Installing Windows Subsystem for Linux

Josef Fruehwald

2022-09-01

Installing a linux distribution on windows involves two main steps:

- 1. Enabling the windows subsystem for linux (wsl) feature.
- 2. Installing and setting up a linux distribution.

i Note

Note: you will have to restart your computer after step 1.

Enabling Windows Subsystem for Linux

Windows Subsystem for Linux is a Windows feature that you'll need to turn on in the Control Panel.

1. Launch Control Panel

You can find the Control Panel by searching "Control Panel" in the start bar.

2. Go to "Programs and Features"

Inside control panel, click on Programs and Features.

3. Turn on Windows Features

Once inside Programs and Features, click on *Turn Windows Features On or Off* on the left hand side.



Figure 1: A screenshot of the control panel, highlighting where programs and features are.

| 0 | Programs and Features | | | | | - C | × | |
|---|-----------------------------|---|------------------------------------|-----------------|--------------|------------------|-----|---|
| ÷ | > 🕇 🖸 > Control | Panel > All Control Panel Items > Programs and Features | ٽ ~ | Search Programs | and Features | | Q | |
| | Control Panel Home | Uninstall or change a program | | | | | | |
| _ | View installed undates | Uninstall a program, select it from the list and then | click Uninstall, Change, or Repair | n. | | | | |
| | Turn Windows features on or | | | | | | | |
| Ľ | off | Organize 🔻 | | | | | - 🕐 | |
| _ | Install a program from the | | | | | | | |
| | network | Name | Publisher | Installed On | Size | Version | | ì |
| | | Adobe Acrobat DC | Adobe Systems Incorporated | 10/14/2021 | 2.63 GB | 21.007.20099 | | |
| | | Adobe Acrobat Reader DC | Adobe Systems Incorporated | 1/26/2022 | 443 MB | 21.011.20039 | | |
| | | Adobe Creative Cloud | Adobe Systems Incorporated | 7/16/2020 | 87.7 MB | 4.7.0.400 | | |
| | | Adobe Genuine Service | Adobe Inc. | 12/13/2021 | | 7.6.0.52 | | |
| | | log Citrix Workspace 2109 | Citrix Systems, Inc. | 10/22/2021 | 268 MB | 21.9.1.4048 | | |
| | | 🛰 CrowdStrike Windows Sensor | CrowdStrike, Inc. | 1/20/2022 | 59.8 MB | 6.33.14705.0 | | |
| | | o Dell Command Update | Dell Inc. | 1/18/2019 | 77.1 MB | 2.4.0 | | |
| | | 🐉 Dell OpenManage Inventory Agent (for Dell Business | Dell | 8/28/2019 | 22.7 MB | 1.6.6.5 | | |
| | | Discord | Discord Inc. | 8/12/2021 | 66.6 MB | 1.0.9002 | | |
| | | Echo360 Software Capture | Echo360 | 7/16/2020 | 89.8 MB | 5.5.608166617 | | |
| | | 🔑 Extended Asian Language font pack for Adobe Acrob | Adobe Systems Incorporated | 9/7/2021 | 115 MB | 21.001.20135 | | |
| | | 💿 Google Chrome | Google LLC | 1/22/2022 | 80.0 MB | 97.0.4692.99 | | |
| | | 🌄 Gradekeeper | | 7/16/2020 | | 7.0 | | |
| | | 😹 Intel® Graphics Driver | Intel Corporation | 7/16/2020 | 74.2 MB | 20.19.15.4835 | | |
| | | http://www.commonstrator Password Solution x64 | Microsoft Corporation | 7/16/2020 | 129 KB | 6.2.0.0 | | |
| | | 🚺 Microsoft 365 Apps for enterprise - en-us | Microsoft Corporation | 5/20/2021 | | 16.0.13901.20516 | | |
| | | 💽 Microsoft Edge | Microsoft Corporation | 7/20/2021 | 103 MB | 97.0.1072.69 | | |
| | | 📨 Microsoft Edge WebView2 Runtime | Microsoft Corporation | 1/22/2022 | | 97.0.1072.69 | | |
| | | Microsoft OneDrive | Microsoft Corporation | 1/26/2022 | 198 MB | 22.002.0103.0004 | | |
| | | 📧 Microsoft Search in Bing | Microsoft Corporation | 5/20/2021 | 2.48 MB | 2.0.2 | | |
| | | | Microsoft Corporation | 1/22/2019 | 100 MB | 5.1.50918.0 | | |
| | | T Microsoft Teams | Microsoft Corporation | 12/15/2021 | 119 MB | 1.4.00.32771 | | |
| | | Microsoft Visual C++ 2005 Redistributable | Microsoft Corporation | 1/18/2019 | 4.84 MB | 8.0.61001 | | |
| | | Microsoft Visual C++ 2005 Redistributable (x64) | Microsoft Corporation | 1/18/2019 | 7.00 MB | 8.0.56336 | | , |
| | | Currently installed programs Total size: 6 64 programs installed | .79 GB | | | | | |

Figure 2: A screenshot of Programs and Features, highlighting the location of Turn Windows Features On or Off.

4. Turn on WSL

.

A pop up window should appear. Scroll down to find "Windows Subsystem for Linux." Click the box so it is checked. Then press ok.

| 📷 Windows Features | — | | \times | | | | | |
|--|----|------|----------|--|--|--|--|--|
| Turn Windows features on or off | | | ? | | | | | |
| To turn a feature on, select its check box. To turn a feature off, clear its check box. A filled box means that only part of the feature is turned on. | | | | | | | | |
| TFTP Client | | | ^ | | | | | |
| Virtual Machine Platform | | | | | | | | |
| Windows Hypervisor Platform | | | | | | | | |
| Windows Identity Foundation 3.5 | | | | | | | | |
| 🗉 🖃 🔄 Windows PowerShell 2.0 | | | | | | | | |
| 😥 🕀 🔲 Windows Process Activation Service | | | | | | | | |
| Windows Projected File System | | | | | | | | |
| Windows Sandbox | 1 | | | | | | | |
| Windows Subsystem for Linux | | | | | | | | |
| Windows TIFF IFilter | | | | | | | | |
| Work Folders Client | | | | | | | | |
| | | | ~ | | | | | |
| | ОК | Canc | el | | | | | |

Figure 3: A screenshot highlighting the item Windows Subsystem for Linux that should be checked off.

5. Restart your computer

Your computer will need to restart before we continue the rest of the process. A window should open after hitting "OK" on the previous step asking if you want to restart now.

Installing and Configuring a Linux Distribution

There are a few different linux distributions to choose from, but most online tutorials for WSL seem to assume you're installing Ubuntu, so I will also.

1. Install Ubuntu

After your computer has restarted, launch the Windows Store, and search for "Ubuntu". On its store page, click on "Get" to install it.



Figure 4: A screenshot of Ubuntu in the Windows Store

2. Launch Ubuntu

You can find Ubuntu, after it has been installed, but searching "Ubuntu" in the search bar. Launching it will open a command line interface.

3. Set a username

You will need to set a username for Ubuntu on your first launch. It doesn't have to be the same as your Windows username, but you might as well make it the same just to keep things easy. Just type in the username you want, and hit enter.

4. Set a password

You'll also need to set a password for your Ubuntu account. Again, this doesn't *need* to be the same as your computer password.

i Note

As you are typing in your password, you won't see the cursor move, or see blanked out characters like * like you are probably used to. That's just how password entry in command lines work, it's ok.

You'll need re-enter your chosen password to confirm.

Finding your files

In most command line interfaces, to get to your home directory, you type cd ~, which will still work in Windows Subsystem for Linux, but ~ isn't where your *Windows* files are. Instead, they're "mounted" at /mnt/c/users/<USERNAME> where <USERNAME> is your Windows username. If you're not sure what your Windows username is, inside Ubuntu type

cd /mnt/c/users/

Then run ls to see the list of user directories. Yours should be in there.

Handout Version

Handout PDF