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  Fluffymarshmellow 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
```

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