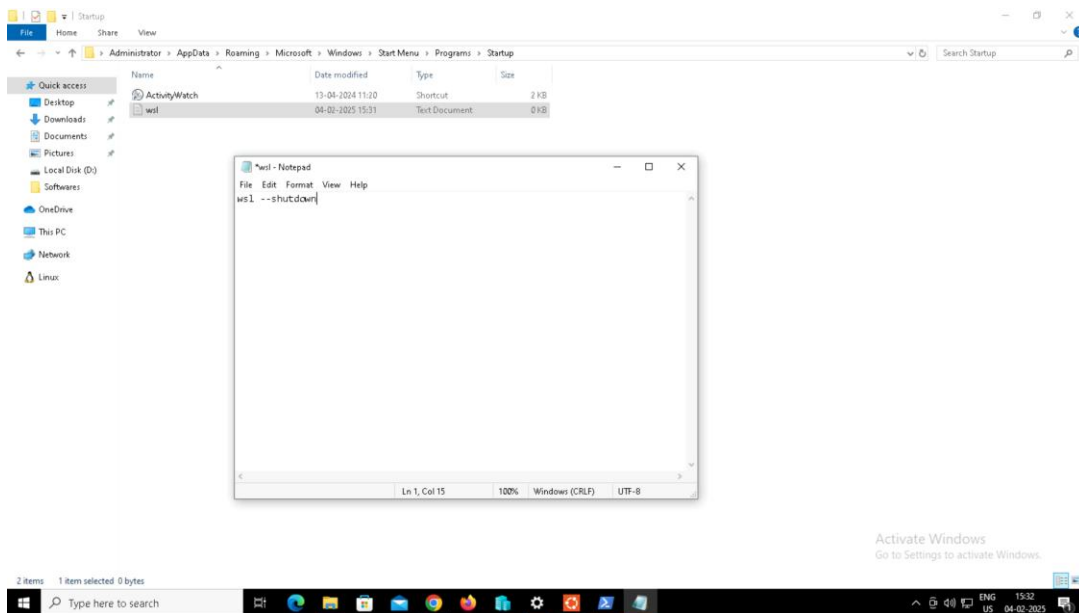


WSL Installations and Applications

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

Select Administrator: Windows PowerShell

```
Windows PowerShell
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PS C:\Users\Administrator> wsl --list --online
The following is a list of valid distributions that can be installed.
To install using 'wsl.exe --install <Distro>'.

NAME                                FRIENDLY NAME
Ubuntu                              Ubuntu
Debian                              Debian GNU/Linux
kali-linux                          Kali Linux Rolling
ubuntu-18.04                         Ubuntu 18.04 LTS
ubuntu-20.04                         Ubuntu 20.04 LTS
ubuntu-22.04                         Ubuntu 22.04 LTS
ubuntu-24.04                         Ubuntu 24.04 LTS
oraclelinux_7_9                     Oracle Linux 7.9
oraclelinux_8_7                     Oracle Linux 8.7
oraclelinux_9_1                     Oracle Linux 9.1
opensuse-leap-15.6                  openSUSE Leap 15.6
suse-linux-enterprise-15-sp5         SUSE Linux Enterprise 15 SP5
suse-linux-enterprise-15-sp6         SUSE Linux Enterprise 15 SP6
opensuse-tumbleweed                 openSUSE Tumbleweed

PS C:\Users\Administrator>
```

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

```
juhi@05d861eca28c5c4: ~  
juhi@05d861eca28c5c4:~$ sudo apt update  
[sudo] password for juhi:  
Hit:1 http://archive.ubuntu.com/ubuntu noble InRelease  
Get:2 http://archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]  
Hit:3 http://security.ubuntu.com/ubuntu noble-security InRelease  
Hit:4 http://archive.ubuntu.com/ubuntu noble-backports InRelease  
Fetched 126 kB in 3s (48.9 kB/s)  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
All packages are up to date.  
juhi@05d861eca28c5c4:~$
```

4. 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  
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Try the new cross-platform PowerShell https://aka.ms/pscore6  
  
PS C:\Users\Administrator> wsl --list --verbose  
NAME                STATE              VERSION  
* Debian             Stopped            2  
Ubuntu               Running            2  
docker-desktop       Stopped            2  
PS C:\Users\Administrator>
```

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

```
Administrator: Windows PowerShell

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

PS C:\Users\Administrator> wsl --list --verbose
  NAME                STATE      VERSION
* Debian              Stopped    2
  Ubuntu              Running    2
  docker-desktop      Stopped    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:
Debian (Default)
Ubuntu
docker-desktop
PS C:\Users\Administrator> wsl --setdefault Ubuntu
Invalid command line argument: --setdefault
Please use 'wsl.exe --help' to get a list of supported arguments.
PS C:\Users\Administrator> wsl --setdefault juhi
Invalid command line argument: --setdefault
Please use 'wsl.exe --help' to get a list of supported arguments.
PS C:\Users\Administrator>
```

6.

```
Administrator: Windows PowerShell

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

PS C:\Users\Administrator> wsl --list --verbose
  NAME                STATE      VERSION
* Debian              Stopped    2
  Ubuntu              Running    2
  docker-desktop      Stopped    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:
Debian (Default)
Ubuntu
docker-desktop
PS C:\Users\Administrator> wsl --setdefault Ubuntu
Invalid command line argument: --setdefault
Please use 'wsl.exe --help' to get a list of supported arguments.
PS C:\Users\Administrator> wsl --setdefault juhi
Invalid command line argument: --setdefault
Please use 'wsl.exe --help' to get a list of supported arguments.
PS C:\Users\Administrator> wsl --setdefault Ubuntu
Invalid command line argument: --setdefault
Please use 'wsl.exe --help' to get a list of supported arguments.
PS C:\Users\Administrator> wsl --list --verbose
  NAME                STATE      VERSION
* Debian              Stopped    2
  Ubuntu              Stopped    2
  docker-desktop      Stopped    2
PS C:\Users\Administrator> wsl --setdefault Ubuntu
The operation completed successfully.
PS C:\Users\Administrator>
```

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

PS C:\Users\Administrator> Test-Path D:\backup
True
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:
Debian (Default)
docker-desktop
PS C:\Users\Administrator>
```

7. Move or Clone Your Linux Disk Image

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

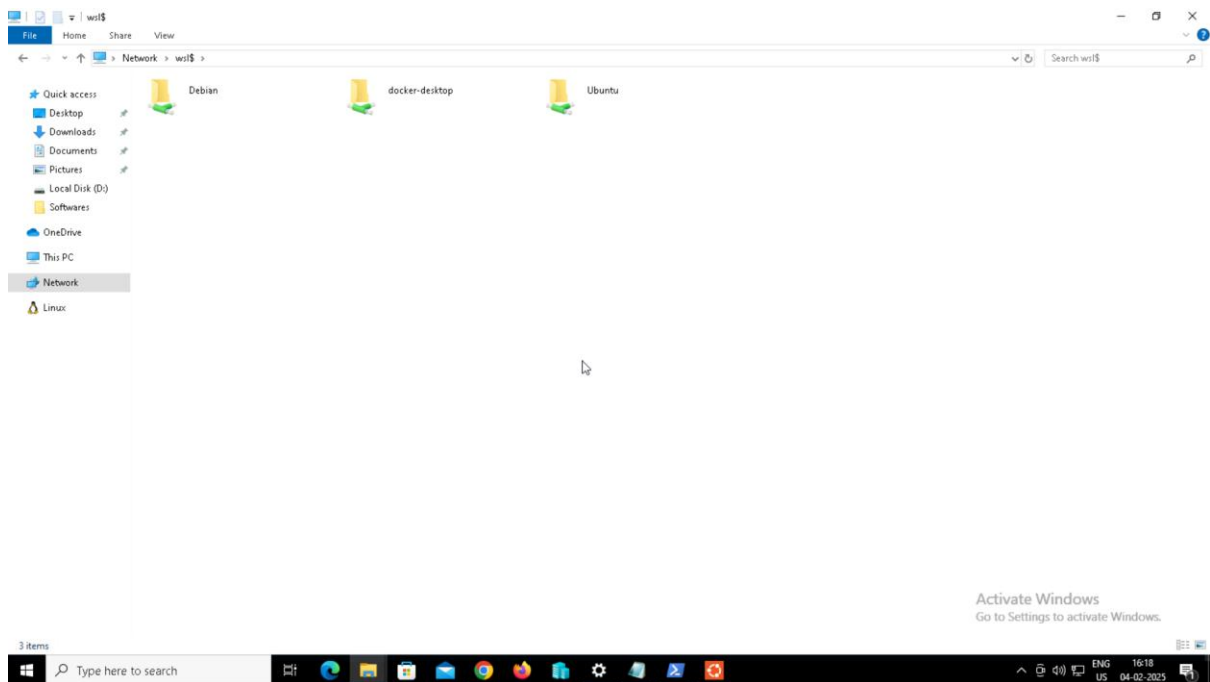
PS C:\Users\Administrator> Test-Path D:\backup
True
PS C:\Users\Administrator> wsl --export Ubuntu D:\backup\ubuntu.tar
Export in progress, this may take a few minutes.
The operation completed successfully.
PS C:\Users\Administrator> wsl --unregister Ubuntu
Unregistering.
The operation completed successfully.
PS C:\Users\Administrator> wsl --list
Windows Subsystem for Linux Distributions:
Debian (Default)
docker-desktop
PS C:\Users\Administrator> mkdir D:\wsl
mkdir : An item with the specified name D:\wsl already exists.
At line:1 char:1
+ mkdir D:\wsl
~
+ CategoryInfo          : ResourceExists: (D:\wsl:String) [New-Item], IOException
+ FullyQualifiedErrorId : DirectoryExist,Microsoft.PowerShell.Commands.NewItemCommand

PS C:\Users\Administrator> Test-Path D:\wsl
True
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:
Debian (Default)
docker-desktop
Ubuntu
PS C:\Users\Administrator>
```

8. Access Linux Files from Windows and Map a Network Drive

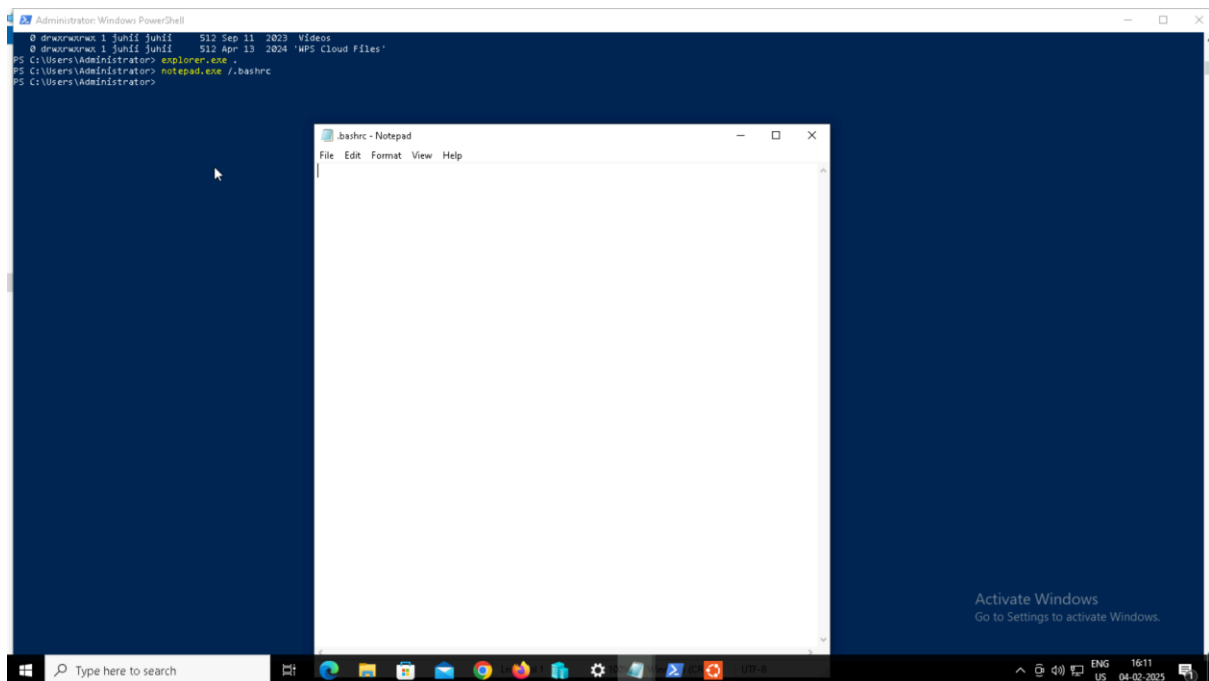
```
Administrator: Windows PowerShell
Debian (Default)
docker-desktop
PS C:\Users\Administrator> mkdir D:\wsl
mkdir : An item with the specified name D:\wsl already exists.
At line:1 char:1
+ mkdir D:\wsl
+ ~~~~~
+ CategoryInfo          : ResourceExists: (D:\wsl:String) [New-Item], IOException
+ FullyQualifiedErrorId : DirectoryExist,Microsoft.PowerShell.Commands.NewItemCommand

PS C:\Users\Administrator> Test-Path D:\wsl
True
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:
Debian (Default)
docker-desktop
Ubuntu
PS C:\Users\Administrator> Ubuntu config --default-user juhi
PS C:\Users\Administrator>
```



[illegible]

11. Run Windows applications from Linux



12. Installing Graphical Linux applications

