

Workspace Virtualization vs. VDI

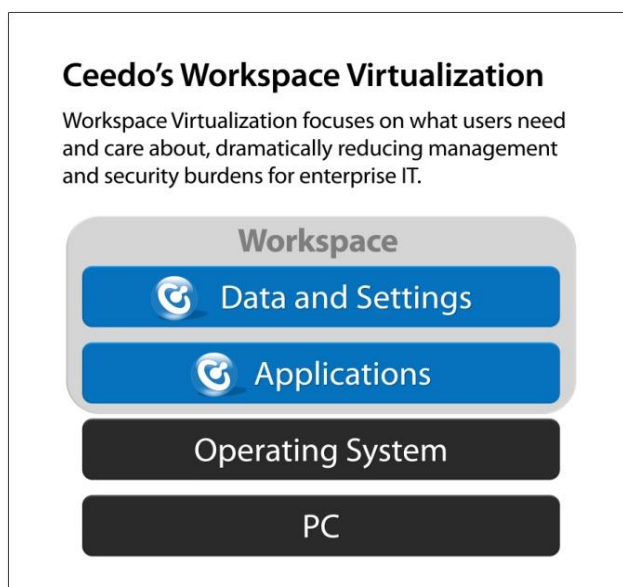
Optimizing Speed, Simplicity and Cost

When faced with the prospect of complex and costly VDI implementations, Ceedo's workspace virtualization allows enterprises to more quickly, easily and affordably provision their users for anytime, anywhere productivity.

Ceedo's Workspace Virtualization Explained

Workspace virtualization technology can encapsulate standard Windows applications – along with any personal settings and data – within a lightweight virtual workspace that is carried on encrypted USB storage. When this storage device is plugged into any PC, it runs on top of the host machine's existing operating system, allowing users to start working immediately – with instant access to essential business applications such as office, CRM or PLM – all running from the device itself. When the user unplugs their device, no trace is left behind on the host machine.

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Unlike desktop virtualization solutions, workspace virtualization does not require customers to own or manage an operating system for each user – while still providing users with everything they need to do their work. The virtual workspace serves as a fully functional alternative to both traditional PCs (or laptops) and to VDI, reducing most of the costs associated with OS management and removing the complexities involved in maintaining and operating expensive datacenters.

Using this technology, IT administrators can quickly and easily set up, update and tear down complete application environments for users that need to work outside the traditional domain of corporate IT, such as

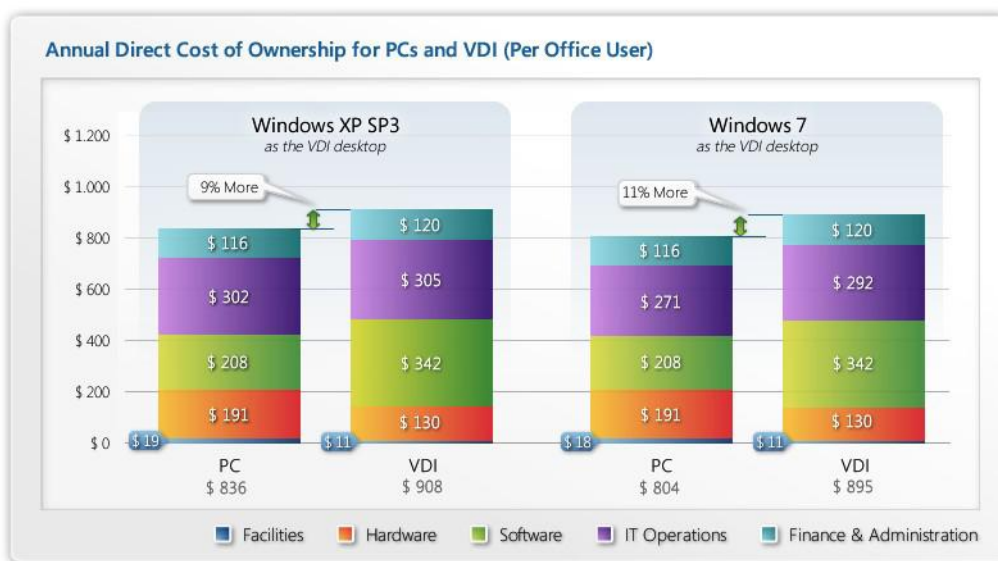
teleworkers, subcontractors or partners. A pre-configured Ceedo workspace can be deployed to users on secure USB storage within minutes and managed remotely throughout its lifecycle.

Acknowledging the True Costs of VDI

Server-based desktop virtualization solutions (VDI) are increasingly emerging as a tool for IT centralization and consolidation, allowing enterprises to deploy user desktops directly from the datacenter instead of managing them on physical PCs spread across the organization.

However, it is also becoming widely acknowledged that VDI does not provide significant cost savings compared with traditional PC management. In fact, the complexities of migrating desktops and managing them in the datacenter merely transfer some costs from the client to the server, and often end up actually increasing the total cost of allowing users to work.

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Source: VDI TCO Analysis for Office Worker Environments, Microsoft Whitepaper

Indeed, while there may certainly be some benefits to the fact that desktops are centrally located and managed, IT organizations have often found VDI deployment to be a daunting task. With any desktop virtualization solution, enterprises still need to own, provision and manage an OS for each user, just like they would on a normal PC. With VDI, however, these challenges are compounded by, among other things, the need to plan, set up and maintain special server hardware/software, manage bandwidth and storage capacities and re-train users to access virtual instead of physical desktops.

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On top of costly and complex management and upfront costs, VDI's promise of computing on any device, from any location, is based upon users' ability to access their desktops remotely over the network. However, especially when there is a need to accommodate flexible and ad-hoc scenarios that extend well beyond the domain of corporate IT – such as teleworking, business continuity (disaster recovery) or effective provisioning of contractors, partners and points of sale – such uninterrupted connectivity is never guaranteed.

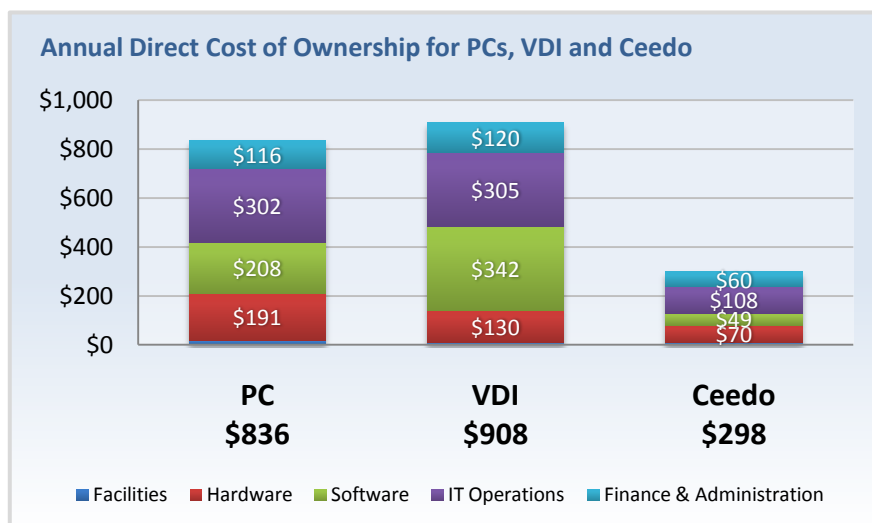
And though locally-executed implementations of desktop virtualization are available, they can present even greater cost disadvantages over traditional PC management, by negating many more of the supposed benefits of VDI.

Optimizing Costs vs. Benefits in Anytime, Anywhere Computing

Combining powerful centralized management with lightweight local execution, workspace virtualization can equally be used for deploying complex and dynamic software environments – such as those required by the insurance and financial markets – or for rolling out a fast Office-on-a-stick or secure remote access solution. By focusing on what users need to do their work, i.e. the applications, rather than the operating system or back-end infrastructure, workspace virtualization makes it faster and easier for enterprises to provision users for anytime, anywhere productivity.

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Because they do not have to deploy a full operating system that is more complex – and more sensitive – to a larger variety of potential breakdowns, IT organizations that utilize workspace virtualization can concentrate on providing timely, mission-critical computing resources to their end users without having to compromise on security, flexibility or functionality or make sizable investments in centralized computing resources.



In the field, the virtual workspace allows users to work either offline or online, and still be up to date with their applications and data wherever they are. It runs on top of – and leverages – the existing Windows OS on the host PC. It works fully in user mode, enabling operation on locked-down PCs. Within minutes, users can access all the applications they need and are used to working with, all launched from a handy toolbar or fully integrated into the user’s Windows UI, as if they were actually installed on the PC.

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Simplifying Management to Reduce IT Friction

Ceedo’s lightweight approach to management allows the virtual workspace to be pre-configured, deployed and then managed remotely for the duration of the solution’s lifecycle.

Using Ceedo’s provisioning tools, IT can easily build a Ceedo application workspace with the desired applications and then wrap it into a single package for distribution to end users, with all the applications ready to launch from any removable storage device, on any Windows PC. Since there is no OS to install or configure – this process is simple and very fast.

Ceedo's cloud-based management system, CCMS, enables the workspace clients to be remotely managed by the enterprise wherever they are, making it possible to change policies, update, remove or install new software applications, apply patches or perform other operations. These client updates are automatically and securely delivered to the Ceedo clients over the cloud. The web-based console allows administrators to generate reports about workspace usage, including startup and shutdown times and application process activity, and to fully enforce usage policies, including authorizing and de-authorizing access for specific users or groups.

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Security is Key

When the challenges of IT provisioning and information security run far beyond the corporate domain, it becomes difficult to avoid risking data leakage through theft or negligence while still allowing users to do their work. Working with some of the world's leading security vendors, Ceedo has integrated advanced features into its products that help prevent data leakage and ensure compliance even when users work across multiple host computers.



In many cases, the advanced authentication features provided by encrypted USB devices can make all the difference when considering how to enable employees to work offshore, as they travel internationally and place themselves at increased risk of data and access credentials falling into the wrong hands.

With Ceedo's hardware partners, multiple authentication factors are available either individually or combined, including strong password, biometric fingerprint scan, or a CAC/PIV card, all validated in the device hardware itself. Once the user is safely authenticated the applications and all user data – hardware-encrypted via AES-256 – are unlocked and ready for use.

Ceedo's virtual workspace can even be carried on multifactor authentication tokens, complete with the token middleware, to provide secure, plug-and-play remote access to server-based applications and data – with zero installation or configuration required by the user.



To **download a trial version** of the Ceedo Enterprise client and set up your own workspace to try out for 30 days, please visit:

<http://www.ceedo.com/products/ceedo-enterprise.html>



To find out more about how Ceedo can help you design, set up, and provision a flexible virtual workspace solution in less than 30 days, **contact us at:**

<http://www.ceedo.com/company/general-sales-inquiries.html>