Embedded/IoT OEMs and Windows as a Service (WaaS)

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A Move from Servicing Branch to Servicing Channels

With the release of Windows 10 in 2015, there were 3 servicing branches that address different types of users and service needs:

Servicing Branch	Editions
CB – Current Branch	Home, Professional, or Enterprise
CBB – Current Branch for Business	Home, Professional, or Enterprise
LTSB – Long Term Service Branch	Windows 10 Enterprise LTSB

The CB servicing branch was for every individual owning a Windows 10 PC. Servicing updates and feature updates will happen often. The CBB servicing branch allowed business to defer feature updates for a cycle, so new updates would not impact business operations. The LTSB servicing branch provided monthly updates like the other two, but feature updates would not be made available for 10 years. For Embedded/IOT OEMs building devices, Windows 10 Enterprise LTSB (aka Windows 10 IoT Enterprise) has been the recommended solution for integrating into commercial devices. OEMs will not be impacted by a sudden changes in features, and can still get and install updates into the system if they so choose.

LTSB releases are not available for every new release of Windows 10. Instead the CB and CBB branches will see the latest feature updates first. The theory is to give these new features time to mature before becoming permanent features in a future LTSB releases. This follows the model that Linux has implemented for years:

Release	Build	Version Number (LTSB?)
TH1	1507 (July 2015)	10240 (LTSB Available)
TH2	1511 (November 2015)	10586
RS1	1607 (July 2016)	14393 (LTSB Available)
RS2	1703 (March 2017)	15063
RS3	1709 (September 2017)	16299

Note: *TH = Threshold, RS = Redstone*

Much of the marketing spin for Windows 10 was around devices big and small running Windows 10, all running UWP applications, and all of these devices talking to the cloud and sharing data. We need to keep in mind that the spin is really a "Tomorrow Land" that Microsoft is working towards; but with each release of the operating system, Microsoft has successfully moved closer to their goal. Now, with the release of Windows 10 16299 Fall Creators Update, the idea of Windows as a Service (WaaS) is being implemented. This brings us to changes in the servicing branches:

Old Servicing Branch	New Servicing Channel	Support Duration
CB – Current Branch	SAC- Semi-Annual Channel	18 Months (Pilot and Board releases)
CBB – Current Branch for Business		
LTSB – Long Term Service Branch	LTSC- Long-Term Servicing Channel	10 Years

With the core Windows 10 OS stable, the move is to offer feature updates twice a year (March and September) to address changes in technology. The updates themselves are additive and are designed to lessen the impact on the overall download and installation time. Monthly patches and

security updates will continue to be released for all channels. Each release goes through a 3-phase process: Insider release, Pilot release that allows IT departments to test applications and drivers (6 Months), and finally Broad release to a wide audience (12 months).

Impact for Embedded/IoT OEMs

For those building devices, you will be using the LTSC release. There have been posts that LTSC releases will happen every 2 to 3 years. This would make 2019 as the next likely release, but nothing is firm as of this writing. For now, Embedded/IoT OEMs should continue to use Windows 10 Enterprise LTSB 2016 (version 14393).

We have had some clients who are looking into moving to version 16299. It is tempting to try and push a device with new features, but doing so would mean the device would be on the shorter life cycle of 12 months, as discussed in the Windows lifecycle fact sheet. This means that each OEM device would have to go through a whole update. Depending on the how and if updates are deployed, this could cause an impact on a OEM's bottom line. For OEMs who have to pass industry regulation, updating a system every 12 months and having to go through a regulatory qualification every year will also be finically impactful. Finally, OEMs have to consider that end-of-life means end-of-ship for devices, which is something that OEMs shipping Windows XP Embedded and Windows Embedded Standard 7 have been experiencing. If there are any delays in releasing a device on the SAC cycle, an OEM could be faced without the ability to ship a licensed product.

The LTSB / LTSC have a longer life cycle for this reason. End-of-life dates are set for 10 years after the Windows version release. You can see the current LTSB EOL dates on the Microsoft Life Cycle Policy page:

Windows 10 Version	Life Cycle Start Date	Mainstream Support End Date	Extended Support End Date
Windows 10 Enterprise LTSB 2015 Version 10240	7/29/2015	10/13/2020	10/14/2025
Windows 10 Enterprise LTSB 2016 Version 14393	8/2/16	10/12/2021	10/13/2026

Summary

WaaS is intended to deliver new features to keep Windows fresh and up to date with the latest technologies and security/bug fixes. It is perfect for individuals and companies that need to have the latest Windows features as soon as they are available. For Embedded/IoT OEMs, the new LTSC is a rename of the LTSB only. The ability to ship and get support for 10 years from the initial release is still the same. It is possible for OEMs to use the latest release to test new features, and it is also possible to ship a device. The impact of a yearly SAC lifecycle might be too costly for some OEMs. Because of this, we continue to recommend staying with the LTSB/LTSC versions.