Install Docker on Ubuntu WSL Without Docker Desktop

1. Enable WSL and Virtual Machine Platform Features

Open PowerShell as Administrator and run:

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

Restart your system

Restart the machine to apply changes.

2. Install WSL 2 Update

Download and install the WSL 2 kernel update:

https://wslstorestorage.blob.core.windows.net/wslblob/wsl_update_x64.msi

3. Set WSL Default Version to 2

```
wsl --set-default-version 2
```

4. Install Ubuntu via WSL

```
wsl --install -d Ubuntu
```

5. Inside Ubuntu: Update and Install Dependencies

```
sudo apt update
```

```
sudo apt-get -y install apt-transport-https ca-certificates curl gnupg lsb-release
```

6. Install Docker

```
sudo apt install docker.io -y
```

7. Configure Docker Daemon

```
sudo mkdir -p /etc/docker
sudo nano /etc/docker/daemon.json
```

Paste the following into the file:

```
{
  "hosts": ["tcp://0.0.0.0:2375", "unix:///var/run/docker.sock"]
}
```

8. Expose Docker to Windows

Open PowerShell as Administrator and run:

```
[Environment]::SetEnvironmentVariable("DOCKER_HOST", "tcp://localhost:2375", "User")
```

9. Start Docker Daemon Manually

In Ubuntu:

```
sudo dockerd
```

Or in background:

```
nohup sudo dockerd &
```

Optional Troubleshooting: Ensure iptables is installed

```
sudo apt-get install iptables
```

Optional Troubleshooting: Switch iptables to Legacy

```
sudo update-alternatives --config iptables
```

If nf_tables is selected:

```
sudo update-alternatives --set iptables /usr/sbin/iptables-legacy
sudo update-alternatives --set ip6tables /usr/sbin/ip6tables-legacy
```

Run SQL Server Docker Container

```
docker run --restart=always --name MxASQLServer \
-e 'ACCEPT_EULA=Y' \
-e 'SA_PASSWORD=HAL@VSCPassword123' \
-e 'MSSQL_PID=Express' \
-p 1433:1433 \
-d mcr.microsoft.com/mssql/server:2017-latest-ubuntu
```

Optional: Dapr CLI Installation

```
Set-ExecutionPolicy RemoteSigned -Scope CurrentUser
```

```
powershell -Command "iwr -useb https://raw.githubusercontent.com/dapr/cli/master/install/install.ps1 | iex"
```