Best practices for migrating from Windows XP to Windows 7

As the current economic circumstances begin to improve and IT budgets increase, many organizations are realizing now is the perfect time to migrate from Windows XP to Windows 7. The conclusion to migrate to Windows 7 is an easy decision to make, but the task of migrating can be daunting. This expert e-guide from SearchEnterpriseDesktop.com provides you with the tools necessary to successfully migrate to Windows 7 and provides you with tips on how to make a smooth transition. Follow step-by-step instructions on how to upgrade and discover the tools that are available to make the transition as painless as possible.
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Table of Contents

Planning a migration from Windows XP to Windows 7

Migrating from XP to Windows 7 with the User State Migration Tool

Resources from Intel
Planning a migration from Windows XP to Windows 7

By Brien M. Posey, Contributor

In spite of the current economic situation, many organizations are upgrading from Windows XP to Windows 7. This really isn’t too much of a surprise considering Windows XP turns 10 years old next year. And since few IT professionals dared to touch Vista, running Windows 7 is a logical choice.

But deciding to upgrade to Windows 7 is the easy part; actually migrating, though, is a different matter. Windows 7 is very different from Windows XP, and as a result, Microsoft does not support in-place upgrades. While you can upgrade from Windows XP to Vista, and then from Vista to Windows 7, this practice is frowned upon (and isn't officially supported) because it leaves remnants of two legacy operating systems (OSes) in its wake.

The only fully supported way to move from Windows XP to Windows 7 is to perform a clean installation. While creating and deploying a Windows 7 disk image isn't too difficult, a lot of planning must be done before any large-scale migration.

Which edition should you use?

Deciding which edition of Windows 7 to deploy is the first step in planning your migration. Three different editions of Windows 7 are suitable for businesses: Professional, Enterprise and Ultimate. Windows 7 Professional is mainly marketed toward smaller firms, although it can join a Windows Server domain. Enterprise Edition offers everything the Professional Edition does, in addition to support for Multilingual User Interface (MUI) packages, BitLocker Drive Encryption and Unix application support. Ultimate Edition is identical to Enterprise Edition except for how it is licensed: Enterprise Edition is only sold through volume licensing, whereas individual licenses can be purchased for Windows 7 Ultimate.
Architecture

An advantage of a clean Windows 7 installation is that it doesn't require the same architecture previously used. In other words, you can deploy the 64-bit version of Windows 7 even if you previously ran a 32-bit version of Windows XP.

However, remember that Windows XP is almost a decade old, and as a result, some computers on your network probably don't have 64-bit processors. Therefore, performing a hardware inventory is essential before making 64-bit the new standard.

Application compatibility

When Microsoft released Vista, the company ruffled many feathers as several applications that ran without problems on Windows XP wouldn't work on Vista because of the new User Account Control (UAC) feature. Although Microsoft has toned down that feature in Windows 7, it's still there, and as such, application compatibility testing is a must.

Although UAC receives most of the blame for application compatibility problems, differences in OS architecture can also be at fault. Microsoft has tried to ensure 32-bit applications run smoothly on 64-bit versions of Windows 7, but I have found a handful that simply refuse to run in 64-bit environments.

Similarly, Windows XP supported the use of 16-bit applications. While 16-bit apps are no longer developed, plenty of organizations have legacy applications designed to run on DOS or Windows NT. Windows 7 will not natively run 16-bit applications.

To help with application compatibility, organizations with any of the three Windows 7 editions can download Windows XP Mode. While on the surface, Windows XP Mode looks like a copy of Windows XP running in a virtual machine, there is a bit more to it. Applications installed on the Windows XP VM can seamlessly run through the Windows 7 graphical user interface.

In addition, Windows XP Mode does support 16-bit applications -- but they may not run exactly as expected. For example, a 16-bit installer starts, but it sometimes fails to actually
install the application. Microsoft has said that apps that make extensive use of hardware interfaces, like 32-bit graphics and audio, do not work well in Windows XP Mode. In addition, not all desktops support Windows XP Mode because of the hardware virtualization requirement (AMD-V or Intel VT).

Although Windows 7 offers better backward compatibility than Windows Vista, there are applications that do not run properly on Windows 7. Therefore, hardware and application compatibility testing is essential prior to a large-scale migration.
Migrating from XP to Windows 7 with the User State Migration Tool

By Gary Olsen, Contributor

One of Windows 7's biggest downfalls is its inability to do a true upgrade from Windows XP. For an individual computer, this really isn't that bad – it simply requires having to reinstall applications. Figure 1 shows the two options Windows 7 setup offers.

**Figure 1: Choosing a Windows 7 installation type**

The **Upgrade** option only works with Vista. If you have Windows XP, then you must select the Custom option, which saves your data and Windows files and directories.

For Windows XP, Documents and Settings, Program Files, and Windows directories are saved in a **Windows.old** directory in Windows 7 after the upgrade, as shown in Figure 2.
Figure 2: The Windows.old directory

For Vista, the directory includes Windows, users, performance logs and program files: For x64 installations, the Program Files (x64) directory is included.

All of these directories are just files: There is no Windows XP bootable image. However, all the Windows files are there and all the applications must be reinstalled. In other words, data isn't lost with the custom upgrade option — just the applications are. Your profiles -- and all other data in the **Windows.old** directory -- can be moved to the proper location.

**Migration tools**

There are some free tools to minimize the manual steps in the migration.

For those who are providing tech support to friends and family, Windows Easy Transfer is the tool to use. Located on the Windows 7 DVD in \Support\Migwiz, the utility is accessed by running the Migsetup.exe, which pulls up a wizard to transfer user accounts, documents, pictures, email and other settings.

Administrators with a lot of clients to migrate should use the User State Migration Tool. It is a component in the Windows Automated Installation Kit (WAIK), and Version 4.0 now supports Windows 7. The WAIK download is a disc image that must either be burned to a
DVD or opened with an ISO reading tool such as IsoBuster or magicISO. You should find a
client computer, burn the WAIK to a DVD, and install it to this client. Then you can get the
USMT files and transfer them to the computers you need.

**Note:** Whether you are doing an in-place install via the Windows 7 DVD or using the
Windows Easy Transfer or USMT tools, any migration from XP to Windows 7 will not include
applications. The only way to avoid reinstalling applications is to upgrade from a Vista
installation.

**USMT basics**

USMT has two basic operations: Scanstate and Loadstate.

Scanstate is used on the source computer and reads predefined XML templates to gather
user data, documents and application data. These files are migUser.xml, migDocs.xml and
migApp.xml, respectively, in the USMT directory. While there is online help for these, it's
minimal and hard to follow when you are formulating a command line. It will save time if
you print a copy of the options from the USMT Components section of the USMT User's
Guide.

Follow these four simple steps to perform the migration:

1. On the source computer:
   Scanstate <path to store output file> /o /c /i:migUser.xml /i:migdocs.xml /i:migapp.xml

   **Note:** The output file should be put on a network drive or USB drive. It is a compressed
   file called USMT.MIG.

2. Install Windows 7 on the destination computer (which can be the same as the source
   computer).
3. On the destination computer:
   Loadstate <path of the USMT.MIG file> /c /lac /lae /i:migUser.xml /i:migdocs.xml
   /i:migapp.xml
4. Reboot the Windows 7 computer.
Resources from Intel

Desktop Virtualization Planning Guide

Streaming and Virtual Hosted Desktop Study

About Intel

For more than three decades, Intel Corporation has developed technology enabling the computer and Internet revolution that has changed the world. Founded in 1968 to build semiconductor memory products, Intel introduced the world's first microprocessor in 1971. Today, Intel supplies the computing and communications industries with chips, boards, systems, and software building blocks that are the "ingredients" of computers, servers and networking and communications products. These products are used by industry members to create advanced computing and communications systems. Intel's mission is to be the preeminent building block supplier to the Internet economy.