

Goodbye XP, hello Vista

It's almost time. Vista is here at last, and many XP users are thinking of making the switch. Artur Hoffmann and Jörg Geiger explain the upgrade process

Judging by the number of letters and emails that the PCW office has been receiving, it's clear that many of our readers have questions about Vista. Should we switch? What are the big advantages? How do we manage migration in a business environment?

Whatever you decide, one thing's clear – before you rush into installing Vista, you ought to draw up a migration plan.

Obviously, Vista has ease-of-use advantages compared with XP, as well as better built-in security mechanisms and up-to-date functionality. This means that XP users can upgrade with a clear conscience. In spite of this, we recommend that you wait at least a few weeks before you switch.

Dual boot first

We went through the full rigmarole of installation to see what you can expect if you don't get Vista with a new PC. The best, and the most secure, solution is to run Windows XP and Vista on a dual-boot system. This will allow you to try out the new operating system without disturbing the existing one. The only requirement is that you have a free NTFS partition with at least 15GB of free space. If you don't want to install Vista onto a production machine right away, you can run it using a virtual machine (see box, page 60).

It is, of course, possible to update your existing XP installation to Vista, but our tests showed that this can cause

problems, some of them fairly serious. The applications most affected are those that work close to system level, such as firewalls and virus scanners, and they can cause Windows Vista to crash. In some cases the incompatibilities can be so severe that Vista dies after your computer blue-screens.

Our testers found another stumbling block when they went to export files using Vista's Windows Easy Transfer tool. The export process only succeeds if you restrain its enthusiasm. If you follow Vista's suggestions it will copy huge numbers of irrelevant files to the new system, leaving erroneous links and programs that don't work.



Moving your data to Vista

Microsoft has decided to help users make the switch by including a tool for moving data. If you're switching to new hardware at home, or on a small-business network, you must first install Vista on the new computers and then start the data transfer from the XP system. The Windows Easy Transfer tool copies, among other things, user accounts, files, folders, and program settings as well as email settings, contacts and messages (see screen 1). However, you will get the best results if you copy just those elements that are essential. If you decide to copy all the data from the C: drive, it could result in incorrect Desktop links, non-functioning programs and user folders that end up containing a mish-mash of XP and Vista files.

Getting ready in XP

Insert the Vista installation DVD into the drive, open the support folder and copy the 26.5MB migwiz directory to the partition containing Windows XP.

Before running migwiz.exe close all other programs, select the correct drive and, optionally, specify a password. Next, decide which files and settings you wish to transfer. By default, the wizard suggests transferring all user accounts, files and settings. When migrating from an XP-only computer to a Vista machine, this makes sense as it creates an image of the whole system. However, it can't be recommended for multi-boot environments where only the content on the C: drive needs to be transferred. In our test, the wizard stupidly suggested transferring all 1.19TB of data from our Raid system.

To specify which data you want to use under Vista, click on Advanced Options and deactivate all other partitions under 'Files in other locations'. Copy only the most important items from the original C: partition. These could include Favorites, My Pictures and My Music. Desktop and Windows Settings, however, should not be copied.

The next step is to deselect the programs you don't wish to use under Vista in the Application settings. Click on Exclude folder in the Migration wizard and enter the path to the relevant directories. By following these instructions, all but 15MB of our original 1.19TB was excluded.

To copy the data that the wizard has saved onto your Vista PC, start Windows Easy Transfer, select 'Continue started

'The best, and most secure, solution is to run Windows XP and Vista on a dual-boot system'

transfer', and click on 'No, I have already copied files and settings to CD, DVD or removable media'. After selecting 'To an external hard disk or to a network path', enter the path to the file SaveData.MIG. The program will initially want to know whether to create a new user account with the details from the C: drive or link it to the one created under Vista. If you are using the same username under Vista,

Vista's boot loader can no longer be edited with a simple text editor. Use the bcdedit command line tool instead

Well intended, but littered with traps: Windows Easy Transfer helps you to move personal data

choosing the link option is recommended. The wizard will then list all the files and settings to be transferred.

XP and Vista in parallel

PCW recommends installing Vista in conjunction with XP to start with, to ensure your eventual changeover is as smooth as possible. Dual-boot systems have several advantages. The main one is that it's possible to retain your working system and the PC is ready to use. Therefore, you can try Vista free from stress and carry out a smooth migration. If you're already using XP on a dual-boot system then Vista can be easily set up as a third option. As a rule of thumb, XP should be installed before Vista.

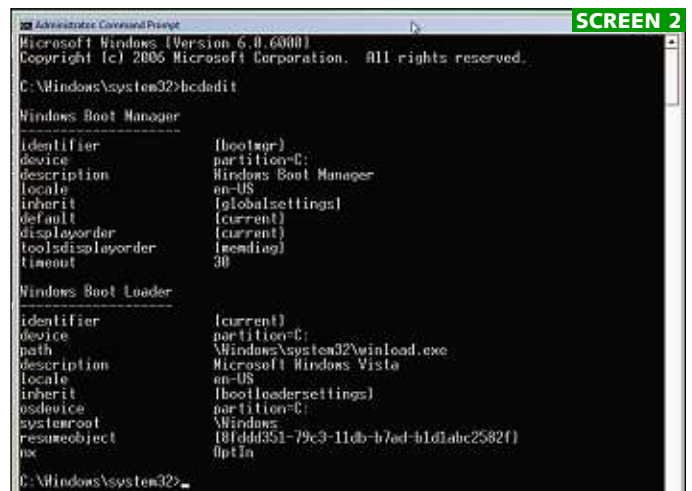
To use both Vista and XP on one computer, all you need is an NTFS partition with at least 15GB of free space. Unlike XP, Vista does not need to be installed on the first partition of a drive – an obvious advantage. The new system does not touch existing folders on the target drive, so you can continue to make use of the data. However, you can't install Vista on external USB or Firewire drives.

The installation is fast and easy, usually taking about 30 minutes: all you have to do is boot the computer from the DVD, enter the serial number and select 'User defined (Advanced)'.

If you install Vista on a partition other than the C: drive – which will be the case for a multi-boot system on which Windows XP is already installed – the new operating system will amend the drive letters automatically. If, for example, you install Vista on E: then under Vista this drive will be designated as C: and all other drive letters will be amended accordingly.

The Vista boot loader

Vista has a new boot loader, which is different in many respects to its predecessor in XP, Boot.ini. To offer better security, the Vista boot loader is a binary file that can't





simply be edited with a text editor. The boot configuration data store (BCD) is concerned only with Vista's start-up information. As before, Boot.ini is responsible for Windows XP start-up. You can test this for yourself. Click on Start, Programs, Accessories, Run, enter msconfig, then click 'Continue' in User Account Administration.

In the System Configuration dialogue box, click on the Start tab, which has only one entry: Microsoft Windows Vista (C:\Windows): Current Operating System; Standard Operating System. This means that you can no longer select which operating system is to be loaded by default – annoying if you still use XP.

Vista upgrade gotcha

There's an awful lot of confusion around the Vista retail upgrade versions, caused by Microsoft changing the way upgrades are performed. If you buy an upgrade version, which is much cheaper than a full version, you need to start the Vista setup routine from within your existing XP installation to check that your system is eligible for the upgrade. Once done, the system reboots and you can then choose whether to do an in-place upgrade or a clean install (your old installation is moved to a Windows.old folder).

This means you can't do a barebones reinstall from your Vista upgrade DVD without installing and activating XP first. As not all Vista versions come with Vista's disk-imaging feature, this will annoy a lot of people, and create a challenge for others on how to slim down an XP installation to a bare minimum. Tools such as Nlite (see our feature at www.pcw.co.uk/2154232), may suddenly become very popular.

Vista on a virtual machine

If you want to get a feel for Windows Vista without having to install it on a production machine, one option is to set it up on a virtual machine.

Microsoft's Virtual PC 2004 doesn't support Vista, but Virtual PC 2007 is now in free public beta (www.microsoft.com/windows/virtualpc/default.aspx) until 30 March 2007, so you have a choice between this and the free VMware Server, which will be a free download when it is released. We've tried both these programs and they worked pretty well. However, you don't get DirectX 9 functionality in either, so you can't

experience the Aero Glass Desktop theme. The installation procedure is exactly the same as on a real system; we recommend that you allocate at least 512MB of memory to the virtual machine.



Don't burn bridges: Vista works fine under Virtual PC 2007 beta

To edit the BCD stores you need to use the bcdedit.exe utility, which is stored in the Windows\System32 folder (see screen 2). The quickest way to access the Start file configuration editor is via the Run dialogue box. Enter cmd and hold down Ctrl and Shift when you click on OK to open an administrator or 'root' command prompt. From here you can access bcdedit. Vista then shows a list of boot parameters.

If you want to save the current BCD store as Boot-Backup1 in the existing D:\Boot-Backups folder, enter the command **bcdedit /export "D:\Boot-Backups\Boot-Backup1"**

(Key: ↵ code string continues)

The command to restore it is similar: **bcdedit /import "D:\Boot-Backups\Boot-Backup1"**

This reinstalls the previously saved boot loader. View more possibilities by entering **bcdedit /?** at the command prompt.

The information listed under Windows Legacy Operating System-Loaded Programs and Windows-Programs loaded at start-up is interesting. The first section relates to the XP boot loader, while the others belong to Vista. If you want to make Windows XP the default OS, enter the command **bcdedit /default {legacy}**

Always make a backup of the BCD store before you edit it.

Adding missing drivers

If you're installing Windows Vista on a relatively new computer, the setup routine will, in most cases, automatically recognise all of the hardware in use and install the appropriate drivers. However, the hardware recognition is not infallible; on one of our test computers, the Vista Device Manager (which can be accessed by selecting Start, Control Panel, Classic View) highlighted four components with a yellow exclamation mark:



Most missing drivers can be found using the Windows Update facility

the soundcard, network adapter, game port and onboard Raid controller. As the soundcard was working fine, our testers ignored the error message.

The easiest way to add missing drivers is via the Windows Security Center. First, select 'Windows Update', and then 'Search for updates'; then click on 'Display available updates' (see screen 3). If suitable drivers are found, the devices will be listed in the Windows Vista section. Select the drivers you want and confirm your choice by clicking on 'Install'. We successfully got the game port and network card to run using this method.

A second option makes use of drivers already installed for Windows XP. In the Device Manager, right-click on the problem device, select 'Update driver software' and choose 'Search for driver software on this computer'. In the next step, tell the program to look on the XP partition – normally the D: drive. This was enough to get our Raid controller working.

Using programs on both systems

If you already work with a dual-boot system and two XP installations, then you'll know from experience that sharing

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The Windows Upgrade Advisor checks whether or not your system is suitable for Vista

programs between installations doesn't always go smoothly. The same is true for the combination of XP and Vista.

While Paint Shop Pro 9, installed under XP, can be started under Vista with no problems, Winamp 5.12 states that the file PX.dll is missing. The program still runs, however, but the player is unable to initialise its database. Adobe Acrobat 6 Professional refuses to start at all because it can't find a valid serial number. Adobe Photoshop Elements 4 tries to start, but Vista blocks it and pops up the program compatibility wizard. This pointed out that there were known problems with updating Adobe Photoshop Elements. A click on 'Search for solutions online' resulted in

Vista power tips

Quick access to commands

Power users can customise the Start menu so that the Run command is always visible on the menu.

Right-click on the Windows button, choose Properties from the context menu and select the Start menu tab. Click on Customize to open the Customize Start Menu dialogue box, and check the box next to the Run Command option.

Partition sizes

Vista has a utility that enables you to manually adjust the size of partitions. To start, use the Windows key and R to open the Run dialogue box, enter diskmgmt.msc, then click OK to confirm. In the File Management section, right-click on the partition that you wish to reduce, then select Reduce volume size. Enter the new size in the next dialogue box and confirm by clicking on OK. Usefully, this works even on the Vista boot partition.

To make a partition bigger, select 'Increase volume size' and enter the information requested by the wizard. This only works for partitions in front of the free disk space.

Admin rights

If an 'Access denied' message appears on the screen after entering the bcdedit command in a Vista command prompt, then you do not have the necessary privileges. To solve this, go to Start, All Programs, Accessories, right-click on Command Prompt and choose Run as Administrator.

Quick tips for a smooth transition

Incompatible programs

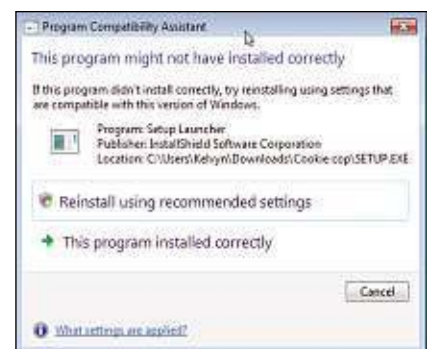
It's pointless to copy program-specific files to Vista if the software needed to open them won't even run under the new operating system. You can use the Windows Upgrade Advisor to check this. Another source of information is the Windows Vista Software Compatibility List Wiki (www.iexbeta.com/wiki/index.php/Windows_Vista_Software_Compatibility_List).

Save everything first

If you intend to upgrade from Windows XP to Vista then you must save all your personal data. The easiest way is to copy all the folders that will still be needed to another partition. Besides any folders that you have created yourself, the Documents and Settings folder is the most important one. Vista takes the data in this folder over, but in the real world it's important to have an independent backup of this directory, in case anything goes wrong.

Vista to Vista copying

Using Windows Easy Transfer, it's also possible to move data from one Vista system to another. In this case it is a lot simpler than doing an XP-to-Vista move, as both partitions already have the same directory structure.



Use the Compatibility Assistant to ensure Vista can run your software



SCREEN 5

Upgrading to Vista from XP can take twice as long as doing a fresh installation

[windowsvista/getready/upgradeadvisor/default.mspx](#)). Click on Windows Vista Upgrade Advisor to begin downloading the 6.4MB file. You also need to download and install – if they're not already installed – the MSXML XML services from the Microsoft download pages, followed by the Upgrade Advisor (see screen 4). You must make sure that the desktop firewall allows the program to access the internet, otherwise it won't work. Begin the system check by clicking on Start Scan. Be patient – it can take some time to complete; when it has finished, click on the 'See Details' button.

Hardware

The Windows Upgrade Advisor gets straight to the point: if your system is suitable for Windows Vista, then you'll see a message saying 'Your computer can run Windows Vista'. It will also suggest the most suitable version of Vista, usually Windows Vista Business, as long as your computer does not have a TV card. Far more interesting than the recommended version is the information listed under Devices and Programs. System requirements only comes into play if the Upgrade Advisor judges your system to be unsuitable for Vista.

You can see how many problems Advisor has found with hardware and peripherals by clicking on the Details button. On a test PC in our labs, the

'The number of potential issues means that we only recommend an upgrade in a few instances'

a box advising to download a patch – not terribly helpful. As these examples show, you'll have fewer problems with a fresh installation.

Upgrading to Vista

You don't have to do a fresh installation when moving to Vista, but a simple upgrade from XP can cause problems. If you're considering an in-place upgrade, the first thing you need to know is that you can't upgrade every version of XP to any version of Vista; the table below

shows which ones can be upgraded; and you can't upgrade from Windows 2000 at all.

If you want to upgrade an existing XP installation to Vista, you need to start installing the new operating system under XP and have at least 8GB free on the system partition. If you don't, the setup program won't offer the upgrade option. In practice, the number of potential issues means that we only recommend carrying out an upgrade in a few instances, for example, if you have recently installed Windows XP and the system is not full of application data.

If you want to upgrade, the first thing you need to do is check the compatibility of the installed applications.

Insert the Vista DVD and on the first screen select 'Check compatibility online'; this will connect to the Windows Vista Upgrade Advisor website (www.microsoft.com/

Upgrade paths from Windows XP to Vista

This table shows you the upgrade matrix from various versions of XP to the different Vista editions. 'New installation' means that you will need to reinstall your applications.



WINDOWS XP VERSIONS	WINDOWS VISTA HOME BASIC	WINDOWS VISTA HOME PREMIUM
Windows XP Home Edition	Upgrade possible	Upgrade possible
Windows XP Professional Edition	New installation required	New installation required
Windows XP Tablet PC Edition	New installation required	Upgrade possible
Windows XP Media Center Edition	New installation required	New installation required
Windows XP Professional Edition x64	New installation required	New installation required

Vista Upgrade Advisor found four problems – the same four devices that were marked with a yellow exclamation mark during the fresh installation we described earlier.

The Action Required column tells you what you need to do. In this instance, for three of the devices you should use Windows Update to load new drivers after installing Vista. The Upgrade Advisor said that the Raid controller, running in IDE mode in our test PC, wouldn't work under

Vista. As we already had this hardware running successfully under Vista, we ignored this tip.

In the 'Cannot find information on these devices section', the tool lists any unrecognised components.

In our test, the routine did not recognise the Canon Fax-LT290, the AVM-NDIS driver or the VMware Virtual Ethernet Adapter.

Incompatible software

Click the Programs tab to see information about the software that the Advisor found on your system. Applications that won't run under Windows Vista are listed first; in our example, the Advisor is indicating that Nero OEM and Alcohol 120% will have to be uninstalled before carrying out the upgrade. According to the Upgrade Advisor, Nero will run under Vista. However, this is not the case.

Be careful with applications listed in this category. You can expect problems – including crashes – if you run them

Troubleshooting Vista

Problem solving

The Windows Vista Upgrade Advisor is useful to run before performing a fresh installation of Vista. It will allow you to identify any applications that will not run, or do not work properly, under Vista.

Run the Windows Vista Upgrade Advisor and make a note of the programs that it complains about. This will save you a lot of time later and help you to avoid installing incompatible software – such as Alcohol 120% – that causes Vista to crash or others, such as older versions of Trillian, that will stop the Aero Desktop working.

Note, however, that the Vista Upgrade Advisor only supports the 32-bit versions of

Windows XP and Vista. If you use Windows XP Professional x64, you will have to keep your fingers crossed and install Windows Vista without prior system analysis.

Triple boot

As well as a fresh installation or using a dual-boot option to run Vista and XP in parallel, there is a third strategy for migration. As Vista has a new boot loader, different to XP's, there is nothing to stop you having a triple-boot system running Vista, XP and your favourite flavour of Linux. It's too complex to cover briefly, but a tutorial for hardcore users is available at <http://tinyurl.com/ymkegv>.

under Vista. In many cases, the programs listed here will be those that work at or close to system level, including firewalls and virus scanners. Some Microsoft applications, such as the Intellitype Pro 5 keyboard driver, appear on the list. These compatibility issues are another reason you should consider a fresh installation of Vista rather than an upgrade from XP.

If you want to upgrade your existing operating system to Windows Vista, go to the Task List. From here you can print out the Advisor's recommendations. We recommend that you run the Windows Vista Upgrade Advisor again after uninstalling the applications listed and rebooting, to check whether or not it has fixed the problems.

The long march to Vista

Click on Install now, and in the next step let the computer search for new updates. Then, enter the serial number, click on Next and select Upgrade. The installer will refresh and display a list of any system components that might not run under Windows Vista. The installation will begin, with the copying of the files. An Upgrade takes about 90 minutes, three times longer than a fresh installation. However, you will be saved the trouble of transferring your files and settings.

The first system restart will take you back to the Vista Desktop. All the shortcuts that you had on your XP desktop, as well as all your programs, will be visible. However, in our experience, the Windows Vista Upgrade Advisor does not identify all programs, which can cause problems. For example, trying to start Acronis Disk Editor causes a blue screen, and Vista abandoned an attempt to open Partition Magic 8, referring to known compatibility issues. So, this is another good reason to uninstall all system-related programs before you begin the upgrade process. All our other applications, including Microsoft Office 2003, Paint Shop Pro and Winamp, ran without any problems; the same was true of our network connections, shared folders, favourites and even the right-mouse button context menu.

Hardware fares much better. A look in the Device Manager showed that even the components that the Windows Vista Upgrade Advisor complained about were working fine – only the Canon Laser-Fax/printer is marked with a question mark.

At this point, you should have a working Vista system – but check all your critical applications to make sure there's nothing that has been overlooked. Welcome to Vista. **PCW**



WINDOWS VISTA BUSINESS	WINDOWS VISTA ULTIMATE
Upgrade possible	Upgrade possible
Upgrade possible	Upgrade possible
New installation required	Upgrade possible
Upgrade possible	Upgrade possible
New installation required	New installation required