon specified criteria, including the size in megabytes and number of the sessions.

Full Tape Test attempts to completely fill the tape with sessions of a specified size in megabytes.

3. Press F2 to begin testing the tape.
4. Press ESC after the tape is tested to exit the utility.

Tape head cleaning

When you select *Tape Head Cleaning* from the Tape Device Management menu the following screen appears:

	Group	Dev#	BD#	ID	Type	Tape Name	Tape ID	Serial #	Seg
A	ARCHIVE	1	0	4	Tape	*TAPE NOT IN DRIVE*			
	ARCserve	0	0	3	Tape	NY-WRITER	2330	1775328702	1

Information about the tape currently in the drive is displayed on the Tape Head Cleaning screen.

1. Press F2.

A message box appears, prompting you to remove the tape that is currently loaded in the tape drive.

2. Remove the tape that is currently loaded in the tape drive.

3. Press ENTER.

Another message appears in the message box, prompting you to insert the cleaning tape in the tape drive.

4. Insert the cleaning tape in the tape drive.

5. Press ENTER to begin cleaning the tape drive heads.

When the tape head cleaning process is complete, the cleaning tape is ejected.

6. Press any key after the cleaning tape is ejected.

7. Press ESC to exit the utility.

The ARCserve database will be updated to indicate the date that the cleaning took place and which drive was cleaned.



Remember to mark the usage on the cleaning cartridge. Cleaning cartridges have limited usage and should not be used once they have passed their time. Check the cartridge documentation to determine how many uses the cleaning cartridge allows.

Real-time statistics

The Real-Time Statistics screen allows you to view information, in real time, on the activity of all attached tape drives.

1. Select Real-Time Statistics from the Available Options menu.

The Real-Time Statistics screen appears:

	Group	Dev#	BD#	ID	Type	Tape Name	Tape ID	Serial #	Seg
	ARCHIVE	1	0	4	Tape	*TAPE NOT IN DRIVE*			
A	ARCserve	0	0	3	Tape	NY-WRITER	2330	1775328702	1

The ARCserve Tape Server supports up to 32 tape drives. All the tape drives you are using will be displayed on the Real-Time Statistics screen. The tape drives are displayed alphabetically by Group name. When a drive is active (a job is currently being processed), the letter “A” will appear to the left of its name on the screen.

2. Select the tape for which you want to view statistical information.

The following detail screen appears:

Real-Time Statistics	
SCSI ID-LUN: 3-0	Default Block Size: 512
Vendor: HP	Compression Drive: YES
Product: C1533A	Compression Enabled: YES
Revision: 9406	Format Type: FSTSEEK
Serial Number: 3718343572	Tape Block Size: 512
Tape Name: 3718343572	Tape Format: CHEYENNE
Tape ID: 8F34	Application: ARCserve
Sequence #: 1	Group: ARCSERVE
Write Protected: NO	
SCSI Command: REWIND	
Job: UNATTENDED	
Task: BACKUP	
User: LYNETTE	
KB Used: 2,625,760	

<F1>:Help or <Esc> to return to Available Options

The top section of this screen displays information about the device, the middle section displays information about the tape, and the bottom section displays current tape operations

The Device information displayed on the Real-Time statistics screen includes SCSI ID and LUN, vendor name, product and revision identification numbers, default block size of the device, availability and status of hardware compression, and the ARCserve tape format type. Information about the tape drive is obtained directly from the device.

The middle of this screen lists information about the tape that is currently loaded in the drive, including its serial, tape id, and sequence numbers, name, write protect, current group, and current block size of the tape.

The bottom of the Real-Time Statistics screen shows all current tape operations, including the executing command (i.e. read, write), the job (i.e. backup, restore, erase), the task, the user, and the total KB of data on the tape.

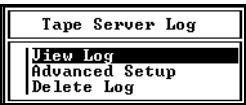
Tape Server Log

The Tape Server Log contains all important tape drive transactions. These transactions are saved in ASCII format to a file called TAPE\$SVR.LOG located in your ARCserve home directory. Transactions saved include client connections to tape, as well as all tape activities, such as the formatting and erasing of tapes. All entries are time and date stamped and give information about the client using the Tape Server's services, the activity performed by the Tape Server, and the resultant status of the Tape Server.

Viewing the log

1. Select Tape Server Log from the Available Options menu on the Tape Server screen.

The Tape Server Log menu appears:



2. Select View Log from the Tape Server Log menu.

The following screen appears:

```
NY-WRITER2/SYS:\ARCSERVE.6\TAPE$SUR.LOG
Nov-13 11:21:46 Loading TAPESUR.NLM. CHEYENNE release...
Nov-13 11:21:48 Scanning Board 0, ADAPTEC AHA-1x4x, Board Name = BOARD0
Nov-13 11:21:48 SCSIID 00: < No Device Present >
Nov-13 11:21:48 SCSIID 01: < No Device Present >
Nov-13 11:21:49 SCSIID 02: < No Device Present >
Nov-13 11:21:49 SCSIID 03: HP C1533A 9406 <Tape Drive>
Nov-13 11:21:51 LUN 01: < No Device Present >
Nov-13 11:21:51 SCSIID 04: ARCHIVE 4586XX 28887-XXX 4BGD <Tape Drive>
Nov-13 11:21:52 LUN 01: ARCHIVE 4586XX 28887-XXX 4BGD <Changer>
Nov-13 11:21:52 SCSIID 05: < No Device Present >
Nov-13 11:21:52 SCSIID 06: < No Device Present >
Nov-13 11:21:59 CHANGER.NLM for Group [TECH_PUB] loaded successfully
Nov-13 11:22:01
Nov-13 11:22:01 TAPESUR.NLM has been loaded successfully
Nov-13 11:22:05 Changer ARCHIVE Detected.
<F1>:Help <Esc>:Exit <↑> <↓> <PgUp> <PgDn> <Ctrl PgUp> <Ctrl PgDn>
```

This screen lists all transactions that have been performed by the Tape Server and includes the date and time each transaction was performed.

Advanced setup

ARCserve enables you to control the Tape Server messages that are recorded in the Activity Log. These options are specified in the Log's Edit Settings screen.



The information recorded in Tape Server Activity Log will be useful when trying to troubleshoot any errors that are encountered during any Tape Server job (backup, restore, etc.). Also, if you ever use the Technical Support services provided for ARCserve, a representative may help you resolve a problem by using the information provided in the Tape Server Log.

To edit the Tape Server Activity Log settings:

1. Select Advanced Setup from the Tape Server Log menu.

The Edit Settings screen appears:

Edit Settings	
Device(s)	All Devices
Message Destination	Messaging Off
Message Type	
Preserve Log File Information For <n> Days: 30	
<div><F1>:Help <F2>:Save Settings <Esc>:Exit</div>	

2. Enter the applicable information in the field of the screen then press F2.

Refer to the table below for information about the screen's fields:

Fields	Definition
<i>Device(s)</i>	Choose a specific device to record in the Activity Log or select all devices. By default the Activity Log will record information for all devices.
<i>Message destination</i>	Allows you to choose where system messages will be displayed/recorded. The four choices are to screen only, to screen and file, to file only, and messaging off.
<i>Message type</i>	Allows you to choose what types of messages are displayed/recorded. You can choose between all messages and errors only.
<i>Preserve log file information for <n> days</i>	Allows you to choose how many days the system will retain information to display in the log. The default value for this field is 30 days.



The settings you select on the Advance Setup screen are not only applied to the messages for the device shown on the screen, but they also affect how all Tape Server messages are displayed.

Deleting the log

You can delete the log at any time by selecting *Delete* from the Activity Log menu. You will be asked to confirm your selection before the log is actually deleted.

Display version

To display version information, select *Display Version* from the Tape Server Log Available Options Menu. The following Version Information screen appears:

Version Information	
NLM:	TAPESUR.NLM for CHEYENNE
NLM VERSION:	6.00
NLM DATE:	October 30, 1995
DESCRIPTION:	ARCserve 6 SCSI Tape Driver
NLM:	STANDARD.NLM
NLM VERSION:	6.00
NLM DATE:	October 30, 1995
DESCRIPTION:	ARCserve 6 Standard Tape Support
NLM:	CHANGER.NLM
NLM VERSION:	6.00
NLM DATE:	October 30, 1995
DESCRIPTION:	ARCserve 6 Changer Support

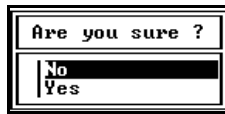
This screen displays version information for each device currently used by ARCserve.

The following information is displayed on this screen:

Field	Description
<i>NLM</i>	This is the name of the NLM used by the displayed device.
<i>NLM Version</i>	This is the version of the NLM in use.
<i>NLM Date</i>	This is the date the NLM was loaded into the ARCserve home directory's NLM subdirectory.
<i>Description</i>	This is the description of what function the module supports. For example, for the TAPESVR.NLM for Cheyenne, the description is ARCserve 6 SCSI Tape Driver. This means that this module supports the SCSI Tape Driver.

Unload and exit

If you select *Unload and Exit* from Available Options of the Tape Server screen, the following screen appears:



From this screen:

1. Select Yes.

The TAPESVR.NLM (and its associated NLMs such as STANDARD.NLM and CHANGER.NLM) will be unloaded. However, the adapter board driver NLM will not be unloaded.



DISASTER RECOVERY

This chapter provides you with information about recovering from a system failure.

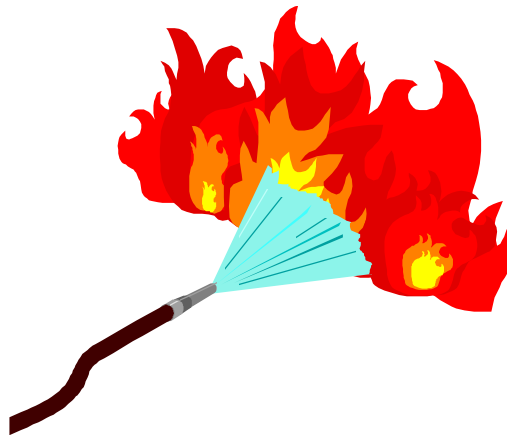
In this chapter, you will learn:

Page:

- | | |
|--------|---|
| 7-2 ➤ | Basics of disaster preparation and recovery |
| 7-5 ➤ | How to prepare for disaster |
| 7-15 ➤ | How to recover from disaster |

Basics of disaster preparation and recovery

Where your computer network is concerned, a disaster occurs when you lose all or part of your network during a catastrophic event like a flood, fire, earthquake, tornado, terrorist bombing, etc. If your loss includes the host server or servers responsible for backing up your data, restoring your network becomes a particularly difficult challenge.



The best way to meet any disaster is to be ready for it when it happens. To help you prepare for such an eventuality, and recover from one when it happens, Cheyenne includes a set of Disaster Preparation and Recovery modules and features in its ARCserve package.

Disaster Preparation/Recovery modules/features

These disaster preparation modules and features are outlined in the following table.

Module/Feature	Function
Cheyenne Disaster Recovery Preparation module (CDRPREP.NLM)	Enables you to create a set of disaster recovery diskettes. These diskettes facilitate restoring your host server when a disaster occurs.
Cheyenne Disaster Recovery module (CDR.NLM)	Helps you get ARCserve up and running again on the server so that you can complete the process of restoring your system and data.
<i>Prepare for Disaster Recovery</i> option in the Manager Backup window	Records essential data recovery information during backups of host server.

This chapter describes how you can use these Cheyenne Disaster Preparation and Recovery modules and features to recover your ARCserve host server in the event of disaster.

What ARCserve Disaster Preparation and Recovery will and won't do

Before making use of your Disaster Preparation and Recovery software, it's important to keep in mind what this process can accomplish and equally important to be aware of its limitations.

Cheyenne Disaster Preparation and Recovery does the following things:

- Enables you to get your ARCserve host server up and running after your operating system and NetWare version have been restored.
- Facilitates restoring the data on your host server to the desired state (most recent backup or other, previous backup).

Disaster Preparation and Recovery does not do the following things:

- Restore your host server's operating system.
- Restore NetWare on your host server.
- Restore remote servers or workstations.

Operating system
and NetWare
considerations

You must reinstall your operating system and NetWare before ARCserve. Therefore, you need the following items for disaster recovery in addition to your ARCserve Disaster Preparation diskettes and other Cheyenne materials.

- Installation disks for your operating system
- Installation disks NetWare
- Operating System Manual
- Novell's Installation Manual

With ARCserve up and running, you can proceed to recover your Database and finish restoring your host server according to the Restore procedures described in the *ARCserve Manager Guide*.

The rest of this chapter describes how to prepare for and recover from a disaster.

Preparing for disaster

During the Preparation phase, you can use the Cheyenne Disaster Recovery Preparation module (CDRPREP.NLM) to create a set of Recovery diskettes. These diskettes, along with the media containing your regular backup data, enable you to restore your ARCserve system on a host server with a minimum of difficulty and time spent at the task.

As part of the preparation phase, you can also select the *Prepare for Disaster Recovery* option when performing backups of your ARCserve host server.

This section describes both of these tasks, as well the following additional items:

- How to store your Disaster Preparation diskettes
- Operating system and NetWare considerations

Running the Cheyenne Disaster Recovery Preparation module

This section describes how to use Cheyenne's Disaster Recovery Preparation module (CDRPREP.NLM).

You don't need to create new disaster recovery diskettes every time you back up your host server. However, we do recommend that you create new Recovery diskettes whenever one of your system or ARCserve files is altered for any reason.

To create a set of disaster recovery diskettes, carry out the following procedure.

1. Prepare several blank, formatted diskettes .

We recommend preparing at least four high-density diskettes. (You may only need three but it's good to have an extra.)

It's also recommended that you label each of your CDR diskettes as follows: *[servername] CDR Disk #[n], Date*

2. Load the Cheyenne Disaster Recovery Preparation module.

At the host server console, enter the following command:
LOAD CDRPREP

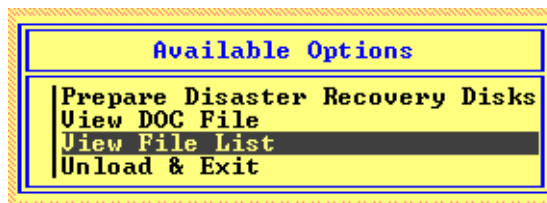
The CDRPREP module loads and a screen appears with a box prompting you to log in the host server.

3. Log in to the server.



To run CDRPREP, you need to be logged in to the server as Supervisor, or as a user with supervisor equivalent rights (on a 4.x server as Admin or Admin equivalent user).

The main menu, shown below, appears, asking you to select one of four options.



Before proceeding to prepare your disaster recovery diskettes, select the *View File List* option and press Enter.

Selecting this option opens the CDR.INI file containing a list of the files which CDRPREP will copy to your Disaster Preparation diskettes in compressed form. If there are additional files you want to have copied to your Disaster Preparation diskettes, Step 7 will give you a chance to add these files to the CDR.INI file.

4. Select Prepare Disaster Recovery Disks and press Enter.
A box appears, asking you to enter your emergency contact information.

5. Enter the requested information in the appropriate spaces.

You must enter information for at least one emergency contact before proceeding.

When you press F2, a box appears, asking if you want to enter additional emergency contact information. To do so, select “Yes”.

If you selected “Yes”, repeat this Step.

If you selected “No”, a box appears prompting you to enter essential information about your host server.

6. Enter the requested information in the appropriate spaces.

Enter the following information in the appropriate spaces: server name, location and any other information that might be relevant in the event of a disaster.

When you’ve entered the information, press F2.

A box appears asking if you want to add a file to the list of input files contained in the CDR.INI file that CDR copies to diskette.

7. Determine if there are any files you want to add to the list of input files.

If you selected “No”, the next box asks you if you want to create a set of disaster recovery disks. If you selected this option, go to step 9.

If you selected “Yes”, a browser appears that lets you select the files you want to add to the file list in the CDR.INI file. If you selected this option, go to step 8.

8. Select the files you want to add to the file list.

Use the browser to select all the files you want to add. These files are added to the existing list of files to be copied.

Also specify whether you want these files saved to diskette in compressed or uncompressed form. (It’s recommended that you save them in compressed form.)

With either option selected, press Enter to continue.

9. Confirm that you want to create a set of disaster recovery diskettes.

To confirm that you want to create a set of CDR diskettes, select “Yes”.

To return to the initial dialog box, select “No”.

10. Specify a drive letter and capacity for your CDR diskettes .

Type in the letter of the drive you’ll be using to create the CDR diskettes.

Press Enter to move down to the disk capacity field.

Press Enter again to see a pop-up list of standard disk capacities.

Select the capacity of the diskettes you’ll be using and press Enter again.

When you’re done, press F2 to continue.

A box appears telling you approximately how many diskettes you’ll need for your disaster recovery set.



Before proceeding, you should have the recommended number of blank, formatted diskettes handy. This way, you can be sure of having the necessary files available in case of disaster. Label each diskette by number.

In case you don't have any blank, formatted diskettes at hand, or your server lacks a floppy drive, CDRPREP gives you the option to copy your files to the following path on your host server's hard disk:

`[ARCserve home dir.]\CDR\[Disk #]`

At some later time, you can copy these disk directories with their files from your hard disk to a set of floppies.

To continue, press any key.

11. Insert the CDR diskettes in the specified drive.

When you've inserted Disk 1, press any key. CDRPREP begins copying the necessary files to this diskette.

Insert each diskette in turn when prompted.

A message appears telling you when you've successfully created a set of diskettes. At this point, to return to the main menu, press any key.

12. Exit CDRPREP.

You can now choose to view the CDR.DOC file which CDRPREP generated in the process of creating your Disaster Preparation diskettes. This file contains information that is critical to recovering your system after a disaster.

To view this file, select the *View Doc File* option and press Enter.

When you've viewed the file, press Escape to return to the main menu.

To exit, select *Unload & Exit* and press Enter.

13. Print out your CDR.DOC file.



We strongly recommend that you print out your CDR.DOC file, so that you have it available in the event of a disaster. Open the file with a text editor or other word-processing program and print it from there. In addition, you should make at least one other copy of this printout.

14. Store your Disaster Preparation materials along with your backup media in a safe place.

Your Disaster Preparation materials should consist of the following items:

- Disaster Preparation diskettes
- Hardcopy of CDR.DOC file
- Diskette containing SESSIONS.CDR file
(refer to the following section for information on how to create a SESSIONS diskette.)



We recommend that you make duplicates of your CDR diskettes and store them off site along with the tapes or other media containing the current backups of your host server. You can coordinate creation and storage of your Disaster Preparation materials with whatever media rotation scheme you may be using, including Auto Pilot.

You should create a new set of Disaster Preparation diskettes whenever any of your ARCserve or system files change significantly.

For information about how to use your CDR diskettes to recover from a disaster, refer to the 'Recovering from disaster' section in this chapter.

Performing disaster preparation backups of your host server

This section describes how to use the *Prepare for Disaster Recovery* option when performing backups of your host server with the ARCserve Manager.



You can use the *Prepare for Disaster Recovery* option with any of the backup media rotation scenarios including Auto Pilot. These scenarios are described in the *ARCserve Manager Guide*.

To use this option while doing a backup, carry out the following procedure.

1. Insert a blank, formatted diskette in the floppy drive of your ARCserve host server.
2. Open the Backup Manager.

Refer to the *ARCserve Manager Guide* for details on how to use the Backup Manager.



You may want to do your disaster recovery backup from the back end, using the Scheduler screen. For information about how to run backups from the host server console, refer to Chapter 4 of this guide, “Running Jobs from the Server Console.”

To specify the disaster recovery option when running backups from the server, do as follows.

In the Backup window, select *Options* and press Enter. The Options window appears.

Select the *Disaster Recovery* field and press “y” so that the word “Yes” appears in the field. Now press Enter and F2 to save this configuration and continue with your regular backup procedure.

3. Click the Options button.

The Options button is shown below. This button is labelled with a pointer-activated tab that says “Options”.

A box appears with the following options:



Clicking the Options button gives you a box where you can select the *Prepare for Disaster Recovery* option.

<input checked="" type="checkbox"/>	Prepare for Disaster Recovery
<input checked="" type="checkbox"/>	Record History in Database
<input type="checkbox"/>	Force Decompression of Compressed Files
<input type="checkbox"/>	Clear User Connections
<input type="checkbox"/>	Eject Media
<input type="checkbox"/>	Disable Logins
<input type="checkbox"/>	Clear Archive Bit

4. Select Prepare for Disaster Recovery.

Select any additional options you want to specify. When you’ve finished, click OK.

5. Run the back up of your host server.

During backup, ARCserve creates a file called SESSIONS.CDR. This file contains information such as media (tape) name, serial number, sequence number, session number, etc. ARCserve writes this file to the diskette you inserted in your floppy drive at the start of this procedure. ARCserve also copies the SESSIONS.CDR file to the following path in the ARCSERVE home directory:

ARCSERVE.6\NLM\CDR\SESSIONS

During a disaster recovery, the information in this file is used to help restore the ARCserve server.

6. View the log to ensure the disaster recovery backup was successful.

7. Label the diskette and store it along with your other disaster preparation materials and backup media in a safe place.



During subsequent backups of your host server, keep using the same diskette when you select the *Prepare for Disaster Recovery* option. With each backup, ARCserve automatically updates the SESSIONS.CDR file on the diskette.

If necessary, you can change the specified floppy drive letter for CDR in the ASCONFIG.INI file, using a text editor. The drive-letter parameter appears in the [DISASTER RECOVERY] section in the following form:

FLOPPY DRIVE = [*drive letter*]:

Recovering from disaster

The disaster recovery phase occurs after you've lost your ARCserve host server. During this stage, you first need to re-install your original operating system on the server, followed by re-installation of NetWare.



We recommend that you develop an emergency plan based on Cheyenne Disaster Preparation and Recovery. To test your plan, set up a test server with a blank hard disk, just as you would need to do if you lost your ARCserve host server. After you've created a set of disaster preparation materials for your host server, simulate a recovery on your test server by following the procedure described below.

To restore your ARCserve host server after a disaster, carry out the following steps.



Because you have to re-install NetWare, keep the following points in mind:

- When restoring NetWare, configure the server as it was previously set up, so that you can restore directories and files properly. You should use the same partitions and volume sizes, and the same hardware configuration.
 - If you are using multiple name spaces for your network, then you will need to re-install and re-configure these name space modules in order to restore files from other operating systems with their proper names.
-

The following is a step by step procedure for disaster recovery:

1. Boot the server using a system diskette.

Your boot disk should contain the necessary files for whatever operating system you're using.



In addition to information about your system, your CDR.DOC file also contains a detailed procedure for restoring your operating system.

2. Configure your system to serve as a NetWare platform .

To complete this step, refer to the documentation for your operating system and the version of NetWare you're using.

3. Re-install NetWare.

Refer to your Novell NetWare documentation to re-install the NetWare operating system.



On a 3.1x server you do not have to copy System and Public files. Just mount the volume and add name space.

On a 4.1x server, server name and context in the NDS tree have to be the same. On a 4.1x server, before reinstalling NDS, make sure you delete any existing objects (such as server, volume, etc.)

Be sure to reinstall the same license the server had before the disaster occurred.



If you are using multiple name spaces for your network, install name space support. These are the *.NAM files. You must load these files, then add the support.

From the console, enter the following command to add name space support:

```
ADD NAME SPACE  name [TO [VOLUME]]  vol_name
```

where *name* is the name of the variable for the name space module you loaded and *volume_name* is the volume where you want to store the non-DOS files.

4. Use Your disaster recovery diskettes to get ARCserve up and running.
 - At the console prompt, enter the command:
SEARCH ADD 1 [*floppy drive letter*]:
(This command lets NetWare see the floppy drive where you plan to insert your disaster recovery diskettes.)
 - If they're loaded, unload CLIB.NLM and NWSNUT.NLM.
 - Insert the disaster recovery diskette labelled DISK 1.
 - At the console prompt, enter: LOAD CDR.
The Cheyenne Disaster Recovery module loads and a screen appears asking you to insert the appropriate disaster recovery diskette when prompted.
 - Press any key to start the file copying process and insert the appropriate diskettes when prompted.

-
- When the file copying process is complete, a dialog box appears, asking you to confirm the password for your login. (You should be logged in as Supervisor on a NetWare 3.x server or 4.x server with Bindery Emulation, or as ADMIN on a 4.1 server with NDS.)
 - Enter the correct password.

At this point, CDR automatically loads ARCserve.



If for some reason ARCserve fails to load, CDR creates a CDRSTART.NCF file. After taking corrective action according to any error messages displayed, continue the recovery process in the following way. At the console prompt, enter: CDRSTART

After successfully loading ARCserve, CDR prompts you to insert the SESSIONS diskette. When you've inserted this diskette, the SESSIONS menu displays a list of Restore jobs and allows you to edit the destination volume and Source group.

You can also enter a Session password, or select a session from the list by highlighting it and pressing Enter.

5. Specify the appropriate SESSIONS parameters .

The SESSIONS menu lets you edit the following fields for each job:

- Destination volume
- Group
- Password
- Restore

To edit any of the above fields, highlight the menu option and press Enter. A screen appears with the editable parameters highlighted. Modify the parameters in the form displayed and press F2 to save the changes.



By default, all sessions displayed in the SESSIONS menu will be restored. You need to specify any sessions you don't want restored. The other defaults for Disaster Recovery jobs are as follows: the Destination Volume is SYS, and the Source Group is the first group loaded.

6. Submit the jobs you've configured .

After configuring all the Restore jobs, press F2 to submit the jobs.

CDR recovers the elements of your ARCserve system in the following order:

- database
- NDS or bindery
- All Volume data in the order in which they were backed up

After all restore jobs are completed, CDR displays the status of the operation.

7. Restart the server and ARCserve.

Unload CDR by pressing F2.

At the console prompt, enter: ASTOP6

Down the server, reboot and restart the server.

At the console prompt, enter: ASTART6

Restarting the server and ARCserve ensures that all the data which was restored can be accessed and that the NLM's will take effect.



C h a p t e r

SETTING UP ALERT MESSAGING

ARCserve can alert you whenever an error is detected.

In this chapter, you will learn:

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8-2 ➤	Alert basics
8-5 ➤	How to load Alert
8-7 ➤	How to configure Alert
8-32 ➤	About the Port Configuration
8-34 ➤	About the Message Report Log
8-35 ➤	About Alert's Activity Log

Alert basics

What is Alert?

Alert is a notification system that sends messages to people in your organization using different communication mechanisms. Alerts can be sent to the system administrator, a hardware technician, or anyone else, in or out of the office.

Alert is used by many software products (including FAXserve, HSM, and ARCserve). You can use general Alert defaults which work similarly with all software products or you can customize Alert settings to work with a specific product like ARCserve, for example.

How does Alert work with ARCserve?

ARCserve uses Alert, which is actually a separate software program that comes bundled with ARCserve, to send messages that alert you when a problem has occurred.

Alert does not generate its own messages. ARCserve generates warning messages whenever there is a problem with one of the ARCserve functions (backup, restore, copy, etc.). These warning messages are passed to Alert, which sends the notification.

ARCserve uses Alert and global messaging from both the host server (where ARCserve is installed) and from the Global Notification Options screen of any front-end manager (such as the Backup Manager).



When you modify Alert or message settings from the ARCserve Manager (Backup, Restore, etc.) your settings only apply to the current job. When the job is complete, the default settings will be used. Use the Alert Custom Configuration Screen (from the ARCserve server) to make any setting permanent. Refer to 'Configuring Alert' on page 8-7 for more information.

Alerts can be sent via:

- Pager - Numeric and alphanumeric.
- FAX - FAXserve must be installed on the server through which you are sending the FAX. (FAXserve is a Cheyenne product that provides simple-to-use facsimile services for your network.)
- Electronic Mail - NetWare Message Handling System (MHS) must be installed on a server on your network supporting SMF64 or 71.
- NetWare broadcasts - ARCserve broadcasts NetWare-related messages to specific users or groups.
- Trouble tickets - ARCserve can print messages through any print queue on your network. (Trouble tickets can only be sent to non-Postscript printers.)



Trouble tickets are not supported through Alert. You can only use trouble tickets for regular messaging notification. For more information refer to Chapter 17, "Using Global Notification Options" of the *ARCserve Manager Guide*.

-
- Simple Network Management Protocol (SNMP) managers - Such as NetWare Management System (NMS), Novell Managewise, IBM Netview, and HP OpenView.

What are the components of Alert?

Alert has three basic components:

- ALERT.NLM - This is the NetWare Loadable Module (NLM) that is responsible for the reception, processing, and distribution of alert messages.
- ALBUILD.NLM - This is the NLM that acts as the channel between Alert and other applications.
- *.ALT - This is the application profile file. This file is provided by an application (such as ARCserve, which creates an ARCSERVE.ALT file). This .ALT file must be present in the PUBLIC directory in order for Alert to handle messages generated by an application.

What do you have to do to generate alerts?

In order for ARCserve to generate alerts, you must tell Alert what information must be communicated. For example, if you will be using the pager system, you will have to tell Alert what pager number to dial, and you will have to supply information about your modem.

All of this information must be configured in the Alert system on your ARCserve host server. This configuration information is shared by all of your remote servers.

Loading Alert

In order to use Alert, you must load it on your file server.



Alert will not automatically load NLMs for all of its functions (this is to avoid loading unnecessary NLMs). Use the following list to load NLMs for the specific functions you will be using. These NLMs must be loaded *before* the Alert NLM is loaded or you can modify your ALSTART file to automatically load these NLMs.

To use paging: load AIO.NLM

To use faxing: load FAXLIB.NLM

To use SNMP: load SNMP.NLM (Note: The trap target destinations must be set in the SYS:\ETC\TRAPTARG.CFG file.)

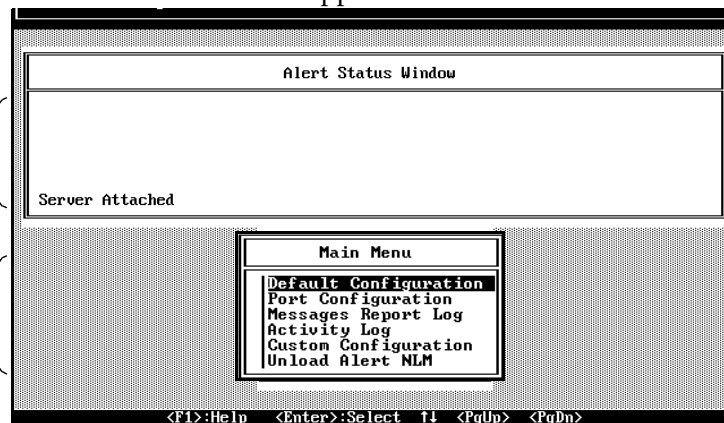
To load Alert:

1. Type **ALSTART** at the file server console.

Alert's main menu will appear:

This section of the screen shows the current status of Alert.

This section lists the options that are available. (You will only see the *Port Configuration* option if you have a modem and AIOCOMX.NLM is loaded.)



A brief description of each of Alert's menu options appears below. Detailed information can be found in the next few sections.

*Default
Configuration*

This option allows you to set basic, default information about your Pager, MHS, FAXserve system, SNMP, modems, and printers.

Port

This option displays a menu that offers several modem options.

*Messages Report
Log*

This option allows you to view a log containing messages that are processed by Alert.

Activity Log

This option allows you to view a log containing the status of Alert. While the current status is displayed on Alert's main menu, this log contains a historical listing of Alert's status.

*Custom
Configuration*

This option allows you to enter information specific to an application. If you do not modify this information, the default configuration will be used.

Configuring Alert



You must configure Alert on all servers running ARCserve. Alert will not be used or recognized by any ARCserve server where it has not been configured

You can enter Alert configuration information in:

- Default Configuration Options - information entered here will be used for all applications that work with Alert.
- Custom Configuration screens - information specific to ARCserve that should override the default Alert configuration can be entered here. For example, Alert is configured to send faxes to Henry Miller, but you want ARCserve to send faxes to Anais Nin. In this case, you would use the ARCserve Custom Configuration screens to override the default fax settings.

If ARCserve is the only application you are using with Alert, you can enter all of your configuration information on the Default Configuration Options screens.

The following section explains how to enter information on the Default Configuration Options screens.

Default Configuration options

The information you enter on the Default Configuration Options screens will be used for all applications that work with Alert.

To enter your default Alert configuration:

1. Select Default Configuration from the Alert main menu.
2. Enter information on the Default Configuration Options screen.

The screenshot shows the 'Default Configuration Options' screen, Page 1 of 2. The screen is divided into several sections with labels and arrows pointing to specific fields:

- Company Name:** Cheyenne Software
- Location:** 3 Expressway Plaza
- Trouble Ticket/Facsimile Header:** Alert for all errors due to inaccessible data.
- PRINT server:** LPT1
- queue:** 2
- login id:** 124578
- password:** [Hit Enter To Reset Password]
- CENTRAL MODEM server:** NY-Writer
- setup:**

Annotations and their corresponding fields:

- Enter your company name and location. (Points to Company Name and Location)
- You can print up to 70 characters per line at the top of reports and FAXes. (Points to the top of the screen)
- Enter the print queue to which trouble tickets will be printed. (Points to the queue field)
- Enter the name of the server where the print queue resides. (Points to the server field)
- Enter the login id. (Points to the login id field)
- You can change the password Alert uses when logging in to the print server. The default is <ENTER>. (Points to the password field)
- Enter any unique initialization information required for your modem. The string you enter should only include features unique to your modem or features not normally set during modem initialization. (Points to the setup field)
- Enter the name of the server with the modem to be used. Use this option when multiple servers share a modem. (Points to the central modem server field)

Navigation keys at the bottom: <F1>:Help <F2>:Exit/Save <Enter>:Select ↑↓ <PgUp> <PgDn> <Esc>:Quit

3. Press PAGE DOWN to move to the second screen .

Default Configuration Options		Page 2 of 2
BROADCAST recipients: [Hit Enter To See List]		
MHS	server:	
	volume:directory	
	login id:	
	password:	[Hit Enter To Reset Password]
	host:	
	recipients:	[Hit Enter To See List]
FAX	host:	
	login id:	
	password:	[Hit Enter To Reset Password]
	recipients:	[Hit Enter To See List]
PAGER recipients:		[Hit Enter To See List]
<F1>:Help <F2>:Exit/Save <Enter>:Select ↑↓ <PgUp> <PgDn> <Esc>:Quit		

Each field on the second screen of the Default Configuration Options screen is explained in its own section on the following pages.

4. Press F2 to save your configuration information .
You are prompted to confirm your selections.

Save Changes?
No
Yes

5. Select Yes to confirm.
You will be returned to the Alert main menu.

Notifying recipients

When ARCserve detects a problem on your network, NetWare messages can be sent to specific network users or groups.



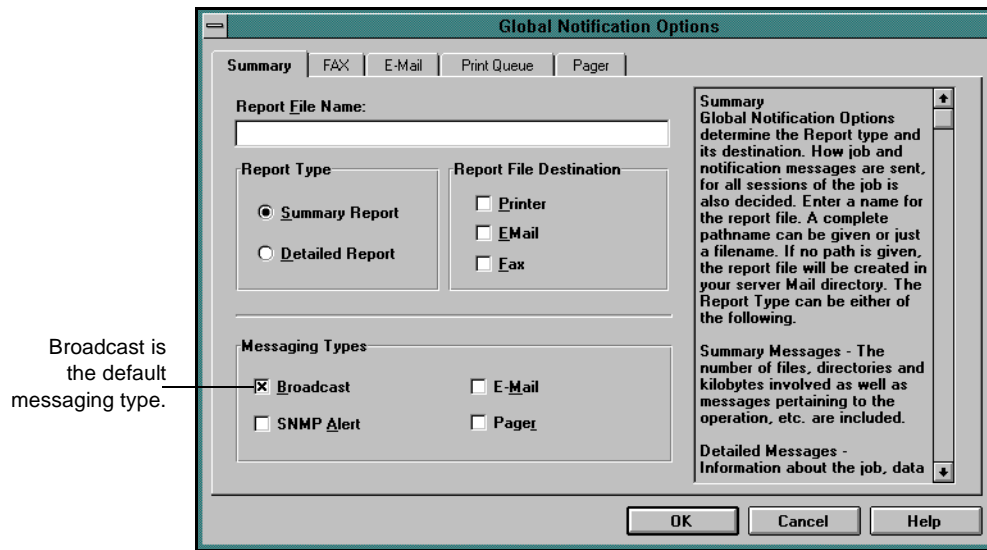
Notifying users and configuring how they are notified *cannot* be configured from the Alert Default and Custom Configurations screens. Any information entered into these fields will be ignored by ARCserve. You must use the Global Notifications Option button from any ARCserve Manager to configure messages sent to recipients.

Using Global Notification options from the ARCserve Manager



When you select the Global Notifications Options from any ARCserve Manager (Backup, Restore, or Copy) the following screen appears:

8



Broadcast is the default setting in the *Messaging Types* field. This option indicates to ARCserve to broadcast an Alert message to the user running the job, as well as other ARCserve Operators.

To modify the *Message Types* field or any other Global Notification Options information, refer to Chapter 17, “Using Global Notification Options” in the *ARCserve Manager Guide* for more information.

Configuring broadcast messages



For information on the severity and numbering scheme of the system messages refer to Chapter 9, “Troubleshooting and System Messages”.

When ARCserve generates an error message it sends it directly to Alert, which generates the error message. These message are prioritized by default. If you have Supervisor rights (or equivalent) you can modify the priority of a message sent by Alert. To do this, you must create a message editor (MESSAGE.INI).

A example of one is shown below:

```
Message.INI

[Notification Override]
E0004=Broadcast,SNMP
E0005=Broadcast,Email
E0006=Broadcast,SNMP
E0007=Broadcast,FAX
E0008=Broadcast,SNMP
E0009=Broadcast,Pager
E0010=Broadcast,SNMP

[Severity Override]
E0004=Warning
E0005=Warning
E0006=Informational
E0007=Warning
E0008=Informational
E0009=Critical
E0010=Warning
```

The default severity and destination can be overridden by using a file in the ARCserve home directory called MESSAGE.INI.

Within the MESSAGE.INI file there will be two sections, Destination Override, and Severity Override.

Destination Override

Any message with a number can be entered as a parameter with the new destinations following separated by commas.

For example, to override message 1005, enter the lines:

```
[Destination Override]  
1005=PAGER,SNMP,BROADCAST,EMAIL
```

Severity Override

The default severity can be overridden in this section. For example, to override message 2003, enter the lines:

```
[Severity Override]  
2003=INFORMATIONAL
```

You can also change the message level to

You can change the message to WARNING or CRITICAL . Only messages with numbers can be overridden. Informational messages may require message numbers so that the user can change the severity or destination.

Message Handling System (MHS)

MHS is the Netware Message Handling System, a collection of Netware NLMs that provide mail delivery service for NetWare networks.

The MHS option is used by ARCserve to send E-mail messages to specific users when a problem occurs. Both NGM Global MHS and Basic MHS are supported. NetWare MHS must be installed on your network in order to be able to send messages.

The MHS settings can be viewed and modified from Page 2 of the Default Configuration Options screen. To view MHS settings:

1. Select Default Configuration Options from the Alert main menu and press <Page Down> to view the second page.

The following screen is displayed:

Default Configuration Options		Page 2 of 2
BROADCAST recipients: [Hit Enter To See List]		
MHS	server:	NW-WRITER
	volume:directory	SYS:
	login id:	MAIL
	password:	[Hit Enter To Reset Password]
	host:	-ASDCDF-
	recipients:	[Hit Enter To See List]
FAX	host:	NW-TECH_PUB
	login id:	FAX
	password:	[Hit Enter To Reset Password]
	recipients:	[Hit Enter To See List]
PAGER recipients:		[Hit Enter To See List]
<F1>:Help <F2>:Exit/Save <Enter>:Select [F] <PgUp> <PgDn> <Esc>:Quit		

The following MHS information is contained on this screen:

Server	Enter the name of the server where MHS is installed.
--------	--

<i>Volume:Directory</i>	Enter the path where MHS is located. For example, enter SYS:MHS.
<i>Login ID</i>	Enter the user name Alert should use when logging into the MHS server.
<i>Password</i>	Change the password Alert uses when logging in to the MHS server. The default is ALERT.
<i>Host</i>	Enter the hub name used by the MHS software to identify the server's MHS system.
<i>Recipients</i>	When you press ENTER in the <i>MHS Recipients</i> field, the current list of recipients appears:

The recipients list is initially empty.

E-Mail Recipients:

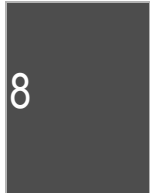
To Add MHS recipients:

1. Press INSERT.
2. Enter the E-mail address of the recipient.
The E-mail address must be in the MHS format:
USER@HOST.
The USER and (MHS) HOST can each consist of up to eight characters separated by the @ symbol.
3. Press ENTER.

Enter E-Mail Address
BOB@-ASDCDF-

4. Press ESC when you have finished entering recipients.

FAX



The FAX option is used to send a fax when a problem occurs.

Cheyenne Software’s FAXserve application must be installed on the server being used to send the fax.

You can modify the Alert FAX information from the Default Configuration Options screen:

Default Configuration Options		Page 2 of 2
BROADCAST recipients: [Hit Enter To See List]		
MHS	server:	NY-WRITER
	volume:directory	SYS:
	login id:	MAIL
	password:	[Hit Enter To Reset Password]
	host:	-ASDCDF-
	recipients:	[Hit Enter To See List]
FAX	host:	NY-TECH_PUB
	login id:	FAX
	password:	[Hit Enter To Reset Password]
	recipients:	[Hit Enter To See List]
PAGER recipients:		[Hit Enter To See List]

<F1>:Help <F2>:Exit/Save <Enter>:Select <PgUp> <PgDn> <Esc>:Quit

The following fields contain Fax information used with Alert:

- Host

Enter the name of the server where FAXserve is installed.
- Login ID

Enter the user name Alert should use when logging in to the FAXserve server.
- Password

Change the password Alert uses when logging in to the FAXserve server. The default is ALERT.

Recipients

When you press ENTER in the *FAX Recipients* field, the current list of recipients appears:

Adding FAX recipients

To add FAX recipients:

1. Press INSERT.

The list is initially empty.

Fax Phone Numbers

2. Enter the FAX parameters.

Fax Parameters
Title : Steve Tschern
FAX Number : 7427929
Fax Cover Page File :

Title

Enter the name of the person to whom you are sending the fax.

FAX Number

Enter the fax number of the recipient.

Fax Cover Page File

Enter the path for the file that contains the cover sheet to use with this fax. This file must be on a server and it must be a .PCX file. Refer to your FAXserve documentation for more information.

3. Press ESC when you are done.

Pager recipients

The pager option is used to send a pager message when a problem occurs. The pager can be numeric or alphanumeric.

The *PAGER recipients* field is located on the Default Configuration Options screen:

The PAGER recipients field

Default Configuration Options		Page 2 of 2
BROADCAST recipients: [Hit Enter To See List]		
MHS	server:	NY-WRITER
	volume:directory	SVS:
	login id:	MAIL
	password:	[Hit Enter To Reset Password]
	host:	-ASDCDF-
	recipients:	[Hit Enter To See List]
FAX	host:	NY-TECH_PUB
	login id:	FAX
	password:	[Hit Enter To Reset Password]
	recipients:	[Hit Enter To See List]
	PAGER recipients:	[Hit Enter To See List]

<F1>:Help <F2>:Exit/Save <Enter>:Select [F4] <PgUp> <PgDn> <Esc>:Quit

When you press ENTER in the *PAGER recipients* field, the current list of recipients appears:

The list is initially empty.

Pager Recipients

Adding pager recipients

- To add pager recipients:
1. Press INSERT.

The Communications Configuration screen appears:

Communications Configuration	
Pager Type:	Numeric Pager
Pager Number:	
Pager ID:	
Baud Rate:	1200
Site ID:	
Connection Delay:	
Message Delay:	
Data Bits:	8
Parity:	None
Stop Bits:	8
Modem Setup String:	

2. Enter information on the Communications Configuration screen.

Pager Type

Indicate if you are using a numeric or alphanumeric pager. Press ENTER to select a pager type.

Pager Number

Enter a maximum of 24 characters. If a digit, such as 9, must be dialed to get a dial tone, it must be included in this field.

A comma can be entered to indicate a one second pause. If a longer pause is desired, a string of commas can be entered.

A dash (-) can be used to separate digits, but it has no function. (Since this can vary by modem, you should verify this with your modem manual.)

Pager ID

Enter up to eight digits to identify the pager that will receive the alerts.

Baud Rate

Indicate the baud rate being used by your modem. Press ENTER to display a list of baud rates from which to choose.

Site ID

Enter up to four digits to identify where the alert occurred. This number is included in the message to the pager. Therefore, if the number is less than four digits, you should use leading zeros.

Connection Delay

Enter one or more commas (,) to delay the connection with the pager company. Typically, a comma represents a one second pause. However, this may vary by brand of modem. Check your modem guide for more information. When a phone number is dialed, a connection is made. The connection may be established immediately or it may be delayed. This will vary with your pager company, location, time of day, telephone equipment, and telephone traffic. If the connection is not established immediately, adding a delay can prevent the alert from being sent before the connection is established.

Message Delay

Enter one or more commas (,) to indicate the time to wait between the connection being made and the alert message being sent. Typically, a comma represents a one second pause. However, this may vary by brand of modem. Check your modem guide for more information.

Data Bits

Enter the number of data bits, seven or eight, that your modem uses.*

Parity

Indicate the parity setting, none, odd, or even, of your modem. Press ENTER to display a list of parity settings from which to choose.*

Stop Bits

Enter the number of stop bits, one or two, that your modem uses.*

* For alphanumeric pagers, the recommended usage settings are:

- 7 data bits, Even parity, 1 stop bit - or -
- 8 data bits, No parity, 1 stop bit.

*Modem Setup
String*

Enter unique initialization information for your modem. The string you enter should only include features unique to your modem or features not normally set during modem initialization.

3. Press ESC to save your information .
4. Answer **yes** to confirm.

System Network Management Protocol (SNMP)

8

How does Alert work with my SNMP manager?

Alert is a notification system that sends messages to people in your organization using different communication mechanisms. One of these mechanisms is a System Network Management Protocol (SNMP) manager. Examples of SNMP managers include: Novell Managewise, IBM Netview, and HP OpenView.

When an problem is encountered ARCserve it is passed to Alert which sends a “trap” to notify you via SNMP.



Before submitting any job you **must** load the appropriate trap definition file within your SNMP manager.

Alert adds objects to your SNMP manager that allow you to load the application (ARCserve) that sends the alert directly from your SNMP manager.

What do I have to do to use Alert with my SNMP manager?

To use Alert with your SNMP manager:

1. Install Alert.

During the ARCserve installation you will have the option of choosing to install Alert. If you select this option, all of Alert’s components will automatically be loaded for you.

Before you choose to have ARCserve install Alert, you should be aware of the following:

- Novell’s SNMP (Managewise) must be installed and configured. You should also verify that SNMP can trap and send alerts to HP OpenView before using Alert.

-
- You must have supervisor or supervisor equivalent rights on a server in order to install Alert on that server.

Refer to the *ARCserve Installation Guide* for more information on this.

2. Load Alert.

Type ALSTAR T at the file server console.

This NCF file will load the required Alert and ARCserve MIB NLMs on your server.

Alert's main menu will appear.

3. Configure Alert for use with the SNMP manager you are using.

This guide shows you how to configure Alert for use with NMS and HP's Openview. Refer to 'Configuring NMS to work with Alert' on page 8-26 and 'The Cheyenne MIBs are compiled and NMS is ready to receive alerts from ARCserve. Configuring HP's OpenView to work with Alert' on page 8-27 for more information. For more detailed information about configuring Novell Mangewise, and IBM Netview, please refer to the respective documentation.

Enabling SNMP from the ARCserve server console

To enable your SNMP to use Alert with any ARCserve job, from the server console:

1. From the ARCserve Scheduler screen, select either Back Up NetWare Server or Restore NetWare Server.
2. Enter all source, destination, and other information necessary for the job.
When all information has been entered, schedule the job.
3. From the Backup or Restore screen, press <F2>.

The following Schedule Job screen appears:

Schedule Job			
Run Job at:	10:40 PM	On:	10/12/95
Submit Job on Hold:	No	Save Script Only:	No
Broadcast:	Yes	SNMP:	Yes
Description:			

By switching the SNMP option, you indicate to ARCserve that SNMP manager are being used to process alerts.

4. Type "Yes" in the SNMP field.

ARCserve will enable SNMP messaging for use with Alert.

Configuring Managewise to work with Alert

To configure Managewise to work with Alert you must do the following:

- Add ARCserve to the Managewise Cheyenne Menu.
- Compile the Cheyenne MIBs to Managewise (the MIBs were added automatically when you installed Alert).

Adding ARCserve to the Managewise menu

You must add ARCserve to the Managewise Menu so that you can launch it from within managewise. When an Alert comes into Managewise from ARCserve, you can launch ARCserve without leaving NMS.

Following are the basic steps for adding ARCserve to the Managewise Menu. For more detailed information about configuring Managewise, please refer to your Managewise documentation.

1. Run the application called *n-olfi.exe*.

N-olfi.exe should be located in the `\nms\bin` directory. A program icon is not created for *n-olfi.exe* by default when you install NMS, so you will have to run it through File Manager or create a program icon for it first.

2. Select the *arcserve.olf* file.

When you return to Managewise, the Cheyenne Menu should contain ARCserve. You can now launch this application from within Managewise.

Compiling Cheyenne's MIBs into NMS

Managewise receives 'traps' (messages) from Cheyenne's applications and displays them on the manager screen. It also records them into the manager's log.

Before Managewise can receive these alerts from Cheyenne's applications, you must compile Cheyenne's MIBs (installed to your workstation when you installed Alert through ARCserve) into Managewise. Following are the basic instructions for compiling the MIBs. For more details about compiling MIBs into NMS, refer to the documentation that came with Managewise.

To compile Cheyenne's MIBs into Managewise:

1. Select SNMP MIB Compiler from the Tools Menu.
2. Select Managewise\SNMPMIBS\CURRENT as the directory for compiling the MIBs.
3. Click Compile.

The Cheyenne MIBs are compiled and Managewise is ready to receive alerts from ARCserve.

Configuring HP's OpenView to work with Alert

To configure HP's OpenView to work with Alert you must do the following:

- Make sure Alert 3.0 is loaded and ALSTART.NCF has been executed.
- Create the ARCserve object.
For HP's OpenView v7.2, install the Trap Definition Files described below.

Creating the ARCserve object

You need to add ARCserve as OpenView object so that you can launch it from within OpenView. When an Alert comes into OpenView from ARCserve you can launch ARCserve without leaving OpenView.

If you have HP's OpenView v7.1 or 7.2 with the NSA software installed, then you need to follow these basic steps for adding objects for your Cheyenne applications to OpenView. (For more detailed information about adding objects, please refer to your OpenView documentation.)

1. Open an existing map or create a new map .
2. Select Create HP NSA Objects from the Autodiscovery Layout menu.

The ARCserve object is added to your map, and you can now launch ARCserve from within OpenView.

Using Trap Definition Files (*.tdf) for HP OpenView v7.2

The Trap Definition Files allow you to use HP OpenView v.7.2 to receive alerts without HP's NSA installed. Once these are loaded in the Customize Traps screen, they will allow HP OpenView to send alerts to the specific alert log. Follow these steps to load the Trap Definition Files (*.tdf):

1. From the Monitor menu select Customize Traps for ARCserve (to add it to HP OpenView).

This loads the trap definition files (*.tdf) for ARCserve. These files are found in the \OV\TRAPMGR directory. If they are not there, check the \TRAPMGR directory on the Alert disk.

When the files are loaded in the Customize Traps screen they will allow OpenView to send alerts to the specific alert log for the node that sent them.

2. Modify the traptarg.cfg file to include the node addresses you will need.

You will then have to reload your SNMP to send the trap to the new address.

The Custom Configuration screens

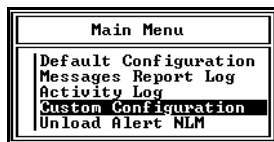
The Custom Configuration screens are used only to override ARCserve information in the Alert default values. For example:

Alert is configured to send faxes to Henry Miller, but you want ARCserve to send faxes to Anais Nin. In this case, you would use the ARCserve Custom Configuration screens to override the default FAX setting.

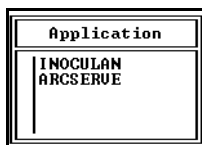
If ARCserve is the only application you are using with Alert, you can enter all of your configuration information on the Default Configuration screens.

To enter your ARCserve-specific configuration:

1. Select Custom Configuration from Alert's main menu.

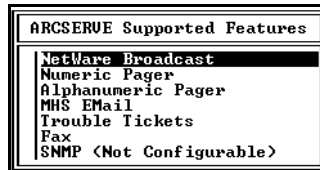


The following screen appears:



2. Select ARCserve.

All of the available options are listed.



3. Select an option.

Any option you select will display a different screen from which you can modify specific Alert configuration settings.

Every option you select contains the *Enable Custom Configuration* field.

4. Set the Enable Custom Configuration field to YES.

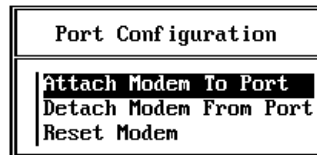
This will enable you to modify the Custom Configuration settings.

5. Enter ARCserve-specific information.

Refer to the section 'The Default Configuration Options screen' for information about specific fields.

Port Configuration

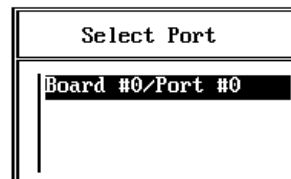
When you select *Port Configuration*, the following menu appears:



Attach Modem To Port

You use this option the first time you are configuring Alert or if your modem was off when Alert was loaded. To use this option:

1. Select Attach Modem To Port.
2. Select a port from the window that appears.



Detach Modem From Port

You use this option to detach a modem, for example, because it was not working properly. To use this option:

1. Select Detach Modem From Port.
2. Select a port from the window that appears.

Reset Modem

Your modem is automatically reset when Alert is loaded. You could use this option for a modem problem, such as a communication that did not end properly and locked your modem. To use this option:

1. Select Reset Modem.

Alert's Messages Report Log

Every message that is generated by Alert is stored in the Messages Report Log. You can view, print, or clear this log.

Displaying the messages report log

To display the Messages Report Log:

1. Select Messages Report Log from Alert's main menu.
A Messages Report Log will appear. The log will contain a record of all Alert messages that have been sent.

Printing the messages report log

You can print the Messages Report Log to the server's print queue. To do this:

1. Press F3.

Clearing the messages report log

You can delete the Messages Report Log. You might want to do this if Alert has been running for a long time and the log has grown large. To clear the log:

1. Press F4.

Alert's Activity Log

8

To display the Alert Activity Log:

1. Select Activity Log from Alert's main menu.

Your Activity Log, similar to the one listed below, will appear:

Alert Activity Log		
09-20-95	11:29:57	Shutting Down Alert Server
09-20-95	12:34:11	Server Attached
09-20-95	12:34:11	Asynchronous AIO Drivers Not Loaded
09-20-95	12:34:22	Shutting Down Alert Server
09-20-95	12:39:26	Server Attached
09-20-95	12:39:26	Asynchronous AIO Drivers Not Loaded
09-20-95	12:39:28	Servicing Alert 0
09-20-95	12:39:28	Starting Fax Send
09-20-95	12:39:30	Fax Sent To Ellen

2. Press <F3> to print the Activity Log.
3. Press <F4> to clear all entries in the Activity Log.



TROUBLESHOOTING AND SYSTEM MESSAGES

This appendix contains some common problems you may encounter while installing or using ARCserve and error messages you may see while using ARCserve.

In this appendix, you will learn:

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About the troubleshooting information

This chapter contains what we've identified as some common problems that you might encounter while using ARCserve.

Most of the problems that you might encounter, especially if you are using SCSI host adapters, will be hardware related. Therefore, the troubleshooting focuses on solving hardware and tape problems.

Two important points to consider when tracking down hardware problems are:

- Make sure your hardware is functional. This includes the host adapter card, the cables, and the tape drive itself. If you can, test your hardware by connecting it to a system that you know works.
- Make sure the hardware is configured properly. This includes setting the proper switches on the controller card (according to the manufactures instructions) and making sure the SCSI bus is terminated properly at both ends.

Problem	Solution
I am having trouble writing information to, or reading information from, my tapes	<p>Check the following:</p> <ul style="list-style-type: none">• Since ARCserve has been installed, has the tape drive ever worked? If you haven't used the tape drive, check the hardware configuration.•• Check all the board settings on the host adapter card. Check the firmware of the tape drive. Is this firmware the latest update? Has it been certified by Cheyenne? Check the termination of the bus. The first and last device on the bus should be terminated.•• Clean the tape drive heads. Regular cleaning of tape drive heads is required if you want to get the most from your equipment.•• Check the brand of tape you are using. Only use manufacturer suggested brand tapes.

Problem	Solution
I am experiencing slow backup and restore rates.	<p>When you restore or backup a remote server, ARCserve's performance drops way down, and the transfer rate is extremely low.</p> <p>If ARCserve seems to have a very slow restore or backup rate only on some volumes, the problem could be due to the number of files on the volume. If the volume has a large number of files in one directory, NetWare's performance is compromised because of the way it handles directory caching.</p> <p>NetWare tries to be intelligent about the way it handles files. When someone requests a directory, NetWare "remembers" this request, assuming that the user will want the files in that directory. So, memory is allocated for this purpose. Normally, this is alright and NetWare allocates about 20 buffers at a time for this purpose. However, in volumes where there is a large number of files in one directory, NetWare bogs down trying to cache these directory entries for the files.</p> <p>To increase the buffers, use NetWare's SET command. Change the setting from 20 to 500:</p> <p>SET MINIMUM DIRECTORYCACHE BUFFERS=500</p> <p>If this works, you may wish to "fine tune" 500 to a smaller number.</p>

Troubleshooting And System Messages

Problem	Solution
Broadcast messages from the file server aren't appearing at workstations where ARCserve is running.	<p>From the ARCserve Server menu, you can change ARCserve's configurations. On the configuration screen is a line that reads:</p> <p>Turn off all messages to workstations.</p> <p>The default setting is No. If you change this to Yes, then ARCserve will not send any broadcast messages. Of course, this only applies to messages that ARCserve sends, not all network broadcast messages.</p> <p>You can also use NetWare's CASTOFF ALL command from the workstation to prevent any broadcast messages from being received or displayed. Use CASTON to accept broadcast messages.</p>

Problem	Solution
<p>I've installed ARCserve, but I'm having trouble seeing my tape drive(s).</p>	<p>Make sure that all cards, cables, and devices are connected properly. If you installed a new card in your system before installing ARCserve, make sure it is seated properly in its slot. If that doesn't work, try putting the card in a different slot.</p> <p>Make sure your SCSI bus is terminated properly. The general rule for terminating devices chained to a SCSI bus is that there must be two sets of terminating resistors, one at the beginning of the chain and one at the end. If you only have one drive connected to your server, then you have two devices on the SCSI bus; the host adapter card and the tape drive. Both the host adapter card and the tape drive should be terminated.</p> <p>Make sure each SCSI device in the chain has a unique ID number. If you have two tape drives attached to the SCSI bus, each with a SCSI ID of 2, chances are neither device will work. Set each drive to a unique SCSI ID. Check the documentation that came with your hardware for information about changing the ID of the device.</p> <p>Make sure all the tape drives are turned on. Sometimes if you forget to turn one device in a chain on, the others will behave erratically.</p> <p>Make sure your computer's power supply is up to the task. The more cards and peripherals you add to a server, the more demands you place on the power supply.</p> <p>Make sure the jumper settings on your adapter board are correct. Check the documentation that came with the board to make sure the jumpers are set correctly for use with your hardware.</p> <p>Replace the cables you are using with ones you know are good. If the problem goes away, you know you had a bad cable.</p>

Troubleshooting And System Messages

Problem	Solution
I'm having trouble with one of my tape drives	<p>If you are having trouble with one particular tape drive, remove all other drives from the chain so you are working with just the one drive. Make sure the SCSI chain is terminated properly after you make these hardware changes</p> <p>Turn the tape drive off then on again. Sometimes the drive may be in a "funny" state which you can straighten out by turning the power off then on again.</p>
The Tape Driver will not load	<p>Use a special parameter when loading the Tape Server that allows you to track all SCSI commands being sent to the device over the SCSI bus. To load the Tape Server with this feature enabled:</p> <p>Edit: ARCSERVE.6\ASCONFIG.INI Find the line that ends with: TAPESVR Change this to read: TAPESVR VERFILE</p> <p>This will create, or append to, a file in ARCserve's home directory called TAPESVR.LOG. All SCSI commands sent over the bus, and all responses received from the devices will be written to this file. FAX this file to Cheyenne's Technical Support department so that we can help you track down the problem.</p>
I get a message "Cannot find Netware.dll when I try to set up ARCserve"	<p>Either IPX and NETx are not loaded, or when you installed Windows, you didn't enable network options. You need to run the Windows Setup program to install this option. Enter the command SETUP from your WINDOWS directory to run this program and enable network options</p>

How the ARCserve error messages are organized

All error messages that ARCserve generates are displayed on the ARCserve Runtime Message Screen and in the ARCserve Activity Log. The messages are preceded by a number, as in the following example:

E0134Failed to open file [*file name*] - [*error description*]

When you get an error message, use the number to find the message in this chapter. Next to the error message in this chapter, you will find a probable cause and a possible solution for the error.

If you happen to get a message that is not in the table, call Cheyenne's Technical Support number with the exact error message.

Scheduler Messages 100-999

Number	Message	Cause	Explanation/Solution
E0107	Failed to log in to host server, [NetWare error code]	This message occurs due to one of the following: 1. The ARCserve-created user CHEY_ARCSVR has been deleted, or the password has been changed. 2. There was some problem with the ARCserve installation.	For each of the possible causes, try the following: 1. From the server console, enter the command ASTOP6. (For NetWare version 3.x), do the following: Delete the user CHEY_ARCSVR through SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x). Run BINDFIX (NetWare 3.1x) or DSREPAIR (NetWare 4.x) Reinstall ARCserve to the same directory as before. 2. From the server console, enter the command ASTOP6. Then, re-install ARCserve.
E0108	Failed to read property [property name], [NetWare error code]	Improper or no installation of ARCserve	Reinstall ARCserve. Note: If you are using NetWare 3.11, run BINDFIX, (NetWare 3.1x) or DSREPAIR (NetWare 4.x) then reinstall ARCserve.
E0113	Failed to attach to queue [queue name],[NetWare error code]	There is some problem with the queue.	Using ARCserve Manager, perform the following steps: 1. Run BINDFIX (NetWare 3.1x) or DSREPAIR (NetWare 4.x). 2. From the server console, enter ASTOP6 to unload ARCserve. 3. Reload ARCserve by entering ASTART6 at the server console. If the problem persists, then you will have to re-install the server piece of ARCserve.

Number	Message	Cause	Explanation/Solution
E0124	Failed to allocate a free entry to record real time statistics	This is an internal system error.	Perform the following steps: 1. Unload ARCserve by entering ASTOP6 at the server console. 2. Reload ARCserve by entering ASTART6 at the server console.
E0125	Failed to allocate XX bytes of memory	Not enough memory on server.	Check server memory. You can do this by following these steps: 1. Enter LOAD MONITOR from the server console. 2. Select "Resource Utilization" from the Available Options menu. 3. If the cache buffer's percentage is very low (below 30%), your server is probably low on memory. 4. To free up some memory, unload any NLM's that are not required. 5. Enter ASTOP6 from the server console to stop ARCserve. 6. Enter ASTART6 from the server console to restart ARCserve. If it happens again, you should restart the file server. You should also consider purchasing more memory for the file server.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E0127	Failed to open activity log - [<i>path name</i>] - [<i>error description</i>]	This is due to one or more of the following: 1. The file server has run out of disk space 2. You don't have appropriate rights to open this file 3. The path to the Activity Log is wrong, or the file doesn't exist. 4. Another process such as a text editor may have the file open.	For each of the causes, check the following: 1. Use CHKVOL to see if the server has run out of disk space. Also use DSPACE to see if there are space restrictions. 2. Use SYSCON to ensure that the proper rights have been assigned. 3. Check the path to the Activity Log, and make sure the file is there. 4. Make sure that no other process has the activity file open.
E0128	Failed to update activity log [<i>path name</i>] - [<i>error description</i>]	This is due to one or more of the following: 1. The file server has run out of disk space 2. You don't have appropriate rights to open this file 3. The path to the Activity Log is wrong, or the file doesn't exist	See E0127
E0133	Failed to load NLM [<i>NLM name</i>], [<i>NetWare error code</i>]	There can be several reasons for this error: 1. The NLM doesn't exist in the specified directory. 2. The search path is incorrect. 3. The file server is low on memory.	Check the path for this NLM to make sure the path is correct and that the NLM hasn't been deleted. If everything appears to be correct, check the memory on the file server. You can do this by following these steps: 1. Enter LOAD MONITOR from the server console. 2. Select "Resource Utilization" from the Available Options menu. 3. See E0125

Number	Message	Cause	Explanation/Solution
E0134	Failed to open file <i>[file name]</i> - <i>[error description]</i>	<p>There can be several reasons for this error message:</p> <ol style="list-style-type: none"> 1. The file doesn't exist. 2. The file is in use by another application which has it open in exclusive mode, and the file hasn't been flagged as shareable. 3. You do not have the proper rights to this directory or file. 4. The path to this file is incorrect. 	<p>For each of the causes, check the following:</p> <ol style="list-style-type: none"> 1. Make sure the file exists. 2. Check to see that the file isn't locked by someone else. Flag the file shareable. Using ARCserve Manager, view the backup options screen. Check the file open method and set it to deny_none. 3. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check the assigned rights to this directory or file. 4. Make sure the path to this file is correct. <p>If you have a number of problems of this kind, you may want to change the backup schedule to run at a time when there is a lesser chance of users accessing files.</p> <p>You may also use the front end's backup options to disconnect users before backup.</p>
E0135	Failed to prepare User Report <i>[filename]</i>	ARCserve was unable to open/create the Log file.	<ol style="list-style-type: none"> 1. Check the path specified in the error message for disk space, existence, rights, and attributes. 2. Make sure that no other process has the file open.
E0138	Failed to read job request, <i>[NetWare error code]</i>	The ARCserve Scheduler has a problem reading the job request.	Put the original job on hold and re-submit the same job again. If this doesn't work you will have to re-install the server piece of ARCserve.
E0139	Failed to retrieve job from queue <i>[queue name]</i> , <i>[NetWare error code]</i>	The ARCserve Scheduler has a problem retrieving the job request.	See E0138. You may have to recreate the queue by re-installing ARCserve.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E0144	Failed to log in to file server [file server] as [user name],[NetWare error code]	<p>There can be many causes for this error:</p> <ol style="list-style-type: none"> 1. The user does not exist on the file server 2. The file server does not exist 3. An invalid password is being used 4. The concurrent connection limitation has been reached 5. Station restrictions exist 6. Time restrictions exist 7. The host server is not responding to ARCserve's request to log on. The NetWare SET REPLY TO GET NEAREST SERVER command is OFF 8. The maximum number of connections has been used on remote server 	<p>For each of the possible causes, try the following:</p> <ol style="list-style-type: none"> 1. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure the user name appears 2. From a workstation, use SLIST to ensure the file server is there 3. Try to log in from a workstation 4. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check the maximum concurrent connection limitations 5. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to see if there are station restrictions 6. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to see if there are time restrictions 7. From the server, enter the command: SET REPLY TO GET NEAREST SERVER=ON You should also use NetWare's NWSHELL utility from the host file server to try and log on to the remote file server. 8. From the server console, enter the command LOAD MONITOR. Select Connection Information to view the active connections. You may have reached the maximum number allowed under your NetWare license
E0151	Error creating screen.	Under normal circumstances, this error shouldn't occur.	Check your memory. Does this error happen often? What were you doing when it happened? Were there abnormal circumstances that you can correct?

Number	Message	Cause	Explanation/Solution
E0159	Failed to create job file [filename], [NetWare Error code]	Not enough disk space on file server.	Create disk space on file server.
E0161	Failed to initialize job file [server name]	Insufficient disk space	Free up more disk space.
E0162	Failed to open report file - [path], [error description]	There can be several causes for the occurrence of this error message: 1. The file doesn't exist, or the path is incorrect. 2. You don't have proper rights to open this file. 3. Someone else has the file open in exclusive mode.	For each of the causes, try the following: 1. Check to see if the file exists and that the path is correct. 2. Make sure correct rights have been assigned. 3. Have the person release the locked file. Flag the file shareable. Using ARCserve Manager, open the Backup Options screen. Check the open files option "Deny None".
E0163	Failed to allocate job buffer.	Memory may be low.	Increase the Maximum amount of short term memory.
E0164	Failed to get data transfer request [error code].	A problem occurred while reading the queue job file from the queue. The queue job may be corrupted.	1. Make sure no messages appear on Manager screen while job is being submitted. 2. Check disk space. 3. Put current job on hold and submit as new job, viewing it through Manager.
E0166	Failed to change job position in queue [error code].	This message can result from timing problem or when Server tries to run a job that Manager is manipulating or viewing.	If message occurs only once and jobs are otherwise running fine, ignore.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E0167	Failed to get queue AQ_CHEY's job list [NetWare error code].	Bindery may be locked or closed by another process or by the Manager.	<p>If message occurs sporadically and jobs otherwise run OK, ignore.</p> <p>2. If message keeps occurring and jobs don't run try the following procedure.</p> <ol style="list-style-type: none"> 1. Unload ARCserve. 2. Run BINDFIX (NetWare 3.1x) or DSREPAIR (NetWare 4.x). 3. Reload ARCserve. <p>If this procedure fails, you need to unload and reinstall ARCserve, then recreate queue and resubmit jobs.</p>
E0168	Error reading file=[<i>filename</i>] size=[<i>file size</i>] - [<i>error description</i>]	<p>This error message can have several causes:</p> <ol style="list-style-type: none"> 1. Someone has deleted or changed the file size since the job started. 2. The connection with remote server was broken. <p>3. An application may have part of the file locked (such as a database application).</p>	<p>For each of the possible causes, try the following:</p> <ol style="list-style-type: none"> 1. Check for the existence of the file, and if the file has been changed. 2. Check the existence of the remote server. <p>Check the communications path to the server, such as routers, bridges, cabling, etc.</p> <p>Make sure you are using the latest version of the LAN drivers.</p> <p>Check your LAN cards. You might try replacing the LAN cards and drivers with those from a different vendor on both servers</p> <ol style="list-style-type: none"> 3. Check to see if an application is active and locking part of the file.
E0171	Error getting queue status.	See E0167.	See E0167.

Number	Message	Cause	Explanation/Solution
E0172	Error reading property time-out [NetWare error code].	This error occurs only with Live-Trial versions of ARCserve. ARCserve failed to read a value from the Bindery or directory.	If jobs continue to run, ignore. If not, try the following procedure: 1. Unload ARCserve. 2. Run BINDFIX/VREPAIR. 3. Reload ARCserve. On a NetWare 4.x server, also check your bindery context.
E0180	Error ! Too many stations requesting stats. No room for [workstation]- [NetWare Error Code]	Too many users are viewing ARCserve real-time statistics.	This error occurs when you are attempting to get real-time statistics. The maximum number of users is eight. If this number has been reached, then you will have to have some users stop viewing these statistics.

The SCHEDULER message table is continued on the following page.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E0183	Server is low on memory. Cannot start job.	The cache buffers percentage has fallen below the minimum number set for ARCserve.	On the ARCserve Server <i>Configuration</i> screen, change the “Minimum cache buffers required to start jobs” number to a lower number. If this error occurs regularly, you should consider purchasing more memory for your ARCserve file server.
E0184	Error - No set name found for daily log.	Auto Pilot job is corrupted.	1. Verify Auto Pilot job and its contents (server, etc.) from the Manager. 2. Make sure no errors occurred on the Manager while job was being submitted. 3. Check disk space. You will probably need to resubmit the Auto Pilot job from the script.
E0185	Failed to send MHS message, RET=1.	ARCserve failed to send the MHS message.	1. Make sure all fields specified through the Manager (MHS server, MHS dir, username, password, MHS ID, etc.) are accurate. 2. Make sure the MHS server is up. 3. Load ARCserve -d in the debug mode and analyze the MHS information in the activity log.
E0186	Failed to prepare activity log [path/filename].	ARCserve couldn't open or create the log file.	1. Check the specified path for disk space, existence and rights. 2. Make sure no other process has the file open.
E0188	ASTOP6 not permitted as a Pre-Post Command.	_____	_____

Number	Message	Cause	Explanation/Solution
E0191	Tape [group name] does not exist - Make sure that the jobs in queue match the tape group configurations.	<p>User submitted Tape Group name that doesn't exist.</p> <p>There is a hardware problem.</p>	<p>1. Make sure the tape group name in the message is that same as that in the TAPESVR.CFG file. If these don't match, use the Manager to change the Tape Group name for the job so it matches that in the TAPESRV.CFG file.</p> <p>2. To check for a hardware problem, make sure the Tape Server is up and can see the Tape Group.</p>

APROCESS Messages 1000-1999

Number	Message	Cause	Explanation/Solution
E1000	Failed to initialize process, [<i>error desc</i>]	The APROCESS.NLM had a problem connecting to the host server, or getting a job from the queue.	Follow the steps below: 1. Unload and reload the ARCserve NLM. 2. Try submitting a test job. 3. Re-install ARCserve.
E1001	Cannot continue with tape driver's read/write process, [<i>error desc</i>]	Refer to the error description for more information about the exact error that occurred. This is usually due to some media or hardware error.	Look under the section titled "Tape Server Messages" and follow the instructions in that section for media then hardware errors.
E1002	Failed to examine state semaphore, [<i>error code</i>]	Check NetWare error code.	Unload and reload ARCserve.
E1006	Failed to contact tape server - no I/O buffer	There is not enough server memory.	See E0125
E1007	Failed to contact tape server - group [<i>group name</i>] is busy	This error is caused by one or more of the following: 1. Group doesn't exist (for E1008) 2. There is some connection problem. 3. There is not enough server memory	For each of the causes check the following: 1. Make sure the group exists. On the Tape Server Menu, look under "Configuration". Select Group. See if the group name(s) here match(es) the one in the message. 2. See E0168, #2 3. See E0125
E1008	Failed to contact tape server - group [<i>group name</i>] not found		
E1009	Failed to contact tape server - communication error		
E1010	Failed to initialize database to begin merging media [<i>media name</i>] sequence [<i>number</i>](ID [<i>number</i>]) session [<i>number</i>], [<i>error code</i>]	There is some problem with the ARCserve database.	Look in the ARCserve Activity Log for the Btrieve error. In Novell's <i>Btrieve Installation and Operation Manual</i> there is a list of Btrieve Status Codes and Messages, along with causes and solutions for this status code.

Number	Message	Cause	Explanation/Solution
E1011	Failed to close database session for merging media [media name] session [number], [error code]	There is some problem with the ARCserve database.	See E1010
E1013	Failed to get function list from Tape Driver, [error code]	This is an internal error.	Contact your reseller or Cheyenne's technical support.
E1014	Failed to format media [media name], [error message]	This error occurs due to one or more of the following: 1. There is no tape in the drive 2. A media error 3. Hardware error	For each of the causes, check the following: 1. Check to see if there is a tape in the drive 2. Check to see if the tape is damaged. Look under the section titled TAPESVR.NLM messages and follow the instructions in that section for media errors. 3. See E1001
E1015	Failed to read media header - [error message]	This error occurs due to one or more of the following: 1. There is no tape in the drive 2. A media error 3. Hardware error	For each of the causes, check the following: 1. Check to see if there is a tape in the drive 2. Check to see if the tape is damaged. 3. See E1001.
E1016	Failed to position media, [error message]	See E1015	See 1015
E1017	Failed to repair incomplete session [<i>session number</i>], [<i>error code</i>]	This error occurs due to one or more of the following: 1. A media error 2. Hardware error	For each of the causes, check the following: 1. The tape may be damaged. 2. See E1001
E1018	Failed to locate media [media name], [error code]	You have given an incorrect tape name for the tape that is in the drive.	You should check the tape that is in the drive.
E1019	Failed to space filemark (request=[<i># filemarks</i>] actual=[<i># filemarks</i>]), [<i>error desc</i>]	Refer to the error description for more information about the exact error that occurred. This is usually due to some media or hardware error.	See E1001
E1020	Failed to detect continuation block	This error is usually due to a hardware error.	See E1001

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E1021	Failed to read continuation block	This error is usually due to a hardware error.	See E1001
E1022	Invalid continuation block, signature=[<i>signature</i>]	This error is usually due to media or hardware error.	Follow the instructions under the section titled "Tape Server Messages" for directions on media and hardware errors.
E1023	Failed to locate volume table, [<i>error code</i>]	This error occurs due to one of the following: 1. The tape drive lost power 2. You are using a drive that has not been certified by CSI.	For each of the causes, check the following: 1. The power may be turned off, and session may not be properly terminated. The drive may have lost power before the session completed. 2. Check to see if the drive is Cheyenne-certified.
E1024	Failed to contact tape server, [<i>error code</i>]	This is usually due to a memory problem, or a connection problem.	See E1007.
E1025	Invalid VT signature: [<i>signature</i>]	This error is usually due to media or hardware error.	Follow the instructions under the section titled "Tape Server Messages" for directions on media and hardware errors.
E1026	Failed to space to end of data, [<i>error message</i>]	This error is usually due to media or hardware error.	Follow the instructions under the section titled "Tape Server Messages" for directions on media and hardware errors.
E1027	Failed to read block number, [<i>error message</i>]	This error occurs due to one of the following: 1. You have a bad tape 2. You are using a drive that has not been certified by CSI.	For each of the causes, check the following: 1. Try a new tape 2. Check to see if the drive is Cheyenne-certified.
E1028	Failed to update volume table	This error occurs due to one or more of the following: 1. There is no tape in the drive 2. The tape is damaged 3. Hardware error 4. Bad connection to SCSI bus	For each of the causes, check the following: 1. Make sure there is a tape in the drive 2. See E1001 3. See E1001 4. Check the cable connections and make sure that both ends of the SCSI bus are terminated.

Number	Message	Cause	Explanation/Solution
E1029	Failed to space chunk <offset> for QFA operation.	1. There are inaccurate offset numbers in the database. 2. The tape drive may be having a problem spacing.	1. You need to merge the tape back into the database. 2. Run DEBUG to verify that this is the case.
E1031	Failed to locate session (media:[media name], session:[number] ,req=[number] actual=[number]), [error message]	Session number to restore is invalid.	Check the restore job form.
E1032	Failed to locate media session by block number (media:[media name], session:[number], block:[number]), [error message]	_____	Check if tape name, sequence and session are valid.
E1033	Failed to access media	1. There is no tape in the drive 2. Media error 3. Hardware error 4. Bad connection	1. Check to see if there is a tape in the tape drive 2. See E1001 3. Try to clean the tape heads. Power off and then power on the drive. 4. Check cable connections and make sure that both ends of the SCSI bus are terminated.
E1034	Failed to access media [media name] sequence number] ID [number]	1. There is no tape in the drive 2. Media error 3. Hardware error 4. Bad connection	See E1033
E1035	Failed to access media [media name]	See 1033.	See 1033.
E1036	Failed to write data to media, [media name]	1. Media error 2. Hardware error 3. Timeout error 4. Unit attention	1. See E1001 2. See E1001 3. This is a tape hardware error. Something is wrong with the tape. 4. A device on the SCSI bus has caused an unscheduled reset, which caused the tape drive to abort all operations.
E1037	Failed to write filemark - [error message]	This is usually due to a media error.	See E1001

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E1038	Failed to write media header ([media name] Seq=[number]) - [error message]	See E1036	See E1036
E1039	Failed to flush tape buffer	See E1036	See E1036
E1040	Failed to write continuation block	See E1036	See E1036
E1041	Failed to locate session [number]	Unable to locate a given session on a tape.	Check the restore job form to determine if correct session number is specified.
E1043	Failed to place end of session on tape	_____	This is a hardware error.
E1045	Failed to spawn [tape name], [error code]	This error occurs due to one or more of the following: 1. NLM does not exist 2. Search path is not set properly 3. Not enough memory.	For each of the causes, check the following: 1. Make sure that NLM is in place. 2. Check search path. 3. See E0125
E1046	Error reading [file path] [file name] - [error message], [number] vs [number] fd=[error code] fsz=[number]	A read error occurred during backup.	Check to see if the file has been deleted. The file may have become corrupted.
E1047	Failed to align [file path] [file name] to block boundary, [error code]	The tape data has not been arranged to a pre-defined format.	Check the following: 1. Check to see if there is a tape in the tape drive 2. The tape because the tape may be damaged. 3. There may be hardware problems with the tape drive. Try to clean tape heads. Power off and then power on the computer. 4. Check the cables, and make sure both ends of the SCSI bus are terminated.
E1048	Failed to initialize job record (owner name), [job type], [set name] [error code]	ARCserve Database Manager has not been notified that ARCserve is going to start a new job.	See E1010.

Number	Message	Cause	Explanation/Solution
E1049	Failed to update job record (<i>owner name</i>), [<i>job type</i>], [<i>set name</i>], [<i>error code</i>]	ARCserve Database Manager has not been notified that ARCserve is going to end a job	See E1010
E1050	Failed to update daily log	ARCserve cannot update the Auto Pilot daily log due to one or more of the following: 1. The host file server is out of disk space 2. You don't have appropriate rights 3. The path is incorrect	For each of the causes, check the following: 1. Check disk space 2. Use SYSCON (NetWare 3.3.xx) or NWADMIN (NetWare 4.x) to make sure that the proper rights have been assigned to the ARCserve home directory 3. Check the path to the daily log
E1052	Failed to access media (media: [<i>media name</i>] sequence [<i>number</i>])	This error occurs due to one of the following: 1. The correct tape is not in the drive 2. You have specified the wrong tape or sequence number	For each of the causes check the following: 1. Make sure the correct tape is in the drive 2. Check the tape name and/or sequence number.
E1054	Failed to resume daemon process, [<i>error code</i>]	This is caused by a tape hardware error.	See E1001
E1055	Failed to read session header - [<i>error code</i>]	This is usually due to either a media or hardware error.	Check the following: 1. Check to see if there is a tape in the tape drive 2. Check the tape because the tape may be damaged. 3. There may be hardware problems with the tape drive. Try to clean tape heads. Power off and then power on the drive. 4. Check the cables, and make sure both ends of the SCSI bus are terminated.
E1056	Invalid file header signature=[<i>XXX</i>]	ARCserve failed to locate file header on tape.	See E1001
E1057	Failed to read file header	This is usually due to a media error	See E1001
E1058	Failed to read from tape, controller failure		

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E1059	Failed to space end of data, [error desc]	Refer to the error description for more information about the exact error that occurred. This is usually due to some media or hardware error.	See E1001
E1060	Failed to read volume table from media, [error code]	This is usually due to a media error	See E1001
E1061	Failed to locate node [node name] for compare. Perform verification.	_____	This is an internal error. Please contact your reseller or Cheyenne Technical Support.
E1062	Invalid session signature, [error code]	During restore/compare/verify, ARCserve failed to find the next available file header from the tape	If you are using QIC (Quarter Inch Tape), retension the tape. If retensioning does not correct the problem, eject the tape and then re-insert it.
E1063	Invalid session password !!	During restore/merge, the session password that was entered does not match the password on the tape	Check the session password
E1065	Failed to start enumerating media, [error code]	ARCserve failed to get the tape list from the tape driver	Database problem. Refer to Activity Log for Btrieve error.
E1066	Failed to submit detailed record for [file name], [error desc]	ARCserve failed to submit detailed file/directory to database	Database problem. Refer to Activity Log for Btrieve error.
E1067	Failed to reverse [number] file marks, [error desc]	This is usually due to a media error.	See E1001
E1069	Failed to reverse [number] block, [error desc]	Refer to the error description for more information about the exact error that occurred. This is usually due to some media or hardware error.	See E1001
E1071	Failed to get Auto Pilot job's tape set, [error code]		
E1072	Failed to update tape	_____	This is a hardware error.

Number	Message	Cause	Explanation/Solution
E1073	Failed to get missed target list, [error desc]	ARCserve failed to query the database so that it can process the targets which are missed from the regular Auto Pilot job	See E1010
E1074	Invalid target name returned from asdb	Target name is invalid	See E1010
E1076	Failed to get number of permanent tapes, [error code]	There is some problem with the ARCserve database.	See E1010
E1078	Failed to enumerate next media, [error code]	ARCserve failed to find the tape list from the tape driver	Check the tape in the drive.
E1079	Failed to create screen [NLM name]	There is not enough server memory to create a screen	See E0125
E1081	Failed to query database for media to be recycled, [error code]	There is some problem with the ARCserve database.	See E1010
E1086	Failed to scan file [file name] (size: [error code]), [error message]	There is some problem with the tape driver.	Check tape drive status or tape driver log.
E1087	Cannot find media information.	See E1008.	See E1008.
E1088	Cannot get session header - [error code].	See E1015.	See E1015.
E1089	Failed to find interleaving session - [error code] [number] [number].	See E1032.	See E1032.
E1090	Tape driver failed to suspend job - [error code].	See E1033 #2, #3 and #4.	See E1033 #2, #3 and #4.
E1091	Insufficient memory is available.	There is not enough server memory.	1) To free up memory, unload some NLM's that are not currently needed. 2) Add more memory to the server if possible.
E1094	ARCserve Netware Agent was not located on node [server name].	ARCserve NetWare Agent was not loaded on the target server.	Load NW Agent on the target server.
E1095	Failed to open status file: [file name].	You may not have rights to create a file. There is no enough disk space.	Get rights. Free up disk space.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E1099	Unable to get media pool - [error code].	See E1010.	See E1010.
E1102	Unable to get execution time for the next job - [error code].	The job in the queue is corrupted.	Delete the job and resubmit a job.
E1103	Unable to get media list.	See E1010.	See E1010.
E1104	No media name list in the rotation job.	The job in the queue is corrupted.	Delete the job and resubmit a job.
E1105	Invalid current Tape Driver buffer count [number].	See E1009.	See E1009.
E1106	Media header found does not conform to SDF specification.	See E1107.	See E1107.
E1107	SDF Media header FID not found.	Media in the drive is not SDF compatible.	This media may not have been created by SDF certified software.
E1108	Unexpected FID [number] at the start of session header.	See E1107.	See E1107.
E1109	Failed to allocate memory, required [number] bytes.	See E1091.	See E1091.
E1110	Session Header found does not conform to SDF specifications.	See E1107.	See E1107.
E1111	File mark usage on this media is not SDF compliant.	See E1107.	See E1107.
E1112	Failed to find session [number].	See E1052.	See E1052.
E1113	Failed to read from buffer - [error code].	There is some problem with the tape driver.	Check tape drive status or tape driver log.
E1114	Failed to read file [file name], request read=[number], actual read=[number].	A read error occurred during merge.	Check to see if the file has been deleted or corrupted.
E1115	Failed to write file - request write=[number], actual write=[number].	A write error occurred during merge creating report file.	Check to see if the file has been deleted or corrupted.
E1116	CRC check failed (CRC number on the file trailer=[number], actual CRC number read from media=[number])	The CRC number on file trailer does not match with actual CRC number read from media.	The Data on the media may be corrupted. You should backup the file again.

Number	Message	Cause	Explanation/Solution
E1117	The data on the media may be corrupted.	See E1116.	See E1116.
E1118	Failed to open a file %s - [file name].	An open file error occurred.	Check to see if the file has been deleted or corrupted.
E1119	Unable to find session [number] for media [media name] - (to skip [number], skipped [number]) - [error message].	See E1032 or E1015.	See E1032 or E1015.
E1120	Unknown media format - [number].	Media is not of compatible format.	Only use media that are approved by the tape drive manufacturer.
E1121	Invalid NT stream ID [number].	Invalid NT stream ID.	Backup up the file again.
E1122	Unable to get media information from database - [error code].	See 1081.	See 1081.
E1123	Failed to get real session header for QFA restore - ret=[error code].	The ARCserve database may be corrupted.	Merge the session and then restore again.
E1124	Failed to find session header - [error code].	See E1123.	See E1123.
E1125	Unable to get session trailer - [error code].	See E1123.	See E1123.
E1126	Failed to find interleaving session header.	See E1123.	See E1123.
E1127	No device is given.	See E1130.	See E1130.
E1129	Failed to flush buffer - [error code].	See E1001.	See E1001.
E1130	Unable to find session state for target [node name] - [number].	This is an internal error.	Contact your reseller or Cheyenne's technical support.
E1131	Unable to find session state for restore job - [number].	See E1130.	See E1130.
E1132	Unable to find device name for comparison.	See E1130.	See E1130.
E1133	Unable to find session state for compare job - [number].	See E1130.	See E1130.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E1134	Unable to get media name for media pool [pool name] - [number].	See E1081.	See E1081.
E1135	Unable to set Auto Pilot or Rotation job backup flag - [error code].	See E1081.	See E1081.
E1136	Unable to get number of media pools - [number].	See E1081.	See E1081.
E1137	Unable to get number of medias from pool [pool name] - [error code].	See E1081.	See E1081.
E1138	Unable to get Media from pool [pool name] - [error code].	See E1081.	See E1081.
E1139	Unable to get media name information from pool [pool name] - [error code].	See E1081.	See E1081.
E1140	Unable to write volume table to media - [error code].	See E1036.	See E1036.
E1144	Failed to register media to database - [error code].	See E1081.	See E1081.

ARCopy Messages 2000-2999

Number	Message	Cause	Explanation/Solution
E2002	User [<i>user name</i>] Does Not Have Supervisory Rights on Server[<i>server name</i>]	_____	Certain operations require the user to have supervisor rights. Log into the server as Supervisor (NetWare 3.1.x) or ADMIN (NetWare 4.x).
E2006	Failed to Locate Directory [<i>directory name</i>] on Workstation	The directory doesn't exist, or the path name is incorrect.	Make sure the directory still exists and that the path is correct.
E2008	Failed to add [<i>User ID</i>] to [<i>servername:volume\directory\</i>]'s trustee list - ff	User does not exist.	Create the appropriate user.
E2010	Failed to Allocate Memory ([<i>number</i>] bytes)	There is not enough server memory.	See E0125
E2013	Failed to Issue InocuLAN Scan Request - [<i>NetWare error code</i>]	InocuLAN is busy scanning something else	InocuLAN took more than five minutes to start scanning the directory.
E2018	Failed to Close [<i>filename</i>]'s Bindery -[<i>NetWare error code</i>]	The user doesn't have appropriate rights for this function.	The user needs to be a Supervisor, or the bindery won't get backed up.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E2021	Failed to connect to target service.	This error usually occurs on a NetWare 4.x server when a user tries to log in to the TSA as Supervisor.	Create a different user and do the backup as that user. To do so, carry out the following procedure: 1. Log in as ADMIN or equivalent. 2. Run NWADMIN from Windows. 3. Find the OU (Organizational Unit) containing the ARCserve server. (Note: Bindery context must be set for the OU that contains the ARCserve server.) 4. Create a new user. 5. Double-click the new user. 6. Set Security Equivalence for the new user equal to ADMIN. 5. Set the Rights for the directories and files you want to service to ADMIN. 6. Log in to the server as the new user under Bindery Emulation (Login [<i>new username</i>] /b). 7. Submit a new backup job, including NDS, as the new user.
E2023	Failed to Establish Connection with WS @ [<i>workstation address</i>], [<i>NetWare error code</i>] - Agent Not Loaded	The Agent is not loaded.	ARCserve has tried to contact the Workstation Agent, but can't, most likely due to the Agent not being loaded.
E2024	Failed to Copy [<i>file name</i>] - Requested:[<i>file size</i>] Actual:[<i>how much was copied successfully</i>], [<i>NetWare error code</i>]	Not enough disk space on destination volume, or there is some corruption in the file.	Check disk space. Also check for directory and user restrictions by using the NetWare utility DSPACE. Make sure the file hasn't been corrupted.
E2027	Failed to Create File [<i>file name</i>] -[<i>error description</i>]	You don't have proper rights to create a file, or there is no disk space available.	Check your assigned rights. Check disk space.

Number	Message	Cause	Explanation/Solution
E2028	Failed to Write Report File (<i>file name</i>)	Either you don't have proper rights to the ARCserve home directory, or the server is out of disk space.	Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check assigned rights. Check the amount of disk space left on the file server.
E2029	Failed to Create Work File [<i>file name</i>] to Store Migration Info, [<i>error description</i>]	This error may occur for two reasons 1. The user doesn't have appropriate rights to the ARCserve home directory, or 2. The file server is out of disk space	For each of the causes, check the following: 1. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check the assigned rights. 2. Check the amount of disk space left on the file server.
E2030	Failed to Create MAC Directory [<i>directory name</i>] [<i>MAC long name</i>], [<i>NetWare error code</i>],	You don't have proper rights to create a file, or there is no disk space available.	Check your assigned rights. Check disk space.
E2031	Failed to Create MAC File [<i>file name</i>] [<i>long name</i>]	Either you don't have proper rights to the ARCserve home directory, or the server is out of disk space.	Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check assigned rights. Check the amount of disk space left on the file server.
E2032	Failed to Begin FTS Session, [<i>NetWare error code</i>]	There is something wrong with the ARCserve databases.	On the backend, at the ARCserve Server menu, check the Activity Log for the Btrieve error number. Look in your <i>Btrieve Installation and Operation Manual</i> for an explanation of the error.
E2033	Failed to Begin FTS Job, [<i>NetWare error code</i>]	There is something wrong with the ARCserve databases.	See E2032
E2034	Failed to Add FTS Record, [<i>NetWare error code</i>]	There is something wrong with the ARCserve databases.	ARCserve is trying to add a record to the ASDIRDAT database. On the backend, at the ARCserve Server menu, check the Activity Log for the Btrieve error number. Look in your <i>Btrieve Installation and Operation Manual</i> for an explanation of the error.
E2035	Failed to End FTS Session, [<i>NetWare error code</i>]	There is something wrong with the ARCserve databases.	See E2032

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E2036	Failed to End FTS Job, [NetWare error code]	There is something wrong with the ARCserve databases.	See E2032
E2038	[Directory name] Not Found - [error description]	Either the directory isn't there, or you don't have appropriate rights to access this directory.	Check to see if the directory has been deleted. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure you have appropriate rights.
E2071	Failed to Create Directory [directory name] - [error description]	There can be several reasons for this error to occur: 1. There is no available disk space. 2. User does not have proper rights to create the directory. 3. Maximum number of directory levels has been reached?	For each of the reasons, check the following: 1. Check disk space on the server. Use DSPACE to check for any user and directory restrictions. 2. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure the user has rights to create directories. 3. Check to see if the maximum number of directory levels has been reached.
E2073	Failed to Open File[file name]- [error description]	The file is already open or the user doesn't have the appropriate rights to open the file.	Check to see if the file is already open, or use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check the rights that have been assigned.
E2078	Failed to Open MAC File [file name][MAC long name] -	There can be several reasons for the occurrence of this error: 1. The user does not have appropriate rights to open this file 2. The path to the file is incorrect 3. The file doesn't exist.	For each of the possible causes, check the following: 1. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure the user has rights to open the file. 2. Check the path to this file. 3. Make sure the file exists.
E2081	Failed to receive job from scheduler. Queue [queue name], ret=[NetWare error code]	There is some problem with the queue.	Put the original job on hold and re-submit the same job again. If that doesn't work you will have to re-install the server piece of ARCserve to recreate the queue.

Number	Message	Cause	Explanation/Solution
E2088	Failed to Record File to be Deleted -[<i>error description</i>]	The host server is out of disk space.	If the host server has run out of disk space, you will have to delete some files to create more room. Use DSPACE to see if there are any user and Directory restrictions.
E2097	Failed to scan [<i>filename</i>] trustees.	Bindery or NDS may be corrupted.	Use BINDFIX (NetWare 3.1x) or DSREPAIR (NetWare 4.x) to repair bindery or NDS.
E2110	Failed to Delete [<i>file name</i>] - [<i>error description</i>]	Proper rights have not been assigned to perform this function.	Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure that the proper rights have been assigned.
E2127	Error Reading [<i>file name</i>] - [<i>error description</i>]	There is some corruption with the file or the connection has been broken.	Use DOS to verify that there isn't a problem with the file. Check to see if the connection is gone.
E2129	Error Writing [<i>file name</i>] - [<i>error description</i>]	There can be a few causes for this message: 1. There is no available disk space. 2. The directory has a space restriction. 3. The user has a space restriction. 4. The proper rights for this function have not been assigned.	For each of the causes, try the following: 1. Check disk space. 2. Use DSPACE to see if there is a space restriction for this directory. 3. Use DSPACE to see if the user has a space restriction. 4. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to see the assigned rights.
E2131	Failed to Open File [<i>file name</i>], Execute Only	_____	ARCserve cannot open this file because it is marked as an EXECUTE ONLY file.
E2133	File [<i>file name</i>] Not Found	Either the directory isn't there, or the user doesn't have appropriate rights to access this directory.	See E2038

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E2197	"Service Connection with File Server [<i>server name</i>] is Broken!",	_____	This message appears after other error messages occur because the connection has been broken. See E0168 for connection troubleshooting.
E2215	Failed to Complete InocuLAN Scan on [<i>directory name</i>] - [<i>NetWare error code</i>]	InocuLAN reported some error (e.g. it couldn't find the directory). Or, the user doesn't have appropriate rights to access this directory.	See 2038
E2216	Wait for InocuLAN Result - Time Out	InocuLAN's virus scan took too long, the directory will be skipped.	ARCserve waits for twenty minutes for InocuLAN to finish its scan.
E2265	Error Reading Retry Missed Files Log [<i>log name</i>], [<i>error description</i>],	There is some corruption with the file or the connection has been broken.	Use DOS to verify that there isn't a problem with the file. Check to see if the connection is gone.
E2266	Error Writing Retry Missed File Log [<i>log name</i>], [<i>error description</i>]	There can be a few causes for this message: 1. There is no available disk space. 2. The directory has a space restriction. 3. The user has a space restriction. 4. The proper rights for this function have not been assigned.	For each of the causes, try the following: 1. Check disk space. 2. Use DSPACE to see if there is a space restriction for this directory. 3. Use DSPACE to see if the user has a space restriction. 4. Use SYSCON to see the assigned rights.
E2285	Failed to Recreate Queue [<i>queue name</i>]	User does not have supervisory rights to perform this function. The user must be a supervisor to perform disk mirroring when the destination is the ARCserve host server.	Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to assign supervisory rights. When submitting this type of copying job, the user should log in as Supervisor (NetWare 3.1x) or ADMIN (NetWare 4.x).

Number	Message	Cause	Explanation/Solution
E2286	Failed to Recreate User [<i>user name</i>]	User does not have supervisory rights to perform this function.	Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to assign supervisory rights. When submitting this type of copying job, the user should log in as Supervisor (NetWare 3.1x) or ADMIN (NetWare 4.x).
E2287	Client [<i>client name</i>] does not have bindery access.	_____	This message appears before numbers 2265 and 2286 when the user doesn't have supervisory rights.
E2313	Failed to Lock File [<i>file name</i>], [<i>error description</i>]	ARCserve cannot lock the file because it is in use.	Have the user who has this file locked release the file. From the front end, in the <i>Backup Options</i> screen, do not choose to lock the file if there is a good chance the files will be in use. Instead, choose "Deny None if Deny Write fails". This will allow the user to view a file while it is being backed up.

File Server Messages 3000-3999

Number	Message	Cause	Explanation/Solution
E3001	Failed to get [<i>volume</i>]'s number, [<i>NetWare error code</i>]	Either the volume has been dismounted or the connection has been broken.	Use CHKVOL or VOLINFO to see if the volume is still mounted. Use MAP to see if the connection has been broken.
E3006	Failed to get [<i>file name</i>]'s information, [<i>NetWare error code</i>]	Either the user doesn't have the appropriate rights for this file, or the file has been deleted.	See 2038
E3007	Failed to back up [<i>Macintosh file name</i>]'s resource fork	This error occurs due to one of the following: 1. The file is locked by another application 2. The file has been deleted 3. The connection has been broken	For each of the causes, do the following 1. If the file is locked, have the application close the file. 2. Check to see if the file has been deleted. 3. Use MAP to see if the connection has been broken.
E3008	Failed to back up [<i>Macintosh file name</i>]'s data fork		
E3009	Failed to open [<i>file name</i>] at end of session	ARCserve is retrying the file that was open when it initially tried to back it up. Again, the file is open.	Have the application close the open file.

Number	Message	Cause	Explanation/Solution
E3011	Failed to open file [file name], [NetWare error code]	<p>There can be several reasons for this error message:</p> <ol style="list-style-type: none"> 1. The file doesn't exist. 2. The file is in use by another application which has it open in exclusive mode, and the file hasn't been flagged as shareable. 3. You do not have the proper rights to this directory or file. 4. The path to this file is incorrect. 	<p>For each of the causes, check the following:</p> <ol style="list-style-type: none"> 1. Make sure the file exists. 2. Check to see that the file isn't locked by someone else. Flag the file shareable. Using ARCserve Manager, view the <i>Backup Options</i> screen. Check the Open File Method and set it to deny none. 3. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check the assigned rights to this directory or file. 4. Make sure the path to this file is correct. <p>If you have a number of problems of this kind, you may want to change the backup schedule to run at a time when there is less of a chance of users accessing files.</p>
E3012	Failed to open [Macintosh file name]'s resource fork, [NetWare error code]	_____	See E3011.
E3013	Failed to open [Macintosh file name]'s data fork, [NetWare error code]	_____	See E3011.
E3014	Failed to get [filename]'s AFP information, [error code]	File has been deleted.	Find another copy of file and copy to path of deleted file.
E3015	Service connection with [file server] is broken, [NetWare error code]	The connection between the workstation and file server has been broken.	<p>If you see this error message, use the following checklist:</p> <ul style="list-style-type: none"> Check the existence of the remote server. Check the communications path to the server, such as routers, bridges, cabling, etc. Make sure you are using the latest version of the LAN drivers. Check your LAN cards.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E3016	Failed to access [<i>file server</i>]/ [<i>directory</i>], [<i>NetWare error code</i>]	ARCserve has failed to access the directory to back it up due to the following 1. The target has been deleted 2. The volume has been dismounted 3. The connection to the server is broken	For each of the causes, check the following 1. Check to see if the target has been deleted. 2. Use the CHKVOL or VOLINFO command to see if the volume has been dismounted. 3. Use the MAP command to see if the connection has been broken.
E3018	Failed to initialize scan buffer [<i>buffer name</i>]	The host server has run out of disk space.	More disk space needs to be made available on the host server.
E3020	Failed to set CWD to [<i>Path</i>] <i>filename</i>], [<i>NetWare error code</i>]	Certain CLIB functions have problems accessing files with extended ASCII characters in the directory name filename (such as Macintosh file names).	Rename the directory or file.
E3021	Failed to change directory	1. The directory may have been deleted. 2. The volume may not be mounted. 3. The user may not have rights to the directory. 4. You're using an older version of CLIB (older v. 4.01d, dated 2/24/94, has this problem).	1. Check that directory exists. 2. Check that volume is mounted. 3. Check user's rights to directory. 4. Check version of CLIB you're using (newer v. 4.01d, dated 3/9/94, solves this problem;).
E3022	Invalid directory	1. Directory may have been deleted. 2. CLIB problem (see E3021).	1. Check that directory exists. 2. See E3021
E3024	Failed to map path, volume, dir [<i>volume\path</i>], [<i>NetWare error code</i>]	See E3020.	See E3020.

Number	Message	Cause	Explanation/Solution
E3025	Failed to scan [<i>file name or directory</i>] trustees, [<i>NetWare error code</i>]	See E2038	See E2038
E3027	Failed to Cache Backup Set, ff	Not enough space on the SYS volume of the ARCserve host server.	1. Free more disk space on the SYS volume. 2. Reschedule job.
E3028	Failed to read from scan buffer, [<i>Error Code</i>]	Usually follows E3112 and results from insufficient disk space in ARCserve home dir.	See E3018.
E3029	Failed to access relative path (Request=11 Actual=2)	See E3028.	See E3028.
E3031	Failed to scan[<i>volume</i>] ([<i>directory</i>])'s space restrictions, [<i>NetWare error code</i>]	See E2038	See E2038
E3035	Failed to start session, [<i>NetWare error code</i>]	_____	This is an internal error. Please contact your reseller or Cheyenne Technical Support.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E3037	Failed to allocate tape buffer	Not enough memory on server.	<p>Check server memory. You can do this by following these steps:</p> <ol style="list-style-type: none">1. Enter LOAD MONITOR from the server console.2. Select "Resource Utilization" from the Available Options menu.3. If the cache buffer's percentage is very low (below 30%), your server is probably low on memory.4. To free up some memory, unload any NLM's that are not required.5. Enter ASTOP6 from the server console to stop ARCserve.6. Enter ASTART6 from the server console to restart ARCserve. <p>If it happens again, you should restart the file server. You should also consider purchasing more memory for the file server.</p>

Number	Message	Cause	Explanation/Solution
E3038	Failed to allocate [<i>entity</i>] (<i>size</i>) bytes)	The host server doesn't have enough memory.	Check server memory. You can do this by following these steps: 1. Enter LOAD MONITOR from the server console. 2. Select "Resource Utilization" from the Available Options menu. 3. If the cache buffer's percentage is very low (below 30%), your server is probably low on memory. 4. To free up some memory, unload any NLM's that are not required. 5. Enter ASTOP6 from the server console to stop ARCserve. 6. Enter ASTART6 from the server console to restart ARCserve. If it happens again, you should restart the file server. You should also consider purchasing more memory for the file server.
E3047	Failed to get database [<i>database name</i>]'s file name (s), [<i>NetWare error code</i>]	_____	This is an internal error. Please contact your reseller or Cheyenne Technical Support.
E3052	Failed to read [<i>file or directory</i>]'s information, [<i>NetWare error code</i>]	_____	See E1061
E3058	Failed to submit InocuLAN scan request - timeout	InocuLAN didn't respond to ARCserve's request for a virus scan.	InocuLAN is probably scanning something else.
E3059	Failed to submit Inoculan scan request 1, fc	Inoculan option was specified when job was submitted but Inoculan isn't loaded on ARCserve host server.	Job isn't affected. Virus scan isn't performed. Check that Inoculan is loaded before submitting another job with virus scan request.
E3061	InocuLAN scanner error - [<i>NetWare error code</i>]	_____	See E1061

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E3065	Failed to set [<i>file name</i>]'s information, [<i>NetWare error code</i>]	The user does not have appropriate rights to perform this function, or the file has been deleted.	Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure that the correct rights have been assigned. Check to see if the file has been deleted.
E3066	Failed to change [<i>file name</i>]'s information, [<i>NetWare error code</i>]	The user does not have appropriate rights to perform this function, or the file has been deleted.	Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure that the correct rights have been assigned. Check to see if the file has been deleted.
E3067	Failed to read next file header, [<i>NetWare error code</i>]	_____	The tape may be bad. See E1061
E3068	Failed to start ARCserve Database backup - [<i>NetWare error code</i>]	_____	See E1061 and E3018.
E3069	Failed to end ARCserve Database backup - [<i>NetWare error code</i>]	_____	See E1061
E3070	Failed to delete Mac file (<i>Macintosh file name</i>), [<i>NetWare error code</i>]	_____	See E1061
E3072	Failed to read [<i>file name</i>]'s map ([<i>number</i>] bytes)	_____	ARCserve couldn't read the sparse file's map due to the number of segments.

Number	Message	Cause	Explanation/Solution
E3073	Failed to allocate block map for [file name] ([number] blocks) [number] bytes	There is not enough server memory.	Check server memory. You can do this by following these steps: 1. Enter LOAD MONITOR from the server console. 2. Select "Resource Utilization" from the Available Options menu. 3. If the cache buffer's percentage is very low (below 30%), your server is probably low on memory. 4. To free up some memory, unload any NLM's that are not required. 5. Enter ASTOP6 from the server console to stop ARCserve. 6. Enter ASTART6 from the server console to restart ARCserve. If it happens again, you should restart the file server. You should also consider purchasing more memory for the file server.
E3074	Failed to disable login to server [server name], [NetWare error code]	See E2038	See E2038
E3075	Failed to enable login to server [server name], [NetWare error code]	See E2038	See E2038
E3076	Failed to lock [file name] (sz = [size of file]), [NetWare error code]	The file is in use by another application.	Close the file.
E3078	Failed to get [Volume]'s statistics, [NetWare error code]	_____	See E1061
E3079	Failed to create file [file name], [NetWare error code], [error description]	You don't have proper rights to create a file, or there is no disk space available.	Check your assigned rights. Check disk space.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E3080	Failed to restore <i>[filename]</i> - request: <i>[file size]</i> actual: <i>[how much was restored successfully]</i> , <i>[NetWare error code]</i>	Not enough disk space on destination volume, or there is some corruption in the file. The connection with the remote server may have been broken.	Check disk space. Also check for directory and user restrictions by using the NetWare utility DSPACE. Make sure the file hasn't been corrupted. See E0168 for connection troubleshooting.
E3082	Failed to assign trustee to <i>[file or directory]</i> , objectID= <i>[object]</i> rights= <i>[rights]</i> , <i>[NetWare error code]</i>	The user doesn't have proper rights to create a file.	See E2038
E3083	Failed to set <i>[volume or directory]</i> space restriction to <i>[number]</i> KB, <i>[NetWare error code]</i>	See E3082	See E3082
E3084	Failed to add object <i>[object id]</i> 's space restriction (<i>[number]</i> KB) to <i>[volume]</i> , <i>[NetWare error code]</i>	The user doesn't have proper rights to create a file, or the object no longer exists.	See E3082
E3085	Failed to create Mac. folder (<i>Macintosh file name</i>), <i>[NetWare error code]</i>	There could be the following causes for the occurrence of this message: 1. The user doesn't have proper rights to create a folder. 2. There is no disk space available. 3. There are directory space restrictions.	For each of the causes, check the following: 1. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check the assigned rights. 2. Check disk space. 3. Use DSPACE to see any directory space restrictions.
E3086	Failed to get (<i>Macintosh file name</i>)'s entry id, <i>[NetWare error code]</i>	_____	See E1061
E3087	Failed to request (<i>Macintosh file name</i>)'s info, <i>[NetWare error code]</i>	_____	See E3086
E3088	Failed to set (<i>Macintosh file name</i>)'s info, <i>[NetWare error code]</i>	_____	See E3086

Number	Message	Cause	Explanation/Solution
E3090	Failed to open (<i>Macintosh file name</i>)'s data fork, [NetWare error code]	Either the file doesn't exist, or the appropriate rights haven't been assigned.	Check to see if the file exists, and then check your access rights.
E3091	Failed to restore (<i>Macintosh file name</i>)'s resource fork	The following can cause this error: 1. There is not enough disk space	For each of the causes, check the following: 1. Check disk space
E3092	Failed to restore (<i>Macintosh file name</i>) data fork	2. There is an error reading data from the tape 3. There are directory space restrictions.	2. Look under the section titled "Tape Server Messages" and follow the instructions for media errors. 3. Use DSPACE to see any directory space restrictions.
E3093	Failed to write (<i>Macintosh file name</i>)'s resource fork, request: [file size] actual:[size that was actually written successfully]	There can be a few causes for this message: 1. There is no available disk space.	For each of the causes, try the following: 1. Check disk space.
E3094	Failed to write (<i>Macintosh file name</i>)'s data fork, request: [file size] actual:[size that was actually written successfully]	2. The directory has a space restriction. 3. The user has a space restriction. 4. The proper rights for this function have not been assigned.	2. Use DSPACE to see if there is a space restriction for this directory. 3. Use DSPACE to see if the user has a space restriction. 4. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to see the assigned rights.
E3095	Failed to create Mac file [Macintosh file name], [NetWare error code]	The user doesn't have proper rights to create a file, or there is no disk space available.	Check the assigned rights. Check disk space.
E3096	Failed to restore sparse file [file name], [number] segments	There is no disk space available.	Check disk space.
E3101	Failed to get volume [volume name]'s information, conid=[id number], [NetWare error code]	_____	See E1061
E3104	Failed to unlock [file name] size = [file size], [NetWare error code]	_____	See E1061
E3105	Failed to query [directory]'s disk space limit, [NetWare error code]	The user doesn't have appropriate rights to perform this function.	Check the assigned rights.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E3106	Failed to query user's disk space allocation limit,[<i>NetWare error code</i>]	The user doesn't have appropriate rights to perform this function.	Check the assigned rights.
E3108	Invalid trustee size [<i>size</i>] (max=[<i>maximum size</i>])	_____	See E1061
E3111	Too many directory levels [<i>level no</i>][<i>path</i>]	The maximum level of subdirectories on a server is 100.	Remove excess subdirectories.
E3112	Failed to update Scan Buffer, req=16372 actual=-1	Not enough space on SYS volume of ARCserve host server.	Free more disk space on SYS volume.
E3120	Failed to backup [<i>filename</i>], [<i>Error Code</i>]	Hardware problem in writing to tape.	See the section of this chapter titled "Tape Server Messages".
E3123	Failed to connect to TS on [<i>server name</i>], [<i>Error Code</i>]	User tried to do an SMS backup but TSA wasn't loaded on the server. (NetWare 3.x servers and 4.x servers with Bindery Emulation)	1. Load the TSA on the server. 2. Disable the SMS backup option in the ARCserve configuration.
E3123	Failed to login/connect to TSA as Supervisor, FFFDFFD7	Occurs on NW 4.1x server. User tried to log in to the TSA as Supervisor and the Supervisor user doesn't exist in NDS. (NetWare 4.1x servers in NDS mode)	Create a new user with a name other than Supervisor. Note: This new user should exist in Bindery Emulation, have Supervisor Object Rights to the Root of the NDS Tree, and have ADMIN Equivalent Rights. Tip: One way to be sure the user will log in to the TSA with the new username is to add the user and password to the Server Security Login field. This task can be done by enabling Node Options in the Backup Window.
E3124	Failed to put ARCserve Database in backup mode, %x - Is ARCserve Database already being backed up?	There are simultaneous AP jobs or custom jobs backing up the host server, both trying to back up the database at the same time. (NetWare 3.x servers and 4.x servers with Bindery Emulation)	The database can only be backed up by one job at a time.

Number	Message	Cause	Explanation/Solution
E3124	Failed to release ARCserve Database on server [server name], fffdfdd6	Logout fails to release connection. (NetWare 4.1x servers in NDS mode)	1. Check for broken connection. 2. Make sure you have the latest SMS files.
E3125	Failed to read [filename]'s data set, [error code]	File may be open or user may not have rights to file. (NetWare 3.x servers and 4.x servers with Bindery Emulation)	1. Check if file is open. 2. Check user's rights to file.
E3125	Failed to read [context]'s data set, FFFDFEFF	Occurs on NW 4.01 server, if user is running a backup job as a user who's not an ADMIN or equivalent. (NetWare 4.1x servers in NDS mode)	See E 3123.
E3125	Failed to read [File/Dir's Path]'s data set, [Error code]	While performing an SMS Backup, this error might pop up. This is because ARCserve requests SMS to read the file or directory's data but the SMS call fails with the error code indicated.	Check if the file exists and you have enough rights to read it.
E3127	Failed to list TSA(s) on server [Server Name], [SMS Error Code]	SMS function call to list the TSA's on the server failed.	Make sure the SMDR and TSA's are all loaded.
E3128	Failed to get [NDS Object Name]'s ID from the directory, [NW Error Code]	Attempted to get the object ID whose NDS Object Name is known.	NetWare call to get the Object Name 's corresponding ID failed with the error code mentioned. The object might have been deleted. Verify if the object exists in the Directory using NETADMIN or NWADMIN.
E3129	Failed to find ID [Object ID]'s name in the directory, [NW Error Code]	Attempted to get the NDS name for an object whose object ID is unknown.	NetWare call to get the Object's name failed with the error code. The object might have been deleted. Verify if the object exists in the Directory using NETADMIN or NWADMIN.
E3130	Failed to initialize work file for grooming	Cause : Unable to write to the work file used for grooming.	Check to see if you have enough disk space. Free up the disk space for ARCserve to create work files for grooming.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E3131	Failed to count AutoPilot set [AP Set Name]'s permanent tape,[Error Code]	FSTAPE tried to get the permanent tapes available from the Database and this operation failed.	Check if the Database is not corrupted. If the database is corrupted, please restore it.
E3132	Failed to initialize disk grooming log - [Path]	Groom Log file was initialized and it failed.	Free up some disk space if out of disk space.
E3146	Cannot compare Directory Services session	An attempt was made to compare the Directory Services session.	This is not an error. Directory Services session cannot be compared.
E3147	Out of disk space - All files may not be backed up	Estimated the disk space available during backup.	Solution : Free up some disk space.
E3148	Failed to begin new session in ARCserve Database, [Error code]	Tried to record the session information in the ARCserve Database, but failed with an error code.	Btrieve error. See Btrieve errors.
E3149	Failed to end ARCserve Database session, [Error code]	See E3148.	See E3148.
E3150	Failed to insert record [Path] in ARCserve Database, [Error code]	Cause : Tried to insert a record in the ARCserve Database.	Btrieve error. See Btrieve errors.
E3151	Failed to put ARCserve Database in backup mode, [Error Code] - Is ARCserve Database already being backed up?	While backing up the ARCserve Database, we put the Database in backup mode. It might fail if the ARCserve Database is already being backed up or because of some other reasons. Error Code tells user the reason. (Btrieve error).	Free up disk space. See Btrieve errors.
E3164	Backup of [File name] was incomplete - deleting file	The backup of the file was incomplete. So, we should not restore part of the file. Hence, it would be deleted.	See if during the backup the file is locked or being updated.
E3165	Please load Storage Server to restore HSM key [Path]	The session which is to be restored contains some migrated files and the Storage Server is not loaded.	Load the Storage Server to restore the HSM keys.
E3166	HSM key [Path] must be restored to original directory	HSM key restored to a different destination.	Restore the HSM. keys to the same destination.

Number	Message	Cause	Explanation/Solution
E3168	Invalid stream signature, [Signature]	Tried to read a stream of data during compare or restore, but encountered an invalid stream signature.	If error occurs during Restore, make sure the compare was OK. If during a compare, then the backup might not have been correctly done.
E3172	Error writing to file [Filename], [Error Code]	While restoring the files, writing the data to file was unsuccessful.	Make sure enough disk space is available and you have enough rights to create the files at the destination directory.
E3173	Invalid filter, [Filter name]	The filter entered by the user is wrong. i.e. does not follow the conditions imposed by ARCserve to submit filters.	Submit a job with proper filters.
E3175	NDS trustees cannot be restored to a Bindery server	When you attempt to restore an 4.x backup with NDS trustees onto a Bindery server you get this error.	Restore it to a 4.x server.
E3176	Bindery trustees cannot be restored to an NDS server	When you attempt to restore an 3.x backup with bindery trustees onto a 4.x server you get this error.	Restore it to a 3.x server.
E3177	Directory Services TSA not loaded on server [Server name]	When you backup an NDS Database, you need the TSANDS.NLM to be loaded. If this is not loaded, you give this error message.	Load the TSANDS.NLM (Directory Services TSA) on the server specified.
E3180	Error updating Disaster Recovery Information [Error code]	When a Disaster Recovery backup is performed, you update some information onto the floppy or on server's hard drive. If the floppy is missing or the server's hard drive is out of disk space then this message pops up.	Put the floppy for Disaster Recovery in the appropriate drive. Free up some hard disk space for the Disaster recovery information.
E3182	Failed to Open Job Status File [File name]	The Job status information is updated in the filename specified at the end of sessions/jobs. When this fails, you get this message.	Enough space should be available on the hard drive.
E3183	NetWare 3.x Host Server uses NDS target - Invalid Job	When a 3.x host server is trying to use the 4.x target in NDS mode, you get this error.	Use the 4.x target in Bindery mode.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E3184	CRC check failed on [Filename] ([CRC on tape] [CRC on disk])	When a CRC check option is enabled, ARCserve checks the CRC for every single file. If this check fails, you get an error message.	Clean the tape drive and check if the tape might be bad. Repeat the backup and verify if CRC is fine.
E3187	Recover Database requires ARCserve Version 6 Database	Recover Database operation was attempted on ARCserve database which was created with ARCserve Version earlier than 6.	Try the Recover Database operation with ARCserve Version 6 Database.
E3188	NDS Schema Backup cannot be performed by a NetWare 3.x Server	When an NDS database backup job is submitted, the schema and the objects would be backed up. But if the host server is a NetWare 3.x server, you cannot perform an NDS Schema backup.	Use a 4.x host server if you want the NDS Schema to be backed up as part of the NDS Database.
E3196	SMS is required to preserve [File System name] name space information	When a job is submitted to backup non-DOS and non-MAC files (i.e., NFS or OS/2 files) then you need to use SMS logic. This implies that you must have the appropriate file system TSA's to be loaded on the target. If the TSA's are missing and if it cannot be loaded then you get this error.	See Cause.
E3201	[File System / Directory]TSA not loaded on server %.48s	Either the File system TSA (TSA410.NLM, TSA311.NLM etc.) or Directory Services TSA (TSANDS.NLM) is not loaded on the server.	Load the appropriate TSA on the server and do the backup. FSTAPE would automatically load the TSA if the server is the host server and if the volume contains name spaces other than DOS or MAC. If FSTAPE cannot load it, the user must manually load it.
E3202	Skipping [Filename], virus detected by InocuLAN	A virus is detected by InocuLAN, during the backup of a file.	The virus must be removed by setting the option to clear the virus using InocuLAN.

Number	Message	Cause	Explanation/Solution
E3205	Cannot restore [File server version] bindery to [File server] target	You attempted to restore the 2.x bindery files to a 3.x server or vice versa.	Bindery files must be restored to their appropriate file server types, i.e., 2.x bindery must be restored to a 2.x server only and a 3.x bindery must be restored to a 3.x server only.
E3206	Supervisory rights needed to restore bindery	Restore of bindery must be done by an user who has supervisory rights.	A user with supervisory rights must restore the bindery. Either grant the rights for the existing user using SYSCON or NETADMIN or change the user who restores the bindery.
E3207	Wrong Destination selected, Bindery can be restored to SYS: volume only	An attempt to restore Bindery to a volume other than SYS: was made.	Bindery can be restored to the SYS: volume alone.

Database Messages 4000-4999

Number	Message	Cause	Explanation/Solution
E4001	Message Index out of bound [<i>index number</i>] (max=[<i>maximum index number</i>]), m,programMesgIndex	The index number is out of range.	You probably have the wrong version of the message file. Please contact your reseller or Cheyenne Technical Support.
E4002	Failed to read message file [<i>file name</i>],path	ARCserve couldn't open the message file due one or more of the following: 1. You don't have the appropriate rights 2. The file doesn't exist 3. The file is locked by another application 4. Some ARCserve system files are missing.	For each of the causes, check the following: 1. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure that the proper rights have been assigned. 2. Check to ensure that the file exists, and that the path is correct 3. Have the application close the file. 4. Re-install ARCserve.
E4003	Failed to allocate message buffer	Not enough memory on server.	See E0125.
E4004	Failed to read message file, request=[<i>size requested</i>] actual=[<i>actual size</i>] bufSize, ret	The message file has been corrupted.	This message will include the name of the NLM message file that ARCserve is trying to read (e.g. CLIENTS.MSG, ASDB.MSG). Check to see if the file has been corrupted. You may need to recopy the file from the installation disks, or re-install ARCserve.
E4005	Too many [<i>number</i>] messages, MAX MESSAGE	_____	Please contact your reseller or Cheyenne Technical Support.
E4007	Unable to access ARCserve home directory [<i>path name</i>]	This error is due to one of the following 1. You don't have the appropriate rights 2. ARCserve was installed correctly	For each of the causes, check the following: 1. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to ensure that you have appropriate rights . 2. Re-install ARCserve.

Number	Message	Cause	Explanation/Solution
E4021	Failed to parse entity, 9	1. Unprintable character in ZONE name. 2. Workstation is missing a machine name.	1. Check with user for zonelist. 2. Perform a lookup test.
E4101	Failed to update[<i>database</i>] record id=[<i>record id</i>], status=[<i>Btrieve error code</i>]	The database has been corrupted.	Look in the ARCserve Activity Log for the Btrieve error. In Novell's <i>Btrieve Installation and Operation Manual</i> there is a list of Btrieve Status Codes and Messages, along with causes and solutions for this status code.
E4102	Failed to insert [<i>database</i>] record, status =[<i>Btrieve error code</i>]	The database has been corrupted.	See E4101.
E4103	[CLIENTS] Failed to Create Activity Log File	This error is due to one of the following: 1. No available disk space 2. You do not have appropriate rights to create the activity log.	For each of the causes check the following: 1. Check disk space 2. Check the assigned rights
E4104	Failed to establish connection with [<i>network address</i>]-[<i>node address</i>], [<i>error code</i>], connSave: [NetWare error codes]	Either the workstation is off, or IPX is not loaded at the workstation.	Make sure the workstation is on and that IPX is loaded.
E4106	Failed to query local IPX address, [<i>NetWare error code</i>]	There is a bad connection, or the workstation has been turned off.	Check the connection. See if the workstation has been turned off.
E4109	Failed to receive IPX packet, [<i>error code</i>] Error Codes: FA = No known route to destination FC = Request canceled FD = Packet overflow FE = Time-out failure/Bad packet FF = Socket closed/Hardware failure	1. In the old version, CLIENTS.NLM returns E4109 and unloads if the server has more than 4 LAN cards or channels. The new version of CLIENTS.NLM can handle up to 8 LAN cards or channels. 2. Network connections may be faulty. 3. Server memory may need to be refreshed.	1. Check the version of CLIENTS.NLM against the number of LAN cards and channels. Also check the version of the LAN card driver on the server. 2. Check network connections. 3. Down, power off, reboot and restart server.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E4112	Failed to query router address for [workstation address], [NetWare error code]	There is a bad connection, or the workstation has been turned off.	Check the connection. See if the workstation has been turned off.
E4113	Failed to load NLM [NLM name], [NetWare error code]	Either the NLM doesn't exist, or there is not enough server memory to load the NLM.	Check to make sure the file NLM exists. Check server memory. See E0125.
E4114	Failed to make file server list	This is an internal error.	ARCserve is trying to make a list of all the file servers on the network. If it fails to make this list, check the LAN card. If you are still unsure, contact your reseller or Cheyenne's Technical Support.
E4115	Failed to allocate \[object name]\ ([Number] bytes)	There is not enough memory on the file server.	Check server memory. You can do this by following the explanation in E4113.
E4201	Failed to create activity log file:[file name]	This error is due to one of the following: 1. No available disk space 2. You do not have appropriate rights to create the activity log.	For each of the causes check the following: 1. Check disk space 2. Check the assigned rights
E4202	Failed to find ([tape name],[seq. number],[id]) tape record	The tape isn't in the database.	Eject the tape and re-insert into the drive. ARCserve will make an entry into its database for this tape.
E4203	Failed to initialize [database name] database	The database has been corrupted.	Refer to your <i>NetWare Btrieve and Installation</i> manual for more information about recovering a corrupt database.
E4204	Failed to allocate memory for [object name].	The server is low on memory	See 4113.
E4205	Failed on integrity checking for [database name]	The file has become corrupted.	If your database file has become corrupted, do as follows: 1. Stop any jobs that are running 2. Unload ARCserve. Enter ASTOP6 from the system console at the host file server 3. Run NetWare's BUTIL program to repair the database

Number	Message	Cause	Explanation/Solution
E4206	Disk is full	No more disk space on host file server.	You should get rid of unnecessary files to get back some disk space.
E4207	Failed to create FTS Daemon [<i>Btrieve error</i>]. No FTS history will be saved.	The database file ASTPSDAT.DB may be locked, or corrupt. Or there may not be enough memory on the ARCserve server.	To see if the file is locked, use NetWare's MONITOR utility. If you determine that there may not be enough memory, see E0125.
E4208	Failed to write to file, [NetWare Error Code]	1. Disk may be full. 2. The volume where ARCserve is installed may have been dismounted. 3. Memory may be corrupted.	Check disk space, and volume status. If OK, reload ARCserve.
E4209	Error creating ASDB status screen	1. Low on memory 2. Wrong version of NWSNUT.NLM.	1. Check Server memory. 2. Update NWSNUT.NLM.
E4210	Failed to delete file [file name]	Memory corrupted.	Reload ARCserve.
E4211	Failed to rename file [file name]	There are too many duplicate *.SAV files in the DATABASE\DBSCAN directory.	Delete *.SAV files in the DATABASE\DBSCAN directory.
E4212	[NetWare Error Code] Failed to open file [file name]	See E4210.	See E4210.
E4214	File [detail file name] corrupt. Merge aborted	During the backup, the server abended. One of the detail files (*.DTL) in the DATABASE\DBSCAN directory is corrupt.	Delete this file and merge the tape if the detail information is needed in the database.

Workstation Messages 5000-5999

Num	Message	Cause	Explanation/Solution
E5000	Failed to connect to workstation - Is Agent loaded?	The workstation Agent is not loaded, or the workstation is blocked by a broadcast message.	Load the appropriate Agent. Use CASTOFF ALL to block broadcast messages to the workstation. Or, at the server console, in ARCserve's <i>Configuration</i> screen, turn on the "Turn off all messages to workstation" option to prevent ARCserve from sending any broadcast messages.
E5001	Failed to establish connection with WS @ [network #], [node address]		
E5002	Failed to start database session, [error code]	This message could be caused by one of the following: 1. There is no more disk space on the host file server. 2. The database may be corrupt or in an inconsistent state.	For each of the causes, check the following: 1. Use CHKVOL to see if the server has run out of disk space. 2. Look in the ARCserve Activity Log for the Btrieve error. See E1010
E5003	Failed to add record to ARCserve database, [error code]	The database has become corrupted, or the file server has run out of disk space.	See E1010. You may need to get back some disk space by getting rid of some unnecessary files.
E5004	Failed to end database session	This message could be caused by one of the following: 1. There is no more disk space on the host file server. 2. The database may be corrupted or in an inconsistent state.	For each of the causes, check the following: 1. Use CHKVOL to see if the server has run out of disk space. 2. Look in the ARCserve Activity Log for the Btrieve error. See E1010
E5005	Failed to locate directory [directory name] on workstation	This message could be caused by one of the following: 1. The source directory of the workstation backup job does not exist on that workstation. 2. The directory may have been deleted.	For each of the causes, check the following: 1. If this is a repeating job, deselect the source directory that does not exist any more. 2. Check to see if the directory has been deleted.

Num	Message	Cause	Explanation/Solution
E5006	Failed to allocate filter buffer [<i>number</i>] bytes	The host server does not have enough memory to process the job.	See E0125
E5007	Failed to allocate memory (number Bytes) for WS Backup	The host server does not have enough memory to process backup.	See E0125.
E5008	Failed to create file [<i>file name</i>] - [<i>error message</i>]	<p>The Workstation Restore process fails to create the file on the workstation due to one of the following:</p> <ol style="list-style-type: none"> 1. There may be a directory with the same file name. 2. The workstation disk may be full. 3. The file is opened by another application in a locked or exclusive mode. 	<p>For each of the causes check the following:</p> <ol style="list-style-type: none"> 1. If the file or directory exists but cannot be overwritten, you can restore the file with the option, 'rename if exists', and then restore the file with a different extension. 2. Use CHKDSK to see if the workstation's disk is full. 3. Have the other application release the file.
E5011	Failed to get host server information,[<i>NetWare error code</i>]	<p>This message occurs due to one of the following:</p> <ol style="list-style-type: none"> 1. The ARCserve-created user CHEY_ARCHSVR has been deleted, or the password has been changed. 2. There was some problem with the ARCserve installation. 	See E0107.
E5012	Failed to get workstation's drive list	_____	See E5000

Troubleshooting And System Messages

Num	Message	Cause	Explanation/Solution
E5013	Failed to initiate SPX send to workstation (cmd=[<i>code number</i>], [# of bytes])	WSTAPE couldn't send an SPX packet to the workstation it was trying to back up for one or more of the following reasons: 1. Agent may have been unloaded. 2. Workstation may have been rebooted. 3. LAN drivers on either workstation or server may have problems.	1. Check that Agent is loaded. 2. Check whether workstation was rebooted. 3. Check LAN drivers.
E5018	Failed to allocate [<i>number</i>] bytes) for WS Backup,	The host server does not have sufficient memory	See E0125
E5019	Failed to open file [<i>file name</i>] - [<i>error message</i>][<i>error code</i>]	The Agent fails to open the file for backup.	See E0134.
E5023	Failed to receive packet from WS, [<i>address</i>] Expecting seq.# [<i>number</i>]	This message occurs due to one of the following: 1. ARCserve has waited for a long time and is unable to receive the packet from the workstation. 2. The connection may be broken. (The workstation may be turned off or the agent may be terminated.)	For each of the causes, check the following: 1. From the server console screen configuration form, select "Yes" for "Use 512 byte packet to communicate with workstation:" You can also load the DOSagent with a parameter that will force a 512 byte packet to be used. Use the command: DOSAGENT ! 2. Make sure the workstation is on and running an Agent
E5027	Failed to send command [<i>code number</i>] to workstation [# of bytes] - [<i>NetWare error code</i>]	1. DOSagent may need to be loaded in 512 bytes mode. 2. Network messages to workstation may be blocking command.	1. Try loading DOSagent in 512 bytes mode. 2. Use CASTOFF ALL to block messages to workstation.

Num	Message	Cause	Explanation/Solution
E5029	Failed to set [<i>file name</i>]'s information, [<i>error code</i>]	The user does not have appropriate rights to perform this function, or the file has been deleted.	Use SYSICON (NetWare 3.x) or NWADMIN (NetWare 4.x) to make sure that the correct rights have been assigned. Check to see if the file has been deleted.
E5035	Failed to end tape session, [<i>NetWare error code</i>]	The connection has been broken between the Tape Server and the workstation.	Check the following: 1. Make sure that no one reset the tape drive. 2. Connection between workstation and file server, and server and tape drive(s)
E5039	Failed to get free buffer's	The host servers does not have enough memory.	See E0125
E5040	Error reading [<i>file name</i>] - [<i>error code</i>] [<i>error message</i>]	_____	See E0168.
E5041	File [<i>file name</i>] differs from its image on tape.	During compare disk to tape, the file has changed because it may not have backed up properly or there may be a media or hardware error.	Back up the file again. Look under the section titled "Tape Server Messages" and follow the instructions in that section for media then hardware errors.

Troubleshooting And System Messages

Num	Message	Cause	Explanation/Solution
E5042	Receive time out (<i>Sequence = sequence #</i>)	<p>This error occurs due to one of the following:</p> <ol style="list-style-type: none"> 1. The workstation has been turned off. 2. The connection is broken. 3. A broadcast message is blocking access to the workstation. 4. Some routing problem. 	<p>For each of the causes, check the following</p> <ol style="list-style-type: none"> 1. Has the workstation been shut off? 2. From the server console screen configuration form, select "Yes" for "Use 512 kbyte packet to communicate with WS Agent." This will force ARCserve to use a smaller packet size. You can also load the DOSagent with a parameter that will force a 512 byte packet to be used. Use the command: DOSAGENT ! 3. Press CTRL-ENTER at the workstation to clear the broadcast message. 4. Check routers or other hardware problems.
E5043	Unknown command [<i>command number</i>] received from workstation	Command number is incorrect.	Check to confirm that the version of the Agent that is currently running is up to date.
E5044	Job is cancelled by WS, - Check workstation disk space	The Agent cancelled this job.	The job may have been cancelled because the disk may be full.
E5048	Failed to open file [<i>file name</i>] for comparison.	File may be locked or deleted.	If file is locked, submit another compare job
E5049	Access rejected by workstation - Invalid password.	The wrong password was entered when workstation backup job was submitted. (Password for Agent doesn't match password for job.)	Check passwords.
E5050	Invalid file header, signature:[<i>signature</i>]	Tape is not of compatible format.	<p>If you are restoring, try to use the attended method.</p> <p>Make sure you are using data grade quality tapes and a Cheyenne-certified drive.</p>

Num	Message	Cause	Explanation/Solution
E5051	Workstation has too many levels.	There are more levels of the directory in the workstation and the DOS File Allocation Table may be corrupt.	Try to use the attended backup mode. Then, you should run the DOS command CHKDSK /f to verify and repair the FAT table error.
E5052	Failed to resume job, [<i>error desc</i>]	Refer to the error description for more information about the exact error that occurred. This is usually due to some media or hardware error.	See E1001
E5053	Failed to write session header to tape	This is usually due to a media or hardware error	See E1001
E5055	Source directory [<i>directory name</i>] does not have ':' or '/'	The job may be corrupt	Resubmit the job.
E5058	Failed to rename file [<i>file name</i>]	ARCserve couldn't restore the source file to the workstation.	Instead of using the Conflict Resolution option "Rename File", choose to restore the file to another directory.

Tape Server Messages 6000 - 7999

In the following table, you will find errors with explanations such as

- Media error, or
- Hardware error

In these cases, use the steps below to guide you through identifying the problem you are having.

For Media errors

For media errors, check the following:

1. Clean the tape drive heads

Has it been a while? Have you ever? You can use ARCserve's tape head cleaning utility from the backend, or use the one provided with the tape drive by the manufacturer.

The advantage with using ARCserve's utility is an entry is made into the ARCserve database with the information that the heads were cleaned, and the date that you cleaned the heads.

2. Try a new tape

Maybe the tape is bad and you just need to use a new one.

Always remember to use only the types of tapes recommended by the drive manufacturer. Never use video tape. These tapes have been shown to be unreliable for data.

<hr/> For hardware errors	<p>For hardware errors, check the following:</p> <ol style="list-style-type: none"> 1. Power the drive off, then on Turning the drive off, then on again may correct the problem. 2. Check the terminators on the SCSI bus Are both ends of the SCSI bus terminated? 3. Check the cables Do you have any loose connections? 4. Make sure the controller board is properly seated You may have to re-seat the controller board. 5. Try a different tape The tape may be the problem. A new one should let you know. 6. Call the vendor of your tape drive 7. As a last resort, power down the server, and power back up. If the controller card was locked, only completely shutting off the computer will unlock it. Do not “warm” boot.
<hr/> Tip for solving many hardware-related errors	<p>One fix that cures many hardware problems is to check the EISA Config settings on the SCSI card.</p>

With one SCSI card

With only one SCSI card, four particularly critical elements should have the following settings:

- DISCONNECT: *ENABLED*
- PARITY: *ENABLED*
- DMA XFER RATE (SYNCHRONOUS XFER RATE): *5MB/S* (ISA cards only)

Number	Message	Cause	Explanation/Solution
E6000	Error Formatting: [ARCserve error description]	If you get this error, it is usually due to the following: 1. An UDE (Unrecoverable Data Error) 2. Hardware error	First, perform the steps for media errors, then perform the steps under hardware errors.
E6001	Error Erasing: [ARCserve error description]	_____	See E6000
E6002	Error Copying: [ARCserve error description]	_____	See E6000
E6003	Error Retensioning: [ARCserve error description]	_____	See E6000
E6004	Error Setting Compression: [ARCserve error description]	_____	See E6000

Number	Message	Cause	Explanation/Solution
E6005	Device will not become ready - initialization required	There is some problem with the tape drive.	Power off the drive, then power back on. Unload the Tape Server NLM, then reload. Check the SCSI terminators. Check the cables connecting your tape drives.
E6006	Logical unit does not respond to selection	There is some problem with the tape drive.	See E6005
E6007	Logical unit failure	There is some problem with the tape drive.	See E6005
E6008	Device communication failure	_____	This is a hardware error.
E6009	Device communication parity error	A SCSI parity error occurred.	This is a hardware error.
E6010	Track following positioning error	_____	This is a hardware error.
E6012	Write error- head sync error during write	_____	This is a hardware error.
E6013	Unrecovered read error	A command failed because a tape read failed. Most likely due to bad media, but it could result from a hardware error.	See E6000
E6014	Uncorrectable block encountered during read	_____	This is a media error.
E6015	Error too long to correct	_____	This is a media error.
E6016	Too many permanent read errors - cannot re-synchronize	_____	This is a media error.
E6017	Incomplete block read (postamble not found)	_____	This is a media error.
E6018	Recorded entity not found or basic media error	_____	This is a media error.
E6019	Filemark or setmark not found	_____	

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E6020	End of data not detected - corrupt format	This tape is bad.	You can no longer use this tape.
E6021	Block sequence error	_____	This is a media error.
E6022	Mechanical positioning error	This is set whenever the drive has performed a mechanism retry in successfully completing a command.	This is a hardware error.
E6023	Servo-Mechanical positioning error	_____	This is a hardware error.
E6024	Positioning error detected by read, space, or locate	The command failed to complete successfully, or the logical position has been lost.	This is a media error.
E6025	Recovered with no ECC applied	_____	The system recovered successfully from a soft error while completing a command.
E6026	Recovered with retries	_____	One or more frames has to be rewritten by the drive in order to complete a command successfully.
E6027	Recovered with ECC applied	_____	The system had to use ECC to successfully complete a command. This means that there was a bad block, but the drive successfully rewrote to another block.
E6028	Mode select parameter error	_____	See E1061
E6029	Synchronous data transfer error	An error has occurred between the controller card and the tape drive.	Disable Synchronous transfer or negotiation. Depending on the drive, you may have to alter the settings on the board.
E6030	Invalid command operation code	_____	See E1061
E6032	Invalid element address - changer	_____	See E1061
E6033	Invalid field in CCB	_____	See E1061

Number	Message	Cause	Explanation/Solution
E6034	LUN not supported	_____	LUNs (Logical Unit Number) are not supported by CSI. Changers and stackers are supported.
E6035	Parameter not supported - flash eeprom problem	This is a firmware error.	Call your tape drive vendor.
E6038	Not ready to ready transition	_____	This is a hardware error.
E6039	Power on reset occurred	_____	Someone powered-on, or reset the tape drive. Another possibility is that power was lost.
E6043	Copy cannot execute - host cannot disconnect	_____	See E1061
E6047	Incompatible medium installed	An unknown tape format was used.	Only use tapes that are approved by the tape drive manufacturer.
E6048	Cannot read medium - unknown format	An unknown tape format was used.	See E6047
E6049	Medium format is corrupt - DDS bad at group level	This tape is bad.	You need to use a new tape.
E6052	Sequential positioning error	_____	This is a media error.
E6053	Tape position error at beginning of media	_____	This is a media error.
E6054	Physical end of tape encountered - tape position error at EOM	The tape drive failed to generate an Early Warning.	This is a hardware error.
6055	Reposition error	_____	This is a media error.
E6056	Read past end of medium	The tape drive failed to generate an Early Warning.	This is a hardware error.
E6058	Device has not self-configured yet	This is a tape hardware error.	It is not possible to send commands to the drive because mechanism tests are being executed.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E6059	Internal ram or diagnostic failure	_____	This is a tape hardware error.
E6060	Diagnostics failure. Vendor unique	_____	This is a tape hardware error.
E6061	Unspecified fatal error	_____	This is a tape hardware error.
E6062	Timeout error	_____	This is a tape hardware error.
E6063	SCSI Message error	_____	This is a tape hardware error.
E6064	Internal software (firmware) error	_____	This is a hardware error.
E6069	SCSI parity error detected	This is a firmware error	You can check the cables. If the cables are ok, contact your reseller or Cheyenne Technical Support.
E6072	Command phase error	Too many parity errors have occurred during an attempted Command phase.	This is a hardware error.
E6073	Data phase error	Too many parity errors have occurred during the Data-In and Data-Out phases of an operation.	This is a hardware error.
E6074	Logical unit failed self-configuration	_____	This is a tape hardware error.
E6076	Write append error	If a WRITE or WRITE FILEMARKS command fails because the append point was unreadable, this error occurs.	This is a media error.
E6079	Erase failure	When an ERASE command fails to erase the area specified.	This is a hardware error.
E6080	Cassette fault	This error occurs if the drive thinks there is something wrong with the cassette, such as the tape breaking.	This is a media error.
E6081	Media load or eject failed	The drive failed to load or eject a tape.	This can be either a medium, or a hardware error

Number	Message	Cause	Explanation/Solution
E6082	Unload tape failure	The drive failed to load or eject a tape.	This can be either a medium, or a hardware error
E6084	Drive hardware error - servo or sensor	_____	This is a tape hardware error.
E6089	Excessive dryness	_____	The relative humidity is too low.
E6090	Mode select failed because the tape is not at LBOT	_____	See E1061
E6091	Incorrect block length	_____	This is a hardware error. Please contact your reseller or Cheyenne Technical Support.
E6092	Fatal - Uncorrectable error	_____	This is a hardware error.
E6093	Possible firmware error or catastrophic drive failure	_____	This is a tape hardware error.
E6094	SCSI bus parity error	_____	This is a tape hardware error.
E6095	Formatted Buffer Parity Error	_____	This is a tape hardware error.
E6096	Media Error	_____	This is a media error.
E6097	Error Counter Overflow	_____	The maximum number of retries has been exhausted.
E6098	Tape Motion Error	_____	See E6000
E6104	Servo System Error	_____	This is a tape hardware error.
E6105	Formatter Error	_____	This is a tape hardware error.
E6106	Write Splice Error, Blank	_____	This is a tape hardware error.
E6107	Write Splice Error, Overshoot	_____	This is a tape hardware error.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E6109	Failed to initialize list. Possibly out of memory.	_____	See E0125
E6110	Timed out trying to ERASE the log file. Erase is aborted	The log file is open.	Close the log file.
E6111	File grooming aborted: couldn't create temp file '[<i>file name</i>]'. Try deleting the temp file and check file rights.	An attempt was made to shorten the log file and failed because a temporary file could not be created. This is usually due to 1. The file server is out of disk space 2. The user doesn't have the appropriate rights for this function.	For each of the causes, check the following: 1. Check the disk space on the file server. 2. Use SYSCON (NetWare 3.x) or NWADMIN (NetWare 4.x) to check the assigned rights.
E6112	File grooming aborted: found an invalid tape activity log name '[<i>file name</i>]'.	The tape activity log has an invalid file name.	Check the file name shown in the error message.
E6113	Operation aborted: failed to open [<i>temp or log</i>] file '[<i>temp or file name</i>]' for [<i>input or output</i>]	You will get two variations of this error message, depending on what ARCserve was trying to do: 1. If ARCserve was trying to open the temp file, the message reads: "Failed to open temp file [<i>temp file name</i>] for output." 2. If ARCserve was trying to open the activity log, the message reads: "Failed to open log file [<i>log file name</i>] for input."	1. ARCserve couldn't open the temporary file which it uses to groom the Activity Log. 2. ARCserve couldn't open the Activity Log file to write the messages that are being kept. You should check the available disk space on the file server and make sure you have appropriate rights to open and create files in the ARCserve home directory.
E6114	No match found for the specified date in the activity log, grooming aborted	The date chosen for grooming the activity log file doesn't match any dates in the log.	Select a valid date.
E6115	Operation aborted: failed while writing to file '[<i>file name</i>]'	_____	See E1061

Number	Message	Cause	Explanation/Solution
E6200	No data detected	During some SCSI Command operation, the driver received an unexpected BLANK CHECK error. BLANK CHECK means that the drive passed over an area on the tape with no readable data.	May happen after a power failure that produced an aborted backup job.
E6205	Error opening file, TDRVDEF.cfg - no such file or directory	TAPESRV.NLM has a problem opening the TDRVDEF.CFG file. The file may be corrupt or contain mismatched parameters.	Delete the existing file and then load and restart ARCserve. Also check the following items: 1. The file attributes for TDRVDEF.CFG should be READ/WRITE (not READ ONLY). 2. There should be adequate disk space.
E6501	Job denied - [reason] where reason = [1] HARDWARE ERROR [2] Volume header illegal block length	1. Hardware error detected on tape drive. 2. Block size of tape differs from block size tape drive expects to see. Tape driver write-protects tape.	1. Inspect the TAPE\$SRV.LOG file for the SCSI error and troubleshoot hardware problem according to the information in the file. 2. If you need the data on the tape, use CONFIG BLOCKSIZE to change block size to agree with tape block size. If you don't need the data, use Tape Manager to erase/reformat the tape with the correct block size.
E6502	Find next session failed.	The algorithm that determines the next session number of the backup job to be appended failed.	Check the TAPE\$SRV.LOG file for previous errors. (Media or hardware errors are most likely.) Troubleshoot according to the information in the file.
E6900	SCSI Time-out - bus free phase time-out	SCSI bus gives a busy signal when user is trying to communicate with tape drive.	To reset tape drive and SCSI board, try the following actions. 1. Turn tape drive off and back on. 2. Unload and reload tape driver. 3. Down server, power off, restart server and reload ARCserve.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E6909	Unknown error	An error occurred after a SCSI command signaled completion. A specific error could not be assigned.	Check the TAPE\$SVR.LOG file for previous errors.
E6910	SCSI Time-out - General time-out error	A SCSI command failed to signal its completion.	This is a hardware error.
E7001	Bad NLM Registrations Signature was passed	The STANDARD.NLM may have become corrupted.	Unload and Reload Tape Server.
E7002	Maximum number of registered NLM's reached	_____	The maximum number (7) of STANDARD.NLMs has been reached.
E7003	Bad Group Signature was passed	The STANDARD.NLM may have become corrupted.	Unload and Reload Tape Server.
E7004	Maximum number of defined Tape Groups reached	_____	The maximum number (7) of defined tape groups has been reached.
E7005	Group Name [<i>group name</i>] is already in use	You have chosen a tape group name that has already been loaded.	Change the name of the tape group to one that is not in use.
E7006	SCSI ID(s) [<i>id number(s)</i>] is already in use	You have tried to use a SCSI ID number more than one time.	You can only load a SCSI ID into one group at a time.
E7007	Error Occurred [<i>error number</i>]	_____	Call your Reseller or Cheyenne Technical Support with the exact error message.
E7008	Failed To Register Tape Group Information, [<i>group name</i>] will unload	This error can occur due to one or more of the following: 1. One of the above errors occurred. 2. A Tape Drive wasn't found at the given SCSIID number	The STANDARD.NLM for this group will unload.
E7009	Tape Drive(s) cannot be found at the given SCSI IDs [<i>id number</i>]	_____	A tape drive wasn't found at the named SCSI ID.
E7010	Only tape drives of the same type can be grouped together	_____	You have tried to group together two or more different types of tape drives.

Number	Message	Cause	Explanation/Solution
E7011	A Non-Tape Device was included in the SCSI ID Group List	_____	You have tried to include a device that is not a tape drive in your Tape Group
E7012	Illegal characters detected in Group Name	_____	You can only use up to 8 alphanumeric (and other printable) characters. You cannot use spaces.
E7013	No Group Name Assigned to [standard/changer/stacker]	_____	Assign a group name so that the NLM can load.
E7014	Illegal Command Line Parameter [<i>contents of unrecognized command line parameter</i>] was given	_____	Look at the error message to determine the illegal command that was given.
E7015	Illegal characters detected in SCSIID parameter	A SCSIID can only be a number between 0 and 6.	Select only valid numbers for a SCSI ID.
E7016	Given SCSI ID [<i>id number</i>] is out of range, Legal Range 0 to 6	A SCSIID can only be a number between 0 and 6.	See E7015
E7017	No SCSI ID was given to SCSIID command line parameter	The "SCSIID" command line parameter was either given a bad value or given no value.	Assign the proper value to the parameter.
E7018	Buffer size parameter is out of legal range	You have tried to issue a BUFFER size greater than 32.	Select only a BUFFER size lower than 32. The default is 6.
E7019	Illegal characters [illegal characters shown] in BUFFER parameter	The BUFFER size given is not a number.	Select only a BUFFER size lower than 32. The default is 6.
E7020	Bad delimiter was detected on command line	_____	STANDARD didn't detect a "-" or = on the command line.
E7021	Board Name was not given on command line	The "BOARD" parameter was given on the command line but no name was specified with the parameter.	Assign a name to the "BOARD" parameter. Ex. nlm1=standard name=board0
E7022	Cannot allocate Job Handle, Maximum number of jobs being processed	Tapesvr.nlm has reached its limits on the number of simultaneous operations it can handle.	Retry loading the NLM at a later time.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E7023	TAPESVR.nlm failed the SCSI Devices Scan on Board [Name of Board]	Tapesvr.nlm failed its scan for SCSI devices on the given board.	Unload ARCserve and check the condition of the hardware. Make sure your SCSI Devices are properly connected and turned on.
E7024	Failed to locate a controller card	When STANDARD.NLM or CHANGER.NLM is loaded without specifying the "BOARD" parameter, the NLM will attempt to locate a controller to use. This error will occur when the NLM fails in its attempt to locate a controller card.	Check TAPESVR.NLM under CONFIGURATION-ADAPTER to make sure it is loaded with a properly configured controller. If not, try unloading and then reloading TAPESVR.NLM.
E7025	Failed to locate a controller with Board Name [Name of board]	STANDARD.NLM or CHANGER.NLM failed to locate a controller with the given board name being represented by TAPESVR.NLM.	Assign the proper board name to the "BOARD" parameter for proper loading.
E7026	Failed to load NLM, Error Code = [code]	See Error Code.	See Error Code.
E7027:	Failed to locate any tape drives on Board [Name of Board] Solution	The NLM failed to locate any tape drives connected to the given controller.	Check to make sure the drives are properly connected, terminated and turned on. If the "SCSIID" parameter is used, make sure that the ID's refer to the proper drives.
E7028	Group [Name of Group] failed to initialize properly and will not be created.	STANDARD.NLM or CHANGER.NLM failed to load properly due to an initialization failure. This message is generally accompanied by a previous error message describing the actual problem.	Make the proper correction as described by the previous error message.
E7030	Device is not a tape drive at Board [Name of Board], SCSI ID [device scsi id]	One of the SCSI Devices specified by the "SCSIID" paramete is not a tape drive.	Reconfigure the "SCSIID" parameter so that all the given SCSI ID's will represent a SCSI tape drive.

Number	Message	Cause	Explanation/Solution
E7031	Failed to access %s	Failed to located the CHANGER.DAT file.	The CHANGER.DAT file must exist in the same directory as CHANGER.NLM. CHANGER.NLM will not load without this file. Copy CHANGER.DAT from the Changer Option installation disk into the NLM subdirectory or re-install the Changer Option.
E7032	CHANGER.DAT does not support [Name of Changer] changer.	The attached Changer is not supported by this version of CHANGER.NLM.	Contact Cheyenne Software for information on the current list of supported Changers to resolve this problem.
E7033	CHANGER.DAT failed integrity Check.	The CHANGER.DAT file is corrupted.	Recopy the CHANGER.DAT file to the ARCserve 6 NLM subdirectory.
E7034	Changer Live Trial has expired.	The CHANGER.NLM that is currently loaded is a Live Trial version and has expired. Future usage of CHANGER.NLM will not be allowed.	Buy Cheyenne's CHANGER Option for ARCserve v6.0.
E7035	Changer Live Trial will expire in [# of days] days.	The CHANGER.NLM is displaying a warning message that it will continue functioning the displayed number of days before it will disable itself from functioning.	Buy Cheyenne's CHANGER Option for ARCserve v6.0 before the CHANGER.NLM disables itself.
E7036	All Tape Drives in Group [Name of Group] have been deactivated due to hardware failure.	Generally caused by timeout errors where SCSI Commands fails to complete within the time allotted. If the timeout error occurs, CHANGER.NLM will disable the drive from being used for future backup or restore operations.	To reactivate the drive, Tapesvr.nlm and Changer.nlm must be unloaded and reloaded. Perform some checks to make sure the drive is functioning correctly before reloading TAPESVR.NLM and CHANGER.NLM.

Parallel Streaming NLMMessages 15000 - 15999

Number	Message	Cause	Explanation/Solution
E15004	Failed to submit database record, [error code]	ARCserve failed to submit file/directory record to database.	Refer to Activity Log for Btrieve error. Run a merge job to rebuild all the file information of that session or there will be problem to view or select files in the TAPE VIEW and TREE VIEW restore job.
E15005	Failed to write session header for target [server name]	ARCserve could not write session header to tape. See E1036.	See E1036.
E15006	Failed to write data from [server name] to tape	ARCserve could not write remote server files information to tape. See E1036.	See E1036.
E15007	Failed to write to tape (target: [server name])	Request to write the remote server information to tape failed. See E1036.	Refer to the message displayed by APROCESS.NLM about the error condition.
E15008	Failed to get number of permanent tape	Request to get the number of permanent tapes for the auto-pilot backup failed. Failed to get permanent tape information from database. The grooming operation needs this information to decide which file should be deleted.	Merge all the tapes of that auto-pilot job to make the grooming work.
E15009	Failed to send command [command code] to server [server name]	ARCserve failed send a command to the client agent for NetWare. Communication problem.	Submit a new backup or compare job. Also see E15024.

Number	Message	Cause	Explanation/Solution
E15010	Unknown command [command code] received from target [server name]	ARCserve received an unknown command from the client agent for NetWare Network error or software problem.	Submit a new job to back up the server. If the problem recurs, back up that server without using 'Push Agent' or 'File Interleaving' and report the problem to Cheyenne.
E15011	Failed to write data to tape, size:[number], ret: [return code]	See E1036.	See E1036.
E15013	Failed to send job request to target [server name]	ARCserve failed to send the job request to the client agent for NetWare on the remote server. Possible broken network connection or network error.	Make sure that the remote server is up, that the appropriate agent is loaded and that a valid network connection exists. Resubmit the job.
E15017	Failed to end database session (target: [server name], ret: [error code])	ARCserve failed to end the session record in database. Database problem.	Refer to Activity Log for Btrieve error. This problem can be solved by running a Merge later, which will read the tape directly and update the database.
E15018	Failed to open [protocol] driver, [error desc]	Communication error detected at the TLI layer. ARCserve failed to open the protocol driver file on the host server.	Make sure you have the latest SPXS.NLM, TLI.NLM, STREAMS.NLM and TCPIP.NLM.
E15021	Failed to bind TLI connection, [error desc]	An attempt to associate the communication protocol address with the connection endpoint failed. There is a system error or the specified file handle does not refer to a valid transport endpoint.(see the error desc).	Make sure you have the latest SPXS.NLM, TLI.NLM, STREAMS.NLM and TCPIP.NLM.
E15022	Failed to allocate TLI buffers, [error desc]	An attempt to allocate memory for various TLI function argument structures failed. There is a system error or the specified file handle does not refer to a valid transport endpoint.	Make sure you have the latest SPXS.NLM, TLI.NLM, STREAMS.NLM and TCPIP.NLM.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E15023	Failed to set connection to non-blocking mode, [error desc]	An error occurred while setting the communication endpoint into non-blocking mode. The endpoint could not be set to the requested mode. There is a system error or the specified file handle does not refer to a valid transport endpoint. (see the error desc).	Make sure you have the latest SPXS.NLM, TLI.NLM, STREAMS.NLM and TCPIP.NLM.
E15024	Failed in receiving connection to [server], [error desc]	Failed to receive information on the status of a previous connect request. See the [error desc].	Make sure that the remote server is up, that the appropriate agent is loaded and that a valid network connection exists. If using TCP/IP, make sure you have bound IP protocol to the board properly with valid address. Use PING to test the TCP/IP connection. Check the 'Send' and 'Received' count and %. Less than 100% indicates a communication problem. Make sure you have the latest SPXS.NLM, TLI.NLM, STREAMS.NLM and TCPIP.NLM. If TCP/IP protocol is used, ARCserve will retry with SPX automatically. If you want to try SPX protocol, open ASCONFIG.INI (in ARCserve home directory) and set 'UseSPX' to 'YES'(under [FILE INTERLEAVING]) and submit a new job. Resubmit the same job. If the error does not occur, it may be caused by a network error.
E15025	Failed to connect to [server name], [error desc]	Attempt to connect to a remote server transport provider failed. The request for connection was not successful.	See E15024.

Number	Message	Cause	Explanation/Solution
E15026	Failed to set the connect to blocking mode, [error desc]	Failed to put the transport into blocking mode. There is a system error or the specified file handle does not refer to a valid transport endpoint.	See [error desc].
E15027	Failed to connect to [server name], time out	The request for connection with the remote server timed out. The host server's request for connection with the client agent for NetWare on the remote server was not granted within the specified time out.	The default time out period is 15 minutes. You can increase this period by editing the 'TimeOutPeriodForInterleaving Connection' field under 'FILE INTERLEAVING' in ASCONFIG.INI (in ARCserve home directory).
E15028	Failed to send the request packet to [server]	The call to send Access Request packet from the host server to the remote server failed. THERE WAS A System error or the connection was broken.	See E15024.
E15029	Failed to receive acknowledgment from [server name]	Failed to receive the acknowledgment from the remote server after sending the job request. The acknowledge packet for the Access Request packet was not received. See the message in the run time screen of the client agent.	See E15024.
E15030	Failed to receive data from [server name] (time out)	ARCserve failed to received data from agent after the connection is established. System error or connection broken.	See E15024. (If "time out" appears at end of a message, ARCserve could not receive data for longer than the "File Interleaving Timeout" set in the server Configuration screen.)
E15031	Incorrect password, Request rejected by [server name]	The transport layer of the remote server denied the Access request because an incorrect password was provided.	Retry with the correct password.
E15032	Protected Directory, Request rejected by [server name]	Request for access to a protected directory rejected by the remote server agent. User does not have enough rights to access that directory.	Ensure the user has sufficient rights to access the protected directory, grant appropriate rights, and retry.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E15033	Invalid user name, Request rejected by [server name]	Request for access to the remote server rejected because an invalid user name was in the request. The user does not exist in the remote server.	Retry with a valid user name.
E15034	Invalid path, Request rejected by [server name]	Request for access to the remote server was rejected because an invalid path was included in the request. The path does not exist in the remote server. It may have been deleted after the job was submitted.	Delete repeating job with invalid path. Resubmit job with proper source path.
E15035	Request rejected by [server name], command: [command code]	The remote server returned a packet indicating that the requested access was denied but the reason is unknown.	Resubmit the job.
E15019	Request rejected by [server name], client agent is busy	Request for access to the remote server was rejected because the client agent is busy. The client agent is busy processing other request (which maybe the previous volume in the compare operation).	Recovery: In the compare operation, ARCserve will retry after 1 minute.Retry later.
E15036	Failed to receive packet. [error desc]	Host server failed to receive data from the agent client for NetWare on the remote server. See [error desc].	See E15024.
E15037	Error in receiving data (length: [number], received: [number])	An incorrect amount of data was received from the client agent on the remote server. There is a system error or software error.	See E15024.
E15038	Failed to transmit packet. [error desc]	Host server failed to transmit a packet to the client agent on the remote server. There is a system error or the connection was broken.	See E15024.

Number	Message	Cause	Explanation/Solution
E15039	Error in sending data (length:[number], sent: [number])	ARCserve failed to send the amount of data specified in the packet to the client agent. There is a system error or the connection was broken.	See E15024.
E15040	Failed to receive data from [server] (command: [command code])	Host server failed to receive data from the remote server. The [command code] is the last command received from the agent. (-1 if no valid data) There is a system error or the connection was broken. ARCserve could not receive any data from client agent and timed out finally. (The 'File Interleaving Timeout' is configurable in the ARCserve Schedule console under 'Configure ARCserve Server'.)	See E15039 and E15024.
E15041	Failed to send command [command code] to server [server]	ARCserve failed to send a command to the client agent on the remote server. There is a system error or the connection was broken.	See previous message in Activity Log for [error desc]. Also see E15024.
E15060	Failed to create report file [file name path], [error desc]	Failed to create a temporary file to save the error/detailed messages for the a backup/compare session.The job should continue normally but the messages for that session won't be saved to the error report file. There is no disk space or file is open such that it cannot be shared/opened by ARCserve. See [error desc].	Check the disk space of the host server. If another application is using the report file specified in non-sharable mode, wait for the application to release the file, or quit the other application so that the report file is free.
E15043	Failed to write file header of the interleaving session header, [error code]	See E1036.	See E1036.
E15044	Failed to write file trailer of the session header, [error code]	See E1036.	See E1036.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E15045	Failed to write session trailer for session [session number], [error code]	See E1036.	See E1036.
E15046	Failed to get Session Statistic block, session: [number], node: [node name], [error code]	Failed to get the buffer with session information. Some internal error occurred. The job will not continue.	Resubmit the job.
E15047	Not enough memory to continue, [number]	The host server does not have enough memory to run the job as submitted. Job can not continue. The [number] is memory space requested in bytes.	Use a smaller striping buffer (configurable in ARCserve Schedule console under 'Configure ARCserve Server'). Add more memory to the server. Set the 'Garbage Collection Interval' of the host server to 60 seconds. Also see E0125.
E15048	Internal Error - [error desc]	Some internal error occurred. Data is corrupted for unknown reason.	This message should not appear at all. Please report to Cheyenne Software if you see it.
E15050	Failed to skip [number] bytes	In Compare operation, the client agent on the remote server asked the host server to skip some data on tape and the host server failed to do so. There is no data on tape for that session to skip. That may happen if the backup failed.	The compare operation will fail. You can submit a new compare job if there is no problem during the backup.
E15053	Failed to write Interleaving session header, [error code]	ARCserve was unable to write parallel session header information to tape. See E1036.	See E1036.
E15054	Failed to add session information and file mark, [error code]	ARCserve failed to write interleaving session information and file mark to tape. The backup job will fail. See E1036.	See E1036.
E15055	Failed to end tape session, [error code]	The current tape session could not be completed.	See Tape Server section.

Number	Message	Cause	Explanation/Solution
E15056	Failed to start tape session, [error code]	The function call to start a tape backup session failed. See E1036.	See E1036.
E15057	Failed to resume tape job, [error code]	The function call to resume tape failed. See E1036.	Refer to other messages displayed by APROCESS.NLM. Also see E1036.
E15058	Failed to get tape free buffer	ARCserve was unable to get enough free Tape drive buffers because there is not enough memory for tape buffers.	See E0125.
E15059	Failed to write to tape, [error code]	See E1036.	See E1036.
E15061	Can not compare file [file name], session number ([number]) out of range	The file to be compared belongs to a session not in the Interleaving session.	Resubmit a backup job.
E15062	Failed to copy file [file name] from tape to buffer, [error code]	The particular file could not be copied from the tape to program buffer for compare. The problem may be: 1. Can not read from tape. 2. Cannot write to buffer. The only condition is that the operation of the session finishes for some other reason before the operation is complete.	Refer to the message displayed by APROCESS.NLM about the error condition.
E15063	Failed to copy session trailer to buffer, [error code]	ARCserve failed to copy session trailer to buffer for compare operation. See E15602.	See E15602.
E15064	Failed to read from tape, [error code]	ARCserve failed to read from tape. Possible causes for this problems are tape drive/tape malfunction.	See E1036.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E15065	Failed to begin thread for compare operation, [error code]	The main thread could not begin a thread to run the compare operation. (For each server backup session, ARCserve creates a thread to communicate with the client agent. The thread will send data to the agent for comparison. If this thread can't be created, the session can not be compared.) Usually the problem is lack of memory.	The other sessions should be able to be compared and the file of this session will be skipped. Resubmit a compare job to compare that session. Setting the 'Garbage Collection Interval' to a shorter period may also be helpful.
E15066	Failed to fork [NLM name] for session [number], [error code]	ARCserve failed to load an NLM to perform backup or compare operation. For the workstation, MAC and UNIX sessions in the backup, you need to load an NLM (WStape, MACserv6, Userve6) to perform the compare operation. Without the NLM only the session can be verified.	Load the NLM (WStape, MACserv6 or Userve6) manually from the server console. The console may display the reason why it cannot load the NLM. Also see E15065.
E15067	Failed to skip file [file name] on tape, [error code]	The call to skip a file on tape returned a value indicating that the call was unsuccessful.	Submit another compare or scan job. Also see E1036.
E15068	Failed to begin database session for node [server name], [error code]	Failed to add session information to database Database problem.	Refer to Activity Log for Btrieve error. This problem can be solved by running a Merge later, which will read the tape directly and update the database.
E15069	Unable to start thread to backup [server name], [error code]	Host server was unable to begin a thread to backup the remote server. Not enough memory to begin the new thread.	Add memory on the Host Server. Unload some NLM's not required during the backup to free up some memory. Set the 'Garbage Collection Interval' of the host server to a shorter period. Also see E1025.

Number	Message	Cause	Explanation/Solution
E15070	Failed to get block number, [error code]	ARCserve was unable to read block number of the current tape position. See E1036.	Refer to the message displayed by APROCESS.NLM about the error condition. Resubmit the backup job. Also see E1036.
E15071	Failed to update Volume Table, [error code]	Explanation: ARCserve was unable to write to Archive format tape volume table. There may be a problem to restoring the session. See E1036.	Resubmit the backup job. Also see E1036.
E15072	Insufficient memory for interleaving buffer([number] bytes) for [server name]	ARCserve was unable to assign enough memory for Interleaving Buffers for the server specified. Not enough Memory on the host Mercury server to run the requested number of nodes in Interleaving jobs.	Add more memory to the host server. Set 'File Interleaving maximum Nodes' to a lower number from the ARCserve console Configuration. Lower the size of 'File Interleaving Buffer Size' from the ARCserve console Configuration. Set the 'Garbage Collection Interval' of the host server to 60 seconds. Also see E1025.
E15074	Failed to create a watchdog thread	ARCserve creates a watchdog thread to make sure all the threads (one for each node) are not sleeping forever during the backup operation. Not enough memory may cause this problem.	The job will run without this thread unless a communication error occurs. If this happens, the job may hang forever and you'll need to unload INTRLEAV.NLM manually from the system console to abort the job.
E15075	The job will continue normally unless any communication problem occurs.	This messages always follows E15074.	See E15074.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E15077	Failed to write session trailer	ARCserve failed to write session trailer to tape. See E1036.	Refer to the message displayed by APROCESS.NLM about the error condition. The session may be restored but the restore job may ask for the next tape at the end of the job. See E1036.
E15077	Failed to close tape	The function to close tape at the end of job failed. See E1036.	Refer to the message displayed by APROCESS.NLM about the error condition.
E15078	Not enough memory to continue. (request [number] bytes)	The host server does not have enough memory to continue the current backup/Compare job.	See 15072.
E15079	Not enough memory, Use [number] bytes Interleaving buffer for [server name]	ARCserve will allocate an Interleaving Buffer for each node in the job. The buffer size is configurable in the ARCserve console Configuration. When there is not enough memory, ARCserve will try using a smaller buffer with the minimum 32K. This message will be displayed if a smaller buffer is used for the Interleaving buffer for a backup node.	See 15072.
E15080	Job will continue normally This message follows E15079.	See E15079.	See E15079.
E15081	Failed to open Job Status file [file name]	The function call to open the job status file failed. The file may be corrupted, deleted or the user may have lost rights to that file. Job Status will not report the right status due to this error.	See the Job Summary in Activity log or Database record for the correct job status.
E15082	Unknown generic command [command code] received from [server name]	An unknown command is received from the agent on the remote server. A system error occurred. The backup job will fail.	Resubmit the backup job. If error recurs, submit job without using agent. Also see E15024.

Number	Message	Cause	Explanation/Solution
E15084	Invalid header received, communication error. Node:[server name], signature:[signature]	The data the ARCserve host server received from the client agent is invalid. There is either a communication error or a software problem.	Retry the same job. If the error still happens, back up without push agent and report problem to Cheyenne.
E15085	Invalid data size received. Node:[server name], command:[command code], Size:[number]	The size of data the ARCserve host server received form the agent is invalid. There is a system error or software problem.	See E15084.
E15086	Failed to get host server information, [error code]	The function call to get host server information failed.	The agent will not display the job requester properly, but the job should continue normally.

ARCserve NetWarePush Agent messages 16000 -16999

Number	Message	Cause	Explanation/Solution
E16000	Failed to initialize process	<p>Failure to initialize Agent Process or failure by the agent to login to the server.</p> <p>Failure to initialize Process occurs rarely and is usually due to lack of memory required to save the Statistics Block received from the ARCserve host server. In some cases it could be if the nwagent.nlm main process is unable to sign on to the remote server on which the agent is running.</p>	<p>Unload other processes and wait 10-15 minutes till memory is freed up.</p> <p>Check that you can login to the remote server directly to rule out the possibilities the bindery or NDS may have been corrupted.</p>
E16045	Failed to load [module]	<p>Client Agent NLM failed to create thread that loads the ARCserve Backup/Restore module.</p> <p>User may have manually copied all Agent related files to the wrong directory or changes were made to the NWAGENT.NCF file in the SYS:\SYSTEM directory.</p>	<p>Reinstall the Push Agent on the remote server using the default directory.</p> <p>Lack of memory can be resolved by unloading NLM's that are not being used.</p>
E16046	Error reading [filename]	<p>Error reading the file on the disk.</p> <p>This error is flagged by FSTAPE when it encounters problems reading a certain file on the disk.</p>	<p>Make sure there is another uncorrupted version of the file in the backup which can be restored later.</p> <p>Make a clean copy of the file and repeat the backup so that a restorable backup exists, or restore the file from an earlier backup so that a clean and complete backup can be done later.</p>

Number	Message	Cause	Explanation/Solution
W16047	Failed to align [filename] to block boundary	<p>There was a failure to pad the file on tape to the boundary of the 512 byte block.</p> <p>When there are errors reading files during a backup (usually due to the existence of corrupt files on disk or some other disk problems) the workstation agent requests the rest of the file to be padded according to the file size. If a call to pad the file on tape to the appropriately-sized tape boundary fails, this error will be returned.</p>	<p>Try a new tape.</p> <p>Clean the tape drive using cleaning tape. Once the tape drive is clean a complete backup should be scheduled as soon as possible.</p>
E16056	Invalid file header [name] signature=%x	<p>Agent function call to read the next file header during a compare operation returned an error.</p> <p>The file header read from the tape on the ARCserve host was not recognized.</p>	<p>Check that backup media are in good condition.</p> <p>Try a new or reformatted tape.</p>
E16057	Failed to read file header - [name]	See E16056	See E16056
E16079	Failed to create screen	<p>Call to create NWAGENT screen failed</p> <p>This error usually occurs because of lack of resources.</p>	Unload other unneeded NLM's to free up server resources.
E16102	Error setting connection number conn = %x, %x	Call failed to function used to disable login to server while the server is being backed up. (The option is under the Global Backup Options.)	<p>Down and restart the server.</p> <p>Reinstall the Push Agent.</p>
E16107	Failed to log in to host server, [server name]. Please verify your login id and password.	<p>The user name for the job has been deleted.</p> <p>The bindery or NDS files are locked. This problem occurs during repairs of the system.</p>	<p>Recreate the deleted user name.</p> <p>Rerun job after repairs are complete.</p>

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E16126	Error getting length of file	The call to get the length of the NWAGENT.LOG file failed when "View Nwagent Log" was selected from the NWAGENT Options screen. This indicates either the NWAGENT.LOG file is corrupted or the volume on which it resides may need repairs due to problems retrieving the size of the file. Or, if the option to mail the error log to the ARCserve host server is selected and at the end of the job the call to determine the length of the file returns an error this error is returned.	If the log file does not contain any vital information, deleting or renaming the file will force the creation of a new log file and solve the problem. Select the option to mail the error log before running the job.
E16134	Failed to open file [filename]	During grooming of log files, opening message and help files, if the call to open a file fails this error is triggered.	Find out which other application has the particular file open in such a way that other applications cannot access it. Exit the application before rerunning the job. If this isn't the problem and the error shows .HLP or .MSG files unable to be opened, try copying these files to the appropriate directory or reinstalling the Push Agent.
E16143	Failed to get host server's information	Workstation agent was unable to gather information about the server.	Check connection to server.
E16144	Failed to log in to file server [server name]	The agent couldn't log in to the remote server. Sometimes this failure occurs because the bindery or NDS files are being repaired at the time.	Try manually logging in to the server directly from the workstation. Repair the bindery or DS using the appropriate utilities. If the problem persists, down and restart the remote server and load the agent again.
E16145	Failed to get file server information from [server name]	See E16143.	See E16143.
E16155	Failed to get NLM name from ID [number]	Not enough memory on the server to save this information.	Free up server memory.

Number	Message	Cause	Explanation/Solution
E16168	Error reading file [filename]	<p>If the call to read the NWAGENT.LOG file fails when "View NW Agent Log" is selected from the NW Agent Options screen, then either the NWAGENT.LOG file is corrupted or the volume on which it resides may need repairing.</p> <p>If the option to mail the error log to the ARCserve host server is selected and, at the end of the job, the call to read the file returns an error, this error is also returned.</p>	<p>If the log file does not contain any vital information deleting or renaming the file will force the creation of a new log file and solve the problem.</p> <p>If the error log is important, you need to rerun the job and ensure the log file is not corrupted and the volume is without errors.</p>
E16173	Error writing to [filename]	<p>By default, the Push Agent log file is groomed every 30 days. During this grooming operation, if the newly groomed file cannot be written back to disk, this error will appear. Usually this will lead to a loss of the groom file.</p>	<p>Regularly save the important log files to a different directory under a different name so that after grooming there is a backup of the information.</p> <p>Set the value of the groom log every 30 days to a higher number to allow the log file to be preserved longer.</p>
W16181:	Failed to delete [filename]	<p>Occurs with the 'Delete Log' option selected. Some other application has the file open so that it cannot be deleted or the file attributes of the log file have been changed to prevent deletion.</p>	<p>Check file attributes and whether other applications are using the log file.</p> <p>Take appropriate action by modifying file attributes or closing other applications that have the log file open.</p>
W16189	AlignListDisplay element not found	<p>Nwagent display screen is not aligned properly.</p> <p>User has been scrolling too quickly for the display to be aligned in time.</p>	<p>Don't scroll so fast.</p> <p>To save server resources, view large log files should from a workstation using a text editor.</p>
W16500	Failed to open activity log [filename]	<p>The Push Agent can't open the log file to write information to it because some other application already has it open.</p>	<p>Make sure other applications don't have the NWAGENT.LOG file open while the Push Agent is processing a job.</p>
W16501	Failed to update activity log [filename]	See W16500.	See W16500.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E16502	Failed to allocate [number] bytes for read/write buffer, [buffer]	The Push Agent cannot obtain the required memory resources for data buffers and other data structures.	To release memory resources, unload unneeded NLM's. Release of memory can sometime take 10-15 minutes after the NLM's are unloaded. If this does not work, leaked memory can only be collected by rebooting the server and running only NWAGENT until the backup operation is complete.
E16504	Failed to allocate resource tag, []	Calls to allocate server resources for screen handles and device handles failed.	Reboot the server to collect leaked resources, add more memory to the server, or use fewer devices on the server on which the agent is running.
E16505	Failed to create [] thread, []	The Push Agent creates different threads for processes that are assigned different tasks. This error will occur if calls to create these threads fail. Backups will usually fail when this error occurs.	Free up or add memory on the server. Repeat the backup operation has with more resources available so that all the necessary threads can be created.
E16506	Failed to initialize user interface	Push Agent failed to load. This failure results from insufficient server resources to initialize the User Interface.	Addition of memory or unloading applications to free up resources will enable the Agent to load.
E16507	Failed to create portal, []	See E16506.	See E16506.
E16508	Failed to allocate memory, [] ([number] bytes)	See E16502.	See E16502.
E16509:	Failed to create screen for []	See E16506.	See E15506.
W16510	Failed to open user log [filename]	See W16500.	See W16500.
W16511	Failed to prepare user log [filename]	See W16500.	See W16500.

Number	Message	Cause	Explanation/Solution
E16512	Failed to initialize [] protocol	<p>The function calls to initialize communication protocols between the ARCserve host server and the remote server failed.</p> <p>This failure can occur because the selected protocol under ARCserve Configuration needs special NLM's loaded and addresses bound to the network card.</p> <p>Another possible cause of this error is the loss of network connection due to physical connection failure.</p>	<p>In case TCP/IP is selected as the communication protocol make sure TCPIP.NLM is loaded on both ends (servers) and that the appropriate address is bound to the network card.</p> <p>Check for proper network connections by listing the servers that can be seen by each of the two ends. If both host and remote servers can see the rest of the network, then resubmit the job. Otherwise, determine and fix the defective component, replace the card or cable and restart the server and Agent.</p>
E16513	Failed to poll on [], []	<p>The function call that polls the different communication channels on the network medium returned a value indicating that there are communication problems and that the backup should be repeated.</p>	<p>Unload the Push Agent and reload it.</p> <p>If the problem persists make sure you have the require NLM's as reported by Pre-flight Check when the Agent is loaded initially. PFC will report if there are any NLM's that need to be updated. If you see such messages, obtain the updated NLM's from the appropriate sources.</p>

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E16514	Failed to open protocol stack - []	<p>The function call used to initialize the transport layer end-point of the communication channel failed.</p> <p>The possible causes are system error, invalid flag names provided, or an invalid transport provider being specified.</p> <p>This error could be caused by a faulty network card/cable or in some rare cases the communication protocol suggested in the call is unable to be initialized because the required NLM's are not loaded on the server. Usually these NLM's are autoloaded by the Agent and if they are not present the Agent will not load.</p>	<p>Check hardware.</p> <p>Check to ensure you're not using unsupported protocols.</p>
E16515	Failed to allocate []s structure, []	See E16506.	See E16506.
E16516	Failed to bind to []s port, []s	<p>The function call which binds the specified protocol to a communication port (end-point) returned a value indicating the call failed.</p> <p>This error usually results from a bad network card or an old network card driver.</p> <p>It can also be due to lack of servers resources.</p>	<p>Check network cards and drivers.</p> <p>Free up server memory.</p>
E16517	Failed to accept []s connection, []s	<p>The function call that is issued by the transport user to accept the transport end-point as a communication port for the backup session failed.</p> <p>Possible causes are bad network connection, bad protocol options being passed, incorrect address used and system errors.</p>	<p>Verify the address used and check the network connections to see if there are any problems.</p>

Number	Message	Cause	Explanation/Solution
E16518	Failed to Receive Packet (len = []), []s	When the time-out period is exceeded while the Agent is waiting for data from the ARCserve host, this error will occur. The possible causes are a break in network connection or some problems with the ARCserve host.	If the ARCserve host server and its connection appear to be all right, increase the time-out for File-Interleaving jobs in the ARCserve configuration screen, and then resubmit the job. If you still get the same error, try increasing the Transmission Threshold parameter on the NW Agent Configuration screen to a higher value. This will reduce the traffic on the network by delaying transmission until more data is available.
E16520	Failed to allocate send buffer [] bytes, []s	The call to allocate memory for the send buffer used by the Agent failed.	Unload unneeded applications and wait until the resources are returned to NetWare. You might also try using fewer 64 KB buffers for the job. This parameter is configurable in the NW Agent configuration screen. Decreasing this number will lessen the amount of memory required to run a particular job.
E16521	Failed to send command [] to, []s	The transport layer experiences difficulty sending the requested data over the network reliably. This error may occur because the transport layer buffers are not being processed fast enough due to heavy network traffic or due to a malfunctioning network card. Other possible causes can be a bad network connection or problems on the ARCserve host server that have caused it to abend.	Usually the server can run the next job successfully after all network connections have been restored successfully. However, if the host server does not appear to have any problems you may need to abort the job by Deactivating ARCserve or by unloading INTRLEAV.NLM. This will force the remote servers to disconnect so the next job can be submitted.
E1622	Failed to send [] bytes data to []s, []	See E1622.	See E1622.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E16523	Failed to send []s	This error will occur when the request to the transport layer interface to send an End OF Job command by the Agent returns a value that indicates the command may not have been transmitted successfully.	Usually the servers will time out by themselves even if the EOJ is not transmitted/received successfully. You can also try unloading INTRLEAV.NLM at the ARCserve host server to force the Agent to disconnect.
E16525	Failed to receive [], []	This error indicates that the Agent either received the incorrect data type than what was requested from the ARCserve host server, or the number of data elements received was not correct.	If possible reboot both ARCserve host server and remote server to reinitialize the network connections and repeat the job. If this fails change network cards on the servers one at a time until the problem goes away.
E16526	Failed to allocate [] bytes for []	See E16520.	See E16520.
E16527	Failed to create thread group, []	See E16505.	See E16505.
E16528	Failed to send [], []	This particular error occurs when in response to the ARCserve host's request for volume/directory information the Agent tries to send requested information but the attempt fails. A break in the communication link is the usual cause	If the connections are restored properly the error will not recur.
E16529	Failed to listen for connection on [], []	This error is due to the failure of the function call that listens to the transport layer for requests from ARCserve hosts.	Unload and reload the Agent so that the transport end-points are reinitialized.
E16530	Failed to get [] object id, []	This error occurs when the call to retrieve the bindery object ID of the user submitting the backup returns an error. Possible causes include the bindery being locked by some other application.	In this case if the job is resubmitted again it should be fine. Sometime the bindery may have been corrupted. Check if the same user can log in to the server from a workstation directly. If not, bindery corruption has occurred.

Number	Message	Cause	Explanation/Solution
W16531	Failed to add [name] as trustee to home directory, []	If the Agent is unable to retrieve the bindery object ID from the server, it attempts to add the user as a trustee to the ARCserve home directory. This error appears when this attempt to add the user submitting the backup job as a trustee fails.	Use SYSCON on NetWare 3.X servers, or NETADMIN on 4.X servers to add the user as a trustee to the ARCserve home directory.
E16532	Failed to get volume [] name, []	Function call to get Volume name of the file server volume failed. This will usually happen only if the particular volume is not mounted on the file server.	Mount all the file server volumes and resubmit the job.
E16533	Failed to import NDS symbols	When the backup of 4.X servers is selected and the call to import DS symbols fails this error will appear. One possible cause is that NDS is corrupt. Another possible cause is that the NDS files are locked due to repair going on.	Run DSREPAIR to fix the errors. Resubmit the job after DS repair is complete.
E16534:	Failed to attach to file server [server name], []	Agent could not attach to the file server specified.	Check if the user can attach to the file server directly. If there are no problems check user name, password, rights, and other restrictions to determine the cause.
E16535	Failed to create NDS context	Agent was unable to create the specified NDS context.	Use Netadmin/Nwadmin to check if the specified context still exists. If it does you need to run DSREPAIR to correct any NDS errors. If the context does not exist any longer, you need to resubmit the job with an appropriate context.
E16536	Failed to get file server distinguished name, []	The NDS files are locked for repair and the distinguished name could not be retrieved.	This problem can be solved by repairing the NDS for possible errors and resubmitting the job after repair.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E16537	Failed to canonicalize name, []	The function call to canonicalize the file server name failed. Possibly the DS is corrupted.	Run DSREPAIR and resubmit the job.
E16538	Failed to set NDS context, []	See E16535.	See E16535.
E16539	Failed to log in to Directory services as [name], []	This error could occur because an incorrect name or password was entered. Sometimes NDS corruption can also cause this error.	Make sure you can login to the server directly using the same name and password. If not, check the username and password. If you can log in directly, try after repairing the NDS.
E16540:	Failed to authenticate , []	Error during user authentication to the Directory Services.	Run DSREPAIR to repair the NDS and see if the authentication succeeds.
E16541	Failed to receive data packet header. Data type []	Agent failed to receive the data header it requested from the ARCserve host. This usually indicates some problems either in the communication medium (network card/cable) or some problem at the ARCserve host server.	Check network connections and make sure the ARCserve host server is active. See if the two servers can see each other by entering DISPLAY SERVERS at both server consoles. If the two servers see each other, cancel the job and resubmit it.
E16542	Failed to receive [] bytes. Data type []	See E16541.	See E16541.
E16543	Failed to receive common info	Agent failed to receive Statistics block for the current session from ARCserve Host.	See E16541.
E16544:	Failed to receive target info	Request for information regarding target backup media returned an error.	See E16541 for solutions. Check network connections and tape drive connections. Resubmit the job.
E16545	Failed to lock device - []	Agent failed to lock hard disk. Function call to lock device returned an error indicating that the call failed. Some other application has the device locked or there are some hardware problems.	Resubmit the job after some time. If error repeats, it is possibly a system error. Try replacing the hard disk controllers.

Number	Message	Cause	Explanation/Solution
E16546	Failed to set device [name] to [], []	Function call to set hard disk I/O to blocking mode failed.	See E16545.
E16547	Failed to release device [name], []	Function call to release hard disk failed.	See E16545.
E16548	Failed to get internetwork address, []	Function call to retrieve the network and node address of the server agent resides on failed.	Type CONFIG on the server console and look for the IPX internal network number and address of the server. If such is not found, you need to supply the IPX address for the server in the AUTOEXEC.NCF file. Refer to your NetWare manuals. If a valid address is found then the only solution may be to reboot the server on which Agent is running and resubmit the job. If error persists, replace the network card/cable and update network device drivers with newer drivers.
I16549	NetWare agent configured to use SPX/SPX2 for data transmission.	This message informs the user that the Agent can use either TCP/IP or SPX/SPX2 for data transmission between the ARCserve host and the remote server.	You must make sure TCPIP.NLM is loaded on the ARCserve Host and the protocol bound to the network adapter and choose TCP/IP as the "Preferred File Interleaving Protocol" in the ARCserve Configuration menu. If either host or remote is a 3.X server and TCP/IP is configured on both, then TCP/IP protocol is used. Otherwise, SPX is used. If both servers are 4.X, SPX2 is the default protocol. To use TCP/IP between two 4.X servers it must be selected in the ARCserve Configuration.
I16550	NetWare agent configured to use TCP/IP or SPX/SPX2 for data transmission.	This message informs the user that the Agent can use only SPX/SPX2 for data transmission between the ARCserve host and the remote server.	See I16549 for details.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
I16551	NetWare Agent buffer size changed from [] Kb to [] Kb to service [] job request.	This informational message will appear when jobs are received from ARCserve NT. ARCserve NT uses smaller buffer sizes than ARCserve 6.0. So when a job request is received from an NT server the Agent uses a smaller buffer size and this message is printed.	Buffer sizes is returned to the original size for the next job.

Pre-flight Check Messages 21000 - 2109

The following table contains messages for PFC.NLM.

Number	Message	Cause	Explanation/Solution
E21000	No space on Disk Volume-	There is not enough space on the volume. PFC. cannot create LOG file.	Delete unnecessary files on the volume.
E21001	Failed to open log file	PFC cannot open or create log file.	Check other message for specific reason.
E21002	Cannot find initialization (.INI) file for ARCserve	PFC cannot find initialization file for the ARCserve - e.g. ASCONFIG.INI.	Check if file exists in home directory where you install ARCserve.
E21003	Failed to read message file	PFC could not find PFC.MSG file. PFC will not load without this file.	Check if file exists in ARCserve's home directory.
E21004	Failed to get volume information	PFC failed to get information about volume.	1. Check if volume is mounted. 2. Perform Volume repair.
E21005	Error reading config file	PFC cannot locate initialization file for PFC (ex. PFC.INI or NWAPFC.INI).	Check Home directory where you installed ARCserveUse /SF option.
E21006	Load time error	A critical error occurred while PFC is loading. PFC cannot load.	Check for other messages for more information.
E21007	Please update the configuration and try again	PFC found that the server configuration requires changes based on the requirements of ARCserve.	Check for other messages for more information.
E21008	Server Configuration passed with Warnings!	PFC found that server does not meet the requirement for the ARCserve which needs be compensated.	Check for other messages for more information and update your server configuration accordingly to satisfy requirements of ARCserve.
E21009	Failed to read product name from	PFC failed to recognize the "Product" you are using with PFC.INI.	Check PFC.INI for keyword PRODUCT. If it does not exist, PFC.INI is not valid. Update PFC.INI.
E21010	Unable to write to Log file - [Reason]	PFC could not write information to log file.	Take action based on Reason stated in the message.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E21011	Message file released already or not read in yet!check if PFC.	PFC could not read message file -- PFC.MSG.	MSG file exists in home directory of ARCserve. Check if this file is not opened by some other application.
E21012	Error Opening File - [Reason]	PFC cannot open or create file.	Take action based on reason stated in the message.
E21013	Message Index out of bound	PFC detected a wrong version of message file (PFC.MSG) or Version of PFC.NLM does not match with PFC.MSG.	Copy PFC files again to server.
E21014	Error Reading File [file name] - [Reason]	PFC cannot read file.	Take action based on reason stated in the message.
E21015	Information may not be complete or available in log file	When disk becomes full, PFC will stop writing to log file.	Check free disk space on the volume where you have installed ARCserve.
E21016	Home directory is not specified	PFC could not locate the directory specified on the command line or Home directory is not specified properly.	Provide proper name and path of home directory. Use /Help for proper syntax.
E21017	INI file name is missing unloading NLM	PFC could not locate the file specified (either PFC.INI or ASCONFIG.INI).	Provide proper name of file. Use /Help for proper syntax.
E21018	Log file name is missing	PFC could not accept alternate log file name on command line.	Provide proper name of file. Use /Help for proper syntax.
E21019	Error retrieving information from [file name]	PFC has problem reading or accessing information from file.	Check for existence and contents of the file.
E21020	Free cache buffers is very low - Percent free = [% free]	PFC has detected that Free cache buffers are very low to efficiently use ARCserve.	1. Unload unused NLM's. 2. If problem continues, restart the server.
E21021	Low free cache [X KB] - ARCserve requires [Y KB]	PFC found that server has low free cache buffer compared to ARCserve requirement.	1. Unload unused NLM's. 2. If problem continues, restart the server.
E21022	Error retrieving information about free memory required by ARCserve	PFC cannot read ARCserve's initialization file (ASCONFIG.INI) or Section is missing in the ASCONFIG.INI file.	Check ASCONFIG.INI.

Number	Message	Cause	Explanation/Solution
E21023	Could not get information about AUTOEXEC.NCF file.	PFC cannot access or open AUTOEXEC.NCF file.	If problem continues, disable NCF option using ASCONFIG.INI.
E21024	Could not get information about STARTUP.NCF file.	PFC cannot access or open STARTUP.NCF file.	If problem continues, disable NCF option using ASCONFIG.INI
E21025	Error: Option [X] = "Y" is invalid.	PFC found that the given option is invalid.	Edit ASCONFIG.INI or PFC.INI that you have recently changed for proper syntax.
E21026	Error: Cannot locate section [SectionName] in [file name].	PFC cannot locate a section in specified file.	Check if file is corrupted or modified.
E21027	Fatal Errors - PFC will not load.	PFC detected server configuration problem(s) which is/are very critical to ARCserve C	Check other messages for exact reason of the message and address the issue(s) before you use ARCserve.
E21028	Warning - PFC will load with following warning(s).	PFC detected server configuration problem(s) which is/are not very critical to ARCserve.	Check other messages for exact reason of the message and address the issues(s) as soon as possible to avoid any other problems using ARCserve.
E21029	Server does not have valid job queue or queue user.	PFC encountered that ARCserve job queue is either corrupted or the user does not have enough rights.	Reinstall ARCserve.
E21030	Netware version (version number) is not supported by ARCserve.	ARCserve does not support the NetWare version you are using.	Update to supported NetWare Version.
E21031	Failed to access configuration file.	PFC cannot access the configuration file, PFC.INI.	Check the home directory where you have installed ARCserve.
E21100	SCSI Hardware information cannot be checked.	PFC will not scan for SCSI hardware.	If you want SCSI information to be scanned by PFC, load board drivers if not loaded, or Unload TAPESVR if it is loaded.
E21101	SCSI board driver and board router NLM's are not loaded.	Board drive(s) (ex. ASPIBD.NLM) and board router NLM (BOARDDDR.V.NLM) are not loaded.	If you want PFC to include SCSI hardware information, load board drivers.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E21102	Driver for SCSI adapter is not loaded.	Board driver(s) (ex. ASPIBD.NLM) is/are not loaded.	For PFC to scan for SCSI devices, load board driver NLM's.
E21103	SCSI devices cannot be located.	PFC cannot find any SCSI devices on the adapters for which board drivers are loaded.	1. Check that board drivers are loaded for SCSI devices that are connected. 2. Check Power Supply, SCSI termination, SCSI cable to the devices.
E21104	Check the SCSI hardware.	PFC has encountered a SCSI hardware error while inventorying SCSI hardware.	1. Check SCSI cable and SCSI termination. 2. Reset power to your SCSI devices. 3. Reset your SCSI host adapters.
E21105	When TAPESVR.nlm is loaded PFC will not scan SCSI bus.	PFC will not generate information about SCSI devices because TAPESVR is using the devices.	If you want to generate information about SCSI hardware, unload TAPESVR when job is not active.
E21106	Hardware error occurred, discontinue scanning SCSI BUS for board [board number]	While doing SCSI scan for board, PFC has encountered SCSI Error and PFC will stop scanning remaining SCSIID's.	Check SCSI troubleshooting guide. Also: 1. Check SCSI cable and SCSI termination. 2. Reset power to your SCSI devices. 3. Reset your SCSI host adapters.
E21107	[Board #] [SCSIID] SCSI I/O Error -(Error code).	PFC encountered SCSI error.	Check SCSI troubleshooting guide.
E21108	SCSI hardware scan is disabled.	PFC will not scan for SCSI hardware.	If you want SCSI information to be scanned by PFC, load board drivers if not loaded, or unload TAPESVR if it is loaded.
E21109	No SCSI Device found.	PFC could not find any backup device on adapter.	If you have any SCSI device(s) on this adapter, check following: 1. Power to SCSI devices. 2. SCSI termination. 3. SCSI cable.

Number	Message	Cause	Explanation/Solution
E21110	SCSI devices cannot be located.	PFC could not find any backup device on adapter.	If you have any SCSI device(s) on this adapter, check following: 1. Power to SCSI devices. 2. SCSI termination. 3. SCSI cable.
E21111	No backup device found on host Adapter [adapter name].	PFC could not find any backup device on adapter.	If you have any SCSI device(s) on this adapter, check following: 1. Power to SCSI devices. 2. SCSI termination. 3. SCSI cable.
E21112	TAPESVR.NLM is loaded, skipped SCSI bus scan.	When TAPESVR is loaded, PFC will skip scanning for SCSI hardware.	If you want to include SCSI hardware information you need to unload TAPESVR when it is inactive.
E21113	SCSI bus scan is incomplete for adapter.	PFC encountered SCSI error for the adapter and did not complete scanning the board.	You might need to reset the SCSI bus by resetting power to the SCSI devices and / or resetting power to the SCSI adapter.
E21114	SCSI I/O Error occurred on adapter.	PFC encountered SCSI error for the adapter and did not complete scanning the board.	You might need to reset the SCSI bus by resetting power to the SCSI devices and/or resetting power to the SCSI adapter.
E21300	Memory requirement should be addressed.	PFC found that the server memory is not enough for ARCserve.	1. Unload NLM's that are not required. 2. Add more memory.
E21301	Error Allocating Memory.	PFC failed to allocate memory.	1. Unload NLM's that are not required. 2. Add more memory.
E21302	Failed to allocate IO buffers.	PFC could not allocate memory to communicate with SCSI devices.	If you are using SCSI adapters that cannot access memory above 16 MB, add following line in STARTUP.NCF and restart your server: Set Reserve Buffers Below 16 MEG = 2002. Unload all modules/NLM's that are not necessary.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E21303	Error: Not enough memory to create screen.	FC cannot allocate memory to create screen.	1. Unload NLM's that are not required. 2. Add more memory.
E21304	Failed to allocate memory.	PFC failed to allocate memory.	1. Unload NLM's that are not required. 2. Add more memory.
E21305	Memory Allocation [# of bytes] failed.	PFC failed to allocate memory.	1. Unload NLM's that are not required. 2. Add more memory.
E21306	Error: Failed to allocate memory [# of Bytes] below 16MB.	PFC cannot access memory below 16MB.	Add the following line: Set Reserved Buffers Below 16 MEG=200 in STARTUP.NCF and restart the server.
E21400	[NLM Name & Path] Version Information not found.	PFC could not determine the version of specified NLM on disk.	Check if the version of NLM is the same as recommended by PFC. If not, contact the NLM vendor to get the recommended version of NLM and update the server.
E21401	Module Checking will be disabled.	PFC cannot locate section in PFC.INI file to check for proper version of modules.	Check for PFC.INI file in ARCserve's home directory.
E21402	Contact the vendor for the updated module(s).	Server is using some outdated or old modules. ARCserve requires latest modules.	Contact the appropriate vendor for updated modules.
E21403	Module Compare disabled.	PFC will not check on Module information.	See E21404.
E21404	Module version cannot be verified.	When PFC cannot locate or read PFC.INI or cannot locate section for list of NLM's to be checked, PFC cannot check for version of NLM's.	Check for PFC.INI in the home directory and section [MODULESxxx] in the PFC.INI., where xxx is the NetWare version you are using.
E21405	Unknown version of NLM.	PFC could not determine the version of NLM that is loaded in memory.	Check if the version of NLM is the same as recommended by PFC. If not, contact the NLM vendor to get the recommended version of NLM and update the server.

TCC.NLM Messages 23000 - 23999 and Status Utility messages 25000 - 25999

The following table contains the messages for the TCC.NLM module. and for the Status Utility.

Number	Message	Cause	Explanation/Solution
E23000	TCC: Failed to initialize job %d.	TCC failed to properly initialize itself through ARCserve.	See similar errors in other modules like APROCESS, FSTAPE, etc.
E23001	TCC: Error: Source SCSI ID %d not found.	The source SCSI ID is not on the SCSI Bus.	Make sure the ID exists. Also check the cable and make sure the drive is powered up.
E23002	TCC: Error: Destination SCSI ID %d not found.	Same as 23001 except for the destination drive.	Same as E23001 except for the destination drive.
E23003	TCC: Error: Cannot find source changer or device isn't a changer.	A tape copy/compare/clean was attempted for a changer but the device is not a changer.	Do task with changer.
E23004	TCC: Error: Cannot load source tape into tape drive.	A failure to load the media into the tape drive has occurred.	Check hardware.
E23005	TCC: Error: Cannot find destination changer or device isn't a changer.	See 23003.	See 23003.
E23006	TCC: Error: Cannot load destination tape into tape drive.	See 23004.	See 23004.
E23007	TCC: Tape error occurred during Copy/Compare/Clean/Erase operation.	An error occurred usually preceded by the actual error message describing the failure condition.	See error message describing failure condition.
E23008	TCC: Tape Copy error, No space left on destination tape	The destination tape was filled. Usually because the source tape may have been longer.	Use a destination tape with sufficient space.
E23009	TCC: Tape Compare error, tape headers do not compare.	The two tapes being compared show a difference in the tape headers. Could also indicate a hardware problem.	Check to see if comparison was inadvertently done between two different tapes. Also check hardware.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E23010	TCC: Tape Compare error, Error = %00000008x.	This would be associated with an error that typically was unexpected.	The error code may be of assistance to Cheyenne Technical Support.
E23011	TCC: Tape Copy/Compare/Clean/Erase error, No Tape in Drive. Error = %s.	The physical tape was either improperly loaded or not loaded into the drive at all.	Check to see that a tape is properly loaded in the drive.
E23012	TCC: Tape Copy/Compare/Clean/Erase error, Slot is empty. Error = %s.	The slot in the changer selected for the operation does not contain a tape.	Check to see that a tape is properly loaded in the changer slot.
E23013	TCC: Tape Copy/Compare/Clean/Erase Operation Failed, %s.	See 23007.	See 23007.
E23014	TCC: Tape Compare error, tapes do not compare.	An compare error occurred usually preceded by the actual error message creating the miscompare condition. Usually caused by dirty heads or a hardware problem.	Clean tape heads. Check hardware.
E23015	TCC: Failed to allocate Session Status Buffer.	An internal message indicating that there is not enough memory available to do the job.	Check the available memory on the server.
E23016	Cancelling copy - tape not inserted	A timeout was reached while TCC waited (and prompted) the user to insert a tape into the drive to commence an operation.	Insert tape in drive before TCC times out.
E23017	TCC: Error: Missing parameters on command line.	When using the command line version of TCC, a parameter was missing.	Load TCC /? at the console to see the available command line options.
E23018	TCC: Error: Incorrect parameters on command line.	When using the command line version of TCC, a parameter was incorrect.	See 23017.
E23019	TCC: Error: Failed to examine state semaphore - %x.	An internal message indicating in some cases a low memory condition.	Contact Cheyenne Technical Support if this occurs.
E23020	TCC: Copy job has been cancelled.	The user or a timeout condition (no tape inserted in the drive) caused the job to be cancelled.	Check for tape in drive.
E23021	TCC: Selected source changer slot %d is empty.	The slot in the changer selected for the operation does not contain a tape.	Insert tape in changer slot.

Number	Message	Cause	Explanation/Solution
E23022	TCC: Selected destination changer slot %d is empty.	See E23021.	See E23021.
E23023	TCC: Selected destination changer slot %d is not blank.	The slot in the changer selected for the operation is not blank and a blank tape was chosen as the criteria for the job.	Insert a blank tape in the changer.
E23024	Cancelling copy - destination tape is write protected.	The tape to be copied to is write protected.	Insert a non write-protected tape or cancel write-protection.
E23025	Cancelling copy - destination tape in slot %d is write protected.	See E23024.	See E23024.
E23026	Cancelling - source device, SCSI ID %d is not a tape drive.	The SCSI ID chosen for the job is not a tape device.	Check that the SCSI ID of the tape drive being used is correct.
E23027	Cancelling - destination device, SCSI ID %d is not a tape drive.	See E23026.	See E23026.
E23028	Cancelling - Source and destination do not have the same format type.	The source and destination media must be of the same format type. The three format types are Fast Seek (all DAT, DLT's, and 8mm except the 8200).	Check that source and destination media are of same type.
E23029	Cancelling - Source and destination may not be the same	The source SCSI ID and destination SCSI ID are the same.	You must do a copy/compare operation using two different drives.
E23030	Cancelling - Source tape is a cleaning tape - slot %d.	The source tape chosen in a copy/compare job from a changer is the cleaning tape. The wrong slot was chosen.	Select the right slot.
E23031	Cancelling - Destination tape is a cleaning tape - slot %d.	See E23030.	See E23030.
E25000	Semaphore will not open.	An internal error usually indicative of low memory conditions.	Check server memory.
E25001	Usage: STATCLNT <s> <host server> <Job Number>, or, STATCLNT <m> <host server> <arcbatch data name> <Job Number>	Command line usage information.	Command line usage information.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E25003	Unable to import home Directory.	The ARCserve home directory could not be found usually because ARCserve was not loaded or was unloaded.	Check to see that ARCserve is loaded.
E25004	No job number given.	The job number passed to STATCLNT was not seen. This error should be extremely rare.	Resubmit job.
E25005	Job file was not located or corrupt.	The job file associated with the backup was not written or was corrupted.	Check for disk space availability.
E25006	ARCSERVE.NLM not loaded.	ARCserve NLM must be loaded in order to load STATCLNT or STATSERV.	Load ARCserve.
E25007	Unable to Locate Host Server.	The host server specified on the command line was not attachable.	Check that the server is up and that STATSERV is loaded on it.
E25008	Unable to Locate NCP Extension on Host Server.	STATSERV.NLM is not loaded on the host server.	Make sure STATSERV.NLM is loaded on the Host Server.
E25009	Error Opening File %s (%s).	A file necessary for copying or transmitting was not found.	Check the spelling of the filenames provided in the command line arguments.
E25010	Failed to write filename %s into name file %s.	An error occurred writing the special file containing information for a move operation.	Check disk space.
E25011	Could not Connect to Host Server.	An attempt at connecting to the host server failed.	Check that the server is up and is visible to other servers on the network.
E25012	Error Reading Local file.	A disk error occurred in reading a file.	N/A.
E25013	Error Sending file.Check the lan.	A communication error occurred when STATCLNT was sending data to STATSERV.	Make sure both servers are up.
E25014	Error Disconnection from Host Server.	An error occurred disconnecting from the host server. Should be extremely rare.	N/A.
E25015	Failed to open: %s.	Failure to open a file.	Make sure all files which STATCLNT needs are in the proper place.

Number	Message	Cause	Explanation/Solution
E25016	Unable to Register NCP Extension, %s.	A NetWare error occurred while trying to register the extension.	Contact Cheyenne Technical Support.
E25018	Error Deregistering NCP Extension: %s.	A NetWare error occurred while trying to deregister the extension.	Contact Cheyenne Technical Support.
E25019	Cannot create a file below 90000000.	STATCLNT will use the range of 99999999 through 90000000 to create its temporary file. If this range is used the message will occur. This should be extremely rare.	N/A.
E25020	%s reports error restoring callers thread group context.	This is an internal message.	Contact Cheyenne Technical Support.
E25021	Error shutting down Connection.	See E24014.	See E24014.
E25022	ARCBATCH never loaded.	The ARCBATCH.NLM which STATSERV uses did not load.	Make sure the ARCBATCH.NLM is in the ARCserve NLM home directory.

CSLOADER Messages 24000 - 2499

The following table contains CSLOADER messages.

Number	Message	Cause	Explanation/Solution
E24000	Invalid module keyword [invalid name of keyword].	There is invalid format in loader section of asconfig.ini file.	Module keyword NLM[number] is used for non-Cheyenne module. Module keyword CSNLM[number] is used for Cheyenne module.
E24001	Failed to find load file [NLM file name].	The load file doesn't exist.	Check the path to this file.
E24002	Failed to load [NLM file name]. Please switch to the Console Screen for more information.	See E0133.	See E0133.
E24004	Unknown NLM Loader signature [number].	This is an internal error.	Contact your reseller or Cheyenne's technical support.
E24005	Failed to open file [file name] - [NetWare error message].	See E3011.	See E3011.
E24006	Failed to read file [file name] ([number] vs. [number]) - [NetWare error message].	See E1046.	See E1046.
E24007	Invalid load file format.	This is an internal error.	Contact your reseller or Cheyenne's technical support.
E24008	Failed to find load order section.	There is an invalid format in the loader section of ASCONFIG.INI file.	Check the section name in ASCONFIG.INI.
E24009	Insufficient memory is available.	See E3037.	See E3037.
E24011	The configuration file [file name] does not exist.	See E3011.	See E3011.

ASIDF Messages 37000 - 37999

The following table contains ASIDF messages.

Number	Message	Cause	Explanation/Solution
E37003	Failed to Start Arcserve Database Session	ASDB.NLM may have been unloaded.	Make sure that ASDB.NLM is still in memory.
E37006	ASIDF.NLM failed to allocate memory	This happens when server runs out of memory.	Free up server memory.
E37026	Error In read, [error no]	_____	_____
E370007	SIDF: Tape i/o failure,[error]	ARCserve is unable to read data from the tape. Either the tape may be bad or it may have encountered an unexpected file mark.	Check tape.
E37008	Target Volume is out of Disk Space. Restore operation Aborted	The destination is out of disk space.	Retry the Restore operation after freeing disk space on the destination.
E37009	Parser error.	This tape may have been created by non SIDF-certified software and cannot be restored by ARCserve.	_____
E37013	Unable to login to [file server name] as [username]	ARCserve is not able to log in to destination file server for performing a restore operation using the user name and password specified when submitting the job .	Check to make sure that the user name and password are correct.
E37011	Failed to Initiate SIDF Restore. Please check if TSA is loaded on the destination and Arcserve Host servers.	ARCserve was unable to find TSA's on host/destination servers .	Make sure that TSA is loaded on host as well as destination servers . Also, check SMDR and TSA versions.
E37024	Unable to list TSAs on %s,Is TSA loaded?	See E37011.	See E37011.
E37022	Unable to Connect to TSA %s . Check User name and password	See E37013.	See E37013.
E37018	Error in Listing Target Services, [error code]	See E37011.	See E37011.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
E37021	[Name] TSA not found,restore operation aborted	See E37011.	See E37011.
E37023	Unable To Establish Connection to TSA [name], [error code]	See E37013.	See E37013.
E37019	Failed to connect to Target Service [name] as [user],[error]	See E37013.	See E37013.
E37027	Failed to write to dataset [filename] ,[errorcode]	ARCserve failed to write data to file.	1. Check destination disk space. 2. Check whether compressed data is being restored to non- compressed volume.
E37028	Failed to open dataset [filename] for restore [error]	The destination may be out of disk space .	Check disk space on destination volume.

Btrieve and related errors

The following table lists the Btrieve errors that occur in connection with the operation of ARCserve. For solutions, refer to the numbered list of “possible Resolutions” after the table.

Number	Message	Cause	Explanation/Solution
Btrieve 2	BTRV - Failed to Access: *.DB, 2 Attempting to: Insert Record I/O Error	ARCserve encountered an error while reading from or writing to the database. The error may be received at the ARCserve Manager while accessing the database or in the Activity Log during a Backup/Restore Operation.	See Possible Resolutions # 18, 19.
Btrieve 3	File not open.	The operation cannot be executed because the database file is not open.	See Possible Resolution # 15.
Btrieve 12	File not found.	Btrieve cannot find the specified file (*.DB) to complete the requested operation. The error will normally be received when trying to access a portion of the database from the ARCserve Manager.	See Possible Resolutions # 4, 8, 16, 19, 20.
Btrieve 20	Record Manager inactive.	The error is received when attempting to open the ARCserve Manager from the workstation. The Record Manager or Requester is inactive.	See Possible Resolutions # 4, 8, 16-19.
Btrieve 91	Server error.	The error is received when the Requester cannot establish a session with the ARCserve server. The error would only be seen when attempting an operation from the ARCserve Manager which, in turn, needs to perform an operation with one of the ARCserve databases.	See Possible Resolutions # 5, 7, 8-12, 17-19.

Troubleshooting And System Messages

Number	Message	Cause	Explanation/Solution
Btrieve 97	When loading BREQUEST.EXE, the following message is received: IPX Tape Sockets are Full Or, when loading the ARCserve Manager: BTRV Error 97: Accessing file *.DB Attempting to open file, Data Message To Small	The application tried to read or write a record that is longer than those that the Btrieve Requester can handle.	See Possible Resolutions # 5, 7, 8-12, 17-19
Btrieve 1002	Btrieve cannot allocate memory needed.	The error is normally received when attempting to access the ARCserve Manager at the workstation. Btrieve cannot allocate the memory needed from the workstation to open the Database.	See Possible Resolutions # 4-8, 13, 14, 16-19.
E4205	Failed on Integrity Check [filename.db] [error #]	The database file has become corrupt. This error is normally received after an ASTART6 is issued at the server console. When ASDB.NLM attempts to open the ARCserve Database, it may detect corruption.	Follow the steps to recover a corrupt database in the section titled "Repairing database files from the server console" on p. 14-53 of the <i>ARCserve Manager Guide</i> . The recovery procedure should be performed for all database files. The error may only be citing one *.DB file, but since a Btrieve Database is indexed and all database files share information, the possibility that another database file contains corruption is high.

Btrieve possible resolutions

The following table of Possible Resolution includes all of the currently known solutions to the Btrieve Errors listed in the table above. The possible resolutions listed for each error message should be performed in the order in which they are shown. If all possible resolutions have been tried, or if a Btrieve error message is generated which isn't listed, call Cheyenne Technical Support for assistance.

No.	Possible Resolution
1	Verify that BTRIEVE.NLM version 6.15.2 and BSPXCOM.NLM version 6.15.1 are running on the server. Type "MODULES" at the file server console to see the version numbers of these NLM's. Verify that BREQUEST.EXE is not being loaded at the workstation. When in Windows, open a DOS window and execute the command: "MEM/C MORE" to verify that BREQUEST is not loaded into memory, or use the utility NTSWD.EXE located in the ARCSERVE.6\UTILITY directory on the ARCserve server. This utility will display all loaded .DLL and .EXE files, and the locations they were loaded from.
2	Verify that the path to the \ARCSERVE.6\DATABASE directory is correct. Verify that the database files exist in the \ARCSERVE.6\DATABASE directory. The \DATABASE directory MUST exist under the \ARCSERVE.6 directory, and all database files (*.DB) MUST exist in the \DATABASE directory.
3	Verify that the version of the ARCserve Manager matches the version of ARCserve running on the server. At the file server console type "MODULES". Check the version of ARCSERVE.NLM and ASDB.NLM. In the ARCserve Manager at the workstation, click on the HELP pulldown menu and check the version of ARCserve listed under ABOUT ARCSERVE. Verify that the Server and Manager versions of ARCserve are the same.
4	Make sure that the WBTRCALL.DLL file exists in the SYS:ARCSERVE\MANAGER or in the ARCserve.6 directory. If the WBTRCALL.DLL file does exist, make sure that it is being loaded from the ARCserve.6 manager directory. The utility NTSWD.EXE located in the ARCSERVE.6\UTILITY directory can be used to determine where WBTRCALL.DLL is being loaded from.

No.	Possible Resolution
5	Try typing "WIN ARCSERVE" from the \ARCSERVE.6\MANAGER on the server, or from the ARCSERVE.6 directory on the local workstation directory to determine if there is a DLL conflict. Verify that the same Btrieve error message is not generated. If it is not, then this confirms that when ARCserve is executed while in Windows, older DLL's or drivers are being used to execute ARCSERVE.EXE. The environment needs to be updated with latest Windows drivers and DLL's
6	Make sure that BTRIEVE.EXE and BREQUEST.EXE are NOT loaded on the workstation.
7	Try running the Manager on a different workstation. Either the software or hardware at the original workstation may be causing the problem
8	Verify that all NetWare and Microsoft drivers and/or DLL's have been updated with latest versions.
9	Increase the number of Maximum Connections in BSETUP to at least 100. From the file server console prompt, type LOAD BSETUP. The maximum connections setting can be increased under SET BTRIEVE CONFIGURATION
10	Increase the timeout parameters in SPXCONFIG. From the file server console prompt, type "LOAD SPXCONFIG." Increase the timeout settings for the following: SPX WATCHDOG ABORT TIMEOUT, SPX WATCHDOG VERIFY TIMEOUT & SPX ACK WAIT TIMEOUT.
11	Check for any unusual IPX problems (e.g.: a second internal network address that cannot be explained). An established connection between BREQUEST.EXE and BTRIEVE.NLM is dependent on BREQUEST finding the BTRIEVE.NLM. A phantom IPX address would prevent this connection to be established.
12	Include the following line in your NET.CFG (or SHELL.CFG) file to increase the IPX sockets: IPX Sockets=30 This statement should be added to the "Protocol IPXODI" section of the *.CFG file and be indented.
13	While in Windows, open a DOS window and execute the command: "MEM/C MORE". Verify that Brequest is NOT loaded into memory.

No.	Possible Resolution
14	If the ARCserve Manager is running from Norton Desktop for Windows (or from another desktop organizer program), exit the desktop program and submit the ARCserve jobs using Progman (Windows' Program Manager) as the Windows shell. Once the jobs are submitted, the workstation may be returned to its original configuration.
15	Increase the Number of Open Files and/or the Number of Open File Handles parameters on the Btrieve load line in the ASTART.NCF file. The Open Files parameter is -f. (e.g.: -f=40) The default is 20. The Open File Handles parameter is -h. (e.g.: -h=100). The default is 100.
16	Verify that LOCAL = NO is set in the [brequestDPMI] section of the NOVDB.INI file located in the workstation's \WINDOWS directory.
17	If VLM's are running on the workstation, try using NETX.
18	Try replacing the BTRIEVE.NLM, BSPXCOM.NLM, and BREQUEST.EXE files with new copies; they may have been corrupted.
19	Verify that the BTRIEVE and BSPXCOM NLM's are loading with the ARCserve default parameters. If the parameters have been changed to accommodate another application, unload that application and return all of the settings back to their defaults and run a test. Call Cheyenne Technical Support, or the application's manufacturer, to discuss the safe usage of the different parameters. The following are ARCserve's default parameters: LOAD BTRIEVE -p=4096 -f=20 -h=60 -l=20 -t=15 -u=0 -s=30 -m=512 LOAD BSPXCOM -d=8192 -s=15 -w=3
20	Check the length of the \DATABASE directory path (i.e.: SYS:ARCSERVE\DATABASE). If it contains more than 60 characters, the path will need to be shortened.

Using the Novell workstation check utility

In order to make diagnosing installation and configuration problems easier, ARCserve includes a Novell utility called NTSWD.EXE which can be run from a Windows workstation and can provide information about loaded Windows programs, DLL's, VxDs and Netware modules. This program is located in the UTILITY sub-directory of your ARCserve host server.

Installing NTSWD.EXE

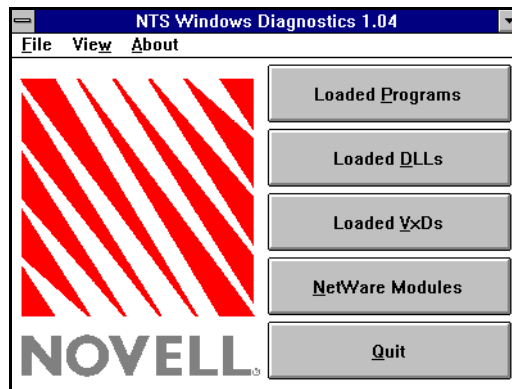
To install the utility on your workstation:

1. Copy NTSWD.EXE to your WINDOWS directory
2. Within Program Manager, select File/New then Program Item.
3. Enter the following in the Program Properties dialog box
Description: NTSWD
Command Line: NTSWD.EXE
Working Directory: C:\WINDOWS
Shortcut Key: None
4. Click OK.

The utility requires TOOLHELP.DLL in order to function. This DLL ships with Windows 3. and Windows for Workgroups 3.11. Windows 3.0 users should obtain this DLL from Microsoft Download service or from a copy of Windows 3.1.

Using
NTSWD.EXE

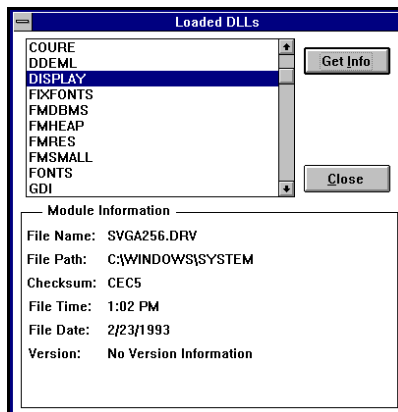
To use the utility, double-click on the NTSWD icon. The utility will appear:



As you can see, the utility contains four button for getting information on various types of loaded files. You can view your workstation's Loaded Programs, Loaded DLL's, Loaded VxDs and NetWare Modules simply by clicking on the appropriate button.

When you click a button, the window for the applicable file type appears:

*When you
click Loaded
DLL's, this
screen
appears.*



To view information about an item listed, double-click it or click the Get Info button. The bottom of the window will display details about the item you've selected.



USING ASCONFIG.INI AND TAPESVR.CFG

ARCserve uses the ASCONFIG.INI to centralize its default settings. You can change the parameters of the ASCONFIG.INI to alter these settings. TAPESVR.CFG is the INI file used by TAPESVR.NLM. TAPESVR.NLM is used by the ARCserve Tape Server to monitor media.

In this appendix, you will learn:

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- | | | |
|------------|----------|--|
| A-2 | ➤ | About the ASCONFIG.INI file |
| A-3 | ➤ | How to edit the ASCONFIG.INI file |
| A-5 | ➤ | About the TAPESVR.CFG file |
| A-6 | ➤ | How to edit the TAPESVR.CFG parameters |

About the ASCONFIG.INI

The purpose of the ASCONFIG.INI is to centralize management of all of ARCserve's global options, as well as all NLM options.

In previous versions, ARCserve would rely on command-line parameters or individual .CFG files to specify options. With the growing number of NLM's and options, there is now a need to combine this information into one file.

The ASCONFIG.INI is a Windows-based format file which is easily edited via a text editor.

ASCONFIG.INI is located in your ARCserve home directory.

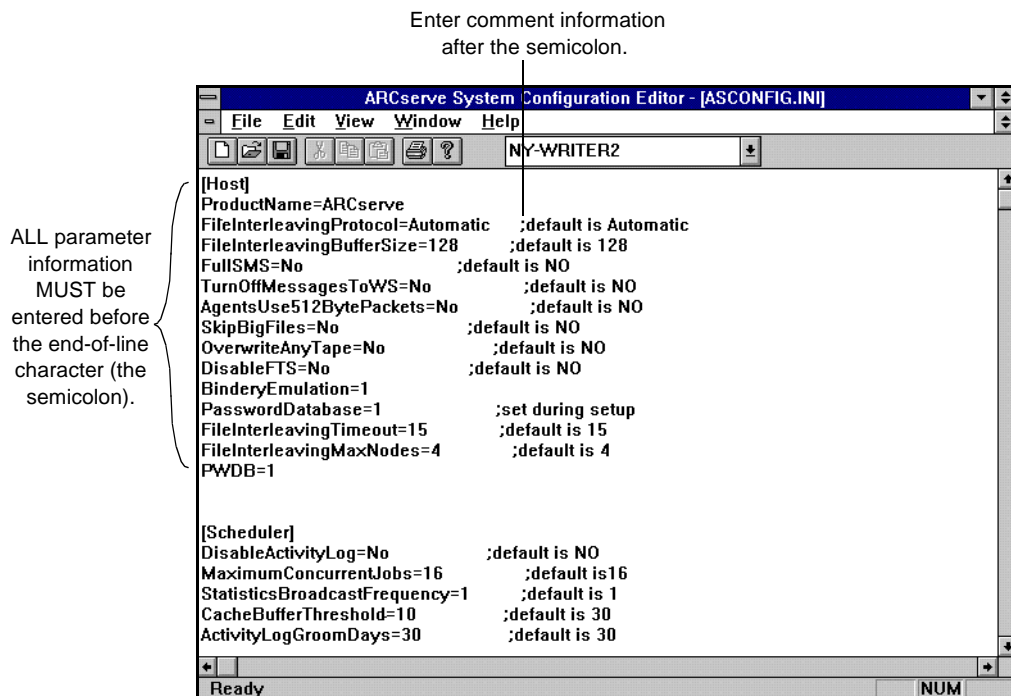
Editing the ASCONFIG.INI

To edit the contents of the ASCONFIG.INI, simply launch any Windows or DOS based text editor. You can also use the ARCserve System Configuration Editor provided your workstation is connected to the ARCserve server or the server name is specified on the command line.



The information contained in the ASCONFIG.INI file should not be altered unless you have specific instructions to do so by a Technical Support representative.

An example appears below:



When editing the parameters a few rules apply:

- The parameter names are not case sensitive, they are treated as all uppercase.
- The parameters being searched for will be converted to uppercase before searching for them in the .INI file.
- Each parameter MUST be followed by an equal (=) sign and a value.
- There may be a blank space before and/or after the equal sign.
- The parameter value will consist of all characters from the first non-blank space character after the equal sign to the last non-blank character before the end-of-line character (the semicolon).
- Any text after the semicolon to the end of the line will be considered to be a comment and will be ignored.

About the TAPESVR.CFG file

The TAPESVR.CFG file is the TAPESVR.NLM's INI file. TAPESVR.CFG is located in the ARCserve home directory's NLM subdirectory. For example:

```
[SYS:][ARCserve Home Directory]\NL  M
```

You do not need the TAPESVR.CFG file in order for the TAPESVR.NLM to load. TAPESVR.CFG facilitates the use of initialization parameters that can be used with TAPESVR.NLM.



The information contained in the TAPESVR.CFG file should not be altered unless you have specific instructions to do so by a Technical Support representative. Always make a copy of the TAPESVR.CFG file before you modify it in any way.

If you are instructed to alter the TAPESVR.CFG file, you must make the changes at the command line. These changes will permanently alter the settings in the TAPESVR.CFG file.

There are several command line parameters that you should be aware of. Refer to the section that follows for more information on editing command line parameters for the TAPESVR.CFG file.

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Editing the TAPESVR.CFG parameters

TAPESVR.CFG command line parameters will override any of the current settings in the TAPESVR.CFG file.



You should only use the TAPESVR.CFG command line parameters described here when you have received instructions to do so from a Technical Support representative.

Layout

The layout for entering TAPESVR.CFG command line parameters is:

```
[Section]
Entry[x]=[y][Parameter][z] ;Comment  s
```

Section

A Section is the name of the category that an Entry belongs to. An Entry is the actual entry name of the parameter entered on the command line. The following four sections are currently used with the TAPESVR.CFG:

- BOARD: Relates to the Tape Server board.
- CONFIG: Relates to the configuration of the Tape Server.
- NLM: Relates to the Tape Server NLMs.
- TIMEOUT: Relates to the timeout settings of the Tape Server.

Entry [x]

This is the name of the section (BOARD, CONFIG, etc.) you enter on the command line. If an [x] option follows an Entry name, it means there can be multiple entries of the same name (but each must be differentiated by a number). The [x] option must be given in ascending order and must begin with the

number one (1). A break in the order will be seen as a terminator for the entry sequence. Following are examples of a legal Entry sequence and an illegal Entry sequence.

Example One (legal Entry sequence):

[NLM]

NLM1=...

NLM2=...

NLM3=...

In this example, TAPESVR will see all NLM entries from 1 to 3.

Example Two (illegal Entry sequence):

[NLM]

NLM1=...

NLM2=...

NLM4=...

In this example, TAPESVR will only see NLM1 and NLM2. Since there is no NLM3, TAPESVR will terminate with NLM2 and will not service NLM4.

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[y] [Parameter] [z]

The next part of the layout has the following definitions:

- [y]: This may be an ASCII string or value depending on its usage.
- [Parameter] [z]: This denotes a second parameter, followed by its value [z].

Refer to ‘TAPESVR.CFG parameter sections and functions’ for more information on parameters.

Comments

You can enter any comments in the parameter line by using a semicolon (;). Any text after a semicolon (;) to the end of the parameter line will be considered to be a comment and will be ignored by TAPESVR.NLM.

TAPESVR.CFG parameter sections and functions

This section will describe some of the Entries you can use with the TAPESVR.CFG command line parameter Sections. Where applicable, an Entry's function will be described.



Not all of the TAPESVR.CFG command line parameter Sections are explained here. Further information will be provided (if necessary) when you contact Technical Support services for assistance.

[BOARD] parameters

EXCLUDE_x EXCLUDE_x = BOARDDRV = "scsi id list "

The purpose of this parameter is to restrict the specified SCSI IDs from being accessed by the Tape Server. Absolutely no SCSI commands will be sent to any of the SCSI IDs given in the "scsi id list." For example:

Tom wants to exclude SCSI IDs 2, 5, and 6 from being accessed by TAPESVR. He would type the following on the command line:

EXCLUDE1 = BOARDDRV = 2 5 6

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[CONFIG] parameters

BLOCKSIZE = y

The function of this parameter is to change the default tape block size that TAPESVR.NLM will use. When this parameter is used it will globally set all tape drives to the given block size. For example:

```
Tom wants to change the block size on all tape drives to
2048 bytes. He would type the following on the
command line:
[CONFIG]
BLOCKSIZE = 2048
```

BOARDID = y

The function of this parameter is to change the SCSI ID of the host SCSI adapter. This function should only be used when the board driver incorrectly reports the SCSI ID of its adapter. Currently the only adapter that requires the use of the BOARDID command is the DPT SCSI boards. Their ASPI driver incorrectly reports the host adapter's SCSI ID at 0 instead of 7. The legal values you can enter for "y" are: 0, 1, 2, 3, 4, 5, 6, and 7.

USEBELOW16

When this parameter is set to [ENABLE], it will force TAPESVR.NLM to allocate all the memory that it will use for I/O purposes so that memory resides below the 16 megabyte address range. If USEABOVE16 is also specified in the TAPESVR.CFG, USEBELOW16 will *always* override it.



When USEBELOW16 is set to [DISABLE] it does not mean that memory above the 16 megabyte address range can then be used. It means that it will use internal defaults. The internal default memory is decided by the board driver that TAPESVR.NLM is using.

USEABOVE16

When this parameter is set to [ENABLE] it will override any internal restrictions regarding the allocation and use of memory above 16 megabytes. It will allow memory above 16 megabytes to be used. When this parameter is set to [DISABLE] it will use the default restrictions regarding the allocation and use of memory above 16 megabytes.



When USEABOVE16 is set to [DISABLE] it does not mean that memory below the 16 megabyte address range can then be used. It means that it will use internal defaults. The internal default memory is decided by the board driver that TAPESVR.NLM is using. If this parameter is set to [ENABLE] when it should not be, your server willabend. If you are using a 16-bit controller **do not** set USEABOVE16 to [ENABLE].

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[NLM] parameters

NLMx="NLM
NAME"
[parameters]

This parameter will cause TAPESVR.NLM to load the specified NLM along with its command line parameters. The NLM must be located in the ARCserve home directory's NLM subdirectory. TAPESVR.NLM loads NLMs based on the concept of "Load and Forget." This means that TAPESVR.NLM has no concept of the type or function of the NLM that it is loading. TAPESVR.NLM loads each NLM serially.

NLMx=PAUSE
seconds

This parameter will cause TAPESVR.NLM to stop its loading of NLMs and pause for the specified number of seconds. When the time has expired, TAPESVR.NLM will continue loading NLMs (beginning with the next NLMx sequence).