



Workplace Ninja

User Group Finland

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THANKS FOR THE SPONSORS!



Oudot Windowsit (Weird Windowses)

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Ancient Windowses

- Windows 1.01, 1.02, 1.03, 1.04 (x86-16)
- Windows 2.01, 2.03, 2.1, 2.11 (x86-16, IA-32)
- Windows 3.0, 3.1 (x86-16, IA-32)
- Windows for Workgroups 3.1 (IA-32)
- Windows NT 3.1 (IA-32, Alpha, MIPS)
- Windows 3.11 (x86-16, IA-32)
- Windows for Workgroups 3.11 (IA-32)
- Windows NT 3.5, 3.51 (IA-32, Alpha, MIPS, PowerPC)
- Windows 95 (IA-32)
- Windows NT 4.0 (IA-32, Alpha, MIPS, PowerPC)
- Windows 98, Windows 98 Second Edition (IA-32)
- Windows 2000 (IA-32)
- Windows Me (IA-32)

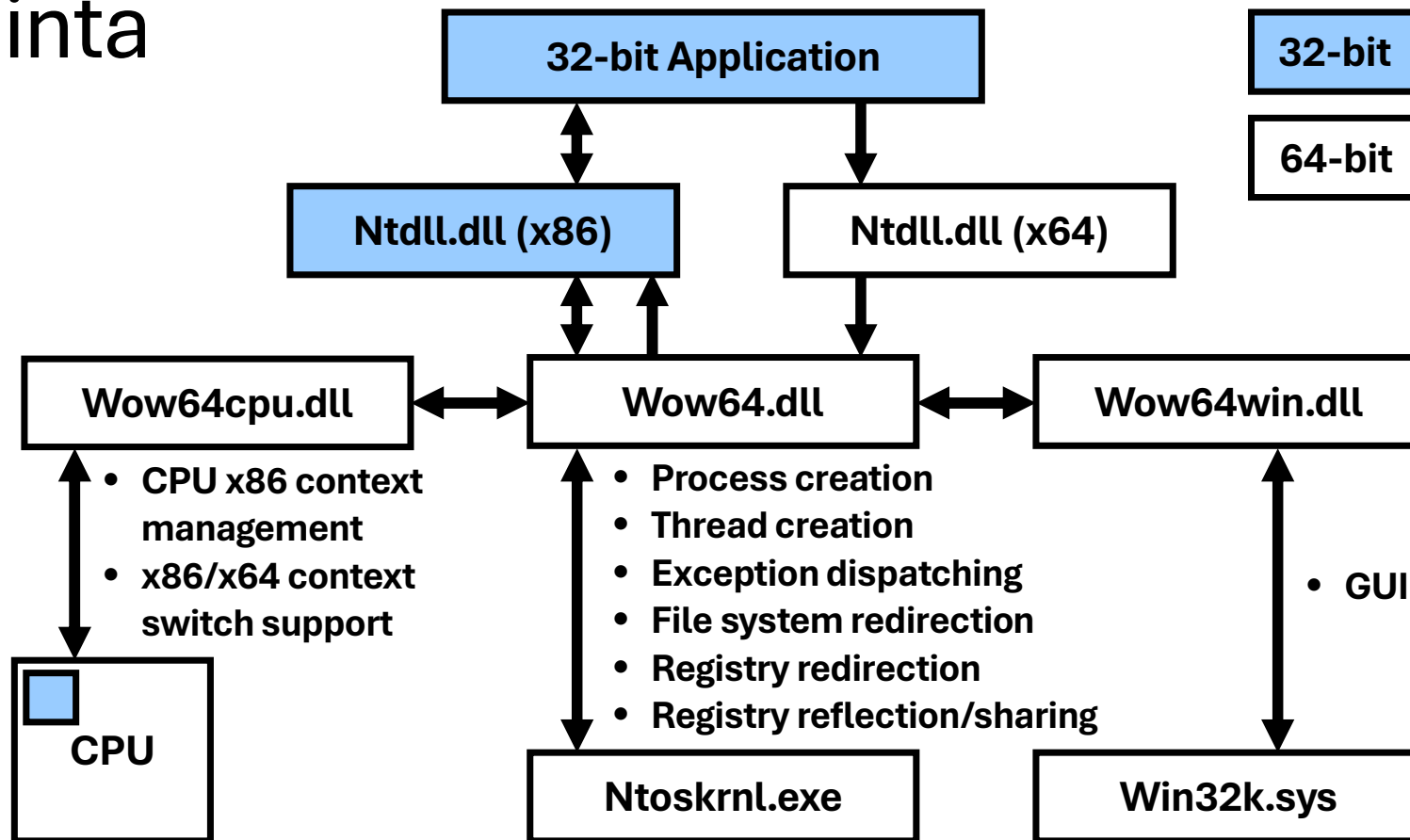


Windows XP

- Starter, Home, Professional
- Windows XP N - no Media Player: EU
- Windows XP KN - no Media Player, Messenger: South Korea
- Windows XP Media Center Editions
- Windows XP 64-bit Edition (Itanium)
- Windows XP Professional x64 Edition (x86-64) (WOW64!)
- Windows XP Tablet PC Edition
- Windows XP Embedded, POSReady
- Windows Fundamentals for Legacy PCs



WOW64 toiminta



WOW64 yhteenveto selkeyttämään tilannetta

- kaikki missä lukee "x86"-tarkennus on 32-bittistä
- kaikki missä ei lue mitään tarkennuksia on oletettavasti 64-bittistä
- kaikki missä lukee "32" on yleensä 64-bittistä
- kaikki missä lukee "64" on yleensä 32-bittistä
 - tai 64-bittistä, mikä on tehty 32-bittistä varten
- kaikki missä lukee sekä "64" että "32" on 32-bittistä paitsi silloin kun se on 64-bittistä



Windows Vista

- Starter, Home Basic, Home Premium, Business, Enterprise, Ultimate
- Business for Embedded Systems, Ultimate for Embedded Systems
- Many new cool things
 - Security improvements: UAC, BitLocker, Firewall, Defender, Credential Providers, Cryptography, ...
 - WIM, WDS, Multilingual UI, GPT+UEFI



Windows 7

- Starter, Home Basic, Home Premium, Professional, Enterprise, Ultimate
- Windows 7 N - no Media Player etc.: EU
- Windows 7 KN - no Media Player etc.: South Korea
- Windows 7 E - no Internet Explorer - EU
- Windows Embedded Standard 7
- Windows Embedded POSReady 7
- Windows Thin PC



Windows 8, 8.1

- Touch screen support
- Windows Store
- Metro UI 😊 😍 😍



Windows RT (ARM)

Surface (with Windows) RT

Released in October 2012

Surface served as the launch device for Windows RT, a limited version of Windows 8 designed for devices based on ARM architecture.

...first PC which Microsoft had designed and manufactured in-house



Windows Mobile (Windows CE)

- Pocket PC 2000
- Pocket PC 2002
- Smartphone 2002
- Windows Mobile 2003
- Windows Mobile 2003 SE
- Windows Mobile 5
- Windows Mobile 6
- Windows Mobile 6.1
- Windows Mobile 6.5



Windows Phone

- Windows Phone 7, 7.5, 8
 - Windows CE based (6.0)
- Windows Phone 8, 8.1
 - Windows NT based (6.2, 6.3)
- Windows 10 Mobile
 - Windows NT based (10.0)



Remember these?

- Zune
 - iPod "killer"
 - Windows CE -based
- Microsoft Band
 - "smart band wrist watch"
- Nokia, Lumia, Continuum



Xbox

- Windows 2000 based, OS heavily modified
 - Xbox (x86)
 - Xbox 360 (PowerPC)
- XBox System Software
 - Hyper-V
 - Windows 8, Windows 10, Windows 11, ...
 - Xbox One, One S, One X (x86-64)
 - Xbox Series S, Series X (x86-64, custom AMD Zen2)



Hololens

- Hololens (x84-64)
- Hololens 2 (ARM)
- Windows Mixed Reality
 - Windows 10, Windows 11
 - Removed from Windows 11 24H2



Windows To Go

- Windows installed on USB Drive
 - Only Microsoft certified USB flash drives
- Windows 8, 8.1 Enterprise
- Windows 10 Enterprise or Education
- KMS or ADBA activation
- BitLocker support
- Removed in Windows 10 2004



Windows S mode

- Windows 10, Windows 11
- "streamlined for security and performance"
- Only Store Apps
 - no win32 apps
- Domain join is not available
- Great success?
 - Switch out of S mode in Windows



Surface Hub

- Surface Hub, 2S
 - Windows 10 Team edition
 - On October 14, 2025, the following changes will take effect:
 - Windows 10 Team edition reaches end of support.
 - Surface Hub 2S devices must be on a Windows 11-based platform, such as Windows 11 or Microsoft Teams Rooms on Windows, to continue receiving updates and support.
 - Surface Hub v1 devices are no longer supported. We recommend upgrading to a newer Surface Hub device.
 - Upgrade from Surface Hub 2S to Surface Hub 3 with the Surface Hub 3 Compute Cartridge
- Surface Hub 3
 - Teams Rooms on Windows



Windows Enterprise multi-session

- Windows 10, Windows 11
- Multiple concurrent interactive sessions
- AVD only
 - Can I...? We don't allow...
 - Can I...? No.
 - Can I...? No.



Windows Dev Kit 2023

- "Project Volterra"
- Windows 11 Pro ARM



Windows ARM

- x86-64 emulation
 - Drivers must be natively ARM
- Windows 11 ARM
 - Windows 11 on Arm supports emulation of both x86 and x64 apps. Performance is enhanced with the introduction of the new emulator Prism in Windows 11 24H2
- Windows 10 ARM
 - Windows 10 on Arm also supports emulation, but only for x86 apps



Windows 11 ARM x86-64 emulation

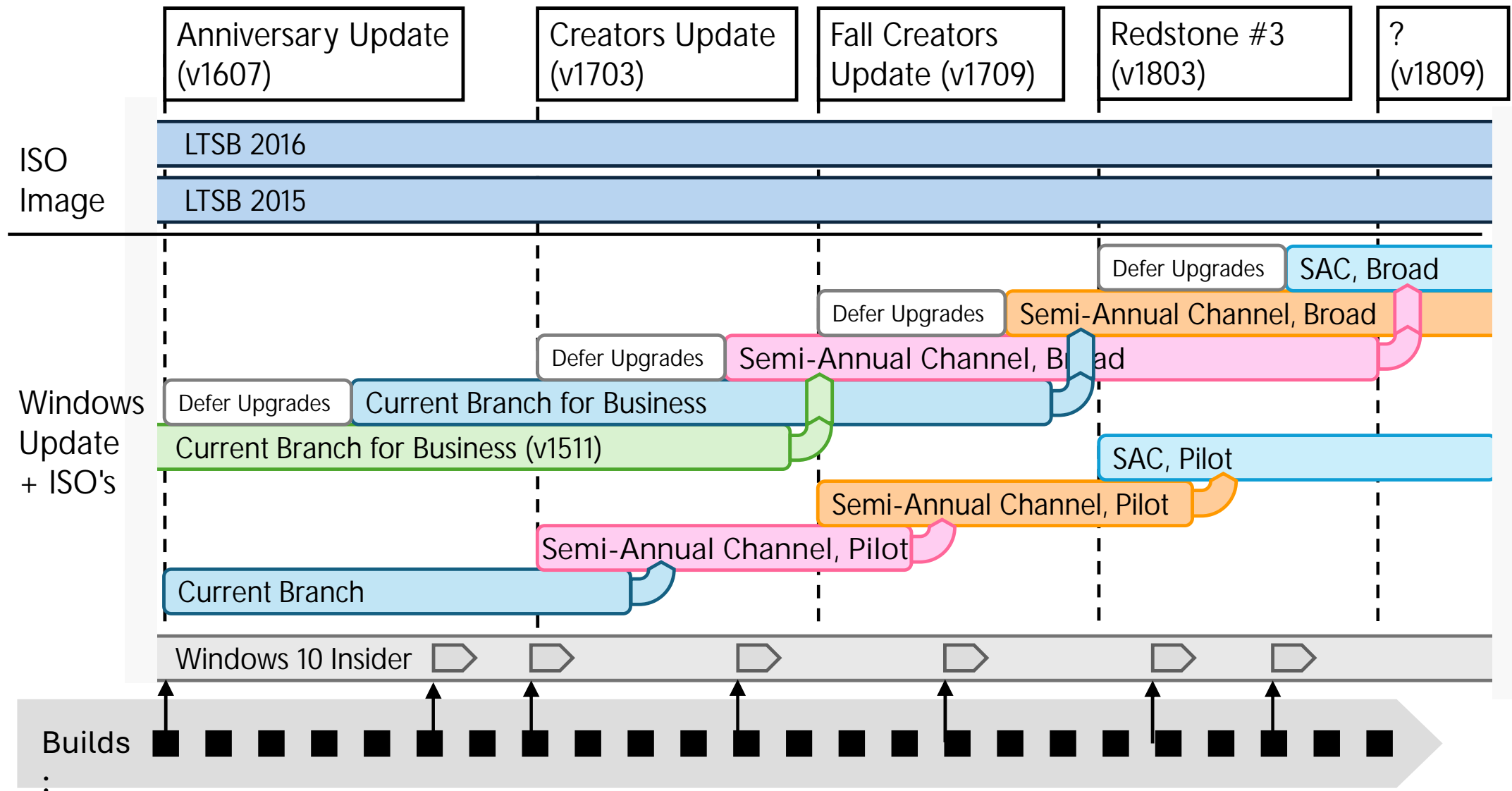
- For x86 apps, the WOW64 layer of Windows allows x86 code to run on the Arm64 version of Windows, just as it allows x86 code to run on the x64 version of Windows. This means that x86 apps on Arm are protected with filesystem and registry redirection.
- For x64 apps, there's no WOW64 layer and no separate registry or folder of Windows system binaries. Instead, system binaries are compiled as Arm64X PE files that can be loaded into both x64 and Arm64 processes from the same location without the need for filesystem redirection. This means that x64 applications can access the entire OS, both filesystem and registry, without the need for special code.
- Note that emulation only supports user mode code and doesn't support drivers. Any kernel mode components must be compiled as Arm64.

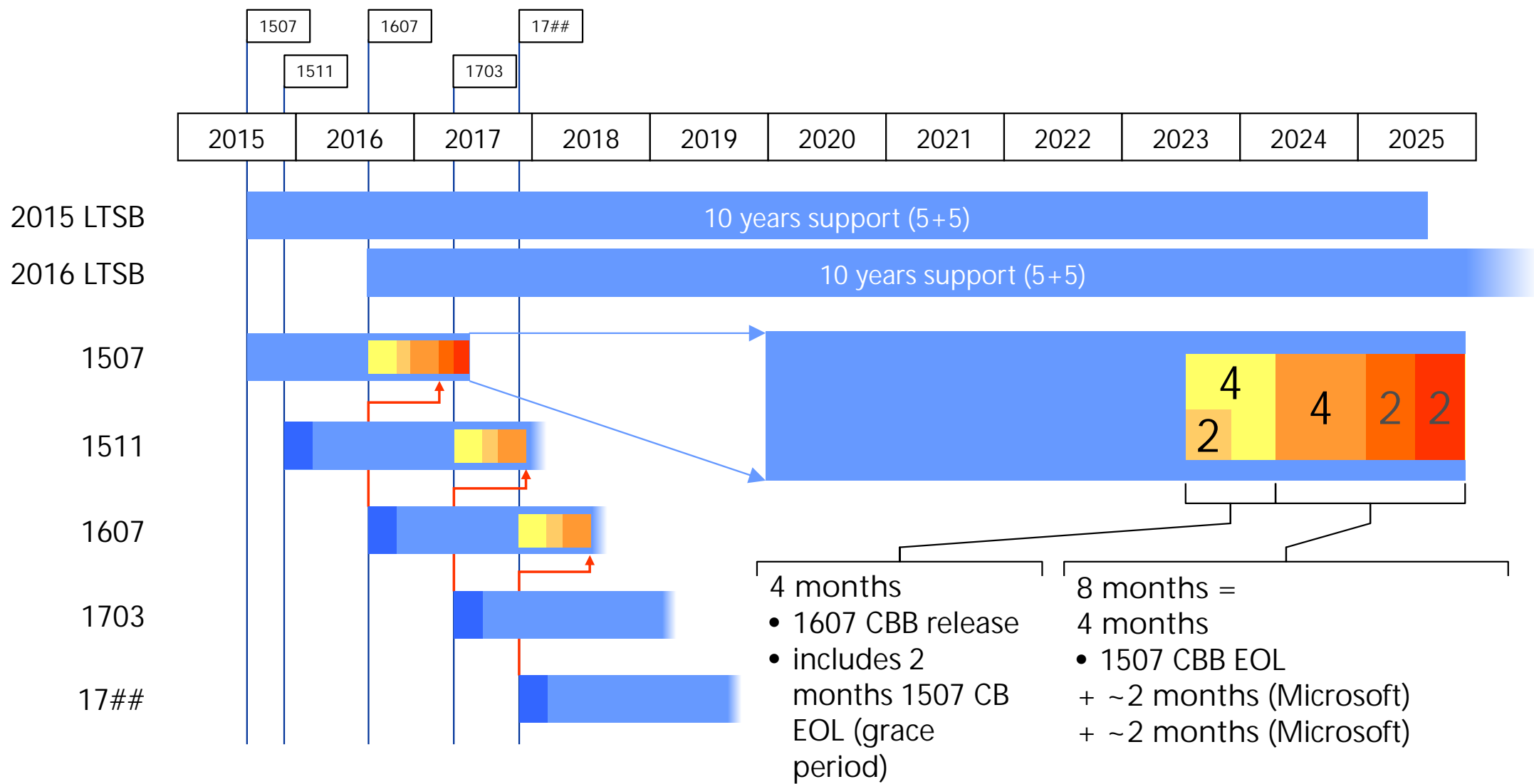


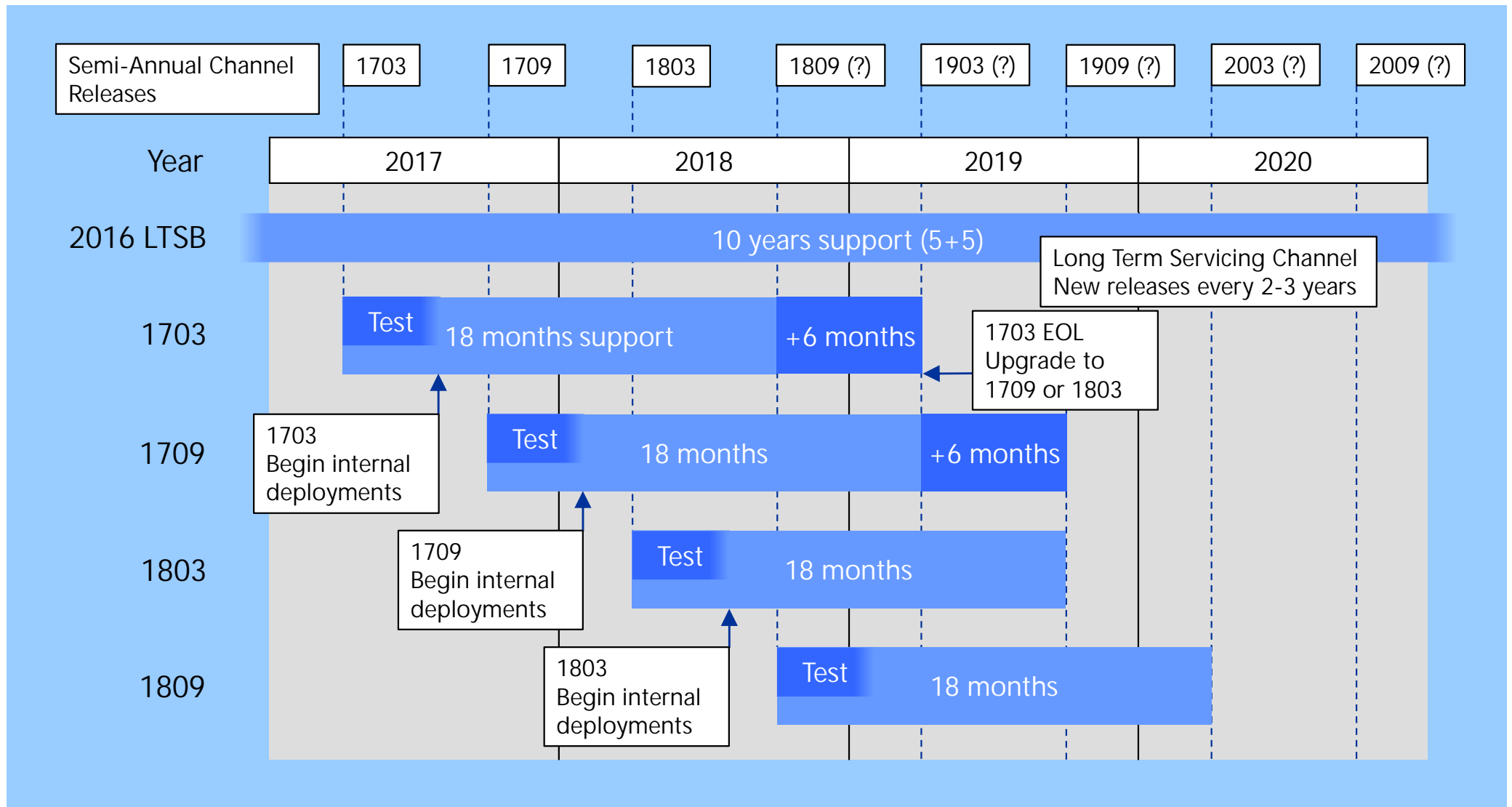
Windows 11 26H1

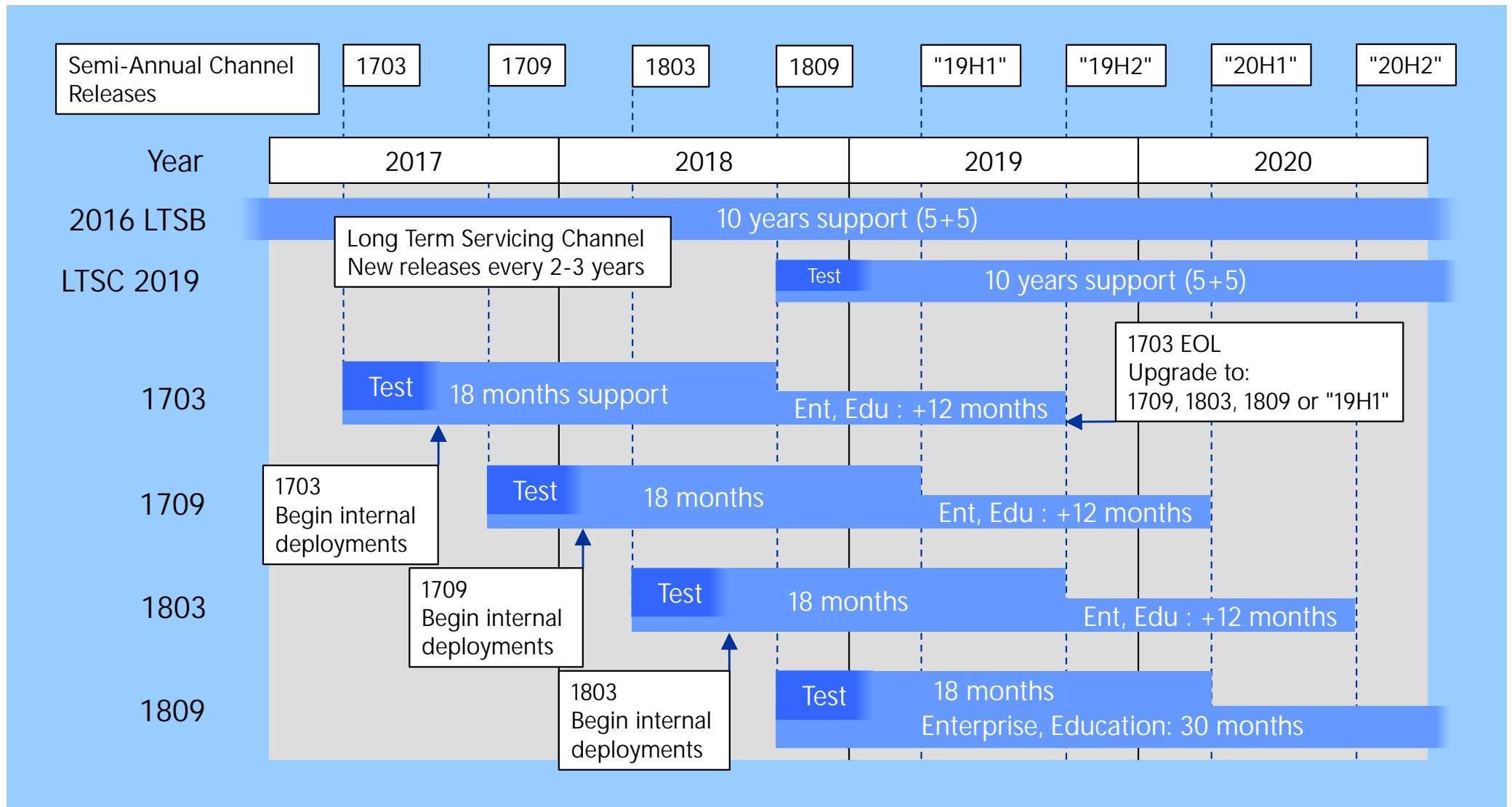


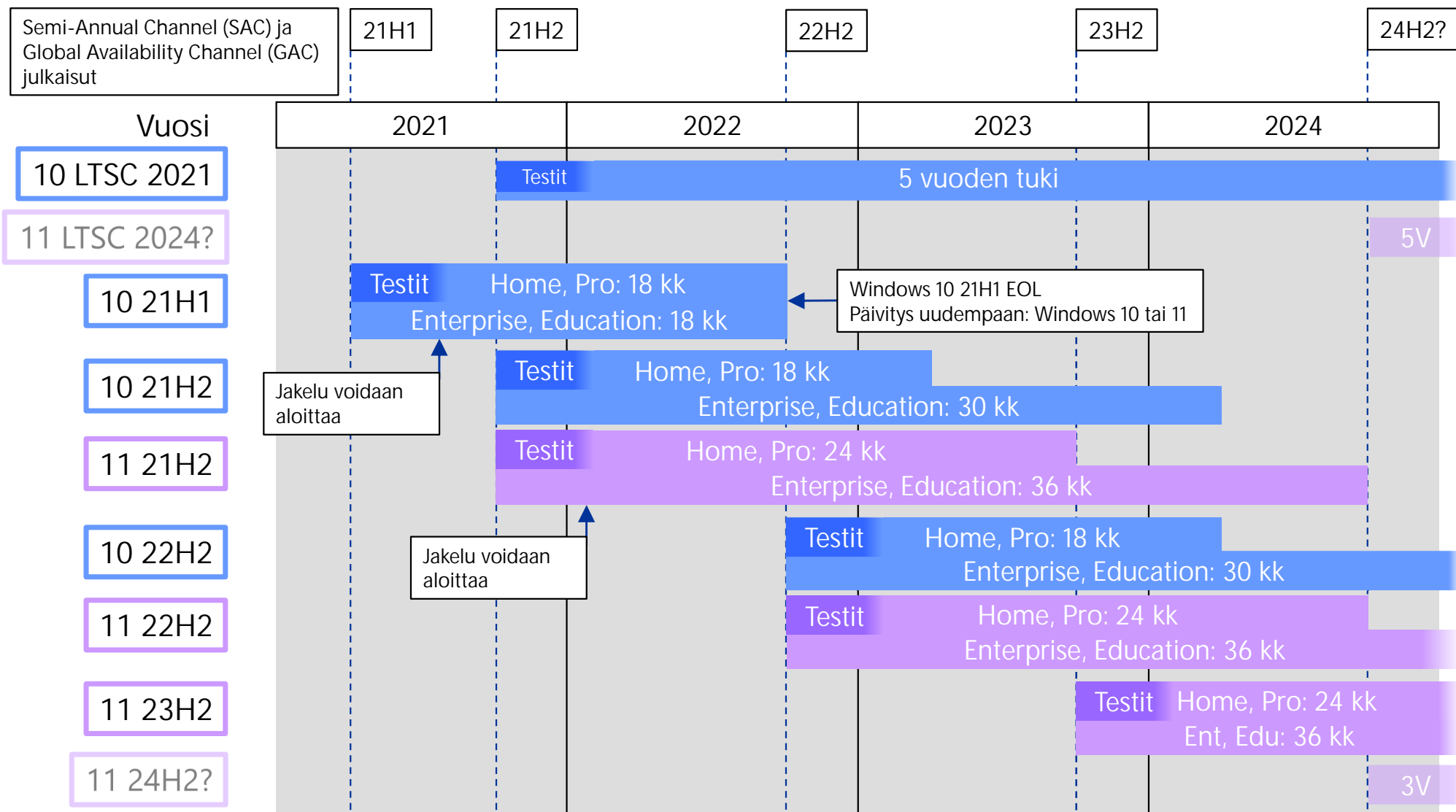
Windows 10 & 11 versions



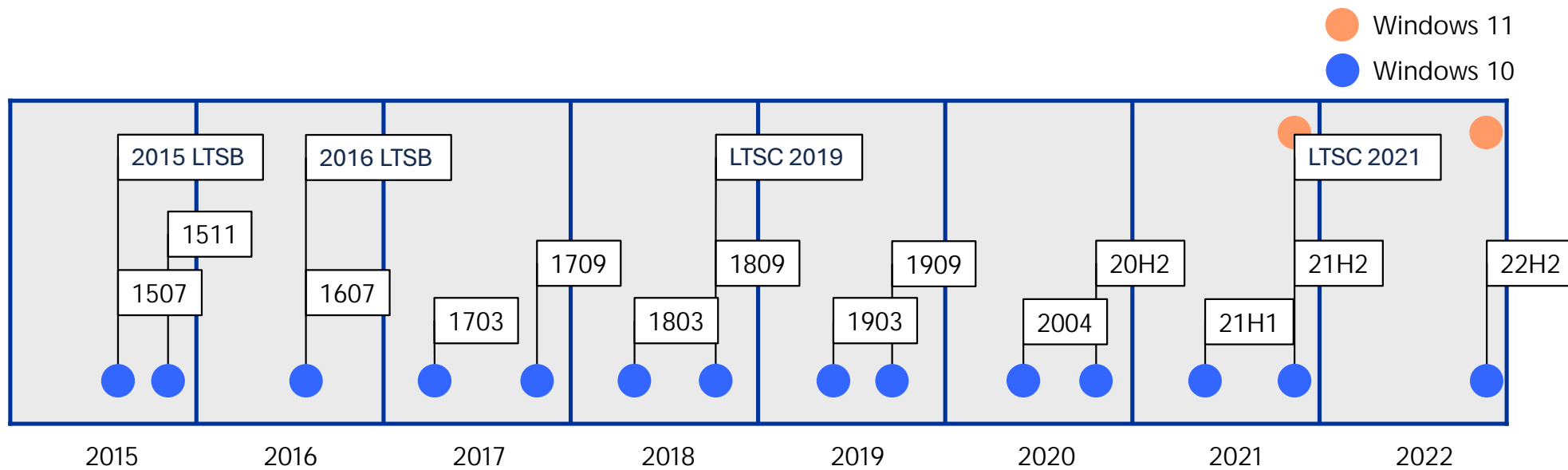




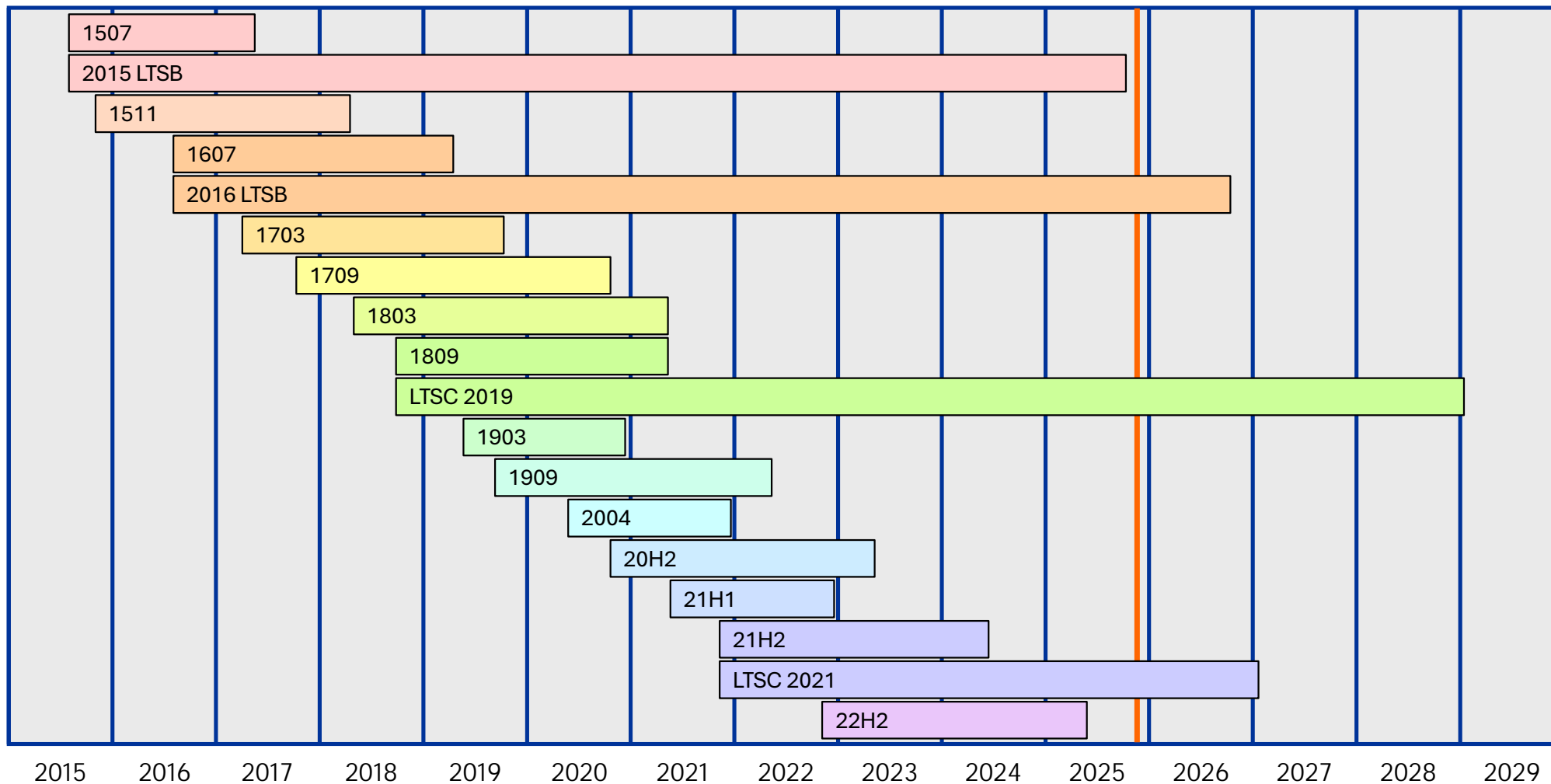




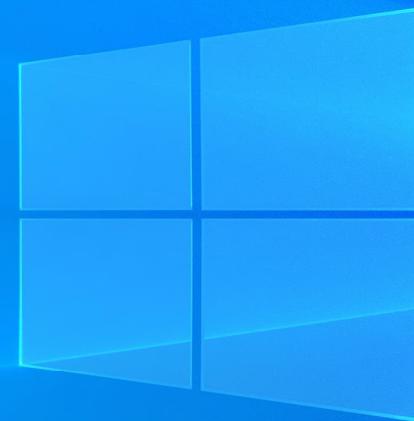
WaaS ja Windows 10 -versiot



Window 10 Enterprise versiot ja elinkaari



Windows 10 versiopäivitykset
”Miten meni noin niinku omasta
mielestä?”



Windows 10 versiopäivitysten kehitys

- In-place upgrade, "v1"
 - Kone pois käytöstä koko päivityksen ajan
 - Ensimmäisessä kirjautumisessa profiilin päivittyminen
- In-place upgrade, "v2"
 - Päivitys valmistellaan taustalla
 - Ensimmäisessä kirjautumisessa profiilin päivittyminen
- Enablement Packages
 - Kuten tietoturvatietä päivitys
 - Ei voida käyttää järeisiin muutoksiin



Upgrade error codes

If the upgrade process is not successful, Windows Setup will return two codes:

A result code: The result code corresponds to a specific Win32 or NTSTATUS error.

An extend code: The extend code contains information about both the phase in which an error occurred, and the operation that was being performed when the error occurred.

For example, a result code of 0xC1900101 with an extend code of 0x4000D will be returned as: 0xC1900101 - 0x4000D.

<https://learn.microsoft.com/en-us/windows/deployment/upgrade/upgrade-error-codes>

Windows 10 November update was pulled for forgetting privacy settings; it's now back

Four privacy settings were reset to their defaults when upgrading Windows 10.

The mystery behind the removal of the Windows 10 November Update, **version 1511**, has been revealed. Last week Microsoft received reports that, when upgrading from the Windows 10 July release to the November update, **four privacy-related settings were getting reset** to their default values.

<https://arstechnica.com/information-technology/2015/11/windows-10-november-update-was-pulled-for-forgetting-privacy-settings-its-now-back/>

Microsoft pulls Windows 10 October Update (version 1809)

Microsoft cites problems with the latest update package deleting user files. Windows 10 November update was pulled for forgetting privacy settings; it's now back

Microsoft has paused the rollout of Windows 10 October 2018 Update (version 1809), the latest version of the Windows 10 operating system, which Microsoft released this week, on Tuesday, October 2.

In a support document updated today, October 6, the Redmond-based OS maker said it took this decision after users complained that v1809 had deleted files after the update.

<https://www.zdnet.com/article/microsoft-pulls-windows-10-october-update-version-1809/>

Microsoft confirms ZIP bug in Windows 10 October 2018 Update

A Microsoft representative has confirmed that the October 2018 Update for Windows 10 suffers from a bug that acts up with ZIP files in certain circumstances [...]

[...] according to Microsoft, the upshot is that if you copy or move **files** from a ZIP without extracting them first, they “**might not be copied or moved correctly**”, even though it may look as if they have been.

<https://www.techradar.com/news/microsoft-confirms-zip-bug-in-windows-10-october-2018-update-and-offers-advice>

Certificates are missing after you update a device to a newer version of Windows 10

This article provides workarounds for an issue in which a **device loses its system and user certificates** after an operating system update.

Applies to: Windows 10, version 20H2; Windows 10, version 2004; Windows 10, version 1909; Windows 10, version 1903

<https://learn.microsoft.com/en-us/troubleshoot/windows-client/deployment/certs-missing-after-device-update>

Active Setup registry keys are deleted during Windows 10 version update

Registry keys in

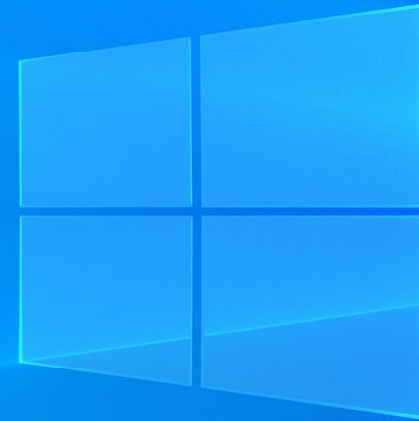
- “HKLM\SOFTWARE\Microsoft\Active Setup\Installed Components” and
- “HKLM\SOFTWARE\WOW6432Node\Microsoft\Active Setup\Installed Components”

are deleted during Windows version update.

Using Active Setup is not supported by Microsoft.

<https://helgeklein.com/blog/get-rid-of-active-setup/>

Windows 10 LTSC kokemuksia 10 vuoden ajalta



"Jaettu" työpöytä -bugi

- Windows 10 LTSC 2016 (1607)
- Quick Access-valikon Desktop ohjautuu default user:in työpöydälle
"C:\Users\Default\Desktop"
- Kaikilla on kirjoitusoikeudet kansioon
"C:\Users\Default\Desktop"
- Lopputulos: työpöydälle aiemmin tallennetut tiedostot kopioituvat uusien profiilien työpöydälle

 Quick access

 Desktop



.NET Framework 4.7.1

- LTSB 2016 -versiota ei ole julkaistu WU/WSUS-jakeluun
 - "For Windows 10 Version 1607 (LTSB), Windows 10 Version 1703, and Windows Server 2016, the update is available on Update Catalog only"
<https://support.microsoft.com/en-us/help/4033393/the-microsoft-net-framework-4-7-1-for-windows-10-version-1607-windows>
 - Ladattavissa erillisenä päivityksenä Microsoft Update Catalogista
<https://www.catalog.update.microsoft.com/Search.aspx?q=KB4033393>
 - LTSB 2016 KB4033393 ei ole WSUS-kelpoinen .msu-paketti
- Paint .NET 4.0.21 ei toiminut
- Ratkaisu
 - wusa.exe windows10.0-kb4033393-x64.msu /quiet /norestart
 - pakotettu jakelu ConfigMgr:n kautta



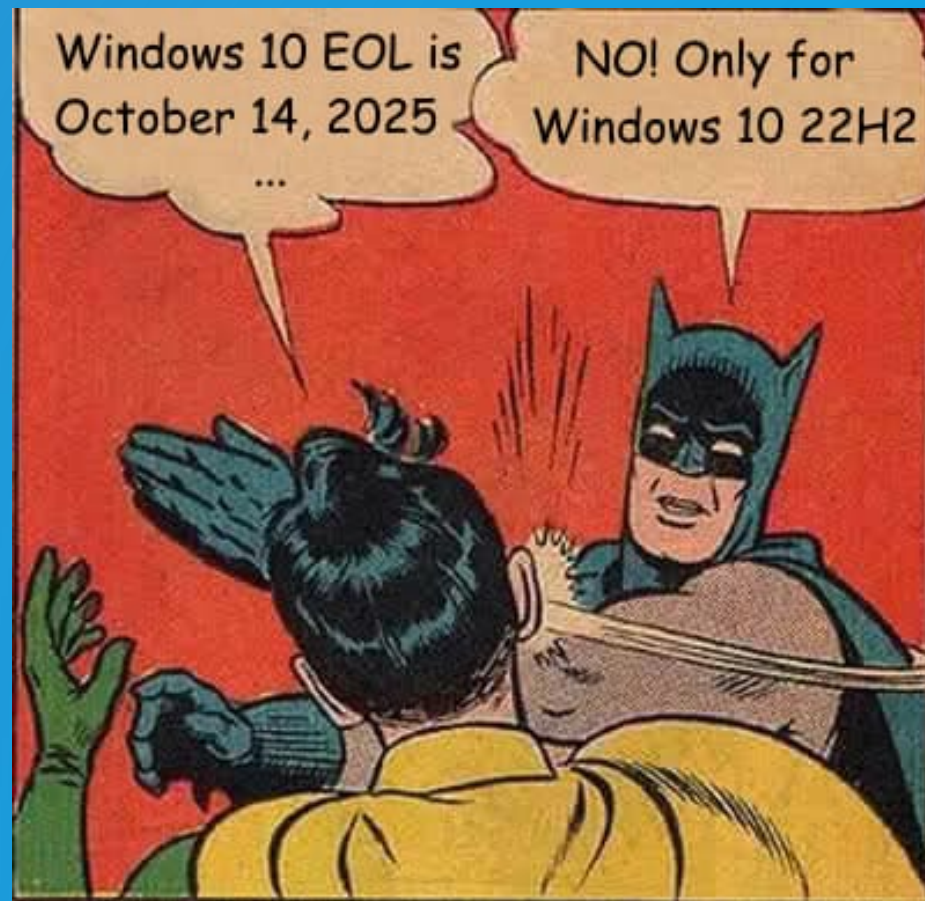
Minecraft: Education Edition 1.9+



- Windows Store/.appxbundle-paketointi
 - Vaatii vähintään 10-version 1703
 - O365-autentikointisovellus Minecraft.AdalServer.exe kaatuu vanhemmissa 10-versioissa
 - 2016 LTSB on 1607 eli liian vanha
- Desktop-versio
 - exe-paketoitu msi-asennus
 - Tuettu Windows 7, 8, 10
 - "Transitioning to the desktop application for Minecraft: Education Edition"
<https://minecraftereducation.zendesk.com/hc/en-us/articles/360026424472-Transitioning-to-the-desktop-application-for-Minecraft-Education-Edition>
- Store- ja Desktop –paketoinnit ovat yhteensopivia LAN-pelissä (kunhan ovat samaa versionumeroa)



Windows 10 EOL



Windows 10 ja 11 EOL

Windows	EOL ▼
Windows 10 Enterprise 22H2	14.10.2025
Windows 11 Enterprise 22H2	14.10.2025
Windows 11 Enterprise 23H2	10.11.2026
Windows 10 Enterprise LTSC 2021	12.1.2027
Windows 11 Enterprise 24H2	12.10.2027
Windows 10 Enterprise LTSC 2019	9.1.2029
Windows 11 Enterprise LTSC 2024	9.10.2029

Windows-versioiden tunnistaminen

- GAC, LTSC
- Registry
- WMI
- AD/Entra ID/Intune/



THANK YOU ALL AND
A SPECIAL THANKS TO OUR SPONSORS!



Thank you!

