



I D C T E C H N O L O G Y S P O T L I G H T

Migrating to Windows 7? Technology Points to Consider

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Adapted from *Worldwide IT Asset Management Software 2009–2013 Forecast and 2008 Vendor Shares* by Frederick W. Broussard, IDC #221076 and *Deployment Opportunities for Windows 7* by Matt Healey, Al Gillen, and Cushing Anderson, IDC #223694

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To date, Windows XP is the most widely deployed Windows client operating system (OS) in the industry. According to IDC, there were 435 million genuine (nonpirated) copies of Windows XP in use at the end of 2009. As support for XP comes to an end, migrating to the Windows 7 operating system is the strategy of many organizations.

Indeed, according to a recent survey conducted by IDC, 64% of respondents in North America plan to migrate current Windows XP clients by replacing both the hardware and the operating system, migrating only the OS, or moving to a thin client or desktop virtualization environment. Most respondents indicated that they had already begun to migrate to Windows 7 or would be beginning to migrate to Windows 7 in the next six months. Of the 390 IT professionals surveyed, 48% said that their company has already started to use Windows 7, and 39% said that a formal migration program is already under way. Further, 89% of those companies surveyed said that they have definitive plans to begin a migration in a 24-month period. IDC believes that this is due to pent-up demand for new client technology as a result of the extended refresh cycles caused by the economic downturn.

As organizations migrate to Windows 7, many are looking to streamline the process for both IT and end users. Using endpoint management and other automated tools can enable organizations to reduce the complexity and costs associated with migrating client PCs to a new operating system. This Technology Spotlight examines how endpoint management and related technologies can be used to streamline the migration process and discusses the role that Novell plays in this increasingly important market.

Introduction

With time running out on the extended support Microsoft will be providing for Windows XP, the time is right for many XP customers to migrate to Windows 7. In fact, most companies in a recent IDC survey said that they have firm plans in place to begin migrations to Windows 7 within two years.

However, while the decision to migrate to Windows 7 is relatively straightforward, the process of migrating can be rife with IT complexity, end-user disruptions, and added costs. Available RAM, the state of software licenses, and the compatibility of existing applications are among the issues IT needs to consider when migrating to Windows 7. Without careful planning, migrating to a new operating system can be disruptive to both end users and the business and can create an environment that leaves PCs and servers without patches or updates and, therefore, less secure than before. The resulting fixes can lead to added expense, creating an unsecure IT environment, user dissatisfaction, and productivity loss, as well as delaying efforts that depend on PCs for timely delivery to market.

Windows 7 can be deployed using the same approaches that were used with Windows XP, but those outdated approaches fail to prepare organizations to benefit from reduced management costs and more efficient client-side management. One way to mitigate the disruption and risks inherent in an operating system migration is to do comprehensive planning. Ideally, an IT organization embarking on a major migration should break planning down into a three-phased approach:

1. Begin with an assessment of the environment.
2. Carry out the actual migration.
3. Conclude with ongoing management.

To streamline the entire migration process, from assessment to ongoing management, IT organizations can turn to technologies that automate various facets of migrations. For instance, endpoint management tools like asset management software and configuration management software enable IT to automate and streamline migration processes by providing a holistic view of IT assets and centralized life-cycle management, respectively. This view allows IT departments to create an IT service management capability within their organizations based on the need to provide easy-to-access, repeatable, and cost-effective services for the business and the users.

Specifically, IDC has done significant research on the topic of infrastructure optimization. Over time, operating systems and the application portfolios they support diverge into what eventually is a collection of instance-unique machines. As system diversity increases, the ability of IT to successfully centrally deploy new applications, patches, and fixes diminishes. The result is that management is compromised, agility is reduced, and end users experience more frequent and longer outages due to system configurations. Use of change and configuration management tools, along with tighter management policies, can help prevent this scenario.

IDC sees application compatibility as one of the most pressing concerns for end users when planning for a migration to Windows 7. There are a number of solutions to application compatibility, including replacement of applications, repair of problem applications, and use of modern solutions such as application virtualization to overcome incompatibility issues. Indeed, migration to Windows 7 may provide a boost for application virtualization. Windows 7 introduces application compatibility challenges that can be overcome by some of the application virtualization solutions on the market today.

IDC research has noted that security remains a top concern for IT executives and organizations managing their IT environments. The threat to the IT environment from directed attacks, as well as from spyware, viruses, and other malware, means that IT executives require solutions that integrate secure approaches to management and securely manage the IT environment.

Finally, IDC expects service desk software to be a core focus of IT managers who want to systematically address security and management concerns within their IT infrastructure to track and handle incidents and problems and to provide self-service support in the form of service catalogs and service management. Much of the innovation will continue to be driven around core change and configuration control capabilities, especially for automated provisioning and life-cycle management of physical and virtual systems. IT managers will need to provide value-added capabilities for financial management, deriving from the ability of the service management solutions they build to automatically discover and inventory IT asset and software license information.

Definitions

Key market drivers for asset management continue to be the need for accurate IT asset discovery and inventory information, software asset management (SAM) maturity (which is increasing as IT organizations steadily improve the identification and management of physical and virtual assets), and contract and vendor management/consolidation. Influencers of growth also include IT service management use cases such as client or server provisioning/deprovisioning, server consolidation/virtualization, and process-based management systems, such as ITIL, and the ability to lower IT operations costs through process standardization.

IT asset management software includes the following functions:

- Discovery/inventory is the initial discovery of hardware and software within the environment.
- License management monitors and controls the total company seats of software for acquiring and managing the company's software and its allocation.

Change and configuration management software provides management of system, client, desktop, and peripheral hardware and software assets but not network devices. Software for planning, tracking, and applying system hardware and software changes is also included, as is software distribution, hardware and software discovery and inventory, license management, asset management, settings and state management, and auditing.

Application virtualization is defined as software that encapsulates and isolates an application from its underlying host operating system, as well as from other local applications running within a client environment.

Service desk solutions use a problem and incident tracking management and resolution system to collect incidents reported to the service desk, as well as facilitate incident analysis or request new services.

Benefits of Automated Tools

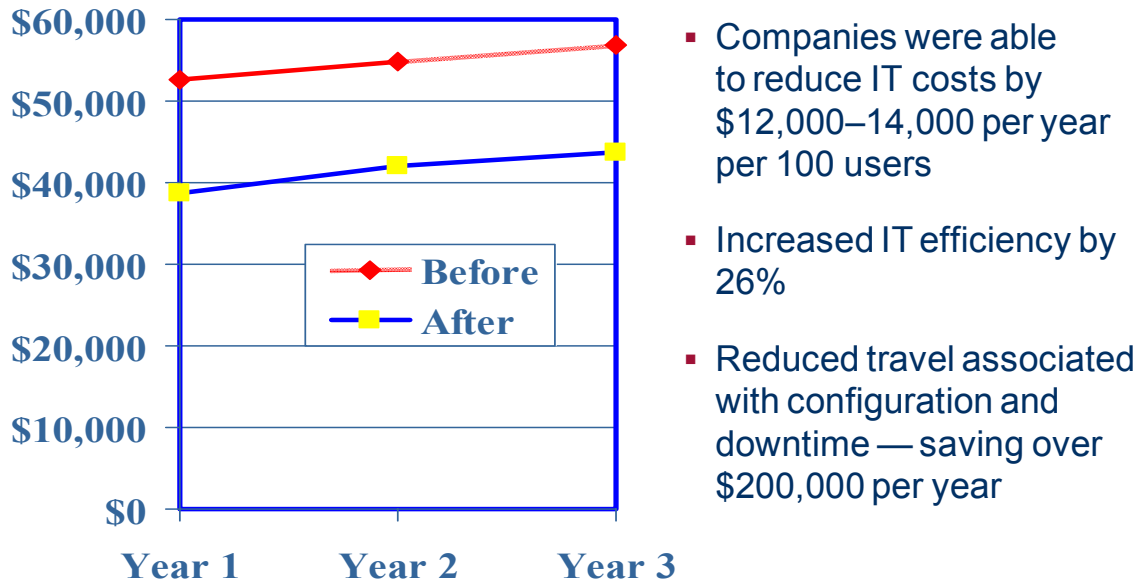
To best manage a migration to Windows 7, IT departments must first start with knowledge of the hardware and software configurations of the existing IT infrastructure. IT shops frequently start with the need to determine existing hardware and software configurations of laptops and desktops. Small organizations can determine these configurations relatively quickly by physically visiting machines, but once an organization has more than 100 PCs, this task becomes more difficult. Further, with more computers, it is important to know what software application licenses have been purchased or how many more are needed. IT asset management software can speed the discovery of the PCs and servers on the network and quickly put the information into a database for easy retrieval and review.

Once the asset information has been discovered, it can be used by other applications, such as event automation, software distribution, or service desk solutions, to further other IT department objectives. IT can then create automated processes that can leverage this information to speed execution of repetitive tasks, thereby lowering costs as well as easing IT workload over the long term. Automating asset management with configuration management and application virtualization can result in a number of benefits, including the following:

- **Lower IT costs.** As a result of having standardized system configurations and automated processes, costs can be reduced. According to IDC research, companies that used automated configuration management software were able to reduce IT costs up to \$14,000 per year for every 100 PC users. Ultimately, these cost savings directly translate to lower costs associated with Windows 7 migrations (see Figure 1).

FIGURE 1

Cost Reductions as a Result of Using Automated Configuration Management Software



Source: IDC, 2009

- **More streamlined migrations.** Application virtualization is one technology that speeds the Windows 7 migration process simply because applications can be configured to provision themselves onto PCs as users log in or at the first touch of the application. As a result, desktops and laptops can be configured with a base operating system image, and part — or all — of the application portfolio can be delivered automatically.
- **Minimizing business disruptions.** Having a better-managed and more recoverable client infrastructure means that business outages will be minimal in number, and when they do happen, they will be shorter in duration.
- **Having known and standard system configurations.** With known system configurations, it is easier for IT to deploy new applications or change system settings, with a predictable outcome, because there are few or no nonstandard configurations.
- **More satisfied end users.** Reliable systems running with known and easily maintained configurations lead to fewer disruptions for end users, so they can be more productive. When end users are more productive, they are more satisfied with IT as a result.

Product Profile

Novell Inc., is a Waltham, Massachusetts–based provider of diverse software products and services aimed at the operating systems and infrastructure components of the IT industry. To help organizations better manage the migration to Windows 7, Novell offers five products in the ZENworks family:

- Novell ZENworks Asset Management is designed to provide a comprehensive view of an organization's IT assets ranging from inventory to software usage and license management. According to Novell, ZENworks Asset Management can enable IT managers to determine which devices support Windows 7 and which applications are compatible with Windows 7. In addition, ZENworks Asset Management can provide insight into hardware leases and contracts to better manage PC upgrades, track usage, and keep tabs on software licenses.
- Novell ZENworks Configuration Management's unique identity-based management capability is designed to handle various configuration functions such as software distribution, OS imaging, and remote management. By automating configuration, ZENworks Configuration Management enables IT administrators to deploy Windows 7 to target machines and efficiently reapply end-user settings, thereby minimizing disruption.
- Novell ZENworks Application Virtualization is designed to eliminate application conflict and compatibility issues as organizations migrate to Windows 7. The software accomplishes this by converting Windows, .NET, and Java applications into self-contained Windows executable files. According to Novell, ZENworks Application Virtualization reduces testing and deployment times for Windows 7 applications and can improve employee productivity by enabling employees to take applications with them via a USB drive or stream the applications over the Web.
- Novell ZENworks Patch Management automates patch management and is designed to ease the security tasks of the IT staff. The software automates the process of discovering security alerts, retrieving patches, and deploying the appropriate patches to the right machines before problems occur.
- In addition, Novell offers Novell Service Desk (designed on ITIL v3 principles), a tool that automates service desk functions and is designed to streamline ongoing desktop management. Configurable workflows encompass critical support areas including request, fulfillment, incident, problem, and change management. Novell Service Desk includes a federated CMDB that can enable IT departments to gain visibility into the IT infrastructure that provides the foundation for business services.

In addition to being available as individual products, Novell's ZENworks Asset Management, ZENworks Configuration Management, ZENworks Application Virtualization, and ZENworks Patch Management are offered as the Novell Endpoint Management Suite.

Challenges

Despite what organizations indicate in terms of migrating to Windows 7, the operating system is still brand new. As a result, organizations may pilot and test Windows 7 before tackling full-scale migrations. To an extent, the success of Novell's ZENworks products hinges on the value organizations place on Windows 7. Another factor that Novell has to address is the inherent difficulties organizations face when going through a migration process. Many organizations may not have the budget available. Novell must demonstrate through use cases the ROI of automation to convince prospective customers that the cost of investing in ZENworks will be significantly less than the cost of handling migration processes manually. In addition, Novell has to contend with other vendors that offer products aimed at easing the migration to Windows 7. To compete effectively, Novell has to convince customers that there is value in turning to a single vendor that offers integrated point products.

Conclusion

As with Windows XP, Windows 7 is likely to be a very long-term deployment and will likely be heavily used. As a result, any deployment decisions that IT professionals make today are likely to have deep and long-term implications from both a security standpoint and an operations standpoint. Consequently, it is critical to make sure the migration to Windows 7 is accomplished as efficiently and cost-effectively as possible.

One way to mitigate risks and streamline migrations to Windows 7 is to automate the various tasks involved in such migrations. Identifying existing IT assets, centralizing life-cycle and configuration management, deploying application virtualization technologies, and servicing potential Windows 7 help desk requests are among the approaches that organizations may take to reduce the issues involved when migrating to a new operating system.

If Novell can address the challenges highlighted in this paper, IDC believes that the company has a good chance to succeed in the market for providing technologies to ease the migration to Windows 7.

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