



# Windows Server 2003 End-of-Support: An Opportunity to Modernize for Business Mobility

Upgrade your server OS while future-proofing your application delivery strategy with Citrix XenDesktop and XenApp

End-of-support for Windows Server 2003 offers a golden opportunity to upgrade your application delivery capabilities with a secure, cloud-ready platform designed for mobility. With Windows Server 2003 approaching end-of-support, IT organizations are planning initiatives for Windows Server 2012 R2 migration. More than just upgrading the server OS, this project also offers an ideal opportunity to dramatically upgrade your application delivery capabilities to meet a new generation of requirements. If you've been using Citrix XenApp 4.x or Terminal Services for remote access, the latest version of Citrix XenDesktop with Citrix XenApp can deliver greater mobility for users, increased flexibility for IT and a secure, cloud-ready platform for the future of your organization. Citrix AppDNA, part of XenDesktop Platinum edition, ensures a painless transition by accelerating your migration project and automating day-to-day app management for your virtualized environment.

The world of IT has changed dramatically since the introduction of Windows Server 2003. Application virtualization technology has reached unprecedented levels of performance and security while evolving to meet the demanding needs of today's mobile workforce. With Citrix® XenDesktop® and XenApp®, you can:

- Deliver apps and desktops using any type of virtualization method, including VDI, hosted shared, remote PC and more.
- Provide best-in-class performance over any network, on any device, with comprehensive peripherals support, including generic USB device support on XenApp, and universal printing capabilities.

- Extend your local environments to public clouds or build entirely cloud-native solutions.
- Maintain security and ensure compliance with the latest standards.

This white paper explores the benefits of upgrading to XenDesktop and XenApp 7.x as part of your Windows Server 2003 end-of-support strategy.

### **The Windows Server 2003 end-of-support opportunity**

Microsoft has announced that the Extended Support End Date for Windows Server 2003 will be July 14, 2015. This presents customers with a couple of options. You can:

- Migrate to a newer platform—whether on-premise, private cloud or public cloud—and rewrite legacy applications as needed to assure compatibility, a tremendously time-consuming prospect that diverts attention and resources from strategic initiatives.
- Migrate to a newer platform and rely on a modern virtualization solution for app and desktop delivery, eliminating the need to rewrite legacy apps.

The second option is clearly the strategic choice to make. The rapid evolution of application delivery technology over the past decade has transformed the benefits available. Beyond tactical remote access, a modern app and desktop delivery solution can play a strategic role in your organization—but only if you choose the right one. It's crucial not to get locked into a solution that lacks maturity and fails to provide the features you'll need now and in the future—critical capabilities like:

- An any-cloud architecture that allows complete freedom to define your cloud strategy in the best way for your organization.
- Available Integrations with an enterprise mobility management solution to empower people anywhere, on any device they choose to use.
- Available integrated file sync and sharing solution to securely mobilize corporate data
- Advanced access controls and authentication delivered through a secure architecture to minimize risk no matter how people access their apps.

The right solution will enable complete workforce and business mobility with the flexibility and freedom of choice your users and IT organization demand.

### Requirements for a modern app and desktop delivery platform

As a key element of your infrastructure, your app and desktop delivery platform deserves careful consideration. Make sure the solution

you choose can help you address the following requirements to enable business mobility and the transformation of IT.

#### Choose the right hosting model for each user

The enterprise workforce encompasses a broad variety of user profiles, from on-the-go executives and salespeople, to call center and

back office personnel, to engineers and designers using high-end graphics software. The needs of these groups are far too varied to meet through a one-size-fits-all approach to desktop and app virtualization. Some need high-performance VDI desktops; others will find a hosted shared desktop perfectly adequate; and still others may need offline access while on the road, or secure access to their own corporate PCs from outside the office. Your solution should give you the flexibility to deliver apps and desktops in multiple ways through the same platform to meet diverse requirements for performance, cost, personalization and manageability.

#### Enable workforce mobility and bring-your-own device (BYOD)

As consumerization takes hold in the enterprise, employees are reaching new levels of productivity, mobility and satisfaction. For IT, the challenge is to ensure that people can easily access their desktops, apps and data regardless of the device they choose—laptop, thin client or tablet; corporate-issued or BYOD—and enjoy a great experience no matter where they work. This includes:

- A way to get to work quickly on any device—even a new consumer laptop or tablet—and gain self-service access to Windows, web, SaaS and mobile apps without having to ask for help from IT.
- The ability to connect over any kind of network without having to memorize settings—while ensuring full security and access control for IT.

- Full support for printing, VoIP, camera, USB devices and other peripherals while using virtual apps and desktops.
- A high-definition experience for rich graphics and 3D applications on any device, over any network connection.

#### Manage and secure mobile devices

With a diverse mix of corporate-issued and BYO devices in the environment, IT needs a way to maintain control and reduce risk without placing excessive constraints on productivity. Corporate apps and data must be kept separate from personal content to prevent leakage and simplify management, including the ability to wipe corporate content remotely while leaving personal content untouched.

#### Mobilize data along with desktops and apps

Users already share files frequently within and beyond the organization—but all too often, they do this using consumer file sharing services that lack enterprise-grade security. To prevent this practice from opening security vulnerabilities and compromising compliance, IT needs to provide a fully secure service that's as simple to use as a consumer app. For optimal productivity, the service should include business-oriented features such as workflow integration, desktop integration, built-in content editing and remote wipe should devices go missing.

#### Leverage any cloud

Cloud technology is transforming the way IT services are delivered. Many organizations are seeking to leverage cloud-scale efficiencies and self-service techniques within their own private desktop and app clouds. At the same time, they may want to be able to scale flexibly into public cloud resources during peak utilization periods, or for workloads for which they do not want to purchase large amounts of infrastructure to

operate. Your app and desktop delivery platform needs to allow optimal flexibility to connect with and extend to any cloud platform within a unified environment. Without an any-cloud architecture, you may find your cloud strategy hampered by old-fashioned vendor lock-in.

#### Maintain manageability and visibility for IT

To ensure a high level of service, IT needs to be able to manage and support the virtualized environment effectively. Make sure your app and desktop delivery platform provides simple-to-use user support, management and provisioning tools that provide full visibility into user sessions, as well as single-image management for both physical and virtual Windows desktops and services.

#### Enforce security and granular access control

Business mobility can't come at the expense of security and compliance. Granular access control is critical to allow the right level of access for each user and avoid unnecessary restrictions, while maintaining compliance with regulatory mandates and corporate standards. IT should be able to define, apply and manage security policies easily, without burdening users with the need to memorize complex, scenario-specific login procedures. Equally important is the gateway people use to connect to the environment. In the past, many organizations relied on Citrix Secure Gateway, an ICA® proxy solution, running as a service on a Windows server in the DMZ—a less than fully secure configuration. Citrix has since replaced Secure Gateway with Citrix NetScaler Gateway™, a hardened security appliance designed to run in the DMZ. Organizations that take this opportunity to upgrade to NetScaler Gateway can thus gain a more secure foundation for remote access as well as enhanced functionality such as granular Smart Access controls, SSL VPN and MDX Micro VPN for mobile apps.

### Microsoft and Citrix—Better together

Customers who initially implemented XenApp with Windows Server 2003 have even more reasons to continue using Citrix with Microsoft today. The longtime partnership between the two companies, encompassing hundreds of thousands of joint customers, has an unmatched track record of meeting customer requirements for app and desktop delivery over multiple generations of Windows. Today, Citrix and Microsoft deliver best-of-breed desktop and app virtualization solutions that enable customers to:

- Address the full range of needs today and in the future with flexible access to multiple types of apps and desktop delivery models in one platform, and proven scale for 100s – 100,000s of users.
- Empower people on any device with access to their apps from Windows-based PCs, Macs, smartphones, tablets, HTML5 browsers, thin clients, zero clients and more, as well as a touch-enabled experience for Windows apps on touch-capable devices.
- Deliver the best user experience over any network connection, including a built-in universal printing solution and high-fidelity virtualization of 3D and graphics-intensive apps with Citrix HDX™ 3D Pro.
- Make security both effective and transparent with context-aware security to allow the right level of access and functionality for the user's current scenario without the need for manual configuration.
- Optimize IT with simple yet robust management functionality that saves valuable time for more strategic work, as well as an any-cloud architecture that allows full flexibility to leverage the right private and public cloud resources in the right way for the organization.

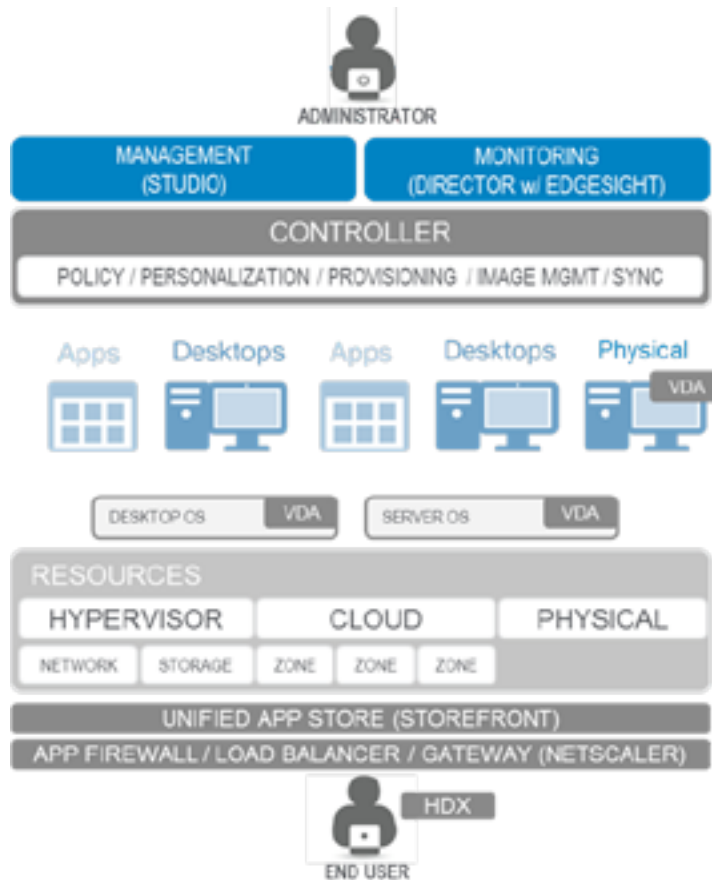
### Modernize app and desktop delivery with XenDesktop and XenApp

Citrix has been helping organizations modernize their application delivery strategy since the earliest days of remote access. Today, our customer base includes more than 98 percent of the Fortune 500 and the elements of the Citrix mobile workspace solution have been recognized as leaders in their respective markets by top industry analysts.

As a cornerstone of Citrix mobile workspace solutions, the latest release of XenDesktop and XenApp incorporates a quarter-century of real-world experience and customer feedback on the features, use cases and workflows that matter most for businesses and IT. By making Windows Server 2003 end-of-support your pivot to an upgraded app delivery platform powered by XenDesktop and XenApp, you can put state-of-the-art virtualization capabilities to work for your business—among many others.

XenDesktop and XenApp provide a simple yet powerful architecture to meet diverse user needs throughout the enterprise. Administrators use Citrix Desktop Studio and Desktop Director to easily create and monitor virtual desktop and app hosts. A delivery controller provides services for image management, sync, provisioning, policy application and personalization; manages user connections; and registers the virtual delivery agents (VDAs) for virtual apps and desktop. VDAs can be installed on either server OS virtual machines or desktop OS virtual machines according to the delivery model being used and provide the connection point between Citrix Receiver and hosted app or desktop. A resource layer makes it possible to leverage additional physical and virtual assets within virtual desktops. The front end incorporates a unified app store, app firewall, gateway and technologies to secure and optimize the user experience as well as Citrix Receiver™ – a universal client available for any end user computing device.

## The high-level architecture of Citrix XenDesktop with XenApp

**Speed migration and simplify management with Citrix AppDNA**

A major portion of the transition from Windows Server 2003 is the migration of applications to a new platform, which can be a long, complex and costly process. IT must perform an inventory of every app which has been installed in the existing environment, and then determine which will run correctly as-is in the new environment, which will require minor remediation to do so and which would need more extensive work. [AppDNA™](#) streamlines and accelerates this process by collecting the “DNA”—file, registry and configuration data—of apps, then using an abstracted computing environment to assess their compatibility with the new OS or virtualized environment. This provides greater predictability

in terms of time and money, more efficient use of IT resources and a much higher chance of success for the project.

AppDNA also facilitates day-to-day app management by bringing new speed and efficiency to testing, remediation and application packaging process. With both application and operating system DNA in the AppDNA repository, IT can more easily understand how users will be affected by any change in their app portfolio. The abstracted computing environment enables IT to model application outcomes and determine the best plan of action by answering two key questions: will the new app or version install and work properly? If not, what is needed to fix it?

By automating testing, packaging and remediation processes, IT can provide usability testers with cleaner apps and reduce the repetition of test-package-user acceptability testing cycles.

#### Multiple app and desktop delivery models

Citrix FlexCast® services enable XenDesktop and XenApp to deliver multiple virtual app and desktop models to meet the needs of diverse users and use cases—all through a single unified platform. While VDI can be the right choice for many use cases, providing a dedicated virtual machine for each user can be cost-prohibitive at scale. Hosted-shared desktops and remote PC models can provide a more cost-effective alternative for many users; for others, VDI with Personal vDisk can combine the maximum user personalization benefits of VDI with the storage optimizations and administrative efficiencies of single-image management. At the more demanding end of the scale, IT can let designers and engineers access centralized, workstation-class 3D graphics virtual environments, apps and design data on any device. Citrix XenClient®, included with XenDesktop Enterprise and Platinum editions, powers client virtualization for secure offline productivity and other high-mobility use cases.

#### Any-device, any-network productivity with a simple, self-service user experience

People can become productive quickly and easily wherever they work, on any device they choose to use. They simply download the Citrix Receiver client—available on Windows, Android, iOS, Windows Phone, Blackberry, Linux and Chrome as well as a myriad of thin and zero client devices—and enter their email address to configure their network connection automatically. A unified app store provides a single place to find all their Windows, web, SaaS and mobile apps. Apps and desktops running on touch-capable mobile devices are touch-enabled, providing an

experience that is familiar and consistent with that on a native device. Citrix Receiver for desktops is neatly integrated into the user's environment to enable intuitive control over the virtual desktop and apps.

Citrix Receiver leverages Citrix HDX optimization technologies to provide the richest user experience possible over any network connection. Whether people connect over 3G/4G, WAN or LAN, HDX adapts to the available network bandwidth and latency to provide an optimal experience. HDX also allows people to access graphically demanding content such as Adobe Flash, DirectX, Direct 3D and OpenGL applications on any device, including those that don't offer native support for these formats. For demanding CAD and engineering apps, the solution provides 3D acceleration through virtual GPUs for smooth visual performance. The Citrix NetScaler® application delivery controller (ADC) complements HDX to ensure 100 percent app availability, application and database server offload, network acceleration and load balancing.

A complete, no-compromise user experience is crucial to empower business mobility. XenDesktop and XenApp provide universal printing capabilities and generic support for USB peripherals, and allows people to make full use of their devices' camera and microphone to use VoIP and video, join high-definition video conferences or capture audiovisual content.

#### Comprehensive security and management for mobile devices and apps

To enable mobility without increasing risk, Citrix XenMobile® provides complete MDM and MAM capabilities for secure enterprise mobility management. IT gains identity-based provisioning and control of apps, data and devices, automatic account de-provisioning for terminated users and selective wipe to enforce device security policies without compromising

employees' personal apps and data. XenMobile also provides business-grade secure email, browser, notes, calendar and more apps to avoid the security gaps that can be introduced by consumer-grade apps on mobile devices.

#### Secure file sync and sharing

Citrix ShareFile® lets you deliver a secure, robust data sync and sharing service that meets all of the workforce's mobility and collaboration needs. A rich, consumer-style experience makes it simple for people to store and sync data across all their devices from any network location. IT can maintain a high level of management and control over file and data sharing, with absolute flexibility to choose where data will be stored, robust device security policies, comprehensive auditing features and integration with Microsoft Active Directory.

#### Any-cloud extensibility

As you leverage private, public and hybrid clouds to increase scalability, agility and cost efficiency, Citrix lets you build your desktop and IaaS clouds on top of any hypervisor or cloud platform, or on any combination thereof, to choose the best option for each workload. Built-in extensions to public cloud services let you extend your app and desktop clouds into the infrastructures offered by public cloud service providers. Instead of limiting you to a single vendor's cloud, XenDesktop and XenApp provide the freedom to define and evolve your cloud strategy in the best way for your organization.

#### Simple scalability and manageability

From a small departmental deployment to a large enterprise environment, Citrix provides the tools you need to manage, grow and maintain your app and desktop delivery environment. The solution enables single-image management for both physical and virtual Windows desktops and services. Desktop Studio and Desktop Director provide visibility and manageability across the entire deployment. Deep integration with

Microsoft System Center helps you optimize your deployment, complementing the automation, inventory management, delivery, acceleration and run-time monitoring of XenDesktop and XenApp. Departments can consume services via a simple, self-service portal that integrates with the orchestration layer to automatically spin up or spin down capacity as needed, easing the burden on IT while meeting user needs quickly and efficiently.

#### Security and access control

Beyond the inherent security of its secure-by-design centralized architecture, the Citrix solution provides comprehensive security tools including integrated SSL VPN and attack protection. IT can protect the business and maintain compliance by creating granular access control policies for specific groups of users, devices or connection types. You can allow a given group of users to access a wide range of applications and data while on the LAN, a subset of those resources from home, and a smaller subset over a public network. Another, less trusted group could be restricted to a small subset of resources under all conditions. Administrators can also restrict the ability of users in insecure environments to copy, email or print data, or to save confidential files to removable media. XenDesktop and XenApp adhere to strict security methodologies like those defined under FIPS and Common Criteria certification standards. XenClient ensures security for offline use cases through capabilities such as remote wipe, USB device filters and VM expiration.

#### Conclusion

The sunset of Windows Server 2003 represents an important transition for your organization. By seizing this opportunity to upgrade your application delivery solution, you can gain important strategic capabilities to help your users and business become more agile, mobile and productive. The latest version of Citrix



XenDesktop with XenApp lets you deliver apps and desktops in the right way for each use case with a simple, self-service experience for users and optimal performance for any app, over any network. An any-cloud architecture allows full flexibility to leverage public, private and hybrid clouds as your cloud strategy evolves. Comprehensive security and granular access control let you allow the greatest possible freedom for users while ensuring effective protection and compliance for your business. Citrix AppDNA migration and management tools accelerate your transition to a new server platform and simplify management moving forward.

Make Windows Server 2003 end-of-support your pivot to a next-generation application delivery platform. To learn more about Windows Server 2003 migration and schedule a proof-of-concept for XenApp, please contact your Citrix channel representative.

#### Additional resources

- [Citrix XenDesktop](#)
- [Citrix XenApp](#)
- [Citrix XenClient](#)
- [Citrix XenMobile](#)
- [Citrix ShareFile](#)
- [Citrix NetScaler](#)
- [Citrix AppDNA](#)
- [Gartner Magic Quadrant reports on Citrix mobile workspace solutions](#)
- [IDC MarketScape Excerpt: Worldwide Client Virtualization Software 2013 Vendor Assessment](#)
- [The Forrester Wave: Enterprise Mobile Management, Q3 2014](#)

<http://www.citrix.com/products/appdna/overview.html>

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#### About Citrix

Citrix (NASDAQ:CTXS) is a leader in mobile workspaces, providing virtualization, mobility management, networking and cloud services to enable new ways to work better. Citrix solutions power business mobility through secure, personal workspaces that provide people with instant access to apps, desktops, data and communications on any device, over any network and cloud. This year Citrix is celebrating 25 years of innovation, making IT simpler and people more productive. With annual revenue in 2013 of \$2.9 billion, Citrix solutions are in use at more than 330,000 organizations and by over 100 million users globally. Learn more at [www.citrix.com](http://www.citrix.com).

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