

# How to save your bacon – real solutions for real needs

## Quick overview

1. Know where your data is
2. Identify your risk tolerance
3. Identify your technical savvy
4. Take responsibility for your own data and system
5. Pay now or pay more later
6. Take action – backup your data
7. Take action – image your system
8. Retain multiple copies of your backups and images
9. Verify status of images and data backups
10. Document your plan

## Backup & Recovery

What is a backup and why do I need one?

A backup is a copy of some electronic data on removable media.

A backup ensures that your data is not lost in a disaster or if the files get deleted.

An image of a computer can be used to restore the computer files and configuration to the EXACT state when the image was taken.

It's like taking a picture of your computer.

Backups of data directories need to be made on a regular basis to keep current with changes to the data.

Consider your risk tolerance

If you don't care about any of the data you have on your computer including your email, then OK, don't backup.

Consider the cost of a rebuild

Paying someone to rebuild your computer from scratch will cost more because it will take longer than simply restoring your system from an image and then restoring your changed data files over the old.

If you can rebuild your computer yourself, then this is less of a concern.

Consider the cost of data loss

I have a lot of critical data. I would not be able to function without these files. I cannot afford to lose my email either. So I perform backups daily.

I then perform archive to media backups weekly that go in a fire safe.

My brother-in-law uses his computer for his business, but prints off all his important files and he doesn't keep email, so he doesn't feel the need for backups.

I would rather manage electronic files than several cabinets full of papers.

Backing up the data on your computer that you care about is not difficult or expensive. So why not do it just to be safe?

When to perform a restore

Perform a restore when your computer is physically destroyed, such as, in a fire.

A file was deleted that you want, but it cannot be recovered from the Recycle Bin.

A virus corrupted some of your data files, and the antivirus software cannot repair them.

You need an older version of a particular file because it has some content in it you want.

Your computer is stolen.

Or you need to recover from a hardware failure that makes your data corrupt or irrecoverable.

Methods for backup

Robocopy to another computer across a network or to an external USB 2.0 hard drive  
(<http://qualityplusconsulting.com/res/SampleBackup.cmd.txt>)

Sample script mirrors destination directory to be an exact replica of the source directory.

Robocopy C:\Data E:\Data /V /MIR /Z /NP /R:2 /XF ~\*.\* \*.ost /log:C:\Temp\SyncLog.txt

/V = verbose  
/MIR = mirror  
/Z = restartable mode  
/NP = turns off copy progress indicator to speed up job  
/R:x = retry count of 2  
/XF = list type of files to exclude  
/log = output log of robocopy job

#### Ghost – imaging

Provides a means to recover the computer to its exact state of when the image was taken. Simple file recovery of changed data can be performed afterwards from your regular backup media.

I offer this service depending upon quantity of data on your computer.

Ask me for this service and I will tell you if it is practical based upon your specific situation.

#### A sample disaster scenario:

A virus infects your computer and corrupts or deletes a bunch of system files. The operating system is too far gone for a simple recovery of data files. Options are:

1. Restore from image, then restore changed data from regular backup media.
2. Rebuild computer

Option 1 will 99% of the time take less time to do.

Also option 1 is the only way to get the system back exactly the way it was when the image was taken. Otherwise, you will have lost customizations.

#### Which solution will work best for me?

Consider the following factors:

Capacity – how much data to back up?

Speed

Manual or automated

Cost

What is my risk tolerance?

#### Backup and restore strategy

Need regular data backup

Need image of system or be prepared to completely reinstall

System recovery – do not attempt alone unless you are sure you know what you are doing

#### Disaster preparedness

There are many types of disaster:

Hard drive failure

Operating system corruption

Complete system destruction, e.g., fire

Component failure

Easy recovery unless the processor, memory or hard drive was the component that failed.

Any of these failing has significant probability of corrupting the operating system and other data on the hard drive.

Have more than one version of regular backups in case the media is bad.

Mark backups with the date the backup was made for version control purposes.

Keep backups in a fire safe or in two different locations.

Get organized.

Keep all your install media in a safe place (CDs, documentation, floppies, DVDs)

Establish contacts. Know whom you will call when a disaster happens.

This person should be able to help you recover your system from any level of disaster.

If you don't do this ahead of time, it's like trying to buy insurance while you are on your way to the hospital.