Connecting Intel Galileo Gen2 to eduroam

Wi-Fi

Enabling and disabling wifi

To check if wifi is enabled you can run `connmanctl technologies` and check for the line that says `Powered: True/False`. To power the wifi on you can run `connmanctl enable wifi` or if you need to disable it you can run `connmanctl disable wifi`. Other ways to enable wifi could include using the `Fn` keys on the laptop to turn it on or running `ip link set <interface> up`.

Connecting to an open access point

The commands in this section show how to run `connmanctl` in command mode.

To scan the network `connmanctl` accepts simple names called *technologies*. To scan for nearby Wi-Fi networks:

```
$ connmanctl scan wifi
```

To list the available networks found after a scan run (example output):

```
$ connmanctl services
```

```
*AO MyNetwork               wifi_dc85de828967_68756773616d_managed_psk
    OtherNET                wifi_dc85de828967_38303944616e69656c73_managed_psk
    AnotherOne              wifi_dc85de828967_3257495245363836_managed_wep
    FourthNetwork           wifi_dc85de828967_4d7572706879_managed_wep
    AnOpenNetwork           wifi_dc85de828967_4d6568657272696e_managed_none
```

To connect to an open network, use the second field beginning with `wifi_`:

```
$ connmanctl connect wifi_dc85de828967_4d6568657272696e_managed_none
```

Tip: Network names can be tab-completed.

You should now be connected to the network. Check using `ip addr` or `connmanctl state`.

Connecting to a protected access point

For protected access points you will need to provide some information to the ConnMan daemon, at the very least a password or a passphrase.

The commands in this section show how to run `connmanctl` in interactive mode, it is required for running the `agent` command. To start interactive mode simply type:

```
$ connmanctl
```

You then proceed almost as above, first scan for any Wi-Fi *technologies*:

```
connmanctl> scan wifi
```

To list services:

```
connmanctl> services
```

Now you need to register the agent to handle user requests. The command is:

```
connmanctl> agent on
```

You now need to connect to one of the protected services. To do this easily, just use tab completion for the wifi_ service. If you were connecting to OtherNET in the example above you would type:

```
connmanctl> connect wifi_dc85de828967_38303944616e69656c73_managed_psk
```

The agent will then ask you to provide any information the daemon needs to complete the connection. The information requested will vary depending on the type of network you are connecting to. The agent will also print additional data about the information it needs as shown in the example below.

```
Agent RequestInput wifi_dc85de828967_38303944616e69656c73_managed_psk
  Passphrase = [ Type=psk, Requirement=mandatory ]
  Passphrase?
```

Provide the information requested, in this example the passphrase, and then type:

```
connmanctl> quit
```

If the information you provided is correct you should now be connected to the protected access point.

Connecting to Eduroam

- Navigate to `/var/lib/connman` directory. If it does not exist create `/var/lib/connman` directory using 'mkdir' and cd to `/var/lib/connman` directory.
- Create a 'eduroam.config' file using 'vi' text editor.

  :~# **vi eduroam.config**
- Copy paste the content provided below and change the username and password.

  Note : Please be careful with the eduroam.config file because the password which you are typing is visible and the file can be opened and viewed later.

```
[global]
Name=eduroam
[service_peap]
Type=wifi
Name=eduroam
Security Type=WPA2-Enterprise
Encryption Type=AES(CCMP)
EAP=peap
Phase2=MSCHAPV2
Identity=username@student.uml.edu
Passphrase=password
```

- Save the file and **restart** `connman` to connect to the new network.

:~# **systemctl restart connman**

- Galileo will connect to the eduroam network.
- To check if it has been connected to the eduroam, enter the command ‘ip a’ and check if the wireless interface has been assigned with any ip address. If not assigned, then the system is not connected to eduroam.
- You can also check by using the ping command.

  :~# ping www.google.com

For more information please refer :

1) https://software.intel.com/en-us/node/519955