Running Linux

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This short guide will show some pathways to run Linux on your computer.

Contents

Windows: have Linux locally installed

WSL (Windows Subsystem for Linux)

The Windows Subsystem for Linux (WSL) enables to run a Linux environment (including most command-line tools and applications) directly on Windows, without the overhead of a virtual machine.

You can:

- Install a Linux distributions from the Windows Store.
- Run shell scripts and Linux command-line applications including:
    - Languages: Python, C/C++, etc.
    - Editors: vim, emacs.
    - Etc.

Find out more on Microsoft's Documentation page.

Set up a WSL development environment

There are two installation steps necessary to use WSL:

1. Install WSL (requires Administrative access), check the Microsoft Website: https://learn.microsoft.com/en-us/windows/wsl/install#install-the-windows-subsystem-for-linux and https://learn.microsoft.com/en-us/windows/wsl/setup/environment?source=recommendations
2. Install the Linux Distribution of your choice. Ubuntu is a good distribution to get started.

Tip:

- Take a look at Microsoft's WSL FAQ page.
- https://learn.microsoft.com/en-us/windows/wsl/tutorials/gui-apps

See also

These links (maybe somewhat dated) provided me with very useful information:

- https://walkingrandomly.com/?p=6011
- https://www.cs.odu.edu/~zeil/FAQs/Public/win10Bash/
- https://nccastaff.bournemouth.ac.uk/jmacey/post/wsl/wsl/
- https://nickjanetakis.com/blog/using-wsl-and-mobaxterm-to-create-a-linux-dev-environment-on-windows

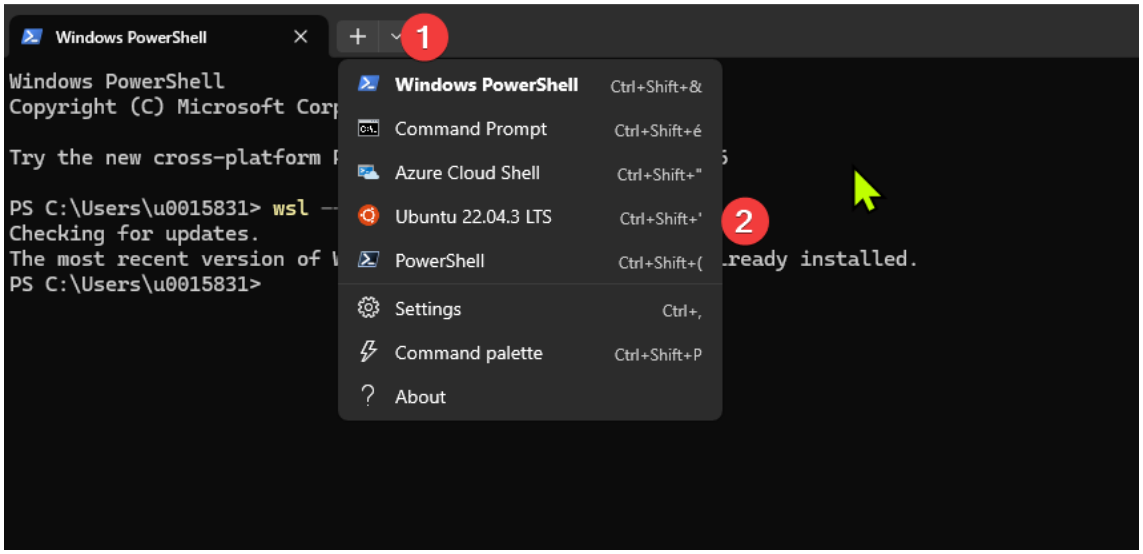
Books:

- Pro Windows Subsystem for Linux (WSL)
- Learn Windows Subsystem for Linux

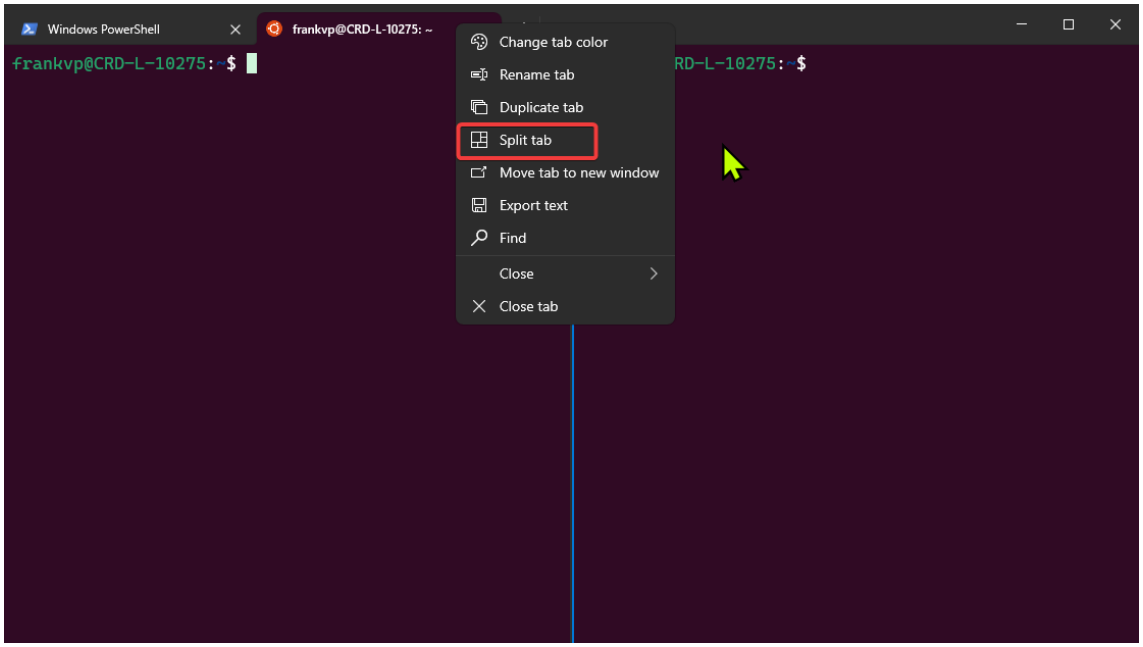
Windows terminal

Check: https://learn.microsoft.com/en-us/windows/wsl/setup/environment

Windows Terminal can run any application with a command line interface. Its main features include multiple tabs and panes.



A useful feature when developing code is the 'split screen'. Splitting a screen in Windows Terminal creates multiple panes within the same tab. This allows you to run multiple command-line applications next to each other within the same tab. You can split the screen either vertically or horizontally. The advantage of this is that it minimizes the need to switch between tabs and lets you see multiple prompts at once.

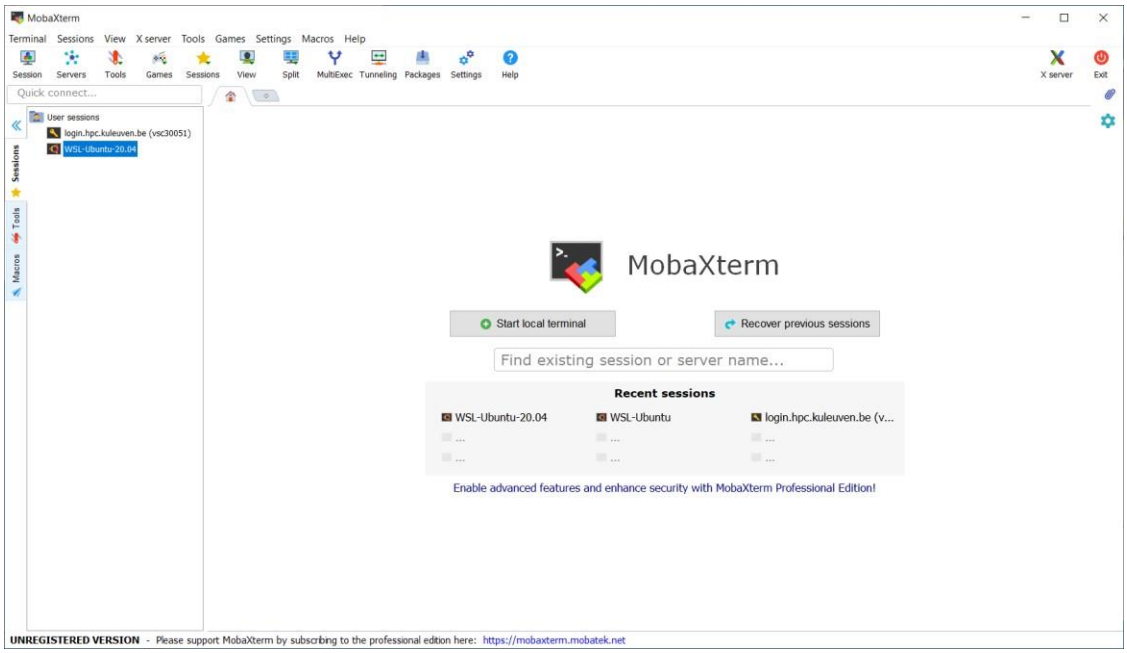


MobaXterm

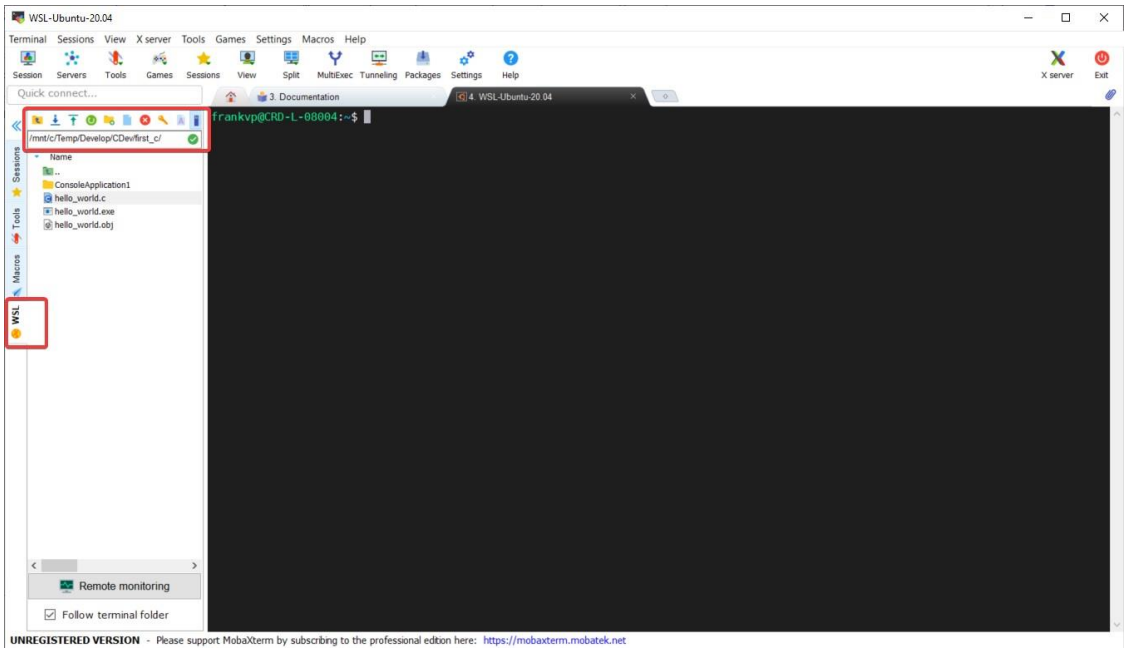
MobaXterm (https://mobaxterm.mobatek.net/) has support for WSL2 which makes it easy to launch Linux GUI applications from Linux on Windows.

After the installation of a Linux distribution on WSL2, you will find new sessions with the prefix WSL in MobaXterm. Simply click the session label and a new terminal will be automatically configured to talk to the local XServer.

A portable version can be downloaded and when you start the software, you can select for opening a WSL session, no hassle.



In the recent versions of MobaXterm, a WSL tab is available in the desktop, enabling you to walk through the files in the WSL system, double clicking the file starts the MobaXterm editor, making life easy.



Running a virtual machine

Another option is to install Virtual Machine (VM) software. You can choose either:

- Virtualbox (https://www.virtualbox.org/)
- Vmware: VMware Workstation Player (https://www.vmware.com/products/workstation-player/workstation-player-evaluation.html)

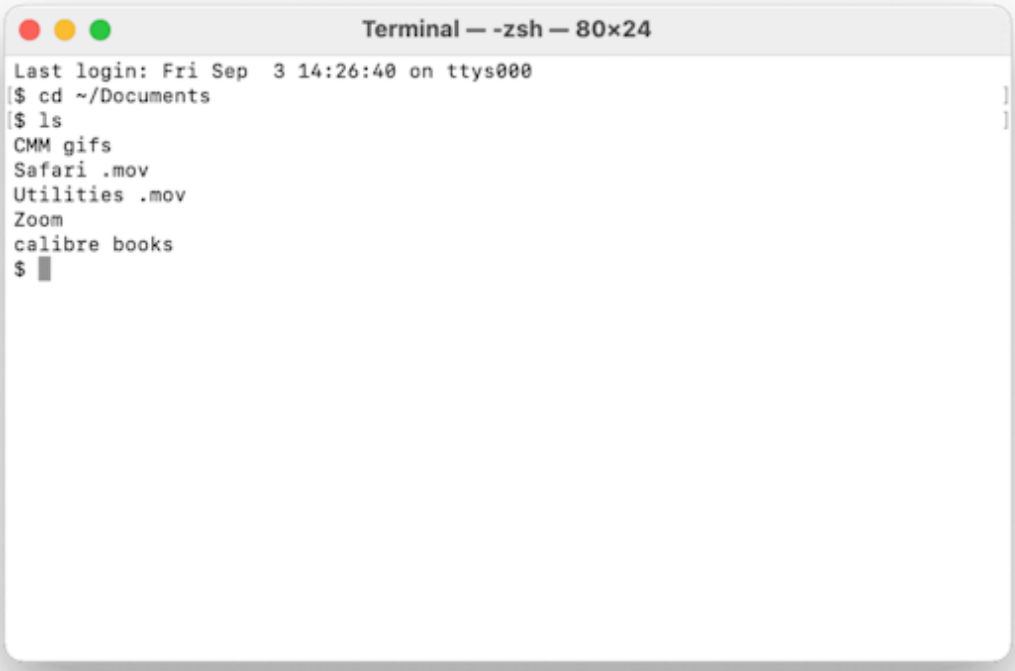
Once the virtual machine software is installed, a Linux distribution of your choice can be installed.

Ubuntu might be a good choice for beginners.

https://www.makeuseof.com/linux-virtual-machine-or-wsl/

macOS: run Linux commands

macOS is a flavor of UNIX, similar to Linux. On macOS, you can use the Terminal app (/Applications/Utilities/Terminal) to obtain a command line terminal.



Source: https://macpaw.com/how-to/use-terminal-on-mac

Online Linux terminal

There are couple of online Linux terminals active where you can practice Linux commands or test your shell scripts.

This can be helpful when running a Windows operating system and you want to run a quick test.

Some websites may require you to register and log in to save your sessions.

A few sites:

- Webminal (https://webminal.org)
- repl.it (https://replit.com/)
- CoCalc (https://cocalc.com/features/terminal)
- Tutorialspoint terminal https://www.tutorialspoint.com/linux_terminal_online.php

check: https://itsfoss.com/online-linux-terminals/