

Backups

Why Back Up?

- n It's insurance against...
- n Hardware failure
- n Software failure
- n Malware attack
- n Human error by you

What to back up?

- n Everything
- n Just the data
- n Data and programs separately

Where to back it up to?



Second internal HD?



External HD?



- n USB devices.
- n Portability can be an advantage.
- n ...and a snag (as we'll see later)

Network Attached Storage?

- n Permanently attached to all computers. (including laptops via the wireless router) J
- n Looks like shared folder(s)
- n Redundant discs (RAID) J
- n Does other stuff too
- n Price ~£350 L



The Cloud?

- n Relatively slow L
- n Not suitable for huge amounts of data L
- n Free J
- n Available from anywhere J
- n Windows Live Mesh and Dropbox are example systems.



When to back up?

- n Before making significant changes
- n After making significant changes
- n But will you remember?
- n It's best to automate the process..
- n .. which dictates that the backup medium has to be permanently attached..
- n .. A potential downside of portable devices.

Types of Backup

- n Full – everything every time.
- n Incremental – changes since last time.
- n Differential – changes since last full.

Full Backup

- n It's a complete snapshot J
- n It's big and slow L
- n It's quickest to recover J

Incremental – changes since last time

- n Backups are usually fast and small J
- n But after say 10 backups, you end up with a full backup and 9 increments.
- n For recovery, these have to be 'played back' in turn.
- n This is slow L
- n ..but you don't have to do it very often J

Differential – changes since last full

- n Backups are a tad slower and larger than incremental ones.
- n For recovery, one only needs to restore the last full back up plus the most recent differential one.
- n This is faster than recovering lots of incremental backups.
- n .. but it's a rare event.

What Software to Use?

Desirable Features

- n Runs in Windows and from a boot disc
- n Verifies backups
- n Can be scheduled
- n Is network aware
- n Can run selective backups
- n Can run very selective restores, a single document if desired.
- n Acronis True Image ~£25

Folder Synchronisation (eg. Microsoft Sync Tool)

- n Keeps two folders identical J
- n .. But delete a file from one and it'll be deleted from the other L
- n Usually schedulable and sometimes 'instant'
- n Sometimes network aware J

Karen's Replicator (quick and dirty copy)

- n Not a 'proper' backup but very handy.
- n Can be scheduled.
- n Network aware.
- n Does not verify L
- n If source file changes, old copy is overwritten – so no history is available L.
- n If source file deleted, copy remains J .
- n Free J

What Do I Do?

- n I back up my systems monthly using Acronis (the day after the MS updates)
- n I back up my working data daily using Acronis (thus keeping files' histories)
- n I back up my working data daily using Karen's Replicator (for fast recovery from stupidity)
- n I keep a folder of critical files on LiveMesh (so that it's available to all computers)

Demos

- n Acronis True Image
- n Karen's Replicator
- n Windows Live Mesh