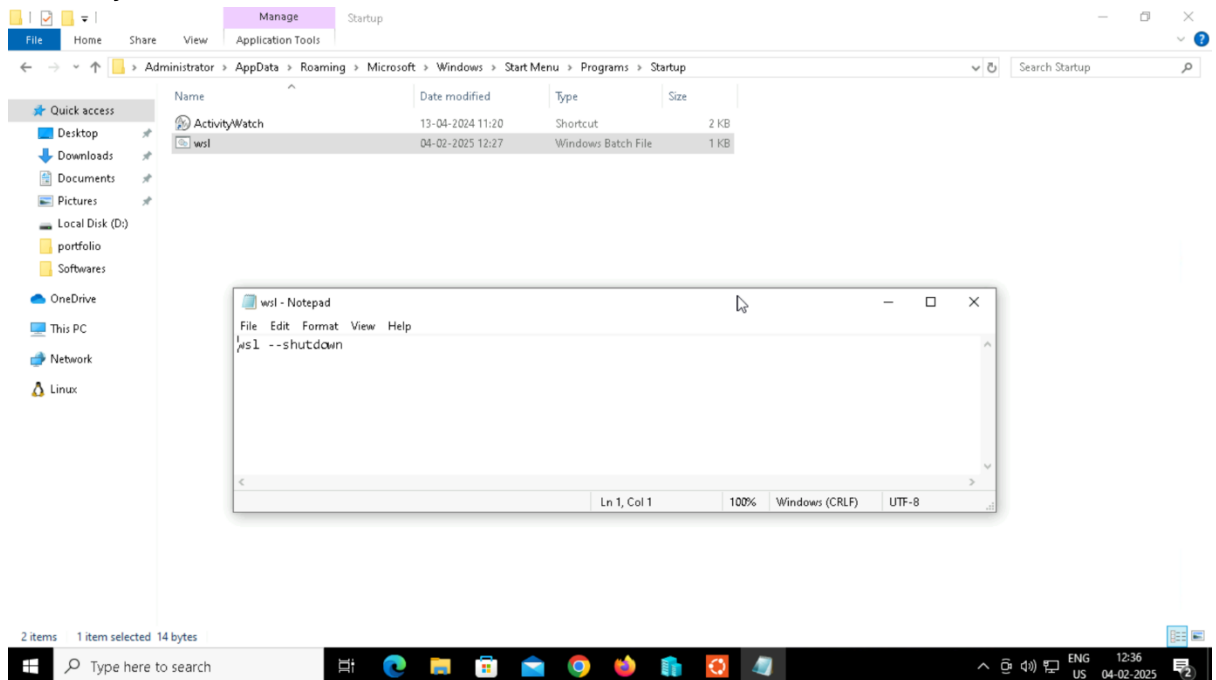
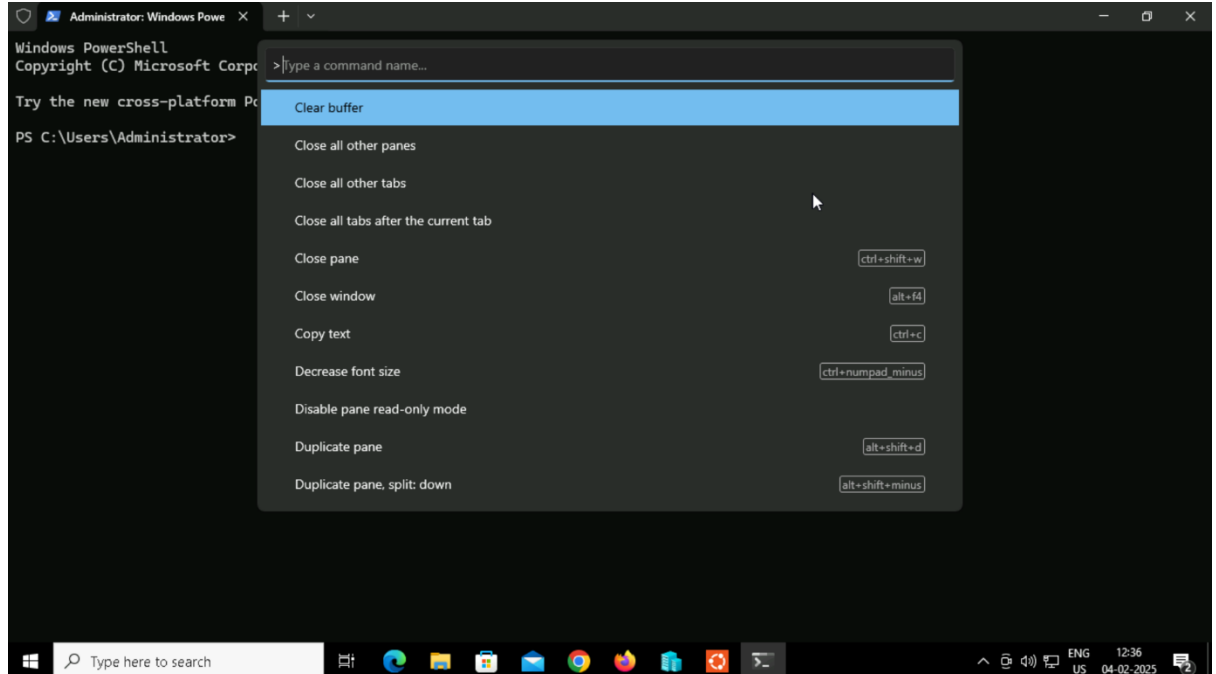


## WSL Installations and Applications

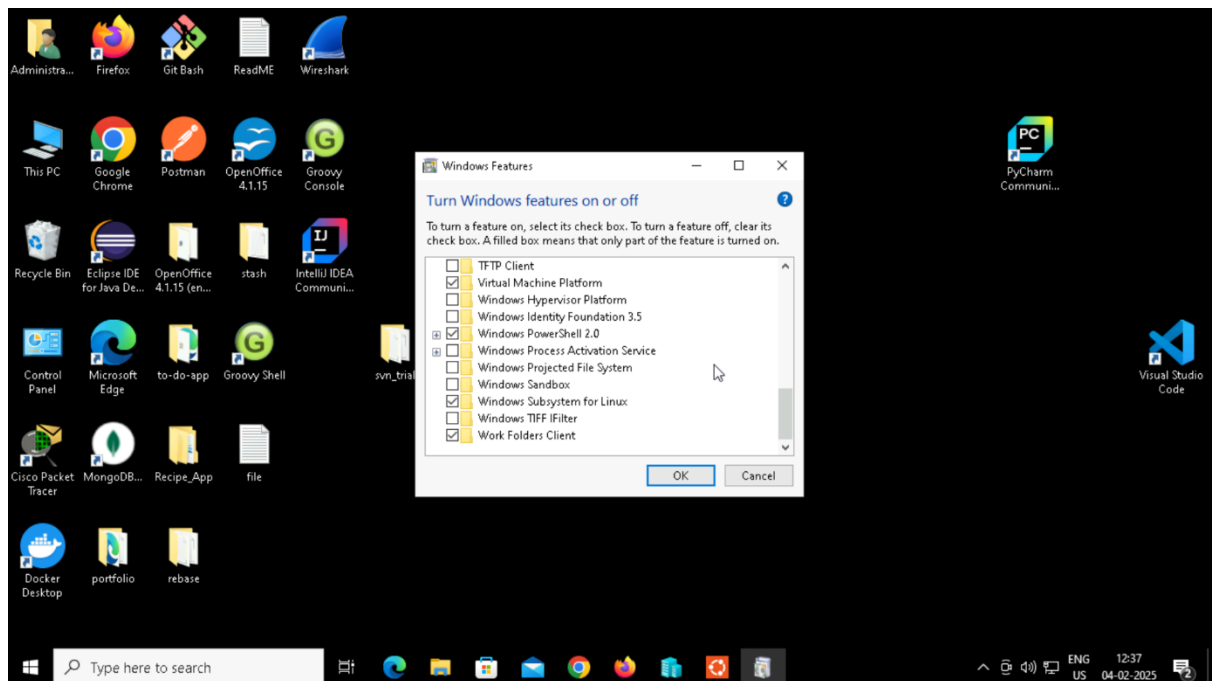
1. Create a wsl.bat file which will shut down WSL after Windows boots but it will restart as soon as you access a Linux distro



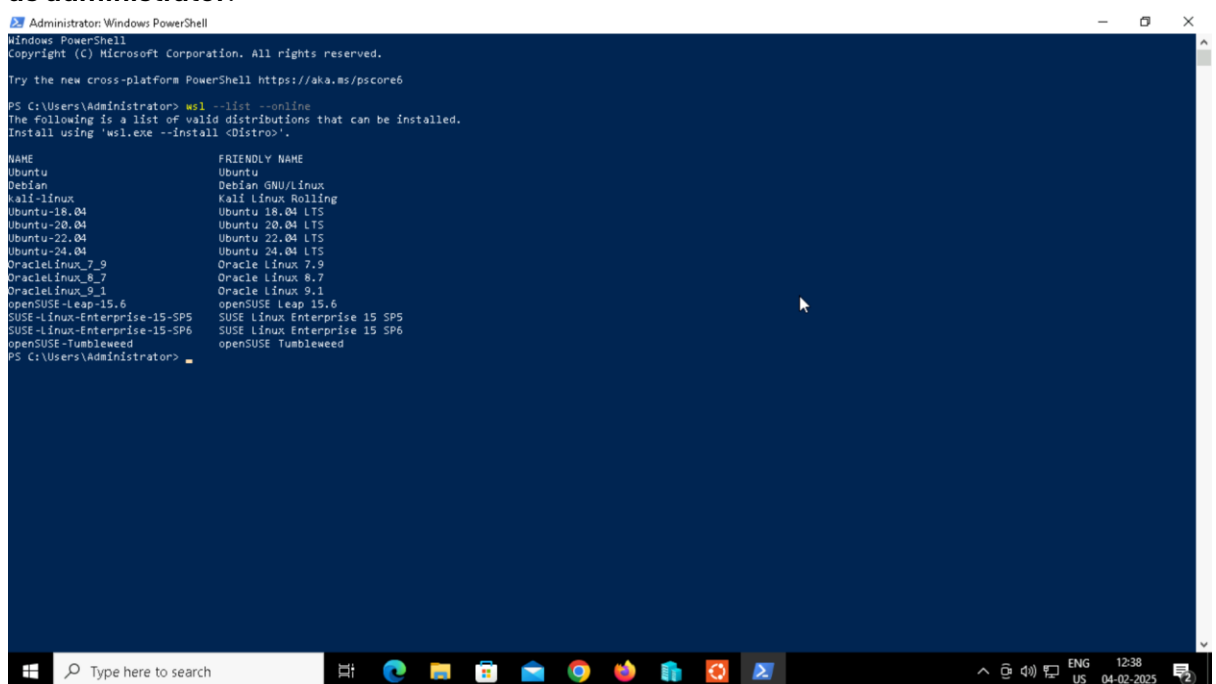
2. Windows Terminal automatically adds WSL2 Linux distros when they're installed and offers a configurable range of options including tabs, split views, themes, transparency, and key bindings.



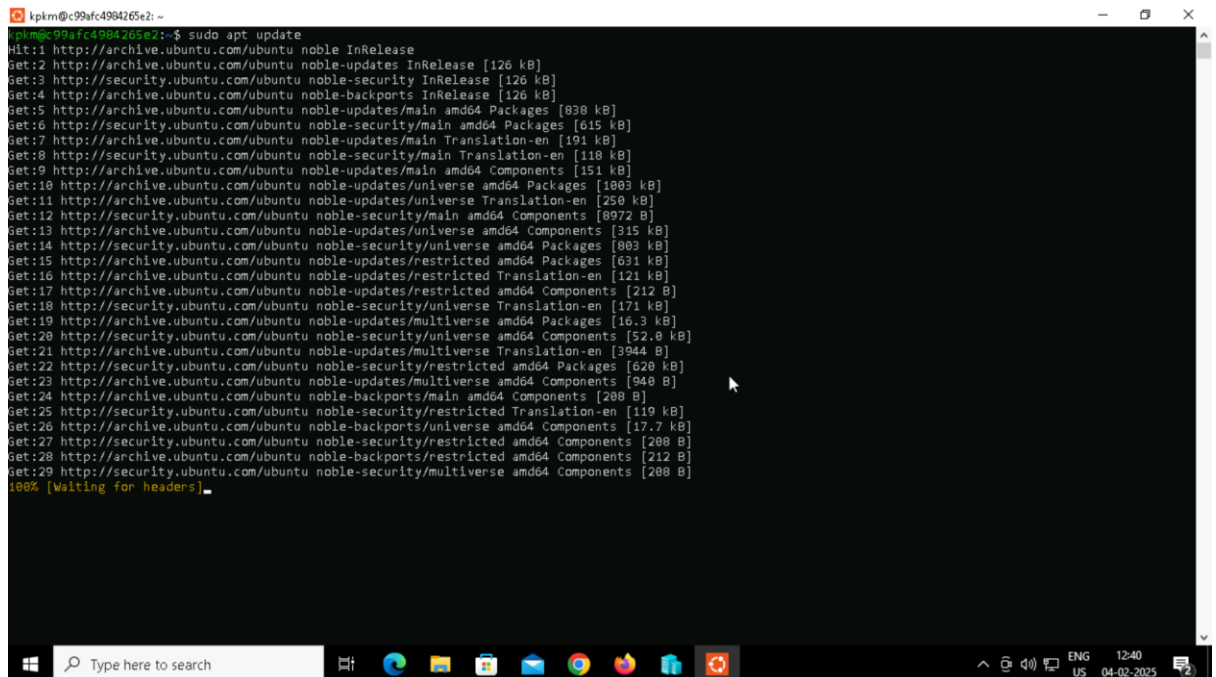
3. The **Virtual Machine Platform** and **Windows Subsystem for Linux** features must be enabled in **Turn Windows features on or off** option. The panel is accessed by hitting Start and typing “features” or from the **Programs and Features** icon in the classic **Control Panel**.



4. Search for or locate **PowerShell** in the Start menu, right-click the icon, and choose **Run as administrator**.

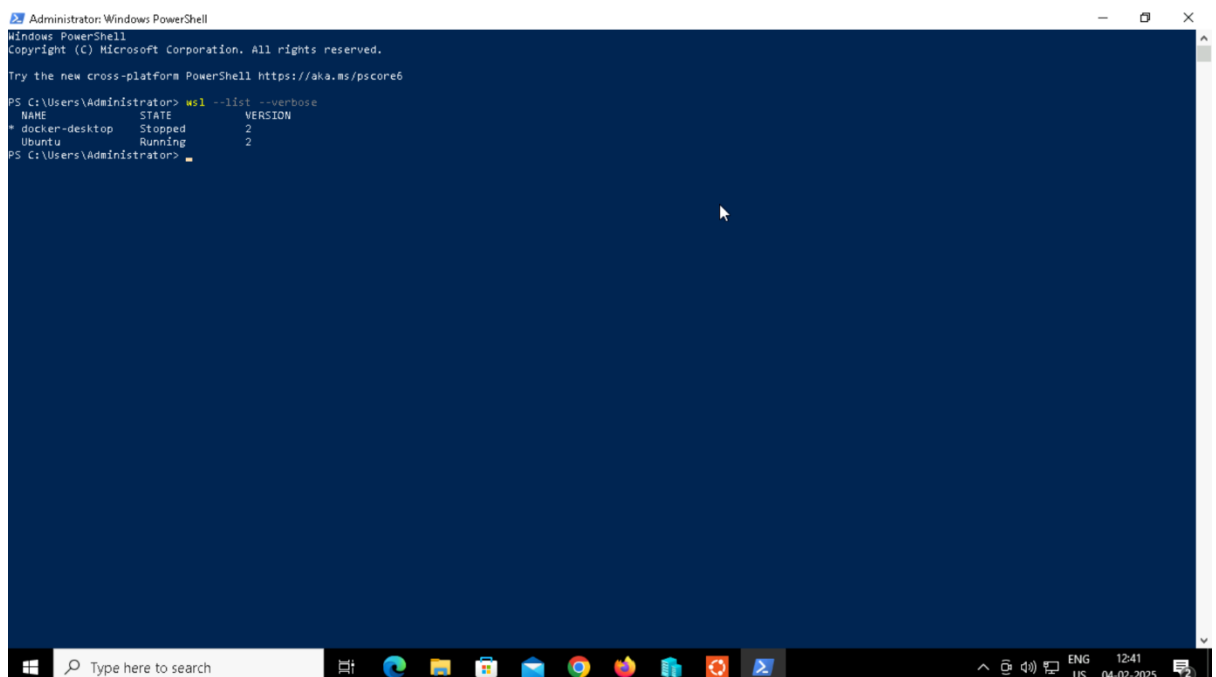


5. There are likely to be several Linux updates. To update Ubuntu applications, enter the following commands in the Linux terminal:



```
kpkm@1c99afc4984265e2:~$ sudo apt update
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:5 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [838 kB]
Get:6 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [615 kB]
Get:7 http://archive.ubuntu.com/ubuntu noble-updates/main Translation-en [191 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [118 kB]
Get:9 http://archive.ubuntu.com/ubuntu noble-updates/main amd64 Components [151 kB]
Get:10 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Packages [1803 kB]
Get:11 http://archive.ubuntu.com/ubuntu noble-updates/universe Translation-en [250 kB]
Get:12 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [8972 B]
Get:13 http://archive.ubuntu.com/ubuntu noble-updates/universe amd64 Components [315 kB]
Get:14 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [803 kB]
Get:15 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Packages [631 kB]
Get:16 http://archive.ubuntu.com/ubuntu noble-updates/restricted Translation-en [121 kB]
Get:17 http://archive.ubuntu.com/ubuntu noble-updates/restricted amd64 Components [212 B]
Get:18 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [171 kB]
Get:19 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Packages [16.3 kB]
Get:20 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [52.0 kB]
Get:21 http://archive.ubuntu.com/ubuntu noble-updates/multiverse Translation-en [3944 B]
Get:22 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [620 kB]
Get:23 http://archive.ubuntu.com/ubuntu noble-updates/multiverse amd64 Components [940 B]
Get:24 http://archive.ubuntu.com/ubuntu noble-backports/main amd64 Components [208 B]
Get:25 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [119 kB]
Get:26 http://archive.ubuntu.com/ubuntu noble-backports/universe amd64 Components [17.7 kB]
Get:27 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Components [208 B]
Get:28 http://archive.ubuntu.com/ubuntu noble-backports/restricted amd64 Components [212 B]
Get:29 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [208 B]
180% [Waiting for headers]
```

6. Existing WSL1 distros can be converted to WSL2. For that, enter the following command in a Windows Powershell terminal to display the installed Linux distros and their WSL version:

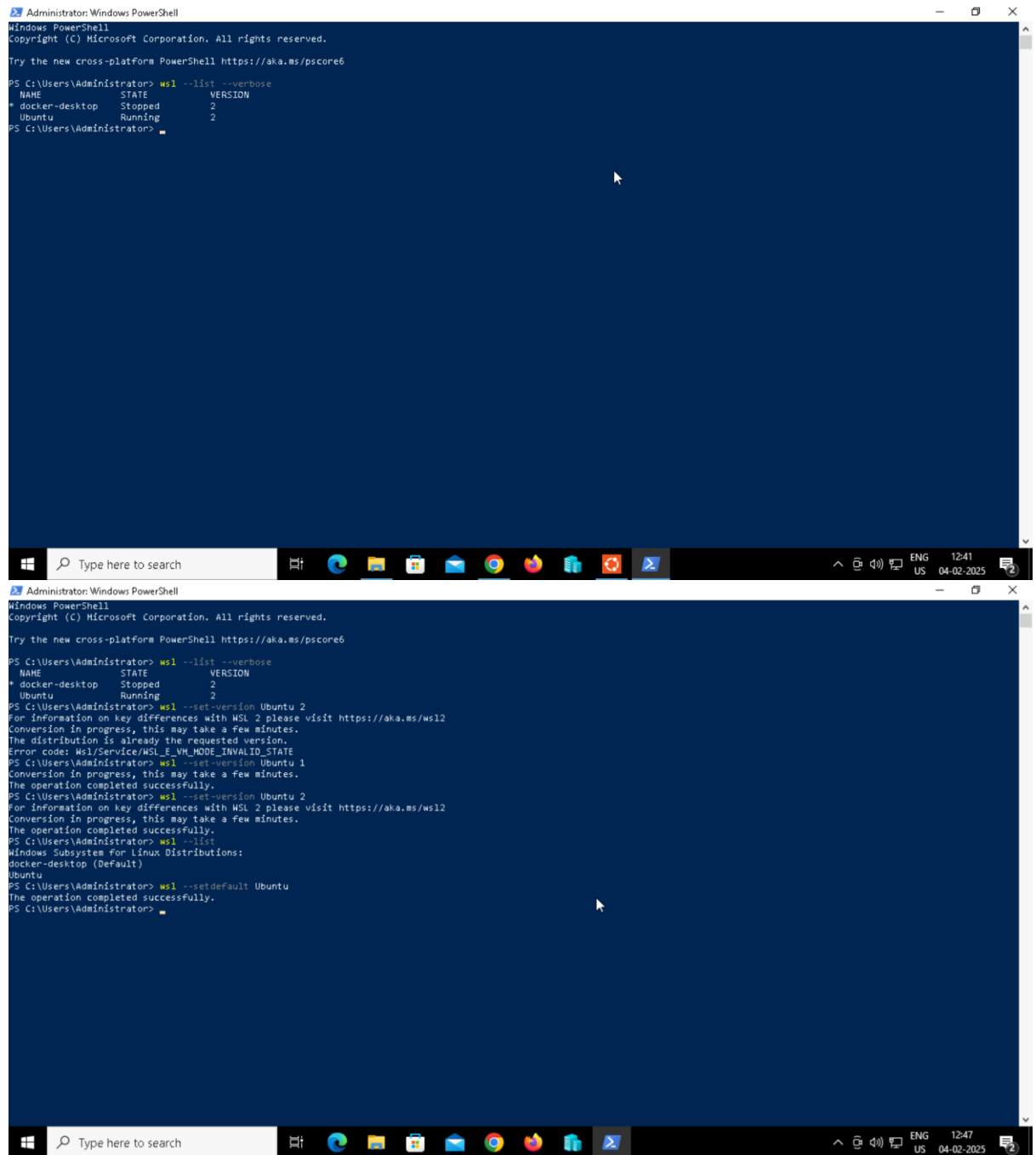


```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (c) Microsoft Corporation. All rights reserved.

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Administrator> wsl --list --verbose
  NAME                STATE      VERSION
  -
  docker-desktop      Stopped    2
  Ubuntu               Running    2
PS C:\Users\Administrator>
```

## 7. Try switching between WSL1 and WSL2 and also setup a default version



The image contains two screenshots of a Windows PowerShell window running as Administrator. The first screenshot shows the output of the `wsl --list --verbose` command, which lists installed WSL distributions. The second screenshot shows a series of commands to set the default WSL version for Ubuntu, including an attempt to set it to 1 (which fails due to an invalid state) and then successfully setting it to 2.

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

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Administrator> wsl --list --verbose
NAME                STATE              VERSION
* docker-desktop    Stopped            2
  Ubuntu             Running            2
PS C:\Users\Administrator>
```

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

Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Administrator> wsl --list --verbose
NAME                STATE              VERSION
* docker-desktop    Stopped            2
  Ubuntu             Running            2
PS C:\Users\Administrator> wsl --set-version Ubuntu 2
For information on key differences with WSL 2 please visit https://aka.ms/wsl2
Conversion in progress, this may take a few minutes.
The distribution is already the requested version.
Error code: Wsl/Service/WSL_E_VM_MODE_INVALID_STATE
PS C:\Users\Administrator> wsl --set-version Ubuntu 1
Conversion in progress, this may take a few minutes.
The operation completed successfully.
PS C:\Users\Administrator> wsl --set-version Ubuntu 2
For information on key differences with WSL 2 please visit https://aka.ms/wsl2
Conversion in progress, this may take a few minutes.
The operation completed successfully.
PS C:\Users\Administrator> wsl --list
Windows Subsystem for Linux Distributions:
docker-desktop (Default)
Ubuntu
PS C:\Users\Administrator> wsl --set-default Ubuntu
The operation completed successfully.
PS C:\Users\Administrator>
```

## 8. Move or Clone Your Linux Disk Image

```
Administrator: Windows PowerShell
PS C:\Users\Administrator> wsl --list
Windows Subsystem for Linux Distributions:
Ubuntu (Default)
docker-desktop
PS C:\Users\Administrator> mkdir D:\backup

Directory: D:\

Mode                LastWriteTime         Length Name
----                -
d-----          04-02-2025   12:48             backup

PS C:\Users\Administrator> wsl --export Ubuntu D:\backup\ubuntu.tar
Export in progress, this may take a few minutes.
The operation completed successfully.
PS C:\Users\Administrator> wsl --unregister Ubuntu
Unregistering.
The operation completed successfully.
PS C:\Users\Administrator> wsl --list
Windows Subsystem for Linux Distributions:
docker-desktop (Default)
PS C:\Users\Administrator>
```

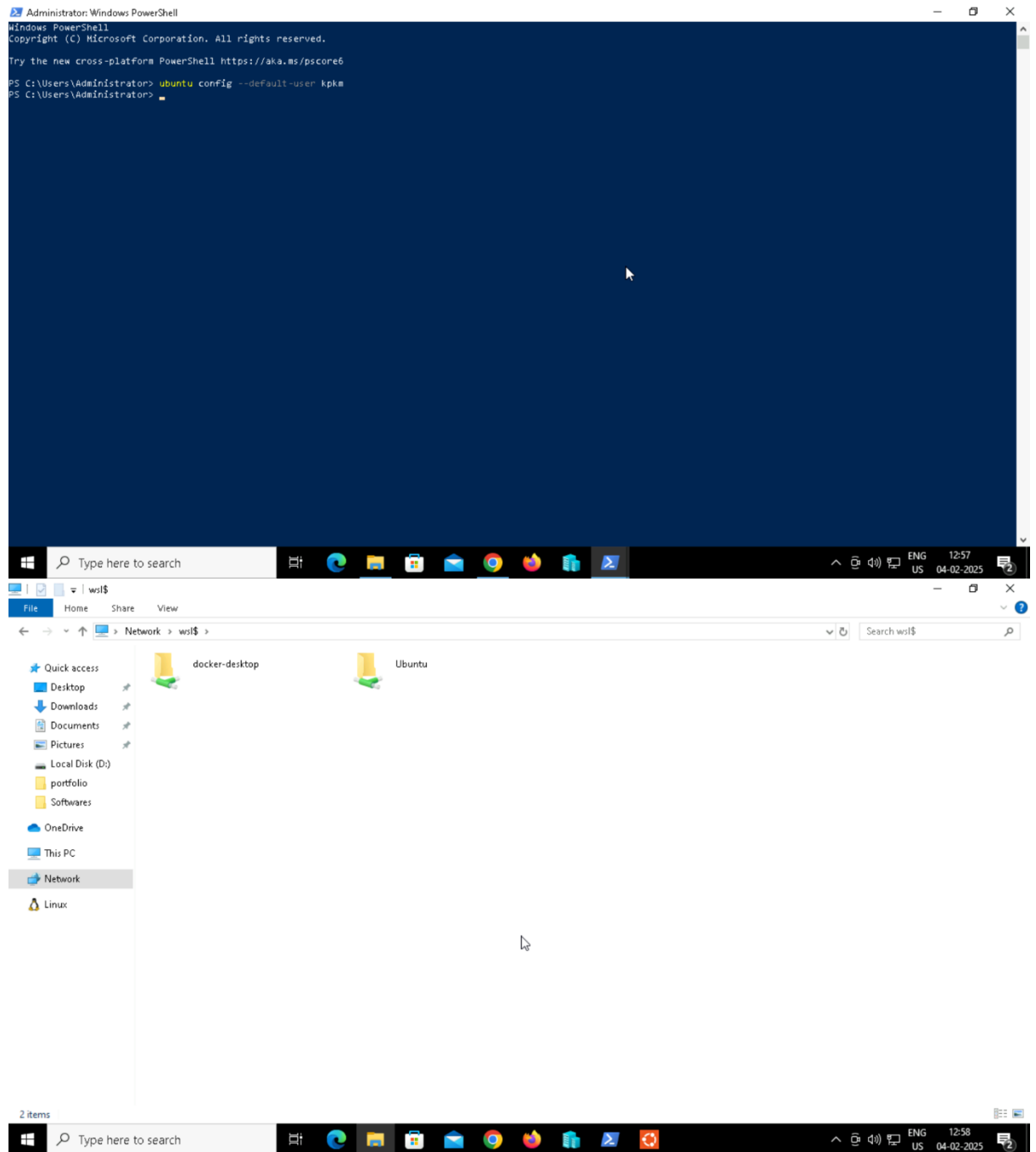
```
Administrator: Windows PowerShell
PS C:\Users\Administrator> mkdir D:\wsl

Directory: D:\

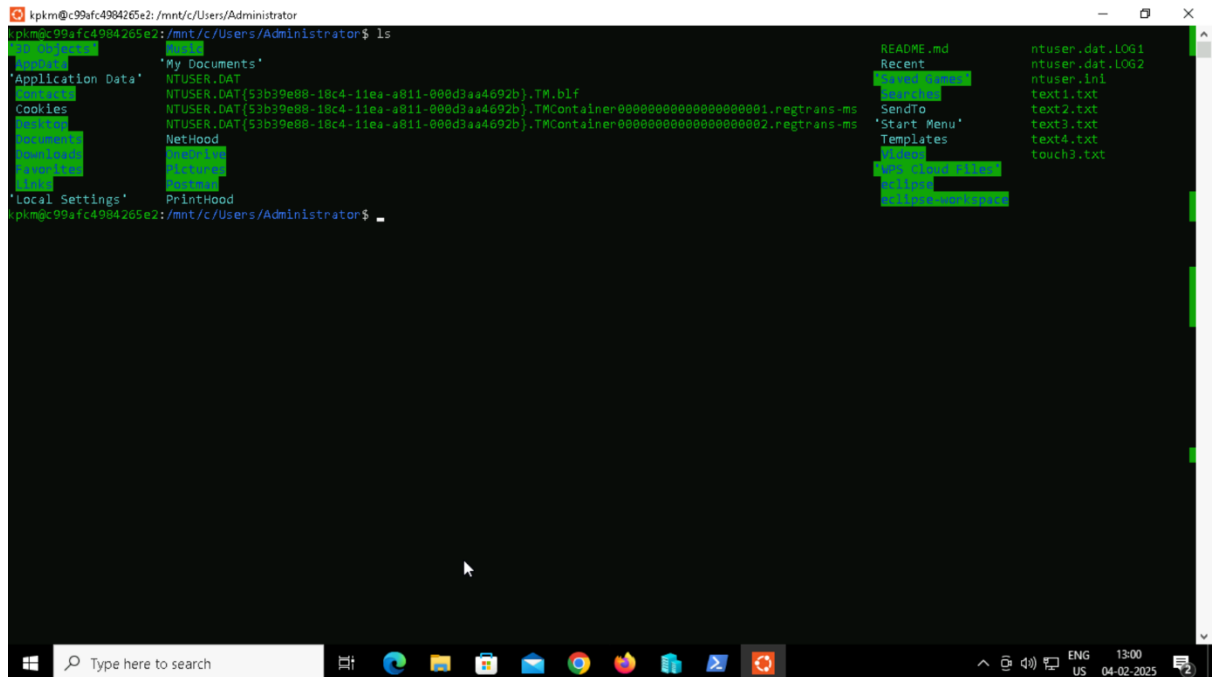
Mode                LastWriteTime         Length Name
----                -
d-----          04-02-2025   12:51             wsl

PS C:\Users\Administrator> wsl --import Ubuntu D:\wsl\ D:\backup\ubuntu.tar
Import in progress, this may take a few minutes.
The operation completed successfully.
PS C:\Users\Administrator> wsl --list
Windows Subsystem for Linux Distributions:
Ubuntu
docker-desktop (Default)
PS C:\Users\Administrator>
```

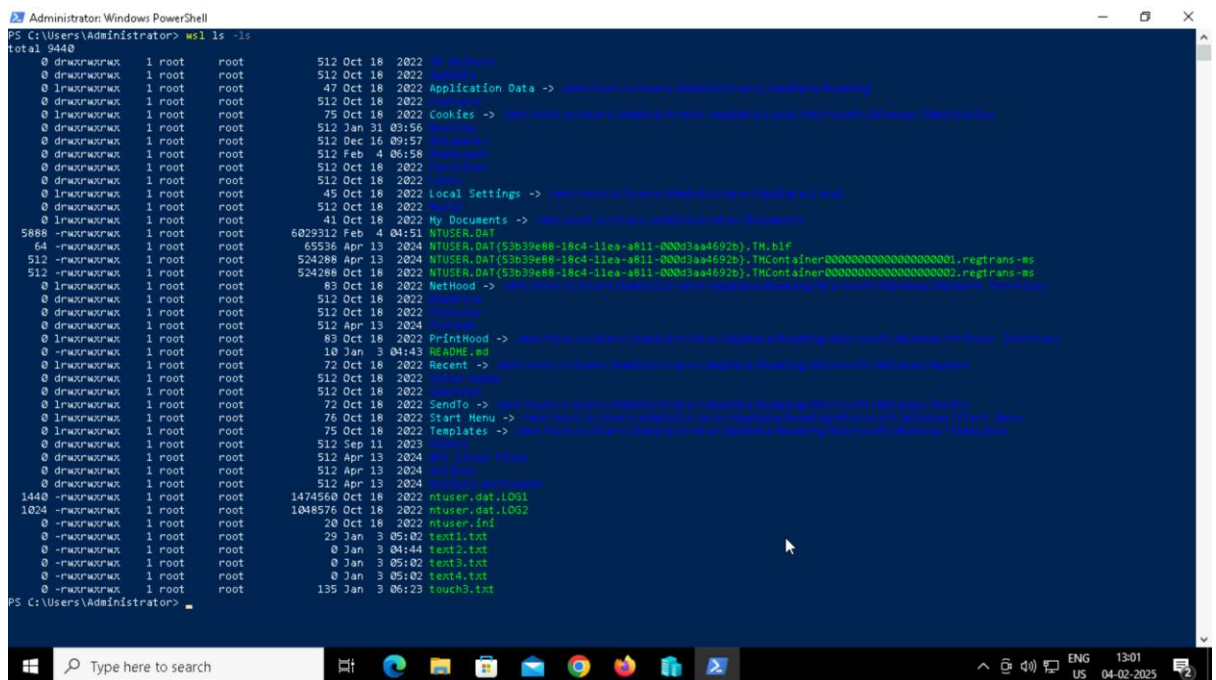
## 9. Access Linux Files from Windows and Map a Network Drive



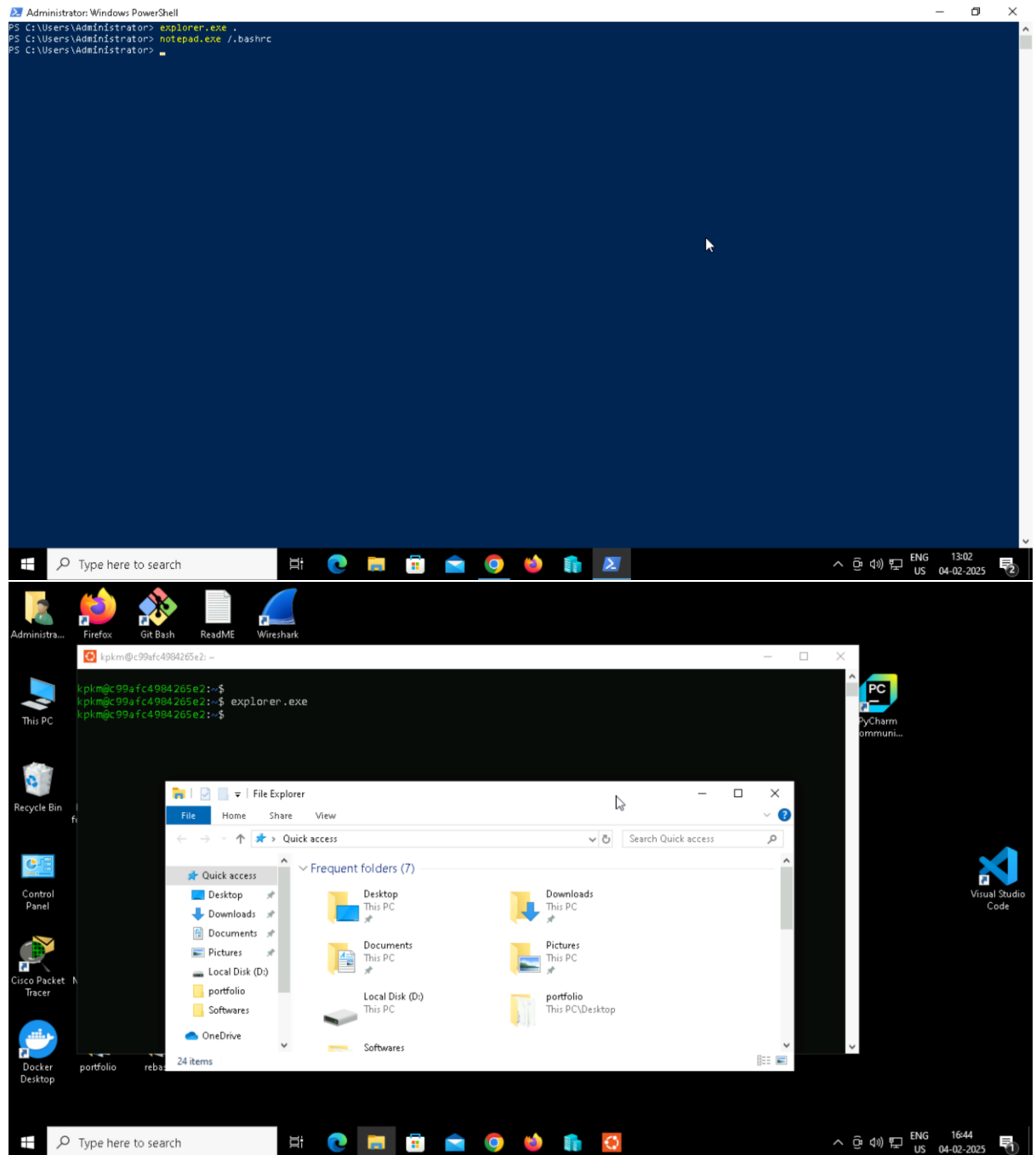
## 10. Accessing Windows files from Linux



## 11. Run Linux commands from Windows



## 12. Run Windows applications from Linux





### 13. Installing Graphical Linux applications

