

GoVault Drive



# User's Guide



GoVault Drive



# User's Guide

**Note:** Before using this information and the product it supports, read the information in Appendix B, "Notices," on page 25 and the warranty information in the *Warranty and Support Information* document on the IBM *Documentation CD*.

**First Edition (January 2007)**

**© Copyright International Business Machines Corporation 2007. All rights reserved.**

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

---

# Contents

<b>Safety</b> . . . . .	v
<b>Chapter 1. Introduction</b> . . . . .	1
The IBM Documentation CD . . . . .	1
Hardware and software requirements . . . . .	1
Using the Documentation Browser . . . . .	1
Notices and statements in this documentation . . . . .	2
Components . . . . .	2
Drive carrier . . . . .	2
Cartridge . . . . .	3
Software . . . . .	4
Front panel . . . . .	4
<b>Chapter 2. Installing the GoVault Drive</b> . . . . .	5
Installation guidelines . . . . .	5
Handling static-sensitive devices . . . . .	5
Returning the GoVault Drive . . . . .	6
Hardware and software requirements . . . . .	6
Parts inventory . . . . .	6
Installing the GoVault Drive hardware . . . . .	6
Installing the GoVault Drive application . . . . .	7
<b>Chapter 3. Using the GoVault Drive</b> . . . . .	9
Ordering additional cartridges . . . . .	9
Working with cartridges . . . . .	9
Inserting a cartridge . . . . .	9
Ejecting a cartridge . . . . .	9
Write-protecting a cartridge . . . . .	10
Labeling cartridges . . . . .	10
Storing and handling cartridges . . . . .	11
Using the GoVault Drive application . . . . .	11
Using the GoVault Drive application with a Windows operating system . . . . .	12
Using the GoVault Drive application with a Linux operating system . . . . .	17
Solving problems . . . . .	19
Replacing the drive carrier . . . . .	20
Removing the GoVault Drive carrier . . . . .	20
Installing the GoVault Drive carrier . . . . .	20
<b>Appendix A. Specifications</b> . . . . .	23
Hardware . . . . .	23
Power requirements . . . . .	23
<b>Appendix B. Notices</b> . . . . .	25
Trademarks . . . . .	25
Important notes . . . . .	26
Product recycling and disposal . . . . .	26
Electronic emission notices . . . . .	27
Federal Communications Commission (FCC) statement . . . . .	28
Industry Canada Class B emission compliance statement . . . . .	28
Avis de conformité à la réglementation d'Industrie Canada . . . . .	28
European Union EMC Directive conformance statement . . . . .	28
Japanese Voluntary Control Council for Interference (VCCI) statement . . . . .	29

**Index** . . . . . 31

## Safety

Before installing this product, read the Safety Information.

مج، يجب قراءة دات السلامة

Antes de instalar este produto, leia as Informações de Segurança.

在安装本产品之前，请仔细阅读 **Safety Information** (安全信息)。

Prije instalacije ovog produkta obavezno pročitajte Sigurnosne Upute.

Před instalací tohoto produktu si přečtěte příručku bezpečnostních instrukcí.

Læs sikkerhedsforskrifterne, før du installerer dette produkt.

Ennen kuin asennat tämän tuotteen, lue turvaohjeet kohdasta Safety Information.

Avant d'installer ce produit, lisez les consignes de sécurité.

Vor der Installation dieses Produkts die Sicherheitshinweise lesen.

Πριν εγκαταστήσετε το προϊόν αυτό, διαβάστε τις πληροφορίες ασφάλειας (safety information).

לפני שתתקינו מוצר זה, קראו את הוראות הבטיחות.

A termék telepítése előtt olvassa el a Biztonsági előírásokat!

Prima di installare questo prodotto, leggere le Informazioni sulla Sicurezza.

製品の設置の前に、安全情報をお読みください。

본 제품을 설치하기 전에 안전 정보를 읽으십시오.

Пред да се инсталира овој продукт, прочитајте информацијата за безбедност.

Lees voordat u dit product installeert eerst de veiligheidsvoorschriften.

Les sikkerhetsinformasjonen (Safety Information) før du installerer dette produktet.

Przed zainstalowaniem tego produktu, należy zapoznać się z książką "Informacje dotyczące bezpieczeństwa" (Safety Information).

Antes de instalar este produto, leia as Informações sobre Segurança.

Перед установкой продукта прочтите инструкции по технике безопасности.

Pred inštaláciou tohto zariadenia si prečítajte Bezpečnostné predpisy.

Pred namestitvijo tega proizvoda preberite Varnostne informacije.

Antes de instalar este producto lea la información de seguridad.

Läs säkerhetsinformationen innan du installerar den här produkten.

安裝本產品之前，請先閱讀「安全資訊」。

**Statement 1:**



**DANGER**

**Electrical current from power, telephone, and communication cables is hazardous.**

**To avoid a shock hazard:**

- **Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.**
- **Connect all power cords to a properly wired and grounded electrical outlet.**
- **Connect to properly wired outlets any equipment that will be attached to this product.**
- **When possible, use one hand only to connect or disconnect signal cables.**
- **Never turn on any equipment when there is evidence of fire, water, or structural damage.**
- **Disconnect the attached power cords, telecommunications systems, networks, and modems before you open the device covers, unless instructed otherwise in the installation and configuration procedures.**
- **Connect and disconnect cables as described in the following table when installing, moving, or opening covers on this product or attached devices.**

**To Connect:**

1. Turn everything OFF.
2. First, attach all cables to devices.
3. Attach signal cables to connectors.
4. Attach power cords to outlet.
5. Turn device ON.

**To Disconnect:**

1. Turn everything OFF.
2. First, remove power cords from outlet.
3. Remove signal cables from connectors.
4. Remove all cables from devices.

---

## Chapter 1. Introduction

The IBM® GoVault Drive is a ruggedized hard disk drive solution for xSeries® and System x™ servers and IntelliStation® workstations. Read this entire document before you install or use the GoVault Drive.

The GoVault Drive comes with a limited warranty. For information about the warranty and getting service and assistance, see the *IBM GoVault Drive Warranty and Support Information* document.

Contact your place of purchase if an item is missing or damaged. Be sure to retain your proof of purchase. It might be required for you to receive warranty service.

---

## The IBM Documentation CD

The IBM *Documentation* CD contains documentation for the GoVault Drive in Portable Document Format (PDF) and includes the IBM Documentation Browser to help you find information quickly.

## Hardware and software requirements

The IBM *Documentation* CD requires the following minimum hardware and software:

- Microsoft® Windows® XP, Windows 2000, or Red Hat Linux®
- 100 MHz microprocessor
- 32 MB of RAM
- Adobe Acrobat Reader 3.0 (or later) or xpdf, which comes with Linux operating systems

## Using the Documentation Browser

Use the Documentation Browser to browse the contents of the CD, read brief descriptions of the documents, and view documents, using Adobe Acrobat Reader or xpdf. The Documentation Browser automatically detects the regional settings in your system and displays the documents in the language for that region (if available). If a document is not available in the language for that region, the English-language version is displayed.

Use one of the following procedures to start the Documentation Browser:

- If Autostart is enabled, insert the CD into the CD drive. The Documentation Browser starts automatically.
- If Autostart is disabled or is not enabled for all users, use one of the following procedures:
  - If you are using a Windows operating system, insert the CD into the CD drive and click **Start --> Run**. In the **Open** field, type  
`e:\win32.bat`  
  
where *e* is the drive letter of the CD drive, and click **OK**.
  - If you are using Red Hat Linux, insert the CD into the CD drive; then, run the following command from the /mnt/cdrom directory:  
`sh runlinux.sh`

Select the GoVault Drive from the **Product** menu. The **Available Topics** list displays all the documents for the GoVault Drive. Some documents might be in folders. A plus sign (+) indicates each folder or document that has additional documents under it. Click the plus sign to display the additional documents.

When you select a document, a description of the document is displayed under **Topic Description**. To select more than one document, press and hold the Ctrl key while you select the documents. Click **View Book** to view the selected document or documents in Acrobat Reader or xpdf. If you selected more than one document, all the selected documents are opened in Acrobat Reader or xpdf.

To search all the documents, type a word or word string in the **Search** field and click **Search**. The documents in which the word or word string appears are listed in order of the most occurrences. Click a document to view it, and press Ctrl+F to use the Acrobat search function or Alt+F to use the xpdf search function within the document.

Click **Help** for detailed information about using the Documentation Browser.

---

## Notices and statements in this documentation

The caution and danger statements in this document are also in the multilingual *Safety Information* document, which is on the IBM *Documentation* CD. Each statement is numbered for reference to the corresponding statement in your language in the *Safety Information* document.

The following notices and statements are used in this document:

- **Note:** These notices provide important tips, guidance, or advice.
- **Attention:** These notices indicate potential damage to programs, devices, or data. An attention notice is placed just before the instruction or situation in which damage could occur.
- **Danger:** These statements indicate a situation that can be potentially lethal or extremely hazardous to you. A danger statement is placed just before the description of a potentially lethal or extremely hazardous procedure step or situation.

---

## Components

This section provides a description of the following GoVault Drive components:

- Drive carrier
- Cartridge
- Application software

The drive carrier and the cartridges are ordered separately from each other.

### Drive carrier

The drive carrier (see Figure 1 on page 3) serves as a cartridge housing.

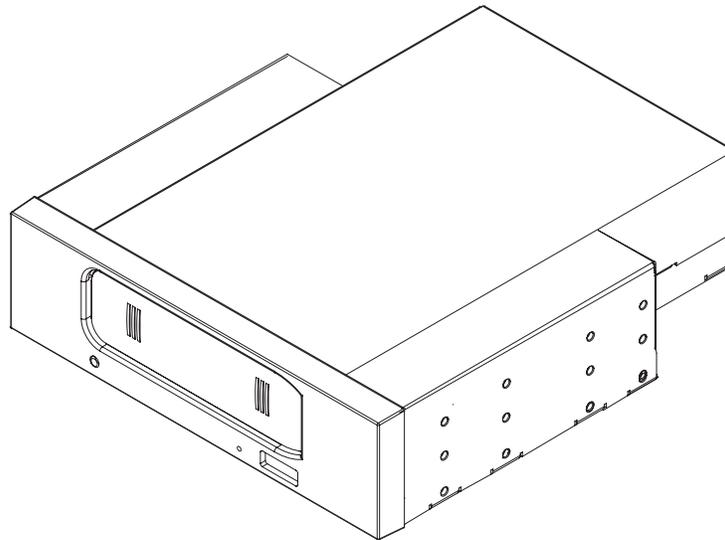


Figure 1. Drive carrier

The drive carrier has the following features:

- Is connected to the computer through a Serial ATA interface and is SATA II compliant at SATA 1.5 GB per second
- Is compatible with integrated 3 GB per second SATA controllers and with SATA 3 GB per second PCI host bus adapters
- Includes an LED for power and activity status
- Enables the cartridge to be hot-plugged and available to the operating system

## Cartridge

The cartridge (see Figure 2) is a removable hard disk drive.

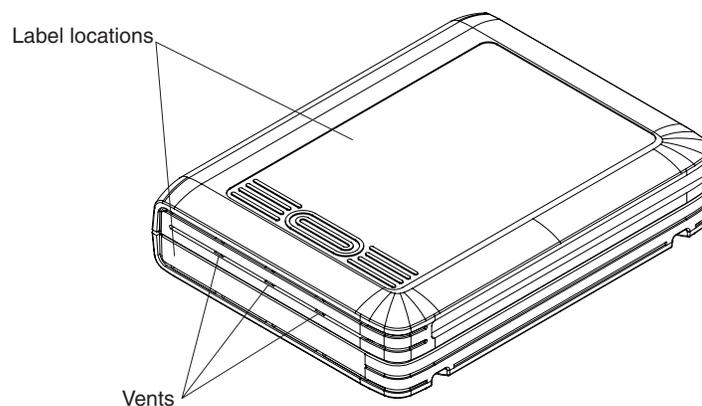


Figure 2. Cartridge

The cartridge has the following features:

- Is ruggedized to withstand a drop from up to .9 meter (36 inches) without damage
- Can be write-protected
- Can store 80 GB of data or 120 GB of data depending on the version
- Can be password protected

**Attention:** If you forget a password or enter an incorrect password three times, you cannot access the data by any means. The data can only be erased (see “Erasing a cartridge” on page 13).

## Software

The GoVault Drive is compatible with Linux and Windows file systems. It can act as a standard drive.

All backup applications that can work with removable-media disk devices will work with the GoVault Drive. However, backup applications that create files larger than 4 GB are not compatible with the FAT32 file system.

---

## Front panel

The front panel of the GoVault Drive contains a status LED, manual ejection hole, and eject button as shown in Figure 3.

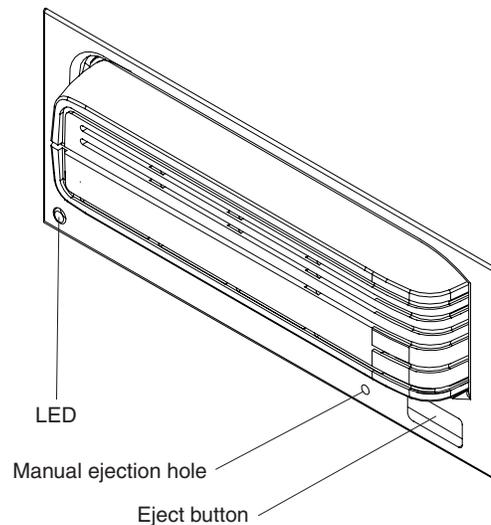


Figure 3. Front panel components

Table 1 describes the status indications of the status LED.

Table 1. Status LED indications

LED	Status
On	The carrier is turned on and functioning correctly. A cartridge might or might not be inserted.
Flashes slowly	One of the following operations is in progress: <ul style="list-style-type: none"><li>• Data is being read.</li><li>• Data is being written.</li><li>• A cartridge is being inserted or ejected.</li></ul>
Flashes moderately	A recoverable error has occurred. The cartridge must be replaced, or the temperature or voltage is too high.
Flashes quickly	An unrecoverable error has occurred. Either the cartridge or the drive carrier must be replaced.

---

## Chapter 2. Installing the GoVault Drive

This chapter provides instructions for installing the GoVault Drive and the GoVault Drive application.

---

### Installation guidelines

Before you remove or replace a device, read the following information:

- Read the safety information that begins on page v and “Handling static-sensitive devices.” This information will help you work safely.
- Observe good housekeeping in the area where you are working. Place removed covers and other parts in a safe place.
- Do not attempt to lift an object that you think is too heavy for you. If you have to lift a heavy object, observe the following precautions:
  - Make sure that you can stand safely without slipping.
  - Distribute the weight of the object equally between your feet.
  - Use a slow lifting force. Never move suddenly or twist when you lift a heavy object.
  - To avoid straining the muscles in your back, lift by standing or by pushing up with your leg muscles.
- Make sure that you have an adequate number of properly grounded electrical outlets for the server and all attached devices.
- Back up all important data before you make changes to disk drives.

### Handling static-sensitive devices

**Attention:** Static electricity can damage electronic devices. To avoid damage, keep static-sensitive devices in their static-protective packages until you are ready to install them.

To reduce the possibility of damage from electrostatic discharge, observe the following precautions:

- Limit your movement. Movement can cause static electricity to build up around you.
- The use of a grounding system is recommended. For example, wear an electrostatic-discharge wrist strap, if one is available.
- Handle the device carefully, holding it by its edges or its frame.
- Do not touch solder joints, pins, or exposed circuitry.
- Do not leave the device where others can handle and damage it.
- While the device is still in its static-protective package, touch it to an unpainted metal surface for at least 2 seconds. This drains static electricity from the package and from your body.
- Remove the device from its package and install it immediately without setting down the device. If it is necessary to set down the device, put it back into its static-protective package. Do not place the device on a metal surface.
- Take additional care when handling devices during cold weather. Heating reduces indoor humidity and increases static electricity.

## Returning the GoVault Drive

Keep the packaging that comes with the GoVault Drive in case you have to return it for service or warranty replacement.

---

## Hardware and software requirements

Before you begin the installation process, make sure that your system meets the following requirements:

- Hardware:
    - Intel Pentium 4 or higher microprocessor
    - One empty 5.25-inch drive bay
    - Serial ATA II (SATA II) compliant interface
    - CD drive
    - 20 MB of available hard disk drive space
  - A supported operating system. For the most current list of operating systems that support the GoVault Drive, go to <http://www.ibm.com/servers/eserver/serverproven/compat/us/xseries/storage/tmatrix.html> and select your system-and-device combination.
- 

## Parts inventory

Before you install the GoVault Drive, make sure that you received the following parts:

- GoVault Carrier:
    - Drive carrier
    - SATA cable
    - 4 mounting screws
    - *Warranty and Support Information* document
    - *Documentation CD*
  - GoVault Cartridge: Disk drive cartridge (80 GB or 120 GB)
- 

## Installing the GoVault Drive hardware

To install the GoVault Drive, complete the following steps:

1. Read the safety information that begins on page v and “Installation guidelines” on page 5.
2. Make sure that the system is turned off and that the power cord is disconnected.
3. Install the drive carrier in the bay, using the drive-installation instructions that came with your system.
4. Connect the SATA cable to the connector on the SATA adapter.
5. Connect the other end of the SATA cable to the drive carrier.

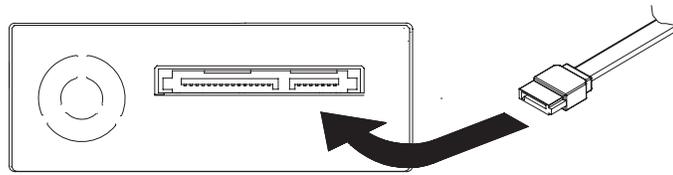


Figure 4. Connecting the SATA cable to the drive carrier

6. Connect the power cable (included with the system) to the drive carrier.

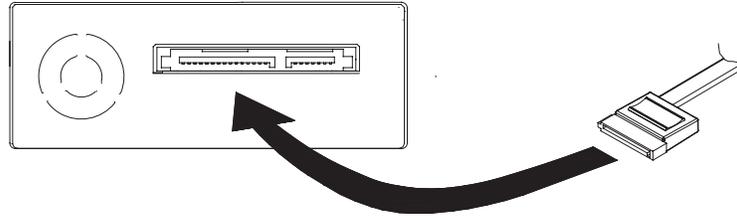


Figure 5. Connecting the power cable to the drive carrier

7. Make sure that the other end of the power cable is connected to the power supply.
8. Reinstall the system covers, using the instructions that came with the system.
9. Connect the power cord and turn on the system.
10. Insert the cartridge into the drive carrier and slowly push it in until it is seated.

The GoVault Drive is now ready to be used. However, to use all of the features of the GoVault Drive, go to “Installing the GoVault Drive application” and install the GoVault application.

---

## Installing the GoVault Drive application

To install the optional application software on a system that is running a Windows operating system, complete the following steps:

1. Make sure that the system is turned on.
2. Insert the *GoVault Drive Documentation* CD into the CD drive.
3. Wait for the Documentation Browser to start and then close it.
4. Browse the contents of the CD to find the Driver folder.
5. Open the Driver folder and double-click the SetupGoVault file. The Welcome to the GoVault Setup Wizard window opens.
6. Click **Next**. The Select Installation Folder window opens.
7. Click **Next** if you want to install the software in the default drive. Click **Browse** to select a different folder, and then click **Next**. The Confirm Installation window opens.
8. Click **Next** to start the installation. The Installation Complete window opens when the software has been installed.

To install the optional application software on a system that is running a Linux operating system, complete the following steps:

1. Log in as a root user.
2. Insert the *GoVault Drive Documentation* CD into the CD drive.
3. Wait for the Documentation Browser to start and then close it.

4. Browse the contents of the CD to find the Driver folder.
5. Open the Driver folder and copy the following files to a directory:
  - GoVault-1.2-5.i386.rpm
  - AddPackage
  - RemovePackage
6. Change to the directory that you copied the files to.
7. Open a terminal window and enter the following commands:

```
dos2unix addpackage
./addpackage
StartGoVault
```
8. Change to the root directory.
9. Edit the `.bash_profile` file and add the following line to the bottom of the file:

```
StartGoVault
```

---

## Chapter 3. Using the GoVault Drive

This chapter provides information about using the GoVault Drive.

---

### Ordering additional cartridges

To order additional cartridges, go to <http://www.ibm.com/servers/eserver/xseries/storage/tape.html>, or contact your IBM authorized reseller.

---

### Working with cartridges

This section provides information about working with cartridges.

#### Inserting a cartridge

**Note:** The data cartridge cannot be inserted upside down or backwards.

To insert a cartridge into the drive carrier, place the cartridge into the drive opening and slowly push it in until it seats firmly in the drive carrier. The LED on the drive carrier flashes while the operating system accesses the drive.

#### Ejecting a cartridge

You can use any of the following methods to eject a cartridge:

- Press the eject button on the drive carrier (see Figure 6 on page 10) for at least 0.5 second. If the cartridge is not ejected, the LED (see Figure 6 on page 10) flashes five times to indicate that either the operating system or the GoVault Drive application is preventing the cartridge from being ejected.
- Use the GoVault Drive application. For example, in Windows, complete the following steps:
  1. Right-click **Start**.
  2. Click **Explore**.
  3. Double-click **My Computer**.
  4. Right-click **Removable Disk**.
  5. Click **Eject**.
- Use the manual ejection hole (see Figure 6 on page 10) to eject the cartridge in case of a power loss, or when the other methods of cartridge ejection fail. To eject a cartridge, insert a straightened paper clip or similar object into the manual ejection hole until the cartridge is ejected.

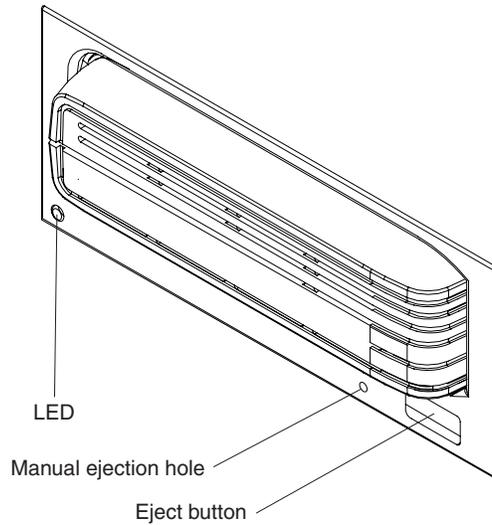


Figure 6. Drive carrier front panel components

## Write-protecting a cartridge

You can prevent data from being written to a cartridge by using the write-protect switch on the back of the cartridge. If a cartridge is write-protected, data cannot be written to or deleted from the cartridge, but data can be read from the cartridge.

To write-protect a cartridge, move the write-protect switch over the write-protect symbol on the cartridge.

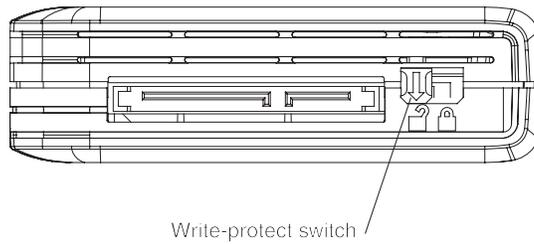


Figure 7. Write-protect switch

If an attempt is made to write data or delete data from a write-protected cartridge, the operation is prevented, and an error message is displayed.

## Labeling cartridges

Place labels only on the top and the front of the cartridge, as shown in Figure 8 on page 11.

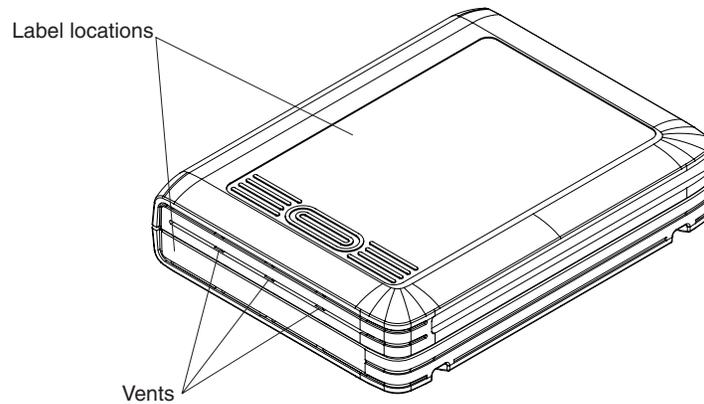


Figure 8. Label locations

**Attention:** Do not block the cartridge vents with the front label.

To ensure that the labels do not cause a problem, follow these guidelines:

- Place only one label at each label location.
- Use only labels that are similar to the labels that were supplied with the cartridge.
- Make sure that the edges of the labels adhere completely to the cartridge.

## Storing and handling cartridges

Observe the following guidelines when you store and handle cartridges:

- Do not stack cartridges.
- Do not drop cartridges from a height of more than .9 meter (36 inches).
- Store cartridges between 20°C (68°F) and 30°C (86°F) at 20% to 40% relative humidity (noncondensing), and a maximum wet bulb temperature of 25°C (77°F).
- Do not expose cartridges to more than 20°C (36°F) per hour temperature change.
- Do not expose cartridges to corrosive gases.
- Do not allow cartridges to get wet.
- Do not expose cartridges to excessive dust and airborne particles.
- Do not open cartridges.
- Do not expose cartridges to magnetic or electrical fields.

See Appendix A, “Specifications,” on page 23 for more information about the environmental specifications for the cartridges.

---

## Using the GoVault Drive application

On a system that is running a Windows operating system, you can use the GoVault Drive application to perform the following tasks:

- Use a password to protect data on a cartridge
- Format a cartridge
- Eject a cartridge
- Erase data from a cartridge
- Display cartridge properties
- Perform maintenance tasks
- Display information about the hardware that is installed in your system

- Define folders that can be shared on a network
- Display cartridge and carrier status
- Update firmware
- Enable the file autoplay function
- Define disk space quotas
- Define security information

On a system that is running a Linux operating system, you can use the GoVault Drive application to perform the following tasks:

- Use a password to protect data on a cartridge
- Eject a cartridge
- Display cartridge properties
- Update firmware
- Erase a cartridge

See “Using the GoVault Drive application with a Linux operating system” on page 17 for more information.

## Using the GoVault Drive application with a Windows operating system

This section provides information about using the GoVault Drive application with a system that is running a Windows operating system.

### Working with passwords

You can protect data on a cartridge by using a password. Every time you insert a password-protected cartridge into the drive carrier, you must enter the password.

A password must be defined for each cartridge.

**Attention:** If you forget a password or enter an incorrect password three times, you cannot access the data by any means. The data can only be erased (see “Erasing a cartridge” on page 13).

Passwords are case-sensitive and can be 6 through 16 characters. Passwords cannot contain spaces.

**Setting a password:** To set a password, complete the following steps:

1. Make sure that the cartridge is write-enabled, and insert it into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Set Password**. The Set Cartridge Password window opens.
7. Type the new password in the **New Password** and **Confirm Password** fields.
8. Click **OK**. The cartridge is now protected by the password.

**Using a password-protected cartridge:** To use a password-protected cartridge, complete the following steps:

1. Insert the cartridge into the drive carrier. The Enter Cartridge Password window opens.
2. Type the password and click **OK**.

If you type the correct password, the Enter Cartridge Password window closes, and the contents of the drive are displayed.

If you type an incorrect password, an error message is displayed. Eject and reinsert the cartridge, and then type the password again.

**Changing a password:** To change a password, complete the following steps:

1. Insert the password-protected cartridge into the drive carrier. If the cartridge is already in the drive, eject it and then insert it again. The Enter Cartridge Password window opens.
2. Type the password.
3. Select the **Change Password** check box.
4. Click **OK**. The Set Cartridge Password window opens.
5. Type the new password in the **New Password** and **Confirm Password** fields.
6. Click **OK**. The password is changed.

## Formatting a cartridge

**Attention:** The format function erases all data that is stored on a cartridge.

The GoVault Drive can be formatted for different capacities and the following file systems:

- FAT
- NTFS
- FAT32

**Note:** The Windows formatting option is compatible with the GoVault Drive, but it will not format files larger than 32 GB in FAT32. However, you can use the GoVault application to format files larger than 32 GB in FAT32.

To format a cartridge, complete the following steps:

1. Insert the cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Format**. The Format window opens.
7. Select the options that you want to use.
8. Click **Start**.

## Ejecting a cartridge

To eject a cartridge, complete the following steps:

1. Right-click **Start**.
2. Click **Explore**.
3. Double-click **My Computer**.
4. Right-click the GoVault Drive.
5. Click **Eject**. The cartridge is ejected.

## Erasing a cartridge

You can erase data from a cartridge by using the Security Erase Cartridge function. A cartridge must be password-protected before you can erase it by using the Security Erase Cartridge function.

**Note:** The Security Erase Cartridge function can take from 20 minutes to 2 hours, depending on the amount of data that is stored on the disk.

To erase all data from a password-protected cartridge, complete the following steps:

1. Insert the password-protected cartridge into the drive carrier. If the cartridge is already in the drive, eject it and then insert it again. The Enter Cartridge Password window opens.
2. Type the password and click **OK**. The Set Cartridge Password window opens.
3. Click **Security Erase**. The Security Erase Cartridge window opens.
4. Click **Start Erase** to start the Security Erase Cartridge function. A confirmation window opens.
5. Click **OK** to erase the cartridge.

### Displaying cartridge and drive carrier properties

To display properties (for example, the capacity and file system type) of a cartridge and the drive carrier, complete the following steps:

1. Insert the cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.

### Performing maintenance tasks

You can perform the following maintenance tasks:

- Check the cartridge for errors
- Back up files on the cartridge
- Defragment the cartridge

To perform cartridge maintenance tasks, complete the following steps:

1. Insert the cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.
7. Click the **Tools** tab.
8. Click one of the following buttons:
  - Click **Check Now** to check the cartridge for errors.
  - Click **Backup Now** to back up files on the cartridge.
  - Click **Defragment Now** to defragment the cartridge.

### Displaying hardware information

To display information about the hardware that is installed in the system, complete the following steps:

1. Insert a cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.

5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.
7. Click the **Hardware** tab. Information about the hardware that is installed in the system is displayed.

### Sharing folders on the network

To share the contents of a cartridge over a network, complete the following steps:

1. Insert the cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.
7. Click the **Sharing** tab.
8. Select **Share This Folder**.
9. Click **OK**.

### Displaying carrier and cartridge status

To display the status of the carrier and cartridge, complete the following steps:

1. Insert the cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.
7. Click **Status**. The Status window opens.

### Updating firmware

To update the GoVault Drive firmware, complete the following steps:

1. Go to <http://www.ibm.com/pc/support/site.wss/document.do?Indocid=TAPE-FILES> and download the latest version of firmware. Note the location that you downloaded it to.
2. Insert the cartridge into the drive carrier.
3. Right-click **Start**.
4. Click **Explore**.
5. Double-click **My Computer**.
6. Right-click the GoVault Drive.
7. Click **Properties**. The properties window opens.
8. Click the **Status** tab. The Status window opens.
9. Click **Update Firmware**. The Firmware Update window opens.
10. Enter the location of the updated firmware or click **Browse** to locate it.
11. Close all applications that are running.
12. Click **Start Update**. The Firmware Update window opens.
13. Click **OK** to start the firmware upgrade. The Firmware Update window opens.
14. Click **OK**. If the cartridge is not write-protected, the upgrade process is complete. If the cartridge is write-protected, the upgrade process is completed, and the cartridge is ejected.

## Enabling the file autoplay function

To enable the file autoplay function, complete the following steps:

1. Insert the cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.
7. Click **Autoplay**. The Autoplay window opens.
8. Select a content type:
  - Music
  - Pictures
  - Video files
  - Mixed content
9. Select an action that you want to be performed automatically when the GoVault Drive is used:
  - Play
  - Open folder
  - Take no action
10. Click **Apply**.

## Working with disk space quotas

To display disk space quota information, complete the following steps:

1. Insert the cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.
7. Click **Quota**. The Quota window opens.
8. Click **Quota Entries**. The quota information is displayed.

To define a disk space quota for a user, complete the following steps:

1. Insert the cartridge into the drive carrier.
2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.
7. Click **Quota**. The Quota window opens.
8. Select **Enable Quota Management**.
9. Specify the quota information.
10. Click **Apply**. A message is displayed.
11. Read the message and click **OK**.

## Defining security

To define the security properties for a user, complete the following steps:

1. Insert the cartridge into the drive carrier.

2. Right-click **Start**.
3. Click **Explore**.
4. Double-click **My Computer**.
5. Right-click the GoVault Drive.
6. Click **Properties**. The Properties window opens.
7. Click **Security**. The Security window opens.
8. Select the user that you want to specify security information for.
9. Specify the security permissions.
10. Click **Apply**.
11. If you want to work with the following advanced security functions, click **Advanced**:
  - **Permissions**: View or change user security permissions.
  - **Auditing**: Specify the events that you want to be written to the security log.
  - **Owner**: Assign ownership of objects.
  - **Effective permissions**: Display the permissions that a user or group inherit based solely on group membership.

## Using the GoVault Drive application with a Linux operating system

This section provides information about using the GoVault Drive application with a Linux operating system.

### Working with passwords

You can protect data on a cartridge by using a password. Every time you insert a password-protected cartridge into the drive carrier, you must enter the password.

A password must be defined for each cartridge.

**Attention:** If you forget a password or enter an incorrect password three times, you cannot access the data by any means. The data can only be erased (see “Erasing a cartridge” on page 18).

Passwords are case-sensitive and can be 6 through 16 characters. Passwords cannot contain spaces.

**Setting a password:** To set a password, complete the following steps:

1. Make sure that the cartridge is write-enabled, and insert it into the drive carrier.
2. From the Linux desktop, double-click the **GoVault Application** icon. The GoVault Application window opens.
3. Click **Set Password**. The Set Cartridge Password window opens.
4. Type the new password in the **New Password** and **Confirm Password** fields.
5. **Click OK**. The cartridge is now protected by the password.

**Using a password-protected cartridge:** To use a password-protected cartridge, complete the following steps:

1. Insert the cartridge into the drive carrier. The Enter Cartridge Password window opens.
2. Type the password and click **OK**.

If you type the correct password, the Enter Cartridge Password window closes.

If you type an incorrect password, an error message is displayed. Eject and reinsert the cartridge, and then type the password again.

**Changing a password:** To change a password, complete the following steps:

1. Insert the password-protected cartridge into the drive carrier. If the cartridge is already in the drive, eject it and then insert it again. The Enter Cartridge Password window opens.
2. Type the password.
3. Select the **Change Password** check box.
4. Click **OK**. The Set Cartridge Password window opens.
5. Type the new password in the **New Password** and **Confirm Password** fields.
6. Click **OK**. The password is changed.

### Ejecting a cartridge

To eject a cartridge, complete the following steps:

1. From the Linux desktop, double-click the **GoVault Application** icon. The GoVault control window opens.
2. Double-click the GoVault drive.
3. Double-click **Eject**. The cartridge is ejected.

### Displaying cartridge and drive carrier properties

To display properties (for example, the capacity and file system type) of a cartridge and the drive carrier, complete the following steps:

1. From the Linux desktop, double-click the GoVault Application icon. The GoVault Application window opens.
2. Double-click the GoVault drive.
3. Double-click **Properties**. The cartridge and drive carrier properties are displayed.

### Updating firmware

To update the GoVault Drive firmware, complete the following steps:

1. Go to <http://www.ibm.com/pc/support/site.wss/document.do?Indocid=TAPE-FILES> and download the latest version of firmware. Note the location that you downloaded it to.
2. Insert the cartridge into the drive carrier.
3. From the Linux desktop, double-click the **GoVault Application** icon. The GoVault Application window opens.
4. Double-click **Properties**. The Cartridge Properties window opens.
5. Double-click **Update Firmware**.
6. Type the firmware file name or click **Browse** to find the file.
7. Double-click **Start Update**. The firmware is updated.

### Erasing a cartridge

You can erase data from a cartridge by using the Security Erase Cartridge function. A cartridge must be password-protected before you can erase it by using the Security Erase Cartridge function.

**Note:** The Security Erase Cartridge function can take from 20 minutes to 2 hours, depending on the amount of data that is stored on the disk.

To erase all data from a password-protected cartridge, complete the following steps:

1. Insert the password-protected cartridge into the drive carrier. If the cartridge is already in the drive, eject it and then insert it again. The Enter Cartridge Password window opens.

2. Type the password and click **OK**. The Set Cartridge Password window opens.
3. Click **Security Erase**. The Security Erase Cartridge window opens.
4. Click **Start Erase** to start the Security Erase Cartridge function. A confirmation window opens.
5. Click **OK** to erase the cartridge.

## Solving problems

Error conditions are indicated by entries in the Windows Application Error log, error messages that are displayed on the screen, and the LED on the front of the GoVault Drive. For more information about the LED indications, see Table 1 on page 4.

Table 2 lists problems that might occur with the GoVault Drive and potential solutions.

Table 2. Problems and solutions

Problem	Error indication	Solution
Temperature out of range	<p>The LED on the front of the GoVault flashes moderately quickly, an error message is written in the Windows Application Event log, and the following message is displayed at the first occurrence of the problem:</p> <p>The GoVault has detected the temperature is beyond specifications. It is recommended that you close all backup applications and eject your cartridge.</p> <p>If the temperature-out-of-range condition continues for 2 minutes, the cartridge is ejected, and the following message is displayed every 5 minutes:</p> <p>The GoVault cartridge was ejected due to a temperature out of range condition detected.</p>	<ol style="list-style-type: none"> <li>1. Close all backup applications.</li> <li>2. Eject the cartridge.</li> <li>3. Turn off the system.</li> <li>4. Make sure that the system fans are operational and unobstructed.</li> <li>5. When the problem has been corrected, install the cartridge and turn on the system.</li> </ol> <p>When the operating temperature has been within the specified temperature range for 5 minutes, the following message is displayed:</p> <p>The GoVault temperature fault has cleared. The temperature has been within range for the past five minutes.</p>
Voltage out of range	<p>The LED on the front of the GoVault flashes moderately quickly, an error message is written in the Windows Application Event log, and the following message is displayed at the first occurrence of the problem:</p> <p>The GoVault has detected a supply voltage beyond specifications. It is recommended that you close all backup programs and eject your cartridge.</p> <p>If the voltage-out-of-range condition continues for 2 minutes, the cartridge is ejected, and the following message is displayed every 5 minutes:</p> <p>The GoVault cartridge was ejected. The GoVault has detected a supply voltage beyond specifications.</p>	<ol style="list-style-type: none"> <li>1. Close all backup applications.</li> <li>2. Eject the cartridge.</li> <li>3. Turn off the system.</li> <li>4. Correct the voltage-out-of-range condition.</li> <li>5. When the problem has been corrected, install the cartridge and turn on the system.</li> </ol> <p>When the supply voltage has been within the specified range for 5 minutes, the following message is displayed:</p> <p>The GoVault voltage fault has cleared. The voltage has been within range for the past five minutes.</p>

Table 2. Problems and solutions (continued)

Problem	Error indication	Solution
A Self-Monitoring, Analysis, and Reporting Technology (SMART) error has been detected.	The GoVault cartridge has detected a SMART error.	Contact IBM support.

## Replacing the drive carrier

The autoloader components are Tier 1 customer replaceable units (CRUs). Replacement of Tier 1 CRUs is your responsibility. If IBM installs a Tier 1 CRU at your request, you will be charged for the installation.

For more information about the terms of the warranty and getting service and assistance, see the *Warranty and Support Information* document.

If you are instructed to return a component, follow all packaging instructions, and use any packaging materials for shipping that are supplied to you.

Table 3 lists the replaceable components.

Table 3. CRU list

Description	CRU part number	Tier
GoVault carrier	24R0037	Tier 1
GoVault 80 GB cartridge	25R0038	Tier 1
GoVault 120 GB cartridge	42D8779	Tier 1
Mounting screws	42C3933	Tier 1
SATA cable	26K1186	Tier 1

## Removing the GoVault Drive carrier

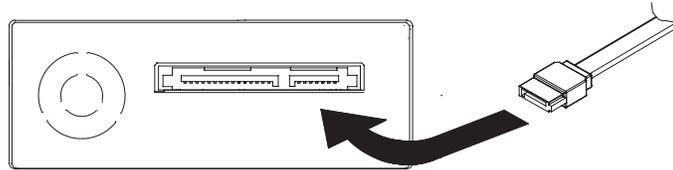
To remove the GoVault Drive carrier, complete the following steps:

1. Read the safety information that begins on page v and “Installation guidelines” on page 5.
2. Make sure that the system is turned off and that the power cord is disconnected.
3. Remove the cartridge from the drive carrier.
4. Remove the system covers, using the instructions that came with the system.
5. Disconnect the power cable from the drive carrier.
6. Disconnect the SATA cable from the drive carrier.
7. Remove the drive carrier from the bay, using the drive-installation instructions that came with your system.

## Installing the GoVault Drive carrier

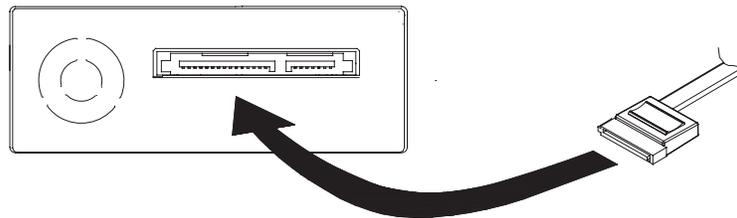
To install the GoVault Drive carrier, complete the following steps:

1. Read the safety information that begins on page v and “Installation guidelines” on page 5.
2. Make sure that the system is turned off and that the power cord is disconnected.
3. Install the drive carrier in the bay, using the drive-installation instructions that came with your system.
4. Connect the SATA cable to the drive carrier.



*Figure 9. Connecting the SATA cable to the drive carrier*

5. Connect the power cable to the drive carrier.



*Figure 10. Connecting the power cable to the drive carrier*

6. Reinstall the system covers, using the instructions that came with the system.
7. Connect the power cord and turn on the system.
8. Insert the cartridge into the drive carrier and slowly push it in until it is seated.



---

## Appendix A. Specifications

The section provides a summary of the GoVault Drive specifications:

---

### Hardware

*Table 4. Environmental specifications*

Condition	Specification
Temperature	10°C - 40°C (50°F - 104°F)
Thermal shock	10°C (18°F) over 2 minutes
Temperature gradient	11°C (19.8°F) over the temperature range
Relative humidity (non-condensing)	20% - 80%
Humidity gradient	10% per hour
Altitude	10 000 feet above MSL at 25°C (77°F)

*Table 5. Assembled cartridge and carrier characteristics*

Description	Value
Shock: Cartridge (non-operational)	Up to a .9 meter (36-inch) drop onto a hard surface
Shelf life (inside cartridge)	10 years
Humidity robustness: time to reach 60% relative humidity at 60°C/80% relative humidity soak (non-operational)	1000 hours
Insertions	2000 (minimum)

*Table 6. Cartridge operating environment*

Condition	Value
Temperature	5°C - 55°C (41°F - 131°F)
Relative humidity	5% - 90% (noncondensing)
Maximum localized temperature	Permanent damage at greater than 40°C (104°F)

*Table 7. Cartridge storage requirements*

Description	Value
Temperature	20°C - 30°C (68°F - 86°F)
Relative humidity	5% - 90% (noncondensing)

---

### Power requirements

*Table 8. 5 V dc power specification*

Description	Value
Operating voltage	5.00 V dc $\pm$ 5%
Non-operating maximum voltage	5.5 V dc
Maximum standby current	800 mA

Table 8. 5 V dc power specification (continued)

Description	Value
Maximum continuous operating current	1.2 A

**Note:** RMS parameters are measured at the power connector, using a true RMS meter.

Table 9. 12 V dc power specification

Description	Value
Operating voltage tolerance	12 V dc $\pm 10\%$
Non-operating maximum voltage	28 V dc
Maximum continuous operating current	300 mA
Maximum peak operating current	300 mA
Power-supply ripple	100 mA peak to peak

Table 10. Power Dissipation

Description	Value
Maximum standby power <sup>1</sup>	800 mA at 5 V
Maximum continuous operating power <sup>2</sup>	6 W
Maximum peak operating power	6 W
<sup>1</sup> In standby mode with a cartridge loaded	
<sup>2</sup> For the duration of the hard disk drive startup	

---

## Appendix B. Notices

This publication was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

*IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.*

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some jurisdictions do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this publication to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product, and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

---

## Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

BladeCenter  
IBM  
IBM (logo)  
IntelliStation  
ServerProven  
System x  
xSeries

Intel and Pentium are trademarks or registered trademarks of Intel Corporation or its subsidiaries in the United States and other countries.

Microsoft, Windows, and Windows NT are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, or service names may be trademarks or service marks of others.

---

## Important notes

Processor speeds indicate the internal clock speed of the microprocessor; other factors also affect application performance.

CD drive speeds list the variable read rate. Actual speeds vary and are often less than the maximum possible.

When referring to processor storage, real and virtual storage, or channel volume, KB stands for approximately 1000 bytes, MB stands for approximately 1 000 000 bytes, and GB stands for approximately 1 000 000 000 bytes.

When referring to hard disk drive capacity or communications volume, MB stands for 1 000 000 bytes, and GB stands for 1 000 000 000 bytes. Total user-accessible capacity may vary depending on operating environments.

Maximum internal hard disk drive capacities assume the replacement of any standard hard disk drives and population of all hard disk drive bays with the largest currently supported drives available from IBM.

Maximum memory may require replacement of the standard memory with an optional memory module.

IBM makes no representation or warranties regarding non-IBM products and services that are ServerProven<sup>®</sup>, including but not limited to the implied warranties of merchantability and fitness for a particular purpose. These products are offered and warranted solely by third parties.

IBM makes no representations or warranties with respect to non-IBM products. Support (if any) for the non-IBM products is provided by the third party, not IBM.

Some software may differ from its retail version (if available), and may not include user manuals or all program functionality.

---

## Product recycling and disposal

This unit must be recycled or discarded according to applicable local and national regulations. IBM encourages owners of information technology (IT) equipment to responsibly recycle their equipment when it is no longer needed. IBM offers a variety of product return programs and services in several countries to assist equipment owners in recycling their IT products. Information on IBM product recycling offerings can be found on IBM's Internet site at <http://www.ibm.com/ibm/environment/products/prp.shtml>.

Esta unidad debe reciclarse o desecharse de acuerdo con lo establecido en la normativa nacional o local aplicable. IBM recomienda a los propietarios de equipos de tecnología de la información (TI) que reciclen responsablemente sus equipos

cuando éstos ya no les sean útiles. IBM dispone de una serie de programas y servicios de devolución de productos en varios países, a fin de ayudar a los propietarios de equipos a reciclar sus productos de TI. Se puede encontrar información sobre las ofertas de reciclado de productos de IBM en el sitio web de IBM <http://www.ibm.com/ibm/environment/products/prp.shtml>.



**Notice:** This mark applies only to countries within the European Union (EU) and Norway.

This appliance is labeled in accordance with European Directive 2002/96/EC concerning waste electrical and electronic equipment (WEEE). The Directive determines the framework for the return and recycling of used appliances as applicable throughout the European Union. This label is applied to various products to indicate that the product is not to be thrown away, but rather reclaimed upon end of life per this Directive.

注意：このマークは EU 諸国およびノルウェーにおいてのみ適用されます。

この機器には、EU 諸国に対する廃電気電子機器指令 2002/96/EC(WEEE) のラベルが貼られています。この指令は、EU 諸国に適用する使用済み機器の回収とリサイクルの骨子を定めています。このラベルは、使用済みになった時に指令に従って適正な処理をする必要があることを知らせるために種々の製品に貼られています。

**Remarque :** Cette marque s'applique uniquement aux pays de l'Union Européenne et à la Norvège.

L'étiquette du système respecte la Directive européenne 2002/96/EC en matière de Déchets des Equipements Electriques et Electroniques (DEEE), qui détermine les dispositions de retour et de recyclage applicables aux systèmes utilisés à travers l'Union européenne. Conformément à la directive, ladite étiquette précise que le produit sur lequel elle est apposée ne doit pas être jeté mais être récupéré en fin de vie.

In accordance with the European WEEE Directive, electrical and electronic equipment (EEE) is to be collected separately and to be reused, recycled, or recovered at end of life. Users of EEE with the WEEE marking per Annex IV of the WEEE Directive, as shown above, must not dispose of end of life EEE as unsorted municipal waste, but use the collection framework available to customers for the return, recycling, and recovery of WEEE. Customer participation is important to minimize any potential effects of EEE on the environment and human health due to the potential presence of hazardous substances in EEE. For proper collection and treatment, contact your local IBM representative.

---

## Electronic emission notices

IBM GoVault Drive

## Federal Communications Commission (FCC) statement

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible party:  
International Business Machines Corporation  
New Orchard Road  
Armonk, NY 10504  
Telephone: 1-919-543-2193



Tested To Comply  
With FCC Standards

FOR HOME OR OFFICE USE

## Industry Canada Class B emission compliance statement

This Class B digital apparatus complies with Canadian ICES-003.

## Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

## European Union EMC Directive conformance statement

This product is in conformity with the protection requirements of EU Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to electromagnetic compatibility. IBM cannot accept responsibility for any failure to satisfy the protection requirements resulting from a nonrecommended modification of the product, including the fitting of non-IBM option cards. This

product has been tested and found to comply with the limits for Class B Information Technology Equipment according to CISPR 22/European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

## Japanese Voluntary Control Council for Interference (VCCI) statement

この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。  
取扱説明書に従って正しい取り扱いをして下さい。



---

# Index

## A

attention notices 2  
auditing 16  
autoplay function 16

## B

back up cartridge 14

## C

carrier status 15  
cartridge  
    back up files 14  
    check for errors 14  
    defragment 14  
    display status 15  
    ejecting 9  
    erasing on Linux systems 18  
    erasing on Windows systems 13  
    formatting 13  
    inserting 9  
    operating environment 23  
    ordering 9  
    password 12  
    protecting with password on Linux systems 17  
    set password 12  
    set password on Linux systems 17  
    share contents 15  
    storage requirements 23  
    using password protected 12  
    using password protected on Linux systems 17  
    write protecting 10  
cartridge properties, displaying on Linux systems 18  
cartridge properties, displaying on Windows systems 14  
caution statements 2  
common problems 19  
components 2  
CRU list 20

## D

danger statements 2  
defragment cartridge 14  
disk space quotas 16  
documentation CD 1  
drive carrier  
    description 2  
    installing 6

## E

eject button location 4  
erase cartridge on Linux systems 18  
erase cartridge on Windows systems 13

## F

file, autoplay 16  
firmware, updating on Linux systems 18  
firmware, updating on Windows systems 15  
format cartridge 13  
front panel, component locations 4

## H

hardware information 14  
hardware requirements 6  
hardware specifications 23

## I

important notices 2  
inherited security properties 16  
installation  
    drive carrier 6  
    GoVault Drive 6  
    guidelines 5

## L

LED  
    location 4  
    status indications 4

## M

manual ejection port  
    location 4  
    using 9

## N

notes 2  
notes, important 26  
notices and statements 2

## O

object ownership 16

## P

parts list 20  
parts, list of 6  
password  
    changing 13  
    changing on Linux systems 18  
    setting 12  
    setting on Linux systems 17  
    using 12  
    using on Linux systems 17  
permissions 16

power specifications 23  
problems 19

## Q

quotas, disk space 16

## R

requirements  
hardware 6

## S

security  
auditing 16  
define user properties 16  
inherited properties 16  
object ownership 16  
permissions 16  
share cartridge 15  
software requirements 6  
specification  
hardware 23  
specifications  
cartridge operating environment 23  
cartridge storage environment 23  
power 23  
testing 23  
statements and notices 2  
static-sensitive devices, handling 5  
status  
carrier 15  
cartridge 15

## T

testing specifications 23  
trademarks 25

## U

user security 16

## W

write-protect switch 10





Part Number: 40M3724

Printed in USA

(1P) P/N: 40M3724

