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Centralized Virtual Desktop Eases PC Procurement, Deployment, and Management

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Centralized virtual desktop, or CVD, is a form of server-based computing. CVD utilizes a server-grade hypervisor to host multiple unique and isolated client operating systems aboard a single server or group of servers in the datacenter environment. The virtual desktops are delivered to end users' devices via the network. IDC expects that CVD will continue an upward growth trend through 2014. As CVD technology matures, it will become increasingly applicable to greater parts of organizations and a greater breadth of industry verticals beyond the typical healthcare, finance, government, and education verticals that dominate the CVD market today.

The following questions were posed by VCE to Ian Song, senior research analyst for IDC's Enterprise Virtualization Software program, on behalf of VCE's customers.

Q. What are the motivators for centralized virtual desktop deployment?

A. Because of the recent economic downturn, many companies are trying to prolong the life of their PC fleets. So, with aging PCs in need of replacement, and the impending Windows 7 migration, organizations are looking for a better desktop computing model.

CVD technology has matured over the past few years and is becoming a legitimate alternative to physical desktops and traditional management because of the following benefits:

- **Lower costs.** Virtual desktops can measurably reduce overall IT operation costs — from prolonging hardware replacement cycles (capex) to reducing desktop maintenance and service time (opex).
- **Streamlined management.** IT administrators can centrally manage all virtual desktops in a datacenter environment, thus improving IT support efficiency. In addition, administrators can quickly set up new virtual machines, ensuring virtually zero downtime.
- **Better continuity planning/disaster recovery.** Because virtual machines can be quickly deployed to any hardware without worrying about compatibility, they can be factored into organizational business continuity planning, allowing enterprises to return to operation quickly after disasters.
- **Improved security.** Virtual machines ensure secure connections and allow for policies that can remove physical connections (such as USB drives), improving overall enterprise network security.

Furthermore, organizations can choose to deploy thin clients or other energy-saving devices, thus complying with green IT and reducing energy footprints. Additionally, improved computing reliability can increase end-user and non-IT business unit operational efficiency.

While some benefits can be realized in the short term to justify the initial investment, organizations should really have a long-term view when evaluating the viability of moving into a virtualized desktop infrastructure.

Q. What are the obstacles to adopting and deploying CVD?

A. Because organizational structure and needs are different from company to company, there isn't a one-size-fits-all software solution out there. First, IT has to understand the addressability of CVD to the organization by conducting a comprehensive IT assessment, which can be lengthy and difficult. Second, it's hard to select, test, purchase, and integrate an array of different products (from different vendors) to fit the specific needs of the organization. Third, lots of trial and error has to happen before specific hardware capacity can be procured. Finally, training the IT staff to manage the new technology is a resource- and time-intensive process.

Only after careful assessment and tests should the deployment stage commence. Deployment of CVD may be difficult if the organization is taking on all the moving parts, and it will be prone to making errors that can result in delays. Additionally, once CVD is deployed, management becomes the key to extracting value from the project. This isn't something the desktop or the server administrators can do by themselves; it requires additional time-consuming training, which typically delays value recognition.

CVD isn't a simple solution, and without proper planning, execution, and management, organizations would be hard pressed to recover value from CVD in a timely manner.

Q. How can a converged infrastructure platform help with adopting and deploying CVD?

A. One of the toughest and most cost-intensive aspects of implementing CVD is picking the right datacenter hardware to support the virtual desktops. IT not only has to make sure that all moving parts (network, storage, and server) will work in harmony but also has to manage different hardware separately. So, building a new datacenter with individual hardware pieces introduces additional complexities that will delay and reduce the effectiveness of a CVD environment. Additionally, building an infrastructure with separate pieces can be expensive, and resources (both capital and computing) may be wasted; plus, there's no guarantee on the capability and scalability of the new infrastructure once the CVDs are up and running.

This is really where converged infrastructure becomes truly valuable. By utilizing a converged infrastructure solution from a vendor that has experience and expertise in every aspect of datacenter hardware, as well as extensive knowledge about virtual desktops, IT can focus less on making CVDs work and more on making CVDs work for the users. Customers who choose converged infrastructure solutions can spend less time on hardware configurations knowing that every piece of the infrastructure has been preengineered to maximize resource utilization. Increasing the capability of a converged platform is as simple as adding the needed hardware.

With converged infrastructure, operations can be streamlined because many vendors integrate multiple hardware management into one console. Because fewer configurations are required, the chances of human error are greatly reduced. As stated earlier, management of virtual desktops is the key to extracting value from CVD, and converged infrastructure will allow IT to effectively manage the CVD environment without thinking about the hardware limitations — the results of which reduce TCO, produce quicker ROI, and better conserve resources.

ABOUT THIS ANALYST

Ian Song is a senior research analyst for IDC's Enterprise Virtualization Software program. In this role, he examines virtualization software products deployed within the enterprise, focusing on software designed to virtualize the client environment. Mr. Song researches and produces studies related to centralized virtual desktop software, distributed virtual desktop software, and application streaming and virtual user interface software.

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