Connect to Wi-Fi on OpenBSD

Even though I prefer physical connection, even on a laptop, and I plug in an Ethernet cable whenever I can, it is sometimes necessary to use WiFi. This requires remembering a few commands on OpenBSD.

Figure out network interface name

OpenBSD offers support for various network cards. It used to be way worse, but now I would say it's pretty uncommon to find a wireless card that doesn't work at all, however, features might differ from driver to driver.

First, we need to get the name of our wireless interface. To do so, run `ifconfig`:

```
$ ifconfig
```

In the output, look for one of these interface names (list of possible wireless interfaces in OpenBSD, the name differs based on the wireless driver that handles the Wi-Fi card). Other clues that it's a wireless interface include `wlan`, `802.11` etc.

```
iwn0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
□□lladdr 00:11:22:33:44:55
        index 2 priority 4 llprio 3
        groups: wlan
        media: IEEE802.11 autoselect
        status: no network
        ieee80211: nwid ""
```

> In my case, the interface name is `iwn0`.

Up the interface

Before we can start scanning or connecting to networks, we need to make sure the wireless interface is `UP`. Replace `iwn0` with the name of your interface.

```
$ doas ifconfig iwn0 up
```

Scan for Wi-Fi networks

Basically all operating systems allow you to view all available wireless networks around you in some way. Usually in a form of a list that appears after you turn on Wi-Fi access. It's basically the same on OpenBSD, it just took me a bit longer to figure out since OpenBSD won't give you shiny buttons, but a simple (and powerful!) terminal.

```
$ ifconfig iwn0 scan
```

Which will give you the aforementioned list:

```
iwn0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
□□lladdr 00:11:22:33:44:55
        index 2 priority 4 llprio 3
        groups: wlan
        media: IEEE802.11 autoselect
        status: no network
        ieee80211: nwid ""
        □□nwid MyWiFi chan 11 bssid 55:44:33:22:55:66 -49dBm HT-MCS15
privacy,short_preamble,short_slottime,wpa2
                nwid AnotherNetwork chan 112 bssid 88:00:11:99:55:33 -58dBm HT-MCS15
privacy,short_preamble,short_slottime,wpa2
                nwid TP-Link chan 7 bssid 99:55:11:11:11:11 -91dBm HT-MCS15
privacy,short_slottime,radio_measurement
□□□□...
                ...
```

Connect to a Wifi Network

Choose your desired network from the list generated by `ifconfig iwn0 scan` and run:

```
$ doas ifconfig iwn0 nwid "MyWiFi" wpakey MySuperSecretPassword
```

- `iwn0` – Name of the interface
- `MyWifi` – Name of your Wi-Fi network
- `MySuperSecretPassword` – password for your network, omit `wpakey` if the network is open

You should now be connected, but you most likely won't be able to ping anything yet.

```
$ ping 8.8.8.8


PING 8.8.8.8 (8.8.8.8): 56 data bytes
ping: sendmsg: No route to host
ping wrote 8.8.8.8 64 chars, ret=-1
```

That is because **you haven't asked for a DHCP lease yet.**

Get IP from DHCP server

This option assumes you want a DHCP address, not a static one. To get the address from DHCP, simply run `dhclient` on your Wi-Fi interface.

```
$ doas dhclient iwn0


iwn0: 192.168.1.58 lease accepted from 192.168.1.1 (11:11:11:11:11:11)
```

> Success! You are now connected to a Wi-Fi network with a valid IP address. There's, however, way more to discover and learn – auto connecting, configuration files so you don't have to remember all the commands etc. This guide was mainly designed to show you how to connect to a wireless network one-off.

Revision #2
Created 4 October 2021 19:19:10 by Marek
Updated 4 October 2021 22:36:57 by Marek