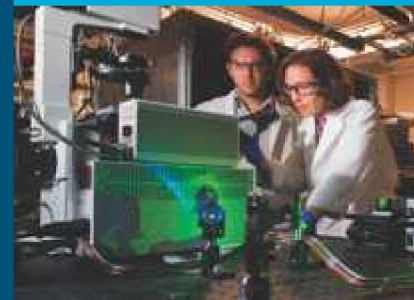


Managing the New Windows I/O Servicing Model



PRESENTED BY

Roman Selever and Stana Kopczuk



Where we are today and how we got here

- Windows 10 became Sandia's default operating system April 2016
- Started initially with build 1511 for all new builds
- Windows 7 was, and still remains, an option when required
- Start of IPU delayed until following year due to resource constraints and concerns over ever changing servicing model from Microsoft
- Build 1607 became default version February 2017
- Started wide scale 1607 in-place upgrades March 2017, targeting existing Windows 10 users
- By April 2017, 8000 systems were running Windows 10, majority from new builds/rebuilds
- Started targeting 7/8.1 users May 2017
- Over 17000 by October 2017, with over 6000 done using IPU
- Build 1703 became default version October 2017 and phased deployment started
- Build 1709 became default version April 2018 and is currently being deployed
- Build 1803 started IT/Dev phase May 2018

Our Servicing Model

- 1-2 weeks insider testing (approximately 10 IT staff members)
- 4 months IT/Dev testing (100-200 IT staff and developers)
- 2 weeks at end of IT/Dev used for EA testing (500-1000 users)
- 3 months phased deployments, separated into 6 phases (10%, 15%, 15%, 20%, 20%, 20%) of randomly assigned systems
- 2 weeks for final cleanup attempt
- 2 month move to legacy process, near end of 18 month support lifecycle
- Orchestrator is used to manage collection membership, send emails to users when they're being targeted and start each phase

- IT/Dev and EA participation based on SharePoint signup

- All deployments provide targets with 9 day optional advertisement that becomes mandatory on day 10

- Have seen a consistent 3% failure rate for IPU's and 8-10% for 7/8.1 to 10 IPU's

- Rollback process has proven to be very reliable and very few users are ever left without a functioning system following a failure

The image shows a composite of three elements related to Windows 10 servicing:

- Top Left:** A portion of an email notification with the subject "Subject: Windows Computing Notification".
- Top Right:** A "Software Center" window header from Sandia National Laboratories.
- Center:** A large advertisement titled "An important message for Windows 10 Adopters". The text includes:
 - "Dear Mr. User: This new process allows app developers/owners of each new Windows update, and (2) testing you all possible. You will receive new versions about..."
 - "App developers, owners and POCs: Help pilot Sandia's new Windows 10 version upgrade with an option to self-upgrade before the push deployment. With the Windows Team. The goal is for your applications to survive, or you can..."
 - "Sign up for the Windows 10 Servicing..."
 - "+ new item or edit this list"
 - "Count= 152"
- Bottom Center:** An "Installation Progress" window titled "Sandia National Laboratories Running: Windows 10 x64 1709 In-Place Upgrade". The progress bar shows "Running action: Initializing task sequence ...".
- Bottom Left:** A "How to enroll" section with the text:
 - "IMPORTANT! If you enroll a physical Windows computer, it must already be running Windows 10. This process cannot upgrade a Windows 7 or 8.x computer to Windows 10."
 - "1. Enter your information in the Sign Up list. Decide whether to enroll an existing Windows 10 physical computer (this should not be your primary computer) or request a specialized virtual test computer (at no cost to you as long as you participate in..."

Challenges

- We initially forgot KISS. Tried to do several app updates, including switch from Office 2010 to 2016/365
- Adapting to ever changing servicing/support model
 - 3 updates a year to 2
 - 18-20+ months of support down to firm 18...now + 6?
 - CB/CBB changed to something more confusing
- Capturing/prioritizing feedback during pilots when helpdesk not yet prepared to support
- Slow SCCM/ADK updates (1511)

Feedback Hub

- Store apps (like xbox and solitaire) reinstall (since 1607)
- Start icons on taskbar (since 1607)
- MBAM 2.5 upgrade required and caused issues which delayed (1607)
- Taskbar/explorer hangs (1607...fixed in 1703)
- Not sharing telemetry data = no stopping of updates (since 1703)
- Randomly crashing services (1703...mostly went away in 1709...maybe making a comeback in 1803)
- SEP 14 (1709)
- Multi user login problems (1703...fixed in 1709)

New feedback

What kind of feedback is it?

Suggestion Problem

Tell us about it

Summarize your issue

0/150

Give us more detail (optional)

0/1000

Feedback Hub

Welcome

Give us feedback to make Windows better

What's new

Get Started with Windows Analytics
Quest - 4/30/2018

NOTE: To try this Quest, you will need to be able to view and follow English. Windows Analytics solution helps you stay current with Windows 10 feature updates.

Use Netflix app to reliably open, download and play videos/movies
Quest - 4/25/2018

Netflix
Trusted Microsoft Store app

Netflix app can launch, download and play video/movie content reliably

Announcing Windows 10 Insider Preview Build 17134 for Fast
Announcement - 4/20/2018
UPDATE 4/20: We have released Windows 10 Insider Preview Build 17134 (RS4) to Windows Insiders in the SR ring and Release Preview ring.

Recommendations

- Expect delays
- Don't hold out hope that issues you see in a build will get fixed in that same build
- Find or become a good project manager and create a reusable project plan for servicing.



ID	Task Mode	Task Name	Duration	Start	Finish	Predecessors	% Complete
1		Windows 10 1803 Upgrade	196 days	Mon 3/19/18	Wed 1/2/19		1%
2	✓	Insider Testing (MS Beta Testing)	10 days	Mon 3/19/18	Fri 3/30/18		100%
8	✦	IT DEV Prep Work	13 days	Mon 4/30/18	Wed 5/16/18	2	47%
9	✓	Add OS to ICK	1 day	Mon 4/30/18	Mon 4/30/18	2	100%
10	✓	Fill out Risk and Impact form to present to the Change Board in the ECAB meeting	2 days	Tue 5/1/18	Wed 5/2/18	9	100%
11	📅	Present at ECAB meeting	6 days	Thu 5/3/18	Thu 5/10/18	10	50%
12	✓	Fill out Initial OS Approval form and submit to Keiva and Robbie	1 day	Thu 5/3/18	Thu 5/3/18	10	100%
13	📅	Validate DMS	5 days	Tue 5/1/18	Mon 5/7/18	9	91%
14	✓	Validate SEP functions	5 days	Tue 5/1/18	Mon 5/7/18		100%
15	✓	Validate SCCM functions	5 days	Tue 5/1/18	Mon 5/7/18		100%
16	📅	Update DMS Flag in ICK	1 day	Tue 5/1/18	Tue 5/1/18		0%
17	📅	Validate In-Place Upgrade (IPU) works with Existing SCCM and Operating System Deployment (OSD) Tools	5 days	Tue 5/8/18	Mon 5/14/18	13	0%
18	📅	Submit an SDN/Teaser if we don't have enough IT/DEV testers	10 days	Thu 5/3/18	Wed 5/16/18	10	0%
19	📅	Advertise OS version update to IT/DEV/VM...SCN	1 day	Thu 5/17/18	Thu 5/17/18	8	0%
22	📅	Inform IT individuals about OS update through 3CSI Teaser (talk to T.C. about this)	10 days	Thu 5/17/18	Thu 5/31/18	8	0%
23	📅	Infrastructure Collaboration	60 days	Fri 5/18/18	Mon 8/13/18	19	0%
24	📅	Update KMS (SCN/SRN/SPN)	60 days	Fri 5/18/18	Mon 8/13/18		0%
25	📅	Update ADK on SCCM (SCN/SRN/SPN)	60 days	Fri 5/18/18	Mon 8/13/18		0%
26	📅	Update MDT on SCCM (SCN/SRN/SPN)	60 days	Fri 5/18/18	Mon 8/13/18		0%
27	📅	Juniper (reach out to SME to ensure they are satisfied)	60 days	Fri 5/18/18	Mon 8/13/18		0%

Please Tell us about your experience with project management

So project management... ya know, I like, manage the projects..

6 Recommendations

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- Don't hold out hope that issues you see in a build will get fixed in that build
- Find or become a good project manager and create a reusable project plan for servicing.
- Make friends with the IT and Development folks (website devs, sccm team, desktop support, etc)



Programmer



What my friends think I do



What my mom thinks I do



What society thinks I do



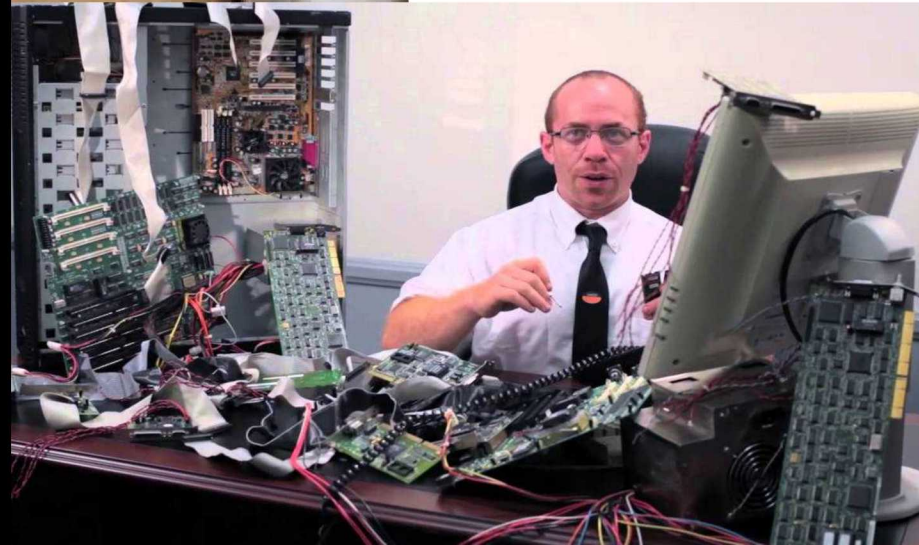
What customers think I do



What I think I do



What I actually do



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- Find a good communications person and come up with a good communication plan for the different audiences/stakeholders



Windows 10 release schedule & naming convention

Microsoft's twice-yearly release schedule

With the introduction of Windows 10, Microsoft changed its rhythm for deploying major versions of its operating system. Gone are the days of OS updates every three or four years. Instead, you will receive version updates **twice per every 12 months**. See the chart above for a high-level illustration of Microsoft's release schedule (click **Refresh** on the drawing viewer if you get an error and can't see the chart).

Microsoft's new naming convention

In addition, Microsoft has abandoned its traditional naming convention for each major new version of Windows. From now through the foreseeable future, **everything is Windows 10, and the only thing that changes is the version number**. Just in the past 18 months, for example, we have deployed versions **1511, 1607, and 1703**, and we are currently preparing version **1709** for release.

Windows 10 FAQs

Category : **DaaS** (1)

Category : **General** (4)

Category : **Security** (2)

Category : **Software and compatibility** (7)

Category : **Upgrade process** (4)

Category : **Windows 10 apps and store** (1)

➤ Add new item

Library

➤ new document or drag files here

✓	Name	Modified	M	EDIT LINKS
	QuickKeys-For-Windows-10	September 29, 2015		

Windows News



Windows 10 End-User Early Adopters **Windows 10 Information for IT Staff** Windows Team Sandia's COE

Windows 10 Information for IT Staff

This site is specifically for IT staff to allow for engagement with the Windows 10 project team. Use this to provide feedback and suggestions, a

Latest Win 10 Info for IT Staff

Title	Modified
Windows 10 Version Mapping Info and Common Terms	5/8/2018 10:07 PM

(Moving this from Pre-KB to here, as it was suggested to me this content is not a good fit for the KB.)

Helpful info, since their versions and names are confusing.

- Windows 10 1507 (10240) RTM
- Windows 10 1511 (10586) November Update
- Windows 10 1607 (14393) Anniversary
- Windows 10 1703 (15063) Creators Update
- Windows 10 1709 (16299) Fall Creators Update
- Windows 10 1803 (17134) April Update=

Fast-Publish Articles

This is a list of KB articles in the works. As Windows 10 insta configuration work is still in progress, these instructions may testing and feedback.

Please provide feedback to the documented fix/workaround accurate prior to being submitted to the ITSM KB.

new discussion

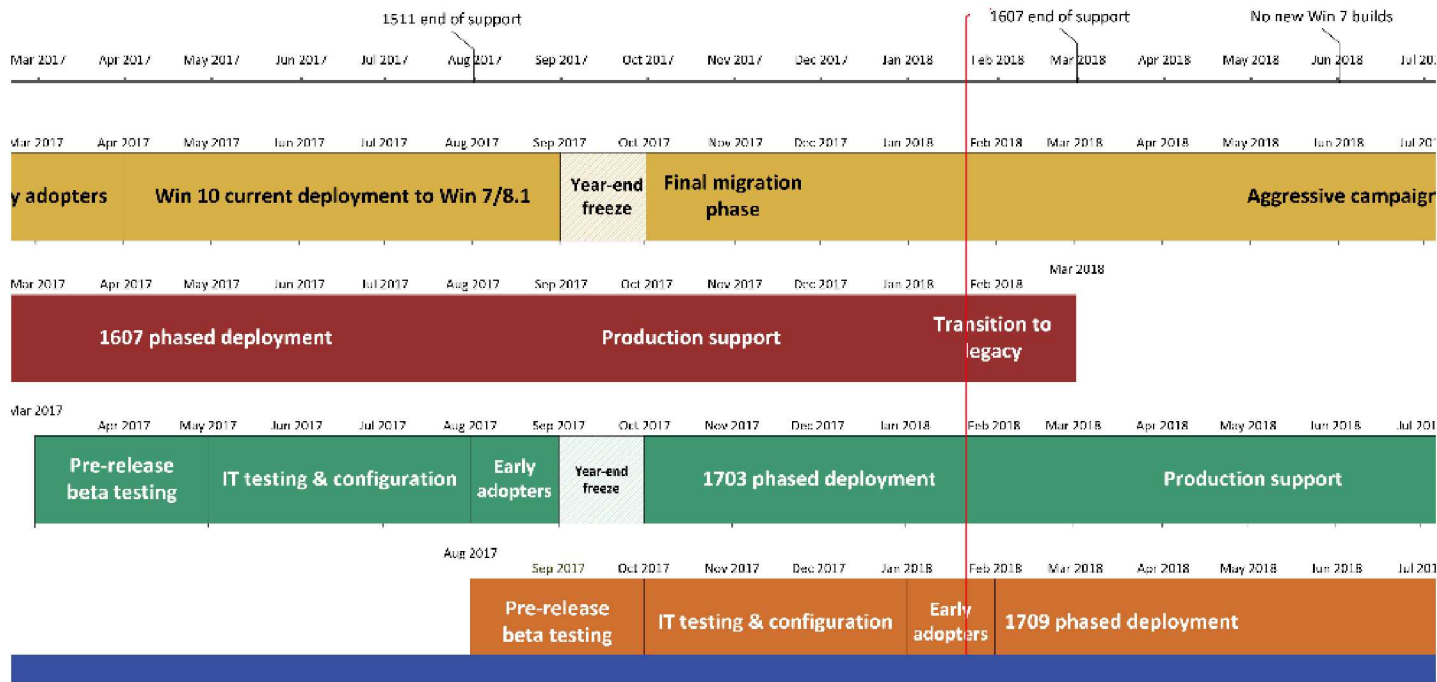
Recent My discussions Unanswered questions ...

[Windows update issues not fixed, watch out for 1803](#) with the release of 1803, by Microsoft, we're now experien By Selever, Roman | 6 days ago

[1709 issue to watch out for...also](#) ran into one IPU today, that got hung up on the installing u By Selever, Roman | April 17

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- Find a good communications person and come up with a good communication plan for the different audiences/stakeholders
- Find a way to explain the chaos to everyone



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- Stick with Task Sequences

Windows 10 Servicing

The screenshot displays the Windows 10 Servicing dashboard. It features two donut charts: 'Windows 10 Usage' and 'Windows 10 Rings'. The 'Usage' chart is divided into five segments: 1511 (green), 1607 (blue), 1703 (purple), 1709 (dark blue), and Other (dark blue). The 'Rings' chart shows two segments: 'Semi-Annual Channel (Targeted)' (light blue) and 'Semi-Annual Channel' (dark blue). A legend below the rings chart also includes 'Long-term Servicing Channel' (green). To the right of the charts is a 'Create Servicing' button with a plus icon and an 'Alerts' section with a minus icon and a green checkmark. Below the charts, a large text box reads 'Please define servicing plan for Windows 10'. At the bottom, a 'Windows 10 x64 1703 In-Place Upgrade Task Sequence Editor' window is open, showing a list of tasks under 'Prepare for Upgrade' and 'Upgrade the Operating System'. The 'Prepare for Upgrade' tasks include: SetOriginalOS, Win10 Build Var, Check Readiness for Upgrade, LogStart, Stage Drivers, Make drvs Directory, and Disable BitLocker. The 'Upgrade the Operating System' task is also visible. The task sequence editor has a 'Properties' pane on the right with fields for Type, Name, and Description.

Windows 10 Usage

Windows 10 Rings

Create Servicing

Alerts

Please define servicing plan for Windows 10

Windows 10 x64 1703 In-Place Upgrade Task Sequence Editor

Prepare for Upgrade

- SetOriginalOS
- Win10 Build Var
- Check Readiness for Upgrade
- LogStart
- Stage Drivers
- Make drvs Directory
- Disable BitLocker

Upgrade the Operating System

Properties Options

Type: Group

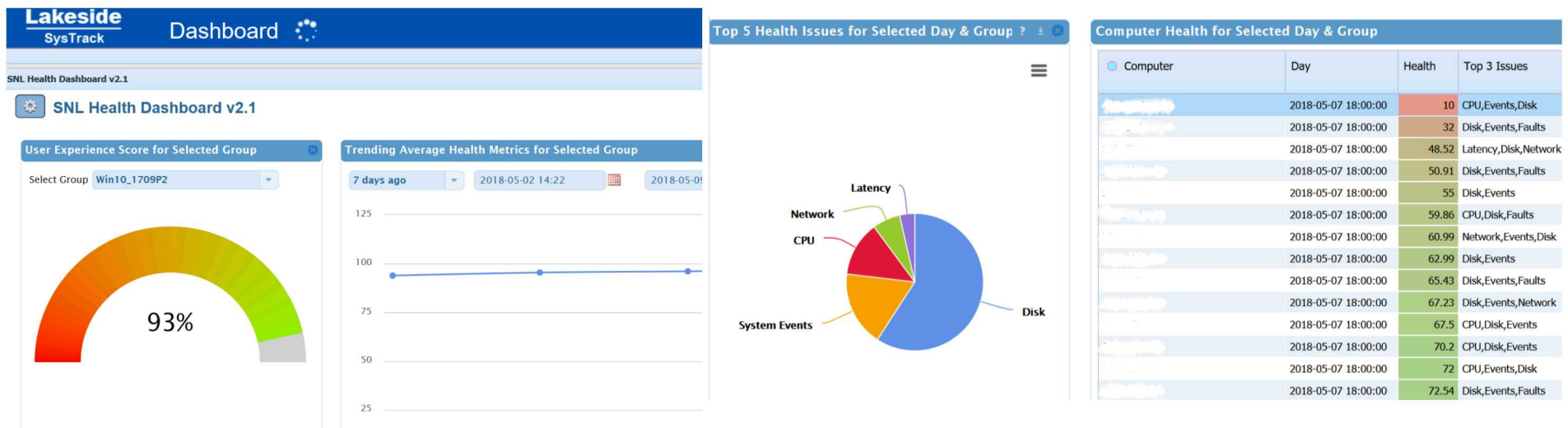
Name: Prepare for Upgrade

Description: Actions to run in full OS to prepare for upgrade of the operati

No settings are required for this action.

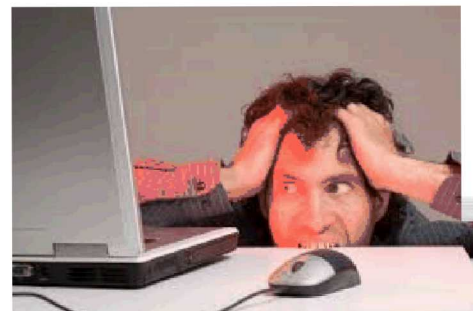
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- Stick with Task Sequences
- Find a tool that will allow you to be proactive. SysTrack has been a big benefit, providing insight into possible issues before users even start calling



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- This is no longer a part time job
- Don't deploy Windows 10 to all your users until you know you have a working servicing model
- Upgrade drivers during IPU
- Find the right balance between IT/Dev folks and users. Give them as much flexibility as you can and try to make the process as predictable as possible
- If you're going to skip a build, don't skip the testing/evaluation work
- Track and make visible application incompatibilities. Helps techs and reminds you who to harass
- Identify your critical applications in your project plan and the owners...so you know who else to harass

Key Takeaways

- It's not necessarily easy, but it is possible to do this and keep up with Microsoft's new aggressive schedule
- KISS, unless you can't
- As soon as you have it figured out, Microsoft will change or break something, so be flexible
- Forming good relationships with partners is key to success

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- KISS, unless you can't
- As soon as you have it figured out, Microsoft will change or break something, so be flexible
- Forming good relationships with partners and an underground burrito based economy is key to success

