Blade PC's – What Are They and Why Do I Need Them?

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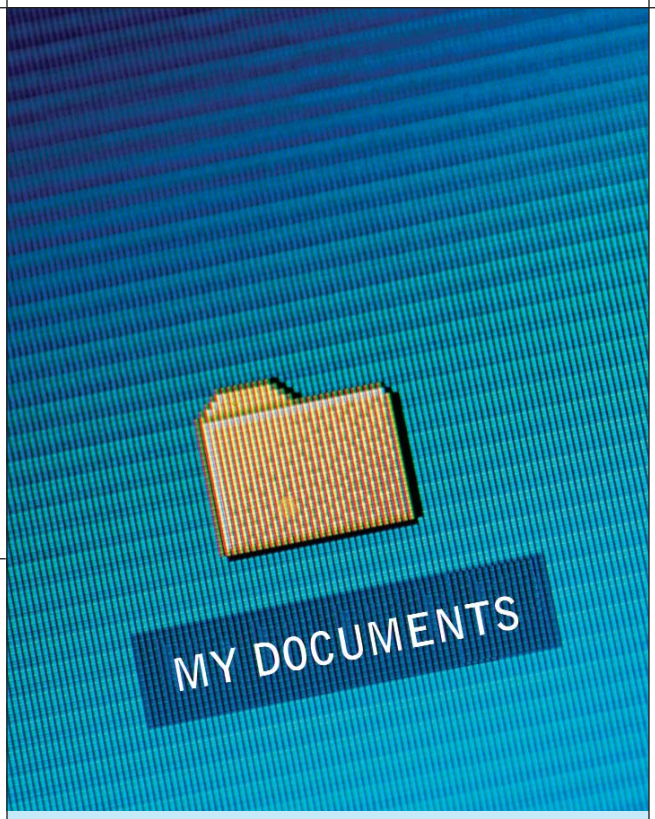
There is no one leading a business today who has not heard about a laptop with sensitive data being lost or stolen and thought to themselves "What would that mean to my business if that happened to one of my employees?" The negative press and loss of customer confidence that can result from this kind of incident can devastate a company.

A scenario such as this is one of the many risks involved with the ever-widening nature of today's distributed business computing environments. However, many businesses today must rely on highly distributed computing to effectively serve their customers and to grow. Remote sales and service personnel, multiple sites across the country or the globe, offshore resources, temporary project-based contractors—all are critical components of today's successful business enterprises.

In addition to the data security concerns, when examining their PC infrastructure businesses must also address the cost of managing this environment. Placing full-functioning desktop or laptop PC's in the hands of every end-user is a costly endeavor and often provides a level of power and flexibility beyond that which is needed for the job. Besides the initial acquisition and licensing costs, the ongoing support required for the full-functioning PC (such as deployment, image creation management, hardware break-fix and Moves/Adds/Changes (MAC)) results in the total cost of ownership for this segment of the computing environment occupying a disproportionate amount of the overall IT budget. Case in point: Forrester Research recently found that PCs covet a full 25% of the average 2007 IT hardware budget.



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Security and manageability are the two key business drivers in the evolution of client computing to the Blade PC. What exactly is a "Blade PC?" Take the popular features of the Blade server (space-saving, rack-mountable, plug 'n play components, redundant power) and apply them to the PC. Add to this rack-mounted PC additional features and capabilities heretofore foreign to the PC world (centralized management, centralized data storage, instantaneous failover, application control) and you have the Blade PC. In a sentence, Blade PCs offer the same level of end-user experience as the traditional PC platform, with the level of security, management and control that can only be found in the datacenter.

One of the leading Blade PC platforms in the industry is HP's Client Computing Infrastructure, or CCI. How does HP CCI work? The end-user connects to the CCI Blade PC, residing in a rack in the datacenter, through a thin client device on his

or her desktop. The thin client device supports a monitor, keyboard and mouse. It may or may not have additional USB ports to allow for synching handheld devices or connecting flash drives or other devices. The USB ports are completely programmable: they may be configured to only allow certain devices to connect, or they may be completely disabled. The thin client device connects to the Blade PC via standard Ethernet. When the end-user logs on to the network, his or her individual profile is pulled from the SAN or NAS and presented on the screen. The end-user's experience is nearly identical to that of the traditional Windows-based PC. When the end-user saves data, for instance to "My Documents," the data is actually being saved to the network data store. If the Blade PC should ever fail, the end-user does not have to call the help desk and wait for a technician to arrive to fix or replace the PC. Rather, the PC session fails over automatically to another Blade PC and the end-user is presented with a network logon screen. Upon logon, his or her personal desktop reappears, with all data secure and in place, and work continues. Total downtime is a few minutes instead of several hours.

Let's do a quick compare and contrast of the basic PC support functions as they apply to the Blade versus traditional PC:

Function	Traditional PC	Blade PC
Hardware Failure	End-user places call to the Help Desk and loses productivity while waiting for technician to arrive to perform break-fix duties. A potential loss of data exists if the failure involves the PC hard drive. If a new PC must be deployed, additional time and lost productivity occurs due to data migration and deskside configuration that must be performed.	End-user is logged off of the failed Blade PC and automatically failed over to a different available Blade PC. The end-user is presented with a new logon screen. The end-user logs onto network and resumes work in minutes, without loss of data or need for data migration or custom configuration. IT datacenter resources "rip and replace" failed blade on normal maintenance schedule.
PC Image	End-user may install rogue and/or unlicensed applications. Image lockdown on individual PCs may be hard to manage and too inflexible. End-user experience is dissatisfactory.	Image is managed and controlled at the datacenter level by IT datacenter resources.
End-user Move	Technician is dispatched to end-user s desk. PC and peripherals is disconnected, loaded on cart (or boxed for shipment) and delivered to new location. Technician receives PC and peripherals, connects up equipment, boots and tests PC for connectivity and functionality. During entire Move process, end-user is unable to work.	On end-user's desk is a thin client, monitor and mouse, similar or identical to that on his or her former desk. End-user logs on to network and resumes work. The "Move" becomes only the movement of the end-user; the need for moving the end-user's PC equipment is eliminated.
Data Backup	A number of files, some containing business critical or sensitive data, reside on local PC with the risk of loss or theft. Local PC files backed up on inconsistent or incomplete basis, if backed up at all. Data may be irrecoverable if lost and days or weeks of downtime may result if lost data has to be recreated. Customer confidence may be damaged if data loss becomes known.	IT controls backup through standard datacenter policies, resources and methodologies. Data security and regulatory compliance is ensured.

Thus, too many businesses and in many client computing scenarios, a Blade PC solution such as CCI can make a significant positive impact in terms of security and cost containment. Let's review some of the scenarios discussed at the outset of this article:

- For the remote sales and service personnel, the risk of data loss due to hardware failure or theft are virtually eliminated. These resources log onto Blade PCs via a VPN connection and data is maintained in the datacenter, not on the local device. An additional capability that extends the value and applicability of the CCI solution is that standard laptops can be configured to be thin clients when connected to the corporate network. This allows for the flexibility of a full-functioning device for non-business use, with the security and manageability of a thin client when utilized for business purposes.
- End-users across multiple company sites, such as manufacturing and distribution facilities, enjoy a satisfactory PC experience with centralized data storage and management. And for hostile environments, such as warehouses, manufacturing facilities, construction sites and other non-climate controlled areas, thin client devices are completely solid state, dramatically reducing the number of hardware break-fix events.
- Offshore resources connect to your network via low-cost thin client devices. Data remains on-shore, in your datacenter. The high turnover often seen in offshore labor pools is not as costly due to the simple and secure provisioning of the thin clients and Blade PCs.
- Contracted project resources who require short-term access to sensitive data and may need mobility to perform the work, yet leave the organization when the project is completed, now have access to business data on demand, but the data does not leave your facility each time the contractor carries the company-issued laptop out the door. Locked-down images and USB ports, controlled and managed by the IT staff in the datacenter, ensures data is not transferred to non-controlled devices. When the project is completed, your data does not walk out the door with the contractor.
- Fully-functioning, traditional PCs may be provisioned to the power users who need them. But for the large pool of data entry operators, accounting clerks or call center analysts who do not require PC power and functionality, Blade PCs offer a secure and highly available client PC environment that provides a personalized end-user experience with maximum productivity.

To ensure success and sustain growth, in increasing numbers enterprise organizations are utilizing tools and technology to minimize the risks and the support costs inherent in the distributed computing environment. Blade PC technology, as the industry-leading HP CCI solution demonstrates, is one strategy that leading companies are adopting to meet the secure computing demands for business today and for the future.

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