Cost Savings through Desktop Virtualization

Published April 18, 2007
Parallels, Inc.
Second Revision - 2007
Introduction

For employees to perform at their best, they require the right software, applications and resources. To address this need, companies have traditionally invested in excess hardware, often providing individual users with multiple computers to access the programs required for their daily tasks.

In the past decade, there have been a number of advancements in PC-based systems. Virtual machine technology now enables desktop PCs to run almost any operating system. By partnering closely with Intel and AMD, Parallels delivers industry-leading desktop virtualization solutions that seamlessly run multiple operating systems at the same time while maintaining high levels of performance and security.

Many companies already strive to reduce costs by standardizing on a smaller set of desktop platforms. However, thanks to recent advances in desktop virtualization, there is now another way. Parallels software helps companies reduce the cost of supporting and maintaining employee personal computers and workstations. By utilizing Parallels desktop virtualization solutions, companies can realize significant savings, including:

- Direct Hardware Savings
- Reduced Support Costs
- Training & Skills

Direct Hardware Savings

Desktop virtualization enables users to consolidate multiple computers that each runs a single operating system to a single computer that runs multiple operating systems. By consolidating onto a smaller number of physical machines, companies save the cost of additional hardware and their associated devices and peripherals. Businesses in nearly any industry can consolidate workstations for a variety of workers, including:

- Creative professionals using Macs and Microsoft Windows development tools
- Contract workers who use both their own machine and a client machine
- Unix users running Windows
- Production Design professionals running Linux and Windows

Support Costs

By leveraging virtualization technology, companies reduce support costs through lower expenses on spare parts, more informed support staff and the reduced number of platforms required for corporate applications.

Each desktop system requires not only the hardware to support end users, but also spare hardware to repair faulty systems. Consolidating on a smaller set of hardware enables businesses to reduce costs for spare parts and achieve higher efficiency from those parts that they do purchase.

While administrators must still learn each supported operating system, they are required to learn a smaller set of hardware systems, thereby improving their efficiency. They can still support the company’s desktop infrastructure without having to know the in-and-outs of as many machines.

Companies can put more effort into developing and testing their applications for a single platform and then deploying those applications to any computer by running Parallels, resulting in higher quality applications and overall companywide efficiency.

Training & Skills

Invariably end users will spend more time using one operating system versus another. This increases the support costs for the non-preferred operating system as users will not be as familiar with its user interfaces and tools. Parallels Coherence enables the end-user or administrator to customize a single user experience and simultaneously run applications from both OSes within that environment.
Desktop Consolidation

It’s almost impossible for Mac users to avoid Windows applications, because critical applications are very often available only on Windows. In such cases, some businesses might be tempted to purchase separate Windows PCs dedicated specifically to running Windows-only applications. Additionally, keeping Windows and Mac environments separate might appear to foster a more stable desktop IT environment by reducing complexity on individual machines.

However, there is a significant downside to investing in dedicated Windows PCs. Although the low cost of PC hardware might seem attractive, users still need to purchase not only the box itself, but a monitor, keyboard, mouse and surge protector or uninterruptible power supply. What’s more, additional PCs consume precious real estate, increase energy consumption and require additional maintenance resources. Utilizing virtual machines to run multiple operating systems on a host platform instead of dedicating separate physical computers to run separate operating systems allows companies to save space, energy and overall IT costs. To further cost savings and efficiency, Parallels partners closely with chipmakers to reduce energy consumption while maintaining virtual machine stability and performance.

Many mobile Mac users who require Windows applications do not want to purchase a portable Windows machine. Few find it acceptable to carry both a Windows and a Mac laptop in addition to their associated cords and devices.

The Parallels Solution

Parallels, Inc. offers a software product for Mac users that can eliminate the need to purchase a separate Windows PC. Parallels Desktop for Mac enables users to run Windows and any of several flavors of Linux side-by-side with Mac OS X on any Intel-powered Mac without rebooting. Parallels Workstation enables a Windows or Linux PC to run Windows and Linux guests.

Corporate Virtual Machines for Contractors

Contracting workers has become increasingly popular, and most companies use consultants or contractors in some capacity as part of their basic business infrastructure. Traditionally, companies either provided these workers a company computer or spent valuable resources configuring contract workers’ computers to work on the company network, both options being highly costly and time consuming.

Quite often, companies hire contractors on an as-needed basis and need the contractors to be up and running quickly if not immediately. To solve this problem, many companies maintain spare hardware available especially for contract use, resulting in excess PCs that sit idle and take up valuable storage space when not in use.

Alternatively, many companies allow contractors to use their own equipment; however, contract workers often need secure access to corporate network resources and applications. In such cases, IT staff must customize the contract workers’ equipment, which also wastes valuable time and IT resources.

The Parallels Solution

Companies can create and configure a standard Parallels virtual machine to deploy to contractors’ workstations, almost regardless of the contractors’ hardware platforms and operating systems. Using Parallels to run the company’s pre-developed virtual machine, a contractor can be up and running in minutes with access to all of the required networks, applications and tools, which saves the company the cost of additional hardware, time and other valuable resources.

Parallels also offers a management solution in conjunction with partners that provides security and control of virtual machines, enabling administrators to revoke and expire virtual machines that have been distributed to contractor employees. To find out more, contact sales@parallels.com.

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Real World Examples

nVidia Corp.

nVidia Corp. makes graphics cards for both Mac and Windows desktop systems. EFI (Extensible Firmware Interface), a low-level software introduced by Intel to replace BIOS, is required to enable nVidia’s cards to work on both Macs and Itanium PCs. However, the EFI byte code compiler is available only for Windows.

To be intimately aware of the systems for which they are designing products, nVidia developers needed access to both Mac and Windows systems. Faced with the need to run the EFI compiler, nVidia could have either purchased a separate Windows PC for each developer or sought a virtualization solution for the Mac. Using Apple’s Boot Camp on the Mac was not acceptable because doing so would require developers to shut down the Mac OS before bringing up Windows and another shut-down-start-up cycle to switch back to the Mac OS. To use both the Windows and the Mac operating systems would require constant rebooting back-and-forth. “If you do that very much, it gets to be a tremendous waste of time,” says John Mitchell of nVidia.

According to Mitchell, Parallels Desktop for Mac was the only solution that answered nVidia’s need. nVidia now runs Parallels Desktop for Mac on more than 20 Macs and is saving the cost of buying and maintaining that many PCs.

DCS Communication

DCS Communications runs remote television broadcast operations for networks. Jess Heimlich of DCS Communications uses Mac systems to control the intercoms used to communicate between production staff and on-air talent for live broadcast events. Macs are the machines of choice because he trusts their stability more than that of PCs.

“Windows machines were prone to crashing, but in a real-time situation, that’s not acceptable,” says Heimlich. Even so, Heimlich needed to run a Windows application and to do so, he had been using Virtual PC for some time. “It ran as an [Intel] 286 [-based machine] under emulation mode, but it was just as buggy as Windows itself,” says Heimlich.

Heimlich says that running Windows XP via Parallels Desktop for Mac is more stable than on a PC. Because downtime is completely unacceptable, he often runs two to three machines at a time, each backing up the other. “The Parallels interface to the Mac hardware seems to be superior to anything in the past,” says Heimlich.

In the past, Macs were significantly more expensive than PCs, Heimlich notes. However, since Apple switched from PowerPC to Intel microprocessors, the cost of Macs has come down. He reports that approximately 50 of his colleagues in the television industry have converted to Macs running Parallels. “Every one of them finds it to be more reliable, faster and more durable than their previous experience. When you add the cost of the Mac and the Parallels software and compare that to the cost of adding a Windows machine, it’s not even competition any more. You’re getting two computers for the price of one. You can’t afford not to buy it at the price they sell it.”
More About Parallels

Parallels uses hypervisor technology, which is a thin layer of software that sits between a machine’s hardware and its primary operating system. This hypervisor allows the Parallels virtual machine direct access to the machine’s hardware resources and dramatically improves virtual machine stability, security and performance. Additionally, Parallels Desktop for Mac includes several user-friendly features designed specifically to make the end-user experience seamless and flexible, including:

- Run Windows applications natively alongside Mac programs on the Mac desktop with Coherence.
- Open Windows files with Mac apps and Mac files with Windows apps using SmartSelect.
- Access Windows files and folders from the Mac desktop without launching Windows using Parallels Explorer.
- Run select Windows-only 3D games and applications in a Parallels VM with support for 3D graphics.
- Create and configure Shared Folders ‘on the fly’.
- Drag-and-drop and copy-and-paste between OSes.
- Map Mac folders to Windows drive letters for instant access to key folders, regardless of their OS.

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