Windows 10 Application Compatibility

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I t isn't exactly a secret that most organizations opted not to deploy Windows 8. Many administrators had a bad experience migrating from Windows XP or Windows Vista to Windows 7, and simply were not ready to repeat the experience by migrating to Windows 8. Technical blogs also cited dissatisfaction with the user interface and the missing start menu as the additional reason why Windows 8 has not been widely deployed in the enterprise. Although the user interface probably does play a role in Windows 8 not being more widely adopted, there are other reasons that commonly go unreported.
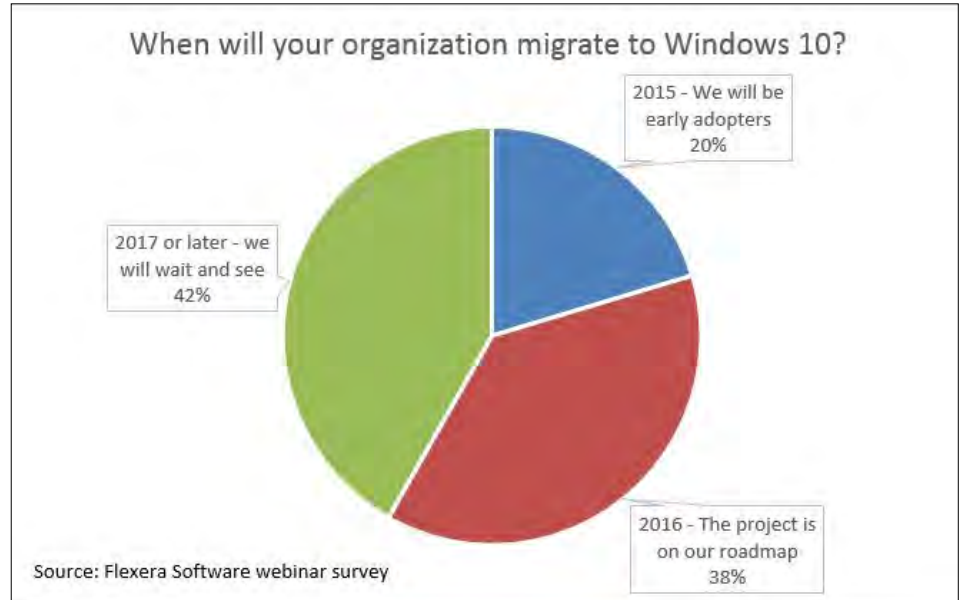
One of the biggest reasons why organizations have largely held off on migrating their enterprises to Windows 8 is that operating system migrations are a complex, costly, and risky undertaking. Not only are there costs associated with application compatibility testing and remediation, but there are also potential negative impacts to end users and critical business processes.

Today, administrators are facing a migration to Windows 10. Windows 10 will present a number of challenges related to application compatibility testing. One such challenge is based around the idea that administrators are under pressure to migrate to Windows 10 relatively quickly. In a recent survey by Flexera Software over half (58%) of the respondents said that their organizations would be adopting Windows 10 within 18 months of its release.

Many of the organizations that are planning to make the move to Windows 10 are doing so as a way of replacing aging desktop operating systems. Windows XP reached its end of support last year and mainstream support for Windows Vista SP2 and Windows 7 SP1 has already ended (http://windows.microsoft.com/en-us/windows/lifecycle).

It isn't just the prospect of running an outdated operating system that is forcing organizations to look closely at Windows 10 however, but also the Windows 10 licensing model. Some Microsoft customers that are currently running Windows 7 or Windows 8 will qualify for a free upgrade to Windows 10. Many larger organizations unfortunately will not qualify

When will your organization migrate to Windows 10?

2015 - We will be early adopters
20%

2017 or later - we will wait and see
42%

2016 - The project is on our roadmap
38%

Source: Flexera Software webinar survey

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for the upgrade since Microsoft is not providing free upgrades for Windows 7 Enterprise or Windows 8 Enterprise. Windows 7 Professional and Windows 8.1 Professional however, are available for a free upgrade, but in order to get Windows 10 for free the upgrade must be completed within a year of Windows 10's release. As such, qualifying organizations will be under pressure to complete their application compatibility testing quickly.

Microsoft has been widely publicizing the benefits of its new universal applications, but has downplayed the issue of desktop application compatibility for Windows 10. Microsoft states that "most programs created for earlier versions of Windows will work in this version of Windows" (http://windows.microsoft.com/en-us/windows-8/older-programs-compatible-version-windows). Even so, it is difficult to take this statement at face value. After upsetting customers with a plethora of application compatibility issues in Vista, Microsoft worked hard to minimize application compatibility issues in Windows 7 and 8. In spite of these efforts however, some compatibility issues still occurred. These issues were largely related to driver issues or to hard coded version checks within some applications. While it seems that Microsoft is going to great lengths to minimize application compatibility issues, it is unrealistic to expect every application to work on the new OS. There are bound to be at least some compatibility issues.

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Some of these compatibility issues will likely be attributed to 32-bit/ 64-bit compatibility. Microsoft is going to release a 32-bit version of Windows 10. However, almost all PCs that are in use today have a 64-bit processor and the vast majority of new desktop applications are 64-bit. The 32-bit version of Windows is presumably targeted toward those organizations that are currently running a 32-bit version of Windows. Even so, these organizations will have to decide whether to remain on a 32-bit operating system even though most new applications are written for 64-bit systems, or they will have to adopt a 64-bit version of Windows 10 even though some of their legacy applications may not work properly on the new platform.

Perhaps the biggest challenge related to application compatibility testing for Windows 10 can be attributed to the fact that Windows 10 will be unlike any operating system that Microsoft has ever produced. Microsoft has already said that Windows 10 will be the last version of Windows. It isn't that Microsoft is giving up on the Windows platform, but rather that they are moving to a model in which the operating system is perpetually updated rather than forcing administrators to endure a complicated and costly desktop operating system migration every few years.

From an application compatibility testing standpoint, this means that application compatibility testing will become something that must be done on an ongoing basis as opposed to only being done prior to an operating system migration.

Microsoft's new delivery model for Windows 10 is being referred to as Windows as a Service. The premise of delivering regular updates to the Windows operating system is not entirely unprecedented. After all, Microsoft has been giving its customers "Patch Tuesday" updates for years. Even so, the approach that Microsoft is going to be using for updating Windows 10 is going to be different from the Windows Update model that Microsoft uses today.

For enterprise customers with global deployments, keeping up with Windows is a huge undertaking and allowing Microsoft to automatically deliver new features and updates continuously to its infrastructure is problematic. Critical enterprise systems are often times unique and

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require strong change management and compatibility testing and verification prior to releasing updates into production to ensure systems continue to operate reliably.

In Windows 10, Microsoft will be introducing new classes of updates. Microsoft hasn't yet stated exactly what these classifications will be aside from suggesting that some updates will be security related and that others will introduce new functionality. Microsoft has also indicated that administrators will be able to choose the updates that they want to install. For example, an organization might choose to deploy security updates relatively quickly, but wait to deploy functionality updates until more extensive testing can be performed. This idea points to the importance of ongoing compatibility testing, but there is another issue that is worth considering.

Microsoft's new update delivery method will lead directly to configuration branching. Configuration branching refers to a condition in which a single operating system is configured in a number of different ways. For instance, suppose that Microsoft were to introduce a new feature that is useful to an organization's Marketing department, but that is undesirable for the Finance department. Assuming that the organization decided to go ahead and deploy this feature to the systems running in the Marketing department the end result would be a configuration branch.

The concept of configuration branching may also come into play with regard to the various types of devices that will be able to run Windows 10. Microsoft has indicated that Windows 10 will run on PCs, tablets, and phones. Needless to say, a Windows 10 phone would likely run a very different configuration from that of a Windows 10 desktop PC, resulting in another configuration branch. Incidentally, Windows 10 phones will be able to run the same universal apps as Windows 10 desktop PCs, but will not be able to run legacy applications.

CONCLUSION

Windows 10 is without a doubt the most important Windows release to come along since Windows 95 (which was released 20 years ago). Even so, Windows 10 will complicate application compatibility testing. Some applications will inevitably fail to run on the new operating system.

Other applications may run on some Windows 10 device types, but not others. Even after the initial application compatibility testing is complete however, the fact that Windows 10 will continue to evolve as Microsoft releases new updates means that administrators may have little choice but to perform ongoing application compatibility testing. Of course, application compatibility testing can be a very tedious process, especially when multiple Windows editions or multiple Windows configurations are present. As such, IT shops should consider investing in software that can help to manage and simplify application compatibility testing as part of a continuous Application Readiness process. ■

Brien Posey is an 11-time Microsoft MVP with over two decades of IT experience. As a freelance writer, Posey has written many thousands of articles and written or contributed to several dozen books on a wide variety of IT topics. Prior to going freelance, Posey was a CIO for a national chain of hospitals and healthcare facilities. He has also served as a network administrator for some of the country's largest insurance companies and for the Department of Defense at Fort Knox. When He isn't busy writing, Brien Posey enjoys exotic travel, scuba diving, and racing his Cigarette boat. You can visit his personal Web site at: www.brienposey.com.

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To learn more about the Application Readiness process visit the Flexera website http://www.flexerasoftware.com/enterprise/products/application-packaging/

> **IT shops should consider investing in software that can help to manage and simplify application compatibility testing.**

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