Top 10 Myths of Desktop Virtualization

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The Myths...

1. Desktop virtualization is costly and requires big infrastructure investments
2. Desktop virtualization is complicated and it can take months to set up
3. The PC is dead – thin clients and tablets are the future
4. Desktop virtualization does not deliver rapid Return on Investment (ROI)
5. Desktop virtualization does not work for laptops or offline users
6. Virtual desktops running on clients are not as secure as server-hosted VDI
7. Virtual desktops on clients do not deliver the management benefits of VDI
8. Desktop virtualization does not work for unified communications
9. Bare metal and type-1 hypervisors are effectively the same
10. VDI is better for business continuity than virtual desktops running on clients

The Myths Debunked...

There are many flavors of Desktop Virtualization and what’s true for one type is not always true for another. Virtual Desktop Infrastructure (VDI), which hosts virtual desktops in a data center, is one approach that has sparked a lot of the myths noted above, but VDI is not the only way to virtualize the desktop.

Intelligent Desktop Virtualization (IDV), a phrase coined by Intel®, describes a different approach to desktop virtualization. Where VDI centralizes both management and execution of virtual desktops, IDV maintains the benefits of centralized management while securely leveraging the compute power of endpoint devices to deliver better performance, mobility, and cost of ownership while reducing complexity. Read on to see how IDV debunks these myths...
1. Desktop virtualization is costly and requires big infrastructure investments...

This is only true of server-hosted VDI (Virtual Desktop Infrastructure), which centralizes both the management and the execution of virtual desktops. IDV (Intelligent Desktop Virtualization) dramatically reduces costs because it only centralizes the management while harnessing the power of PCs for the execution of virtual desktops on a secure local hypervisor. A server-hosted VDI implementation can cost upwards of $1,000,000 for a 1,000 seat deployment, but the up-front infrastructure cost for an equivalent sized client-hosted IDV deployment is less than $20,000 – and this includes the management server as well as backup storage.

IDV was specifically developed to address the cost, performance, and mobility concerns of server-hosted VDI while delivering all of the benefits, such as security, manageability, and reliability.

2. Desktop virtualization is complicated and it can take months to set up...

This is also true of server-hosted VDI, but not IDV. When IT organizations were implementing server virtualization, they experienced relatively minimal complexity because the workload remained in the data center. However, with desktop virtualization using server-hosted VDI, a workload designed for the desktop is being moved from the desktop to the data center. This change creates complexity and challenges requiring network hardware, WAN-accelerators, and other technologies to try to compensate for this radical change. With IDV, the execution of the virtual desktops is local, so no complex infrastructure is required to set it up. Most organizations can get an implementation of IDV up and running with hardware they already have, and it often takes less than 90 minutes to set up a working test environment.

3. The PC is dead – thin clients and tablets are the future...

All of the major analyst firms, including Gartner, IDC, and Forrester, state that number of business PCs is growing. In fact, laptops are predicted to grow at double digit rates. It is true that tablets are growing very rapidly – especially in the consumer market – but the fact is that the number of business PCs is also growing, not shrinking. While it’s true that in recent years, the growth of PCs has slowed due to economic conditions, they still grew even during that tough economic period.

While it used to be the case that thin clients were significantly less costly than PCs, this is no longer the case. PC prices have come down so that a good desktop system can be acquired at nearly the same price as a thin client. The big difference is that with the thin client, expensive servers and high-performance storage are required in the data center to run the desktop workload, whereas with a PC, the workload runs on the low cost PC, resulting in significant savings. If the PCs were managed with traditional management solutions, there would be management cost savings with thin clients. However, if the PCs are virtualized using an IDV solution, then the PCs and virtual desktop images are managed centrally, yielding the same management cost savings as with thin clients. The total cost is significantly less using an IDV solution with intelligent clients compared to a VDI solution with thin clients.
4. Desktop virtualization does not deliver rapid Return on Investment (ROI)...
The biggest challenges to achieving ROI from server-hosted VDI are the up-front infrastructure costs and operating costs for the data center required to support VDI. IDV delivers rapid ROI because it provides all of the same benefits, but at less than 1/10\textsuperscript{th} the cost. By maintaining the return, but dramatically reducing the cost, IDV is able to deliver rapid ROI. Because of the significant investment required with VDI, many companies are not even able to estimate a payback period. With IDV, on the other hand, companies can often achieve complete payback for their project in 6-12 months.

5. Desktop virtualization does not work for laptops or offline users...
This is true of server-hosted VDI, but not of IDV. With a VDI solution, users need to be persistently connected to the network to access their desktops. While VDI solutions can offer a mechanism for checking out an image for disconnected use, this process is often cumbersome – requiring time for synchronization. Moreover, the VDI clients for check-in/check-out solutions run within a host operating system on laptops. This means that the base operating system on those laptops still needs to be managed, and there will be no savings in PC management or support for the laptop users. The cost of supporting these laptops can be significant because laptops are used extensively across businesses and represent the fastest growing segment of the PC market. IDC, Gartner, Forrester, and all the major analysts predict double digit growth for laptops in the foreseeable future.

With IDV, on the other hand, users have their virtual desktops and data on their fully encrypted laptop. Moreover, because the hypervisor is installed directly onto the laptop without any operating system between the hypervisor and the hardware, the laptop is fully managed through the centralized management system. So with IDV, organizations have a single solution that works equally well across all of their systems regardless of whether they are desktop PCs or laptops.

6. Virtual desktops running on clients are not as secure as server-hosted VDI...
Server-hosted VDI addresses security concerns by moving the desktop and data into the data center. Client virtualization – as a part of a complete IDV solution – can address security concerns in two ways: through locally encrypted storage, or through centralized storage. For most applications, IDV solutions offer comprehensive security for locally hosted data by combining AES-256 full disk encryption, a true type-1 client hypervisor, USB filtering, time-based lockout, and remote kill capabilities. For applications where data is not permitted to leave the data center due to either compliance or policy reasons, there are advanced IDV solutions that can still execute locally using a client hypervisor while both the virtual desktop and data remain in the data center. This innovative approach harnesses the power of local execution even when centralization of data is a mandate.
7. Virtual desktops on clients do not deliver the management benefits of VDI...
When client virtualization is deployed as a part of a complete IDV solution, it delivers all of the management benefits of VDI. Images are still centrally managed, and IT professionals can completely manage tens of thousands of PCs through a single management console. The most advanced IDV solutions enable management at two levels: the device and the virtual desktop. With a true type-1 hypervisor, the PC becomes a locked down, fully managed device.

8. Desktop virtualization does not work for unified communications...
While server-hosted VDI has difficulty with unified communications tools such as Skype and other applications that are dependent on local performance or USB devices, IDV does not have these issues. With IDV, the applications are running locally. So video, audio, microphones, and webcams work as they would with a native PC. As one prominent analyst said, “It feels local because it is.”

9. Bare metal and type-1 hypervisors are effectively the same...
A true type-1 hypervisor has no operating system between the hypervisor and the hardware. Some hypervisors have been dubbed “Bare Metal” or even incorrectly referenced as type-1 because they include an integrated installer that installs a Linux OS and simultaneously installs a type-2 hypervisor on top of that Linux OS. Xen, vSphere/ESX, and Hyper-V are true type-1 hypervisors, but not all of these are available as client hypervisors. VMware Player and VMware Fusion are client hypervisors, but they are type-2 hypervisors. A true type-1 offers significant security and performance benefits over a type-2, even when that type-2 is packaged to appear as a type-1 through the use of an integrated installer. This is because with a type-2, if the underlying operating system gets compromised, the entire hypervisor and all the virtual machines may be compromised. So even if you are using a secure VPN connection within your Virtual Machine, if the underlying operating system is compromised, malware could take control of your Virtual Machine and wreak havoc on your corporate network. With a true type-1 hypervisor, there is no operating system to be compromised underneath the hypervisor.

10. VDI is better for business continuity than virtual desktops running on clients...
Client virtualization, as a part of a complete IDV solution, actually offers better business continuity than server-hosted VDI. With server-hosted VDI, if the network goes down, no one can work. With IDV, systems continue to operate just as a normal PC would if the network access is down. While users will not be able to access the Internet to get updates, they can still access their local files and applications and they can still get work done.

IDV solutions also include transparent automated backup capabilities, so in the event that a PC is lost, broken, or stolen, the virtual desktop and all of the data are completely backed up. In the case of a lost or stolen PC, the data is kept secure through encryption, lockout, and remote kill capabilities. Because the image is fully virtualized, it can be rapidly deployed to a new PC to get the user productive again in as little as 10-15 minutes.
About Virtual Computer

Virtual Computer is the market leader in Intelligent Desktop Virtualization (IDV), combining client virtualization with centralized management to deliver the benefits of desktop virtualization without the drawbacks.

The company’s flagship product, Virtual Computer NxTop®, makes managing thousands of desktops and laptops as easy as managing one, while offering new levels of flexibility and productivity to end-users. NxTop delivers ultra-fast native PC performance, complete mobility, and better manageability than server-hosted VDI for a fraction of the cost.

Get a free download of NxTop at www.virtualcomputer.com.