TIME TO TRIM PC FAT?

Worldwide, thin client use is on the rise while PC sales are slowing down, partly due to the rapid rise of cloud computing. Library and information services leveraging cloud computing should now also be looking at the potential cost savings of introducing 'thin client' computers to replace those fat old PCs, according to the gurus of IT. INCITE asked IT specialist Marc Doehnert to explain why our computers might benefit from slimming down.

Technically, a thin client is basically a small computer optimised for connecting to a data centre or cloud service provider. It is designed to be managed centrally by a manufacturer's operating software. Thin clients operate in a virtual environment, so software, operating systems and data storage is shared and can be accessed by those that need it at any time.

Essentially the thin client 'pulls' applications and data from the cloud at need, rather than having them stored to a hard disk on each individual device.

Thin clients tend to be about a quarter of the size of a traditional PC (now otherwise known as a 'fat client'), and with no user-accessible storage on board, they run more quietly, use less energy, break down less and are cheaper to buy. The average lifespan of a PC is about three years, whereas a thin client will last for five or six. They also boot up much faster than PCs, a feature many users rate as their favourite.

Perhaps the biggest potential benefit to a library facility is the central management of a thin client network. With all applications stored and administered in a central location, IT staff have a quick and convenient means to check on each device, update programs, backup data and maintain a reliable network. Each device is remotely controlled, so can be switched on or off by IT staff from a central location. This can prevent theft, save power and help to protect the network from external attack.

If data is stored in the cloud rather than on each separate device, a library or information facility we also save a lot of time, effort and cost by consolidating data security. Instead of a licence protecting every device, data security can be moved to the cloud provider or kept at the server level if the company has their own private cloud. Storing and transporting data on a USB drive remains a security risk, but this can easily be countered by most operating software, which provides administrators with the means to lock out any USB device that is not recognised.

Software exists that allows laptops and notebooks to be converted into a thin client, giving them the same management and security capabilities. This also gives an organisation the option of introducing new technology in stages, reducing the burden of purchasing a whole new suite of hardware at once. Some of the more advanced thin client vendors are now adding local capabilities to each device, responding to user needs such as unified communications and wireless mobility.

The total cost of savings to a library or facility can be as much as 70%, according to a study by Bloor Research. Power and hardware costs are the obvious areas of improvement, but there are also savings in administration, since a centrally managed environment involving thin clients simplifies the role of an IT department and makes the job of maintaining a computer network quicker and less complex. For larger facilities, this can equate to a smaller IT staff or reduced outsourcing costs.

It is true that extra servers are generally required to store the consolidated data, and the subsequent cost of cooling down a server room is quite high. However, Fraunhofer Institute for Environmental, Safety and Energy Technology in Germany conducted a wide range of tests on thin clients and established that overall, a thin client network will run at between 47% and 60% more environmentally friendly than an equivalent PC network, depending on the operating system and network architecture deployed.

Thin clients allow a facility to move all data and applications into the cloud which frees up administration time, reduces running costs and enables a cheaper, more robust piece of hardware to capably replace the PC or fat client.

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