ThinkPad ThinkCentre

Portable 80 GB USB 2.0 Hard Drive with Rescue and Recovery

User's Guide

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Note: Before using this information and the product it supports, read the information in Appendix C, "Service and Support," on page 35 and Appendix D, "Lenovo Statement of Limited Warranty," on page 37.

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Preface

This manual provides information on the 80 GB USB 2.0 Hard Drive with Rescue and RecoveryTM. This manual is written for the installer and user of this equipment and contains the following information:

- Chapter 1, "Hardware User's Guide" contains instructions for installing and using the 80 GB Hard Disk Drive with Rescue and Recovery.
- Chapter 2, "Installing and using the Rescue and Recovery software," on page 5 contains installation prerequisites and instructions, a listing of Rescue and Recovery with Rapid Restore[™] components and system requirements, and an overview of the Rescue and Recovery with Rapid Restore concepts.
- Appendix A, "Troubleshooting" contains information that might be helpful if you encounter trouble using Rescue and Recovery with Rapid Restore.
- Appendix B, "Glossary," on page 29 contains definitions of industry terms to assist you in understanding some of the concepts discussed in this guide.
- Appendix C, "Service and Support," on page 35 provides service and support information.
- Appendix D, "Lenovo Statement of Limited Warranty," on page 37 provides warranty information.
- Appendix E, "Notices," on page 57 contains trademarks and legal notices.

Registering your option

Thank you for purchasing this Lenovo[™] product. Please take a few moments to register your product and provide us with information that will help Lenovo to better serve you in the future. Your feedback is valuable to us in developing products and services that are important to you, as well as in developing better ways to communicate with you. Register your option on the following Web site:

http://www.lenovo.com/register/

Lenovo will send you information and updates on your registered product unless you indicate on the Web site questionnaire that you do not want to receive further information.

Before you begin

Be sure to review the following information before installing and using the Portable 80 GB USB 2.0 Hard Drive with Rescue and Recovery.

- Attention

Only use the cables that come with this option. You might damage the drive if you use a cable not included with the option package. Do not attach an AC adapter to this device.

- To avoid damaging your USB Hard Drive, handle with care. When transporting the drive or when it is not in use, place it in the carrying case that comes with the option. For more information on correctly handling your USB Hard Drive, see "Maintaining the drive" on page 4.
- The primary USB cable must be connected to a USB high power port. If you experience problems, try connecting the primary USB cable to another USB port.
- When using your USB Hard Drive on a mobile computer with a USB 2.0 PCMCIA card, the primary USB cable must be inserted into the PCMCIA card high power port. You must also connect the auxiliary power cable to the USB port to provide adequate power.

- Attention

Lenovo does not support this product with a third party disk-utility that reorders or sorts the partition table.

- Attention

Please keep the CD that came with your Portable 80 GB USB 2.0 Hard Drive and make a copy of this CD. Lenovo cannot replace this CD, nor can it be downloaded from the web.

Online Help

The Rescue and Recovery integrated Online Help system is an invaluable source of information. The help system contains information that dynamically updates as you access different Rescue and Recovery components.

To access the Rescue and Recovery online help system, perform the steps below:

- 1. Access the Rescue and Recovery main console.
- 2. Go to the Help menu.

Chapter 1. Hardware User's Guide

This chapter contains instructions for installing and using the Portable 80 GB Hard Disk Drive with Rescue and Recovery.

Note: Before you install and use the Portable 80GB USB 2.0 Hard Drive with Rescue and Recovery, be sure to read "Before you begin" on page vii.

Product description

The Portable 80 GB Hard Disk Drive with Rescue and Recovery is a portable, lightweight, high-speed USB hard disk drive that is compatible with the USB 2.0 standard which enables data transfers that are up to 80 times faster than through USB 1.1 connections. The drive can be used with mobile or desktop computers and is also compatible with USB 1.0 and USB 1.1 connections. After you install the drive, it operates as a plug-and-play device and is hot-swappable; that is, you can connect and disconnect the drive while the computer is running. See "Disconnecting the drive from your computer" on page 3.

The option package includes:

- · Portable 80 GB Hard Disk Drive with Rescue and Recovery
- Primary USB cable (USB "A" to "mini B" connection)
- Auxiliary power cable
- *User's Guide and Software CD* that includes the Rapid Restore software and this online *User's Guide*

Note: Please keep this CD and make a copy of it. Lenovo cannot replace this CD, nor can it be downloaded from the Web.

- Warranty flyer
- Carrying case

Hardware and software requirements

You must have the following hardware installed on your computer:

- Minimum 200MHz Intel[™] Pentium[®] microprocessor
- 64 MB Random Access Memory (RAM)
- · CD-ROM or DVD-ROM drive to install the software on the included CD
- USB 1.1 or 2.0 ports

Your computer must have Microsoft[®] Windows[®] 2000 Professional or Microsoft Windows XP installed to use the Portable 80 GB Hard Disk Drive with Rescue and Recovery.

Installing the drive

This section provides instructions for installing the drive.

To install the drive, complete the following procedure:

1. Attach the primary USB cable to the USB port **5**, as shown in Figure 1.



- **1** Power switch
- 2 Drive activity LED
- **3** Auxiliary power port
- 4 Power LED
- 5 USB port
- 6 Primary USB cable
- 7 Auxiliary power cable

Figure 1. Installing the drive

- 2. Connect the other end of the primary USB cable **6** to an available USB port on your computer.
- **3**. Attach the auxiliary power cable to the auxiliary power port **3** on the drive.
- 4. Attach the other end of the auxiliary power cable **7** to an available USB port on your computer.
- 5. Turn the switch **1** to the on position.

Attention

Only use the cables that come with this option. You might damage the drive if you use a cable not included with the option package. Do not attach an ac adapter to this device.

6. Open **My Computer** and double-click the icon that is associated with the USB Hard Drive.

Windows will automatically detect the drive. The first time you perform these steps, a welcome window will open with the option to install the Rescue and Recovery software.

If you intend to use the included Rescue and Recovery software, be sure to read Chapter 2, "Installing and using the Rescue and Recovery software," on page 5.

If you do not intend to use the included Rescue and Recovery software, then your drive is ready to use, no additional software install is required. To disable the autolaunch, click **Do not show this again** in the lower-left hand corner of the browser window, disconnect the drive, and then reconnect the drive.

Note: Depending on the amount of data that is being backed up, the Rescue and Recovery installation can require a substantial amount of time. This is especially true when backing up using a USB 1.1 connection. Interrupting a Rescue and Recovery installation may result in data loss.

Making your drive bootable

Your drive can be configured to be bootable on systems that have boot-to-USB BIOS support. Typically, the BIOS will detect the drive as "HDD-1" or "USB." To add the Portable 80 GB Hard Disk Drive with Rescue and Recovery to your computer startup sequence, you will need to use your computer BIOS setup utility. For information on using the BIOS setup utility, refer to the documentation that came with your computer.

If you are having a problem, be sure to check that you have the latest BIOS installed on your computer. For a list of computers that support booting through BIOS to USB storage devices, refer to the http://www.lenovo.com/think/support support Web site.

Note: Please make sure to read "Creating a secure environment to reset forgotten hardware passwords" on page 9 before trying to make your drive bootable.

If you do not see the drive listed as one of the devices that can be added to the boot list, Reset BIOS settings to default.

To do this:

- Press F1 as the system is booting (to get into Setup/BIOS). Once the BIOS screen appear:
- 2. Press F9 to set the BIOS default settings.
- 3. Answer Yes to the "Load Defaults Now" question.
- 4. Press **F10**.
- 5. Answer Yes to the "Save and Exit" question.

Disconnecting the drive from your computer

To disconnect the drive, complete the following procedure.

- 1. Click the **Safely Remove Hardware** icon in the system tray.
- 2. Click the **USB Mass Storage Device** icon to stop the device.
- 3. Turn the drive power switch to the off position.
- 4. Disconnect the cables.

Detaching the system from a docking station or media bay

When the USB HDD is attached to the USB ports on a docking station or media bay, steps need to be taken to assure a complete undock and prevent possible data loss. Please complete one of the following methods:

Method 1

Use the Undock Computer function from the Start Menu in Windows.

Method 2

On a Thinkpad computer, hit Fn + F9 to access the Easy Eject Action menu, then Eject Thinkpad PC from Dock. It is recommended to wait at least two minutes following writing data to the USB HDD before starting the eject process. If the ejection process fails to complete with a message stating that the system is unable to stop the device, then click the **Safely Remove Hardware** icon in the system tray prior to using Fn + F9 again.

Maintaining the drive

Use the following maintenance guidelines for your drive.

- Do not drop or shock the drive.
- Use the drive power switch to turn off the drive when you are not using it.
- Do not operate or store the drive near strong magnetic fields.
- Do not expose the drive to liquids, extreme temperatures, or humidity.
- Do not use any power cables or adapters that are not included in this option package.

Chapter 2. Installing and using the Rescue and Recovery software

The ThinkVantage Rescue and RecoveryTM product provides a number of features that can help you recover from a problem, even if you cannot start the Microsoft Windows[®] operating system. Main features include:

- Full and incremental hard disk backup through the Rescue and Recovery program located in the Windows environment. Backup files can be stored in a protected area of your hard disk, on recordable CD or DVD media, on a network drive, or on a USB device.
- Full hard disk recovery using backup files created by the Rescue and Recovery program.
- Recovery and transfer of individual files stored on your local hard disk in Windows partitions, a network drive, or from a Rescue and Recovery backup file.
- The Rescue and Recovery workspace, which runs independently of the Windows
 operating system. Through the Rescue and Recovery workspace, you can restore
 your hard disk to one of several saved states, recover files from your Windows
 partition or from a backup, communicate over the Internet, and view useful
 information about the condition of your computer.

Prerequisites

To install this program, the following conditions must be met:

- Windows XP or Windows 2000 with Service Pack 3 or later. If you are installing this program on a hard disk that has a capacity of greater than 137 GB, Service Pack 1 is required for Windows XP.
- Internet Explorer 5.5 or later
- 128 MB of memory of which no more than 8 MB can be designated as shared memory under the video setup in BIOS.
- 800 MB of free disk space
- Administrator privileges are required to perform this installation.

About Rescue and Recovery

The Rescue and RecoveryTM 3 program is a ThinkVantageTM technology aimed at helping users restore their computer data and recover from software or hardware-related failures. In the event of a computer failure, you can use the Rescue and Recovery program to restore the contents of the primary hard drive to a previously saved state.

Additional information

If you are an administrator, system engineer, network administrator, or customer engineer seeking to implement the Rescue and Recovery program across a large enterprise, you can obtain additional and more detailed information by reading the *ThinkVantage Rescue and Recovery and ThinkVantage Client Security Solution Deployment Guide* located at the following Web site:

http://www-307.ibm.com/pc/support/site.wss/ document.do?lndocid=MIGR-54502

Introduction

The Rescue and Recovery program enables you to manage backups, which can be stored on your hard disk drive, on a remote network drive, or on removable media such as CDs, DVDs, or a USB hard disk drive. You can use your backups to restore the contents of your hard disk drive in the event of a complete operating-system failure. If you store your backups on a remote network drive or removable media, and you experience a hard disk mechanical failure, you can restore the contents of your hard disk to a previously stored state after you install a replacement hard disk drive. In addition, you can schedule backup operations to take place automatically on a specified day and time, or you can manually initiate a backup operation to take place any time you think it is necessary.

The Rescue and Recovery program is divided into two components. One component resides outside of the Windows[®] environment and is called the Rescue and Recovery workspace. The other component is available within the Windows environment and contains many of the same functions as the workspace. However, the ability to perform a backup operation is only available by using Rescue and Recovery components in the Windows environment. The act of performing a backup is key to being able to perform many rescue and recovery operations within the workspace and Windows environment.

- **Rescue and Recovery workspace:** Because the workspace runs independently of the Windows operating system, it is hidden and immune from most types of virus attacks and provides a safe place from which to perform rescue and recovery operations that might not be possible in the Windows environment. The following list includes some of the tasks you can accomplish using the Rescue and Recovery workspace:
 - Rescue individual files or restore the entire contents of your hard drive.
 - Help protect the workspace from unauthorized use by assigning either a password or passphrase.
 - Use a wired Ethernet connection to communicate over a network, access the Internet and Intranet sites, send and receive e-mails using a Web-based e-mail account, map a network drive, or download important files.
 - Troubleshoot a problem by viewing logs to see if a failure coincided with a configuration change.
 - Configure your computer to start from an alternate device such as backup CDs created by the Rescue and Recovery program, Rescue and Recovery media, or product recovery discs.
- **Rescue and Recovery (Windows environment):** Performing Rescue and Recovery operations in the Windows environment is similar to performing the same operations in the workspace. However, there are a variety of settings and preferences that you can customize as you begin to use the program to create regularly scheduled backups. The following list includes some of the tasks you can accomplish using the Rescue and Recovery components within the Windows environment:
 - Backup files to a hidden, protected folder on the local hard-disk drive
 - Schedule daily, weekly, or monthly backups
 - Restore files to a previously saved state
 - Optimize your backup storage space
 - Archive backups to external media

Before you install Rescue and Recovery

Before you install the Rescue and Recovery program it is important that the following prerequisites are met:

- Windows XP or Windows 2000 with Service Pack 3. If you are installing this program on a hard disk that has a capacity of greater than 137 GB, Service Pack 1 is required for Windows XP.
- Internet Explorer 5.5 (or higher).
- 128 MB of memory of which no more than 8 MB can be designated as shared memory under the video setup in BIOS.
- 800 MB of free disk space.

Administrator rights are required to perform this installation.

Installing Rescue and Recovery

Complete the following installation process to install the Rescue and Recovery program:

- 1. Start your computer and close any open programs.
- 2. Insert the Rescue and Recovery installation CD. In most cases, the installation program starts automatically. If the installation program does not start, do the following:
 - a. From the Windows desktop, click Start, and then click Run.
 - b. Type *d*:\SETUP.EXE (where *d* is the drive letter of the CD or DVD drive that contains the Rescue and Recovery installation CD.)
 - c. Follow the instructions on the screen.
 - **Note:** Some Rescue and Recovery installation packages provide an opportunity to install the Client Security Solution 6.0 application as well. To install the Client Security Solution 6.0 application in addition to the Rescue and Recovery program, select the Client Security Solution and any of its subcomponents during the install process.

To view considerations about installing this version of the Rescue and Recovery program over previous versions of the Rescue and Recovery program, or about installing the Rescue and Recovery program in conjunction with the Client Security Solution application, see "Using the Client Security Solution with Rescue and Recovery" on page 17.

Creating Rescue and Recovery media

You can create three types of Rescue and Recovery(TM) media to help you restore your computer even if you cannot enter the Windows(R) environment. Each type of media has its own purpose. The following list describes how Rescue and Recovery media is used:

- **Product Recovery discs:**You use Product Recovery discs to restore the contents of the hard disk to its original factory state. Product Recovery discs are useful if you transfer the computer to another area, sell the computer, recycle the computer, or as a last resort put the computer in an operational state after all other methods of recovery have failed. This recovery media is intended for ThinkCentre[™] and ThinkPad[®] computers only.
- **Rescue media:**Rescue media enables you to create a CD or a USB hard disk drive that you can use to help recover from failures that prevent you from gaining access to the Windows environment or the Rescue and Recovery workspace on your hard disk. Although such problems are rare, it is a good idea

to be prepared and make your rescue media as soon as possible, before a problem occurs. This recovery media is intended for ThinkCentre and ThinkPad computers as well as other brands of computers.

• Secure environment to reset forgotten hardware passwords: This secure environment runs independently of Windows and will help you reset forgotten power-on and hard-disk-drive passwords. Your identity is established by answering a set of questions that you created. It is a good idea to create this secure environment as soon as possible, before a password is forgotten. You cannot reset forgotten hardware passwords until this secure environment is created on your hard drive and after you have enrolled. This recovery media is supported on select ThinkCentre and ThinkPad computers only.

Creating and using Product Recovery discs

To create a set of Product Recovery discs, you must have a CD or DVD drive capable of recording on writable CD or DVD media. When you create your set of Product Recovery discs, you make one Rescue and Recovery disc and, depending on the media you use, one or more Product Recovery discs.

To create Product Recovery discs, do the following:

- 1. Start the Create Recovery Media program.
- 2. Mark the Create Product Recovery discs radio button.
- 3. Mark the Create a set of Product Recovery discs now radio button.
- 4. Click OK.
- **Note:** Your Microsoft[®] Windows license permits you to create only one set of Product Recovery discs, so it is important that you store the discs in a safe place after you make them. When you restore your computer with the Product Recovery discs, all data and partitions on your hard disk are deleted. The end result will be a single C: partition containing the original factory contents. After using the Product Recovery discs to restore your computer, you will no longer be able to restore your computer from a backup that was taken previously.

To use your Product Recovery discs, do the following:

- 1. Insert the Rescue and Recovery disc into your CD or DVD drive.
- 2. Restart your computer.
- 3. After a short delay, the Rescue and Recovery workspace opens.
 - **Note:** If the Rescue and Recovery workspace fails to open, you might not have your startup device (CD drive, DVD drive, or USB device) set correctly in your BIOS startup sequence. Refer to the documentation that came with your computer for information about gaining access to the BIOS configuration utility.
- 4. In the Rescue and Recovery menu, click **Restore your system**.
- **5**. Follow the instructions on the screen. Insert the appropriate Product Recovery disc when prompted.

Creating and using Rescue media

You can perform the following tasks using the Rescue and Recovery workspace from your rescue media:

- Recover files, folders, or your entire hard disk contents from a backup using the Rescue and Recovery program
- View key information about your computer and an event history

- Troubleshoot problems by using information and diagnostics
- Transfer files from your computer or network to other media

To create your rescue media now, do the following:

- 1. Mark the Create rescue media radio button.
- 2. Select the radio button for the type of rescue media you want to create. You can create rescue media on a a CD, a USB hard disk drive, or an internal hard drive.
- **3**. If you choose to create rescue media on a USB hard disk drive or an internal hard drive, then use the drop-down menu to select the drive on which you want the media created.
- 4. Mark the Do not destroy existing data check box if you would like to make existing partition bootable and preserve the contents of that partition.

Note: f you choose to create rescue media on either a USB hard-disk drive or an internal hard drive, then the drive must:

- Have 500 MB of available storage
- Contain either a FAT32 or NTFS file system format
- Have been created using a Windows partitioning utility

Rescue media must be created on a primary partition, not an extended or logical partition. Rescue media is only created in the first primary partition on a drive. If a primary partition does not exist, one will be created for you.

- 5. Click OK.
- 6. Follow the instructions on the screen.

If you do not want to make rescue media now, click **Cancel**.

To use your rescue media, do one of the following

- Insert the rescue disc (CD or DVD) into your CD or DVD drive, then restart your computer.
- Attach your USB hard disk drive to one of the USB connectors on your computer; then, turn on your computer.

When the rescue media starts, the Rescue and Recovery workspace opens. Help for each feature is available from the Rescue and Recovery workspace.

Note: If your rescue media fails to start, you might not have your rescue device (CD drive, DVD drive, or USB device) set correctly in your BIOS startup sequence. Refer to the documentation that came with your computer for information about gaining access to the BIOS configuration utility.

Creating a secure environment to reset forgotten hardware passwords

This secure environment enables you to recover if power-on or hard-disk-drive passwords are lost or forgotten. Creating this environment does not help you recover from forgotten Windows passwords, or passwords associated with the Rescue and Recovery workspace. By creating this environment, you are adding an additional bootable device to the Startup Device Menu, from which you can reset your forgotten hardware passwords. You access this menu by pressing F12 when you are prompted for your power-on password.

Note: It is a good idea to set an Administrator or Supervisor password before beginning this procedure. If you do not have an Administrator or Supervisor password set, your environment will not be as secure as possible. When you complete this procedure, your power-on password and hard-disk-drive password will be the same. It is a good idea to print this procedure and save it in a safe place. This procedure is designed to help you complete the task of creating the secure environment and to help you reset your forgotten passwords after the secure environment is created.

To create the secure environment, do the following:

- 1. In the hardware password reset environment area, mark the **Create secure environment to reset hardware passwords** radio button.
- 2. Click OK. The BIOS Supervisor Password window opens.
- **3**. In the Enter Supervisor Password field, type your administrator or supervisor password. This is the Administrator or Supervisor password that you have previously set in BIOS to protect your hardware settings.
- 4. Click OK. The Create key window opens.
- 5. In the Key generation area, do one of the following:
 - **Note:** A key is a security feature used to authenticate your identity. The first time you create this secure environment you have to create a new key. Any subsequent attempts to create a secure environment will give you the option to either use the same key that you created on your initial attempt or create a different key. If you are creating this environment for this computer only, it is a good idea to generate a new key. If you are creating this environment for several computers, you might want to use the same key. See the Rescue and Recovery Deployment Guide for details about creating a secure environment for several computers. To download the Rescue and Recovery Deployment Guide, go to

http://www.lenovo.com/think/support/site.wss/ document.do?lndocid=MIGR-54502&sitestyle=lenovo

- If this is your first time creating a key and you plan to create the secure environment on this computer only, then mark the **Generate new key** radio button.
- If this is your first time creating a key and you want to create a secure environment that can be deployed to other computers, then mark the **Generate new key** radio button. Then mark the **Export key to file** checkbox. Use the **Browse** button to define where you want the key to be stored.
- If you have already created a key and want to use that key to create a secure environment that can be deployed to other computers, then mark the **Import key from file** radio button. Use the **Browse** button to define where the key you want to use is located.
- 6. In the Install area, mark the Automatically install the secure environment check box if you want to create the secure environment now.
- 7. Click **OK** to install the secure environment. Failing to install the package will not result in a secure environment.
- 8. Click **OK**. A dialog box opens informing you that this operation will create a secure operating system, independent of the Windows environment. By performing this operation you will be able to reset your power-on and hard-disk-drive passwords in the event that they are forgotten.
- **9**. Click **OK** to restart your computer. Your computer will restart and prompt you to enter your BIOS passwords. Enter your BIOS passwords; then, click **Enter**. You will restart into the secure environment where the Welcome to hardware password reset window opens.

- **10**. Mark the Setup hardware password reset radio button if this is your first time creating the secure environment or if you would like to re-enroll your computer and hard disks.
- 11. Click Next. The Hard disks to be set up window opens.
- 12. In the Computer Serial Number area, mark the **Set up** check box beside the computer you want to set up.
- **13**. In the Hard disks area, mark the **Set up** check box. If you have more than one hard disk drive, options to enroll the additional hard disk drives are provided.
- 14. Click Next. The Enter new power-on password window opens.
- 15. In the New power-on password field, type the power-on password you want to use. If you already have a power-on password it will be reset to the one you enter into the field. In addition, your hard-disk-drive password also will be set to the same password.
- 16. Click Next. The Create security questions and answers window opens.
- 17. In each of the three Question fields type a question to which only you know the answers. These questions will be presented to you in the event that you forget your power-on password and attempt to reset it.
- **18**. In each of the three Answer fields type the answer to each question. You will be required to know each answer in the event that you forget your power-on password and attempt to reset it.
- **19.** Click **Next**, and then click **Finish**. Your computer will restart in the Windows environment.

Resetting or erasing hardware passwords

Complete the following steps to reset or erase a hardware password that you have already set. You can only reset or erase a hardware password if you have installed, enabled, and enrolled your secure environment. To create a secure environment, see "Creating a secure environment to reset forgotten hardware passwords" on page 9

- **Note:** When you reset your hardware password, your power-on password and hard-disk-drive password will be the same. It is a good idea to print this procedure and save it in a safe place. This procedure is designed to help you complete the task of creating the secure environment and to help you reset your forgotten passwords after the secure environment is created.
- To reset or erase a forgotten password, complete the following procedure:
- 1. Turn on the computer. When prompted for your power-on password, press F12.
- 2. When prompted for your hard-disk-drive password, press F12. The Welcome to Hardware password reset window opens. Do one of the following:
 - **Reset forgotten hardware password**: Mark this radio button if you have forgotten your passwords and would like to reset them.
 - a. Click Next. The Hardware password to be reset window opens.
 - b. In the Computer Serial Number area, click the **Reset power-on password** button beside the appropriate computer.
 - c. In the Hard disk area, click the **Reset hard-drive password** button beside the appropriate hard drives. If you have more than one hard disk drive, options to reset the additional hard disk drives are provided.
 - d. Click Next. The Answer security questions window opens.
 - e. Provide the answers to the questions that you provided when you initially set your hardware passwords. Click **Next**. The Create new power-on password window opens.

- f. In the New power-on password field, type the power-on password you want to use. In addition, your hard-disk-drive password also will be set to the same password.
- g. Click **Next**, and then click **Finish**. Your computer will restart in the Windows environment.
- Erase hardware password: Mark this radio button if you would like to erase the hardware passwords. You might want to erase hardware passwords if this computer once belonged to another owner and you want to erase the current hardware passwords before assigning the computer to a different owner.
 - a. Click Next. The Erase hardware passwords window opens.
 - b. In the Computer Serial Number area, click the **Erase password** button beside the appropriate computer.
 - c. In the Hard disk area, click the **Erase password** button beside the appropriate hard drives. If you have more than one hard disk drive, options to erase the passwords on additional hard disk drives are provided.
 - d. Click Next. The Answer security questions window opens.
 - e. Provide the answers to the questions that you provided when you initially set your hardware passwords. Click **Next**, and then click **Finish**. Your computer will restart in the Windows environment.

Using Rescue and Recovery in the Windows environment

The Rescue and Recovery program in the Windows environment enables you to perform numerous types of backup, restore, and advanced functions. The following information instructs you on how to access the Rescue and Recovery program as well as how to use many of its features.

Accessing Rescue and Recovery in the Windows environment

Complete the following procedure to access the Rescue and Recovery program in the Windows environment:

- 1. From the Windows desktop, click Start.
- 2. Select Programs.
- 3. Select ThinkVantage.
- 4. Click Rescue and Recovery.

Setting Rescue and Recovery preferences

The Rescue and Recovery program enables you to select which hard drive partitions to include in backup operations and to select the backup locations you want to use to store your backups. To set you preferences, complete the following procedure:

- 1. Open the Rescue and Recovery program within the Windows environment.
- 2. From the Rescue and Recovery main window, click the **Set schedule and preferences** icon.
- 3. Follow the instructions on the screen. Click Help for more detailed information.

Scheduling: Establishing a schedule for your backup operations ensures that your valuable files will be systematically protected. You can schedule automatic backup operations to take place on a daily, weekly, or monthly basis at a day and time of your choosing. If you prefer not to have backup operations take place automatically, you also can disable scheduled backup operations. By default, backups are scheduled to take place every Wednesday at noon. However, you

might want to change the backup schedule to fit your specific needs. To change the backup schedule, complete the following procedure:

- 1. Open the Rescue and Recovery program within the Windows environment.
- 2. From the Rescue and Recovery main window, click the **Set Schedule and preferences** icon.
- 3. Follow the instructions on the screen. Click Help for more detailed information.

Password protecting backup files: The Rescue and Recovery program enables you to password-protect your backups. This protection helps to ensure that unauthorized users cannot access your sensitive information from one of your backups.

Note: Password-protecting a backup is different than encrypting a backup. You can password-protect a backup on a ThinkCentre[®], ThinkPad[®], or computers produced by other manufacturers. Encrypting a backup, however, requires the embedded security chip, which is only available on select ThinkPad and ThinkCentre computers. For more information about using the Client Security Solution application in conjunction with Rescue and Recovery, see "Using the Client Security Solution with Rescue and Recovery" on page 17.

To password-protect your backups, complete the following procedure:

- 1. Open the Rescue and Recovery program within the Windows environment.
- 2. From the Rescue and Recovery main window, click the **Set schedule and preferences** icon.
- 3. Follow the instructions on the screen. Click **Help** for more detailed information.

Rescue and Recovery features

The Rescue and Recovery program provides a variety of backup, restore, and advanced features. The following information provides a brief overview of many of the features available.

Backup features: Performing a backup operation helps to ensure that you can restore your hard disk contents to a previously known state. The following list describes the types of bakcup features provided with the Rescue and Recovery program:

- **Creating a backup:** A backup is a snapshot of the entire contents of your hard-disk drive, including the Microsoft Windows operating system, software application, registry settings, network settings, fix packs, desktop settings, and unique data files. You can create a backup on your local hard-disk drive, a second hard-disk drive, a USB hard-disk drive, or a network drive.
- Viewing backup files: This feature enables you to view all of your backups, including the location of the backups, the backup names, and the dates and times the backups were created. Backups created on unattached, external devices are not listed. By default, the base (or initial) backup is saved along with five incremental (or subsequent) backups. Only the most recent backups are saved. In order to retain older backups, you must archive backup files to an external device.
- **Optimizing backup storage:** This feature enables you to optimize the space used to store your backups. If you schedule backup operations, it is a good idea to use the Optimize backup storage space tool to specify files that might not require frequent backups.

Restore features: Performing a restore operation restores the contents of your hard disk to a previously known state. There are different types of restore

operations, some being more invasive than others. The following list describes the types of restore features provided with the Rescue and Recovery program:

- **Restoring individual files:** Copying files and folders to an external medium provides valuable protection for your data. The Rescue and Recovery program enables you to copy files and folders to a diskette, a second hard drive, a USB hard drive, or a network drive. Then you can restore the files that you saved.
- **Restoring only the operating system and applications:** When you select to restore only the Windows operating system and applications from a backup, the Rescue and Recovery program restores only Windows and application files to the backed-up state. Your current personal data will be preserved. All applications installed since the time of the backup will need to be reinstalled. Some settings, such as network and printer settings, might need to be reconfigured.
- **Rejuvenating your system:** Selecting to rejuvenate your system optimizes system performance by taking a new incremental backup and then defragmenting your hard drive and backups. It then restores selected settings and data from a backup of your choice. This feature helps eliminate viruses, adware, and spyware while maintaining your current settings and data. All applications installed since the time of the backup will need to be reinstalled.
- **Restoring your entire hard disk:** You can choose to restore your hard disk to any number of backed-up states. Each backup is differentiated by its creation time and date. The Rescue and Recovery program can restore your system from a backup stored on the local drive, a USB hard drive, a network drive, or from CD or DVD. When performing a restore operation, all data created after the selected backup was taken is erased.
 - **Note:** If you start your computer from an alternate device such as a CD or DVD drive, make sure that you have the appropriate backup CDs or DVDs. The backup CDs or DVDs will be used after this process to format your hard drive. If you do not have your backup CDs or DVDs, all data on your hard drive will be lost.
- **Restoring to the factory-installed state:** This recovery method reformats the primary partition of your hard disk (drive C); then, reinstalls your operating system, device drivers, and factory-installed software. The hard disk is restored to the same state as when the computer was originally manufactured.
 - **Note:** If you are running this utility from a CD, all data and partitions on your hard disk will be deleted. The end result will be a single C: partition containing the original factory contents. If you are running this utility from a hard disk that has multiple partitions, you will be given the option of restoring the factory contents to the C: partition only and leaving the other partitions intact, or deleting all partitions and installing the factory contents in a single C: partition.

If you use the Rescue and Recovery 3.0 program to restore a backup that was produced by an earlier version, then you will have to reinstall the Rescue and Recovery 3.0 program.

Advanced features: The advanced features enable you to customize your backups, delete backups, and prepare a file to help you migrate system information and data from one computer to another. The following list describes the advanced features provided with the Rescue and Recovery program:

• **Copying backups from the hard drive:** The Rescue and Recovery program enables you to use removable media to restore the contents of the hard disk in the event of a hard-disk drive failure. Media from which a backup can be

restored includes CDR, DVD, USB hard-disk drive, second hard-disk drive, or network drive. Copying your backup files to removable media enhances backup protection and enables you to restore your system from any of your archived backups.

- **Deleting a backup:** This feature enables you to delete backup files previously saved to a device.
- **Excluding files from a backup:** By excluding files from a backup and incremental backups, you can save hard-disk space.
- **Specifying files for single storage:** By selecting a file for single storage, a copy of the selected file exists in the most recent backup only. All other copies of the file are removed from any other existing backups.
- **Creating a migration file:** Creating a migration file enables you to extract data and personal settings that you created through a backup operation and transfer that information to another computer.

Note: Once a migration file is created, it must be imported at the target computer using System Migration Assistant 5.0 (or higher).

- **Creating Rescue and Recovery media:** There are three types of Rescue and Recovery media that can help you restore your computer even if you cannot enter the Windows environment. Each has its own purpose. The following list describes how Rescue and Recovery media are used:
 - Product Recovery discs: Product Recovery discs enable you to restore the contents of the hard disk to its original factory state. Product Recovery discs are useful if you transfer the computer to another area, sell the computer, recycle the computer, or (as a last resort) put the computer in an operational state after all other methods of recovery have failed. This recovery medium is intended for ThinkCentre and ThinkPad computers only.
 - Rescue media: Rescue media enables you to create a CD or a USB hard disk drive that you can use to help recover from failures that prevent you from gaining access to the Windows environment or the Rescue and Recovery workspace on your hard disk. Although such problems are rare, it is a good idea to make your rescue media as soon as possible, before a problem occurs. This recovery medium is intended for ThinkCentre computers, ThinkPad computers, and computers made by other manufacturers.
 - Secure environment to reset forgotten hardware passwords: This secure environment runs independently of Windows and will help you reset forgotten power-on and hard-disk drive passwords. Your identity is established by answering a set of questions that you created. It is a good idea to create this secure environment as soon as possible, before a password is forgotten. You cannot reset forgotten hardware passwords until this secure environment is created on your hard disk and after you have enrolled. This recovery medium is supported on select ThinkCentre and ThinkPad computers only.

To create recovery media, do the following:

- 1. From the Windows desktop, click Start.
- 2. Select All Programs.
- 3. Select ThinkVantage.
- 4. Click Create Recovery Media.

Using the Rescue and Recovery workspace

The Rescue and Recovery workspace provides a number of features that can help you recover from a problem, even if you cannot start the Windows operating system. Through the Rescue and Recovery workspace you can restore your hard disk to one of several saved states, recover files from your Windows partition or from a backup, communicate over the Internet, download files, and view useful information about the condition of your computer. The following information describes how to access the Rescue and Recovery workspace and a brief description of its features.

Accessing the Rescue and Recovery workspace

To access the Rescue and Recovery workspace, complete one of the following methods:

Method 1:

- 1. Shut down your computer.
- 2. Detach the computer and/or USB HDD from any docking station, media hub or USB hub.
- 3. Attach the USB HDD directly to the ports on the computer.
- 4. Restart your computer.
- 5. Repeatedly press and release the F11 key.
- **6**. After a short delay, the Rescue and Recovery workspace is displayed. For information about using the various features, click **Help**.

Method 2:

- 1. Insert the Rescue and Recovery CD you created into your CD or DVD drive, or if your rescue media is an external USB hard disk drive, attach the drive now.
- 2. Shut down your computer.
- **3**. Detach the computer and/or USB HDD from any docking station, media hub or USB hub.
- 4. Attach the USB HDD directly to the ports on the computer.
- 5. Restart your computer.
- **6**. After a short delay, the Rescue and Recovery workspace is displayed. For information about using the various features, click **Help**.
 - **Note:** If your rescue media fails to start, you might not have your rescue device (CD drive, DVD drive, or USB device) set correctly in your BIOS startup sequence. Refer to the documentation that came with your computer for information about gaining access to the BIOS configuration.

Rescue and Recovery workspace features

The Rescue and Recovery workspace helps accomplish a variety of tasks even if you cannot enter the Windows environment. You can do the following in the Rescue and Recovery workspace:

- Viewing information: View logs to determine the status of an operation associated with the Rescue and Recovery program in the Windows environment. View current system information to determine if and when a configuration change took place.
- Understanding recovery options: Rescue files from your Windows environment or restore backed-up files to your Windows environment. There are different

methods that enable you to restore data. Some methods can restore your entire hard disk drive, while others restore select files only. Restore the contents of your hard disk in the following ways:

- Restore operating system and applications only. This function restores only Windows and application files to a backed-up state. Personal data is preserved.
- Migrate from a backup. This function enables you to create a package that contains critical data and settings contained on one computer so that they can be migrated to another computer. You must have System Migration Assistant (SMA 5.0 or higher) installed on the target computer in order to complete the migration process.
- Restore the entire contents of your hard disk to a previously saved state.
- Rescue files from your Windows environment and transfer them to a diskette, USB hard disk, or a network drive. This feature is extremely useful if you are unable to start Windows, but have access to another computer where you can continue your work.
- Restore the entire contents of your hard disk to the original factory contents. This feature is useful if you transfer the computer to another area, sell the computer, recycle the computer, or as a last resort put the computer in an operational state after all other methods of recovery have failed.
- **Configure your computer:** Access the computer Basic Input/Output System (BIOS) to enable and disable hardware features, enhance security through BIOS-controlled passwords, change the startup sequence, and set other hardware features. Configure your computer to start from an alternate device such as backup CDs created by the Rescue and Recovery program, diagnostic diskettes, rescue or recovery discs.
- **Communicate over the network:** Use a wired Ethernet connection to access the Web, send e-mail through a Web-based e-mail account, download files, and map a network drive.
- Solve a problem: Run the provided diagnostic program, PC-Doctor, to test the hardware features of your computer. Create self-starting diagnostic diskettes so you can run the PC-Doctor for DOS program outside of the Rescue and Recovery workspace.

Using the Client Security Solution with Rescue and Recovery

Both the Rescue and Recovery program and the Client Security Solution application are ThinkVantage Technologies that have been developed with you in mind. That is, they are designed to work separately or together, depending upon your needs. The following information is intended to help you design your strategy for using these programs, and to highlight how these programs enhance each other.

There are important considerations to take into account when installing the Rescue and Recovery program, the Client Security Solution application, or both together. The following tables provide information to help you determine which installation strategy is best for you:

Software installed is	And you want	Follow this process Comments	
Client Security Software 5.4x	Client Security Software 5.4x and Rescue and Recovery 3.0	 Install Rescue and Recovery 3.0 program. When prompted, indicate that you want to keep the Client Security Software 5.4x application installed. Backups ca protected to Security Sof application Client Security Software 5.4x application installed. The master feature is a security feature is a security feature is a security feature information "Additionation" 	annot be using Client oftware 5.4x , and any use of urity Software the Rescue and 0.0 program will sing an emulated Client Security : password added to your atures. A master is typically used prise nt. For more n see, al information"
Client Security Software 5.4x	Client Security Solution 6.0 Standalone installation package	 Uninstall the Client Security Software 5.4x. application Install the Client Security Solution 6.0 (Standalone) application. You must before u Otherwi information You must before in Client Security 	et decrypt any d files and ny Password r information ninstalling. se, this ion will be lost. et uninstall the Folder on software astalling the ecurity Solution ion.

Table 1. The following table provides information to help you change your Rescue and Recovery and Client Security configuration. Client Security Solution standalone means the install was acquired from the Web or CD.

Software installed is	And you want	Follow this process	Comments
Client Security Software 5.4x	Client Security Solution 6.0 and Rescue and Recovery 3.0	 Uninstall the Client Security Software 5.4x application. Install the Rescue and Recovery 3.0 program. 	 Installing Rescue and Recovery 3.0 over Client Security Software 5.4x without first uninstalling Client Security Software will result in Rescue and Recovery only. Before you uninstall the Client Security Software 5.4x application, you must decrypt any encrypted files and export any Password Manager information before uninstalling. Otherwise, this information will be lost. You must uninstall the File and Folder Encryption software before installing the Client Security Solution 6.0 application.
Rescue and Recovery 3.0	Client Security Software 5.4x and Rescue and Recovery 3.0	 Uninstall the Rescue and Recovery 3.0 program. Install the Client Security Software 5.4x application. Install the Rescue and Recovery 3.0 program. When prompted, indicate that you want to keep the Client Security Software 5.4x application installed. 	 The Client Security Software 5.4x application cannot be installed over the Rescue and Recovery 3.0 program. Local backups are deleted when uninstalling the Rescue and Recovery 3.0 program.

Table 1. The following table provides information to help you change your Rescue and Recovery and Client Security configuration. Client Security Solution standalone means the install was acquired from the Web or CD. (continued)

Software installed is	And you want	Follow this process	Comments
Rescue and Recovery 3.0	Client Security Solution 6.0 Standalone install package	 Uninstall the Rescue and Recovery 3.0 program. Install the Client Security Solution 6.0 (Standalone) application. 	 Uninstalling Rescue and Recovery will delete user files and Client Security Solution registry settings. Rescue and Recovery backups protected by Client Security Solution will no longer be accessible. Local backups are deleted when uninstalling Rescue and Recovery 3.0. Client Security Solution 6.0 (Standalone) cannot be installed over Rescue
Rescue and Recovery 3.0	Rescue and Recovery 3.0 and Client Security Solution 6.0	 Select the Modify option from Add/Remove programs. Complete the modify operation by adding the Client Security Solution application and any desired subcomponents. 	 and Recovery 3.0. Local backups are deleted when the Client Security Solution application is added. After adding the Client Security Solution application, create a new base backup as soon as possible. Client Security Solution settings and data files are deleted. The Client Security Solution 6.0 (Standalone) application cannot be installed over the Rescue and Recovery 3.0 program.
Client Security Solution 6.0 Standalone installation package	Client Security Software 5.4x	 Uninstall the Client Security Solution 6.0 (Standalone) application. Install the Client Security Software 5.4x application. 	• Deleting Client Security Solution 6.0 data files and settings at the prompt will not affect Client Security Software 5.4x operations.
Client Security Solution 6.0 Standalone installation package	Rescue and Recovery 3.0	 Uninstall the Client Security Solution 6.0 application. Install the Rescue and Recovery 3.0 program. During the install, choose to install the Rescue and Recovery program only. 	When uninstalling the Client Security Solution 6.0 application, you must delete Security Solution 6.0 files and settings. Failure to remove these at the prompt will terminate the Rescue and Recovery 3.0 install.

Table 1. The following table provides information to help you change your Rescue and Recovery and Client Security configuration. Client Security Solution standalone means the install was acquired from the Web or CD. (continued)

Software installed is	And you want	Follow this process	Comments
Client Security Solution 6.0 Standalone	Rescue and Recovery 3.0 and Client Security Solution 6.0	 Install the Rescue and Recovery 3.0 program. Select any subcomponents of the Client Security Solution 6.0 application that you would like installed. 	 Client Security Solution 6.0 data files and settings are preserved. To choose to protect backups using the Client Security Solution 6.0 application, use the Rescue and Recovery program.
Rescue and Recovery 3.0 and Client Security Solution 6.0	Client Security Software 5.4x	 Uninstall the Rescue and Recovery - Client Security Solution application. Install the Client Security Software 5.4x application. 	 The Client Security Software 5.4x application cannot install over the Client Security Solution 6.0 application. Deleting data files and settings at the prompt will not affect Client Security Software 5.4x operations. By uninstalling the Rescue and Recovery 3.0 program, the Client Security Solution 6.0 application is automatically uninstalled.
Rescue and Recovery 3.0 and Client Security Solution 6.0	Rescue and Recovery 3.0	 Select Modify from Add/Remove programs. Remove the Client Security Solution 6.0 application. 	 Local backups are deleted when the Client Security Solution 6.0 application is removed. Uninstalling the Client Security Solution 6.0 application will result in not having Password Manager or PrivateDisk. The Rescue and Recovery 3.0 backups protected with the Client Security Solution 6.0 application are no longer accessible. Create a new backup as soon as possible.

Table 1. The following table provides information to help you change your Rescue and Recovery and Client Security configuration. Client Security Solution standalone means the install was acquired from the Web or CD. (continued)

Software installed is	And you want	Follow this process	Comments
Rescue and Recovery 3.0 and Client Security Solution 6.0	Client Security Solution 6.0	 Uninstall the Rescue and Recovery 3.0 program. When prompted, choose to keep current Client Security Solution 6.0 settings only if you want to keep your current security configuration. 	 Rescue and Recovery 3.0 backups protected with Client Security Solution 6.0 are no longer accessible. Local backups are deleted when uninstalling the Rescue and Recovery 3.0 application.
		 Install the Client Security Solution 6.0 (Standalone) application. 	

Table 1. The following table provides information to help you change your Rescue and Recovery and Client Security configuration. Client Security Solution standalone means the install was acquired from the Web or CD. (continued)

Rescue and Recovery passwords and passphrases

You can use passwords or passphrases can be used to protect the Rescue and Recovery workspace, thereby protecting critical data from unauthorized access. You can specify to protect the Rescue and Recovery workspace by using the Client Security Setup wizard to set security preferences or by changing your logon settings using the Client Security Solution application. The Client Security Solution application also enables you to establish password recovery options within the Rescue and Recovery workspace.

Notes:

- 1. This feature is available only if the Client Security Solution 6.0 program is installed. To use this feature you must have completed the Client Security 6.0 Setup wizard and specified that you want to use either a password or passphrase to log on to your computer.
- 2. Both the Client Security Setup 6.0 wizard and the Client Security Solution 6.0 application are accessible in the Windows environment only. If you choose to use Rescue and Recovery without Client Security Solution, then the Rescue and Recovery workspace will not be protected by a password or passphrase.
- **3**. The Client Security Solution application enables you to establish password recovery options within the Rescue and Recovery workspace.

Use the following methods to protect the Rescue and Recovery workspace using a password or passphrase.

Method 1: If you have not completed the Client Security Setup Wizard, do the following to protect the Rescue and Recovery workspace with either a password or passphrase:

- 1. From the Windows desktop click **Start**, click **All Programs**, select **ThinkVantage**, and then double-click **Client Security Solution**.
- 2. When the Client Security Solution window opens, click the **Advanced** menu item.
- **3**. Click the **Set security and backup preferences** icon. The Client Security Setup Wizard opens.
- 4. Set your security preferences. When prompted choose one of the following:

- If you want to protect the Rescue and Recovery workspace using your Windows logon password, mark the Use Windows password to gain access to the Rescue and Recovery workspace check box.
- If you want to protect the Rescue and Recovery workspace using your Client Security Solution logon passphrase, mark the Use the Client Security Solution passphrase to gain access to the Rescue and Recovery workspace check box.
- 5. Complete the Client Security Solution Setup wizard, then click **Finish**. For more information, click **Help** within the Client Security Setup Wizard.

Method 2: If you have completed the Client Security Setup Wizard, do the following to protect the Rescue and Recovery workspace with a password or passphrase:

- 1. From the Windows desktop click **Start**, click **All Programs**, select **ThinkVantage**, and then double-click **Client Security Solution**.
- 2. When the Client Security Solution window opens, click the **Advanced** menu item.
- 3. Click Change logon settings.
- 4. Follow the instructions on the screen. For detailed information click **Help** within the Client Security Solution application.

Setting backup preferences using the Client Security Setup Wizard

The Client Security Solution Setup Wizard provides configuration options that enable you to set a variety of security features, such as enabling the embedded security chip, selecting how you want to authenticate to the Windows environment, choosing to use Rescue and Recovery to back up your sensitive data, or electing to use fingerprint authentication.

Complete the following procedure to use the Client Security Setup wizard:

- 1. From the Windows desktop click **Start**, click **All Programs**, select **ThinkVantage**, and then double-click **Client Security Solution**.
- 2. When the Client Security Solution window opens, click the **Advanced** menu item.
- **3**. When the Client Security Solution window opens, click **Set security and backup preferences**. The Client Security Setup Wizard opens.
- 4. Set your security preferences.
- 5. Complete the Client Security Solution Setup wizard, then click **Finish**. For detailed information, click **Help** within the Client Security Setup Wizard.

More information about the Client Security Solution

For detailed information about the Client Security Solution application and its features, see the *Client Security Solution User Guide* on the Web at:

http://www.lenovo.com/think/support/

If you have the Client Security Solution application already installed, you can read more detailed information from the User Guide by completing the following procedure:

- 1. From the Windows desktop, click Start.
- 2. Select All Programs.
- 3. Select ThinkVantage.
- 4. Click Client Security Solution.

- 5. From the Client Security Solution menu bar click Help.
- 6. Click User's Guide.

Appendix A. Troubleshooting

The following information might be helpful if you encounter trouble using the Rescue and Recovery application.

General troubleshooting information

The following information might be helpful if you encounter trouble using the Rescue and Recovery software.

- When new Windows users are created, the system must be rebooted before the new users can be backed up.
- Do not use Rescue and Recovery in conjunction with any other utility software that modifies the master boot record. Software that modifies the master boot record of your hard disk might render your backups inaccessible. Such software includes, but is not limited to Roxio GoBack, System Commander, and PowerQuest BootMagic.
- Norton Antivirus 5.0 might not be able to read the boot record of the hard drive.

Installation troubleshooting information

The following information might be helpful if you encounter trouble while attempting to install or uninstall the Rescue and Recovery with Rapid Restore software.

Uninstalling the software

To uninstall Rescue and Recovery from a computer running Windows 2000 Professional or Windows XP, you must log onto the computer with administrator rights. For more information on user accounts, see the help system provided with the operating system.

Backup troubleshooting information

Rescue and Recovery notifies you if a valid base backup image does not exist. Then, it enables you to create a new base backup image.

The following information might be helpful if you encounter trouble while attempting a backup operation using Rescue and Recovery with Rapid Restore software.

- User accounts are included in backup and restore operations. Therefore, if you restore your system to a time when a user did not exist or had a different password, that user will not be able to log in.
- If the Rapid Restore interface is closed while performing a Windows incremental backup, Rescue and Recovery will continue to backup files in the background.

Backup operation is slow

Backup performance depends upon the size and type of operation being performed. Backup operation performance can be optimized by performing frequent backups. Running another program, such as an anti-virus program, while creating a backup image will adversely affect backup performance. Do not run any programs while creating a backup image.

Run anti-virus programs before or after performing a backup operation.

Notes:

- 1. Backups will take longer via USB 1.1.
- **2.** To prevent possible database corruption, always close all applications and services before performing a backup operation.

Scheduling dates on the 29th, 30th, or 31st

Rescue and Recovery with Rapid Restore does not allow you to specify a scheduled backup on the 29th, 30th, or 31st day of the month, but you can schedule a backup for the end of the month.

Unable to select Archive your backups

If the CD-R Archive option is not available, the customer does not have an installed CD-R device.

CD-RW media are easily overwritten and degrade with each use. CD-RW media are not supported when creating a CD-R archive set.

To restore a backup set from a CD, your CD drive must be a supported boot option for the computer you are restoring.

In order to perform a CD-R Archive, the hard drive must have at least 700MB of free space.

Restore troubleshooting information

The following information might be helpful if you encounter trouble while attempting a restore operation using Rescue and Recovery software.

To restore a backup set from a CD, your CD drive must be a supported boot option for the computer you are restoring.

Restore operation is slow

Restore operation performance depends upon the size and type of operation being performed. To prevent possible database corruption, always close all applications and services before performing a restore operation.

User cannot log on after a restore operation

This problem will occur on multi-user systems when a new user is added and a backup operation takes place before the new user logs on for the first time.

To remedy this problem, the IT administrator must add the new user again and either restart the computer, or have the new user log on before the next backup operation.

To prevent this problem, restart the computer after adding a new user, or ensure that the new user logs on before the next backup operation is performed.
Power management troubleshooting information

The following information might be helpful if you encounter trouble while using the Rescue and Recovery due to power management issues, such as standby, hibernate, and power loss.

Rescue and Recovery will respond to a system request in the following manner:

- When a backup or CD-R Archive is in progress. When a backup or CD-R Archive is in progress and the system requests to enter standby/hibernate, Rescue and Recovery will stop the backup in progress and allow the power request to proceed. Upon resume, it will record the backup as failed and query the user to run the backup again.
- When a restore is in progress. When a restore is in progress, the power request will be rejected and the restore will continue.

Appendix B. Glossary

Backup

Backup is the process of copying disk information so that it is preserved in case of equipment failures or software and operating system corruptions.

Base backup image

Original sector-based backup image of the primary hard disk created during the Rapid Restore installation process. This image is the foundation upon which cumulative and most recent backups are created.

Boot

Refers to the initial startup of a computer, such as when you power on or restart a computer.

Boot-time

The time during which a computer boots—when a computer starts up but the operating system has not yet taken over control of the computer. It is during this time that the OBRM's pre-operating system interface is accessible to the user.

Boot Manager

A software program stored in the master boot record that reads the boot sector record of the partition containing the operating system to be booted into RAM. In turn, that record contains a program that loads the rest of the operating system into RAM

Byte

A group of eight bits, which can represent a number from zero through 255, a letter of the alphabet, or a variety of other things.

CD-R

CD-R (for compact disc, recordable) is a type of write once, read many (worm) compact disc (CD) format that allows one-time recording on a disc.

CD-RW

CD-RW (for compact disc, re-writable) is a compact disc (CD) format that allows repeated recording on a disc.

CD-ROM

Compact Disk Read-Only Memory. An electronic media commonly used within the software industry to store information. As the name implies, the original contents of a CD-ROM cannot be modified.

Controller

A specialized electronic circuit that serves as an interface between a device, such as a hard disk, and a computer. IDE and SCSI are examples of hard disk controllers.

Cumulative backup

A compressed incremental backup. The cumulative backup stores differential, or incremental, information as it relates to the base image and most recent backup.

Data

Information processed by a computer. Examples of data include database files, word processing documents, and html pages.

Database

A collection of related information about a subject, organized in a useful manner that provides a base or foundation for procedures such as retrieving information, drawing conclusions, and making decisions.

Data Migration Manager

The Data Migration Manager (DMM) enables users to move their existing disk image to a new, larger hard drive. The most common reason for migrating to another hard drive is the need for additional storage space. The two main obstacles most people encounter when performing a disk migration include the lack of IT knowledge required to successfully complete the process and the decreased productivity resulting from the downtime directly related to the migration process.

The Data Migration Manager's "One Button Migration" feature eliminates these barriers so users can effectively and efficiently migrate their disk image and data without compromising their uptime or data integrity. In addition, Rapid Restore's built-in migration technology handles all the complex decision-making so users don't need to be IT experts to properly migrate their disk image and data to a new hard disk.

Disk drive

A type of storage device used by computers.

Diskette

Removable storage medium.

Disk Image

A disk image is a file containing an exact and complete sector-based image of your hard disk. The image contains everything on your hard disk including disk format and structure (for example, FAT), boot sector, directories, operating system, software, registry settings, network settings, and data. The benefit of creating disk images is that users can quickly restore their entire system without needing to reinstall their operating system, applications, etc.

Drive letter

In Windows and MS-DOS operating systems, the naming convention for hard disks, consisting of a letter, followed by a colon (for example, C: or D:).

Extended partition

A type of partition that overcomes the limitation of four partitions per disk drive as one or more logical drives may be created within an extended partition.

FAT file system

The file system used by MS-DOS and adapted for Windows to store information on hard disks, which makes use of a file allocation table. There are three types of FAT file systems including FAT12, FAT16, and FAT32.

File Allocation Table (FAT)

A table or list maintained by certain operating systems to keep track of how files are stored on a hard disk.

File system

The method used by an operating system to name, access, and organize files and directories on a disk (for example, FAT32 or NTFS).

Graphical user interface (GUI)

A user interface, as used in the Windows operating systems, which uses a mouse and graphic displays to interact with the user. The goal of a GUI is to make the program easier to use than a text-based application or operating system such as MS-DOS.

Hard Disk

A specific type of disk drive comprised of one or more rigid metal platters.

IDE (Integrated Device Electronics)

A interface technology used to integrate a disk drive and a computer. Hard disks using IDE technology have their controller built directly into the disk drive eliminating the need for a separate controller card in the computer.

Interface

The connection and interaction between hardware, software, or the user.

Locked File

Files currently in use by your system and traditionally unavailable to other applications, including backup operations. Examples of applications that create locked files include Oracle databases, SQL servers, Lotus Notes[®], and e-mail servers.

Logical drive

A portion of a hard disk that is considered to be a single unit. In this context, logical means "conceptual" because there is no direct relationship between the name and a physical object.

Master Boot Record

The information in the first sector of any hard disk or diskette that identifies how and where an operating system is located so that it can be booted (loaded) into the computer's main storage or random access memory. The master boot record is also sometimes called the "partition sector" or the "master partition table" because it includes a table that locates the hard disk's partitions. In addition to this table, the master boot record also includes a program, known as the boot manager, that reads the boot sector record of the partition containing the operating system to be booted into RAM. In turn, that record contains a program that loads the rest of the operating system into RAM.

Master file table (MFT)

On an NTFS volume, the master file table is a file containing information about all other files in that volume. This includes the name of each file, its physical location on the disk, and other information.

MFT

See "Master file table (MFT)" on page 32.

Most Recent backup

A compressed incremental backup file reflecting the state of a hard disk at the time the backup is performed. Only files not matching those in the cumulative backup are stored in the most recent backup file. Most recent backups can be automated using Rapid Restore's Schedule feature or performed manually.

One-Button Restore Manager (OBRM)

The One-Button Restore Manager is the backbone of Rapid Restore's image and backup management capabilities. The OBRM is extremely powerful and integrates with several other Rapid Restore components so that users can easily restore the contents of their hard disk to a previously known state. The One-Button Restore Manager is easily accessible from several entry points including:

- Before Windows Runs (Pre-Operating System Mode)
- Windows Graphical User Interface (Windows Mode)
- Over the Network (Remote Management Mode)

Partition

A subdivision of the space on a disk drive that is treated as though it were a separate physical unit. A computer with only one hard disk drive can have a single partition, often called drive C:, or it can have several partitions, such as drive C:, drive D:, and drive E.

Peripheral device

A device located on the outside of a computer (for example a tape drive or a USB hard disk).

Permission

The ability of a user to access or modify files, especially those not created by that user. Permissions exist for security reasons including the prevention of unauthorized access to sensitive information.

Pre-operating system mode

The time between when a computer boots (starts up) and the operating system has not yet taken over control of the computer.

Primary partition

In Windows and MS-DOS operating systems, a hard disk can be divided into a maximum of four primary partitions; or three primary partitions plus an extended partition, which in turn can contain one or more logical drives.

RAID

See "Redundant Array of Independent Disks (RAID)" on page 33.

Redundant Array of Independent Disks (RAID)

A method of combining several hard disks to make one large volume. RAID configurations are typically used on a network file server to achieve faster access, greater protection against disk failure, or both.

Restore

The process of using an image or backup to revert to a previous hard disk state.

SCSI (Small Computer System Interface)

An interface technology used to integrate a disk drive and a computer.

Service partition

A hidden, locked partition on the local hard disk used for backup and restore operation. Service partitions are tightly compressed to save disk space and comprise the base image, cumulative backup, and most recent backup.

Site License Key

IT Administrators looking to access Rapid Restore's enterprise-level functionality can do so by registering for a Site License Key. A Site License Key enables IT Administrators to efficiently configure, deploy, and manage Rapid Restore in an enterprise environment.

Snapshot

A snapshot backup replaces your existing cumulative backup with optimized cumulative backup data. This optimized backup consolidates all incremental backup data (cumulative and most recent) into one cumulative backup. In addition, the snapshot process deletes the most recent backup.

Snapshot backups should be performed at significant checkpoints such as after the installation of a new application, creation of a new database, etc.

USB Drive

USB (Universal Serial Bus) drive is a plug-and-play hard drive that connects to your computer through a USB interface.

Utility

A program that provides basic services or functions.

Volume

A subdivision of the space on a hard disk that is treated as though it were a separate physical unit, or a combination of physical disks treated as a single unit. A computer with only one hard disk can have a single volume, often called drive C:, or it can have several volumes, such as drive C:, drive D:, and drive E:.

Volume set

A single logical drive composed of up to 32 areas of free space on one or more hard disks. Volume sets can be used to combine small areas of free space on one or more hard disks into a larger logical drive.

Appendix C. Service and Support

The following information describes the technical support that is available for your product, during the warranty period or throughout the life of the product. Refer to your Lenovo Statement of Limited Warranty for a full explanation of Lenovo warranty terms.

Online technical support

Online technical support is available during the life of your product through the Personal Computing Support Web site at http://www.lenovo.com/think/support.

During the warranty period, assistance for replacement or exchange of defective components is available. In addition, if your option is installed in a ThinkPad or ThinkCentre computer, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

Telephone technical support

Installation and configuration support through the Customer Support Center will be withdrawn or made available for a fee, at Lenovo's discretion, 90 days after the option has been withdrawn from marketing. Additional support offerings, including step-by-step installation assistance, are available for a nominal fee.

To assist the technical support representative, have available as much of the following information as possible:

- Option name
- Option number
- · Proof of purchase
- · Computer manufacturer, model, serial number, and manual
- Exact wording of the error message (if any)
- Description of the problem
- · Hardware and software configuration information for your system

If possible, be at your computer. Your technical support representative might want to walk you through the problem during the call.

For a list of Service and Support phone numbers, see "Worldwide telephone list" on page 52. Phone numbers are subject to change without notice. For the most current phone numbers, go to http://www.lenovo.com/think/support and click **Support phone list**. If the number for your country or region is not listed, contact your reseller or Lenovo marketing representative.

Appendix D. Lenovo Statement of Limited Warranty

LSOLW-00 05/2005

Part 1 - General Terms

This Statement of Limited Warranty includes Part 1 - General Terms, Part 2 -Country-unique Terms, and Part 3 - Warranty Information. The terms of Part 2 replace or modify those of Part 1. The warranties provided by Lenovo Group Limited or one of its subsidiaries (called "Lenovo") in this Statement of Limited Warranty apply only to Machines you purchase for your use, and not for resale. The term "Machine" means a Lenovo machine, its options, features, conversions, upgrades or peripheral products, or any combination of them. The term "Machine" does not include any software programs, whether pre-loaded with the Machine, installed subsequently or otherwise. Nothing in this Statement of Limited Warranty affects any statutory rights of consumers that cannot be waived or limited by contract.

What this Warranty Covers

Lenovo warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to Lenovo's Official Published Specifications ("Specifications") which are available on request. The warranty period for the Machine starts on the original date of installation and is specified in Part 3 -Warranty Information. The date on your invoice or sales receipt is the date of installation unless Lenovo or your reseller informs you otherwise. Unless Lenovo specifies otherwise, these warranties apply only in the country or region in which you purchased the Machine.

THESE WARRANTIES ARE YOUR EXCLUSIVE WARRANTIES AND REPLACE ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF EXPRESS OR IMPLIED WARRANTIES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU. IN THAT EVENT, SUCH WARRANTIES ARE LIMITED IN DURATION TO THE WARRANTY PERIOD. NO WARRANTIES APPLY AFTER THAT PERIOD. SOME STATES OR JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

What this Warranty Does not Cover

This warranty does not cover the following:

- any software programs, whether pre-loaded or shipped with the Machine, or installed subsequently;
- failure resulting from misuse, accident, modification, unsuitable physical or operating environment, or improper maintenance by you;
- failure caused by a product for which Lenovo is not responsible; and
- any non-Lenovo products, including those that Lenovo may procure and provide with or integrate into a Lenovo Machine at your request.

The warranty is voided by removal or alteration of identification labels on the Machine or its parts.

Lenovo does not warrant uninterrupted or error-free operation of a Machine.

Any technical or other support provided for a Machine under warranty, such as assistance with "how-to" questions and those regarding Machine set-up and installation, is provided **WITHOUT WARRANTIES OF ANY KIND**.

How to Obtain Warranty Service

Warranty service may be provided by Lenovo, IBM, your reseller if authorized to perform warranty service, or an authorized warranty service provider. Each of them is referred to as a "Service Provider."

If the Machine does not function as warranted during the warranty period, contact a Service Provider. If you do not register the Machine with Lenovo, you may be required to present proof of purchase as evidence of your entitlement to warranty service.

What Lenovo Will Do to Correct Problems

When you contact a Service Provider for service, you must follow the problem determination and resolution procedures that we specify. An initial diagnosis of your problem can be made either by a technician over the telephone or electronically by access to a support website.

The type of warranty service applicable to your Machine is specified in Part 3 - Warranty Information.

You are responsible for downloading and installing designated software updates from a support web site or from other electronic media, and following the instructions that your Service Provider provides. Software updates may include basic input/output system code (called "BIOS"), utility programs, device drivers, and other software updates.

If your problem can be resolved with a Customer Replaceable Unit ("CRU") (e.g., keyboard, mouse, speaker, memory, hard disk drive), your Service Provider will ship the CRU to you for you to install.

If the Machine does not function as warranted during the warranty period and your problem cannot be resolved over the telephone or electronically, through your application of software updates, or with a CRU, your Service Provider, will either, at its discretion, 1) repair it to make it function as warranted, or 2) replace it with one that is at least functionally equivalent. If your Service Provider is unable to do either, you may return the Machine to your place of purchase and your money will be refunded.

As part of the warranty service, your Service Provider may also install selected engineering changes that apply to the Machine.

Exchange of a Machine or Part

When the warranty service involves the exchange of a Machine or part, the item your Service Provider replaces becomes Lenovo's property and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item.

Your Additional Responsibilities

Before your Service Provider exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service.

You also agree to:

- 1. ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange;
- 2. obtain authorization from the owner to have your Service Provider service a Machine that you do not own; and
- 3. where applicable, before service is provided:
 - a. follow the service request procedures that your Service Provider provides;
 - b. backup or secure all programs, data, and funds contained in the Machine; and
 - **c.** provide your Service Provider with sufficient, free, and safe access to your facilities to permit Lenovo to fulfill its obligations.
- 4. (a) ensure all information about identified or identifiable individuals (Personal Data) is deleted from the Machine (to the extent technically possible), (b) allow your Service Provider or a supplier to process on your behalf any remaining Personal Data as your Service Provider considers necessary to fulfill its obligations under this Statement of Limited Warranty (which may include shipping the Machine for such processing to other service locations around the world), and (c) ensure that such processing complies with any laws applicable to such Personal Data.

Limitation of Liability

Lenovo is responsible for loss of, or damage to, your Machine only while it is 1) in your Service Provider's possession or 2) in transit in those cases where Lenovo is responsible for the transportation charges.

Neither Lenovo nor your Service Provider are responsible for any of your confidential, proprietary or personal information contained in a Machine which you return for any reason. You should remove all such information from the Machine prior to its return.

Circumstances may arise where, because of a default on Lenovo's part or other liability, you are entitled to recover damages from Lenovo. In each such instance, regardless of the basis on which you are entitled to claim damages from Lenovo (including fundamental breach, negligence, misrepresentation, or other contract or tort claim), except for any liability that cannot be waived or limited by applicable laws, Lenovo is liable for no more than

- 1. damages for bodily injury (including death) and damage to real property and tangible personal property for which Lenovo is legally liable; and
- 2. the amount of any other actual direct damages, up to the charges for the Machine that is subject of the claim.

This limit also applies to Lenovo's suppliers, resellers and your Service Provider. It is the maximum for which Lenovo, its suppliers, resellers, and your Service Provider are collectively responsible.

UNDER NO CIRCUMSTANCES IS LENOVO, ITS SUPPLIERS, RESELLERS OR SERVICE PROVIDERS LIABLE FOR ANY OF THE FOLLOWING EVEN IF INFORMED OF THEIR POSSIBILITY: 1) THIRD PARTY CLAIMS AGAINST YOU FOR DAMAGES (OTHER THAN THOSE UNDER THE FIRST ITEM LISTED ABOVE); 2) LOSS OF, OR DAMAGE TO, DATA; 3) SPECIAL, INCIDENTAL, OR INDIRECT DAMAGES OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR 4) LOST PROFITS, BUSINESS REVENUE,

GOODWILL OR ANTICIPATED SAVINGS. SOME STATES OR JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Governing Law

Both you and Lenovo consent to the application of the laws of the country in which you acquired the Machine to govern, interpret, and enforce all of your and Lenovo's rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Statement of Limited Warranty, without regard to conflict of law principles.

THESE WARRANTIES GIVE YOU SPECIFIC LEGAL RIGHTS AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE OR JURISDICTION TO JURISDICTION.

Jurisdiction

All of our rights, duties, and obligations are subject to the courts of the country in which you acquired the Machine.

Part 2 - Country-unique Terms

AMERICAS

ARGENTINA

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Ordinary Commercial Court of the city of Buenos Aires.

BOLIVIA

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the courts of the city of La Paz.

BRAZIL

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the court of Rio de Janeiro, RJ.

CHILE

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Civil Courts of Justice of Santiago.

COLOMBIA

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Judges of the Republic of Colombia.

ECUADOR

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Judges of Quito.

MEXICO

Jurisdiction: *The following is added after the first sentence:*

Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Federal Courts of Mexico City, Federal District.

PARAGUAY

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the courts of the city of Asuncion.

PERU

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Judges and Tribunals of the Judicial District of Lima, Cercado.

Limitation of Liability: *The following is added at the end of this section:* In accordance with Article 1328 of the Peruvian Civil Code the limitations and exclusions specified in this section will not apply to damages caused by Lenovo's willful misconduct ("dolo") or gross negligence ("culpa inexcusable").

URUGUAY

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the City of Montevideo Court's Jurisdiction.

VENEZUELA

Jurisdiction: *The following is added after the first sentence:* Any litigation arising from this Statement of Limited Warranty will be settled exclusively by the Courts of the Metropolitan Area Of the City of Caracas.

NORTH AMERICA

How to Obtain Warranty Service: *The following is added to this Section:* To obtain warranty service from IBM service in Canada or the United States, call 1-800-IBM-SERV (426-7378).

CANADA

Limitation of Liability: *The following replaces item 1 of this section:* 1. damages for bodily injury (including death) or physical harm to real property and tangible personal property caused by Lenovo's negligence; and

Governing Law: *The following replaces "laws of the country in which you acquired the Machine" in the first sentence:* laws in the Province of Ontario.

UNITED STATES

Governing Law: *The following replaces "laws of the country in which you acquired the Machine" in the first sentence:* laws of the State of New York.

laws of the state of new h

ASIA PACIFIC

AUSTRALIA

What this Warranty Covers: *The following paragraph is added to this section:*

The warranties specified in this Section are in addition to any rights you may have under the Trade Practices Act 1974 or other similar legislation and are only limited to the extent permitted by the applicable legislation.

Limitation of Liability: *The following is added to this section:*

Where Lenovo is in breach of a condition or warranty implied by the Trade Practices Act 1974 or other similar legislation, Lenovo's liability is limited to the repair or replacement of the goods or the supply of equivalent goods. Where that condition or warranty relates to right to sell, quiet possession or clear title, or the goods are of a kind ordinarily acquired for personal, domestic or household use or consumption, then none of the limitations in this paragraph apply.

Governing Law: *The following replaces* "laws of the country in which you acquired the Machine" *in the first sentence:* laws of the State or Territory.

CAMBODIA AND LAOS

Governing Law: *The following replaces* "laws of the country in which you acquired the Machine" *in the first sentence:* laws of the State of New York, United States of America.

CAMBODIA, INDONESIA, AND LAOS

Arbitration: *The following is added under this heading:* Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Singapore in accordance with the Arbitration Rules of Singapore International Arbitration Center ("SIAC Rules") then in effect. The arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact

and the conclusions of law.

The number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties shall appoint a third arbitrator who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the SIAC. Other vacancies shall be filled by the respective nominating party. Proceedings shall continue from the stage they were at when the vacancy occurred.

If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator shall be the sole arbitrator, provided that the arbitrator was validly and properly appointed.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

HONG KONG S.A.R. OF CHINA AND MACAU S.A.R. OF CHINA

Governing Law: *The following replaces* "laws of the country in which you acquired the Machine" *in the first sentence:*

laws of Hong Kong Special Administrative Region of China.

INDIA

Limitation of Liability: *The following replaces items 1 and 2 of this section:*

 liability for bodily injury (including death) or damage to real property and tangible personal property will be limited to that caused by Lenovo's negligence; and 2. as to any other actual damage arising in any situation involving nonperformance by Lenovo pursuant to, or in any way related to the subject of this Statement of Limited Warranty, the charge paid by you for the individual Machine that is the subject of the claim.

Arbitration: The following is added under this heading

Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Bangalore, India in accordance with the laws of India then in effect. The arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

The number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties shall appoint a third arbitrator who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the Bar Council of India. Other vacancies shall be filled by the respective nominating party. Proceedings shall continue from the stage they were at when the vacancy occurred.

If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator shall be the sole arbitrator, provided that the arbitrator was validly and properly appointed.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

JAPAN

Governing Law: *The following sentence is added to this section:* Any doubts concerning this Statement of Limited Warranty will be initially resolved between us in good faith and in accordance with the principle of mutual trust.

MALAYSIA

Limitation of Liability: The word "*SPECIAL*" in item 3 of the fifth paragraph is deleted.

NEW ZEALAND

What this Warranty Covers: *The following paragraph is added to this section:* The warranties specified in this section are in addition to any rights you may have under the Consumer Guarantees Act 1993 or other legislation which cannot be excluded or limited. The Consumer Guarantees Act 1993 will not apply in respect of any goods which Lenovo provides, if you require the goods for the purposes of a business as defined in that Act.

Limitation of Liability: *The following is added to this section:*

Where Machines are not acquired for the purposes of a business as defined in the Consumer Guarantees Act 1993, the limitations in this Section are subject to the limitations in that Act.

PEOPLE'S REPUBLIC OF CHINA (PRC)

Governing Law: *The following replaces* "laws of the country in which you acquired the Machine" *in the first sentence:*

laws of the State of New York, United States of America (except when local law requires otherwise).

PHILIPPINES

Limitation of Liability: Item 3 in the fifth paragraph is replaced by the following: SPECIAL (INCLUDING NOMINAL AND EXEMPLARY DAMAGES), MORAL, INCIDENTAL, OR INDIRECT DAMAGES FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; OR

Arbitration: The following is added: under this heading Disputes arising out of or in connection with this Statement of Limited Warranty shall be finally settled by arbitration which shall be held in Metro Manila, Philippines in accordance with the laws of the Philippines then in effect. The arbitration award shall be final and binding for the parties without appeal and shall be in writing and set forth the findings of fact and the conclusions of law.

The number of arbitrators shall be three, with each side to the dispute being entitled to appoint one arbitrator. The two arbitrators appointed by the parties shall appoint a third arbitrator who shall act as chairman of the proceedings. Vacancies in the post of chairman shall be filled by the president of the Philippine Dispute Resolution Center, Inc.. Other vacancies shall be filled by the respective nominating party. Proceedings shall continue from the stage they were at when the vacancy occurred.

If one of the parties refuses or otherwise fails to appoint an arbitrator within 30 days of the date the other party appoints its, the first appointed arbitrator shall be the sole arbitrator, provided that the arbitrator was validly and properly appointed.

All proceedings shall be conducted, including all documents presented in such proceedings, in the English language. The English language version of this Statement of Limited Warranty prevails over any other language version.

SINGAPORE

Limitation of Liability: *The words* "**SPECIAL**" *and* "**ECONOMIC**" *in item* 3 *in the fifth paragraph are deleted.*

EUROPE, MIDDLE EAST, AFRICA (EMEA)

THE FOLLOWING TERMS APPLY TO ALL EMEA COUNTRIES:

The terms of this Statement of Limited Warranty apply to Machines purchased from Lenovo or a Lenovo reseller.

How to Obtain Warranty Service:

Add the following paragraph in **Western Europe** (Andorra, Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Monaco, Netherlands, Norway, Poland, Portugal, San Marino, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom, Vatican State, and any country subsequently added to the European Union, as from the date of accession):

The warranty for Machines acquired in Western Europe shall be valid and applicable in all Western Europe countries provided the Machines have been announced and made available in such countries.

If you purchase a Machine in one of the Western European countries, as defined above, you may obtain warranty service for that Machine in any of those countries from a Service Provider, provided the Machine has been announced and made available by Lenovo in the country in which you wish to obtain service. If you purchased a Personal Computer Machine in Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Federal Republic of Yugoslavia, Former Yugoslav Republic of Macedonia (FYROM), Moldova, Poland, Romania, Russia, Slovak Republic, Slovenia, or Ukraine, you may obtain warranty service for that Machine in any of those countries from a Service Provider, provided the Machine has been announced and made available by Lenovo in the country in which you wish to obtain service..

If you purchase a Machine in a Middle Eastern or African country, you may obtain warranty service for that Machine from a Service Provider within the country of purchase, provided the Machine has been announced and made available by Lenovo in that country. Warranty service in Africa is available within 50 kilometers of a Service Provider. You are responsible for transportation costs for Machines located outside 50 kilometers of a Service Provider.

Governing Law:

The phrase "the laws of the country in which you acquired the Machine" is replaced by:

1) "the laws of Austria" in Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, FYR Macedonia, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, and FR Yugoslavia; 2) "the laws of France" in Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Democratic Republic of Congo, Equatorial Guinea, French Guiana, French Polynesia, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Madagascar, Mali, Mauritania, Mauritius, Mayotte, Morocco, New Caledonia, Niger, Reunion, Senegal, Seychelles, Togo, Tunisia, Vanuatu, and Wallis & Futuna; 3) "the laws of Finland" in Estonia, Latvia, and Lithuania; 4) "the laws of England" in Angola, Bahrain, Botswana, Burundi, Egypt, Eritrea, Ethiopia, Ghana, Jordan, Kenya, Kuwait, Liberia, Malawi, Malta, Mozambique, Nigeria, Oman, Pakistan, Qatar, Rwanda, Sao Tome, Saudi Arabia, Sierra Leone, Somalia, Tanzania, Uganda, United Arab Emirates, the United Kingdom, West Bank/Gaza, Yemen, Zambia, and Zimbabwe; and 5) "the laws of South Africa" in South Africa, Namibia, Lesotho and Swaziland.

Jurisdiction: *The following exceptions are added to this section:*

1) In Austria the choice of jurisdiction for all disputes arising out of this Statement of Limited Warranty and relating thereto, including its existence, will be the competent court of law in Vienna, Austria (Inner-City); 2) in Angola, Bahrain, Botswana, Burundi, Egypt, Eritrea, Ethiopia, Ghana, Jordan, Kenya, Kuwait, Liberia, Malawi, Malta, Mozambique, Nigeria, Oman, Pakistan, Qatar, Rwanda, Sao Tome, Saudi Arabia, Sierra Leone, Somalia, Tanzania, Uganda, United Arab Emirates, West Bank/Gaza, Yemen, Zambia, and Zimbabwe all disputes arising out of this Statement of Limited Warranty or related to its execution, including summary proceedings, will be submitted to the exclusive jurisdiction of the English courts; 3) in Belgium and Luxembourg, all disputes arising out of this Statement of Limited Warranty or related to its interpretation or its execution, the law, and the courts of the capital city, of the country of your registered office and/or commercial site location only are competent; 4) in France, Algeria, Benin, Burkina Faso, Cameroon, Cape Verde, Central African Republic, Chad, Comoros, Congo Republic, Djibouti, Democratic Republic of Congo, Equatorial Guinea, French Guiana, French Polynesia, Gabon, Gambia, Guinea, Guinea-Bissau, Ivory Coast, Lebanon, Madagascar, Mali, Mauritania, Mauritius, Mayotte, Morocco, New Caledonia, Niger, Reunion, Senegal, Seychelles, Togo, Tunisia, Vanuatu, and

Wallis & Futuna all disputes arising out of this Statement of Limited Warranty or related to its violation or execution, including summary proceedings, will be settled exclusively by the Commercial Court of Paris; 5) in Russia, all disputes arising out of or in relation to the interpretation, the violation, the termination, the nullity of the execution of this Statement of Limited Warranty shall be settled by Arbitration Court of Moscow; 6) in South Africa, Namibia, Lesotho and Swaziland, both of us agree to submit all disputes relating to this Statement of Limited Warranty to the jurisdiction of the High Court in Johannesburg; 7) in Turkey all disputes arising out of or in connection with this Statement of Limited Warranty shall be resolved by the Istanbul Central (Sultanahmet) Courts and Execution Directorates of Istanbul, the Republic of Turkey; 8) in each of the following specified countries, any legal claim arising out of this Statement of Limited Warranty will be brought before, and settled exclusively by, the competent court of a) Athens for Greece, b) Tel Aviv-Jaffa for Israel, c) Milan for Italy, d) Lisbon for Portugal, and e) Madrid for Spain; and 9) in the United Kingdom, both of us agree to submit all disputes relating to this Statement of Limited Warranty to the jurisdiction of the English courts.

Arbitration: *The following is added under this heading:*

In Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, FYR Macedonia, Moldova, Poland, Romania, Russia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan, and FR Yugoslavia all disputes arising out of this Statement of Limited Warranty or related to its violation, termination or nullity will be finally settled under the Rules of Arbitration and Conciliation of the International Arbitral Center of the Federal Economic Chamber in Vienna (Vienna Rules) by three arbitrators appointed in accordance with these rules. The arbitration will be held in Vienna, Austria, and the official language of the proceedings will be English. The decision of the arbitrators will be final and binding upon both parties. Therefore, pursuant to paragraph 598 (2) of the Austrian Code of Civil Procedure, the parties expressly waive the application of paragraph 595 (1) figure 7 of the Code. Lenovo may, however, institute proceedings in a competent court in the country of installation.

In Estonia, Latvia and Lithuania all disputes arising in connection with this Statement of Limited Warranty will be finally settled in arbitration that will be held in Helsinki, Finland in accordance with the arbitration laws of Finland then in effect. Each party will appoint one arbitrator. The arbitrators will then jointly appoint the chairman. If arbitrators cannot agree on the chairman, then the Central Chamber of Commerce in Helsinki will appoint the chairman.

EUROPEAN UNION (EU)

THE FOLLOWING TERMS APPLY TO ALL EU COUNTRIES:

The warranty for Machines acquired in EU countries is valid and applicable in all EU countries provided the Machines have been announced and made available in such countries.

How to Obtain Warranty Service: *The following is added to this section:* To obtain warranty service from IBM service in EU countries, see the telephone listing in Part 3 - Warranty Information. You may contact IBM service at the following address:

IBM Warranty & Service Quality Dept. PO Box 30 Spango Valley Greenock Scotland PA16 0AH

CONSUMERS

Consumers have legal rights under applicable national legislation governing the sale of consumer goods. Such rights are not affected by the warranties provided in this Statement of Limited Warranty.

AUSTRIA, DENMARK, FINLAND, GREECE, ITALY, NETHERLANDS, NORWAY, PORTUGAL, SPAIN, SWEDEN AND SWITZERLAND

Limitation of Liability: *The following replaces the terms of this section in its entirety:* Except as otherwise provided by mandatory law:

 Lenovo's liability for any damages and losses that may arise as a consequence of the fulfillment of its obligations under or in connection with this Statement of Limited Warranty or due to any other cause related to this Statement of Limited Warranty is limited to the compensation of only those damages and losses proved and actually arising as an immediate and direct consequence of the non-fulfillment of such obligations (if Lenovo is at fault) or of such cause, for a maximum amount equal to the charges you paid for the Machine.

The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which Lenovo is legally liable.

2. UNDER NO CIRCUMSTANCES IS LENOVO, ITS SUPPLIERS, RESELLERS OR SERVICE PROVIDERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY: 1) LOSS OF, OR DAMAGE TO, DATA; 2) INCIDENTAL OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; 3) LOST PROFITS, EVEN IF THEY ARISE AS AN IMMEDIATE CONSEQUENCE OF THE EVENT THAT GENERATED THE DAMAGES; OR 4) LOSS OF BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.

FRANCE AND BELGIUM

Limitation of Liability: *The following replaces the terms of this section in its entirety:* Except as otherwise provided by mandatory law:

 Lenovo's liability for any damages and losses that may arise as a consequence of the fulfillment of its obligations under or in connection with this Statement of Limited Warranty is limited to the compensation of only those damages and losses proved and actually arising as an immediate and direct consequence of the non-fulfillment of such obligations (if Lenovo is at fault), for a maximum amount equal to the charges you paid for the Machine that has caused the damages.

The above limitation shall not apply to damages for bodily injuries (including death) and damages to real property and tangible personal property for which Lenovo is legally liable.

2. UNDER NO CIRCUMSTANCES IS LENOVO, ITS SUPPLIERS, RESELLERS OR SERVICE PROVIDERS LIABLE FOR ANY OF THE FOLLOWING, EVEN IF INFORMED OF THEIR POSSIBILITY: 1) LOSS OF, OR DAMAGE TO, DATA; 2) INCIDENTAL OR INDIRECT DAMAGES, OR FOR ANY ECONOMIC CONSEQUENTIAL DAMAGES; 3) LOST PROFITS, EVEN IF THEY ARISE AS AN IMMEDIATE CONSEQUENCE OF THE EVENT THAT GENERATED THE DAMAGES; OR 4) LOSS OF BUSINESS, REVENUE, GOODWILL, OR ANTICIPATED SAVINGS.

THE FOLLOWING TERMS APPLY TO THE COUNTRY SPECIFIED:

AUSTRIA

The provisions of this Statement of Limited Warranty replace any applicable statutory warranties.

What this Warranty Covers: *The following replaces the first sentence of the first paragraph of this section:*

The warranty for a Lenovo Machine covers the functionality of the Machine for its normal use and the Machine's conformity to its Specifications.

The following paragraphs are added to this section:

The limitation period for consumers in action for breach of warranty is the statutory period as a minimum. In case your Service Provider is unable to repair a Lenovo Machine, you can alternatively ask for a partial refund as far as justified by the reduced value of the unrepaired Machine or ask for a cancellation of the respective agreement for such Machine and get your money refunded.

The second paragraph does not apply.

What Lenovo Will Do to Correct Problems: *The following is added to this section:* During the warranty period, Lenovo will reimburse you for the transportation charges for the delivery of the failing Machine to IBM Service.

Limitation of Liability: *The following paragraph is added to this section:*

The limitations and exclusions specified in the Statement of Limited Warranty will not apply to damages caused by Lenovo with fraud or gross negligence and for express warranty.

The following sentence is added to the end of item 2:

Lenovo's liability under this item is limited to the violation of essential contractual terms in cases of ordinary negligence.

EGYPT

Limitation of Liability: *The following replaces item 2 in this section:* as to any other actual direct damages, Lenovo's liability will be limited to the total amount you paid for the Machine that is the subject of the claim.

Applicability of suppliers, resellers, and Service Providers (unchanged).

FRANCE

Limitation of Liability: *The following replaces the second sentence of the first paragraph of this section:*

In such instances, regardless of the basis on which you are entitled to claim damages from Lenovo, Lenovo is liable for no more than: (items 1 and 2 unchanged).

GERMANY

What this Warranty Covers: *The following replaces the first sentence of the first paragraph of this section:*

The warranty for a Lenovo Machine covers the functionality of the Machine for its normal use and the Machine's conformity to its Specifications.

The following paragraphs are added to this section:

The minimum warranty period for Machines is twelve months. In case your Service Provider is unable to repair a Lenovo Machine, you can alternatively ask for a partial refund as far as justified by the reduced value of the unrepaired Machine or ask for a cancellation of the respective agreement for such Machine and get your money refunded.

The second paragraph does not apply.

What Lenovo Will Do to Correct Problems: *The following is added to this section:* During the warranty period, transportation for delivery of the failing Machine to Lenovo or IBM service will be at Lenovo's expense.

Limitation of Liability: The following paragraph is added to this section:

The limitations and exclusions specified in the Statement of Limited Warranty will not apply to damages caused by Lenovo with fraud or gross negligence and for express warranty.

The following sentence is added to the end of item 2:

Lenovo's liability under this item is limited to the violation of essential contractual terms in cases of ordinary negligence.

HUNGARY

Limitation of Liability: *The following is added at the end of this section:* The limitation and exclusion specified herein shall not apply to liability for a breach of contract damaging life, physical well-being, or health that has been caused intentionally, by gross negligence, or by a criminal act.

The parties accept the limitations of liability as valid provisions and state that the Section 314.(2) of the Hungarian Civil Code applies as the acquisition price as well as other advantages arising out of the present Statement of Limited Warranty balance this limitation of liability.

IRELAND

What this Warranty Covers: *The following is added to this section:* Except as expressly provided in these terms and conditions, all statutory conditions, including all warranties implied, but without prejudice to the generality of the foregoing all warranties implied by the Sale of Goods Act 1893 or the Sale of Goods and Supply of Services Act 1980 are hereby excluded.

Limitation of Liability: *The following replaces the terms of section in its entirety:* For the purposes of this section, a "Default" means any act, statement, omission, or negligence on the part of Lenovo in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which Lenovo is legally liable to you, whether in contract or tort. A number of Defaults which together result in, or contribute to, substantially the same loss or damage will be treated as one Default occurring on the date of occurrence of the last such Default.

Circumstances may arise where, because of a Default, you are entitled to recover damages from Lenovo.

This section sets out the extent of Lenovo's liability and your sole remedy.

- 1. Lenovo will accept unlimited liability for death or personal injury caused by the negligence of Lenovo.
- 2. Subject always to the **Items for Which Lenovo is Not Liable** below, Lenovo will accept unlimited liability for physical damage to your tangible property resulting from the negligence of Lenovo.
- **3**. Except as provided in items 1 and 2 above, Lenovo's entire liability for actual damages for any one Default will not in any event exceed 125% of the amount you paid for the Machine directly relating to the Default.

Items for Which Lenovo is Not Liable

Save with respect to any liability referred to in item 1 above, under no

circumstances is Lenovo, its suppliers, resellers or Service Providers liable for any of the following, even if Lenovo or they were informed of the possibility of such losses:

- 1. loss of, or damage to, data;
- 2. special, indirect, or consequential loss; or
- 3. loss of profits, business, revenue, goodwill, or anticipated savings.

SLOVAKIA

Limitation of Liability: *The following is added to the end of the last paragraph:* The limitations apply to the extent they are not prohibited under §§ 373-386 of the Slovak Commercial Code.

SOUTH AFRICA, NAMIBIA, BOTSWANA, LESOTHO AND SWAZILAND

Limitation of Liability: *The following is added to this section:* Lenovo's entire liability to you for actual damages arising in all situations involving nonperformance by Lenovo in respect of the subject matter of this Statement of Warranty will be limited to the charge paid by you for the individual Machine that is the subject of your claim from Lenovo.

UNITED KINGDOM

Limitation of Liability: *The following replaces the terms of this section is in its entirety:* For the purposes of this section, a "Default" means any act, statement, omission, or negligence on the part of Lenovo in connection with, or in relation to, the subject matter of this Statement of Limited Warranty in respect of which Lenovo is legally liable to you, whether in contract or tort. A number of Defaults which together result in, or contribute to, substantially the same loss or damage will be treated as one Default.

Circumstances may arise where, because of a Default, you are entitled to recover damages from Lenovo.

This section sets out the extent of Lenovo's liability and your sole remedy. 1. Lenovo will accept unlimited liability for:

- a. death or personal injury caused by the negligence of Lenovo; and
- b. any breach of its obligations implied by Section 12 of the Sale of Goods Act 1979 or Section 2 of the Supply of Goods and Services Act 1982, or any statutory modification or re-enactment of either such Section.
- 2. Lenovo will accept unlimited liability, subject always to the **Items for Which Lenovo is Not Liable** below, for physical damage to your tangible property resulting from the negligence of Lenovo.
- **3**. Lenovo's entire liability for actual damages for any one Default will not in any event, except as provided in items 1 and 2 above, exceed 125% of the total purchase price payable or the charges for the Machine directly relating to the Default.

These limits also apply to Lenovo's suppliers, resellers and Service Providers. They state the maximum for which Lenovo and such suppliers, resellers and Service Providers are collectively responsible.

Items for Which Lenovo is Not Liable

Save with respect to any liability referred to in item 1 above, under no circumstances is Lenovo or any of its suppliers, resellers or Service Providers liable for any of the following, even if Lenovo or they were informed of the possibility of such losses:

1. loss of, or damage to, data;

- 2. special, indirect, or consequential loss; or
- 3. loss of profits, business, revenue, goodwill, or anticipated savings.

Part 3 - Warranty Information

This Part 3 provides information regarding the warranty applicable to your Machine, including the warranty period and type of warranty service Lenovo provides.

Warranty Period

The warranty period may vary by country or region and is specified in the table below. NOTE: "Region" means either Hong Kong or Macau Special Administrative Region of China.

A warranty period of 3 years on parts and 3 years on labor means that Lenovo provides warranty service during the three years of the warranty period.

Machine Type	Country or Region of Purchase	Warranty Period	Type of Warranty Service
80 GB USB 2.0 Hard Disk Drive with Rescue and Recovery	Worldwide	3 years	7

Types of Warranty Service

If required, your Service Provider will provide repair or exchange service depending on the type of warranty service specified for your Machine in the above table and as described below. Scheduling of service will depend upon the time of your call and is subject to parts availability. Service levels are response time objectives and are not guaranteed. The specified level of warranty service may not be available in all worldwide locations, additional charges may apply outside your Service Provider's normal service area, contact your local Service Provider representative or your reseller for country and location specific information.

1. Customer Replaceable Unit ("CRU") Service

Lenovo will ship CRUs to you for you to install, Tier 1 CRUs are easy to install whereas Tier 2 CRUs require some technical skill and tools. CRU information and replacement instructions are shipped with your Machine and are available from Lenovo at any time on your request. You may request that a Service Provider install CRUs, at no additional charge, under the type of warranty service designated for your Machine. Lenovo specifies in the materials shipped with a replacement CRU whether a defective CRU must be returned. When return is required, 1) return instructions and a container are shipped with the replacement CRU, and 2) you may be charged for the replacement CRU if Lenovo does not receive the defective CRU within 30 days of your receipt of the replacement.

2. On-site Service

Your Service Provider will either repair or exchange the failing Machine at your location and verify its operation. You must provide suitable working area to allow disassembly and reassembly of the Lenovo Machine. The area must be clean, well lit and suitable for the purpose. For some Machines, certain repairs may require sending the Machine to a designated service center.

3. Courier or Depot Service *

You will disconnect the failing Machine for collection arranged by your Service Provider. A shipping container will be provided to you for you to return your Machine to a designated service center. A courier will pick up your Machine and deliver it to the designated service center. Following its repair or exchange, the service center will arrange the return delivery of the Machine to your location. You are responsible for its installation and verification.

4. Customer Carry-In or Mail-In Service

You will deliver or mail as your Service Provider specifies (prepaid unless specified otherwise) the failing Machine suitably packaged to a designated location. After the Machine has been repaired or exchanged, it will be made available for your collection or, for Mail-in Service, the Machine will be returned to you at Lenovo's expense, unless your Service Provider specifies otherwise. You are responsible for the subsequent installation and verification of the Machine.

5. CRU and On-site Service

This type of Warranty Service is a combination of Type 1 and Type 2 (see above).

6. CRU and Courier or Depot Service

This type of Warranty Service is a combination of Type 1 and Type 3 (see above).

7. CRU and Customer Carry-In or Mail-In Service

This type of Warranty Service is a combination of Type 1 and Type 4 (see above).

When a 5, 6 or 7 type of warranty service is listed, your Service Provider will determine which type of warranty service is appropriate for the repair.

* This type of service is called ThinkPad EasyServ or EasyServ in some countries.

To obtain warranty service contact a Service Provider. In Canada or the United States, call 1-800-IBM-SERV (426-7378). In other countries, see the telephone numbers below.

Worldwide telephone list

Phone numbers are subject to change without notice. For the most current phone numbers, go to http://www.lenovo.com/think/support and click **Support phone list**.

Country or Region	Telephone Number
Africa	Africa: +44 (0)1475-555-055 South Africa: +27-11-3028888 and 0800110756 Central Africa: Contact the nearest IBM Business Partner
Argentina	0800-666-0011 (Spanish)
Australia	131-426 (English)
Austria	Up and running support: 01-24592-5901 Warranty service and support: 01-211-454-610 (German)
Belgium	Up and running support: 02-210-9820 (Dutch) Up and running support: 02-210-9800 (French) Warranty service and support: 02-225-3611 (Dutch, French)
Bolivia	0800-0189 (Spanish)

Country or Region	Telephone Number
Brazil	Sao Paulo region: (11) 3889-8986 Toll free outside Sao Paulo region: 0800-7014-815 (Brazilian Portuguese)
Canada	1-800-565-3344 (English, French) In Toronto only call: 416-383-3344
Chile	800-224-488 (Spanish)
China	800-810-1818 (Mandarin)
China (Hong Kong S.A.R.)	Home PC: 852-2825-7799 Commercial PC: 852-8205-0333 ThinkPad and WorkPad: 852-2825-6580 (Cantonese, English, Putonghua)
Colombia	1-800-912-3021 (Spanish)
Costa Rica	284-3911 (Spanish)
Croatia	0800-0426
Cyprus	+357-22-841100
Czech Republic	+420-2-7213-1316
Denmark	Up and running support: 4520-8200 Warranty service and support: 7010-5150 (Danish)
Dominican Republic	566-4755 566-5161 ext. 8201 Toll Free within the Dominican Republic: 1-200-1929 (Spanish)
Ecuador	1-800-426911 (Spanish)
El Salvador	250-5696 (Spanish)
Estonia	+386-61-1796-699
Finland	Up and running support: 09-459-6960 Warranty service and support: +358-800-1-4260 (Finnish)
France	Up and running support: 0238-557-450 Warranty service and support (hardware): 0810-631-213 Warranty service and support (software): 0810-631-020 (French)
Germany	Up and running support: 07032-15-49201 Warranty service and support: 01805-25-35-58 (German)
Greece	+30-210-680-1700
Guatemala	335-8490 (Spanish)
Honduras	Tegucigalpa & San Pedro Sula: 232-4222 San Pedro Sula: 552-2234 (Spanish)
Hungary	+36-1-382-5720
India	1600-44-6666 Alternate Toll Free: +91-80-2678-8940 (English)
Indonesia	800-140-3555 +62-21-251-2955 (English, Bahasa, Indonesian)

Country or Region	Telephone Number
Ireland	Up and running support: 01-815-9202 Warranty service and support: 01-881-1444 (English)
Italy	Up and running support: 02-7031-6101 Warranty service and support: +39-800-820094 (Italian)
Japan	Desktop: Toll free: 0120-887-870 For International: +81-46-266-4724
	ThinkPad: Toll free: 0120-887-874 For International: +81-46-266-4724
	Both of the above numbers will be answered with a Japanese language voice prompt. For telephone support in English, please wait for the Japanese voice prompt to end, and an operator will answer. Please ask for "English support please," and your call will be transferred to an English speaking operator.
	PC Software: 0120-558-695 Overseas calls: +81-44-200-8666 (Japanese)
Korea	1588-5801 (Korean)
Latvia	+386-61-1796-699
Lithuania	+386-61-1796-699
Luxembourg	+352-298-977-5063 (French)
Malaysia	1800-88-8558 (English, Bahasa, Melayu)
Malta	+356-23-4175
Mexico	001-866-434-2080 (Spanish)
Middle East	+44 (0)1475-555-055
Netherlands	+31-20-514-5770 (Dutch)
New Zealand	0800-446-149 (English)
Nicaragua	255-6658 (Spanish)
Norway	Up and running support: 6681-1100 Warranty service and support: 8152-1550 (Norwegian)
Panama	206-6047 (Spanish)
Peru	0-800-50-866 (Spanish)
Philippines	1800-1888-1426 +63-2-995-8420 (English, Philipino)
Poland	+48-22-878-6999
Portugal	+351-21-892-7147 (Portuguese)
Romania	+4-021-224-4015
Russian Federation	+7-095-940-2000 (Russian)
Singapore	1800-3172-888 (English, Bahasa, Melayu)
Slovakia	+421-2-4954-1217

Country or Region	Telephone Number
Slovenia	+386-1-4796-699
Spain	91-714-7983 91-397-6503 (Spanish)
Sri Lanka	+94-11-2448-442 (English)
Sweden	Up and running support: 08-477-4420 Warranty service and support: 077-117-1040 (Swedish)
Switzerland	Up and running support: 058-333-0900 Warranty service and support: 0800-55-54-54 (German, French, Italian)
Taiwan	886-2-8723-9799 (Mandarin)
Thailand	1-800-299-229 (Thai)
Turkey	00800-4463-2041 (Turkish)
United Kingdom	Up and running support: 01475-555-055 Warranty service and support (hardware): 08705-500-900 Warranty service and support (software): 08457-151-516 (English)
United States	1-800-426-7378 (English)
Uruguay	000-411-005-6649 (Spanish)
Venezuela	0-800-100-2011 (Spanish)
Vietnam	For northern area and Hanoi: 84-4-8436675 For southern area and Ho Chi Minh City: 84-8-829-5160 (English, Vietnamese)

Guarantee supplement for Mexico

This supplement is considered part of Lenovo's Statement of Limited Warranty and shall be effective solely and exclusively for products distributed and commercialized within Territory of the Mexican United States. In the event of a conflict, the terms of this supplement shall apply.

All software programs pre-loaded in the equipment shall only have a thirty- (30) day guarantee for installation defects from the date of purchase. Lenovo is not responsible for the information in such software programs and/or any additional software programs installed by you or installed after purchase of the product.

Services not chargeable to the guarantee shall be charged to the final user, prior an authorization.

In the event that warranty repair is required please call the Customer Support Center at 001-866-434-2080, where you will be directed to the nearest Authorized Service Center. Should no Authorized Service Center exist in your city, location or within 70 kilometers of your city or location, the guarantee includes any reasonable delivery charges related to the transportation of the product to our nearest Authorized Service Center. Please call the nearest Authorized Service Center to obtain the necessary approvals or information concerning the shipment of the product and the shipment address. To obtain a list of Authorized Service Centers, please visit:

http://www.lenovo.com/think/support/site.wss/ document.do?lndocid=MIGR-44986&sitestyle=lenovo

Manufactured by:

SCI Systems de México, S.A. de C.V. Av. De la Solidaridad Iberoamericana No. 7020 Col. Club de Golf Atlas El Salto, Jalisco, México C.P. 45680, Tel. 01-800-3676900

Marketing by: Lenovo de México, Comercialización y Servicios, S. A. de C. V. Alfonso Nápoles Gándara No 3111 Parque Corporativo de Peña Blanca Delegación Álvaro Obregón México, D.F., México C.P. 01210, Tel. 01-800-00-325-00

Appendix E. Notices

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

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Lenovo (United States), Inc. 500 Park Offices Drive, Hwy. 54 Research Triangle Park, NC 27709 U.S.A. Attention: Lenovo Director of Licensing

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The following terms are trademarks of Lenovo in the United States, other countries, or both: Lenovo ThinkCentre ThinkPad

IBM and Lotus Notes are trademarks of International Business Machines Corporation in the United States, other countries, or both.

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.

Electronic emission notices

The following information refers to the 80GB USB 2.0 Hard Disk Drive with Rescue and Recovery.

Federal Communications Commission (FCC) Declaration of Conformity

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, used, 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 the 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 authorized dealer or service representative for help.

Lenovo is not responsible for any radio or television interference caused by using other than recommended cables or 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:

Lenovo (United States) Inc. One Manhattanville Road Purchase, New York 10577 Telephone: (919) 254-0532

FC 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.

EU-EMC Directive (89/336/EG) EN 55022 class B Statement of Compliance

Deutschsprachiger EU Hinweis:

Hinweis für Geräte der Klasse B EU-Richtlinie zur ElektromagnetischenVerträglichkeit Dieses Produkt entspricht den Schutzanforderungen der EU-Richtlinie 89/336/EWG zur Angleichung der Rechtsvorschriften über die elektromagnetische Verträglichkeit in den EU-Mitgliedsstaaten.

und hält die Grenzwerte der EN 55022 Klasse B ein.

Um dieses sicherzustellen, sind die Geräte wie in den Handbüchern beschrieben zu installieren und zu betreiben. Des Weiteren dürfen auch nur von der Lenovo empfohlene Kabel angeschlossen werden. Lenovo übernimmt keine Verantwortung für die Einhaltung der Schutzanforderungen, wenn das Produkt ohne Zustimmung der Lenovo verändert bzw. wenn Erweiterungskomponenten von Fremdherstellern ohne Empfehlung der Lenovo gesteckt/eingebaut werden.

Deutschland: Einhaltung des Gesetzes über die elektromagnetische Verträglichkeit von Geräten Dieses Produkt entspricht dem "Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG)". Dies ist die Umsetzung der EU-Richtlinie 89/336/EWG in der Bundesrepublik Deutschland.

Zulassungsbescheinigung laut dem Deutschen Gesetz über die elektromagnetische Verträglichkeit von Geräten (EMVG) vom 18. September 1998 (bzw. der EMC EG Richtlinie 89/336) für Geräte der Klasse B Dieses Gerät ist berechtigt, in Übereinstimmung mit dem Deutschen EMVG das EG-Konformitätszeichen - CE - zu führen. Verantwortlich für die Konformitätserklärung nach Paragraf 5 des EMVG ist die Lenovo (Deutschland) GmbH, Pascalstr. 100, D-70569 Stuttgart. Informationen in Hinsicht EMVG Paragraf 4 Abs. (1) 4:

Das Gerät erfüllt die Schutzanforderungen nach EN 55024 und EN 55022 Klasse B.)

European Union - Compliance to the Electromagnetic Compatibility Directive

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

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to 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.

Avis de conformité à la directive de l'Union Européenne

Le présent produit satisfait aux exigences de protection énoncées dans la directive 89/336/CEE du Conseil concernant le rapprochement des législations des Etats membres relatives à la compatibilité électromagnétique. Lenovo décline toute responsabilité en cas de non-respect de cette directive résultant d'une modification non recommandée du produit, y compris l'ajout de cartes en option non Lenovo.

Ce produit respecte les limites des caractéristiques d'immunité des appareils de traitement de l'information définies par la classe B de la norme européenne EN 55022 (CISPR 22). La conformité aux spécifications de la classe B offre une garantie acceptable contre les perturbations avec les appareils de communication agréés, dans les zones résidentielles.

Unione Europea - Directiva EMC (Conformidad électromagnética)

Este producto satisface los requisitos de protección del Consejo de la UE, Directiva 89/336/CEE en lo que a la legislatura de los Estados Miembros sobre compatibilidad electromagnética se refiere.

Lenovo no puede aceptar responsabilidad alguna si este producto deja de satisfacer dichos requisitos de protección como resultado de una modificación no recomendada del producto, incluyendo el ajuste de tarjetas de opción que no sean Lenovo.

Este producto ha sido probado y satisface los límites para Equipos Informáticos Clase B de conformidad con el Estándar Europeo EN 55022. Los límites para los equipos de Clase B se han establecido para entornos residenciales típicos a fin de proporcionar una protección razonable contra las interferencias con dispositivos de comunicación licenciados.

Union Europea - Normativa EMC

Questo prodotto è conforme alle normative di protezione ai sensi della Direttiva del Consiglio dell'Unione Europea 89/336/CEE sull'armonizzazione legislativa degli stati membri in materia di compatibilità elettromagnetica.

Lenovo non accetta responsabilità alcuna per la mancata conformità alle normative di protezione dovuta a modifiche non consigliate al prodotto, compresa l'installazione di schede e componenti di marca diversa da Lenovo.

Le prove effettuate sul presente prodotto hanno accertato che esso rientra nei limiti stabiliti per le le apparecchiature di informatica Classe B ai sensi del Norma Europea EN 55022. I limiti delle apparecchiature della Classe B sono stati stabiliti al fine di fornire ragionevole protezione da interferenze mediante dispositivi di comunicazione in concessione in ambienti residenziali tipici.

Korea Class B Compliance

이 기기는 가정용으로 전자파 적합등록을 한 기기로서 주거지역에서는 물론 모든 지역에서 사용할 수 있습니다.

Japan VCCI Class B Compliance

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。

Japanese statement of compliance for products less than or equal to 20 A per phase

高調波ガイドライン適合品
ThinkPad ThinkCentre

Part Number: 40Y8740

Printed in USA

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