

# Backup Made Easy

## The Impact of Data Loss

Information on our computer systems is vital to our businesses. Despite this, the vast majority of small businesses do not have adequate backup and data recovery systems in place. If you're in any doubt about the impact of data loss then research by the National Archives & Records Administration has shown that 60% of companies that lose their data will shut down within 6 months and 93% of companies that lost their data for 10 days or more filed for bankruptcy within one year of the disaster.

It is vital to your business that irreplaceable documents are saved in a place where they are safe and can quickly and easily be retrieved. Even if the data can be replaced from elsewhere your business could still suffer due to the time it takes or the costs involved. Backing up all files ensures that no matter what happens to your computer systems, you have reassurance in the fact that all of your data is safe and you will be able to resume normal business. Backing up all files ensures that no matter what happens to your computer systems, you can have reassurance in the fact that all of your files are available in backup.

**Depending on the amount of data to be backed up, the importance of that data, and the funds available to you. Here are some of the options available...**

## USB External Hard Drives



USB External hard drives are one of the most popular methods of backup. They connect to your computer with a simple USB cable. Most computers have several USB ports where you can plug the external drive in. Many of these drives come with a one-click download option, meaning all you need to do is press a button on the front of the drive or your desktop to begin an automatic backup.

### Advantages

- ✓ Store large quantities of data
- ✓ Small, lightweight and portable
- ✓ Often pre-packaged with software for simple and hassle free copying of files

### Disadvantages

- ✗ Unlike the internal hard drive in your PC, which is held securely in a rarely moved case, external drives can be carried about from place to place and as a result they can get dropped, knocked, crushed and subject to all manner of abuse and trauma... leading to failure
- ✗ If you don't take the external drive off site and there is a localised disaster (such as a flood, fire or theft) it will probably be damaged at the same time as your main system, which could still result in total data loss

## Using Backup Programs

Recent versions of Windows and Mac OS X include backup programs with the operating system that can be used in conjunction with other backup systems and regimes (see below).

The most recent version of the backup program included with Windows 7 is a vast improvement on previous versions of Windows and is designed to backup your data to external sources.

If you are a Mac user, these come with a built in program called Time Machine. Backing up your files using this method allows you to easily restore them to a previously saved point. Time Machine, which is in your dock by default and can also be found in the applications menu, also works in conjunction with external USB Hard Drives.



## USB Flash Drives



A Universal Serial Bus (USB) flash drive, also known as a memory stick is a portable memory chip circuit board contained in a small plastic case about the size of a thumb.

### Advantages

- ✓ USB flash drives are great for carrying around your data everywhere you go. Storage doesn't get much more compact than this.
- ✓ The chip inside the USB flash drive does not require power to retain data, so batteries or power sources are not needed
- ✓ Relatively cheap option
- ✓ Advances in flash drives have seen lines of flash drives that come with software similar to that found on large external hard disks for quickly and automatic backing up of data

### Disadvantages

- ✗ Not suitable for very large amounts of data
- ✗ The solid state technology used in flash drives is prone to static electricity. Even a small electrical charge can cause the loss of data on a flash drive so better for temporary storage rather than a reliable permanent backup
- ✗ They are so small and portable that they can be easily misplaced, lost or damaged

## Online Options



Online file storage solutions are becoming increasingly popular as they allow users to upload their files (off site) to a server for safe keeping. In addition to functionality, cost is also an important aspect that you need to consider. Many online services provide a free account with a limit to the online storage space, and provide more space for those that are willing to pay for it. This type of data storage can also be useful if you want to share files between several users in addition to being used as a backup.

There are also companies that will provide remote online, or managed backup services on behalf of the end users. Online backup systems run on a schedule, typically at night while computers aren't in use. Managed backup services appeal to customers who simply don't want to, or aren't able to perform their own backups because they don't have skilled IT professionals in place.

### Advantages

- ✔ All Data is instantly stored off site. Offering extra security in the event of a disaster
- ✔ Easy to set-up. No additional hardware required
- ✔ Traditional storage systems have hard limits on capacity, Cloud storage mitigates this problem

### Disadvantages

- ✘ Performance of cloud data storage is limited by bandwidth. Full system backups may take too long
- ✘ Reliant on an internet connection. Without access to the internet no data can be stored or recovered

## DVD/CD



These have been around for many years and are a commonly recognised form of recording data.

### Advantages

- ✔ Very cheap way to backup data
- ✔ Easily accessible by virtually all computers

### Disadvantages

- ✘ Backing up using CDs and DVDs is a slow process for large amount of data
- ✘ Must rewrite the entire disk and go through the entire burning process each time
- ✘ Suitable for individual backups but unlikely to be suitable for company-wide or business-critical backups

## When should you backup?

This very much depends on your particular needs. Some businesses need to be able to recover data from years ago whereas others may only need guaranteed access to the latest information. It also depends on the number of files you create and how often you create them. If you create new files every day, you might want to back up weekly or even daily. It's best to schedule regular, automatic backups so you don't even have to think about it.

## Regular Testing

No matter how sophisticated or comprehensive your backup system is, you will never know if it works unless you actually test it. According to Storage Magazine 34% of companies fail to test their backups, and of those that do, 77% have found backup failures. Without testing, your business is still exposed to risk.

## Beyond Data Backup

Although your data files are the most crucial part of your backup, if you only save your data and your system crashes, you will have to devote many hours (or even days in the case of servers) to get your system up and running the way it was before. You will need to re-install all your programs, and in some instances you may need to repurchase them. And after this you will need each program setting up exactly how it was previously.

This downtime can be almost as damaging to a company as actually losing data. How long could your company operate with no IT systems?

To avoid this there are backup systems that provide a complete backup of your system (including programs and their configuration files). These are often referred to as image-based backups. The software captures a snapshot of your hard disk at the time, so that you can restore your system to the exact state it was when you backed it up.

For complete peace of mind a company should adopt a combined backup regime which includes a full systems snapshot very month or so, regular local data backup of all the data and an online back of regularly changing data.

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