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CLOUD-NATIVE, PAKS & SERVERLESS COMPUTING

Windows 11 - How to get there

Jörgen Nilsson
Principal Consultant
Onevinn

Ronni Pedersen
Cloud Architect
APENTO

Level: Advanced



The Ultimate Education Destination
ORLANDO 2022

About me...



Jörgen Nilsson

- Principal Consultant, Onevinn
- Microsoft MVP: Enterprise Mobility
- MCSE/MCSA/MCITP/MCTS
- ITIL Foundation Certified
- Microsoft Certified Trainer (MCT)

Contact Info

- Mail: Jorgen.nilsson@onevinn.se
- Twitter: [@ccmexec](https://twitter.com/ccmexec)

About me...



Ronni Pedersen

- Cloud Architect, APENTO
- Microsoft MVP: Enterprise Mobility
- MCSE/MCSA/MCITP/MCTS and more... ☺
- ITIL Foundation Certified
- Microsoft Certified Trainer (MCT)

Contact Info

- Mail: rop@apento.com
- Twitter: [@ronnipedersen](https://twitter.com/ronnipedersen)

Agenda

- Readiness
- Microsoft Intune (WUfB)
- Task Sequence
- Windows Servicing
- Customizations



Windows 10 Support

Support dates are shown in the Pacific Time Zone (PT) - Redmond, WA, USA.

Support Dates

Listing	Start Date	Retirement Date
Windows 10 Enterprise and Education	Jul 29, 2015	Oct 14, 2025

App Compat / App Assure

- Compatible by design approach
- Microsoft is committed to help you ensure your apps work on the latest versions of our software.
- If you encounter any issues, Microsoft will help you resolve them at no additional cost.

Display version has not changed!

- ProductName and ReleaseID is “**Deprecated**”
- Great for compatibility!
- Bad for CM queries, scripts etc.

ab	CurrentVersion	REG_SZ	6.3
oh	DigitalProductId	REG_BINARY	a4 00 00 00 03 00 00 00 30 30 33 33 30
oh	DigitalProductId4	REG_BINARY	f8 04 00 00 04 00 00 00 30 00 33 00 36 0
ab	DisplayVersion	REG_SZ	22H2
ab	EditionID	REG_SZ	Enterprise
ab	EditionSubManufacturer	REG_SZ	
ab	EditionSubstring	REG_SZ	
ab	EditionSubVersion	REG_SZ	
ab	InstallationType	REG_SZ	Client
oh	InstallDate	REG_DWORD	0x632b6a64 (1663789668)
oh	InstallTime	REG_QWORD	0x1d8cdf3072d9953 (13308263268860)
ab	PathName	REG_SZ	C:\Windows
oh	PendingInstall	REG_DWORD	0x00000000 (0)
ab	ProductId	REG_SZ	00330-80000-00000-AA545
ab	ProductName	REG_SZ	Windows 10 Enterprise
ab	ReleaseId	REG_SZ	2009
ab	SoftwareType	REG_SZ	System
ab	SystemRoot	REG_SZ	C:\WINDOWS

Windows 11 Readiness

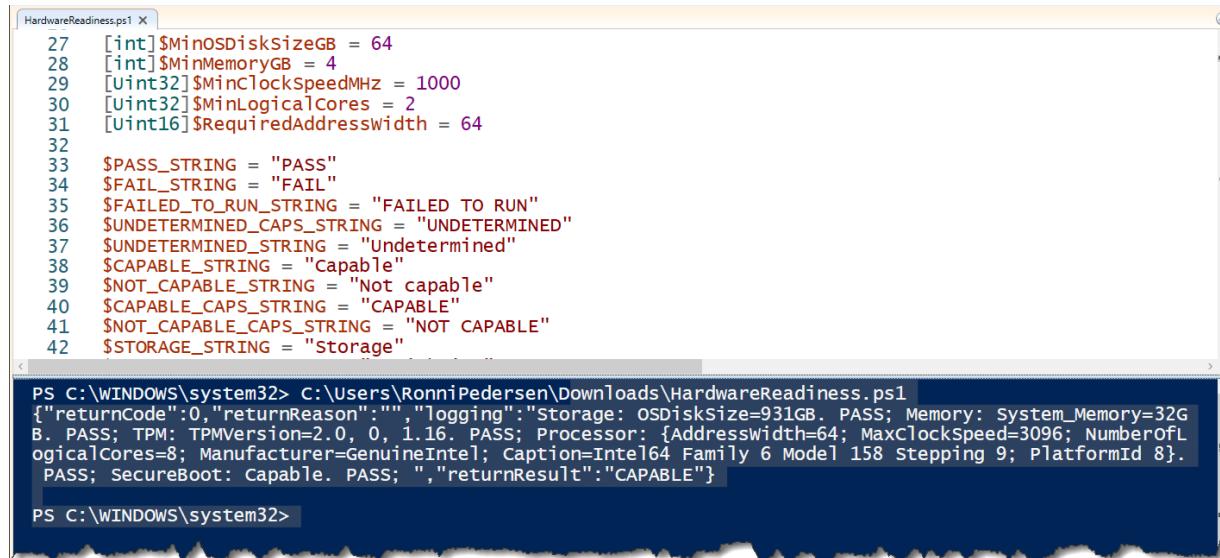
- Endpoint Analytics

- Easy to start using (Tenant attach, Intune, Co-Management)
 - Requires Windows Enterprise E3 (Microsoft 365 E3, EMS E3 or better).

Managed by ↑↓	OS version ↑↓	Windows 11 readiness sta... ↑↓	Windows 11 readiness reason
Co-managed	10.0.19042.1348	Capable	--
Intune	10.0.18363.1916	Not capable	System firmware
Intune	10.0.19043.1348	Not capable	TPM, System firmware
ConfigMgr	10.0.19043.928	Unknown	--
ConfigMgr	10.0.19041.208	Unknown	--

Windows 11 Readiness / MEMCM

- Microsoft provides a PowerShell script



The screenshot shows a Windows PowerShell window titled "HardwareReadiness.ps1" with the following content:

```
27 [int]$MinOSDiskSizeGB = 64
28 [int]$MinMemoryGB = 4
29 [uint32]$MinClockSpeedMHz = 1000
30 [uint32]$MinLogicalCores = 2
31 [uint16]$RequiredAddresswidth = 64
32
33 $PASS_STRING = "PASS"
34 $FAIL_STRING = "FAIL"
35 $FAILED_TO_RUN_STRING = "FAILED TO RUN"
36 $UNDETERMINED_CAPS_STRING = "UNDETERMINED"
37 $UNDETERMINED_STRING = "Undetermined"
38 $CAPABLE_STRING = "Capable"
39 $NOT_CAPABLE_STRING = "Not capable"
40 $CAPABLE_CAPS_STRING = "CAPABLE"
41 $NOT_CAPABLE_CAPS_STRING = "NOT CAPABLE"
42 $STORAGE_STRING = "Storage"
```

Below the code, the PowerShell command and its output are shown:

```
PS C:\WINDOWS\system32> C:\Users\RonniPedersen\Downloads\HardwareReadiness.ps1
{"returnCode":0,"returnReason":"","logging":"Storage: OSDiskSize=931GB. PASS; Memory: System_Memory=32G
B. PASS; TPM: TPMVersion=2.0, 0, 1.16. PASS; Processor: {Addresswidth=64; MaxClockspeed=3096; NumberOfLogicalCores=8; Manufacturer=GenuineIntel; Caption=Intel64 Family 6 Model 158 Stepping 9; PlatformId 8}.
PASS; SecureBoot: Capable. PASS; ","returnResult":"CAPABLE"}
```

PS C:\WINDOWS\system32>

<https://techcommunity.microsoft.com/t5/microsoft-endpoint-manager-blog/understanding-readiness-for-windows-11-with-microsoft-endpoint/ba-p/2770866>

Windows 11 Readiness

- Lots of great free community readiness report available:

Asset - Windows 11 Readiness

Description : List all Windows 10 devices and their hardware inventory status in order to plan a Windows 11 migration. Boxes in red flag any potential migration issues. Use search or collection parameter to narrow your results. Use the "Show Only Non-Ready" parameter to show only devices that are not ready to receive Windows 11.

Collection : All Systems | Search : % | Ready Only : 0

Total : 1727 | Page : 1 of 32

Click here to see the complete report catalog

Version : 2021/08/24 | Report URL | Direct Link

Windows 11 Minimum Requirements

- Processor: 1 gigahertz (GHz) or faster with two or more cores on a [compatible 64-bit processor](#)
- RAM: 6 gigabytes (GB) or greater
- Storage: 64 GB or greater available storage
- System firmware: UEFI Secure Boot capable
- TPM: Trusted Platform Module (TPM) version 2.0

RAM - More than 4GB

Disk - More than 64GB

CPU - More than 1GHz

SecureBoot Enabled

UEFI Enabled

TPM Version

Device Name	User Name	Client	Client Version	Type	OS Edition	OS Version	OS Build	OS Branch	CPU Name	CPU Speed	RAM	Free Space (GB)	Device Manufacturer	Device Model	SecureBoot Enable	UEFI Enabled
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i7-3630QM CPU @ 2.40GHz	2400	8	133	LENOVO	2425V10	No	Yes		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	143	Dell Inc.	OptiPlex 3040	Yes	Yes		
No	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Celeron(R) CPU N3350 @ 1.10GHz	1100	4	17	Dell Inc.	Latitude 318D	No	Yes		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	143	HP	ProDesk 600 G2 SFF	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	162	HP	ProDesk 600 G2 SFF	Yes	Yes		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500U CPU @ 1.70GHz	1700	16	137	Dell Inc.	Latitude 7410	Yes	Yes		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	162	HP	ProDesk 600 G2 SFF	Yes	Yes		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	166	HP	ProDesk 600 G2 SFF	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	178	Dell Inc.	OptiPlex 3050	Yes	Yes		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	191	Dell Inc.	OptiPlex 3050	Yes	Yes		
No	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) Quad CPU Q3800 @ 2.50GHz	2500	6	100	Dell Inc.	OptiPlex 755	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 3.30GHz	3300	8	123	Dell Inc.	OptiPlex 9020	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 3.30GHz	3300	8	150	HP	ProDesk 600 G2 SFF	Yes	Yes		
No	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 3.30GHz	3300	8	169	Dell Inc.	OptiPlex 3070	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 3.30GHz	3300	8	180	Hewlett-Packard	HP Compaq 6000 Elite SFF PC	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Celeron(R) N4020 CPU @ 1.10GHz	1020	4	107	Dell Inc.	Latitude 318D	Yes	Yes		
No	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3400	8	65	Dell Inc.	OptiPlex 5050	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	133	HP	ProDesk 600 G2 SFF	Yes	Yes		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	135	Dell Inc.	OptiPlex 3040	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	4	69	Hewlett-Packard	HP Compaq 8000 Elite SFF PC	No	No		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	150	HP	ProDesk 600 G2 SFF	Yes	Yes		
Yes	5.00.8988.1021	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6400T CPU @ 2.20GHz	2200	8	163	HP	ProDesk 600 G2 SFF	Yes	Yes		
Yes	5.00.8245.1010	i64-based PC	Microsoft Windows 10	Z1H1	10.019043	Semi-Annual (Targeted)	Intel(R) Core(TM) i5-6500 CPU @ 2.30GHz	3200	8	108	HP	ProDesk 600 G2 SFF	Yes	Yes		

<https://systemcenterdudes.com/free-readiness-memcm-sccm-windows-11-report/>

Remote Workers are the new normal

- Network Considerations
 - VPN (Forced/Split Tunneling)
- Content Location
 - WU/MU
 - On-Prem Servers
 - Azure Shares
 - Cloud Management Gateway (DP)
 - Cloud Attached or not
- End User Support
 - What if upgrade fails?
 - Recovery/Re-provision/re-deploy?



Network Considerations

- Optimizing the network traffic for remote workers

Optimizing Office 365 traffic for remote workers with the native Windows 10 VPN client

04/07/2020 • 14 minutes to read •

This article describes how to configure the recommendations in the article [Optimize Office 365 connectivity for remote users using VPN split tunneling](#) for the *native Windows 10 VPN client*. This guidance enables VPN administrators to optimize Office 365 usage while still ensuring that all other traffic goes over the VPN connection and through existing security gateways and tooling.

This can be achieved for the native/built-in Windows 10 VPN client using a *Force Tunneling with Exclusions* approach. This allows you to define IP-based exclusions *even when using force tunneling* in order to "split" certain traffic to use the physical interface while still forcing all other traffic via the VPN interface. Traffic addressed to specifically defined destinations (like those listed in the Office 365 optimize categories) will therefore follow a much more direct and efficient path, without the need to traverse or "hairpin" via the VPN tunnel and back out of the corporate network. For cloud-services like Office 365, this makes a huge difference in performance and usability for remote users.

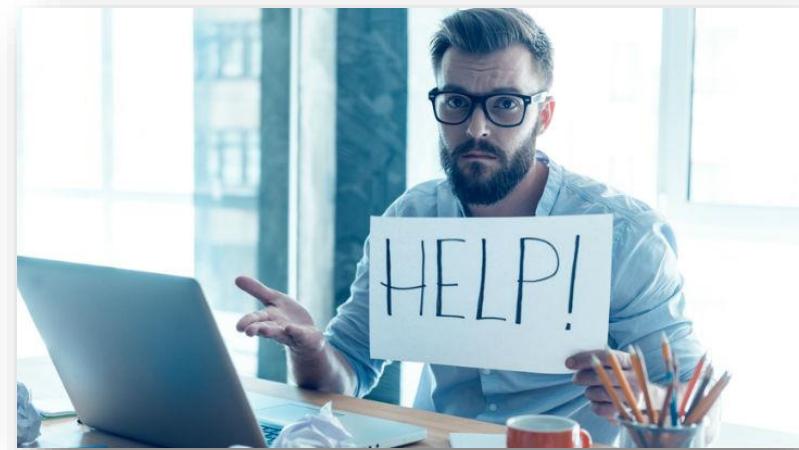
Note

The term *force tunneling with exclusions* is sometimes confusingly called "split tunnels" by other vendors and in some online documentation. For Windows 10 VPN, the term *split tunneling* is defined differently as described in the article [VPN routing decisions](#).

<https://docs.microsoft.com/en-us/windows/security/identity-protection/vpn/vpn-office-365-optimization>

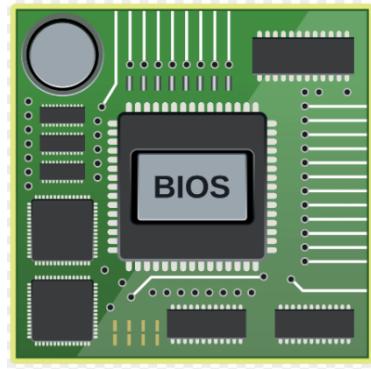
Challenges with Feature Updates

- BIOS and Drivers Updates
- Outdated and unsupported Applications
- Pending Reboots
- Missing updates (CU and Security)
- Language Packs



Driver/BIOS Management

- Community Tool: MSEndpointMgr Modern Driver Management
<https://msendpointmgr.com/modern-driver-management/>
Modern Driver Management should soon support Intune standard alone
- HP are updating BIOS/Firmware using MU for example:
<http://h10032.www1.hp.com/ctg/Manual/c06696094>
- Updates Drivers from Microsoft Update
 - Most major vendors have now started to update drivers using MU



MSEndpointMgr Intune BIOS Control

Driver Automation Tool: Version 7.0.0

MSEndpointMgr

Driver Automation Tool
Automates the process of downloading, extracting and importing Driver and BIOS updates into Configuration Manager, Intune, MDT and other OS deployment solutions

Make & Model Selection OEM Driver Catalogs Common Settings ConfigMgr Settings MDT Settings ConfigMgr Packages ConfigMgr Web Service Diags
Custom Package Creation Intune BIOS Control Process Log About

Intune BIOS Control

BIOS Management Onboarding

Selected	OEM	Model	Production	Latest	SKU Values
<input checked="" type="checkbox"/>	HP	EliteBook 830 G8 Notebook PC	1.06.02	1.06.02	880d
<input type="checkbox"/>	HP	EliteBook 840 G7 Notebook PC	1.06.01	1.06.01	8723
<input type="checkbox"/>	HP	Elite Dragonfly G2 Notebook PC	1.06.03	1.06.03	8716
<input type="checkbox"/>	HP	ZBook Firefly 14 G7 Mobile Workstation	1.06.01	1.06.01	8723
<input type="checkbox"/>	HP	ZBook Firefly 14 G7 Mobile Workstation	1.07.01	1.06.01	8724
<input type="checkbox"/>	HP	Elite Slice for Meeting Rooms	2.53	2.53	81c3
<input type="checkbox"/>	HP	Elite Slice for Meeting Rooms	2.53	2.53	8396
<input type="checkbox"/>	HP	EliteBook 855 G8 Notebook PC	1.06.03	1.06.03	8895
<input type="checkbox"/>	HP	EliteBook 735 G6 Notebook PC	1.17.00	1.17.00	8589

Tenant / Storage Information

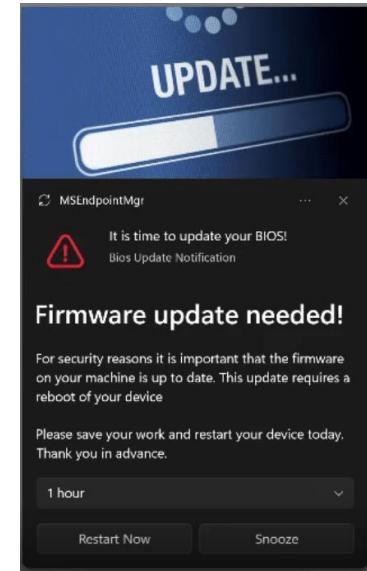
Resource Group Name	[REDACTED]
Subscription ID	[REDACTED]
Tenant ID	[REDACTED]
Storage Location	[REDACTED]
Storage URL	[REDACTED] https://[REDACTED].blob.core.windows...

XML Control Actions

Push Production Update(s)
Push Latest To Production

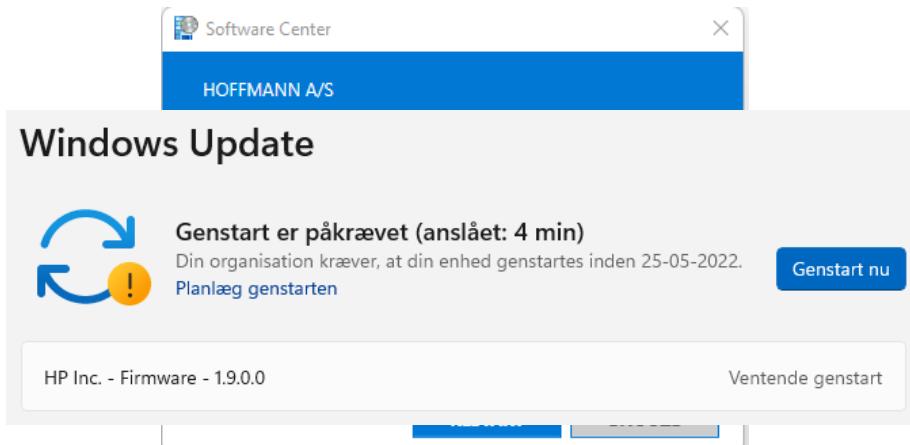
Select All Select None Refresh Azure XML Values

Reset Tool Start Download | Extract | Import



Driver Updates using WUfB

- Drivers updates comes from the vendor
- Can cause many annoying reboots



Driveropdateringer (50)

Intel - net - 22.110.1.1

Installationen blev fuldført d. 25-05-2022

HP Inc. - Firmware - 1.9.0.0

Installationen blev fuldført d. 24-05-2022

Intel Corporation - Display - 30.0.101.1404

Installationen blev fuldført d. 23-05-2022

Intel - SoftwareComponent - 2130.1.16.40

Installationen blev fuldført d. 23-05-2022

Intel - SoftwareComponent - 2143.64.70.0

Installationen blev fuldført d. 18-05-2022

Updates Drivers from Microsoft Update

```
#search and list all missing Drivers
(New-Object -ComObject Microsoft.Update.ServiceManager).Services
$UpdateSvc = New-Object -ComObject Microsoft.Update.ServiceManager
$UpdateSvc.AddService2("7971f918-a847-4430-9279-4a52d1efef18d",7,"")
$Session = New-Object -ComObject Microsoft.Update.Session
$Searcher = $Session.CreateUpdateSearcher()

$Searcher.ServiceID = '7971f918-a847-4430-9279-4a52d1efef18d'
$Searcher.SearchScope = 1 # MachineOnly
$Searcher.ServerSelection = 3 # Third Party

$criteria = "IsInstalled=0 and Type='Driver' and ISHidden=0"
Write-Host('Searching Driver-Updates...') -Fore Green
$searchResult = $Searcher.Search($criteria)
$Updates = $searchResult.Updates

#Show available Drivers
$Updates | select Title, DriverModel, DriverVerDate, DriverClass, DriverManufacturer | fl

#Download the Drivers from Microsoft
$UpdatesToDelete = New-Object -Com Microsoft.Update.UpdateColl
$updates | % { $UpdatesToDelete.Add($_) | out-null }
Write-Host('Downloading Drivers...') -Fore Green
$updateSession = New-Object -Com Microsoft.Update.Session
$downloader = $updateSession.CreateUpdateDownloader()
$downloader.Updates = $UpdatesToDelete
$downloader.Download()

#Check if the Drivers are all downloaded and trigger the Installation
$UpdatesToInstall = New-Object -Com Microsoft.Update.UpdateColl
$updates | % { if($_.IsDownloaded) { $UpdatesToInstall.Add($_) | out-null } }

Write-Host('Installing Drivers...') -Fore Green
$installer = $updateSession.CreateUpdateInstaller()
$installer.Updates = $UpdatesToInstall
$installationResult = $installer.Install()
if($installationResult.RebootRequired) {
    Write-Host('Reboot required! please reboot now..') -Fore Red
} else { Write-Host('Done..') -Fore Green }
```

```
PS C:\WINDOWS\system32> $Updates | select Title, DriverModel, DriverVerDate, DriverClass, DriverManufacturer | fl

Title : INTEL - System - 7/18/1968 12:00:00 AM - 10.1.14.4
DriverModel : Intel(R) Host Bridge/DRAM Registers - 3ED0
DriverVerDate : 18/07/1968 00.00.00
DriverClass : OtherHardware
DriverManufacturer : INTEL

Title : Intel - net - 22.20.0.6
DriverModel : Intel(R) Wireless-AC 9560 160MHz
DriverVerDate : 30/11/2020 00.00.00
DriverClass : Networking
DriverManufacturer : Intel Corporation

Title : Intel Corporation - Bluetooth - 22.20.0.3
DriverModel : Intel(R) Wireless Bluetooth(R)
DriverVerDate : 27/11/2020 00.00.00
DriverClass : OtherHardware
DriverManufacturer : Intel Corporation
```

```
$UpdatesToDelete = New-Object -Com Microsoft.Update.UpdateColl
$updates | % { $UpdatesToDelete.Add($_) | out-null }
Write-Host('Downloading Drivers...') -Fore Green
$updateSession = New-Object -Com Microsoft.Update.Session
$downloader = $updateSession.CreateUpdateDownloader()
$downloader.Updates = $UpdatesToDelete
$downloader.Download()
```

Downloading Drivers...

HResult ResultCode

0 2

<https://github.com/Workplace-Ninja-User-Group-Denmark>

Drivers and Firmware updates

- Control of what drivers, to what device and when.
- Now: Limited Private Preview in Intune
- Currently building the report for Drivers
- Public release is estimated for Q2 2023

Microsoft Technical Takeoff

<http://aka.ms/TT/WUfBdeployment>



MWP Windows Drivers

...

Manual approval driver update policy

[Sync](#) [Delete](#)

Last sync: 11/10/2022, 2:14:34 PM

[Properties](#) [Recommended drivers](#) [Other drivers](#)[Refresh](#) [Columns](#) [Export](#) Search [Add filter](#)

Showing 1 to 11 of 11 records

Driver name ↑↓	Version ↑↓	Manufacturer ↑↓	Driver class ↑↓	Driver avail.
Synaptics Incorporated - Biometri...	6.0.117.1110	Synaptics Incorporated	OtherHardware	9/10/2022
Intel - SoftwareComponent - 1.63...	1.63.1155.1	Intel	OtherHardware	12/17/2021
Dell Inc. - Monitor - 1.0.0.0	1.0.0.0	Dell Inc.	OtherHardware	4/06/2022
Synaptics - Mouse - 19.6.1.21	19.6.1.21	Synaptics	OtherHardware	1/15/2022
Intel - System - 11.7.0.1003	11.7.0.1003	Intel	OtherHardware	2/07/2022
INTEL - System - 10.1.43.5	10.1.43.5	INTEL	OtherHardware	8/28/2021
HP Inc. - Firmware - 1.10.0.0	1.10.0.0	HP Inc.	Firmware	8/09/2022
Realtek - Net - 11.4.211.2022	11.4.211.2022	Realtek		4/14/2022
HP - Firmware - 1.0.7.5	1.0.7.5	HP	Firmware	9/24/2022
HP Development Company, L.P. - ...	11.1.8.1	HP Inc.	OtherHardware	8/04/2022
Fortemedia - SoftwareComponen...	12.1.6003.5907	Fortemedia	OtherHardware	9/22/2022

Manage driver

Synaptics Incorporated - Biometric - 6.0.117.1110

Manage the approval status for this driver. Save any changes to apply.

Current status[Needs review](#)**Devices installed**

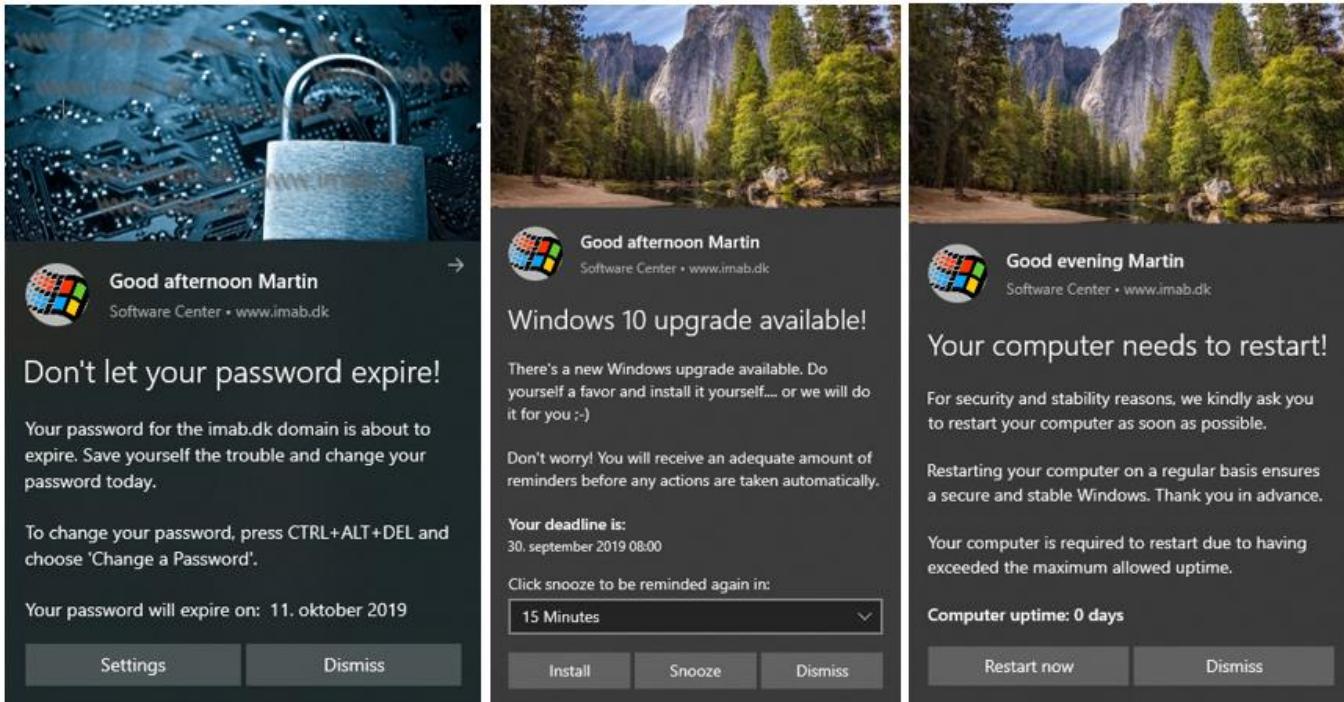
N/A

Additional details**Actions**[Approve](#)**Make available in Windows Update**

11/15/2022

[Save](#)

Pending Reboots / Notifications



<https://www.imab.dk/windows-10-toast-notification-script/>

Windows Update for Business in Microsoft Intune

WINDOWS 11 FEATURE UPDATES

Windows Update for Business

- Pros
 - Devices access Windows Update directly for the updates
 - Simple infrastructure and Less work
 - Simple Management
 - Microsoft hold back updates for “bad” devices (Safeguard Hold)
 - Included driver updates
- Cons
 - Limited Control
 - Maximum 1 year postpone
 - Limited Reporting (it's getting better)



Custom Power BI Reports is key

APENTO

Last Refresh
May 25, 2022 04:09:13

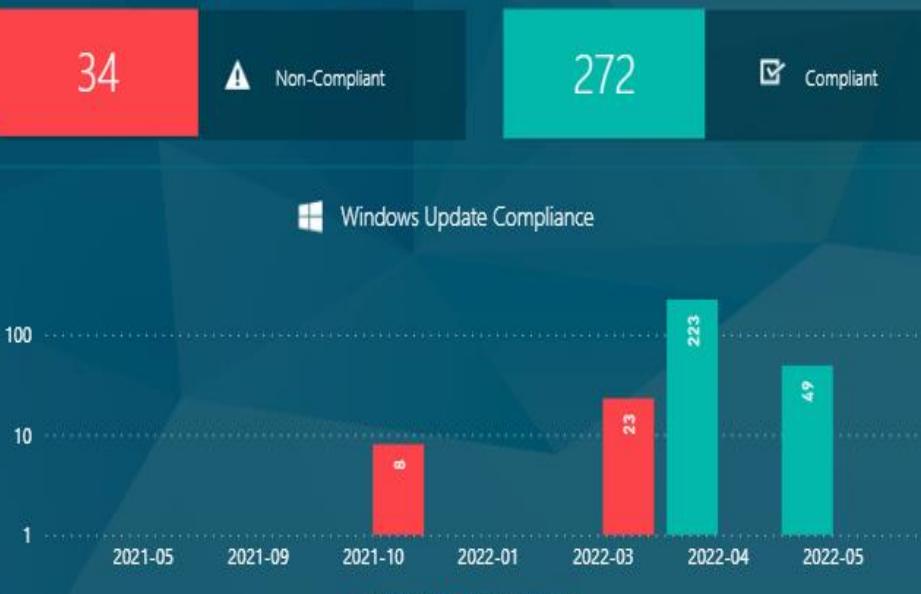
Windows Update

34 ▲ Non-Compliant

272 Compliant

306  Devices

Windows Update Compliance



Period	Non-Compliant	Compliant
2021-05	0	0
2021-09	0	0
2021-10	6	0
2022-01	0	0
2022-03	23	223
2022-04	0	49
2022-05	0	257

Compliant  Non-Compliant 

Windows Update Compliance



Category	Percentage
Compliant	88.89%
Non-Compliant	11.11%

Compliant  Non-Compliant 

Windows 11 Feature Updates (Intune)

This feature is still in public preview

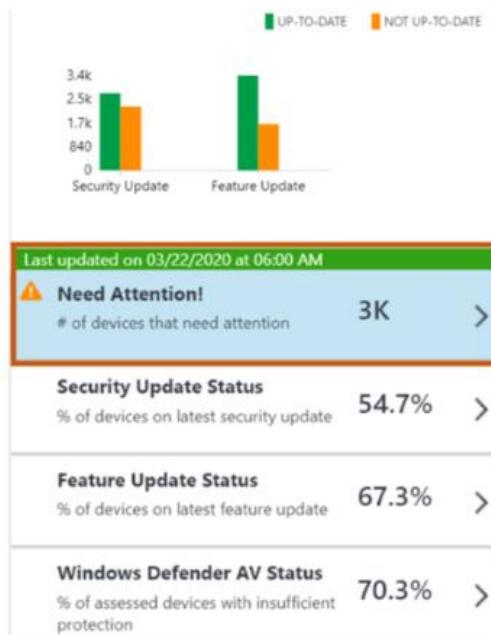
- Telemetry must be turned on
 - Minimum setting of **Basic**.

Important

- The **Feature update deferral period (days)** must be set to **0**.
- **Windows Autopilot**: The feature updates policy cannot be applied during the out of box experience (OOBE). (Can take up to 1 day).

Safeguard Holds

- Diagnostic Data is used to determine whether a devices are ready for a feature update...
- Goal: To ensure a smooth experience!



LIST OF QUERIES

Feature Update deployment issues WaaSDeploymentStatus where UpdateCategory == "Feature" ...
Deferral configurations for Feature Update WaaSUpdateStatus summarize count(ComputerID) by Feature...
Pause configurations for Feature Update WaaSUpdateStatus summarize count(ComputerID) by Feature...
Devices pending reboot to complete feature updates WaaSDeploymentStatus where UpdateCategory == "Feature" ...
Devices with a safeguard hold WaaSDeploymentStatus where DetailedStatus == "Safeg..."
Target build distribution of devices with a safeguard hold WaaSDeploymentStatus where DetailedStatus == "Safeg..."
Security Update Deployment Issues WaaSDeploymentStatus where UpdateCategory == "Quality" ...
Deferral configurations for Quality Update WaaSUpdateStatus summarize count(ComputerID) by Quality...
Pause configurations for Quality Update WaaSUpdateStatus summarize count(ComputerID) by Quality...
Devices pending reboot to complete security updates WaaSDeploymentStatus where UpdateCategory == "Quality" ...
OS Edition distribution for the devices WaaSUpdateStatus summarize DeviceCount = count() by OSE...

Get the Blocker ID (Local)

Command:

```
"C:\WINDOWS\system32>reg query "HKLM\SOFTWARE\Microsoft\Windows  
NT\CurrentVersion\AppCompatFlags\TargetVersionUpgradeExperienceIndicators\NI22H2"
```

Output:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows  
NT\CurrentVersion\AppCompatFlags\TargetVersionUpgradeExperienceIndicators\NI22H2
```

```
DX12    REG_SZ    0  
DestBuildNum    REG_SZ    22621  
DestBuildNumList    REG_SZ    22621,22622,22623  
GStatus    REG_SZ    0  
GatedBlockId    REG_MULTI_SZ    41928397\041332279  
GatedBlockReason    REG_MULTI_SZ    Other\0Other  
GatedFeature    REG_MULTI_SZ    None"
```

SafeGuardHoldLookupSample.ps1

- Author: Gary Blok
- Blog: <https://garytown.com/>

Script:

- <https://github.com/gwablok/garytown/blob/master/Feature-Updates/SafeGuardHolds/SafeGuardHoldLookupSample.ps1>

Output (Example)

```
APP_NAME      : Devices with Integrated 4-Channel Mic and have used Voice Recorder app
SafeguardId   : 41928397
EXE_ID        : {8b5f77d7-26d2-4221-8ab0-059f56532d5b}
PICK_ONE      :
AppName       : Devices with Integrated 4-Channel Mic and have used Voice Recorder app
VENDOR        : Microsoft
NAME          :
BlockType     : GatedBlock
```

Fix: Update driver and/or firmware

```
APP_NAME      : Devices with printer using Microsoft IPP Class Driver (Wu Offer Block)
SafeguardId   : 41332279
EXE_ID        : {cce5bc0a-4441-4c83-9633-a4c1ec4731ff}
PICK_ONE      :
AppName       : Devices with printer using Microsoft IPP Class Driver (Wu Offer Block)
VENDOR        : Microsoft
NAME          :
BlockType     : GatedBlock
```

Fix: Update or remove the printer driver

Requirements for Feature Updates in Intune

- License: Intune + Windows Enterprise E3, VDA or Business Premium
- Windows 10/11 that remains in support
- Hybrid AD joined or Azure AD joined (enrolled in Intune MDM)
- Have Telemetry turned on
- *Windows 10/11 Enterprise LTSC is not supported*
<https://docs.microsoft.com/en-us/mem/intune/protect/windows-10-feature-updates>

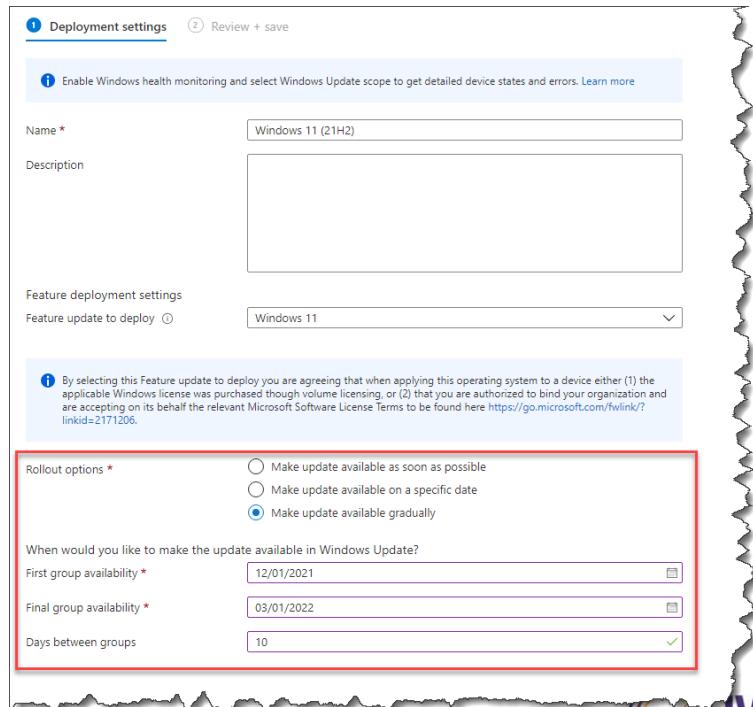
Make updates available gradually

New Rollout Options

- First group availability
- Final group availability
- Days between groups

Example:

- Clients: 400
- First day: 1/1-2022
- Last day: 10/1-2022
- Days between: 3
- Result: **4 Rings** (1/1, 4/1, 7/1, 10/1)



DEMO

Reports: Windows updates (preview)

Home > Reports

Reports | Windows updates (preview)

Search (Ctrl+ /) <

Summary Reports

Refresh

Last refreshed on: 2/8/2021, 2:08:18 PM

Windows update

In progress
4 devices

Success
1 devices

Error
0 devices

Rollback initiated or comp...
0 devices

Cancelled
0 devices

On hold
0 devices

Total
5 devices

Profile	Versions	Success	Error	In progress	Rollback initiated	Cancelled	On hold
Windows 10 Feature ...	20H2	1	0	4	0	0	0

Devices	UPN	Intune Device ID	AAD Device ID	Last Event Time	Update State	Update Substate	Update Aggregated S...
MININT-RLCM8T8	rop@techpreview.dk	4e1d242a-de6a-4f95-b9...	233486f3-1ceb-4b5a-a2...	2/9/2021, 10:00:00 AM	Installed	Update installed	Success
TPPC-0901	rop@techpreview.dk	b80efc22-e7d9-420b-9f...	03fb09da-8960-4e24-90...	2/7/2021, 2:45:06 PM	Pending	Scheduled	In progress
TPPC-2315	rop@techpreview.dk	c3c91379-f4d0-4d44-89...	b668834e-3a0f-49a7-90...	2/9/2021, 4:00:00 AM	Installed	Update installed	Success
TPPC-3826	rop@techpreview.dk	a8f7da64-241c-4948-92...	7cc7944c-88b6-49d9-94...	2/7/2021, 2:45:06 PM	Pending	Scheduled	In progress
TPPC-4085	rop@techpreview.dk	bda1191d-2388-47cd-a...	692baff1-f6fb-4ff9-af5d...	2/8/2021, 10:45:21 PM	Offering	Offer ready	In progress
TPPC-7412	rop@techpreview.dk	ffab687d-1795-4565-ac...	68d0fa2b-39ef-44c3-9b...	2/7/2021, 2:45:06 PM	Pending	Scheduled	In progress

Customer after 60 days (gradually roll-out)

Windows Feature updates



Profile	Versions	Success	Error	In progress	Rollback initiate...	Cancelled
Feature Update for devices running old versions of Windows	Windows 10, version 21H2	17	1	112	0	0
Feature Updates - Ring 0 (Windows 11 21H2)	Windows 11, version 21H2	32	1	15	0	0
Feature Updates - Ring 1 (Windows 10 21H2)	Windows 10, version 21H2	448	14	111	0	0
Feature Updates - Ring 2 (Windows 10 21H2)	Windows 10, version 21H2	945	4	189	0	0
Feature Updates - Ring 3 (Windows 10 21H2)	Windows 10, version 21H2	11810	115	3616	1	0

Migrating from other solutions



- Using Proactive Remediations and Log Analytics
- Ensure Windows Update Settings are Optimal and Compliant.

Service Breaking Settings

Registry Key
Software\Policies\Microsoft\Windows\WindowsUpdate
Software\Policies\Microsoft\Windows\WindowsUpdate
Software\Policies\Microsoft\Windows\WindowsUpdate\AU

Edit - WU Device Settings Inventory ...

1

2

This script will run in detect-only mode because there is no remediation script.

Create a custom script package from scripts you've written. By default, scripts will run on assigned devices every day.

Detection script file Select a file

Detection script

```
<#
SYNOPSIS
Inventory Windows Update device settings
DESCRIPTION
This script is designed to be run as a Proactive Remediation.
Registry keys are inventoried on the device and uploaded to Log Analytics.
Admins are able visualise the Windows Update settings in force across their
```

Remediation script file Select a file

Remediation script

Input script text

Run this script using the logged-on credentials Yes No

Enforce script signature check Yes No

Run script in 64-bit PowerShell Yes No

General

- Workspace summary
- Workbooks
- Logs
- Solutions
- Usage and estimated costs
- Properties
- Service Map

Alert

AppCenterError

AuditLogs

ComputerGroup

Operation

SigninLogs

Usage

Custom Logs

WUDevice_Settings_CL

<https://msendpointmgr.com/2022/05/13/windows-update-settings-compliance/>

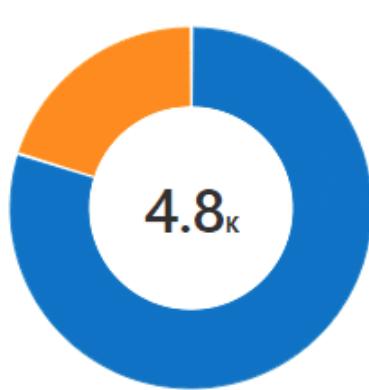
Settings Summary



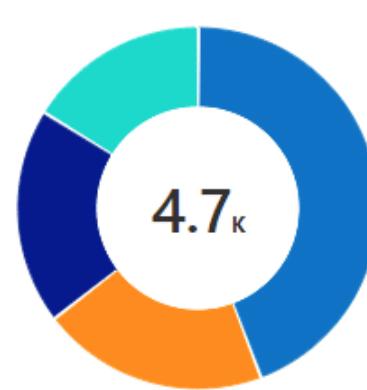
Dashboard Information WSUS Statistics Co-Management Details Script

Windows Update Settings Summary

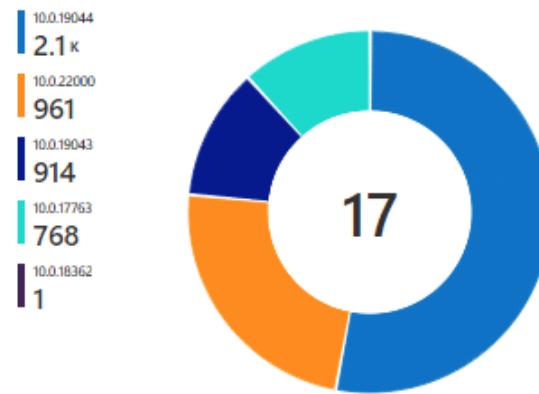
Windows OS Distribution



Windows Build Distribution



Preview Build Targeting

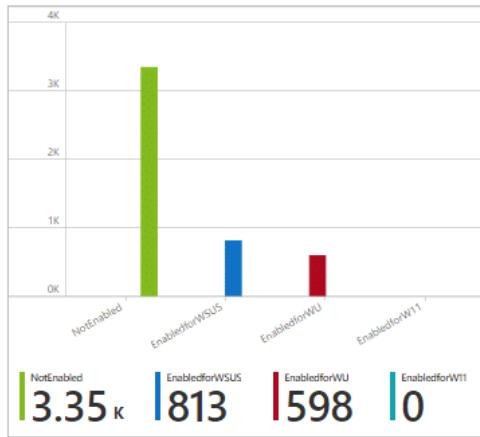


<https://msendpointmgr.com/2022/05/13/windows-update-settings-summary/>

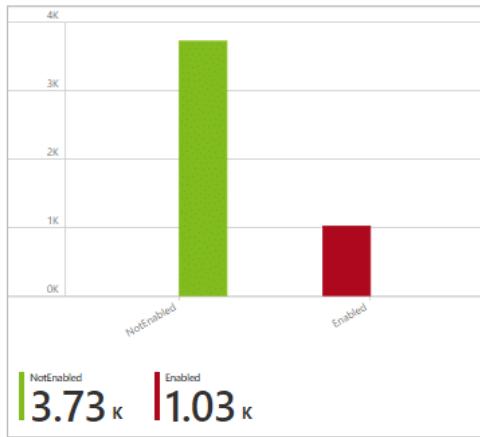
Service Break Settings



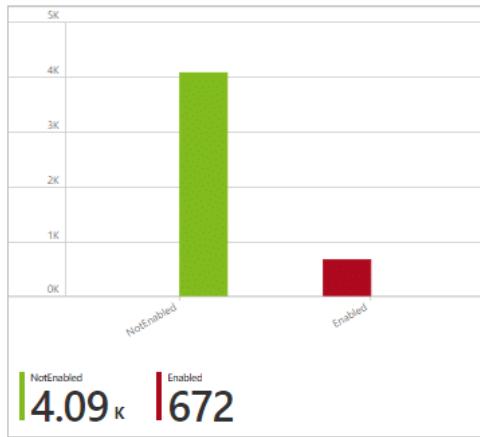
DisableDualScan



NoAutoUpdate



DoNotConnectToWindowsUpdateInternetLocations



DisableDualScan

Setting	↑↓	Devices↑↓
NotEnabled		3346
Enabled (WU)		598
Enabled (WSUS)		813

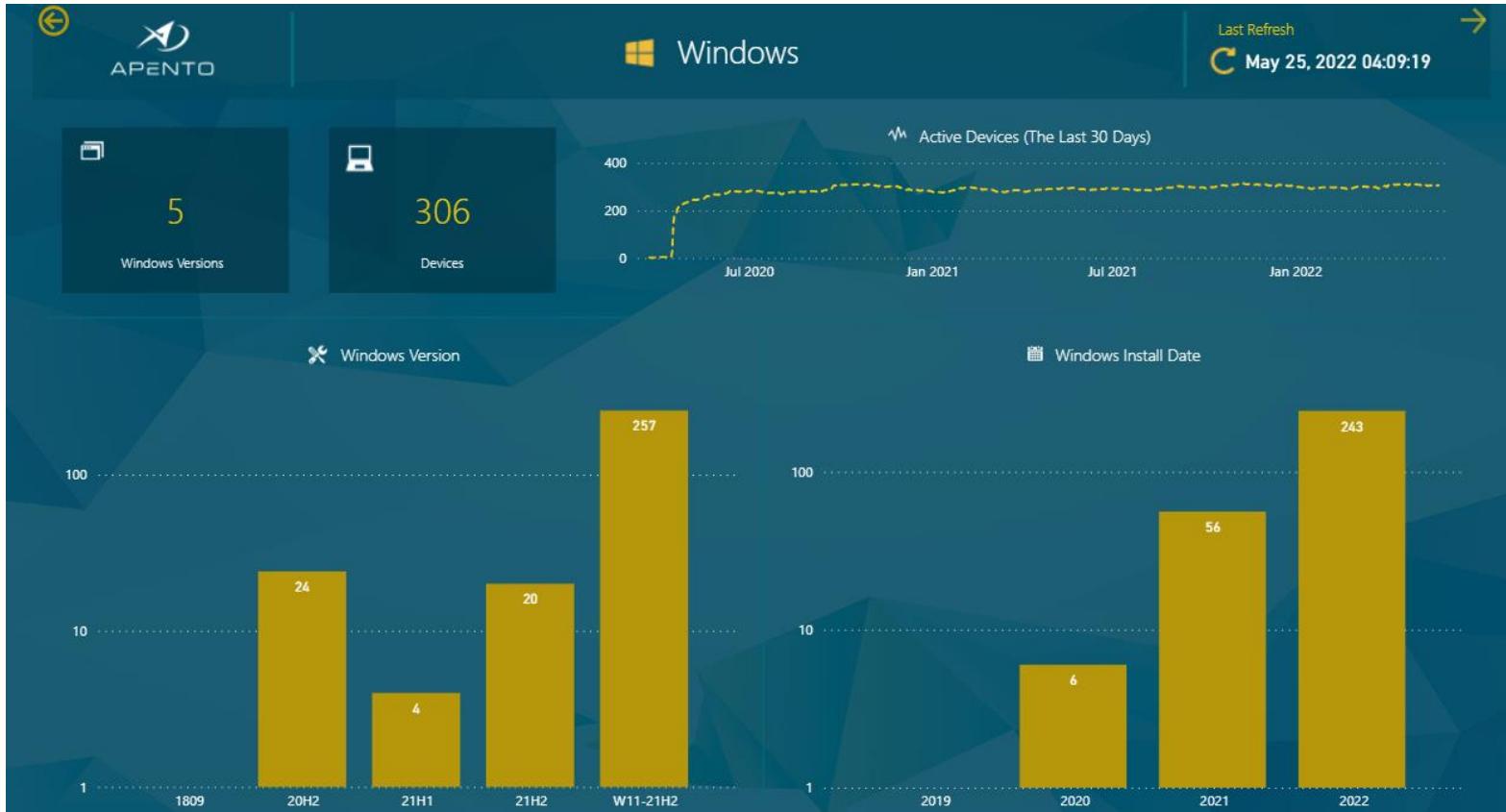
NoAutoUpdate

Setting	↑↓	Devices↑↓
NotEnabled		3729
Enabled		1028

DoNotConnectToWindowsUpdateInternetLocations

Setting	↑↓	Devices↑↓
NotEnabled		4085
Enabled		672

Monitoring Feature Upgrades

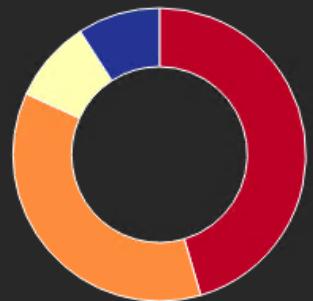


WINDOWS SERVICING (MEMCM)

Windows Servicing

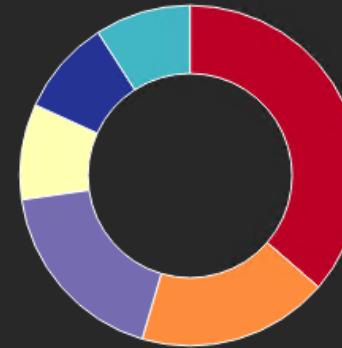
Feature Update Versions

[Show Table](#)

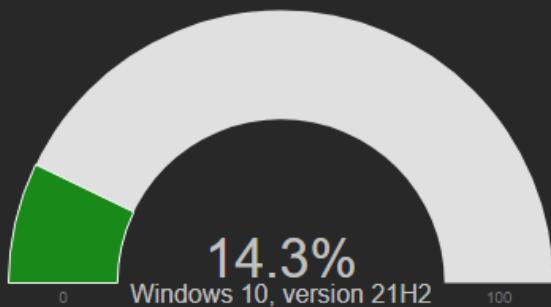


Quality Update Versions

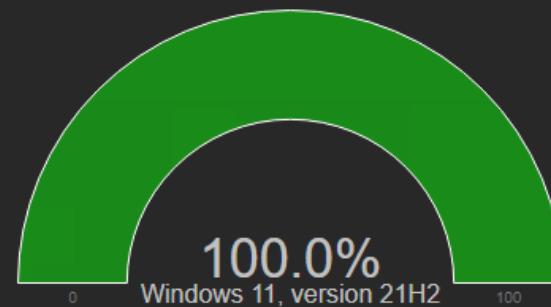
[Show Table](#)



Windows 10 Latest Feature Update



Windows 11 Latest Feature Update



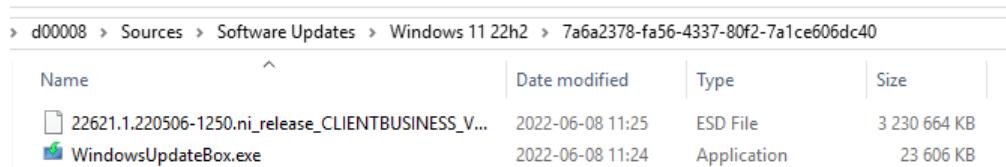
Windows Servicing (MEMCM)

- Error messages show up in the dashboard



MEMCM Windows 11 servicing

- Windowsupdatebox.exe + .esd file
- Content can come from Microsoft Update
- Can be run from an application instead
 - WindowsUpdateBox /Update /PreDownload /quiet
 - WindowsUpdateBox /Update /Install /quiet
 - WindowsUpdateBox /Update /Finalize /quiet



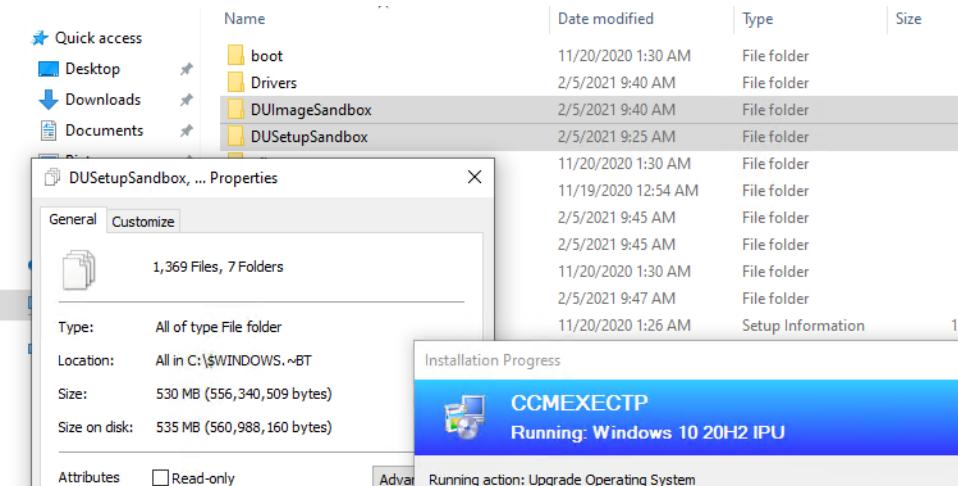
Name	Date modified	Type	Size
22621.1.220506-1250.ni_release_CLIENTBUSINESS_V...	2022-06-08 11:25	ESD File	3 230 664 KB
WindowsUpdateBox.exe	2022-06-08 11:24	Application	23 606 KB

[SCCM/MEMCM: Windows 10 Feature Update Rollouts via Application Deployment - TechNet Articles - United States \(English\) - TechNet Wiki](#)

Dynamic Updates

- Servicing will always trigger Dynamic Updates

- Setup DU:** Fixes to Setup binaries or any files that Setup uses for feature updates.
- SafeOS DU:** Fixes for the 'safe OS' that we use to update Windows recovery environment (WinRE).
- Servicing Stack Update (SSU)/Critical DU:** Fixes that are necessary to address the Windows 10 servicing stack issue and thus required to complete the feature update.
- Latest Cumulative Update (LCU)/General Distribution Release (GDR) DU:** Installs the latest cumulative quality update.
- Language Pack (LP) and Feature On Demand (FOD) DU:** Preserves users' installed language packs and optional features by reinstalling them.
- Driver DU:** Latest version of applicable drivers that have been already published by manufacturers (OEMs and/or IHVs) into Windows Update and specifically targeted for Dynamic Update.



How can we run commands pre/post Feature Update?

Option 1: Setupconfig.ini

Option 2:

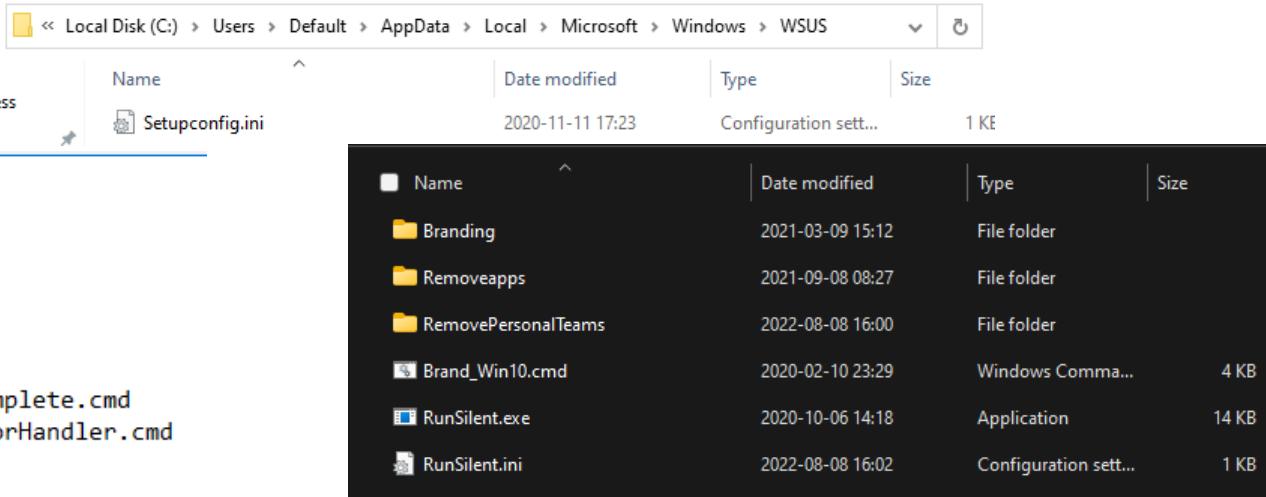
- %windir%\System32\update\run\{GUID}\preinstall.cmd
- %windir%\System32\update\run\{GUID}\precommit.cmd
- %windir%\System32\update\run\{GUID}\failure.cmd
- %windir%\System32\update\run\{GUID}\success.cmd (2004)
- %windir%\System32\update\run\{GUID}\postuninstall.cmd (2004)

Use Runonce instead of Run for = runonce ;-)

<https://docs.microsoft.com/en-us/windows-hardware/manufacture/desktop/windows-setup-enable-custom-actions>

Setupconfig.ini = your new best friend

- Drivers, commands and more = total control!



The screenshot shows a Windows File Explorer window with the path: Local Disk (C:) > Users > Default > AppData > Local > Microsoft > Windows > WSUS. The 'Name' column lists various files and folders. The 'Type' column indicates the nature of each item, such as 'Configuration sett...' for the ini file and 'File folder' for the subfolders.

Name	Date modified	Type	Size
Setupconfig.ini	2020-11-11 17:23	Configuration sett...	1 KB
Branding	2021-03-09 15:12	File folder	
Removeapps	2021-09-08 08:27	File folder	
RemovePersonalTeams	2022-08-08 16:00	File folder	
Brand_Win10.cmd	2020-02-10 23:29	Windows Comma...	4 KB
RunSilent.exe	2020-10-06 14:18	Application	14 KB
RunSilent.ini	2022-08-08 16:02	Configuration sett...	1 KB

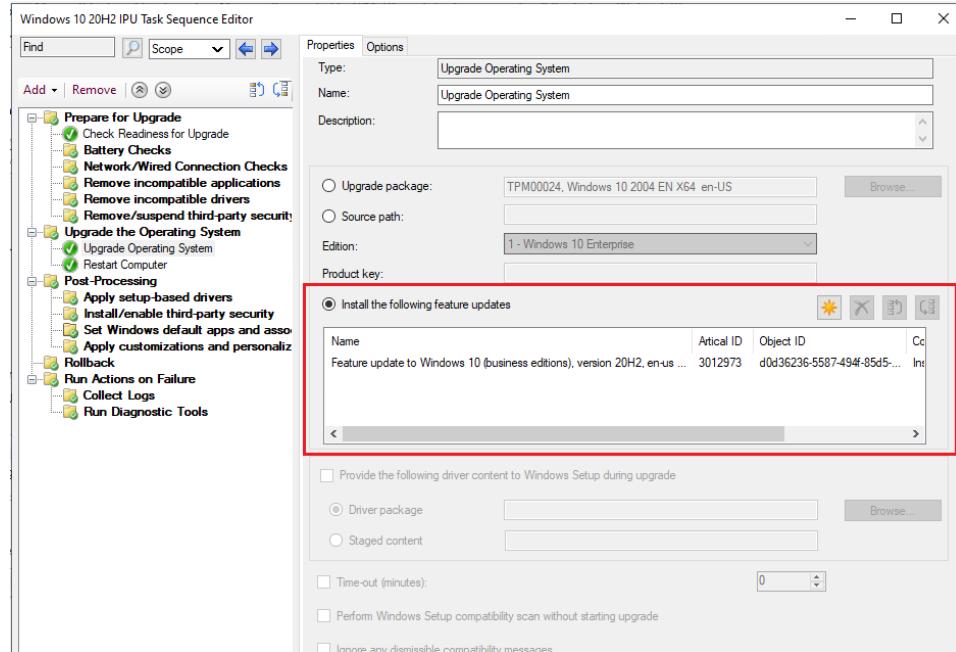
Setupconfig.ini Content:

```
[Setupconfig]
BitLocker=AlwaysSuspend
Compat=IgnoreWarning
Priority=Normal
DynamicUpdate=Enable
ShowOOBE=None
Telemetry=Enable
PostOOBE=C:\Windows\AdvancedIPU\SetupComplete.cmd
PostRollBack=C:\Windows\AdvancedIPU\ErrorHandler.cmd
PostRollBackContext=System
```

<https://www.asquaredozen.com/2019/08/25/windows-10-feature-updates-using-setupconfig-ini-to-manage-feature-updates-in-the-enterprise/>

Feature update in Task Sequence

- Feature update in Task Sequence
- Why you ask?
 - IPU Source = 5,1 GB
 - *.ESD = 3.8 GB
- Will always run Dynamic Updates
- Need to use setupconfig.ini



Advanced Windows Servicing (MEMCM)

- Community Tool
- DeploymentScheduler + IPUInstaller – by Johan Schrewelius
- Either patched Media or .Esd
- Post commands
- Driver updates

Name	Date modified	Type
ErrorHandler	2021-02-07 13:43	File folder
Media	2021-02-07 21:29	File folder
SetupComplete	2021-02-07 14:56	File folder
IpuInstaller.exe	2021-02-09 11:46	Application

This PC > New Volume (E:) > Sources > OS Upgrades > IPU-JN > IPUApplication > SetupComplete >			
Name	Date modified	Type	Size
Branding	2021-02-07 13:43	File folder	
DefaultApps	2021-02-07 13:43	File folder	
Edge	2021-02-07 13:43	File folder	
RemoveApps	2021-02-07 13:44	File folder	
RemoveEdgeWelcome	2021-02-07 13:44	File folder	
StartMenu	2021-02-07 13:44	File folder	
StartMenuFiles	2021-02-07 13:44	File folder	
Brand_Win10.cmd	2020-02-10 23:29	Windows Comma...	4 KB
ChangeSearchbarFor1903AndLater.ps1	2020-11-19 10:27	Windows PowerS...	2 KB
CleanUp.ps1	2021-02-02 17:01	Windows PowerS...	1 KB
DefaultApps.ps1	2020-02-10 23:29	Windows PowerS...	11 KB
ImportLayout.ps1	2020-02-10 23:29	Windows PowerS...	10 KB
RemoveApps.ps1	2020-02-10 23:29	Windows PowerS...	13 KB
RunSilent.exe	2020-10-06 14:18	Application	14 KB
RunSilent.ini	2021-02-07 14:57	Configuration sett...	1 KB

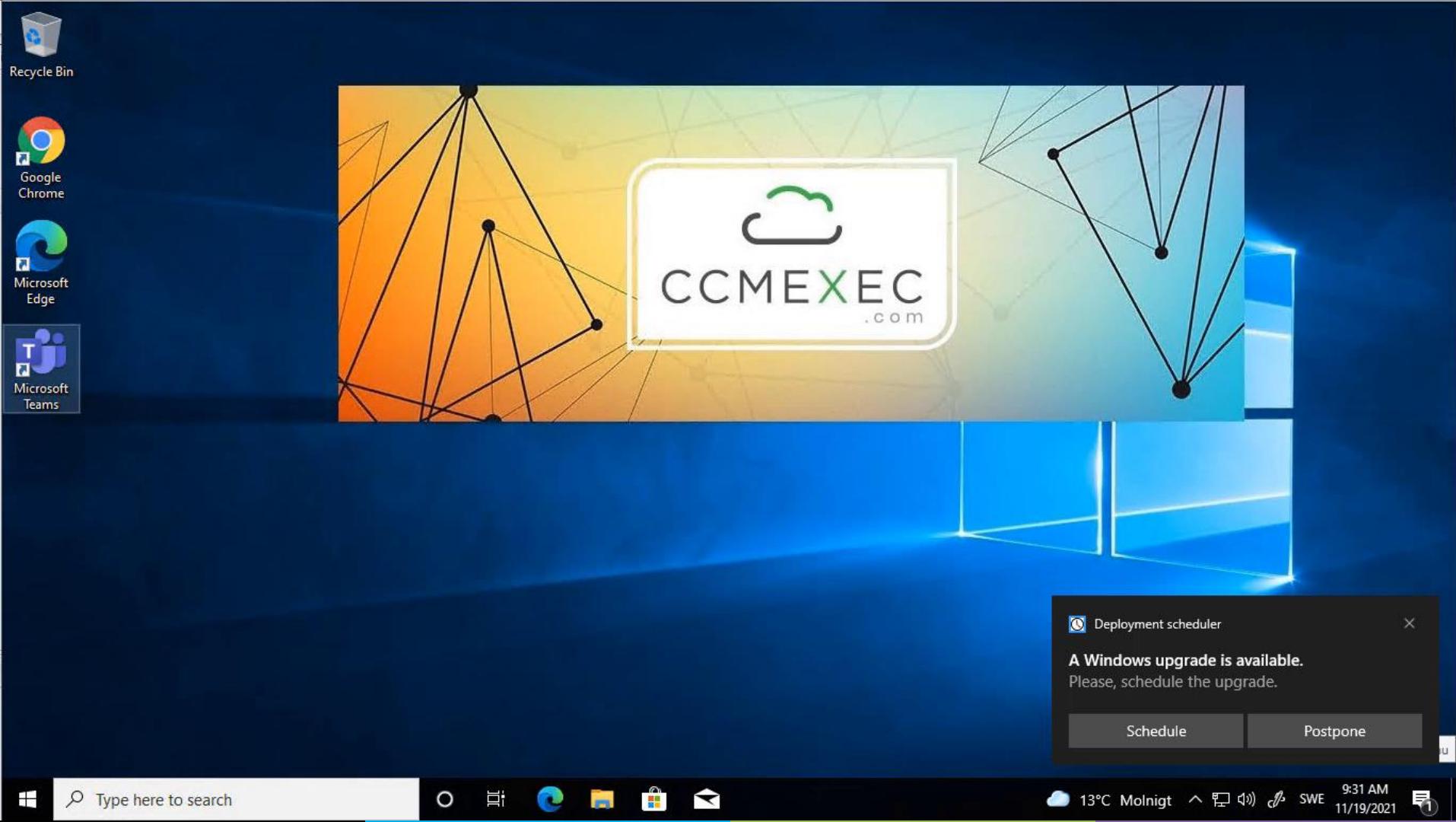
<https://onevinn.schrewelius.it/>

IPUInstaller - drivers

- Driver Package
- IPUDrivers.WIM anywhere in CCMCache

The screenshot shows the IPUMgmt interface. At the top, there's a navigation bar with 'Add' and 'Remove' buttons. Below it is a list of packages: HP830G6, HP2570P, and VM. The 'HP2570P' item is selected, indicated by a dashed border around its icon. To the right, there's a configuration panel for a 'Download Package Content' step. The 'Custom path' field is set to '%ProgramData%\~IPUDrivers'. A note below says: 'Refer to the variable in subsequent steps, using %mycontent02% or %mycontent03%, where the number corresponds to the order this Download Package Content step lists the packages.' There's also a checkbox for 'If a package download fails, continue downloading other packages in the list'. At the bottom, there's a condition editor with a 'WMI Query' condition: 'SELECT * FROM Win32_ComputerSystem WHERE Manufacturer='Hewlett-Packard' AND Model='HP EliteBook 2570p'.

Properties Options				
Type:	Download Package Content			
Name:	HP2570P			
Description:				
1	Name	Type	Size (MB)	Package ID
1	HP2570P	Package	443	EKX00518



Recycle Bin



Google Chrome



Microsoft Edge



Microsoft Teams

Deployment scheduler X

A Windows upgrade is available.
Please, schedule the upgrade.

Schedule

Postpone



Type here to search



13°C Molnigt



SWE

9:31 AM
11/19/2021

Why move to Servicing?

- User experience / productivity
- Content from Microsoft Update?
- Better WFH experience
- Windows 10 20h2 -> Windows 11 21h1 (Fujitsu Lifebook)

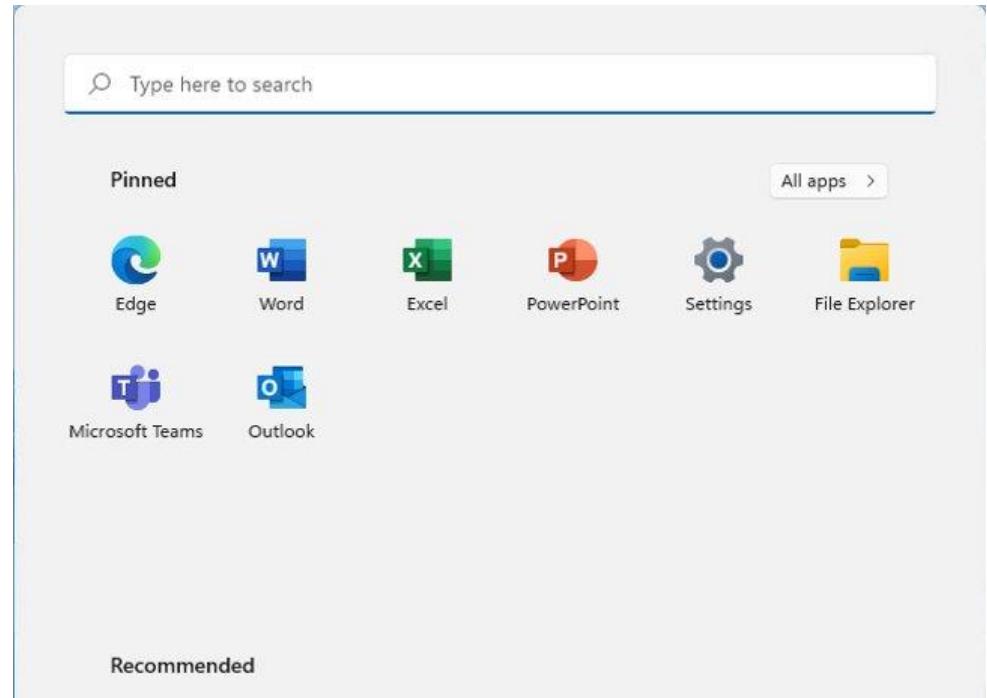
Technology	Installation	Reboot	User Downtime	Total time
Task Sequence	14	9	25	23
Windows Servicing	38	4	4	42
IPUInstaller	12	3	3	15

CUSTOMIZATIONS WINDOWS

11

Windows 11 = modern managed

- Most customizations are only possible using Intune/MDM
- Example Start Menu, a custom start menu can only be deployed using Intune/MDM
- Export-StartLayout PowerShell exports a *.json file that only can be used with Intune

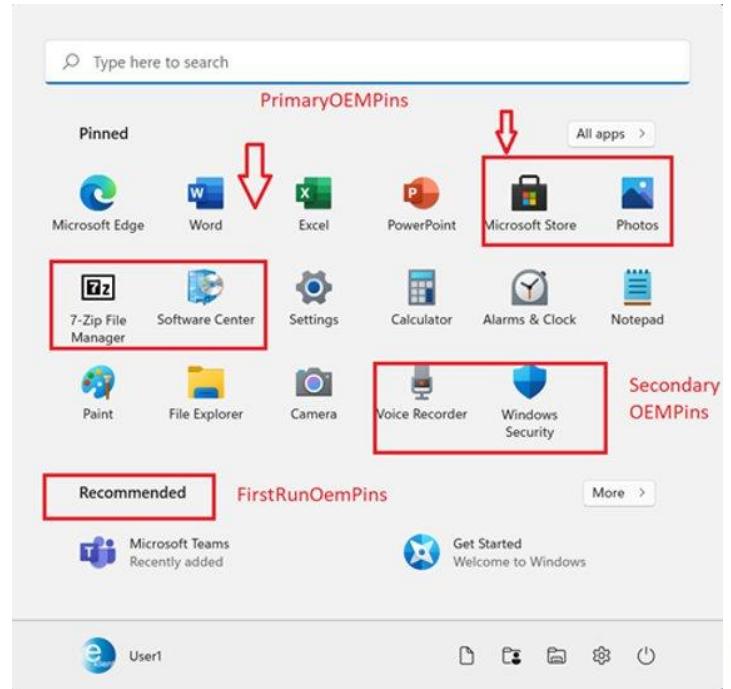


Customized Start Menu using "OEMPinned"

- An option created for OEMs which makes it possible to at modify some parts during OSD
 - 4 st Primary OEMPins
 - 4 st Secondary OEMPins
 - 1st Recommended Managed with Layoutmodification.json

Copy the Layoutmodification.json during OSD:

- Copy-Item -Path \$PSScriptRoot\LayoutModification.json'
-Destination \$env:SystemDrive\Users\Default\AppData\Local\Microsoft\Windows\Shell'

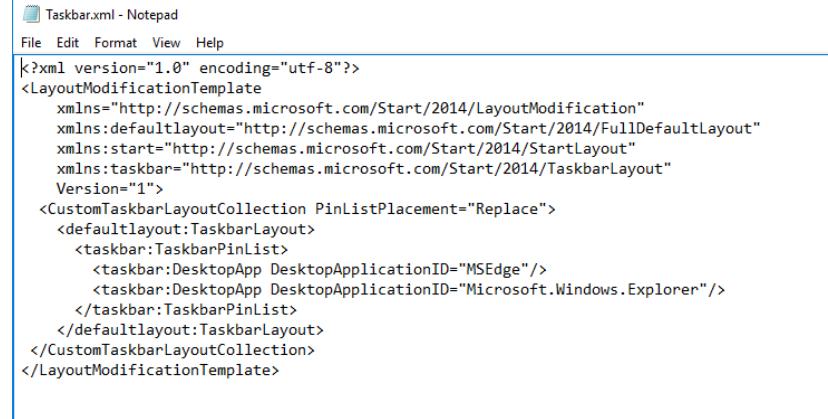


Sample LayoutModification.json

```
{  
    "primaryOEMPins": [  
        {  
            "desktopAppLink": "%ALLUSERSPROFILE%\Microsoft\Windows\Start Menu\Programs\7-Zip\7-Zip File Manager.lnk"  
        },  
        {  
            "desktopAppLink": "%ALLUSERSPROFILE%\Microsoft\Windows\Start Menu\Programs\Microsoft Endpoint Manager\Configuration Manager\Software Center.lnk"  
        },  
        {  
            "desktopAppLink": "%ALLUSERSPROFILE%\Microsoft\Windows\Start Menu\Programs\Outlook.lnk"  
        },  
        {  
            "packagedAppId": "Microsoft.WindowsTerminal_8wekyb3d8bbwe!App"  
        }  
    ],  
    "secondaryOEMPins": [  
        {  
            "packagedAppId": "Microsoft.WindowsCamera_8wekyb3d8bbwe!App"  
        },  
        {  
            "packagedAppId": "Microsoft.WindowsSoundRecorder_8wekyb3d8bbwe!App"  
        },  
        {  
            "packagedAppId": "Microsoft.SecHealthUI_8wekyb3d8bbwe!SecHealthUI"  
        }  
    ],  
    "firstRunOEMPins": [  
        {  
            "packagedAppId": "Microsoft.MicrosoftStickyNotes_8wekyb3d8bbwe!App"  
        }  
    ]  
}
```

Customized taskbar

- Still possible using all the "old" options, Start-Layout; GPO, Import-startlayout, Intune.
- **Note:** Windows 10 Start Menu GPO hits a Windows 11 computer with a full Start-layout and Taskbar config, users can only unpin apps from start and NOT pin.
- Import-StartLayout -LayoutPath \$PSScriptRoot\Startmenustd.xml - MountPath \$env:SystemDrive\



The screenshot shows a Notepad window displaying XML code for a taskbar layout modification template. The code defines a custom taskbar layout collection that replaces the pinned list and contains two pinned desktop applications: Microsoft Edge and Microsoft Windows Explorer.

```
<?xml version="1.0" encoding="utf-8"?>
<LayoutModificationTemplate
    xmlns="http://schemas.microsoft.com/Start/2014/LayoutModification"
    xmlns:defaultLayout="http://schemas.microsoft.com/Start/2014/FullDefaultLayout"
    xmlns:start="http://schemas.microsoft.com/Start/2014/StartLayout"
    xmlns:taskbar="http://schemas.microsoft.com/Start/2014/TaskbarLayout"
    Version="1">
    <CustomTaskbarLayoutCollection PinListPlacement="Replace">
        <defaultLayout:TaskbarLayout>
            <taskbar:TaskbarPinList>
                <taskbar:DesktopApp DesktopApplicationID="MSEdge"/>
                <taskbar:DesktopApp DesktopApplicationID="Microsoft.Windows.Explorer"/>
            </taskbar:TaskbarPinList>
        </defaultLayout:TaskbarLayout>
    </CustomTaskbarLayoutCollection>
</LayoutModificationTemplate>
```

Start Location and more

Start button alignment – 0 = Left

[HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\Advanced]
"TaskbarAI"=dword:00000000

Remove Task View from the Taskbar

[KEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\Advanced]
"ShowTaskViewButton"=dword:00000000

Remove Chat from the Taskbar

[KEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\Advanced]
"TaskbarMn"=dword:00000000

Remove Widgets from the Taskbar

[KEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\Advanced]
"TaskbarDa"=dword:00000000

Remove Search from the Taskbar

[HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Search]
"SearchboxTaskbarMode"=dword:00000000

[Customizing Taskbar and Start in Windows 11 22h2 with PowerShell - CCMEXEC.COM - Enterprise Mobility](#)



Enable Start Menu folders

A great feature not enabled by default, can only be managed using Intune/MDM
PowerShell WMI/Bridge to the rescue
Downside, end users cannot change it



Personalization > Start > Folders

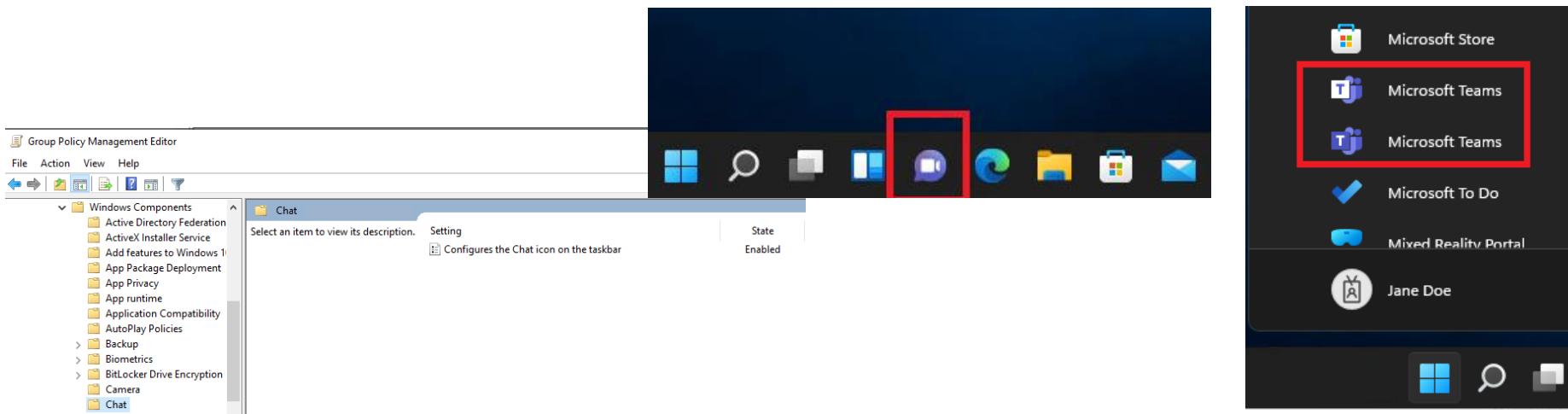
	Settings	On	<input checked="" type="checkbox"/>
	File Explorer	On	<input checked="" type="checkbox"/>
	Documents	On	<input checked="" type="checkbox"/>
	Downloads	On	<input checked="" type="checkbox"/>
	Music	Off	<input type="checkbox"/>
	Pictures	Off	<input type="checkbox"/>
	Videos	Off	<input type="checkbox"/>
	Network	Off	<input type="checkbox"/>

Configure Windows 11 Start Menu folders using PowerShell
- CCMEXEC.COM - Enterprise Mobility

Chat icon

- Points to personal Microsoft Teams
- Can be disabled using GPO
- Can be disabled on modern managed clients using:
OMA-URI = “./Device/Vendor/MSFT/Policy/Config/Experience/ConfigureChatIcon”

Registry:[KEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\Advanced]
“TaskbarMn”=dword:00000000



Disable Personal Teams

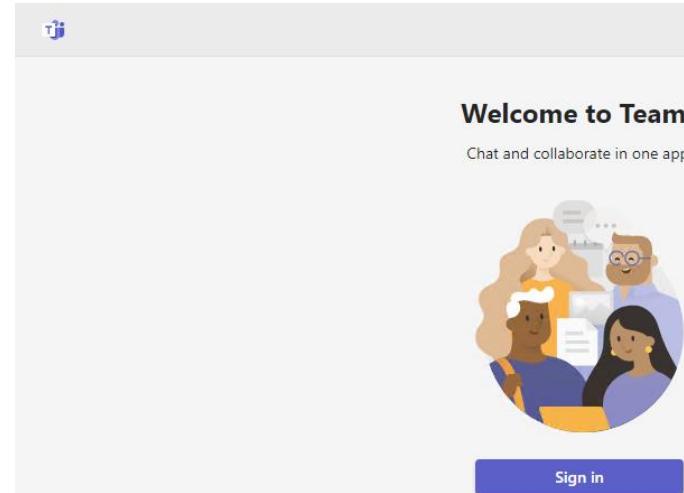
- Disabled by adding Registry value:

"HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Communications\ ConfigureChatAutoInstall

Challenge: owned by **TrustedInstaller**

- During OSD – Unattend.xml
- During Servicing – SetupConfig.ini
- AutoPilot – Proactive remediation/script

SetAcl.exe to take ownership and add the value.



Is uninstalling built-in apps still a thing?

- Uninstall or not?
- New builtin apps in Windows 11
 - PowerAutomate desktop, Microsoft Teams personal

Select DisplayName, PackageName, Version, InstallFolder, Size Out-GridView					
Filter					
Add criteria ▾					
DisplayName	PackageName	Version	InstallFolder	Size	
Microsoft.YourPhone	Microsoft.YourPhone_1.22022.180.0_neutral~_8wekyb3d8bbwe	1.22022.180.0	C:\Program Files\WindowsApps\Microsoft.YourPhone_1.22022.180.0_neutral~_8wekyb3d8bbwe	310,407,689.00	
microsoft.windowscommunicationsapps	microsoft.windowscommunicationsapps_16005.14326.20858.0_neu...	16005.1432...	C:\Program Files\WindowsApps\microsoft.windowscommunicationsapps_16005.14326.20858.0_neu...	214,925,848.00	
Microsoft.Windows.Photos	Microsoft.Windows.Photos_2021.21120.8011.0_neutral~_8wekyb3...	2021.21120....	C:\Program Files\WindowsApps\Microsoft.Windows.Photos_2021.21120.8011.0_neutral~_8wekyb3...	197,229,166.00	
Microsoft.WindowsStore	Microsoft.WindowsStore_22203.1401.21.0_neutral~_8wekyb3d8bb...	22203.1401....	C:\Program Files\WindowsApps\Microsoft.WindowsStore_22203.1401.21.0_neutral~_8wekyb3d8bb...	150,674,691.00	
MicrosoftTeams	MicrosoftTeams_22006.600.1133.7409_x64_8wekyb3d8bbwe	22006.600.1...	C:\Program Files\WindowsApps\MicrosoftTeams_22006.600.1133.7409_x64_8wekyb3d8bbwe	93,947,119.00	
Microsoft.MicrosoftSolitaireCollection	Microsoft.MicrosoftSolitaireCollection_4.12.3171.0_neutral~_8wek...	4.12.3171.0	C:\Program Files\WindowsApps\Microsoft.MicrosoftSolitaireCollection_4.12.3171.0_neutral~_8wek...	60,347,508.00	
Microsoft.549981C3F5F10	Microsoft.549981C3F5F10_4.2203.4603.0_neutral~_8wekyb3d8bbwe	4.2203.4603.0	C:\Program Files\WindowsApps\Microsoft.549981C3F5F10_4.2203.4603.0_neutral~_8wekyb3d8bbwe	49,295,136.00	
Microsoft.XboxGamingOverlay	Microsoft.XboxGamingOverlay_5.722.3302.0_neutral~_8wekyb3d8...	5.722.3302.0	C:\Program Files\WindowsApps\Microsoft.XboxGamingOverlay_5.722.3302.0_neutral~_8wekyb3d8...	48,071,159.00	
Microsoft.ZuneVideo	Microsoft.ZuneVideo_2019.22021.10291.0_neutral~_8wekyb3d8bb...	2019.22021....	C:\Program Files\WindowsApps\Microsoft.ZuneVideo_2019.22021.10291.0_neutral~_8wekyb3d8bb...	37,797,561.00	
Microsoft.StorePurchaseApp	Microsoft.StorePurchaseApp_12109.1001.10.0_neutral~_8wekyb3d...	12109.1001....	C:\Program Files\WindowsApps\Microsoft.StorePurchaseApp_12109.1001.10.0_neutral~_8wekyb3d...	37,502,130.00	
MicrosoftWindows.Client.WebExperience	MicrosoftWindows.Client.WebExperience_421.20070.95.0_neutral~...	421.20070.9...	C:\Program Files\WindowsApps\MicrosoftWindows.Client.WebExperience_421.20070.95.0_neutral~...	35,986,673.00	
Microsoft.ZuneMusic	Microsoft.ZuneMusic_11.2202.45.0_neutral~_8wekyb3d8bbwe	11.2202.45.0	C:\Program Files\WindowsApps\Microsoft.ZuneMusic_11.2202.45.0_neutral~_8wekyb3d8bbwe	34,634,868.00	
Microsoft.WindowsFeedbackHub	Microsoft.WindowsFeedbackHub_2022.317.2207.0_neutral~_8wek...	2022.317.22...	C:\Program Files\WindowsApps\Microsoft.WindowsFeedbackHub_2022.317.2207.0_neutral~_8wek...	33,006,672.00	
Microsoft.VCLibs.140.00	Microsoft.VCLibs.140.00_14.0.29231.0_x64_8wekyb3d8bbwe	14.0.29231.0	C:\Program Files\WindowsApps\Microsoft.VCLibs.140.00_14.0.29231.0_x64_8wekyb3d8bbwe	32,107,153.00	

Call to action

- Move now!
- Take the three years left of Windows 10 support to transition to an AAD join and Intune managed device = Modern Workplace!
- For the rest – Co-management



Session Survey

- Your feedback is very important to us
- Please take a moment to complete the session survey found in the mobile app
- Use the QR code or search for “Converge360 Events” in your app store
- Find this session on the Agenda tab
- Click “Session Evaluation”
- Thank you!

