



UNIX

Lecture 0: WSL Installation / Workspace / Package Management

Filipe Vasconcelos¹

¹ESME, Lille, filipe.vasconcelo@esme.fr

- ① Context**
- ② WSL Installation**
- ③ Preparing the Work Environment**
- ④ Package manager**
- ⑤ Graphical application**



ILO1

Identify or recognize an operating system from the Unix family and provide some examples of these operating systems (Linux, macOS, BSD). Install and use a Bash command interpreter, whether through an emulator, a virtual machine, or a complete Unix family operating system.



- ① Context
- ② WSL Installation
- ③ Preparing the Work Environment
- ④ Package manager
- ⑤ Graphical application



Context

The main goal of this course is to enable students to interact with bash, which is one of the most commonly used command-line interpreters within UNIX-like operating systems.

This tutorial will guide you through the process of installing a Linux distribution on your Windows machine using the Windows Subsystem for Linux (WSL) feature.

The primary advantage of this setup is that it provides you with direct access to the file system of your Windows system.



① Context

② WSL Installation

③ Preparing the Work Environment

④ Package manager

⑤ Graphical application



① Context

② WSL Installation

③ Preparing the Work Environment

④ Package manager

⑤ Graphical application

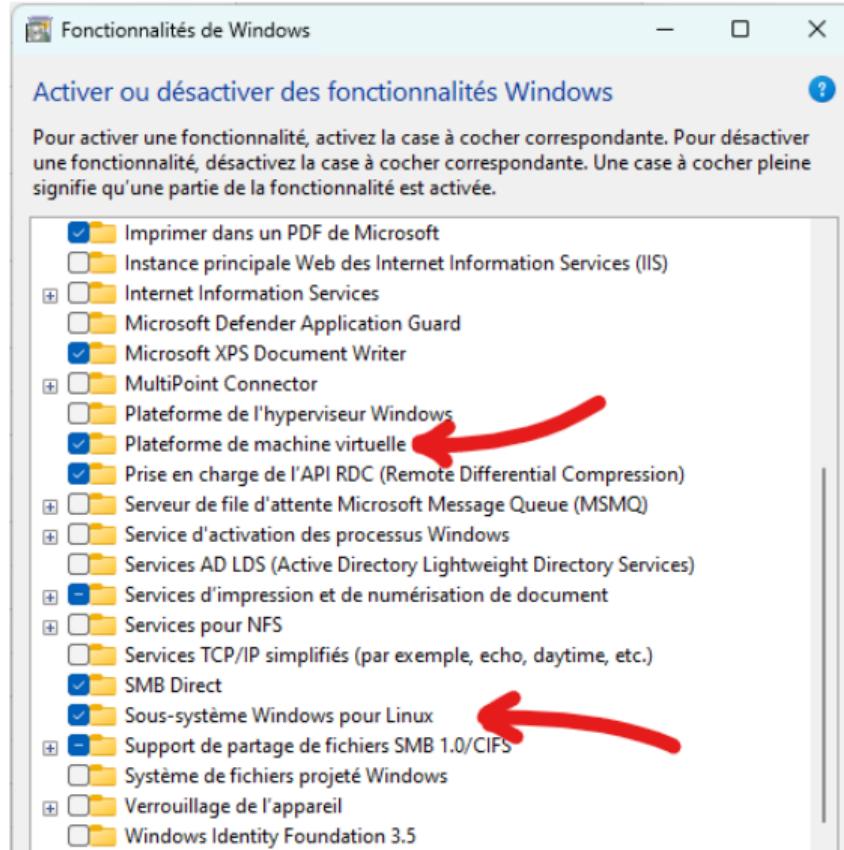


Two steps:

- Enable the WSL (Windows Subsystem for Linux) feature in Windows.
- Install a Linux distribution from the store. Ubuntu is the recommended distribution.

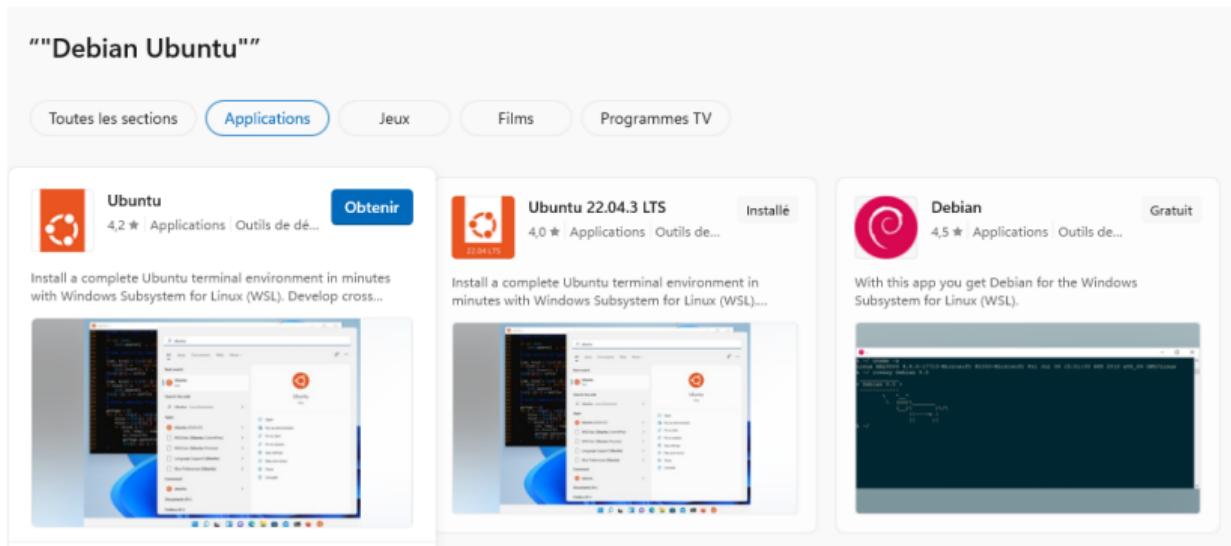


Enable or Disable Windows Features



Install some Linux distribution

Open Microsoft Store and install Ubuntu (Version 22.04)



- ① Context
- ② WSL Installation
- ③ Preparing the Work Environment
- ④ Package manager
- ⑤ Graphical application

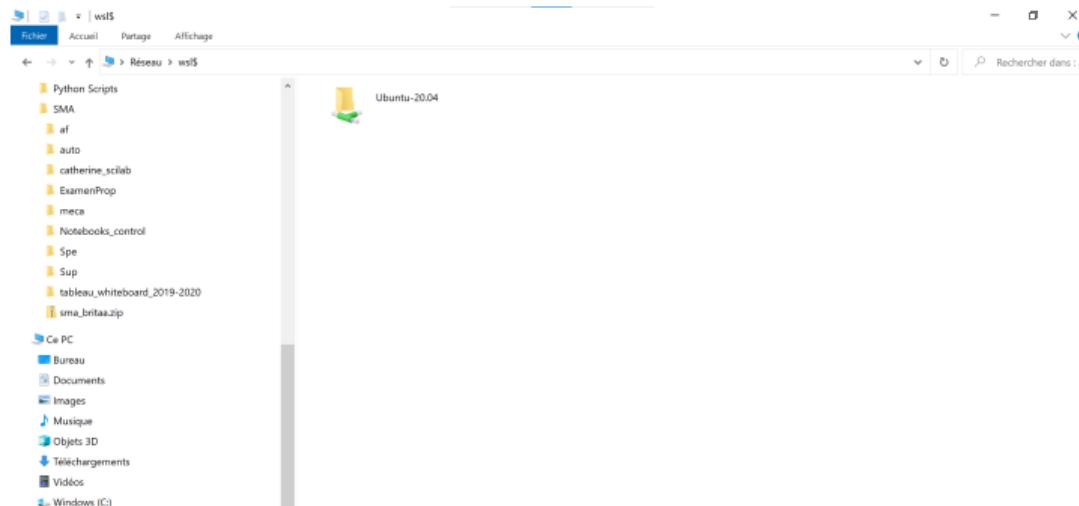


- ① Context
- ② WSL Installation
- ③ Preparing the Work Environment
- ④ Package manager
- ⑤ Graphical application



Viewing the File System in Windows Explorer

- ❑ Open Windows Explorer
- ❑ Type \\wsl\$ in the address bar
- ❑ The newly installed distribution will be displayed.
- ❑ Create a shortcut. (Right-click > Pin to Quick Access)



Multiple Options (Two Here)

- Launch the distribution directly (minimal but sufficient)
- Install Windows Terminal from the Windows Store (more flexible terminal)



To become more familiar with using the console, we recommend using a text editor in console mode.

There are several console text editors available

- nano:** (Recommended!) A very simple command-line text editor, installed by default on Ubuntu.
- emacs***: A powerful, extensible, and customizable text editor.
- vim***: Highly appreciated by developers for its many features, making it a great IDE.

*We won't engage in the childish debate over which of these two editors is the best. It's obviously vim!



- ① Context
- ② WSL Installation
- ③ Preparing the Work Environment
- ④ Package manager
- ⑤ Graphical application



- ① Context
- ② WSL Installation
- ③ Preparing the Work Environment
- ④ Package manager
- ⑤ Graphical application



Installing Packages with apt

The apt command is used to manage the packages (software) installed on your Ubuntu distribution.

```
sudo apt install <package>
```

- Example: Installing vim

```
sudo apt install vim
```

- ① Context
- ② WSL Installation
- ③ Preparing the Work Environment
- ④ Package manager
- ⑤ Graphical application



- ① Context
- ② WSL Installation
- ③ Preparing the Work Environment
- ④ Package manager
- ⑤ Graphical application



Graphical Applications

Windows 11 allows you to directly integrate graphical applications.

<https://docs.microsoft.com/en-us/windows/wsl/tutorials/gui-apps>

Using graphical applications on Windows 10 requires the installation of an X11 server client (e.g., VcXsrv).

Note that having a graphical interface is not necessary for using a console.



Typing on the Keyboard

To be more efficient, it's essential to improve your keyboard dexterity and learn some keyboard shortcuts.

Keyboard Shortcuts

- Up Arrow  : Command history
- Tab  : Auto-completion

