

THIN CLIENTS

PC Authority takes a look at the low-fat alternative to client-side computing.

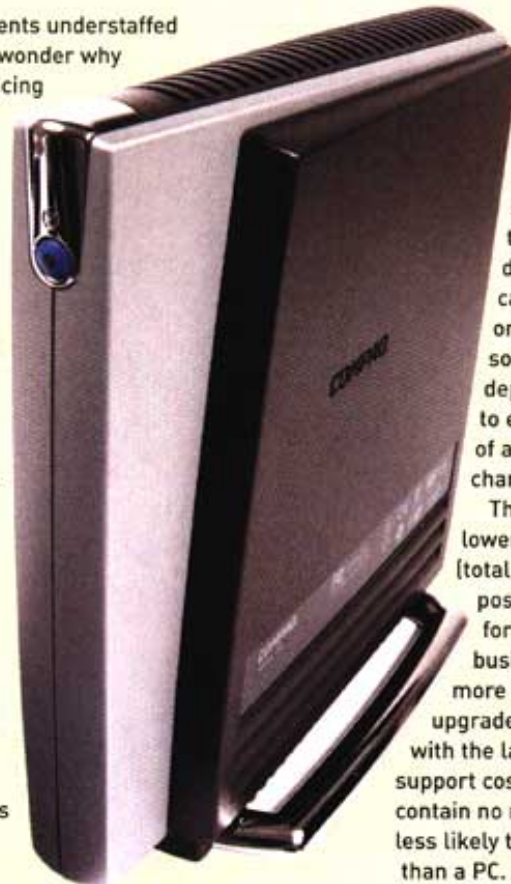
With so many support departments understaffed and overworked, you have to wonder why some companies insist on placing a PC on every desk when their staff clearly don't need all the facilities these 'fat' client systems offer. The LAN has allowed a significant portion of power to move out of the administrator's hands and into those of the users. PC-based storage holding locally installed applications and data brings a plethora of problems, not least management, security and support. In environments where users genuinely don't require these facilities, the thin client network looks far more sensible, and in this month's group test we take a look at a dozen hardware client options.

When you see the advantages offered by the thin client network, it's amazing it isn't more popular. All applications and data are held centrally on a server and accessed remotely by compact, basic devices on the desktop. With no hard disk, floppy or CD-ROM drives, the thin client offers no local storage facilities and, in most cases, comes with nothing more than a reasonably fast processor, a modest supply of RAM and enough internal Flash memory to run an embedded operating system.

The Desktop displayed when a user logs onto a server providing Terminal Services looks no different to a normal Windows environment, but the applications they run and the data they create never leave the server. The only network communications occurring are inward-bound keyboard presses and mouse movements from the client, and outward-bound screen refreshes sent back by the server.

THE MAINFRAME ADVANTAGE

In many ways, the thin client takes the network back to a structure similar to that of the mainframe environment. This is not a bad thing, as the mainframe offers one major advantage that makes management infinitely easier: centralisation. All major hardware is installed and maintained in a single location and software is accessed from dumb terminals. As a result, all support departments can also reside in the same location as the mainframe, therefore providing fast response times in the event of a failure.



Thin clients, like the HP Evo T20, reduce the size and cost of client PCs

With all data in a central repository, security can be tightened as you can determine precisely what data and applications a user can access. Backup also becomes much simpler, because you don't have to worry about data stored on the desktop. Any application upgrades can be carried out easily too – you only need to apply them once to the software on the server rather than deploying them across the network to each PC. Plus, with most avenues of access cut off, viruses have less chance of getting into the system.

The thin client also offers much lower initial costs and reduced TCO (total cost of ownership). True, it's possible to buy basic, low-end PCs for a bit over a grand each, but most businesses are likely to spend far more than that, as they'll need to upgrade them frequently to keep in step with the latest bloatware. Similarly, ongoing support costs for thin clients are less: they contain no moving parts and are therefore less likely to fail, and will probably last longer than a PC. Also, lower power consumption means smaller utility charges, while an absence of cooling fans and chattering hard disks significantly reduces background noise. Even equipment theft comes into the equation

– thin clients are less likely to be stolen, as their inability to run local applications severely limits their value.

TAKING CONTROL

Central to delivering Windows applications over a thin client network is the server. Windows 2000 Server comes with the Terminal Services component as standard, whereas Windows NT 4 Server was offered as a separate Terminal Server Edition. What you run on top of this depends on the services you want to deliver. If only basic services are required, you can settle on Microsoft's RDP (remote desktop protocol), but if you need advanced features you should consider the Citrix MetaFrame Windows NT/2000 Server add-on. This uses Citrix's own ICA (independent computing architecture) protocol and delivers a range of enhancements, including application and server load balancing, the ability to publish applications over the Web and a powerful client that requires minimal network bandwidth, as well as features such as COM port redirection.