Parallels Desktop® for Mac

Enterprise Edition

White Paper

A Framework for Adopting Macs into the Windows Centric Business

|| Parallels®

Parallels Desktop for Mac Enterprise Edition

Enabling IT teams to successfully adopt Macs throughout the business by providing application compatibility and the best in class user experience while leveraging existing infrastructure and investments.

The MacBook Air is one of the hottest selling notebook computers and is landing in the hands of corporate executives and travel prone users at an amazing pace. Add to that the latest MacBooks, iMacs and Mac Pros and you get unprecedented growth of Mac computers in what was once the Windows dominated enterprise. Analyst Charlie Wolf of Needham & Co. informed investors in November that Mac shipment growth in the third quarter of calendar 2011 outpaced the PC market for the 22nd straight quarter. Wolf also reported Also reporting that Apple's 24.6 percent growth dwarfed the 5.3 percent growth in total PC shipments. Whether it is the sleek design, the easy to use interface or the integration with iPads and iPhones, Macs are making their way into the enterprise at a relentless pace that appears unstoppable.

IT teams must quickly adapt to this new reality of rapid, unplanned adoption of a completely new platform while maintaining compliance to security policies, enabling business application compatibility and supporting the mobile workforce. Compounding the challenge for IT, all of this comes at a time when budgets are limited and support staff has been minimized.

Adopting Macs in the Enterprise

For IT to adopt the Mac platform as a viable alternative to the PC/Microsoft mainstay, there are several challenges to overcome. First and foremost, regardless of the hardware the IT department is responsible for maintaining the safety and security of the corporate network, applications and data. Enterprise IT must govern their domain by balancing support for both internal requirements and external regulations. Depending on risk management policies, each Enterprise will have to determine the best-fit solution for their particular business. Some IT teams may choose to own the hardware and fully manage the Mac environment while others may choose to allow users to bring their own computers to work and steer clear of managing the Apple Mac hardware and Mac OS X operating system. In both cases the IT team will require a solution to provide compatibility for those Windows-only applications needed to run the business.

Eight out of ten organizations surveyed said they are "more likely to allow more users to deploy Macintoshes as their enterprise desktops" in 2010-2011up from 68 percent in the 2009 survey.[1]

FULLY MANAGED MAC COMPUTERS

The obvious solution to most companies is to fully manage the Mac client. This approach requires the IT department to standardize the environment ("the stack"), implement additional security protections and continuously validate settings, deploy updates and manage configurations to ensure continuous compliance with corporate security policy. This may double the administration efforts needed to build and maintain corporate images for end user computing.

The fully managed Mac strategy also requires IT to add systems management tools that can support the new OS environment. IT teams should look to their client management system vendors for Mac specific extensions or seek out a new tool set to address this problem. This may include Symantec's Altiris Client Management Suite, LANDesk or Microsoft System Center add-ons. There are also Mac-centric solutions such as Apple Remote Desktop and the JAMF Casper Suite that provide similar if not better systems management capabilities focused on Apple products. As a benefit, the fully managed Mac reduces the risk of supporting the new platform and ensures that the IT department maintains compliance with corporate policies.

BRING YOUR OWN DEVICE (BYOD)

The other predominant option in today's environment is the bring your computer to work model. In this scenario the hardware and its host operating system are the property and responsibility of the user, not the IT department. This makes more and more sense as applications and services move to the cloud, but there is still a great deal of risk involved for the company since un-managed computers should never be allowed to attach themselves directly to a corporate network, nor should company sensitive data find its way onto the local hard drive without proper safeguards.

In both of these scenarios, a solution is needed to continue to protect corporate assets, maintain compliance with company policies and provide compatibility for Windows applications on the Mac.

"22 percent of enterprises see the use of employee-owned Apple Mac computers increasing significantly (within the next 12 months)."[2]

INTRODUCING THE MANAGED CORPORATE DESKTOP AS A VIRTUAL MACHINE

Independent of your client management strategy, there remains a gap between capability and requirements. Your Mac users need access to protected corporate resources as well as applications that may only run on Windows operating systems. Desktop virtualization is a technology that has been available for more than a decade and has matured from a technician's tool set to a mainstream everyday application for business users and consumers alike.

Desktop virtualization is an application that is installed on the target computer. Using a hypervisor to interact with the hardware and host operating system, the desktop virtualization software creates isolated computing environments known as virtual machines. Simply put, desktop virtualization allows a single piece of hardware to run multiple independent "desktops" at the same time. Those desktops can include the host computer desktop as well as one or more desktops based upon alternate operating systems such as Microsoft Windows or Linux.

Diving into this subject you should be aware that "Desktop virtualization" has an ambiguous meaning. In this paper when we refer to Desktop Virtualization we are referring to the ability to run a Virtual Machine directly on the target Mac computer. There is a competing technology typically referred to as Virtual Desktop Infrastructure (VDI), which are hosted desktops that may also use the term "virtual desktops". It is important to distinguish between these two technologies because the first is simply software running on the target computer while the latter is a comprehensive infrastructure requiring significant capital expenditures and datacenter investments. Additional comparison between Desktop Virtualization and VDI can be found later in this document.

In this scenario the managed corporate desktop is simply a virtual machine that can be deployed across computers regardless of the underlying hardware. This can be the same image that is used when the IT team deploys a new Windows based laptop or desktop computer helping companies to leverage the work they are already doing.

Benefits of a managed corporate desktop on Macs

Using a managed corporate desktop on the Mac computers solves several of the challenges associated with adoption in the Enterprise. Regardless of the IT strategy for managed or unmanaged Macs, compatibility and security are still the top two issues that must be addressed. A managed corporate desktop can help to solve both of these challenges.

ON THE MANAGED MAC

Although the managed Mac can be connected to the corporate network with confidence, there remains

a gap between user requirements and application compatibility. Most organizations have a series of strategic business applications that have been tested and certified for a Windows desktop client. Even if the software claims compatibility with Mac OS X, a recertification testing and verification process will need to be completed prior to official support by the company IT team. And with the backlog of IT projects already in place, the availability of applications on the Mac platform can be months to years away from approval. The number of applications within a company that may require this re-validation and testing complicates the re-certification process.

The ability to run the managed corporate desktop image directly on the Mac solves this problem from day one. There is no re-certification of applications needed and the Mac user can have full access to the same desktop they would run if the underlying hardware were a PC. With the Parallels solution the Mac user can not only run the Managed Corporate Desktop at the fastest speeds possible, but they can also integrate selected elements of that corporate desktop into their Mac experience blending the two environments into one highly productive client computing environment.

ON THE UNMANAGED MAC

The unmanaged Mac presents two distinct challenges for the IT team. The first challenge is compatibility, same as explained above. The second challenge is security and endpoint policy compliance. Simply put, an unmanaged computer should never be allowed to directly connect to a corporate network. Network administrators typically block unknown devices from attaching to the network while more sophisticated companies use Network Access Control (NAC) to ensure policy compliance of each endpoint before it can gain access to resources.

But how do you handle guests and unapproved devices? The solution lies in using different networks configurations for different purposes. Unmanaged devices and guests can be directed to a public network that isolates connectivity from corporate assets. Then the use of VPN (virtual private networking) technology can be used to allow some of those users into the private side of the network, but only if their environment is approved and meets policy. This can be accomplished with a Virtual Machine running the corporate environment. Configured properly, a secure VM running in isolation mode from the host OS can provide a safe platform for running those business applications and accessing company data. It doesn't matter if the host is managed or not, the IT team can provide application compatibility and connectivity while complying with company policies.

WHY NOT JUST WEB ENABLED APPLICATIONS?

Are web enabled applications a good alternative? Your answer to this question lies in an equation based upon time and money. Companies need compatibility now and they don't have the amount of money to spend on a quick turnaround to recertify dozens of applications. This is especially true since they typically only need to support a small percentage of their workforce. To illustrate the point, Parallels regularly collects voluntarily submitted statistics about the use of Parallels Desktop for Mac. Out of the millions of users worldwide more than 750,000 people submitted reports in the last cycle. Of these reports, more than 10,000 discreet applications were identified to be running within Parallels virtual machines. Out of those 10,000 applications, only 4 were used by more than 10% of our customers This means that more than just one or two applications would need to be web enabled to fully support Macs in the enterprise. And of course with each new application requirement the time and money equation multiples.

Introducing Parallels Desktop for Mac Enterprise Edition

Since 2006, Parallels desktop virtualization solutions have been at the forefront of providing cross platform compatibility on the Mac. Over the past few years Parallels Desktop for Mac has been distancing itself from the competition by focusing on ease of use, performance and integration between the different desktops running on one computer.

From the perspective of an end user, Parallels Desktop for Mac enables Windows-only business applications to run side by side with Mac OS X applications. Running the Windows-only application is as simple as clicking on an icon on the Dock. Using Parallels Coherence mode, the Windows-only application is blended into the look and feel of the Mac desktop and the user experience is streamlined. Parallels Desktop provides the compatibility required to meet the needs of the Mac user in the enterprise simply by deploying the corporate managed desktop as a VM.

Technically, Parallels Desktop is what is referred to as a Type 2 hypervisor. This means that Parallels Desktop installs as an application on top of the Mac OS X operating system on each computer. Once installed, Parallels Desktop can create and run new computer environments that are able to run side by side with each other. Those computer environments are referred to as Virtual Machines. In essence each virtual machine is a stand-alone computer with its own operating system, applications, network settings, hardware settings, etc. You can even think of a VM as a computer running within a computer.

TWO EDITIONS TO CHOOSE FROM FOR YOUR BUSINESS

Two editions of Parallels Desktop for Mac that are available include a retail edition as well as an Enterprise Edition. Both offerings utilize the same code base and binaries while the business models as well as several feature differences distinguish the two editions.

The retail version is sold and distributed as a perpetual license purchase while the Enterprise Edition is offered as an annual subscription inclusive of updates, upgrades and support as well as Enterprise Edition specific features and add-ons as well as priority access to business class support for IT teams. The retail version is available as an electronic download from Parallels.com online store as well as a wide variety of VARS and Resellers.

The Enterprise Edition is available through Parallels direct sales team as well as a select group of partners. The Enterprise Edition is priced on a per seat basis with an annual subscription rate. One, two and three-year terms as well as volume discounts and enterprise-wide license agreements are available for this edition. The enterprise subscription includes:

• Term based software license for Parallels Desktop for Mac Enterprise Edition
• Business class support with priority access
• Software updates & upgrades during the term

The technical differences between the editions are revealed with the enterprise license key as well as the Parallels support authorizations that are completed at the time of purchase. With Parallels Desktop for Mac Enterprise Edition companies get the same award winning technology with the addition of new capabilities to simplify mass deployments and support endpoint software compliance policies.

MASS DEPLOYMENTS

Deploying applications to client computers is a well-known task for the enterprise IT team. The process starts by packaging the application together with a standardized set of configurations. When the package is ready, it is then distributed to each endpoint using a software distribution tool. Once delivered, the package is opened, installed and configurations are carried out. Lights out deployment and configuration is a necessity of today's highly productive IT team. The Enterprise Edition supports this process and includes access to the Parallels provided Ppackage Template application. This template tool helps the IT administrator to build an OS X-style deployment package for Parallels Desktop including the deployment and configuration of the initial Virtual Machines (aka corporate desktop image as discussed above). The template tool can be found here:
http://download.parallels.com/desktop/tools/pd-autodeploy.zip

To support the lights out deployment and configuration, Parallels Desktop for Mac Enterprise Edition starts with a unified license key. This means that the system administrators are not burdened by managing and deploying individual keys across each endpoint.

The Parallels unified key authorizes a specific number of subscriptions for a defined time period. That single key can be used for deployments across the company and includes not only the enterprise features and, starting with Parallels Desktop 7 for Mac, also includes all of the language packs in a single build, streamlining global deployment. A unified license key also helps to reduce the burden of license tracking and license compliance saving both time and money during IT audits.

The Enterprise Edition supports a silent activation process that is different from the retail version. In the Enterprise Edition the software does not require a user to complete a registration form or physically activate the software as found in the retail version. This enables the IT team to install, configure and activate the software without any interaction on the client computer. By using lights out deployment the end user may not even know how a Windows-only application appeared as an icon on their desktop. Yet they will be thrilled that it is there.

Parallels provides a Mass Deployment Guide that outlines best practices for deploying across a large client computer base using Apple Remote Desktop. This deployment guide explains the process to package and configure Parallels Desktop as well as instructions and guidance on how to pre-configure virtual machines. The deployment guide is downloadable from the Parallels website and is found in the technical documentation section for Parallels Desktop for Mac.
http://download.parallels.com/desktop/v7/docs/en/Parallels_Desktop_Mass_Deployment.pdf

Supporting endpoint & change management compliance

Endpoint compliance policies vary from business to business. The Enterprise Edition includes additional configuration capabilities and eliminates direct communication between Parallels and the business users. It also includes additional configuration parameters to help IT manage the Parallels Desktop software update process and direct support requests to in-house resources.

In the Enterprise Edition, within the Parallels Desktop user interface there are multiple changes that align with business use and help to support company policies. In-product notifications (IPNs) that are used in the retail version to alert customers to important information including updates and upgrade availability are no longer displayed. This enables the IT team to determine which Parallels updates to apply and whey they should be applied.

In conjunction with the removal of IPNs, administrators can configure Parallels product updates to only come from a company-controlled service. The administrator can create a local update server and maintain control over change management for the endpoint. Configuring clients to only receive Parallels product updates from the local update server enables testing and validation to occur before deploying to users. Information on how to create a local update server is found in the Parallels Desktop 7 Mass Deployment Guide located on the Parallels website
http://download.parallels.com/desktop/v7/docs/en/Parallels_Desktop_Mass_Deployment.pdf

The Enterprise Edition also eliminates links to third party software trial downloads and provides the ability to configure the "request support" menu action. In the retail version, the request help function will open a browser and take the user to the Parallels.com support site. In Enterprise installations companies typically prefer their users to contact their own help desk or review their own internal FAQs and self-support mechanisms. The Enterprise Edition allows the configuration of the request support menu item to include a customized text message or open a URL pointing to the company help desk website. Information on how to configure these settings can be found in the Parallels Desktop 7 Mass Deployment Guide
http://download.parallels.com/desktop/v7/docs/en/Parallels_Desktop_Mass_Deployment.pdf

LEVERAGING EXISTING INFRASTRUCTURE TO MANAGE THE WINDOWS BASED CORPORATE DESKTOP

Once Parallels Desktop for Mac is installed on the endpoint and the Windows based corporate desktop image is installed and running as a virtual machine, it's business as usual for your Windows systems administrators. The corporate desktop running within the VM appears as just another node on the network to the client management systems. This enables the IT team to fully manage the corporate desktop VM in the same way with the same tools and same skill sets as they manage their Windows notebook and desktop computers.

---

iPads, iPhones and iPod touch users benefit from Parallels Mobile

By using Parallels Desktop for Mac your end users have the ability to access their Mac computers and the applications from an iPad or iPhone. The Parallels Mobile application found on the AppStore enables users to improve their mobility and directly interact with both OS X and the applications running within Virtual Machines. Designers can show their latest work running on their MacPro in a conference room while executives can easily move between meetings without having to carry around their notebook computers.

Considering Virtual Desktop Infrastructure (VDI) as an alternative?

You may be considering VDI as an alternative to providing Windows based application access to your Mac users. Parallels as a company is no stranger to VDI where the "corporate managed desktop" is hosted in a data center and delivered over the wire to a client device. As a matter of fact Parallels has one of the best technologies available for hosting those desktops in the datacenter (Parallels Virtuozzo) and supports clients around the world that provide desktops as a cloud service.

In Parallels' experience, VDI can be used extremely effectively within several well-defined and distinctive business cases including call centers, kiosks and single purpose application environments. These solutions have proven that they can be distributed via the network with great success. Yet, therein lies the main problem with using VDI to support Mac users in the enterprise. The Mac population in your business is more than likely heavily skewed towards mobile platforms like the MacBook and MacBook Air. These users require the freedom to move from location to location or to travel while remaining productive. Since VDI is a hosted service requiring high-speed connectivity back to your datacenter or hosting location, once the Mac user leaves your business network their ability to connect will define their level of productivity. No network connection or a slow network connection means no productivity.

VDI – THE I STANDS FOR INFRASTRUCTURE

When considering a VDI solution, you are considering additional infrastructure augmenting what you already have in place. Instead of taking advantage of the processor, memory and disk space on the client computer you must re-allocate those resources on servers in the data center. Therefore, each VDI project is a major capital expenditure for hardware, software and even data center space and capabilities that will take years to show a healthy return on investment. The VDI vendors want you to spend money to add more servers to your data center. Add more network storage devices. Add more network capacity. This entire new infrastructure helps the vendors increase their revenues while quickly depleting your available budget for new projects that bring competitive advantages to your business.

More information, software trials and next steps

Parallels Desktop for Mac Enterprise Edition is an excellent choice for supporting Mac computers in your Windows centric business. With Enterprise Edition you can provide the application compatibility needed by your end users with an award winning, best in class solution. Take a look at this MacTech review comparing Parallels Desktop to a competitor:
http://www.mactech.com/articles/mactech/Vol.25/25.04/VMBenchmarks/index.html

You can download the latest version of the Parallels Desktop for Mac software from **http://www.parallels.com/download/desktop/** and obtain a retail trial key online.

For more information or to request a trial of Parallels Desktop Enterprise Edition, please complete the form on the Parallels website located at **http://www.parallels.com/products/desktop/enterprise/**

ABOUT PARALLELS

Parallels is a worldwide leader in virtualization and automation software that optimizes computing for consumers, businesses, and service providers across all major hardware, operating system, and virtualization platforms. Founded in 1999, Parallels is a fast-growing company with more than 800 employees in North America, Europe, and Asia.

ENDNOTES

[1] "2010 Apple Consumer and Enterprise Survey," web-based survey of 600 network administrators and other IT executives conducted from April through June, 2010, by Information Technology Intelligence Consulting and Sunbelt Software. **http://itic-corp.com/blog/2010/07/iticsunbelt-survey-shows-apple-users-extremely-satisfied-with-performance-reliability-and-ease-of-use/**

[2] Forrester Forrsights Hardware Survey, Forrester's Forrsights for Business Technology, September 2011. Used with permission.

Contac Us

Parallels, Inc.
500 SW 39th St. Suite 200
Renton, WA 98057
+1 425 282 6448
www.parallels.com