

# Getting Started



## Norton Ghost™ 2003

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This card is intended to assist first time home users of Norton Ghost who might not feel confident with some of the terms and concepts that are used in Norton Ghost. This card walks you through the basic use of Norton Ghost as a backup tool at home.

## Where to find more information

Norton Ghost includes the following additional documentation:

- The *Norton Ghost User's Guide* is available in PDF format on the CD.
- Multimedia tutorials are included on the CD to walk you through common tasks.
- Links to selected online knowledge base articles can be selected from the Help menu in the Ghost Boot Wizard, Norton Ghost, and Ghost Explorer.
- The Symantec Web site ([www.symantec.com/ghost](http://www.symantec.com/ghost)) has answers to frequently asked questions, troubleshooting tips, online tutorials, a knowledge base, and the latest product information.

## About Norton Ghost

Norton Ghost is a back up and cloning solution for home and small business users. Norton Ghost lets you do the following:

- Back up a computer: A full system back up of your computer.
- Restore a computer if hardware or software failure occurs: Once you have created a back up, you can quickly restore a computer to the last backup copy.
- Clone one partition or hard disk to another: Directly copy one partition or hard disk to another, creating an exact copy of the original.

## Basic user scenarios

As a home user you are most likely to use Norton Ghost for the following tasks:

- Backing up and restoring your computer
- Upgrading to a larger hard disk

# Backing up and restoring your computer

Using Norton Ghost you can create weekly back ups of your computer. If your hard disk crashes, you can use Norton Ghost to restore your computer to the latest back up.

Norton Ghost can restore a computer from an image file that contains Windows XP Home and a full installation of Microsoft Office in less than one minute.

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**Note:** Tests were performed on P4, HD 7,200 RPM.

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## Upgrading to a larger hard disk

Using Norton Ghost you can clone your old hard disk directly to a new disk. This operation copies your operating system, installed software, system files, and data files directly to the new hard disk.

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**Note:** Cloning functionality is described in greater detail in the *Norton Ghost User's Guide*.

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## Concepts and ideas to understand

This section describes some concepts that may help you to understand how Norton Ghost works, and how you can use it to your greatest advantage.

## Backing up a computer

Performing back ups of your computer is an essential part of maintaining your computer system. If you do not take regular back ups, you risk losing all of your data if your hardware or software fails.

## What to back up

Norton Ghost creates a system back up that ensures that every file is saved. Your operating system, software packages, system files, registry, software configuration, and data files are all available for recovery from disaster. There are two advantages to this: There is no chance that you have skipped an important file, and you can return your computer to full functionality quickly.

A back up includes files and data up to the point that the back up was performed. If you enter data that is crucial to you, then

you must back up those data files to ensure that you have a comprehensive back up solution.

## When to back up

You should perform a backup of your computer on a regular basis, for example, once a week, and keep more than just the most recent back up. If disaster strikes, you will lose no more than a week's changes.

You should also perform a back up before and after you make major changes to your computer. For example, if you install a new operating system or new software.

Run the following back ups when you upgrade your operating system:

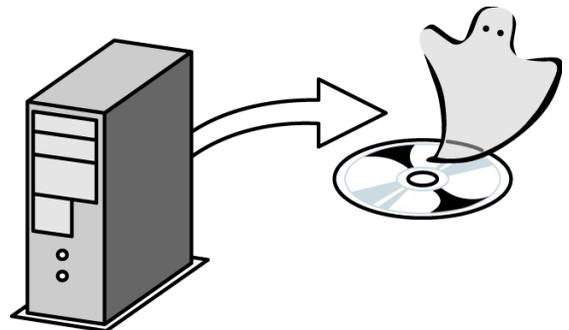
- Back up your computer to capture the existing operating system and files.  
Once you have created this backup, you can revert to it if the installation of the new operating system creates problems on your computer.
- Install the new operating system.
- Back up your computer to capture the new operating system.  
Keep both back ups.

## How Norton Ghost backs up your computer

Norton Ghost backs up your computer to an image file. An image file is a full copy of a hard disk or one or more partitions. This includes the operating system, software packages, system files, and data files.

The image file should only be restored to hardware that is similar to the hardware from which it was created.

**Figure 1-1** Backing up to an image file



The image file must be saved to a storage medium other than the disk or partition that is being backed up. For example, you cannot back up your hard disk to the same hard disk. You must save the back up to another hard disk, a CD/DVD, or another storage device.

## How Norton Ghost restores your computer

Once you have created a back up, you are prepared if disaster strikes. If you experience hardware or software failure, and all other solutions have failed, you can restore the image file to your hard disk.

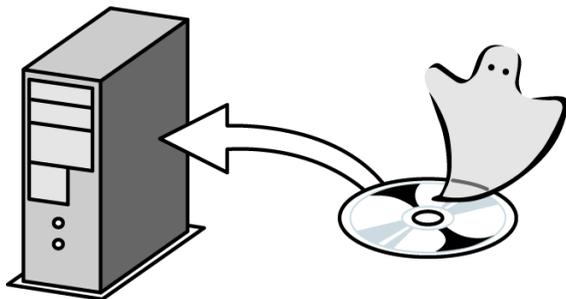
Since a back up contains only those changes made up to the time the back up was created, try to copy any files that were created since the back up to a safe location. Try to recover your systems and data before using Norton Ghost. If this is not successful, you can use Norton Ghost to restore the backup image file onto your partition or hard disk. This overwrites any existing software and data.

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**Warning:** Make sure that you are restoring the correct partition and hard disk as you cannot recover data once it has been overwritten.

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**Figure 1-2** Restoring from an image file

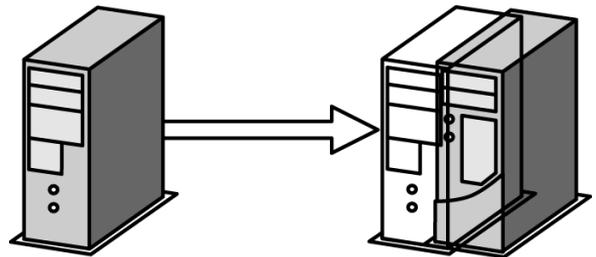


## Using Norton Ghost to clone your computer

You can use Norton Ghost to clone a hard disk directly to another hard disk, or a partition directly to another partition. This creates a replica of the existing disk or partition.

Cloning can be used to upgrade to a new hard disk or as a backup method.

**Figure 1-3** Cloning a computer



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**Note:** The cloning process is described in greater detail in the *Norton Ghost User's Guide*.

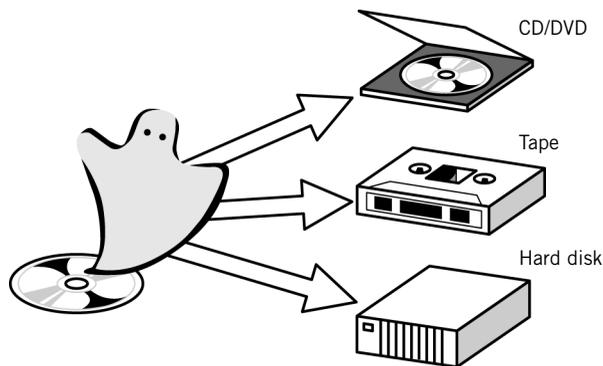
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## Where to store image files

Norton Ghost lets you back up your computer by saving an image file to any of the following storage locations:

- **Second hard disk:** If you have a second hard disk installed in your computer, you can create a back up onto this disk. This method is fast and efficient.
- **Second partition:** If you have a second partition on your hard disk, you can back up a partition to an image file on the second partition. There must be an existing second partition before you perform the back up. A disadvantage of using a second partition on the local hard disk is that if your hard disk fails completely, you can not access the backup image.
- **CD/DVD writable drive:** You can back up to a supported CD or DVD drive. If you have problems writing to CD-R/RW or DVD, check that your drive is listed on the support Web site:  
<http://service1.symantec.com/SUPPORT/ghost.nsf/docid/2002030414141625>
- **Removable media (JAZ disk, ZIP disk, external hard disk).**

**Figure 1-4** Storage locations for image files



## Connecting your computer to an external device

If you are backing up your computer to an external device, you can use one of the following options to connect your computer to the external device:

- USB 1.1 and 2.0
- FireWire

You can find more detail on these methods in the *Norton Ghost User's Guide*.

## Hard disks and drives

A hard disk is a physical disk that is either installed in your computer or connected externally. Your computer has at least one hard disk installed. An external hard drive can be connected by a cable, for example a USB or FireWire cable.

A drive is one of the following:

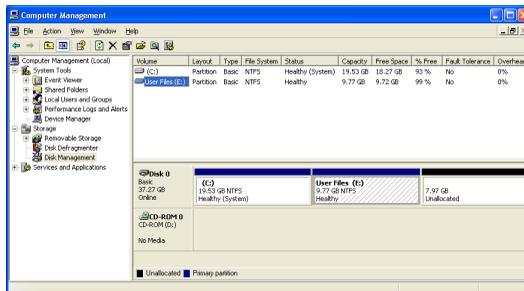
- A partition on a hard disk that has been mapped to a drive. For example, the drive that contains your operating system, user software, and data files is usually mapped to C.
- A floppy disk drive, or CD drive. A floppy disk drive is usually mapped to A, and the CD drive is usually mapped to D.

## Partitions

If a hard disk is divided into partitions, the operating system views each partition as a separate disk. A hard disk drive can contain one or more partitions. If an operating system recognizes the format of the partition, it assigns a drive letter to it. Each partition can be formatted, backed up, restored, cloned, or overwritten independently using Norton Ghost.

Each partition on a hard disk can be formatted with a different file system, for example, FAT or NTFS.

**Figure 1-5** Windows display of partitions



## Virtual Partition

The Virtual Partition is created when you launch a Norton Ghost operation from Windows. All of the files that are required for the back up, restore, or clone are automatically installed into the Virtual Partition and the task is performed. Most of the virtual operation is not apparent to you. However, there are some occasions when you must know what the Virtual Partition is and what it does.

For more information, see the *Norton Ghost User's Guide*.

## File systems

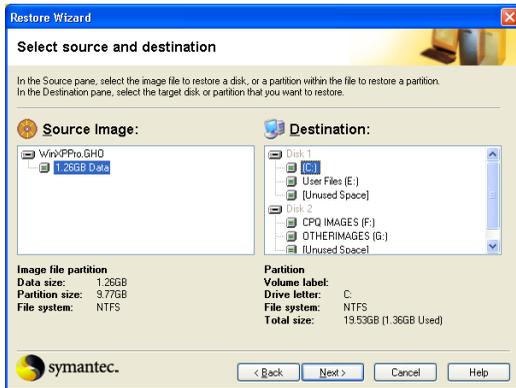
Each partition on your computer is created as a file system type. Each file system behaves differently and may be viewed differently by Norton Ghost. When you back up, restore, or clone with Norton Ghost, the type of file system is displayed with the partition detail.

Common types of partitions that you may see on your computer include the following:

- FAT16
- FAT32
- NTFS
- EXT2/EXT3 (Linux)

Linux and NTFS partitions may not be displayed with a drive letter in Ghost.exe.

**Figure 1-6** Restore window with NTFS source partition



## Windows Ghost and DOS Ghost

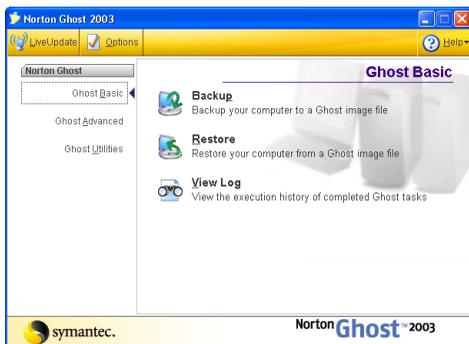
You can start and run Norton Ghost in one of the following:

- Windows
- DOS

## Running Norton Ghost in Windows

Running Norton Ghost from the Windows interface lets you complete basic operations using wizards. The wizards step you through back up, restore, and clone operations, as well as other features of Norton Ghost.

**Figure 1-7** Norton Ghost 2003 main window



## Running the Ghost executable from DOS

DOS is an operating system that is supplied with Norton Ghost that allows some functionality that cannot be performed in Windows.

Only one process of using Norton Ghost from the DOS user interface is described in this guide. The integrity check process is included to ensure that you can access your backup image

file. Running Norton Ghost from the DOS user interface is fully described in the *Norton Ghost User's Guide*.

Running the Ghost executable from the DOS command line

The Ghost executable, Ghost.exe, can be run from the command line in DOS. Using command-line switches, you can set the behavior of Ghost.exe and automate processes.

For more information on running the Ghost executable from the command line, see the *Norton Ghost User's Guide*.

## Ghost boot disks

A Ghost boot disk can be created using the Ghost Boot Wizard, a utility that is supplied with Norton Ghost. A boot disk is a floppy disk that loads DOS and driver files to let you run Ghost.exe on your computer.

You do not need a Ghost boot disk to run the Backup, Restore, and Clone Wizards, but you must have a recovery boot disk or bootable CD/DVD.

You must create a Ghost boot disk and keep it in a safe place. This lets you use Ghost.exe to recover your computer, if Windows is not operational. You do not need a Ghost boot disk if you saved your image file directly to CD or DVD. Using the CD or DVD, you can start your computer and launch Ghost.exe.

To use Ghost.exe you must have a Ghost boot disk or a bootable CD. The following tasks require a Ghost boot disk:

- Restoring your computer with Ghost.exe after software or hardware failure
- Cloning a computer that does not have Windows installed

For more information on creating and using Ghost boot disks, see the *Norton Ghost User's Guide*.

## Backing up and restoring your computer data

The following operations will help you create and test a backup image file:

- Creating a backup image file of your hard disk
- Creating a recovery boot disk
- Testing the recovery boot disk

The following instructions assume that you have installed Norton Ghost on your computer. See the *Norton Ghost User's Guide*.

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**Warning:** You must create and test your recovery image file, using a Ghost boot disk or the backup CD/DVD.

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## Creating a backup image file of your hard disk

You can create a backup image file of your hard disk or one or more partitions using Norton Ghost.

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**Note:** If you are writing the image file to a CD, you may require more than one CD. During the back up, you are prompted to insert extra CDs if required.

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### To create a backup image file of your hard disk

- 1 Do one of the following:
  - On the Windows taskbar, click **Start > Programs > Norton Ghost 2003 > Norton Ghost**.
  - On the Windows XP taskbar, click **Start > All Programs > Norton Ghost 2003 > Norton Ghost**.
- 2 In the Ghost Basic window, click **Backup**, then click **Next**.
- 3 In the Backup Wizard window, in the Source pane, do one of the following:
  - Select a disk to back up.
  - Select one or more partitions to back up. The partitions must reside on the same disk.
- 4 Do one of the following:
  - Click **File** to back up to a file.
  - Click **Recordable CD or DVD** to back up to a CD or DVD drive. Norton Ghost selects the CD or DVD drive that contains writable media.
- 5 Click **Next**.
- 6 If this is the first time you have used Norton Ghost on this computer, in the Add Ghost Disk Identification dialog box, click **OK** to identify all hard disks. If you have previously used Norton Ghost on this computer this dialog box does not appear.
- 7 In the Advanced settings window, click **Next**.
- 8 In the Important Information dialog box, click **Next**.
- 9 In the Disaster Recovery window, click **Continue**.

This dialog box warns you to check that you can run Ghost.exe and access your image file once it has been created.

- 10 In the Backup Wizard window, review the task details, then click **Run Now** to create the backup image file. Your computer is restarted in DOS, the backup image file is created, and your computer is restarted in Windows.

## Creating a recovery boot disk

If you have created a backup image and saved it to somewhere other than a CD or DVD, you must create and test a recovery boot disk in case of emergency. If you experience a critical failure with your hard disk and cannot start your computer, you must have a recovery boot disk or your CD/DVD. This lets you start your computer in DOS and run Ghost.exe to access your backup and restore your computer.

If you have saved your image file to CD or DVD directly from Norton Ghost then Ghost.exe is included on the CD/DVD and you can start your computer from CD/DVD. Test your CD/DVD to ensure that you can start Ghost.exe from your CD/DVD.

Use the Ghost Boot Wizard to create a recovery boot disk. Following are the instructions for creating a standard boot disk. Depending on the files that are included on the boot disk, you may require more than one blank floppy disk.

### To create a recovery boot disk

- 1 On the Windows taskbar, click **Start > Programs > Norton Ghost**.
- 2 In the Ghost Basic window, click **Ghost Utilities**.
- 3 In the Ghost Utilities window, click **Norton Ghost Boot Wizard**.
- 4 In the Ghost Boot Wizard window, click **Standard Ghost Boot Disk**.
- 5 Click **Next**.
- 6 If you saved your image file to an external device, you may need to select one or more of the following:
  - **USB 1.1 support:** Add support for USB 1.1 external devices to the boot disk.
  - **USB 2.0 support:** Add support for USB 2.0 external devices to the boot disk.
  - **Firewire Support:** Add support for FireWire external devices to the boot disk.
  - **Assign DOS drive letters:** Assign a DOS drive letter to an external device.
- 7 Click **Next**.

- 8 In the DOS version window, click **Next**.
- 9 In the Ghost executable location window, click **Next**.
- 10 In the Destination Drive window, in the Floppy Disk Drive field, select the appropriate drive letter.
- 11 Ensure that Format disk(s) first is checked to format the disks before disk creation.
- 12 Ensure that Quick Format is checked to perform a quick format.
- 13 Click **Next**.
- 14 Review the boot disk details and click **Next** to start creating the boot disks.
- 15 In the Format A:\ dialog box, click **Start** to format the floppy disk.
- 16 Click **OK** to confirm the format.
- 17 When the format is complete click **OK**, then click **Close** to continue creating the boot disk.

## Testing your recovery boot disk

You must test the recovery boot disk or CD/DVD to ensure that you can run Ghost.exe and access your backup image file.

### To test your recovery boot disk

- 1 Do one of the following:
  - Insert the recovery boot disk into your floppy disk drive and restart your computer.
  - Insert the backup CD or DVD into the CD/DVD drive and restart your computer. Press any key to continue when you are prompted.

Your computer restarts into DOS and launches Ghost.exe.
- 2 On the Ghost main menu, click **Local > Check > Image File**.
- 3 In the Disk Image file name dialog box, select the image file that you have created.
 

To find the image file, click the down arrow beside the File Image field. Select the drive on which you saved the image file to display the image file name.
- 4 Click **Yes** to proceed with the integrity check.
- 5 Once the integrity check is complete, click **Continue**.
- 6 Remove the recovery boot disk or CD/DVD from the disk drive and restart your computer.

If the image passed the integrity check, you can restore your computer if Windows is not operational.

## Viewing the image file

You can check that your image file contains the files that you expect to see by opening and viewing it in Ghost Explorer.

### To view an image file in Ghost Explorer

- 1 On the Windows taskbar, click **Start > Programs > Norton Ghost 2003 > Norton Ghost**.
- 2 Click **Ghost Utilities**.
- 3 Click **Norton Ghost Explorer**.
- 4 On the File menu, click **Open**.
- 5 Select the image file.
- 6 Click **Open**.

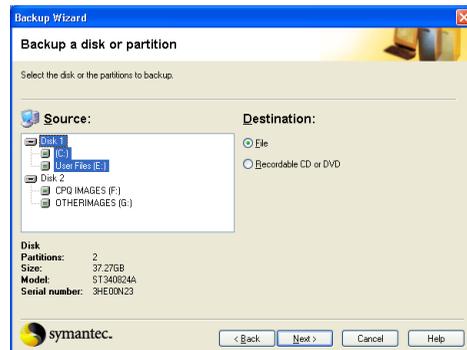
## Norton Ghost components

Norton Ghost installs several features and tools. The main components are described in this card. The remaining components are described in the *Norton Ghost User Guide*.

## Backup Wizard

The Backup Wizard is a Windows application that lets you select a hard disk or partition to backup to an image file.

**Figure 1-8** Backup Wizard

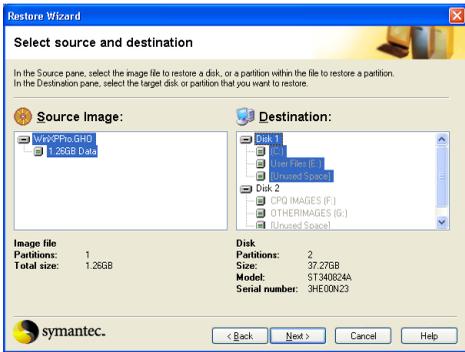


Backup a disk or partition window

## Restore Wizard

The Restore Wizard is a Windows application that lets you restore a hard disk or partition from an image file.

**Figure 1-9** Restore Wizard

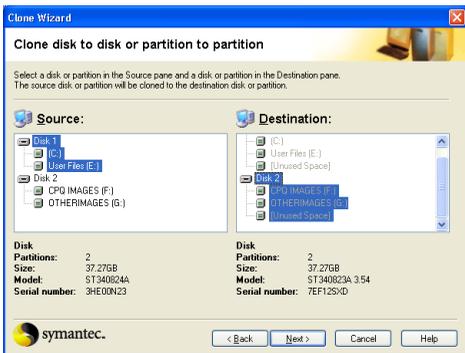


Select source and destination window

## Clone Wizard

The Clone Wizard is a Windows application that lets you clone a hard disk or partition directly to another hard disk or partition.

**Figure 1-10** Clone Wizard

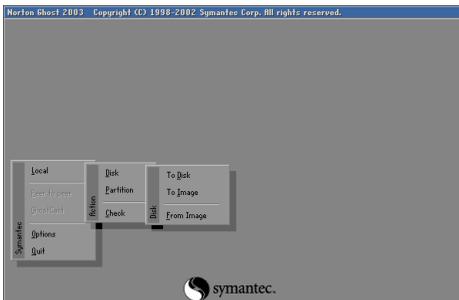


Clone disk to disk or partition to partition window

## Norton Ghost executable

Ghost.exe runs in DOS and lets you back up, restore, and clone. Because the executable is small with minimal memory requirements, you can run it from a DOS boot disk, CD/DVD, or hard drive.

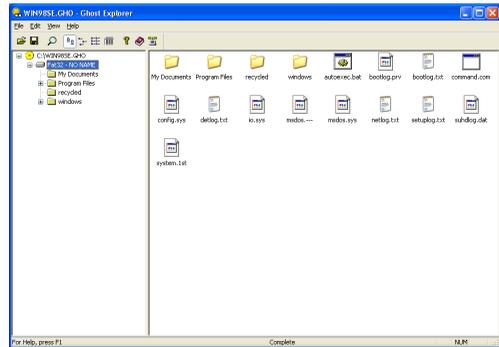
**Figure 1-11** Ghost.exe main menu



## Ghost Explorer

Ghost Explorer is a Windows application that lets you view directories and files in an image file and add, recover, and delete individual directories and files from an image file.

**Figure 1-12** Ghost Explorer main window



## Ghost Boot Wizard

The Ghost Boot Wizard is a windows application that creates boot disks that launch Ghost.exe when you start your computer. You can create boot disks for various tasks, including creating a recovery disk. The wizard guides you to the drivers that are needed to create a boot disk. The Ghost Boot Wizard is a Windows application.

**Figure 1-13** Ghost Boot Wizard main window

