

7 Steps to Windows 7

Ensuring a smooth transition
and sustained business value
from your Windows 7 migration

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Planning your Windows 7 migration

Migrating to Microsoft® Windows® 7 can be intimidating. You want to take advantage of new Windows 7 productivity, security, and control enhancements—but at this scale, how can you keep your migration efficient, cost-effective, and sustainable, while protecting end-user productivity?

But your migration can be an opportunity as well as a challenge. It's the perfect time to clear out leftover stopgaps, workarounds, and inefficiencies from earlier implementations. Windows 7 is your chance to wipe the slate clean. On-demand, user-based provisioning combined with standard configurations and structured change management procedures help you release the full power of today's hardware and software, and lock in the long-term rewards of a manageable, sustainable environment.

Symantec can help you meet the challenge—and capture the opportunity. Our migration and deployment solutions streamline processes to cut the expense, delay, and disruption of your migration—and keep you in control. And when you apply those savings to advanced Symantec solutions for security, virtual environments, data protection, and management, you secure not just the one-time rewards of a smooth migration, but long-term reliability, productivity, and security from an up-to-date, efficient, manageable IT environment.

Symantec has deployed more than 300 million desktops and notebooks to Windows 2000, XP, Windows Vista®—and now Windows 7. And Symantec engineers have built a decade of experience into every Symantec solution, with powerful hands-free, fully-automated technologies that help you turn your migration challenge into a triumph.

Why migrate?

Industry analyst IDC estimates that by the end of 2010, 19% of the global IT workforce will be running Windows 7¹—and if history is any guide, it will be the preferred business platform in a very short time. Initial reviews of the platform support these predictions, and its capabilities justify them:

- **Productivity features** like Libraries and Federated Search accelerate housekeeping and other routine tasks so users can focus on contributing real value
- **Security enhancements** such as BitLocker and AppLocker isolate and protect critical information and system assets from theft, loss, and corruption
- **Connectivity improvements** such as DirectAccess and BranchCache deliver on Microsoft's promise of secure, trouble-free access across the LAN and beyond

And with Windows 7, Microsoft has taken care to avoid migration and deployment issues that compromised earlier OS releases. The platform runs well on most Vista-capable hardware, and Microsoft provides XP Mode, a virtual instance of Windows XP, to run on top of Windows 7 as a temporary "island" for running aging but indispensable legacy applications during the transition. Microsoft makes a comprehensive business case for Windows 7 here: <http://www.microsoft.com/windows/works-the-way-you-want.aspx>.

1-Pamela Passman. "How will Windows 7 impact the global economy?" Microsoft on the Issues. (Redmond, WA: Microsoft Corporation, July 15, 2009); <http://microsoftontheissues.com/cs/blogs/mscorp/archive/2009/07/15/how-will-windows-7-impact-the-global-economy.aspx>.

The Symantec approach to Windows 7 migration

Now what about the migration challenge? In the past, migration meant collecting inventory and configuration data by hand, pasting together solutions from individual parts, writing and testing scripts to handle endless contingencies and dependencies, plus a thousand other dull routines that drain time, energy, money, motivation, and executive patience. Symantec takes a different approach, combining world-class technologies into solutions that handle the busywork so you can concentrate on issues, not details.

- **Integration**—Symantec solutions don't just push an OS image. First, they inventory hardware and software, assess configurations, capture application settings and user data. After imaging the PC, they install packaged applications on the PC conditionally according to user or role, and then reconfigure the migrated computer—all from a single console. This integrated approach eliminates custom scripts and unnecessary help desk support calls, because when the migration is done, the machine is ready to use.
- **Automation**—Few organizations have the time and personnel for a step-by-step manual migration, so Symantec designed tools to automate the process from end to end. Take your lead from thousands of Symantec customers who have migrated millions of computers in just one job, using a single, hardware-independent image—often remotely, without ever touching the computers being migrated.
- **Forward-looking technology**—Symantec delivers native support for sector- and file-based imaging, plus the WIM image format introduced with Vista. Start your migration from wherever you are—Vista, XP, or even Windows 2000 machines—based on business needs, not software limitations. Then deploy simple, standard images with software and configurations appropriate for your environment. As the key deployment partner for Dell, HP, Fujitsu Siemens Computers and IBM, Symantec supports their most advanced hardware-based management technologies—Wake-on-LAN, PXE, and Intel® vPro™ and more—so you can take full advantage of your hardware investments and perform migrations during evenings or off-hours.
- **Post migration management**—Your migration project will create all the pieces you need to build full management capabilities into your infrastructure. Take full advantage, with Symantec automation that will help you secure and manage your IT resources long after your migration is complete, and on-demand delivery for less frequently used applications.

Only Symantec integrates automated, up-to-date migration and deployment solutions backed up by years of experience with over millions of deployments, and then delivers a comprehensive range of endpoint and data protection, endpoint virtualization, and management solutions to help you lock in your success.

Getting started with your migration strategy

A smooth migration requires a sound plan as much as an integrated, automated solution—and preparing your team is an essential part of that plan. As you prepare your Windows 7 migration, be sure to:

- **Communicate**—Successful migrations depend on coordination across an organization. Identify who needs to see or approve components of your plan, and then plan when and how you will keep them informed and involved.
- **Set expectations**—Even a good result can seem like a failure if expectations are undefined or unrealistic. Work with key stakeholders to understand their objectives and agree on achievable goals and milestones.
- **Identify "targets of opportunity"**—Look for ways to use your migration to improve and automate processes, and improve standardization, management automation, compliance and security. Consider:
 - Defining and implementing computer naming standards
 - Standardizing software versions
 - Resolving security vulnerabilities
 - Harvesting and consolidating software licenses
 - Adding capabilities for client and asset management
 - Implementing information management technologies to back up data
 - Software delivery alternatives such as software virtualization and streaming
- **Stay focused**—migrations present natural opportunities to improve, but watch out for out-of-scope distractions like network upgrades. Stay focused on migration-related projects to avoid costs and scope creep that can jeopardize your success.

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Based on our experience with other OS migrations and the capabilities and opportunities presented by Windows 7, Symantec has developed a 7-step process:

1. Assess your environment and plan deployment
2. Build standard OS images
3. Prepare your applications
4. Capture user settings and personality variables
5. Assemble the pieces and automate your migration process
6. Migrate systems
7. Measure and report

The process is heavily weighted toward the "build and test" activities of steps 2 through 7, rather than the final migration itself. Symantec's experience has proven that relatively small investments in tools and preparation pay generous returns during the execution phase and beyond.

1 – Assess the environment and plan your deployment

The first step includes discovering and evaluating patterns of hardware, software, and application use in your end-user environment, and identification of network and management issues you plan to address. Symantec solutions help with pre-built reports that help you determine hardware readiness and overcome infrastructure barriers for a smooth migration.

Reliable, current information about hardware, software deployment and use, and network assets helps you plan when to migrate, and assemble the resources you will need. Once you know your network's physical requirements and topology, you can build a deployment plan that minimizes coverage gaps and unpleasant surprises. Finally, be sure to address business issues and cycles in your plan: misunderstandings about timing, costs, and service levels can compromise even a technically perfect migration.

- **Discover** devices across your network
- **Scan** to inventory hardware and software
- **Monitor** actual application use for license optimization and re-harvesting opportunities
- **Create and analyze** hardware readiness reports to assess requirements
- **Plan** how you will use multicasting, streaming, local file shares and package servers to position files and manage data transfer
- **Assess** software readiness, and prioritize application testing and migration
- **Calculate and report** the time, money, hardware and personnel your plan requires
- **Identify** dependencies—both technical and organizational—embedded in the plan
- **Negotiate** clear, measurable Service Level Agreements (SLAs) with key stakeholders
- **Create** communication plans
- **Identify and communicate** potential issues and risks

Once planning is complete, prepare for migration by building image files, identifying application compatibility issues, building application packages, and generating personality templates. Then build and test your migration tasks to make sure all files and templates are in place and ready to go.

2 – Build standard Windows 7 images

Deploying standard hard disk images is the fastest, most consistent way to install a new operating system. Symantec supports its own native file- and sector-based image format, Ghost images, and Microsoft's WIM format, so you can select what works best in your environment. You can also choose to create a single hardware-independent image or a small set of base images. A best practice is to keep images as small and generic as possible, adding only applications that must be installed on all computers with that base image. Install other applications in the same job, but separately from the OS image. In complex environments, a small set of base images may be more effective, although this approach requires more image maintenance. Regardless of your image strategy:

- **Create** OS images with settings and configuration standardized for multiple users
- **Provide** device drivers for the various hardware configurations
- **Include** applications when they are required on all computers using a single base image

Tip	Assess security requirements
Good security practices suggest using standard configurations throughout your organization to reduce security gaps and vulnerabilities. When migrating to Windows 7, plan to make your security software consistent and up-to-date using the latest Symantec protection products.	

3 – Prepare applications

Applications are the core of user productivity. Most commercial applications will eventually support Windows 7, but you will need to verify, remediate, or replace legacy and custom applications. Up-front testing and consistent packaging reduces requirements for intervention and desktop visits, so be sure to:

- **Identify** which of your applications are supported on Windows 7
- **Remediate** any issues by using policies, repackaging, application virtualization, replacement by current technology or—as a last resort—debugging and code changes
- For applications you plan to repackage:
 - Document corporate repackaging standards, including for example user interaction during the installation, destination directories, and common templates– Choose a repackaging and migration solution such as Wise Package Studio from Symantec– Build process templates for consistent migration and deployment
- **Establish** the order in which you will migrate applications
- **Test** applications together on Windows 7 to assure compatibility in the new environment, and use application virtualization to eliminate any residual incompatibilities
- **Identify** core applications to build into OS images, and prepare the rest for on-demand delivery

Tip	Workspace virtualization
Your Windows 7 migration is a good time to evaluate other ways of migrating users and applications to new operating systems. To save license costs, consider streaming applications on demand.	

4 – Capture user settings and personality

Transfer of end-user network, OS, application, data settings, and other customizations will make or break your OS migration, because corporate computer users simply do not like change. They want to start up their new computers and see exactly what they saw on their old machines—the same settings, background pictures and everything they've

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personalized, so they can get right back to work. Capturing these settings and applying them to the Windows 7 environment is a necessary requirement to maintain productivity and accelerate acceptance. Pay close attention to:

- **Migration** of global settings such as printer and network drive mappings, favorites, and security settings
- **Application settings**, especially for custom applications
- **Data files**—decide which to migrate and which to leave for end users to discard or transfer

Tip	Consider using backup or virtual user profiles
Using backup technologies from Symantec, you can save all the user data to a central location, and then use a "light" personality capture of user settings for the migration. If you have multiple users on a single computer, or users that roam, consider using virtual user profiles to make future migrations easier.	

5 – Assemble and automate

Once the individual pieces are in place, hook them together, encapsulating templates and files into an automated job or workflow sequence so that completion of one task automatically triggers the next. Pre-defined sample jobs and wizards accelerate the process and reduce errors. Most migrations will need to:

- **Capture** personality settings using the template built in Step 4
- **Deploy** the OS image built in Step 2
- **Install** the applications packaged and tested in Step 3
- **Restore** personality settings

6 – Migrate systems

A successful large-scale migration requires knowing what is in front of you. A pilot project is the best way to simulate each step of the migration process for thorough testing and evaluation to ensure a smooth transition. For best results, preselect specific users, run the pilot, and then analyze the overall operation of the process.

Your pilot program should:

- **Position** any new servers purchased according to your Step 1 deployment
- **Adjust** networks, for example by enabling multicasting
- **Assign** desktop computers to act as multicast masters in smaller locations or subnets
- **Select** test candidates
- **Document** test cases
- **Execute** a phased pilot

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Once you have successfully completed the pilot program, now you are ready to pull the trigger and migrate. Make sure you have defined how you are going to execute the migration: in steps, in large batches, or gradually as part of hardware attrition.

7 – Measure and report

Once your automated migration is complete, an important step remains: post-migration reporting and analysis. Good reporting helps your executive team track your migration from a distance, and helps you capture what you've learned for next time. Be sure to include:

- **Systems** successfully migrated
- **Problems** encountered
- **Migration status**, step by step
- **Missing patches**
- **License verification** data
- **Real-time usage data** from on-demand applications

Why Symantec?

In thousands of Windows migrations involving hundreds of millions of PCs, Symantec has never lost sight of how to address end-user concerns without increasing work, complexity, and risk for IT. Symantec migration and deployment solutions integrate and streamline migration processes to reduce the expense, delay, and end-user disruption from your migration—and keep you in control.

Integration, automation, manageability, and forward-looking technology during your migration save time, money, and end-user patience. And when you apply those savings to advanced Symantec solutions for security, virtual environments, data protection, and management, you secure not just the one-time rewards of a smooth migration, but long-term reliability, productivity, and security from an up-to-date, efficient, manageable IT environment.

Solutions to consider

Your Windows 7 migration is an ideal time to upgrade to new levels of efficiency, manageability, and cost-effectiveness that can sustain your IT environment in the years ahead—providing that you can do it without compromising the migration. Symantec recommends solutions that justify their costs during the migration, and then continue to pay off in the long term. These are just a few of the Symantec infrastructure, security, and management solutions that meet those criteria:

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Migration and Endpoint Management	Altiris™ Client Management Suite From Symantec Altiris Deployment Solution from Symantec Symantec Ghost™ Solution Suite
Automation cuts the cost of deployment by more than two-thirds, reduces the total cost of owning and operating a desktop PC more than 40%, and then pays back even more by supporting Green Computing, license management, and other cost-reduction initiatives.	

Application Packaging and Virtualization	Wise Package Studio™ from Symantec Symantec Workspace Virtualization Symantec Workspace Profiles
Virtualization locks in migration gains. User-manageable workspaces keep productivity high without compromising OS standardization; on-demand streaming helps cut license costs; and profile virtualization supports roaming, backup and restoration of personality and profile settings across machines, environments and operating systems.	

Security and Data Loss Prevention	Symantec Endpoint Protection Symantec Protection Suite Symantec Data Loss Prevention
The global threat environment has changed dramatically: focusing is now on targeted and surprise attacks, threats to data and applications, and risks from insider errors and malfeasance. Your migration is an ideal time to replace patchwork legacy security measures with powerful, integrated solutions, featuring centralized management according to clear, enforceable policies.	

Backup and Recovery	Symantec Backup Exec™ System Recovery Backup Exec Desktop Edition
Pre-migration backup of user data cuts the risks of data loss during migration and as end-users adjust to their new file-management interface and features. And end-user granular recovery restores a complete system or a single file or folder quickly without Help Desk intervention.	

Additional information

The process outlined here provides a framework for successful migration using powerful automated solutions available from Symantec. Here are some additional sources of detailed information:

- The Symantec Windows 7 Resource Center has everything you need to successfully plan and execute an enterprise-wide Windows 7 migration. It includes best practices, white papers, events, downloads, and more at <http://www.symantec.com/windows7>.
- Symantec Connect is an online community where you can collaborate, learn and share ideas about Symantec solutions at <http://www.symantec.com/community>.

About Symantec

Symantec is a global leader in providing security, storage and systems management solutions to help consumers and organizations secure and manage their information-driven world. Our software and services protect against more risks at more points, more completely and efficiently, enabling confidence wherever information is used or stored.

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