Simplifying the Complexities of Microsoft's New Update Model for Windows 10, Windows 7/8.1 and Office 365

The initial release of Windows 10 in July 2015, marked a fundamental shift to a "Windows-as-a-service" paradigm for updating the operating system. In October 2016, Microsoft adopted a similar model for keeping Windows 7 and 8.1 up-to-date. The move to a "Windows-as-a-service" model was not unprecedented as Microsoft had been using a similar model for keeping Office 365 up-to-date. Along with the shift to a service-based paradigm, Microsoft introduced significant changes to the manner in which updates are packaged, distributed, and installed. Many organizations are unaware of the impact of these changes and the best course of action to take in order to keep their environments updated and protected. This paper discusses the implications of the changes and how to implement a patching and update process that best satisfies an organization's security requirements.

Understanding Microsoft's New Update Process

Among the most significant changes in the update process is the movement to a "rollup" model, in which multiple changes or fixes are consolidated into a single update package. In some cases, the rollups are cumulative and supersede the previous month's rollup. In other cases, the rollups are not cumulative and only include fixes released since the previous month's update.

By moving to a rollup model, Microsoft intends "to bring a more consistent and simplified servicing experience to Windows 10, Office 365, and Windows 7 SP1 and 8.1 so all supported versions of Windows follow a similar update servicing model. The new model gives you fewer updates to manage, greater predictability, and a higher quality update."[1] The table below summarizes these changes.

Microsoft's New Update Model – Summary of Changes

Update	Cumulative?	Type of Changes Included	Frequency	Special Notes
Windows 10 Cumulative Updates	Yes	Cumulative rollup of all security and reliability fixes since the original release of Windows 10.	Monthly	• Update packages grow in size each month (the cumulative update for the original release of Windows 10 reached approximately 1 GB in size). • The entire update package must be installed– there's no ability to selectivity install (or uninstall) particular fixes. If rollback is needed, you'll need to uninstall the entire update package. All of the fixes included in the update package will be rolled back.
Windows 10 Feature Updates	Yes	Cumulative update of new features, security, and reliability fixes. Includes entire copy of Windows fixes to- date.	Once or twice a year	• Files can be very large (3-4 GB).
Windows 7/8.1 Monthly Quality Rollups	Yes	Cumulative rollup of all security and reliability fixes since October 2016.	Monthly	• The entire update package must be installed – there's no ability to selectivity install (or uninstall) particular fixes.

[1] *Further Simplifying Servicing Models for Windows 7 and 8,* Microsoft TechNet, August 15, 2016.

				• If rollback is needed, you'll have to uninstall the entire update package. All of the fixes included in the update package will be rolled back.
Windows 7/8.1 Monthly Security Updates	No	Aggregate of security fixes for a particular month, but it isn't cumulative (meaning it doesn't include updates from previous months). Introduced in October 2016.	Monthly	• The entire update must be installed– there's no ability to selectivity install (or uninstall) updates. • If rollback is needed, you'll have to uninstall the entire update package. All of the fixes included in the update package will be rolled back.
Office 365 (Click to Run installations)	Yes	Security fixes, reliability fixes, and new features are bundled in new versions of Office 365.	Current Channel – security fixes, reliability fixes and features distributed each month. Deferred Channel – security fixes distributed each month. Reliability fixes and new features distributed every four months. First Release for Deferred Channel – security fixes and reliability fixes distributed each month; new features distributed every four months.	• 'Click to Run' option uses incremental differencing to only download the missing content needed to install the update to the target device. • You have three options, called update channels, to control how often Office 365 is updated with new features. These channels are the Current Channel, Deferred Channel, and the First Release for Deferred Channel.

Changes to Updating Windows Operating Systems and Office 365

Windows 10 Changes

Microsoft previously supported three methods for distributing Windows updates: security fixes distributed as part of Security Bulletins, reliability fixes distributed as part of Knowledgebase articles, and rollups of new functionality (and previously released security and reliability fixes) distributed as Service Packs.
In the case of Windows 10, Microsoft now supports two methods for distributing updates: Cumulative Updates and Feature Updates. Cumulative Updates are released each month and contain all of the security and reliability fixes since the release of a particular version of Windows 10.

Unlike the previous model, Cumulative Updates don't provide organizations with the ability to only install

security fixes, but not install reliability fixes. Likewise, Cumulative Updates do not enable organizations to selectively install some security fixes, but not others. In the event that there are issues with an individual fix included in a Cumulative Update, organizations must uninstall the entire Cumulative Update.

Feature Updates are conceptually similar to Service Packs, containing new functionality added since the previous release of Windows 10 and all previously released security and reliability fixes. Feature Updates represent a self-contained version of Windows 10, which means they can be installed independently. It's not necessary to install a Feature Update over a previous version of Windows 10.

A common characteristic of both Cumulative Updates and Feature Updates is that they can be quite large. The Cumulative Update for the initial release of Windows 10 grew each month as additional fixes were added, eventually reaching approximately 1 gigabyte in size. Feature Updates are typically 3-4 gigabytes in size.

The large size of Cumulative Updates and Feature Updates pose a significant challenge to organizations that have sites with limited incoming bandwidth serviced by remote package servers. In order to protect the devices against new vulnerabilities, organizations would need to download an update package approaching 1 gigabyte in size to each device on a monthly basis, thereby consuming a significant amount of network bandwidth and potentially having an adverse impact on critical business operations.

Windows 7/8.1 Changes

In October 2016, Microsoft migrated to an update model for Windows 7/8.1 similar to the model previously introduced for Windows 10. Updates for Windows 7/8.1 now come in two forms: Monthly Quality Rollups and Monthly Security Updates.

While Monthly Quality Rollups are cumulative, Monthly Security Updates are not. Monthly Quality Rollups contain all security and reliability fixes for the current month and previous months. Monthly Security Updates include all security fixes for the current month, but don't include security fixes from previous months. Many organizations choose to deploy the Monthly Security Updates each month, electing to only deploy the Monthly Quality Rollups on an "as needed" basis.

Like Windows 10 Cumulative Updates, Windows 7/8.1 Monthly Quality Rollups grow in size each month, because they, too, are cumulative. Just as Windows 10 Cumulative Updates and Feature Updates are difficult for many organizations to manage due to their size, Windows 7/8.1 Monthly Quality Rollups also pose a similar challenge in environments that include sites with limited incoming bandwidth serviced by remote package servers.

Office 365 Changes

Historically, Windows applications like Office have been installed by downloading a large installation package to the target device and running the installation. By contrast, Office 365 predominantly uses an installation technology known as 'Click to Run' to install the local component of the application. Office 365's 'Click to Run' installation lets users begin using the application before it's fully installed by streaming down the required blocks on demand using Microsoft's App-V technology.

To give organizations more control over how often their users receive Office 365's new features, Microsoft offers three options, called update channels, to control how often Office 365 is updated with new features.

These channels include:

- Current Channel, which provides users with the newest features of Office as soon as they're available.
- Deferred Channel, which provides users with new features of Office only a few times a year.
- First Release for Deferred Channel, which provides pilot users and application compatibility testers the opportunity to test the next Deferred Channel.

For more information about choosing the appropriate channel, refer to this TechNet article.

Office 365 updates are distributed as part of new versions of Office 365 which are 1-2 gigabytes in size. Realizing that the large updates pose a challenge for many organizations, Microsoft built native update capabilities into Office 365 utilizing incremental differencing functionality. Rather than downloading an entire update package to a device and installing it, Office 365's update capabilities only download the missing content required to update the target device to the desired version.

Solving Update Challenges with Symantec IT Management Suite

Although these changes may seem complex, there's an answer: Symantec IT Management Suite. IT Management Suite's Patch Management Solution provides a unified framework and user experience to update all Windows operating systems and applications in an organization's environment. Patch Management Solution supports the new Microsoft update processes detailed in this paper so administrators can easily ensure their environment is protected and up-to-date.

Successfully Updating Windows 10 and Windows 7/8.1

IT Management Suite's Patch Management Solution detects Windows 10 and Windows 7/8.1 devices that require Cumulative Updates, Feature Updates, Monthly Quality Rollups, or Monthly Security Updates, installs the updates, and tracks the updates' rollout using compliance reports.

For sites where large file sizes are an issue because of the lack of a local package server, Patch Management Solution supports data transfer efficiencies using multicasting or peer-to-peer package download capabilities. Both solutions let devices download packages from other devices at their site rather than requiring each device to download packages directly from a remote package server across a Wide Area Network (WAN), which can significantly impact bandwidth.

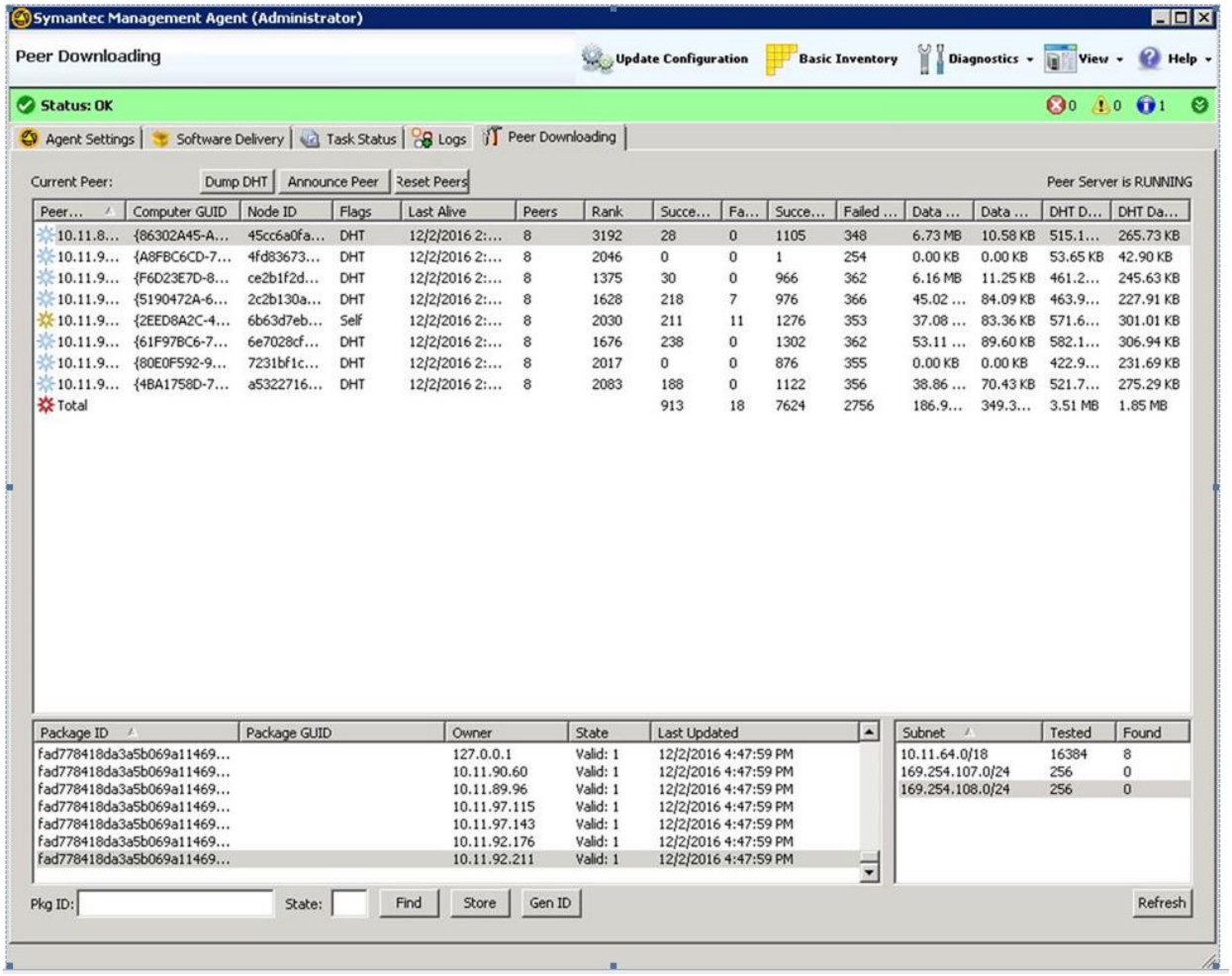

Figure 1: Diagnostic information is displayed as updates are downloaded using peer to peer functionality.

Successfully Updating Office 365

IT Management Suite's Patch Management Solution will identify Office 365 installations that need updating and then download and install only the content required to each device. IT Management Suite will first download the Office 365 update to a central repository and then distribute it using its package server infrastructure, if present, to get the updated content closer to the devices that need it.

The Symantec Management Agent dynamically determines the nearest package server on each device when an update to Office 365 is required, modifying the path to the update package location in a configuration file used by Office 365's native update capabilities. The Symantec Management Agent then invokes Office 365's native update capabilities, resulting in only the content needed by each device being downloaded from the package server. This approach utilizes IT Management Suite's package server infrastructure, leveraging the incremental differencing functionality built into Office 365' native update capabilities to minimize the load on network bandwidth.

Next Steps

Understanding Microsoft's new update processes for Windows 10, Windows 7/8.1, and Office 365 can seem daunting, but IT Management Suite simplifies the process by masking the complexities and streamlining the update process. By providing a unified framework and user experience to update all Windows operating systems and applications, IT Management Suite protects organizations' environments and data by effectively distributing the latest updates to Microsoft operating systems and Office 365.

Learn more about securely managing devices with centralized, simplified patch management for Windows, Mac, Linux, and virtual environments using Symantec IT Management Suite and Patch Management Solution.

About Symantec

Symantec Corporation (NASDAQ: SYMC), the world's leading cyber security company, helps businesses, governments and people secure their most important data wherever it lives. Organizations across the world look to Symantec for strategic, integrated solutions to defend against sophisticated attacks across endpoints, cloud and infrastructure. Likewise, a global community of more than 50 million people and families rely on Symantec's Norton suite of products for protection at home and across all of their devices. Symantec operates one of the world's largest civilian cyber intelligence networks, allowing it to see and protect against the most advanced threats. For additional information, please visit www.symantec.com or connect with us on Facebook, Twitter, and LinkedIn.

Symantec Corporation World Headquarters

350 Ellis Street
Mountain View, CA 94043 USA
+1 (650) 527 8000
1 (800) 721 3934

www.symantec.com

1/17 Part #21370380