Using Ubuntu/WSL2 on Windows 10

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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

App Vol							
System sounds	da 0	100	Output Default	~	Default ~]	
Console Window Host	4	0	Default	~	Default ~]	
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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
 Windows x64
 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)
 Default Gateway . . . . . . . . : ::
                  135.255.128.1
 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

\rightarrow \uparrow \uparrow \downarrow \rightarrow This	PC > (C:) System > Users > Public > Scripts			~	Ö	
📕 mehan 🛛 🖈 ^	Name	Date modified	Туре	Size		
🔜 Desktop 🛛 🖈	JpdateAnyConnectInterfaceMetrics.ps1	8/11/2021 12:25 PM	Windows PowerSh		1 KB	
🖊 Downloads 🖈						
🖹 Documents 🖈						
Nictures 🖈						
📕 bin						
Cisco AnyConnec						
Music						
Videos						
OneDrive - Nokia						
This PC						
3D Objects						
Desktop						
Documents						
Downloads						
Music						
Pictures						
Videos						

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
- ٠ Select the Triggers Tab

Create Task		
oporal Triggers A	ations Conditions Sattings	
eneral magers y	cuons conditions settings	
When you create a	task, you can specify the conditions that will trigger the task.	
Trigger	Details	Status
On an event	On event - Log: Cisco AnyConnect Secure Mobility Client, Source:	Enabled
	F (1)	
	F d b F - I - b -	
<u>N</u> ew	Edit Delete	
<u>N</u> ew	Edit Delete	
<u>N</u> ew	<u>Eart</u> <u>D</u> elete	
<u>N</u> ew		Cancel

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

neral Triggers	Actions Co	nditions Settings	
When you crea	te a task, you n	ust specify the action that will occur when your task	: starts.
Action	Details		
			*
<u>N</u> ew	<u>E</u> dit	Delete	

Click New

ew Actio	in	
You mus	t specify what action this task will perform.	
Actjon:	Start a program	~
Setting	1	
Progra	m/script:	
Power	ihell.exe	Browse
Add a	guments (optional):	C\Users\Public\Scripts\U
Start in	n (optional):	

- 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

Create	Task					×	
General	Triggers	Actions	Conditions	Settings			
Specify the conditions that, along with the trigger, determine whether the task should run. The task will not run if any condition specified here is not true. Idle							
Start the task only if the <u>c</u> omputer is idle for: 10 minutes							
	W <u>a</u> it f	or idle for:			1 hour ~		
✓ S	top if the	comput <u>e</u> r	ceases to be i	dle			
	Restart if	the idle s	tate res <u>u</u> mes				
Power		1.201				-	
Star	t the task o	only if the	computer is o	on AC gov	ver		
S	top if the (computer	switches to <u>b</u>	attery pov	ver		
<u>W</u> ak	the com	puter to r	un this task				
Netwo	rk —	e fellewie	a actualy co	an action i	ie susilable:	-	
	t oni <u>v</u> ii th	eronowin	g network co	nection	is available:	. 1	
Any	connectio	n					
					OK Cancel		

- 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