Windows XP Migration | White Paper

Accelerate Your Windows Migration with Citrix XenDesktop

Address Windows XP end-of-life quickly and efficiently. Transform your environment for today's mobile workstyles.

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Urgency is growing for organizations that still rely on Microsoft Windows XP to do business. With end-of-support-life for Windows XP looming on April 14, 2014, IT must move quickly to migrate to Windows 7 or Windows 8.1 to avoid damaging security breaches and compliance violations. A traditional upgrade process would take many months—time that organizations simply don't have. Equally important, IT can't allow its Windows project to divert resources and stall progress on key initiatives to support enterprise mobility. What's needed is a way to solve the Windows XP migration challenge while simultaneously moving forward to enable anytime, anywhere, any-device productivity for today's modern workforce.

Citrix XenDesktop with FlexCast technology lets you kick-start your transition from Windows XP to Windows 7/8.1 while transforming your environment to address a new generation of strategic business requirements. Instead of bogging down in application compatibility issues, you can use desktop virtualization to begin delivering Windows 7/8.1 apps and desktops right away. At the same time, you can address Windows XP apps requiring remediation and replacement as needed, in parallel, to make a gradual transition off of Windows XP. Users maintain uninterrupted access to all the apps their work requires, regardless of operating system, throughout the process—and gain anywhere, any-device productivity for new mobility and convenience.

The Citrix strategy for rapid Windows migration and enterprise transformation delivers key benefits for IT and the business.

- **Reduce risk** by avoiding damaging security breaches and compliance violations resulting from continued reliance on Windows XP
- **Increase IT productivity** by using virtual desktops to transition to Windows 7/8.1
- **Improve cost efficiency** by delivering virtual apps and desktops to legacy hardware
- **Modernize your environment** by enabling people to be more productive anytime, anywhere and on any device

This paper discusses Citrix technologies, tools and best practices to accelerate your Windows migration and transform your computing environment. A step-by-step process provides a high-level framework to help you get started right away.

The Windows migration imperative

For organizations yet to address Windows XP end-of-life, migrating off the platform is now a mission-critical need. Many factors may have contributed to the delay, from application compatibility challenges to budget constraints to the sheer scope of the project, but the cost of continued inaction is unacceptably high. Three factors contribute to the growing risk: security, compliance and rising complexity.

Security

The end of support for Windows XP means an end to security updates as well. This will leave PCs still running the OS more vulnerable to zero-day threats, viruses, spyware and other malicious activity. A single attack can compromise an organization's intellectual property, customer data, sensitive personal information and day-to-day operations, and lead to lawsuits and long-term reputational damage. The risk is already considerable—according to Microsoft, Windows XP is now 21 times more likely to be infected[1] with malware than Windows 8—and it will grow rapidly once exposed security vulnerabilities are no longer being patched or remediated. Due to code reuse between Windows XP and Windows 7/8.1, patches to newer versions of Windows may point to unsecured holes in Windows XP, providing a roadmap for hackers to exploit companies still on the platform.

Compliance

Both internal and external compliance audits are likely to require that enterprises run on supported, fully patched versions of Windows; indeed, this is a baseline requirement that any organization should be able to meet. The failure to meet this standard can easily result in loss of business, higher premiums for business insurance and even gaps in business insurance coverage. The consequences of non-compliance can be especially high in regulated industries such as healthcare and financial services, leading to loss of regulatory approval. Organizations with third-party service providers or outsourced contracts may also find that these providers now forgo SLAs on desktop support for Windows XP, leading to further difficulties.

Rising complexity

The end of support for Windows XP will trigger numerous downstream issues beyond security and compliance. The myriad platform dependencies and third-party technologies in the typical enterprise environment already increase the potential complexity of Windows migration, and these will increase as these elements of the infrastructure fall out of Windows XP compatibility. Dealing with these issues, combined with proliferating security and compliance issues, will make IT's job exponentially more complex and time-consuming, and divert both personnel and budget resources from more strategic work. IT risks paralysis just at the moment when crucial new priorities are emerging, including enabling enterprise mobility and embracing consumerization.

Windows migration is clearly no longer optional. The question now is how best to proceed. For most organizations, a Windows upgrade is the largest desktop initiative in many years. The project can call for a massive commitment of budget, resources and time, with the potential for major disruptions to IT as well as users.

The right strategy will both minimize time, cost, complexity and disruption, and ensure the greatest resulting value for the business. With desktop virtualization, you can achieve both objectives.

How desktop virtualization enables faster Windows migration at a lower cost

Every experienced IT professional knows too well the pain associated with a traditional operating system upgrade. Manual, decentralized methods for OS migration and desktop management are highly time-consuming and prone to error, and fail to meet the requirements of a distributed workforce using an expanding range of devices. Application compatibility concerns add to the migration timeline, as IT must test and rewrite many apps one by one for a variety of platforms.

Desktop virtualization lets you overcome the migration challenges posed by a traditional desktop architecture. One of the most important trends in enterprise IT, desktop virtualization decouples the client operating system, applications and data from the underlying hardware. Instead of installed software and data residing on individual PCs, complete virtual desktops are assembled dynamically on demand and delivered to whatever device the user happens to be using at a given time, whether laptop, thin client or mobile device. A single golden master of the operating system and each application supports every user in the organization, with patches and updates performed only once. Data remains secure within the datacenter and can be prevented from residing on the endpoint. Any data that must reside on the endpoint for offline use is protected through full encryption.

Sidestep application compatibility issues. Many enterprises rely on mission-critical applications that are incompatible with Windows versions beyond Windows XP, or with newer versions of Microsoft Internet Explorer, posing a major obstacle to an OS upgrade. Worse still, you may not know how many such apps there may be, or which ones they are. With desktop virtualization, you don't need to know where all of your apps stand in terms of compatibility before you can move forward. Desktop virtualization lets you provide both Windows XP and Windows 7/8.1 desktops to users to suit their application compatibility needs. This allows you to get an early start delivering updated versions of the apps you already know are compatible with newer Windows versions—the low-hanging fruit—while simultaneously taking a more gradual approach with apps that may require remediation. For users, both legacy Windows XP apps and updated Windows 7/8.1 apps are readily available throughout the process.

Rapidly secure user data. Every day that data remains on Windows XP endpoints, the organization faces the risk of security breaches, malware, non-compliance and regulatory fines. Even an upgraded PC or mobile device can be susceptible to the loss, theft or interception of intellectual property, customer data or sensitive personal information. An unsupported OS multiplies this vulnerability. Desktop virtualization provides a secure-by-design centralized environment to store and safeguard user data on every platform in the enterprise, including Windows XP and Windows 7/8.1 as well as mobile platforms. IT gains comprehensive capabilities for access control, auditing and reporting to ensure compliance with regulatory requirements and IT standards.

Deliver virtual apps and desktops to legacy hardware for cost efficiency. As with any updated OS, Windows 7/8.1 can require user endpoints to be updated as well in order to perform effectively. This adds both capital and operating cost to the initiative, and introduces a new element of logistical complexity. Desktop virtualization lets you extend the life of legacy hardware by shifting processing to the datacenter, ensuring a high-quality experience regardless of endpoint specifications. Instead of having to support a seemingly unlimited variety of user configurations—each with its own unique potential for conflicts and breakdowns—you can use a single standard image to support people on any device they use.

Beyond migration to transformation

As you address the urgent need for Windows migration, it's also essential to maintain focus and make progress on key strategic initiatives around enterprise mobility. Bringing your environment up to the current standard is only the beginning; you also need to look to the future and make sure the solution you implement will help you respond effectively to evolving needs. As an anywhere, anytime, any-device technology, desktop virtualization gives you that flexibility. It lets you solve the Windows migration challenge and transform your environment to address emerging needs—all through the same solution.

Empower a modern workforce with anywhere, anytime productivity

Business users today need the ability to be productive anywhere they need to work, at any time. Organizations need an efficient way to support flexworking and other mobility programs, and to support remote and branch workers. Desktop virtualization makes it simple for IT to provide access to apps and desktops anywhere and any time people work. Data remains locked-down within the datacenter, enabling effective security, compliance and business continuity planning for an increasingly distributed, mobile world.

Allow people to use any device, anywhere

Device types are proliferating throughout the enterprise, including thin clients, smartphones and tablets. A new generation of employees expects to be able to use their own personal devices for work, whether in the office under a Bring-Your-Own-Device (BYOD) program or informally after hours. On-the-go professionals need to be able to roam across laptops, tablets and smartphones throughout the day. Remote and branch office users need the flexibility to choose the right devices for their needs, and change devices quickly in the event of technical problems. IT needs to provide access to apps and desktops for contractors and partners without having to provision and support corporate-issued devices. Desktop virtualization allows full freedom of choice in the devices people use.

Deliver apps and desktops on-demand across a distributed, mobile workforce

Traditional methods for provisioning and support can't keep pace with the requirements of today's workforce. Desktop virtualization enables on-demand IT from any location. Businesses can provision apps and desktops to new locations, integrate acquired teams and onboard new personnel literally overnight. Initiatives such as outsourcing, offshoring, virtual collaboration and the deployment of

employees in third-party locations become far simpler and cost-effective to implement. Users gain self-service access to apps and desktops, and can complete upgrades or resolve technical problems simply by refreshing their desktops.

Future-proof your IT strategy

It's hard to innovate when your focus and resources are consumed by the maintenance of a traditional desktop infrastructure. Desktop virtualization lets you modernize and mobilize your environment while providing access far more efficiently to both legacy and new apps and desktops. As a result, you can respond in a more agile, effective manner to fast-changing requirements for enterprise mobility and act as a true agent of business transformation for your organization.

Key technologies for Windows migration and IT transformation

As the leader in mobile workstyles, Citrix provides a complete solution to accelerate your Windows migration while transforming your desktop environment.

Citrix XenDesktop

A comprehensive desktop virtualization solution, Citrix XenDesktop enables enterprise IT to deliver Windows as a service—always on, highly secure and seamlessly mobile. At the core of XenDesktop, FlexCast technology provides a rich set of capabilities to deliver virtual desktops and apps in several ways to meet user and organizational requirements for mobility, security, performance, flexibility and personalization. This is especially valuable in the context of a Windows migration, giving IT more options to make a rational and cost-effective transition from Windows XP to Windows 7/8.1.

To ensure seamless productivity for users throughout the migration, IT can provide access to both Windows XP and Windows 7/8.1 desktops on any device, delivering the full range of apps within a single environment regardless of their OS compatibility. This means that IT can begin transitioning apps with known Windows 7/8.1 compatibility to the new OS right away so users can enjoy its enhanced features and benefits, and address Windows XP apps requiring remediation and replacement through a more gradual parallel process.

XenDesktop also allows greater flexibility in your approach to endpoint hardware. One option is to keep existing Windows XP-compatible hardware in place, run legacy apps locally, and deliver hosted Windows 7/8.1 apps and desktops on-demand. As an alternative, you can replace your endpoints with low-cost, low-energy consumption thin clients, then use XenDesktop to deliver one set of hosted apps and desktops for legacy applications requiring Windows XP, and another set of hosted apps and desktops for Windows 7/8.1. In this scenario, you can also use Windows Thin PC, a smaller-footprint, locked-down version of Windows 7, to repurpose existing PCs as thin clients.

Beyond accelerating your Windows migration, XenDesktop provides key capabilities to modernize and transform your desktop environment. You can:

- Deliver universal access to desktops, apps and data on-demand from any device, corporate-issued or BYOD
- Mobilize Windows-based applications for access on tablets and smartphones
- Provide a single point of self-service access for apps of all types, including Windows, native mobile, web and SaaS

Citrix AppDNA

While XenDesktop accelerates your migration of apps with known Windows 7/8.1 compatibility, Citrix AppDNA helps you address potential compatibility issues for your remaining apps more quickly and efficiently. AppDNA streamlines the process to determine which of these apps will run correctly as-is in the new environment, which will require minor remediation to do so and which would need more extensive work. 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.

A step-by-step framework for your initiative

As a major initiative with implications throughout the organization, the implementation of desktop virtualization in tandem with the migration off XP requires a well-thought-out strategy and comprehensive planning. The specifics of this approach will vary from organization to organization, but the following steps provide a high-level framework to guide your planning process.

Step 1 – Prioritize Business Initiatives

Desktop virtualization implementations are as unique as the organizations that perform them. Choices from delivery modality (session-based, VDI, streamed or local VM desktops) to endpoint devices (PCs, laptops, thin clients, tablets) will depend on factors such as the needs of the various user types within the organization, the tasks they perform, and the locations in which they perform them. As you evaluate business priorities and requirements, you should:

1. Identify and meet with project stakeholders
2. Gain consensus on key project drivers
3. Prioritize drivers based on strategic imperatives
4. Document and distribute drivers for approval

Step 2 – Undertake a Data Capture

Before you analyze your environment, it's important to capture current data on users, applications and devices. There are three approaches for this—manual, survey and automated.

- **Manual** – While it is possible to capture user and application data by visiting or connecting remotely to each desktop one-by-one, this is not the ideal approach.

A manual data capture is highly time-intensive, making it inappropriate for all but the smallest organizations. It also makes it difficult to gain a good understanding of performance requirements over time.

- **Survey** – For a more hands-off approach, IT can create a survey on user and application requirements for each business manager to complete for their departments. This saves time for the project team, but typically results in less-than-complete data, since it is unlikely that every manager within the organization will complete the questionnaire.
- **Automated** – A variety of inventory tools are available to automate the collection of a wide range of information, including application usage and performance requirements. The drawback of this approach is that it can't be used to identify business characteristics such as application criticality, licensing and security requirements.

The best approach is to use a survey to identify business characteristics and an automated tool to identify technical characteristics.

Step 3 – Analyze your environment and segment your users

To maximize the success of your Windows migration and IT transformation, you need a full understanding of your current environment. This includes:

- **The segmentation of users** based on their work habits and overall requirements. Typical segments include task workers, guest workers, remote workers, LAN-based office workers, WAN-based office workers and mobile workers. Each group can then be aligned with the most appropriate virtual desktop modality to meet their needs.
- **An assessment of existing endpoint devices** to establish whether and how each type of device can be used after migration and transformation.
- **An analysis of the applications in use.** Based on factors such as user profile, resource requirements and technical requirements, you can determine the best way to integrate each application into Windows 7/8.1 virtual desktops, leveraging the multiple application delivery strategies supported by FlexCast technology.

Based on this analysis, you can divide users into groups based on a common set of characteristics. Each group can then be assigned an appropriate desktop type to meet their needs for performance and functionality with optimal efficiency.

For simplicity, user groups generally consist of one or more different roles within the organization—such as HR, marketing and finance—but the grouping can occur at the user level if necessary. All users within a group should have the five following characteristics in common:

- **Workload**, including processor, memory, disk and graphical requirements
- **Mobility**, in terms of whether the group needs to switch among multiple devices, connect remotely or work offline

- **Personalization**, reflecting whether these users need the ability to customize their session, desktop or nothing at all
- **Security**, including whether multi-user operating systems and user-installed applications are allowed, and whether a static IP address or MAC address is necessary
- **Criticality** in terms of how much downtime the user group can tolerate

Step 4 – Rationalize your applications

Based on the data captured in Step 2, you can narrow the scope of your initiative by eliminating unnecessary work.

- Simplify your project by reducing the application list down to the bare minimum required. This includes consolidating application versions by removing redundant or outdated versions.
- Remove any applications that are no longer required by the business. Your inventory tool will help you identify how often each application is used, and which aren't being used at all. You should also remove management applications such as antivirus and backup software, as these should be evaluated separately from user applications.

Make sure to send your rationalized application list to the app and business owners to make sure you don't remove anything essential.

Step 5 – Tackle application compatibility at your own pace

To quickly begin migrating off of Windows XP, start with the applications you already know will work on Windows 7/8.1 and begin leveraging one of the many application delivery strategies supported by desktop virtualization.

At the same time, in a parallel process, you can use AppDNA to address apps with uncertain Windows 7/8.1 compatibility or known issues. An AppDNA overview report can give you a list of your apps and the status of each app on a given platform, making it easy to see which can be migrated immediately. For apps that are not migration-ready, you can either remediate the issue based on the details uncovered by AppDNA, or flag the app for replacement.

As you move forward, you can use AppDNA report modeling to determine the best platform for each app, and automate and accelerate processes from profiling, testing and sequencing to the creation of deployment-ready packages.

Conclusion

For many organizations, Windows XP end-of-support-life represents a looming nightmare of rising security vulnerability, potentially costly non-compliance and growing management complexity. However, there is still time to minimize these risks and address Windows migration in a rational and efficient manner. Desktop virtualization provides a mechanism to not only accelerate the transition from Windows XP to Windows 7/8.1, but also address key strategic IT priorities at the same time—in particular, around enterprise mobility. Citrix XenDesktop with FlexCast technology lets you deploy Windows 7/8.1 apps and desktops immediately while continuing to provide access to apps limited to Windows XP compatibility. In parallel, you can use Citrix AppDNA to identify legacy apps that require remediation or replacement, and deal with these in a gradual process based on business requirements and organizational priorities. The resulting environment, with the flexibility to deliver apps and desktops on-demand however best suits the needs of business and the users—anywhere, anytime, on any device—enables the required mobility by today's enterprise workforce.

Notes

[1] Still Running Windows XP? Upgrade Now to Reduce Security Risks
Microsoft Trustworthy Computing Blog, Aug 20, 2013

Corporate Headquarters
Fort Lauderdale, FL, USA

India Development Center
Bangalore, India

Latin America Headquarters
Coral Gables, FL, USA

Silicon Valley Headquarters
Santa Clara, CA, USA

Online Division Headquarters
Santa Barbara, CA, USA

UK Development Center
Chalfont, United Kingdom

EMEA Headquarters
Schaffhausen, Switzerland

Pacific Headquarters
Hong Kong, China

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Citrix (NASDAQ:CTXS) is the cloud company that enables mobile workstyles—empowering people to work and collaborate from anywhere, easily and securely. With market-leading solutions for mobility, desktop virtualization, cloud networking, cloud platforms, collaboration and data sharing, Citrix helps organizations achieve the speed and agility necessary to succeed in a mobile and dynamic world. Citrix products are in use at more than 260,000 organizations and by over 100 million users globally. Annual revenue in 2012 was $2.59 billion. Learn more at www.citrix.com.