A prescription for IT efficiency

Windows XP was released to manufacturing on August 24, 2001 and – for its time – was a tour de force in desktop operating system design and implementation. But 2001 was a long time ago. Systems still running Windows XP today reflect some of the limitations of 2001 technology.

Security is more important in the healthcare setting than many other industries. Breaches of patient data can result in HIPAA violations and government investigations. Breaches of system security can cause breakdowns of equipment used to sustain life and patient health. Phishing expeditions can cause thousands or millions of dollars to be lost or stolen.

Windows XP is far less secure than Windows 7 and Windows 8. If you choose to migrate your facility for no other reason, the fact that Internet crime has increased more than 600% since Windows XP was released may be motivation enough. With more and more concerns over hospital and patient security, and with some very high profile breaches making the evening news, reducing huge security risks needs to be a high priority. Windows XP, because of its age, poses a measurable security risk on every desktop where it's still deployed.

On the other hand, Windows 7 and Windows 8 are exceptional desktop operating systems, with modern security, faster operation, tons of wonderful user experience improvements, and better integration into enterprise-level healthcare IT.

Windows XP is no longer safe for your hospital or healthcare facility

Microsoft stopped providing mainstream Windows XP support in 2009. For an operating system introduced in 2001, Windows XP has had an amazing run, but it's just not suited for the demands of our modern computing world. When XP was introduced, it was nothing short of awesome. But it was introduced in a time before modern network security and, more to the point, modern network threats.

It's no surprise that data breaches are on the rise in healthcare organizations. A recent Ponemon Institute study reports that 96 percent of all healthcare providers have had at least one data breach in the last two years, and the frequency of data breaches has increased 32 percent in just the last year alone.

Because Windows XP was developed so long ago, it doesn't have the security facilities provided by modern desktop operating systems like Windows 7 and Windows 8. If you migrate your facility to Windows 7 or Windows 8 for no other reason, preventing data breaches and security failures should be motivation enough.

Malicious programs have free reign in Windows XP. By contrast, the modern Windows environment adds Kernel Patch Protection to stop malicious software from grabbing onto kernel events and Windows Service Hardening, which forces Microsoft services to use pre-defined access profiles.

The modern Windows environment also has improved User Access Control (UAC). UAC blocks applications and users from making changes by running, by default, at standard (i.e., not administrator) permissions level. Changes made require explicit permission to elevate permissions on a case-by-case basis.

Windows 8 is even more secure, adding new touch-based authentication methods, secure boot, and improved malware protection.
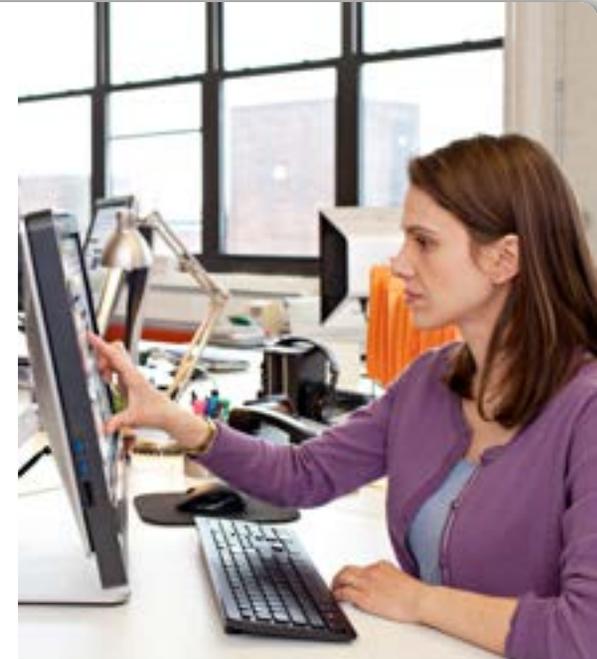
Benefits of Windows in a healthcare setting

Perhaps the single most important reason to upgrade to Windows 7 or Windows 8 is a vastly improved Windows security model compared to Windows XP.

Consider a medical analogy. If you're continuing to use Windows XP in the world of modern computer contagion, it's like entering a hospital room to provide care for a patient with MRSA without donning gown, gloves, and mask, and then neglecting to perform hand hygiene before leaving the room. Upgrading to Windows 7 or Windows 8 is the equivalent of taking proper precautions for your fleet of PCs.

Of particular interest to enterprise healthcare providers, Windows 7 and Windows 8 include native biometric support in the form of the Windows Biometric Framework. This provides a standardized programming interface and device interface for a variety of biometric devices, most notably fingerprint readers.

From an operational point of view, one of the most obvious benefits is that Windows 7 and Windows 8 will work on modern, high-performance hardware. Windows 7 added native support for solid state drives, including changes which reduce how many writes and flushes are sent to the SSD, along with better tools for managing them. Windows 8 builds on that by adding deep support for touch-based, tablet, and mobile computing.

Boot performance has also improved considerably, and systems now support Instant On with Connected Stand-By Mode, a huge time savings for users. Saving time may mean saving lives in a patient care environment.

To most Windows users, the biggest changes with modern Windows environments are in the experience. There are literally hundreds of small and large user experience tweaks, all of which can make everyone's day a little more productive, and the experience of using Windows a little more enjoyable. Windows 8 takes that experience to an entirely new tablet- and touch-oriented level with the new, modern design language and live apps and tiles.

Windows 8 provides comfortable touch devices protected seamlessly by robust end-to-end security

When it comes to advances in mobile medical computing, nothing beats the combination of Windows 8 and touch-enabled secure devices like the Dell Latitude 10 tablet, XPS 12 convertible Ultrabook tablet, or a highly mobile non-touch enabled Latitude 6430u Ultrabook.

Medical professionals can be more productive and responsive to patient needs by integrating extremely mobile, and in some cases touch-enabled, enterprise-class secure devices within the healthcare setting. The new tile-oriented modern user-interface could provide medical professionals with the ability to survey their entire scope of practice with a single glance. Tiles serve as launchers and widgets at the same time. New apps can be written in traditional programming languages or HTML and JavaScript, providing hospitals with the ability to easily customize mobile clinical display devices to their specific needs.

Consumer tablets certainly will find their way into medical facilities, especially in organizations that are more open to supporting clinicians' BYOD inclinations. Yet, nothing beats the robust security and end-to-end vertical integration of Windows 8 tablets into enterprise-class information systems. You can best leverage the power of SharePoint, Microsoft Office, and Microsoft Lync secured messaging tightly with your Windows 8 tablet environment.

Windows 8 supports a wide variety of input modes, including touch, stylus, voice, keyboard and mouse, and even the completely contact-free Kinect. Using this wide array of input possibilities allows for ultimate flexibility, from the familiar tablet finger movements, to stylus input for authorization signatures, to the ability to control a computer hands-free from within a highly-sterile environment.

Windows 8 is the ultimate in flexible, responsive, and robust operating systems, available on the smallest tablet to the largest display. It's designed from the ground up to integrate seamlessly with your IT infrastructure.

Knowledge is opportunity

No matter how well you prepare, the migration of an entire health enterprise from a highly-entrenched Windows XP to Windows 7 or Windows 8 will be a bit of a challenge. Fortunately, today's hardware has far more bang for your buck than ever before. Dell's upgrade teams will hold your hand every step of the way, and the resulting systems and software will be far more reliable, easy-to-use, and productive than anything you've run before. In terms of user satisfaction, increased productivity, reliability, security, and even return-on-investment, the results will be more than worth the effort.

Start your migration by upgrading a manageable number of users at a time. Consider implementing an early adopter program with enthusiastic users willing to test and champion newer technology. Taking your time will help you control costs, learn where there are challenges, streamline the process, reduce stress, and create reference customers within your own organization.

Next, it's time for application discovery. Dell can help automate this process using a discovery agent that can catalog every executable running on each PC. Once you know what you have, it's time to decide which applications, enterprise-wide, should be retained, which should be replaced, which should be upgraded, and which are mission-critical but somehow locked in time. In addition, investing in application remediation from XP to Windows 7 lays the groundwork for an easy transition from Windows 7 to Windows 8. In addition, those XP-to-Windows 7 remediated applications will inherit legacy application support on Windows 8 tablets.

It also may make sense to consider virtualizing desktops. Desktop virtualization is the process by which the Windows desktop doesn't run on the local computer, but is, instead, a virtual machine instance running on a Windows Server 2008 R2 or Windows Server 2012.

Finally, try to install off-shift, use your users to help out, port everything on a given machine at once, zero out your old hard drives, and appoint "deputies" (these may be your early adopters, who can now help others with the migration).

Boost IT efficiency with more capable desktops and mobile devices

Windows 7 and Windows 8 add a tremendous number of features, and both are more streamlined and efficient than previous versions. No matter where you look, you'll find a well thought-out new productivity feature here, a new capability there, a new safety and security consideration somewhere else. In the case of Windows 8, it's all streamlined with a modern UI designed for the mobile professional.

Without a doubt, Windows 8 is Microsoft's most ambitious desktop operating system yet, and running on Dell hardware, a modern Windows environment will provide the best desktop and mobile environments available to your users.

Migration is always a bit of work, but with good planning and a good attitude, it can ultimately be hugely rewarding in terms of monetary savings. Plus, a Windows 7 or Windows 8 migration can substantially improve your entire staff's quality of work life. Many healthcare providers are deployed on Windows XP or other technologies that are more than a decade old. Operating systems have come a long way since then.

As you've seen, running Windows 7 and Windows 8 on Dell PCs can vastly increase security, transform task management, improve overall productivity, and reduce both cost and stress.

Learn more
Each page in this guide is chock full of fascinating resources and ways for you to learn more about how Dell and Windows can benefit your healthcare enterprise. Just click a page and then visit any or all of the resources in the boxes on the right.

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