

# Wireless

I didn't end up having luck with `iw`, but I'm sure it is very useful. It seems I just wasn't able to interactively enter a password, so in the end I couldn't connect to WiFi. Worth looking at `iw` though.

```
sudo iw dev wlp0s20f3 scan
sudo iw dev wlp0s20f3 scan | grep SSI
sudo iw dev
sudo iw list
sudo iw wlp0s20f3 connect "Reed WIFI-2G"
```

See examples in `man nmcli-examples`. A lot of good information between this page and the `SEE ALSO` section at the bottom.

## Network configurations

```
tree /etc/NetworkManager/
.
├── conf.d
│   └── default-wifi-powersave-on.conf
├── dispatcher.d
│   ├── 01-ifupdown
│   ├── 99tlp-rdw-nm
│   ├── no-wait.d
│   ├── pre-down.d
│   └── pre-up.d
├── dnsmasq.d
├── dnsmasq-shared.d
├── NetworkManager.conf
└── system-connections
    ├── Mi Casa.nmconnection
    ├── FAKE WIFI-2G.nmconnection
    └── FAKE WIFI-5G.nmconnection
```

8 directories, 7 files

**Terminal NetworkManager UI** made using curses library can be installed and ran with the following commands

```
sudo apt install network-manager
nmtui
```

**Gnome NetworkManager GUI** for editing wireless and bluetooth connections using a GUI application build for Gnome desktops

```
sudo apt install network-manager-gnome
nm-connection-editor
```

**Wifi can be toggled** with `wifi on` and `wifi off`

```
wifi on

wifi      = on
```

```
rfkill

ID TYPE    DEVICE    SOFT    HARD
0 wlan     phy0      unblocked unblocked
1 bluetooth hci0      unblocked unblocked
```

**Connecting to WiFi**

```
nmcli device wifi list

IN-USE BSSID      SSID          MODE  CHAN  RATE    SIGNAL  BARS  SECURITY
*   40:B8:9A:D7:EC:AF FAKE WIFI-2G   Infra 1    195 Mbit/s 100    ████████ WPA2
   40:B8:9A:D7:EC:B0 FAKE WIFI-5G   Infra 149   405 Mbit/s 94     ████████ WPA2
   FA:8F:CA:95:43:9B Living Room    Infra 6     65 Mbit/s 75     ██████  --
   FA:8F:CA:82:9D:D4 Family Room TV.b Infra 6     65 Mbit/s 57     ██████  --
   14:ED:BB:1F:44:6D Hi              Infra 8     130 Mbit/s 57     ██████  WPA2
   14:ED:BB:1F:44:76 ATT9eu7M6L      Infra 149   540 Mbit/s 44     ██████  WPA2
   4C:ED:FB:AD:D8:08 Fluffymarshmallow Infra 1     540 Mbit/s 30     ██████  WPA2
   70:77:81:DE:43:59 WIFIDE4355     Infra 1     195 Mbit/s 24     ██████  WPA2
   70:5A:9E:6C:D4:29 TC8717T23      Infra 6     195 Mbit/s 19     ██████  WPA2
   A8:A7:95:E8:68:82 Wildflower-2G   Infra 1     195 Mbit/s 14     ██████  WPA2
   CC:2D:21:57:E0:71 Rudy             Infra 6     130 Mbit/s 14     ██████  WPA1 WPA2
   CE:A5:11:3C:E4:C2 Orbi_setup      Infra 9     130 Mbit/s 14     ██████  --
```

A8:6B:AD:EB:B4:56	Gypsy-2	Infra	6	195 Mbit/s	12		WPA1 WPA2
CE:A5:11:3C:EF:8E	Orbi_setup	Infra	9	130 Mbit/s	12		--

Now bring up a connection with the access point we want, and pass the `--ask` flag to enter a password for authentication.

```
nmcli c up "FAKE WIFI-2G" --ask
```

Passwords or encryption keys are required to access the wireless network 'FAKE WIFI-2G'.

Password (802-11-wireless-security.psk): .....

Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkManager/ActiveConnection/9)

**Disable transmission devices** with `rfctl`

```
rfkill list
```

0: phy0: Wireless LAN

Soft blocked: no

Hard blocked: no

1: hci0: Bluetooth

Soft blocked: yes

Hard blocked: no

**Block WiFi**

```
rfkill block wlan
```

**Block Bluetooth**

```
rfkill block bluetooth
```

---

Revision #5

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