Key Management Services (KMS) client activation and product keys

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To use KMS, you need to have a KMS host available on your local network. Computers that activate with a KMS host need to have a specific product key. This key is sometimes referred to as the KMS client key, but it's formally known as a Microsoft Generic Volume License Key (GVLK). Computers that are running volume licensing editions of Windows Server and Windows client are, by default, KMS clients with no extra configuration needed as the relevant GVLK is already there.

There are some scenarios, however, where you'll need to add the GVLK to the computer you wish to activate against a KMS host, such as:

- Converting a computer from using a Multiple Activation Key (MAK)
- Converting a retail license of Windows to a KMS client
- If the computer was previously a KMS host

> ⓘ **Important**
>
> To use the keys listed here (which are GVLKs), you must first have a KMS host available on your local network. If you don't already have a KMS host, please see how to **create a KMS host** to learn more.
>
> If you want to activate Windows without a KMS host available and outside of a volume-activation scenario (for example, you're trying to activate a retail version of Windows client), **these keys will not work**. You will need to use another method of activating Windows, such as using a MAK, or purchasing a retail license. Get help to **find your Windows product key** and learn about **genuine versions of Windows**.

Install a product key

If you're converting a computer from a KMS host, MAK, or retail edition of Windows to a KMS client, install the applicable product key (GVLK) from the list below. To install a client product key, open an administrative command prompt on the client, and run the following command and then press `Enter`:

```
slmgr /ipk <product key>
```

For example, to install the product key for Windows Server 2022 Datacenter edition, run the following command and then press `Enter`:

```
slmgr /ipk WX4NM-KYWYW-QJJR4-XV3QB-6VM33
```

Generic Volume License Keys (GVLK)

In the tables that follow, you'll find the GVLKs for each version and edition of Windows. LTSC is *Long-Term Servicing Channel*, while LTSB is *Long-Term Servicing Branch*.

Windows Server (LTSC versions)

Windows Server 2022

Operating system edition	KMS Client Product Key
Windows Server 2022 Datacenter	WX4NM-KYWYW-QJJR4-XV3QB-6VM33
Windows Server 2022 Datacenter Azure Edition	NTBV8-9K7Q8-V27C6-M2BTV-KHMXV
Windows Server 2022 Standard	VDYBN-27WPP-V4HQT-9VMD4-VMK7H

Windows Server 2019

Operating system edition	KMS Client Product Key
Windows Server 2019 Datacenter	WMDGN-G9PQG-XVVXX-R3X43-63DFG
Windows Server 2019 Standard	N69G4-B89J2-4G8F4-WWYCC-J464C
Windows Server 2019 Essentials	WVDHN-86M7X-466P6-VHXV7-YY726

Windows Server 2016

Operating system edition	KMS Client Product Key
Windows Server 2016 Datacenter	CB7KF-BWN84-R7R2Y-793K2-8XDDG
Windows Server 2016 Standard	WC2BQ-8NRM3-FDDYY-2BFGV-KHKQY
Windows Server 2016 Essentials	JCKRF-N37P4-C2D82-9YXRT-4M63B

Windows Server (Semi-Annual Channel versions)

Windows Server, versions 20H2, 2004, 1909, 1903, and 1809

Operating system edition	KMS Client Product Key
Windows Server Datacenter	6NMRW-2C8FM-D24W7-TQWMY-CWH2D
Windows Server Standard	N2KJX-J94YW-TQVFB-DG9YT-724CC

ⓘ **Important**

Windows Server, version 20H2 reached end of service on August 9, 2022. This includes the retirement of Windows Server Semi-Annual Channel (SAC) with no future releases and will no longer receive security updates after August 9, 2022.

Customers using Windows Server SAC should move to Azure Stack HCI. Alternatively, customers may use the Long-Term Servicing Channel of Windows Server.

Windows 11 and Windows 10 (Semi-Annual Channel versions)

See the Windows lifecycle fact sheet for information about supported versions and end of service dates.

Operating system edition	KMS Client Product Key
Windows 11 Pro Windows 10 Pro	W269N-WFGWX-YVC9B-4J6C9-T83GX
Windows 11 Pro N Windows 10 Pro N	MH37W-N47XK-V7XM9-C7227-GCQG9
Windows 11 Pro for Workstations Windows 10 Pro for Workstations	NRG8B-VKK3Q-CXVCJ-9G2XF-6Q84J
Windows 11 Pro for Workstations N Windows 10 Pro for Workstations N	9FNHH-K3HBT-3W4TD-6383H-6XYWF
Windows 11 Pro Education Windows 10 Pro Education	6TP4R-GNPTD-KYYHQ-7B7DP-J447Y
Windows 11 Pro Education N Windows 10 Pro Education N	YVWGF-BXNMC-HTQYQ-CPQ99-66QFC

Operating system edition	KMS Client Product Key
Windows 11 Education Windows 10 Education	NW6C2-QMPVW-D7KKK-3GKT6-VCFB2
Windows 11 Education N Windows 10 Education N	2WH4N-8QGBV-H22JP-CT43Q-MDWWJ
Windows 11 Enterprise Windows 10 Enterprise	NPPR9-FWDCX-D2C8J-H872K-2YT43
Windows 11 Enterprise N Windows 10 Enterprise N	DPH2V-TTNVB-4X9Q3-TJR4H-KHJW4
Windows 11 Enterprise G Windows 10 Enterprise G	YYVX9-NTFWV-6MDM3-9PT4T-4M68B
Windows 11 Enterprise G N Windows 10 Enterprise G N	44RPN-FTY23-9VTTB-MP9BX-T84FV

Windows 10 (LTSC/LTSB versions)

Windows 10 LTSC 2021 and 2019

Operating system edition	KMS Client Product Key
Windows 10 Enterprise LTSC 2021 Windows 10 Enterprise LTSC 2019	M7XTQ-FN8P6-TTKYV-9D4CC-J462D
Windows 10 Enterprise N LTSC 2021 Windows 10 Enterprise N LTSC 2019	92NFX-8DJQP-P6BBQ-THF9C-7CG2H

Windows 10 LTSB 2016

Operating system edition	KMS Client Product Key
Windows 10 Enterprise LTSB 2016	DCPHK-NFMTC-H88MJ-PFHPY-QJ4BJ
Windows 10 Enterprise N LTSB 2016	QFFDN-GRT3P-VKWWX-X7T3R-8B639

Windows 10 LTSB 2015

Operating system edition	KMS Client Product Key
Windows 10 Enterprise 2015 LTSB	WNMTR-4C88C-JK8YV-HQ7T2-76DF9
Windows 10 Enterprise 2015 LTSB N	2F77B-TNFGY-69QQF-B8YKP-D69TJ

Earlier versions of Windows Server

Windows Server, version 1803

Operating system edition	KMS Client Product Key
Windows Server Datacenter	2HXDN-KRXHB-GPYC7-YCKFJ-7FVDG
Windows Server Standard	PTXN8-JFHJM-4WC78-MPCBR-9W4KR

Windows Server, version 1709

Operating system edition	KMS Client Product Key
Windows Server Datacenter	6Y6KB-N82V8-D8CQV-23MJW-BWTG6
Windows Server Standard	DPCNP-XQFKJ-BJF7R-FRC8D-GF6G4

Windows Server 2012 R2

Operating system edition	KMS Client Product Key
Windows Server 2012 R2 Standard	D2N9P-3P6X9-2R39C-7RTCD-MDVJX
Windows Server 2012 R2 Datacenter	W3GGN-FT8W3-Y4M27-J84CP-Q3VJ9
Windows Server 2012 R2 Essentials	KNC87-3J2TX-XB4WP-VCPJV-M4FWM

Windows Server 2012

Operating system edition	KMS Client Product Key
Windows Server 2012	BN3D2-R7TKB-3YPBD-8DRP2-27GG4
Windows Server 2012 N	8N2M2-HWPGY-7PGT9-HGDD8-GVGGY
Windows Server 2012 Single Language	2WN2H-YGCQR-KFX6K-CD6TF-84YXQ
Windows Server 2012 Country Specific	4K36P-JN4VD-GDC6V-KDT89-DYFKP
Windows Server 2012 Standard	XC9B7-NBPP2-83J2H-RHMBY-92BT4
Windows Server 2012 MultiPoint Standard	HM7DN-YVMH3-46JC3-XYTG7-CYQJJ
Windows Server 2012 MultiPoint Premium	XNH6W-2V9GX-RGJ4K-Y8X6F-QGJ2G
Windows Server 2012 Datacenter	48HP8-DN98B-MYWDG-T2DCC-8W83P

Windows Server 2008 R2

Operating system edition	KMS Client Product Key
Windows Server 2008 R2 Web	6TPJF-RBVHG-WBW2R-86QPH-6RTM4
Windows Server 2008 R2 HPC edition	TT8MH-CG224-D3D7Q-498W2-9QCTX
Windows Server 2008 R2 Standard	YC6KT-GKW9T-YTKYR-T4X34-R7VHC
Windows Server 2008 R2 Enterprise	489J6-VHDMP-X63PK-3K798-CPX3Y
Windows Server 2008 R2 Datacenter	74YFP-3QFB3-KQT8W-PMXWJ-7M648
Windows Server 2008 R2 for Itanium-based Systems	GT63C-RJFQ3-4GMB6-BRFB9-CB83V

Windows Server 2008

Operating system edition	KMS Client Product Key
Windows Web Server 2008	WYR28-R7TFJ-3X2YQ-YCY4H-M249D
Windows Server 2008 Standard	TM24T-X9RMF-VWXK6-X8JC9-BFGM2
Windows Server 2008 Standard without Hyper-V	W7VD6-7JFBR-RX26B-YKQ3Y-6FFFJ
Windows Server 2008 Enterprise	YQGMW-MPWTJ-34KDK-48M3W-X4Q6V
Windows Server 2008 Enterprise without Hyper-V	39BXF-X8Q23-P2WWT-38T2F-G3FPG
Windows Server 2008 HPC	RCTX3-KWVHP-BR6TB-RB6DM-6X7HP
Windows Server 2008 Datacenter	7M67G-PC374-GR742-YH8V4-TCBY3
Windows Server 2008 Datacenter without Hyper-V	22XQ2-VRXRG-P8D42-K34TD-G3QQC
Windows Server 2008 for Itanium-Based Systems	4DWFP-JF3DJ-B7DTH-78FJB-PDRHK

Earlier versions of Windows

Windows 8.1

Operating system edition	KMS Client Product Key
Windows 8.1 Pro	GCRJD-8NW9H-F2CDX-CCM8D-9D6T9
Windows 8.1 Pro N	HMCNV-VVBFX-7HMBH-CTY9B-B4FXY
Windows 8.1 Enterprise	MHF9N-XY6XB-WVXMC-BTDCT-MKKG7

Operating system edition	KMS Client Product Key
Windows 8.1 Enterprise N	TT4HM-HN7YT-62K67-RGRQJ-JFFXW

Windows 8

Operating system edition	KMS Client Product Key
Windows 8 Pro	NG4HW-VH26C-733KW-K6F98-J8CK4
Windows 8 Pro N	XCVCF-2NXM9-723PB-MHCB7-2RYQQ
Windows 8 Enterprise	32JNW-9KQ84-P47T8-D8GGY-CWCK7
Windows 8 Enterprise N	JMNMF-RHW7P-DMY6X-RF3DR-X2BQT

Windows 7

Operating system edition	KMS Client Product Key
Windows 7 Professional	FJ82H-XT6CR-J8D7P-XQJJ2-GPDD4
Windows 7 Professional N	MRPKT-YTG23-K7D7T-X2JMM-QY7MG
Windows 7 Professional E	W82YF-2Q76Y-63HXB-FGJG9-GF7QX
Windows 7 Enterprise	33PXH-7Y6KF-2VJC9-XBBR8-HVTHH
Windows 7 Enterprise N	YDRBP-3D83W-TY26F-D46B2-XCKRJ
Windows 7 Enterprise E	C29WB-22CC8-VJ326-GHFJW-H9DH4

Windows Vista

Operating system edition	KMS Client Product Key
Windows Vista Business	YFKBB-PQJJV-G996G-VWGXY-2V3X8
Windows Vista Business N	HMBQG-8H2RH-C77VX-27R82-VMQBT
Windows Vista Enterprise	VKK3X-68KWM-X2YGT-QR4M6-4BWMV
Windows Vista Enterprise N	VTC42-BM838-43QHV-84HX6-XJXKV