

Desk hopping

We all feel firmly tied to our desks now and again. But there is a way to avoid being chained to one workspace. Desktop virtualisation has its benefits and consequences, as Graham Jervis explains



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In March last year, renowned IT research body Gartner predicted that virtual desktop infrastructure revenue will grow globally from around \$1.4 billion, currently less than one per cent of the worldwide professional PC market, to \$65.7 billion in 2013, “more than 40 per cent of the worldwide professional PC market.”

That is enormous and in the state of the current market and with the technologies still developing that forecast seems incredible; but even if their figures are wildly exaggerated it does imply a major change in PC application deployment.

The current economic conditions have ensured that both large and small organisations are looking for substantial savings on their base operating costs. For many, the largest costs after staff, are those associated with their buildings. Fortunately, there are substantial opportunities to reap major cost savings through better utilisation of workspaces – many offices have workstation utilisations less than 50 per cent and interest in desk-sharing has never been higher. Equally fortunately, advances in IT have made this much more achievable

for all by enabling telephone services to follow a person to any desk and for those IT applications that are particular to an individual to be available wherever he or she works.

However, the current business climate is also one which challenges any new additional investment in technology that may be required. It is the purpose of this article to outline the various options and their consequences that are available for those who seek to make the changes to enable desk-sharing now. I shall begin with the much discussed and currently popular subject of Desktop Virtualisation (I can almost hear the yawns!).

So what is this new Nirvana - sounds like something from *Star Trek*? Well, virtualisation has been with us for a long time. If you think of it as being a working representation of something that once required a physical presence of its own to work and now can work equally well using a different physical form with something else. Still with me?

It's a bit like using a TV to do your internet surfing. So hopefully, you might realise that if we could create a virtual form of everyone's unique desktop applications and appearance and make those available at any physical computer or device, then it wouldn't matter where people sat to work. Job done? Well – not quite.

The technology

The issue that IT departments have to wrestle with is what form of Desktop Virtualisation is most appropriate and cost effective. I said that Desktop Virtualisation has been around for some time. It has, and was called Terminal Services (TS) by Microsoft and Citrix XenApp by Citrix. This technology provides a user with a familiar desktop from a remote server (in a data centre) to a user's computer even when a desktop operating system is not installed. Sounds a bit like the old days of mainframes and dumb terminals - and to the user it is, but with all the advantages of a modern form.

Then there is the much newer form of Desktop Virtualisation called VDI (virtual desktop infrastructure). The main difference is that with TS, applications need to be much more standardized and TS can best be thought of as providing, from a remote server, a set of applications for multi-users, whereas VDI treats each person as a single user and provides those applications that are needed for that user. Clearly that has tremendous advantages for the personal and business preferences of individuals and gives the greatest degree of flexibility and resilience.

But, even though VDI and Terminal Server are both server-based computing forms of desktop virtualisation, there are other types of desktop virtualisation that don't use server-based computing at all.

For example, OS streaming describes a technology where a set of Windows applications run locally on a desktop device (so called “client-based computing” rather than “server-based computing”). But with OS streaming, the

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DESKTOP VIRTUALISATION

FEATURE

« operating system is “streamed” from a central point down to the desktop rather than it being installed locally. Since no software is installed on the desktop it is called virtualised.

The benefits

The advantages of all these forms of virtualisation are traditionally described as being in facilitating the IT management of large communities of desktops. I have not seen any clear description of the benefits that such technologies can unleash in enabling better use of expensive real estate, increasing the resilience of an organization to disasters, or to the improvement in peoples’ productivity arising from supporting greater workplace flexibility.

The benefits to IT are that they can manage all their users as if they only had a single desktop with desktop virtualisation, and that saves money. In other words, just manage one desktop instead of hundreds or thousands - great for IT.

But not necessarily so for users. Unless everyone wants the exact same desktop wallpaper with the company logo on it, it’s likely that some users will be unhappy. Even worse is the fact that user “personalisation” is more than simple vanities such as desktop wallpapers or dinosaur cursors. In many cases, users need access to software applications above and beyond what IT decide to provide in the shared “base” desktop.

The second major limitation is that these shared base solutions do not support what’s now called the “user-installed application”. In other words, the only applications that are delivered into the shared base image are those that the IT administrator has specifically prepared. So if a user needs to use an application that IT didn’t install, then that user’s out of luck.

Fortunately, both of these problems are solvable. There are now many products on the market which solve the “user personality” problem and now there are emerging vendors who are solving the “user installed apps” challenge.

The challenge

So why are IT departments hesitating over introducing software that can significantly reduce their costs and enable them to exercise greater control? The answer to this is largely, that although the future will likely be VDI, this is quite new technology. Only a handful of vendors, themselves quite new companies, supply these products. There are issues and worries over the server capacities required and the security consequences of some of the efficiency tools, such as image cloning, which provide the benefits of lower maintenance.

You don’t have to wait for the technologies to mature or for IT departments to overcome their justifiable concerns over security and acquiring new skills. Many companies enforce standard builds for staff and, where applications are based upon a relatively uncomplicated set, desk-sharing presents few problems. Even where different teams may vary their IT needs, these tend to be small variations upon a standard set and therefore, for many, desk-sharing is a workable option for most of the time.



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FM QUICK FACTS

- VDI and Terminal Server are both server-based computing forms of desktop virtualisation
- Other types of desktop virtualisation don’t use server-based computing at all, for example, OS streaming

Several companies employ the idea of Teamzones, in which all the desktops within a Teamzone are identical and thereby allow complete sharing within the members of that Teamzone. Careful analysis of the each group’s requirements is essential and with this information to hand it is possible to make adjacent Teamzones comparable to increase shareability. There are, however, some limitations to this approach. Teamzones need to be of a reasonable size (generally more than 35 workstations) and sharing ratios kept to relatively modest proportions of 1.2 people per desk to avoid contention. This is the condition which exists when a person arriving late may find all suitable desks occupied. Some of these restrictions can be overcome by creating a few desktops as superbuilds, in which all the applications required by people on a floor in a building are available on a limited number of shareable desks. Mathematical simulations can optimize sharing amongst Teamzones and be used to inform design decisions.

So what of the future? In my view and that of most of the technical cognoscenti, VDI is the way the technology will develop. The security issues and capacity worries will disappear and the number of vendors in this market will increase.

I would not however wait for this to happen:

- I would advise FM managers to ensure that the workplace benefits of virtualisation are well made and;
- I would work with IT to identify those groups and business units that have IT needs most similar to the base IT build and encourage them to desk-share and pilot designs around the use of Teamzones where these seem appropriate.

Much can still be done without high investment in new technology just at this time. **FM**

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