

## Why should you back up your hard disk?

Computers are frequently at risk from system crashes or data loss due to disasters such as viruses, worms, accidental deletion of important files, faulty software downloaded from the Internet, or hard disk failure. Any of these problems could destroy your important data, such as financial records, personal photos, and other irreplaceable files.

There are two ways to protect your data. One is to copy your important files to another location. The second is to create an image that includes your data.

## What is imaging?

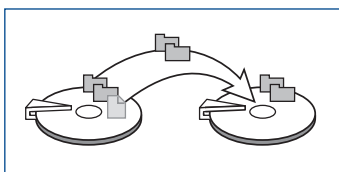
Imaging is the process of creating an exact clone of your hard disk (or partitions on the hard disk) in another location. (Many computers include a single partition on the hard disk. If your computer has a C: drive for files on the hard disk and the D: drive is assigned to your CD drive, you probably have one partition on your hard disk.)

Imaging goes beyond copying simple data files. An image file can include the operating system, any applications you have installed, and your personal configurations and settings—in addition to your data files. In short, the image file includes everything you need to get your system back up and running quickly after a system failure.

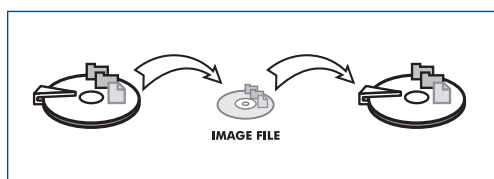
## Why is imaging better than simply copying files?

You can make copies of your important data files such as spreadsheets, email, documents, and other important data files. There are file backup products on the market (such as Xcopy) that accomplish this task. Many people perform file backup manually by dragging and dropping files into another folder for safekeeping.

cannot boot into Windows, it is a lot of work to get your system back up and running if your only backups are single files on external media.

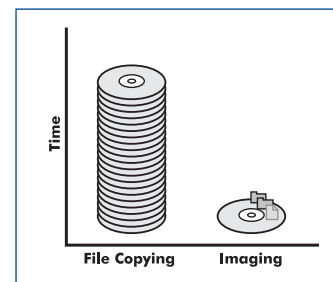


*Simple file copy: Hidden files may not get copied.*



*Imaging: All files (including hidden files) are copied to an intermediate file (image file). The image file can be restored to a hard disk or another location.*

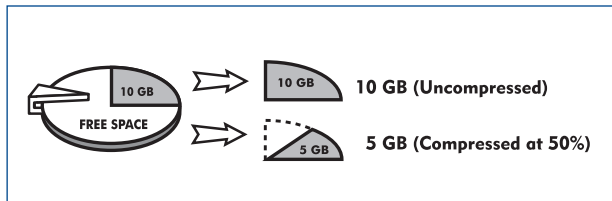
Copied files are useful if you lose or destroy a file because they can be easily restored. However, backing up files only saves those files. If your computer crashes so that you



*Save time! An image file can help restore your PC in a fraction of the time required to reinstall your programs and files.*

In this situation, backup image files are a great improvement over simple collections of data files. A backup image includes EVERYTHING on your hard drive, including your operating system, applications, personal settings and all of your data files. You only need to restore the backup image to have your system back up and running. Without an image, you would be stuck reinstalling your operating system and all of your applications—a process that can take hours or even days and may also require the assistance of a paid technician. Disk imaging allows you to save time—and get your data back again.

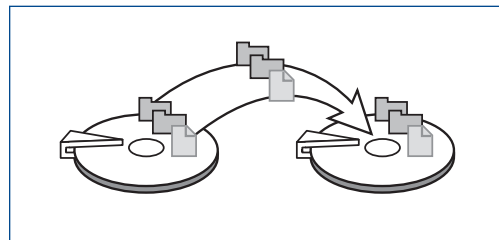
Image files stand out from simple copied files not only because they offer a more complete disaster recovery solution, but because they can be compressed or used to configure your system quickly when you upgrade to a new, larger hard disk.



*Compressed image files only use a fraction of the space as regular backups.*

Disk-to-disk copying uses sector-based methods to copy all files, including system, hidden, and data files. When you use disk-to-disk copying, the destination disk is bootable (meaning your

operating system will start when you turn on your computer). Disk-to-disk copies cannot be compressed. Imaging differs from disk-to-disk and file copying mainly in that it creates an



*Disk-to-disk copying: Your entire hard drive is copied.*

intermediate file (the image file), whereas disk-to-disk copying copies data directly to the destination disk. Disk-to-disk copies do not allow for compressing the data.

## Creating an image

Before you create an image, make sure your system is set up just the way you want it. The operating system and software applications should be installed and running well. You may also want to use a file system tool such as ScanDisk or CHKDSK to check for disk errors before imaging. When you restore an image file, your system will be returned to the exact state it was in when you created the image, so it pays to get things the way you want them before imaging.

Next, you must decide which partitions you want to include in the image file and where you will store the image file.

You can save image files to different devices and locations. In any case, make sure you only store the image file on reliable, durable media:

- Removable media, such as CD-R, CD-R/W, Zip<sup>®</sup>, or Jaz<sup>®</sup> disks
- Network shares (folders on a network)
- Local hard disk (including a different partition on the same hard disk or a second disk)

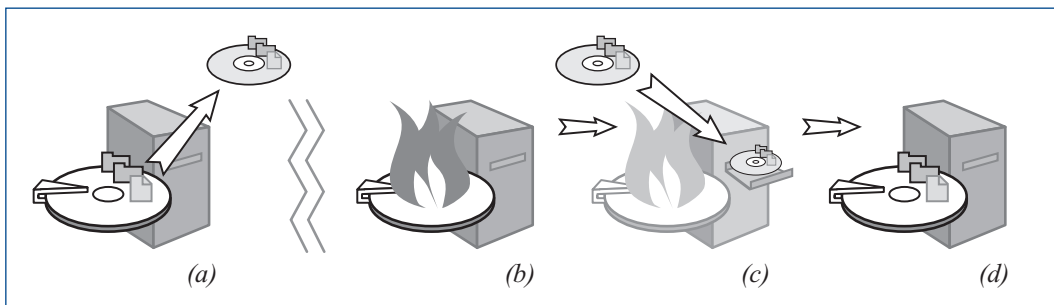
You cannot store the image file on any of the partitions you are including in the image. For example, if you are creating an image of your C: drive, you cannot save the image file on the C: drive.

## Recovering your system from an image file

Once you have created the image file, restoring is easy and fast. You can restore the saved image to the same hard disk or to a different computer. It should be cautioned, however, that if you restore an image (other than data files) to a machine that has significantly different hardware than the machine where the image was created, you might encounter problems. For example, the machine to which you restore the image may be unstable or unbootable. You can circumvent these issues to some extent by making sure that the machine you use to create the image has all the drivers you may need on the machines you will restore the image to.

Your imaging solution should allow you to start the imaging program from either a floppy disk or CD. You can then restore the image from the location you used to store it earlier. For example, if you created the image of your hard disk and stored it on a CD, if disaster strikes (for example, if the computer crashes and you can no longer start the operating system), you can boot from the CD that you created during the imaging process.

When you restore an image file, your system is returned to the state it was in when you created the image.



*a) Imaging creates a compressed backup of your entire hard drive onto removable media such as CD-R/W. b) When disaster strikes and you lose data, c) you simply pop in the CD and copy the image file back onto the hard drive, d) restoring your computer (and your valuable data) to its last saved, working state.*

## Choosing imaging software

- Does the software let you recover your system without requiring you to first reinstall the operating system?
- Does the software support a wide range of external drives?
- Does the software allow you to easily restore individual files and directories from the image without having to restore the full image?
- Does the software let you create and restore images without booting from floppy diskettes?
- Does the software let you restore images to different drives?
- Does the software let you resize the partitions in the image file during the restore process?
- Does the software support all the file systems you will be using on your computer?
- Does the software let you schedule an imaging session from Windows?
- Does the software let you modify the format of the image file after its initial creation?
- Does the software maintain file system optimizations?
- Does the software let you password-protect image files?
- In addition to creating images, can the software perform direct disk-to-disk copies?
- Is the software from a reputable company?
- Is technical support provided?

# PowerQuest® Drive Image® 2002: A solution to meet your imaging needs!

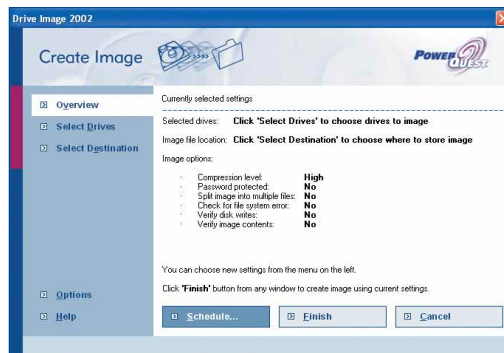
PowerQuest Drive Image 2002 does all of these things and more! Drive Image 2002 allows you to create images of non-system partition directly from Windows. Drive Image has an easy-to-use, intuitive Windows interface, plus powerful wizards to make it easy to create and restore images. The initial backup wizard allows you to immediately create an image of your entire system when you run Drive Image for the first time. The setup wizard allows you to choose what to include in your backup image and where to save it. If your system is not configured with a valid

place to store image files on the hard disk, the setup wizard creates a backup location for you. Drive Image also has a scheduling feature so you can schedule your hard drive to be automatically backed up daily, weekly, or monthly.

If you have a system failure, you can use Drive Image to restore your operating system, applications, and data and be back up and running quickly. If you delete a folder by accident, you can use ImageExplorer to restore the folder—or individual files—from an image file.



*Easy-to-use intuitive Windows interface.*



*Easily create hard disk images for backup.*

Please visit [www.powerquest.com](http://www.powerquest.com) for a free demo version or purchase from your local software reseller. Drive Image 2002 is available in English, French, German, Italian, Japanese, and Spanish.

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