Microsoft

Microsoft EEAP Release Notes

Windows Server LTSC and SAC, preview build 17672.1000

These release notes describe the new features, bug fixes, known issues, and breaking changes introduced since build 17666.1000 of Windows Server 2019 Long-Term Servicing Channel (LTSC).

This build includes the following:

Long-Term Servicing Channel (LTSC) preview

- Windows Server 2019 Datacenter Edition and Standard Edition with Desktop Experience and Server Core installation options (ISO and VHDX)

Semi-Annual Channel (SAC) preview

- Windows Server Datacenter Edition and Standard Edition with Core installation options (ISO and VHDX)

Additional content (LTSC and SAC)

- Nano Server Container
- Server Core Container
- Microsoft Hyper-V Server preview

Key information

This section has key information required for testing the latest build.

<table>
<tr>
<td>Windows Server activation keys</td>
<td>This build and all future builds will require use of activation keys during setup. The following keys allow for unlimited activations.
<table>
<tr><td>Datacenter</td><td>6XBNX-4JQGW-QX6QG-74P76-72V67</td></tr>
<tr><td>Standard</td><td>MFY9F-XBN2F-TYFMP-CCV49-RMYVH</td></tr>
</table>
This Server Insider pre-release build will expire on July 2, 2018.</td>
</tr>
<tr>
<td>Symbols for debugging</td>
<td>If you need symbols, you can obtain them from the public symbol server. For details, see Using the Microsoft Symbol Server.</td>
</tr>
<tr>
<td>HLK and Certification Guidance</td>
<td>The Windows Hardware Lab Kit (HLK) will be updated to support Windows 10 vNext and Windows Server LTSC vNext.

The HLK is updated each week and available for download on Microsoft Collaborate, you will see the download locations with your weekly build notifications.

The HLK for Windows 10 and Windows Server LTSC vNext will enforce the Windows 10 hardware requirements and policies, which will be posted on MSDN in March, and is designed for testing Windows 10 vNext and Windows Server LTSC vNext (codename RS5).

The support scenarios identified in the following table will be accepted.
<table>
<tr><th>HLK VERSION</th><th>WINDOWS 10 VERSIONS SUPPORTED</th><th>DEVICE/COMPONENT SUBMISSIONS ACCEPTED</th><th>SYSTEM SUBMISSIONS ACCEPTED</th></tr>
<tr><td>"RS5</td><td>Code named "RS5"</td><td>"RS5" client device/component "vNext" Server device/component</td><td>"vNext" Server systems</td></tr>
<tr><td>1709</td><td>1709 - client</td><td>1709 client device/component</td><td>1709 client systems</td></tr>
</table>
</td>
</tr>
</table>

HLK VERSION	WINDOWS 10 VERSIONS SUPPORTED	DEVICE/COMPONENT SUBMISSIONS ACCEPTED	SYSTEM SUBMISSIONS ACCEPTED
1703	1703 - client 1607 - client	1703 client device/component 1607 client device/component	1703 client systems
1607	1607 - client 1607 - Server, Azure Stack, SDDC 1511 - client	1607 client device/component 1607 Server device/component 1511 client device/component	1607 Server systems

When submitting a Windows 10 RS5 and Windows Server LTSC vNext HLK package for validation, you must use Windows 10 vNext and Windows Server LTSC vNext, version build TBD or newer on the test device. The submission will otherwise be rejected.

You must continue to use the Windows Hardware Certification Kit (HCK) version 2.1 to certify for following operating systems:

- Windows 7
- Windows 8
- Windows 8.1
- Windows Server 2012
- Windows Server 2012 R2

You must continue to use the Windows Logo Kit (WLK) version 1.6 to certify for following operating systems:

- Windows Server 2008 R2 (x64 and ia64)
- Windows Server 2008 (x86, x64 and ia64)

Certification for Windows Server 2016, Azure Stack and SDDC must meet the Windows Hardware Compatibility Requirements as stated in version 1607 of the documentation, use the 1607 version of the Windows Server 2016 operating system and use HLK version 1607 build 14393 with matching playlist and supplemental content to generate logs and following the policies stated in the Windows Server Policy. Questions about the Azure Stack or SDDC program or how to submit the results for solution validation should be directed to the appropriate Microsoft contact – technical account manager or partner management contact.

Playlists to support the incremental Windows releases

With the change in the policy regarding which versions of Windows 10 the HLK will validate, it becomes important to note which tests are required with each kit. Playlists must match the HLK version used, not the Windows 10 version under test. You can download all playlists (CompatPlaylists.zip) from http://aka.ms/HLKPlaylist.

The follow table lists the required playlist pairings.

HLK VERSION	ARCHITECTURE	PLAYLIST
"RS5"	x86 or x64	HLK Version 1709 CompatPlaylist x86_x64
"RS5"	ARM64 desktop	HLK Version 1709 CompatPlaylist ARM64 HLK Version 1709 CompatPlaylist ARM64_x86 on ARM64
1709	x86 or x64	HLK Version 1709 CompatPlaylist x86_x64
1709	ARM64 desktop *	HLK Version 1709 CompatPlaylist ARM64 HLK Version 1709 CompatPlaylist ARM64_x86 on ARM64
1703	x86 or x64	HLK Version 1703 CompatPlaylist
1607	x86 or x64	HLK Version 1607 CompatPlaylist

> Testing ARM64 Desktop requires two playlists. For additional information, see the setup instructions in Step 1: Install Controller and Studio on the test server on Hardware Dev Center.

Symbols for debugging

If you need symbols, you can obtain them from the public symbol server. For details, see Using the Microsoft Symbol Server.

Installing kits on released operating systems	If you are installing the Windows 10 kits on a publicly released OS such as Windows 10, version 1703, Windows 10, version 1607, Windows 10, version 1511, Windows 10, Windows 8.1, Windows 8, or Windows 7, you must disable strong name-signing and manually install two additional test certificates. To do this, perform the following installation procedure once for each test computer, using an account with administrator privileges on the controller computer: • From the **KitPreInstall** folder, install the **TestRoot.cer** and **TestRoot-SHA2.cer** test certificates using the following steps: 1. From the controller computer, right-click the certificate. 2. Click **Install Certificate**. 3. Click **Next**. 4. Accept the default for the certificate store, and click **Next**. 5. Click **Finish**. • From the same folder, disable strong name signing by installing the **StrongNameBypass.reg** and **WOW64StrongNameBypass.reg** registry keys, as follows: 1. From the controller computer, right-click the registry key. 2. Click **Merge**. 3. Click **Run**. 4. Click **Yes**.

Build validation and feedback

In each preview release, there are two major areas that we would like you to try out:

- **In-place OS Upgrade** (from Windows Server 2012 R2, Windows Server 2016 or a previous preview build).

- **Application compatibility** – please let us know if any server roles or applications stops working or fails to function as it used to.

Please report any issues you find.

In addition, please also validate functionality that was introduced in previous preview

releases. For a list of new features introduced in earlier releases, see aka.ms/ServerInsider-WhatsNew.

As always, we welcome your feedback.

What's new

The following table describes some of the new features or improvements that are included in this build.

FEATURE OR IMPROVEMENT	DESCRIPTION OF FEATURE OR IMPROVEMENT
Fonts are now an optional component	We converted non-critical font components into optional components (OC) in Windows Server Core editions, and then removed these OCs from Windows Server Core container images. This change won't affect user experience of Windows Server Core, except that users now have the ability to enable or disable non-critical font components, like they can do for any other OC. For Server Core containers, only the default font, Arial, is supported; no other fonts are supported, and no others can be installed.

Bug fixes

The bug fixes described in the following table are new in this build.

WORK ITEM	DESCRIPTION OF BUG FIX
13546043	We fixed an issue that could cause a driver for a network adapter that supports Receive Side Scaling (RSS) Version 2 to receive an incorrect value for the default processor number on a system that is translating RSS Version 1 to RSS Version 2.

WORK ITEM	DESCRIPTION OF BUG FIX
15297813	We fixed an issue that could cause removal of the Failover Cluster feature to be rolled back following restart of the system. On an affected server, adding the feature works correctly, but removing the feature, either through the GUI or by using PowerShell, results in the operating system displaying a warning: "We couldn't complete the features. Undoing changes. Don't turn off your computer."
16616234	We fixed the following issue: The size of a file according to NTFS and a stream control block can become different from the size according to Cache Manager. This might cause a bug check if a read operation is out of bounds for the file size that Cache Manager has stored.
17011430, 16279848	We changed the Settings app to display printer errors. This change addresses an issue in which printers connected via the Internet Printing Protocol (IPP) do not support the same printer description language as the operating system.
13084950, 14684384	We updated drivers that are provided with the operating system for manufacturers of storage devices.

Known issues

The following known issues are new in this build, or they were not resolved in the last build.

WORK ITEM	DESCRIPTION OF KNOWN ISSUE
00000000	**In-place OS upgrade: Domain Controllers.** Active Directory (AD) Domain Controllers (DC) might not be upgraded correctly by an in-place upgrade unless the NT Directory Service (NTDS) is stopped before initiating the upgrade. To ensure recoverability in the case of failure, back up any AD DC before performing an in-place OS upgrade.
16647767	[NEW] **Start-VM**, a PowerShell cmdlet, may fail with an error: "The process cannot access the file because it is being used by another process."

WORK ITEM	DESCRIPTION OF KNOWN ISSUE
16712217	[NEW] Some third-party apps do not start when run in a Hyper-V container, possibly due to an incorrect character set. For affected apps, a workaround is to manually set the character set to UTF-8 in your JVM for the Container by running **set JAVA_OPTS=-Dsun.jnu.encoding=UTF-8**.
12139737	Editing or creating policies for AppLocker can cause the MMC snap-in to crash when generated rules for a packaged app.
16060707	After upgrading the operating system, the AppX database may have corrupted entries, which causes problems for components that use those entries. An administrator might notice this issue when generating packaged app rules or when managing an installed package, resulting in error messages such as "This wizard has encountered a fatal error and cannot continue" and "MMC has detected an error in a snap-in and will unload it."

Breaking changes

No breaking changes are included in this build.