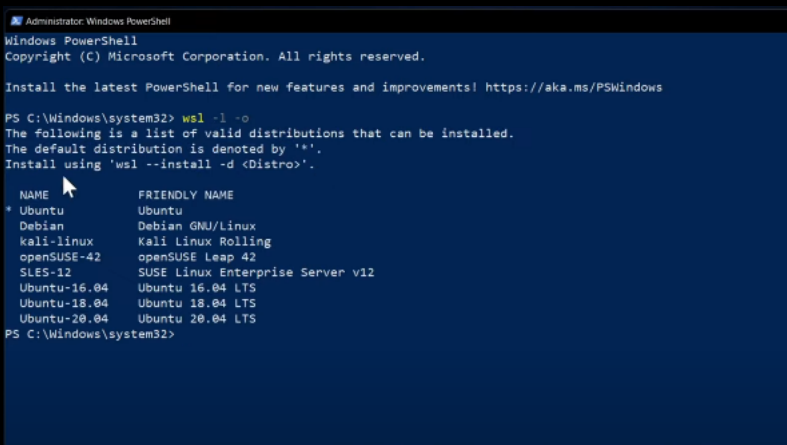


How can I install ROS 1 on Ubuntu (just to be clear my laptop is windows 11):

- **First** you have to make sure that your device is up to date and has **OS build 22000** or more, now to check that: go to **search** icon and type **about your PC** then scroll down until you find OS build.
- **Second** and here is the **beginning of the installation** you're going to search **Icon** again and search for **PowerShell** but run it as administrator.
- **To see** the distributions of WSL write this command and one of them is ubuntu:




```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Windows\system32> wsl -l -o
The following is a list of valid distributions that can be installed.
The default distribution is denoted by '*'.
Install using 'wsl --install -d <Distro>'.

  NAME                FRIENDLY NAME
* Ubuntu              Ubuntu
  Debian              Debian GNU/Linux
  kali-linux           Kali Linux Rolling
  opensuse-42          openSUSE Leap 42
  SLES-12             SUSE Linux Enterprise Server v12
  Ubuntu-16.04         Ubuntu 16.04 LTS
  Ubuntu-18.04         Ubuntu 18.04 LTS
  Ubuntu-20.04         Ubuntu 20.04 LTS
PS C:\Windows\system32>
```

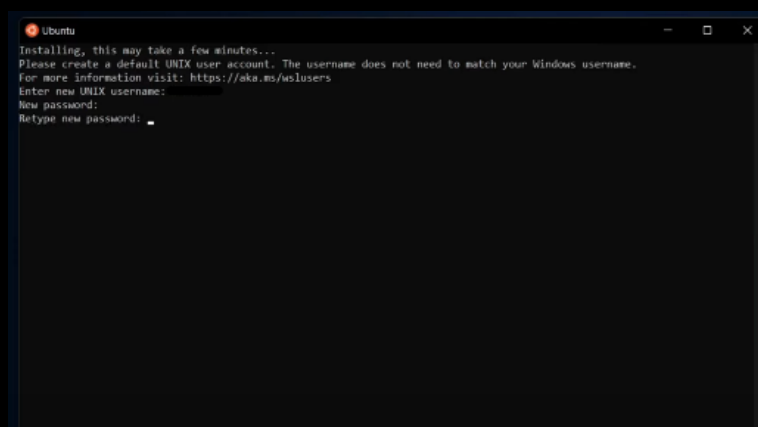
- Now to install ubuntu write this command:
`wsl --install -d ubuntu`



```
Administrator: Windows PowerShell

PS C:\Windows\system32> wsl --install -d ubuntu
Installing: Virtual Machine Platform
Virtual Machine Platform has been installed.
Installing: Windows Subsystem for Linux
Windows Subsystem for Linux has been installed.
Downloading: GUI App Support
Installing: GUI App Support
GUI App Support has been installed.
Downloading: Ubuntu
The requested operation is successful. Changes will not be effective until the system is rebooted.
PS C:\Windows\system32>
```

- Restart the laptop:
Once you restart your laptop, ubuntu will continue the installation and after that, it will ask you to put your username and password thus, you must write down them in a notebook, so you don't forget them.



```
Ubuntu
Installing, this may take a few minutes...
Please create a default UNIX user account. The username does not need to match your Windows username.
For more information visit: https://aka.ms/wslusers
Enter new UNIX username:
New password:
Retype new password:
```

- The command for Installing ROS 1 noetic on ubuntu:
- Setup your sources.list:

```
• sudo sh -c 'echo "deb http://packages.ros.org/ros/ubuntu $(lsb_release -sc) main" > /etc/apt/sources.list.d/ros-latest.list'
```

- Set up your keys:

```
• sudo apt install curl # if you haven't already installed curl  
• curl -s https://raw.githubusercontent.com/ros/rosdistro/master/ros.asc | sudo apt-key add -  
• sudo apt update
```

```
sudo apt install ros-noetic-desktop-full
```

- Environment setup:

```
• source /opt/ros/noetic/setup.bash  
• gedit ~/.bashrc
```

▽ Now you are ready to use it just write -----→ roscore