



Matt's Real Estate Technology Blog

Quick! Before Your Hard Drive Dies, Back Up!

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There are so many ways you can lose precious computer files. Your hard drive can die, you can get a virus that deletes or corrupts your files, or you can lose your computer or mobile device. What do you do now?

Sometimes a dead hard drive or corrupted files can be recovered by a computer professional, but that's too expensive and time consuming for most people. The only truly viable approach to recovering from a hard drive failure is having a **BACKUP**. You must back up your files and settings before it's too late. This seems like a simple and obvious point, but it is as simple and obvious as flossing your teeth – which is to say that people don't do it, or don't do it often enough, and then are mightily surprised when their dentist tells them about the \$1,200 of dental work that is coming their way. Backup is just like that: unless you do it regularly, you will be at a loss in the event of a failure.

There are two ways to completely back up your files. One copies your files to the “cloud” when you are online; the other is to make backups to media such as external hard drives or DVDs.

Cloud Backup

One of the newest ways to create a backup of your files is by using cloud computing, where a program running on your computer copies your changed content to many redundant servers on the Internet (the cloud). It is then their responsibility to take care of your data and send them back to you if and when you need them. Often, the cloud provider will store different versions of your files as you create them so that you can retrieve a previous version of a file. There may be security concerns in sending your files to someone else, but most reputable cloud providers offer encryption and other security guarantees.

One advantage of cloud backup is that it takes place automatically when you are online, and when it comes to backup, easier is better. Also, if you are just backing up to a spare hard drive, both your computer and the spare hard drive can both be lost in a fire or burglary. Yes, you can have backup drives which you keep in another location – but that takes effort that many people aren't willing to make.

The largest downside to cloud backup is that restoring your content back to your computer can be time-consuming, taking days to retrieve all the files from the Internet to restore a whole hard drive. Carbonite, one of the cloud backup providers, hedges its bets in its professional product; it

allows you to do a continuous backup to an external hard drive simultaneously with its cloud backup. If the cloud is unavailable, the external backup will have you up and running in a few hours.

Popular cloud backup solutions include:

- [Apple iCloud](#) – this will back up both your Mac and your iPhone
- [Carbonite](#) (Mac and PC, smartphone) – has continuous backup software for PC
- [Mozy](#) (Mac and PC) – has continuous backup software for PC

Hard Drive Backups

To create a backup onto a separate hard drive you will need an external hard drive to copy the files to. Most modern disk drives connect to your computer via a connector known as the USB port. If you have a computer, Mac or PC, that is four or fewer years old, you probably have a USB port into which you can plug an external drive. Some Macs, especially older ones, have another kind of port called a FireWire port while newer ones have a Thunderbolt port. There are models of disk drive that accommodate these kinds of ports. Popular models include:

USB

- WD My Passport Ultra 2TB Portable External Hard Drive USB 3.0 – \$149
- Seagate Backup Plus 4 TB USB 3.0 Desktop External Hard Drive – \$149

FireWire

- WD My Passport Studio 2TB Mac Portable FireWire 800 External Hard Drive – \$189.99
- WD My Book Studio 3 TB Desktop FireWire 800 External Hard Drive – \$139.99

Windows Backup

Starting with Windows 7, Windows has built-in backup software which is actually quite serviceable and reliable. Windows Backup actually backs up twice. First, it backs up all files in your Libraries – Documents, Music, Pictures, and Videos, plus your email. Then, it creates a “system image” – an exact copy of your hard drive – and puts it onto your backup drive.

Microsoft walks you through the specifics of how to back up and restore using Windows Backup here:

<http://windows.microsoft.com/en-us/windows7/products/features/backup-and-restore>

When you schedule backups, make them for times when the computer is actually turned on. Windows will not reschedule them for you if your computer is turned off, e.g., at night. It is all too common for people in this situation to think they’re backing up when they actually aren’t.

Windows Backup does have limitations. You can only restore a system image to the same computer you made it from. As well, you can only restore files to computers running Windows 7 or higher. To back up and restore to a different computer, there are options. The hard drive

manufacturers mentioned above, Seagate and WD, offer their own free backup and restore software for PC which will allow you to restore your information to different computers. There are also commercial PC backup products such as NovaStor, Acronis, and ShadowProtect, that, for under \$100, offer much fuller feature sets than the free offerings while allowing you to restore files across different Windows operating systems.

Encrypting your backup is an extremely good idea. If you are using Windows 7 Ultimate or Windows 8 Professional versions, you can encrypt the drive to which you send your backup. This will make it unreadable by anyone who does not have the proper information – a password or a digital key file which you can save to a USB drive. Make sure you can get hold of the password or drive with the key when you need it – and be sure to keep it secure!

Apple Backup

Apple takes a slightly different approach to backup than Windows. Apple's Time Machine backup is continuous (always on) and is constantly taking snapshots of your files and data. As Apple puts it succinctly, "Time Machine keeps hourly backups for the past 24 hours, daily backups for the past month, and weekly backups until your backup drive is full." Once your backup drive is nearly full, Time Machine will start deleting the oldest backups, so it pays to have as large a backup drive as possible. This is easiest to do if you supply your own external hard drive. Apple sells a backup drive with wireless networking capabilities called an AirPort Time Capsule, but the capacities are smaller and the price greater.

To get started, you simply attach your backup drive, if it's USB, to your Mac's USB port, or, if it's FireWire, to your Mac's FireWire port. You'll be asked whether you would like to reformat the drive (yes, if it's a non-Apple drive) and encrypt it (yes). That is all you have to do. You should leave the machine on overnight so that Time Machine can do an initial full backup, and, in the morning, you will be completely covered.

Apple walks you through how to back up and restore using Time Machine here:

<http://support.apple.com/kb/ht1427>

Burning a CD or DVD

Every once in a while, if you have a CD or DVD player in your computer that lets you "burn" (create) CDs or DVDs, you may want to back up some of your files to a CD or DVD. Though burning files to DVD or putting them on a flash drive should not be your primary means of backup, everything helps. That DVD of your financials that you made a few years ago may prove to be of great value. But keep in mind that there may be security issues with taking unencrypted backups out of your office – you may need to clear that with your company and have a process for keeping it secure.

iPhone / iPad Backup

Regularly connect your device to a computer with iTunes running. Your device should show up in the iTunes menu. Your device should automatically synchronize and be backed up. If not, right-click (or control-click) the device under “Devices” and select “Back Up” – or, in the “File” menu, select “Devices”, then “Back Up”. Also, if you click on your device you will be able to reach the “Summary” tab in “Preferences”. Select “Encrypt iPhone backups” and apply the settings. Always validate that the files are backed up to your computer and are accessible without your mobile device, and be sure to back up your computer in turn.

Android Backup

Each kind of Android device has different settings in unique places, depending on the manufacturer, model, and carrier. For example, some Verizon devices have a “System Setting” called “Backup Assistant Plus” where backups for contacts, pictures and video can be configured. Meanwhile, those in Canada on Rogers might install and configure the “Rogers Mobile Backup” app. Some carriers’ backup software has an “automatic restore” feature. Some people avoid the carrier’s backup software and use third party software such as Google’s or other vendors’ installed apps. Sometimes backup settings are located in the “Privacy” area of “System Settings”. Usually the store where you purchased your device can walk you through the options, but choose and use something to back up your data.

Conclusion

As you’ve seen, Microsoft, Apple, and others provide resources you can use to help you get your disk and its files back in case of emergency. Backup is essential, whether it’s continuous, as with Apple, Carbonite, and Mozy, on a schedule, as in Windows Backup, or once in a while, using a CD or DVD writer. The more you can do to make sure that your data is safe, the less terror you will feel when a virus or disk failure comes along, and the less time you will have to spend concentrating on computer recovery instead of your business.