

10.2.2 Windows Versions Facts

When purchasing a new computer, or upgrading an existing computer, one of the first choices you will need to make is which Windows OS version and edition to install. When deciding on a particular Windows version or edition, consider the following general information:

- Each Windows OS edition has different features and limitations. For example, Windows 10 Home edition does not include BitLocker support. When deciding on an OS edition, first identify the intended use of the computer system, and then select the edition with the appropriate features.
- In addition to the version and edition, you will also need to select which Windows OS architecture to install. Each OS has either a 32-bit (x86) or 64-bit (x64) architecture edition.
 - The biggest advantage to using a 64-bit version is support for more than 4GB of memory (most 32-bit systems can use only about 3GB of memory). You would also choose a 64-bit version if you needed to run 64-bit applications or use hardware that had only 64-bit drivers.
 - You must have a 64-bit processor to run a 64-bit operating system. You can, however, run a 32-bit operating system on a 64-bit processor.
 - A 64-bit operating system requires 64-bit drivers. For this reason, older hardware (that has only 32-bit drivers available) will not work on a 64-bit operating system.
 - A 64-bit operating system can run both 32-bit and 64-bit applications; a 32-bit operating system cannot run a 64-bit application. Some 32-bit applications running on a 64-bit version of Windows will have errors that do not exist on 32-bit systems, so vendors might need to release patches for these applications.

This lesson covers the following topics:

- Windows 7
- Windows 8/8.1
- Windows 10

Windows 7

Windows 7, which was released in 2009, was developed to address many of the problems found in Windows Vista. Windows 7 introduced the following features not found in previous versions:

- Enhanced Aero features, including:
 - Snap (maximizes window when dragged to top of screen)
 - Shake (hide/show all windows except for the window being "shaken")
 - Peek (reveals the desktop by making all windows transparent)
- Redesigned taskbar with the ability to pin applications.
- Libraries.
- Improved backup and restore flexibility.
- XP Mode (Professional, Ultimate, and Enterprise only).
- HomeGroup, which allows a group of PCs on a home network to share files and printers. HomeGroup simplifies the management of workgroups for administrators. Both HomeGroup and workgroup can co-exist.

Minimum Hardware Requirements:

- 1 GHz processor
- 1 GB RAM (2 GB for a 64-bit system)
- 16 GB free disk space (20 GB for a 64-bit system)
- 128 MB video memory with DirectX 9 support
- DVD-ROM drive (if installing from a DVD)

Windows 8/8.1

Windows 8 was released in 2012 and introduced major changes to the Windows OS. A year later, Windows 8.1 was offered as a free upgrade in order to fix several issues. Windows 8/8.1 introduced the following features:

- UEFI integration (including UEFI Secure Boot)
- Hybrid Boot mode
- USB 3.0 support
- Windows Metro UI, which is optimized for touchscreen devices
- Windows Store apps
- Charms and the charm toolbar, which provides access to system and app controls
- Start button removed (Windows 8)
- Start button reintroduced (Windows 8.1)
- Start screen (replaced the traditional Start menu)
- OneDrive integration (Windows 8.1)

Minimum Hardware Requirements:

- 1 GHz processor with support for PAE, NX, and SSE2
- 1 GB RAM (2 GB for a 64-bit system)
- 16 GB free disk space (20 GB for a 64-bit system)

- DirectX 9 graphics device with WDDM driver
- DVD-ROM drive (if installing from a DVD)

Windows 10

Windows 10 is the most recent version of the Windows OS and was released in 2015. Windows 10 was designed to address many of the shortcomings and issues customers had with Windows 8. Windows 10 was offered as a free upgrade to anyone using an older version of Windows 7 or 8. Windows 10 introduced the following features:

- Universal Windows Platform (UWP)
- Native Ubuntu Linux compatibility
- Cortana, Microsoft's "intelligent personal assistant" software
- Microsoft Edge web browser (replaces Microsoft Internet Explorer)
- DirectX 12 and WDDM 2.0 support
- Start menu reintroduced with new tile design
- Improved security features

Minimum Hardware Requirements:

- 1 GHz processor with support for PAE, NX, and SSE2
 - 1 GB RAM (2 GB for a 64-bit system)
 - 16 GB free disk space (20 GB for a 64-bit system)
 - DirectX 9 graphics device with WDDM driver
 - DVD-ROM drive (if installing from a DVD)
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