

# Guide to connect to SIM wifi on Ubuntu (and other Linux Distros using the Terminal)

1. You will need to create a Network Profile using nmcli
    - nmcli is a default network manager tool that is preinstalled on Ubuntu, Fedora and other Distros.
  2. Open your terminal and type in:

## **nmcli device wifi list**

| WPA1 WPA2 802.1X |                    |       |       |            |        |            |
|------------------|--------------------|-------|-------|------------|--------|------------|
|                  | ESSID              | Mode  | Chans | Rate       | Signal | Bars       |
| WPA1 WPA2 802.1X | SIM_LL2025         | Infra | 149   | 540 Mbit/s | 100    | ██████████ |
| WPA1 WPA2 802.1X | eduroam aws        | Infra | 149   | 540 Mbit/s | 100    | ██████████ |
| WPA1 WPA2 802.1X | SIM_WiFi           | Infra | 149   | 540 Mbit/s | 100    | ██████████ |
| WPA1 WPA2 802.1X | MH_PubAuth         | Infra | 149   | 540 Mbit/s | 100    | ██████████ |
| WPA1 WPA2 802.1X | eduroam aws        | Infra | 149   | 540 Mbit/s | 100    | ██████████ |
| WPA1 WPA2 802.1X | SIM_WiFi_AWS       | Infra | 149   | 540 Mbit/s | 100    | ██████████ |
| WPA1 WPA2 802.1X | MH_PubAuth         | Infra | 149   | 540 Mbit/s | 100    | ██████████ |
| WPA1 WPA2 802.1X | eduroam aws        | Infra | 149   | 540 Mbit/s | 100    | ██████████ |
| WPA1 WPA2 802.1X | SIM_Guests         | Infra | 149   | 540 Mbit/s | 94     | ██████████ |
| WPA1 WPA2 802.1X | SIM_WiFi           | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | SIM_Birmingham2025 | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | eduroam aws        | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | SILEExams          | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | SIM_Birmingham2025 | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | SIM_LL2025         | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | SIM_WiFi_AWS       | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | MH_PubAuth         | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | eduroam aws        | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | SILEExams          | Infra | 6     | 260 Mbit/s | 84     | ██████████ |
| WPA1 WPA2 802.1X | SIM_LL2025         | Infra | 6     | 260 Mbit/s | 82     | ██████████ |
| WPA1 WPA2 802.1X | eduroam            | Infra | 6     | 260 Mbit/s | 82     | ██████████ |
| WPA1 WPA2 802.1X | SIM_WiFi_AWS       | Infra | 6     | 260 Mbit/s | 82     | ██████████ |
| WPA1 WPA2 802.1X | MH_PubAuth         | Infra | 6     | 260 Mbit/s | 82     | ██████████ |
| WPA1 WPA2 802.1X | eduroam            | Infra | 149   | 540 Mbit/s | 100    | ██████████ |

- Take note of the SSID of the school wifi (SIM WiFi)

## nmcli device

```
player@Athena:~$ nmcli device
DEVICE      TYPE      STATE           CONNECTION
wlp0s20f3   wifi     connected       school-wifi
br0        ethernet  disconnected   - (externally) to
p2p_0       p2p      disconnected   -
enp0s3_1f6  ethernet  unavailable   -
```

- Take note of your interface name. Your interface name will be different from mine, usually, it is the one that is at the top that is connected to nothing or your hotspot. If you can't find your interface name, use your phone as a hotspot and try connecting to the wifi on your phone first using the command:  
`Nmcli device wifi connect <"Your SSID"> password <password>`

- ### 3. Then set up the network profile:

```
nmcli connection add type wifi \
```

ifname xxxxxxxxxxxx \ #this is the interface name of your wifi card on your device,  
It should look like a bunch of string and characters.

```
con-name school-wifi \ #this is the connection name, you can set this as anything  
ssid "SIM WiFi" #this is the SSID that we got from Step 2
```

4. Now you have to set up the network with the correct configurations.

```
nmcli connection modify school-wifi \
```

wifi-sec-key-mgmt wpa-eap \#SIM uses WPA Enterprise Security Protocol

802-1x.eap peap \

```
802-1x.identity "your_student_id" \ #your username should be  
<simstudent\username>  
802-1x.password "your_password" \  
802-1x.phase2-auth mschapv2
```

5. Certificate Handling

```
nmcli connection modify school-wifi 802-1x.ca-cert ""  
#SIM doesn't usually require a certificate so you can leave this content inside the ""  
blank
```

6. Get the connection up

```
nmcli connection up school-wifi  
#a successful connection should look like the screenshot below.
```

```
[pilayer@Athena:~$ nmcli connection up school-wifi  
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkManager/  
ActiveConnection/10)]
```

- You should see Connection successfully activated

7. If you encounter any issues, view the logs using this command to troubleshoot  
`journalctl -u NetworkManager -f`