

Modernizing and Extending Your Virtual Desktop and Application Management Platform

WHITE PAPER

As virtualization increasingly takes hold throughout the enterprise, organizations are looking for ways to extend the capabilities of their existing virtual desktop and application frameworks with new features and a digital workspace strategy.

The face of client desktops and applications is increasingly virtual. Adoption of hypervisor-based solutions has spread aggressively beyond the technology's initial foundation in servers and storage to apps and desktops. The reasons why this latest wave of virtualization adoption is happening are numerous and widely accepted, including cost efficiency, easier management, faster deployment, better scalability and widespread use of automation.

In addition, business stakeholders are becoming both more knowledgeable and more demanding when it comes to their client computing options and their applications, meaning there's more pressure on enterprise IT decision-makers and their teams to develop wide-ranging, long-term strategies built around the concepts

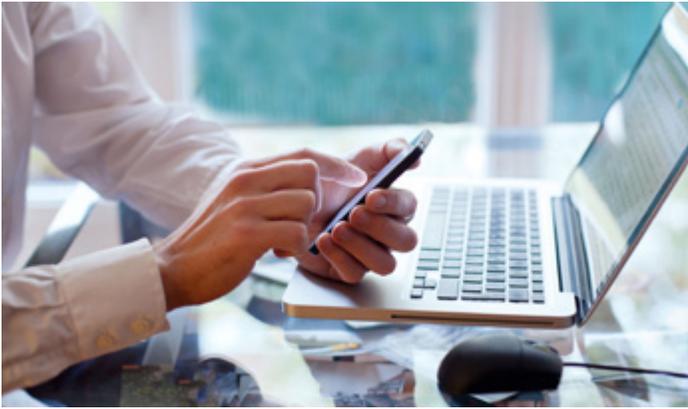
of flexibility, agility, scalability, security and cost efficiency. Now, add in the reality that enterprises are increasingly adopting hybrid IT that ideally blends a mix of development, deployment and delivery options, including on-premises and cloud-based deployment models.

This means desktop and application virtualization solutions need to be re-envisioned and re-engineered to support a wider array of devices, applications, deployment options and computing architectures. As effective as many current solutions have been in bringing the benefits of virtualization and cloud computing to enterprises and their users, it's now time to clear the decks and develop new frameworks that are more efficient, more economical and more utilitarian.

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To do so, enterprises need to build a true “digital workspace” that allows users to access Windows applications along with a host of web, software-as-a-service (SaaS) and mobile applications. In the digital workspace of today and beyond, enterprises need the ability to deliver and manage any application on any device by integrating identity, application, desktop and enterprise mobility management into a single platform.

For IT leaders, the challenge is twofold. First, it’s essential to put in place desktop and application virtualization solutions that provide enterprisewide functionality, performance, security and scalability that’s even richer than current options. And second, IT executives and their teams need to build support for, and put in place plans to execute, a long-term vision for a digital workspace that takes desktop and application virtualization to even greater heights.

Customer pain points and business implications

In this rapidly evolving application environment, enterprise users have increasingly confronted challenges associated with a heterogeneous computing environment. As a result, IT organizations and their business stakeholders have to grapple with the following pain points:

- Managing enterprise applications—the vast majority of which are Windows-based—is

time consuming, expensive and complex, and eats up staff resources. For instance, the well-known Patch Tuesday process to fix newly exposed Windows security problems is just one example of IT organizations having to devote significant time and energy to tactical requirements.

- Enterprise application portfolios are bigger, broader and more diverse. No longer are applications developed and deployed only or even primarily on premises. New options abound, such as SaaS and other application services and various flavors of cloud and hosted/colocated solutions.
- Mobility is a big factor for both applications and desktops. In fact, mobility is now a driving force for how, where and when work is done, as well as how applications are accessed.
- The very definition of desktop is more complex and nebulous. No longer limited to a stationary *desktop* or a corporate-issued notebook, intelligent clients now abound in a variety of formats, including personal devices, Internet of Things-based sensors, and smart non-computing infrastructure such as medical equipment, motor vehicles and loading docks.
- Availability demands, rigorously detailed in service-level agreements, have escalated as access to applications and data has expanded to 24/7 availability.

The business, financial and operational implications of these pain points are substantial. For instance, compliance and regulatory demands have become more precise and are always expanding, with substantial fines for noncompliance. Of course, security and information governance guidelines carry their own implications, ranging from legal exposure and threats to brand reputation to intellectual property theft, operational inefficiencies and higher costs.

At the same time, challenges with availability, application access and desktop/mobility management typically impact workplace productivity, increase costs and waste time and energy for IT staff, who spend an inordinate amount of time just “keeping the lights on.”

What to look for in desktop and application virtualization solutions

IT decision-makers have a number of options to consider when shopping for a desktop and application virtualization solution. Actually, to be more accurate, there are a number of products they might consider buying, but relatively few of them offer the full array of features, functionality and facility required to address and overcome the pain points and implications outlined above.

Instead, enterprises need to do their homework when evaluating potential desktop and application virtualization solutions and providers because the must-have checklist is precise and essential. The ideal desktop and application virtualization solution should deliver:

- **A comprehensive and integrated framework from the start, not features that have been added on.** “Bolt-on” features such as automation, a single management console and the ability to manage any and all devices aren’t nearly good enough. They must be engineered and integrated into the solution.
- **An easy pathway to your virtual infrastructure.** Few organizations want to keep adding more expensive infrastructure to their data centers, nor are they excited about taking on more IT staff to manage sprawling data centers in their headquarters and distributed data centers in far-flung locations. VMware’s software-defined data center (SDDC) is quickly becoming the new normal for enterprise computing, and your desktop and application virtualization solution must fit into that paradigm. This includes tight integration of well-established



virtualization platforms, including vSphere, NSX and vSAN.

- **Multiple deployment options.** Hybrid IT is now a fact of life for nearly all enterprises, including midsize and even small organizations that need the flexibility to mix and match on-premises and cloud-based deployment models. The best desktop and application virtualization solution will fit into both of those deployment modes.
- **Security ensured regardless of location, device or connectivity approach.** Security threat vectors are not limited to a particular type of infrastructure or application deployment model. That means desktop and application virtualization solutions must deliver to today’s hybrid IT—heterogeneous environments that mix physical, virtual and cloud applications—the same robust, scalable security defense traditionally associated with on-premises desktops and applications.
- **A platform that allows you to SaaS-ify your Windows apps alongside mobile, web and other SaaS apps.** Organizations are struggling to come up with a comprehensive strategy to enable contextual access to all corporate resources. Many organizations have siloed solutions to manage identity, mobile and Windows-based assets. The ideal desktop and application virtualization solution is one that integrates tightly into a single platform with an eye on supporting access to all of these components.



The benefits and advantages of VMware Horizon and Workspace ONE

VMware, long established as the leader in virtualization solutions, provides a comprehensive, enterprise-class approach to desktop and application virtualization with VMware Horizon. As an integrated platform to securely deliver access to all applications—regardless of deployment or delivery model—Horizon eases management across all classes of desktops, devices and applications.

An important benefit of Horizon is its tight integration into VMware's SDDC strategy, linked to and by VMware's other industry-leading virtualization solutions. These include vSphere, the industry's most popular virtualization hypervisor; the market-leading vSAN storage virtualization solution; and VMware NSX for network provisioning, security and micro-segmentation. As a result, integrating Horizon into the overall SDDC environment helps ease management, reduce cost and improve data center infrastructure performance and application availability.

In addition to supporting Horizon through on-premises deployment and delivery, VMware also offers Horizon Cloud with hosted infrastructure. This approach gives organizations the flexibility to expand virtual desktops, accommodate staff fluctuations or move the desktop environment

to a third party without incurring big infrastructure costs. Horizon Cloud with hosted infrastructure supports application delivery to any device at any location in a secure, easy-to-manage fashion.

The result of Horizon's advanced, integrated functionality is an independently documented story of business and financial value. According to IDC research, VMware Horizon delivered a five-year return on investment of 413% and a nine-month payback period on the financial investment.¹ Based on in-depth customer interviews, IDC determined that Horizon helped:

- Facilitate employee mobility and access to applications
- Save time associated with device and application logins
- Reduce the time it takes IT staff to support and manage device environments
- Lower the impact of device-related problems
- Lower costs beyond those of traditional PCs and other non-virtualized devices

Additional research shows that VMware's Instant Clone Technology creates disposable virtual machine clones faster than Citrix Provisioning Services, helping to improve performance and availability even during periods of demand spikes.²

To help organizations modernize their full range of application delivery and deployment across both physical and virtual on-premises and hosted environments and as cloud-based services, VMware's Workspace ONE acts as a secure, easy-to-manage platform. Workspace ONE dovetails neatly with enterprise trends toward hybrid IT, virtualized infrastructure, increased mobility and an enhanced user experience.

1 "The Business Value of VMware Horizon," IDC, 2016

2 "Deploy virtual desktops faster and more easily with VMware Instant Clone Technology," Principled Technologies, December 2016

Workspace ONE gives users the flexibility to access virtualized applications or desktops on a personalized basis with single-sign-on capability and use with any device. Automated policy administration and enforcement significantly alleviates the IT staff burden, while supporting a unified application catalog. Organizations that have already committed to virtualization solutions such as Horizon are likely to find that a modernized digital workspace solution such as Workspace ONE is the next step to a scalable, economical and secure long-term approach for desktop and application virtualization.

Conclusion

As enterprise computing and application requirements continue to diversify, expand and become more complex, organizations must evolve their virtualization strategies accordingly. Desktop and application virtualization not only must be a key part of the overall IT framework, but it also must take an integrated, holistic approach with a single platform optimized for centralized management of all applications and desktops in a true digital workspace that can be scaled easily, securely and cost efficiently.

VMware's approach to desktop and application virtualization embraces and embodies the concepts of integration, automation, security, self-service and scalability. Horizon is a tightly integrated desktop and application virtualization platform for the entire enterprise and has received independent acclaim from research organizations for its many advantages over competitive platforms such as Citrix XenDesktop. Horizon Apps enhances the user experience and creates a new standard for application delivery, and Horizon Cloud gives organizations an easier and more economical way to use and manage desktops and applications without committing to big



increases in infrastructure spending. Additionally, Workspace ONE is an innovative, flexible and scalable solution that ensures customers can leverage a single platform to provide contextual access to Windows desktops and apps (through Horizon) alongside their mobile, web and SaaS apps across devices and locations.

For more information on VMware's leading desktop and application virtualization solution, please visit www.vmware.com/products/horizon.

Additional Resources

For additional information:

- [Download IDC's Virtual Client Computing MarketScape to learn why VMware was named a leader two years in a row.](#)
- [Test Drive VMware Horizon Now with a Free Hands-on Lab.](#)