IBM

Backup Recovery and Media Services for iSeries: iSeries Navigator Plug-in Student Guide

ITSO iSeries Technical Forum 2001

May 2001

Introduction

This document describes the new Graphical User Interface (GUI) functionality provided with Backup Recovery and Media Services (BRMS) as a plug-in to iSeries Operations Navigator for V5R1. The GUI function is shipped with the BRMS product, 5722-BR1.

Overview

The BRMS plug-in shows up as a new **Backup Recovery and Media Services** folder in the iSeries Operations Navigator hierarchy when BRMS is installed on the iSeries and plug-in has been successfully installed.

Prerequisites

The following prerequisite hardware and software must be installed on the workstation (PC) and on the iSeries before installing the BRMS GUI plug-in.

Workstation (PC)

- ? Processor: 450 MHz is recommended
- ? Memory: 128 MB minimum is recommended
- ? Disk Space: 1 GB or more of unused DASD
- ? Display: Resolution of 1024 x 768 is recommended
- ? Operating System: Windows 95/98/Millenium/NT/2000
- ? IBM Client Access Express with Operations Navigator installed on your PC

iSeries

- { Operating System/400 (5722-SS1) installed
- { Client Access Express (5722-XE1) installed
- { Backup Recovery and Media Services (5722-BR1) installed (with the latest BRMS PTFs applied)
- { iSeries Integration for Windows Server (5722-WSV) installed

Accessing the Operations Navigator on your PC

To access the iSeries (Operations) Navigator on your PC:

- { Double-click the **AS/400 Operations Navigator** icon on your desktop if one was created during the installation process

    -- Or

- { Double-click the **AS/400 Operations Navigator** icon found inside the IBM AS/400 Client Access Express folder on the desktop

-- Or

{ Select the following menu options: **Start->Programs->IBM AS/400 Client Access Express->AS /400 Operations Navigator**

Installing and Uninstalling the Plug-in

This chapter outlines the steps to install or uninstall the BRMS GUI plug-in.

Install the BRMS Plug-in

To install the BRMS plug-in, follow these steps:

1. Right-click the *Network Neighborhood* icon on your desktop.

2. Select *Map Network Drive….*

3. Specfy **\\system-name\qibm** for *Path*, where **system-name** is the name of the system on which the BRMS product (5722-BR1 is installed.

4. Click **OK**.

5. Double-click the *IBM AS/400 Client Access Express* icon.

6. Double-click the *Selective Setup* icon in the *Client Access Express* folder.

7. Click **Next** on the **Selective Setup** panel.

8. Click **Browse** on the **Selective Setup Options** panel.

9. On the **Choose Folder** panel select the *Drive* mapped to **drive:\\system-name\qibm**.

10. Click **OK**.

11. Click **Next** on the **Selective Setup Options** panel.

12. Click **Next** on the **Components Cannot Be Installed** panel.

13. Find **Backup, Recovery and Media Services** under *Components* on the **Component Selection** panel.

14. Click the *Backup, Recovery and Media Services* check box.

15. Click **Next** on the **Component Selection** panel.

16. *Backup, Recovery and Media Services* should be listed under *Add components* on the **Start Copying Files** panel.
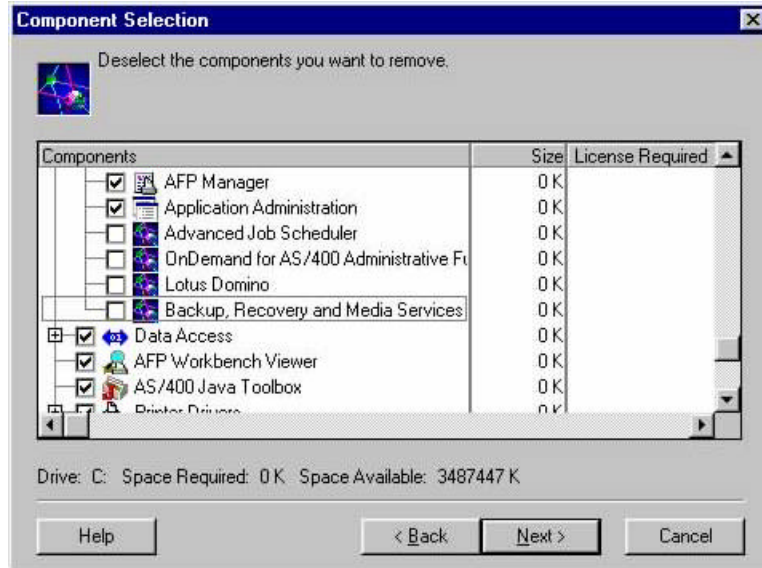
17. Click **Nex**t on the **Start Copying Files** panel.

18. Deselect the *View the README file* and *Add program folder to desktop* check boxes on the **Install Completed** panel.

19. Click **Next** on the **Install Completed** panel.

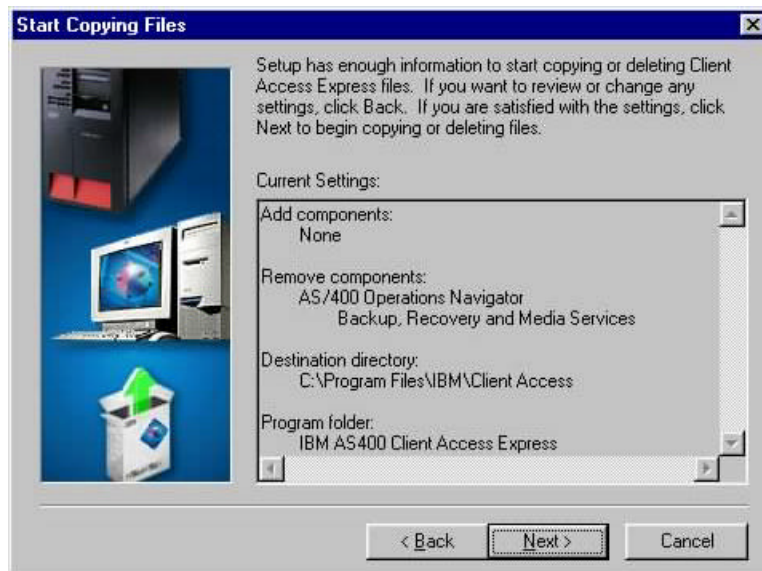20. Click **Finish** on the **Setup Complete** panel.

Uninstall the BRMS Plug-in

To uninstall the BRMS plug-in, follow these steps:

1. Double-click the *IBM AS/400 Client Access Express* icon.

2. Double-click the *Selective Setup* icon in the *Client Access Express* folder.

3. Click **Next** on the **Selective Setup** panel.

4. Select *Ignore, I'm going to uninstall components* on the **Selective Setup Options** panel.

5. Click **Next** on the **Selective Setup Options** panel.

6. Click the plus sign (**+**) next to *AS/400 Operations Navigator* to expand the installed components on the **Component Selection** panel,.

7. Find *Backup, Recovery and Media Services***.**

8. Deselect the *Backup, Recovery and Media Services* check box.

9. Click **Next**. on the **Component Selection** panel. *Backup, Recovery and Media Services* should be listed under *Remove components* on the **Start Copying Files** panel**.**


10. Click **Next**. on the **Start Copying Files** panel.

11. Click **Finish** on the **Setup Complete** panel.

Operations Navigator Hierarchy Integration

This chapter explores many of the BRMS GUI elements which are integrated into the iSeries Operations Navigator hierarchy after the plug-in is installed.

1. Open a connection to the system from which you installed the BRMS plug-in by clicking on the system folder.
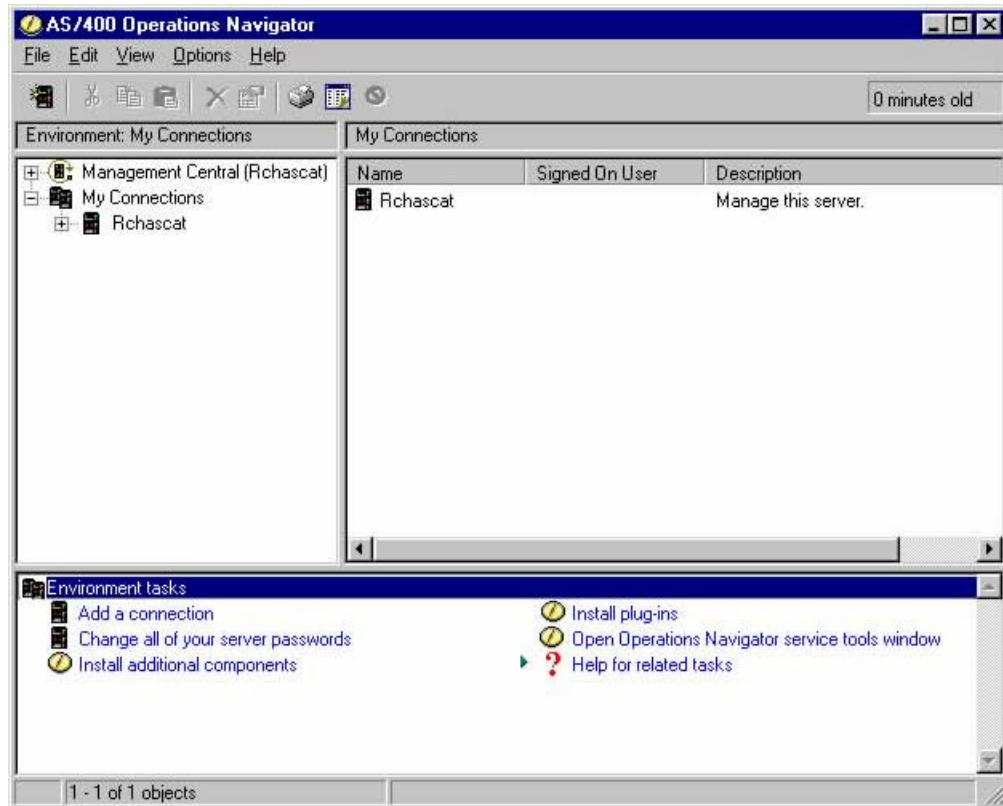
2. Open the Operations Navigator hierarchy for this system by double-clicking on the system folder.

The *Backup, Recovery and Media Services* folder should be visible at the bottom of the hierarchy.
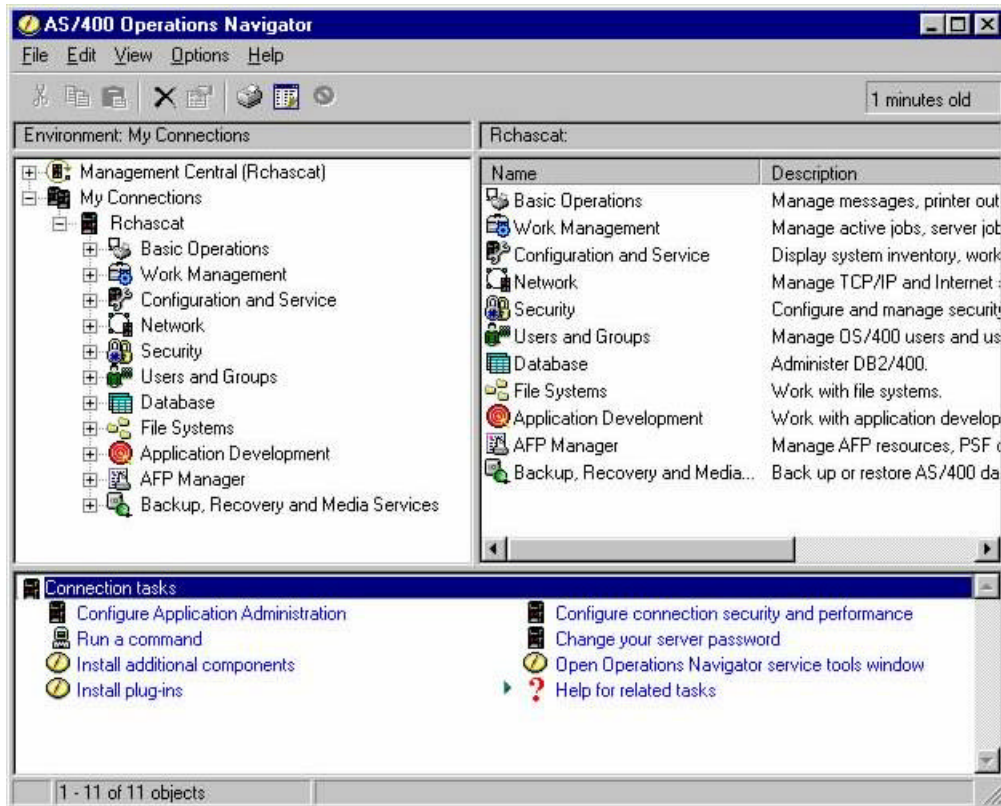
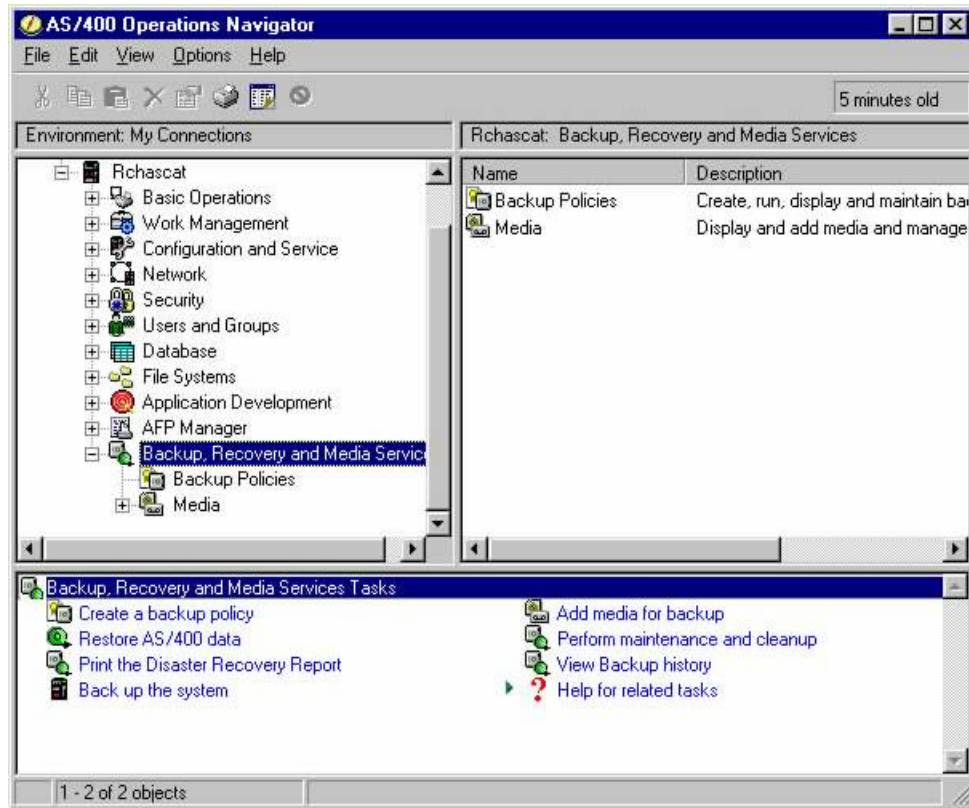3. Click the *Backup, Recovery and Media Services* folder.

The **Connection tasks** in the task pad at the bottom of the **Operation Navigator** panel are replaced with the **Backup, Recovery and Media Services** Tasks. The functions available from **Backup, Recovery and Media Services** Tasks are:

Create a backup policy	Creates a new backup policy.
Print the Disaster Recovery Report	Prints AS/400 disaster recovery report.
Add media for backup	Adds new media for backup and recovery.
View the backup history	Displays the backup and recovery log.
Restore AS/400 data	Restores selected backed-up objects.
Back up the system	Backs up the selected system.
Perform maintenance and cleanup	Runs maintenance and cleanup activities related to backup.
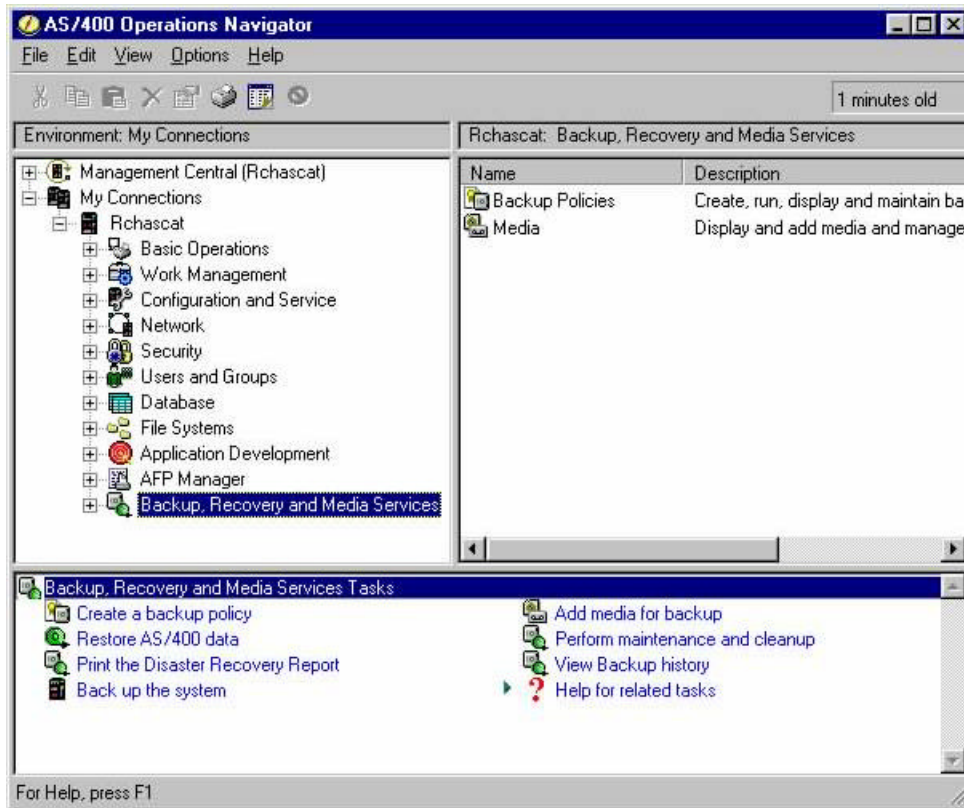
4. Double-click the *Backup, Recovery and Media Services* folder.

   The *Backup Policies* folder and *Media* folder are contained in the *Backup, Recovery and Media Services* folder. These folders provide context menus that include the functions you use to manage BRMS from Operations Navigator.

5. Right-click the *Backup, Recovery and Media Services* folder to bring up the context menu and explore the functions that are available. The available functions from this folder are:

Back Up System…	Backs up the selected system
Back Up System…	Backs up the selected system
Print Recovery Report	Print AS/400 disaster recovery report
Backup and Recovery Log	Displays the backup and recovery log
Run Maintenance…	Runs maintenance and cleanup activities related to backup

6. Right-click the *Backup Policies* folder to bring up the context menu and explore the functions that are available. The available functions from this folder are:

New Policy…	Creates a new backup policy.
Backup History…	Displays backed up items contained in the backup history

7. Right-click the *Media* folder to bring up the context menu and explore the functions that are available. The available functions from this folder are:

Backup History…	Displays backed up items contained in the backup history

8. Right-click the system folder at the top of the Operations Navigator hierarchy to bring up the context menu and explore the functions that are available. The available functions from this folder are:

Backup Up System…	Use to run or schedule a backup of the entire system

9. Right-click the *Configuration and Service* folder to bring up the context menu and explore the functions that are available. The available functions from this folder are:

Back Up…	Use to back up the configuration data on the system.
Restore…	Use to restore the configuration data to the system.

10. Explore the functions available from the *Users and Groups* folder by right-clicking on the folder folder to bring up the context menu. Functions available from this folder are:

Back Up…	Use to back up the security data and users on the system.
Restore…	Use to restore the users to the system.

11. Open the *File Systems* folder in the hierarchy

12. Open the *Integrated File System* folder in the hierarchy

13. Open the *QSYS.LIB* folder in the hierarchy

14. Explore the functions available for objects by right-clicking on any library folder to bring up the context menu. Functions available from this folder are:

Back Up…	Use to back up the selected object.
Restore…	Use to restore the selected object.

15. Close the *File Systems* folder when you have completed your exploration.
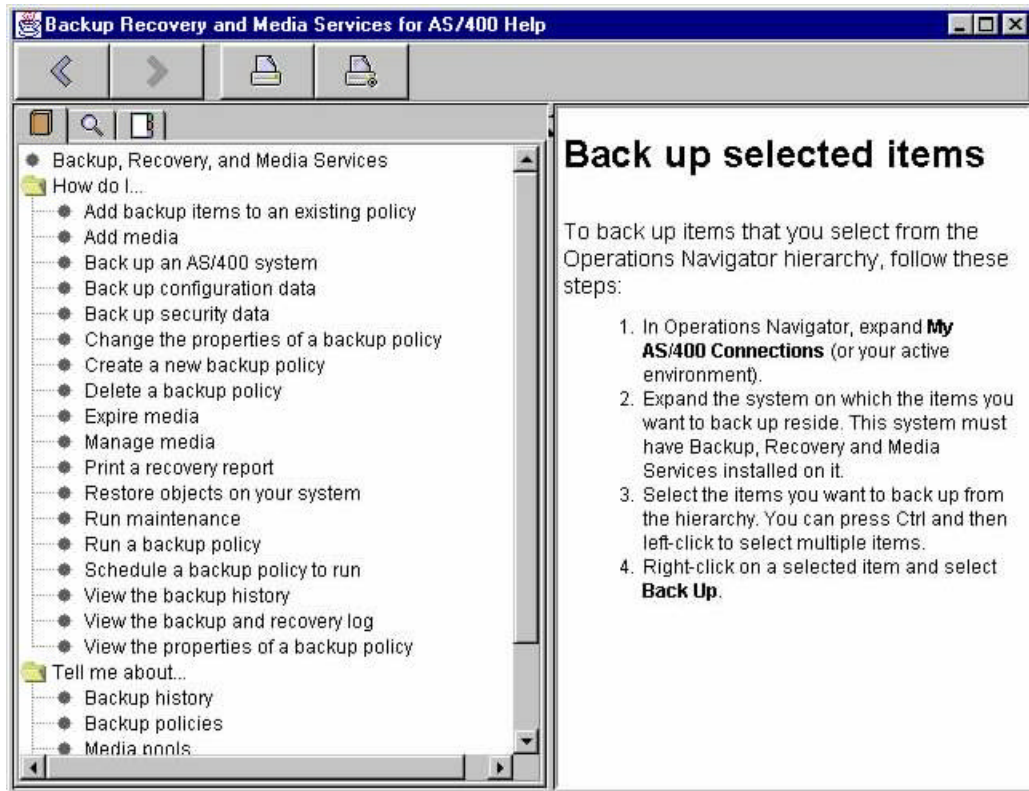
BRMS Help

This section explores the help text panels provided by the BRMS GUI plug-in and how to access these panels.
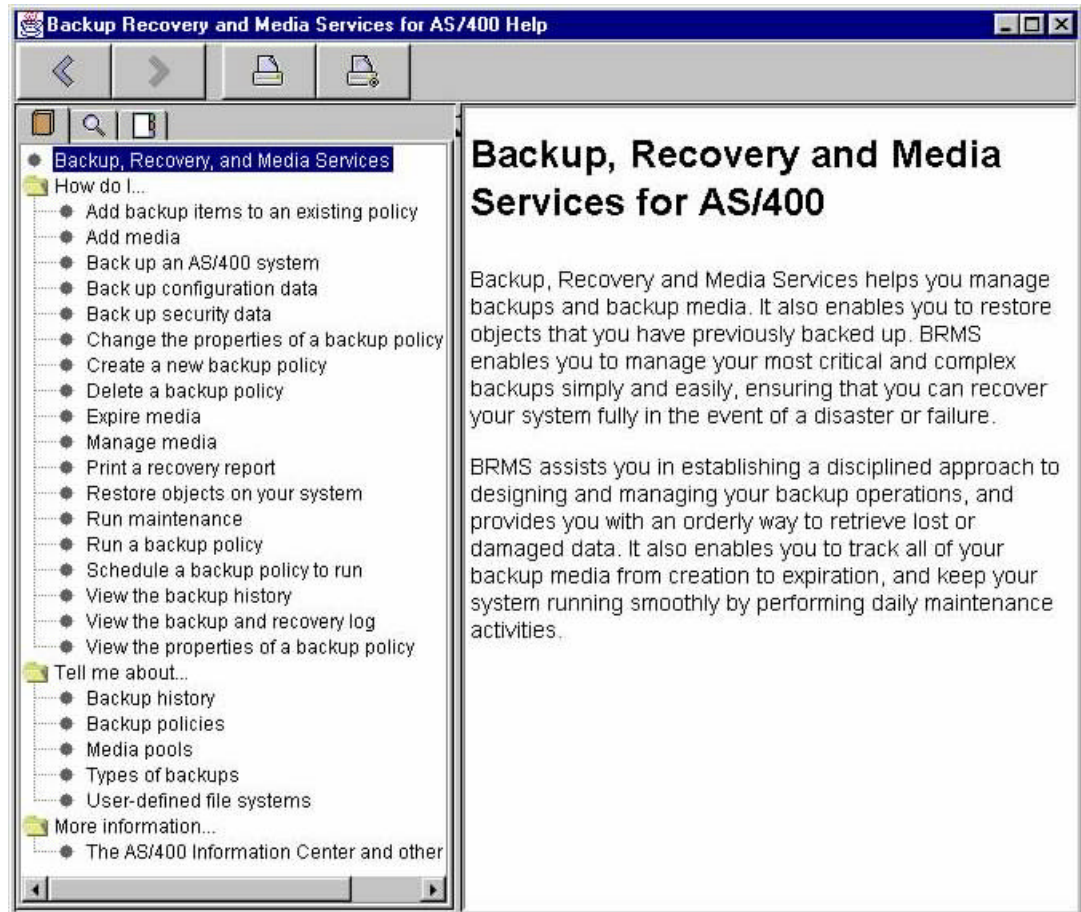
1. Click the *Backup, Recovery and Media Services* folder.

2. Double-click *Help for related tasks* from **Backup, Recovery and Media Services Tasks**.
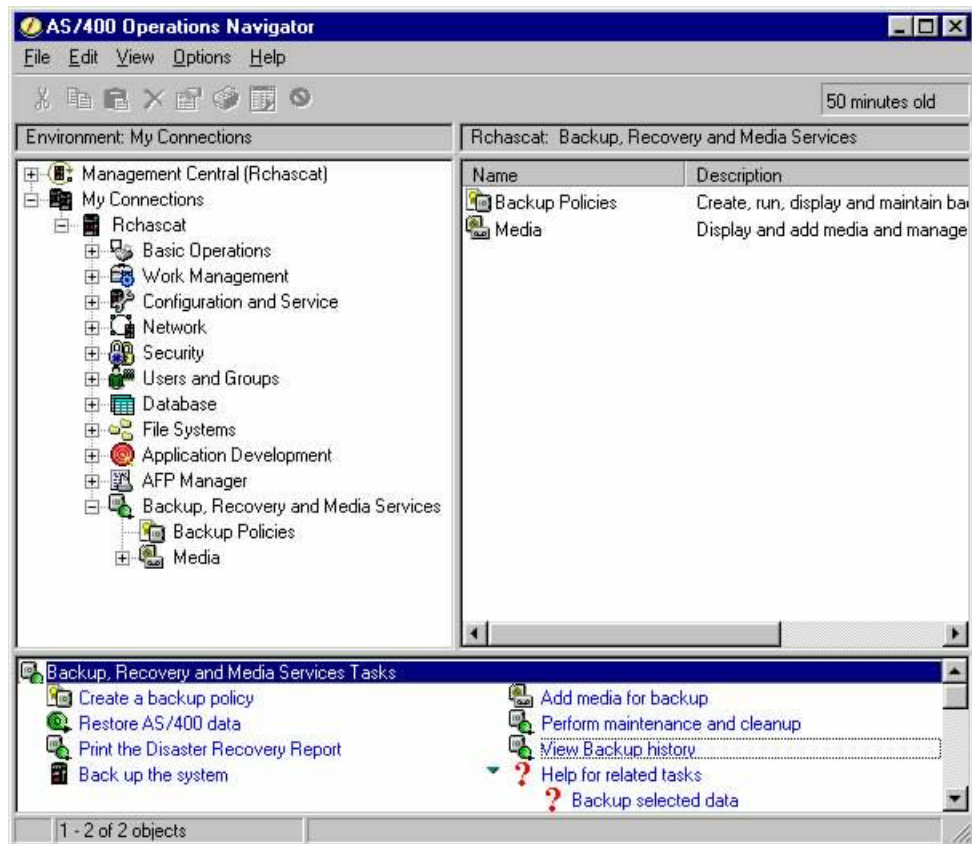
3. Double-click the *Backup selected data* task help item to bring up the **Backup Recovery and Media Services for AS/400 Help** panel.

Backup Recovery and Media Services for AS/400 Help

Back up selected items

To back up items that you select from the Operations Navigator hierarchy, follow these steps:

1. In Operations Navigator, expand **My AS/400 Connections** (or your active environment).
2. Expand the system on which the items you want to back up reside. This system must have Backup, Recovery and Media Services installed on it.
3. Select the items you want to back up from the hierarchy. You can press Ctrl and then left-click to select multiple items.
4. Right-click on a selected item and select **Back Up**.

Left pane tree items:

- Backup, Recovery, and Media Services
- How do I...
  - Add backup items to an existing policy
  - Add media
  - Back up an AS/400 system
  - Back up configuration data
  - Back up security data
  - Change the properties of a backup policy
  - Create a new backup policy
  - Delete a backup policy
  - Expire media
  - Manage media
  - Print a recovery report
  - Restore objects on your system
  - Run maintenance
  - Run a backup policy
  - Schedule a backup policy to run
  - View the backup history
  - View the backup and recovery log
  - View the properties of a backup policy
- Tell me about...
  - Backup history
  - Backup policies
  - Media pools

4. The left pane of the **Backup Recovery and Media Services for AS/400 Help** panel lists a wide range of help topics. Click any topic, and the help text appears for your selected topic in the right pane.

5. If you cannot find a particular help topic, click the *Index* icon above the left window on the **Backup Recovery and Media Services for AS/400 Help** panel to see an alphabetized list of the help items that are available, whether it is for a topic, a function, or a definition.
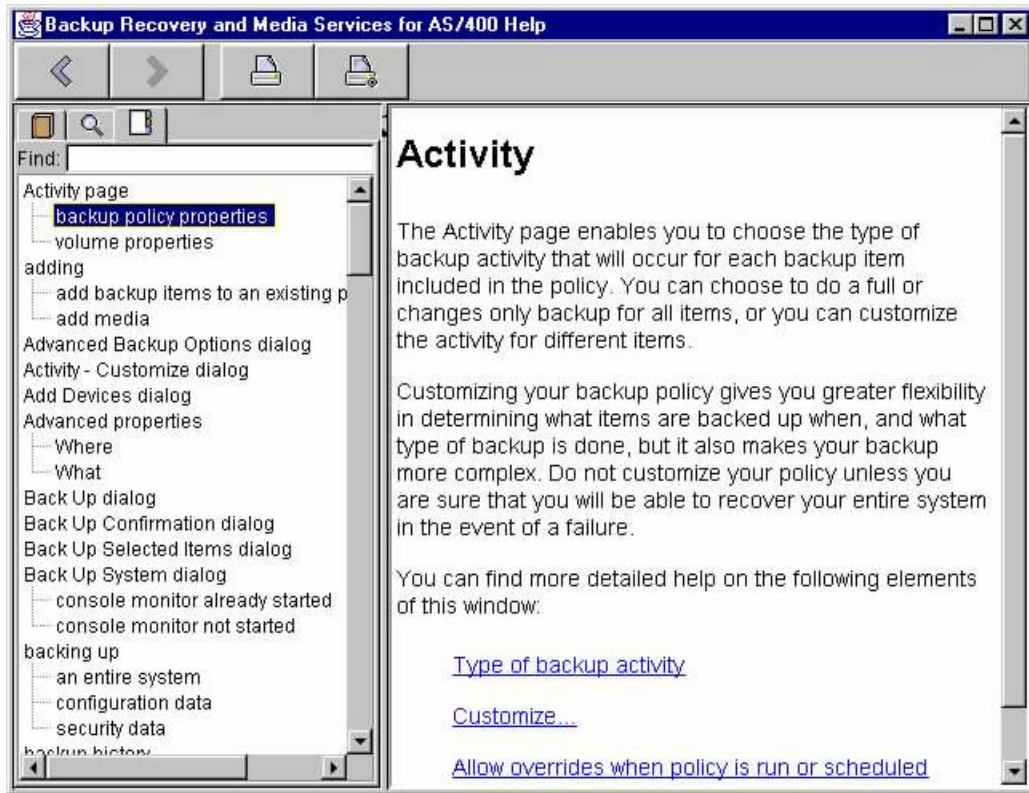
6. Close the **Backup Recovery and Media Services for AS/400 Help** panel when you have completed your exploration.

Scheduling a System Backup

This section explores how the BRMS GUI is integrated into Management Central. Management Central is used by BRMS for running and scheduling backup operations. This section will guide you through the steps and panels you will encounter when scheduling a backup operation.

1. Click the *Backup, Recovery and Media Services* folder**.**

2. Click *Back up the system* from **Backup, Recovery and Media Services Tasks**.

   The **Backup Activity Override** panel appears, which indicates the **System* backup policy is scheduled for a *Full* backup. You can override the policy setting by clicking the *Override policy setting* radio button and selecting *Changes only*. This provides an easy way to change the way a backup policy is run. Using overrides eliminates the need for you to create one policy for full backups and another for changes only backups. You simply manage it by scheduling the same policy with different activity settings.

   A *Changes only* backup is the term the GUI uses for a cumulative backup. A cumulative backup is a save of all changes of an object since the last full backup.
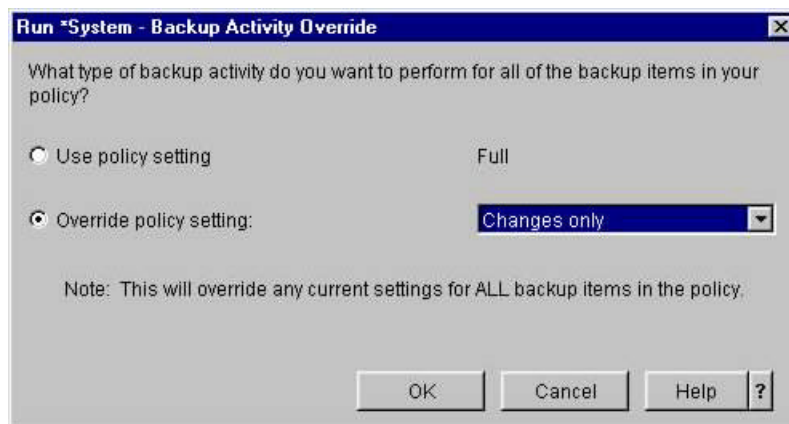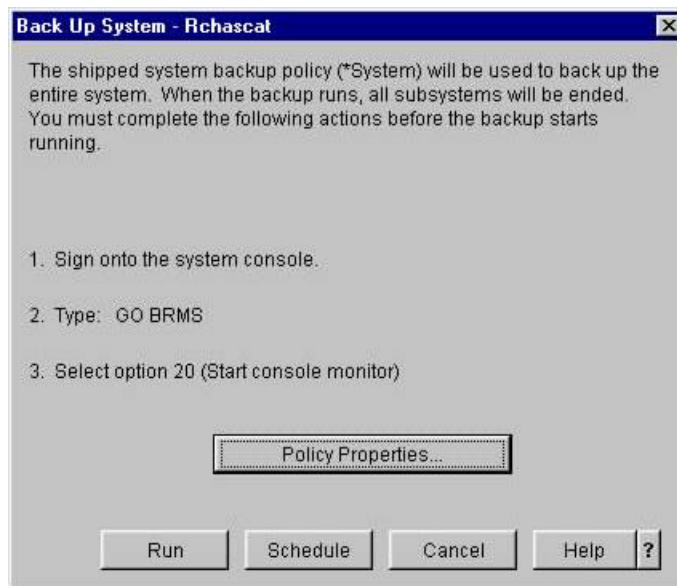

3. Click **OK**

   You are presented with the **Retention Override** panel which indicates the **System* backup policy is using a 90-day retention for the backup. You can override the policy setting by clicking on the *Override policy settings* radio button and specifying a different retention. This provides an easy way to change the way a backup policy is run. Using overrides eliminates the need for you to create one policy using one retention and another policy using a different retention. You simply manage the retention by specifying the desired retention when scheduling the policy.

   Retention refers to how long the backup data is saved on the media and in the BRMS history. This saved data and the media is considered *active* data during the retention period. At the end of the retention period the saved history and the media containing the saved data *expires*. Expired saved items are removed from history. The media containing the saved data also expires if all saved objects on the volume are expired. Expired volumes are placed back in the media pool and are available for reuse. Old saved data on expired volumes cannot be restored once the volume is reused for a new backup.
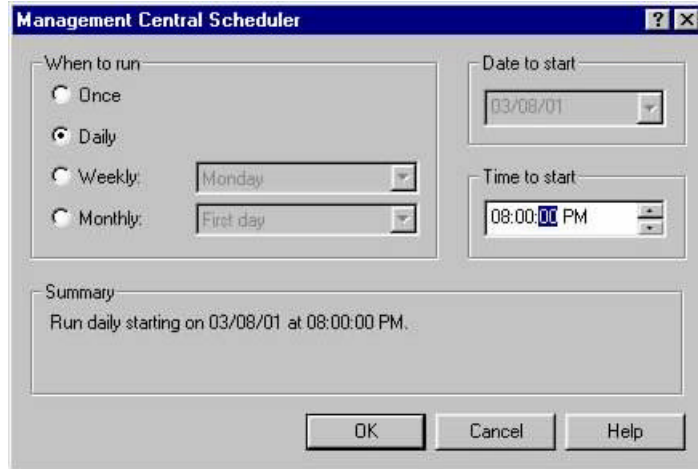
4. Click **OK**.

The **Back Up System** panel reminds you that since this is a system backup and that you must start the BRMS Console Monitor before the backup begins. The **Policy Properties** button on this panel allows you to view the properties of the backup policy used to perform the system backup. Policy Properties will be discussed in a later chapter. The **Run** button allows you to run the policy now, and the **Schedule** button allows you to schedule the backup to run at a later date and time.

5. Click **Schedule** on the **Back Up System** panel.

The **Management Central Scheduler** panel allows you specify on which days the policy is to run, as well as a starting date and a starting time.

6. Click **OK**.

   The **AS/400 Operations Navigator** task scheduled confirmation panel tells you to look in the
   Scheduled Tasks folder under **Management Central** to view the status of the task or to
   work with the task.

7. Click **OK** on the **AS/400 Operations Navigator** task scheduled confirmation panel.

8. Double-click the *Management Central* folder at the top of the Operation Navigator hierarchy.

9. Double-click the *Scheduled Tasks* folder in *Management Central* folder.

10. Double-click the *Backup, Recovery and Media Services* folder in the *Scheduled Tasks* folder
    to view the system backup task you just scheduled.

11. Place the cursor over the slider bar at the bottom of the right pane, hold down the left mouse
    button and slowly slide the bar to the right.

12. Explore the information in each of the columns for the *Run '*System' backup policy* task.
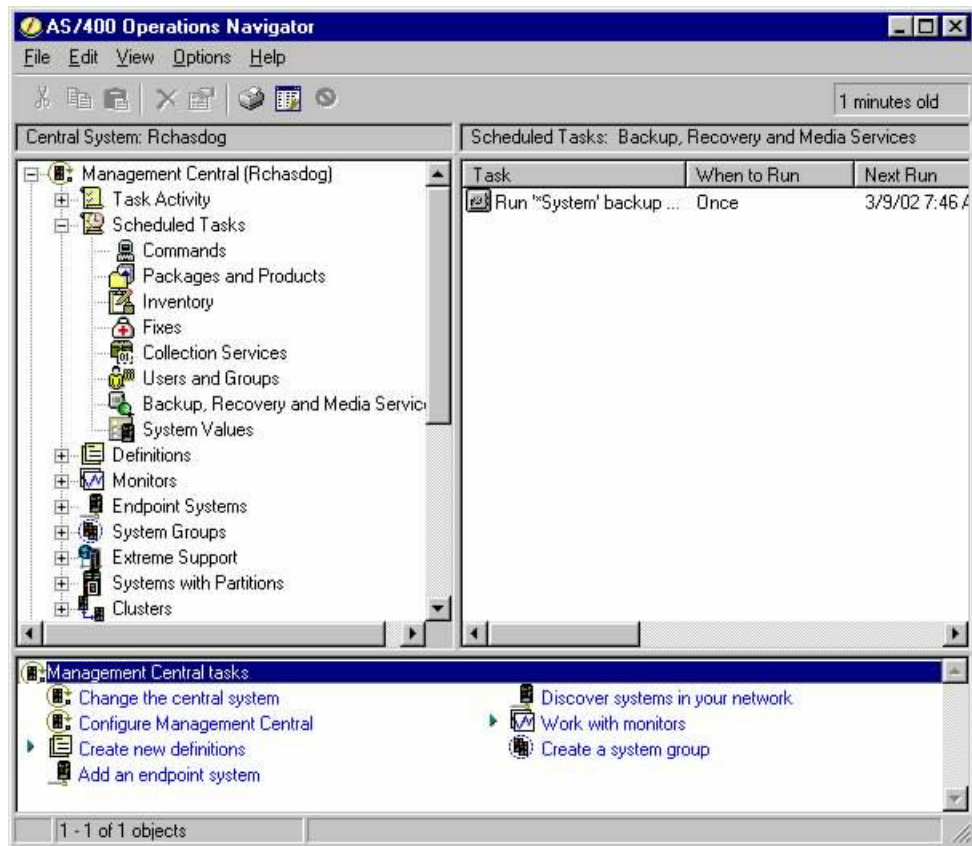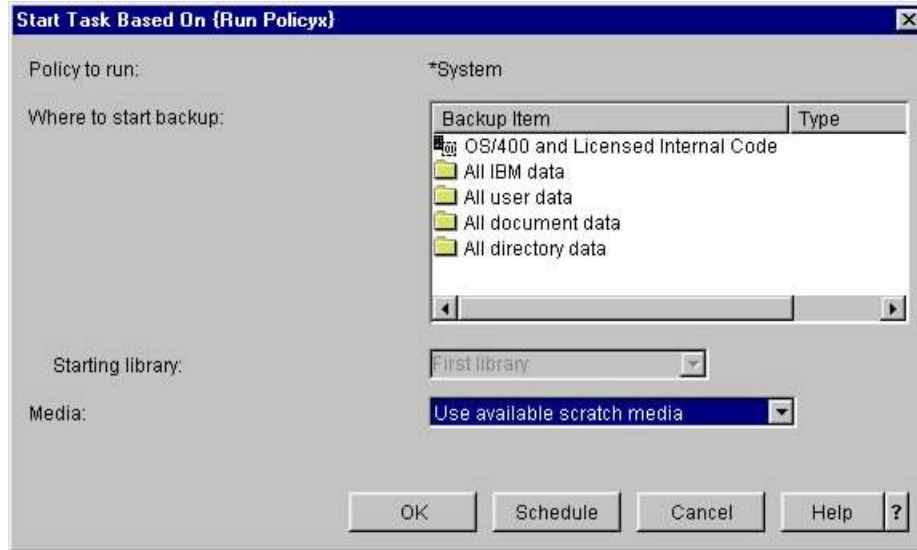

13. Right-click the *Run '*System' backup policy* task.

14. Click *Start Based On....*

   This function brings up the **Start Task Based On** panel which you use to start or schedule a new task based on the properties of the selected task. This might be useful to restart a backup that did not complete successfully.

15. Click the *All IBM data* or *All user data* under *Backup Item*.

   This enables the *Starting library* prompt. You can use this to specify the name of a library where you want the backup to begin when you restart a backup policy that might have ended prematurely while processing either of these backup items.

Start Task Based On {Run Policyx}

Policy to run:	*System
Where to start backup:	

Backup Item	Type
OS/400 and Licensed Internal Code	
All IBM data	
All user data	
All document data	
All directory data	

Starting library: First library

Media: Use available scratch media

OK   Schedule   Cancel   Help ?

16. Click **Cancel**.

17. Right-click *Run '*System' backup policy* task then click *Delete….*

The **Confirm Delete** panel is used to validate your request to delete the task.

Confirm Delete

Items to delete:

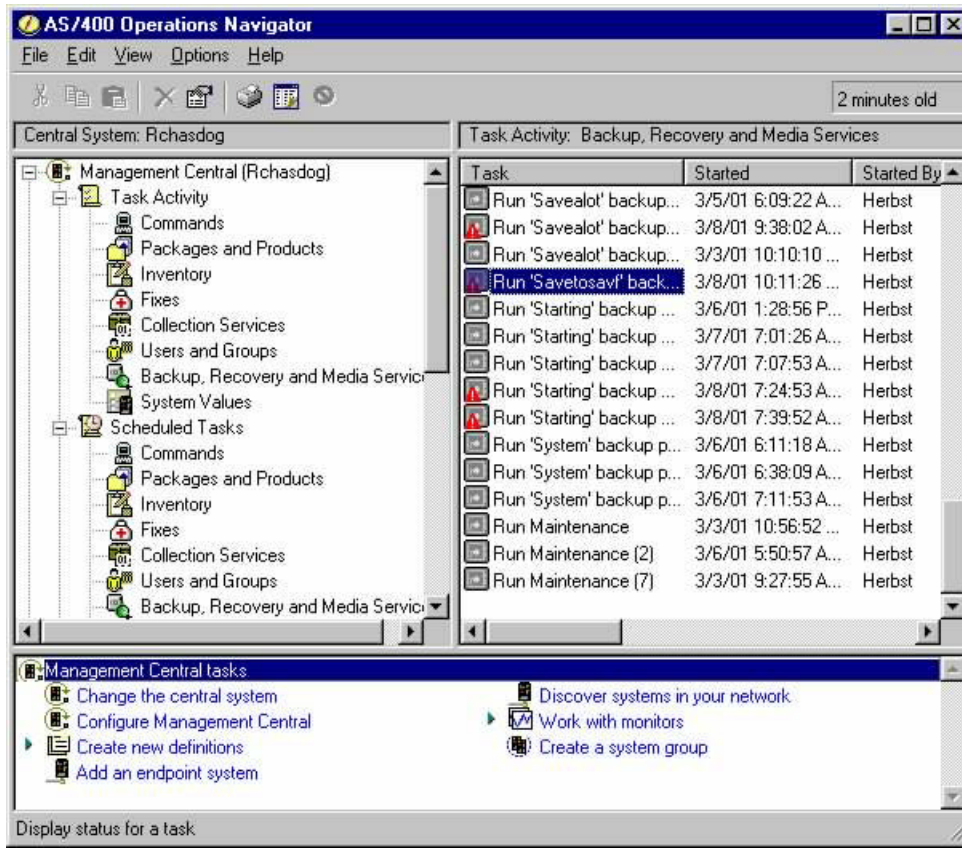| Item	Status
Run '*System' backup policy	Scheduled

Delete   Cancel   Help ?
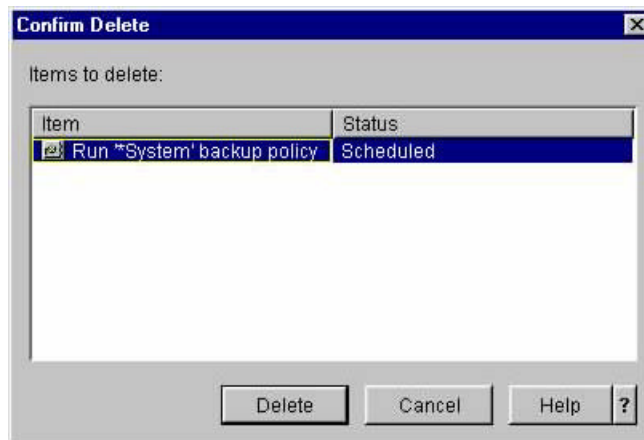
18. Click **Delete**.

19. Double-click the *Task Activity* folder in the *Management Central* folder.

20. Double-click the *Backup, Recovery and Media Services* folder in the *Task Activity* folder.

This provides you with a summary of all completed BRMS tasks.

21. Right-click the *Run 'System' backup policy* task and click *Status* to bring up the **Run 'System' backup policy Status** panel.
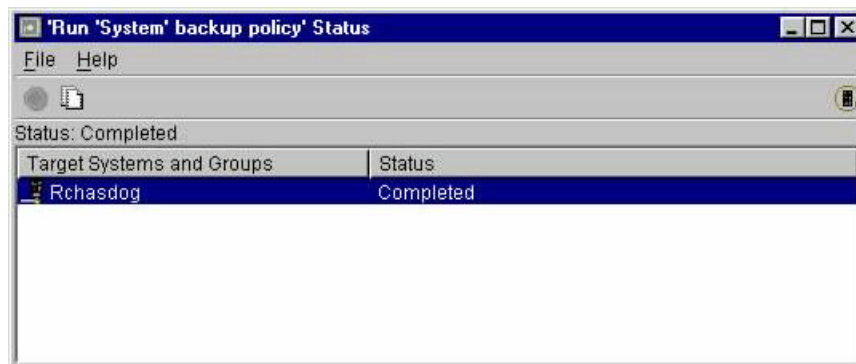
22. Click an entry under *Target Systems and Groups* to highlight the *Output* icon.

23. Click the *Output* icon to bring up the **Printer Output** panel which contains the job log for the completed task.
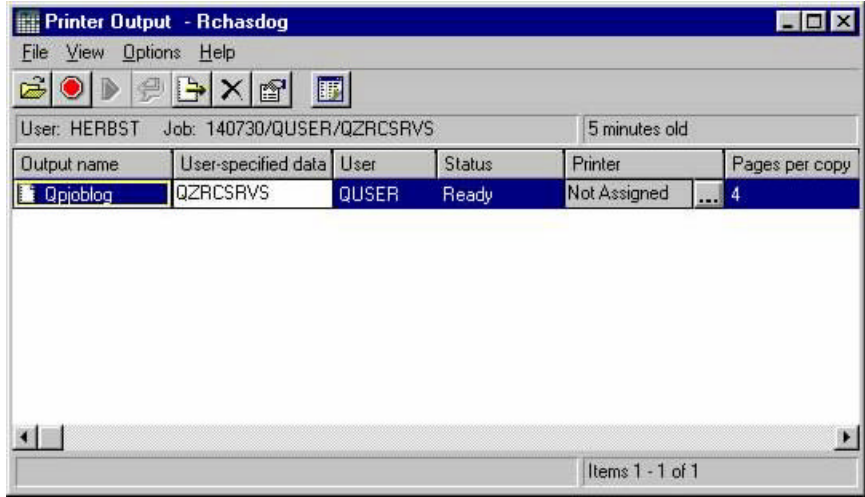
24. Explore the job log for the task by double-clicking on the job log entry.

25. Close all open windows and folders when you have completed your exploration.

Backup Policy Wizard

This chapter introduces the BRMS Backup Policy Wizard. This wizard greatly simplifies the process for creating backup policies. You can use it to create policies to backup the entire system, or the IBM data, or the user data, or Lotus servers, or any combination of these. If you want to create a for a customized backup, like for a specific application and the application data, you can do that too through this wizard.

The steps that follow walk you through two of many possible backup scenarios. You are encouraged to explore all the various paths through the wizard to become familiar with the capabilities of the Backup Policy Wizard.

1. Click the **Backup, Recovery and Media Services** folder.

2. Click *Create a backup policy* from **Backup Recovery and Media Services Tasks**.

   The **Details** button on the **Welcome** panel and any wizard panels are used to find additional help for the specific panel.
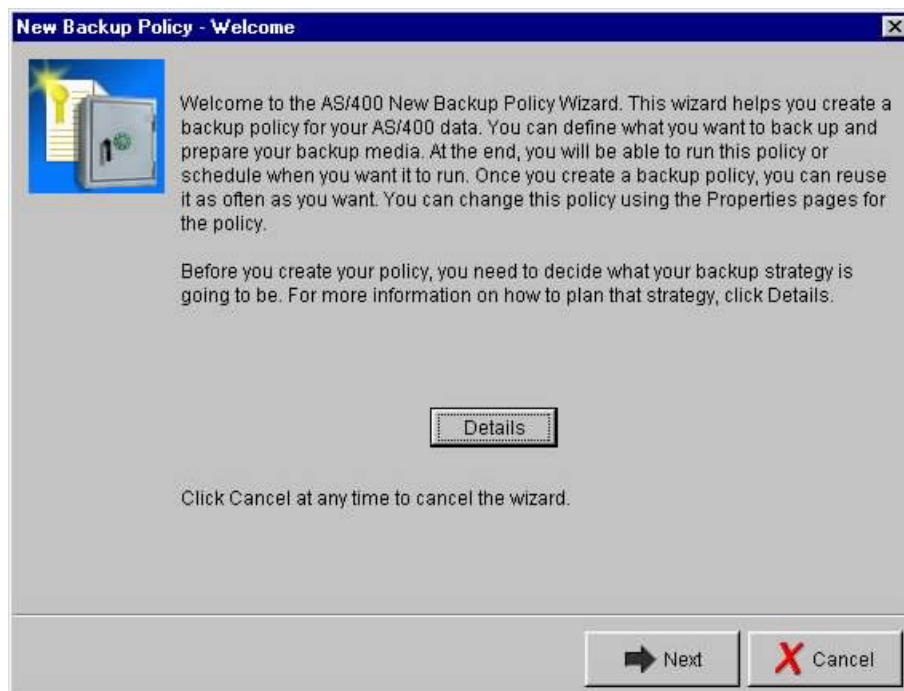
3. Click **Next**.

4. Enter **deleteit** for **Name** on the **Backup Policy Name** panel. Backup policy names must follow these rules:
   - ✍ 1 to 10 characters in length
   - ✍ The first character must begin with one of the characters **A-P**, **R-Z**, **$** (dollar), **#** (number) and **@** (at).
   - ✍ .The other characters can consist of any combination of the characters **A-Z , 0-9**, **$** (dollar), **#** (number), **@** (at), **_** (underscore) and **.** (period).

5. Enter text describing the backup policy for **Description**. Descriptions can consisted of 1 to 128 characters in length. This field supports any combination of displayable apphabetic, numeric and special characters.
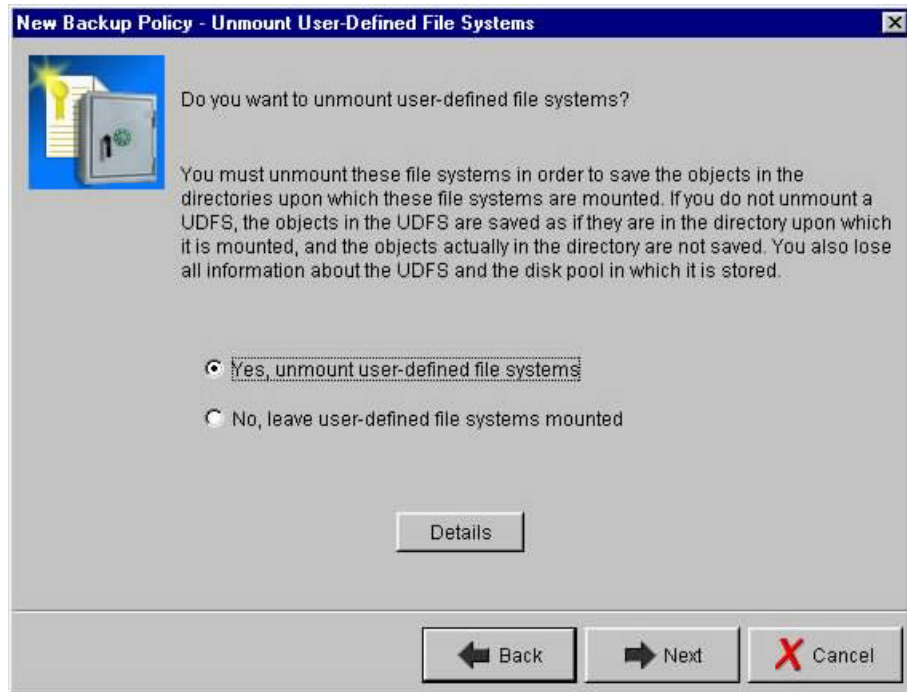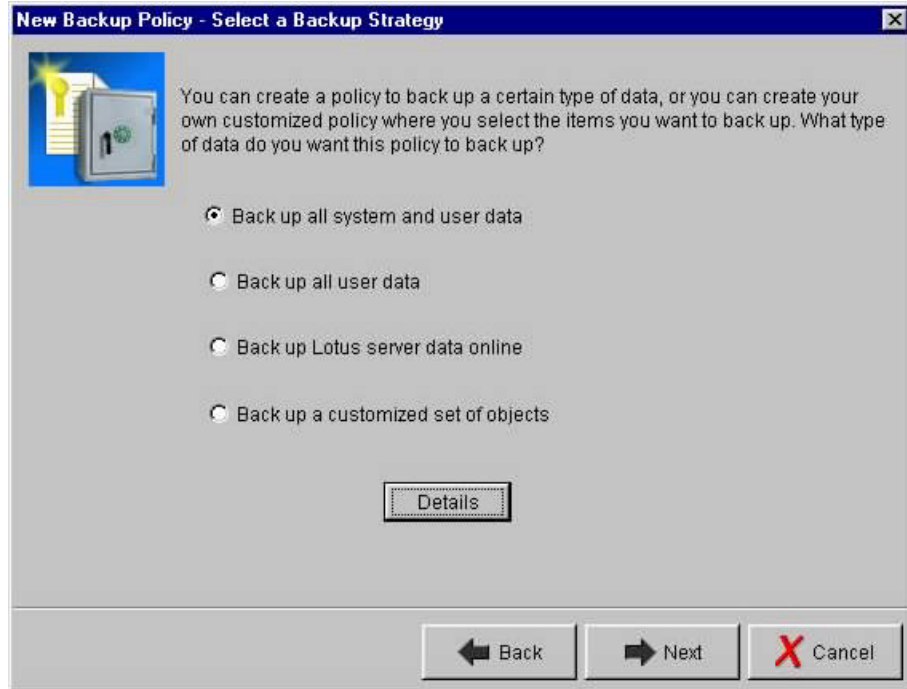

6. Click **Next**.

The **Unmount User-Defined File Systems** panel appears if your system has user-defined file systems. User-defined file systems must be unmounted to properly back them up and the directory over which there files systems are mounted. User-defined file systems should always be unmounted when performing full system backups or when backing up all directories and files (Integrated Files System - IFS). The only time you would elect not to unmount the user-defined files systems is when you are creating a customized backup which backs up specific directories and files which and do not include these user-defined file systems.

New Backup Policy - Unmount User-Defined File Systems

Do you want to unmount user-defined file systems?

You must unmount these file systems in order to save the objects in the directories upon which these file systems are mounted. If you do not unmount a UDFS, the objects in the UDFS are saved as if they are in the directory upon which it is mounted, and the objects actually in the directory are not saved. You also lose all information about the UDFS and the disk pool in which it is stored.

⦿ Yes, unmount user-defined file systems

○ No, leave user-defined file systems mounted

[Details]

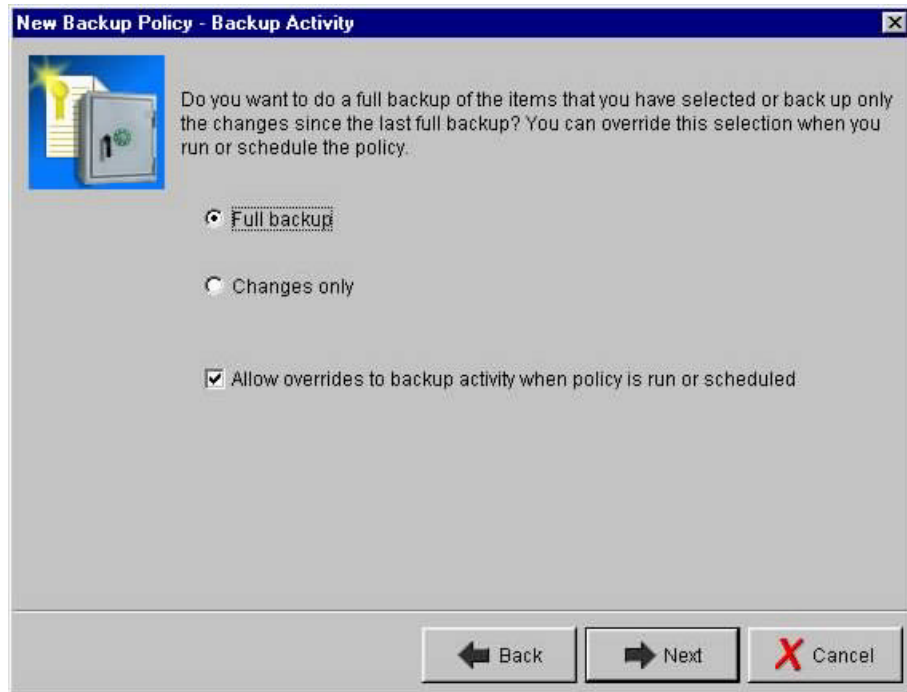[⬅ Back]   [➡ Next]   [✗ Cancel]

7. Click **Next**.

The **Select a Backup Strategy** panel is used to define the type of data to be included in the backup. For this first policy, we will use the default which is *Back up all system and user data*.

8. Click **Next**.

   The **Backup Activity** panel allows you to select whether the save is a full backup of the system including all user data, or just the changes to this data since that last full backup. For this first policy, we use the default which is *Full backup*. The *Allow overrides to backup activity when policy is run or scheduled* check box allows you to specify whether the **Backup Activity Override** panel is displayed when the policy is selected to be run or scheduled to run. If this box is checked, the **Backup Activity Override** panel will be presented each time the policy is selected to be run or scheduled to run. This gives you the opportunity to use an override to perform *Changes only* backups using the same policy. If you uncheck the check box, the **Backup Activity Override** panel is not presented.

   Backup activity overrides do not change the backup policy settings. The override applies only to the backup policy to which the override was applied and only when the backup policy is run.
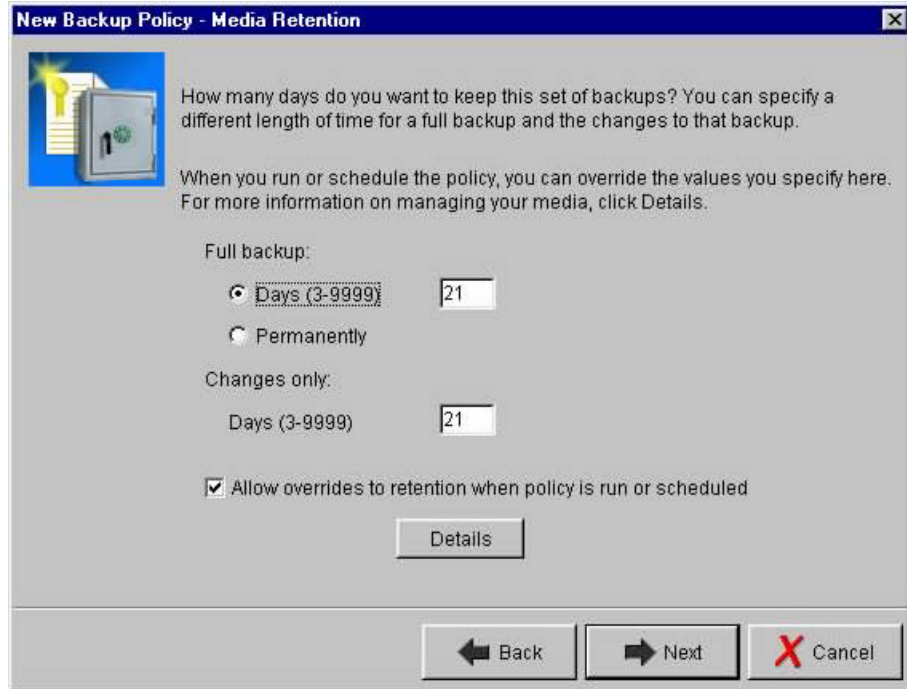
New Backup Policy - Backup Activity

Do you want to do a full backup of the items that you have selected or back up only the changes since the last full backup? You can override this selection when you run or schedule the policy.

- ⦿ Full backup
- ○ Changes only

☑ Allow overrides to backup activity when policy is run or scheduled

⬅ Back   ➡ Next   ✖ Cancel

9. Click **Next**.

The **Media Retention** panel allows you to specify how long information about the saved objects is to be retained by BRMS after they are saved. Media retention defines a period during which the saved objects and the media containing these saved objects is considered to the 'active'. When the retention period ends the saved objects will 'expire'. Expired saved objects are removed from the BRMS history information when maintenance is run. If all objects on a media volume have expired, the volume is also expired and the volume is returned to the 'scratch' pool and is avaiable for reuse.

The *Allow overrides to retention when policy is run or scheduled* check box allows to specify whether the **Backup Retention Override** panel is displayed when the policy is selected to be run or scheduled to run. If this box is checked, the **Backup Retention Override** panel will be presented each time the policy is selected to be run or scheduled to run. This gives you the opportunity to override the retention specified when the backup policy was created. If you uncheck the check box, the **Backup Retention Override** panel is not presented.

Retention overrides do not change the backup policy settings. The override applies only to the backup policy to which the override was applied and only when the backup policy is run.

```
New Backup Policy - Media Retention                              [X]

         How many days do you want to keep this set of backups? You can specify a
         different length of time for a full backup and the changes to that backup.

         When you run or schedule the policy, you can override the values you specify here.
         For more information on managing your media, click Details.

              Full backup:

                 ( ) Days (3-9999)          [21  ]

                 ( ) Permanently

              Changes only:

                 Days (3-9999)              [21  ]

                 [✓] Allow overrides to retention when policy is run or scheduled

                              [ Details ]

                          [ ◀ Back ]  [ ▶ Next ]  [ ✗ Cancel ]
```

10. Click **Next**.

The **Select Backup Devices** panel allows you to specify from one to four devices to be used for the backup. The devices will be used in the order shown in the *Backup devices* window.

To obtain a list of *Available devices*, you must first select a *Media pool* whichs contain the backup media (volumes) that will be used during the backup. When you select a *Media pool*, the plug-in will retrieve the list of *Available devices* that support read and write operations to the volumes in that *Media pool*. If there is only one device, the plug-in will pre-load the device under *Backup Devices*.
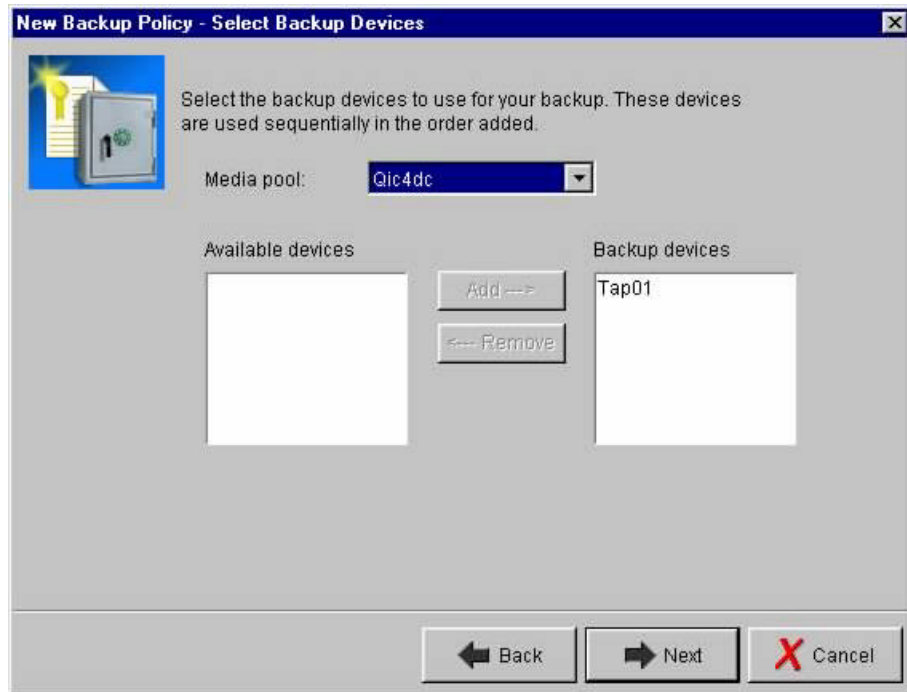
11. Select a media pool from the *Media Pool* list which provides a list of *Available devices* or a single *Backup device*.

12. Select a *Backup device* if you are provided a of *Available devices*.
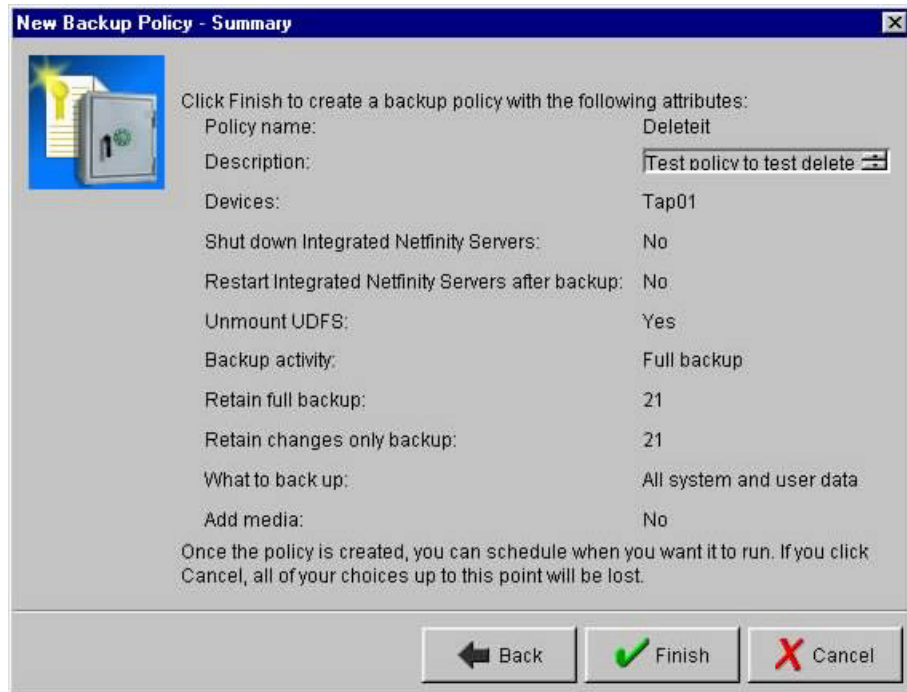
13. Select **Next**.

   The **Add Media** panel allows you to add media volumes to the media pool for this backup policy. Specifying *Yes, I want to add the media* will take you to the **Add Media Wizard** so that you can specify the names of the backup media which this backup policy will use. We will discuss adding media in a later chapter.

14. Select *No, the media is already added or I will add it later.*

15. Click **Next**.

The **Summary** panel provides an overview of the attributes you selected for this backup policy. If these are not correct, you can use the **Back** buttons on the panels to go back to the appropriate panel and make the correction.

New Backup Policy - Summary

Click Finish to create a backup policy with the following attributes:

Policy name:	Deleteit
Description:	Test policy to test delete
Devices:	Tap01
Shut down Integrated Netfinity Servers:	No
Restart Integrated Netfinity Servers after backup:	No
Unmount UDFS:	Yes
Backup activity:	Full backup
Retain full backup:	21
Retain changes only backup:	21
What to back up:	All system and user data
Add media:	No

Once the policy is created, you can schedule when you want it to run. If you click Cancel, all of your choices up to this point will be lost.

Back   Finish   Cancel

16. Click **Finish**.

The **Creating New Policy** panel will be presented while the wizard creates the policy.

New Backup Policy - Creating New Policy

Creating backup policy 'Deleteit'.

When the **Policy Created** panel appears, you can use this panel to run the policy, schedule the policy to run during specific dates and times, or end wizard operations.

New Backup Policy - Policy Created

The backup policy has been created. You can schedule this policy to run at a later time or you can run it now. When would you like this policy to run?

Run Now   Schedule   Done
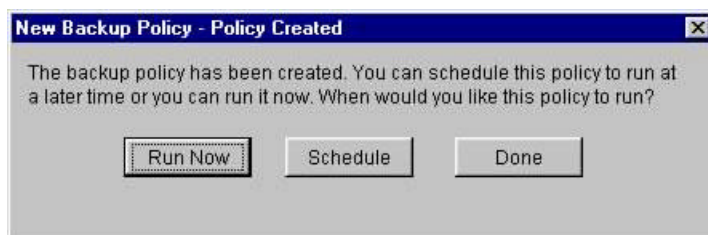
17. Click **Done**.

<u>This next **Backup Policy Wizard** example is intended to show you some of the capabilities available for creating customized policies.</u>

1. Click *Create a backup policy* on the **Backup Recovery and Media Services Tacks**.

2. Click **Next** on the **Welcome** panel.

3. Enter a policy name and a suitable description on the **Backup Policy Name** panel.

4. Click **Next**.

5. Select *Back up a customized set of objects* on the **Select a Backup Strategy** panel.

6. Click **Next**.

   The **Customize IBM Data or User Data** panel allows you specify whether you want to backup *IBM-supplied data*, or *User data*, or both.
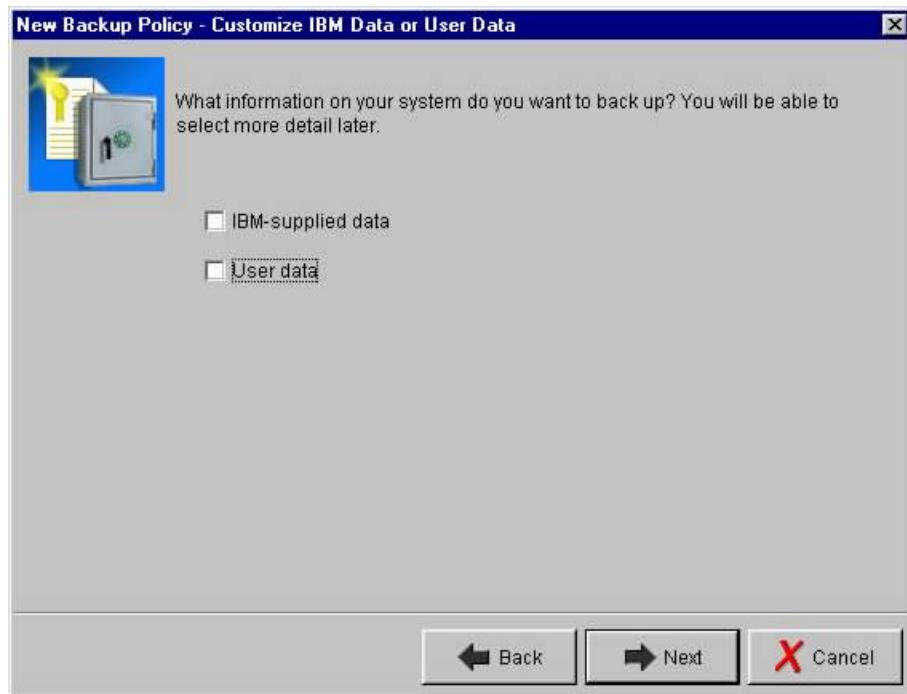
7. Select *IBM-supplied data* and *User data*.

8. Click **Next**.

   The **Customize IBM Data** panel allows you select the types of IBM-supplied data you want to backup. You could uncheck the check boxes to eliminate the *Licensed Internal Code and the operating system*, or *All IBM libraries* or *All IBM directories* from the backup.

New Backup Policy - Customize IBM Data

What system data do you want to back up?

☑ Licensed Internal Code and the operating system

☑ All IBM libraries

☑ All IBM directories

Back   Next   Cancel
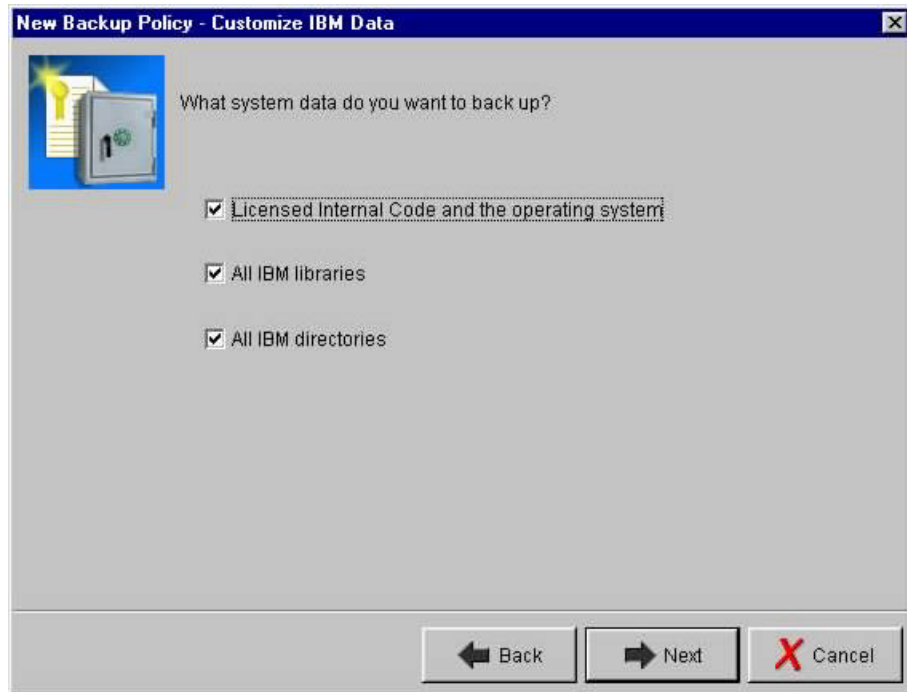
9. Click **Next**.

The **Customize User Data** panel allows you select the types of User data you want to backup. You could uncheck the check boxes to eliminate *All user libraries*, or *All folder in QDLS*, or *All directories* or *User profiles and security information*, or *Configuration data*, or *All printer output* from the backup.
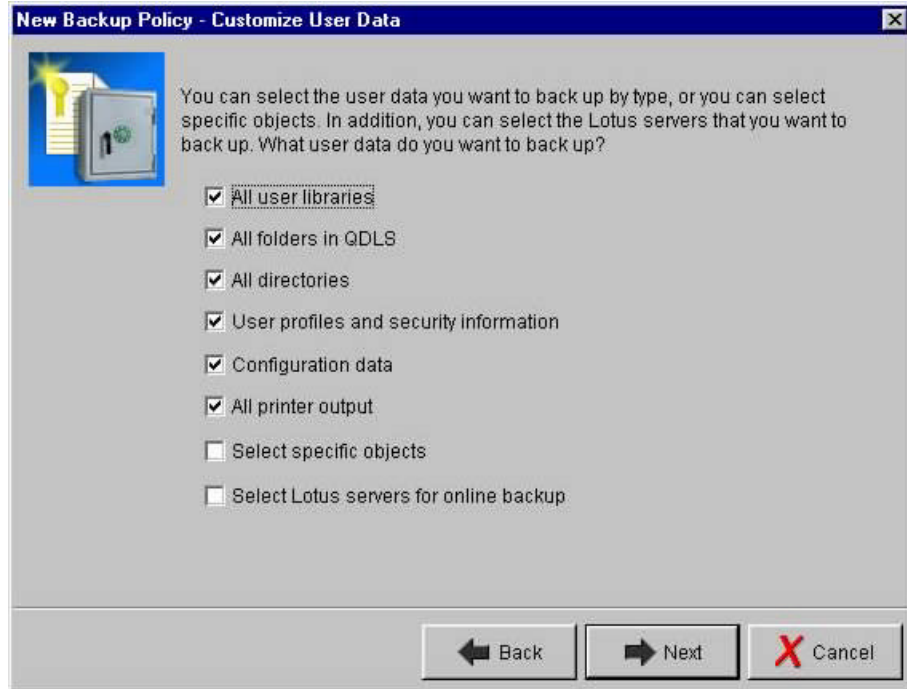
10. Click **Next**.

The **Backup Order** panel gives you an opportunity to change the order the items are backed up. This is accomplished by selecting a *Backup Item* and using the **Move Up** or **Move Down** buttons. These buttons are not enabled in this particular policy because of the items which were selected. The plug-in enforces a specific backup order to ensure optimum system recovery.

New Backup Policy - Backup Order

The following shows what you have selected to back up. The items will be backed up in the order shown. You can change the order of items that contain user data by clicking Move Up and Move Down.

Certain items are processed first and in a particular order, if they are included in the policy. This order is imposed so that, should you need to recover your system, your data is recovered in the correct order.

Backup Item	Type
OS/400 and Licensed Internal Code	
Security data	
Configuration data	
All IBM data	
All user data	
All document data	
All directory data	
All IBM directories	

Move Up   Move Down

Back   Next   Cancel

11. Click **Cancel**. We do not actually create this policy for this demonstration.

This next **Backup Policy Wizard** shows you how to create lists of objects to backup.

1. Click *Create a backup policy* on **Backup Recovery and Media Services Tasks**.

2. Click **Next** on the **Welcom**e panel.

3. Enter **MyListsPcy** for *Name* and a suitable description on the **Backup Policy Name** panel.

4. Click **Next**.

5. Select *Back up a customized set of objects* on the **Select a Backup Strategy** panel.

6. Click **Next**.

7. Select *User data* on the **Customize IBM Data or User Data** panel.

8. Select *Select specific objects*.

9. Click **Next**.

    The **Select Objects for Backup** panel provides you with a list of objects on the system. You select objects for backup by checking the check box to the left of the object name.

    Let us run through a simple example where we select a single object of each type. We will explore the **Select Lists…** and **Specify Generics…** buttons in the next example.
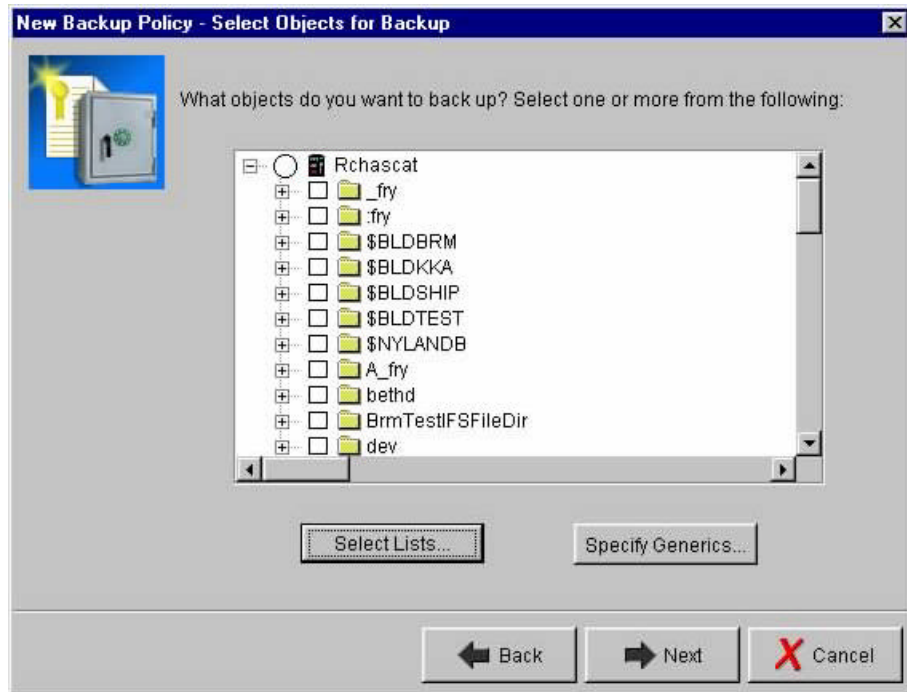
10. Double-click the *QDLS* folder.

11. Select any folder in the *QDLS* library by clicking on the check box adjacent to the folder.

12. Double-click the *QSYS.LIB* folder.

13. Double-click the *QGPL.LIB* folder.

14. Select the *QSS1MRI.DTAARA* object in the *QGPL* library by clicking on the check box.

15. Select the *tmp* directory by clicking on the checkbox adjacent to the directory.

16. Click **Next**.

   The **Create Folder List** panel provides a summary of the folders you selected for backup. The name of the folder list defaults to the name of the backup policy. You can change the name and description as you desire. The *Omit* column allows you to specify a folder or sub-folder to be omitted from the backup. For example, if you have a folder named MYFLR that contains a sub-folder name TMP which you want to omit from the backup, select folders MYFLR and MYFLR/TMP, and then select the *Omit* check box for MYFLR/TMP.

New Backup Policy - Create Folder List

You chose to back up the following folders. This group of folders will be saved in a folder list that you can reuse in other backup policies. Specify a name and description for the folder list.

Folder list name: Mylistpcy

Description: Create a policy with lists

Folders to be backed up:

Folder	Omit
QBKBOOKS	☐

Back   Next   Cancel

17. Click **Next**.

The **Create Objects List** panel provides a summary of the library objects you selected for backup. The name of the object list defaults to the name of the backup policy. You can change the name and description as you desire.

New Backup Policy - Create Objects List

You chose to back up the following objects. This group of objects will be saved in an object list that you can reuse in other backup policies. Specify a name and description for the object list.

Objects list name: Mylistpcy

Description: Create a policy with lists

Objects to be backed up:

Library	Object	Type	Member
Qgpl	QSS1MRI	*DTAARA	

Back   Next   Cancel
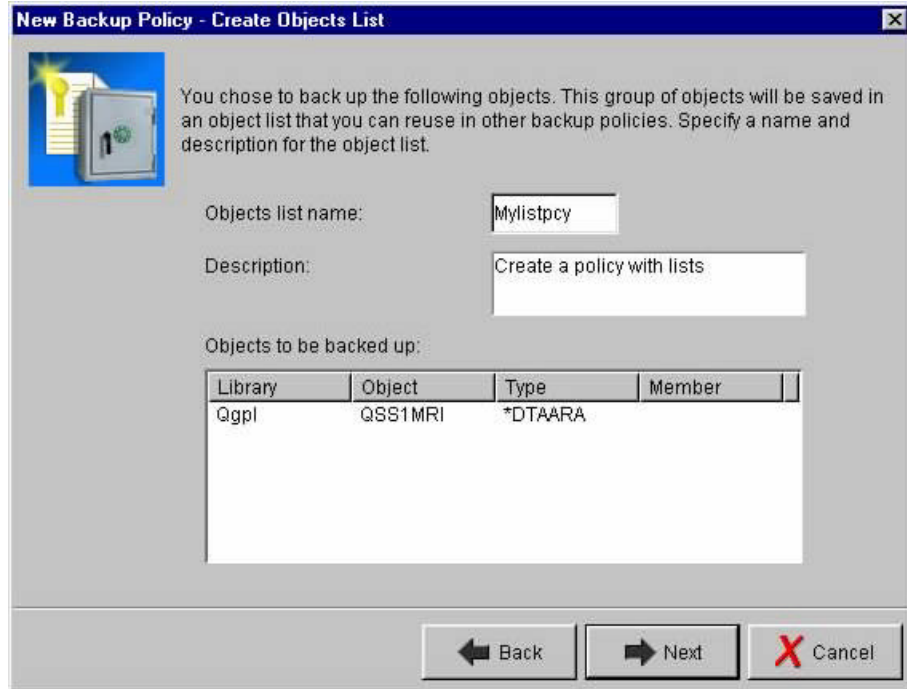
18. Click **Next**.

The **Create Directories List** panel provides a summary of the directories and files you selected for backup. The name of the directory list defaults to the name of the backup policy. You can change the name and description as you desire. The *Omit* column allows you to specify a directory, sub-directory, or file to be omitted from the backup. For example, if you have a directory named MYDIR that contains a sub-directory named TMP which you want to omit from the backup, select directories MYDIR and MYDIR/TMP, then click the *Omit* check box for MYDIR/TMP.

The *Include all sub-directories* option allows you to indicate that only the directories and sub-directories specified in the lists will be backed up. If the directories and sub-directories contain additional sub-directories, these are omitted from the backup if you do not select this option.

19. Click **Next**.

    The **Backup Order** panel provides a summary of the lists which will be created and the order in which the lists will be processed.
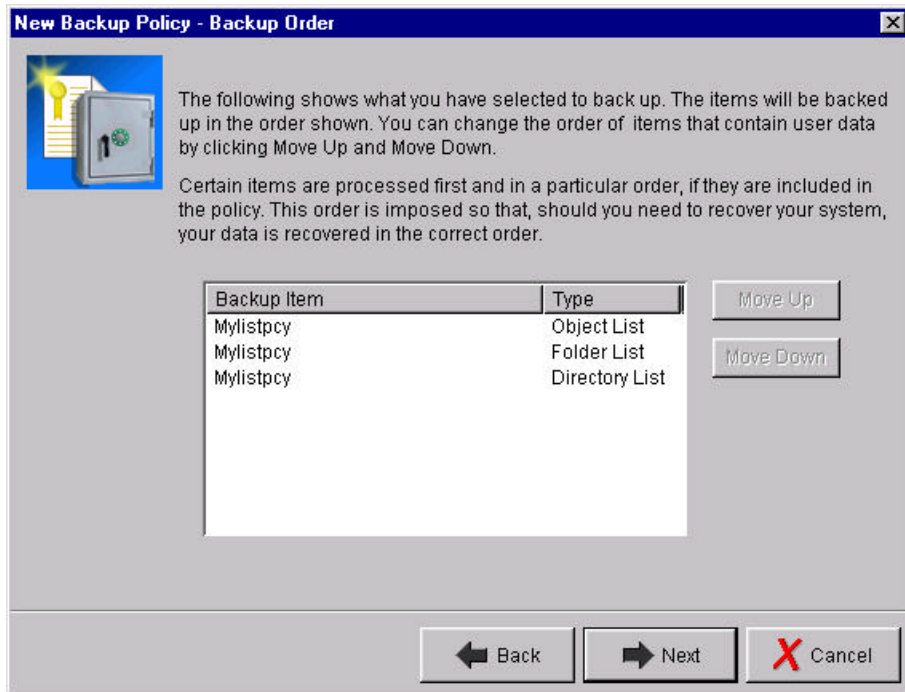
20. Click **Next**.

21. Click **Next** on the **Unmount User-Defined File Systems** panel.

22. Click **Next** on the **Backup Activity** panel.

23. Click **Next** on the **Media Retention** panel.

24. Select a device and then click **Next** on the **Select Backup Devices** panel.

25. Select *No, the media is already added or I will add it later* on the **Add Media** panel.

26. Click **Finish** on the **Summary** panel.

   In addition to the **Policy Created** panel, you will also see confirmation panels for the creation of each of the lists similar to the following:

27. Click **Done** on the **Policy Created** panel.

This next **Backup Policy Wizard** example shows you how to create lists using generic names for the list entries.

1. Click the *Create a backup policy* on **Backup Recovery and Media Services Tasks**.

2. Click **Next** on the **Welcome** panel.

3. Enter **MyListPcy2** for *Name* on the **Backup Policy Name** panel and enter a suitable description.

4. Click **Next**.

5. Select *Back up a customized set of objects* on the **Select a Backup Strategy** panel.

6. Click **Next**.

7. Select *User data* on the **Customize IBM Data or User Data** panel.

8. Click **Next**.

9. Select *Select specific objects* on the **Customize User Data** panel.

10. Click **Next**.

11. Click **Select Lists…** on the **Select Objects for Backup** panel.

    The **Select Lists** panel allows you to select lists to be added to this backup policy.
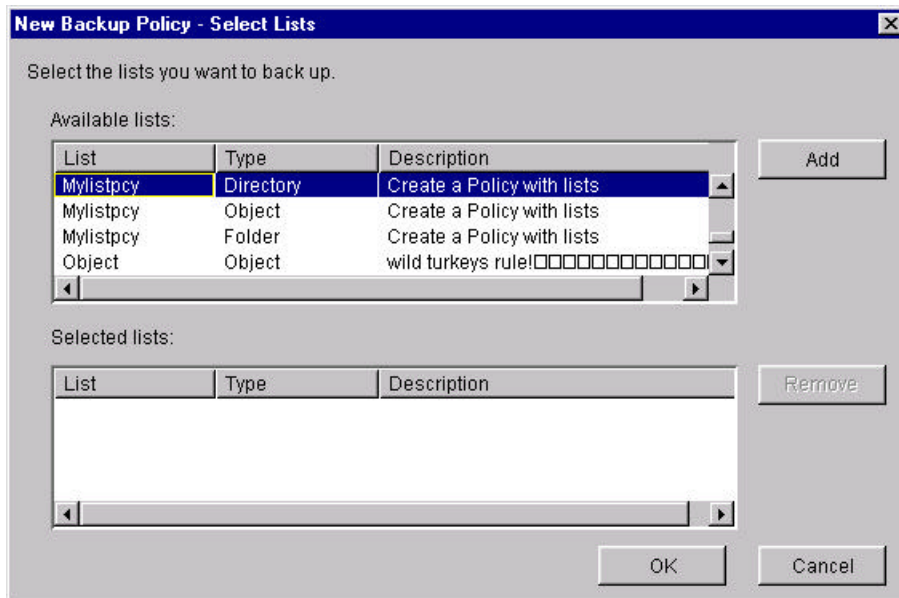
12. Find the list named *Mylistpcy* that you created in the previous example under *Available lists*.

13. Click on *Mylistpcy* in the *List* column to select the entry.

14. Click **Add** to add *Mylistpcy* to *Selected lists*.

15. Click **OK** to return to the **Select Objects for Backup** panel.

At this point, you could select additional items from the object hierarchy that you want included in your backup or added to the selected lists. We went through those steps in the previous example so let's focus on how to add generics.

16. Click **Specify Generics…**

The **Specify Generics** panel allows you to select the type of generic you want to add.
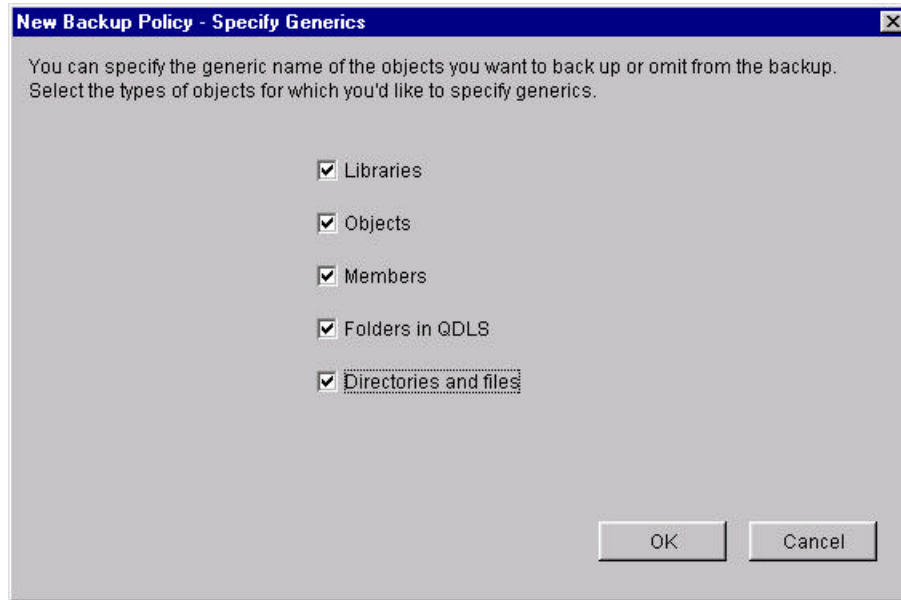
17. Select the *Libraries, Objects, Members, Folders in QDLS, and Directories and files* checkboxes.

18. Click **OK**.

19. Explore the Specify Generics for Libraries panel by adding some generic library names.
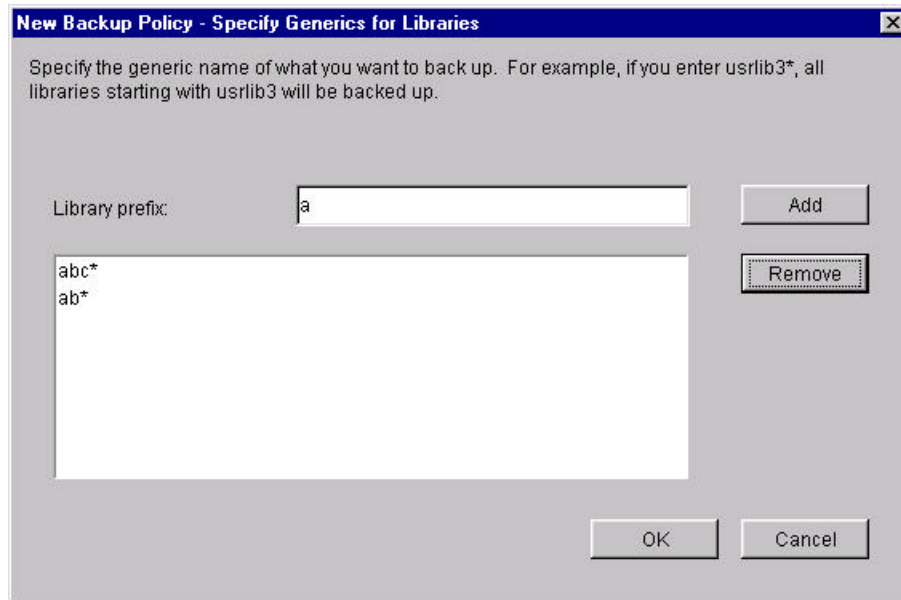
20. Enter **abc** for *Library prefix*.

21. Click **Add**.

22. Enter **ab** for *Library prefix*.

23. Click **Add**.

24. Enter **a** for *Library prefix*.

25. Click **Add**.

    Notice that an * (asterick) is appended to each prefix you enter. The asterick indicates that any library on the system beginning with this prefix will be include in the backup when this policy is run.

26. Select **a*** at the bottom of the generics list.

27. Click **Remove** to remove the entry from the list.

28. Click **OK**.

29. Explore the **Specify Generics for Objects** panel by adding some generic object names.

30. Enter **def** for *Object prefix*.

31. Enter **a** for *Library***.**

32. Click **Add**.

33. Select *Journal Receiver* for *Type*.

34. Click **Add**.

   The form of the entries for generic objects is *library-name/objectname.object-type*.

35. Click **OK**.

36. Explore the **Specify Generics for Members** panel by adding some generic member names.

37. Enter **ghi** for *Member prefix*.

38. Enter **a** for *Library*.

39. Enter **def** for *Object***.**

40. Click **Add**.

   The form of the entries for generic objects is *library-name/object-name/member-name*.

41. Click **OK**.

42. Explore the **Specify Generics for Folders** panel by adding some generic folder names.

New Backup Policy - Specify Generics for Folders

Specify the generic name of what you want to back up. For example, if you enter fldra*, all items starting with fldra* will be backed up or omitted.

Folder prefix: [myflr/tmp]   [Add]

Generic	Omit		[Remove]
MYFLR/*	☐		
MYFLR/TMP*	☑		

[OK]   [Cancel]
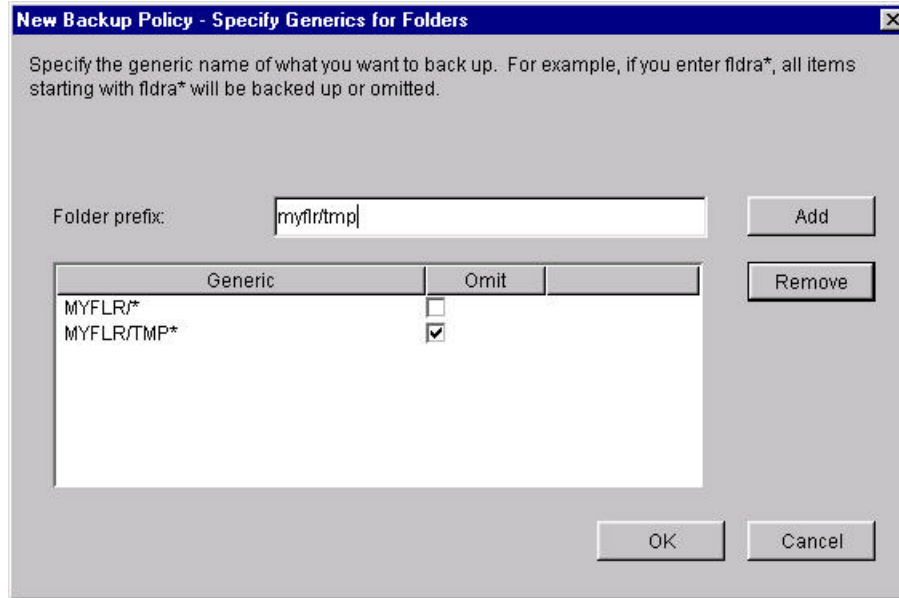
43. Enter **myflr**/ for *Folder prefix*.

44. Click **Add**.

45. Enter **myflr/tmp** for *Folder prefix.*

46. *C*lick **Add**.

47. Check the *Omit* check box adjacent to **myflr/tmp***.

    This specifies that all subfolders beginning with **tmp** are to be omitted from the backup when folder **myflr** is backed up.

48. Click **OK**.

49. Explore the **Specify Generics for Directories or Files** panel by adding some generic directory and file names.

New Backup Policy - Specify Generics for Directories or Files

Specify the directory path and generic file name of what you want to back up or omit. For example, if you enter /com/trdir*, all directories or files that start with /com/trdir will be backed up or omitted.

Directory or file: /tmp

Generic	Omit	
/*	☐	
/tmp*	☑	
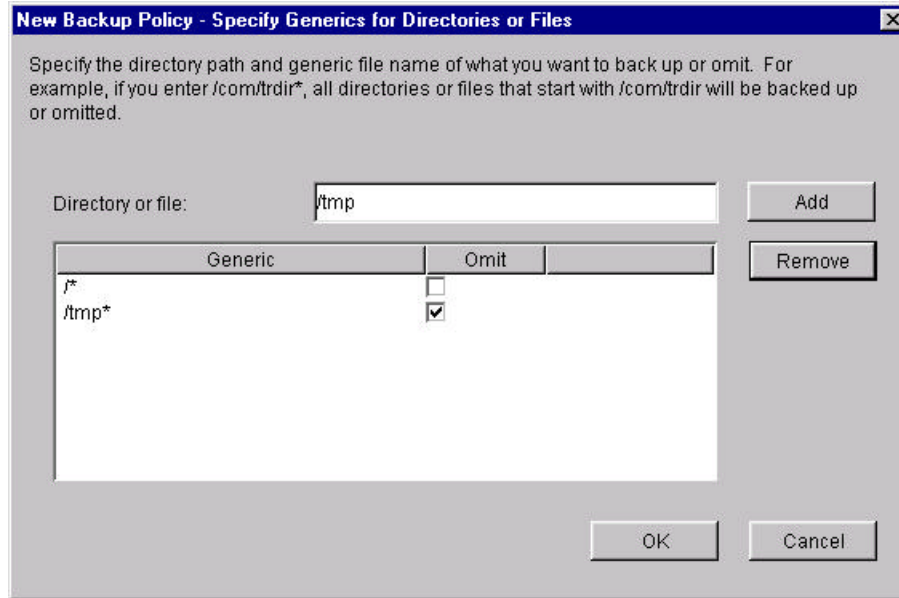
50. Enter / for *Directory or file*. This specifies the root directory.

51. Click **Add**.

52. Enter **/tmp** for *Directory or file*.

53. Click **Add**.

54. Check the *Omit* check box adjacent to **/tmp***.

   This specifies all sub-directories beginning with **tmp** are to be omitted from the backup when the root directory is backed up.

55. Click **OK**.

56. Click **Next** on the **Select Objects For Backup** panel.

57. Click **Next** on the **Create Folder Lists** panel.

58. Click **Next** on the **Create Objects Lists** panel.

59. Click **Next** on the **Create Directories Lists** panel.

60. Explore the **Backup Order** panel by selecting each of the *Backup Items* and using the **Move Up** and **Move Down** buttons to change the order of selected items. This panel enforces the following rules when selecting a Backup item to be moved.

   ✍ Object lists cannot be moved above libraries.
   ✍ Folder lists cannot be moved above objects lists.
   ✍ Directory lists cannot be moved above folder lists.

   If the selected Backup item does not meet the above rules, the Move Up and/or Move Down buttons will be disabled.

New Backup Policy - Backup Order

The following shows what you have selected to back up. The items will be backed up in the order shown. You can change the order of items that contain user data by clicking Move Up and Move Down.

Certain items are processed first and in a particular order, if they are included in the policy. This order is imposed so that, should you need to recover your system, your data is recovered in the correct order.

Backup Item	Type
Abc*	Library
Ab*	Library
Mylistpcy	Object List
Mylistpcy2	Object List
Mylistpcy	Folder List
Mylistpcy2	Folder List
Mylistpcy	Directory List
Mylistpcy2	Directory List

Move Up   Move Down

Back   Next   Cancel

61. Click **Cancel.**

This completes the introduction to the **Backup Policy Wizard.**

Maintenance

This chapter introduces you to the BRMS Maintenance functions available in the plug-in.

1. Click the *Backup, Recovery and Media Services* folder.

2. Click *Perform maintenance and cleanup* from **Backup Recovery and Media Services Tasks**.

   The **Run Maintenance** panel provides you the means of running or scheduling BRMS maintenance.

   Run Maintenance ☒

   Running maintenance will perform various maintenance and cleanup activities related to your backup information. Media will be expired, backup history and backup log entries are deleted, and several reports will be run, including the disaster recovery report. You should run maintenance daily.

   Click OK to run maintenance now or click on Schedule to schedule maintenance to run at a later time.

   Note: Make sure that all backups have finished running before you run maintenance.

   [OK]   [Schedule]   [Cancel]   [Help]   [?]

   ---

3. Click **Help** and click *click here* in the help panel to learn what actions BRMS will perform when running maintenance.

4. Click **Cancel** when you have completed exploration.

Add Media Wizard

This chapter introduces you to the Add Media Wizard which is provided with the plug-in to help you prepare media for a backup. With the Add Media Wizard, you add media volumes to the BRMS media inventory. Add media volumes to the BRMS media inventory means that you want BRMS to track this media. BRMS does this until explicitly removed from the inventory.

1. Click the *Backup, Recovery and Media Services* folder.

2. Click *Add media for backup* from **Backup Recovery and Media Services Tasks**.

3. Review the **Welcome** panel.
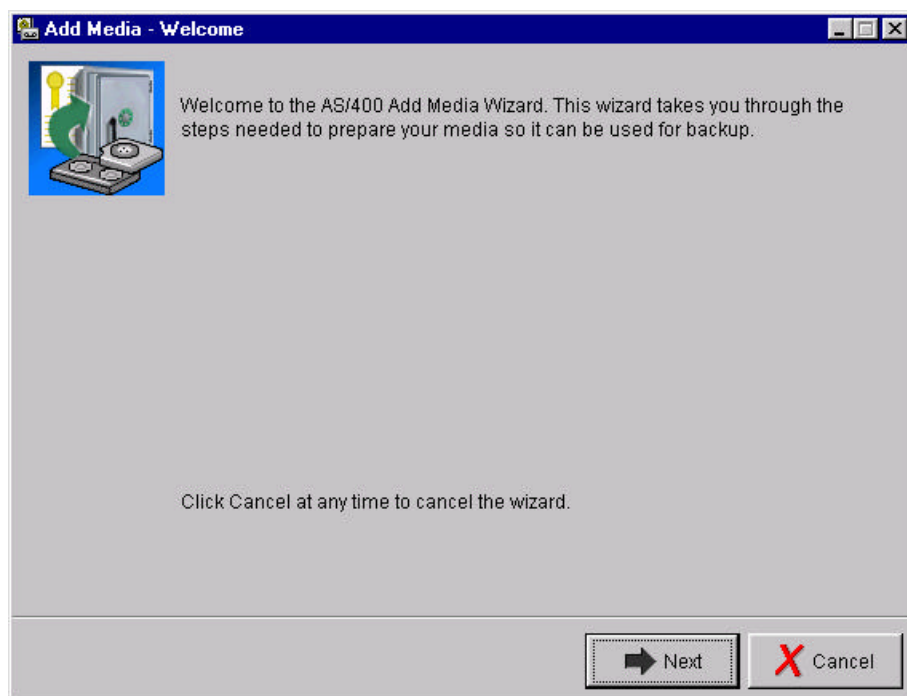
4. Click **Next**.

   The **Select the Media Pool** panel allows you to select a media pool to which the media is to be added. A media pool is a collection of media volumes supporting the same type of media. Media is categorized by the type of media (reel, ¼-inch cartridge, ½-cartridge, etc.) and by the write density.

   The **Select the Media Pool** panel provides you with a list of available media pools.
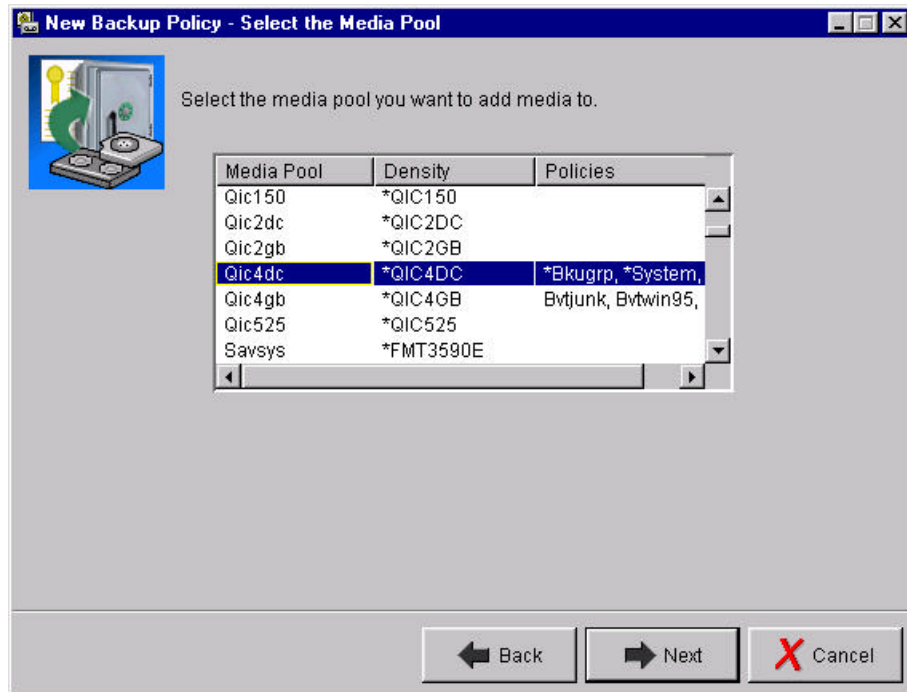
5. Select the media pool that you used when you created the **deleteit** backup policy.

    Hint: If you don't know it, it might be listed in the Policies column on the Select the Media Pool panel.

6. Click **Next**.

7. Explore the **Add Volumes** panel by adding specific volume names and volume name prefixes.
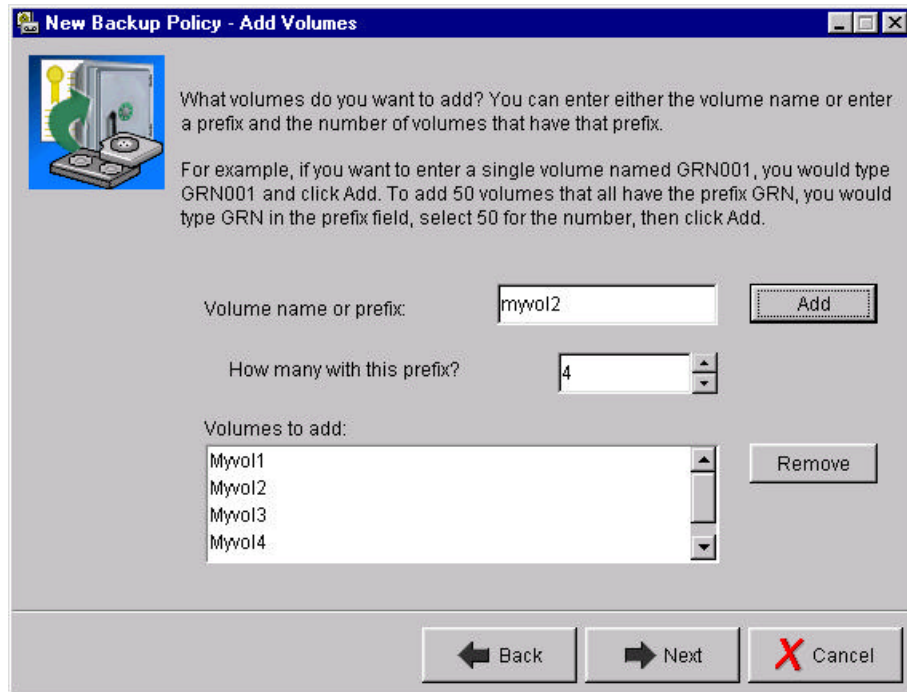
8. Enter **myvol1** for *Volume name or prefix*.

   BRMS uses volume names can be 1 to 6 characters in length.

9. Click **Add**.

10. Enter **myvol2** *Volume name or prefix* and set *How many with this prefix?* to 4.

11. Click **Add**.

12. Click **Next**

    The **Initialize volumes** panel allows you to select whether the media volumes you are adding are to be initialized, whether BRMS should check for active files on the volume before initializing the volume, and what device is to be used to initialize the volumes.

New Backup Policy - Initialize Volumes

Select the volumes to initialize. If you select Ignore active files, you will destroy any active data on the volume.

Volumes	Initialize	Ignore Active Files
Myvol1	☑	☐
Myvol2	☑	☐
Myvol3	☑	☐
Myvol4	☑	☐
Myvol5	☑	☐

What device do you want to initialize your media on?

Media pool: Qic4dc

Device: Tap01

← Back   → Next   ✗ Cancel
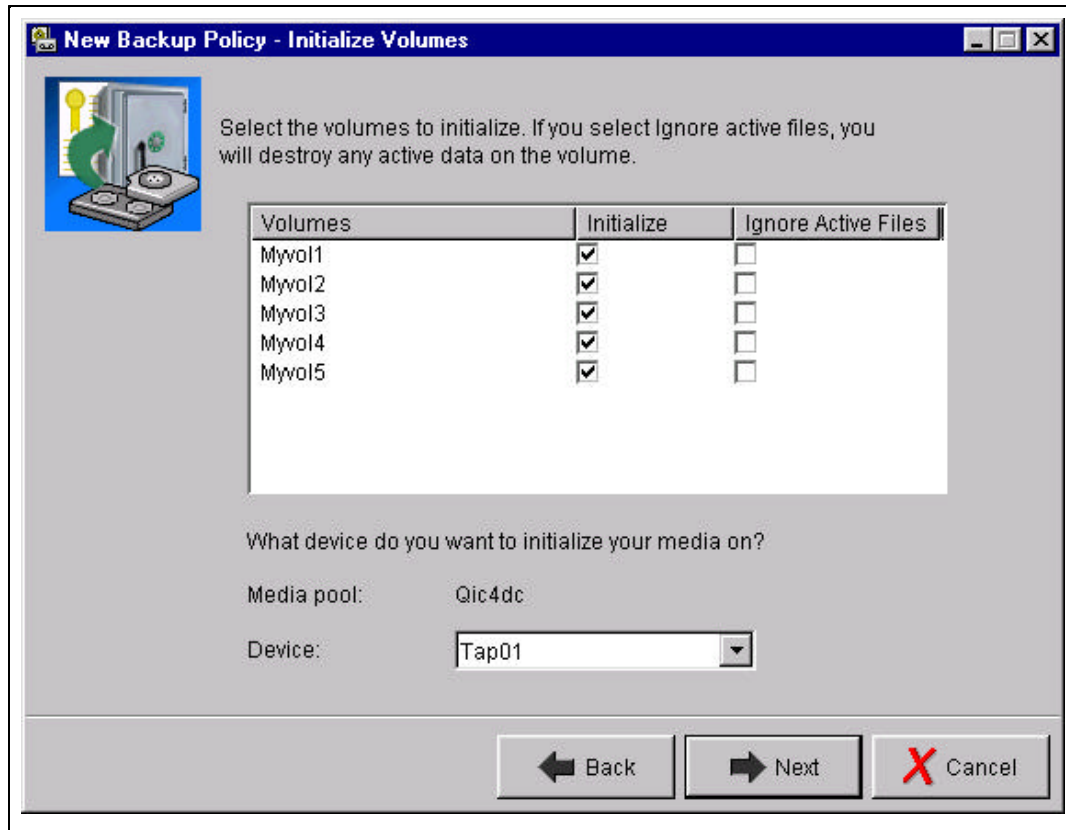
13. Uncheck the *Initialize* check box for each volume .

14. Click **Next**.

   The **Summary** panel provides an overview of the volumes being added.

   To make a correction like adding or removing a volume, use the **Back** button to return to the appropriate panel.
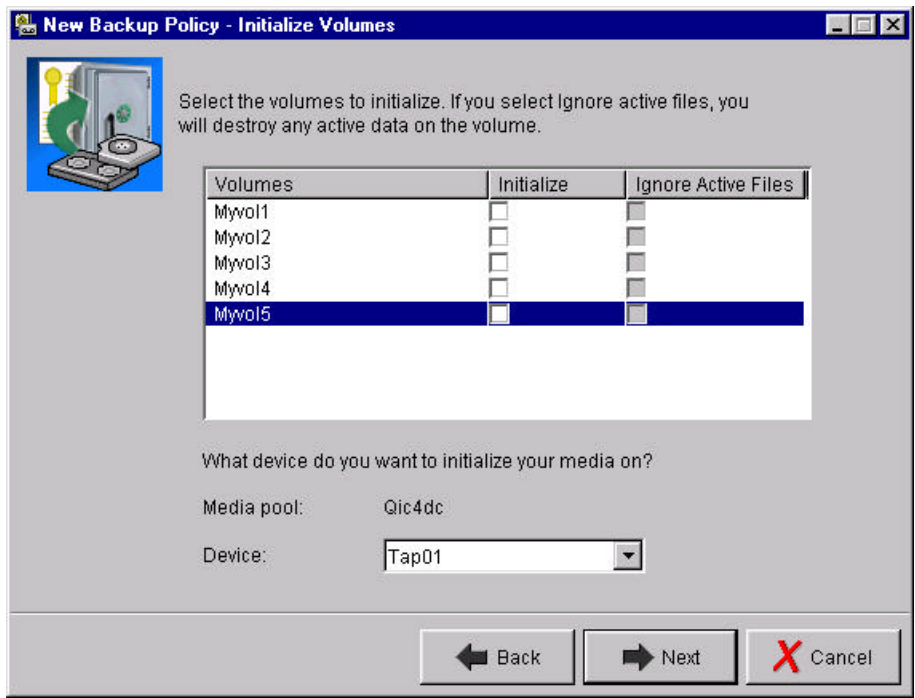
15. Click **Finish**.

The wizard adds the volumes to the BRMS media inventory.

Tape volumes

This chapter shows you how you can find and review information about volumes you have added to the BRMS media inventory.

1. Double-click the *Backup, Recovery and Media Services* folder

2. Double-click the *Media* folder

3. Right-click *Tape Volumes* folder

4. Click **Include…**

   The **Include** panel allows you to filter the set of volumes you want to review.

5. Click the **Help** button to learn more about the filters available on this panel .

6.   Enter **myvol*** for *Volume*.

7.   Click **OK**.

8.   Right-click the *Tape Volumes* folder.

9.   Click **Open**.

The **Tape Volumes** panel provides you with the list of volumes which met the filter criteria as specified in the **Include** panel. This this case, it retrieved a list of volumes beginning with the generic name **myvol*.**
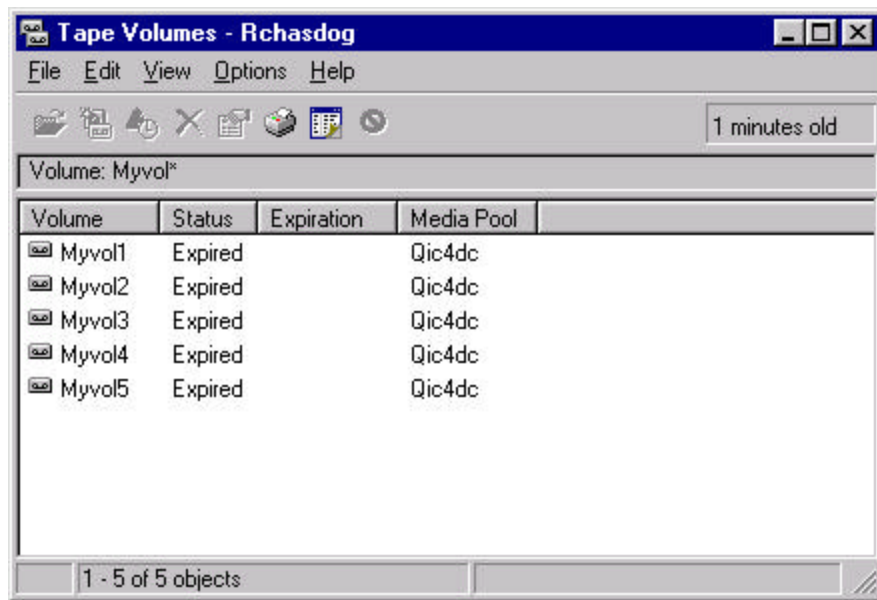
10. Select **Options**.

11. Click **Columns…**.

The **Columns** panel allows you to select which column information is included on the **Tape Volumes** display.
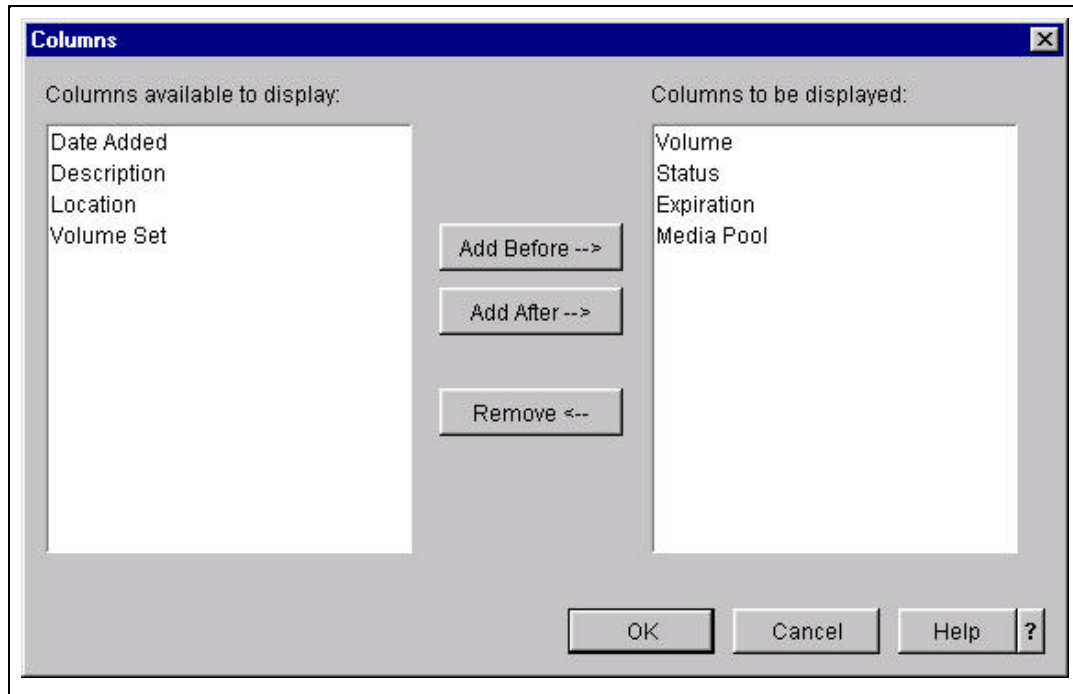
12. Select *Location* from *Columns available to display*.

13. Select *Volume* under *Columns to be displayed*.

14. Click **Add after-->.**
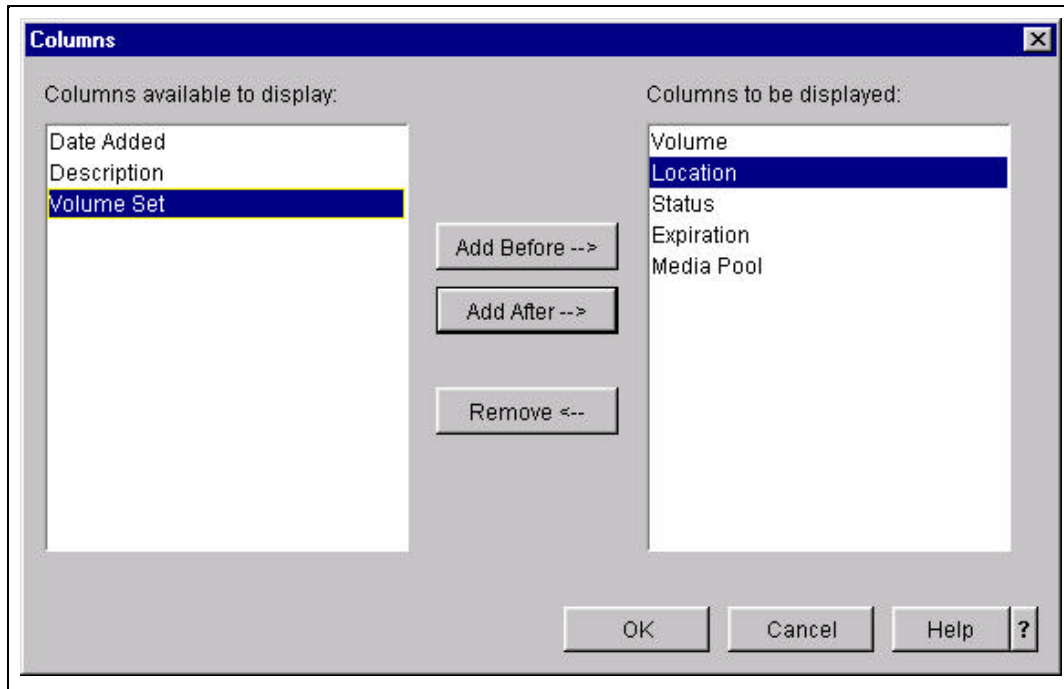
15. Click **OK**.

Notice the *Location* column is added to the **Tape Volumes** display and it is in the position you specified on the **Columns** panel.
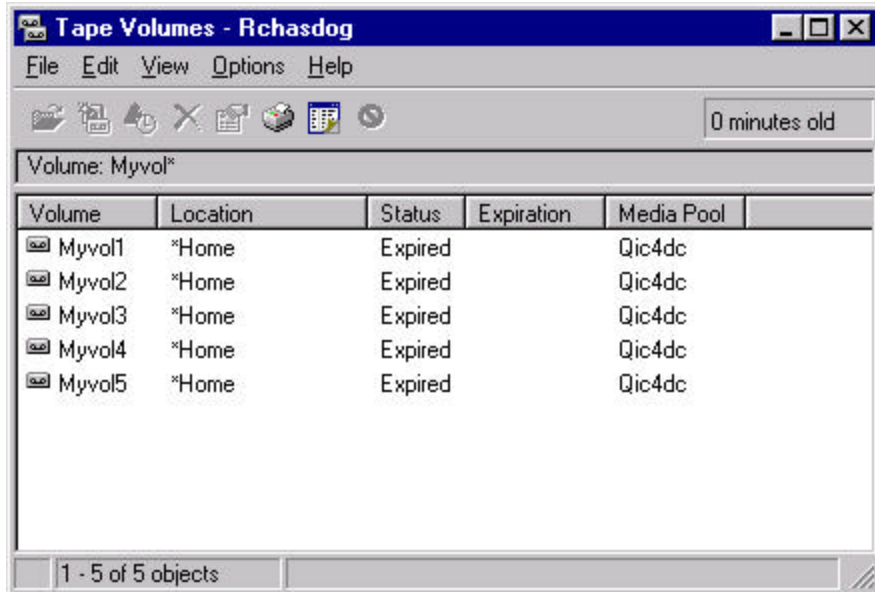
16. Right-click **Myvol2**.

17. Click **Properties**.

The **Tape Properties** panels allows you to review information for a specific volume.

The information on the *General* tab of the **Tape Properties** panel shows you the media pool of the volume, the current location, and the current expiration date of the volume. You can

optional change the expiration of the volume from this panel. We will review this function shortly.
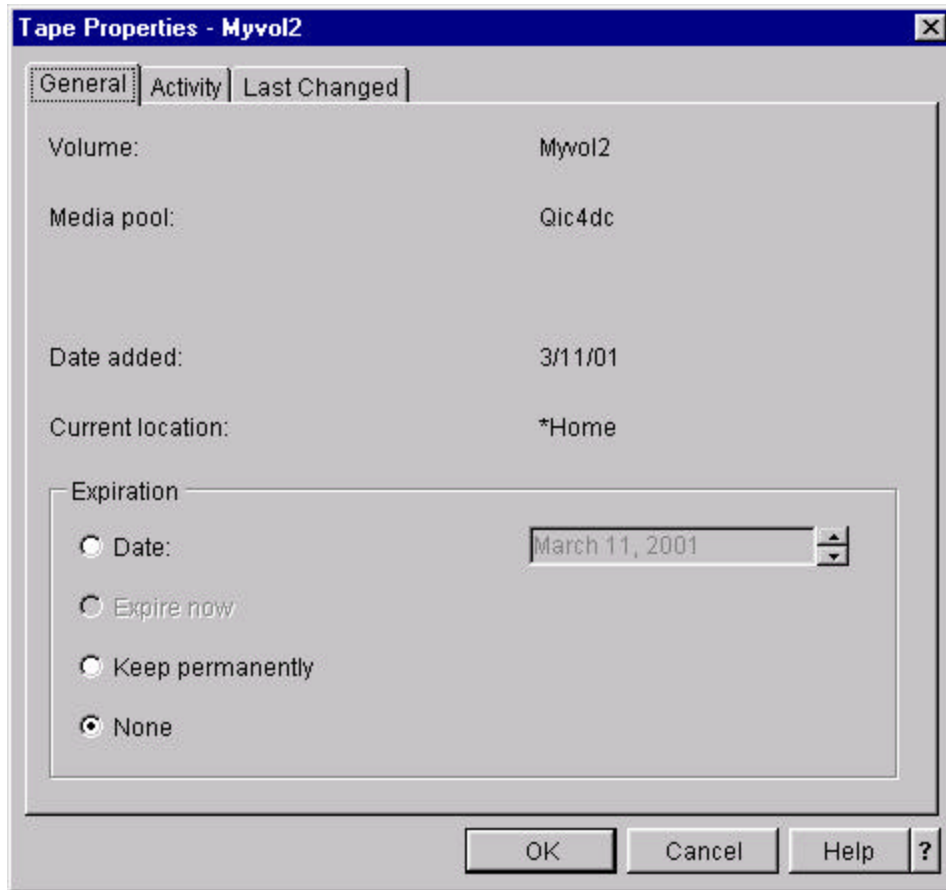
18. Click the *Activity* tab.

The information on the *Activity* tab of the **Tape Properties** panel shows you the number of read/write errors, the number of bytes read/written, the most recent bytes written, and the maximum bytes written. All of this information is collected for a volume once the volume is added to the BRMS media inventory.

Tape Properties - Myvol2

General | Activity | Last Changed

Read errors:	0
Write errors:	0
Bytes read:	0 bytes
Bytes written:	0 bytes
Current bytes written:	0 bytes
Maximum bytes written:	0 bytes
Use counts:	0

OK | Cancel | Help | ?
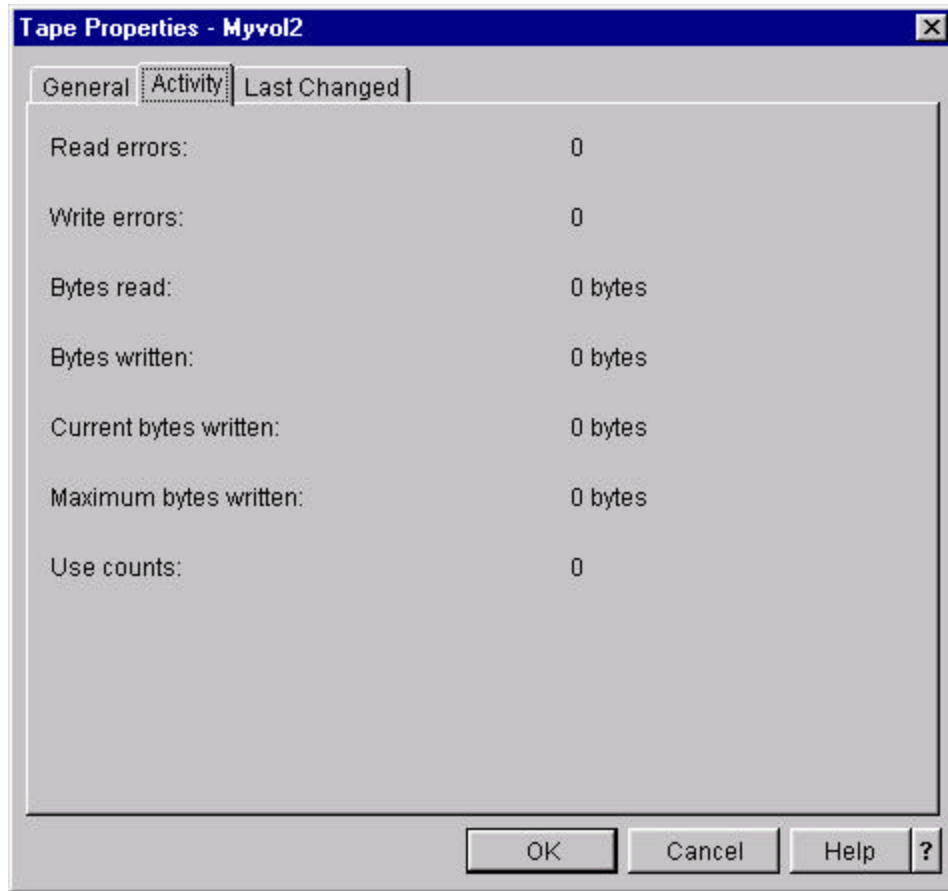
19. Click the *Last Changed* tab.

The information on the *Last Changed* tab of the **Tape Properties** panel shows you when the information about this volume was last changed, and the job and user that made the change.

Tape Properties - Myvol2

General | **Activity** | **Last Changed**

Job name:	QPADEV0002
User:	Sphank
Number:	147668
Date:	3/10/01
Time:	11:00:01 AM

OK   Cancel   Help   ?
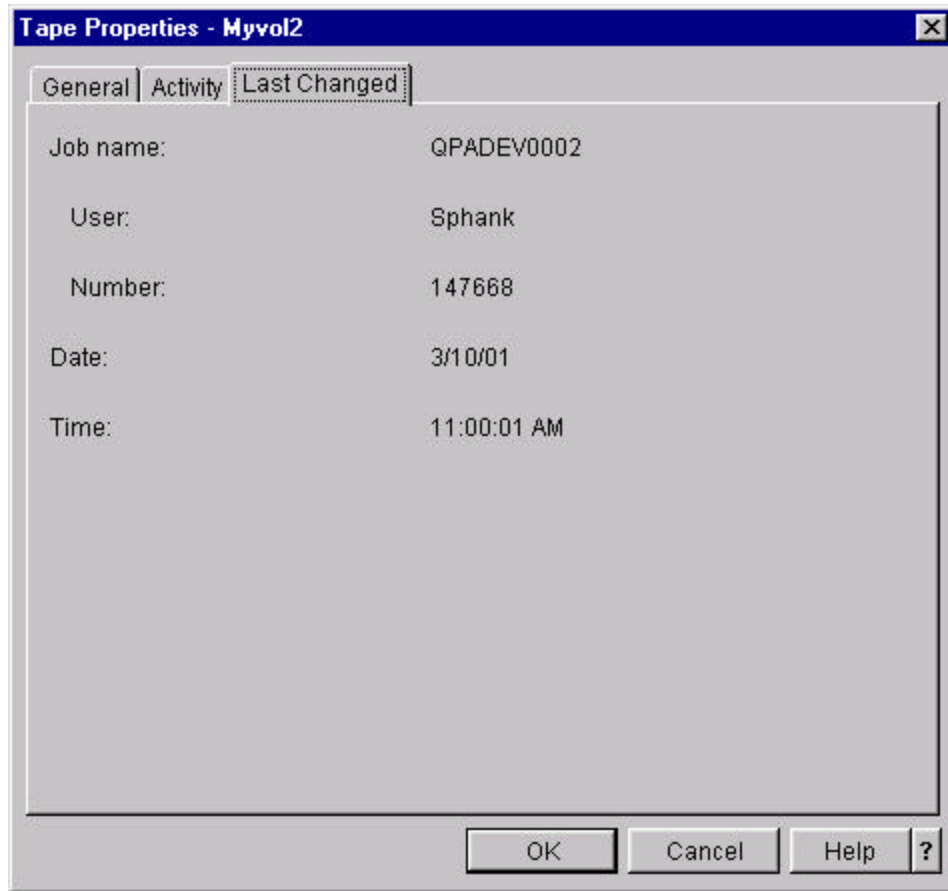
20. Click the *General* tab.

21. Click the *Date* radio button inside the *Expiration* group box.

22. Click the year within *Date* highlight it.

23. Increment the year by clicking the up spin button to the right.

24. Click **OK** to leave **Tape Properties** and to apply the expiration date change.

The **Tape Volumes** panel refreshes automatically because of the change. You now see **Myvol2** with an expiration date assigned. Also notice that the status of the volume changed from *Expired* to *Active*.
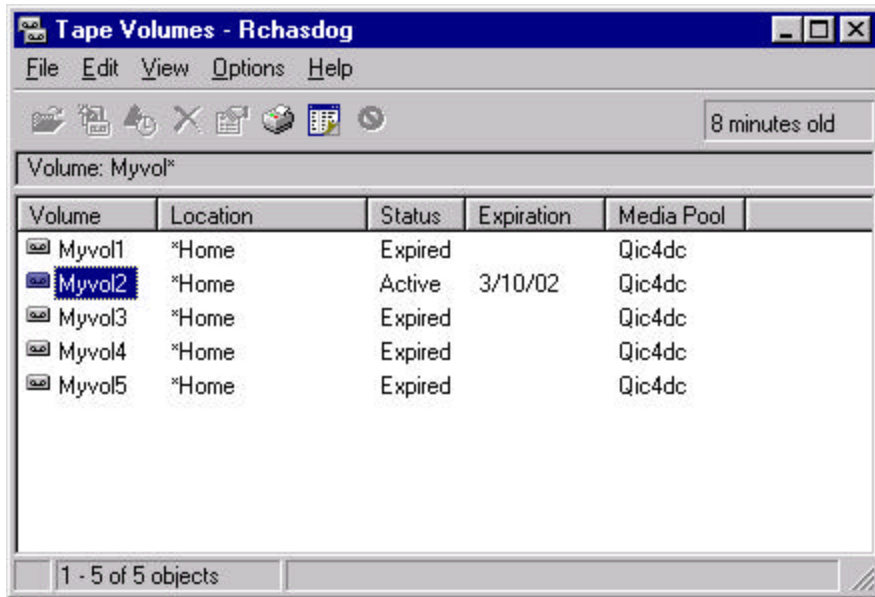
25. Select **Options**.

26. Click **Sort…**.

   The **Sort** panel allows you to specify how entries that are presented to the **Tape Volume** panel are sorted. You do this by moving the name of the column(s) you want to sort by from *Columns available to sort* to *Sort based on the following*. If multiple entries are listed in *Sort based on the following*, the sort is applied to the first entry, then the second, and so on. The default is set to sort by the *Volume* name.
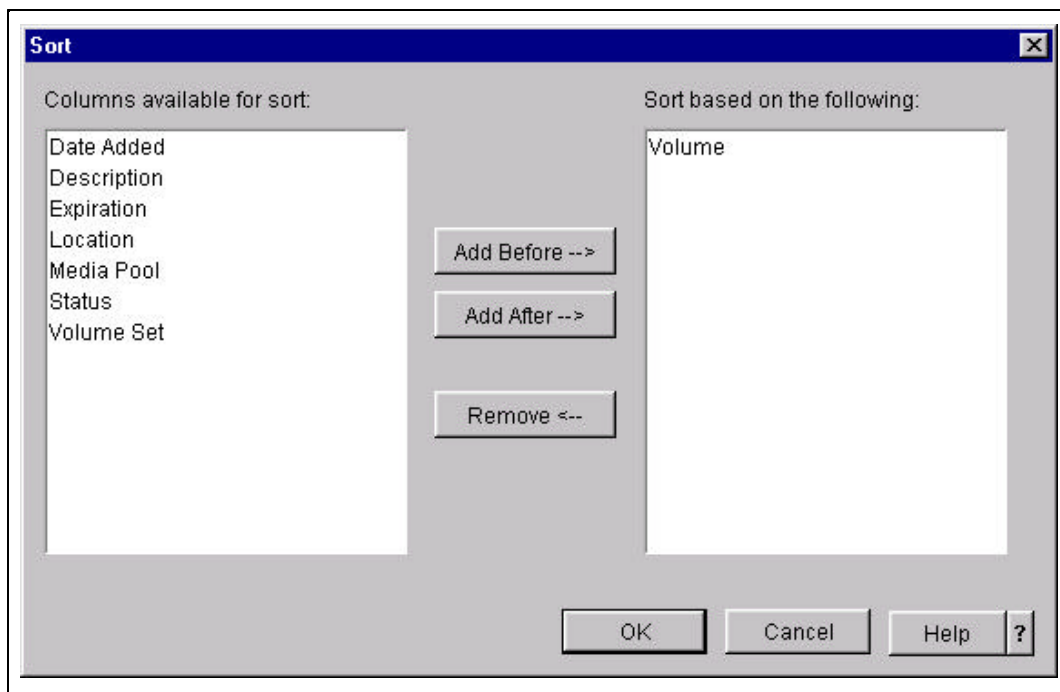
27. Select *Volume* in *Sort based on the following*.

28. Click **Remove**.

29. Select **Expiration** in *Fields available for sort*.

30. Click **Add Before-->**
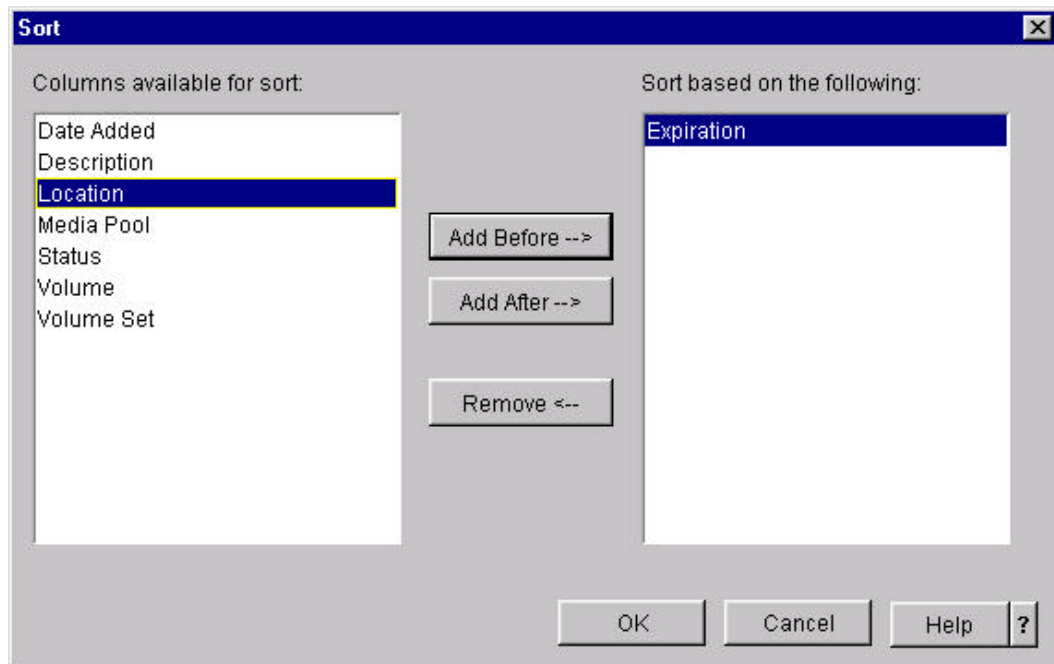
31. Click **OK** to apply the new sort criteria.

    The **Tape Volumes** panel refreshes automatically to reflect the change. You now see
    Myvol2 volume at the bottom of the list because you sorted by *Expiration* date rather than by
    Volume name.

```
Tape Volumes - Rchasdog                              _ □ X
File  Edit  View  Options  Help

[toolbar icons]                              0 minutes old

Volume: Myvol*

Volume      Location      Status    Expiration   Media Pool
Myvol1      *Home         Expired                Qic4dc
Myvol3      *Home         Expired                Qic4dc
Myvol4      *Home         Expired                Qic4dc
Myvol5      *Home         Expired                Qic4dc
Myvol2      *Home         Active    3/10/02      Qic4dc




1 - 5 of 5 objects
```
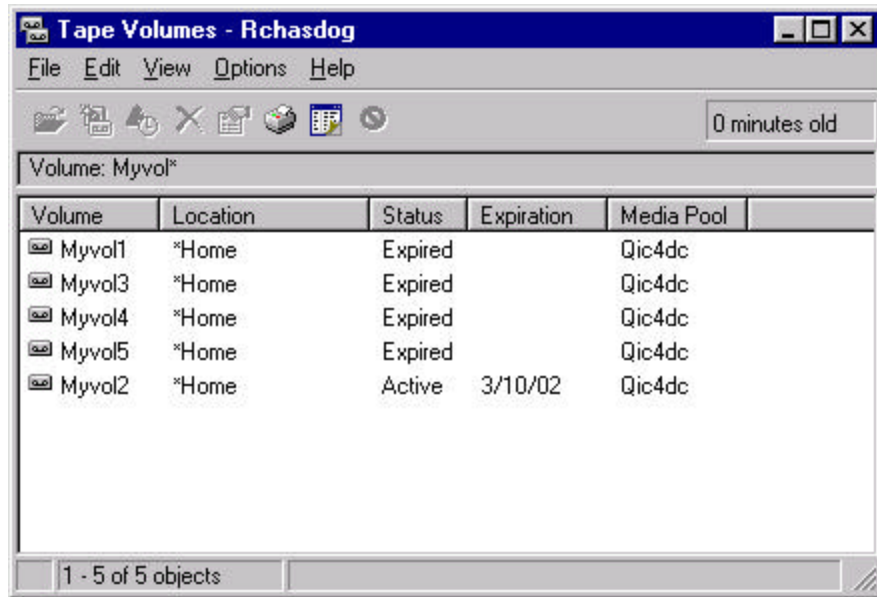
32. Right-click **Myvol2**.

33. Click **Expire...**.

The **Confirm Expire** panel is used to force you to acknowledge the expiration request.

When you expire a volume all history information about the saved items that may exist on the volume are also expired. Expired saved items are removed from the history when maintenance is run and the expired volume is placed into the scratch pool for reuse. Never expire a volume unless you are sure you no longer needs the saved items on that volume.
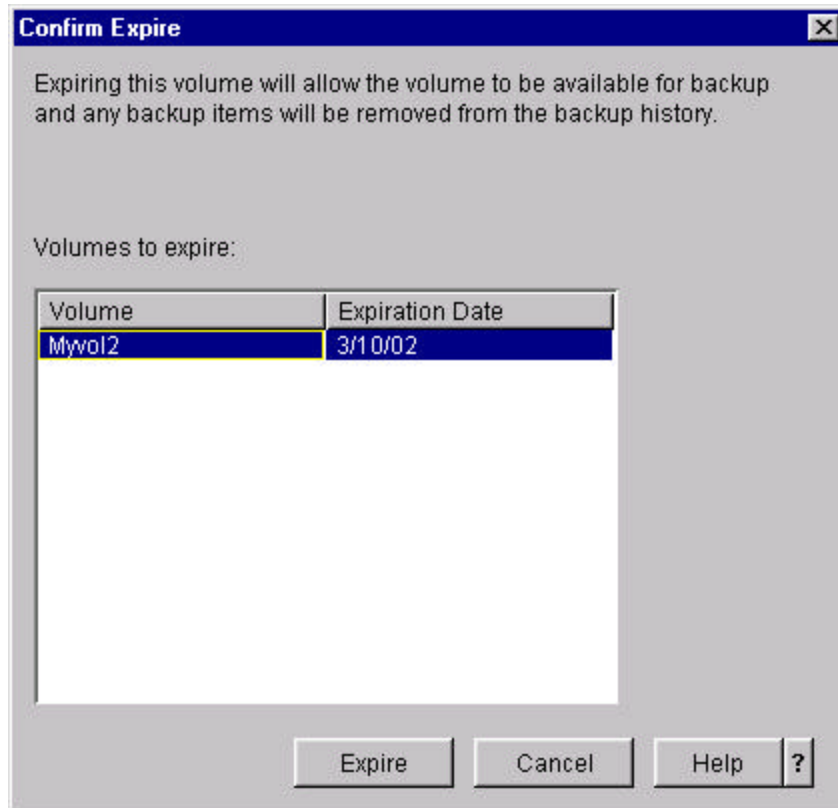
34. Click **Expire**.

When the **Tape Volumes** panel refreshes, the expiration date of volume **Myvol2** is changed to the current Date.
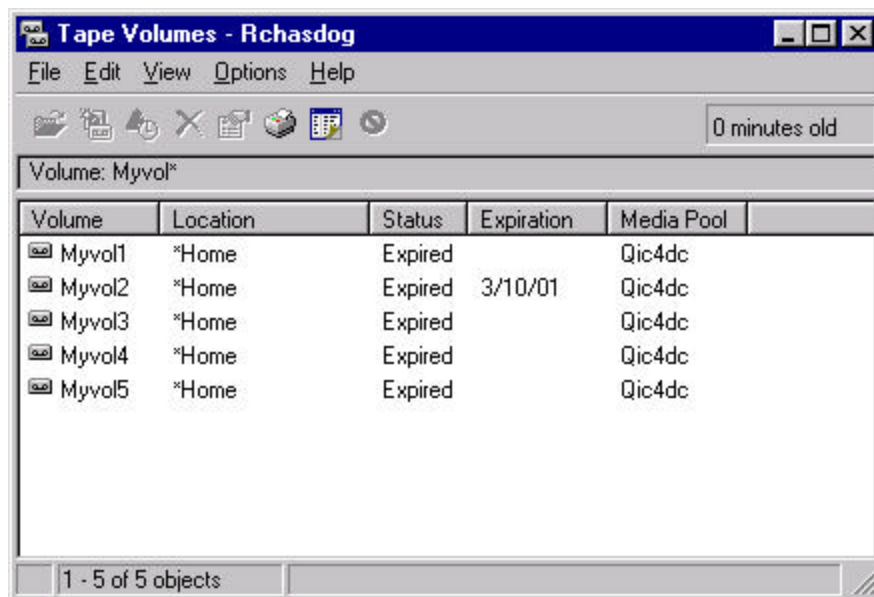
35. Right-click **Myvol2**.

36. Click on **Remove...**.

The **Confirm Remove** panel is forces you to acknowledge the removal request.

When you remove a volume from the BRMS media inventory, it can no longer be used by BRMS. You should only volumes that are damaged and are no longer Usable.
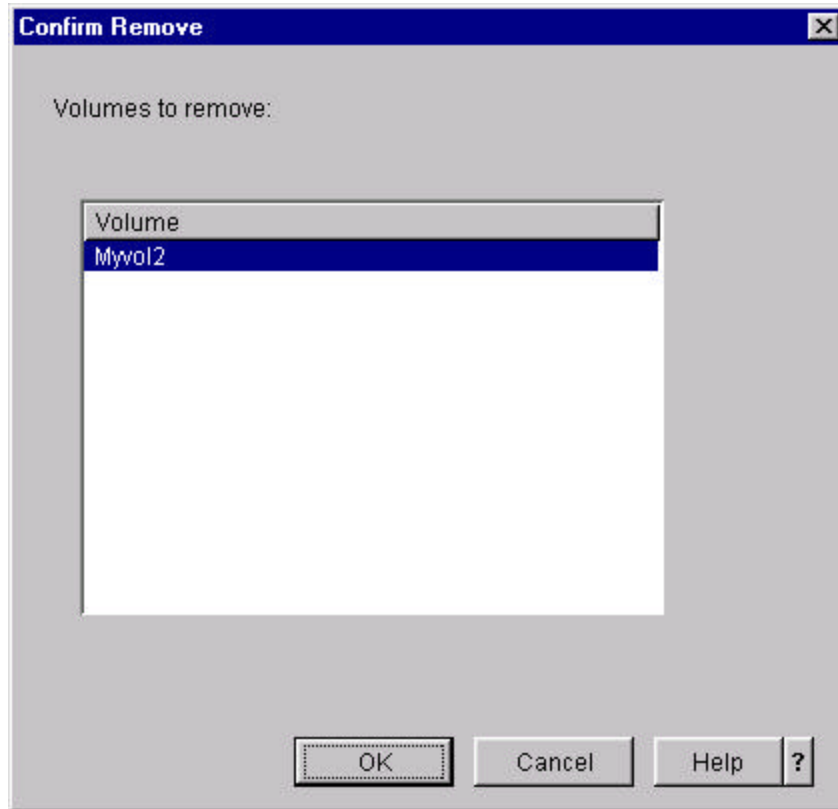
37. Click **OK**.

When the **Tape Volumes** panel refreshes, notice that **Myvol2** is removed from the media inventory.

Tape Volumes - Rchasdog

File   Edit   View   Options   Help

0 minutes old

Volume: Myvol*

Volume	Location	Status	Expiration	Media Pool	
Myvol1	*Home	Expired		Qic4dc	
Myvol3	*Home	Expired		Qic4dc	
Myvol4	*Home	Expired		Qic4dc	
Myvol5	*Home	Expired		Qic4dc	

1 - 4 of 4 objects
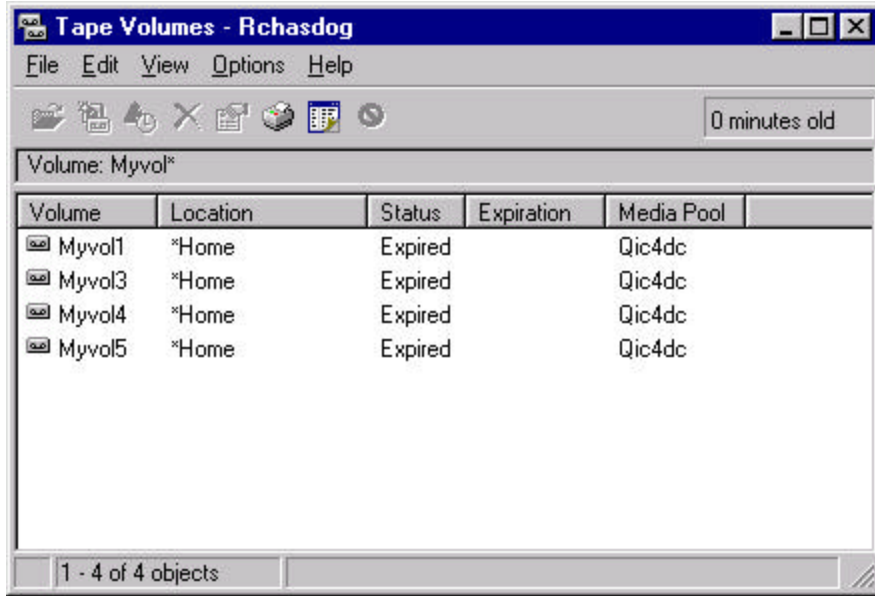
38. Close the **Tape Volumes** panel when you have completed your exploration.

Backup Policy Properties

This chapter shows you how to modify the properties of a backup policy and how to delete a backup policy.

1. Double-click the *Backup, Recovery and Media Services* folder.

2. Double-click the *Backup Policies* folder.

   A list of the backup policies and their descriptions appears in the right pane of the iSeries Operations Navigator window.
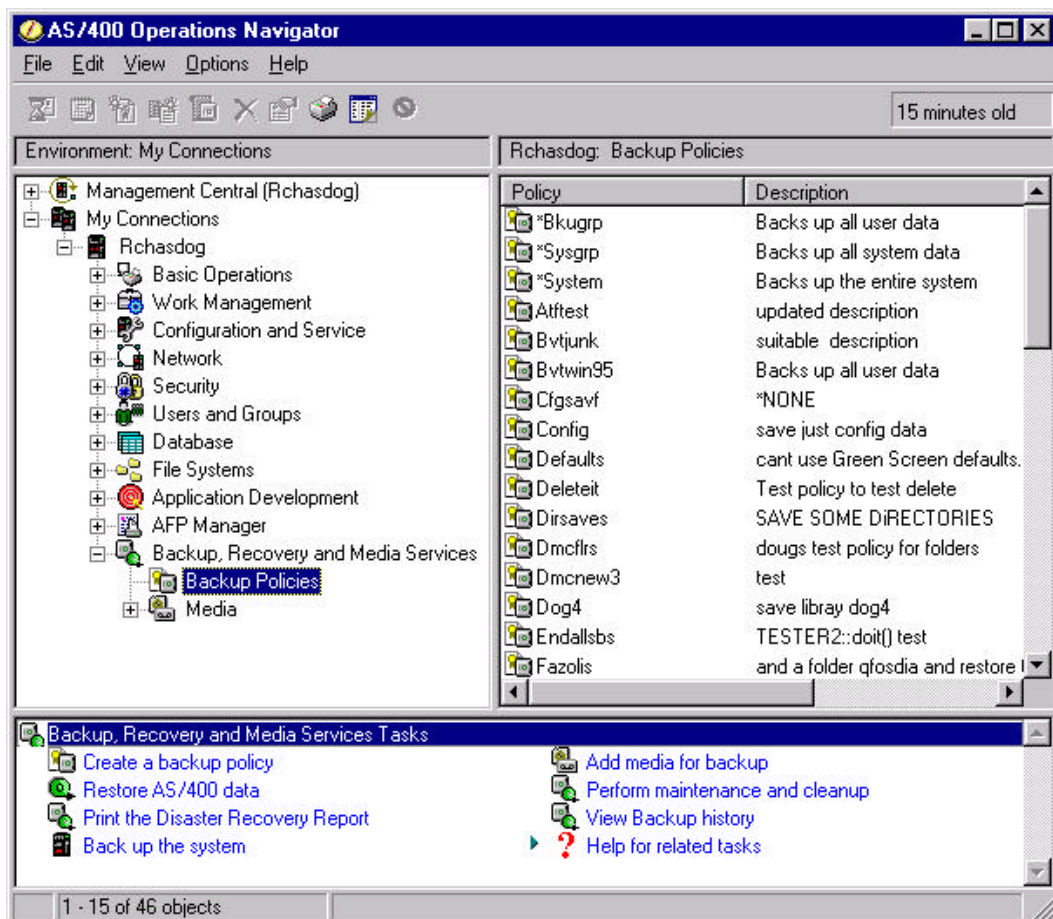
3. Right-click the backup policy named **Deleteit** which you created earlier.

4. Explore the available functions of the context menu. Not all functions are available, depending on the backup policy you choose. Functions that are not available are grayed out and can not be selected. Typically, this occurs on backup policies provided by BRMS.

Run Now	Run the backup policy

Schedule…	Schedule the backup policy
New Based on…	Create a new policy based on this policy
Backup History…	Display the backup history for policy
Delete…	Delete the backup policy
Properties	Display the properties for this policy

5. Right-click the policy **Deleteit**.

6. Click **Delete…**

   The **Confirm Delete** panel forces you to acknowledge the delete request.
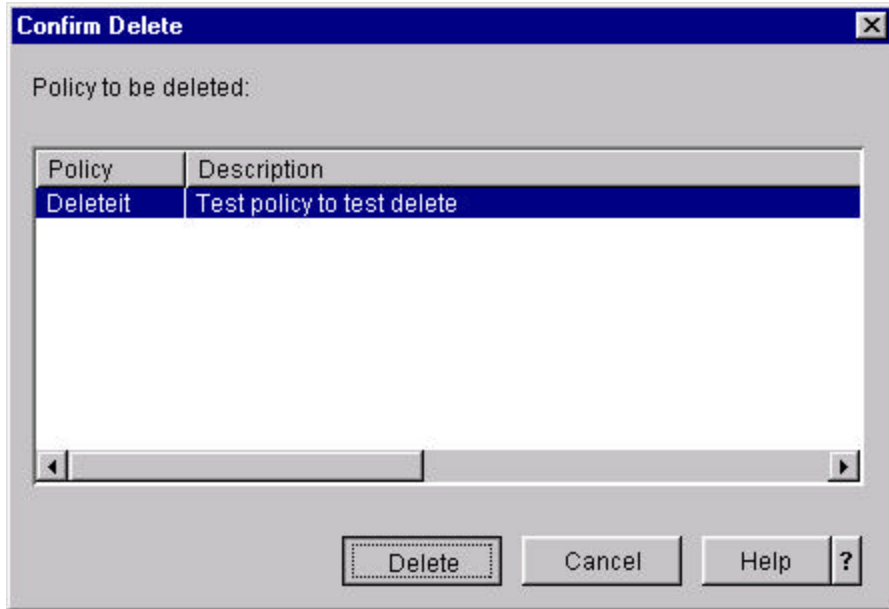
7. Click **Delete**.

   The backup policy is deleted from BRMS. Notice that the *Deleteit* backup policy no longer exists when the **Backup Policies** panel is refreshed.
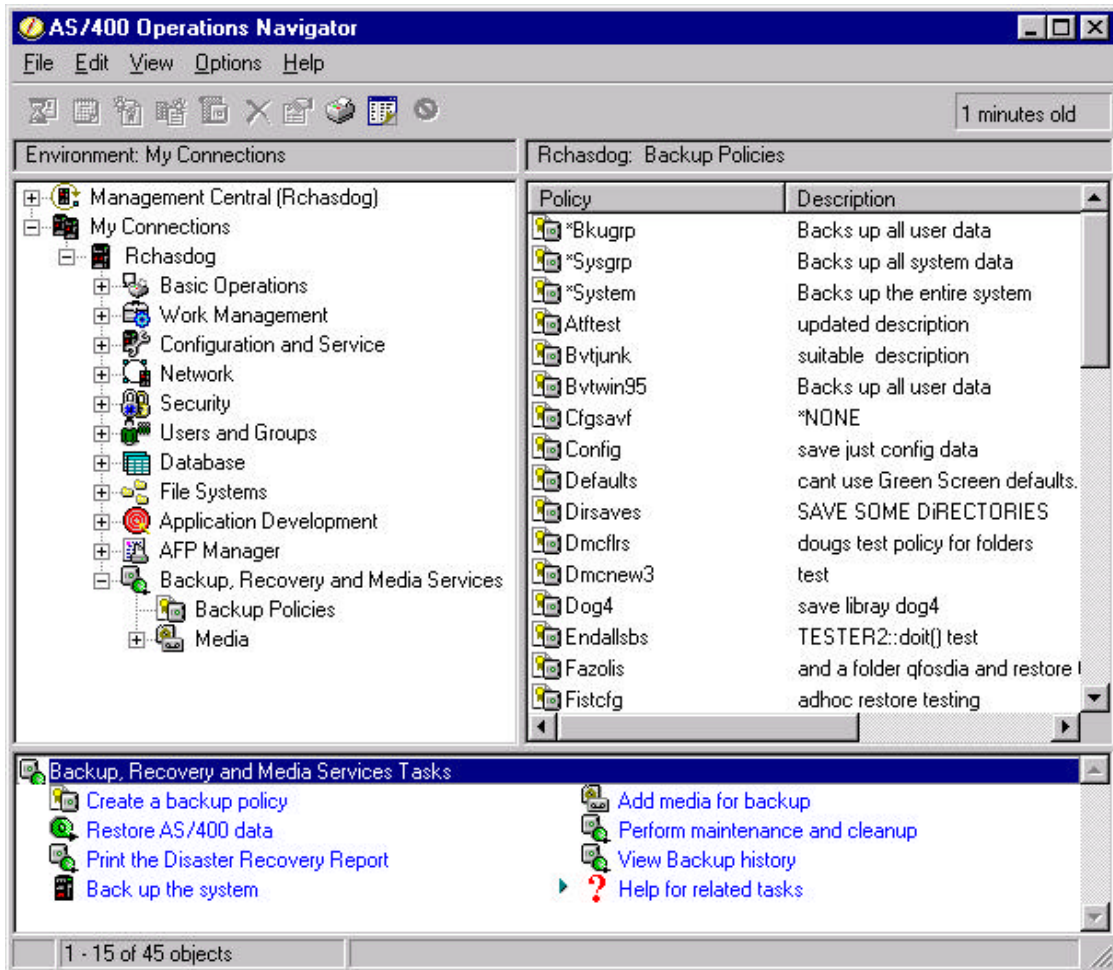
8. Right-click the ***System** policy

9. Click **New Based On**…

   The **New Based On…** function retrieves all of the policy attributes (properties) from the selected policy and creates a new policy based on these properties.

   The **New Policy Based on** panel allows you to name the new policy and to add a description.

   At this point, you can decide whether to create the new policy without modifying the properties. In this case, you would click **OK**. To change the properties of this policy at a later time, you would right-click on the policy name under *Policy* from the **Backup Policies** display and click **Properties**. A panel similar to the one shown below appears.

   You can click the **Before**, **During**, and **After** buttons to review and modify the properties of the backup policy.
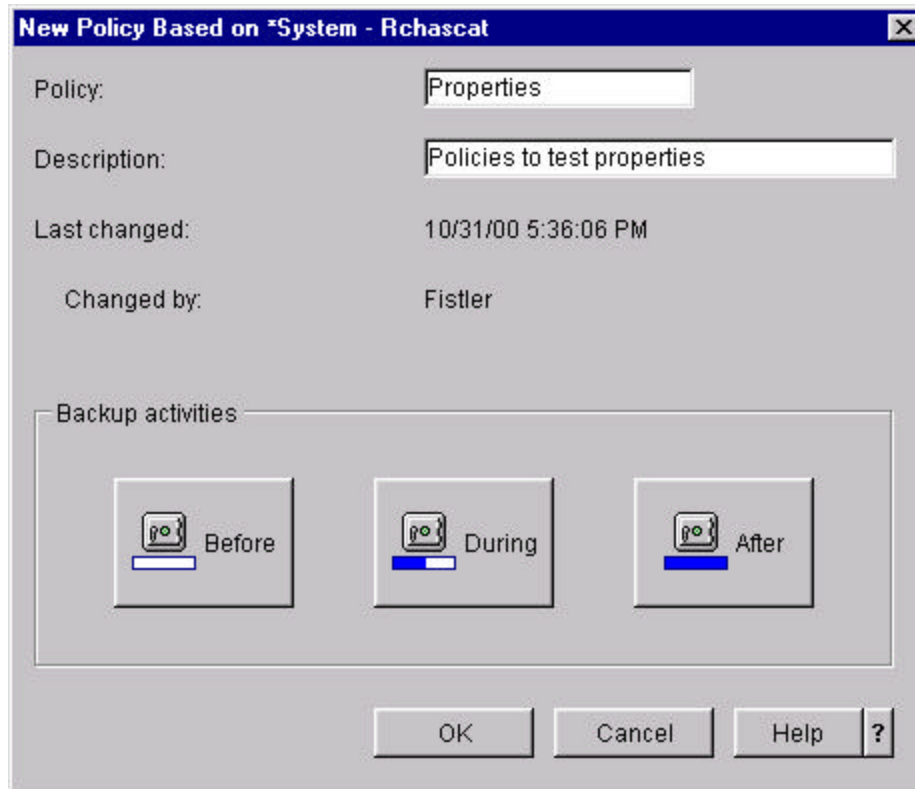
10. Enter **properties** for *Policy* and enter a suitable description.

11. Click **Before**.

12. Explore the properties on the *General* tab of **Properties - Before Backup** panel.

13. Click the **Help** button to learn more about the properties of this panel.
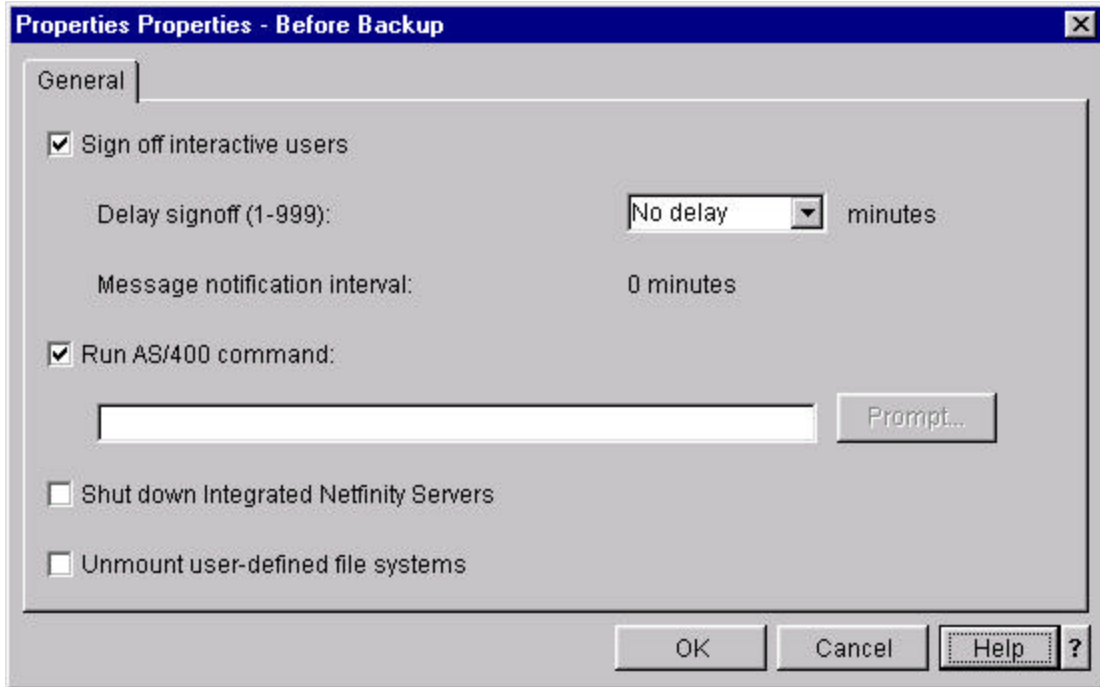
14. Click **OK**.

15. Click **During**.

16. Explore the properties on the *What* tab of **Properties - During** panel.

This panel shows you what is being backed up by the policy. You can add and remove
backup items on this panel, select the level of object detail to be kept when the backup item
is saved, and change the order items are backed up (with the bounds imposed by the panel).
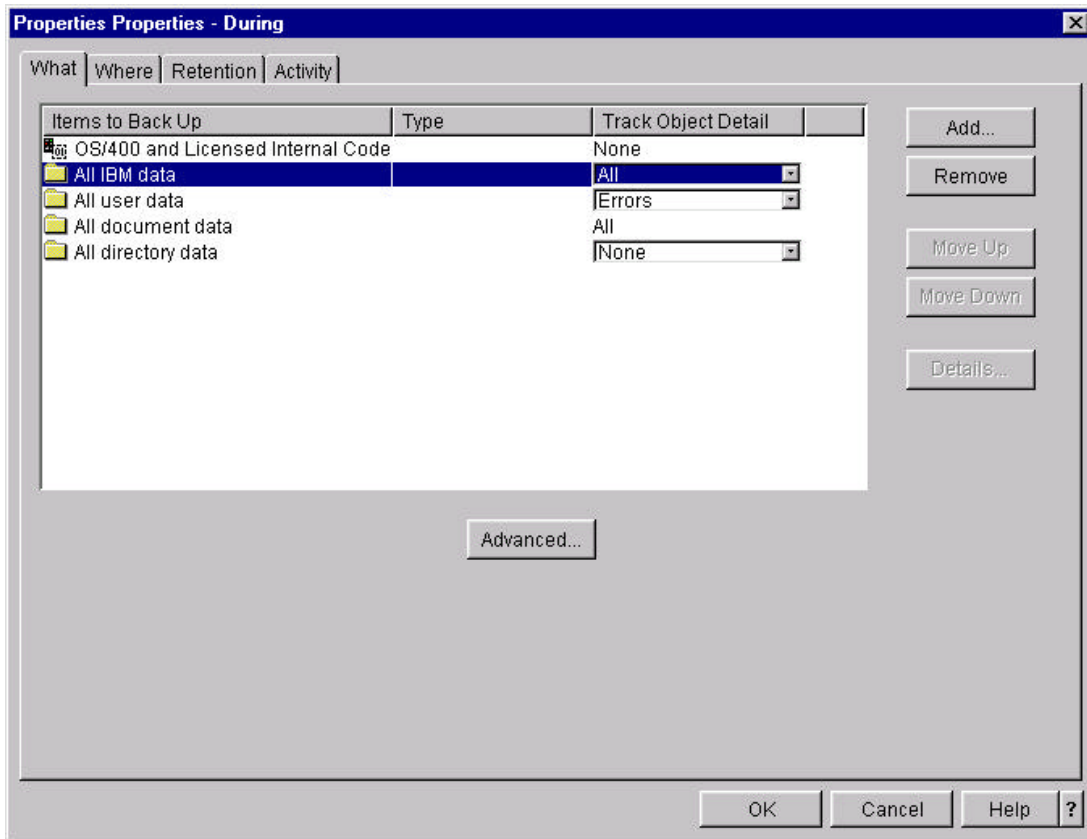
17. Click the **Help** button to learn more about the properties of this panel.

18. Click **Advanced**.

19. Review the **Advanced Properties - What** Panel.
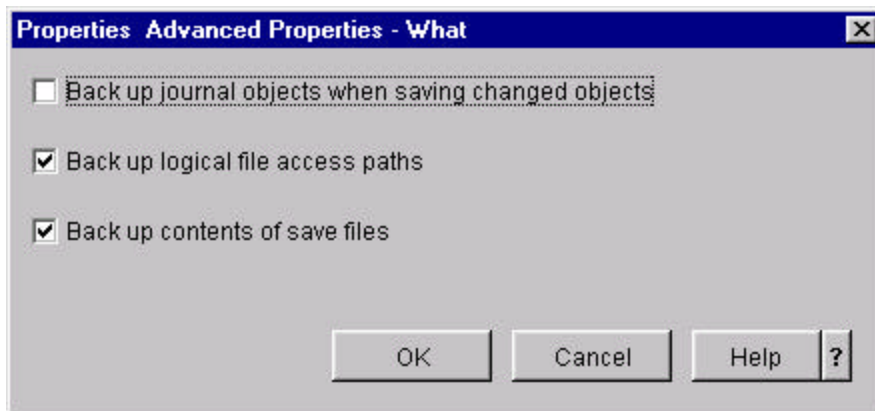
20. Click the **Help** button to learn more about the properties of this panel.

21. Click **OK**.

22. Click the *Where* tab of **Properties - During** panel.

The *Where* properties shows you the devices used by the backup policy. You can add or remove devices or change the order in which the devices are used.
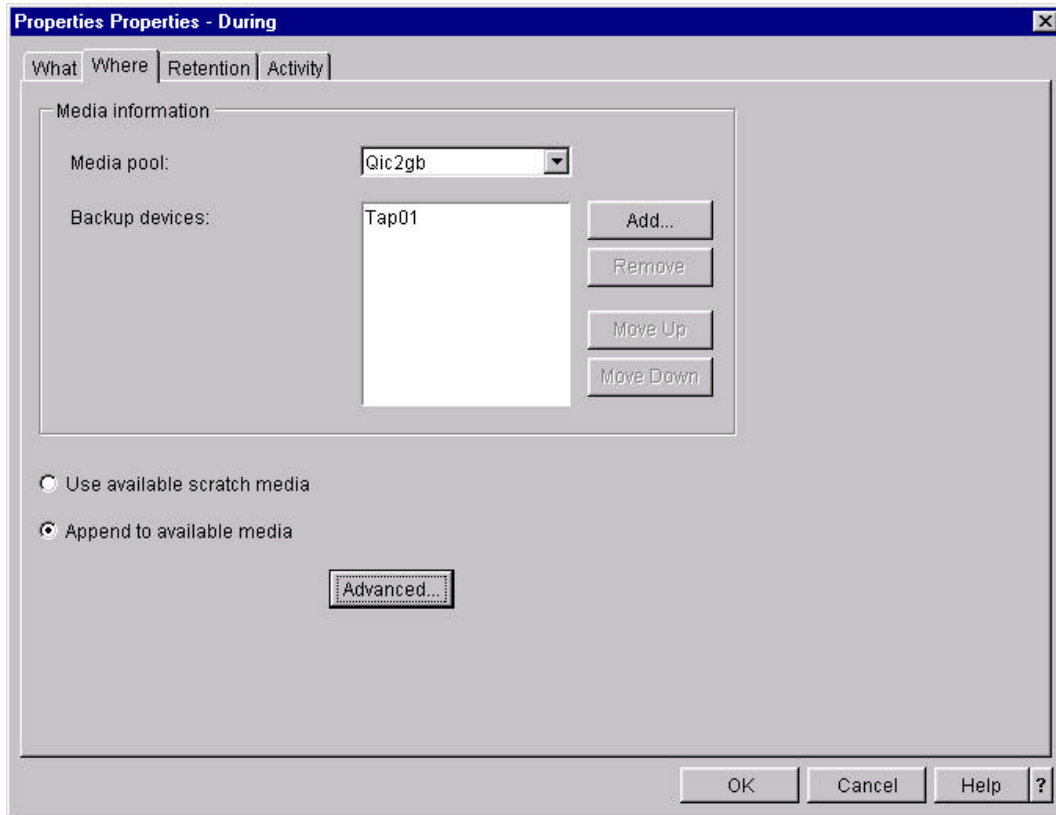
23. Click the **Help** button to learn more about the properties of this panel.

24. Click **Advanced**.

   The *Advanced Properties - Where* panel allows you to change attributes related to how the data is written to the media.
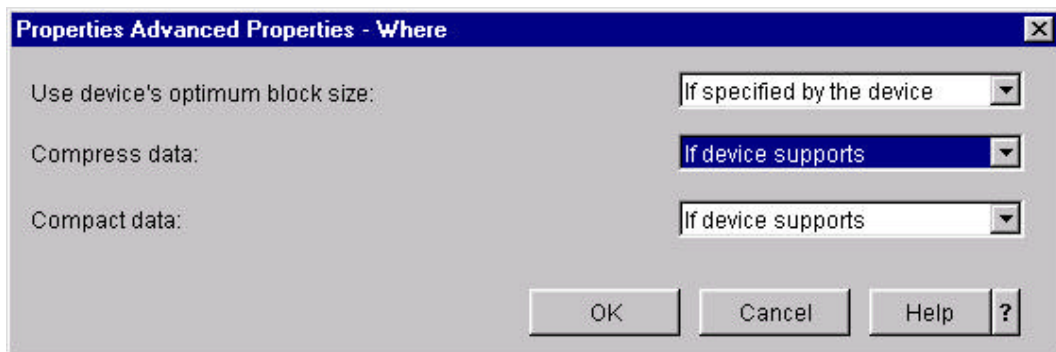
25. Click the **Help** button to learn more about the properties of this panel.

26. Click **OK**.

27. Click the *Retention* tab of **Properties - During** panel.

The *Retention* properties allow you to modify the current retention attributes of this backup policy. The retention attributes determine how long BRMS keeps history information about saved items backed up by this policy. When the retention period ends, the saved items are expired and removed from the history.

28. Click the **Help** button to learn more about the properties of this panel.

29. Click **OK**.

30. Click the *Activity* tab of **Properties - During** panel.

The Activity properties allow you to specify whether a *Full* backup is performed on the backup items or a *Changes only* backup. When you select either *Full* or *Changes Only*, this applies to all backup items for all the days during which the policy is run.
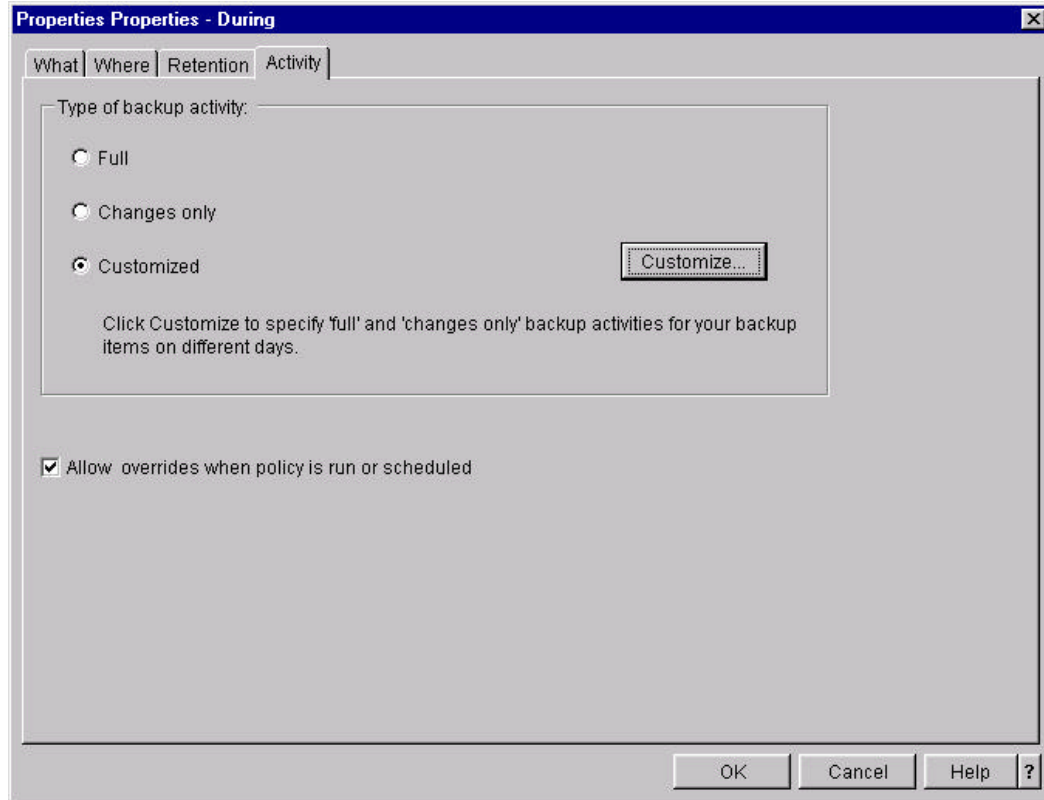
31. Click the **Help** button to learn more about the properties of this panel.

32. Click the **Customize** radio button.

33. Click **Customize...**

The **Activity - Customize** panel allows you to select whether a backup item is run on a specific day. For example, if you schedule this policy to run daily (including Sundays) but do not want a backup to occur on Sundays. You can uncheck the check boxes for all *Items to Backup* in the *Sunday* column. If you also wanted to backup *Changes only* for all user data during weekdays to minimize your backup window, you would uncheck the check boxes for *Monday* through *Friday* for *OS/400 and Licensed Internal Code* and *All IBM data*, then change the check boxes for *All user data*, *All document data*, and *All directory data* for *Monday* through *Friday* from *Full backup* to *Changes only*.

Activity - Customize

For each backup item, specify what type of backup you want to occur on each day of the week.

Legend for backup types:
☐ No backup   ☑ Changes only   ☑ Full backup

Items to Back Up	Type	Sund...	Mon...	Tues...	Wed...	Thur...	Frid...	Sat...
OS/400 and Lic...		☐	☐	☐	☐	☐	☐	☑
All IBM data		☐	☐	☐	☐	☐	☐	☑
All user data		☐	☑	☑	☑	☑	☑	☑
All document data		☐	☑	☑	☑	☑	☑	☑
All directory data		☐	☑	☑	☑	☑	☑	☑

Note: When the policy is run using these settings, the backup will only occur on the days that have an activity and match the days that are scheduled to run.

[OK]   [Cancel]   [Help] [?]

34. Click the **Help** button to learn more about the properties of this panel.

35. Click **OK**.

36. Click **OK**.

37. Click **After.**

    Explore the *General* tab the **Properties - After Backup** panel.
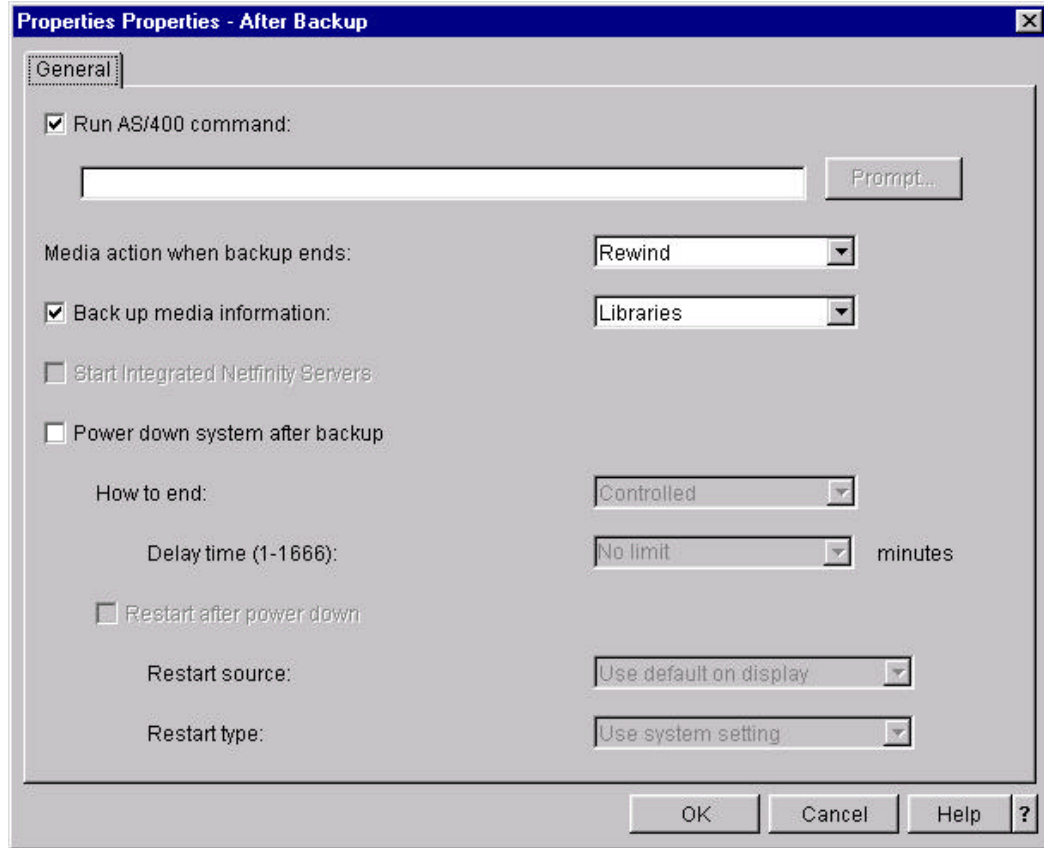
38. Click the **Help** button to learn more about the properties of this panel.

39. Click **OK**.

40. Click **OK** to create the backup policy.

Backup and Recovery Log

This chapter introduces you to the BRMS Backup and Recovery Log panels.

1. Right-click the *Backup, Recovery and Media Services* folder.

2. Click *Backup and Recovery Log*.

   The **Include** panel allows you to filter the messages retrieved from the BRMS backup and recovery log.

3. Click the **Help** button to learn more about the filters available on this panel .

4. Select **Maintenance** for *Entry types*.

5. Click **OK**.

The **Backup and Recovery Log** panel presents the messages in the BRMS log meeting the criteria imposed by any filters you select. The messages are sorted by date and time. The newest messages are at the bottom of the list.

Note: *Message* text is displayed based on the primary or secondary language of the iSeries server, not the current language of the workstation.

Backup and Recovery Log - Rchascat				
File Edit View Options Help				
			0 minutes old	
Entry types: Maintenance				
Message ID	Message	Date Sent	Time Sent	
Brm1524	System start up program exec...	8/20/00	8:00:55 AM	
Brm1538	Starting history content mainte...	8/22/00	12:04:07 ...	
Brm1539	Media information maintenanc...	8/22/00	12:04:17 ...	
Brm1807	Last run date for BRM mainte...	8/24/00	4:45:54 PM	
Brm1807	Last run date for BRM mainte...	8/24/00	4:52:25 PM	
Brm1807	Last run date for BRM mainte...	8/24/00	5:00:00 PM	
Brm1524	System start up program exec...	8/30/00	9:05:00 AM	
Brm1524	System start up program exec...	9/1/00	2:02:04 PM	
Brm1524	System start up program exec...	9/1/00	9:33:24 PM	
Brm1524	System start up program exec...	9/5/00	3:55:57 PM	
Brm1524	System start up program exec...	9/7/00	11:36:11 ...	
Brm1524	System start up program exec...	9/8/00	6:06:01 PM	
Brm1543	BRM maintenance procedure ...	9/10/00	7:36:09 AM	
Brm1663	Version control checked volu...	9/10/00	7:38:15 AM	
Brm1550	Volume expiration procedure e...	9/10/00	7:38:19 AM	
Brm1538	Starting history content mainte...	9/10/00	7:38:23 AM	
Brm1539	Media information maintenanc...	9/10/00	7:38:44 AM	
1 - 17 of 300 objects				

6. Right-click one of the messages.

7. Click **Details**.

   The **Detailed Message Information** panel shows you detailed message information for the selected message.

   Note: *Message* and *Message Help* is display based on the primary or secondary language of the iSeries server, not the current language of the workstation.

Detailed Message Information

| Message ID: | BRM1663 |

| Date and time sent: | 9/10/00 7:38:15 AM |

| Severity: | 10 |

| Entry type: | Maintenance |

Message:

> Version control checked volume usage.

Message help:

> Cause . . . . . : Volumes using version control to control expiration were checked. All versions of saves were checked to determine if any had surpassed their version limit. Volumes eligible for expiration were marked, and the expiration procedure will expire them.

| Program: | Q1acver |

| Job name: | Qpadev0005 |

| User: | Herbst |

| Number: | 092674 |

OK   Help   ?

8. Click **OK**.

9. Close the **Backup and Recovery Log** panel when you complete your exploration.

Restore Wizard (Adhoc)

This chapter shows you how to perform a restore operation using the **Restore Wizard** when the saved item is not contained in the BRMS history information (this is referred to as an *adhoc* restore).

1. Click the *Backup, Recovery and Media Services* folder.

2. Click on *Restore AS/400 data* from **Backup Recovery and Media Services Tasks**.

3. Review the **Restore Wizard Welcome** panel.
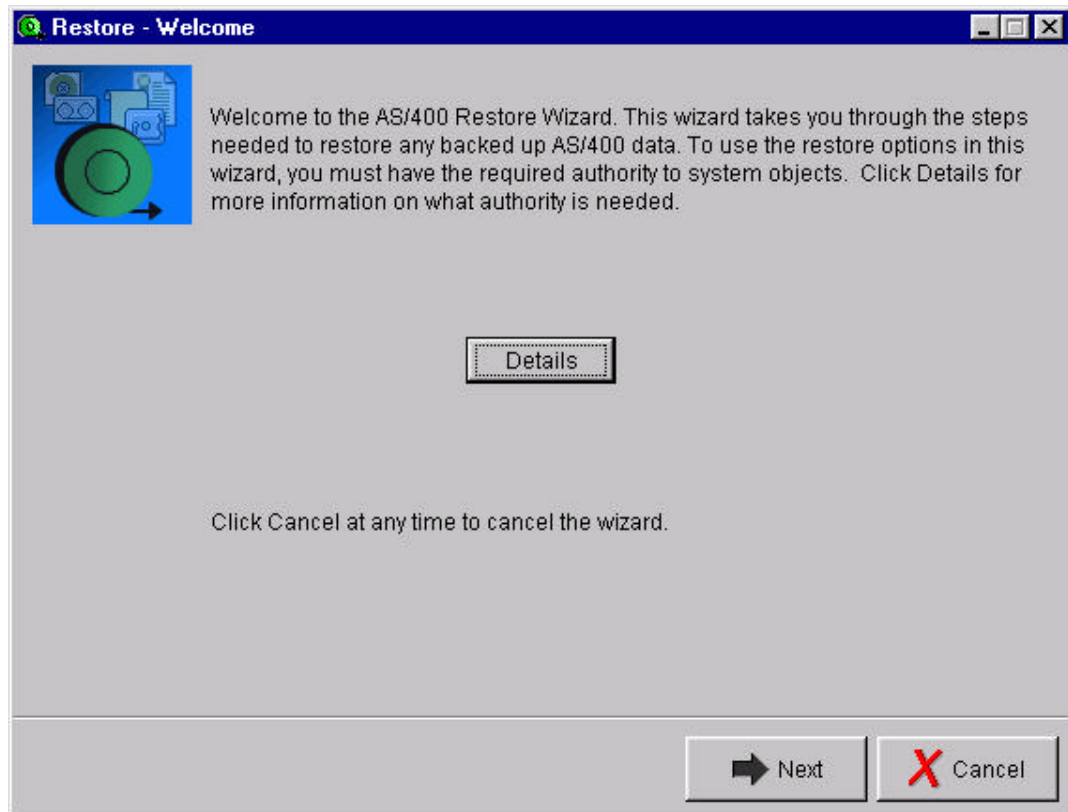
4. Click **Details** button on this panel or other wizard panels to view help information about the panel.

5. Click **Next**.

   The **Restore from Backup History or Device** panel determines whether this is a restore from backup history or an adhoc restore.
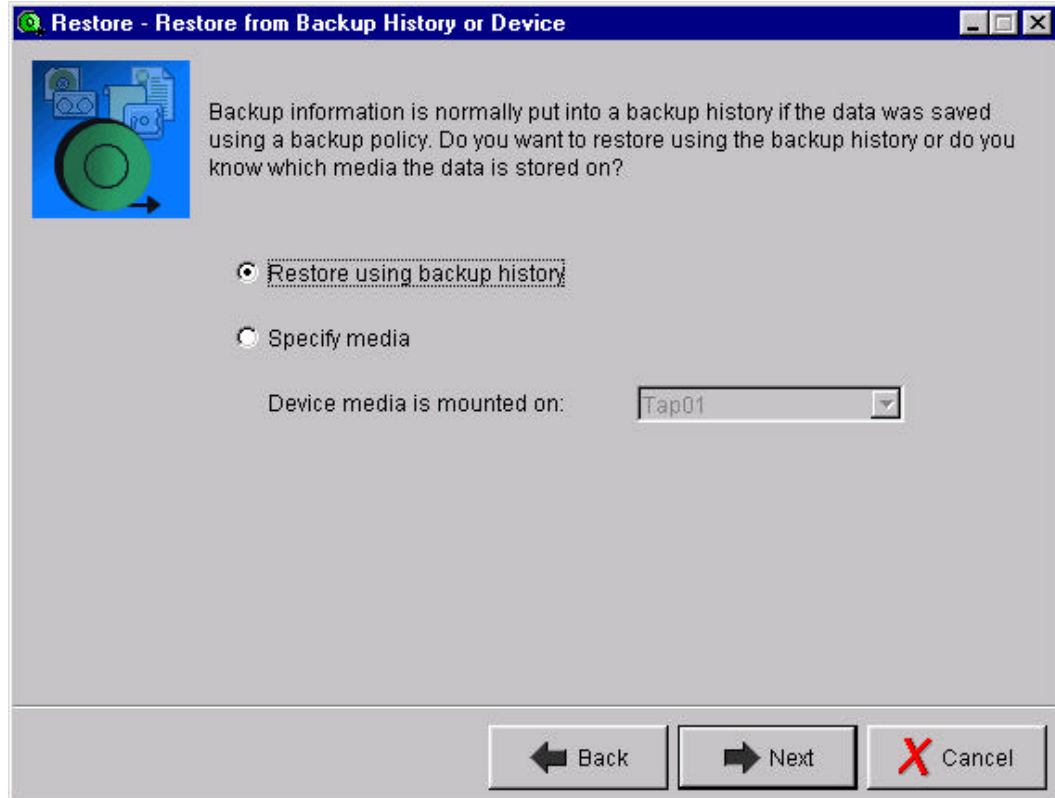
6. Select *Specify media* to specify that this is an adhoc restore.

7. Select a device from *Device media is mounted on*.

8. Click **Next**.

   The **Select Type of Information** panel allows you to specify the type of information to be restored. The restore wizard provides you with several object type options.
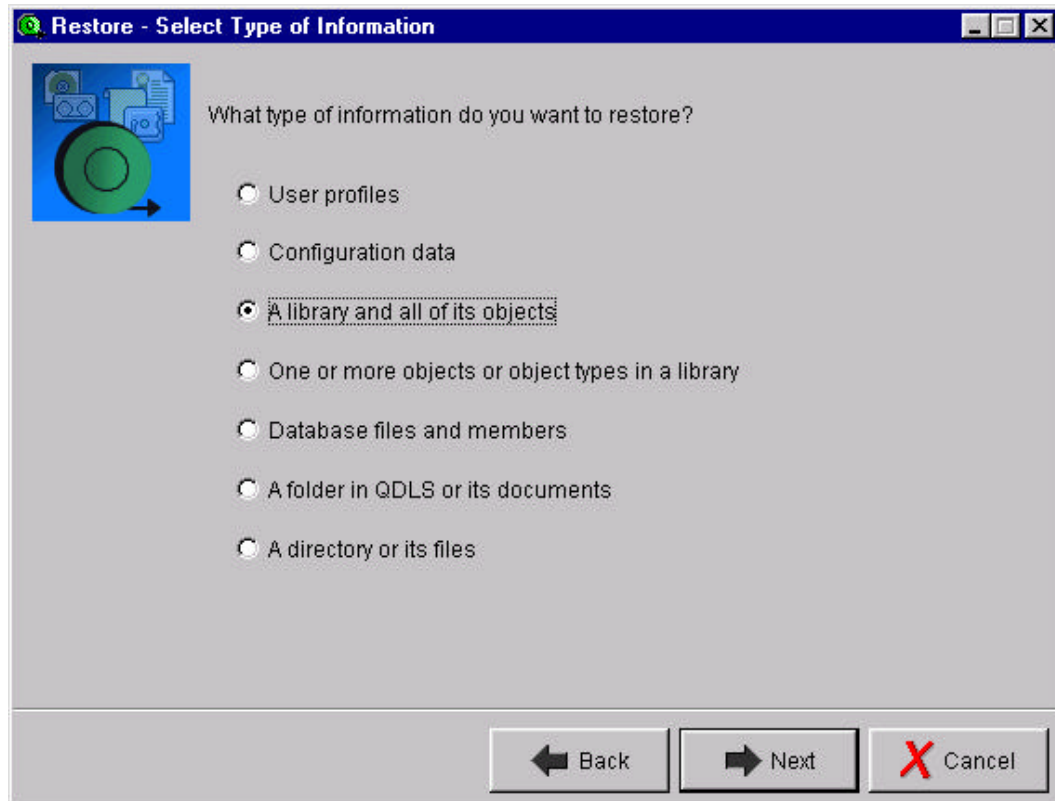
9. Select *A library and all of its objects*.

10. Click **Next**.

The **Select Library** panel allows you to specify the name of the library to be restored.
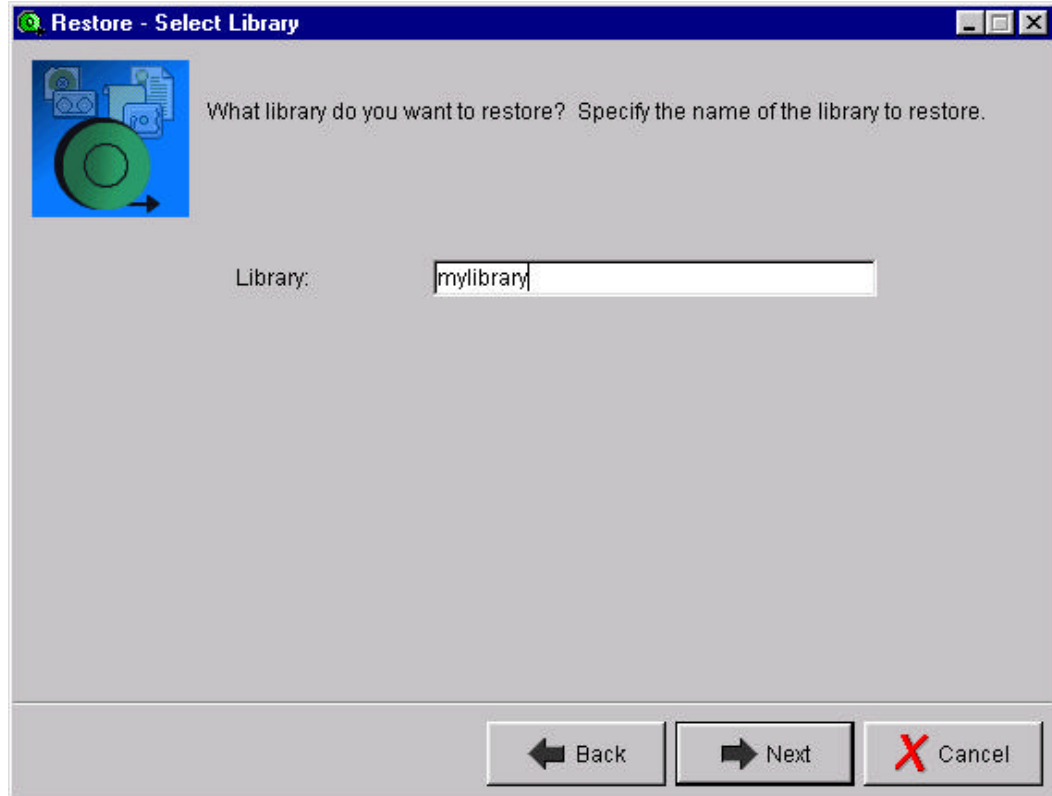
11. Enter **mylibrary** for *Library*.

12. Click **Next**.

    The **Restore to Same Location** panel allows you to specify whether the library is to be restored using the saved library named, or using a new name provided by you.
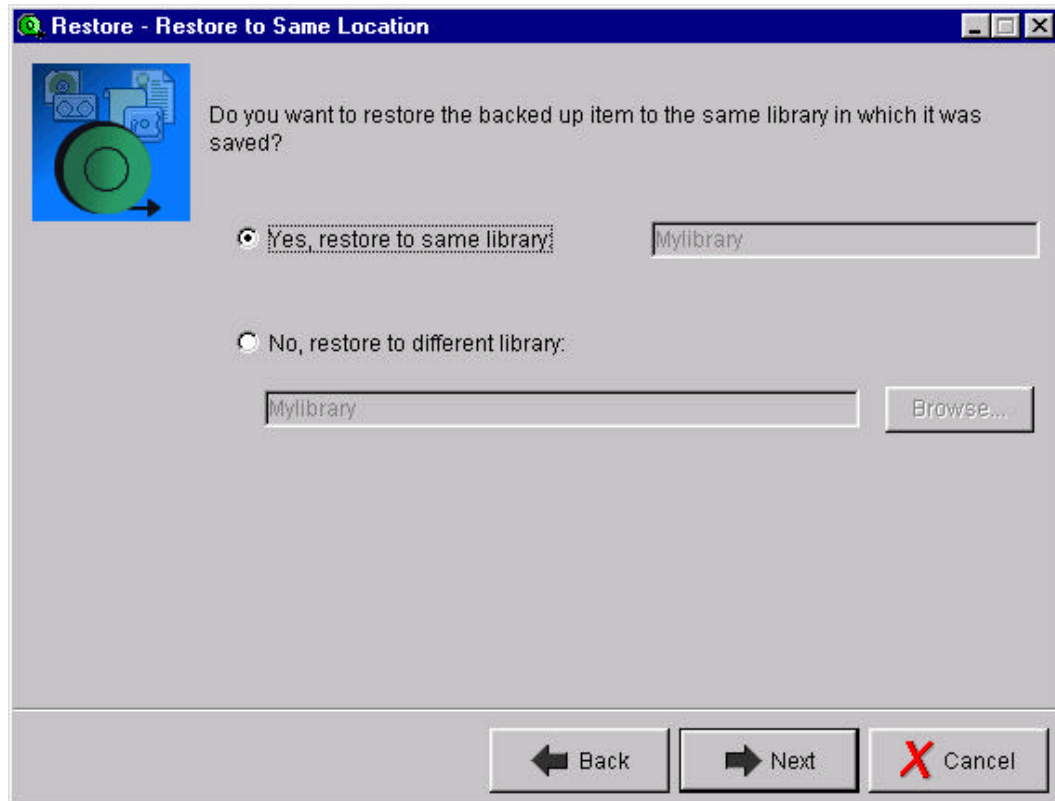
13. Click *No, restore to different library*.

14. Click **Browse...**.

   The **Browse Libraries** panel allows you to choose an existing library into which the saved objects are to be restored.
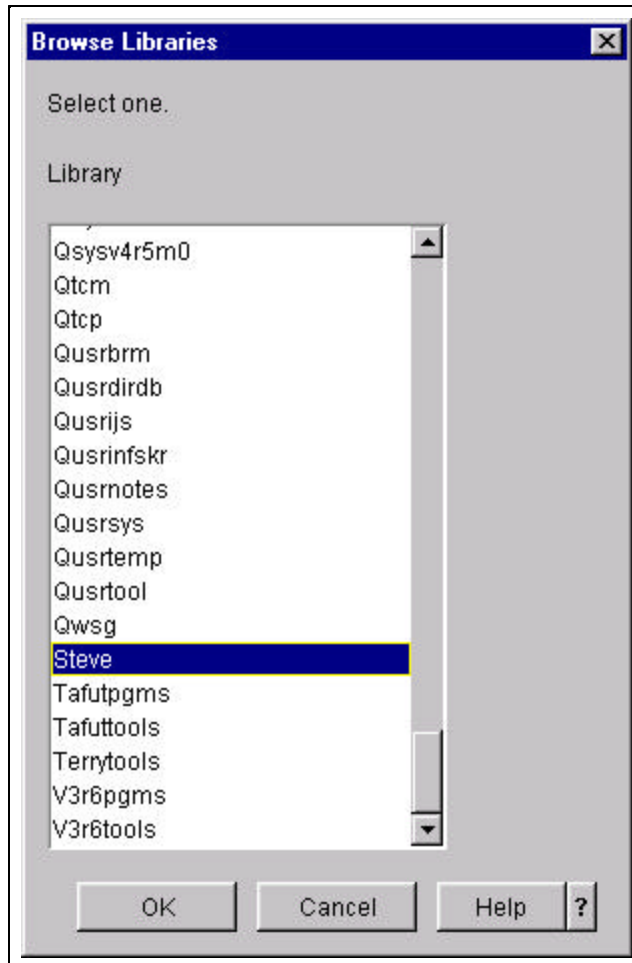
15. Click **OK**.

16. Click **Next**..

    The **Summary** panel summarizes the pending restore operation.

Restore - Summary

Click Finish to restore the selected items now. Click Schedule to restore the items at a later time. Be sure to mount the volumes you need before you run the restore.

Items to restore: 1   Details...

Device: Tap01

Volumes needed: Volume

New location: Steve

Advanced Options...

Back   Finish   Cancel   Schedule
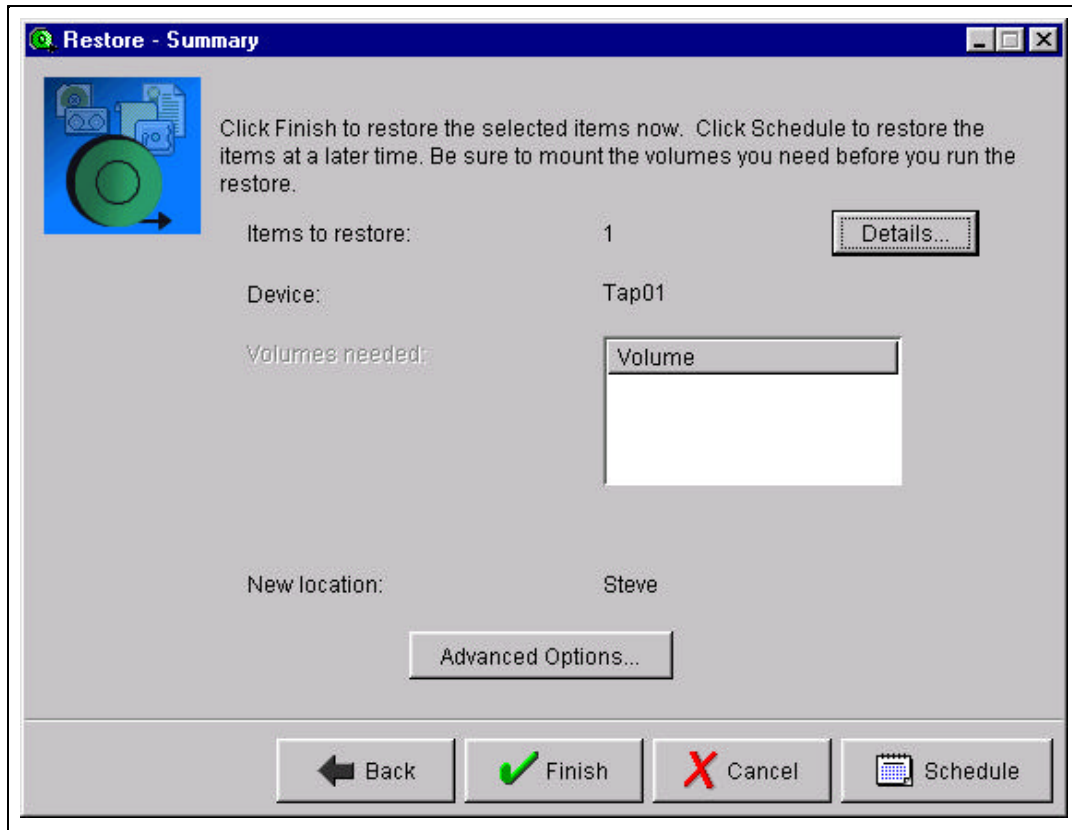
17. Click the **Details…** button.

The **Restore Details** panel shows you a summary of the items you specified are to be to restored.

Restore - Details

Libraries to restore:

Object
Mylibrary

Close   Help   ?
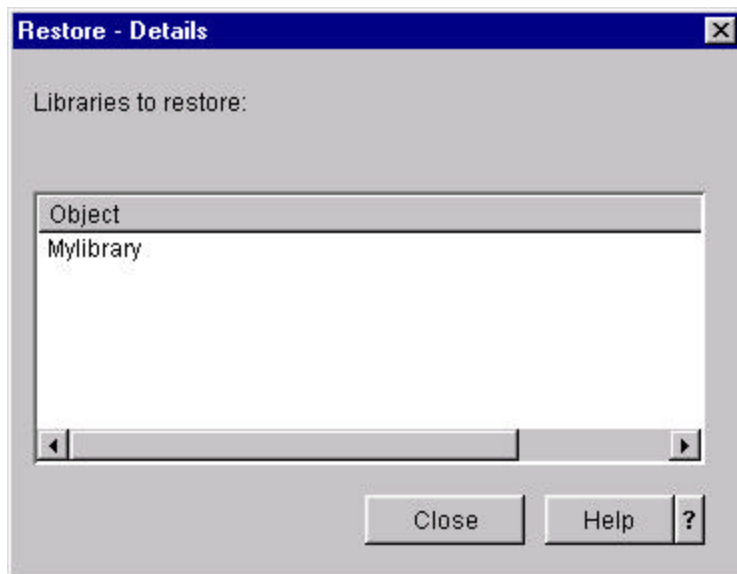
18. Click **Close**.

19. Click **Advanced Options…**

The **Advanced Options** panel allows you to specify additional options related to your restore operation.

20. Click **OK**.

Normally, you click the **Finish** button to complete the restore operation. However, since you haven't backed up a library named *Mylibrary*, the exercise would be useless because it would fail.

Click **Cancel** to exit the **Restore Wizard** and adhoc restores. You are encouraged to use the **Back** buttons to return to the **Select Type of Information** panel and explore alternate paths through the wizard for the different object types.

Running a Simple Backup

This section guides you through the steps to perform a backup using BRMS in order to create history information in the BRMS database.

Note: History information is required to complete chapters **Backup History** and **Restore Wizard (History).** Skip this chapter if you are a previous user of BRMS and already have backup history information on your iSeries server.

1. Insert a tape volume into the tape device that will be used for this backup.

2. Click the *Backup, Recovery and Media Services* folder.

3. Click *Create a backup policy* from **Backup Recovery and Media Services Tasks**.

4. Click **Next** on the **Welcome** panel.

5. Enter a policy name and a suitable description on the **Backup Policy Name** panel.

6. Click **Next**..

7. Select *Back up a customized set of objects* on the **Select a Backup Strategy** panel.

8. Click **Next**..

9. Select *User data* on the **Customize IBM Data or User Data** panel.

10. Click **Next**..

11. Check *User profiles and security information.*

12. Check *Configuration data.*

13. Check *Select specific objects.*

14. Select the following objects from the **Select Objects for Backup** panel:

    QIBM/locales
    QDLS/QBKBOOKS (or some other suitable folder with documents)
    QSYS.LIB/QGPL.LIB/QDDSSRC.FILE

15. Click **Next**..

16. Click **Next** on the **Create Folder List** panel.

17. Click **Next** on the **Create Objects List** panel.

18. Click **Next** on the **Create Directories List** panel.

19. Click **Next** on the **Backup Order** panel.

20. Select *No, leave user-defined file system mounted* on the **Unmount User-defined File Systems** panel.

21. Click **Next**..

22. Click **Next** on the **Backup Activity** panel.

23. Click **Next** on the **Media Retention** panel.

24. Select a *Media pool* on the **Select Backup Devices** panel for the volume in the drive.

25. Select one of the drives from *Available devices*.

26. Click **Add**.

27. Click **Next**..

28. Click **Next** on the **Add Media** panel.

29. Enter the name of the volume in *Volume name or prefix* on the **Add volumes** panel.

30. Click **Add**.

31. Click **Next**..

32. Check the *Ignore Active Files* checkbox adjacent to the volume on the **Initialize Volumes** panel.

33. Click **Next**..

34. Click **Finish** on the **Summary** panel.

The backup policy and lists are created and the volume is added to the media inventory. Now we need to run the policy to perform the backup and create the history information.

35. Click **View**.

36. Click **Refresh** (your policy should show up under Policy).

37. Right-click your backup policy.

38. Click **Run Now**.

39. Click **OK** on the **Backup Activity Override** panel.

40. Click **OK** on the **Retention Override** panel.

41. Click **OK** on the **AS/400 Operation Navigator** task confirmation panel.

42. Open the **Management Central** folder.

43. Open the **Task Activity** folder.

44. Open the **Backup Recovery and Media Services** folder.

Wait for the backup to complete!

Backup History

This chapter shows you how to view BRMS history information. BRMS history is information that is stored in BRMS databases about a saved items. This information is retained in the database for a retention period which you specify when you create the policy. A saved item and the media it is stored on are refferred to as being *active* during this retention period. BRMS assures that active saved items are not accidentially over-written. At the end of a retention period, the saved item is *expired*. The media volume containing the saved item expires when all saved items on the media expire. Saved items and media volumes are expired when you run BRMS maintenance.

Note: Because the history information on your system is current, the dates and times in some of the screen captures that follow will be different than what you will see.

1. Double-click the *Backup, Recovery and Media Services* folder.

2. Right click the *Backup Policies* folder.

3. Click **Backup History**.

   The **Include** panel allows you to filter or subset the history view. You can subset the history information by backup *Policy*, *Media Pool*, *Save Dates*, *Backup-up items*, *Volume*, *Completion status*, and *Disk pool*, or any combination of these attributes.

4. Explore the choices available to you for filtering the history informtion.

5. Click the **Help** button to learn more about these filters.

Backup History - Include

Include

Policy:	All
Media pool:	All

Saved dates

- ⦿ All dates
- ○ Specific dates:
  - From: March 12, 2001
  - To: March 12, 2001

Backed-up items

Backed-up item:	All
Type:	Security data
Type of backup:	All

Volume:	All
Completion status:	Successful backups
Disk pool:	All

☑ Always show this first

[OK] [Cancel] [Help] [?]

---
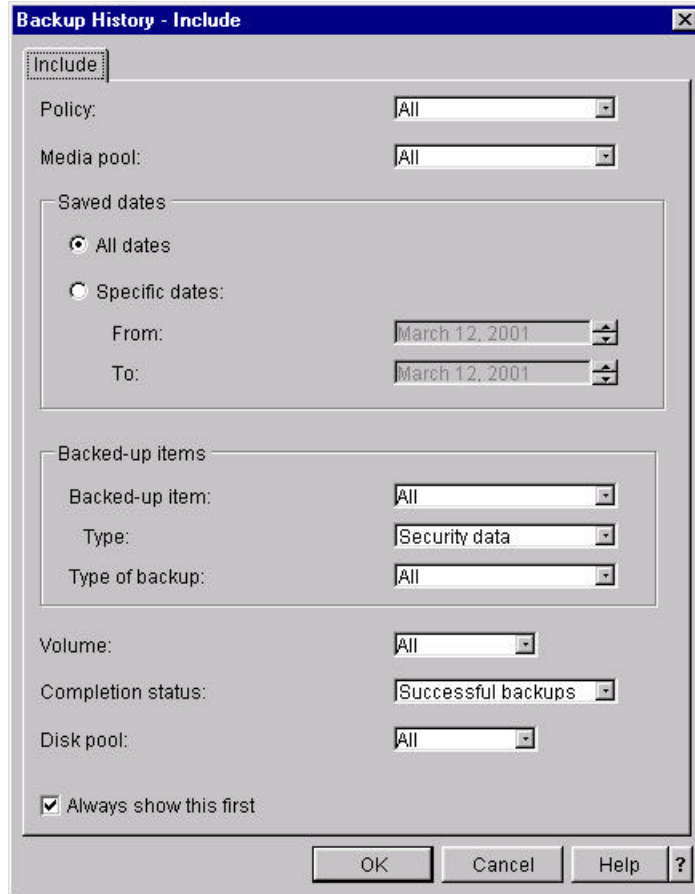
6. Select **Security data** for *Back-up items - Type*.

7. Select **Successful backups** for *Completion status*.

8. Click **OK**.

   The **Backup History** panel shows you a *non-detailed* view of the saved item history. When we refer to history there are multiple views. The top view, also referred to as the *non-detail* view shows the backup items by type. You can select and open backup items from the top view to view the first level of the *detail* view. Typically this first level consists of objects containers such as libraries, folder or directories. You can continue opening these detailed views until you get to specific backup items like objects, members, documents or files. Opening these detailed views is often referred to as *drilling down.*

   When you run a backup, you can set the backup policy properties to indicate whether object detail is to be kept for the saved items. If you set the attribute for a backup item to indicate that object detail is <u>not</u> to be kept, you will not be able to drill down below the *non-detailed* view. Restoring objects using non-detailed history information requires that you know the name of the object(s). It is recommended that you kept detailed history information of all your user data to faciliate easy recovery.

Some experienced BRMS users intently omit keeping object detail to shorten their backup window. Object detail processing does require additional machine cycles to process and additional storage to maintain.
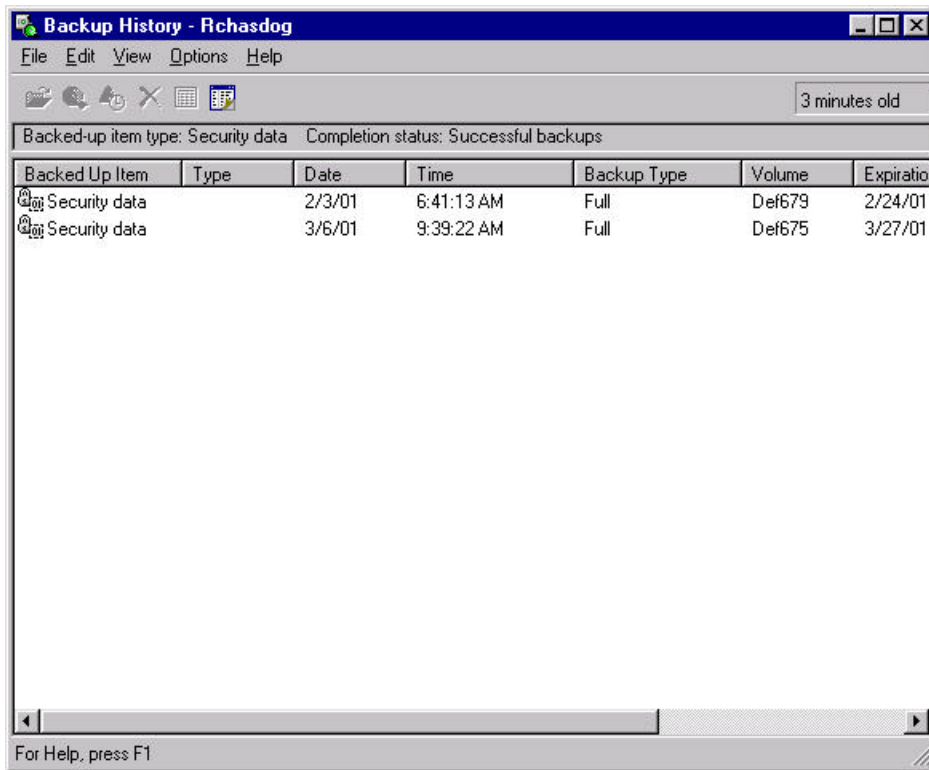
9. Right-click the *Security data* entry that has the same save date as the date you ran the backup outlined in chapter *Running a Simple Backup*.

10. Explore the functions available from the context menu. Functions available are:

Restore…	Restores the selected item.
Media	Displays the volume's properties for the selected item
Media Set	Displays the set of media for the selected object.
Expire…	Expires the selected item in the backup history.
Delete…	Deletes the selected item from the backup history.
Details	Displays details of the backed-up item.

11. Select **Options**.

12. Click **Columns…**.

The **Columns** panel allows you to select which column information is included on the **Backup History** panel.
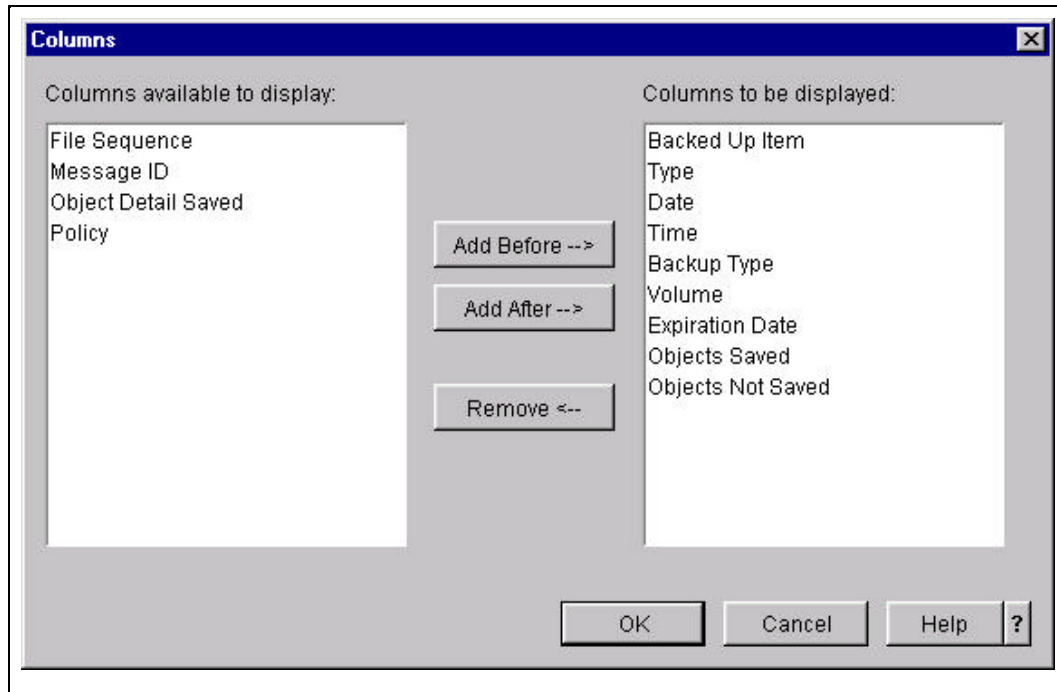
13. Select **Backup Type** in *Columns to be displayed.*

14. Click **Remove<--**.

15. Select **Type** in *Columns to be displayed.*

16. Click **Remove<--**.

17. Click **OK**.

Notice the *Type* and *Backup Type* columns are removed from the **Backup History** panel when it is refreshed.

```
Backup History - Rchasdog                                    _ □ ×
File  Edit  View  Options  Help

🖿 🖳 🕒 ✕ ▦ 🗊                                         18 minutes old

Backed-up item type: Security data   Completion status: Successful backups

Backed Up Item  | Date    | Time        | Volume | Expiration Date | Objects Saved | Objects N
🔒 Security data | 2/3/01  | 6:41:13 AM  | Def679 | 2/24/01         | 80            | 0
🔒 Security data | 3/6/01  | 9:39:22 AM  | Def675 | 3/27/01         | 85            | 0

◄                                                                          ►

1 - 2 of 2 objects
```

18. Select **Options**.

19. Click **Sort…**.

The **Sort** panel allows you to specify how the *Back Up Items* are sorted. You do this by moving the name of the column from *Columns available to sort* to *Sort based on the following*. If multiple entries are listed in *Sort based on the following*, the sort is applied to the first entry, then the second, and so on.

20. Explore sorting your view of the *Back Up Items* on the **Backup History** panel.
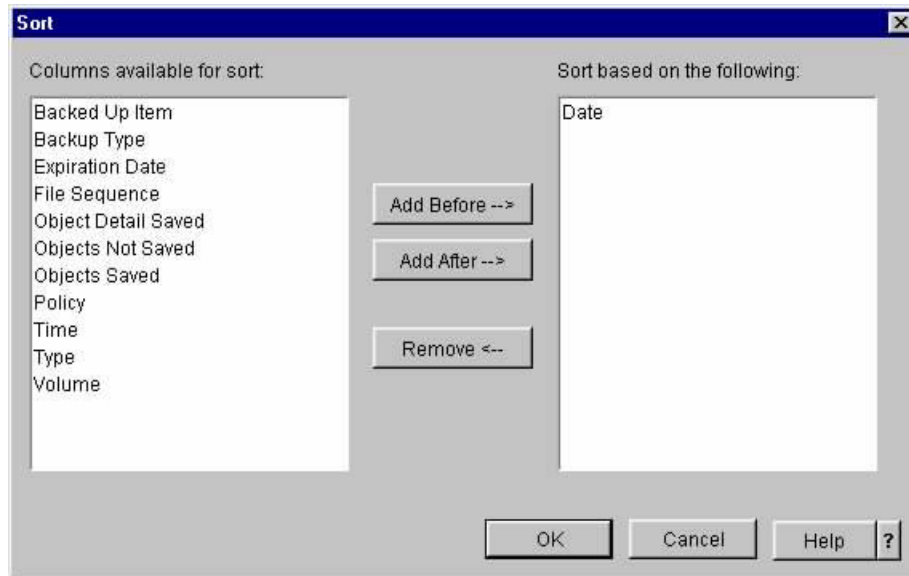
21. Click **OK** to return to the **Backup History** panel when you have completed exploring sort.

22. Right-click **Security data**.

23. Click **Expire...**.

   The **Confirm Expire** panel forces you to acknowledge the expiration request. Expired saved items are removed from history when maintenance is run.
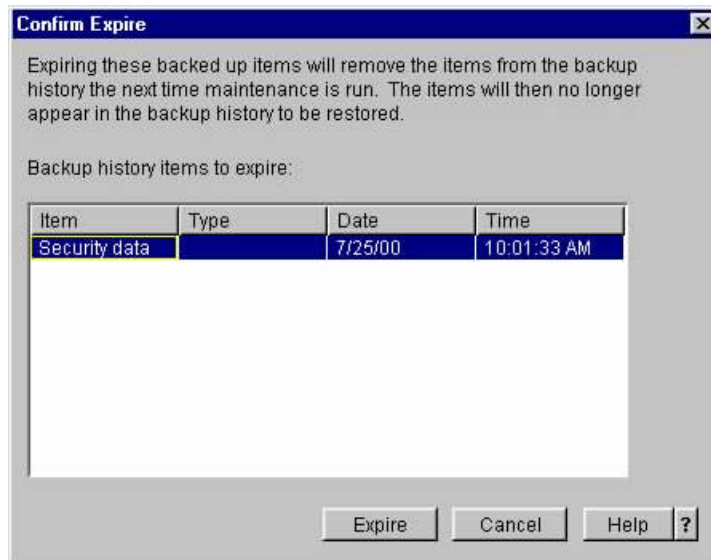
24. Click **Cancel** on the **Confirm Expire** panel.

25. Click on **Delete...** for the selected item.

   The **Confirm Delete** panel forces you to acknowledge the delete request. Deleted saved items are removed from history when you click on **Expire**. Deleted saved items can only be restored using the adhoc restore process and only if the media containing the saved item

has not expired and been overwritten. Always use caution when expiring and deleting backup items from the history information.
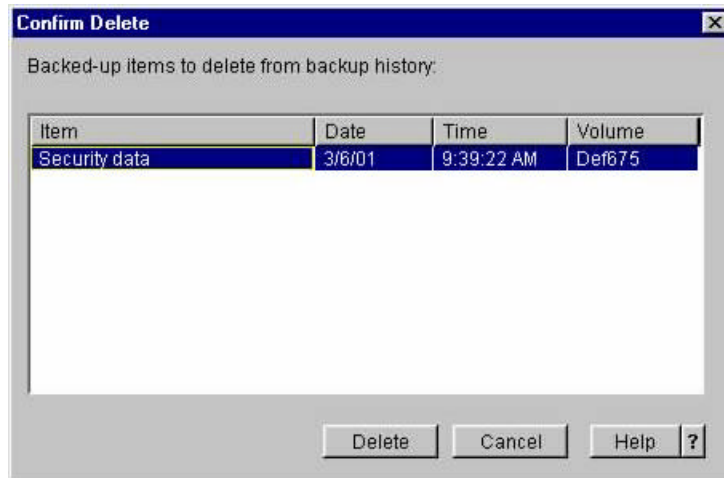
26. Click **Cancel** on the **Confirm Delete** panel.

27. Click **Details** for the selected item.
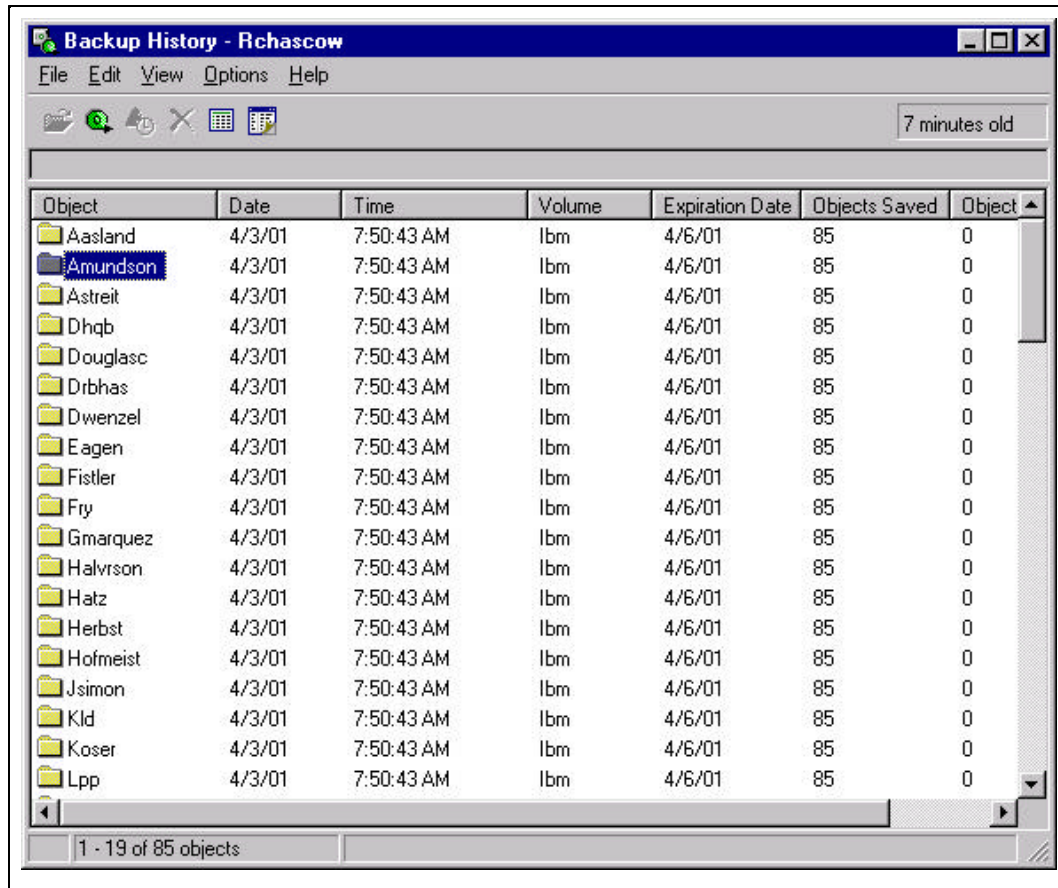
The **Backup Details** panel provides you with additional information about the backed up item like the *File Sequence* number, *Disk pool* (auxiliary storage pool) from which the item was saved, *Text* description , *Saved release*, *Target release*, and other information about the saved object.

28. Click **OK**.

29. Click **Open** for the selected item.

    You are presented with the object detail for this backed up item.

30. Select an *Object* in the detail view.

31. Right-click on the selected object.

32. Click **Restore...**.

    You are taken to the *Restore Wizard* **Welcome** panel so that you can restore the selected
    backed up item from the save media.

33. Click **Cancel**. We will discuss the *Restore Wizard* in the next chapter.

34. Right-click on the selected object.

35. Click **Media**.

    The **Tape Properties** panel for the volume containing the backed up item is displayed.
    These are the same panels discussed in the *Tape Volumes* chapter of this guide.

36. Click **OK**.

37. Right-click on the selected object.

38. Click **Media Set**. (if enabled)

   The **Tape Volume Set** panel shows all volumes belonging to the volume set. These are the same panels discussed in the *Tape Volumes* chapter of this guide.

39. Close the **Tape Volume Set** panel.

40. Close the **Backup History** panels when you have finished exploring.

You are encouraged to try different views of Backup History using different attributes on the **Include** panel.

Restore Wizard (History)

This chapter shows you how to perform a restore operation using the Restore Wizard when the saved item is in the BRMS history information.

Note: Because the history information on your system is current, the dates and times in some of the screen captures that follow will be different than what you will see.

1. Click the *Backup, Recovery and Media Services* icon.

2. Click *Restore AS/400 data* from **Backup Recovery and Media Services Tasks**.

3. Click **Next** on the **Welcome** panel.

4. Click **Next** on the **Restore from Backup History or Device** panel.

5. Select *User Profiles* on the **Select Type of Information** panel.

6. Click **Next** .

   The **Specify the Saved Version to Restore** panel allows you to specify what version of the saved item you want to restore. You can have the restore wizard restore the most recent backup (*Restore the most current*), you can have the wizard present you with a list of saved dates (*Select the date to restore*), or you can specify a date you want the saved item restored to (*Restore to this date*).
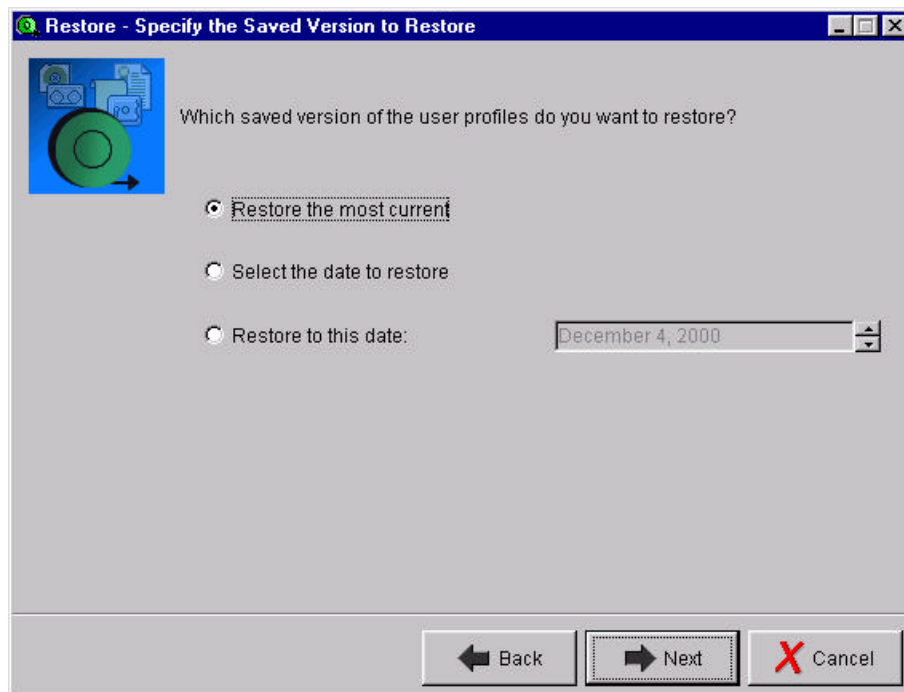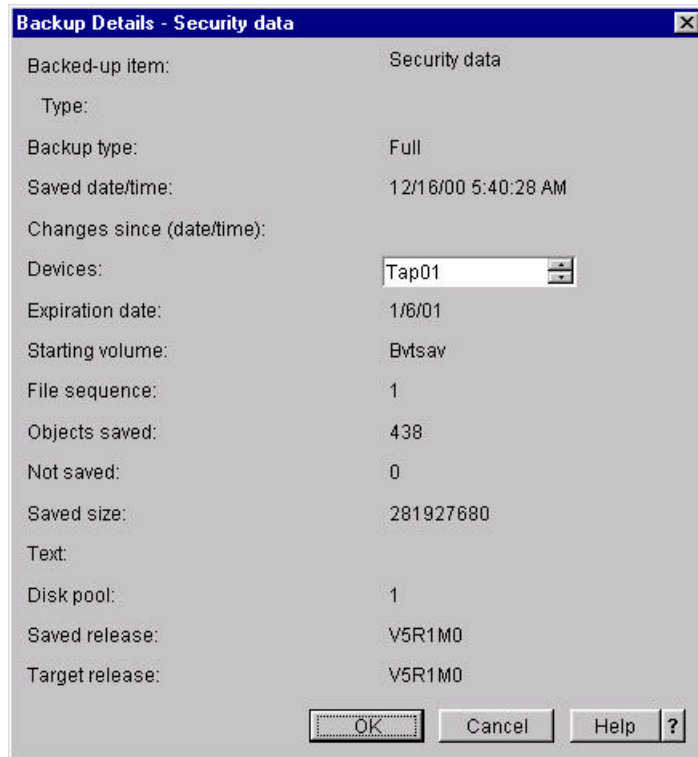

7. Select *Select the date to restore*.

8. Click **Next**.

   The **Select the Date of the Save** panel presents you with the save dates when User Profiles were backed up.
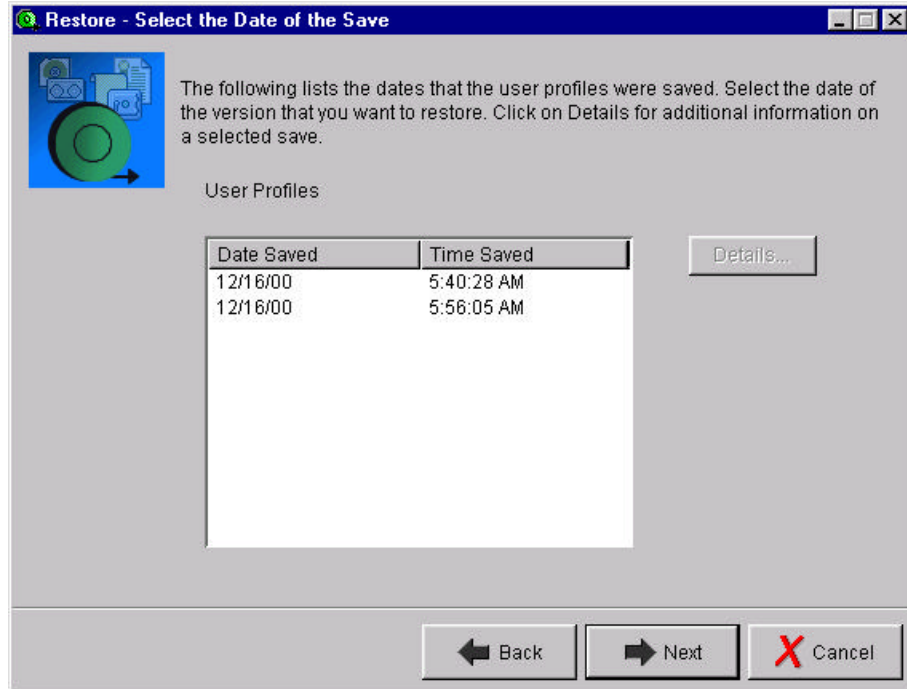
9. Select the entry that has the same save date as the date you ran the backup outlined in the *Running a Simple Backup* chapter.

10. Click **Details...**.

11. This is the same **Backup Details** panel we reviewed in the Backup History chapter.

Backup Details - Security data

Backed-up item:	Security data
Type:	
Backup type:	Full
Saved date/time:	12/16/00 5:40:28 AM
Changes since (date/time):	
Devices:	Tap01
Expiration date:	1/6/01
Starting volume:	Bvtsav
File sequence:	1
Objects saved:	438
Not saved:	0
Saved size:	281927680
Text:	
Disk pool:	1
Saved release:	V5R1M0
Target release:	V5R1M0

OK   Cancel   Help ?

12. Click **OK**.

13. Click **Next** on the **Select the Date of the Save** panel.

The **Select Users** panel presents you with a list of the user profiles saved for the *Security data* back up item. The **Details...** button provides you with additional information about the saved object, providing a panel similar to the **Backup Details** panel shown above.
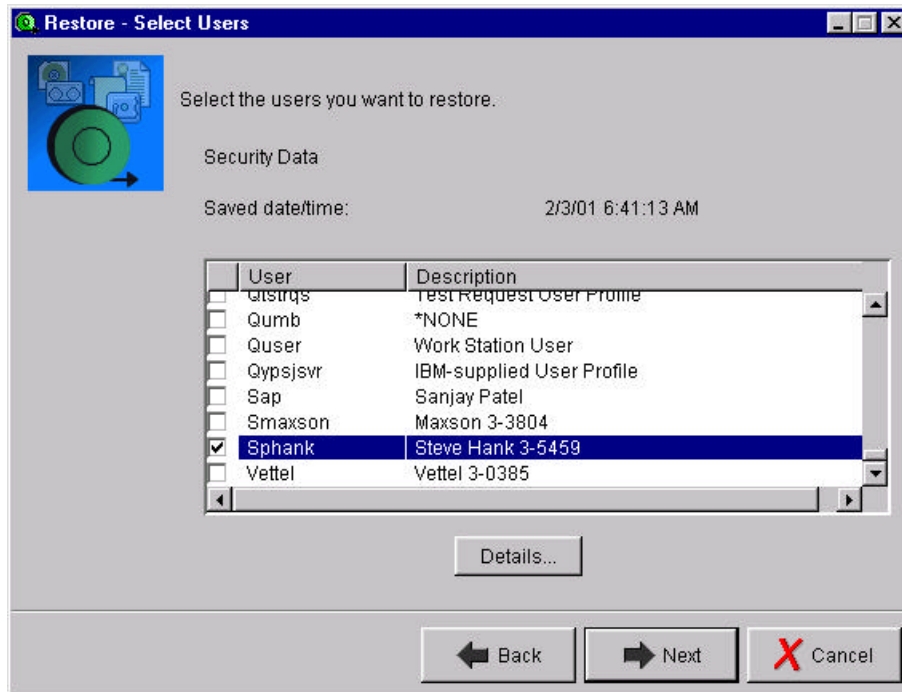
14. Select a *User* from the list.

15. Click **Next** .

    The **Summary** panel provides a confirmation of the backup item(s) you are about to restore. At this point, you would click **Finish** to restore the saved item(s), **Schedule** to schedule the restore to occur at a later time, **Cancel** to exit the Restore Wizard, or **Back** to add or remove objects.
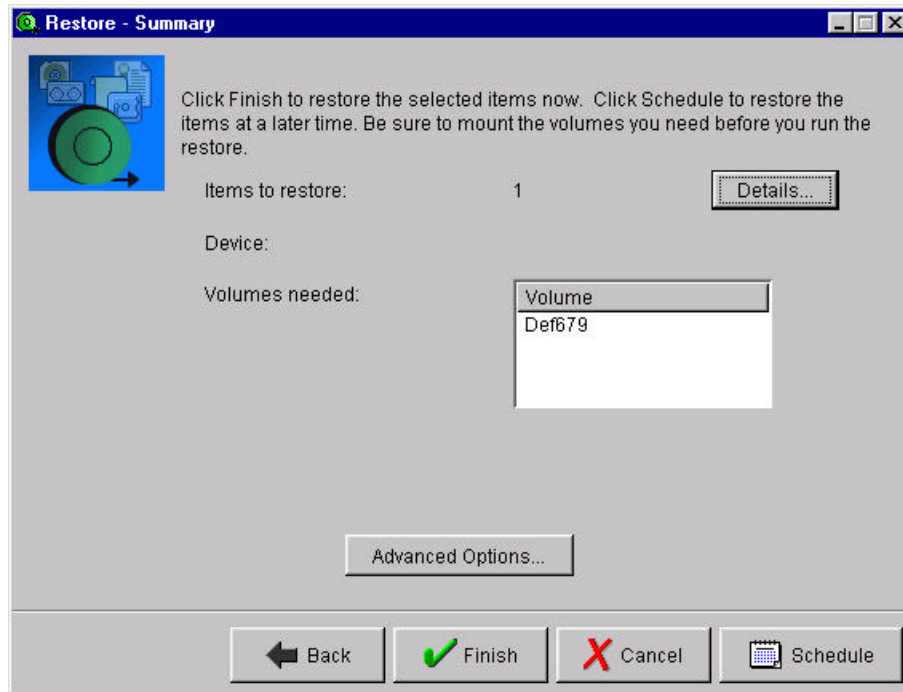
16. Click **Details...**.

   The **Details** panel provides you with a list of the objects you are about to restore.
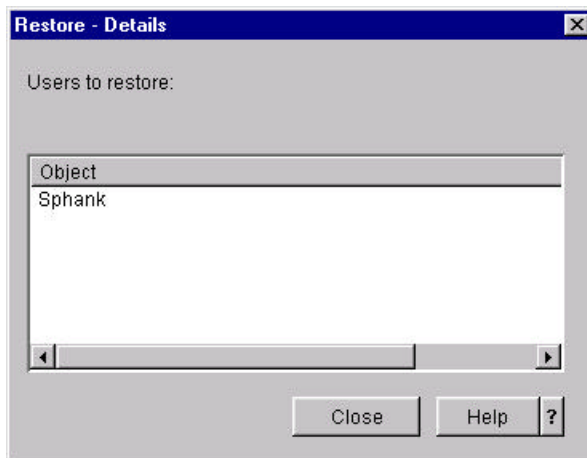
17. Click **Close**.

18. Click **Back** until you return to the **Select Type of Information** panel.

19. Select *A library, its objects, or its members* on the **Select Type of Information** panel.

20. Click **Next**.

21. The **Select Library** panel allows you to enter the name of the library you want to restore. If you don't know the name of the library, you can click **Browse...** and it will provide you a list of libraries that have been backed up by BRMS.
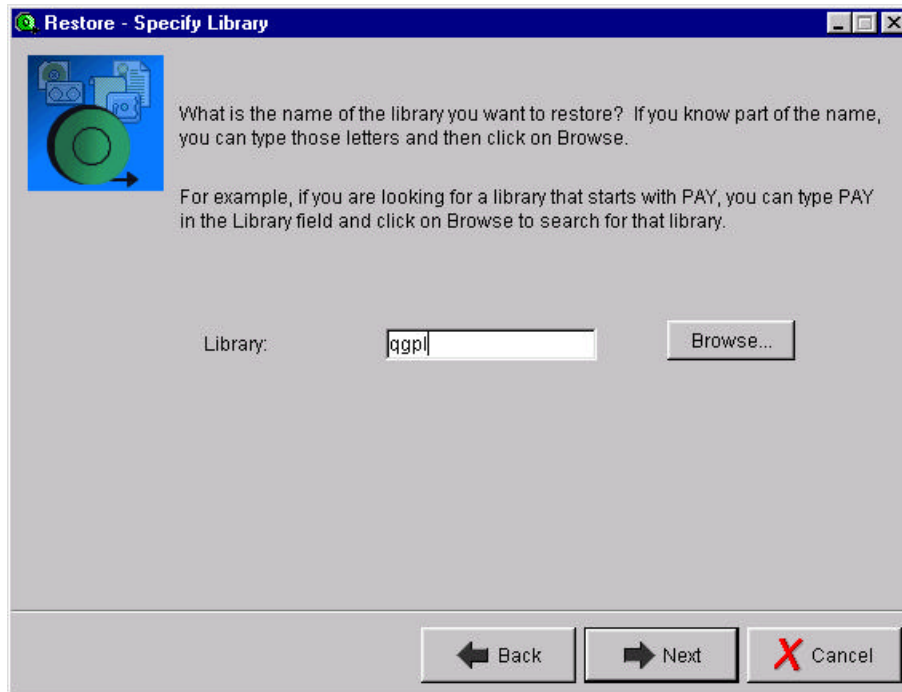
22. Enter **qgpl** for *Library*.

23. Click **Next** .

24. Select *Select the date to restore* on the **Specify the Saved Version to Restore** panel.

25. Click **Next** .

26. Select the entry that has the same save date as the date you ran the backup outlined in the *Running a Simple Backup* chapter.

27. Click **Next** on the **Select the Date of the Save** panel.

    The **Restore Entire Library** panel gives you the opportunity to specify whether the entire library is to be restored or whether you want to restore one or more objects from the library.
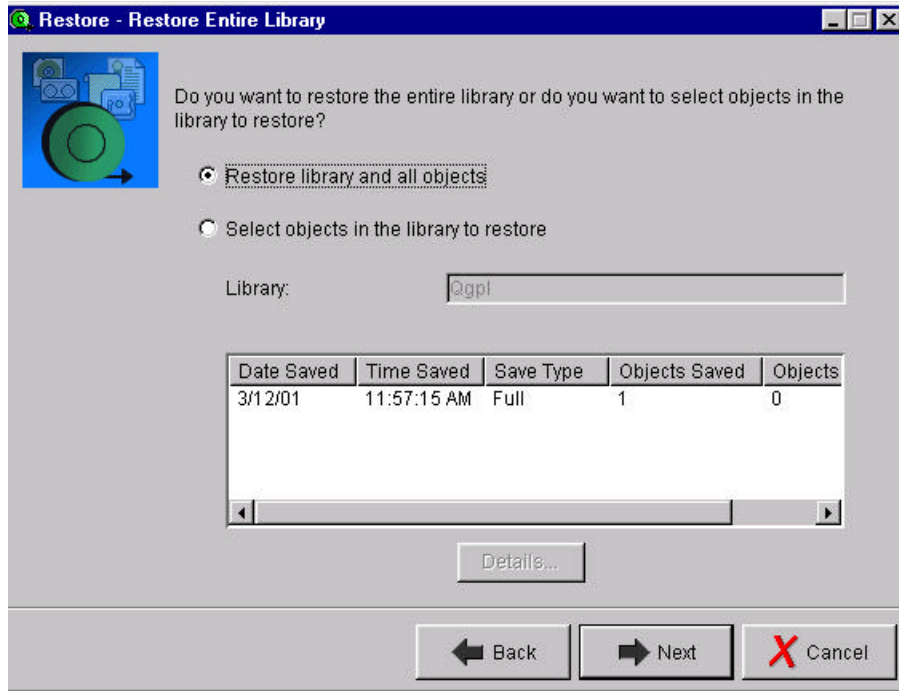
28. Select *Select objects in the library to restore.*
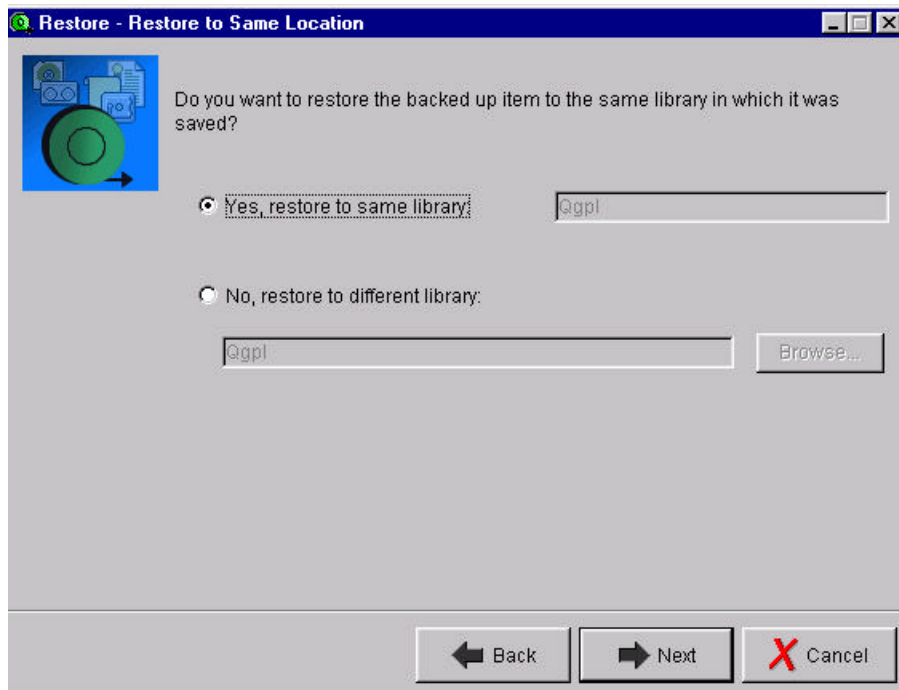
29. Click **Next** .

   The **Select Objects** panel allows you to select one or more objects you want to restore.
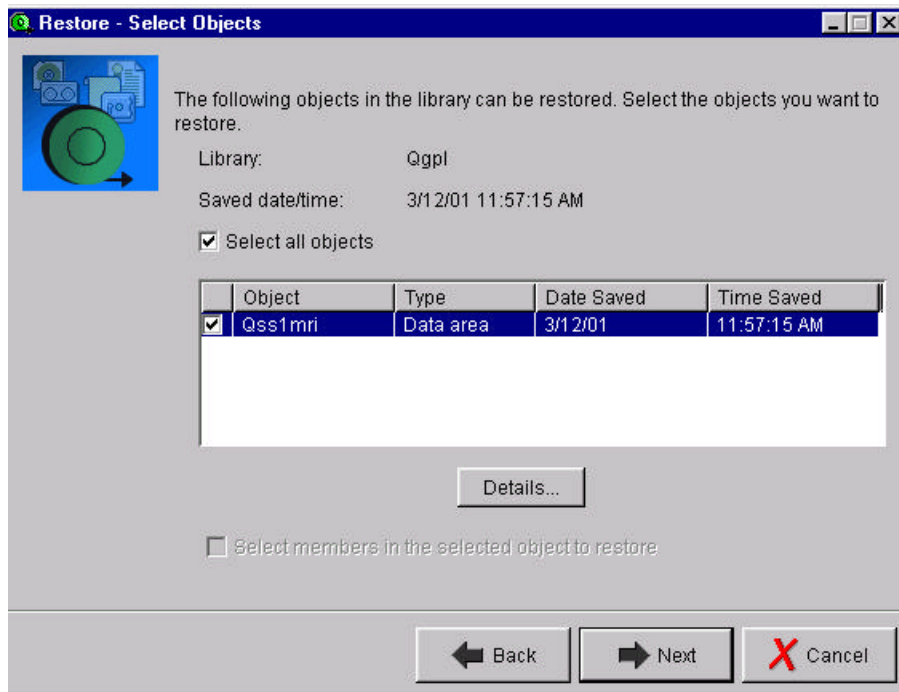
30. Select the check box for the **Qss1mri** object.

31. Click **Next** .

The **Restore to Same Location** panel lets you specify whether you want to restore the object(s) to the same library from which these were saved or to a different library.
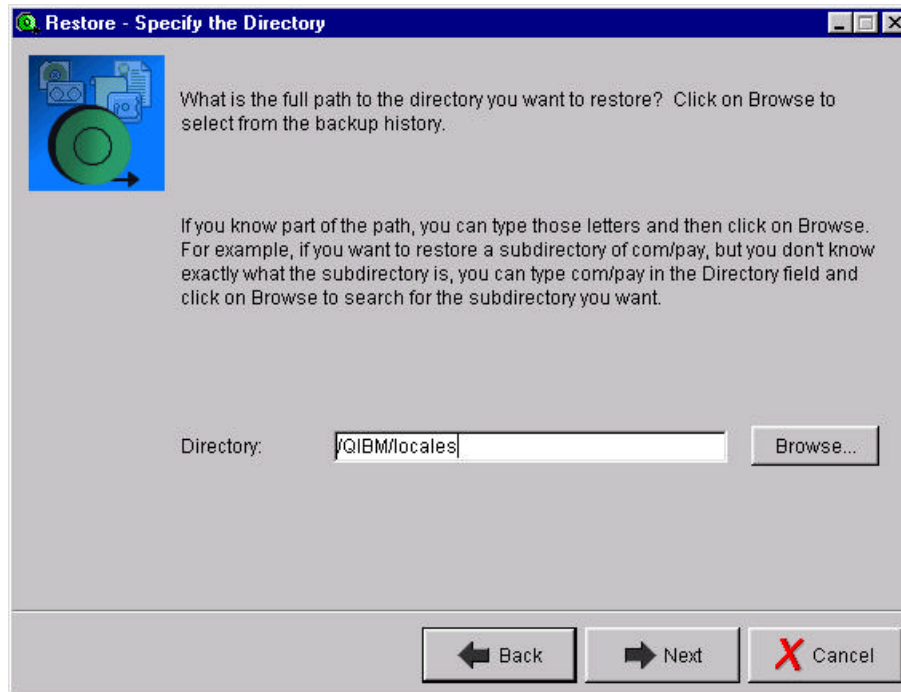

32. Click **Next** .

The restore **Summary** panel was discussed earlier. This completes this restore scenario.

33. Click **Back** until you return to the **Select Type of Information** panel.

34. Select *A directory or its files* on the **Select Type of Information** panel.
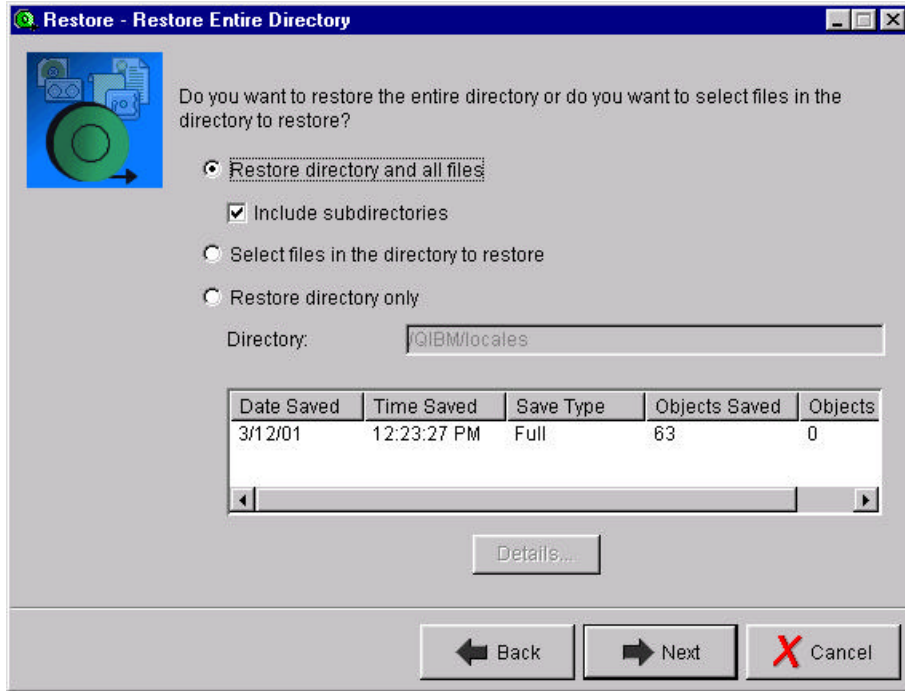
35. Click **Next**.

The **Specify the Directory** panel allows you to enter the name of the directory containing the objects you want to restore. If you don't know the name of the directory, you can click **Browse...** to find a list of saved directories.

36. Enter **/QIBM/locales** for *Directory*.

37. Click **Next** .

38. Select *Select the date to restore* on the **Specify the Saved Version to Restore** panel.

39. Click **Next** .

40. Select the entry that has the same save date as the date you ran the backup outlined the *Running a Simple Backup* chapter.

41. Click **Next** on the **Select the Date of the Save** panel.

    The **Restore Entire Directory** panel gives you the opportunity to specify whether only the directory is to be restored (*Restore directory only*), or the directory and all its files including any subdirectories are restored (*Restore directory and all files - Include subdirectories*), or whether you want to select the files to be restored (*Select files in the directory to restore*).

42. Select *Select files in the directory to restore*.

43. Click **Next** .

   The **Select Files** panel allows you to select the specific files you want to restore.
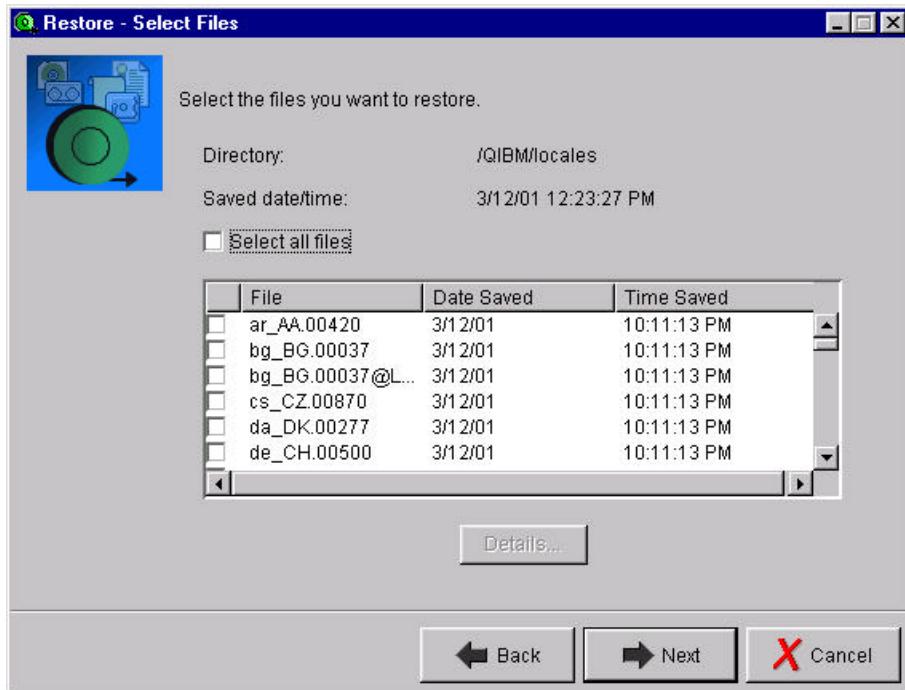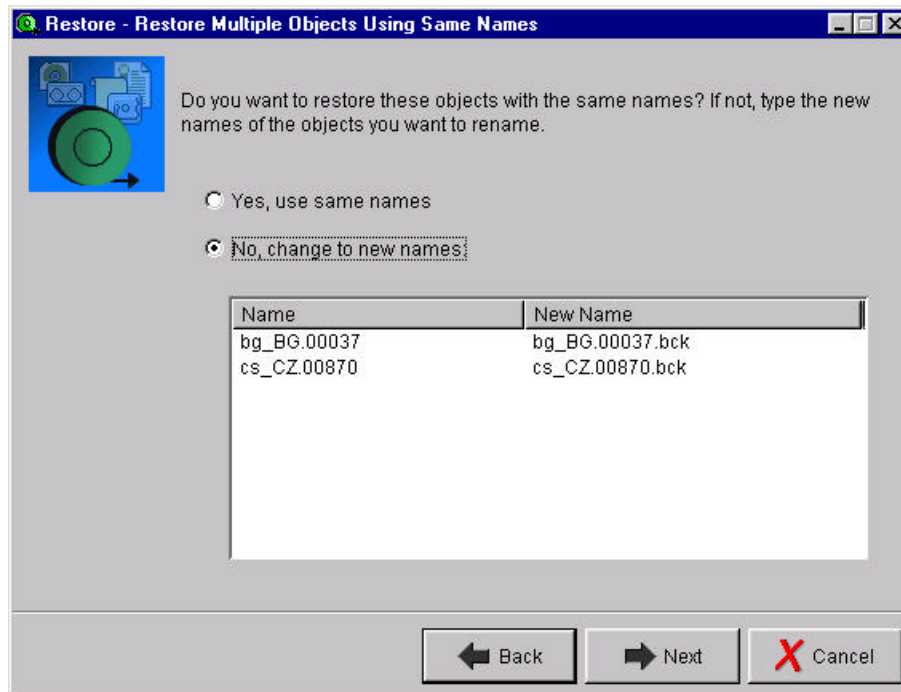

44. Select any two *File*s from the list.

45. Click **Next**.

The **Restore Multiple Objects Using Same Name** panel allows you to restore the saved objects under new names if you choose.

46. Explore entering new names for the selected objects.

47. Click **Next** .

The restore **Summary** panel was discussed earlier. This completes this restore scenario. You are encouraged to explore some of the other restores paths through the restore wizard.

48. Click **Cancel** when you have completed your exploration.

This completes the walk-through of the BRMS GUI plug-in for iSeries Operations Navigator.