

Windows Desktop Threshold Release Notes: Build 9807.0.140803 Early Partner Drop

August 6-7, 2014

Contents

| | |
|--|-------------------------------------|
| Windows Desktop Threshold Release Notes: Build 9807.0.140803 Early Partner Drop..... | 1 |
| In this document..... | 2 |
| Pairing information..... | 3 |
| What's new..... | 4 |
| Breaking changes..... | 5 |
| Known issues..... | 6 |
| System requirements and setup..... | 9 |
| <i>System requirements</i> | 9 |
| <i>Install the operating system from the ISO file</i> | 9 |
| <i>Install the Windows ADK</i> | 9 |
| <i>Install the HLK</i> | 9 |
| <i>Install the WDK</i> | 10 |
| Additional resources..... | Error! Bookmark not defined. |
| Change history..... | Error! Bookmark not defined. |
| Copyright information..... | 15 |

We value your feedback. If you have suggestions for improving these release notes, [send us email](#).

In this document


This release notes document contains:

- A list of the kits that are included in this release of Windows "Threshold."
- A brief summary of recent feature changes in the Windows "Threshold" desktop operating system.
- Information about breaking changes and known issues in the Windows "Threshold" operating system and the kits.
- Setup instructions for the Windows "Threshold" operating system and the kits.

Pairing information

This release of Windows Desktop Threshold Early Partner Drop includes the following configuration:

| | Value |
|--|--------------------|
| Windows "Threshold" | 9807.0.140803-0005 |
| Windows Assessment and Deployment Kit (ADK) | 9807 |
| Windows Driver Kit (WDK) | 9807 |
| Windows Hardware Lab Kit (HLK) | 9807 |
| Windows Standalone SDK (for use with WDK) | 9807 |

 This document contains preliminary pre-release information and is subject to change.

What's new

The following features and other changes are new in this release:

| TFS Item Numbers | Description |
|-------------------------|--|
| 124701, 160960 | Customers can organize their windows across multiple desktops to work more efficiently across different tasks. |

Breaking changes

The following breaking changes are introduced in this release:

MSCOREE.lib is not installed by the Windows 8.2 SDK

Summary: Version 8.2 of the standalone Windows SDK does not install the **MSCOREE.lib** library.

Action: When installing the standalone SDK, do not install the .NET Framework 4.5.1. Instead, after installing the standalone SDK, copy **MSCOREE.lib** from version 8.1 of the standalone Windows SDK (in the **C:\Program Files (x86)\Windows Kits\8.1\Lib\winv6.3\um\arm** directory) to the **C:\Program Files (x86)\Windows Kits\8.2\Lib\winv6.4\um\arm** directory.

UMDF 2.0 templates and samples do not build

Summary: User-Mode Driver Framework (UMDF) 2.0 templates and samples do not build due to versioning issues and Windows Driver Frameworks (WDF) bugs.

Action: There is no workaround at this time.

The following Windows Threshold Server-specific breaking changes were inadvertently omitted from previous release notes:

Windows Threshold Server Hyper-V now requires a 64-bit system that has Second Level Address Translation (SLAT)

Summary: Windows Threshold Server Hyper-V now requires a 64-bit system that has Second Level Address Translation (SLAT). SLAT is supported by modern 64-bit processors from Intel and AMD. This requirement has existed in Windows Client Hyper-V since Windows 8.

Action: There is no workaround for this change.

Windows Defender will be installed and enabled by default in Windows Threshold Server

Summary: Windows Defender is installed and enabled by default in Windows Threshold Server. Windows Defender runs "headless" (without UI) by default in Windows Threshold Server. The Windows Defender UI can be installed post OS install if needed.

Windows Defender can be managed through the UI or by using WMI, PowerShell, or Group Policy.

Action: To disable Windows Defender, you must uninstall it by using the **Remove Roles and Features** Wizard or by using the **Remove-WindowsFeature** cmdlet.

Known issues

Windows SDK and WDK Lib directory is moving from Winv6.3 to Winv6.4

Summary: The Windows OS version for Threshold is 6.4. To support driver development for previous releases, it is important that the libraries are moved to be side by side. This allows driver developers to build drivers for both Windows 8.1 and Windows Threshold without collisions.

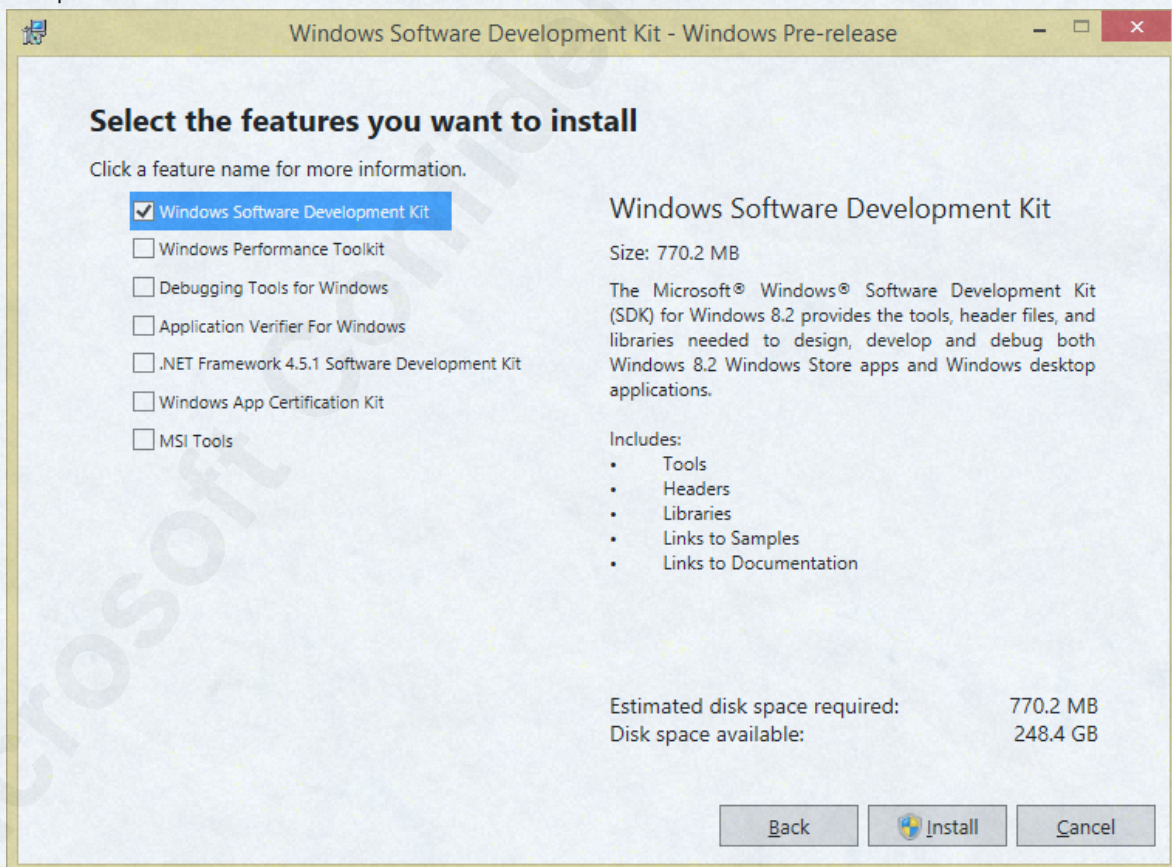
Action: If your driver or test code contains hard-coded paths to LIB folder locations, you will need to update the path from .\LIB\Winv6.3 to .\LIB\Winv6.4.

Additional kits that are included with the Windows SDK should not be installed

Summary: When you are running the installation wizard for the Windows Software Development Kit (SDK), the Windows SDK is one of many components that you are given the choice to install.

However, there are currently bugs in the registry settings of the other components that can cause serious destabilization, so you should avoid installing those other components.

Action: In the **Select the features you want to install** section of the installation wizard (shown below), select only the Windows Software Development Kit for installation, and clear the options for components such as the Windows Performance Toolkit, the Windows App Certification Kit, and other components.



The MakeCat tool is not operational

Summary: The [MakeCat](#) tool for creating a catalog file is not currently operational.

Action: Reuse the WinTrust.dll library from the 8.1 version of the Windows Driver Kit (WDK). The MakeCat tool will be fixed in a future release.

The installed directory path names for the kits have been changed

Summary: The name of the installed directory path after you install the development environment (or the Windows Software Development Kit) and the Windows Driver Kit (WDK) has been modified to reflect the correct version number (8.2 instead of 8.1). The directory is now

C:\Program Files\Windows Kits\8.2 for a 32-bit OS and **C:\Program Files (x86)\Windows Kits\8.2** for a 64-bit OS.

Action: Perform the following steps:

- Modify any tools and scripts that use hardcoded path dependencies to account for the changes in the directory path names.

Windows SDK and WDK:

Old value: **%ProgramFiles(x86)%\Windows Kits\8.1**

New value: **%ProgramFiles(x86)%\Windows Kits\8.2**

- Redirect Visual Studio to work with the new build of the Windows Software Development Kit by performing one of the following sets of registry changes.
 - For a 32-bit OS, make the following registry changes in the **HKLM\Software\Microsoft\Microsoft SDKs\Windows\v8.1** subkey.

| Registry entry name | Old value | New value |
|---------------------------|---------------------------------------|---------------------------------------|
| InstallationFolder | C:\Program Files\Windows Kits\8.1\ | C:\Program Files\Windows Kits\8.2\ |
| ProductName | Microsoft Windows SDK for Windows 8.1 | Microsoft Windows SDK for Windows 8.2 |
| ProductVersion | 6.3.9600 | 6.3.9807 |

- For a 64-bit OS, make the following registry changes in the **HKLM\Software\Wow6432Node\Microsoft\Microsoft SDKs\Windows\v8.1** subkey.

| Registry entry name | Old value | New value |
|---------------------------|--|--|
| InstallationFolder | C:\Program Files (x86)\Windows Kits\8.1\ | C:\Program Files (x86)\Windows Kits\8.2\ |
| ProductName | Microsoft Windows SDK for Windows 8.1 | Microsoft Windows SDK for Windows 8.2 |
| ProductVersion | 6.3.9600 | 6.3.9807 |

- Modify existing projects to use WDK version 8.2 by performing the following steps for each project:
 1. Open the properties for the project.
 2. Go to **Configuration > General**.

3. Change the Platform Toolset property to reflect the appropriate version 8.2 property (for example, **WindowsKernelModeDriver8.2**, **WindowsUserModeDriver8.2**, or **WindowsApplicationForDrivers8.2**).

Notes about using the Windows SDK and WDK

Summary: Be aware of the following issues in this version of the Windows SDK and WDK.

- This version of the Windows SDK (9807) is to be used for driver development only, and it is unsupported for app development.
- The 9807 build of the WDK should only be used with the 9807 build of the Windows SDK.
- The Windows SDK should only be installed on a test machine, and you may have to install future releases on a clean machine.
- The 9807 build of the WDK does not work with Visual Studio Express. If you attempt to open a project in Visual Studio Express, various packages will fail to load.

Macros that are used in the include path of certain build files need to be renamed

Summary: In certain build files (files with names that begin with **qc** and are **.vcxproj**, **sources.props**, and other MSBuild file types), if the macro names **DDK_INC_PATH**, **SDK_INC_PATH**, **KIT_SHARED_INC_PATH** or **CRT_INC_PATH** appear in the include path, the names will have to be updated to prevent the build process from breaking.

Action: Use the following table as a guide to replace those macro names with the appropriate new macro names in the include path of those build files (for example, **qcgpio.vcxproj**). Note that you do not have to update these macro names where they are used in contexts that do not involve an include path.

| Previous macro name | Updated macro name |
|----------------------------|-------------------------------|
| DDK_INC_PATH | KM_IncludePath |
| SDK_INC_PATH | UM_IncludePath |
| KIT_SHARED_INC_PATH | KIT_SHARED_IncludePath |
| CRT_INC_PATH | CRT_IncludePath |

System requirements and setup

System requirements

Review the Threshold Minimum Hardware Requirement Specification to make sure that your system can support this version of the Windows operating system. Version 0.2 of this specification is current as of 6/25/14.

The current draft of the Minimum Hardware Requirements Specification is provided as a standalone document that is currently available to partners through the [Windows 8.1 and Windows Server 2012 R2 Program](#) on the Microsoft Connect site.

Install the operating system from the ISO file

To install the Windows Desktop operating system, perform the following steps:

1. Right-click the ISO file and select **Properties**.
2. Under the **General** tab, click **Change**.
3. Click **Windows Explorer**.
4. Click OK.
5. Right-click the ISO file and select **Mount**.

The directions for installing other components are listed below.

Install the Windows ADK

To install the Windows Assessment and Deployment Kit (ADK), perform the following steps:

1. Run ADKSetup.exe.
2. Click **Install**, specify the location where you want to install the Windows ADK features, and then click **Next**.
3. Select the Windows ADK features that you want to install, and then click **Install**.

For more information, see the full [ADKSetup command-line syntax](#).

For known installation issues for the ADK, see the [ADK Release notes](#).

Install the HLK

To install the HLK, please refer to [Windows HCK Getting Started](#) on MSDN. The following notes provide information about changes for this release from the installation steps described in the Windows HCK Getting Started.

- To install the Windows HLK Client and Studio for x86, x64, and ARM, navigate to \\<ControllerName>\HLKInstall\Client\Setup.cmd.
- The Kits policy for ARM has changed location from ...\HCKInstall\ARMClient to ...\\HLKInstall\Client\ARM\Secureboot
- Controller and Studio Only install logs are now located at ..\%temp%\HLK*.

The following steps only need to be performed ONCE per OS installation. All actions must be performed from an account with administrator privileges on the controller, and clients must have an RTM version of the Windows Desktop operating system installed.

1. Install the test-certificate provided in the StrongNameSigning folder (*testroot and testroot-SHA2*) as follows:
 - a. From the controller machine, right-click the certificate.
 - b. Click **Install Certificate**.
 - c. Click **Next**.
 - d. Accept the default value for the certificate store, and click **Next**.
 - e. Click **Finish**.
2. Disable Strong-name signing by installing the provided registry keys located in the \Kits\HLK\StrongNameSigning\ folder:

StrongNameBypass.reg

WOW64StrongNameBypass.reg

To install these registry keys, perform the following steps:

- a. From the controller machine, right-click the registry key.
 - b. Click **Merge**.
 - c. Click **Run**.
 - d. Click **Yes**.
3. Reboot the controller.

For information about HLK known issues and breaking changes, see the HLK release notes.

Install the WDK

To set up your machine for Windows driver development, you must install the following components, in the specified order:

1. The [development environment](#) (Visual Studio)
2. The [Windows Software Development Kit](#) (SDK)
 - Visual Studio includes the Windows SDK. If you do not install Visual Studio, you must install the Windows SDK separately.
3. The [Windows Driver Kit](#) (WDK)

The directions for installing these components are listed below.

Development environment

To install the development environment, download and install [Visual Studio 2013](#) RTM using the default directory path. For the version to download, choose **Ultimate**, **Premium**, or **Professional**.

Windows Software Development Kit

- Visual Studio 2013 includes the Windows SDK. If you installed Visual Studio 2013, you can skip this step.

To install the Windows SDK, run the installer from the `standalonesdk` folder on Signiant, and use the default directory path.

To ensure that the Windows SDK was properly installed, make sure that the information in the following table matches the directory structure on the installation machine.

| Windows SDK directory tree | Subdirectories within the directory tree |
|--|--|
| For a 32-bit OS: C:\Program Files\Windows Kits\8.2 | <ul style="list-style-type: none"> • App Certification Kit • Bin • Catalogs • Debuggers • DesignTime • Include • Lib • Redist • References • Shortcuts • Testing • Windows Performance Toolkit |
| For a 64-bit OS: C:\Program Files (x86)\Windows Kits\8.2 | |

The Windows SDK is a prerequisite for installing the WDK.

Windows Driver Kit

To install the Windows Driver Kit (WDK), run the installer from the `WDK` folder on Signiant, and use the default directory path.

To ensure that the WDK was properly installed, make sure that the information in the following table matches the directory structure on the installation machine. Because the WDK has the same main directory as the Windows SDK, the subdirectories that are listed are in addition to the subdirectories that were installed for the Windows SDK.

| WDK directory tree | Additional subdirectories within the directory tree |
|--|---|
| For a 32-bit OS: C:\Program Files\Windows Kits\8.2 | <ul style="list-style-type: none"> • Build • BuildLabSupport • CodeAnalysis • CrossCertificates • Debug • Help • Remote • Tools |
| For a 64-bit OS: C:\Program Files (x86)\Windows Kits\8.2 | |

You can also see a list of tools that are included in the WDK by opening the **C:\Program Files\Windows Kits\8.2\Tools\Docs\ToolIndex.htm** file. (For a 64-bit OS, the top-level directory is **Program Files (x86)** instead of **Program Files**.) A web page with the title **Index of Windows**

Driver Kit Tools appears, which lists each installed tool, the corresponding file location, and a short description, with the drivers categorized by technology type.

Additional resources

Windows ADK release notes

- <http://technet.microsoft.com/en-us/library/hh825613.aspx>

Windows ADK installation instructions

- <http://technet.microsoft.com/en-us/library/hh825494.aspx>

Change history

Changes in the 9802.0 build.....13

Changes in the 9796.0 build 14

Changes in the 9802.0 build

Release date: July 30-31, 2014

Pairing note:

| | Value |
|--|--------------------|
| Windows "Threshold" | 9802.0.140727-1455 |
| Windows Assessment and Deployment Kit (ADK) | N/A |
| Windows Driver Kit (WDK) | N/A |
| Windows Hardware Lab Kit (HLK) | 9802 |
| Windows Standalone SDK (for use with WDK) | N/A |

The following features and other changes were new in this release:

| TFS Item Numbers | Description |
|------------------|---|
| 168396 | Users can now run their favorite modern apps in the familiar desktop world. It will be possible for modern apps – both existing Win 8.x apps and new Threshold apps – to run inside a traditional overlapping window on the desktop, alongside the user's Win32 programs. |

The following breaking changes were introduced in this release:

Summary: For Windows Threshold, the following registry value is being reset to 9600:

HKLM\Software\Microsoft\Windows NT\CurrentVersion\CurrentBuild

Beginning with Windows Threshold, registry values can no longer be used to determine the OS build number.

Action: There is no workaround for this change.

Changes in the 9796.0 build

Release date: July 17-18, 2014

Pairing note:

| | Value |
|--|--------------------|
| Windows "Threshold" | 9796.0.140715-1347 |
| Windows Assessment and Deployment Kit (ADK) | 9796 |
| Windows Driver Kit (WDK) | 9796 |
| Windows Hardware Lab Kit (HLK) | 9796 |
| Windows Standalone SDK (for use with WDK) | 9796 |

The following changes, bug fixes, and features were new in this release:

| TFS Item Numbers | Description |
|--|---|
| 169941, 165997, 169911, 167243, 169931 | Mini-Start has been added, along with several features that allow the user to resize the start menu, back up its settings to the cloud (similar to the start screen), and change its look and feel. |

Support for floppy disk drivers has been removed

Support for floppy drives has been removed for Threshold.

The file/folder size in File Explorer has switched from hexadecimal to decimal

File Explorer now uses decimal (base 10) values to calculate units. Previously, it used 1 KB = 1024 bytes. Now, it uses 1KB = 1000 bytes, 1MB = 1000 KB, etc. This will more accurately match what users expect to see in File Explorer.

Copyright information

This document is provided "as-is." Information and views expressed in this document, including URL and other Internet Web site references, may change without notice.

Some examples depicted herein are provided for illustration only and are fictitious. No real association or connection is intended or should be inferred.

This document does not provide you with any legal rights to any intellectual property in any Microsoft product. You may copy and use this document for your internal, reference purposes. This document is confidential and proprietary to Microsoft. It is disclosed and can be used only pursuant to a non-disclosure agreement.

CONFIDENTIAL. Distribution Only to Partners Under Nondisclosure. Microsoft makes no warranties, express or implied. © 2014 Microsoft. All rights reserved.

Please refer to [Microsoft Trademarks](#) for a list of trademarked products.

Portions of this software are based on NCSA Mosaic. NCSA Mosaic was developed by the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign. Distributed under a licensing agreement with Spyglass, Inc.

Contains security software licensed from RSA Data Security, Inc.

UPnP™ is a certification mark of the UPnP™ Implementers Corporation.

Bluetooth® is a trademark owned by Bluetooth SIG, Inc., USA and licensed to Microsoft Corporation.

Intel is a registered trademark of Intel Corporation.

Itanium is a registered trademark of Intel Corporation.

All other trademarks are property of their respective owners.