Sustainable IT tips: Operating systems

Finding the right system for your needs

- ☐ ***Always match operating systems to hardware specifications***
  A machine which doesn't have enough system resources to run its installed software will struggle, and waste the user's time; a system that is too powerful for the software installed upon it represents a waste of resources – *in effect the user is wasting the system's time*. What we should find, by planning our needs and matching them to a machine specification, is a balance between these two extremes

- ☐ ***Define a role for a machine and install a system that meets that role***
  Operating systems work well when they perform a defined purpose. That could be a general purpose like a desktop machine, or a specific purpose like a data server. Sometimes you can combine both – such as a desktop with a web server installed to allow web development. In practice it's better to manage the load on machines in a way that optimises their role rather than obstructing it. Find a role for the hardware you have, and only buy new hardware when what you have can no longer perform the tasks you require reliably.

- ☐ ***Old machines can be useful if you assign them a suitable role in the system***
  Some roles require little processing power, such as a printer server, file server, or running network services such as DHCP and email. A new server will do all this and more – but if you have a suitable old machine the ecological option is to use that equipment until it can no longer reliably fulfil the role.

- ☐ ***Always document the machine hardware and the system installation***
  Knowing your hardware is essential to maintaining it, and especially for dealing with faults and bugs when they crop up. More importantly, data secured behind password access controls, and especially encrypted data, can be lost if the password is forgotten. Securely stored system documentation, listing system and hardware configurations, can avoid this.

- ☐ ***Configure power management options to reduce consumption, but avoid settings that are so obstructive that the user disables them***
  Power management can make savings in energy use, provided that it does not become so obstructive that the user disables it. After a period of idleness, switching to hibernation is more secure than sleep mode as it's less likely to create data loss in the event of a power failure/the machine being switched off.

- ☐ ***Give feedback on power management***
  The best way for a user to understand the load of their system is to get direct feedback on the desktop – allowing them to change their behaviour and not over-tax their system.

This checklist was extracted from a new publication by the APC, **A sustainable guide to IT,** *written by environmental activist and ICT expert Paul Mobbs. To read the other Sustainable IT tip sheets, or to download the publication, visit greeningit.apc.org. For more information, email info@apc.org.*