INSTALL WINDOWS 11 ON PC NOT MEETING REQUIREMENTS

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MICROSOFT DISCLAIMER

Installing Windows 11 on devices that don't meet minimum system requirements
https://support.microsoft.com/en-us/windows/installing-windows-11-on-devices-that-don-t-meet-minimum-system-requirements-0b2dc4a2-5933-4ad4-9c09-ef0a331518f1

CPU/TPM 2.0 CHECK BYPASS

The CPU/TPM 2.0 check during Win 11 installation can be bypassed. The methods below should allow successful installation of Win 11 on 6TH and 7TH gen (Kaby Lake) Intel processors and AMD Zen 2 (Ryzen 2000).

These requirements, however, still exist:

1) System must boot UEFI BIOS (no CSM)
2) Add-in cards must support UEFI boot (drivers, e.g. video card)
3) Modern DCH drivers must be available for hardware components
4) Secure Boot must be enabled (at least during installation)
5) TPM 1.2 should be enabled
6) The CPU must be 64 bit (Win 11 will not run on 32 bit processors)

That said, it is possible to clean install and run Windows 11 on systems that do not support TPM, UEFI and secure boot (e.g. Intel Gen 1). This is documented in a separate section at the end, but there will likely be performance and compatibility issues.

BYPASS METHODS

There are a number of known ways to bypass the CPU/TPM check:

1) Registry Hack - the official MS documented method
2) ISO Hack - the easiest unofficial method
3) Deception Hack - tricks the installation using Win 10 files
4) Script Hack - batch file that does 1 & 2 above

I. REGISTRY HACK (MS official method)

Ways to install Windows 11
https://support.microsoft.com/en-us/windows/ways-to-install-windows-11-e0edbbfb-cfc5-4011-868b-2ce77ac7c70e

Bypass the compatibility check

1) Open the Registry Editor (regedit.exe)
2) Confirm the UAC prompt.
3) Go to “HKEY_LOCAL_MACHINE\SYSTEM\Setup\MoSetup”
4) Right-click on “MoSetup” and select New > Dword (32-bit) Value.
5) Name it “AllowUpgradesWithUnsupportedTPMOrCPU”.
6) Double-click on the new Dword and set its value to 1.
7) Restart the PC

II. ISO HACK (unofficial method)

Delete the Appraiser files

1) Download Windows 11 ISO
2) Mount the Windows 11 ISO in Explorer

3) Copy the image's contents to a folder
4) Navigate to the "Sources" folder
5) Delete the files "appraiser.dll" and "appraiser.sdb"

Run setup and it should bypass the TPM/CPU check. If it doesn't work:

1) Navigate to "C:\$WINDOWS.~BT\Sources" directory
2) If the files "appraiser.dll" and "appraiser.sdb" exist, delete them
3) Run the ISO setup again

III. DECEPTION HACK

Requirements:

1) Windows 10 ISO
2) Windows 11 ISO

Fool setup into using Windows 10 requirements instead of Windows 11:

1) Open the Windows 10 ISO
2) Copy all files in the "Sources" folder, except for "Install.ESD", to a separate folder
3) Load the Windows 11 image in Explorer
4) Copy the Win 11 file "Install.WIM" to the folder above
5) Run the Windows 10 setup

IV. SCRIPT HACK (Universal MediaCreationTool Wrapper)

This method allow installation of Windows 11 on machines with no TPM.

Download Universal MediaCreationTool (MCT) Wrapper zip file:
https://gist.github.com/AveYo/c74dc774a8fb81a332b5d65613187b15

The zip file contains "Skip_TPM_Check_on_Dynamic_Update.cmd". This batch file does two things:

1) Deletes the file "appraiser.dll"
2) Creates the MS sanctioned registry key bypass

To execute the batch file:

1) Right click the cmd file
2) Run as administrator

WIN 11 INSTALL ON OLD CPUs/MOBO

If a system does not support TPM and/or UEFI boot it cannot be upgraded from Win 10 to 11, but Win 11 can be clean installed.

Boot Win 11 from a USB stick. When the Win 11 setup screen appears, do the following:

1) Press Shift + F10 to open a Command Prompt window
2) Type regedit and press Enter to open the Registry Editor
3) Navigate to "HKEY_LOCAL_MACHINE\SYSTEM\Setup"
4) Right-click the "Setup" folder and create a new key called "LabConfig"
   Note: keys are case-sensitive
5) Right-click the "LabConfig" folder and create one new DWORD value named "BypassTPMCheck" and another named "BypassSecureBootCheck".
   If your PC has Secure Boot, but no TPM (or vice-versa), you can omit the unneeded key.
6) Double-click each entry you just created and change the values from 0 to 1.
7) Proceed with the install as you normally would.

SOURCES (links)

gHacks - Martin Brinkmann - Oct 6, 2021
Microsoft posts instructions for upgrading to Windows 11 on unsupported PCs
https://www.ghacks.net/2021/10/06/microsoft-posts-instructions-for-upgrading-to-windows-11-on-unsupported-pcs/

Bleeping Computer - Bill Toulas - Oct 6, 2021
Microsoft shares Windows 11 TPM check bypass for unsupported PCs
https://www.bleepingcomputer.com/news/microsoft/microsoft-shares-windows-11-tpm-check-bypass-for-unsupported-pcs/

gHacks - Ashwin - Oct 5, 2021
How to install Windows 11 without TPM 2.0
https://www.ghacks.net/2021/10/05/how-to-install-windows-11-without-tpm-2-0/

gHacks - Martin Brinkmann - Sept 27, 2021
MediaCreationTool: download Windows 11 ISOs and bypass system compatibility checks
https://www.ghacks.net/2021/09/27/mediacreationtool-bat-download-windows-11-isos-and-bypass-system-compatibility-checks/

ArsTechnica - Andrew Cunningham - Oct 6, 2021
How to upgrade to Windows 11, whether your PC is supported or not
https://arstechnica.com/gadgets/2021/10/how-to-upgrade-to-windows-11-whether-your-pc-is-supported-or-not/

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VIRTUALIZATION BASED SECURITY (VBS)

Windows 10 does not have "Virtualization Based Security" (VBS) enabled by default. If upgrading from Win 10 to 11, the setting should persist. If doing a clean install, however, this may not be the case.

OEM devices that ship with Windows 11 will likely have VBS enabled.

VBS has been documented to have an impact on gaming performance, especially on CPUs older than 7th gen Kaby Lake Intel.

Gen 7 Intel, AMD Zen 2 (Ryzen 2000) and newer support Mode Based Execution Control (MBEC). Although MBEC and its' AMD equivalent aren't a required hardware component for VBS, it seems to impact VBS performance. Since Intel Haswell does not have MBEC, for example, enabling VBS would noticably diminish performance.

There are two requirements for VBS:

1) The harware must support Core Isolation
2) Drivers must support VBS

To enable/disable VBS in Windows 10:

1) Go to Windows settings then "Update & Security"
2) On the left, select "Windows Security"
3) In the "Protection areas" section, select "Device security"
4) Enable "Core Isolation" if needed
5) Click "Core isolation details"
6) Enable the "Memory integrity" switch (VBS)

When the "Memory integrity" switch is flipped, Windows will:

1) Check for driver VBS compliance, and
2) List which drivers are are not (which prevents enablement)

The procedure should be similar in Windows 11.

SEE:

PC World - Gordon Ung (executive editor) - Oct 4, 2021 3:30 am PDT
Microsoft's Virtualization Based Security feature can slow performance
https://www.pcworld.com/article/539139/tested-heres-how-much-the-new-windows-security-features-hurt-pc-performance.html