Quantum.

Data Protection Software, Version 1.0

GoVault™

20013143-001

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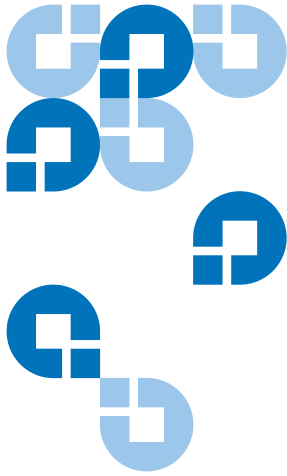**Chapter 4**   **Functional Description**   **66**

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Preface

Audience

This guide is written for people in small business, home office, or branch office environments, Information Technology (IT) staff or consultants, and independent professionals who will use the GoVault™ data protection software to develop and implement data protection plans for their important business or personal files.

Purpose

This guide provides the following information about the GoVault data protection software:

- An introductory overview

- Installation procedures

- Operating procedures

- Functional description

- Data protection best practices

- Frequently asked questions

Document Organization

This document is organized as follows:

- , provides an introductory overview of the GoVault data protection software—what it does, and how it works.

- , provides step-by-step procedures for installing the GoVault data protection software.

- , provide detailed instructions for creating and implementing data protection plans, and for finding and recovering files from the GoVault data protection archives.

- , provides a functional overview of the GoVault data protection software.

- , provides common techniques for optimizing your overall data protection environment.

- , provides answers to the questions that are frequently asked about the GoVault data protection software.

Notational Conventions

This manual uses the following conventions:

Note:	Notes emphasize important information related to the main topic.

Tech Tip:	Tech Tips provide technical information which may be helpful in performing the procedure.

Caution:	Cautions indicate potential hazards to equipment and are included to prevent damage to equipment.

Warning:	Warnings indicate potential hazards to personal safety and are included to prevent injury.

Contacts

The following subsections identify the Quantum company contacts.

Quantum Corporate Headquarters

To order documentation on GoVault Tabletop or other products, contact:

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P.O. Box 57100
Irvine, CA 92619-7100
(949) 856-7800
(800) 284-5101

Technical Publications

To comment on existing documentation send e-mail to:

doc-comments@quantum.com

Quantum Home Page

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Getting More Information or Help

More information about this product is available on the Service and Support website at www.quantum.com/support. The Service and Support website contains a collection of information, including answers to frequently asked questions (FAQs). You can also access software, firmware, and drivers through this site.

For further assistance, or if training is desired, contact Quantum:

Quantum Technical Assistance Center in the USA: 800-284-5101

For additional contact information: www.quantum.com/support

To open a Service Request:: www.quantum.com/esupport

For the most up-to-date information on Quantum Global Services, please visit: www.quantum.com/support
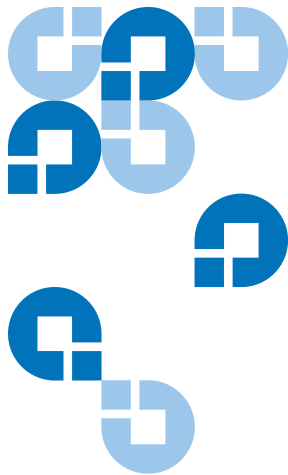
Introduction

This chapter provides an introductory overview of the GoVault™ data protection software. Topics include:

- [Overview](#)
- [Functional Description](#)
- [Operational Features](#) on page 5

Overview

The GoVault data protection software is an extremely robust, easy-to-use backup and restore application that merges advanced data de-duplication technology—also known as capacity-optimized storage (COS)—with the GoVault dock and cartridge disk drive to extend the amount of data that can be archived by a factor of from 10 to 20 times, or more, depending on the nature of the backup data.

Implemented as a single-user/single-server application, with direct access to the GoVault removable disk subsystem, the GoVault data protection software provides access to COS technology for:

- Small business/home office environments

- Information Technology (IT) staff or consultants who configure and support backup/restore functions for individual departments or clients

- Independent professionals and people who are responsible for the protection of their own business or personal data

The GoVault data protection software runs on the following Microsoft Windows-based workstation and server systems:

- Windows XP (32- or 64-bit), SP2

- Windows Server 2003 (32- or 64-bit), SP1 or R2

- Windows Vista (all editions, 32- or 64-bit)

Functional Description

As shown in figure 1, the GoVault data protection software implements six major functional services to optimize the backup and restore operations between the hard disks, folders, and files on your workstation or server system and the GoVault cartridges:

- Device Enablement

- Protection Plan Management

- Cartridge Management

- Cartridge Capacity Optimization

- Explore and Restore

- Alerts and Notification

Table 1 provides a brief description of each GoVault data protection software functional service.

Figure 1 Software Functional
Block Diagram
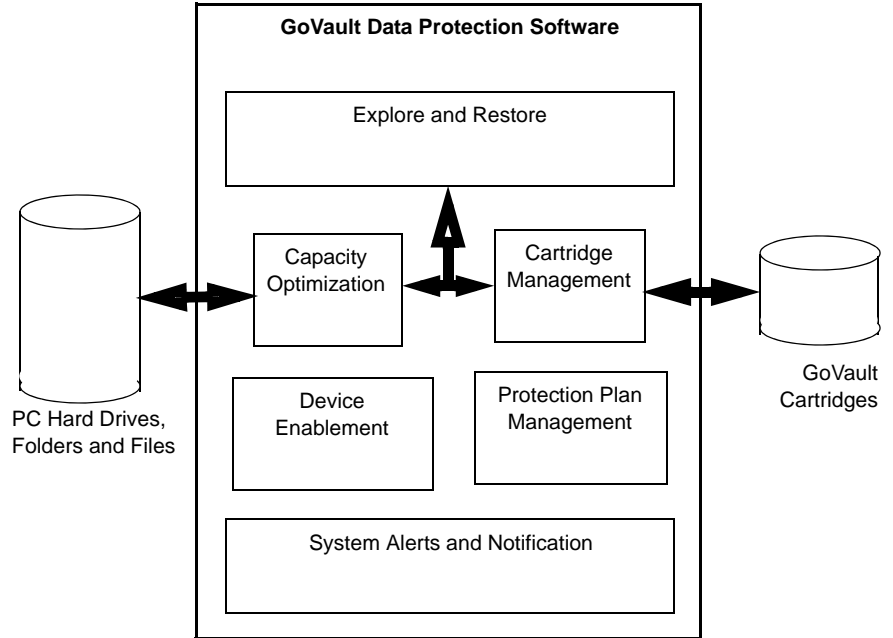
Table 1 Software Functional
Description

Function	Description
Device Enablement	Ensures that the software installation, configuration and operation complies with standard application conventions for Microsoft™ Windows platforms, including:
	• Preinstallation verification of system hardware and software prerequisites
	• Installation and configuration by a standard Windows installer wizard
	• Confirmation of resource availability before launching a backup or restore operation

Function	Description
Protection Plan Management	Captures, maintains, and executes the specified operating parameters for creating data protection archives, including: • What specific disk drives, folders, or files to protect • Where the archive is to be created and updated • When the archive update operation is to take place
Cartridge Management	Administers the identification and validation of GoVault cartridges as data protection archive devices, including: • Cartridge names and hard disk drive serial numbers (HDD S/N) • Cartridge insertion tracking and rotation reminders • Cartridge data integrity and online/offline cataloging
Capacity Optimization	Implements advanced data de-duplication engine that minimizes the amount of data that must be stored, over time, to maintain the integrity of the archive.
Explore and Restore	Simplifies the task of finding and restoring files from both online and offline archives by either: • Familiar drag-and-drop or copy-and-paste functions • Traditional full-restore functions • Search-for-file restore functions

Function	Description
System Alerts and Notification	Provides ongoing notices and reminders about the status of archive operation, including:
	• The status and availability of cartridges
	• Cartridge rotation schedules
	• File or network access conditions
	• Operating faults or errors

Operational Features

Installing the GoVault data protection software instantly transforms your GoVault dock and cartridge disk drive into a revolutionary new data protection system that weds innovative data de-duplication technology with a simple, straightforward graphical user interface. The result is an extremely powerful but easy-to-use data backup/recovery/archive system.

The GoVault data protection software uses heuristic algorithms and content factoring routines to optimally segment and uniquely identify each data segment and store it only once, along with the metadata required to reconstruct the original data. Factoring out common data virtually eliminates the redundant information that would be stored for a given data set. This significantly increases the effective capacity of the GoVault cartridge and enhances the performance of the archive system. The result is a long-term disk-based archiving system that is extremely fast, easy to use, and very affordable.

With the GoVault data protection software, you can quickly and easily:

• Create multiple customized scripts, called protection plans, that store capacity-optimized archive versions of specified files on GoVault cartridges

• Specify for backup any individual file or folder, or all files and folders, or any combination of files and folders on any or all of your local hard disk drives, and on network-connected disk drives

- Specify file types to exclude from your backup protection plans

- Identify and designate a specific GoVault cartridge, or use any available GoVault cartridge for each protection plan

- Use Windows Encrypting File System to automatically encrypt and decrypt protected files and folders

- Schedule each protection plan to run automatically at any time of the day, any day of the week, any week of the month, any month of the year—even multiple times a day

- Schedule automatic reminders when it is time to rotate your GoVault cartridges

- Edit or delete protection plans as easily as you created them

- Use familiar Windows Explorer-like dialogs to quickly:

  - Find specific files or folders in your protection plan archives

  - Perform copy/paste or drag-and-drop file handling operations to restore files to their original locations or to any alternate location

  - Restore to a particular point in time
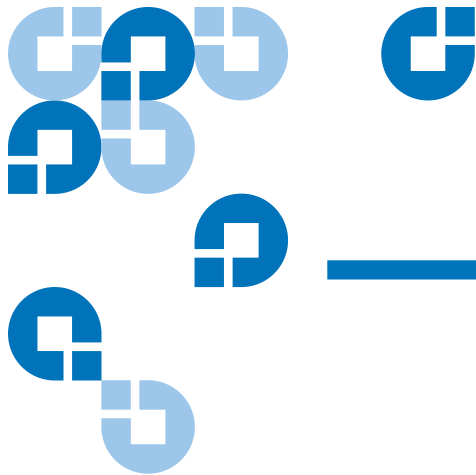
Chapter 2
Installation

This chapter identifies the system requirements and provides the procedures for installing the GoVault™ data protection software on your workstation or server system.

System Requirements

Before installing the GoVault data protection software, make sure that your workstation or server system meets the following hardware and software system requirements:

Hardware	• CPU, either:
	  • Intel Pentium 4 or above
	  • AMD K6 or above
	• CD-ROM drive
	• 33 Mbytes of hard available hard disk storage
	• GoVault dock and cartridge disk drive

Software	• One of the following operating systems:
	• Windows XP (32- or 64-bit), SP2
	• Windows Server 2003 (32- or 64-bit), SP1 or R2
	• Windows Vista (all editions, 32- or 64-bit)
	• Microsoft .Net Framework*
	• GoVault for Windows system application software

* The .NET Framework software is provided on the GoVault Product Documentation and Resource CD, and will be installed automatically if it is not already installed on your system.

Installing the GoVault Data Protection Software

Install the GoVault data protection software on your workstation or server system as follows:

1 Verify that your system meets the hardware and software requirements listed in the <u>System Requirements</u> subsection.This means that you have already:

    a Installed the GoVault dock and cartridge disk drive.

    b Installed the appropriate version of the GoVault system application software.

    c Restarted your system and confirmed that your GoVault dock and cartridge disk drive and system application software are fully functional.

You cannot install the GoVault data protection software until you have installed the GoVault dock and cartridge disk drive *and* the GoVault system application software. If you have not done this, follow the installation instructions in either the *GoVault for Windows User's Guide* or the *GoVault for Windows Quick Start Guide* before installing the GoVault data protection software.

2 Log on to your system as either Administrator or as a user with administrator privileges. You cannot install the GoVault data protection software unless you are an Administrator or have administrator privileges.

> **Note:** The password associated with your Administrator account, or your user account with administrator privileges should include a valid password. If you install the GoVault data protection software using an administrator account with a blank password, you will not be able to access network-connected resources for backup operations when you are not logged on to your system. (See Protecting Network-Connected Files on page 116.)

3 Insert the GoVault Product Documentation and Resource CD into your CD-ROM drive.

4 Depending on whether the CD-ROM auto-launch feature is enabled on your system, launch the GoVault data protection software Setup Wizard (see figure 2) by either:

> **a** Clicking the link for installing the GoVault data protection software

> **b** Browsing the CD contents and double-clicking the **setup.exe** file

Figure 2 GoVault Data Protection Software Setup Wizard

5 Click **Next** to continue and display the **License Agreement** dialog (see figure 3).

Figure 3 License Agreement
Dialog
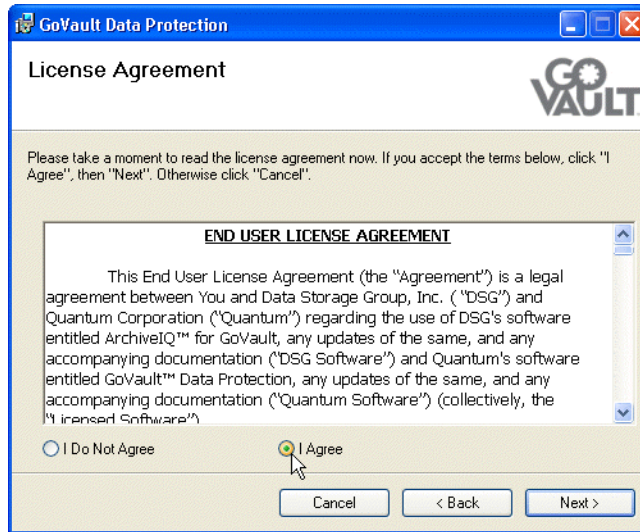
6 Read the License Agreement, select **I Agree**, and click **Next** to continue and display the **Select Installation Folder** dialog (see figure 4).

Figure 4 Select Installation
Folder Dialog
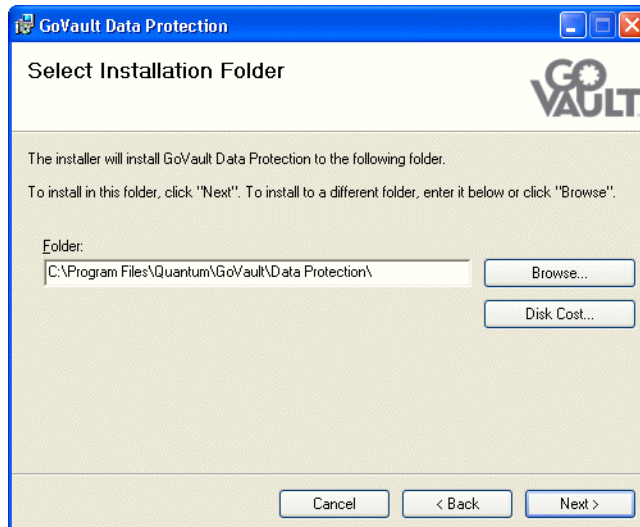
7 Use the **Select Installation Folder** dialog to specify the location where you want to install the GoVault data protection software.

The default location is shown in figure 4. If you want to specify a different location, click **Browse** and navigate to the location you want.

8 Click **Next** to continue and display the **Confirm Installation** dialog (see figure 5).

Figure 5 Confirm Installation Dialog
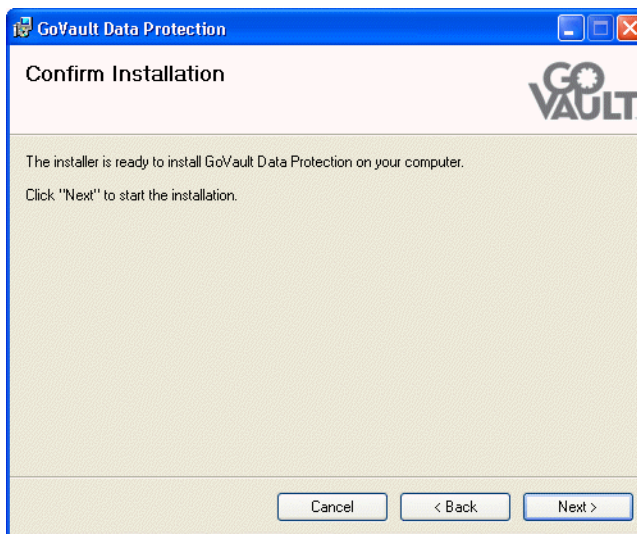
9 Click **Next** to start the installation and observe the progress on the **Installing GoVault Data Protection** display (figure 6).

Figure 6 Installing GoVault
Data Protection Display
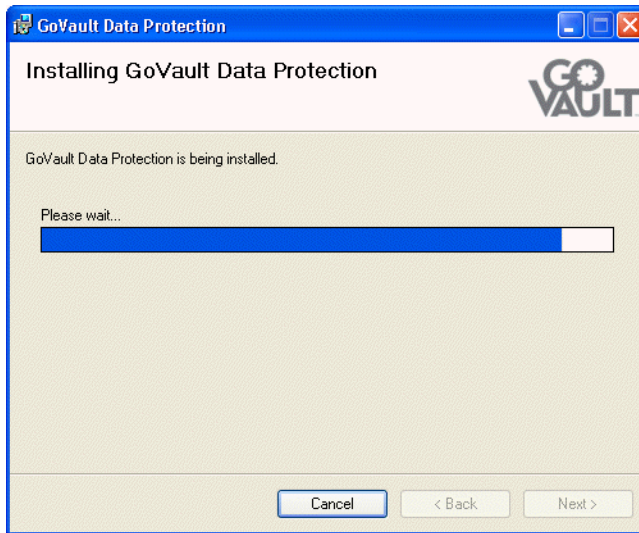
10 Appearance of the **Installation Complete** display signifies a successful installation of the GoVault data protection software (see figure 7).

Figure 7 Installation Complete
Display
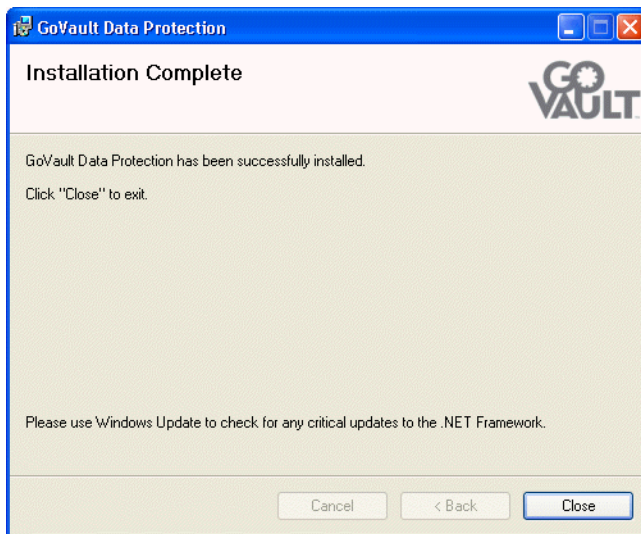
11 As prompted, click **Close** to exit the GoVault data protection software Setup Wizard and remove the GoVault Product Documentation and Resource CD from the CD-ROM drive.

12 To start the GoVault data protection software, click **Start** and select **Programs ==> Quantum GoVault ==> GoVault Data Protection** to display the GoVault data protection software **Home** page (see figure 8).

13 If you had a cartridge in the GoVault dock when you installed the GoVault data protection software, the GoVault data protection software also displays a new media detection prompt asking if you want to enter a cartridge name and description (see figure 9).

At this point, you can either:

a Click **No** to dismiss the prompt and use the cartridge hard disk drive serial number (HDD S/N) to identify the cartridge.

b Click **Yes** to display the **Settings** tab of the **Prepare Media** dialog to specify a name and description for the GoVault cartridge as described in Introducing Cartridges on page 17.

Figure 8 GoVault Data Protection Software Home Page
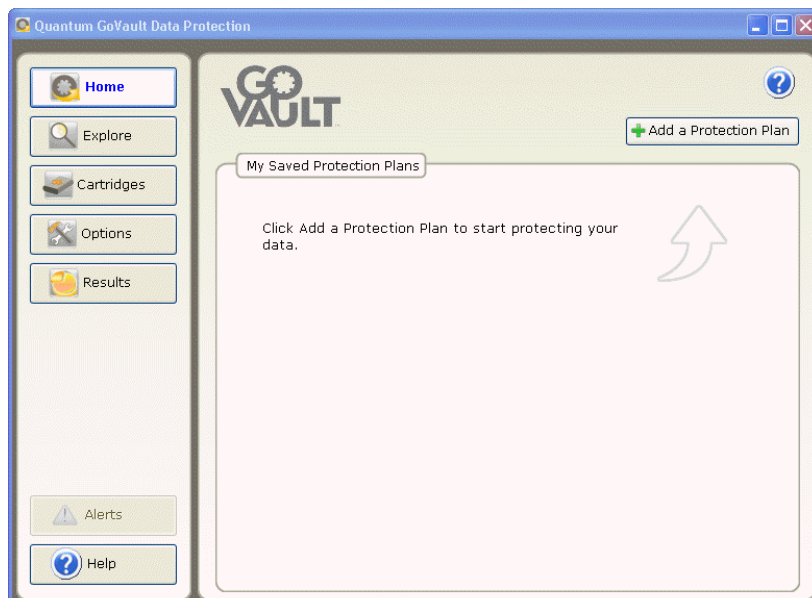
Figure 9 New Media Detection
Prompt
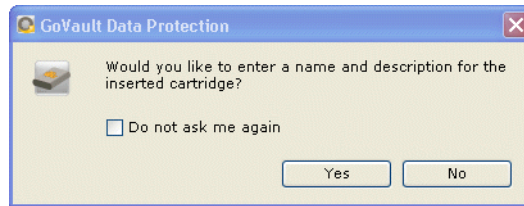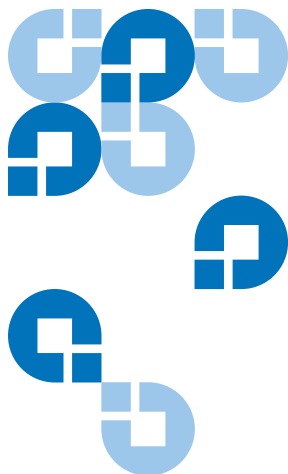
This chapter describes using the GoVault™ data protection software for:

Introducing, Removing and Importing GoVault Cartridges

Before you can use a GoVault cartridge as a GoVault data protection software archive storage device, you must *introduce* the cartridge to the GoVault data protection software archive environment.

The introduction process places a format header on the cartridge and creates an entry in the Windows registry of the host computer.

The introduction procedure includes specifying whether you want to provide a unique name and description for the cartridge, or use the default hard disk drive serial number (HDD S/N) to identify the cartridge. Thereafter, unless you change the specification, the GoVault data protection software automatically:

- • Uses either the cartridge name or HDD S/N to identify the cartridge

- • Keeps track of all archive files that are stored on the cartridge

- • Monitors the amount of available space remaining on the cartridge, and alerts you when it approaches its capacity and is no longer suitable for additional archive operations

When a cartridge becomes full, reaches the end of its useful life, or is otherwise ready for withdrawal from service as an archive storage device, you should remove it from the GoVault data protection software archive environment.

Subsequently, a cartridge that has been removed can be reintroduced or imported back into the original archive environment, or into any other GoVault data protection software archive environment. Note, however, that you do not need to remove a cartridge from the GoVault data protection software archive environment before importing it into another—you can always import cartridges from one GoVault data protection software archive environment to another.

Introducing Cartridges

The first time you insert a new cartridge into the GoVault dock, or if you had a cartridge inserted when you installed the GoVault data protection software, a new media detection prompt asks if you would like to enter a name and description for the cartridge (see figure 9 on page 14).

Clicking . . .	Introduces the cartridge and . . .
Yes	displays the **Set Cartridge Name and Description** dialog on the **Settings** tab of the **Cartridge Settings** page for you to enter a cartridge name and description (see figure 10).
No	uses the cartridge serial number to identify the cartridge.

Selecting the **Do not ask me again** check box makes your subsequent **Yes** or **No** selection the default behavior and inhibits the prompt whenever you insert another new cartridge.

> **Note:** Selecting the **Do not ask me again** check box is not a permanent decision. You can always re-enable the prompt as described in Setting the New Media Action Option on page 61.

If you clicked **Yes** to specify a cartridge name and description:

1 Type a name for the cartridge in the **Name** text box.

2 Type a description of the cartridge in the **Description** text box.

3 Click **Finish** to assign the name and description to the cartridge.

If you want to use the Windows Encrypting File System (EFS) to automatically encrypt and decrypt your protected files and folders, use the procedure in Implementing Data Encryption on page 60 to implement the data encryption function before using the cartridge with a protection plan.

> **Note:** You must implement data encryption on a GoVault cartridge before using it the first time for a protection plan. You cannot implement data encryption for a cartridge after it has been used by a protection plan.

Figure 10 Prepare Media
Dialog

Removing Cartridges

The GoVault data protection software keeps track of the archive file configuration of all GoVault cartridges that have been introduced. Ejecting a cartridge from the GoVault dock only changes its status from Available to Offline. It remains part of the GoVault data protection software archive system, and its status remains on system displays.

To remove a cartridge from the GoVault data protection software archive environment:

1 Click **Cartridges** on the GoVault data protection software **Home** page to display the **Cartridge** page (see figure 46 on page 58).

2 In the **Cartridge Status** display, verify that the cartridge you want to remove is not inserted in the GoVault dock and its status is Offline.

If the cartridge you want to remove is in the GoVault dock and its status is Available:

a Select/highlight the cartridge that you want to remove.

b Open the **Cartridge Utilities** menu and select **Eject Cartridge** to eject the selected cartridge and activate the **Remove** command button.

3 Click **Remove** and then **Yes** on the resulting **Remove Cartridge** prompt to remove the selected cartridge from the GoVault data protection software archive environment (see figure 11).

4 Verify that the GoVault data protection software removes the cartridge from the **Cartridge Status** display.

Figure 11 Remove Cartridge Prompt
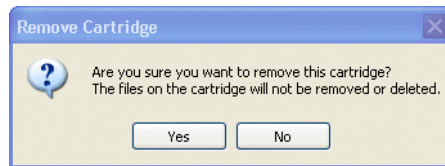
Note that when you remove a cartridge from the GoVault data protection software archive environment, the files remain on the cartridge. Subsequently, you can reintroduce or "import" the cartridge back into the original GoVault data protection software archive environment, or to any other GoVault data protection software archive environment, as described in the following subsection.

Importing Cartridges

When you insert a GoVault cartridge that has been used to store files in another GoVault data protection software system archive environment, the GoVault data protection software recognizes the cartridge but will not retrieve archive information from it, or store archive information to it, until you confirm that you want to *import* the cartridge into the local GoVault data protection software archive environment.

To import a GoVault cartridge from another GoVault data protection software archive environment:

1 Insert the GoVault cartridge into the GoVault dock. Upon recognition that the cartridge has archives from another GoVault data protection software archive environment, the GoVault data protection software:

- Displays a brief alert message above the GoVault data protection software icon in the Windows system tray (see figure 12)

- Activates the **Home** page **Alert** button, changing the display to **Alerts (1)** to signify that an Alerts and Reminder message is available

Figure 12 Import Cartridge
Alert Message
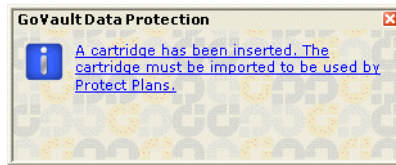
2 Either click the link in the import cartridge alert message or click the **Alerts** command button to display the associated Alerts and Reminders message (see figure 13).

Figure 13 Import Cartridge
Alerts and Reminders Message
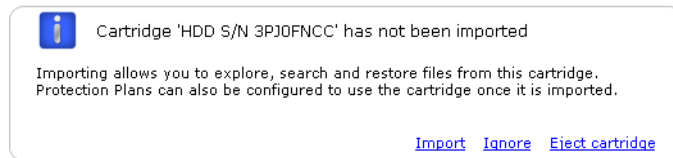
3 As prompted, click **Import** to import the cartridge into the GoVault data protection software archive environment.

The GoVault data protection software will import the index of the archive data that is on the cartridge, and update the **Cartridge Status** display on the **Cartridge** page. You can now use the GoVault data protection software Explore functions to find files that are on the cartridge—even when the cartridge is removed from the GoVault dock, and you can use the cartridge to store new archives created with your own protection plans.

If you click **Ignore**, the GoVault data protection software treats the cartridge as unavailable and you will not be able to access its archive files or write new archive files to it.

Creating a Protection Plan

A protection plan is an automated script that stores capacity-optimized archive versions of your specified files on GoVault cartridges. When creating a protection plan, you specify the:

- Files that you want to protect

  To help you get started, the GoVault data protection software provides three categories for file specification:

  - **Personal Data and Settings** automatically specifies *productivity* files in the **Documents and Settings** folder on the local hard disk drive—usually drive C—including your:

    - Microsoft **Outlook** e-mail settings and .pst files

    - Desktop settings

    - Application data settings

    - Internet favorites

    - **My Documents** and **My Pictures** folders

    You could use the archives created by this option to restore your e-mail files and re-create the "look and feel" of your desktop after a serious system failure.

  - **Custom** inhibits the preselection of any files and requires you to specify the exact files, folders and drives.

  - **Everything** automatically specifies all files and folders on all local disk drives.

- Name and brief description of the protection plan

- GoVault cartridge that you want the protection plan to use

  By default, the GoVault data protection software automatically assigns each protection plan to all new cartridges. You can choose instead to assign a specific cartridge to each protection plan.

- Run schedule for the protection plan

  You can schedule your plan to run either automatically—on a daily, weekly, or monthly basis—or manually, whenever you want.

Depending on the complexity of your backup and restore requirements, you might want to review the information in <u>Best Practices</u> on page 112 to determine the types of protection plans you need, and perhaps devise a cartridge naming convention that complements your cartridge rotation scheme.

When you are ready to create a new protection plan, complete the following procedures in the order presented:

1 <u>Choosing a Starting Point</u>

2 <u>Specifying the Files, Folders, Drives, or Users to Protect</u>

3 <u>Naming the Protection Plan</u> on page 29

4 <u>Specifying the GoVault Cartridge to Use</u> on page 30

5 <u>Specifying a Run Schedule</u> on page 31

Choosing a Starting Point

To specify the starting point for a new protection plan:

1 Click **Add a Protection Plan** on the GoVault data protection software **Home** page to display the **Create a Protection Plan** page (see <u>figure 14</u>).

2 As prompted, use the **Start** tab selections to specify the starting point for your protection plan—the files that you want to protect:

  a Select **Personal Data and Settings** if you want to protect a preselected configuration of user productivity files that you could use to restore your e-mail files and re-create the "look and feel" of your desktop after a serious system failure.

  b Select **Custom** if you want to protect a manually selected configuration of files and folders from both local and network-connected disk drives. **Custom** is the default selection.

  c Select **Everything** if you want to protect all files and folders on all local disk drives.

3 Click either **Next** or the **Selections** tab to view the selection options for the specified starting point and proceed to <u>Specifying the Files, Folders, Drives, or Users to Protect</u>.

Figure 14 Create a Protection
Plan Page
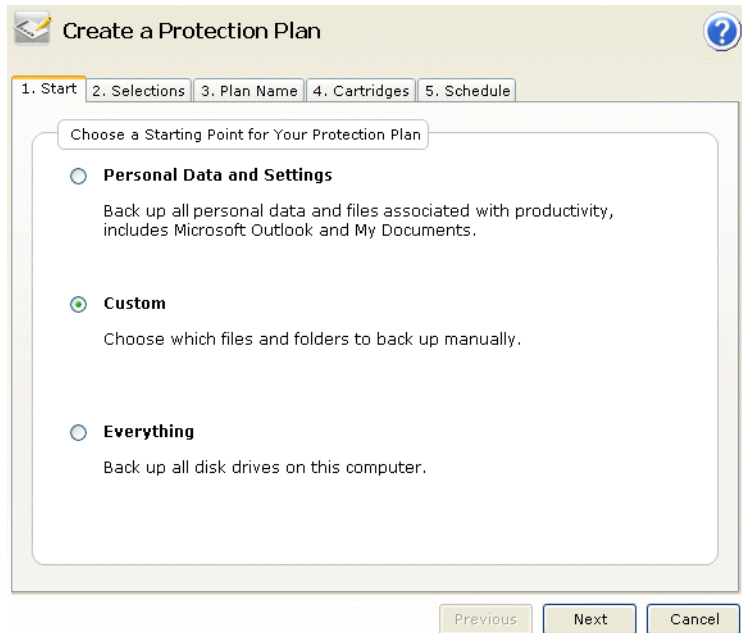
**Specifying the Files,
Folders, Drives, or Users
to Protect**

After choosing a starting point for your plan, use the **Selections** tab dialog
to specify the files, folder, or drives that you want to protect:

IF you specified this starting point . . .	THEN the Selections tab display provides the . . .
Personal Data and Settings	**Select Users to Protect** list box with every user defined for your system preselected for protection. See figure 15 and proceed to Selecting Users to Protect on page 25.

IF you specified this starting point . . .	THEN the Selections tab display provides the . . .
Custom	**Select Files and Folders to Protect** list box with a complete Explorer-like file structure for all local disk drives and network drives connected to your computer, with none of the files, folders, or hard disk drives preselected for protection.
	See figure 16 and proceed to Selecting Files and Folders to Protect on page 26.
Everything	**Select Hard Drives to Protect** list box with every local hard drive on your system preselected for protection.
	See figure 18 and proceed to Selecting Hard Drives to Protect on page 28.

Selecting Users to Protect

Figure 15 Personal Data and
Settings Selections Tab
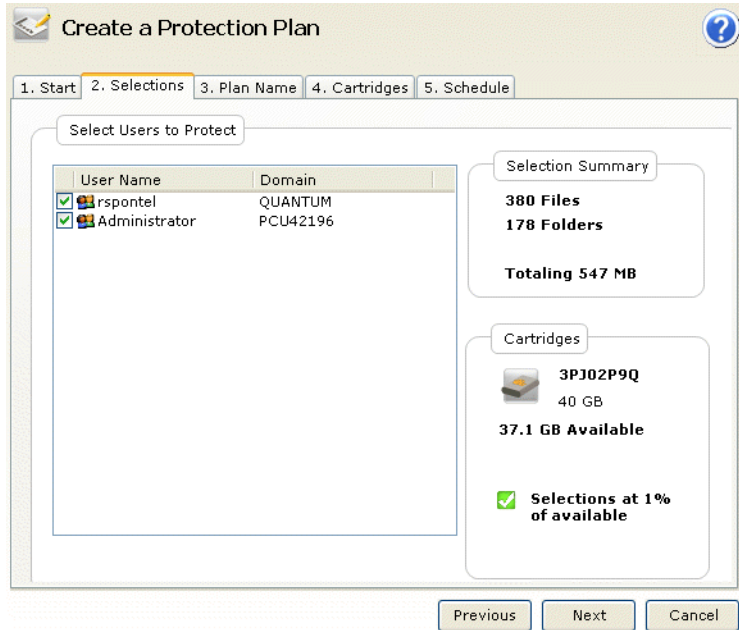
On the **Selections** tab for creating a protection with the Personal Data and
Settings starting point, you can:

1 Uncheck a user's check box to remove the associated files from the
protection plan.

2 As you make your selections, the **Selection Summary** display
automatically updates to show the total number of files and folders
and the total amount of data to be protected.

3 Click either **Next** or the **Plan Name** tab to view the **Plan Name** tab
display.

See figure 19 and proceed to Naming the Protection Plan on page 29.

Selecting Files and Folders to Protect

Figure 16 Custom Selections
Tab
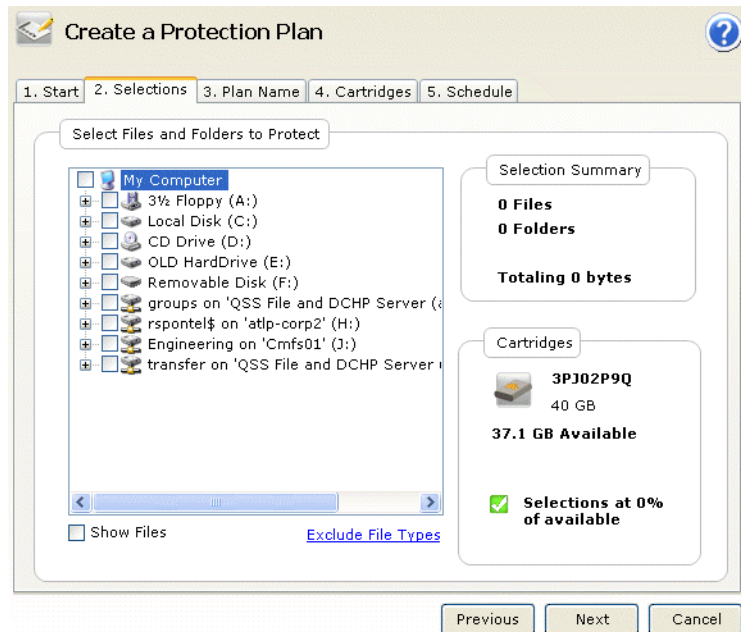
On the **Selections** tab for creating a protection with the Custom starting point, you *must* manually explore the displayed file structure and check the appropriate check boxes to specify the drives, folders or files that you want to protect:

1 If you want to specify individual files, select the **Show files** check box to expand the file structure to the individual-file level.

2 Use the Windows Explorer-like controls to expand the disks and folders and select the check boxes for the files and folders that you want to protect:

Selecting a . . . check box	Adds . . . to your protection plan.
disk drive	all of folders and files on the selected disk drive
folder	all of the files in the selected folder
file	the selected file

3 If you want to exclude certain types of files from your protection plan, click the **Exclude File Types** link to display the **Choose file types to exclude** dialog (see figure 17).

Figure 17 Exclude File Types Dialog
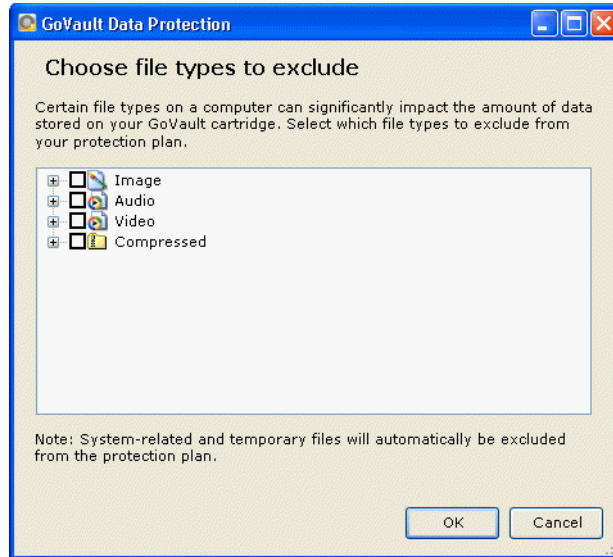
Excluding certain file types, such as images, audio, and video files, can significantly reduce the amount of data that will be stored on your GoVault cartridge, and speed execution of your protection plan:

a Expand the file types structure and select the check box for each file type that you want to exclude from you protection plan.

b Click **OK** to exclude the selected file types from your protection plan and close the **Choose file types to exclude** dialog.

4 As you make your selections, the **Selection Summary** display automatically updates to show the total number of files and folders and the total amount of data to be protected.

5 Click either **Next** or the **Plan Name** tab to view the **Plan Name** tab display.

See figure 19 and proceed to Naming the Protection Plan on page 29.

Selecting Hard Drives to Protect

Figure 18 Everything
Selections Tab
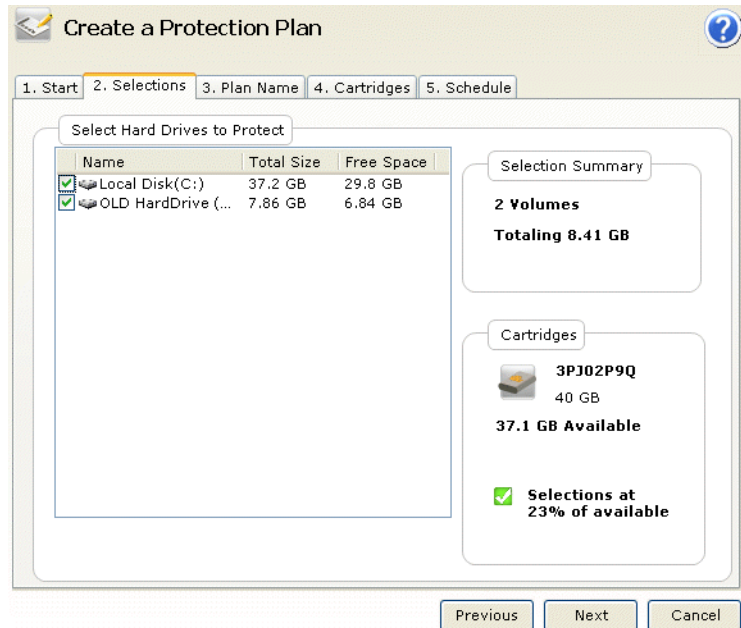
On the **Selections** tab for creating a protection plan with the Everything
starting point, you can:

1 Uncheck a disk drive to remove all of its files from the protection
plan.

2 As you make your selections, the **Selection Summary** display
automatically updates to show the total number of volumes and the
total amount of data to be protected.

3 After you have made your selections, click either **Next** or the **Plan
Name** tab to view the **Plan Name** tab display.

See figure 19 and proceed to Naming the Protection Plan.

Naming the Protection Plan

After choosing a starting point for your plan and selecting the files, folders, drives, or users that you want to protect, use the **Plan Name** tab dialog to specify a name and brief description (see figure 19):

1 Overtype the default name in the **Name** text box to specify a name for your protection plan.

2 Overtype the default description in the **Description** text box to specify a brief description of your protection plan.

3 Click either **Next** or the **Cartridges** tab to view the **Cartridges** tab display.

See figure 20 and proceed to Specifying the GoVault Cartridge to Use.

Figure 19   Plan Name Tab

Specifying the GoVault Cartridge to Use

The **Cartridges** tab lists all of the GoVault cartridges that have been introduced into the GoVault data protection software environment, and provides the options to associate your protection plan with either:

- All new cartridges
- One or more specific cartridges

Figure 20   Cartridges Tab
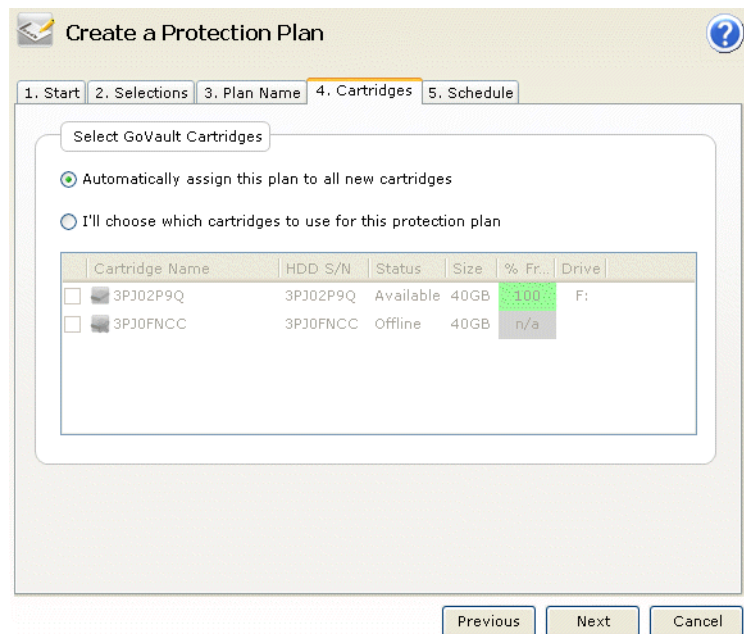
1 If you want your protection plan to backup your files on any available GoVault cartridge, click **Automatically assign this plan to all new cartridges**.

2 If you want your protection plan to backup your files on a specific GoVault cartridge, click **I'll choose which cartridges to use for this plan** and select the cartridges from the list box.

3 After specifying the GoVault cartridges to use, click either **Next** or the **Schedule** tab to view the **Schedule** tab display.

See figure 21 and proceed to Specifying a Run Schedule.

Specifying a Run Schedule

The final step in creating a protection plan is using the **Schedule** tab dialog to specify the times that you want the plan to run (see figure 21).

Figure 21 Schedule Tab
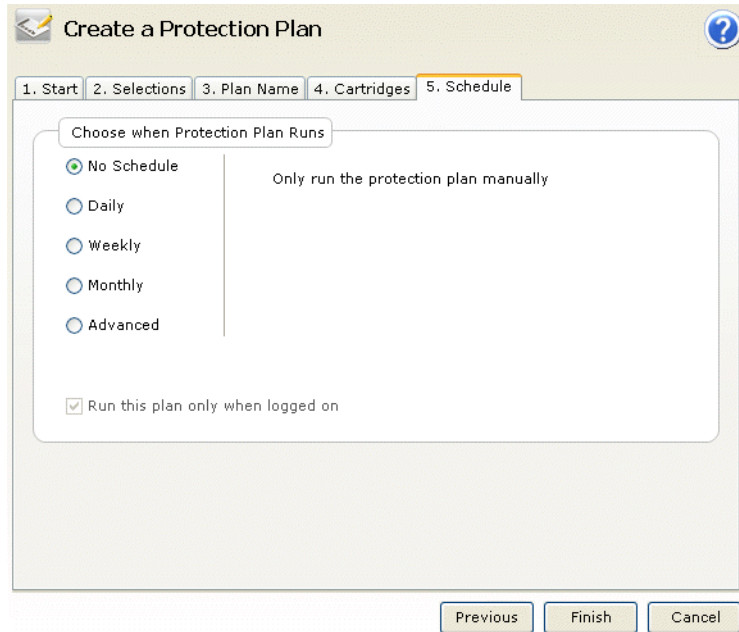
1 Use the schedule options and list boxes to specify how and when you want to run your protection plan:

Select this option . . .	If you want the GoVault data protection software to run your protection plan . . .
No Schedule	only when you launch it manually from the GoVault data protection software **Home** page.
	In this case, your protection plan will not run on any scheduled basis.

Select this option . . .	If you want the GoVault data protection software to run your protection plan . . .
Daily	automatically, once each day at the time you specify in the **At** list box: At: 1:00 AM
Weekly	automatically, once each week, on the day of the week and at the time you specify in the **AT** and **On** list boxes: At: 1:00 AM On: Monday
Monthly	automatically, once each month, on the day of the month and at the time you specify in the **At** and **Day** list boxes: At: 1:00 AM Day: 1 of each month
Advanced	using advanced scheduling features (see Implementing Advanced Scheduling Features on page 34).

2 By default, the GoVault data protection software runs protection plans when you are logged on to your system, as indicated by the default selection in the **Run this plan only when logged on** check box.

If you have scheduled run times when you might not be logged on, you must specify the user name and associated password so the GoVault data protection software can log on and run your plan:

a Unselect the **Run this plan only when logged on** check box and click **Yes** at the resulting prompt (see figure 22) to display the user name and password dialog (see figure 23).

Figure 22 Run When Logged Off Prompt
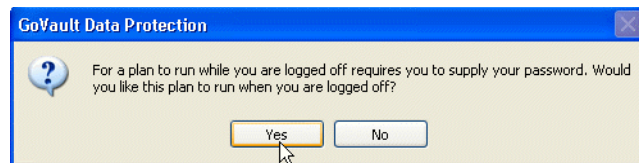
Figure 23 User Name and Password Dialog

b As required, use the **User name** list box to specify the user name that you want the protection plan to run under when you are logged off.

c Type the password associated with the specified user name in the **Password** text box.

d Click **OK** to save your specifications and close the user name and password dialog.

3 Click **OK** to save your protection plan, close the **Create a Protection Plan** dialog, and return to the GoVault data protection software **Home** page.

The GoVault data protection software adds the protection plan to the **My Saved Protection Plans** display, along with an indication of its status and run schedule (see figure 24).

Figure 24 My Saved Protection
Plans Display
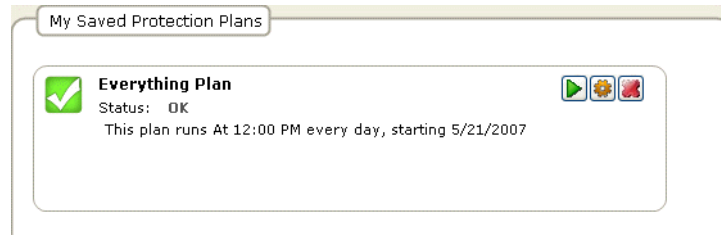
Implementing Advanced Scheduling Features

To access and implement advanced scheduling features for your protection plan:

1 Select the **Advanced** option on the **Create a Protection Plan** page **Schedule** tab (see figure 25).

Figure 25 Implementing
Advanced Scheduling
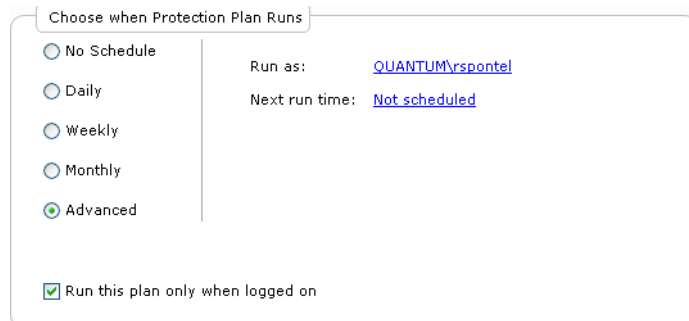
2 Click the **Run as** link to display the user name and password dialog (see figure 23), and:

   a As required, use the **User name** list box to specify the user name that you want the protection plan to run under.

   b Type the password associated with the specified user name in the **Password** text box.

   c Click **OK** to save your specifications and close the user name and password dialog.

3 Click the **Next run time** link to display the **Schedule** tab of the standard Windows **Scheduled Task** dialog that you can use to specify the advanced scheduling tasks for your protection plan (see figure 26).

Figure 26 Scheduled Task
Schedule Tab
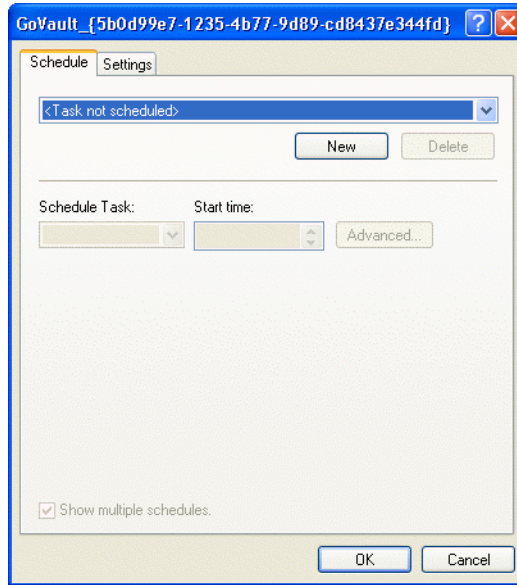
4 On the **Schedule** tab of the **Scheduled Task** dialog, click the **New** command button to activate the two scheduling list boxes and, initially, the **Advanced** command button:

Use this list box . . .	**If you want the GoVault data protection software to run your protection plan . . .**
Schedule Task	At any of the listed events:
	• **Daily**—Selecting a Daily schedule displays a **Schedule Task Daily** selection box that you can use to specify an interval of from every 1 to 9,999 days.
	• **Weekly**—Selecting a Weekly schedule displays a **Schedule Task Weekly** dialog that you can use to specify an interval of from every 1 to 9,999 weeks on a specific day of the week.

Use this list box . . .	**If you want the GoVault data protection software to run your protection plan . . .**
Schedule Task (continued)	At any of the listed events: (continued)
	• **Monthly**—Selecting a Monthly schedule displays a **Schedule Task Monthly** dialog that you can use to specify:
	• Either a day of the month (1 through 31), or the first/second/third/fourth/last day of the week
	• Any or all months of the year
	• **Once**
	• **At System Startup**
	• **At Logon**
	• **When idle**—Selecting a When idle schedule displays a **Schedule Task When Idle** selection box that you can use to specify an idle time of from every 1 to 999 minutes.
Start Time	At a specific time of day for Daily, Weekly, Monthly or Once task schedules.

5 If you selected a Daily, Weekly, Monthly, or Once task schedule, click the **Advanced** command button to display the **Advanced Schedule Options** dialog (see figure 27).

Figure 27 Advanced Schedule
Options Dialog
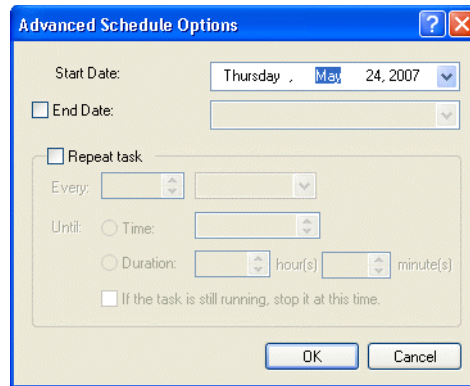
6 As required, use the option buttons and selection boxes on the
Advanced Schedule Options dialog to specify:

- **Start Date**

- **End Date**

- **Repeat Task**:

    - **Every** 1 to 9,999 minutes or seconds

    - **Until** either a specified Time, or a specified Duration of from 1
      to 9,999 hours or 1 to 99 minutes

    - The **If the task is still running . . .** option

7 Click **OK** to close the **Advanced Schedule Options** dialog and return to
the Windows **Scheduled Task** dialog.

8 Click the **Settings** tab of the **Scheduled Task** dialog to specify the
advanced scheduling task options for your protection plan (see
figure 28).

9 As required, use the check boxes and selection boxes on the
Selections tab to specify:

- **Selected Task Completed** options:

    - Delete the task if it is not scheduled to run again

    - Stop the task if it runs for 1 to 999 hours, 1 to 99 minutes

- **Idle Time** options:

    - Only start the task if the computer has been idle for at least 1-
      999 minutes

- • If the computer has not been idle that long, retry for up to 1-999 minutes

- • Stop the task if the computer ceases to be idle

- • Power Management options:

  - • Don't start the task if the computer is running on batteries

  - • Stop the task if battery mode begins

  - • Wake the computer to run the task

10 Click **OK** to save your advanced scheduling tasks and close the **Scheduled Task** dialog.

Figure 28 Scheduled Task Settings Tab
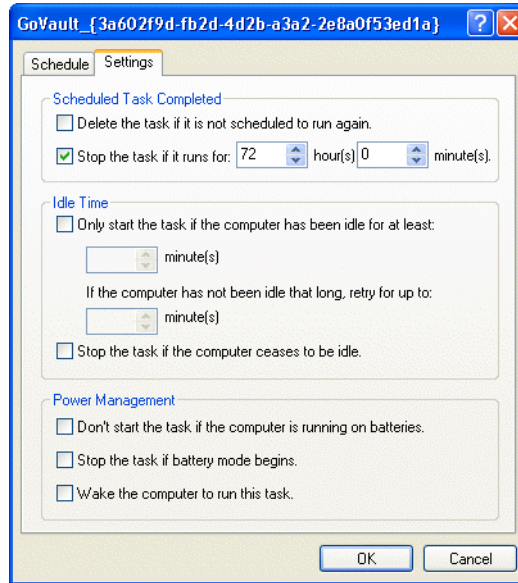
Running, Editing, and Deleting a Protection Plan

Use the three command buttons on the **Home** page **My Saved Protection Plans** display to run, edit or delete a protection plan:

- **Run now**—See Running a Protection Plan

- **Edit settings**—See Editing a Protection Plan on page 40

- **Remove plan**—See Removing a Protection Plan on page 42

Running a Protection Plan

The GoVault data protection software automatically runs your protection plans according to your specified run schedule. You can run a plan manually, at any time, regardless of the established schedule, by clicking the green **Run now** button for the protection plan in the **My Saved Protection Plans** display on the **Home** page (see figure 29).

Figure 29 Saved Protection Plan Run Now Button
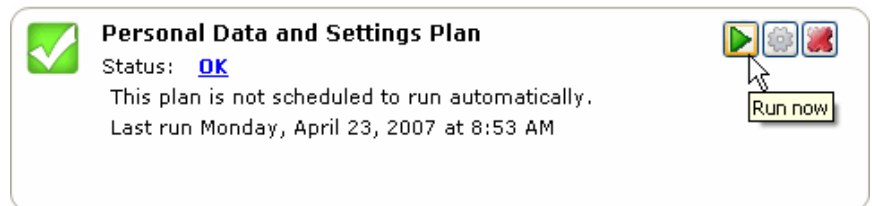
When you click **Run now**, the GoVault data protection software changes the displayed status of the protection plan from **OK** to **Starting**, briefly, then to **Running**, as it displays the progress of the run (see figure 30).

Note: Depending in part on the processor speed and memory configuration of your computer, and in part on the total amount of data you are backing up, the protection plan run can be quite lengthy. You can continue working with other applications during this time, but your system response will likely be slower than normal.

Figure 30 Protection Plan Run
Status Display
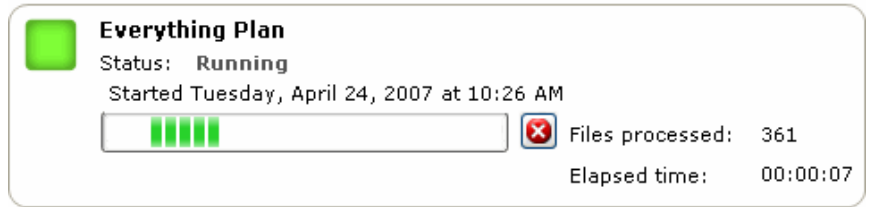
If you want to stop the run operation before it completes, click the **Stop** button (see figure 31) and answer **Yes** to the **Stop Plan** "Are you sure . . .? prompt. The GoVault data protection software stops the plan and changes the displayed status of the protection plan from **Running** to **Cancelled**.

Figure 31 Stop Run Button
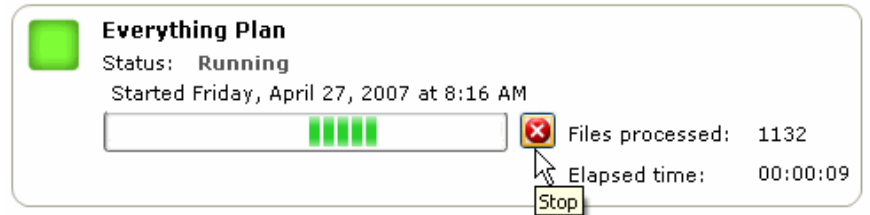
At the end of the run, the GoVault data protection software updates the result details for the plan and redisplays the **OK** status in the **My Saved Protection Plans** display on the **Home** page.

Editing a Protection Plan

To edit a saved protection plan:

1 Click the **Edit settings** button in the **My Saved Protection Plans** display on the **Home** page (see figure 32).

Figure 32 Saved Protection
Plan Edit Settings Button
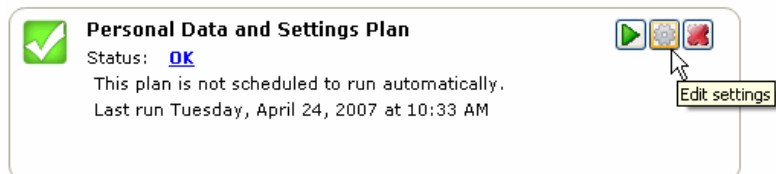
2 The GoVault data protection software displays the **Selections** tab of a **Settings** page that mimics the **Create a Protection Plan** page you used to create the protection plan (see <u>figure 33</u>):

IF you want to change the . . .	THEN use the . . . tab display	AND refer back to subsection . . .
starting point for the plan	**Start**	<u>Choosing a Starting Point</u> on page 22
files, folders, drives, or users to protect	**Selections**	<u>Specifying the Files, Folders, Drives, or Users to Protect</u> on page 23
plan name or description	**Plan Name**	<u>Naming the Protection Plan</u> on page 29
GoVault cartridge to use	**Cartridge**	<u>Specifying the GoVault Cartridge to Use</u> on page 30
scheduled time and day to run the plan	**Schedule**	<u>Specifying a Run Schedule</u> on page 31

3 When you have finished editing the plan, click **OK** to save your changes and redisplay the **Home** page.

Figure 33 Saved Protection
Plan Settings Page
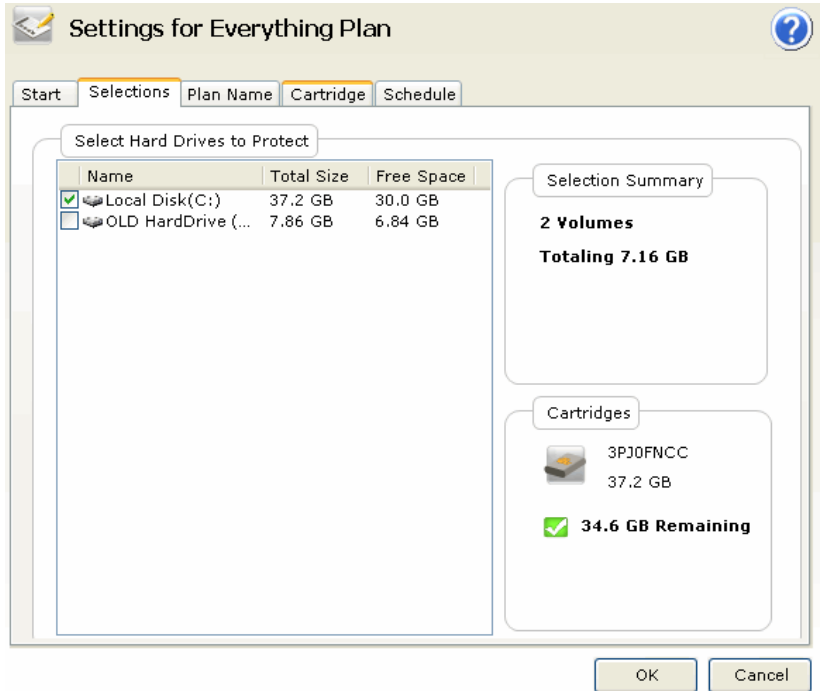
Removing a Protection Plan

To remove a saved protection plan:

1 Click the **Remove plan** button in the **My Saved Protection Plans** display on the **Home** page (see figure 34).

Figure 34 Remove Plan Button
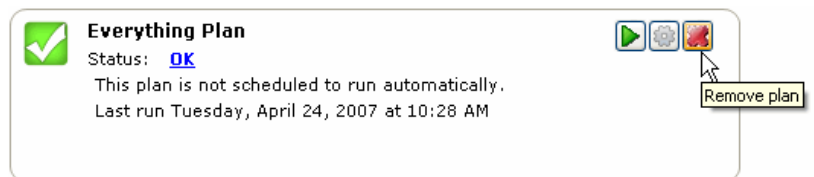
2 Answer **Yes** in response to the **Remove Plan** Are you sure . . .? prompt to remove the protection plan.

> **Note:** Removing a protection plan from the GoVault data protection software archive environment does not delete the archived data that was stored on the GoVault cartridge by the plan. You can still explore and restore the data as described in <u>Finding and Restoring Files and Folders</u> on page 48.

Checking Protection Plan Results

There are two ways to view the results of a protection plan run. Each displays a slightly different view of the **Results** page that shows the activity for all of your saved protection plans:

- Clicking the **Results** command button in the **Home** page options panel displays the **Results** page listing all of your saved protection plans and the number of times they ran (see <u>figure 35</u>).

  As prompted, select/open the protection plan you want to check to display the **Result Details** for the plan (see <u>figure 36</u> and <u>table 2</u>).

- Clicking either the big green check box or the **Status** link on the **Home** page **My Saved Protection Plans** display that shows the results as either **OK**, **Cancelled**, **Warning** or **Error** for a saved protection plan displays the **Results** page showing the **Result Details** for the most-recent run of the plan (see <u>figure 36</u> and <u>table 2</u>).

Figure 35 Results Page
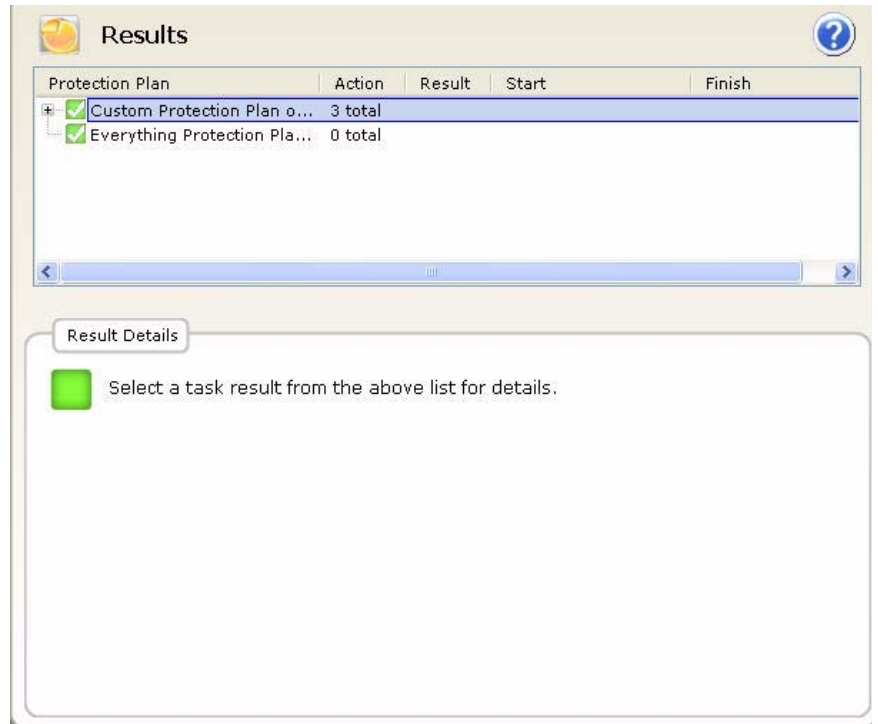
Figure 36 Protection Plan
Result Details Display
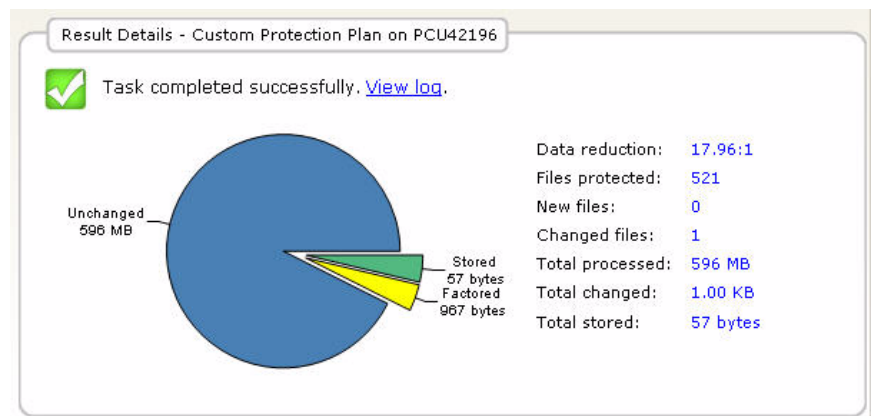
Table 2 Result Details Display
Description

The Result Details display provides a . . .	That shows the . . .
graphic pie-chart	**Stored**— Amount of data that was stored to the GoVault cartridge.
	Factored— Amount of data that was reduced by the capacity optimization feature of the GoVault data protection software.
	Unchanged— Amount of data that was not changed by the plan.
	For the first run of a new protection plan, there will be no unchanged data. All of the data will be shown as either stored or factored.
numeric list	**Data reduction**— Computed ratio of the sum of new data and changed data to the total amount of data stored on the GoVault cartridge by the plan.
	Files protected— Total number of files protected by the plan.
	New files— Total number of new files protected by the plan.
	Changed files— Total number of old files that were changed since the last run of the plan.
	Total processed— Amount of data that was processed by the plan.
	Total changed— Amount of data that changed since the last run of the plan.
	Total stored— Amount of data written on the GoVault cartridge by the plan.

The Result Details display provides a . . .	That shows the . . .
link	**View log** — Listing of the log file that the GoVault data protection software writes to its **Logs** subfolder in the application install folder on your local hard drive (see figure 37 and table 3).

Figure 37 Result Details Log File Listing


```
ArchiveIQ for GoProtect Command Tool Version 1.0.655.1
Copyright (C) 2005-2007 Data Storage Group, LLC. All Rights Reserved.

Archive task started on Fri Mar 30 2007 at 12:24 AM.

Scanning C:\Documents and Settings\rspontel\*
Scanning C:\GoProtect\CurrentBuild\*
Scanning C:\GoVault\SATADriver\*

Archive task completed on Fri Mar 30 2007 at 12:24 AM.

Total Transfer Time: 00:00:00.375
_____

Analysis:

  Directories processed:        184
  Protected files:              521 (625,425,722 bytes)
  Protected data:            596 MB (625,425,722 bytes)
  Unchanged:                 596 MB (100% static content)

  New files:                      0
  Changed files:                  1

  New and changed:          1.00 KB (0.000164% dynamic content)
  Factored:                 967 bytes
  Total stored:              57 bytes
  Data reduction:              18:1 (New and changed data to Total stored)
  CCF Ratio:                 9999:1 (Protected data to Total stored)
  Common Content:            596 MB (100% data de-duplication)


  Total processed:           596 MB (625,425,722 bytes)
_____
```

Table 3 Result Details Log File Description

This log file listing . . .	Shows the . . .
Total transfer time	Amount of time the it took to write the updated archive information to the GoVault cartridge.
Directories processed	Total number of directories processed by the protection plan.
Protected files	Total number and size (in bytes) of files processed by the current run of the protection plan.
Protected data	Total amount of data protected by the plan.

This log file listing . . .	Shows the . . .
Unchanged	Amount (and percentage) of protected data that was unchanged since the last run of the protection plan.
New files	Number of new files since the last run of the protection plan.
Changed files	Number of files that changed since the last run of the protection plan.
New and changed	Amount (and percentage) of protected data that changed since the last run of the protection plan.
Factored	Amount of data that was reduced in size by capacity optimization.
Total stored	Amount of data written to the GoVault cartridge for this run of the protection plan.
Data reduction	Ratio of the total amount of new and changed data (**New and changed**) to the total amount of data written to the GoVault cartridge (**Total stored**) by the current run of the protection plan.
CCF ratio	Ratio of all the data protected by the plan (**Protected data**) to the total amount of data written to the GoVault cartridge (**Total stored**) for this run of the protection plan.
Common content	Amount (and percentage) of common data subject to the data de-duplication function of capacity optimization.
Elapsed time	Amount of time for the entire archive operation, including the total transfer time.

Finding and Restoring Files and Folders

To simplify the task of locating the backup versions of your protected files and folders, the GoVault data protection software presents them in a familiar Windows Explorer-like hierarchical structure that supports:

- Read-only viewing of selected files

- Common file copy/paste and drag-and-drop file handling functions

Additionally, a calendar display shows the dates of all available backup files to support point-in-time explore/restore (rollback) operations.

To find and restore files and folders, click **Explore** on the GoVault data protection software **Home** page to display the **Explore** page (see figure 38).

The **Explore** page provides:

- A calendar display that bold-font highlights each day that a protection plan was run

- List boxes for:

  - Specifying a single file name

  - Selecting multiple files or folders from available backups

- Command buttons for executing the specified explore and restore functions

IF you want to find and restore . . .	THEN proceed to . . .
a single file	Finding and Restoring a Single File.
multiple files and folders	Finding and Restoring Multiple Files and Folders on page 52.
to a particular point in time	Restoring to a Particular Point in Time on page 54.

Figure 38 Explore Page
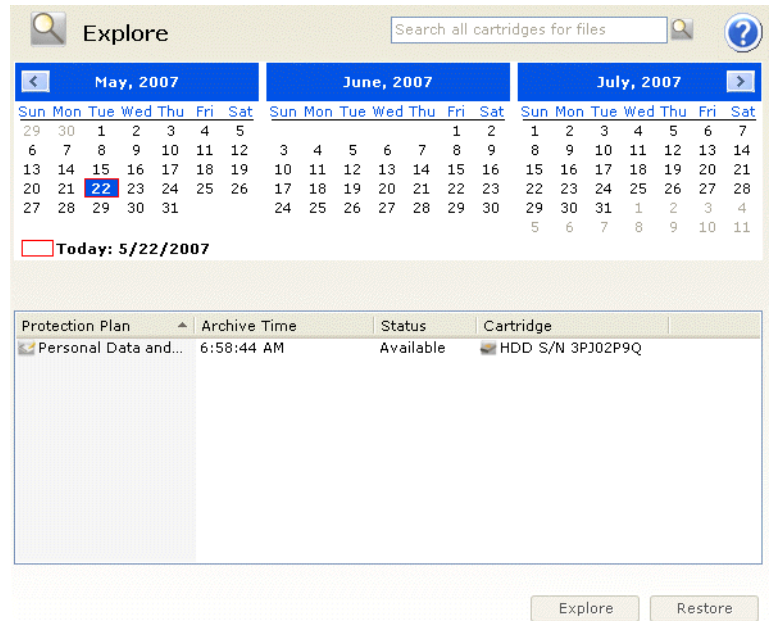
Finding and Restoring a Single File

Before beginning a restore operation, save all open files and close all running applications except the GoVault data protection software.

> **Caution:** Attempting to restore a file that is open can cause data loss or corruption. Always save all open files and close all running applications before beginning a restore operation.

To find and restore a single file:

1 Type the file name, or part of the file name in the **Search all cartridges for files** text box at the top-right corner of the GoVault data protection software **Explore** page.

> **Note:** The text box will auto-complete when you begin typing, and you can use the wildcard asterisk (*) character in your search string, as you would in a standard Windows Explorer file search operation.

2 Either use the **Enter** key or click the adjacent explore icon to find and display all protected versions of the specified file, along with their source folder locations and versions (see <u>figure 39</u>).

Figure 39 Single File Explore Results
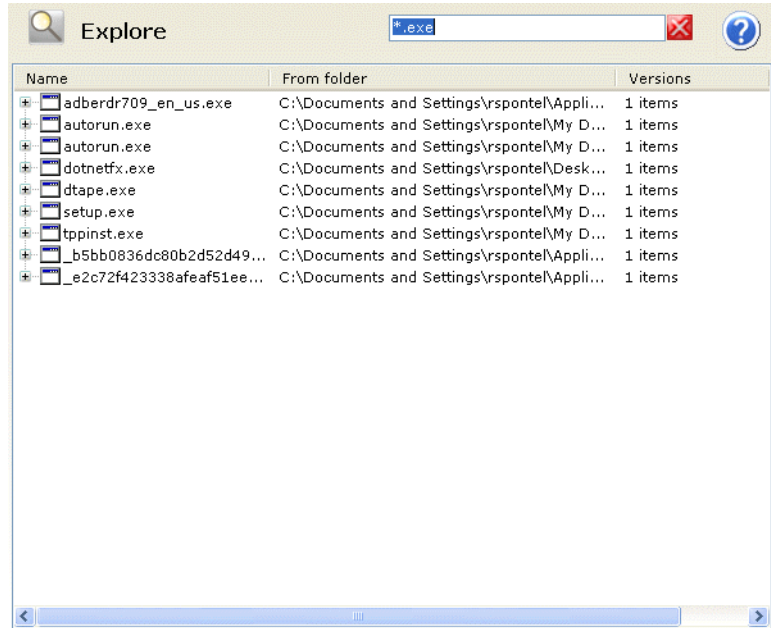
3 As required, open the displayed file listing to select the file that you want to restore.

4 Double-click the selected file to initiate the restore operation.

> **Note:** If the file you are restoring happens to be an executable program file, double-clicking it in the **Explore** page search results listing *will not* launch the program.

IF the file you selected is on . . .	THEN the GoVault data protection software displays . . .
The cartridge that is in the GoVault dock,	• The standard Windows **File Download** dialog while it extracts and reassembles the file from the archive.
	• The standard Windows **Save As** dialog that you can use to specify the location for the restore operation.
	Note: You can restore the file to its original location or to any other location.
	• The standard Windows **Download complete** dialog to signify a successful restore operation.
Another cartridge,	A message indicating the required cartridge (see figure 40).
	In this case, eject the current cartridge from the GoVault dock, insert the required cartridge, and repeat the explore operation.

Figure 40 Required Cartridge Message

Finding and Restoring Multiple Files and Folders

Before beginning a restore operation, save all open files and close all running applications except the GoVault data protection software.

> **Caution:** Attempting to restore a file that is open can cause data loss or corruption. Always save all open files and close all running applications before beginning a restore operation.
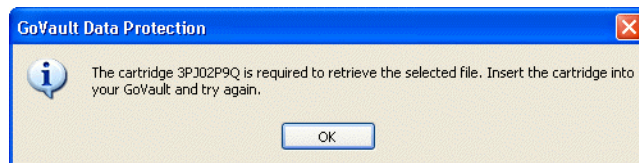
To find and restore multiple files and folders:

1 Select the date of the successful backup operation that you want to restore from in the calendar display on the **Explore** page (see figure 38 on page 49).

The GoVault data protection software displays each successful backup operation that was completed on the selected date, according to the protection plan that produced it, with an indication of the archive time and status of the backup (see figure 41).

Select the protection plan that produced the backup operation you want to restore from to activate the **Explore** and **Restore** command buttons.

> **Note:** If the backup you want to restore from is on a different GoVault cartridge, the Status indication will be Offline. Instead of activating the **Explore** and **Restore** command buttons, the GoVault data protection software displays a message indicating the required cartridge (see figure 42). In this case, eject the current cartridge from the GoVault dock, insert the required cartridge, and repeat the explore operation.

2 Click the **Explore** command button to display the GoVault data protection software explore archive window (see figure 43 on page 54).

(Clicking the **Restore** command button would initiate a point-in-time restore operation, as described in Restoring to a Particular Point in Time on page 54.)
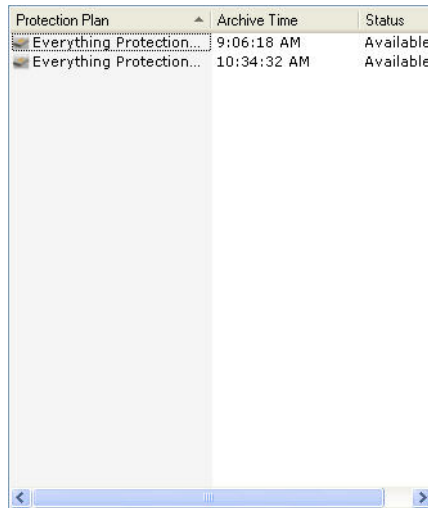
3 Like Windows **Explorer**, the GoVault data protection software explore archive window presents the files from the selected backup operation in a hierarchical file structure display.

Use the standard Windows file selection functions (click, CTRL+click, and SHIFT+click) to open and select the files and folders you want to restore.

4 With your restore files selected, use the standard windows Copy/ Paste or drag-and-drop functions to restore the selected backup files and folders to your system disk drives.

> **Note:** You can restore files to their original location or to any other location.

Figure 41 Multiple File Explore Results

Figure 42 Required Cartridge Message

Figure 43 Explore Archive
Window
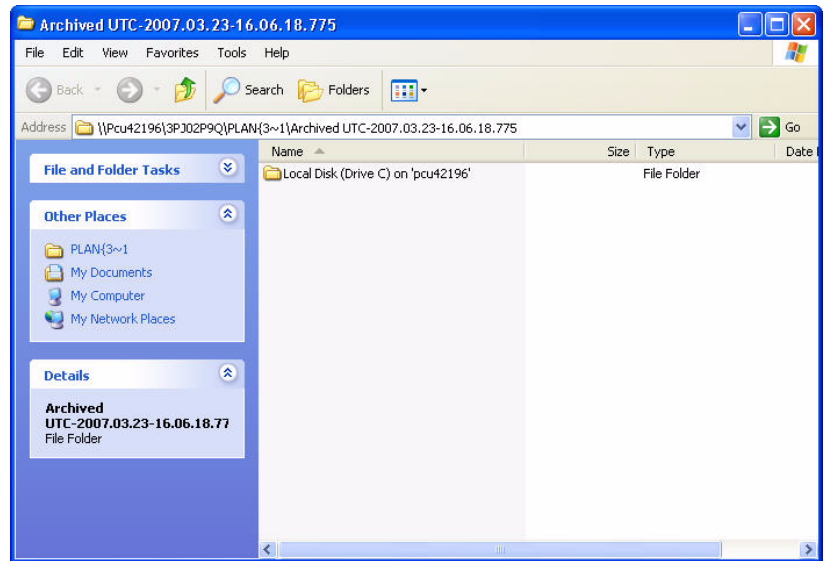
**Restoring to a Particular
Point in Time**

Before beginning a restore operation, save all open files and close all
running applications except the GoVault data protection software.

Caution:	Attempting to restore a file that is open can cause data loss or corruption. Always save all open files and close all running applications before beginning a restore operation.

To restore to a particular point in time:

1 Select the date of the successful backup operation that you want to
restore from in the calendar display on the **Explore** page (see figure 38
on page 49).

The GoVault data protection software displays each successful
backup operation that was completed on the selected date, according
to the protection plan that produced it, with an indication of the
archive time and status of the backup (see figure 41 on page 53).

Select the protection plan that produced the backup operation you want to restore from to activate the **Explore** and **Restore** command buttons.

> **Note:** If the backup you want to restore from is on a different GoVault cartridge, the Status indication will be Offline. Instead of activating the **Explore** and **Restore** command buttons, the GoVault data protection software displays a message indicating the required cartridge (see <u>figure 42</u> on page 53). In this case, eject the current cartridge from the GoVault dock, insert the required cartridge, and repeat the explore operation.

2 Click the **Restore** command button to display the GoVault data protection software **Point in Time Restore** dialog (see <u>figure 44</u>).

Figure 44 Point in Time Restore Dialog
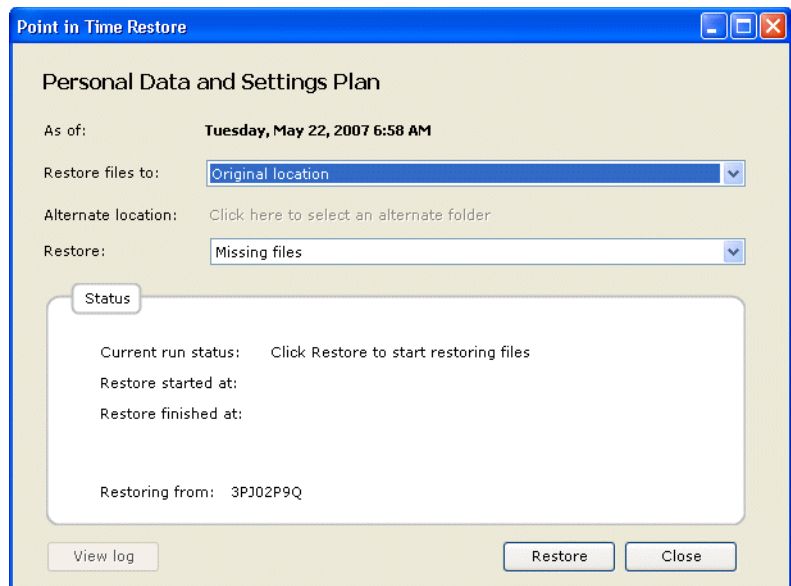
3 Use the **Restore files to** list box to specify whether you want to restore to the original location or to an alternate location.

  a If you select **Alternate location**, the GoVault data protection software activates the alternate location link. As prompted, click the link to display the **Browse For Folder** dialog (see <u>figure 45</u>).

    b On the **Browse for Folder** dialog, either:

       • Navigate to an existing location

       • Click **Make New Folder** and type a name for the new folder

    c Click **OK** to specify the path to your alternate location selection.

Figure 45 Browse For Folder
Dialog
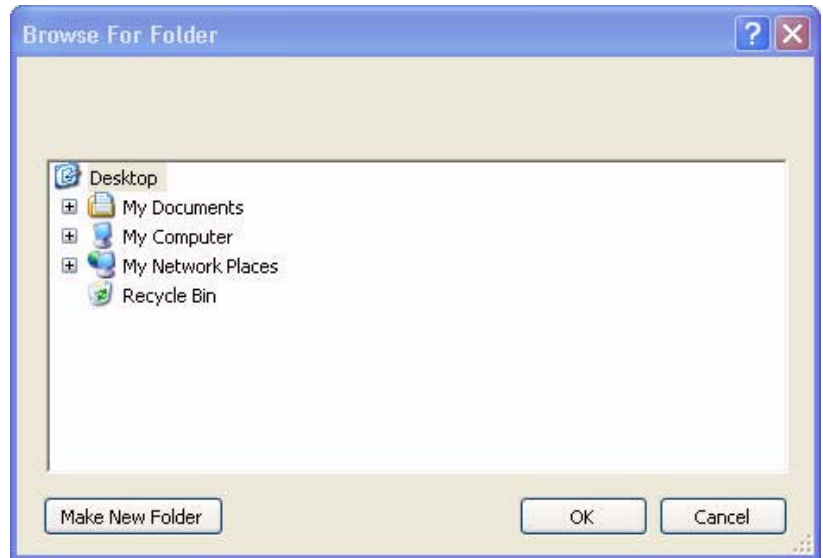
4 Use the **Restore** list box to specify the replacement rules for the restore operation:

    a Select **Missing files** if you want to restore only the files that are missing at the specified restore location.

    This option inhibits the restore operation from overwriting any file at the restore location.

    b Select **Missing files and files that are older** if you want to restore the files that are missing or older at the specified restore location.

    This option inhibits the restore operation from overwriting any file at the restore location that is newer than the file in the archive.

    c Select **Missing files and files that are different** if you want to restore the files that are missing or different at the specified restore location.

This option inhibits the restore operation from overwriting any file at the restore location that is identical to the file in the archive, regardless of the age of the file.

5 After specifying the restore location replacement rules, click **Restore** to begin the restore operation and monitor the displayed status.

6 When the status display signifies that the restore operation has finished, click **Close** to close the **Point in Time Restore** dialog.

Managing GoVault Cartridges and Data Protection

The tasks of managing your GoVault cartridges and data protection include:

- Checking Cartridge Status
- Ejecting Cartridges on page 58
- Erasing Cartridges on page 59
- Implementing Data Encryption on page 60
- Setting the New Media Action Option on page 61
- Establishing a Cartridge Rotation Reminder Schedule on page 62
- Purchasing Additional GoVault Cartridges on page 63

Checking Cartridge Status

To check the status of your GoVault cartridges, click the GoVault data protection software **Cartridges** command button to display the **Cartridge** page (see figure 46).

As shown, the **Cartridge Status** display lists the name of each GoVault cartridge that has been introduced to the GoVault data protection software with an indication of:

- Each cartridge's:
  - Online/offline status
  - Hard disk drive serial number (HDD S/N)

- The drive letter associated with the GoVault dock

- The percentage of available space on the online cartridge

Additionally, the **Free Space Trend** chart provides a graphic representation of free-space consumption over time.

Figure 46 Cartridge Page
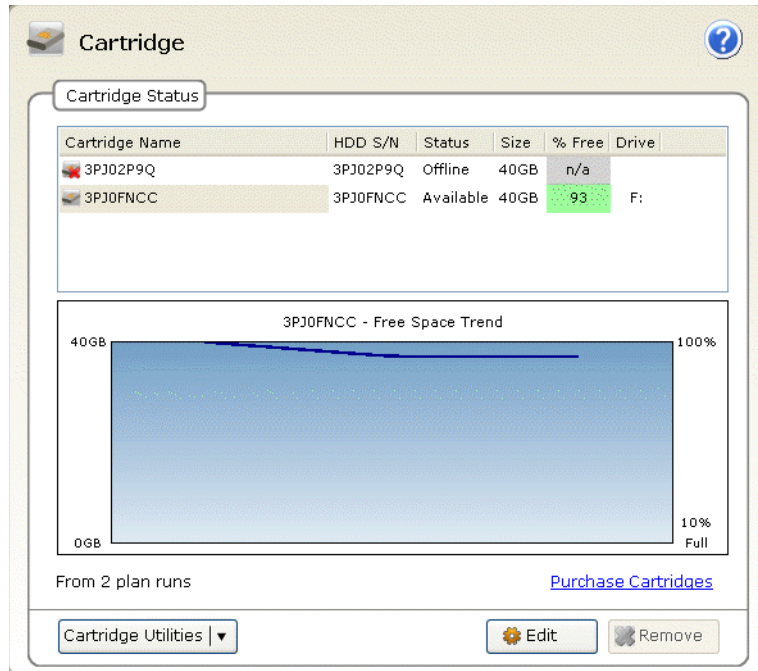
Ejecting Cartridges

To eject a cartridge from the GoVault dock:

1 Click the GoVault data protection software **Cartridges** command button to display the **Cartridge** page (see figure 46).

2 Click **Cartridge Utilities** to open the cartridge utilities menu and click **Eject Cartridge**.

3 Remove the cartridge from the dock after the eject operation completes and store it in its protective case.

Erasing Cartridges

The GoVault data protection software uses the standard Windows reformat drive function to erase GoVault cartridges.

After erasing a cartridge:

- The saved protection plans that were stored on the cartridge will no longer display the **Last run . . .** text.

- The **Results** page will no longer display the results for protection plans that used the cartridge.

- The **Explore** page will no longer display the protection plans that were stored on the cartridge.

To avoid this situation, consider purchasing additional GoVault cartridges to expand your storage capacity.

To erase a GoVault cartridge:

1 Insert the cartridge that you want to erase into the GoVault dock.

2 Click the GoVault data protection software **Cartridges** command button to display the **Cartridge** dialog (see figure 46).

3 Verify that the inserted cartridge is selected/highlighted in the **Cartridge Status** display and click **Cartridge Utilities** to open the cartridge utilities menu.

4 Click **Erase Cartridge** to display the **Erase Cartridge** confirmation prompt (see figure 47).

Figure 47 Erase Cartridge Confirmation Prompt
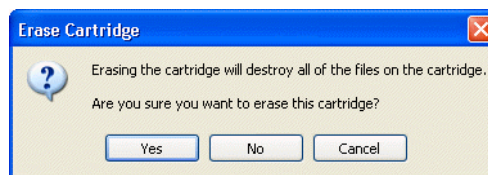
5 Click **Yes** to display the standard Windows **Format Removable Disk** dialog that you can use to reformat (erase) the GoVault cartridge.

> **Note:** Always specify the NTSF file system when erasing GoVault cartridges. The GoVault data protection software will not recognize cartridges formatted with the FAT32 or any other non-NTSF file system, as indicated by a resulting Unsupported format Alert condition.

6 After the reformat operation completes, reintroduce the cartridge to the GoVault data protection software environment (see <u>Introducing Cartridges</u> on page 17).

Implementing Data Encryption

The GoVault data protection software can use the Windows Encrypting File System (EFS) to automatically encrypt and decrypt your protected files and folders.

Caution:	Data encryption is a powerful tool that keeps your data from being accessed and read by persons you do not want to access your data. You should understand the operation of the Windows EFS before deciding to encrypt a cartridge. If you do not understand how EFS works, you might not be able to restore data properly.

If you are not familiar with the Windows EFS:

• Review available sources of information such as the Microsoft resource kits, product documentation, and white papers.

• Use your Internet browser to open the Microsoft home page, click **Support**, then **Knowledge Base**, and search on Encrypting File System.

Note:	You must implement data encryption on a GoVault cartridge *before* using it the first time for a protection plan. You cannot implement data encryption for a cartridge after it has been used by a protection plan.

To implement data encryption on your protected files and folders:

1 As required, insert a new cartridge into the GoVault dock and introduce it to the GoVault data protection software environment (see <u>Introducing Cartridges</u> on page 17).

2 Click the GoVault data protection software **Cartridges** command button to display the **Cartridge** page (see <u>figure 46</u>).

3 Verify that the cartridge is selected and its status is Available.

4 Click **Cartridge Utilities** to open the cartridge utilities menu and click **Manage Encryption** to display the **Encryption tab** of the **Cartridge Settings** page (see <u>figure 48</u>).

5 Select the **Enable encryption for this cartridge** check box.

6 Select the **OK** to implement the data encryption function.

Figure 48 Encryption Tab
Display
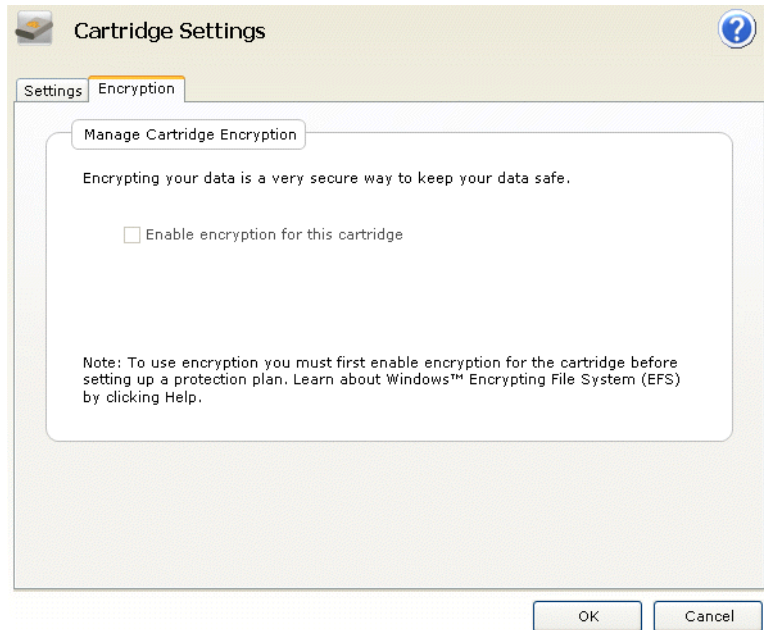

**Setting the New Media
Action Option**

The first time you insert a new cartridge into the GoVault dock, the
GoVault data protection software can either:

- Prompt you to specify a cartridge name and description (see figure 10
  on page 18)

- Use the cartridge hard disk drive serial number (HDD S/D)

You can specify which it will be by making your selection on the **New
Cartridge** tab of the **Options** page:

1 Click the GoVault data protection software **Options** command button
to view the **New Cartridge** tab of the **Options** page (see figure 49).

2 As prompted, select the new cartridge action option that you want
and click **OK** to save your selection and close the **Options** page.

Figure 49 New Cartridge Tab
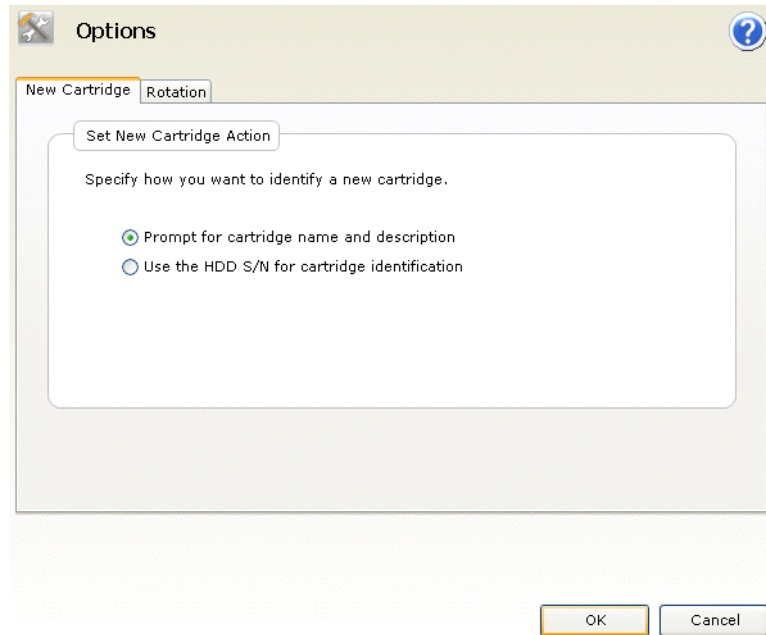
**Establishing a Cartridge Rotation Reminder Schedule**

Regularly rotating your GoVault cartridges enhances your overall data protection by maintaining multiple copies of your data on different cartridges. You can configure the GoVault data protection software to remind you that it is time to rotate your cartridges on one of three schedules:

- Once a week, on any specified day

- Every specified number of days (1 through 31)

- After each successful backup task

To establish a cartridge rotation reminder schedule:

1 Click the GoVault data protection software **Options** command button to view the **Options** dialog (see figure 49).

2 Click the **Rotation** tab to view the **Set Cartridge Rotation Reminder** dialog (see figure 50).

Figure 50 Set Cartridge
Rotation Reminder Dialog
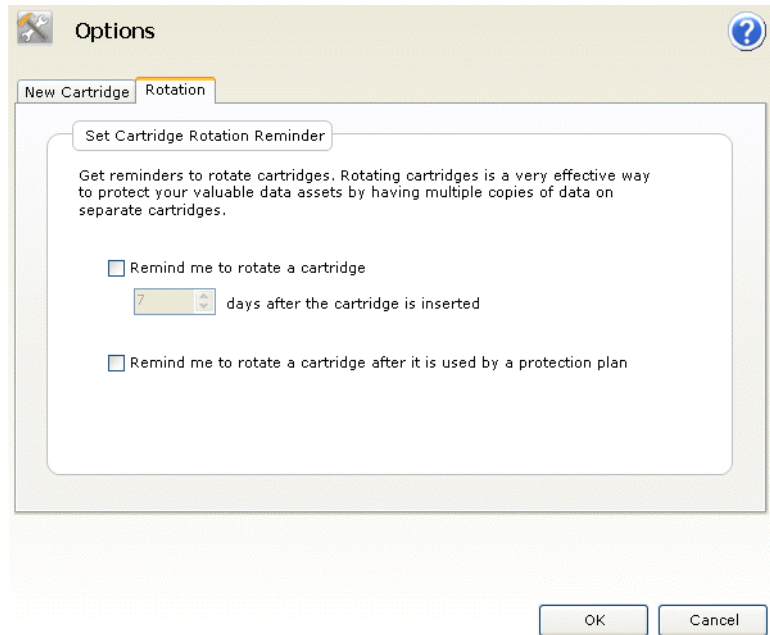
3 Select the **Remind me to rotate a cartridge . . .** option that you want, either:

- • *. . . <1 through 31>* **days after the cartridge is inserted**
- • **. . . after it is used by a protection plan**

4 Click **OK** to save your selection and close the **Options** dialog.

Purchasing Additional GoVault Cartridges

When you need to purchase additional GoVault cartridges:

1 Click the GoVault data protection software **Cartridges** command button to display the **Cartridge** page (see figure 46 on page 58).

2 Click the Purchase Cartridges link. The GoVault data protection software uses your Internet browser to open the **Purchase Cartridges** page on the Quantum website that you can use to purchase additional cartridges:

http://www.quantum.com/WheretoBuy/PurchaseCartridges/Index.aspx

Responding to Alert Conditions

The GoVault data protection software uses Alerts displays to provide warnings and error messages about your GoVault cartridges and protection plan operations.

Upon detection of an Alerts condition, the GoVault data protection software:

- Displays a brief alert message above the GoVault data protection software icon in the Windows system tray

- Activates the **Home** page **Alert** button, changing the display to **Alerts (1)** to signify that an Alerts message is available

Clicking either the link in the brief alert message or the active **Alerts** command button displays the associated **Alerts and Reminders** message. (For an example, see figure 13 on page 20.)

Each alert message provides a brief explanation of the condition, and links to appropriate dialogs for a number of response options. Table 4 lists some of the more common alert conditions and the response actions you can take.

Table 4   Alert Conditions and Response Actions

Alert Condition	Response Actions	Severity
Cartridge *HDD S/N* has an unsupported format	• Reformat cartridge • Eject cartridge	• Error
Cartridge is Read-only (write protected)	• Ignore • Eject cartridge	• Information only
Cartridge Low Free Space	• Eject cartridge	• Warning
Cartridge Rotation Reminder	• Remind me later • Purchase cartridges • Eject cartridge	• Information only

Alert Condition	Response Actions	Severity
Error Running Plan	• Ensure cartridge is present • Ensure cartridge is usable • Ensure cartridge is not write protected • Ensure cartridge has at leaset 5% free space	• Error
Import Cartridge "XYZ"	• Yes • No • Eject cartridge	• Information only
No GoVault units detected	• Ensure a GoVault dock and cartridge disk drive is installed • Review the troubleshooting procedures in the "Handling Operational Fault Conditions" subsection of the *GoVault for Windows User's Guide*, 20013264-001	• Warning
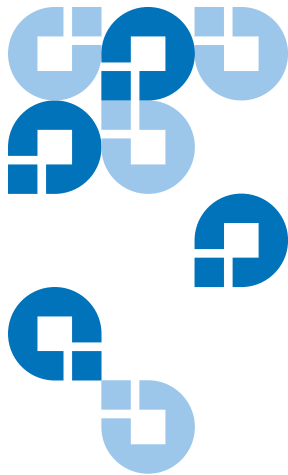
Functional Description

This chapter provide display examples and a brief description of each functional element of the GoVault™ data protection software, including:

Home Page Functions

When you install the GoVault data protection software and open the application for the first time, the initial **Home** page display includes no saved protection plans, as shown in figure 51.

Table 5 briefly describes the things you can do from the initial **Home** page.

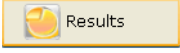Figure 51 Initial Home Page
Display
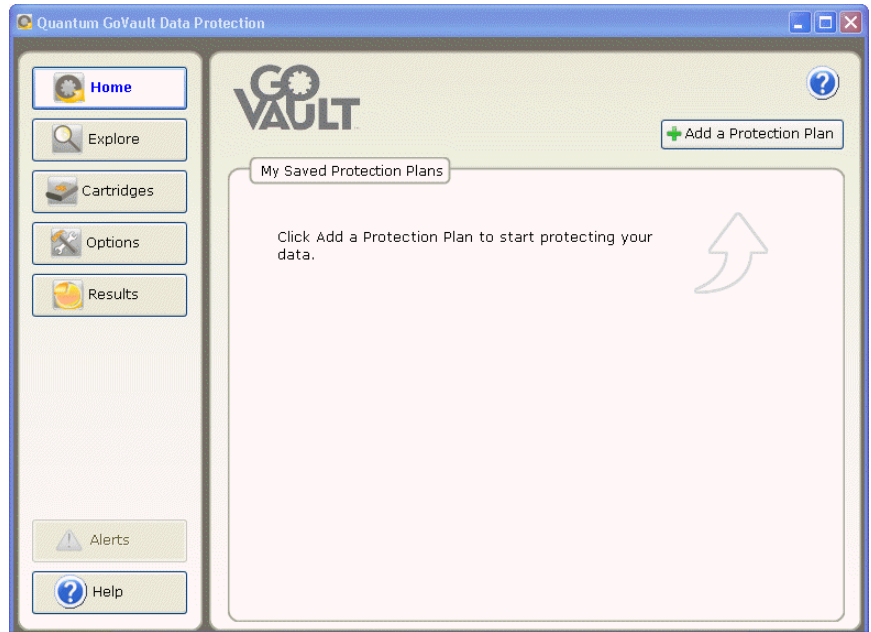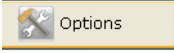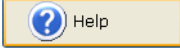
Table 5   Home Page Functions

Clicking . . .	Displays the . . . page	You can use to . . .
![Add a Protection Plan]	**Create a Protection Plan**	create a protection plan (see Create a Protection Plan Page Functions on page 70).
![Explore]	**Explore**	find and restore files from a protection plan archive (see Explore Page Functions on page 91).

Clicking . . .	Displays the . . . page	You can use to . . .
Cartridges	**Cartridge**	check the status of your GoVault cartridges or access the cartridge utilities for ejecting a cartridge, erasing a cartridge, or enabling data encryption for a cartridge (see Cartridge Page Functions on page 97).
Options	**Options**	change the options for handling new cartridges and set up a cartridge rotation schedule (see Options Page Functions on page 102).
Results	**Results**	check the results of a protection plan (see Results Page Functions on page 105).
Alerts (1)	**Alerts**	see the details of an alert condition or operational reminder (see Alerts Page Functions on page 108).
Help	**Help**	follow links to online information about using the GoVault data protection software (see Help Page Functions on page 109).

Clicking . . .	Displays the . . . page	You can use to . . .
	online help file, opened to the "Overview of GoVault GUI"	view or print topics in the online help for the GoVault data protection software graphical user interface.

Subsequently, for each protection plan that you create, the GoVault data protection software adds a status/control panel to the **My Saved Protection Plans** display of the **Home** page (see figure 52).

Table 6 briefly describes the things you can do from the **My Saved Protection Plans** displays.
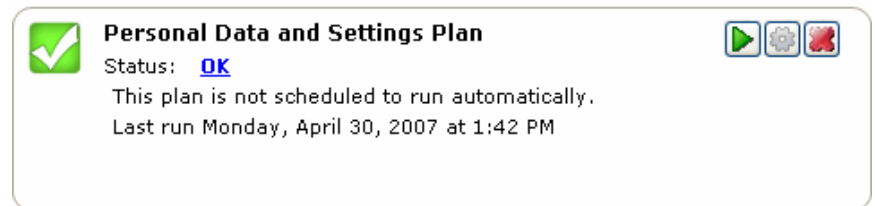
Figure 52 My Saved Protection Plan Display

Table 6   My Saved Protection Plan Functions

Clicking . . .	Performs this function . . .
or: **OK**	Opens the **Results** page that you can use to check the results of the selected protection plan (see Results Page Functions on page 105).
then:	Starts a run of the protection plan now, regardless of the established run schedule. Stops the plan run.

Clicking . . .	Performs this function . . .
	Opens a **Settings for . . . Plan** page for the selected plan, with the **Selections** tab selected. This page is identical to the **Create a Protection Plan** page for the selected plan, and you can use it to change the functional settings for the plan (see <u>Create a Protection Plan Page Functions</u> in the following subsection).
	Displays a **Delete Plan** confirmation message asking if you are sure that you want to remove the selected protection plan.

Create a Protection Plan Page Functions

Clicking the **+ Add a Protection Plan** button on the **Home** page opens the **Create a Protection Plan** page that you can use to create a new protection plan. Tabs, numbered 1 through 5, indicate proper sequence for creating a new plan (see <u>figure 53</u>):

- <u>1. Start</u>
- <u>2. Selections</u>
- <u>3. Plan Name</u>
- <u>4. Cartridge</u>
- <u>5. Schedule</u>

Note: After you have created a protection plan, all of the **Create a Protection Plan** page functions are available as a nearly identical **Settings for . . . Plan** page that you can use to change the settings for the plan.

Start Tab Functions

As prompted, use the **Start** tab to specify a starting point for your plan—the files and folders to protect (see figure 53 and table 7).

Figure 53 Start Tab Display

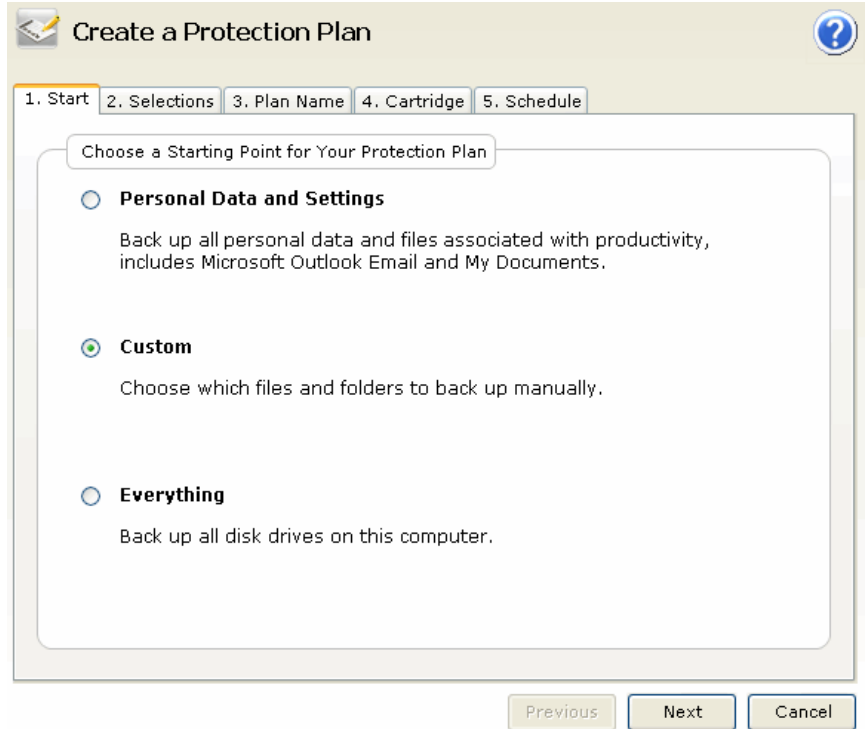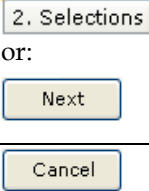Table 7 Start Tab Functions

Clicking . . .	As prompted, performs this function . . .
The **Personal Data and Settings** option	Specifies a fixed selection of productivity files associated with each user name configured on your system. You can unspecify user names on the **Selections** tab, but you cannot unspecify individual files or folders.
The **Custom** option	Allows you to manually specify individual files and folders on the **Selections** tab.

Clicking . . .	As prompted, performs this function . . .
The **Everything** option	Specifies all files on all of your system hard drives. You can unspecify drives on the **Selections** tab, but you cannot unspecify individual files or folders.
2. Selections or: Next	Opens the **Selections** tab that you use to either unspecify user names or disk drives, or specify individual files and folders, depending on the selected starting point.
Cancel	Cancels the plan creation function and redisplays the **Home** page.
?	Displays the online help file, opened to the "Creating Protection Plans" topic.

Selections Tab Functions

The **Selections** tab functions depend on the starting point specified on the **Start** tab:

IF the specified staring point is . . .	THEN the Selections tab functions are to . . .
Personal Data and Settings	Select Users to Protect
Custom	Select Files and Folders to Protect
Everything	Select Hard Drives to Protect

Select Users to Protect Functions

The **Select Users to Protect** display provides a check box for each user configured on your system, and a summary display of the amount of disk space consumed by the selected users' files (see figure 54).

Table 8 provides a brief description of the Select Users to Protect functions.

Figure 54 Select Users to
Protect Display

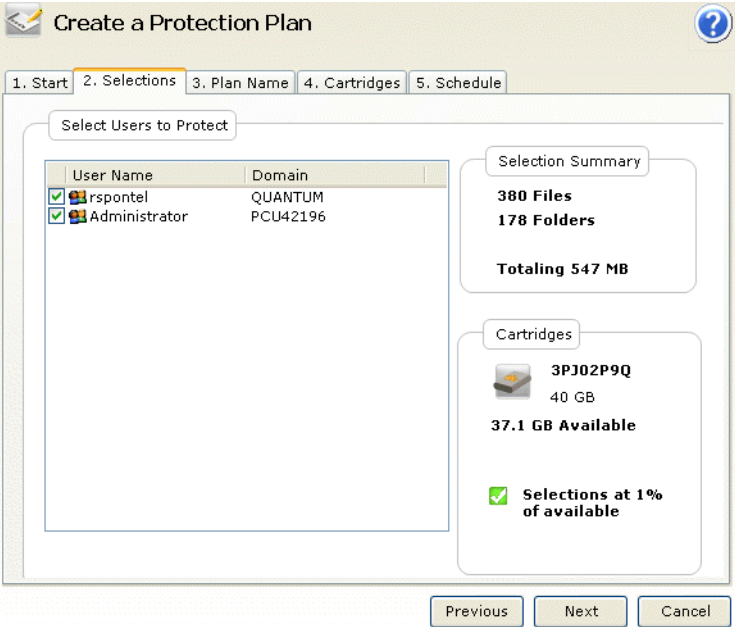Table 8 Select Users to
Protect Functions

Clicking . . .	Performs this function . . .
☑ Administrator for example,	Unchecks the **Administrator** check box and removes the associated user files from the protection plan.
☐ Administrator for example,	Checks the **Administrator** check box and adds the associated user files to the protection plan.
3. Plan Name or: Next	Opens the **Plan Name** tab that you use to specify a name and brief description for the plan.
1. Start or: Previous	Reopens the **Start** tab if you want to change the plan starting point.
Cancel	Cancels the plan creation function and redisplays the **Home** page.

Clicking . . .	Performs this function . . .
❓	Displays the online help file, opened to the "Creating Protection Plans" topic.

Select Files and Folders to Protect Functions

The **Select Files and Folders to Protect** display provides the complete file structure for each local and network-connected hard drive on your system, a check box for each drive, folder and file, and a summary display of the amount of disk space consumed by the selected drives, folders and files (see figure 55).

Table 9 provides a brief description of the Select Files and Folders to Protect functions.
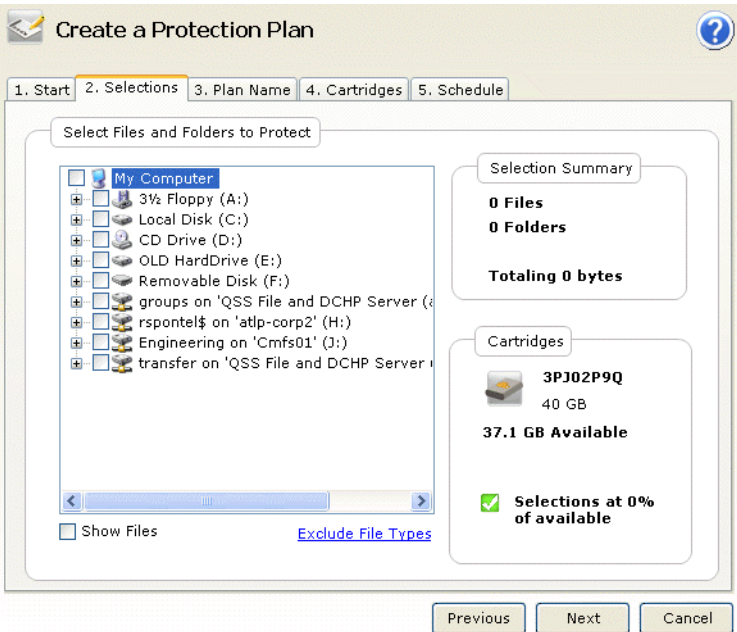
Figure 55 Select Files and
Folders to Protect Display

Table 9 Select Files and
Folders to Protect Functions

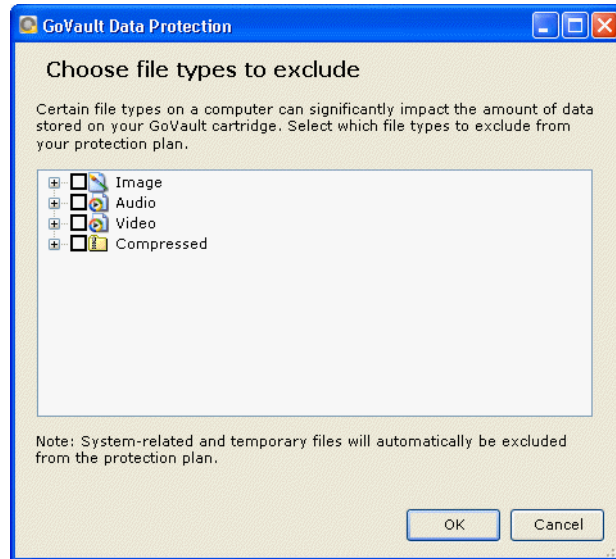| Clicking . . .	Performs this function . . .
An expand (**+**) box, as in: ⊞ ☐ 🖴 Local Disk (C:) for example,	Expands the displayed file structure to show all folders for a drive, all subfolders for a folder, and, if the **Show files** check box is selected, all files for a folder.
A collapse (**-**) box, as in: ⊞ ☐ 🖴 Local Disk (C:) for example,	Collapses the displayed file structure to hide all folders for a drive, all subfolders for a folder, or, if the **Show files** check box is selected, all files for a folder.
☐ Show files	Expands the displayed file structure to the individual-file level.
Exclude file types...	Displays the **Choose file types to exclude** dialog that you can use to exclude specific types of files from the protection plan (see figure 56). Table 10 provides a brief description of the exclude file types functions.
3. Plan Name or: Next	Opens the **Plan Name** tab that you use to specify a name and brief description for the plan.
1. Start or: Previous	Reopens the **Start** tab if you want to change the plan starting point.
Cancel	Cancels the plan creation function and redisplays the **Home** page.
❓	Displays the online help file, opened to the "Creating Protection Plans" topic.

Figure 56 Choose File Types
To Exclude Display
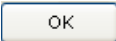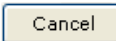
Table 10 Choose File Types to
Exclude Functions

Clicking . . .	Performs this function . . .
An expand (**+**) box, as in: ⊞ ☐ Image for example,	Expands the selected file type to show the most common specific instances of file types you might want to exclude.
A collapse (**-**) box, as in: ⊟ ☐ Image for example,	Collapses the selected file type to hide the most common specific instances of file types you might want to exclude.
OK	Saves your selections and closes the **Choose file types to exclude** dialog.
Cancel	Cancels the exclude file types function and closes the **Choose file types to exclude** dialog.

Select Hard Drives to Protect Functions

The **Select Hard Drives to Protect** display provides a check box for each system hard drive showing its size and amount of free space, and a

summary display of the amount of disk space consumed by the selected drives (see figure 57).

Table 11 provides a brief description of the Select Hard Drives to Protect functions.

Figure 57 Select Hard Drives to Protect Display
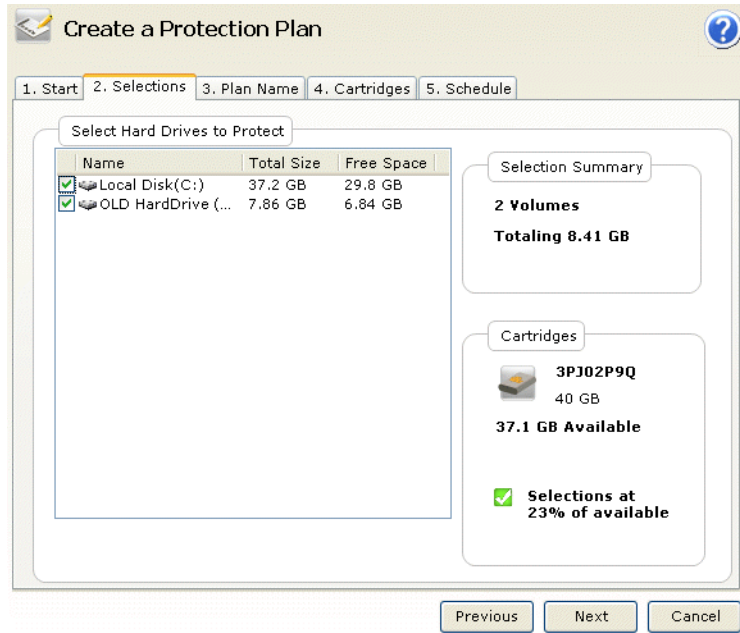
Table 11 Select Hard Drives to Protect Functions

Clicking . . .	Performs this function . . .
☑ Local Disk(C:) for example,	Unchecks the **Local Disk (C:)** check box, removes all of the drive's folders and files from the protection plan and automatically updates the **Selection Summary** display.
☐ Local Disk(C:) for example,	Checks the **Local Disk (C:)** check box, adds all of the drive's folders and files to the protection plan and automatically updates the **Selection Summary** display.

Clicking . . .	Performs this function . . .
3. Plan Name or: Next	Opens the **Plan Name** tab that you use to specify a name and brief description for the protection plan.
1. Start or: Previous	Reopens the **Start** tab if you want to change the plan starting point.
Cancel	Cancels the plan creation function and redisplays the **Home** page.
⑦	Displays the online help file, opened to the "Creating Protection Plans" topic.

Plan Name Tab Functions

The **Set Plan Name and Description** display provides text boxes you can use to specify a name and brief description of the protection plan (see figure 58).

Table 12 provides a brief description of the Set Plan Name and Description functions.

Figure 58 Set Plan Name and
Description Display
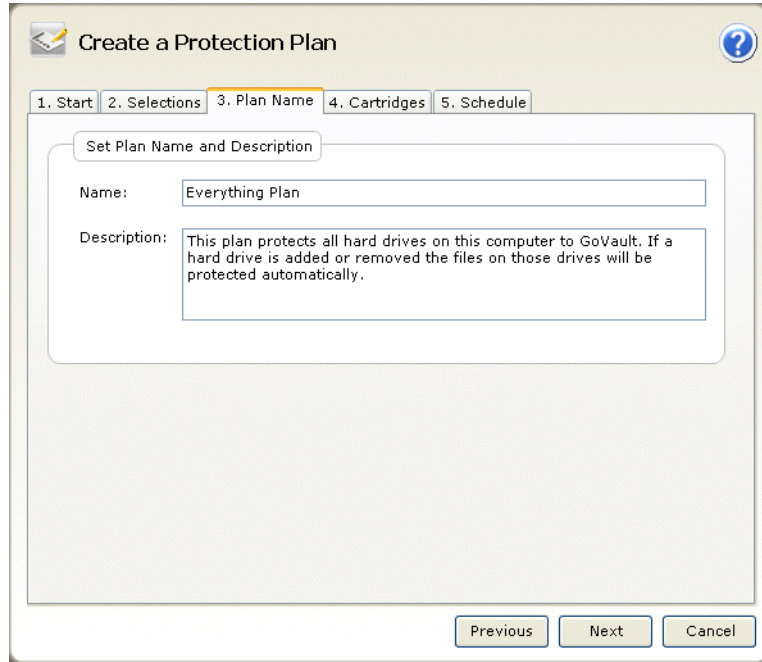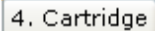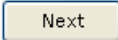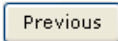
Table 12 Set Plan Name and
Description Functions

Clicking . . .	Performs this function . . .
In the **Name** text box	Allows you replace the default plan name.
In the **Description** text box	Allows you to replace the default plan description.
4. Cartridge or: Next	Opens the **Cartridge** tab that you use to specify which GoVault cartridges you want the plan to use.
2. Selections or: Previous	Reopens the **Selections** tab if you want to change the plan name or description.
Cancel	Cancels the plan creation function and redisplays the **Home** page.
?	Displays the online help file, opened to the "Creating Protection Plans" topic.

Cartridge Tab Functions

The **Select GoVault Cartridge** display provides option buttons and text boxes you can use to specify the cartridges that the protection plan will use (see figure 59).

Table 13 provides a brief description of the Select GoVault Cartridge functions.

Figure 59 Select GoVault
Cartridge Display
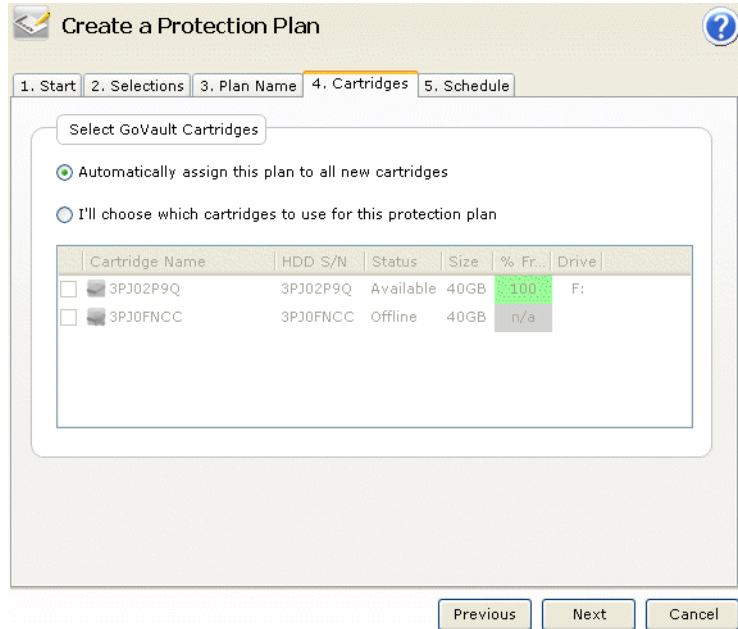
Table 13 Select GoVault
Cartridge Functions

Clicking . . .	Performs this function . . .
The default **Automatically assign...** option button	As prompted, automatically assigns the protection plan to all new GoVault cartridges.
The **I'll choose...** option button	Activates the list box showing all of the GoVault cartridges that have been introduced into the GoVault data protection software environment.

Clicking . . .	Performs this function . . .
☐ 💾 3PJ02P9Q for example,	Assigns the protection plan to the selected GoVault cartridge.
5. Schedule or: Next	Opens the **Schedule** tab that you use to specify when you want the plan to run.
3. Plan Name or: Previous	Reopens the **Plan Name** tab if you want to change the plan name or description.
Cancel	Cancels the plan creation function and redisplays the **Home** page.
❓	Displays the online help file, opened to the "Creating Protection Plans" topic.

Schedule Tab Functions

The **Choose when Protection Plan Runs** display provides option buttons and selection boxes you can use to specify a periodic run schedule for the protection plan (see figure 60).

Table 14 provides a brief description of the Choose when Protection Plans Run functions.

Figure 60 Choose When
Protection Plan Runs Display
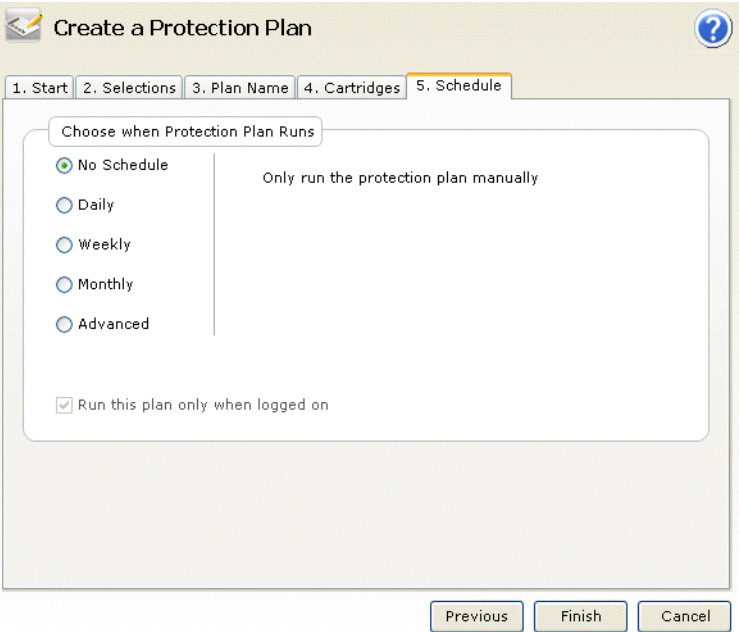
Table 14 Choose When
Protection Plan Runs Functions

Clicking . . .	Performs this function . . .
⚪ No Schedule	Specifies the default action of no schedule for the protection plan.
⚪ Daily	Specifies that the protection plan will run each day and displays the **At** list box you can use to specify the time of the day for the run: At: 1:00 AM
⚪ Weekly	Specifies that the protection plan will run each week and displays the **At** and **On** list boxes you can use to specify the time of day and the day of the week for the run: At: 1:00 AM On: Monday

Clicking . . .	Performs this function . . .
⚪ Monthly	Specifies that the protection plan will run each month and displays the **At** and **Day** list boxes you can use to specify the time of day and the day of the month for the run: At: `1:00 AM ▾` Day: `4 ⬍` of each month
⚪ Advanced	Displays **Run as** and **Next run time** links to additional dialogs that you can use to access and implement advanced scheduling task features for your protection plans. Then: • Clicking the active **Run as** link displays a user name and password dialog that you can use to provide the log on information that the GoVault data protection software will use to run your protection plan when you are not logged on to the system (see [figure 23](#) on page 33). • Clicking the active **Next run time** link displays the standard Windows **Scheduled Task** dialog that you can use to access and implement advanced scheduling task features for your protection plan (see [figure 61](#) and [table 15](#)). [Table 16](#) provides a brief description of the **Schedule** tab functions and [table 18](#) provides a brief description of the **Settings** tab functions.
☑ **Run this plan only when logged on**	Displays a user name and password dialog that you can use to provide the log on information that the GoVault data protection software will use to run your protection plan when you are not logged on to the system (see [figure 23](#) on page 33).

Clicking . . .	Performs this function . . .
4. Cartridge or: Previous	Reopens the **Cartridge** tab if you want to change the specification of which GoVault cartridges you want the plan to use.
Finish	Saves your protection plan and adds it to the **My Saved Protection Plans** display on the **Home** page.
Cancel	Cancels the plan creation function and redisplays the **Home** page.
②	Displays the online help file, opened to the "Creating Protection Plans" topic.

Figure 61 Scheduled Task Dialog
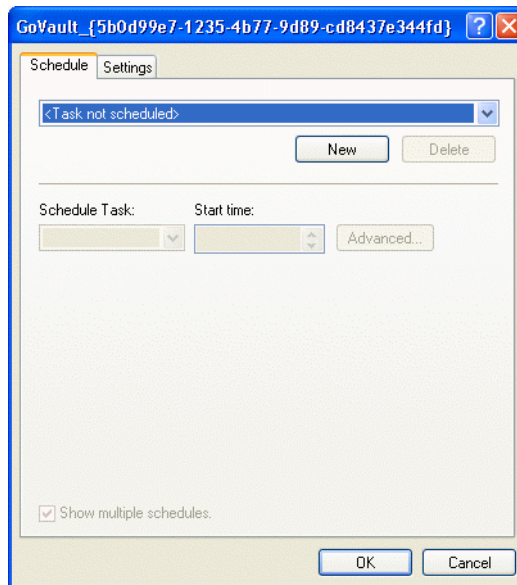
Table 15   Scheduled Task
Dialog Functions
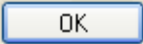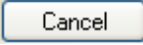
Clicking . . .	Performs this function . . .
New	Activates the **Schedule** tab elements that you can use to implement advanced scheduling tasks for your protection plan: • The **Schedule Task** and **Start Time** selection boxes • The **Advanced** command button • The **Show multiple schedules** check box (See figure 62 and table 16.)
Settings	Opens the **Settings** tab display that you can use to specify the advanced scheduling task options for your protection plan (see figure 64 and table 18).
OK	Saves your selections and closes the Windows **Scheduled Task** dialog.
Cancel	Discards your selections and closes the Windows **Scheduled Task** dialog.

Figure 62 Scheduled Task
Schedule Tab Display
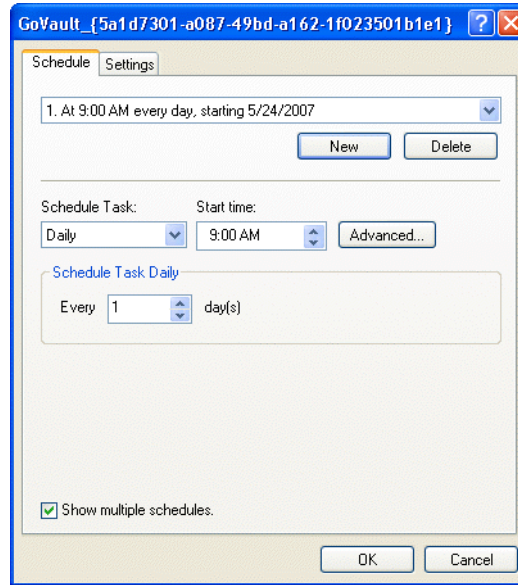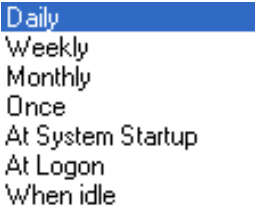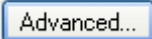
Table 16 Scheduled Task
Schedule Tab Functions

Clicking . . .	Performs this function . . .
The **Schedule Task** list box: Daily	Shows the schedule task selections: Daily Weekly Monthly Once At System Startup At Logon When idle
The **Start time** selection box: 9:00 AM	Increments or decrements the task start time.
Advanced...	Displays the **Advanced Schedule Options** dialog (see figure 63 and table 17).
The **Schedule Task Daily** selection box: Every 1 day(s)	Increments or decrements the daily task schedule.
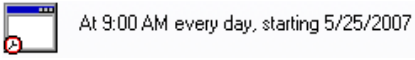
Clicking . . .	Performs this function . . .
☑ Show multiple schedules.	Toggles the **Schedule** tab display between a multi-schedule list box, as shown in figure 62 and a single-schedule display: At 9:00 AM every day, starting 5/25/2007
Delete	Deletes the selected task schedule.
OK	Saves your selections and closes the Windows **Scheduled Task** dialog.
Cancel	Discards your selections and closes the Windows **Scheduled Task** dialog.

Figure 63 Advanced Schedule Options Dialog
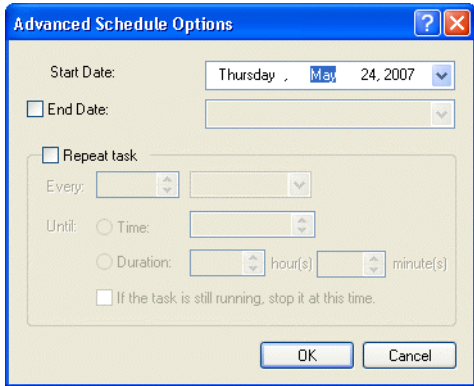
Table 17   Advanced Schedule
Options Dialog Functions
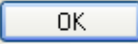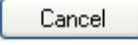
Clicking . . .	Performs this function . . .
The **Start Date** list box: Friday , May 25, 2007 ⌄	Displays a calendar for specifying the task start date:
The **End Date** check box: ☐ End Date:	Enables the **End Date** list box that, in turn, displays a calendar for specifying the task end date. The end date calendar is identical to the start date calendar.
The **Repeat task** check box: ☐ Repeat task	Activates the repeat task specification elements: • The **Every . . .** minutes/hours selection boxes • The **Until: Time** and **Until: Duration** option buttons and selection boxes • The **If the task is still running . . .** check box
OK	Saves your selections and closes the **Advanced Schedule Options** dialog.
Cancel	Discards your selections and closes the **Advanced Schedule Options** dialog.

Figure 64 Scheduled Task
Settings Tab Display
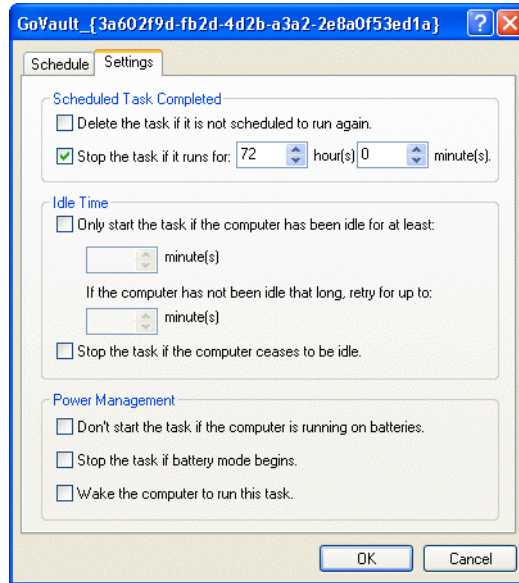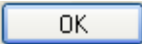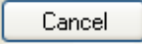
Table 18 Scheduled Task
Settings Tab Functions

Clicking . . .	Performs this function . . .
The **Delete the task . . .** check box for **Schedule Task Completed** settings	Selects and unselects the option to delete the task file after it has finished running if it is not scheduled to run again. Use this option for tasks that you scheduled to run only one time.
The **Stop the task . . .** check box for **Schedule Task Completed** settings	Selects and unselects the option to stop the task after a specified period of time. Selecting this option activates the **hour(s)** and **minute(s)** selection boxes.
The **Only start the task . . .** check box for **Idle Time** settings	Selects and unselects the option to inhibit the task from running until the computer has been idle for a specified period of time. Selecting this option activates the two **minute(s)** selection boxes that you can use to specify the idle and retry times.

Clicking . . .	Performs this function . . .
The **Stop the task . . .** check box for **Idle Time** settings	Selects and unselects the option to stop the task if someone starts using the computer while the task is running.
The **Don't start the task . . .** check box for **Power Management** settings	Selects and unselects the option to inhibit the task from starting when the computer is operating on battery power.

Use this option to prevent excessive power-consuming disk access operations and extend the life of your batteries. |
The **Stop the task . . .** check box for **Power Management** settings	Selects and unselects the option to stop the task when the computer switches to battery power.
The **Wake the compute . . .** check box for **Power Management** settings	Selects and unselects the option to wake the computer if it is in sleep mode at the scheduled run time.
OK	Saves your selections and closes the Windows **Scheduled Task** dialog.
Cancel	Discards your selections and closes the Windows **Scheduled Task** dialog.

Explore Page Functions

Clicking the **Explore** command button on the GoVault data protection software **Home** page displays the **Explore** page you can use to find and restore files from a protection plan archive (see figure 65).

Table 19 provides a brief description of the Explore functions.

Figure 65 Explore Page Display
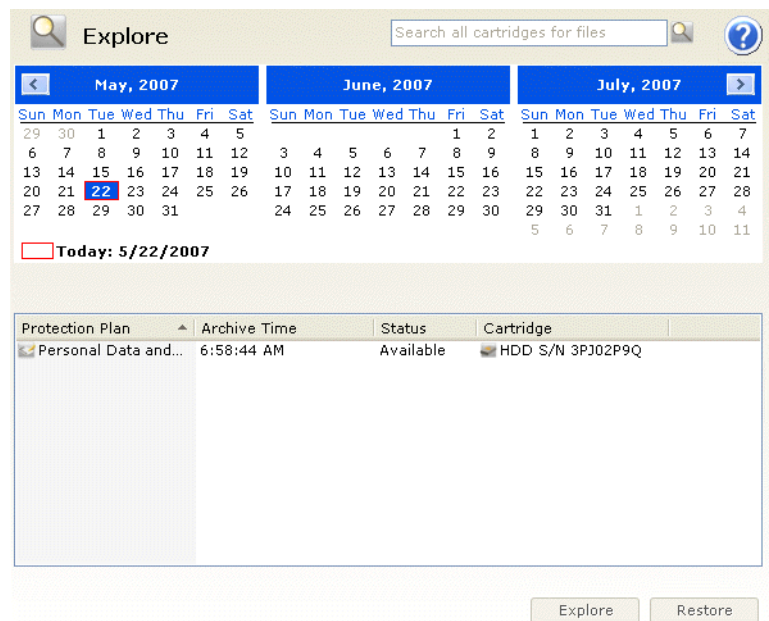
Table 19   Explore Page
Functions

Clicking . . .	Performs this function . . .
	Activates the **Search all cartridges for files** text box that you can use to enter a search string to search for files that might be archived on any GoVault cartridge—either available or offline. After typing all or part of a file name, including the wildcard asterisk (*) character and file type extensions if you want, and either clicking the search icon again or pressing the **ENTER** key, the search function displays the search results (see <u>figure 66</u>). <u>Table 20</u> provides a brief description of the search results functions.
Any calendar date shown in **bold** font	Displays a list of the protection plans that were run on that date, along with an indication of the time the archive was created and a status indication of whether the archive is available or offline (see <u>figure 67</u> on page 94): • **Available** signifies that the archive is stored on the currently loaded GoVault cartridge • **Offline** signifies that the archive is stored on another GoVault cartridge
Any available protection plan archive	Activates the **Explore** and **Restore** buttons you can use to find and restore files from the selected archive.

Clicking . . .	Performs this function . . .
Explore	Displays a Windows **Explorer**-like display that represents the file structure of the archive produced by the selected protection plan run (see figure 68 on page 95). From this window, you can use all of the familiar Windows **Explorer** functions to expand/collapse the file structure display and look for specific files and folders. You can use all of the familiar Windows **Explorer** file-handling functions to perform copy/paste or drag-and-drop restore functions from the protection plan archive.
Restore	Displays the **Point in Time Restore** dialog that you can use to perform a point-in-time restore operation from the selected protection plan archive (see figure 69 on page 95). Figure Table 21 on page 96 provides a brief description of the Point in Time Restore functions.
❓	Displays the online help file, opened to the "Explore and Restore" topic.

Figure 66 Search All
Cartridges Results Display
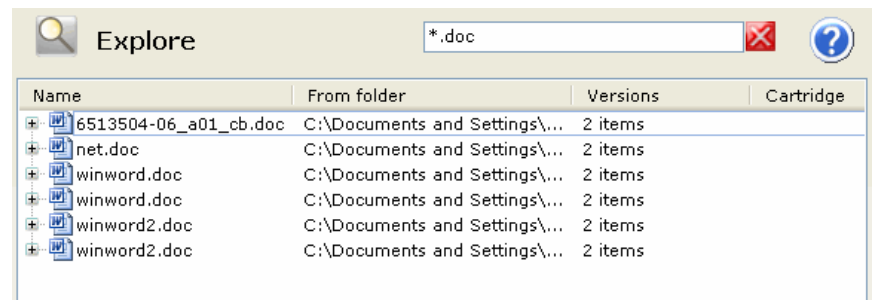
Table 20 Search All Cartridges Results Functions

Clicking . . .	Performs this function . . .
An expand (**+**) box, as in: ⊞ 📄 net.doc for example, or double clicking a collapsed file listing	Expands the selected file listing to show each available version of the file, and the GoVault cartridge it is archived on.
A collapse (**-**) box, as in: ⊟ 📄 net.doc for example, or double clicking an expanded file listing	Collapses the selected file listing.
Double clicking, or right clicking and selecting **Save as** for a specific file version	Displays either: • The standard Windows **Save As** dialog that you can use to restore the file from the archive to any available location • An **Insert Cartridge** display prompting you to insert the required cartridge
❌	Cancels the Search All Cartridges Results function and redisplays the **Explore** page.
❓	Displays the online help file, opened to the "Explore and Restore" topic.

Figure 67 Protection Plan Status Indications

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Figure 68 Explore Archive Window
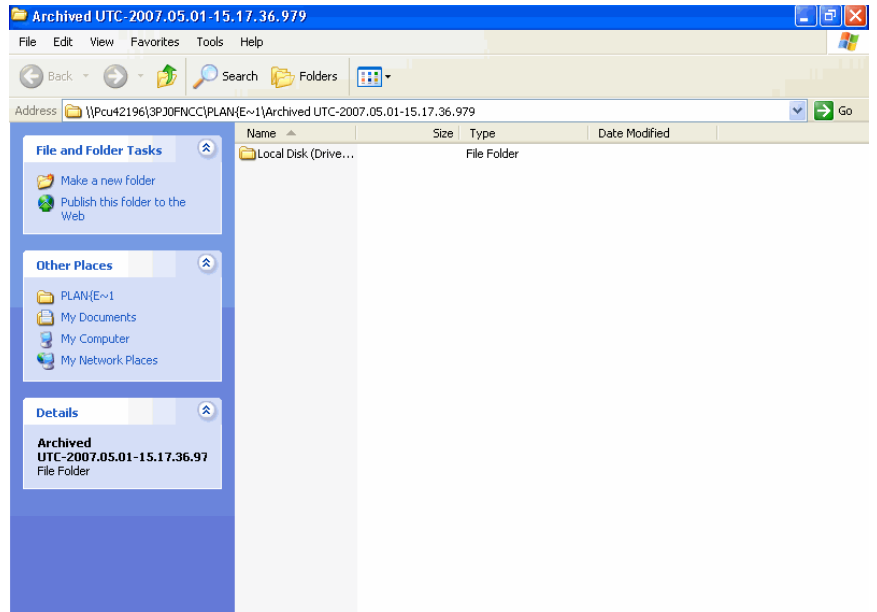
Figure 69 Point in Time Restore Dialog
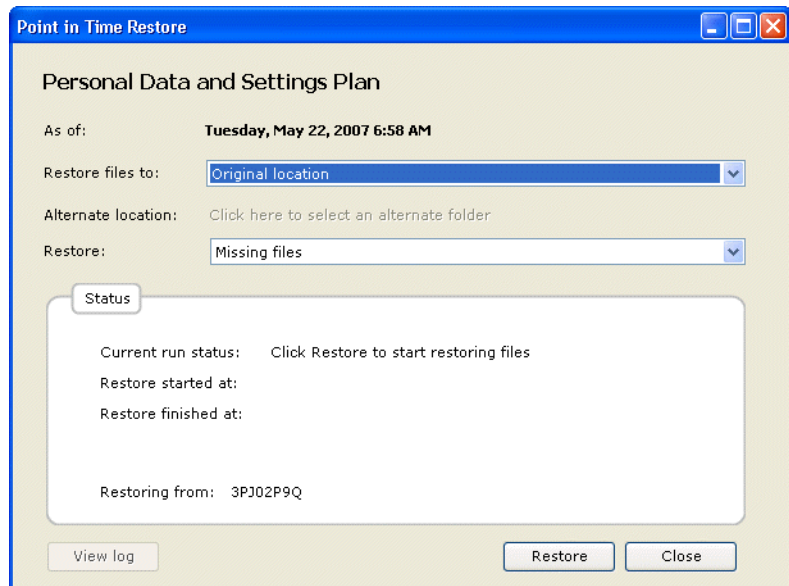
Table 21 Point in Time Restore
Functions
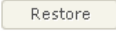
Clicking . . .	Performs this function . . .
⌄ for the **Restore files to** list box	Opens the **Restore files to** list box to display the **Alternate location** option. Selecting the **Alternate location** option activates the **Click here to select an alternate folder** link.
Click here to select an alternate folder	Displays the standard Windows **Browse For Folder** dialog that you can use to specify an alternate location for the restore operation.
⌄ for the **Replace existing files** list box	Opens the **Replace existing files** list box to display two additional options: • Only replace the existing file if it is older than a file from the archive • Always replace the existing file with a file from the archive
Restore	Launches the restore operation, according to the options you selected, updating the **Status** indication as the operation progresses, and activates the **View log** button when the operation completes.
View log	Opens a text file listing of the log file generated at the end of the restore operation (see <u>figure 70</u>).

Figure 70 Restore Activity Log
File Listing

```
ArchiveIQ for GoVault Command Tool Version 1.0.691.2 [Windows 5.1]
Copyright (C) 2005-2007 Data Storage Group, Inc. All rights reserved.

Restore task started on Fri May 4 2007 at 11:15 AM.
Restoring files from '3PJ0FNCC'

Restore task completed on Fri May 4 2007 at 11:16 AM.
_____
Analysis:

 Directories processed:      214
 Restored files:              35
 Restored data:           18.2 MB (19,095,005 bytes)
_____

Elapsed Time: 9.406 seconds
```

Cartridge Page Functions

Clicking the **Cartridge** command button on the GoVault data protection software **Home** page displays the **Cartridge** page (see figure 71) you can use to:

- Check the status of your GoVault cartridges

- Access the cartridge utilities for:

  - Ejecting a cartridge

  - Erasing a cartridge

  - Enabling data encryption for a cartridge

- Change a cartridge name and description

- Purchase additional cartridges

- Remove a cartridge from the GoVault data protection software archive environment

Table 22 provides a brief description of the Cartridge functions.

Figure 71 Cartridge Page
Display
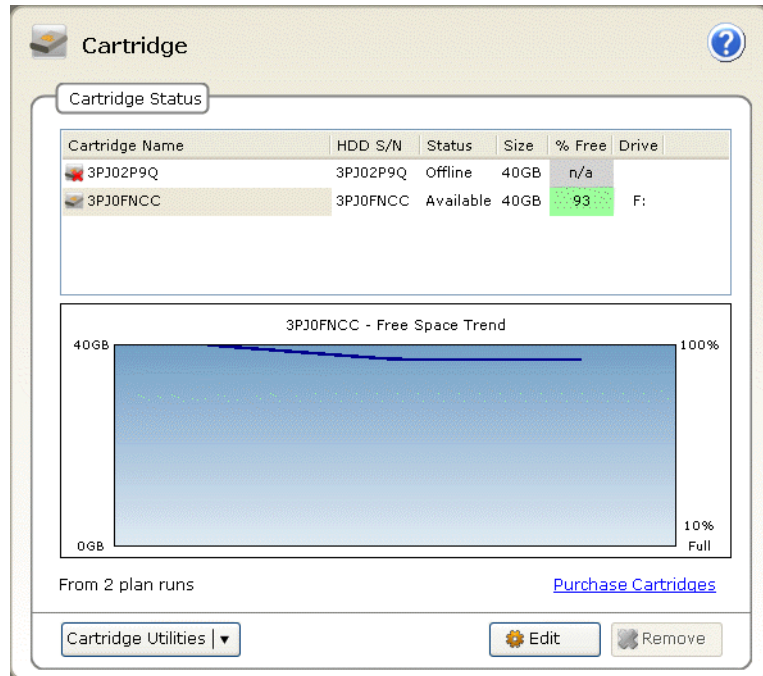
Table 22   Cartridge Page
Functions

Clicking . . .	Performs this function . . .
Any listed offline cartridge	Activates the **Remove** button, deactivates the **Edit** and **Cartridge Utilities** buttons, and displays the status for the selected cartridge, which includes: • A graphic **Free Space Trend** representation of the available disk space • The number of protection plan runs associated with the archive

Clicking . . .	Performs this function . . .
The currently available cartridge	Activates the **Edit** and **Cartridge Utilities** buttons, deactivates the **Remove** button, and displays the status for the selected cartridge, which includes: • A graphic **Free Space Trend** representation of the available disk space • The number of protection plan runs associated with the archive
Cartridge Utilities ▼ or right clicking the currently available cartridge	Displays the cartridge utilities menu: Eject Cartridge Erase Cartridge Manage Encryption
Eject Cartridge	Ejects the cartridge from the GoVault dock.
Erase Cartridge	Initially, displays a confirmation prompt asking if you are sure that you want to erase the cartridge. Selecting: • **No** or **Cancel** stops the erase function • **Yes** displays the standard Windows **Format Removable Disk** dialog that you can use reformat (erase) the GoVault cartridge

Clicking . . .	Performs this function . . .
Manage Encryption	Displays the **Manage Cartridge Encryption** dialog on the **Encryption** tab of the **Settings for Workstation Backup** page that you can use to enable encryption for the GoVault cartridge (see <u>figure 72</u>). **Note:** As prompted, you can only enable encryption for a new cartridge that has not been used by a protection plan. If the cartridge has been used by a protection plan, then the **Enable encryption for this cartridge** check box will be inactive and you will not be able to specify encryption.
<u>Edit</u>	Displays the **Set Cartridge Name and Description** dialog on the **Settings** tab of the **Settings for Workstation Backup** page that you can use to enter or change a name and description for the GoVault cartridge (see <u>figure 75</u> on page 105). <u>Table 23 on page 102</u> provides a brief description of the **Settings** tab functions.
Remove	Displays a confirmation prompt asking if you are sure that you want to remove the cartridge. Selecting: • **No** or **Cancel** stops the remove function • **Yes** removes the selected cartridge from the GoVault data protection software environment and deletes its listing on the **Cartridge Status** display
<u>Purchase cartridges</u>	Uses your Internet browser to link to the **Purchase Cartridges** page on the Quantum website where you can order additional GoVault cartridges.
?	Displays the online help file, opened to the "Cartridge Status" topic.

Figure 72 Manage Cartridge Encryption Dialog
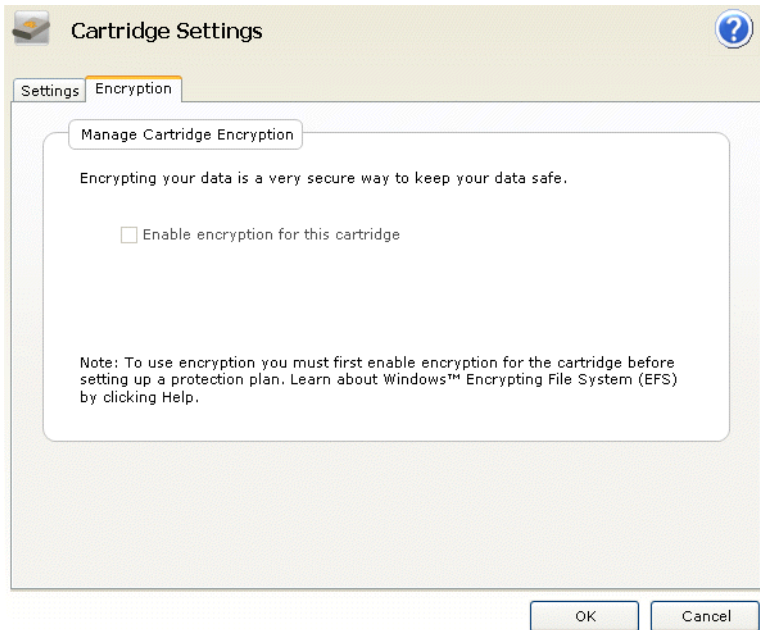
Figure 73 Settings Tab Display
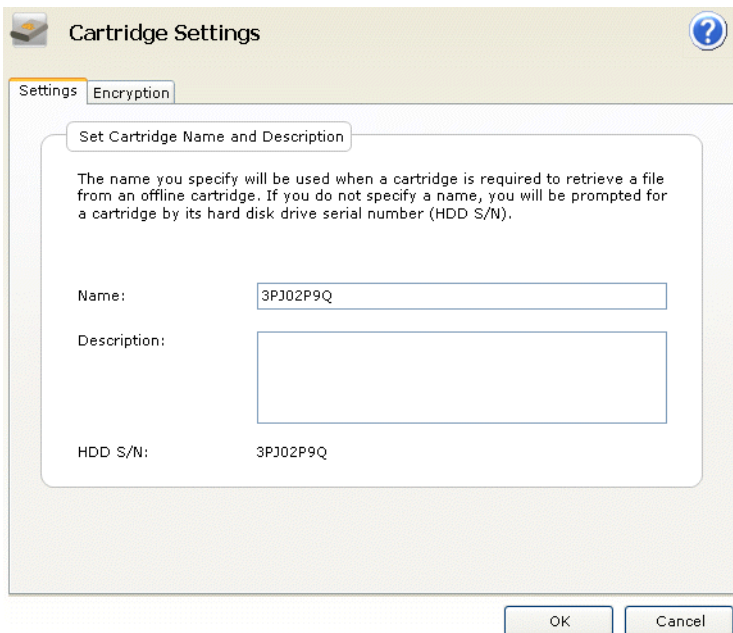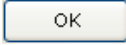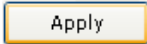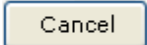
Table 23   Settings Tab
Functions

Clicking . . .	Performs this function . . .
In the **Name** text box	Allows you enter or change the cartridge name.
In the **Description** text box	Allows you to enter or change the cartridge description.
OK or: Apply	Saves your changes and redisplays the **Cartridge** page.
Cancel	Disregards your changes and redisplays the **Cartridge** page.
(?)	Displays the online help file, opened to the "Cartridge Edit Options" topic.

Options Page Functions

Clicking the **Options** command button on the GoVault data protection software **Home** page displays the **Options** page you can use to set the operational options for new media detection and cartridge rotation reminders (see <u>figure 74</u>).

<u>Table 24</u> provides a brief description of the Options functions.

Figure 74 Options Page
Display
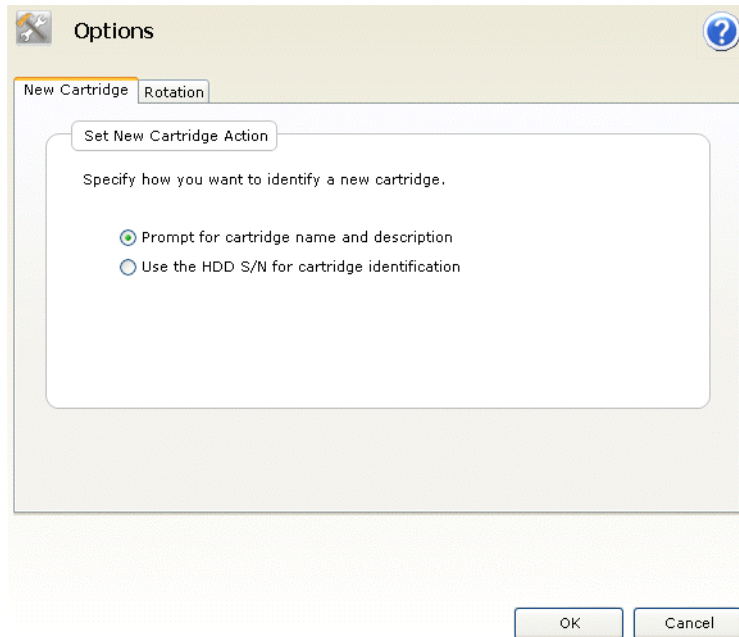
Table 24 Options Page
Functions

Clicking . . .	Performs this function . . .
New Cartridge	Displays the **Set New Cartridge Action** dialog that you can use to specify the default behavior when the GoVault data protection software detects that a new cartridge has been inserted into the GoVault dock (see figure 74). Select either: • **Prompt for cartridge name and description** • **Use the HDD S/N for cartridge identification**
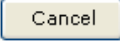
Clicking . . .	Performs this function . . .
Rotation	Displays the **Set Cartridge Rotation Reminder** dialog that you can use to generate reminder messages when it is time to rotate your GoVault cartridges (see <u>figure 75</u>). Selecting: • **Remind me to rotate a cartridge** activates the selection box that you can use to specify a number of days after a cartridge is inserted (1 to 31): `7` ⬍ days after the cartridge is inserted • **Remind me to rotate a cartridge after it is used by a protection plan** produces a reminder message every time the cartridge is accessed by a protection plan
OK	Saves your selections and redisplays the **Home** page.
Cancel	Disregards your selections and redisplays the **Home** page.
❓	Displays the online help file, opened to the "Options" topic.

Figure 75 Set Cartridge
Rotation Reminder Dialog
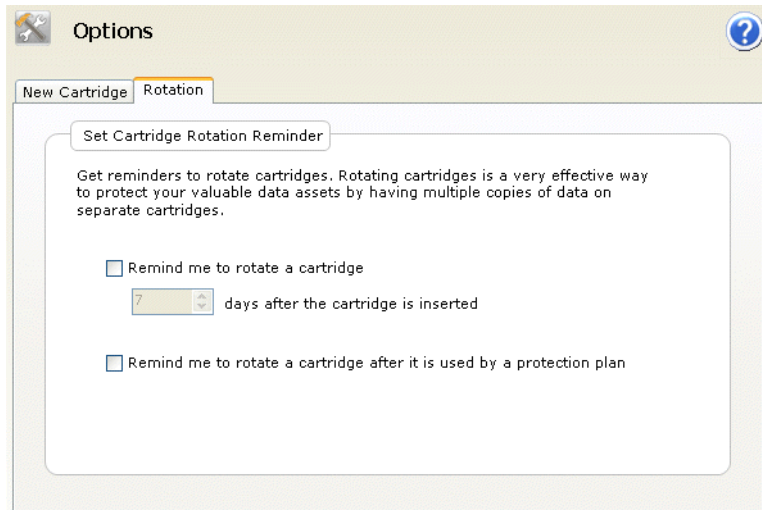
Results Page Functions

Clicking the **Results** command button on the GoVault data protection
software **Home** page displays the **Results** page you can use to check the
results of a protection plan (see).

provides a brief description of the Results functions.

Figure 76 Results Page
Display
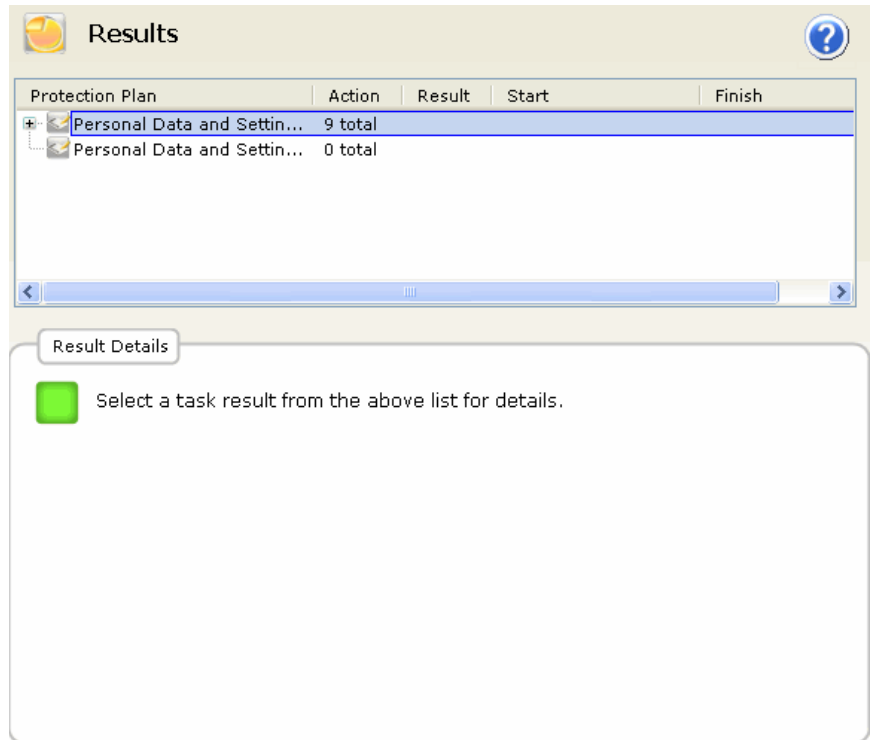
Table 25 Results Page
Functions

Clicking . . .	Performs this function . . .
An expand (**+**) box or double clicking a collapsed plan listing	Expands the selected plan listing to show the results for each run of the protection plan.
A collapse (**-**) box or double clicking an expanded plan listing	Collapses the selected protection plan listing.
A specific run of a protection plan	Updates the **Result Details** display for the plan, which includes a link to the resulting log file, and, for a successful archive action, a graphic representation of the results (see figure 77).

Clicking . . .	Performs this function . . .
View log	Opens a text file listing of the log file generated at the end of the selected protection plan action (see figure 78).
⑦	Displays the online help file, opened to the "Results" topic.

Figure 77 Archive Activity Result Details
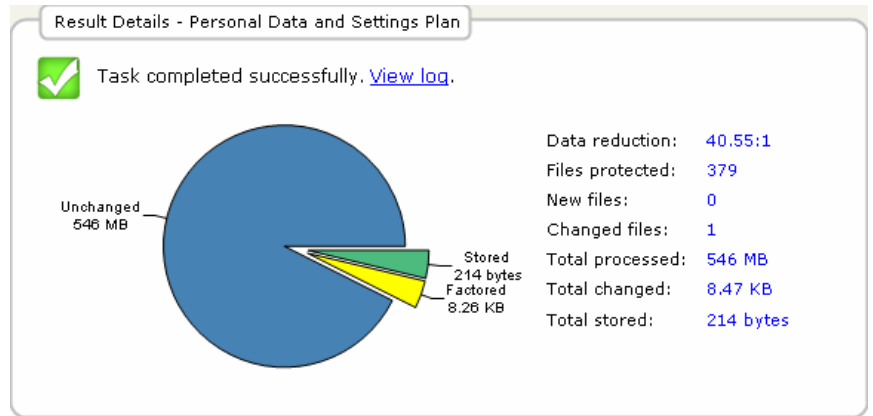
Figure 78 Archive Activity Log
File Listing

```
ArchiveIQ for GoVault Command Tool Version 1.0.691.2 [windows 5.1]
Copyright (C) 2005-2007 Data Storage Group, Inc. All rights reserved.

Archive task started on Mon Apr 30 2007 at 1:41 PM.
Archiving files to '3PJOFNCC'

Scanning C:\Documents and Settings\rspontel\Application Data\*
Scanning C:\Documents and Settings\rspontel\Desktop\*
Scanning C:\Documents and Settings\rspontel\Local Settings\Application Data\*
Scanning C:\Documents and Settings\rspontel\My Documents\*
Scanning C:\Documents and Settings\rspontel\Templates\*
Scanning C:\Documents and Settings\rspontel\Favorites\*
Scanning C:\Documents and Settings\Administrator\Application Data\*
Scanning C:\Documents and Settings\Administrator\Desktop\*
Scanning C:\Documents and Settings\Administrator\Local Settings\Application Data\*
Scanning C:\Documents and Settings\Administrator\My Documents\*
Scanning C:\Documents and Settings\Administrator\Templates\*
Scanning C:\Documents and Settings\Administrator\Favorites\*

Archive task completed on Mon Apr 30 2007 at 1:42 PM.

Total Transfer Time: 00:00:00.390
_____

Analysis:

  Directories processed:         213
  Protected files:               379 (573,476,368 bytes)
  Protected data:                546 MB (573,476,368 bytes)
  Unchanged:                     546 MB (99.998% static content)

  New files:                       0
  Changed files:                   1

  New and changed:               8.47 KB (0.00151% dynamic content)
  Factored:                      8.26 KB (8,464 bytes)
  Total stored:                  214 bytes
  Data reduction:                40.6:1 (New and changed data to Total stored)
  CCF Ratio:                     9999:1 (Protected data to Total stored)
  Common Content:                546 MB (100% data de-duplication)


  Total processed:               546 MB (573,476,368 bytes)
_____

Elapsed Time: 12.594 seconds
```

Alerts Page Functions

The **Alerts** command button on the GoVault data protection software **Home** page is inactive until an Alert condition or an optional reminder condition occurs. In those cases, clicking the active **Alerts** command button displays the **Alerts** page you can use to read and respond to the condition (see figure 79).

As shown, each message in the **Alerts and Reminders** display provides an appropriate response to the condition. See table 4 in Responding to Alert Conditions on page 64 for a list of some of the more common alert conditions and the response actions you can take.

Figure 79 Alerts Page Display
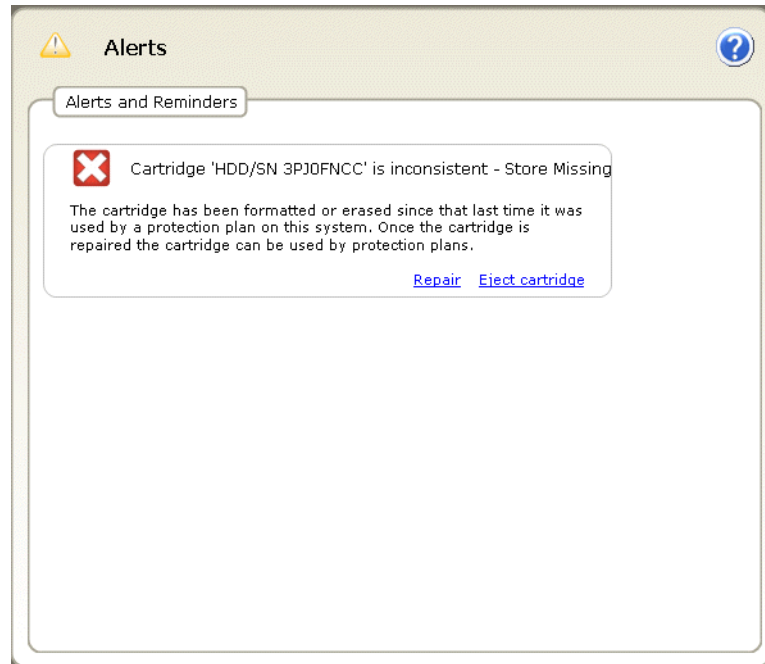
Help Page Functions

Clicking the **Help** command button on the GoVault data protection software **Home** page displays the **Help** page you can use to access two types of available online help (see figure 80):

- General

- About

Table 26, and table 27 provide brief descriptions of the General and About help functions.

Figure 80 Help Page Display
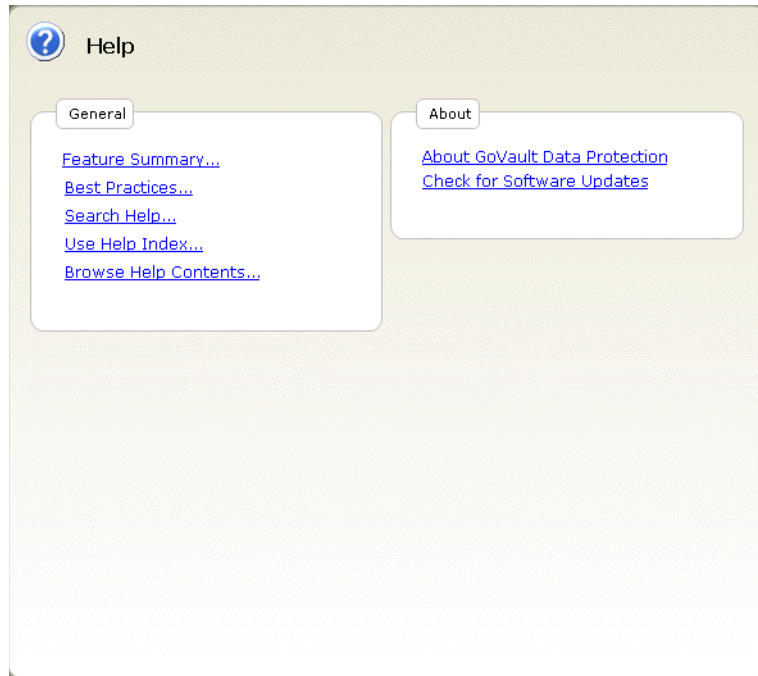
Table 26 General Help
Functions

Clicking . . .	Performs this function . . .
Feature Summary...	Displays the online help file, opened to the "GoVault Data Protection Features" topic.
Best Practices...	Displays the online help file, opened to the "Best Practices" topic.
Search Help...	Displays the online help file, opened to the "Welcome to GoVault Data Protection" topic.
Use Help Index...	Displays the **Index** tab of the online help file.
Browse Help Contents...	Displays the **Contents** tab of the online help file.

Table 27 About Help Functions	**Clicking . . .**	**Performs this function . . .**
	About GoVault Data Protection	Displays the **About GoVault Data Protection** display that provides the Version number of the GoVault data protection software and all of its installed software modules.
	Check for Software Updates	Uses your Internet browser to open the GoVault products page of the Quantum website: http://www.quantum.com/govault
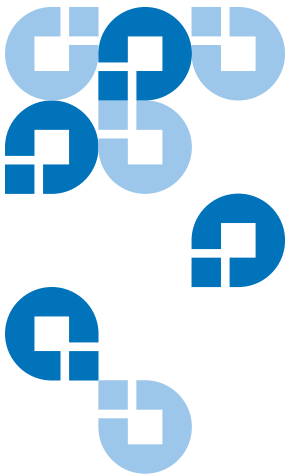
Best Practices

This chapter describes the things you should consider when developing protection plans to get the best performance from the GoVault™ data protection software, including:

- [Selecting GoVault Cartridges](#)
- [Developing Protection Plans](#) on page 114
- [Using Windows System Recovery](#) on page 116

Selecting GoVault Cartridges

Four key factors to consider when determining the capacity of your GoVault cartridges, and how many of them you will need are:

- The total size of the data set you need to protect

- The makeup of the data set—the ratio of fixed to dynamic file content, and the amount of file compression potential

- The cartridge rotation schedule

- The extent of your long-term archive requirements

Data Set Size Considerations

In most cases, selecting a cartridge size that is approximately equal to the total size of the data set will be adequate to protect a data set with a normal mix of fixed and dynamic file content, and without a high concentration of noncompressible files.

> **Note:** The term fixed files refers to files like video, music, pictures, and so on. Once created, they are seldom changed or edited. The term dynamic files refers to files like word processing documents, spreadsheets, project plans, presentations, and so on. They are frequently revised and updated.

In these situations, for example, selecting an 80 Mbyte GoVault cartridge to protect an 80 Mbyte data set would support an initial backup of the entire data set, and then daily backups for several months before approaching the capacity of the cartridge.

Data Set Makeup Considerations

On average, an initial baseline backup provides a data compression ratio of approximately 2:1, taking about 40 Gbytes of disk space to back up 80 Gbytes of data. Subsequent backups, however, only compress and store any new data and the portion of the original set that has changed since the prior backup.

If you mostly make changes to existing files, or if you have multiple folders with duplicate copies of the same file, then multiple backups over a period of time can produce a virtual data compression ratio of 20:1 or more.

If you mostly add new files, and seldom modify existing files, then the net data compression ration will remain closer to the original 2:1, overall.

When selecting GoVault cartridges, always evaluate the makeup of the data set you need to protect, and select a larger cartridge size if you have a high proportion of already-compressed files, or if you more frequently add new files than modify existing files.

Cartridge Rotation Considerations

Using multiple cartridges to store your valuable data is a best practice, and is vital to your data protection scheme.

In its simplest form, cartridge rotation would consist of a second GoVault cartridge with a second copy of your baseline system archive that you would store in a safe place at a different location. On a regularly

scheduled basis, you would exchange the two. This would provide a minimal amount of protection, but would leave "at risk" the new files and update activities that take place between rotations.

More aggressive cartridge rotation schedules would add more cartridges and a more-frequent rotation schedule. A daily cartridge rotation schedule would not be unusual in a highly active, fast-moving environment where access to prior versions of frequently changing files was vital.

Whatever cartridge rotation scheme you need, you can configure your protection plans to remind you when it's time to rotate cartridges. And you need not be concerned about keeping track of which files are on which cartridges—the GoVault data protection software will keep track for you, and tell you which cartridge you need when it is time to find and restore files.

Long-term Archive Considerations

When a GoVault cartridge becomes filled to capacity and is no longer viable for additional protection plan runs, you have two options:

- Erase/reformat the cartridge and start over
- Replace the cartridge with a new one, keeping the full cartridge for long-term archive protection

Erasing and reusing a cartridge saves the cost of the replacement, but forever destroys the contents of the cartridge.

Before erasing and reusing a cartridge, always carefully evaluate the value of the data on the cartridge—the probability that you might someday need specific versions of files that are on it, and the impact that such a loss might have on your business. If these are important factors, then you should always purchase an additional cartridge and keep the full one for long-term archive protection.

Developing Protection Plans

A key element to consider before developing your first protection plan is the incredible operational flexibility provided by the GoVault data protection software. Rather than developing *a* (one) protection plan, you

can, and most likely will, develop multiple protection plans—as many as you need. Each one can:

- Have its own name and description

- Protect any combination of files, folders, and hard disk drives—both local and network-connected—from a single file or folder to all files and folders on all drives

- Be scheduled to run automatically at any time of day, on any day the week, month, or year, and even multiple times on the same day

- Access a specific cartridge, or any/all cartridges

With all this operational flexibility, it is generally considered wise to initially, create and run an "Everything" plan that will protect all files and folders on all of your hard drives. Schedule this plan to run with whatever frequency you feel comfortable with.

Then, evaluate your computer's file structure, the types of files, and the frequency of updates and new file creation activities and develop multiple protection plans to fit the operational aspects of your business.

Supporting Subsequent Restore Operations

Consider all of the different things that you might need from a recovery operation, and then tailor a new plan to provide each of those requirements.

Yes, you can always recover any file from an Everything type backup, but protection plans that target specific file or folder types will run much more quickly because they won't be constantly scanning all of your fixed-type files for changes.

Supporting Multiple GoVault Cartridges

If you need to protect more data than can fit on a single cartridge, or if you have unique kinds of data that can be assigned to two or more cartridges, develop a different protection plan for each. Consider, for example, backing up:

- Files with predominantly fixed content on one cartridge, files with predominantly dynamic content on another

- Files associated with specific products, projects, or customers, or groups of them on a specific cartridge

**Protecting Network-
Connected Files**

If you need to protect files on a remote network-connected computer, first establish administrator-level access to that computer. Next, map a local drive to a shared folder on the remote computer. Be sure to configure the mapped drive to reconnect at logon if you want to schedule the plan to run automatically at a specific time interval. Then you can create a Custom plan to protect the remote network-connected files.

To preserve security information and be able to restore user-encrypted files on behalf of that user, the remote computer must be in either the same domain as your local host computer or in a *trusted* domain.

> **Note:** Do not create administrator accounts with blank passwords for remote access by the GoVault data protection software. You must provide a valid username/password combination when you create protection plans that access remote resources, and an administrator account with a blank password cannot authenticate on the remote system and will not have access permissions to write file owner and access control list (ACL) security information.

Using Windows System Recovery

The GoVault data protection software is a *data* protection application, intended to backup and recover your important *data* files. It is not intended and will not function as a *system* recovery tool.

Always use the Windows System Recovery utility to restore your computer operating system and installed applications.

Also, after performing an Everything type restore operation, use Windows System Recovery if you encounter any irregularities with your operating system or applications.
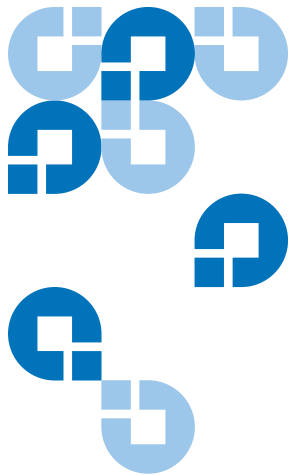
Frequently Asked Questions

This appendix provides answers to the questions that are frequently asked about the GoVault data protection software:

- [What is it and how does it work?](#)

- [When should I use the options to save my Personal Data and Settings, Everything, or use a Custom plan? And what do they protect?](#) on page 119

- [How do I restore my files?](#) on page 120

- [What happens when I do an Everything restore?](#) on page 121

- [When should I rotate my cartridges?](#) on page 121

- [What should I do when my cartridge is nearly full?](#) on page 122

- [When should I use Windows System Recovery instead of the GoVault data protection software?](#) on page 123

- [How does the GoVault data protection software work with my Microsoft Outlook files or other open files?](#) on page 123

- [How can I restore an Outlook .pst file?](#) on page 124

- [How do I protect and restore files that are on another computer?](#) on page 124

- [How does the GoVault data protection software maintain data integrity?](#) on page 125

What is it and how does it work?

The GoVault data protection software is an archiving/capacity-optimization application designed for use with removable GoVault cartridges. To better optimize the long-term storage of digital content, the GoVault data protection software uses innovative technology to virtually eliminate redundant information stored for a given set of data.

The GoVault data protection software uses a heuristic approach to optimally segment data, and Common Content Factoring™ to uniquely identify each segment and store it only once. For a given version of a set of data, new segments are stored along with metadata used to reconstruct this version from these new segments and possibly other segments stored at earlier points in time.

By factoring out common data, the effective capacity of a GoVault cartridge is significantly increased without loss of functionality and with increased performance of the archiving system. In short, the GoVault data protection software makes long-term disk-based archiving fast, easy, and affordable.

When should I use the options to save my Personal Data and Settings, Everything, or use a Custom plan? And what do they protect?

You can create as many protection plans as you like to configure the GoVault data protection software to save:

- Only your most important files

- Everything on all of your hard disk drives

- Anything in between

A protection plan keeps track of all the selected files and, after its initial run, will only store new and truly unique data over time. A full recovery point is created each time a plan is run. You don't need to worry about plans having overlapping files—a file will only be stored once to the cartridge.

You might want to configure your system to save all your files once a week or once a month, and then create another protection plan to save your most important files several times a day to protect against an accidental deletion or a virus attack.

You can also designate specific cartridges for specific protection plans. This is handy if you have more data than can fit on a single cartridge, or if you have different kinds of data that can naturally be divided among two or more cartridges.

For example, you might want to save Customer A-L files on one cartridge, and Customer M-Z files on another. The GoVault data protection software always knows which cartridge is inserted and what plans to run for that cartridge.

When creating new protection plans, it helps to think about what you will need if recovery of the data is required, then limit the plan to files and folders affected by that scenario.

The Personal Data and Settings protection plan is a built-in plan that stores data under the **Documents and Settings** folder (Windows XP SP2 and Windows Server 2003) or **Users\UserName** (Windows Vista). If you store your documents in the **My Documents** folder by default, this plan can help you easily backup and recover your document files.

The Personal Data and Settings protection plan will also store your Microsoft Outlook files. This plan will store system-specific settings such as the **Desktop** folder, Internet Explorer **Favorites** and other files under **Documents and Settings** in case you need to rebuild your system because of a serious system failure. You would be able to restore your e-mail files and the *look-and-feel* of your system.

Choosing the Custom protection plan ensures that the GoVault data protection software does not automatically archive any files. Instead, you must choose exactly which folders and files to archive. Use this option if you want complete control in choosing the files you want to protect.

The Everything protection plan automatically selects all local hard disk drives on your PC to protect. All files and folders on the local hard disk drives will be archived on the GoVault cartridge. The best approach would be to perform an Everything backup first, and then create other protection plans to store only the changes to your most important data.

How do I restore my files?

You can view the contents of your archives and restore your files through the **Explore** dialog by clicking the **Explore** button in the left panel of the **Home** page. The GoVault data protection software provides instant access to the data you have archived by taking advantage of the random access capabilities of the removable GoVault cartridges. The process of finding and restoring your data is made simple because the GoVault data protection software can display your data in the same way you view your files in Windows every day.

There are three ways to restore your files:

- You can use the search capability to find and restore a single file.

  If you need just a single file, but are not sure which version, try searching for the file by typing its name, or a portion of the name, and the GoVault data protection software will immediately locate the matching files, even if they reside on a cartridge that is not loaded!

- You can explore a plan using the same Windows Explorer interface you are already familiar with. You can explore files by viewing the files directly on the cartridge and drag and drop them from the cartridge.

- You can restore the entire plan using a simple restore interface.

For safety reasons, the GoVault data protection software will never replace a newer file with a previous version unless specifically instructed to do so.

What happens when I do an Everything restore?

The GoVault data protection software is not intended to provide full recovery to a blank system disk. If you choose to restore all of your files, including system files, to an existing disk, for safety reasons, files that are currently open will not be restored. This could lead to some inconsistency after the restore task completes.

To reduce the number of affected files, always close all applications except the GoVault data protection software before restoring your disk.

You can choose to restore just the missing files, restore files that are older, or only restore files that are different. You can use the latter option if you suspect that some files have been changed by a virus attack, or if you need to get back to previous versions.

When should I rotate my cartridges?

The use of multiple cartridges to store your valuable data is considered a best practice. You should rotate your cartridges at least once a week by removing the active cartridge from the GoVault dock, replacing it with another one and storing the rotated cartridge in a safe off-site location until you are ready to do the next rotation.

You might want to rotate your cartridges more often and use more than one extra cartridge to provide a higher level of data protection. The GoVault data protection software makes it easy. Each time you insert a new cartridge, new and changed files will be added to the cartridge. Depending on how often the cartridges are rotated, some cartridges can have more recovery points than others.

You could create a cartridge rotation schedule based solely on the number of cartridges you believe is sufficient for your needs. For example, you might just want to create an Everything protection plan to store all of your local hard drive data to a cartridge, then use a separate cartridge for each day that you need to backup. This way you would have a complete backup of your system each day.

Another option would be to create a three-cartridge rotation scheme in which the first and last day of your backup cycle uses a cartridge specifically for those days, and the third cartridge is used sometime between those days.

You could create a cartridge rotation scheme based on the types of files you have stored on your local and network systems, and designate specific cartridges for specific protection plans. This can be helpful if you have different kinds of data that can naturally be divided among two or more cartridges. For example, if you have a large amount of fixed content data such as music, images, video, and so on, you might want to use a cartridge solely for the purpose of storing those types of files. Depending on how often you add to these file types, or change these files, you might need to use this cartridge only once a week or less often. Other cartridges could be used for your dynamic content files such as one cartridge for Customers A through L and another cartridge for Customers M through Z.

What should I do when my cartridge is nearly full?

Usually, when a cartridge fills up it is time to purchase a new one.

Review the results from the last set of protection plans to see how much data is actually being protected and how much space is being used. Use this as a guide to correctly size the next GoVault cartridge to use.

Always purchase cartridges that are large enough to hold all of your original files uncompressed. The GoVault data protection software will compress files before they are stored to the cartridge, and only store the changed parts of a file thereafter. So, depending on the compressibility of your files, you generally need a cartridge that is only a little larger than the size of all your original files.

If you like, you can create two or more plans and save a portion of your disk on two or more cartridges. This is what you should do if original file set is larger than the capacity of a single GoVault cartridge.

When should I use Windows System Recovery instead of the GoVault data protection software?

Windows System Recovery protects the operating system and most installed applications and allows you to restore the system files back to a previous point in time. You should always use Windows System Recovery instead of the GoVault data protection software to restore the operating system.

You should also use Windows System Recovery after running a restore Everything task if you suspect any inconsistencies with your operating system or any installed applications.

How does the GoVault data protection software work with my Microsoft Outlook files or other open files?

Microsoft Outlook files have been notorious for creating problems with most backup applications for two reasons:

- Outlook files are typically very large
- The file contents are always changing

The GoVault data protection software first creates a consistent *snap-shot* of open files being backed up using the Microsoft Volume Shadow Copy Service (VSS) when the protection plan begins backing up your files. It then identifies the changed portion of the file and saves these changes, along with information about the original file. This dramatically reduces the amount of space required to back up the file at each given point in time and effectively extends the storage capacity your GoVault cartridge.

When it comes time to restore, the entire file is copied back exactly as it was at the given point in time.

How can I restore an Outlook .pst file?

The built-in Personal Data and Settings plan will automatically back up all of your local Outlook e-mail files. You can restore your Outlook .pst file to an alternate folder and open it there to view the e-mail files from that point in time.

You can restore your .pst file as you would any other file by clicking the **Explore** button on the **Home** page. When the **Explore** page opens, type *.pst in the search text box at the top of the screen and press **Enter**. Find and right-click the .pst file you want to restore, choose **Save As** and specify a folder such as **C:**. Then, when you start Outlook, click **File ==> Open ==> Outlook Data File**. Find and click the .pst file you restored and **OK** to view the restored .pst file in Outlook.

How do I protect and restore files that are on another computer?

The GoVault data protection software enables you to protect and restore files for any disk drive that you have access to on your computer.

You can save files from a remote computer by first mapping a drive to a share on the remote computer for which you have administrator access,

and then creating a protection plan that includes folders from the new mapped drive letter.

If you schedule the plan to run at a particular interval, then be sure to configure the mapped drive to reconnect at logon.

To preserve security information, and to be able to restore user-encrypted files (on behalf of that user), your remote computer should be in the same domain as is the host computer or in a trusted domain.

You can also explore for files and folders from the host computer by selecting a specific recovery point. All Windows file access checks are performed just as if you were exploring the original disk.

User-encrypted files and folders will show in green font color, and you will be able to access encrypted files for which you have a valid encryption certificate.

How does the GoVault data protection software maintain data integrity?

The GoVault data protection software makes sure your data is safely stored to the GoVault cartridge by enabling buffer flushing during disk write operations. This slows down first-pass archiving performance, but provides a higher level of data integrity.

The GoVault data protection software ensures everything is written to the physical media before committing records. If data corruption is ever detected, the system will quarantine the corrupted data and attempt to rebuild the portion of corrupted data using information from the original file.

What are the ArchiveIQ for GoVault Manager and ViewStor services?

ArchiveIQ™ is the technology name behind the GoVault data protection software. The technology was developed in partnership with Data Storage Group, Inc. The provided services integrate system monitoring and data protection management functionality for the GoVault data protection software user application.

The user interface works in conjunction with these services to provide data protection for your system.

The ViewStor™ service provides a simplified interface to archived data and allows you to use Windows Explorer to quickly find files and folders for all saved points in time.

During installation, I see a message, "The ArchiveIQ ViewStor service failed to start."

The GoVault data protection software uses the Windows WebClient service to display the files you back up through Windows Explorer. If the WebClient service is not running, the software will display the message, "The ArchiveIQ ViewStor service failed to start." This is an informational message only. The installation of the software will not be affected if the WebClient service is not running. You can click **OK** to continue with the the software installation.

After installation is complete, I see a message, "To be able to explore GoVault cartridges some services must be started."

You might see this message if:

- The Windows WebClient service is not running when the software is bringing up the GoVault data protection software user interface

- The software could not start its services because the operating system could not allow the services to start temporarily

Click **Yes** to allow the software to work with Windows to start the software services.

I clicked Yes to start the services but I see a message, "The ArchiveIQ for GoVault ViewStor service failed to start. You will not be able to Explore or Search for archived files without this service."

This message indicates that there may be a conflict on a port that the software uses for displaying the files you back up through Windows Explorer.

To determine if the WebClient service is active and running, right-click the **My Computer** icon on the Windows desktop (Windows XP and Windows 2003) or bring up the **Start** menu on Windows Vista by clicking the Windows logo at lower left corner of your desktop and then right-clicking **Computer** (in the panel on the right). Left-click **Manage** and click **Services**.

Under the name column find **WebClient**. Look under the **Status** column and check for the word Started. If the word Started does not appear, double-click **WebClient**. When the next window appears look for Startup

type and make sure that the text box shows Automatic. If not click the text box and choose **Automatic**.

Now look for Service status, and make sure that the word Started is shown, such as: **Service status: Started**. If the word Started is still not shown, then click the **Start** button and click **OK** to close the window.

The ArchiveIQ for GoVault ViewStor service requires access to port 80 of the computer. This is the common port for receiving requests from a Web client and is usually open as a default setting.

In rare occasions, an application or Windows OS setting might also be using port 80 and causing a conflict.

If you still see the message, **The ArchiveIQ for GoVault ViewStor service failed to start. You will not be able to Explore or Search for archived files without this service**, there might be a port 80 conflict. In this case, open a command prompt window (DOS window) and type:

netstat -ano > port80.txt

Save the file and contact Quantum Tech. Support for assistance.

Note: Common Content Factoring, ArchiveIQ, and ViewStor, are trademarks of Data Storage Group, Inc. in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.