



## Virtualisation and the business

**As part of the redefinition and consolidation of the datacentre, virtualisation has been one of the two key technologies – blade systems is the other. HP commissioned a worldwide report in June and July 2008 to find out just how virtualisation was changing business. One of the most significant results was that CIOs and those responsible for choosing technology inside enterprises do not believe that the business is benefiting from virtualisation.**

Commissioning reports is always difficult. You try and pick a subject that will tell you what you want to hear or, at worst, something you can quickly change. When the HP Virtualisation Study was commissioned it's reasonable to expect that the majority of enterprise customers would be talking about their plans to increase the penetration of virtualisation. For those that were not already involved in virtualisation projects, the report would hopefully provide information that sales teams could use to shape strategy.

Yet among the key messages were two that stood out. The first was that half of the Technical Decision Makers (TDMs) said virtualisation is just a technology that allows IT to deliver existing services more effectively. The second was that only one third of the senior TDMs thought virtualisation was a business tool.

The first message is good news for the datacentre. The strategy of reducing cost through the combination of blade systems and virtualisation is working. Not only is the cost of power being reduced by using more efficient technologies, but the datacentre is actually delivering a better service to the business as a result.

The second means that we are not getting that message through. The business might see a better level of service but if it isn't convinced of the business benefit, there will only be a limited amount of time before demands from other parts of the business begin to eat into the IT budget.

The question is: how do we change this perception?

If the business is seeing more effective IT then most of us would believe the business case is clear. It is logical to think that by keeping budgets under control and managing spiralling power costs, we're showing a clear business case for virtualisation. Yet this message depends on the business being cost driven. With current recessionary fears, costs are always going to be under control but different vertical markets see the cost of IT as a necessity.

Typical of this market are those involved in financial markets, research and development and even the oil and gas industries. Here, there is a constant need for IT to crunch numbers faster and create an edge for the business. The focus is more on the speed of response from the applications, rather than the cost of running that infrastructure.

One of the messages that seems to be getting lost today is that virtualisation is a crucial element of business continuity (BC) and disaster recovery (DR). Many sites have chosen not to virtualise certain applications because they fear it will impact performance. A lot of database teams are unwilling to put their application into a virtual machine (VM) because they are concerned that other VMs could then be placed on the hardware.

To prevent this, all they need is a process and set of rules. There is no reason why a particular piece of hardware could not still be dedicated to a single application, even when that application is running in a VM.

For these applications BC and DR plans revolve around building clusters of computers and storage that will immediately failover when something goes wrong. This means there are very significant sums of money tied up in redundant resources that are all consuming power, but giving nothing back to the business.

The supporters of this approach point out that when something goes wrong, the redundant

hardware responds immediately and that the business doesn't have the luxury of waiting for a new machine to be started, or a VM to be loaded.

This is a very persuasive argument and for many people it is the only argument. However, not all the systems that are protected in this way need such expensive hardware on standby. In addition, VMs can be kept running on other hardware and synchronised through block based replication. When something goes wrong, they can be brought online immediately and with no loss of data – especially important for databases.

What the VM approach offers over the traditional clustered approach is an ease of migration to new hardware, and a better backup process. Taking a snapshot of a VM is easier than taking a snapshot of a whole physical machine. The VM is already seen from the outside as a small set of files, while a physical computer with all of its files has to be imaged more carefully.

This ease of backup and support for BC and DR plans is particularly important when you are trying to support many remote sites. Replication of lots of remote machines on a file-by-file basis is very inefficient, both at a network level as well as a memory and CPU level. Doing this at the VM level makes it easy to setup and manage. And when the unthinkable happens, you can recover the situation immediately by deploying the VM onto whatever hardware you have in a matter of minutes. Trying and do this with a backup from a physical machine takes hours.

At the end of the day, virtualisation can improve your delivery of services, and deal with those two areas of the business no one wants to think about – Business Continuity and Disaster Recovery. The ability to get the business up and running in minutes rather than hours is a clear business advantage.