The solution isn't always VDI

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The concept of thin client computing goes back a long, long time. Essentially, the first computers, using green screen monitors, were carrying out all the business logic at the centre and using the monitors as a means of presenting the results to the user. As distributed computing took over and PCs proliferated, organisations soon saw that information was also becoming disseminated across a multitude of devices. Through the use of centralised stores masquerading as virtual local drives, this was brought back under some degree of control.

Then mobility raised its head – users working while not in an office using laptops or home-based computers to carry out work. There seemed to be nothing for it except to provide full systems for these people, with the application and data held on the device itself. This approach is still the de facto way of providing access to personal productivity applications (such as office tools) and many enterprise applications also download data so that a specific client application can be used to still carry out work while away from the office. But this means that what should just be a £700 access device suddenly becomes far more valuable and dangerous – it now contains data that may have value in itself, and can be lost through theft or through carelessness (e.g. left in the back of a taxi!)

Even within an office, having hundreds or even thousands of devices configured differently causes a management headache, and a failure in any one device can lead to considerable productivity impact while a replacement device is sourced and provisioned to the same state as the failed device.

To the rescue came thin client, or server-based computing. The most common form of this is where a user's total desktop is run on the server in the data centre and only the graphical interface is presented to the user at their access device. This is great in theory – all data is kept central, the device type becomes immaterial, provided that it can support an access session and all control is placed back in the hands of the business via data centre.

The problem is that the user experience is not always what is hoped for. Network latency and bandwidth can have a big impact on how the user perceives the experience, and even small issues can make regular use of such a system tiring to the point where users start to try and find ways around using such centralised systems.

Organisations also find that many of the promised gains just don't materialise. Energy savings based on replacing desktop PCs with low-energy thin clients don't always add up; after all, a PC is just as useful as a thin client as an access only device, and many organisations carry on using these relatively energy-hungry devices and actually see their overall energy usage increase.

So, are completely virtualised desktops (virtual desktop infrastructure, or VDI) the way forward? Certainly, when looking at task workers who are tied to a specific desktop device it can work well. LAN speeds mean that response times are perfectly adequate, the VDI images can be defined and managed centrally to serve hundreds or thousands of users and low-energy access devices can be rolled out as and when required.

How about the more mobile user? A completely centralised system may not be the right approach for them. However, these are the users who present a greater security risk, so providing them with a completely mobile-device based system introduces too much risk. Also, recent research carried out by Quocirca for Trend Micro demonstrates that the increasing consumerisation of IT means that more people will be coming to IT with non-standard devices expecting them to be able to be used for accessing corporate systems (see figure 1).

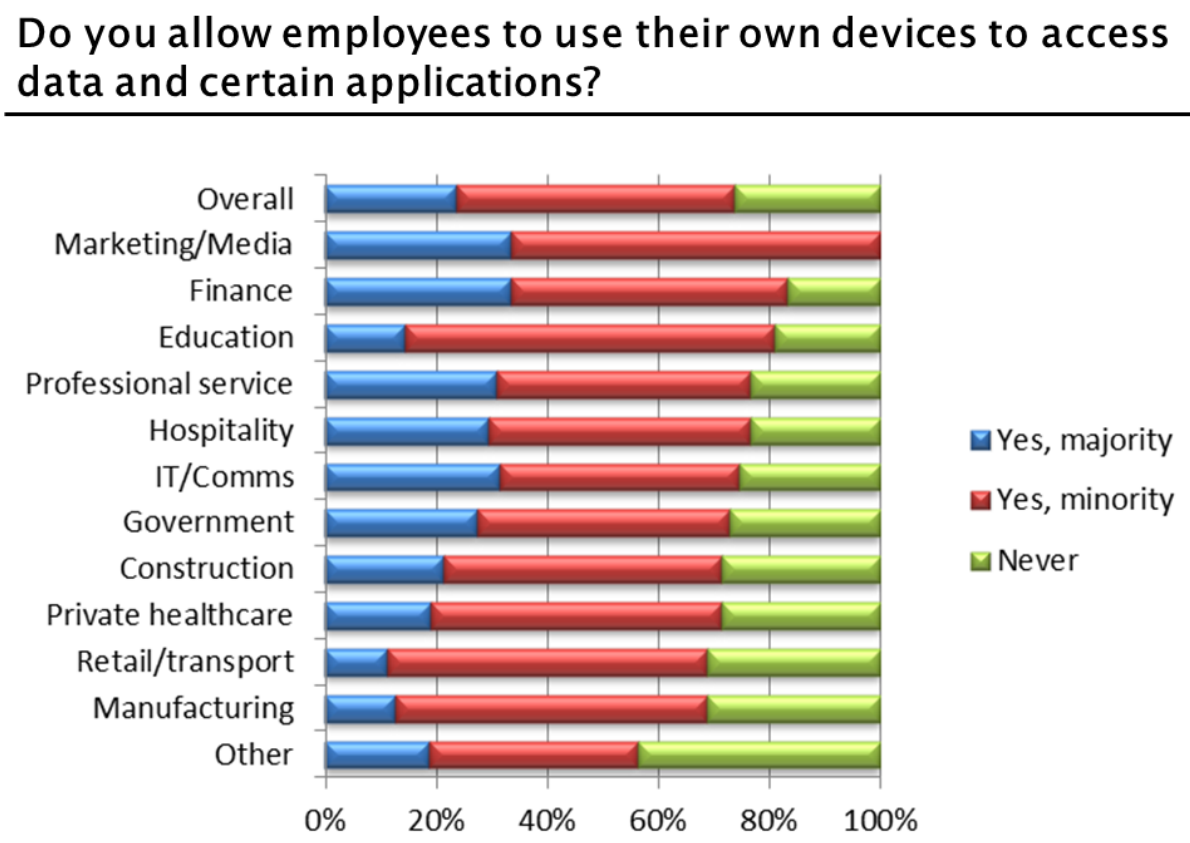

Figure 1

The same research found growing use of tablet devices within a more remote workforce (see figure 2). The key here is to abstract the device from the function. It is possible to maintain a fully centralised image in the same way as a standard VDI approach, but to copy that image to the device. This can be held within a virtualised space, so that there is no interaction possible between the device, its basic operating system and applications and the corporate image running within its own secure environment, or "sandbox". Such systems do still present a degree of security risk – data is still being stored within this virtual image, but this can be mitigated through flushing any data down to a central store as soon as network connectivity is made, or in ensuring that any data is deleted should anyone attempt to access the sandboxed environment via non-preferred means. For those who spend a great deal of time disconnected, this provides the best balance between centralised control and capability to carry out their corporate function.

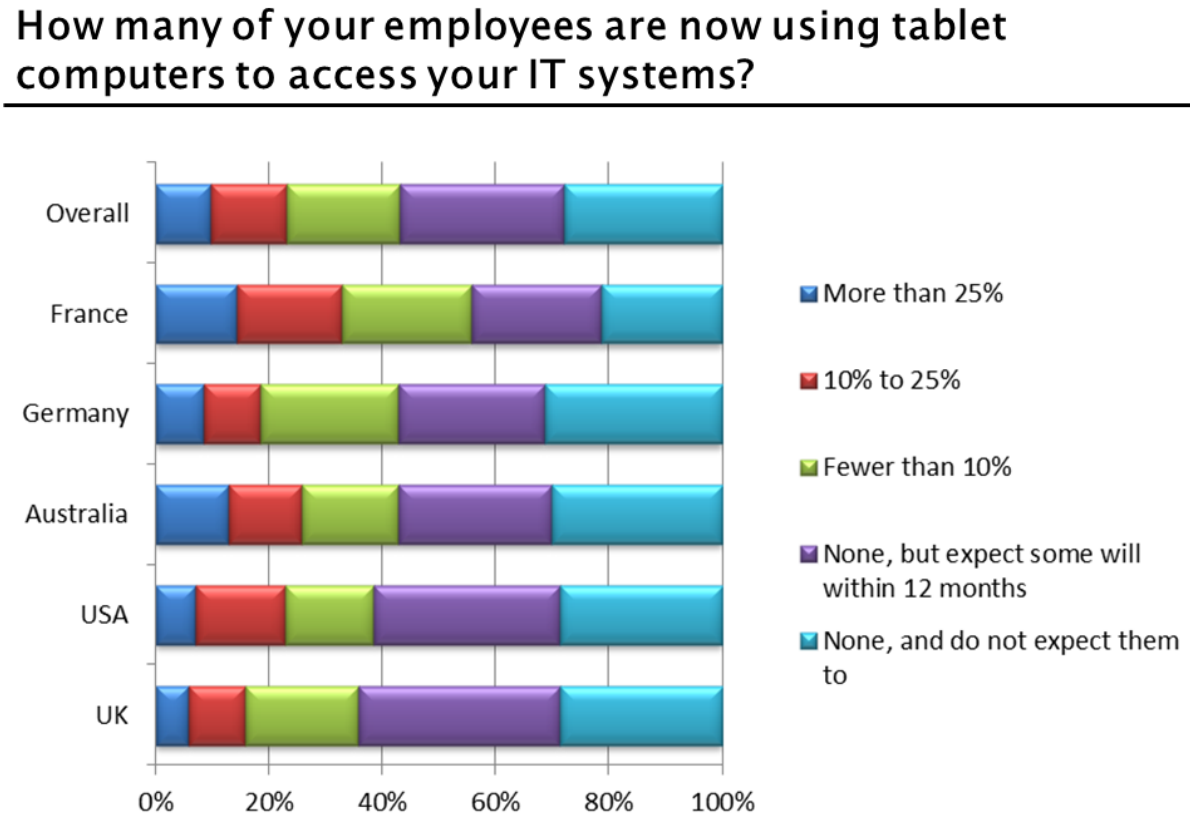

Figure 2

It is further possible to stream applications down to a device on the fly. Here, the intelligence of the end device (its CPU, operating system and so on) is still used to run the application, but the application is kept updated in the data centre.

On logging out, any data created or changed is flushed back to the server, and the associated data footprint is wiped completely from the device, so removing any security issues. This approach is very useful for those who will be connected to the network the majority of the time, but may be accessing systems over a low bandwidth or high latency connection. The initial application stream should be provided over a high bandwidth connection, but from there onward, only the delta changes need to be passed down and use very little bandwidth. Data access times can be improved through the use of wide area network acceleration tools (such as Expand Networks, Riverbed, Blue Coat or Silverpeak) so providing a very fast experience for the user.

There are many ways of providing a virtualised environment that improves the corporate security, ensures that corporate data is centralised and improves the capability to manage a disparate, decentralised and increasingly consumerised end user device environment. Indeed, just centralising data can be a means of solving some issues, with the use of read-only application clients and restricted capabilities such as cut and paste enabling users to continue working without the need for a complex approach to virtualised desktops and/or applications. Along with the main players of Citrix and VMware, smaller players such as Centrix, RES Software and AppSense provide tools and systems to manage the user experience through a seamless aggregation of a hybrid system where parts of the virtual system will be based around VDI, some around desktop streaming and some around application streaming. Likewise, those who have emerged from a hardware world, such as Igel, Wyse and ChipPC offer software that makes the most of

these increasingly intelligent devices, enabling users to gain the most from a more centralised system.

The answer may not be VDI – but it is increasingly apparent that it will be server-based computing to provide the information control that today's organisations are striving to find.

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Quocirca is a primary research and analysis company specialising in the business impact of information technology and communications (ITC). With world-wide, native language reach, Quocirca provides in-depth insights into the views of buyers and influencers in large, mid-sized and small organisations. Its analyst team is made up of real-world practitioners with first-hand experience of ITC delivery who continuously research and track the industry and its real usage in the markets.

Through researching perceptions, Quocirca uncovers the real hurdles to technology adoption – the personal and political aspects of an organisation's environment and the pressures of the need for demonstrable business value in any implementation. This capability to uncover and report back on the end-user perceptions in the market enables Quocirca to advise on the realities of technology adoption, not the promises.

Quocirca research is always pragmatic, business orientated and conducted in the context of the bigger picture. ITC has the ability to transform businesses and the processes that drive them, but often fails to do so. Quocirca's mission is to help organisations improve their success rate in process enablement through better levels of understanding and the adoption of the correct technologies at the correct time.

Quocirca has a pro-active primary research programme, regularly surveying users, purchasers and resellers of ITC products and services on emerging, evolving and maturing technologies. Over time, Quocirca has built a picture of long term investment trends, providing invaluable information for the whole of the ITC community.

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