

Virtualisation

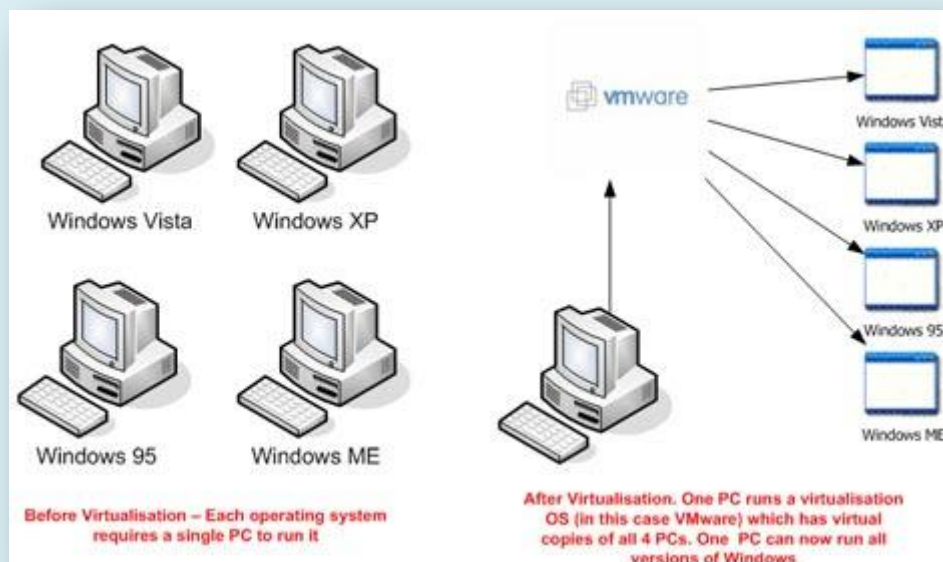
This is a term that covers various areas of computing. Broadly speaking virtualisation is when you create a simulated copy of something else, and present that copy as the actual thing. You can virtualise most aspects of your infrastructure, starting with...

Virtual Operating Systems

Especially useful for testing applications, in different environments, on one machine. You can load virtualisation software onto a desktop PC, compartmentalise it, and load various operating systems into each “compartment”. This saves on hardware and running costs, as well as being a space-saving tool. See diagram. Virtualising your PCs makes sense for small companies that have no server-based applications or for small projects that require a test suite. Not be confused with a Virtual Desktop (see below).

Products suitable for this:

- VMware
- Virtual Iron



Virtual Desktops

Another space-saving, power-saving option. Great for standardising your desktop setups. You create one desktop with all the relevant applications, virtualise it on the server, and

then roll it out across your organisation on your network. This does not however mean you only need to buy one application license, as you will still need the correct amount of licenses for all concurrent users. However, if you only ever have a proportion of users accessing these applications, with a virtual desktop, you could cut down on the amount you buy.

Products suitable for this:

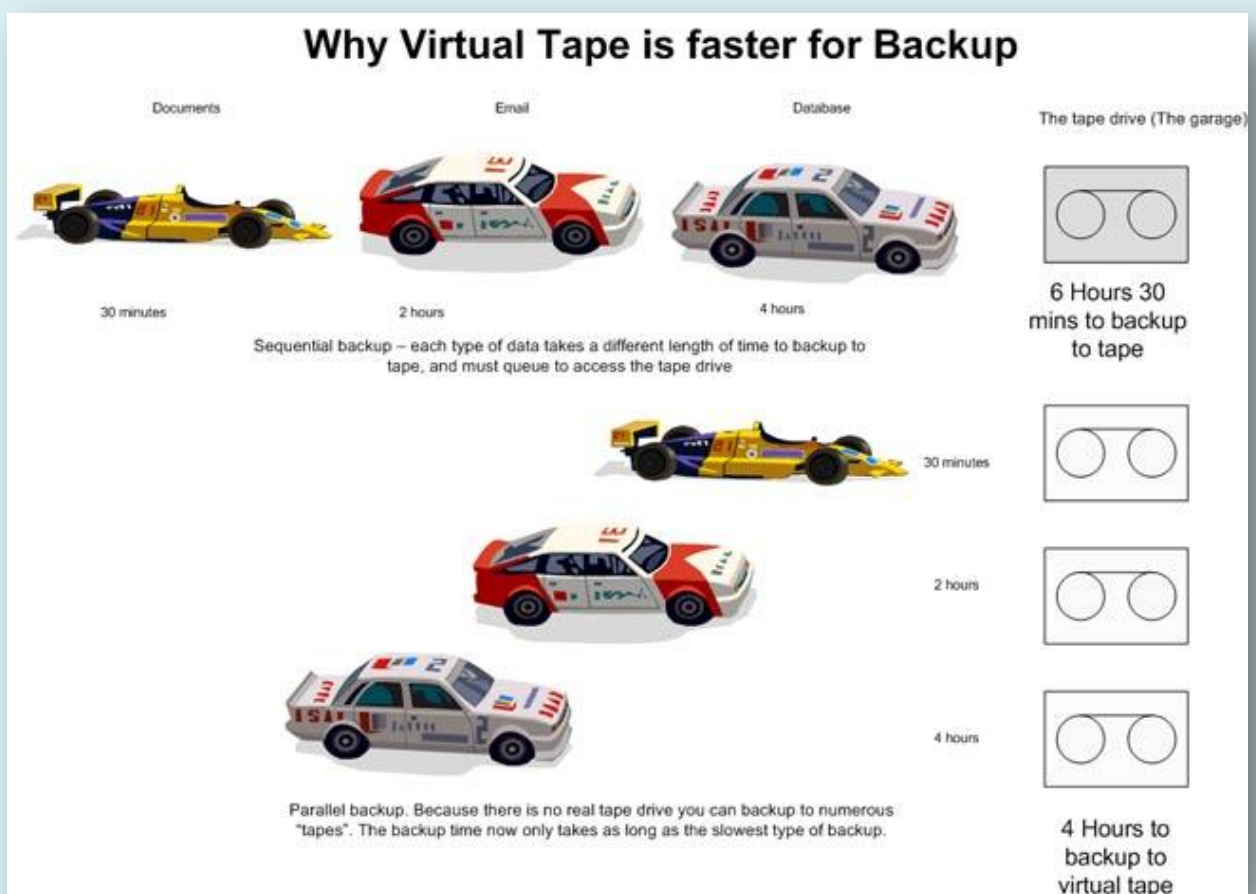
- VMware
- Virtual Iron

Virtual Tape Library (VTL)

One of the great storage innovations, a virtual tape library fools backup software into thinking they are backing up to tape when in fact they are backing up to disk. Because there is no physical tape drive, backups are faster and can store much more data. It is also faster than normal disk backup, because the data is handled like a tape, and not fragmented like a normal hard disk. See diagram.

Products suitable for this:

- REO Series from Overland Storage



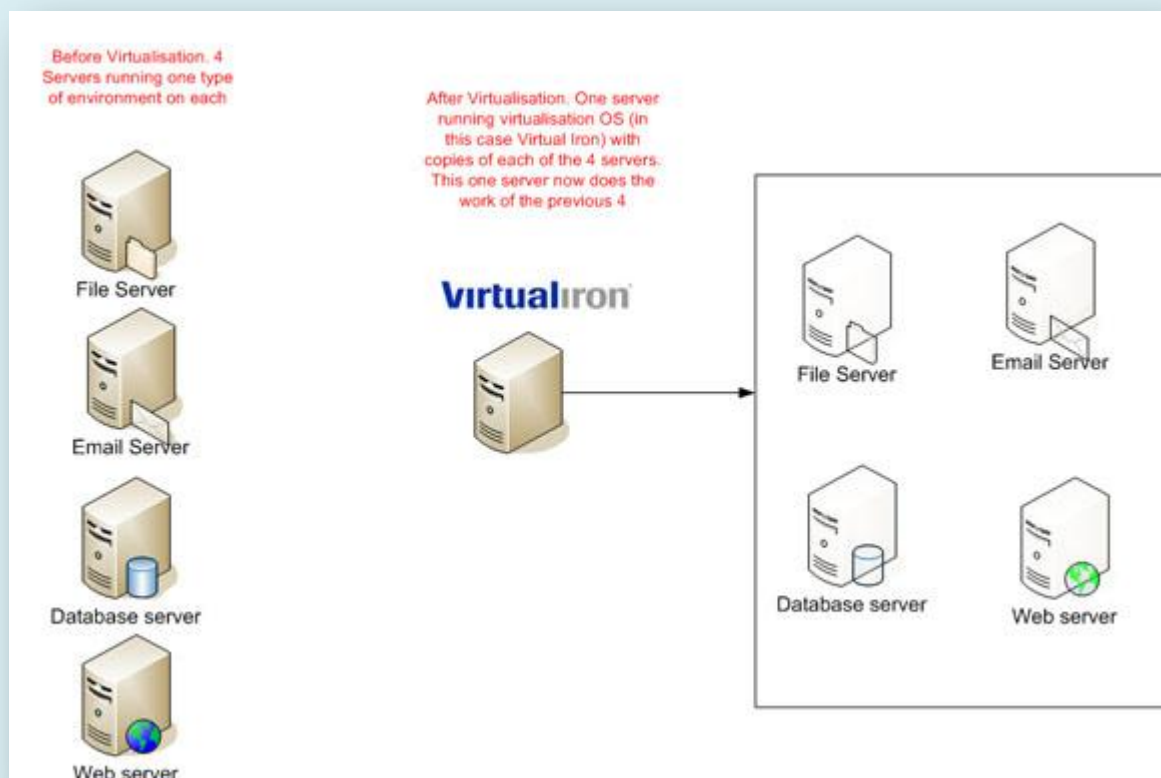
Virtualised Servers

This is where the main savings can be made. In most infrastructures, servers are loaded with single purpose applications, such as Exchange, SQL etc.. You therefore have one server running your file and print, one running email, one running your databases and so on. The downside of this is that you start collecting servers. Your server room will fill up with servers, your air-conditioning will need to be able to cope with the amount of heat generated by running all these machines, and therefore your electricity bill will start to rocket. Virtualisation software can create copies of multiple servers and have them running on one. (See diagram). The advantages of virtualising your servers could be because:

- you have run out of server room and you need the space,
- you may be economising and need to reduce your power bills
- you have an environmental target to meet
- you may want to utilise your hardware investment for different projects
- or to create a DR solution.

Products suitable for this:

- VMware
- Virtual Iron



Virtual SAN

The most effective way of storing data from multiple servers is a SAN. For many companies a SAN is too expensive to consider, however you can obtain the functionality of a SAN through storage virtualisation. Virtualisation switches can consolidate your existing storage (such as fibre channel DAS or older SANs) and create a virtual SAN which has snapshot and replication features.

Products suitable for this:

- [SANRAD](#)

So what are the business benefits?

Decrease your overheads

By reducing your physical machines you cut down on power use, and therefore cut your electricity bills. You also remove the need to purchase more and more equipment by utilising what you currently have.

Free-up floor-space

By consolidating everything to less physical hardware, you need less floor-space for your IT room. If your server room is already too full and you are concerned about the cost of obtaining more space (a definite concern if you are based in the very expensive London area) then virtualisation is the ideal solution.

Reduce your environmental impact

By reducing power consumption, and by utilising virtual tapes instead of actual ones, your carbon footprint and landfill waste is reduced. Although environmental targets are currently a voluntary imposition, it will not be long before legislation is introduced that may enforce corporate responsibility for environmental impact.

Make more efficient use of your current hardware

You may have all the capacity your company needs, but it is spread thinly over various machines. Virtualisation will consolidate your usage and make more efficient use of your hardware, freeing up equipment for other usages (such as a short-term project or a test environment).

Implement a Disaster Recovery solution

Many companies would love to implement a full disaster recovery solution, but are concerned about the cost of purchasing redundant and secondary servers. After virtualisation you will have freed up servers which you could use for DR without any further outlay. Also, a by-product of virtualisation is replication, which could be used to create a robust DR solution, far superior to any backup and recovery you may already have.

Improve backup times

If after optimising your storage usage your backup window is still too long, consider implementing a Virtual Tape Library. The benefits of a VTL system are; reduction in power consumption, less impact on day-to-day usage of your systems, less administration required (no need to swap tapes around), tape purchases reduced, physical storage space required for tapes is reduced, and because there are no physical tapes there is improved security for the data on them.

Contact Us

Storage Partners specialises in helping companies adapt their infrastructures to make the best use of their hardware for their existing and future needs. Virtualisation is just one way of achieving that. To ensure that you get the best out of virtualisation techniques contact Storage Partners today on 024 7568 7300 to arrange a consultation.

www.StoragePartners.co.uk

enquiries@StoragePartners.co.uk

1 The Square, Manfield Ave, Coventry, CV2 2QJ