DOCKER DESKTOP MIGRATION TO WSL 2 ON WINDOWS

## By Andrea Vargas

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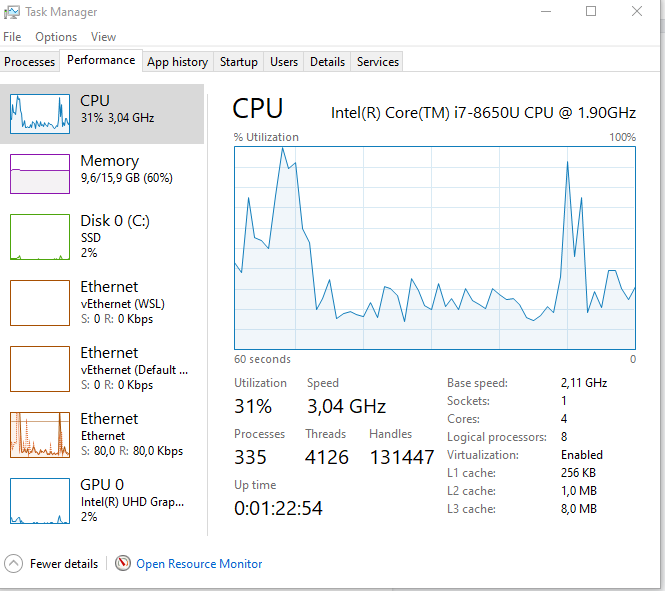
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# 

# Validate Virtualization on Task Manager

* Performance
* CPU



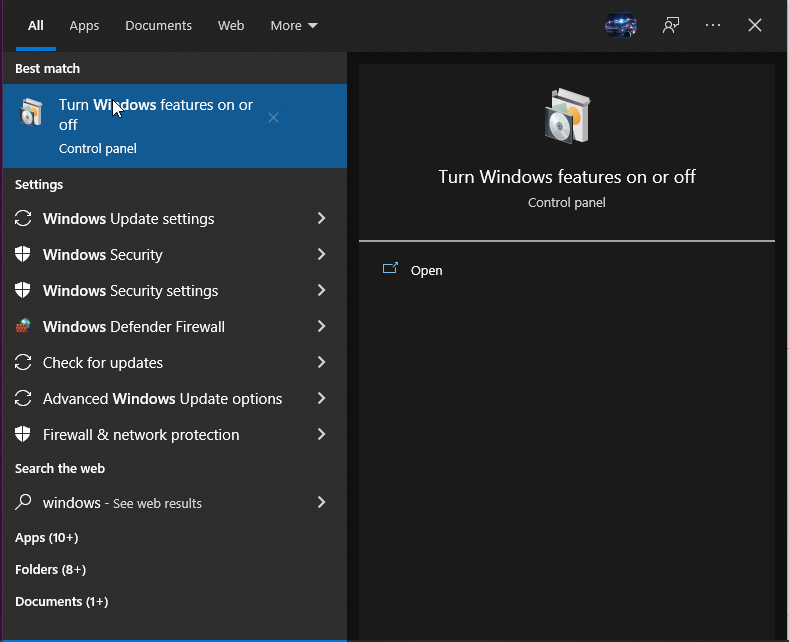
If virtualization is disable you can check this video

[How to enable virtualization in Bios windows 10](https://www.youtube.com/watch?v=Ub3I14BwODU)

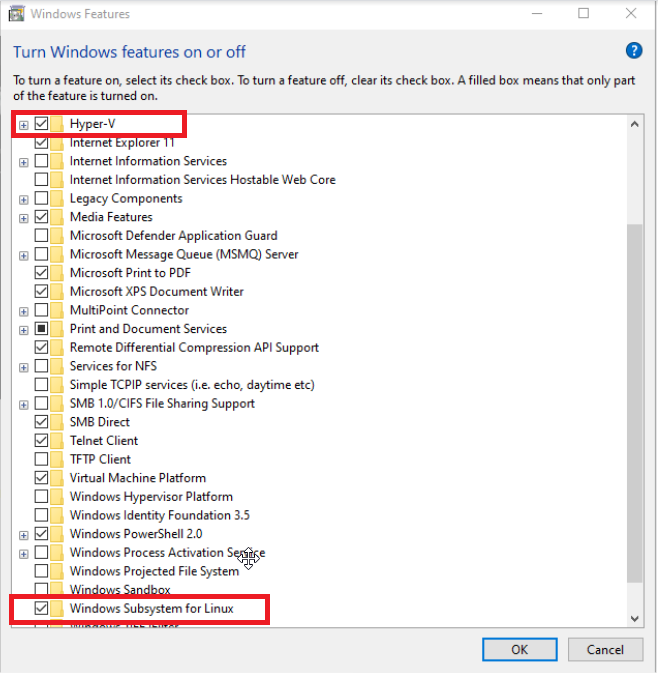
# Turn on Windows features virtualization

# 

* Go turn Windows features or Off



Active features: Hyper-V and Windows subsystem for Linux



Restart your laptop

# Open Powershell as Administrator and run the following commands

To check wsl distributions

|  |
| --- |
| wsl -l -v |

To set the default wsl 2

|  |
| --- |
| wsl --set-default-version 2 |

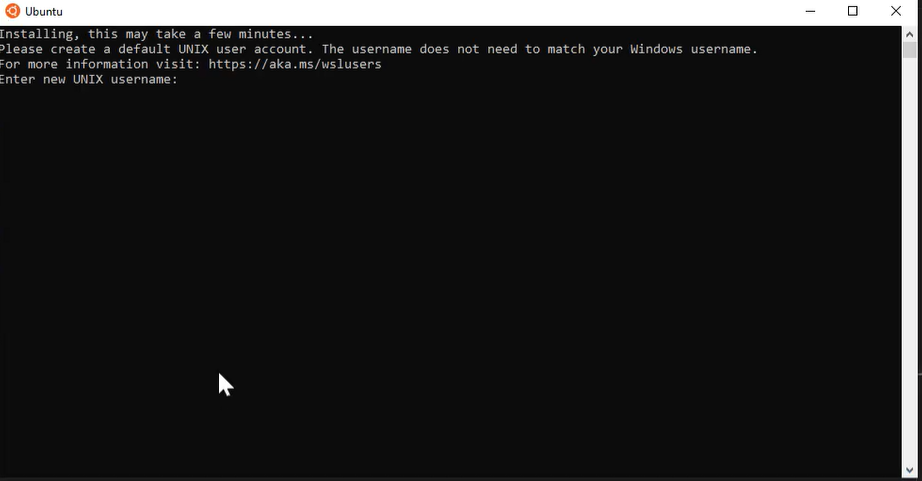
To Install ubuntu

|  |
| --- |
| wsl --install -d Ubuntu |

Set default WSL distribution

|  |
| --- |
| wsl --set-default $DISTRIBUTION-NAME (Ubuntu) |

Set username and password



|  |
| --- |
| ping google.com |

# If it fails then follow the steps bellow:

* Download the distro [wsl-vpnkit.tar.gz](https://github.com/sakai135/wsl-vpnkit/releases) and copy it to C:\Users\<username>
* Open a PowerShell in **C:\Users\<username>** and run these commands

|  |
| --- |
| wsl.exe --import wsl-vpnkit $env:USERPROFILE\wsl-vpnkit wsl-vpnkit.tar.gz |

|  |
| --- |
| wsl.exe -d wsl-vpnkit |

|  |
| --- |
| wsl.exe -d wsl-vpnkit service wsl-vpnkit start |

* To prevent having to re-run any commands, open a WSL 2 session window and run

|  |
| --- |
| sudo nano ~/.bashrc |

Append this command at the end of the file and save

|  |
| --- |
| wsl.exe -d wsl-vpnkit service wsl-vpnkit start >/dev/null 2>&1 |

To save the file :

Ctrl + X

Y

Enter

.bashrc runs on every interactive shell launch.

* Close and re-open a new WSL 2 session. To confirm network access, run a ping command

|  |
| --- |
| ping google.com |

### 

# Open WSL window to do package repository configuration

|  |
| --- |
| source /etc/os-release |

|  |
| --- |
| curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add - |

|  |
| --- |
| echo "deb [arch=amd64] https://download.docker.com/linux/ubuntu ${VERSION\_CODENAME} stable" | sudo tee /etc/apt/sources.list.d/docker.list |

# Update your Ubuntu distribution

|  |
| --- |
| sudo apt update && sudo apt upgrade |

# Remove Residue from previous docker installations

|  |
| --- |
| sudo apt remove docker docker-engine docker.io containerd runc |

# Install official Docker release

|  |
| --- |
| sudo apt install docker-ce docker-ce-cli containerd.io |

# Add user to docker group

Replace the $USER with your user

|  |
| --- |
| sudo usermod -aG docker $USER |

# Install docker on Windows

[GitHub](https://github.com/StefanScherer/docker-cli-builder/releases) download the docker.exe command in standalone :

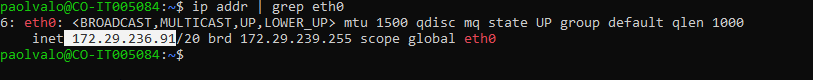
* Download the exe
* Put it in the directory like c:\bin, create the folder if does not exist
* Add this directory in the path for executables : *System Properties\Environment Variables\System Variables\Path*

# IF YOU ARE USING VPN CONNECTION

# Get address from WSL(Ubuntu) environment

**Use the command:**

|  |
| --- |
| ip addr | grep eth0 |



# Open Power shell as Administrator and execute the following command and replace the IP at the end

|  |
| --- |
| netsh interface portproxy add v4tov4 listenport=2375 listenaddress=0.0.0.0 connectport=2375 connectaddress=172.22.32.26 |

# Init docker

|  |
| --- |
| wsl sh -c "sudo dockerd -H tcp://0.0.0.0" |

# If it fails Open again wsl ubuntu window and run:

|  |
| --- |
| rm -rf /var/run/docker.pid |

Or kill the PID

|  |
| --- |
| lsof |

Search the PID

|  |
| --- |
| Sudo kill $pid |

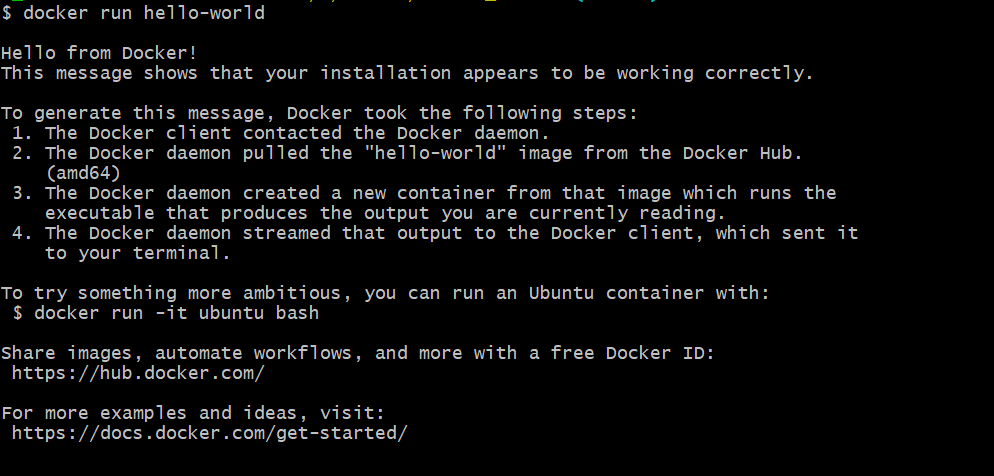
# Set Docker System environment variable on Windows

|  |
| --- |
| *DOCKER\_HOST value tcp://localhost:2375* |

## 

# Test docker command from windows command line

|  |
| --- |
| docker run -it hello-world |

You will see something like 

# If you lose the connection inside the Ubuntu environment run this commands from the Windows command line

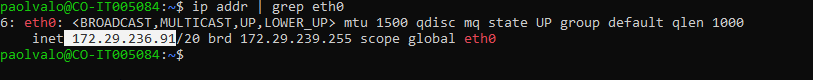
|  |
| --- |
| wsl -l -v wsl.exe -d wsl-vpnkit service wsl-vpnkit start |

Daily process to work with Docker

# Get address from WSL(Ubuntu) environment, this IP changes when you restart your laptop

**Use the command:**

|  |
| --- |
| ip addr | grep eth0 |



# 

# Open Power shell as Administrator and execute the following command and replace the IP at the end

|  |
| --- |
| netsh interface portproxy add v4tov4 listenport=2375 listenaddress=0.0.0.0 connectport=2375 connectaddress=172.22.32.26 |

# Init docker

|  |
| --- |
| wsl sh -c "sudo dockerd -H tcp://0.0.0.0" |

Workaround docker-compose

* Add environment variables and commands on dockerfile
* Build image from dockerfile with the command

|  |
| --- |
| docker build -t $imageName $DockerfileLocation |

* Run the container with the command

|  |
| --- |
| docker run -dp 8080:8080 $imageName |

# References

* <https://dev.to/_nicolas_louis_/how-to-run-docker-on-windows-without-docker-desktop-hik>
* <https://www.youtube.com/watch?v=yCK3easuYm4&t=664s>
* <https://www.youtube.com/watch?v=NpN8CraDr0A>

Coming soon video about this on my youtube channel

[Coding Together ENG - YouTube](https://www.youtube.com/channel/UCJ79Hao8TFBFc2HuWPSuqOg)

Pagina web manul de uso WSL2

<https://learn.microsoft.com/en-us/windows/wsl/install-manual>

## Paso 1: habilite el subsistema de Windows para Linux

Abra PowerShell **como administrador (menú Inicio > PowerShell > clic derecho > Ejecutar como administrador)** e ingrese este comando:

dism.exe /online /enable-feature /featurename:Microsoft-Windows-Subsystem-Linux /all /norestart

## Paso 2: comprobar los requisitos para ejecutar WSL 2

ara actualizar a WSL 2, debe ejecutar Windows 10...

* Para sistemas x64: **Versión 1903** o posterior, con **Build 18362** o posterior.
* Para sistemas ARM64: **Versión 2004** o posterior, con **Build 19041** o posterior.

## Paso 3: habilite la función de máquina virtual

dism.exe /online /enable-feature /featurename:VirtualMachinePlatform /all /norestart

## Paso 4: descargue el paquete de actualización del kernel de Linux

Descarga el último paquete:Buscarlo en la pagina :

<https://learn.microsoft.com/en-us/windows/wsl/install-manual>

## Paso 5: establezca WSL 2 como su versión predeterminada

wsl --set-default-version 2 ====:escribir en power shell

## Paso 6: instale la distribución de Linux que prefiera

wsl -l -v

wsl --install -d Ubuntu

## Paso 7: colocar USUARIO Y CONTRASEÑA

## Paso 8: Probar la coneccion al internet

En la maquina de UBUNTU colocamos:

Ping [www.google.com](http://www.google.com)

Paramos la maquina con control +C