

Simple Backup Strategy for Home Computers

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This document contains the most essential elements of a backup strategy for your computer. If you don't feel comfortable with these issues and want a detailed discussion of each of these topics, please see the other document: "[Detailed Backup Strategy for Home Computers](#)".

Backing up the information on your computer is critical! (Just ask anyone who has lost years worth of irreplaceable photos or important documents just because they thought their hard drive would never fail.) Your backup plan can range from something very simple to very elaborate, but you need to have a plan to backup regularly and the confidence that you can restore your data if your computer crashes or gets stolen. Create a plan that works for you. Don't get caught in the "it-won't-happen-to-me" syndrome; just start backing up today!

Although there are other methods to backing up than what is described in this document, many of the other methods are more complicated and take more effort. (For example, if you are a technically savvy computer user, you might be aware of the location of all the different types of data you need to protect and may be able to manually copy your data to a flash drive or write it to CDs.) However, most of us will not interrupt our busy schedules for a complicated or difficult process. Please work to make your backup process as simple and as automated as possible.

In Nothing Else, Read This

I strongly urge you to follow the directions in this document to form a backup plan with appropriate hardware and software; you must prepare to recover your critical files (pictures, contacts, emails, budgets, correspondence, etc.) when your computer crashes or needs to be rebuilt. However, if you choose not to do so, then at least do the minimum and copy your files to a flash drive or burn them to a CD; in this way you will not permanently lose all copies of any irreplaceable information. Please remember Corey's Hypothesis of Data Loss: "If you want to lose it, keep only one copy of it."

Overview of Simple Backup Strategy

In order to be ready for the time when you will need to rebuild your computer, (and it *will* happen, whether out of necessity or by choice) keep all of your **Program CDs and Serial Numbers** in one spot. This includes all Operating System CDs/Serial Numbers (such as Windows XP, Vista, OS X, etc.) and all application programs you run on your computer. If you lose your serial numbers you may have to spend a lot of money to re-purchase software you technically already own.

An overview of the steps to protect all your data includes:

- 1) Keep all your documents in one location on your computer (e.g. Windows "My Documents").
- 2) Purchase and setup backup hardware and software (or sign-up for online backup). (Details below.)
- 3) Configure the backup to occur regularly (automatically if possible). Decide how often you need to backup, based on your needs.
 - 3) (a) Periodically check the log files for the backup software to ensure that your automatic backups have completed successfully. (Worse than "not having a backup" is "thinking you have one when you actually don't!")
- 4) Before you are done with your initial program setup, test to make sure you can restore one file from your backup; that way you know your data was backed up successfully.
- 5) If you use a method to backup other than the ones recommended here, then make sure you feel comfortable with the "restore" process since you might not easily be able to get help from someone who is familiar with the backup method you have selected.

If you have a Windows PC

Make sure you keep all your data in the "My Documents" area of your computer and backup this folder to your external device regularly. Make sure to also backup your email address book (and **emails** if they are stored locally) and your **Internet Favorites** (bookmarks).

Option 1 - Backup to External Hard Drive with Windows PC

- 1) Buy an external hard drive to connect to your computer; it should be at least twice as large as your internal hard drive (or a minimum of 500 Gigabytes or 1 Terabyte).
- 2) You will need to buy a backup program to manage the backup to the external device. Based on my experience, I highly recommend purchasing Acronis True Image Home; it may cost \$50, but it will create a backup "image" of your computer (which makes restoring very easy), will maintain multiple copies of your data, and make it easy to backup your email.
 - a) Please see the end of this document for detailed directions on how to use Acronis software.
 - b) Some external hard drives come with their own backup program. If you choose to use this program instead of a program like Acronis, then please be aware that someone else may not easily be able to help advise you if you need to do a restore. Make sure you understand the restore process before there is an emergency.
- 3) Set your software to backup automatically, on a regular schedule (probably once per week or month, based on, "How hard would it be for me to recreate all this information if my hard drive crashed?" Or to replace those pictures? What if I lost all the emails from this last week?). You may also choose to backup critical files that change frequently to a flash drive.

Option 2 - Backup to Online Service with Windows PC

- 1) An alternative to backing up your data to an external hard drive is to use an "online" service.
 - a) Advantages: (1) One advantage for using an online backup service is that the software is usually **easy to configure**; no need to purchase anything else, just download the software and away you go. (2) Another advantage is that a copy of your data is stored "**offsite**", at an external location. In case your computer is lost, stolen, or destroyed, you still have a backup of all your critical data.
 - b) Disadvantages: (1) Be aware that backing up over an Internet connection is **much slower** than connecting to a local hard drive. Backing up lots of data (like photos, etc.) will take considerably **longer** than to a local drive. (2) These online services also **cost** you a monthly fee, as opposed to the one-time cost of your external hard drive and backup software.
- 2) Online Backup Options: Here are some recommendations for online backup services:
 - a) SOS Online Backup (www.sosonlinebackup.com) - SOS Online Backup is a very full-feature online backup solution, backing up files continuously as changes occur. If you have many gigabytes of data to backup, it would take weeks to do so; in this case SOS provides the option to send your data to them on a disk and then only changes will be uploaded over the Internet. The SOS software can also be used to make local backups onto disk. The SOS servers store virtually unlimited versions of your files; you can restore files from any date you chose.
 - b) Mozy Pro (www.mozy.com/pro) - Mozy Pro is a reliable online backup option, but may not be as easy to use or offer some of the advanced features as SOS Online, such as the option to backup locally.
 - c) If you have only 2 gigabytes or less to backup, then you can use the online Mozy Home backup for **free**. (www.mozy.com/home) Alternatively, if you have information that is updated often, then in addition to your full backup plan, you may want to use Mozy Home to back up your most critical data on a daily basis. (However, do ***not*** choose to use the "for

pay" version of Mozy *Home* to backup all your data; if you chose Mozy to backup all your data, use the Mozy *Pro* version.)

If you have an Apple Macintosh Computer

If you have a Macintosh with the **Leopard** or **Snow Leopard OS X**, then buy an external hard drive that is at least twice as large as your internal hard drive (or a minimum of 500 Gigabytes). Plug it in and initiate the **Time Machine** program. Plug in the hard drive whenever you are home or plug it in once a day if you are on the go. Your job is done; let Time Machine do its job! It will keep a current backup of all files that change on your computer. If you ever have to restore your computer, the Mac will ask you if you want to restore from a Time Machine backup at the time of install. (When using Time Machine, your external hard drive needs to be dedicated to backups; don't try to use it for copying other files to since Time Machine needs full control of that drive. There are ways to partition a hard drive for shared use with Time Machine, but that is beyond the scope of this document.)

If you own an older version of OS X, like **Tiger**, then you will need to install a separate backup program (instead of using OS X Time Machine) and follow the directions for backing up a Windows PC (above). I suggest using either SilverKeeper or SuperDuper! as your backup software.

As an option, you can also use an online backup service like Mozy Pro with your Mac. Please see the comments made above concerning online backup services; both the advantages and disadvantages apply to Macs too. (SOS Online Backup software does not work with Macs.)

Other Resources and Ideas on Backing Up:

Review of online backup services: <http://www.pcmag.com/article2/0,2817,2288755,00.asp>

"Eight Ways to Backup Your Computer": <http://www.switched.com/2009/02/26/8-ways-to-back-up-your-computer-and-keep-your-stuff-safe/>

"How to Back Up Your Hard Disk in Windows": <http://www.howtohaven.com/system/how-to-back-up-hard-disk.shtml>

Details for Using Acronis Backup Software with Windows

If you choose to use Acronis software, the actual name of the backup software is "Acronis True Image Home". One place that offers a good price for Acronis is the website: www.allacronis.com For the backup concepts discussed for Acronis in this document, please see the video tutorials listed below for complete instructions on how to accomplish these tasks.

1) First Create a Bootable Rescue Media CD to Prepare for a Complete Restore

If you downloaded Acronis, you will want to create a bootable rescue media CD. If your system crashes, you will be able to boot from this CD, run the Acronis program (stored on the CD), and choose to restore you computer from a disk image that you will create (explained below). To create this CD, choose "Create Bootable Rescue Media" and choose to create it (burn it) to a CD. (If you purchased Acronis on CD, that CD is already your bootable rescue CD; no need to create one.)

2) Create Your First Full Disk Image

The backup plan for most users will consist of choosing to backup "My Computer" through the Acronis program. This will create a **Disk Image** of your hard disk which includes *everything* on

your hard disk (including your Windows operating system, your applications, and all your data files). You should choose to store this backup on your external hard drive. Give the backup a file name that makes sense to you (e.g. "MyComputer-August2009.tib" - the extension "tib" stands for "True Image Backup" and is the extension that all your backup files will end with.) Choosing all other Acronis program "default" options for back up is fine.

3) Schedule Regular Differential Backups of "My Computer"

After making a full/complete disk image of your computer, you then want to do regularly scheduled backups to capture all changes that you make on your computer. These subsequent updates are made by choosing to do a "Differential" backup of "My Computer" and choosing to save this Differential backup to the *same file name* as you choose for your complete/initial backup. (e.g. "MyComputer-August2009.tib"). All the changes made to your disk will be backed up.

4) After Some Months, Back Up Data Files Rather Than Your Entire Computer

After 6 months or a year of creating differential backups of your "Disk Image" (as described in step 2 above), you will want to change the process to instead back up only your data files (not your entire computer). The fact is that after a year (or less) of running Microsoft Windows, after a computer crash you would most likely want to reload your computer from the original Windows and application CDs rather than restoring a "year-old disk image" and the latest "differential backup". This is because Windows does regular updates to system files, updates have been applied to various application programs, you may have installed and un-installed software (which can leave stray files on your computer), etc.; all these processes tend to leave Windows more unstable than when freshly installed.

For those same reasons, you might also choose this option if it has been a couple years since your computer was rebuilt at the time you start your backup regimen. Furthermore, if your external hard drive is not large enough to store multiple images of your internal disk drive, then you again may choose just to backup your data files rather than the entire disk drive.

Another reason for doing a file/data backup of your computer is that after two or three years you will most likely purchase a new computer. You would use the file restore to transfer your data to the new computer as opposed to doing a restore from a disk image from the older computer.

- (a) If you choose to not make a disk image, but to backup your data files, the only change you would make to the instructions above (in step #2) would be to choose to backup "My Data" in Acronis (rather than "My Computer"). Again, make sure to store this backup on your external hard drive. (Remember, in order for this method to work effectively it is critical to store all data files in the "My Documents" folder on your computer.)
- (b) You will also want to run this backup again and choose to backup "My Email" if you use MS Outlook for your email; the "My Data" option will not backup your Outlook email and contacts.
- (c) The first time you do a backup you will want to do a "Complete" backup of your data files.
- (d) Subsequently you would choose to do a "differential" backup of your data files (and email).

Comments about Restoring with Acronis on Windows PC

If you need to do a "restore" of your computer from your backup, here are some things to consider. Before you enter a crisis, you should watch the tutorials on restoring listed below (Videos 7 and 9).

Disk Image Restore: Use this option if you backup a disk image of your computer ("My Computer" in Acronis). If your computer crashes and you want to do a restore your disk image, then you would first restore your original complete disk image and then restore the latest differential backup of your computer. Restoring the initial image will put your computer back to the original state (including your operating system, programs, and old data files) and restoring the differential backup will reinstate all changes made since the time the initial image was created.

Data File Restore: Use this option if you backup your data files and email ("My Data" and "My Email" in Acronis) rather than doing a Disk Image ("My Computer" in Acronis). If you need to reload your computer, then you would install your Windows operating system and all application programs from the original CDs. In order to get your data from your backup, you would then restore your original "full backup" of your data files and then restore the latest "differential" backup of your data files. (You need to repeat this process for restoring email.)

Starting with Disk Image then Adding Data File Restore: If you started your backup regimen with a backup of your entire computer to create a Disk Image ("My Computer" in Acronis), but after some time switched to backing up only your data files ("My Data" and "My Email" in Acronis), then you have two options for reloading your computer, as follows:

(1) You can reload your computer from CDs and then restore your data files (as described in "Data File Restore" above) or (2) you can choose to restore the original Acronis "Disk Image" (as described in "Disk Image Restore" above) and then restore your most recent data file backup (both the "original" data file and the latest "differential"), overwriting the old data from the original image.

Tutorials for Using Acronis Backup Software with Windows

If you want more detailed information about using Acronis, there are some tutorials available at this web site: www.acronis.com/homecomputing/products/trueimage/video10/

(Although these tutorial videos are for the previous version of Acronis True Image Home, the concepts are the same and menus are very similar.)

(If the first link on each tutorial page [Streaming Version for Watching Online] does not work, then choose the second option [Download Version (WMV)] and watch it with Windows Media Player.) (If you hear mention of the "Acronis Disk Director", it is a different product that you do not need.)

You probably will want to watch these tutorials:

Video 1: Introduction and Overview

Video 2: Backup Strategies and Default Backup Options

Video 4: Bootable Rescue Media

Video 5: Disk Imaging

Video 7: Restoring the Backup Data

Video 8: File Backup and the Use of File Categories

Video 9: Restoring Data from File Archives

For other step-by-step instructions, please see: www.allacronis.com/step-by-step.php