

# **BrightStor<sup>®</sup> ARCserve<sup>®</sup> Backup for Small Business Server**

## **Getting Started**



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# Chapter 1

## Preserve IT!

### Unparalleled Data Storage Protection for Your Entire Environment

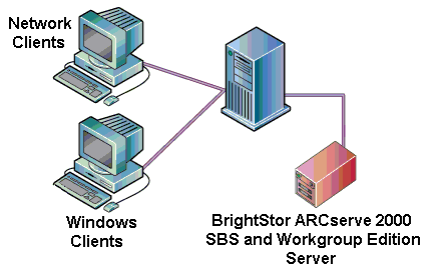
**B**rightStor ARCserve 2000, the industry's leading high performance storage management solution, delivers the most comprehensive tools to protect your most valuable corporate asset – data.

Use BrightStor ARCserve 2000's comprehensive solutions to:

- **Secure Critical Data.** BrightStor ARCserve 2000's family of products delivers the most comprehensive and easy to use tools for guaranteed protection of your data, across multiple operating systems.
- **Reduce Backup Windows.** BrightStor ARCserve 2000 delivers industry-proven technologies, such as parallel streaming, to back up, restore, or copy data while reducing your backup window.
- **Automate Management Tasks.** Essential data protection routines can be automated to minimize administrative time and reduce operating costs.
- **Support Business Expansion.** BrightStor ARCserve 2000's editions offer unlimited scalability and extend support throughout the enterprise.

### Environmentally Correct

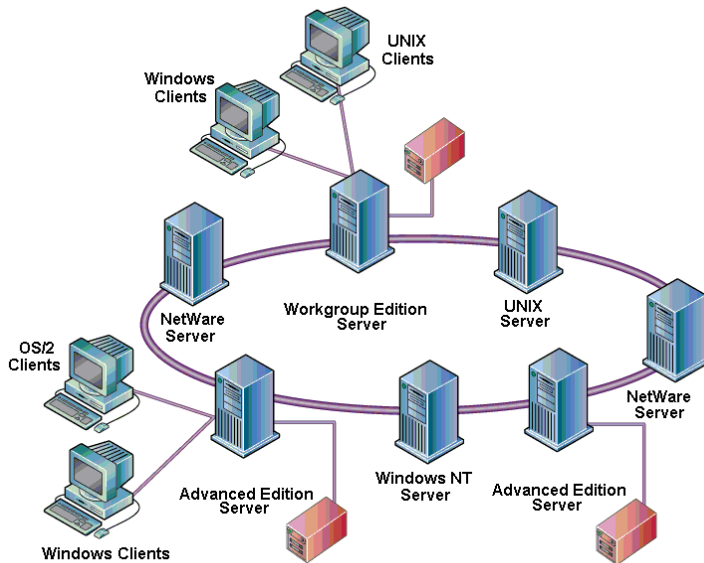
Since no two computer environments are the same, BrightStor ARCserve 2000 is available in different editions. The comprehensive set of agents provides unlimited flexibility in configuring the storage management solution that best fits your environment.



### **BrightStor ARCserve 2000 for Small Business Server and Workgroup Edition**

Support a single Windows 2000 server  
and its attached clients.

## Unparalleled Data Storage Protection for Your Entire Environment



### **BrightStor ARCserve 2000 Advanced Edition**

Ideally suited for multi-server and heterogeneous environments. With its unique set of options, BrightStor ARCserve 2000 provides centralized management of all Small Business Server, Workgroup, and/or Advanced Edition storage servers throughout your network.

### **What is New In BrightStor ARCserve 2000**

BrightStor ARCserve 2000 includes a number of significant enhancements that improve performance, increase data availability, make administration easier, and improve data protection.

- **Web-Based GUI:** BrightStor ARCserve 2000 features a new web-based GUI for remote centralized management of all storage tasks across the enterprise.
- **Remote Centralized Database:** BrightStor ARCserve 2000 stores all storage-related information including job logs, event logs, and device information from multiple BrightStor ARCserve 2000 servers in a central remote repository. The central repository allows interoperability between multiple BrightStor ARCserve 2000 servers running on Windows NT/2000. This provides centralized reporting, review of job logs, and managing devices across the enterprise from a single administration console.
- **Assured Protection for Clustered Environment:** BrightStor ARCserve 2000 extends full support to the Microsoft Cluster Service. High availability and integrated fault resilience of the BrightStor ARCserve 2000 server in the clustered environment is ensured through integrated job failover.

## Unparalleled Data Storage Protection for Your Entire Environment

- **Protect the Windows 2000 Active Directory:** BrightStor ARCserve 2000 delivers complete protection of the Windows 2000 Active Directory. With BrightStor ARCserve 2000, you can be certain of complete protection of your directory service — plus quick and seamless recovery in the event of a disaster.
- **Integrated Virus Scanning and Cure:** After the “cure” option is turned on by the backup Administrator, CA’s industry-leading InoculateIT antivirus software combines with BrightStor ARCserve 2000 to protect the network. The integrated Virus Scan engine automatically scans for viruses during a backup or copy operation. If the cure option is turned on, the infected files are cured immediately. In addition, the Virus Scan engine dynamically updates virus signatures, ensuring protection of your data.
- **Enhanced Performance:** BrightStor ARCserve 2000 delivers high performance backup and restore by dynamically allocating buffer space for operations. The performance automatically scales with available buffer space.
- **New Serverless Backup Option:** BrightStor ARCserve 2000 features a new Serverless Backup Option. The serverless backup option works with the SAN Option to provide unparalleled performance in the SAN environment. With the Serverless Backup Option, the backup and restore operations are taken off the BrightStor ARCserve 2000 server, limiting CPU usage. This significantly enhances the performance of your BrightStor ARCserve 2000 server by freeing up CPU time for mission-critical tasks. For more information about the Serverless Backup Option, visit [www.ca.com/arcserve/](http://www.ca.com/arcserve/).

## Key Features

The following functionality is shared by the BrightStor ARCserve 2000 for Small Business Server, Workgroup, and Advanced Editions:

- **Integrated Client Support:** BrightStor ARCserve 2000 protects your attached desktops with integrated support to back up and restore attached Windows 2000 workstations, Windows 95/98, and Windows 3.1x, NetWare, UNIX, Linux, and OS/2 clients.
- **Integrated Tape and Optical Library Support:** BrightStor ARCserve 2000 includes autoloader support to extend backup flexibility and capacity by leveraging single or automated libraries (tape or optical) with one drive and unlimited slots.
- **Advanced Scheduling:** BrightStor ARCserve 2000 allows you to run backup jobs immediately or schedule them to run at any specified time. The easy-to-use, calendar-based, Graphical User Interface allows you to plan your backup strategy. Refer to the chapter “Back Up Automatically” in this guide for detailed information on how to use a schedule to perform a backup, even when you are out of the office.

## Unparalleled Data Storage Protection for Your Entire Environment

- **Centralized Database:** All BrightStor ARCserve 2000 database information can be stored in a central repository. This lets you to run centralized reports, review job logs, and manage device sharing across the enterprise.
- **Built-in Data Encryption (North America Only):** BrightStor ARCserve 2000 delivers ultimate data security with integrated data encryption. All your critical data is encrypted before transmission over the network, securing it against accidental or malicious intrusion.
- **Data Compression:** BrightStor ARCserve 2000's intelligent data compression increases drive capacity and accelerates data movement, reducing network traffic.
- **Parallel Streaming:** BrightStor ARCserve 2000 significantly increases performance by backing up, restoring, or copying data — thereby reducing your backup window.
- **Data Verification:** BrightStor ARCserve 2000 helps ensure data integrity by offering various verification methods, including CRC, fast tape scan, or byte-by-byte verification.
- **Intelligent Alerts Notification:** BrightStor ARCserve 2000 features multiple Alert Notification methods to report errors. These include pager, e-mail, SNMP traps, event log, or network broadcast. The notification methods are completely user configurable. Read about how Alerts can keep you informed about data management later in this guide.
- **Extensive Device Support.** BrightStor ARCserve 2000 can back up data to virtually any tape, removable drive, or optical device, including magneto-optical media. Visit [www.ca.com/arcserve/](http://www.ca.com/arcserve/) for a complete list of all certified devices.

### Small Business Server Edition Distinctive Features

In addition to the functionality highlighted above, BrightStor ARCserve Backup for Small Business Server also provides the following features:

- **Simplified Installation of All Options.** BrightStor ARCserve Backup for Small Business Server offers simplified installation of all options, eliminating time-consuming installation.
- **Key Option Support.** By providing the Backup Agents for MS-SQL, MS-Exchange, and the Backup Agent for Open Files as components, BrightStor ARCserve Backup for Small Business Server provides secure automated, on-line backup and restore for your critical applications, even while they are open and in use.
- **Integration with Management Console.** BrightStor ARCserve Backup for Small Business Server's Administrator Console integrates seamlessly with the Microsoft SBS Management Console.



### Advanced Edition Distinctive Features

BrightStor ARCserve Backup Advanced Edition supports the following distinctive functionality:

- **Multiple Servers Support.** In addition to the local Windows 2000 Server, BrightStor ARCserve Backup Advanced Edition extends support to protect data on remote Windows 2000 servers. And by utilizing optional Client Agents, BrightStor ARCserve Backup Advanced Edition can also back up and restore Linux, UNIX, NetWare, and OS/2 machines.
- **Centralized and Remote Management.** BrightStor ARCserve Backup Advanced Edition can help reduce administration time and increase productivity by centrally managing all enterprise-wide storage activities from a single Windows 2000 console. All administrative functions are easily accessible from remote locations through the ARCserve Manager or Remote Access Services (RAS).
- **Remote Installation.** BrightStor ARCserve Backup Advanced Edition offers single point installation of any option and/or agent, eliminating time-consuming installation of each machine in your environment.

### Total Enterprise Management with Unicenter TNG Framework

BrightStor ARCserve 2000 works seamlessly with CA's Unicenter TNG® Framework™ (the Framework), today's most sought-after management technology. BrightStor ARCserve 2000 leverages the Framework to deliver unparalleled data protection. Framework is discussed in detail later in this guide.

### For More Information

After walking through this *Getting Started* guide, you can refer to the numerous resources available to you for additional information. Your BrightStor ARCserve 2000 CD contains useful instructional documents that showcase your software as well as detailed explanations about BrightStor ARCserve 2000's comprehensive, feature-rich components. In addition, the online help system offers procedural information and answers to any questions you may encounter. If you need technical support, visit us on the web at [esupport.ca.com](http://esupport.ca.com).

## Chapter 2

# BrightStor ARCserve 2000 Explained!

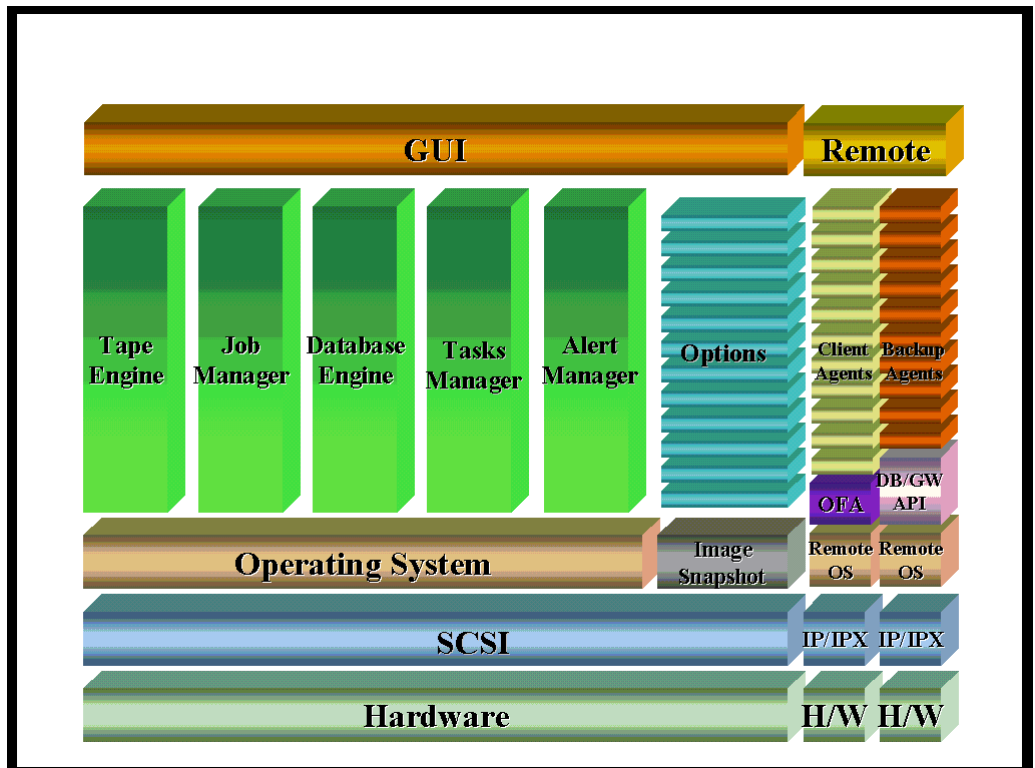
### The Basic Concepts and Installation Tips

**B**rightStor ARCserve 2000 has long set the industry standard for unrivaled data storage management capabilities. This technology is provided for an entire spectrum of users and covers all system platforms.

This chapter describes the concepts that form the BrightStor ARCserve 2000 system, as well as the key components and how they interact with each other and the surrounding environment.




### BrightStor ARCserve 2000's Components

Benefit from BrightStor ARCserve 2000's scalable design to manage and protect your environment. BrightStor ARCserve 2000 is composed of powerful components that seamlessly work to accomplish critical administrative tasks.











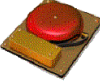
### BrightStor ARCserve 2000 Wizards and Helpful Tools

No introduction is necessary to use these helpful Wizards. Launch them from the BrightStor ARCserve 2000 Home Page and instantly be guided through BrightStor ARCserve 2000's primary functions.

 <b>Backup Wizard</b>	Takes you step-by-step from initial target selection to scheduling a repeating job.
 <b>Restore Wizard</b>	Restores data from media to a specified destination. Restore by session or by querying for the specific data.
 <b>Device Wizard</b>	Simplifies the task of formatting, erasing, re-tensioning, compressing, and ejecting your storage media. Use the Device Wizard to verify that BrightStor ARCserve 2000 communicates with the devices you have installed.
<b>Device Configuration</b>	Configure the backup devices and set the Tape RAID level configured on your system using this step-by-step tool.
<b>Disaster Recovery/Boot Disk Wizard</b>	Create local or remote Disaster Recovery boot disk set following easy, progressive steps. Available in the Advanced Edition and the Workgroup Edition.
<b>Central Database Configuration</b>	Configure the various BrightStor ARCserve 2000 host database systems from this easy-to-use console. Available in the Advanced Edition.

### BrightStor ARCserve 2000 Managers

The Managers are the front-end interface used to perform all BrightStor ARCserve 2000 functions:

	<b>BrightStor ARCserve 2000 Manager:</b> The BrightStor ARCserve 2000 Manager houses the other managers, each of which performs the specific functions described below:
	<b>Job Status Manager:</b> Your job is made easier because this Manager helps monitor, reschedule, and submit all pending, completed, and active jobs.
	<b>Backup Manager:</b> Performing BrightStor ARCserve 2000's core functions, the versatile Backup Manager schedules and submits complete system backups of all machines.
	<b>Restore Manager:</b> Launch the Restore Manager and perform a complete or partial restore of your crucial data. And you can schedule restore jobs from data that has already been backed up by BrightStor ARCserve 2000.
	<b>Media Pool Manager:</b> This Manager makes it easy to create logical groupings of media to quickly identify, maintain, and recycle your media. You can choose specific media rotation schemes to suit your archive needs. Chapter 6, "Back Up Automatically" discusses how to use BrightStor ARCserve 2000's media rotation scheme to simplify administrative tasks.
	<b>Device Manager:</b> Through Device Management, BrightStor ARCserve 2000 is ready to smoothly handle the variety of media it supports. This utility displays information about storage devices and media, enabling media compression, formatting, erasing, ejecting, and re-tensioning. You can also manage media rotations by assigning unique serial numbers.
	<b>Database Manager:</b> BrightStor ARCserve 2000's librarian, this Manager stores information such as the jobs processed by BrightStor ARCserve 2000, the media used, the devices you are using, error logs, and system alerts.
	<b>Reports Manager:</b> Interfacing with the BrightStor ARCserve 2000 database, the Reports Manager furnishes the reports you need about BrightStor ARCserve 2000 activity. This includes data on jobs, media errors, sessions, backup devices, and media pools.
	<b>Alert Manager:</b> This tool sends messages about events that occur during backup. You can configure BrightStor ARCserve 2000 to send Alerts through several different means, including: pager, mail, network broadcast, SNMP traps, and Unicenter TNG Console.

### BrightStor ARCserve 2000 Utilities



**Recover Database:** Allows you to recover the BrightStor ARCserve 2000 database.



**Merge:** Allows you to merge information from BrightStor ARCserve 2000 media into the BrightStor ARCserve 2000 database.



**Scan:** Allows you to scan media for information on your backup sessions.



**Compare:** Allows you to compare the contents of media to the files on your machine.



**Count:** Allows you to count files and directories on a machine.



**Purge:** Allows you to delete files and directories from a machine.



**Copy:** Allows you to copy (or move) files and directories from one machine to another.

### BrightStor ARCserve 2000 Server Components

The following components work in the background to perform the workload for the BrightStor ARCserve 2000 Managers:



**BrightStor ARCserve 2000 Server Engines**—From the BrightStor ARCserve 2000 Server Admin on the Program Group, you can access the powerful BrightStor ARCserve 2000 components performing the background labor for the BrightStor ARCserve 2000 Managers.

The Server Admin contains the Job, Tape, and Database Engines. These engines process and monitor all backup or restore operations and update information about performance in BrightStor ARCserve 2000's activity logs and databases.



**Job Engine:** Processes your jobs at their designated date and time. The Job Engine scans the job queue for a job that is ready to run, then sends it to the appropriate handler.



**Tape Engine:** Responsible for communicating with and controlling your storage devices. The Tape Engine selects the device needed for a BrightStor ARCserve 2000 job.



**Database Engine:** The valuable information contained in the database can be conveniently stored, enabling you to run centralized reports, review job logs and manage device shares on all BrightStor ARCserve 2000 operations. The database information includes:

- Files, directories, drives, and machines that BrightStor ARCserve 2000 has backed up or copied.
- Job type, logs, and the final results, start times, and end times of jobs processed by BrightStor ARCserve 2000.
- Media used by BrightStor ARCserve 2000, such as its type, its name, the date it was first formatted, the date it expires, and the sessions on it.

### Quick Access to BrightStor ARCserve 2000's Main Functions

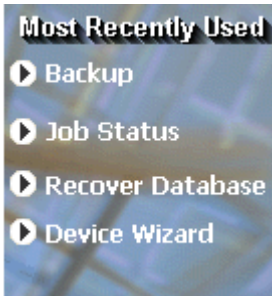
Launch the BrightStor ARCserve 2000 Manager by selecting *Quick Access* from the Home Page. From here you will submit your backup and restore jobs, manage your database, search reports, and so on. Launch the Backup, Restore, and Device Wizards by selecting *Wizards* from the Home Page.



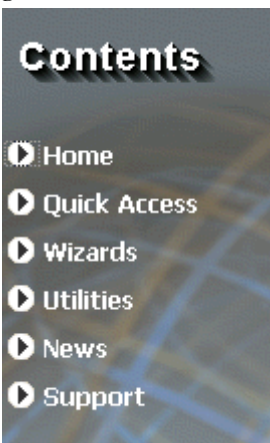
**Buddy Tip**—*BrightStor ARCserve 2000 enables you to customize — while the Quick Access screen is open, from the View menu you can see each BrightStor ARCserve 2000 function in a convenient toolbar, or save the current view.*

### Navigating Easily With BrightStor ARCserve 2000

The BrightStor ARCserve 2000 Manager keeps track of the pages you recently visited so that you can quickly return to them:



It's easy to access common BrightStor ARCserve 2000 *Utilities*, *News*, and *Support* from BrightStor ARCserve 2000 Contents:



## The Basic Concepts and Installation Tips

The Support screen allows quick access to these support tools:

- **BrightStor ARCserve 2000 Activity Log** – This tool provides information on the jobs that BrightStor ARCserve 2000 is currently running.
- **Certified Device List** – This tool links you to an up-to-date listing of all devices currently supported by BrightStor ARCserve 2000.
- **E-Support** – The E-Support Page renders the latest news and information from Technical Support: white papers, how-to documents, troubleshooting guides, patches, and more.
- **E-News** – The bi-weekly newsletter *Storage Enews* provides helpful technical information contained in service packs, hints and tips, product updates/upgrades, and more.

Each Manager window gives you detailed information about your BrightStor ARCserve 2000 job:

The screenshot shows the BrightStor ARCserve 2000 Manager window. The interface is divided into several panes. On the left is a 'Contents' pane with a tree view containing 'Home', 'Quick Access', 'Wizards', 'Utilities', 'News', and 'Support'. Below this is a 'Most Recently Used' section with 'Job Status' and 'Backup'. The main area is split into a 'Source' pane (showing a tree of local disks and system components) and a 'Destination' pane (showing a table of local disks). A 'Properties' pane on the right shows details for the selected 'My Computer' object, including 'Additional Information' like CPU type and memory. Annotations with arrows point to these panes: 'Use the tree in the left pane to navigate.' points to the Contents pane; 'Select individual objects and display detailed information on your selection.' points to the Source pane; 'The Properties pane displays additional information on the selected object.' points to the Properties pane; and 'Select this button to see only the list in the right pane, only the properties view, or both.' points to a button in the top toolbar.

Use the tree in the left pane to navigate.

Select individual objects and display detailed information on your selection.

The Properties pane displays additional information on the selected object.

Select this button to see only the list in the right pane, only the properties view, or both.



### Considerations Before You Install BrightStor ARCserve 2000

BrightStor ARCserve 2000 installs effortlessly with the use of an intuitive Setup Wizard. Before you install the software, it is recommended that you review the following checklist:

- Connect your storage devices to the machine designated as your BrightStor ARCserve 2000 server.
- Make sure that this machine has at least one SCSI controller or adapter supported by both Windows 2000 and BrightStor ARCserve 2000. (BrightStor ARCserve 2000 can support up to eight installed SCSI controllers.)
- Ensure that you have at least Windows 2000 Administrator rights to the Windows 2000 machine on which you are installing either the BrightStor ARCserve 2000 Server or Manager component.
- For BrightStor ARCserve Backup for Small Business Server, ensure that you have the SQL authentication login ID or Microsoft Exchange account information.



**Buddy Tip**—To make sure that your hardware devices are compatible, and that BrightStor ARCserve 2000 can communicate with your system, you can obtain the latest Certified Device List from our web site: [esupport.ca.com/public/storage/ascdls.asp](http://esupport.ca.com/public/storage/ascdls.asp).

### Installing BrightStor ARCserve 2000

To install BrightStor ARCserve 2000:

1. Insert the BrightStor ARCserve 2000 CD to launch the Product Explorer. BrightStor ARCserve 2000 offers a brief component description at the bottom of the screen. Additional information about BrightStor ARCserve 2000 is available using the *Product Information* button.
2. You are offered a choice of installations to run:
  - Standard Setup: This option performs a local setup.
  - Remote Setup: This option installs via the network. You must have the domain/username and password to use this option.

Choose the installation type and click the *Install* button.



**Buddy Tip**—For the purpose of the examples described in this Guide, we will choose a Standard Setup and a Complete Setup Type.

## The Basic Concepts and Installation Tips

3. The Wizard prompts you to choose a setup type. For BrightStor ARCserve Backup for Small Business Server, the *Complete* setup type, the default, installs all of the options. You can select the *Custom* setup type to remove the Backup Agent for Open Files from the installation.
4. Follow the prompts presented by the Setup Wizard to complete the installation process.



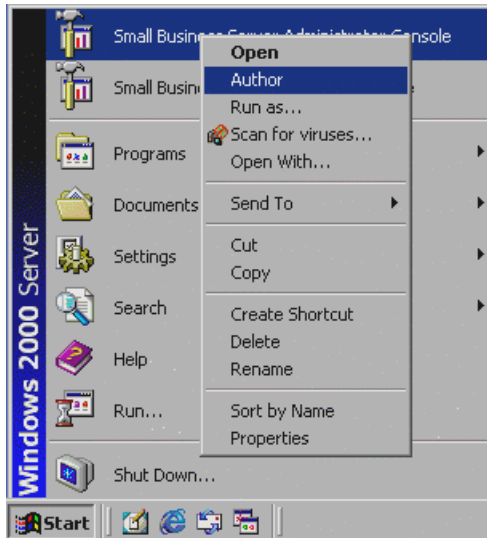
**Buddy Tip**—We recommend that you allow the Setup program to automatically start all required services on every system boot-up when prompted.

5. When prompted, reboot your system.

### Integrate with the Microsoft SBS Management Console

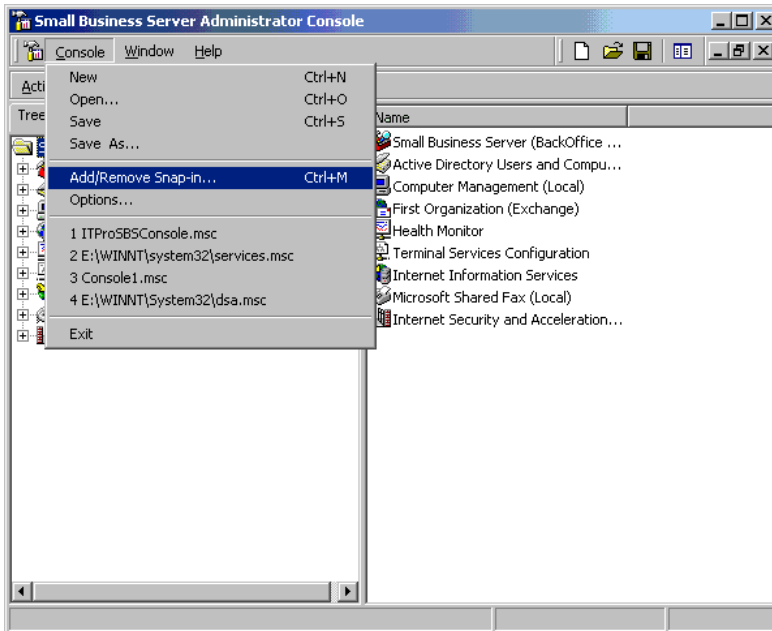
BrightStor ARCserve Backup for Small Business Server's Administrator Console integrates seamlessly with the Microsoft SBS Management Console. You can integrate BrightStor ARCserve Backup for Small Business Server with the Microsoft Management Console once you have rebooted your system after completing the installation.

1. Click the *Start* button and right-click the *Small Business Server Administrator Console* item on the Start menu.

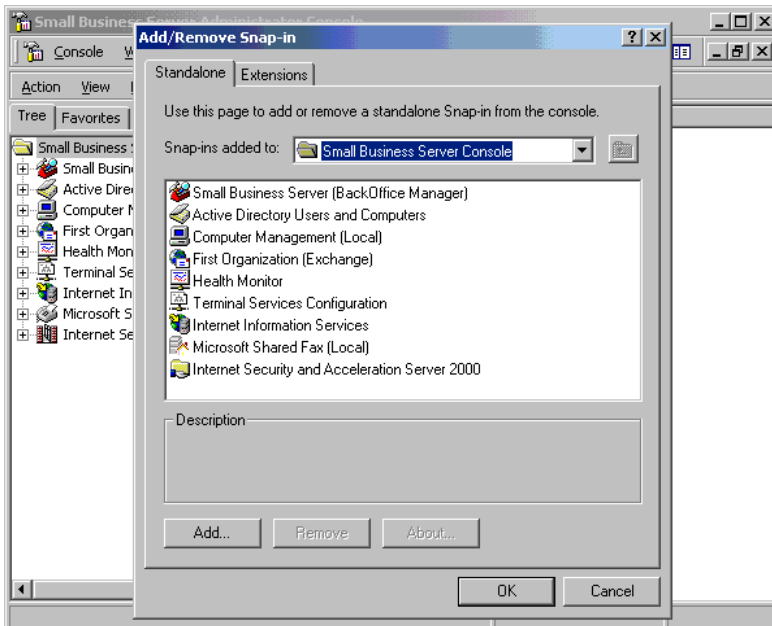


## The Basic Concepts and Installation Tips

2. Select *Author* from the pop-up menu. The Small Business Administrator Console appears. Select *Add/Remove Snap-in* from the Console menu.

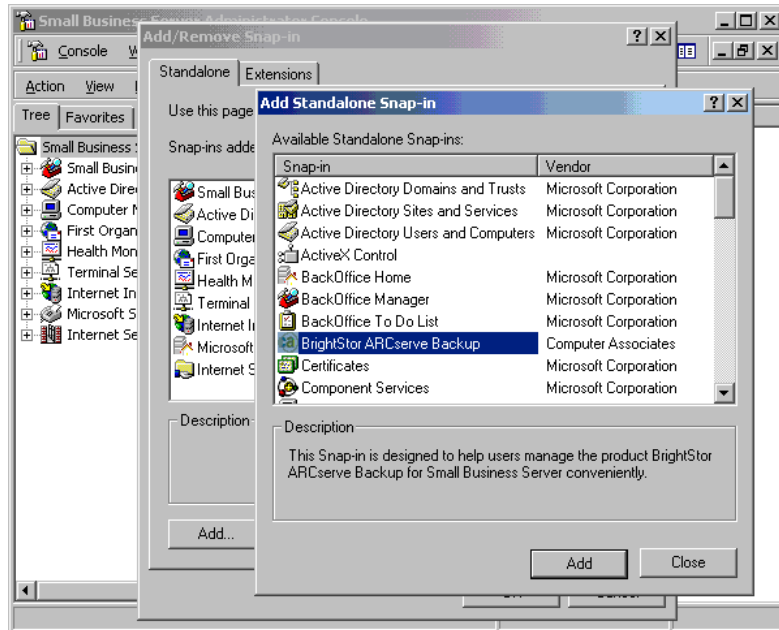


3. The Add/Remove Snap-in dialog appears, with the Standalone tab selected by default. Click *Add*.



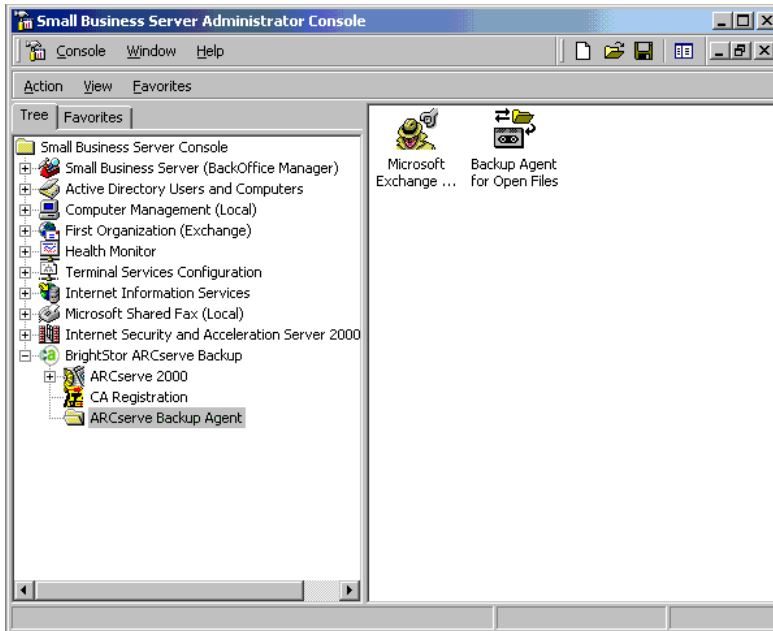
## The Basic Concepts and Installation Tips

3. The Add Standalone Snap-in dialog appears. Select *BrightStor ARCserve Backup* from the list of available snap-ins, and click *Add*.



4. You are prompted to save the snap-in. Click *Yes*.

5. The Small Business Server Administrator Console appears again, with BrightStor ARCserve Backup listed in the Tree.



### What's Next?

Now that you've learned more about BrightStor ARCserve 2000 and completed the installation, BrightStor ARCserve 2000 is poised and ready to help you perform your data management tasks. The next chapters guide you through BrightStor ARCserve 2000's basic functions and offer suggestions on how to use your new software.

You will soon see how the wide scope of BrightStor ARCserve 2000's features combines with its ease of use to make BrightStor ARCserve 2000 an indispensable part of your organization.

## Chapter 3

# Backing IT Up!

### The ABC's of Using BrightStor ARCserve 2000

**R**emember the last time your office building temporarily lost power? It was at the end of the business quarter, and your company's quarterly reports and bills needed to go out the door. After spending nights and a weekend desperately reconstructing the electronic files, you promised yourself that this would never happen again — your data would not be jeopardized due to insufficient backup means. By efficiently and dependably protecting and retrieving files, BrightStor ARCserve 2000 helps you keep that promise.

This chapter introduces you to BrightStor ARCserve 2000's essentials — the navigation tools you use to perform a backup of your data, and then restore the files that you backed up.



**Buddy Tip**— *Before using BrightStor ARCserve 2000 for the first time, it's a good idea to pre-plan your backup requirements. Some of the points you may want to consider are:*

- *How much data do you want to back up?*
  - *what is the current disk capacity in your environment?*
  - *what is the server/data growth you anticipate over the next year?*
- *How do you want to manage the media you are using for backup?*
  - *will off-site storage be practical?*
  - *do you want to migrate unused data to additional storage media?*

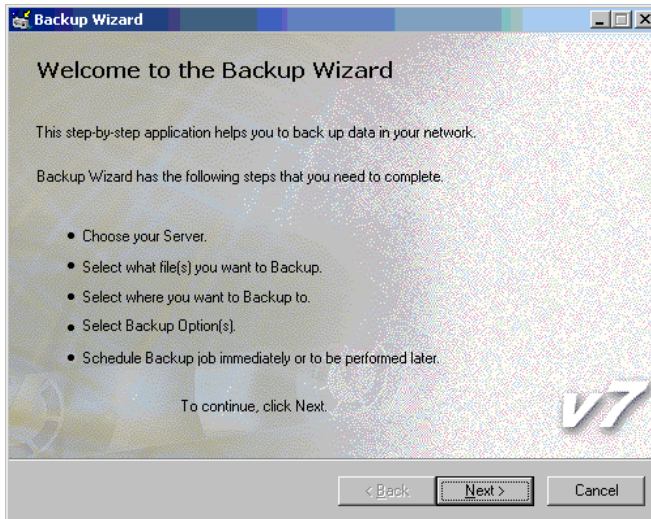
### Follow the Wizards

With BrightStor ARCserve 2000, achieving quick and easy backups and restores is foolproof — the BrightStor ARCserve 2000 Wizards guide you smoothly through each step. In the following tour, you'll back up and restore files from your local machine.

## The ABC's of Using BrightStor ARCserve 2000

To use the Backup Wizard:

1. Select Wizards from the BrightStor ARCserve 2000 Home Page.
2. Select the Backup Wizard. The Backup Wizard Welcome screen appears:



3. Click Next. You can now choose the server you want to back up.
4. In the next screen, enter the Server name.

---

NOTE: If you are not using your local machine, you will be required to enter your user name and password.

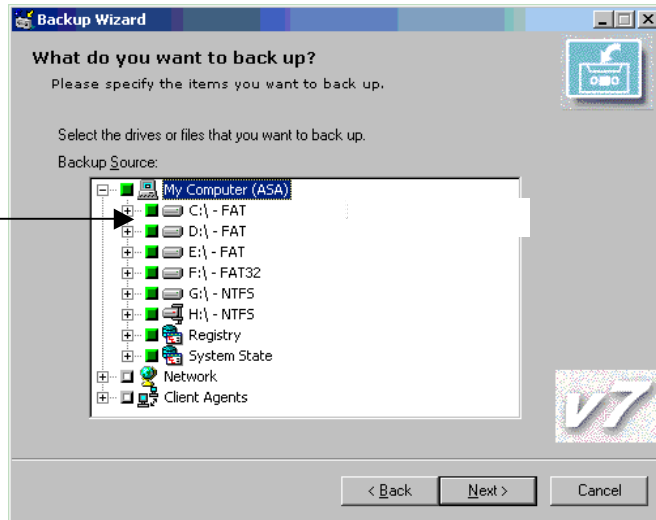
---



## The ABC's of Using BrightStor ARCserve 2000

- Now you can let BrightStor ARCserve 2000 know the specific files that you plan to back up.

Click the box next to “My Computer” and it will appear solid green — that is all you do to target all the drives, directories, and files on your machine for BrightStor ARCserve 2000 to back up!



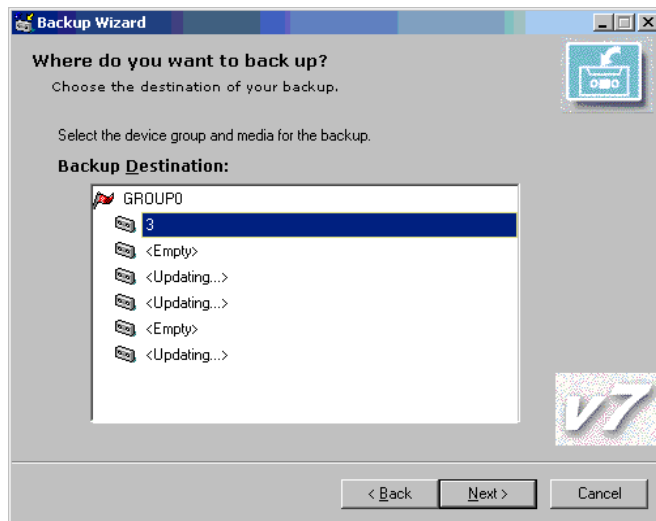
The Browser displays the machine tree from which you can select domains, machines, volumes (drives), shares, directories, and files for backup.

- To back up your machine, highlight “My Computer”. Then click Next.



**Buddy Tip**—If you are performing a backup during peak hours of network traffic, it is recommended that you back up drives that are not in use.

- The Backup Wizard now asks you to choose the backup destination by selecting the media for the backup.

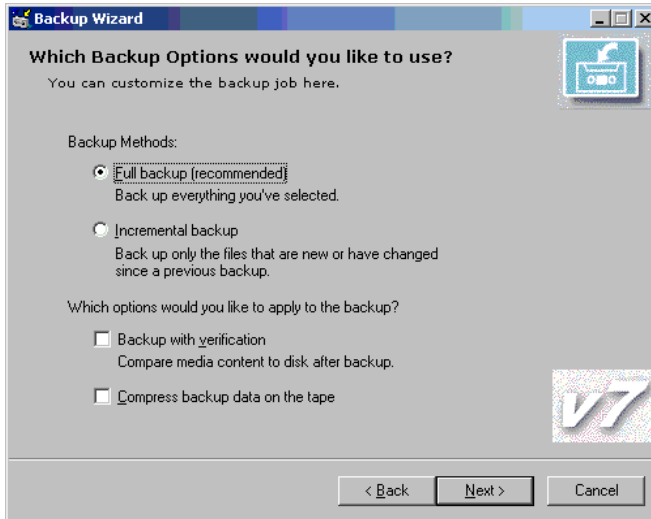




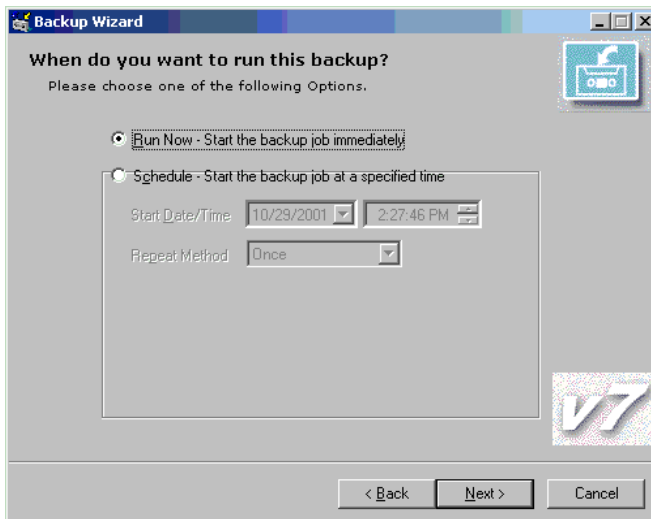


**Buddy Tip**— Make sure that the media you use is completely **blank**. Choose a new tape or select the *Quick Erase Plus* method to format media.

- The Backup Options screen appears. BrightStor ARCserve 2000 allows you to customize the backup job by choosing the extent of the files that are to be backed up.  
Choose a Full backup as the Backup Method, and click Next.



- You can decide to run the backup job immediately, or schedule it for a later date and time.  
Select Run Now to start the job and click Next.





**Buddy Tip**—*BrightStor ARCserve 2000 allows you to establish a schedule so that your backup repeats at regular intervals, allowing you to be miles away when BrightStor ARCserve 2000 is managing your data. When you return, you can check out the Activity Log and review the details of the backup.*

10. In the screen that follows, enter a description for the job that you just created.

**Backup Wizard is almost Complete**

Please enter a Backup Description:

Backup (ASA) to 3

☒ Start Job Monitor

**Backup Wizard Summary**

Source: ASA  
Destination: 3  
Options: Full Backup  
Schedule: Run Now

Please verify that the Backup Wizard summary is correct.  
If not correct, please use the Back button to change the options.

To submit the Backup job, Click Finish.

< Back Finish Cancel

Before you click Finish to submit the job, click the check box to start the Job Monitor. This launches the Job Status Window, from which you can watch the progress of your job!

**Job Monitor**

Job Type: Backup

Status: Connect to media...

Source

Filename Size (bytes)

Destination

Totals

Total Files	MB Processed	Elapsed Time
0	0.00	15s

MB/Minute

Close Abort

From this window you can see the server's job queue, from where you can right-click on the job to add, modify, reschedule, or delete it.

You and BrightStor ARCserve 2000 have just completed performing a basic and essential routine — you have prepared to back up your entire computer!

Now that you have accomplished your first backup, you can see first-hand how easy it is to use BrightStor ARCserve 2000 to accomplish your most important task. It's now time to go to the second part of the operation — you're ready to restore the files that you have just backed up.

To use the Restore Wizard:

Select the Restore Wizard from the Wizards screen and click Next.

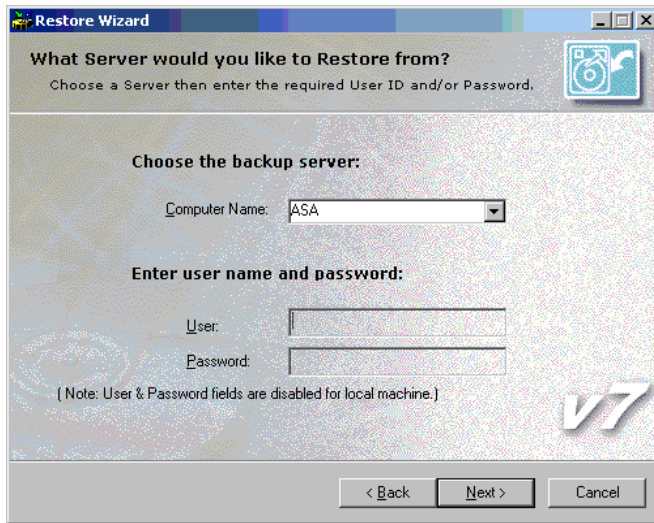


1. Similar to the information you entered with the Backup Wizard, enter the server, and click Next.

---

NOTE: If you are not using your local machine, you will be required to enter your user name and password.

---



**Restore Wizard**

**What Server would you like to Restore from?**  
Choose a Server then enter the required User ID and/or Password.

**Choose the backup server:**

Computer Name: ASA

**Enter user name and password:**

User:

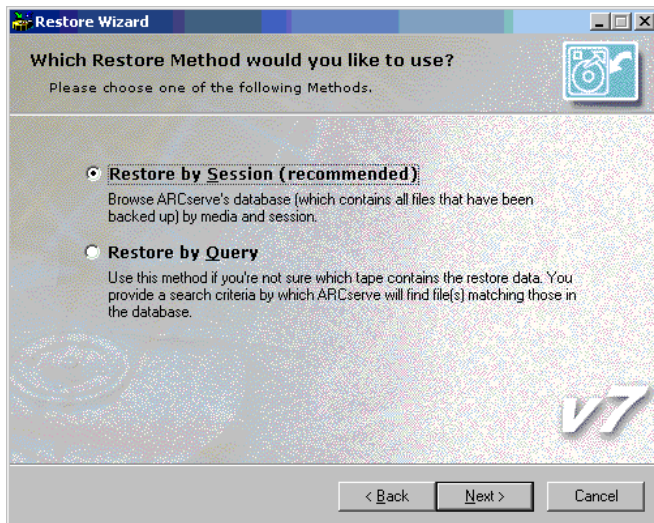
Password:

(Note: User & Password fields are disabled for local machine.)

< Back   Next >   Cancel

v7

2. In this tour, you will perform a Restore by Session by selecting the media that contains your backup. BrightStor ARCserve 2000 allows you to browse the database to find the backup session it just performed.



**Restore Wizard**

**Which Restore Method would you like to use?**  
Please choose one of the following Methods.

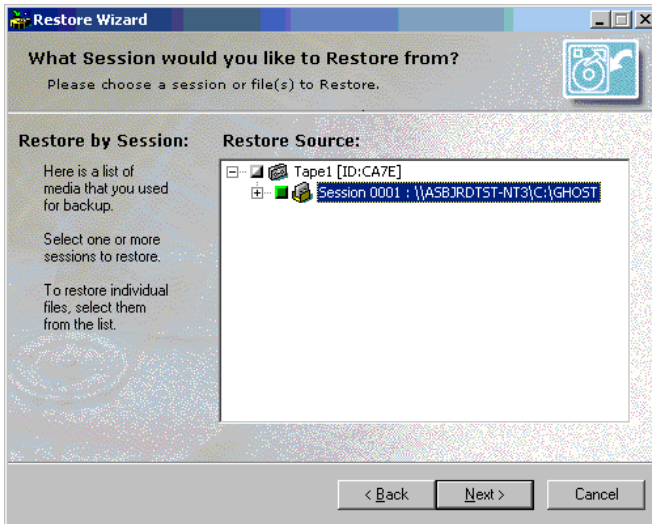
☒ **Restore by Session (recommended)**  
Browse ARCserve's database (which contains all files that have been backed up) by media and session.

☐ **Restore by Query**  
Use this method if you're not sure which tape contains the restore data. You provide a search criteria by which ARCserve will find file(s) matching those in the database.

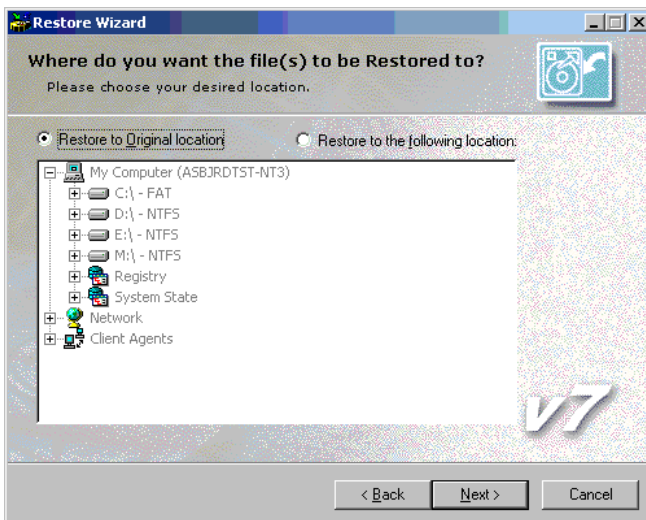
< Back   Next >   Cancel

v7

3. The Restore Wizard asks for the session that you need to restore.

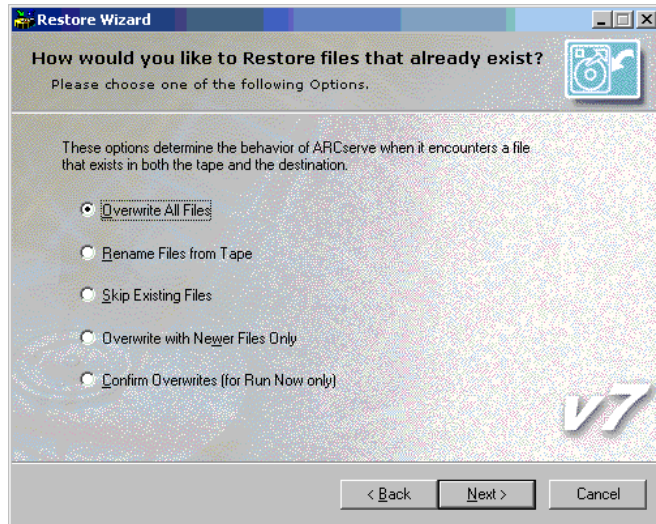


4. To compare the restored data to the original, restore the files to a new location so that you can make a comparison. (This is not a necessary procedure, but one that demonstrates that BrightStor ARCserve 2000 has backed up and restored everything on your computer.) In Windows Explorer, create the folder "Restore Test". In the next Wizard screen, select the destination *Restore to the following location*, highlight "Restore Test" and click Next.

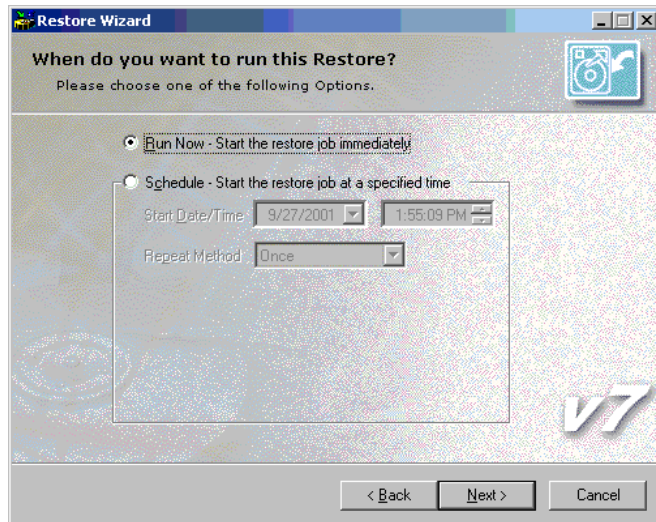


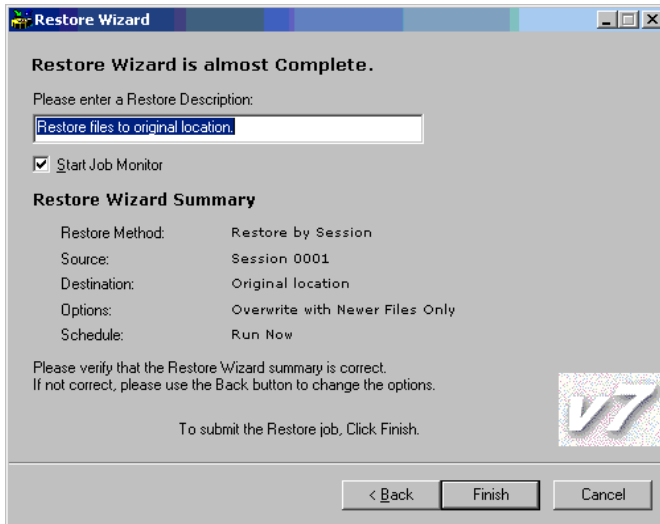
5. BrightStor ARCserve 2000 now prompts you to make a choice about restoring files that already exist. Choose the option to *Overwrite All Files*.





6. Click Next. The screen that follows allows you to schedule a Restore session, just as you previously scheduled a backup session. Choose to Run Now and click Next. BrightStor ARCserve 2000 will restore the files to the path (\Restore Test) you selected.





7. Click Finish to have BrightStor ARCserve 2000 submit your restore job.
8. Now it's time to check out the status of your restore session. Because the Job Monitor started by default when you submitted the job, you can see how BrightStor ARCserve 2000 is progressing in real-time.
9. To further confirm BrightStor ARCserve 2000's ability to perform a perfect backup and restore, you can now compare the files that appear under "Restore Test" to the ones on your original directory.

### What's Next?

As you have just seen, backing up files from a local machine and then restoring them is really simple. But this is only the beginning of BrightStor ARCserve 2000's range of powerful and easy to use functions.

In the following pages, you will learn how to expand your knowledge and use of BrightStor ARCserve 2000's features — by managing multiple servers from a remote machine.

# Manage IT!

## Put BrightStor ARCserve 2000 to Work Throughout the Enterprise

**Y**ou've seen how quick and easy it is to select files for a BrightStor ARCserve 2000 backup of your machine. Now you're ready to extend your expertise by backing up and managing a remote server that's running on a different operating system.

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NOTE: This chapter describes Windows 95/98 functions available in the BrightStor ARCserve 2000 Advanced, Workgroup, and Small Business Server Editions.

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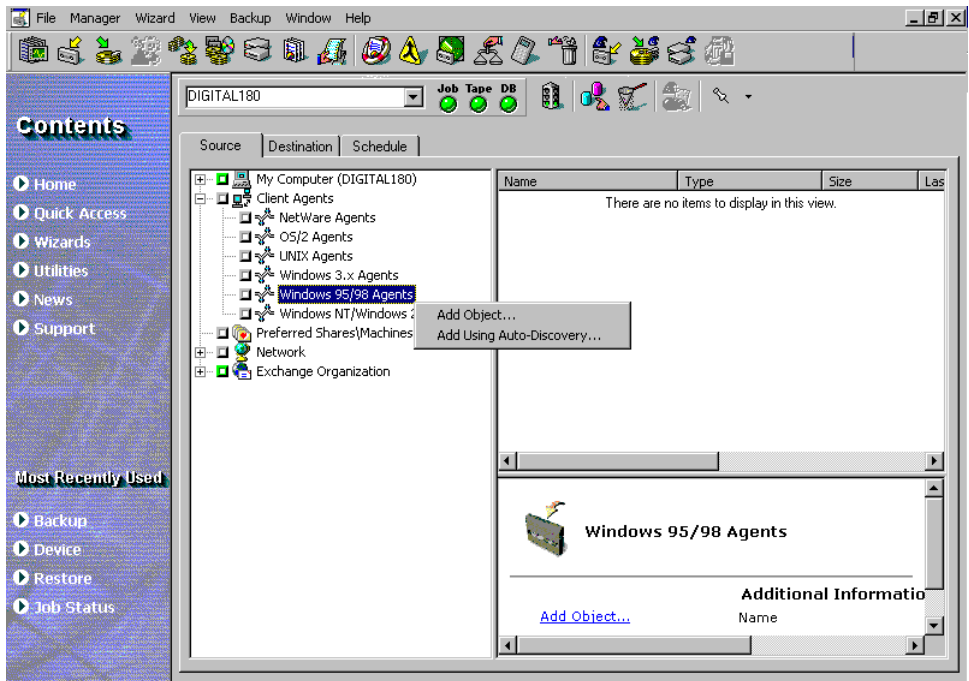
### Backing Up a Remote Server

Before you can back up a remote machine on a different platform, you need to have BrightStor ARCserve 2000 installed and running on your server and you must first install the appropriate agent (in this case, Windows 95 Agent) on that remote machine. In this scenario, you will back up a server that is running Windows 95.

1. From the Backup Manager window, highlight the Windows 95/98 Agent, and right-click:

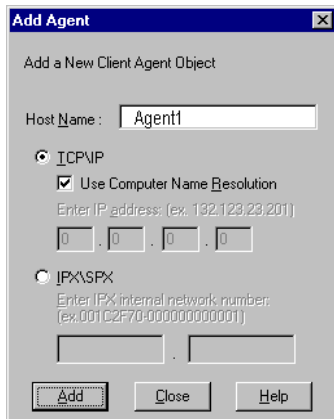


## Put BrightStor ARCserve 2000 to Work Throughout the Enterprise



**Buddy Tip**—*Alternately, you can use Auto Discovery to find machines that have the selected agents installed.*

2. Select *Add Object* from the drop-down menu. The Add Agent dialog box appears:

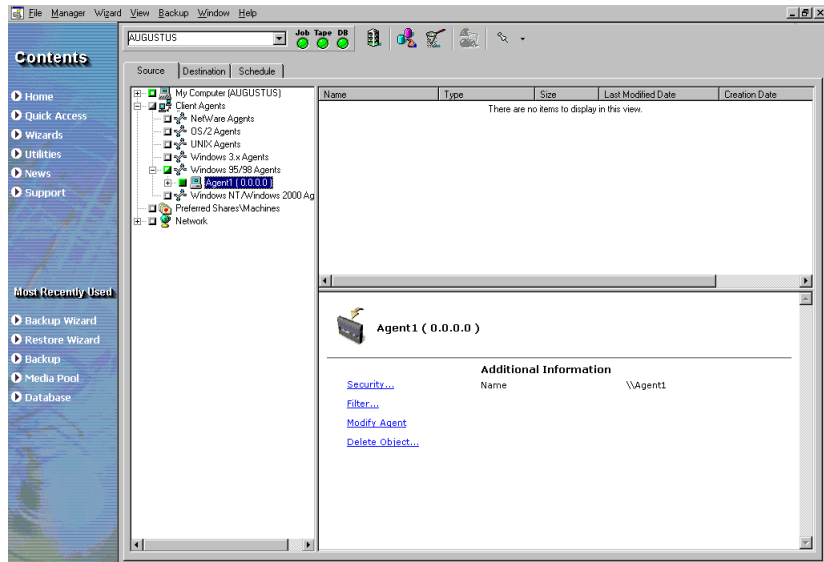


3. In this example in the *Host Name* field, “Agent1” is entered for the remote machine. You can enter an appropriate name of your choice. Click Add to include the remote server for backup.



**Buddy Tip**—BrightStor ARCserve 2000 enables the backup of multiple servers to be treated as one job. If you choose this method, BrightStor ARCserve 2000 automatically submits the tasks in the job queue as one job and backs up the servers one after the other. Or, you can have BrightStor ARCserve 2000 back up each machine as a separate job by clicking the Schedule tab and specifying when you want each job to run.

4. Select the agent.



Click on the + to the left of the remote machine.

The Security and Agent Information dialog box opens, asking you for security and agent information for the machine.

When you supply this information, you are entitled to the rights to browse the machine and perform a backup.


5. Choose the *Source* and *Destination* for each machine that you want to include in the backup.

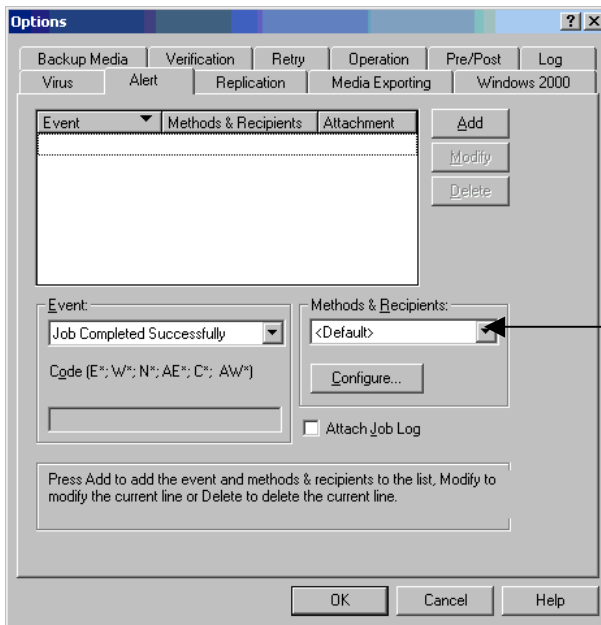
When you have finished adding the machines, but before you click Run, it's time to set up an Alert for notification after the job runs.

## Setting Up an Alert

You can use Alert as part of BrightStor ARCserve 2000's notification system to transmit messages to one person or groups of people anywhere you designate. It's possible to send Alerts about BrightStor ARCserve 2000's performance in different ways: through e-mail, broadcast, pager, SNMP, printer, and Lotus Notes. In the following scenario, you'll configure Alert to broadcast a message when the backup successfully completes.

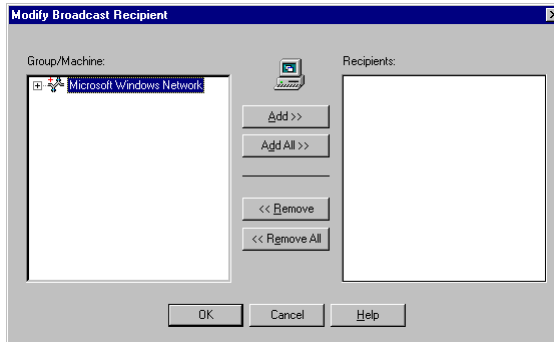
To start Alert:

1.  From the Backup Manager window, click the Options button and select the Alert tab.



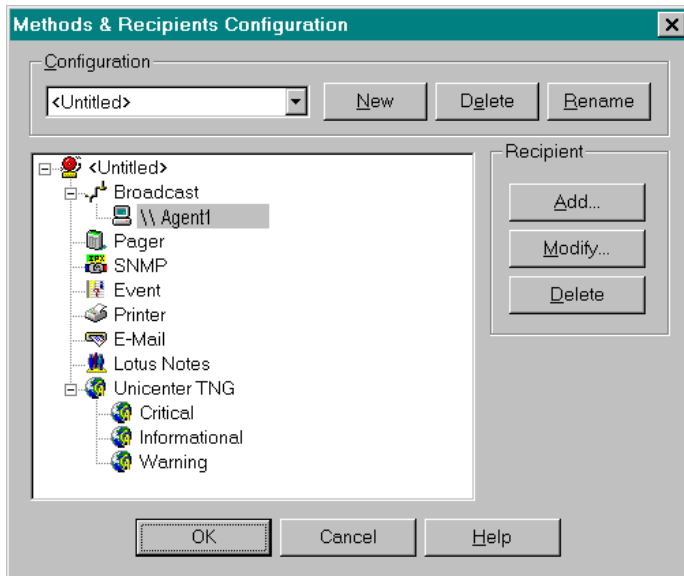
2. Click *Configure* to determine the transmission method. Highlight the Alert method; in this case select *Broadcast*, and click Add. The following screen launches:

## Put BrightStor ARCserve 2000 to Work Throughout the Enterprise



3. From the Modify Broadcast Recipient dialog box, select your machine from the network and click Add to the Recipients box.

Click OK.



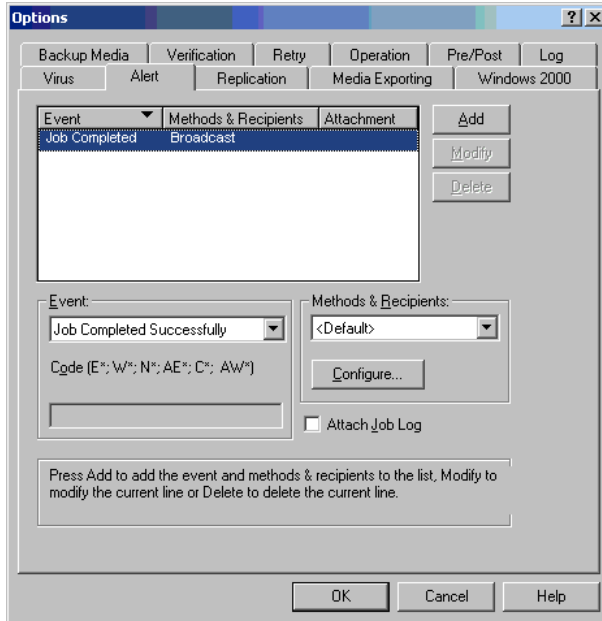
4. To save the configuration, click OK and enter the name of the configuration you selected. In this instance, enter the name "Broadcast".

Click OK to save the configuration.

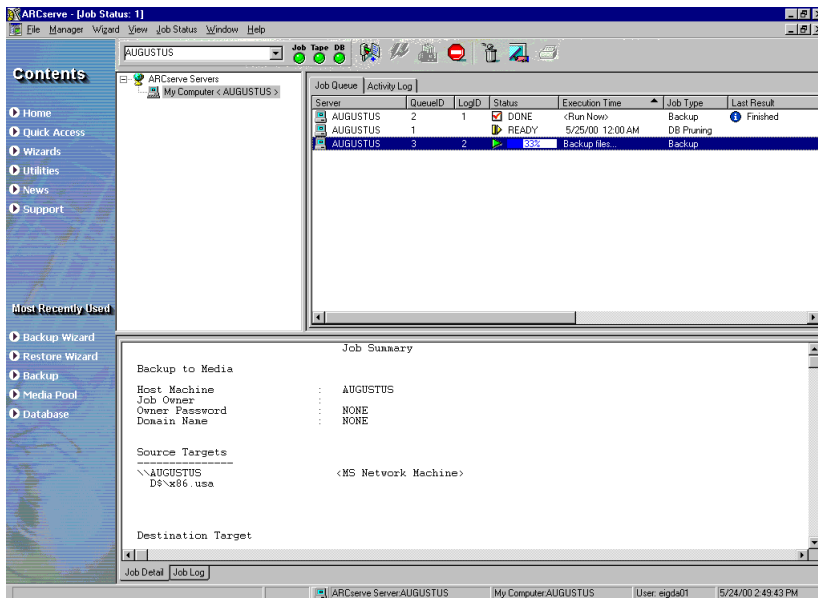
5. Select an Event from the Event list box and click Add.

## Put BrightStor ARCserve 2000 to Work Throughout the Enterprise

The name of the Alert configuration, the event, and the method appear:

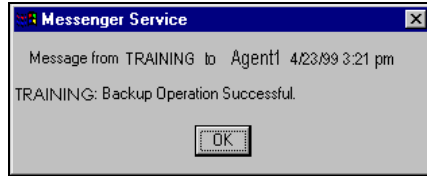


6.  Now that you have set up Alert, you can proceed with your backup. Click OK and then click Run to submit your job:



## Put BrightStor ARCserve 2000 to Work Throughout the Enterprise

- When the job completes, Alert will let you know:

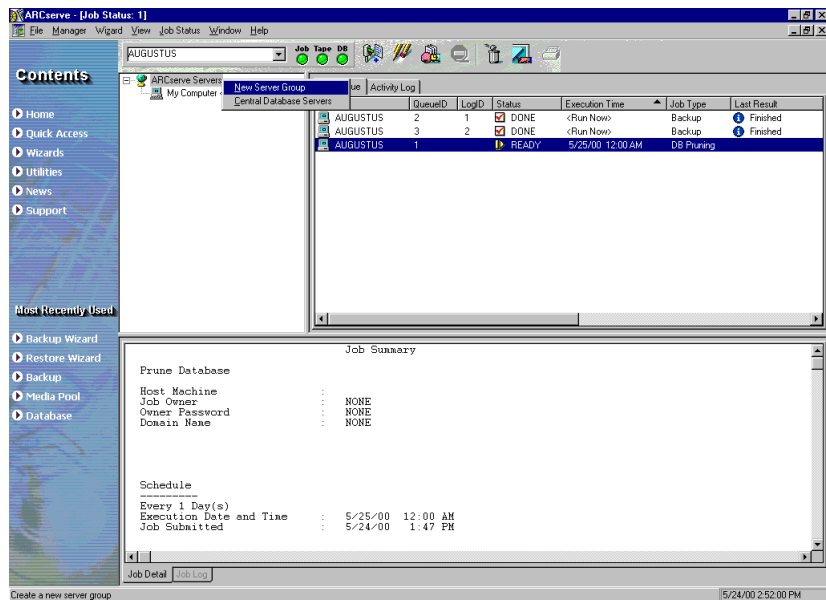


### Enabling Centralized Management

One of BrightStor ARCserve 2000's major benefits is that you can centrally monitor and manage backups and restores on remote machines.

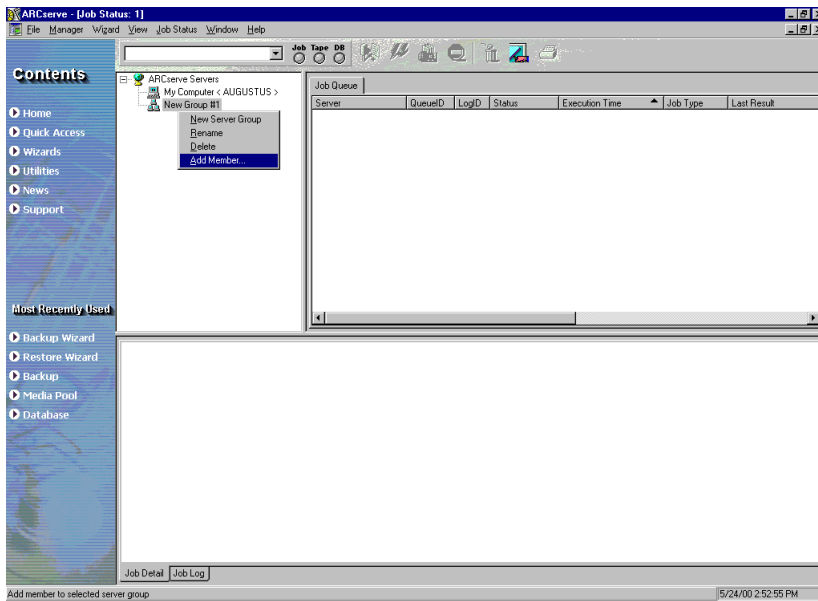
Initially, when you open the Job Status Manager window, you can see only your machine. To add a remote server that you want to monitor, you must first create a New Server Group.

- From the Job Status Manager window, select *ARCserve Servers* and right-click. From the drop-down menu select *New Server Group*.

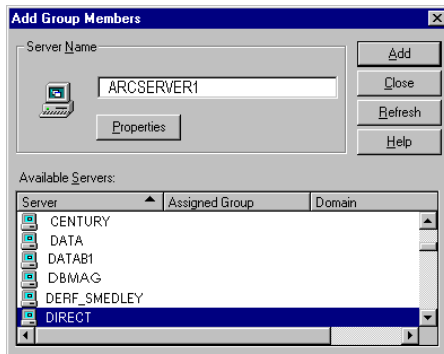


- Enter a name for the new group in the text field. In this instance, the new group is called "Remote1".
- Now you can add a member or members to the new server group you just created by highlighting "Remote1" and right-clicking *Add Members*.

## Put BrightStor ARCserve 2000 to Work Throughout the Enterprise



- The Add Group Members dialog box appears.  
Select a machine from this list and click Add or enter the name of the remote machine you want to add to the “Remote1” group:



- Enter the password and username for the computer when it prompts you.

In this instance, the server “ARCSERVER1” is added as a new member of the group “Remote1”. You can add the server name of your choice.



**Buddy Tip**—You must have Administrator or equal rights to the remote machine in order to monitor that machine or to manage its jobs from the Job Status window.

- When the job starts, all machines that you have rights to appear in the Job Status window. They are listed under “Remote1”.



**Buddy Tip**—*From the Job Status Window, you can select a job and control it by right-clicking. Then you can reschedule, modify, delete, re-start a completed job, or stop a job that is now running.*

### What's Next?

The following chapter discusses how to maximize the use of your hardware devices and media to further enhance BrightStor ARCserve 2000's performance.





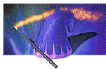
## Chapter 5

# Getting BrightStor ARCserve 2000 In Gear!

### Device Management

**B**efore you embark on a long car trip, you're sure to take time to check the tires and the oil filter to ensure a safe journey. Similarly, BrightStor ARCserve 2000's effective media management provides valuable preparation for reliable backup and recovery performance. Media management consists of software and processes for the use of the software. The type of media can be magnetic tape, optical platters or most types of SCSI attached removable storage. Because functions such as tracking files to specific storage media are important requirements of your organization's daily production routine, effective media management requires knowing the contents and location of all removable media (for example, magnetic tape). BrightStor ARCserve 2000 allows you to track your media through the Device Wizard or the Device Manager.

### Use the Device Wizard



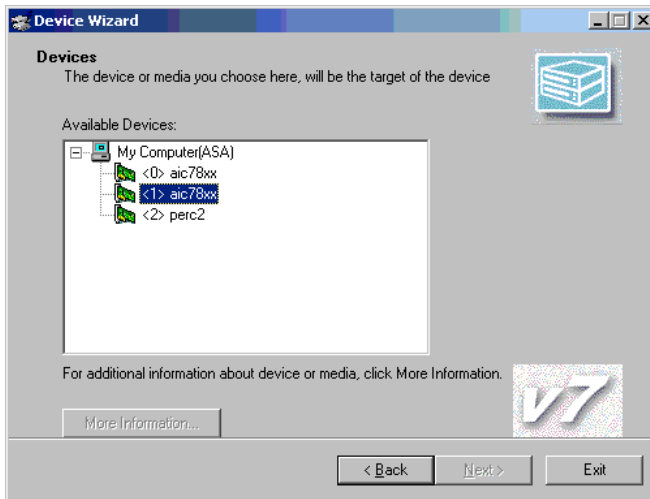
You can launch the Device Wizard from the Wizards button on the BrightStor ARCserve 2000 Home Page.



## Device Management

The Device Wizard helps you see at a glance all the devices that are connected to your machine.

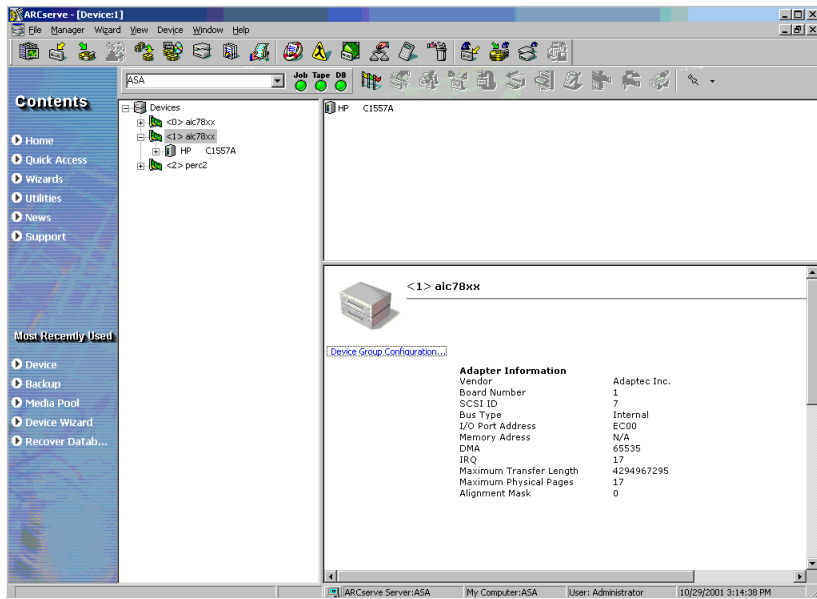
1. Highlight an adapter, device, media, or changer. Select from among the available functions on the toolbar: *Format*, *Erase*, *Retention*, *Compression*, *Eject*, or *Rebuild*.
2. To display device information about the media or the device itself, highlight a tape device.



## Device Management



If you are using the Device Manager, the information about the device appears in the right lower pane of the Device Manager window, similar to the one shown below:



**Buddy Tip**—If you have more than one storage device connected to your network machine, BrightStor ARCserve 2000 lets you separate them into two or more groups. In this way, you can have a group perform a backup, while another group processes a restore. This is known as “parallel streaming”.

If you have several devices in a group and your job spans more than one media, the Device Manager can automatically span the tapes for you. You can then submit large backup jobs to BrightStor ARCserve 2000, and automatically span multiple media until the job is complete.


Let’s assume that you now have two media groups: “GROUP1”(one storage device) and “GROUP2”(two storage devices).

- Submit a large backup job that requires more than one media.
- Insert blank (formatted) media into each GROUP2 drive.
- BrightStor ARCserve 2000 automates the media spanning for you.

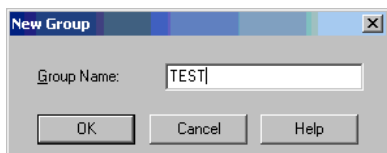


**Buddy Tip**—If you used GROUP1 for the same backup job without using BrightStor ARCserve 2000 to span the media, you would have had to change the media manually.

## Device Management

1.  Click the Device Group Configuration button to open the Device Group Configuration dialog box and create a new group.

Enter the name “TEST” for the group and click OK.



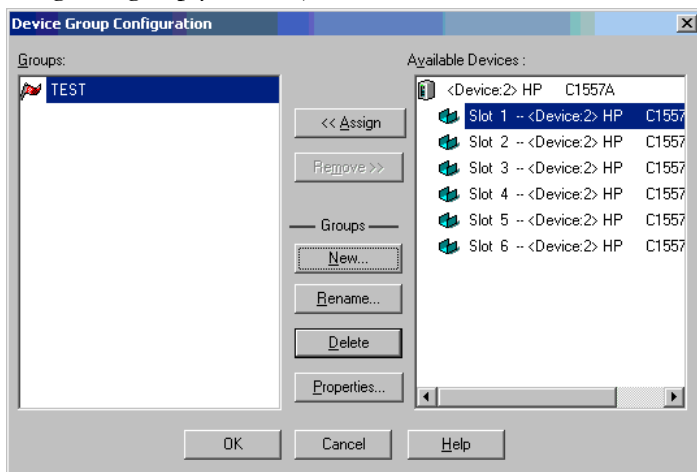
(Group0 appears by default and the Device will be under Group0.)

---

NOTE: You can rename Group0.

---

2. Assign the group you have just named to the available device.



3. Click *Assign* and then click OK.

## What's Next?

Arranging your media to work continuously and efficiently helps achieve a high level of storage management. To further control media, read about Media Pools, BrightStor ARCserve 2000's way of organizing media, in the following chapter.

The next chapter also discusses using BrightStor ARCserve 2000's pre-configured backup schemes to accommodate your specific requirements. At the same time, you'll establish permanent and automatic methods and routines that are maintenance-free.

## Chapter 6

# Back Up Automatically!

## Put BrightStor ARCserve 2000's Tape Rotation To Work

You have already enjoyed the benefits of using the Backup Wizard to perform a simple BrightStor ARCserve 2000 backup. Now you are ready to take advantage of BrightStor ARCserve 2000's built-in scheme that lets you set up a backup scheme that, once established, repeatedly performs without any further intervention needed.

For the purposes of this tour, we are assuming that your company has retail outlets that conduct business five days a week. The most convenient time for you to schedule backups is after business hours, when the backup processing will not take up valuable network time.

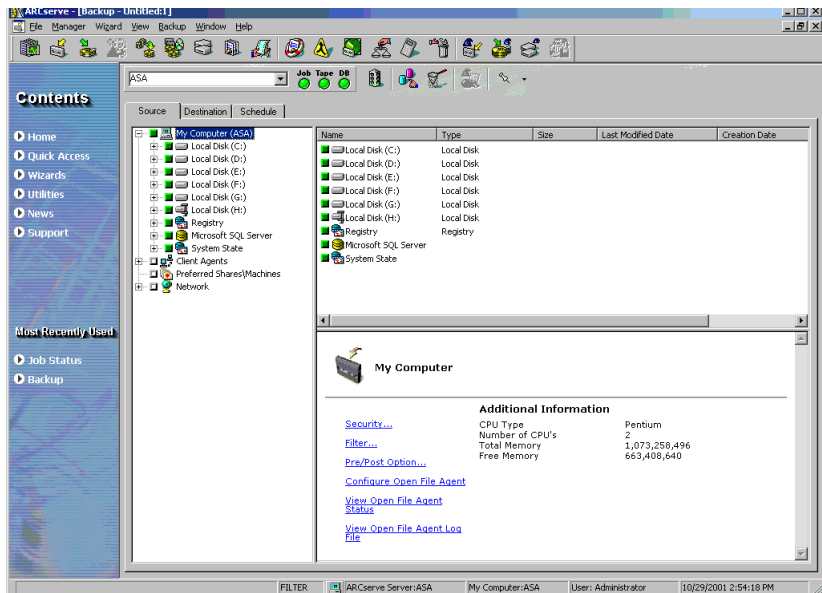
## Create Repeating Backups Easily



To access the Backup Manager:

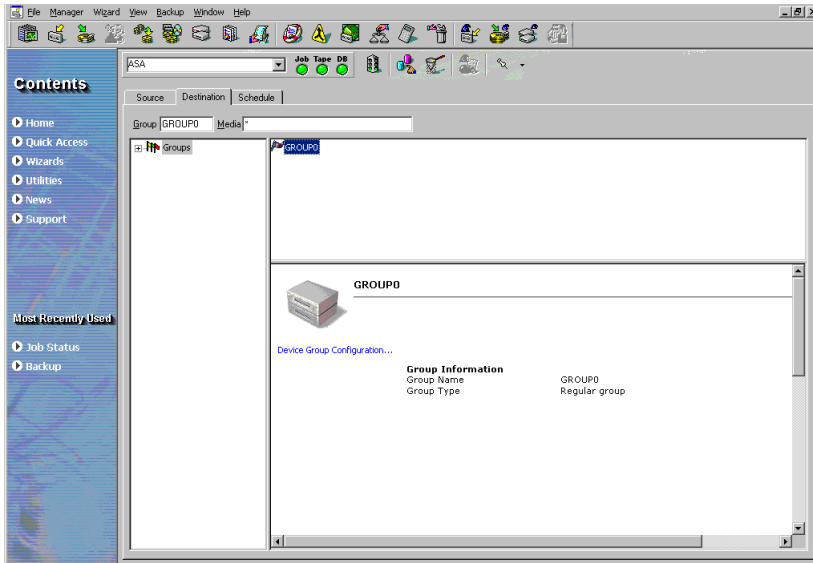
1. From the BrightStor ARCserve 2000 Home Page, select *Quick Access*. Then select Backup Manager. The following window appears:

From the Source tab, select "My Computer" to select all the files on your machine.



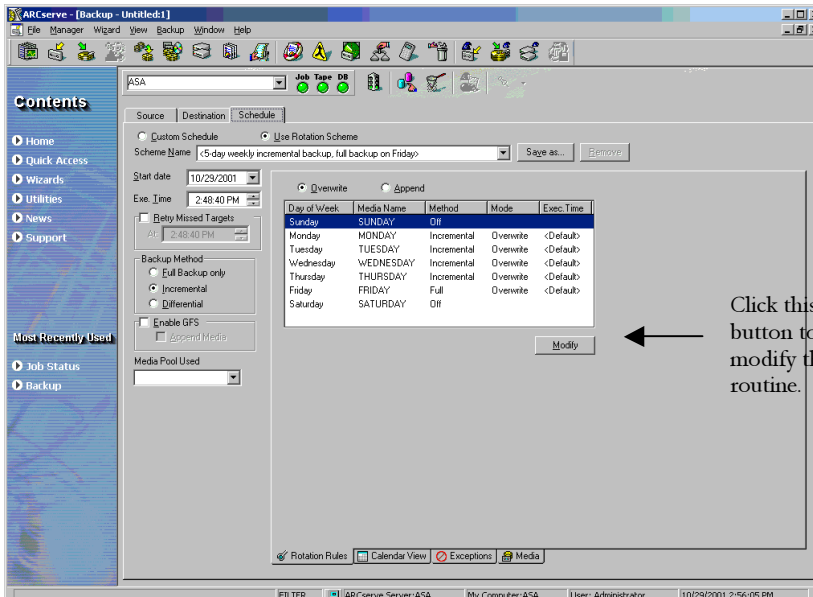
## Put BrightStor ARCserve 2000's Tape Rotation To Work

Next, click the Destination tab to choose the group that you're going to use for this backup:



2. After you've selected the tape and clicked the Schedule tab, BrightStor ARCserve 2000 gives you a choice of pre-designed backup schemes. You can use any of the pre-determined configurations, but in this case, select Use Rotation Scheme and then select a full backup, using the 5-day backup schedule:

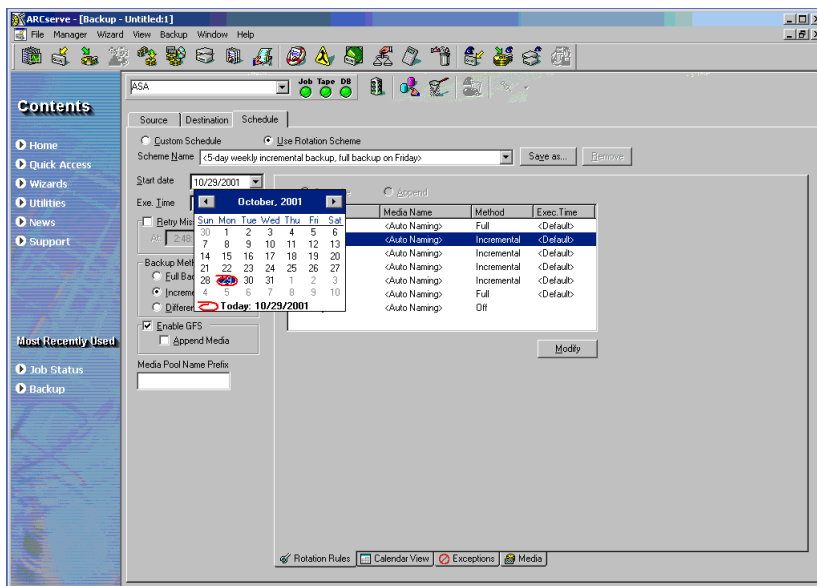
Choose a  
backup time  
(after hours)  
that's  
convenient  
for your  
business.



Click this  
button to  
modify the  
routine.

## Put BrightStor ARCserve 2000's Tape Rotation To Work

You can easily modify this scheme by highlighting the day you want to change, and then clicking *Modify* to launch the Configuration dialog box. In this instance, you're changing the routine because you want to initiate a full backup on Saturday, which was previously not selected.



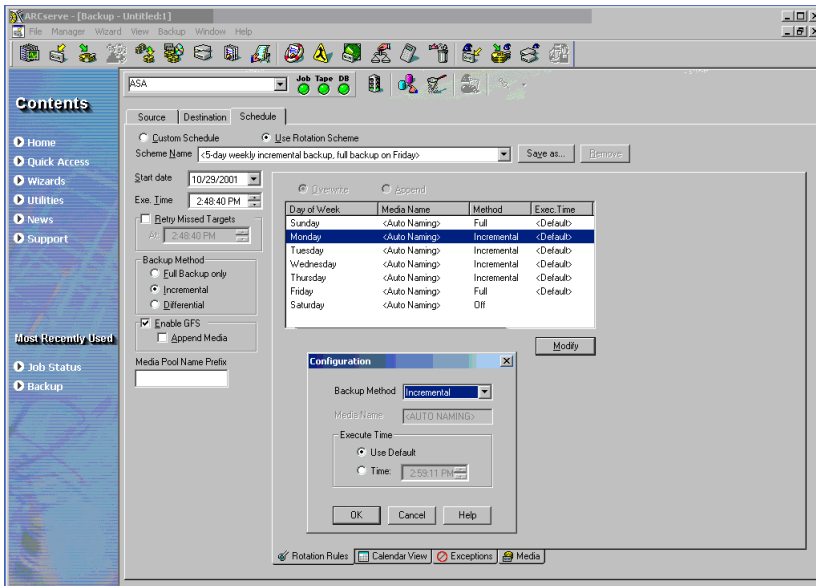
Click OK on the configuration dialog box when you're satisfied with the change.

- Now let's review the backup plan that you've devised by checking out the calendar. If you want to make a change in the schedule that you've set up, you can click on the Exceptions tab.

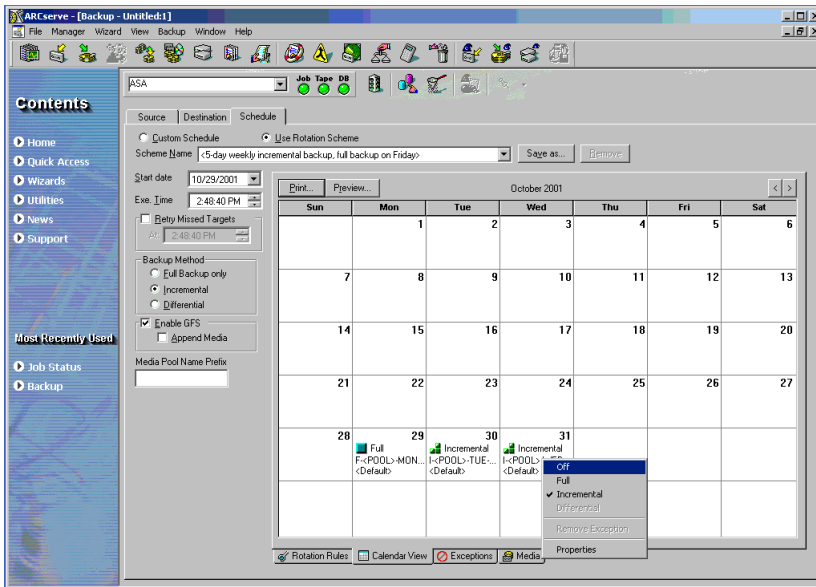


## Put BrightStor ARCserve 2000's Tape Rotation To Work

For example, Friday is in the normal backup schedule, but the last day of the month falls on a Friday, and you want to close down all business operations to inventory merchandise.



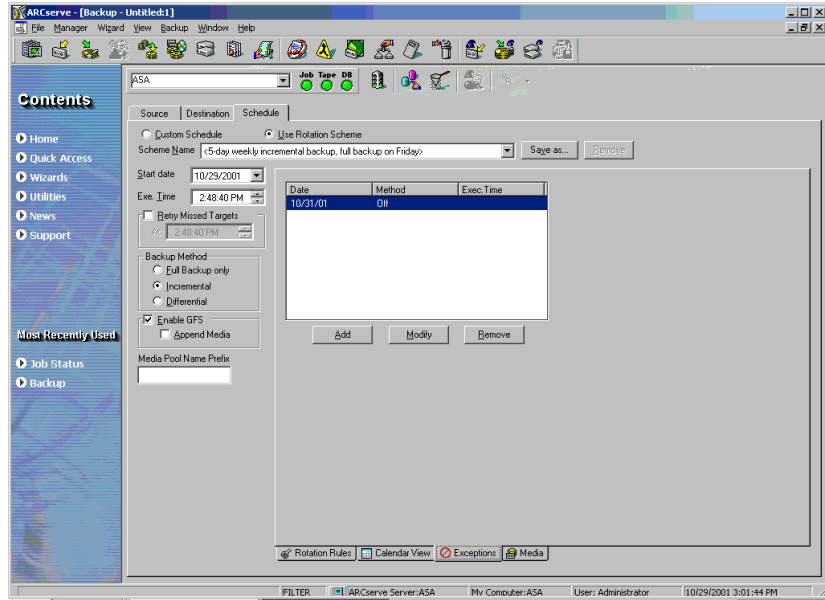
- Now you want to check out the schedule on the Calendar View:




- Select "March 31, 2000" on the calendar and right-click. Select *Off*.

## Put BrightStor ARCserve 2000's Tape Rotation To Work

- When you click the Schedule tab, you'll see that the backup is not scheduled for Friday. After you've made the exception to the regular schedule, the normal schedule will resume. You can verify that BrightStor ARCserve 2000 made the change you wanted by clicking the *Exceptions* tab:



-  Enter the name of the Media Pool Used and then submit the backup schedule by clicking the Run button.



**Buddy Tip**—*Make sure that you enter the name of the Media Pool used before the job runs.*

## GFS Rotations

The Grandfather-Father-Son (GFS) strategy is a method of maintaining backups on a daily, weekly, and monthly basis. GFS backup schemes are based on a seven-day weekly schedule, beginning any day of your choice. The primary purpose of the GFS scheme is to maintain a minimum standard and consistent interval at which to rotate and retire the media. This scheme always uses the oldest tape first, so once you run through a full week, the Monday tape will be used.

## Put BrightStor ARCserve 2000's Tape Rotation To Work

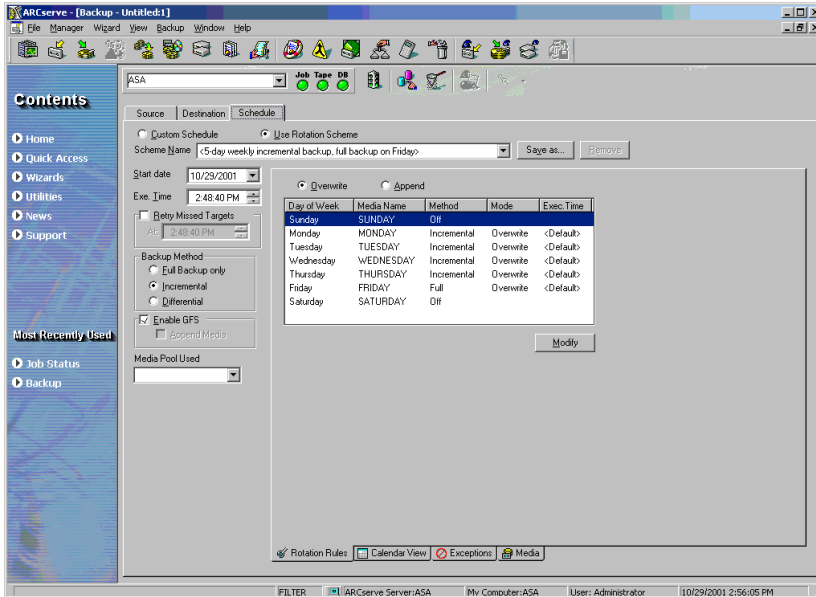
You should perform a full backup at least once a week. All other days, you can perform full, partial, or no backups. The advantage of setting up GFS is that once it is configured, you only need to make sure the right media is in the tape drive for each day of the week. From that time on, GFS tells you which media to use, and manages the backups for you. The daily backups are the Son media. A full backup is performed at least once a week, and the last full weekly backup is the Father media. The last full backup of the month (monthly backup) is the Grandfather media.



**Buddy Tip**—*The monthly media are saved throughout the year, and should be taken off-site for safekeeping.*

Now that you have mastered a Rotation Scheme, you can continue on to BrightStor ARCserve 2000's GFS Rotation Scheme.

1. From the Backup Manager Window, select a source and destination. Then, click the Schedule tab.



If it is not already activated, activate the *Use Rotation Scheme* check box.

NOTE: *Enable GFS* is automatically marked when the Scheme name is selected.

2. Select *Append Media*.



**Buddy Tip**—*Append Media will add the data from one Incremental or Differential backup session to the same media as the following backup session, instead of creating a new tape.*

## Put BrightStor ARCserve 2000's Tape Rotation To Work

- From the *Scheme Name* drop-down box, select “5-day weekly incremental backup, full backup on Friday, with GFS enabled”.

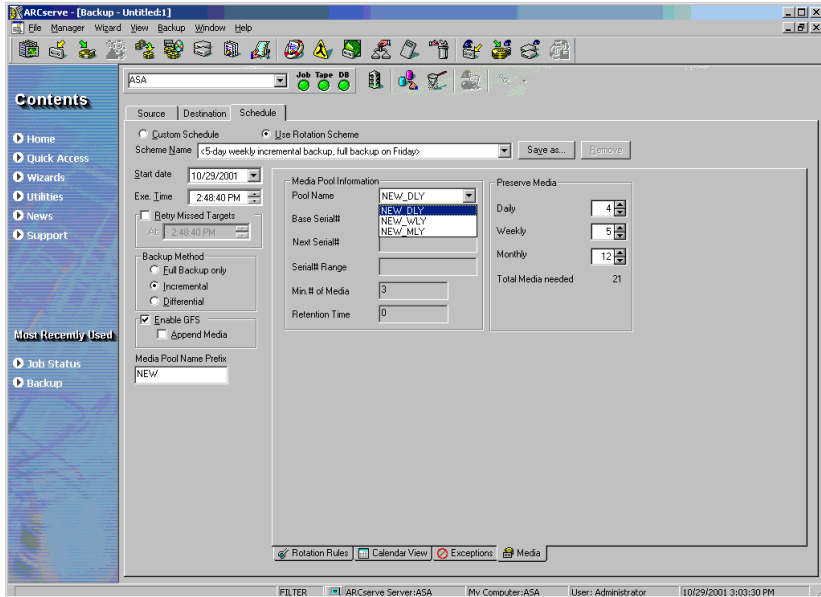


**Buddy Tip**—When you choose the *Incremental Backup* method, only files that have changed since the last backup are backed up again. *Incremental Backups* take less time and require fewer media.

- In the space labeled *Media Pool Name Prefix*, enter “ACCT” to designate the prefix for all of your media names.

BrightStor ARCserve 2000 automatically creates and names your backup media using the name you designated.

- If your company’s business hours are from Monday to Friday, you want to maintain incremental backups from Monday through Thursday. On Friday you select to have a Full backup. You decide that you want to keep the media you use for six months before you recycle it.



Using this configuration, you’ll need four tapes for your daily incremental backups; five weekly tapes, and seven monthly tapes. The total media that you need to get ready for this scheme is 16.

- Click Run.

The backup job now runs exactly the way you’ve assigned it, and the media will be recycled as you pre-determined.

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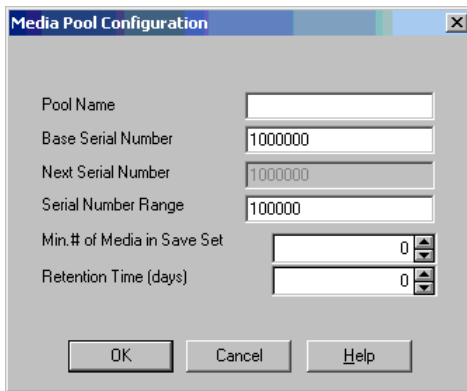
### Media Pool Manager

As you know, you can use BrightStor ARCserve 2000's automatic rotation schemes to control the media that you use during backups. If you don't use the automatic features, the Media Pool Manager is an indispensable tool to efficiently schedule the maintenance and recycling of your media. The media pool that you create is a logical collection of removable storage media (tapes, optical platters, etc.) managed as a single unit.

To assign a new media pool:

1.  From the Media Pool Manager window, click the New Pool button.

The Media Pool Configuration dialog box appears.



The dialog box titled "Media Pool Configuration" contains the following fields and controls:

- Pool Name: A text input field.
- Base Serial Number: A text input field with the value "1000000".
- Next Serial Number: A text input field with the value "1000000".
- Serial Number Range: A text input field with the value "100000".
- Min. # of Media in Save Set: A spin box with the value "0".
- Retention Time (days): A spin box with the value "0".
- Buttons: OK, Cancel, and Help.

2. Enter "HQ\_102" in the *Pool Name* field.



**Buddy Tip**—BrightStor ARCserve 2000 automatically assigns media serial numbers when media is formatted and placed in a specific media pool.

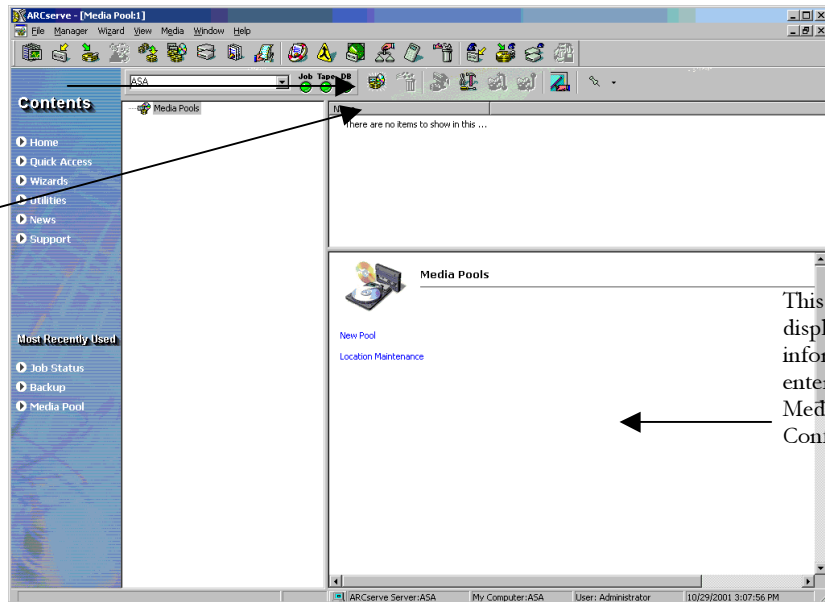
3. When done, click OK



**Buddy Tip**—Each media pool is divided in two sets, the *Save Set* and the *Scratch Set*. Once the media has passed certain criteria such as retention time and the number of required media in the media pool, the media is moved to the *Scratch Set*. Retention period is the number of days a media is kept in the *Save Set* of a Media Pool. When this period ends, the media is moved from the *Save Set* to the *Scratch Set* and is made available for use.

## Put BrightStor ARCserve 2000's Tape Rotation To Work

A *Save Set* is the portion of the media pool that locks the media so that it can't be overwritten. A *Scratch Set* is a media set that can be used during a backup job. Once media has been written to it, it moves from the *Scratch Set* to the *Save Set*.



This pane displays all the information entered in the Media Pool Configuration.



**Buddy Tip**—You can specify the minimum number of save media to be retained in the media pool *Save Set*. This is a safeguard that prevents data loss in case backups are not done for extended periods of time.

### What's Next?

By now, you are feeling good about what you and BrightStor ARCserve 2000 accomplish throughout your network environment — and you have a working knowledge of BrightStor ARCserve 2000's functions and features. Now you can meet the “brains” behind BrightStor ARCserve 2000's operations.

The following chapter describes the Database Manager, where all of BrightStor ARCserve 2000's operating data resides. This information is made available to you through Reports, which help track everything BrightStor ARCserve 2000 does.

## Chapter 7

# BrightStor ARCserve 2000 Shares Its Knowledge!

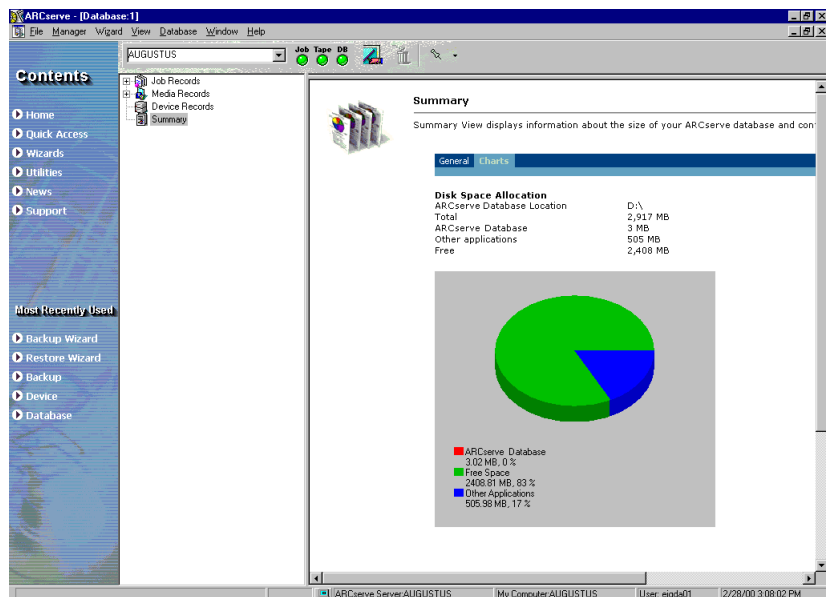
### Using the BrightStor ARCserve 2000 Database and Reports

Two behind-the-scenes components contribute greatly to BrightStor ARCserve 2000's industrial strength — by interpreting the operating information for your system, and then reporting that information directly to you. These helpful managers are the Database Manager and the Reports Manager.

For example, the Database Manager makes it easy for you to perform intelligent restores by maintaining records on each file and the media that it was backed up to. It informs the Device Manager where the media is, and when to retire old media. The Database Manager helps you maintain an efficient system by deleting old records, and viewing information about jobs BrightStor ARCserve 2000 has run.



When the Database Manager is opened from the Quick Access screen, you can look at the Summary charts to determine how much space the database uses on your hard disk:



**Buddy Tip**—You can prune old database records from the Database Engine tab in the BrightStor ARCserve 2000 Server Admin. You can view database statistics such as buffer size, number of active jobs and number of database records processed. You can enable/disable database

*pruning in this tab and change the settings for the number of days and the time at which the pruning will take place.*

### Reports

Similar to the other BrightStor ARCserve 2000 Managers, you can open the Reports Manager from the Quick Access screen. After the Database Manager has collected specific BrightStor ARCserve 2000 information, the Reports Manager produces log data in the following formats that you can view or print:

- **Activity Log** — All BrightStor ARCserve 2000 activity is recorded.
- **Job Log** — Furnishes activity related to a specific job.
- **Tape Log** — For debugging purposes only, all tape activity is available.

The types of reports that are available include:

- **Job Report** — lists jobs that BrightStor ARCserve 2000 has run.
- **Backup Media Error Report** — provides information about selected media.
- **Media Pool Report** — furnishes date activated, serial number ranges, and media properties of the tapes contained in a named pool.
- **Enterprise Job Status** — contains information about jobs run by all the servers within a specific period of time.
- **GFS Media Prediction Report** — displays a forecast of the media you will need by name. You can select the number of days you want to run the report.
- **Session Report** — furnishes information about all of the backup sessions that are on media. (Each source you select to back up is saved on media as an individual session.)
- **Session Detail Report** — contains information from the Media Session Report and also lists each file backed up in each session.
- **Backup Device Report** — delivers information about all storage devices used with BrightStor ARCserve 2000.
- **GFS Rotation Profile Report** — contains the Source, Session Number, and file statistics for each media, data on the media in the Scratch and Save Sets, media pool name, number of media in each set, tape names, backup method for each media, status, and location.



# Customize IT!

### BrightStor ARCserve 2000 Specific Solution Products

**B**rightStor ARCserve 2000's comprehensive package of powerful features enables automated scheduling, built-in virus detection and curing, comprehensive alert notification, centralized administration and extensive reporting. If you need to further customize the BrightStor ARCserve 2000 environment, separately purchased options can extend BrightStor ARCserve 2000's management, protection, and performance capabilities.

This chapter provides a brief summary of the range of additional products that help you perform disaster recovery, back up open files, support additional platforms, maximize performance, and perform online backup of applications, fibre channel and replication. While this chapter discusses all of the client agents and product options, some of these options are only available for the BrightStor ARCserve 2000 Advanced Edition, and do not apply to the Small Business Server or Workgroup Editions.



**Buddy Tip**—For more BrightStor ARCserve 2000 product information, visit [www.ca.com/arcserve](http://www.ca.com/arcserve)

### Essential Environment Protection

**BrightStor ARCserve 2000 Client Agents** extend backup/restore support to a wide variety of networked machines. The extensive set of client agents extend scheduled backup/restore support to the following client machines:

- Windows 95/98
- Windows NT (Workstation/Server)
- Windows 2000 (Professional, Server and Advanced Server)
- NetWare including NetWare 5 with long file name support
- Linux (Red Hat, SUSE, Turbo Linux, and Caldera distributions)
- Solaris SPARC
- Solaris Intel
- IBM/AIX
- HP/UX
- Silicon Graphics IRIX
- Digital TRU 64

## BrightStor ARCserve 2000 Specific Solution Products

- SCO Open Server
- SCO Unixware
- OS/2

All of these client agents and product options are available for the Advanced Edition. Some of these client agents and product options are not available for the Workgroup or Small Business Server Editions.

**BrightStor ARCserve 2000 Disaster Recovery Option** provides a fast Disaster Recovery Solution for Windows NT/2000 environments. BrightStor ARCserve 2000 provides quick and easy restoration of a downed server, without the need for re-installing the operating system or BrightStor ARCserve 2000. With BrightStor ARCserve 2000 Disaster Recovery Option you can save the boot disk information on a set of floppy disks or a CD (for machines that support bootable CD-ROM's only) or have BrightStor ARCserve 2000 collect and update the information automatically for you. In the case of a disaster, the entire system can be rebuilt without having to reinstall the Operating System. In addition BrightStor ARCserve 2000 Disaster Recovery also provides users with the capability of performing remote system recovery by waking the failed system and installing the OS and data from any location on the network.

**BrightStor ARCserve 2000 Backup Agent for Open Files** addresses one of the greatest obstacles to providing a complete backup solution - the problem of backing up files that are in use by other applications or users. BrightStor ARCserve 2000 Backup Agent ensures that all backups are complete without skipping files that are in use or locked by other applications. Patented state-of-the-art techniques ensure the integrity of the backed-up data and provide completely transparent operation. BrightStor ARCserve 2000 Backup Agent For Open Files supports all Windows 2000 features including the new NTFS 5 file format. In addition it leverages the Windows 2000 installer technology for easy and remote installation on multiple systems.

**BrightStor ARCserve 2000 Tape Library Option** provides flexible, unattended operations by optimizing the capabilities of tape libraries or autoloaders. BrightStor ARCserve 2000's Tape Library Option supports multiple drive libraries and is required for the Storage Area Network Option. The number of libraries that can be installed on one computer is limited only by your computer's available resources and system performance. Libraries and single-drive tape drives may be installed on the same computer, attached to the same or different host adapters. BrightStor ARCserve 2000 can send simultaneous data streams to all drives to optimize throughput on any multiple drive library. In addition, BrightStor ARCserve 2000 Tape Library Option delivers advanced tape management and scheduling features including the ability to choose a particular date or range of dates for tape based copy and extended virtual library support.

## BrightStor ARCserve 2000's Backup Agents for Database and Messaging Systems

**BrightStor ARCserve 2000's Backup Agents** for database and messaging systems are the reliable, flexible connection that allows BrightStor ARCserve 2000 to efficiently back up and restore critical application. BrightStor ARCserve 2000 and the optional Backup Agents combine to provide secure automated, on-line backup and restore for your critical applications while open and in use. The following are available for the Advanced Edition:

### **Database Agents**

Microsoft SQL Server  
Oracle  
Informix  
Sybase  
Ingres II Server  
R/3

### **Messaging Agents**

Microsoft Exchange Server  
Lotus Notes

## Comprehensive Storage Network (SAN) Support:

**BrightStor ARCserve 2000 Storage Area Network Option** enables users to fully exploit leading edge Fibre Channel technology. Fibre Channel SAN support offers numerous benefits to the enterprise, providing the ability for multiple servers to share storage devices, high-speed backup and restore over a fast fiber-optic storage backbone, flexibility of extended distances for storage devices, advanced device management tools and total scalability of the storage network. Includes the Tape Library Option

**BrightStor ARCserve 2000 Serverless Backup Option** leverages SNIA Standard, Extended SCSI Copy command to significantly enhance performance by taking the backup load off servers, and freeing CPU time for mission critical tasks. The serverless backup technology, combined with BrightStor ARCserve 2000 SAN solutions delivers high performance, hot online protection of SAN volumes, unlimited scalability and reduced administrative costs.

### Proven Performance Enhancements

**BrightStor ARCserve 2000 Tape RAID Option** increases backup performance by striping data across multiple drives. When three or more drives are used, RAID provides fault tolerance, enabling data restoration even if a tape is lost or damaged. The Tape RAID option supports 0,1 & 5, mirroring and striping with and without parity. The Tape RAID Option is also capable of supporting individual tape drives (RAIT) or RAID across multiple libraries (RAIL).

**BrightStor ARCserve 2000 Image Option** performs ultra-high-speed backup and file-level restore by creating a block-level image of data rather than processing file-by-file. The Image Option also supports the new Windows 2000 NTFS5 file formats. Ultimate data integrity remains in check and even open files or data in use is captured with maximum integrity. This makes it an ideal compliment to your disaster recovery solution or a simple way to conduct super fast backups in SAN environments.

**BrightStor ARCserve 2000 Optical Library Option** extends BrightStor ARCserve 2000's built-in optical library capabilities to provide flexible, unattended operations by optimizing the capabilities of Optical libraries or jukeboxes. BrightStor ARCserve 2000's Optical Library Option supports multiple drive jukeboxes, including MO drives. The number of libraries that can be installed on one computer is limited only by your computer's available resources and system performance. Libraries and single optical drives may be installed on the same computer and attached to the same or different host adapters. BrightStor ARCserve 2000 can send simultaneous data streams to all drives to optimize throughput

# Ask Your Buddy



## Ask Your Buddy – Questions and Answers

- Question:** How do I know what amount of memory is free on the system?
- Answer:** BrightStor ARCserve 2000 uses free memory only when a backup or restore job runs. (The memory is allocated when the job starts, and is freed when it completes.) To get an idea of the available free memory, create an environment with all the applications that need to be running during the backup period, and check the free available memory. (Use the Task Manager to determine the free memory.)
- Question:** As a BrightStor ARCserve 2000 administrator, what utilities are available to manage the BrightStor ARCserve 2000 database?
- Answer:** Refer to the document VLDBUTIL.WRI for information regarding utilities available to manage the BrightStor ARCserve 2000 database.
- Question:** How much disk space does each entry in the BrightStor ARCserve 2000 database require when using MS SQL as the alternative database?
- Answer:** Every file (record) you back up consumes about 105 to 115 bytes of the ASDB database space. 150 MB of the SQL database contains approximately one million records.
- Question:** Why is BrightStor ARCserve 2000 not backing up my BrightStor ARCserve 2000 SQL database even though I have the global option “Back up BrightStor ARCserve 2000 Database files” selected?
- Answer:** When using MS SQL as the alternative database, the global option to “Backup BrightStor ARCserve 2000 Database files” is not valid. Use the BrightStor ARCserve 2000 Backup Agent for MS SQL Server to back up the database.

## Ask Your Buddy – Questions and Answers

**Question:** Why do I get a “session credential conflict error” in BrightStor ARCserve 2000 for NT?

**Answer:** The error means you have a connection open to the given remote server's share under a user name other than the one the backup is using. To verify, check Explorer for drive mappings. From the command prompt, run 'net use' (without the quotes) to further identify connections between the two machines. This command may have to be run on the remote machine, too. If the remote machine is a NetWare server, you can load the monitor utility to verify which accounts have active connections to the server.

To avoid the session credential conflict, you must connect to the remote machine with the same user account as the current open connection. To modify the job to reflect a different user name, go to the Job Status screen, highlight the job, right-click, and choose *Modify Job*. Select *Run Job*. In the Agent and Security Information screen, highlight the remote server and click the Security button. Enter the user name and password. You can also clear open connections with the Windows 2000 Server Manager utility, located in the Administrative Tools group.

**Question:** I back up my remote computers under Network / Microsoft Network / <Domain Name> / <Computer Name>, but the backup is not very fast. Am I doing something wrong?

**Answer:** Increase backup speed by implementing the BrightStor ARCserve 2000 Agent technology. This Agent uses Push technology, which distributes some of the processing to the local operating system of the target Server/Workstation. In this way, the data is “pushed” across the Network, saving BrightStor ARCserve 2000 from some of the processing work.

**Question:** After the server crashed, in addition to replacing the hard disk, I also replaced some outdated hardware. I ran the Disaster Recovery restore and it appears to write everything back to disk, but when I reboot the server I get a bluescreen crash. What is wrong here?

**Answer:** Changing a hard drive is OK, but if you change a SCSI controller/Network card/ Video controller and driver(s) for new cards that did not exist on the old system, NT can crash or behave erratically (for example, NT may not see the network). Try to replace the faulty hardware with same/similar hardware. Under NT if you change hardware without installing new driver(s) and then try to boot to NT, the result is unpredictable. In short, disaster recovery and hardware upgrades should not be combined. To restore your

## Ask Your Buddy – Questions and Answers

data, you should first reinstall the Operating System and then reinstall BrightStor ARCserve 2000.

**Question:** I am receiving a media error on my backups, and the tapes in the drive are new. What can I do to get my problem resolved?

**Answer:** Read the following recommendations for the care and operation of media:

TAPES: Tapes must be of a brand and length that is approved by the tape drive manufacturer.

1. Check your drive's documentation to see which ones are approved. A tape of an unapproved brand or type can fail consistently in a particular drive.
2. Only use tapes of the proper length. Some tape drives can use a variety of different-length tapes. Tapes vary in thickness, tension, and particle density, and a drive has to be designed to properly handle those differences without causing damage to itself or the tape.

CLEANING CARTRIDGE:

1. Clean tape drives using cleaning cartridges. The cleaning tape will clean not only the head but also the full tape path; this will prevent both read/write and tape positioning problems.
2. Follow the tape drive manufacturer recommendations. Use only cleaning tapes that are recommended and use them only according to the instructions.
3. Some cleaning tapes are only good for a certain number of uses. If they are used more than specified, they come to the end of their tape and will do nothing at all. Most manufacturers recommend cleaning the drive after every 25 to 30 hours of use. Some will also recommend cleaning the drive after using a brand new tape for the first time.

**Question:** Which e-mail client should be installed on the Exchange Server before installing the Database Agent?

**Answer:** Outlook or Exchange.

**Question:** What devices does BrightStor ARCserve 2000 support?

**Answer:** BrightStor ARCserve 2000 is designed to work with most of the SCSI tape devices, as well as SCSI Rewritable Optical devices. Refer to CA's website for a certified device list to confirm the firmware and model of the supported device.

## Ask Your Buddy – Questions and Answers

- Question:** I would like to be notified in a case of a problem with my backup. What can I do to achieve this goal?
- Answer:** BrightStor ARCserve 2000 NT provides the best alert notification in the industry and provides event-based notification — via Email, pager, SNMP, broadcast, event log, or through Unicenter TNG views.
- Question:** Can BrightStor ARCserve 2000 back up Linux machines?
- Answer:** Yes, BrightStor ARCserve 2000 offers a Linux Client Agent, which is an optional purchase.
- Question:** What protocols can be used to backup a NetWare server under BrightStor ARCserve 2000?
- Answer:** BrightStor ARCserve 2000 can use IPX/SPX or TCP/IP protocols to back up NetWare servers.
- Question:** Can BrightStor ARCserve 2000 allow me to restore a particular registry hive?
- Answer:** If the registry icon was explicitly selected during the backup, you will be able to restore selective pieces of the registry. However, this should only be done with full knowledge of the registry.
- Question:** What is the difference between a GFS rotation job and a custom rotation job?
- Answer:** GFS, which stands for Grandfather, Father and Son, is a set rotation scheme that creates three media pools automatically. These are the daily, weekly and monthly pools. This is a set rotation that is limited in customization and it also must auto-name the tapes involved. A custom rotation scheme is completely configured by the user. The user configures the properties of the pool or pools involved, days to backup, etc.
- Question:** Can I utilize the various BrightStor ARCserve 2000 tape options together? Can I use RAID, Image, and Tape Library options together?
- Answer:** Absolutely. RAID and Image combined will allow you to get maximum throughput for your local backups.



## Ask Your Buddy – Questions and Answers

**Question:** How can I be informed of the latest updates to BrightStor ARCserve 2000 products?

**Answer:** All support patches will be posted on [esupport.ca.com](http://esupport.ca.com) once they are publicly released. In addition to checking the web site, you may also subscribe to e-news — a bi-weekly news update that focuses on support issues and covers the BrightStor ARCserve 2000 family of products.