Rsync Backup

- Tapes are good for off site backup

- Tapes are slow
  - Need to be obtained from safe store
  - Need to be put in the drive
  - Need to seek to where the file is
  - Backing up 100GB takes a long time
- Tapes need me to do something
  I am lazy
- Which tape to load, when was the data lost ?

Backup to disk

- Disks are fast
  - Locally attached
  - Can do hierarchical (file tree) search

- Disks are limited in size
  - How many copies of the 100GB file store can you keep?
- Disk backup is not fast enough
  - The network bandwidth is probably a limiting factor in disk bandwidth

Rsync

- Copies files between machines efficiently
  - Use file size & modification time to decide if a file has changed
  - Compress network traffic
- Great for creating snapshot images of file systems for several machines.
- First backup takes forever, nightly updates are quick since most office type files are unchanged from day to day

Differential Rsync

- --link-dest option, backup to a directory but link unchanged files from another directory.
- Create directories with names like 20080220
- Create a new directory per day
- Typical nightly backup time is 5-10 minutes for 100GB
- Disk space use on the backup machine to keep several months backup is 200GB.

How do the users restore files

- NFS file system or Samba share
  Exported read only!
- backup:/arch/server/20080220/home/fred/

- They copy lost/damaged files themselves.

  In theory.

  In practice when you have shown them 6 times

Not the whole story

- Still need to do off site backups
- Still need to ensure that system data is backed up.
- Not a good way to backup large databases.

- Whole system backups do not need to be user friendly.

- Can take tape backups from backup machine.

rsyncbackup

- Shell scrip that is run from cron every night
- Documentation explaining how to set up backup server and backed up machines.

- Automatically clean backup directories more than X days old.
- Can keep backups made on 1st of the month for a longer period.
- Generally hassle free.

Free to download

- http://www.phcomp.co.uk/downloads.php

- Alain Williams <addw@phcomp.co.uk>
- Parliament Hill Computers Ltd