THE END IS HERE.

Institutions Using XP can Crush the XP End-of-Life Problem TODAY.

VIRTUAL BRIDGES

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Introduction

A 2013 survey by the antivirus vendor AVAST found that 96% of schools in the U.S. schools will be facing a "huge cost of Windows XP upgrades" resulting from the upcoming XP EOL. If your institution has any of the half-billion (yes, that is a 'b') PCs running Windows XP today, and you are concerned about the upcoming end of life for Windows XP, we have some good news. It is not too late to take action, and *THE END IS HERE: Institutions using XP can Crush the XP End-of-Life Problem TODAY* will show you what to do.

This guide is for professionals in higher education that want to know more about the Windows XP End-of-Life (XP EOL), what it means, and what to do about it, from a practical perspective, rather than a technical perspective. We keep technical terms and industry jargon to a minimum.

We also explain clearly the impact that Windows XP EOL will have on your institution. We discuss what XP EOL entails, when it will happen, and the practical problems it will create.

Having done that, we will show you how desktop virtualization solves those problems. This guide is written by Virtual Bridges, a company that creates desktop virtualization solutions. We like to think that desktop virtualization can solve some of the biggest problems the world has ever faced. (From a desktop perspective, of course.) Having said that, this document will provide an objective and useful point of view to the situation, no matter how you decide to solve the problem.

What to Expect from Windows XP EOL, and When

Microsoft's Windows XP operating system, first introduced in December 2001, is nearing the end of its product lifecycle. However, even with XP EOL just months away, a significant number of users, ranging from around 20% to around 30% depending on the data source you consult, continue to use some version of Windows XP for their desktop systems. Why have so many chosen to keep using XP for so long? In part because so many applications were written specifically for Windows XP or for Internet Explorer 6, which is no longer supported on newer versions of Windows. Some of these legacy applications lack source code, or were written by individuals or businesses no longer around. And some schools and businesses cannot, or prefer not to, move off of the applications. The result is that some institutions plan to continue using XP past its end of life. Some would like to migrate to a different version of Windows. Some have not made a decision either way. Whatever your situation, we will help you chart a new path in the post-XP era.

What Will Happen when XP EOL Hits

There are practical implications of the upcoming Windows XP EOL.

Microsoft will stop sending you fixes and patches
For supported versions of Windows, Microsoft regularly supplies automatic fixes and patches to address problems that arise. Many updates are part of the set of patches that Microsoft releases on the second Tuesday of every month, informally known as "patch Tuesday," with others released as needed. After XP EOL, Microsoft will no longer supply fixes and patches for Windows XP.

Microsoft will stop providing technical support
Microsoft will no longer provide technical assistance for Windows XP, even for institutions that are eligible for Microsoft's extended support. Microsoft can be a final step in the escalation process for IT organizations trying to resolve problems with desktop operating systems, but that line of defense will disappear.

Microsoft will stop sending out security updates
In addition to providing fixes and patches to flaws in the operating system, Microsoft regularly provides security updates to current versions of Windows to address security issues. Following XP EOL, Microsoft will no longer provide security updates for XP. Any newly discovered security vulnerability in XP, and any new, successful hack, will be problematic.

Hardware manufacturers will stop building hardware for XP
One final implication of XP EOL relates to the hardware and peripherals with which Windows XP is compatible. Given Microsoft's announced end of life for XP, manufacturers will likely begin to phase out the development of Windows XP drivers. (Drivers are the software that allows external devices to communicate with the operating system.)

When It's Going to Happen

Some bad news—It already happened
Microsoft ended mainstream support for Windows XP in April 2009. Mainstream support includes things like the complimentary support included with the product license and the policy of accepting requests for changes to the operating system. At that time, Microsoft announced that they would continue to provide extended support, which consisted mainly of ongoing security updates and access, for a fee, to non-security-related patches and technical support. However, Microsoft will also stop providing extended support on April 8, 2014.

Some OK news—If you have a REALLY BIG BUDGET, you can still get support
One caveat to the above is that institutions will have the option, following the end of extended support, to create a Custom Support solution with Microsoft that can include ongoing support for

Windows XP. However, Custom Support may be prohibitively expensive for most institutions; one organization reported a proposed cost from Microsoft of $1 million for the first year of custom support for 5,000 Windows XP machines.

Some good news—desktop virtualization solves XP EOL

As you will see, the good news is that desktop virtualization can solve your Windows XP EOL problem, it's not too late to get started, and it will be easier than you think.

The Practical Problems XP EOL will Create

Many of the technical challenges that will arise from Windows XP EOL translate into practical and organizational problems. These problems are in areas such as security and compliance, productivity and costs. We will look at these problems now, but don't worry. In the next section, we will explain how you can solve those problems.

Security and Compliance Risks

Your institution's data will be at risk

Today, before the final XP EOL date has arrived, Microsoft reports that Windows XP systems are infected at six times the rate of Windows 8. Inevitably, after Windows XP EOL, the lack of security updates and antivirus support will leave XP-based systems even more vulnerable. This could put data resident on those systems—intellectual property, faculty and staff records, student data, etc.—at risk. Even if the data on a particular XP machine is not that valuable, unpatched XP systems could also give hackers an entry point into your data center to infect other machines or attack your entire data store. The risk is compounded by the likelihood that antivirus software vendors may end their support for XP in light of Microsoft's ending of support. As a result, XP-based systems could become an attractive target to those who write malicious code, which could create substantial security risk.

Your institution will be at risk of non-compliance

A related problem is that continuing to use Windows XP after its end of life may result in compliance issues. The absence of security patches may result in institutions failing to meet specific compliance requirements (PCI, HIPAA), which can lead to fines and liability issues.

Productivity Risks

User productivity will decrease

While Windows XP is widely regarded as a reasonably stable operating system, that stability will be hard-pressed to continue when patches and updates end. Any new issues in Windows XP

installations following XP EOL will likely reduce productivity for faculty, staff and students using XP-based PCs for two reasons. First, in a worst-case scenario, users that rely on Windows XP systems may find the new issue simply prevents them from accessing the operating system completely. Second, IT organizations will find that any new instability in the OS that persists will be difficult to resolve without access to Microsoft support, leaving users working under poor conditions.

Your proprietary, XP-based software could fail

A similar concern is the set of issues that arise with legacy applications programmed to run on Windows XP. Faced with no support from Microsoft, such issues could represent a significant obstacle. In a worst-case scenario, the application could become unusable, creating potential for disruption to the daily rhythm of your campus.

Lack of access to the latest software will put you a competitive disadvantage

Aside from hits to user productivity based on OS and program problems, any changes to an institution's Windows XP infrastructure post-EOL will be challenging. For example, as software designed for higher education improves, it will likely do so without XP compatibility. In other words, even if a given desktop computer running Windows XP continues to work with no problems, getting the latest and most effective software for it will become increasingly difficult as manufacturers stop supporting Windows XP.

Increased Expenses

It will cost a lot to keep running XP

If your institution chooses to continue using Windows XP despite the operating system's end of life, the decision will be costly. Research by the analyst firm IDC found that it already costs organizations $701 more per PC per year to continue to use Windows XP than it would cost to use Windows 7, based on the calculation that the cost per pc per year for Windows XP is $870 vs. $168 for a comparable Windows 7 installation.

It will cost a lot to perform a traditional migration to a new version of Windows

The alternative, migrating to a new Windows operating system, is also costly. Expenses include, minimally, the cost of licenses for the new OS, the cost of new hardware needed to run the new OS, the costs of installing and deploying the new systems and potentially the cost of training users to use the new OS. The analyst firm Gartner estimates that following a traditional path of migrating to Windows 7 will cost between $1,274 and $2,069 per PC.

Using Desktop Virtualization to Solve XP EOL

Virtual Desktops solve XP EOL problems whether you get a new OS or stick with XP

With a clear understanding of the problems that XP EOL creates, we can now turn to the solution to all of those problems. If you want to keep using Windows XP, desktop virtualization helps you do so. If you want to migrate to a new version of Windows, desktop virtualization helps you do that too. For almost any path you choose, desktop virtualization is the key to dealing with XP EOL, and it solves a number of other problems too.

Choices for dealing with XP EOL

This table summarizes the choices you can make when it comes to XP EOL.

Ways to Deal with Windows XP End-of-Life

	Improves data safety	Reduces compliance risk	Improves user productivity	May support legacy XP-based apps	Lowers cost of system Management	Eliminates need for new desktop software licenses	Eliminates need for new desktop hardware
Do nothing and keep using Windows XP	No	No	No	No	No	Yes	No
Keep using Windows XP with desktop virtualization	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Migrate to a new version of Windows the traditional way	Yes	Yes	Maybe	No	Maybe	No	No
Migrate to a new version of Windows with desktop virtualization	Yes	Yes	Yes	No	Yes	No	Yes

What desktop virtualization is and does

Desktop virtualization is the technological approach in which a desktop operating system (such as Windows XP or Windows 7) does not have to reside on a specific, physical laptop or desktop machine, but can instead run as a virtual machine, also called a virtual desktop, in the cloud in a data center. Terms that describe this approach include, depending on the specific technology and

method of implementation, VDI (virtual desktop infrastructure) and DaaS (Desktop as a Service), but for simplicity we will use the term desktop virtualization here.

What you get out of desktop virtualization

Users can access the virtual desktops from a variety of devices, and the devices do not themselves need to be able to run the operating system—they simply display the operating system as it runs in the cloud in a data center. For example, a user could choose to access his virtual desktop—complete with all the applications, documents, internet favorites and so forth that he had on his old, physical machine—from a tablet, laptop, thin client, or a range of other devices, from any location that has access to the Internet.

Why desktop virtualization solves XP EOL when traditional hardware doesn't

Two key differences between virtual desktops and traditional desktops—the fact that you can access a virtual desktop from a variety of devices, and the fact that you can access it from anywhere with Internet or network access—combine to solve the XP EOL problem in a variety of ways.

Desktop Virtualization Limits Security and Compliance Risks

Virtual desktops keep your institution's data protected inside the data center

As noted above, virtual desktops reside in the cloud in a data center. When an institution moves from a physical Windows XP infrastructure to a virtual one, the Windows XP desktops, and all the data on them, become virtual, moving into the data center where they are physically secure and where IT can easily protect the data with efficient, regular backups.

While users can continue to use their Windows XP desktops by accessing them from their preferred device, the data on the virtual desktops never leaves the safety of the data center. Users see a visual representation of what they are working on as they use the applications and operating systems they are accustomed to using. The visual representation, though, consists entirely of pixels – the data itself does not move over the network and is never stored on the user's device.

Virtual desktops let you track access to desktops, which is good for compliance

A related benefit of desktop virtualization is that IT organizations can both limit and track access to virtual desktops with greater precision than is typically possible with physical machines. This allows IT organizations to create detailed audit logs showing who accessed which data on which machine, and when, providing a robust audit trail to help meet compliance requirements.

Virtual Desktops Increase Productivity

Virtual desktops give XP users a stable and productive working environment

Windows XP virtual desktops, unlike their physical counterparts, will not encounter problems related to hardware aging and failure, and will be more stable. Moreover, because IT professionals manage the virtual desktops in the data center, conflicts and issues that can arise when a user

attempts to use incompatible hardware and peripherals, thereby destabilizing his XP installation, disappear. These two aspects of desktop virtualization contribute to improving Windows XP stability and, by extension, maintain user productivity.

Users are productive anywhere because they can access desktops from anywhere

Moving to a virtualized Windows XP environment, however, may not only maintain user productivity, but can also effectively improve user productivity. Faculty, administrators, staff and students have very different tasks and goals. Creating a method for anywhere-access increases their ability to get things done. This is because users can access their virtual Windows XP desktops remotely via the internet, giving them flexibility in where they work, and can access them using a range of devices. For example, a user could access his Windows XP system from an internet café using a tablet—and be just as productive as he would have been at his original, outdated physical machine.

Your legacy XP applications will be stable because they will run on stable, virtual desktops

In addition to the improvements in user productivity that result from improved access to and stability of Windows XP desktops, institutions can also see benefits to legacy software applications that run on Windows XP. These applications can run in a virtualized XP environment that will not suffer from hardware instabilities and can therefore improve the application's availability.

Desktop Virtualization Helps Control Increases in Expenses

If you stick with XP, you won't have to buy new Windows desktop OS licenses

Schools that choose to continue to use Windows XP need not incur the cost of upgrading all their licenses to a more recent operating system. It would be quite expensive to keep using XP on traditional desktops, as discussed earlier. But the expense of managing and maintaining all that desktop hardware evaporates when you virtualize your desktops, making continued use of XP a viable option. Sticking with XP provides clear and immediate savings.

With virtual desktops, you won't have to buy new desktop hardware for XP systems

Hardware that can run Windows XP efficiently would likely be unable to run newer operating systems well. But that same hardware could work well as thin clients that provide access to virtual Windows XP desktops. For the purposes of this discussion, a thin client simply refers to a device that can show a Windows XP machine on a monitor or display but that does not do the processing and other tasks needed to run Windows XP. The processing for virtual Windows XP desktops takes place in virtual machines in the data center. The devices through which users access the virtual desktops simply display an image of what is happening in the data center. In short, then, institutions can turn their dated physical desktops into perfectly adequate thin clients, without the need to buy new hardware.

With virtual desktops, you won't need expensive desktop hardware to upgrade Windows

For institutions that do want to move from Windows XP to a newer operating system, desktop virtualization eliminates a big obstacle—the cost of new, more robust desktops and laptops that can run the new OS. In a virtualized desktop environment, all the desktops run on a cloud in a data center, not on individual hardware. You can repurpose existing, dated hardware for use as a thin client, or let users access their virtual desktops from their preferred device.

Virtual Bridges Solves the XP EOL Problem

Desktop virtualization is great, but the best-known solutions are hard to use

Since desktop virtualization can solve the hardest XP EOL problems, you might think institutions everywhere would overwhelmingly choose desktop virtualization. The problem is that the more widely known desktop virtualization solutions have enough drawbacks of their own to make them an undesirable choice. A desktop virtualization solution that is time-consuming to implement, requires specialized or proprietary skills to manage, requires you to buy expensive hardware and, after all that, delivers a poor user experience, is not a viable solution to XP EOL. That is why Virtual Bridges is committed to getting it right.

Learn how the US Department of Defense is using our solution today.

Virtual Bridges makes desktop virtualization faster, easier and less expensive

The purpose of this document is not to evangelize Virtual Bridges, but rather to show how desktop virtualization in general can solve problems that arise as Windows XP's end of life approaches. Having said that, we will look very briefly here at how Virtual Bridges technology addresses XP EOL.

Learn how Gruppo API reduced operating costs using our solution.

Ask how we can help you solve your XP EOL problems, and try our solution for yourself

Virtual Bridges, fortunately, is particularly good at solving the problems that XP EOL creates, such as data and compliance risk, user productivity risk, and increased expenses. Plus, Virtual Bridges is typically less than half the cost of comparable solutions from competitors.

Learn what it takes to have a successful desktop virtualization implementation.

In case you want to find out for yourself, we offer a free trial of our software, including an evaluation of your institution's readiness for a desktop virtualization solution. You can request your free trial now by calling us at 877-926-8834 or emailing us at info@vbridges.com at any time.