



VDI and Beyond: Addressing Top IT Challenges from BYOD to Windows 10

Use a single solution for everything from simple VDI to on-demand delivery of Windows, SaaS and web apps.

Citrix XenDesktop gives you the flexibility to meet the diverse needs of your mobile workforce, your business and your IT organization—simply, efficiently and at a lower cost.

Industry analysts and thought leaders love to talk about app and desktop virtualization on a high level as a driver of business transformation, but IT admins tend to be more grounded in real-world questions and challenges. Does this use case call for a full virtual desktop or just a virtualized app? How can I support BYOD without sacrificing security? What are we going to do about all these users who are already self-upgrading to Windows 10? Perhaps most importantly, how can I support the full range of scenarios—everything from simple VDI to delivering Windows, SaaS and web apps on-demand to any device—without overwhelming cost and complexity?

There's a lot more to virtual delivery than VDI, and it takes more than a one-size-fits-all solution to deliver apps, desktops and data in the right way for each of your key IT use cases. Most solutions make you choose either virtual apps or desktops, but to meet the needs of employees, IT and the business, you need a simple way to manage both apps and desktops through a single solution. With Citrix XenDesktop, you get the full power of Citrix XenApp—the industry-leading app virtualization solution used by the 10 largest companies in healthcare, banking, automotive and aerospace—integrated into the leading VDI solution.¹ XenDesktop is built on the FlexCast Management Architecture, the most flexible solution for app and desktop virtualization, to provide a single, unified solution for remote access, workspace mobility, any-device productivity and more. From simple app delivery to advanced VDI, XenDesktop flexes with your needs, whether your priority is to empower users with BYOD, improve security and compliance on the corporate desktop, simplify Windows 10 migration or conserve IT budget by transitioning to low-cost devices like Chromebooks or thin clients.

This paper explores use cases that highlight how XenDesktop, incorporating the full power of XenApp, can enable enterprise mobility in the right way for each use case while providing the security and manageability IT needs.

Secure mobility and BYOD

Today's employees need to be able to work from anywhere—a customer location, a home office, an airport lounge—with full access to all of their apps and data with a great user experience. As personal devices flow into every organization, you also need a way to deal with the ad hoc bring-your-own device (BYOD) program that likely already exists in your environment, whether sanctioned or grass-roots. In either case, VDI makes it possible to deliver a user's complete mobile workspace on any device they choose to use—including their own personal devices—over any network while IT maintains full security and control.

¹ *The Forrester Wave™: Server-Hosted Virtual Desktops (VDI)*, Q3 2015.

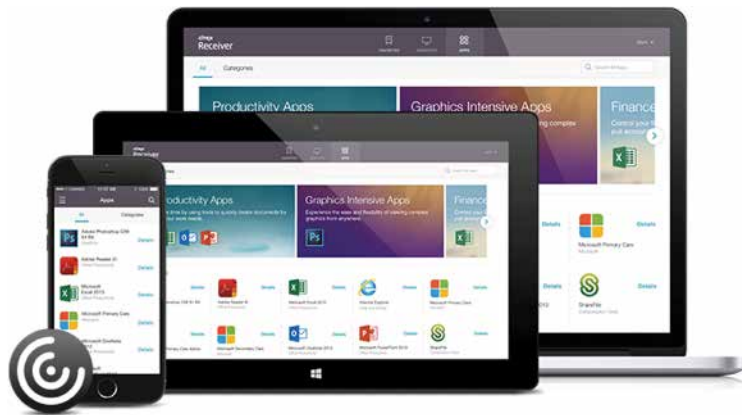
"[XenDesktop is] the best solution we have found to provide our users with secure remote access to business applications as well as reduce costs of our infrastructure maintenance."

Marcelo Noronha

IT Project Manager, Qualicorp

XenDesktop enables secure productivity on any device, anywhere, by providing users with seamless, secure access to their virtual desktops, apps and data without having to join your corporate network. This unified solution enables the secure delivery of Windows, Linux, SaaS and web apps to all type of devices, including Windows and Linux desktops, Macs, thin clients, tablets and smartphones. IT gains a single point to manage access control and can limit actions based on both user identity and the endpoint device, providing better application security, data protection and compliance management. A seamless login process leads the user to an enterprise StoreFront to select the apps or desktop they want to use, leaving them one touch away from launching apps just like a native app installed on an iOS, Android, Blackberry, Mac, Linux or Windows device. XenDesktop also optimizes the network traffic for the remote connection by caching video traffic to reduce retransmitting, and by prioritizing interactive traffic like voice and video over bulk file transfers and print jobs to ensure a high-performance experience.

Able to work from anywhere with the same, consistent portable, always-available workspace, employees can achieve higher productivity and job satisfaction while driving business agility and competitive advantage for the organization. "[XenDesktop is] the best solution we have found to provide our users with secure remote access to business applications as well as reduce costs of our infrastructure maintenance," says Marcelo Noronha, IT Project Manager, Qualicorp.²



Employees access their apps and desktops through a simple StoreFront with a consistent experience across all of their devices.

Security and compliance

Today's IT leaders face the challenge of reducing business risk while enabling people to work however best suits their purposes—any location, device or network. Data stored locally on laptops, tablets and smartphones is at constant risk of compromise through loss, theft or malware, and public networks present additional risks. To comply with both government regulations and security best practices, IT needs a way to protect corporate data without restricting user productivity.

XenDesktop enables IT to centralize apps and intellectual property in the datacenter, where comprehensive activity logging, reporting and audit make it much simpler to address mandates for privacy, compliance and risk management. IT can allow access to apps, desktops and data based on use case-driven, task-specific access control—including policies to determine what

² Source: [TechValidate](#).

actions users may perform with each app. XenDesktop is FIPS-compliant and Common Criteria-certified to meet the highest standards of regulated industries; preconfigured security templates enable IT to lock down the environment in just a few clicks, providing a fast and simple way to increase security. “If someone’s laptop is stolen or gets a virus, it doesn’t matter because everything they’re accessing is centrally located in our datacenter, not running around on individual devices,” says Mark Holley, Chief Security Officer, Bank of American Fork.

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Margaret Arakawa

General Manager, US Windows 10 & Devices, Microsoft

For employees, XenDesktop provides a simple, consistent experience to access desktops, apps and data on any device without the need to deal with complex user-facing security measures. An easy-to-use interface encourages adoption of the solution so the organization can maximize its security benefits.

Secure browser apps

As web and SaaS apps continue to grow in popularity in the enterprise, IT needs to ensure that they remain as secure and manageable as any other type of application. In many cases, apps have been developed for specific browsers or plug-ins that may now be outdated or pose security threats. Frequent browser updates compound the challenge, especially when multiple browsers are in use in the organization, including Internet Explorer, Firefox, Safari, Chrome and Microsoft’s new Edge browser.

By using XenDesktop to virtualize the browsers used to access web and SaaS apps, IT can retain sensitive information in the datacenter, not in the user’s local browser cache, eliminating the risk of loss or theft. Only screen updates, mouse click and keystroke commands cross the network to the endpoint device, not data, and nothing is left behind when the network connection is terminated. Granular access policy enforcement lets you eliminate unnecessary VPN holes and reduce the risk of data loss or intrusion through unsecured connections.

XenDesktop also reduces web app management costs by eliminating the need to update apps with every browser update. Administrators pick the best web browser and the plug-ins needed for each web app, then deliver it in a virtualized session inside the user’s preferred browser. As a result, updates on the user’s device have no impact on the compatibility of the web apps they use. A consistent user experience across any device and browser can considerably reduce costly help desk calls as well.

Windows 10® migration

In the first month of its release, Windows 10 set the record for a one-month increase in user share for any operating system. As employees take the initiative to install the latest Microsoft OS themselves or bring in new Windows 10-based BYO devices, this OS migration is taking on new urgency for IT. Manual, decentralized methods can make this an arduous process for IT, diverting staff from higher-value work. Applications require extensive testing and remediation to ensure compatibility with the new OS, and the increasingly diverse endpoints in use throughout the enterprise, including BYO devices, posed an additional layer of complexity.

XenDesktop enables IT to provide immediate access to corporate and legacy apps on any Windows 10 device, corporate or BYOD, without the time and cost of manual deployment across every location in the business. Employees face no interruption in productivity or supportability—even if you haven't performed application compatibility testing. As organizations standardize on Windows 10, IT can use XenDesktop to deploy a single golden image of the Windows 10 desktop in the datacenter for delivery to users everywhere. Management becomes far simpler and more efficient, as do support and security; if a user's desktop becomes corrupted or infected, a simple reboot will restore a pristine image. For users continuing to run older laptops and PCs, thin clients and other non-Windows 10 compliant devices, Citrix advanced user experience technologies ensure the same high-performance experience as those using newer endpoints, including enhanced support for peripherals.

"Microsoft is excited that our longtime partner, Citrix, is helping enterprise customers embrace Windows 10. With XenApp and XenDesktop, Citrix enables faster application migration to Windows 10 with access to critical line of business apps as soon as they upgrade," says Margaret Arakawa, General Manager, US Windows 10 & Devices, Microsoft.

XenDesktop app layering technology, AppDisk, lets IT manage applications independently from the underlying OS, master desktop or server image. Applications can be installed in the AppDisk layer and then moved seamlessly from Windows 7 to Windows 10 without impacting the underlying OS image. As a complement to AppDisk, Citrix AppDNA, included with XenDesktop, accelerates app migration and ensures app compatibility to support users running apps developed for Windows XP or Windows 7 on Windows 10 devices. By automating and analyzing application compatibility, and helping IT remediate any issues much more quickly, AppDNA reduces the cost and complexity of application upgrades, migrations and updates by as much as 90 percent. This applies for both Windows 10 and future upgrades, eliminating a perennial pain point for IT.

Skype for Business

The rapid growth of Microsoft® Skype for Business as a leading unified communications platform for real-time chat, voice, video, and screen sharing poses new challenges for IT. Locally installed endpoints leave chat and video logs, transferred files and other content at risk of loss, theft or malware, while the diversity of devices being used adds to the complexity of configuration and support.

By using XenDesktop to deliver Skype, IT can keep the Skype app and its associated data secure in the datacenter, beyond the reach of malware. Single-image management simplifies Skype for both users and IT. A single version of Skype supports all users regardless of the device—Windows, Mac, Linux or thin client—with the same user experience, including interface and login procedure. For employees, this consistency eases collaboration and increases productivity; for IT, it minimizes user training and cuts down on helpdesk calls. Centralization of the app also simplifies management and makes it easier to apply patches and updates.

Simpler, lower-cost management

The opportunities to reduce cost woven through the use cases discussed above illustrate one of the most compelling use cases for XenDesktop: lowering IT expenses through a simpler, more efficient centralized architecture. The solution makes it possible to:

- **Streamline desktop and app management** through single-image management, central monitoring, and the automation of provisioning and other common tasks. IT can deliver high-performance access to Windows, Linux, SaaS and web apps from any device at a fraction of the time and budget previously required, and apply updates and patches with similar efficiency, freeing resources for more strategic projects.
- **Escape traditional PC refresh cycles** with the ability to deliver an up-to-date virtual desktop to thin clients, Chromebooks and other low-cost devices over any network with a native-like user experience. By shifting processing to the datacenter, IT can keep devices of all types in service much longer—even as more demanding operating systems come into use—and can use BYOD programs to shift endpoint purchasing and management to employees themselves. In fact, existing PC refresh budgets can be repurposed to fund desktop virtualization initiatives, making the transition even easier to make. “XenDesktop has saved us the cost of an all-at-once refresh so we can stagger the capex spend over several years and even out our support cycles,” says Simon Davey, Group head of IT, Kelliher Insurance.
- **Embrace next-generation systems and platforms** like Skype for Business. More and more companies are replacing their phone systems with the Microsoft solution—already the third most-adopted PBX in the U.S. and still growing. Recognizing the advantages of delivering Skype virtually, Citrix and Microsoft have worked together to ensure that these implementations realize the full benefits of improved security and manageability without sacrificing performance. Together, the two companies have introduced the only Microsoft-endorsed solution for delivering Skype for Business in a virtual environment. A more efficient centralized architecture not only frees IT funds for more strategic projects and infrastructure upgrades; it also makes these initiatives simpler to implement.

Conclusion

App and desktop virtualization provide simple, effective ways to address a broad range of high-priority IT needs to enable the modern workforce. Some use cases are best suited for app virtualization, such as the secure delivery Skype for Business or browser-based SaaS and web apps, while others, including Windows 10 migration and BYOD, call for a full VDI desktop. Most vendors force customers to choose one model or the other—app or desktop virtualization, but not both in the same solution. Only Citrix XenDesktop, incorporating the full power of Citrix XenApp, delivers both app and desktop virtualization to provide optimal flexibility. Built on the FlexCast Management Architecture, XenDesktop lets you address all your needs for remote access, workspace mobility, any-device productivity and more through the same unified solution.

Additional Resources

[Top 10 Reasons to Strengthen Information Security with Desktop Virtualization](#)

[Top Three Reasons to Deliver Web Apps with Application Virtualization](#)

[The Citrix Advantage for Windows 10](#)

[Run Skype for Business as a Secure Virtual Ap—with a Great User Experience](#)

[Three ways companies are slashing IT costs with VDI](#)

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Citrix (NASDAQ:CTXS) is leading the transition to software-defining the workplace, uniting virtualization, mobility management, networking and SaaS solutions to enable new ways for businesses and people to work better. Citrix solutions power business mobility through secure, mobile workspaces that provide people with instant access to apps, desktops, data and communications on any device, over any network and cloud. With annual revenue in 2015 of \$3.28 billion, Citrix solutions are in use at more than 400,000 organizations and by over 100 million users globally. Learn more at www.citrix.com.

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