

# gamechanger

Game changing technology for upgrading to Windows 10

## What you need to know before beginning migration to Windows 10

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End of life for Windows 7 is fast approaching, are you ready for the next operating system?

**W**ith Windows 8 having recently reached the end of mainstream support, and the end of extended support for Windows 7 fast approaching, organizations that still rely on these operating systems should consider migrating to Windows 10.

There are a number of compelling reasons to make the move to Windows 10. When Windows 7 reaches the end of its extended support phase, for example, Microsoft will no longer provide patches for the operating system, which means that Windows will be left vulnerable to any security exploits that are subsequently discovered.

Another reason for prioritizing Windows 10 adoption is that Windows 10 offers features such as biometric authentication that do not exist in Windows 7. Of course there is also the benefit of consistency. New PCs are shipped with Windows 10, meaning that organizations currently running Windows 7 may find themselves having to support two different operating systems if they are not already doing so.

Traditionally, IT organizations have often chosen to roll out OS upgrades to coincide with the hardware refresh cycle, which usually occurs every three to five years. In this situation

however, waiting for the next hardware refresh might not be an option since Windows 7 has less than two years of extended support remaining which may not be enough time to replace all devices before the deadline. Never mind that end users probably don't want to have to wait three to five years to get access to operating system capabilities they already use at home. These same features, such as greatly improved security, an improved user experience, and support for modern apps, can also be tremendously helpful to the IT staff, not just the end user.

Accelerating the hardware refresh cycle is an option for some organizations but that increases capital expenditure and puts additional load on IT teams to deliver. It also doesn't address the issues of on-going Windows servicing.



### MIGRATION CHALLENGES

Although there are a number of compelling reasons why an organization should update its desktops to Windows 10, there are a number of considerations that must be taken into account. Organizations can avoid numerous technical issues and their associated costs by taking the time to address several key migration considerations up front.

### HARDWARE READINESS

One of the most difficult, and yet most commonly overlooked, challenges associated with an operating system migration is hardware readiness. At one time, each new version of Windows that was released required greater hardware resources than the previous version. Today however, Windows 10 has essentially the same hardware requirements as Windows 7 and Windows 8. Because any computer that is currently running Windows 7 should theoretically be capable of running Windows 10, a hardware readiness assessment is sometimes perceived as unnecessary.

In spite of this, there are a few hardware related issues that can put the brakes on a Windows 10 migration, even if the hardware is currently running Windows 7.

One of the first issues that administrators should configure is whether aging hardware supports Unified Extensible Firmware Interface (UEFI). Although it is possible to run Windows 10 without UEFI, UEFI is required in order to use the Secure Boot, Device Guard and other

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features, which greatly increase the operating system's security. As such, administrators must figure out a way of not only verifying that PCs are equipped with UEFI support, but also that UEFI support is enabled.

Another thing that needs to be checked is that the PCs support a 64-bit architecture. Today every PC that is being manufactured includes a 64-bit processor.

However, that was not the case at the time Windows 7 was released. While there are 32-bit editions of Windows 10 available, desktop management will be easier if organizations standardize around the 64-bit architecture. Not only does a 64-bit architecture have the potential to improve scalability and performance for business applications such as databases or large spreadsheets, many application vendors have begun phasing out support for 32-bit operating systems.

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The biggest hardware issue that tends to derail Windows 10 migrations is the availability of hard disk space. Windows 10 requires a minimum of 16 GB of hard disk space for 32-bit deployments, or 20 GB of space for 64-bit deployments. While these requirements may seem trivial in this age of multi-terabyte desktop hard drives, older PCs may have significantly smaller hard drives than their modern counterparts. More importantly however, performing an in-place upgrade compounds the storage requirements, because the previous operating system is retained within the PC's Windows.old folder in case there is a need to revert the PC back to its original operating system. Hence, a PC whose hard drive is filled nearly to capacity may not have sufficient storage space to allow for a Windows 10 upgrade.

Finally, administrators must consider the general hardware health of the PC that is to receive Windows 10. An aging system that has an unreliable hard disk, bad memory, or other hardware problems are likely to fail catastrophically during the migration process.

### MIGRATION METHOD

Another key consideration is that of the migration method. Organizations that are currently running Windows 7 or 8 have the option of performing an in-place upgrade to Windows 10, or of performing a clean installation.

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The primary advantage of performing an in-place upgrade is that doing so preserves the user's applications and configuration settings. However, there are also a number of significant disadvantages to using this method.

In-place upgrades result in baggage being left behind by the previous operating system. Because of the way that the upgrade process tries to retain files and settings from the previous OS, upgrades are more likely to fail than a clean installation is. Never mind that upgrades are time consuming, and can be disruptive to the end user whose PC is being upgraded. More importantly perhaps, in place upgrades prohibit changing Windows editions, upgrading to a 64-bit architecture, or enabling UEFI. Since many of the Windows 10 security features are tied to UEFI, support for UEFI should be top of mind for IT pros.

On the other hand, a clean installation can be scheduled to run automatically late at night (through the use of third party software), or during another non-disruptive time, and results in a pristine operating system installation. Furthermore, performing a clean installation allows for Windows edition changes and architecture changes (such as going from Professional Edition to Enterprise Edition, or going from 32-bit to 64-bit), which would not be allowed by an in-place upgrade. The issue with a clean install is that it may wipe the device's hard disk. As such, the user will lose their applications, settings, and possibly even data. You will therefore have to ensure that you have a robust backup / restore process and that you are able to manage application reinstalls to reduce downtime for the end user.

### **APPLICATION SUPPORT**

Finally, organizations must consider whether their existing applications will work on Windows 10, or if there are some applications that will need to be modified or replaced. Conventional wisdom has long held the need for comprehensive application compatibility testing, but this approach is no longer practical. Not only has the sheer number of applications used within an organization grown by a considerable margin, so too has Microsoft's approach to updating Windows.

Microsoft has committed to providing two major feature updates to Windows 10 each year. Performing comprehensive compatibility testing for an ever increasing number of applications twice a year is completely impractical, even though Microsoft offers a number of free tools that make the process easier. A better approach is to use small scale pilot deployments of new Windows versions as an alternative to comprehensive lab testing.

Because Microsoft is providing two major updates per year, the lifecycle for these updates is a mere 18 months, which is far shorter than the lifecycle of previous Windows versions. As such, organizations will be required to upgrade Windows at least once a year. While it is possible to do an in place upgrade, the previously discussed in place upgrade issues still need to be considered.

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### **CONCLUSION**

In the past, IT shops have often been reluctant to invest in OS migration tools, because such tools were viewed as being something that would only be used once. Because of Microsoft's new delivery model for Windows 10 updates however, IT pros should consider adopting a good OS migration tool as a part of their software arsenal.

# THE 1E SOLUTION SMOOTHS THE PATH TO WINDOWS 10 UPGRADES

The 1E Windows Servicing Suite (WSS) (<https://www.1e.com/products/windows-servicing-suite/>) is designed to directly address the challenges of migrating to Windows 10 from a previous Windows version. Unlike some competing solutions, 1E has not designed WSS to replace your existing management tools. Instead, WSS augments Microsoft's System Center Configuration Manager, so as to extend its capabilities.

One of the most common complaints about the migration to a new Windows operating system is that the migration process is disruptive to the end user. Even if IT schedules the migration to occur late at night, well outside of business hours, there will inevitably be a user who is working late and trying to complete an important project, only to be disrupted by a scheduled migration. There's also the issue of how to upgrade or service the growing number of end users who are rarely in the office.

1E WSS is designed to empower the end user by allowing the user to initiate the migration process when it is convenient for them. Rather than users being at the mercy of the IT department, the user can go to an app store and schedule a migration to occur at a time that works for their schedule. They can also do this when working remotely—at home, in an airport or a coffee shop. IT can block out times when updates cannot be scheduled, for example during critical end of month/quarter dates. Not only does this reduce disruption for the business but valuable IT resources can focus on more critical tasks.



automation also ensures end user data and settings are preserved during the update and even migrated to a new PC if the user is replacing an existing device.

Rolling out Windows and application installation images across a distributed organization's WAN could impact important business traffic (such as VoIP or application data) meaning updates are only attempted out of normal working hours. WSS manages network bandwidth in such a way that ensures that migrations will be performed as efficiently as possible, but without impacting other network traffic.

Another benefit to using WSS for the migration to Windows 10, applications can be rationalized and refreshed automatically during the process. With rules applied based on actual usage, end users are sure of having the applications they need following an update while IT can standardize versions, reduce application sprawl and reclaim unused licenses.

With the whole process automated and driven by the end users, the solution continues to deliver benefits long after the initial update to Windows 10: on-going Windows 10 updates, break/fix rebuilds, application updates, replacing existing computers when they come to their end of life, and provisioning new computers for new hires.

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WSS makes the OS update a “zero touch” process—even including the conversion from BIOS to UEFI which is required for Windows 10 advanced security. As each vendor has different processes and tools this can be a complex, risky and time-consuming task but the automation in WSS simplifies the task to simple CM task sequence steps. The

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