



DESKTOPS FOR THE FUTURE

A Windows 7 upgrade creates streamlined desktop environments primed for virtualization, cloud computing and other next-generation technologies

As the economy moves farther from the recession and slowly makes a recovery, indications are that businesses are ready to increase IT spending. And while there may be a long list of IT projects vying for funding, companies would do well to apply some of that cash to updating their desktop operating system to Windows 7. In short order this will transform their desktop environment and set the stage for next-generation IT, including desktop and application virtualization, cloud computing, mobility and consumerization. Upgrading to Windows 7 also will ease the path to Windows 8, due out later this year.

There's no question that enterprise IT shops have been in a holding pattern, but things are improving. Computer

Economics, in its 2011 IT executive survey of 157 organizations worldwide, "Outlook for IT Spending and Staffing in 2012," concluded that while in 2010, 42 percent of IT organizations had reduced their IT operational budgets, only 22 percent had cut them in 2011. So, things are stabilizing.

However, tightened budgets are only one part of the desktop story. Many organizations still run Windows XP. In March 2011, Forrester estimated in its report, "Corporate Desktop Operating System and Browser Trends, Q2 2010 to Q2 2011," that 60 percent of corporate desktops were still running Microsoft's aging operating system. It's likely that less-than-stellar experiences with Windows Vista, XP's successor, were also responsible for slowing Windows 7 adoption.

Too Late for XP, Too Early for Win 8

But time is running out for XP. According to the Info-Tech Research Group, final support for Windows XP will end by April 2014, and application and driver support will largely cease before then. The research firm also recommends that organizations currently on Windows XP move to Windows 7 by 2012 to avoid the costs associated with a lack of support for the OS and applications. In fact, Microsoft has said that after April 8, 2014, it will not issue any new security updates, nonsecurity hotfixes, free or paid assisted-support options or online technical content updates. After that, an organization faces potential vulnerabilities and risks. In addition, independent software vendors (ISVs) and hardware makers are also likely to end their support of Windows XP. Organizations running XP beyond 2014 can expect to pay up to \$200,000 per year for security patches and support from Microsoft, according to Info-Tech Research.

A Windows 7 Upgrade:

- Modernizes desktop environments.
- Streamlines applications, removes redundancies and sharpens license management.
- Stabilizes the OS platform for virtualization, cloud and mobility.
- Transitions desktops of Windows XP, which Microsoft will stop supporting by April 2014.
- Sets the stage for Windows 8, due out late 2012.

Of course, it's no secret that Microsoft is readying its next-generation OS — Windows 8. The beta version was just released, and a tablet version was featured on numerous Ultrabook and tablet demos at the CES 2012 show in January. Industry experts expect a commercial version of Windows 8 for laptops and PCs

to hit the market sometime in the third quarter of this year. Much of the buzz around the new OS says that it is expected to offer a brand new interface optimized for both desktop and touch screen-enabled mobile devices.

But waiting for Windows 8 really isn't an option for enterprises still running older OSes. Nor is jumping on the new OS as soon as it's available, at least not until it has proven its mettle. "My simple guidance for most organizations for the next 18 to 24 months would be to move to, or stay on, Windows 7 and not move to Windows 8," says Mark Tauschek, lead research analyst with Info-Tech Research Group. "Windows 7 is now considered a stable OS with a service pack, while Windows 8 will be new and likely still have bugs and application and hardware compatibility issues upon release."

Laura DiDio, principal of Information Technology Intelligence Consulting (ITIC), says that while upgrading to a new desktop OS should be done only if there are clear and compelling business drivers, organizations that are "two, three or even four revs behind should definitely migrate. If your current OS is old or no longer supported, such as with Windows XP, it will cause performance and reliability issues and be much more problematic and time consuming for IT managers and network administrators to manage and troubleshoot."

Cleaning House, Creating Efficiencies, Cashing in on Features

An enterprise desktop refresh and upgrade to Windows 7 also lets organizations clean house by standardizing desktops, streamlining applications, removing redundancies and sharpening license management strategies. When global business intelligence and data analytics solutions provider SAS began its move to Windows 7 in the fall of 2009, the decision was part of an overall effort to improve efficiency. SAS chose Dell desktops, all with at least 8 gigabytes of RAM, and began deploying Windows 7 Enterprise 64-bit to all of the company's client endpoints.

Time for Windows 7 A Desktop OS Upgrade Offers a Number of Advantages		
Transform	Improve	Innovate
Revisit desktop hardware and upgrade as needed.	Cut operating expenses related to energy, maintenance and management.	Stabilize the desktop computing environment so it is ready for next-gen technologies.
Address application incompatibilities, redundancies and inadequacies.	Speed productivity with more-efficient hardware.	Capitalize on new features in Windows 7 that align with desktop virtualization.
Streamline driver updates and user access controls.	Increase customer satisfaction with streamlined and more-effective application performance.	Capitalize on new features in Windows 7 that enable application virtualization.
Advance system management and configuration capabilities.	Optimize IT and help desk resources by improving maintenance and management tasks.	Free up budget and staff by eliminating inefficiencies that can then be applied to strategic IT projects.
Standardize across the enterprise to streamline maintenance and management.	Sharpen asset management and licensing management and save money with updated contracts.	Align the desktop operating system with burgeoning mobility and consumerization of IT trends.
Review licensing contracts and sharpen asset management and licensing programs.	Modernize IT security, management, connectivity and other critical operations with Windows 7 enhancements.	Ease the transition to Microsoft's next-gen OS, Windows 8, which is due out later in 2012.

SAS' Best Practices for a Successful Windows 7 Upgrade

- Get business units involved early — at beta stages — to ensure their apps are compatible.
- Leverage virtualization — desktop or application — to address incompatible software & legacy app needs.
- Conduct hands-on “first look” events that allow staff to see the OS before it lands on their desk, and to ask IT staff questions.
- Conduct demo sessions showing people the key benefits, features, and “tips and tricks” of the new OS to get them excited about migrating.
- Be proactive in sharing information. Let people know what’s coming, what they should expect and why they should move. Follow this up with good documentation to allow self-support.

Source: Brent MacDonald, global IT manager, enterprise client software technologies, SAS

As Brent MacDonald, SAS' global IT manager, enterprise client software technologies, describes it, employees were eager to migrate to Windows 7, and the refresh enabled the company to make a number of other changes in its IT environment, including upgrading legacy software, introducing new policies and eliminating extraneous software. To prepare, the IT team tested various versions extensively to uncover and address any compatibility issues they might run into with production deployment. In January 2010, deployment started in earnest, says MacDonald. In total, SAS had 17,000 Windows machines that needed upgrading. To date, SAS has migrated 92 percent of its machines to Windows 7.

Among the many benefits MacDonald points to is global standardization. “Windows 7 allowed us to deploy a single version of the operating system in English to all global machines, and allowed users to apply additional multilanguage user interface (MUI) packs to change the display language,” he says. “This simplified our global build, and opened the door to further standardization.”

Similarly, Betfair, which owns and operates one of the world's largest Internet betting exchanges with more than three million registered customers, moved to Windows 7 on Dell machines to improve application performance, enhance security and energy efficiency, and simplify maintenance. With Windows 7, the company says it has enhanced desktop laptop security by using the built-in disk encryption, which also has eliminated the cost and management overhead of a third-party solution.

“Manageability is another big reason to move,” notes ITIC's DiDio. “Windows 7 has many more built-in management features than prior versions of the OS. Organizations might also feel more comfortable moving to Windows 7 because it's been shipping

for over two years now and it's a known quantity — most of the kinks have been worked out.”

At SAS, the migration enabled the company to rethink some of the software it had deployed, as well as to consider software agreements. New features in Windows 7 eliminated the need for software installs such as voice recognition, and in other cases SAS was able to end license agreements and migrate to different software. “As we were already taking over central management of Windows 7, we were able to also take over central management of other software agreements and software deployment,” notes MacDonald, adding that the upgrade helped SAS achieve economies of scale in its license agreements.

The upgrade also triggered application discovery and compatibility testing. “For some groups, Windows 7 created a business driver for them to rework older systems with new technologies,” MacDonald says. According to MacDonald, SAS' IT group prides itself on maintaining a very cutting-edge work environment, “so many of the applications deployed were already at or scheduled for upgrade to the latest compatible version.”

Info-Tech Research points to a collection of features inherent in Windows 7 that make it an attractive client computing OS environment. For example, a consolidated search function lets users search for files on their desktops, the network or on the Internet from a single search. The enterprise edition of Windows 7 offers enhanced security features, such as BitLocker and AppLocker, to ensure security of corporate data and application control. BitLocker encrypts the contents of hard drives on desktops and laptops that have Trusted Platform Modules (TPMs) embedded in



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hardware, while AppLocker lets IT exercise control over the applications users are allowed to install and run, and it also defines specific applications and digital signatures that users can install autonomously, reducing the need for constant IT support.

Equally important, an OS overhaul to Windows 7 gives organizations the opportunity to refresh their PC hardware. According to Info-Tech Research, most desktops and laptops manufactured

in 2008 or later will run Windows 7 without issue. In fact, even older hardware (up to five years old) will run Windows 7 32-bit handily, but there is some risk of driver incompatibility. Both SAS and Betfair took the Windows 7 migration as an opportunity to replace aging desktop hardware.

Setting the Stage for the Future

A desktop and OS refresh to Windows 7 does more than clean house, increase efficiencies and improve security, management and licensing. It primes IT enterprises for innovation. For starters, a move to Windows 7 provides an opportunity to consider other client computing models, including client virtualization solutions. Its enhanced protocols for multimedia, and new access and security models, make it a stable foundation for client virtualization implementations and beyond that, cloud computing. And there's no doubt that Windows 7 provides IT with a more modern, robust OS



— a must-have as organizations transition operations into cloud-based environments that promise additional efficiencies and flexible yet comprehensive computing resources.

With server virtualization projects well under way at many organizations, desktop and application virtualization is gaining ground. Windows 7 migration will be part of that traction. In a Forrester Research study commissioned by IT services and solutions provider Dimension Data, which is headquartered in Johannesburg, South Africa, last fall, 21 percent of the survey respondents said they are prioritizing desktop and application virtualization. Another 29 percent of firms are standardizing around Windows 7 and desktop virtualization. The study also found that while most organizations' existing deployments of desktop virtualization touch fewer than 500 employees today, they have plans to scale these deployments to thousands — and ultimately tens of thousands — of users over the next two years. Forrester points out that because major OS transitions — such as that of Windows XP to Windows 7 — require adjustments to a significant portion of applications, there's never going to be a better time to tie desktop and application virtualization technologies to organizations' upgrade plans.

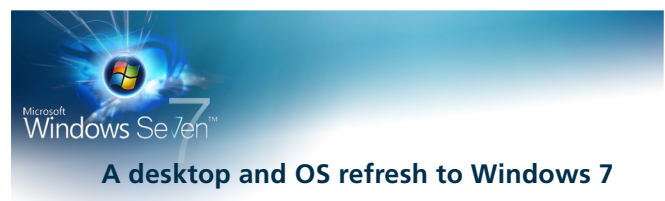
Desktop virtualization promises a number of benefits, among them reduced power consumption, streamlined provisioning, faster recovery from software configuration mishaps, and improved security and compliance. Because it allows IT to maintain a base configuration of the desktop image through

version-appropriate OS, .NET, IE, browser and security patches that individual users can't tamper with, desktop virtualization simplifies desktop management and reduces the cost of maintaining client-based applications. Global outsourcing services company Infosys Technologies became an early adopter of the Windows 7 Enterprise operation system, and the upgrade has enabled the company to begin its move toward desktop virtualization. Infosys has already used the virtualization features that work with Windows 7 to virtualize training applications in the Infosys Global Education Center in Mysore, India, a 337-acre campus that can train as many as 14,000 employees at any given time. The virtualization features have reduced the time Infosys needed to prepare desktop PCs for training purposes.

For SAS, the 64-bit version of Windows 7 enabled the IT team to begin reclaiming secondary systems needed for testing and development purposes and replacing them with locally hosted virtual machines. "Under Microsoft's licensing terms, we were able to deploy up to four client OS virtual machines on each PC," says MacDonald. "This helped SAS recoup substantial costs in terms of supporting additional physical hardware."

Application virtualization, too, promises a number of benefits. With application virtualization, which in essence encapsulates the applications from the operating systems and streams them to the PC, organizations no longer have to install and reinstall applications, nor do they have to spend inordinate amounts of time resolving application conflicts (since the applications resources are isolated). When end users have to transition to a new machine, there is little to no downtime, and IT shops are able to more rapidly deliver more applications to more users, in more places.

Windows 7 also offers up features for mobility and sets a stable platform for the consumerization of IT — two technology trends that are top of mind for many IT executives. In fact, according to a Gartner survey done in January 2012, 61 percent of respondents say they will be improving their mobile capability over the next three years. Among the enhanced mobility features



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are a simpler process for connecting wirelessly, VPN Reconnect, which allows Windows 7 to automatically reestablish active virtual private network connections when Internet connectivity is interrupted, and a mobile version of the security function BitLocker. Called BitLocker To Go, the mobile version encrypts and protects data on removable media.

According to SAS' MacDonald, Windows 7 is paving the way for new technologies to be introduced into the organization. SAS is conducting a pilot in conjunction with Microsoft to evaluate Windows 7 and Office OneNote on tablet devices, to provide a paperless alternative for employees who currently take extensive notes on paper.

The Right Time for Windows 7

Among the numerous reasons for upgrading the enterprise desktop OS, and by extension, the PC computing hardware, there is probably one that rises to the top: timing. With the battered economy finally on the upswing, enterprise IT departments are finding more room in their budgets to tackle much-needed projects such as an OS refresh. And a desktop OS refresh is just what's needed when every dollar counts and every minute matters. After all, OS upgrades enable organizations to rethink and restructure their entire desktop infrastructure into more efficient and productive environments. SAS, for example, used its migration to Windows 7 to upgrade legacy applications, cut

out extraneous software and achieve economies of scale in its license agreements, among other improvements.

Moving to Windows 7 also lets organizations start taking advantage of virtual desktops and applications, as well as cloud computing — technologies that are top of mind for many IT executives. With mobility becoming a central issue for organizations as well, Windows 7 features technology that makes it easier to support mobile computing. Windows 7 also paves the path to Windows 8, Microsoft's next-generation OS expected out late in 2012. There's no better time than now to move to Windows 7. ■

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