**Install Linux on Windows with WSL**

* Article
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**In this article**

1. [Prerequisites](https://learn.microsoft.com/en-us/windows/wsl/install#prerequisites)
2. [Install WSL command](https://learn.microsoft.com/en-us/windows/wsl/install#install-wsl-command)
3. [Change the default Linux distribution installed](https://learn.microsoft.com/en-us/windows/wsl/install#change-the-default-linux-distribution-installed)
4. [Set up your Linux user info](https://learn.microsoft.com/en-us/windows/wsl/install#set-up-your-linux-user-info)

Show 6 more

Developers can access the power of both Windows and Linux at the same time on a Windows machine. The Windows Subsystem for Linux (WSL) lets developers install a Linux distribution (such as Ubuntu, OpenSUSE, Kali, Debian, Arch Linux, etc) and use Linux applications, utilities, and Bash command-line tools directly on Windows, unmodified, without the overhead of a traditional virtual machine or dualboot setup.

**Prerequisites**

You must be running Windows 10 version 2004 and higher (Build 19041 and higher) or Windows 11 to use the commands below. If you are on earlier versions please see [the manual install page](https://learn.microsoft.com/en-us/windows/wsl/install-manual).

**Install WSL command**

You can now install everything you need to run WSL with a single command. Open PowerShell or Windows Command Prompt in **administrator** mode by right-clicking and selecting "Run as administrator", enter the wsl --install command, then restart your machine.

PowerShellCopy

wsl --install

This command will enable the features necessary to run WSL and install the Ubuntu distribution of Linux. ([This default distribution can be changed](https://learn.microsoft.com/en-us/windows/wsl/basic-commands#install)).

If you're running an older build, or just prefer not to use the install command and would like step-by-step directions, see [**WSL manual installation steps for older versions**](https://learn.microsoft.com/en-us/windows/wsl/install-manual).

The first time you launch a newly installed Linux distribution, a console window will open and you'll be asked to wait for files to de-compress and be stored on your machine. All future launches should take less than a second.

**Note**

The above command only works if WSL is not installed at all, if you run wsl --install and see the WSL help text, please try running wsl --list --online to see a list of available distros and run wsl --install -d <DistroName> to install a distro. To uninstall WSL, see [**Uninstall legacy version of WSL**](https://learn.microsoft.com/en-us/windows/wsl/troubleshooting#uninstall-legacy-version-of-wsl) or [**unregister or uninstall a Linux distribution**](https://learn.microsoft.com/en-us/windows/wsl/basic-commands#unregister-or-uninstall-a-linux-distribution).

**Change the default Linux distribution installed**

By default, the installed Linux distribution will be Ubuntu. This can be changed using the -d flag.

* To change the distribution installed, enter: wsl --install -d <Distribution Name>. Replace <Distribution Name> with the name of the distribution you would like to install.
* To see a list of available Linux distributions available for download through the online store, enter: wsl --list --online or wsl -l -o.
* To install additional Linux distributions after the initial install, you may also use the command: wsl --install -d <Distribution Name>.

**Tip**

If you want to install additional distributions from inside a Linux/Bash command line (rather than from PowerShell or Command Prompt), you must use .exe in the command: wsl.exe --install -d <Distribution Name> or to list available distributions: wsl.exe -l -o.

If you run into an issue during the install process, check the [installation section of the troubleshooting guide](https://learn.microsoft.com/en-us/windows/wsl/troubleshooting#installation-issues).

To install a Linux distribution that is not listed as available, you can [import any Linux distribution](https://learn.microsoft.com/en-us/windows/wsl/use-custom-distro) using a TAR file. Or in some cases, [as with Arch Linux](https://wsldl-pg.github.io/ArchW-docs/How-to-Setup/), you can install using an .appx file. You can also create your own [custom Linux distribution](https://learn.microsoft.com/en-us/windows/wsl/build-custom-distro) to use with WSL.

**Set up your Linux user info**

Once you have installed WSL, you will need to create a user account and password for your newly installed Linux distribution. See the [Best practices for setting up a WSL development environment](https://learn.microsoft.com/en-us/windows/wsl/setup/environment#set-up-your-linux-username-and-password) guide to learn more.

**Set up and best practices**

We recommend following our [Best practices for setting up a WSL development environment](https://learn.microsoft.com/en-us/windows/wsl/setup/environment) guide for a step-by-step walk-through of how to set up a user name and password for your installed Linux distribution(s), using basic WSL commands, installing and customizing Windows Terminal, set up for Git version control, code editing and debugging using the VS Code remote server, good practices for file storage, setting up a database, mounting an external drive, setting up GPU acceleration, and more.

**Check which version of WSL you are running**

You can list your installed Linux distributions and check the version of WSL each is set to by entering the command: wsl -l -v in PowerShell or Windows Command Prompt.

To set the default version to WSL 1 or WSL 2 when a new Linux distribution is installed, use the command: wsl --set-default-version <Version#>, replacing <Version#> with either 1 or 2.

To set the default Linux distribution used with the wsl command, enter: wsl -s <DistributionName> or wsl --setdefault <DistributionName>, replacing <DistributionName> with the name of the Linux distribution you would like to use. For example, from PowerShell/CMD, enter: wsl -s Debian to set the default distribution to Debian. Now running wsl npm init from Powershell will run the npm init command in Debian.

To run a specific wsl distribution from within PowerShell or Windows Command Prompt without changing your default distribution, use the command: wsl -d <DistributionName>, replacing <DistributionName> with the name of the distribution you want to use.

Learn more in the guide to [Basic commands for WSL](https://learn.microsoft.com/en-us/windows/wsl/basic-commands).