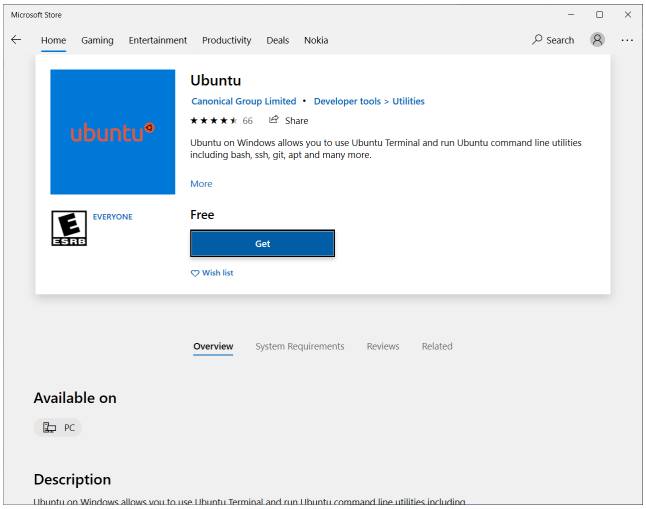
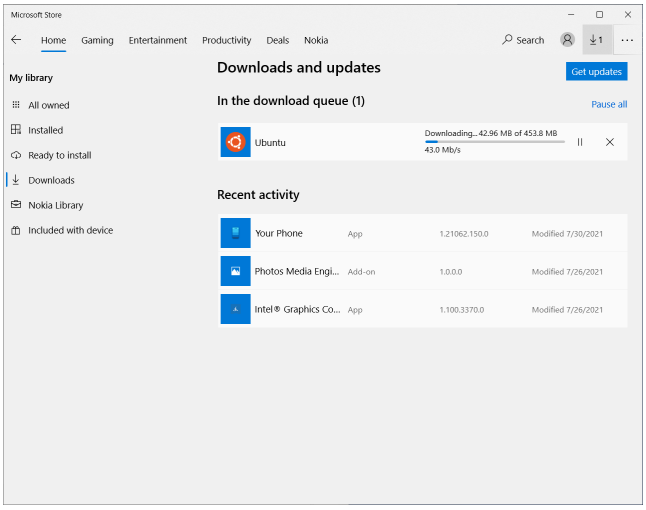
Using Ubuntu/WSL2 on Windows 10

Installation

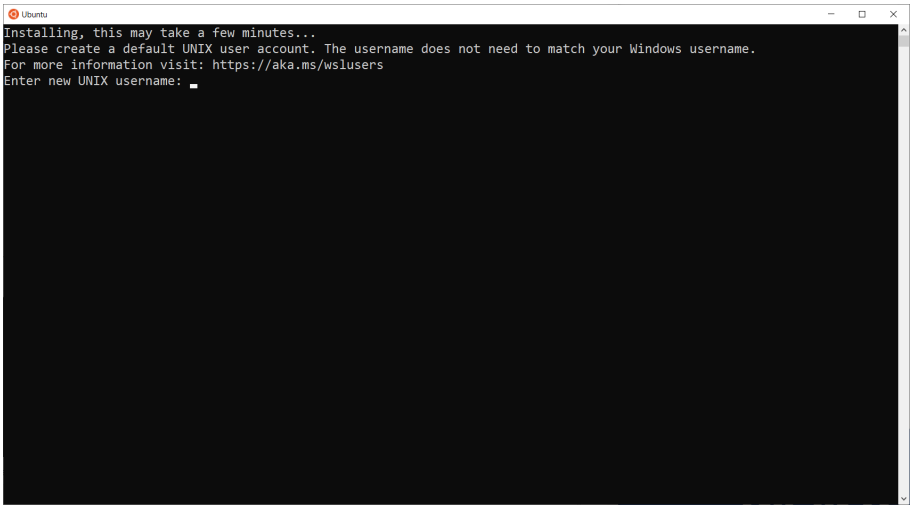
Visit the Microsoft Store and install Ubuntu.



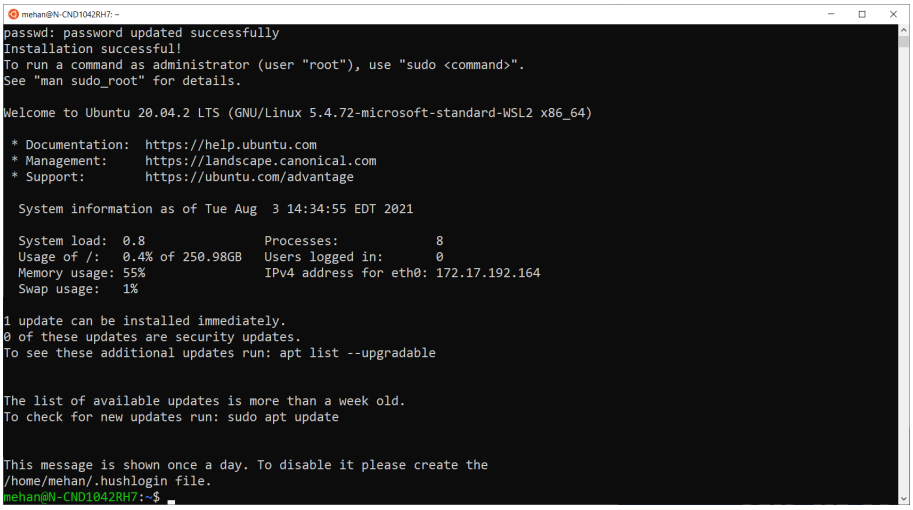
Click get and then wait for the download to complete. You can view the status of the download by clicking the download icon in the top right corner.



Once it has downloaded, click the launch button from the initial ubuntu screen.



Enter a new username and password.



Launch the Ubuntu App to get a command prompt.

```
USER@HOST:~$ uname -a
Linux N-CND1042RH7 5.4.72-microsoft-standard-WSL2 #1 SMP Wed Oct 28 23:40:43 UTC 2020 x86_64 x86_64 x86_64 GNU
/Linux
```

Common Tasks

Mount your windows home folder

```
$ cd ~
$ ln -s /mnt/c/Users/mehan home
```

Disable visual and audio bell/beep in WSL on Windows 10

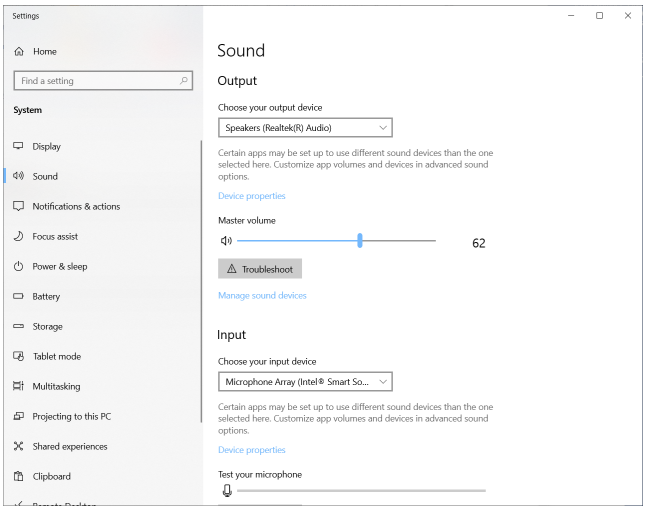
```
$ vi ~/inputrc
```

Add the following

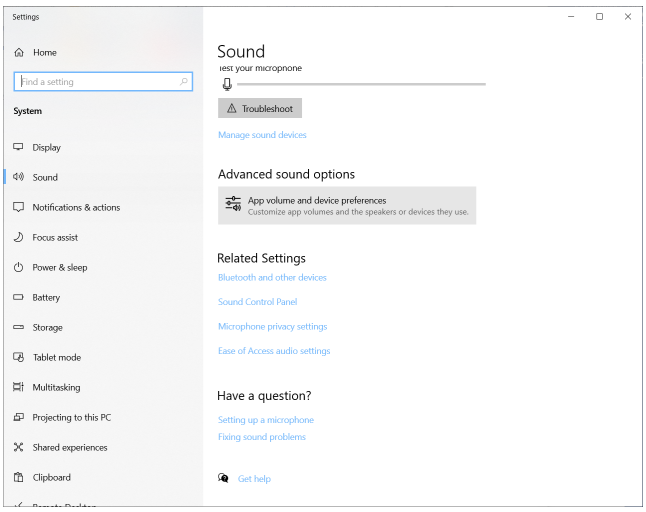
```
set bell-style none
```

Turn off Command Prompt Sounds

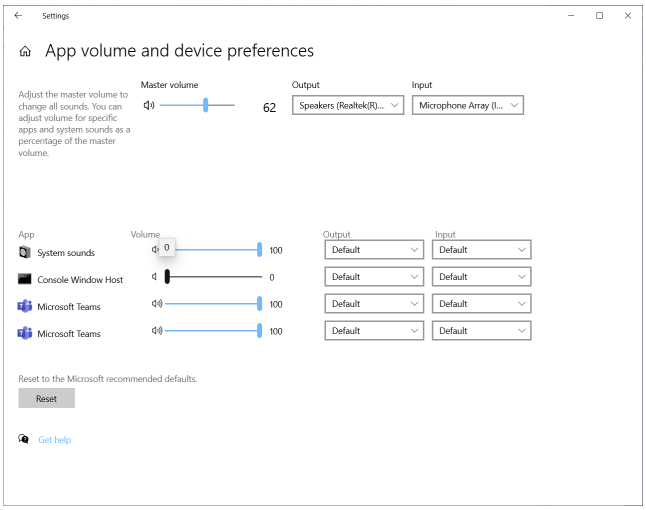
Open up Sound Settings



Scroll down to Advances Sound options and click it.



Set Console Window Host volume to 0



Advanced Tasks

Adding Docker Support

We can add our user to the docker user group by issuing the following command:

```
$ sudo usermod -aG docker <USER>
```

Update permissions on docker.sock

```
$ sudo chmod 666 /var/run/docker.sock
```

Adding Kubernetes Support

See https://kubernetes.io/docs/tasks/tools/install-kubectl-linux/

Install kubectl

```
# download
$ curl -LO "https://dl.k8s.io/release/$(curl -L -s https://dl.k8s.io/release/stable.txt)/bin/linux/amd64
/kubectl"

#install
$ sudo install -o root -g root -m 0755 kubectl /usr/local/bin/kubectl
```

Adding VPN Support (AnyConnect)

These instructions assume that you are using Ubuntu.

Create a WSL configuration file

In your Ubuntu terminal, issue the following command:

```
$ sudo vi /etc/wsl.conf
```

Add the following:

```
[network]
generateResolvConf = false
```

Terminate your Linux instance

From a Windows Command Prompt issue the following command:

```
> wsl --terminate Ubuntu
```

Delete your existing resolfv.conf file

In your Ubuntu terminal, issue the following command:

```
cd /etc
sudo rm -Rf resolv.conf
```

Connect to your VPN

Connect to the VPN using your AnyConnect client.

Determine your VPN Connection DNS IP Addresses

From a Windows Command Prompt issue the following command:

```
> ipconfig /all

   Connection-specific DNS Suffix  . : vpn.company.com
   Description . . . . . . . . . . . : Cisco AnyConnect Secure Mobility Client Virtual Miniport Adapter for
Windows x64
   Physical Address. . . . . . . . . : 00-05-9A-3C-7A-00
   DHCP Enabled. . . . . . . . . . . : No
   Autoconfiguration Enabled . . . . : Yes
   Link-local IPv6 Address . . . . . : fe80::3d7f:b69b:dd71:28d1%25(Preferred)
   Link-local IPv6 Address . . . . . : fe80::cde5:6a02:e9d2:f284%25(Preferred)
   IPv4 Address. . . . . . . . . . . : 135.255.134.209(Preferred)
   Subnet Mask . . . . . . . . . . . : 255.255.240.0
   Default Gateway . . . . . . . . . : ::
                                       135.255.128.1
   DHCPv6 IAID . . . . . . . . . . . : 419431834
   DHCPv6 Client DUID. . . . . . . . : 00-01-00-01-28-25-22-A7-6C-02-E0-CD-FE-58
   DNS Servers . . . . . . . . . . . : 135.5.25.53
                                       135.239.25.53
   Primary WINS Server . . . . . . . : 135.5.8.20
   Secondary WINS Server . . . . . . : 135.5.136.20
   NetBIOS over Tcpip. . . . . . . . : Enabled
```

From the above output, we can see that the VPNs DNS IP addresses are: **135.5.25.53** and **135.239.25.53**.

Update your Resolv.conf File

In your Ubuntu terminal, issue the following command:

```
$ sudo vi /etc/resolve.cong
```

Replace contents with the following

```
nameserver <VPN_DNS_IP1>
nameserver <VPN_DNS_IP2>
nameserver 8.8.8.8
```

Terminate your Linux instance

From a Windows Command Prompt issue the following command:

```
> wsl --terminate Ubuntu
```

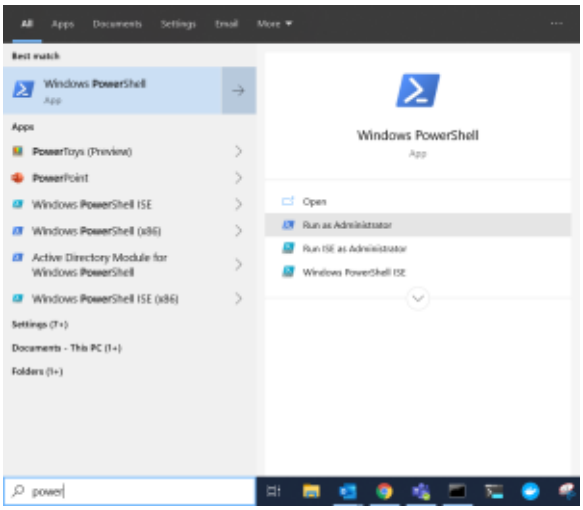
Lock the Resolv.conf file from Updates

In your Ubuntu terminal, issue the following command:

```
$ sudo chattr +i /etc/resolv.conf
```

Set the NET IP Interface for the VPN Connection

Open Windows Powershell with Administrative rights:



From this Windows Powershell instance, Issue the following command:

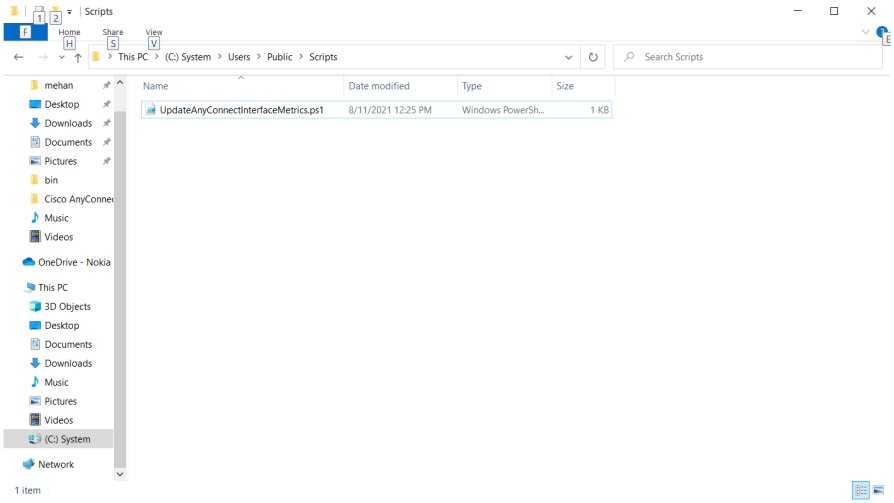
```
Get-NetAdapter | Where-Object {$_.InterfaceDescription -Match "Cisco AnyConnect"} | Set-NetIPInterface -
InterfaceMetric 6000
```

Create a Task to Apply Workaround on VPN Connect

We can create an automatic Windows task which will automatically open the Powershell and run the command for us.

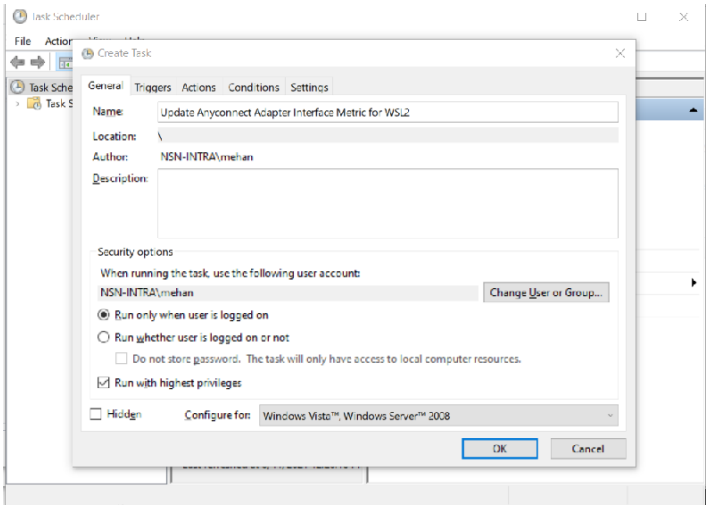
Create the script file anywhere, I created it in my Users\Public\Scripts\ folder and called it UpdateAnyConnectInterfaceMetrics.ps1. You can however create it where you want and name it what you want. Here is the content:

```
Get-NetAdapter | Where-Object {$_.InterfaceDescription -Match "Cisco AnyConnect"} | Set-NetIPInterface -
InterfaceMetric 6000
```

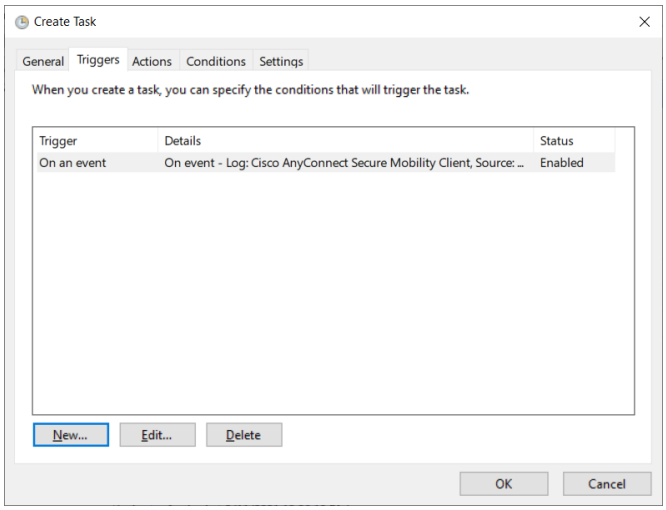


Now follow these instructions. Do not use quotes when entering file path.

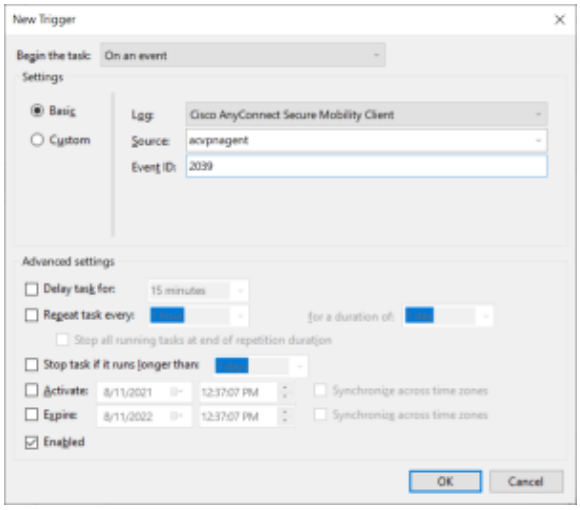
- Open Task Scheduler
- Select Action Click Create Task



- Name it **Update Anyconnect Adapter Interface Metric for WSL2**
- Check **Run with highest privileges**
- Select the Triggers Tab

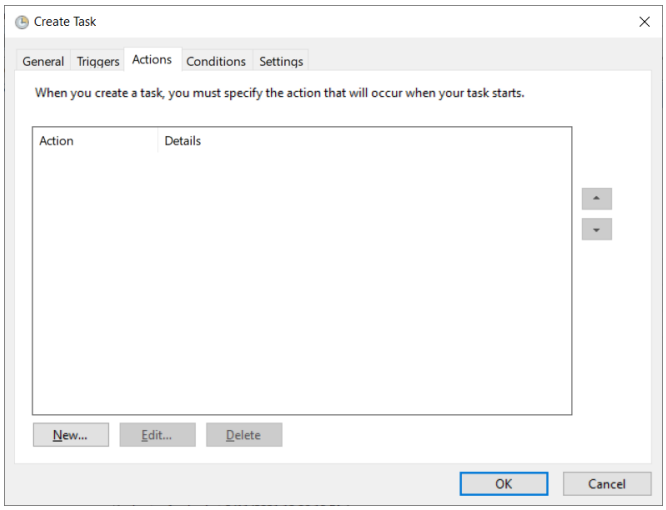


- Click the New Button

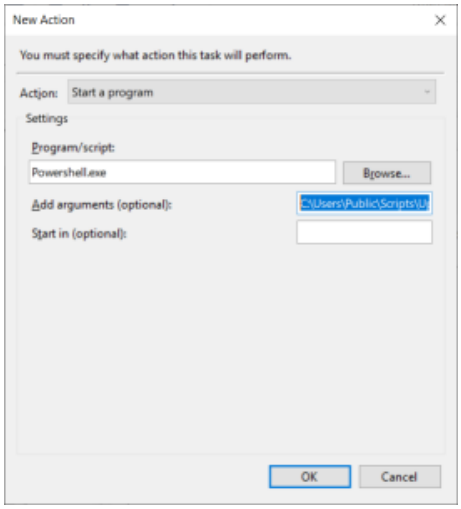


- Select **On Event** from the **Begin the Task** pull down.
- Select **Cisco AnyConnect Secure Mobility Client** from the **Log**.
- Select **acvpnagent** from the **Source**.
- Enter **2039** for the **Event ID**.
- Click OK

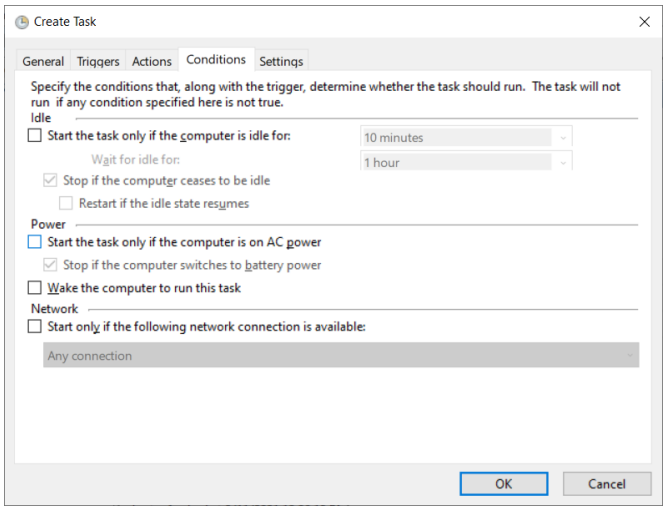
- Select the Action Tab



- Click New



- Select **Start a program** from the Action pulldown.
- Enter **Powershell.exe** for the Program/script.
- Enter **C:\Users\Public\Scripts\UpdateAnyConnectInterfaceMetrics.ps1** for the argument.
- Click OK
- Click the Conditions Tab



- **Uncheck** the option "**Start the task only if the computer is on AC power"**.
- Click OK to Create the Task.

References

Reference	URL
Fix DNS resolution in WSL2	https://gist.github.com/coltenkrauter/608cfe02319ce60facd76373249b8ca6