

Windows 2000 vs. Windows XP Deployment Considerations

By Morgan Stern

Managing Principal

Lucent Technologies Worldwide Services



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Introduction

With the recent release of Windows XP, organizations that have decided to migrate to the Windows 2000 platform are facing a difficult decision. Should they migrate to Windows 2000 Professional now, or wait a few months to deploy Windows XP Professional? What about those companies that have already begun their Windows 2000 Professional deployments? Should they stop the deployments and begin deploying XP when it becomes available?

The purpose of this paper is to provide a concise discussion of the issues surrounding deployment of Windows 2000 Professional and Windows XP Professional, with the intention of assisting organizations in their decision-making processes. By no means should this document be considered to be an exhaustive examination of all of the issues surrounding the decision-making process. Instead, it is an introductory work that identifies the major issues and topics.

The document is divided into three sections. The first section, *Why Consider Windows XP?*, provides a brief introduction to the new features and technologies within Windows XP. Section Two, *Considerations for Pre-deployment Environments*, contains recommendations for organizations that have not yet initiated their desktop migrations, while Section Three, *Considerations for In-deployment Environments*, discusses considerations for organizations that are in the midst of their desktop deployments.

Why Consider Windows XP?

While a number of trade journals and analyst groups have discounted Windows XP as being Windows 2000 with a new GUI, it is important to consider whether XP's other new features and technologies can provide additional business value compared to Windows 2000.

Organizations considering which desktop operating system (OS) to migrate to should factor these features into the evaluation to determine which OS will deliver the most benefits to their businesses.

Following are some of the features that may influence an organization's plans to adopt Windows XP.

Management/Administration Improvements

One XP area in which Microsoft has made significant improvements over Windows 2000 is in management and administration of the desktop. Features such as *system restore* (which provide users and administrators with the ability to "roll-back" the desktop to a previous state while retaining all data) and *remote assistance* (which enables an administrator to remotely access a user's screen, mouse, and keyboard) have the potential to significantly reduce administrative costs by eliminating the need for costly desktop support visits or manual system restoration.

In addition, Windows XP includes a series of new *group policy* elements to provide higher levels of manageability compared to Windows 2000 or Windows 9x.

Compatibility/Usability Features

Another area where Windows XP boasts significant advantages over Windows 2000 is in the area of compatibility. With Windows XP, users or administrators can specify an application to run in either a Windows 2000 mode, a Windows NT 4.0 mode, or a Windows 9X mode, depending upon which environment is most suitable for the application. This application compatibility mode will save many enterprises from immediately incurring the costs associated with obtaining Windows 2000-compatible versions of applications that are already in use.

Another interesting feature that promises to improve the usability of Windows XP is the *remote desktop* feature. Using remote desktop functionality, users can access their desktop environments remotely from any workstation that contains the Remote Desktop Protocol (RDP) client. While this functionality will be desirable to many users, there are significant security implications that should be evaluated prior to enabling this feature.

Deployment Improvements

To support rapid deployments of Windows XP, Microsoft has added a number of new features and has improved on features that first appeared in Windows 2000. These features should be carefully considered because of their ability to reduce costs associated with deployment and ongoing management of the Windows XP environment.

First, the *User State Migration Tool*, which appeared in an unsupported format in the Windows 2000 Resource Kit, is now a fully supported utility. This tool enables administrators to migrate users' data and application settings from their existing desktops to their new Windows XP desktops.

In addition, Microsoft has significantly improved the functionality of tools such as unattended install, Sysprep, and remote OS installation.

Native Support for .Net Framework

Windows XP will be the first client OS from Microsoft that will contain basic native support for the .Net framework. Specifically, XP will natively support features such as instant messaging and authentication via Microsoft's Passport service, which is a core component of the Microsoft Hailstorm initiative. Organizations that have considered implementing .Net services should evaluate their implementation timelines to determine how quickly .Net support will be required at the desktop.

Considerations for Pre-deployment Environments

Organizations that have not yet initiated their desktop deployments need to make an immediate decision on which version to implement – Windows 2000 or Windows XP. The majority of organizations will benefit by deploying Windows XP (and possibly delaying their deployment by a few months) instead of deploying Windows 2000. Following are a few issues to consider.

Added Business Value

While the list of new features in Windows XP is relatively small, many of the new features, such as those discussed earlier, can have a significant positive impact on the value that XP can bring to a business. For example, the remote assistance capabilities of Windows XP can significantly reduce the number of scenarios that would require support personnel to physically visit a workstation to perform repairs. Another feature that has the potential to significantly reduce costs is the ability to run specified applications in Win9x or NT 4.0 compatibility modes, thereby eliminating the cost of obtaining a Windows 2000-compatible version of a mission-critical application.

Support Considerations

Microsoft typically supports a desktop operating system for four years. Windows 2000 has been available since early 2000, which means that Microsoft will likely support Windows 2000 only through 2003. For many large enterprises, a desktop deployment can take 3+ years, which means that if a large enterprise organization began its migration to Windows 2000 today, support for it would expire before the deployment was completed. By selecting Windows XP as the desktop standard, organizations will have the ability to leverage the entire 4-year support window for their desktop users.

OS Stability and Service Packs

Some organizations will undoubtedly have reservations about deploying Windows XP prior to the release of service pack 1 for XP. This perspective is well justified, considering Microsoft's history of releasing software that contained significant bugs. These organizations should consider two things:

1. Microsoft has made significant improvements in the testing and release of their "non-consumer" operating systems, as evidenced by the stability of Windows 2000. Windows XP has undergone a similar, lengthy, beta test period.
2. Windows XP is not an entirely new OS. From a code perspective, Windows XP is quite similar to Windows 2000, so the potential for major new bugs should be limited to some of the new features and functionalities, and should not be related to the core OS itself.

New Computer Purchases

After the release of Windows XP Professional, it will become increasingly difficult for organizations to purchase a new computer with Windows 2000 pre-installed. While this will not be an issue for enterprises that install pre-configured images to newly purchased computers, the costs associated with licensing issues should be evaluated nonetheless.

Waiting for XP May Impact the Deployment Schedule

If an organization is prepared to begin its implementation immediately, the decision to wait for Windows XP will introduce a significant delay into the deployment schedule, due to the fact that Windows XP is scheduled for release in October 2001. Considering that most organizations will want to do sufficient testing with the release version of the code, the earliest a company could begin deployment of Windows XP would be December 2001.

Considerations for In-Deployment Environments

While the case is relatively clear for organizations in the pre-deployment phase to wait for Windows XP, the situation is more complicated for enterprises that have already begun to deploy Windows 2000 to their desktop users.

Microsoft's position is that organizations that have begun their Windows 2000 Professional deployment should continue deploying 2000. When the deployment is complete, they should evaluate the business benefits of XP and make deployment decisions based on the added value of XP. This position may be viewed suspiciously, though, since it comes from an organization that stands to profit from the licensing revenues should a company decide to deploy Windows 2000 now and then Windows XP to the same user population in a year or two.

Enterprises must make a decision. One alternative is to maintain a "pure" Windows 2000 Professional environment and forego the migration to Windows XP by waiting for the successor to XP for their next desktop migration.

The second alternative is to deploy Windows 2000 Professional to a percentage of the end-user population and Windows XP to the remainder of the organization once XP is released.

IT managers will quickly recognize neither option is perfect. Each organization will need to carefully analyze the technical, economic, and business issues associated with each of these alternatives, then make a decision based upon what they consider to be in the best interest of the business.

Some of the issues for IT managers to consider are:

Support

Many organizations strive to maintain the most homogeneous computing infrastructure possible, which means that end-users should use the same version of operating system on a standardized hardware platform. For enterprises like this, it may make sense to continue to deploy Windows 2000 to all end-users. Keep in mind, however, the technical support lifetime of Windows 2000 mentioned earlier. Unless the organization can reasonably anticipate that the project will be completed in a matter of months, and not years, it may make sense to re-evaluate the importance of a homogeneous environment.

On the other hand, if the organization chooses to deploy a mixture of Windows 2000 Pro and Windows XP Pro, they will need to carefully anticipate the additional support costs incurred in order to provide technical support for a mixed-OS environment. Analysts such as Gartner Group recommend that enterprises go this route and plan for an environment of "managed diversity" because of the minimal differences between XP and 2000.

Technology Refresh Cycle

Another issue to consider involves the organization's technology refresh cycle. If the IT department routinely replaces users' computers every three years, the organization may run into difficulty in obtaining systems with Windows 2000 pre-installed in 2002 and beyond. This could present significant complications to an organization that standardizes on Windows 2000 Professional on the desktop.

As we discussed earlier, once XP becomes available, computer vendors will likely pre-install Windows XP Professional on all new systems – which would mean that the enterprise may end up paying for the XP license on the new machine *and* a Windows 2000 license if they re-image or reinstall the OS on the system.

End-user Education and Training

Windows XP Professional includes an entirely new graphical user interface (GUI), so it presents a very different look and feel to the end user. This may cause some organizations to conclude that they will need to double their budget for end-user training, since they'll need to train one group of end users for Windows 2000 Professional and another group for Windows XP. This situation can be avoided, however, because Windows XP has the ability to utilize the Windows 2000 GUI. Organizations wishing to leverage this capability need to be prepared to manage the settings on the workstation to prohibit end users from changing their GUI on a whim.

Conclusion and Recommendations

While it is difficult to make general recommendations, we recommend that organizations that are in "pre-deployment" mode wait for Windows XP to become available, and then deploy XP to their desktop users. Organizations that are in "ongoing deployment-mode" should evaluate the current state of their project to determine if it makes sense to deploy a mixed Windows 2000/XP environment or to stick with a pure Windows 2000 environment. We believe that in most situations, it will be desirable for these organizations to deploy a mixture of Windows 2000 and Windows XP.

Enterprises should:

- Evaluate the timeline of their deployment project with a consideration for the support lifecycle of Windows 2000. If the project is scheduled to go beyond 2002, strongly consider deploying Windows XP instead.
- Define OS and configuration standards for newly purchased computers – both for new employees and for end users that receive new machines via PC refresh. If their standard is to remain on Windows 2000, work with your PC vendor to identify the long-term ramifications, if any.
- Evaluate the new features and technologies within Windows XP regardless of their situation, to determine how they may contribute to the business, either through cost reduction or through added benefits.
- Leverage automated tools and processes in the deployment of Windows 2000 or Windows XP whenever possible. Deployment automation can significantly lower both the cost of the initial deployment and the cost to deploy a new OS later.

- If your Windows 2000 Professional deployment is already complete, evaluate automation tools (both from Microsoft and from third parties) to assess the feasibility of automating a deployment of Windows XP.

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References

http://news.cnet.com/news/0-1003-201-5877013-0.html

http://news.cnet.com/news/0-1003-202-5857221.html

http://www3.gartner.com/5_about/press_room/pr20010508c.html

http://www.inquiry.com/pubs/infoworld/vol23/issue14/010402hnwinhec.asp

http://www.entmag.com/breaknews.asp?ID=4439

http://www.itworld.com/Comp/2221/Microsoftreleasesupd360/

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