1) create from the web interface dashboard 3 A3 nodes, with their profiles (traffic and performances)
2) $ ssh rbruzzes@grenoble.iot-lab.info
3) `iotlab-auth -u rbruzzes`
4) `iotlab-experiment submit -n riot_a8 -d 120 -l 3,archi=a8:at86rf231+site=grenoble`
5)
6) $ `mkdir -p ~/A8/riot`
7) $ `cd ~/A8/riot`
8) `rm -rf RIOT`
9) ~~$ `git clone https://github.com/RIOT-OS/RIOT.git -b 2020.10-branch`~~
10) `git clone https://github.com/RIOT-OS/RIOT.git -b 2021.01-branch`
11) $ `cd RIOT`
12) $ `source /opt/riot.source`
13) $ `make ETHOS_BAUDRATE=500000 DEFAULT_CHANNEL=19 BOARD=iotlab-a8-m3 -C examples/gnrc_border_router clean all`
14) $ `cp examples/gnrc_border_router/bin/iotlab-a8-m3/gnrc_border_router.elf ~/A8/`
15) $ `make DEFAULT_CHANNEL=19 BOARD=iotlab-a8-m3 -C examples/gnrc_networking clean all`
16) $ `cp examples/gnrc_networking/bin/iotlab-a8-m3/gnrc_networking.elf ~/A8/`
17) $ ssh root@node-a8-110
18) $ ~~`iotlab_flash A8/gnrc_border_router.elf`~~

19) `flash_a8_m3 A8/gnrc_border_router.elf`
20) $ `cd ~/A8/riot/RIOT/dist/tools/uhcpd`
21) $ `make clean all`
22) `$ cd ../ethos`
23) `$ make clean all`
24) `printenv`
25) `Take inet6_prefix 2001:660:5307:306e`
26) reset_a8_m3
27) `$` *ip -6 r (see if some tap or address is busy*

2001:660:5307:3000::/64 dev eth0 proto kernel metric 256
fe80::/64 dev eth0 proto kernel metric 256
ff00::/8 dev eth0 metric 256
default via 2001:660:5307:3000:ff:: dev eth0 metric 1024

28) $ `./start_network.sh /dev/ttyA8_M3 tap0 2001:660:5307:306e::1/64 500000`
29) `(If not prompt the shell then open a new terminal and reset logically the board` /usr/bin/reset_a8_m3)
30)

Open now another terminal and issue the following commands :

1) $ ssh rbruzzes@grenoble.iot-lab.info
2) $ `ssh root@node-a8-112`
3) $ vim config.conf
4) Type I to switch to insert mode
5) Paste the code (hold shift and right click)

```
# add some debug output
```

```
trace_output protocol

# listen for MQTT-SN traffic on UDP port 1885
listener 1885 INADDR_ANY mqtts
  ipv6 true

# listen to MQTT connections on tcp port 1886
listener 1886 INADDR_ANY
  ipv6 true
```

6) The ESC and :wq
7) $ ip -6 -o addr show eth0

```
2: eth0    inet6 2001:660:5307:3000::70/64 scope global \
valid_lft forever preferred_lft forever
2: eth0    inet6 fe80::fadc:7aff:fe01:956e/64 scope link \
valid_lft forever preferred_lft forever
```

8) $ broker_mqtts config.conf
9) (sudo service mosquitto stop) this is used if sopped

Open now another terminal and issue the following commands

1) $ ssh rbruzzes@grenoble.iot-lab.info
2) $ source /opt/riot.source
3) $ cd ~/A8/riot/RIOT
4) $ make BOARD=iotlab-a8-m3 -C examples/emcute_mqttsn
5) $ ssh root@node-a8-102
6) $ flash_a8_m3 A8/riot/RIOT/examples/emcute_mqttsn/bin/iotlab-a8-m3/emcute_mqttsn.elf (this must be done once log into the node with ssh in root directory and not in the a8 directory ! if this does not work!! Use the following instead)
7) ~~$ iotlab-node --flash emcute_mqttsn.elf~~

8) ~~$ iotlab-ssh flash-m3 A8/riot/RIOT/examples/emcute_mqttsn/bin/iotlab-a8-m3/emcute_mqttsn.elf -l grenoble,a8,113~~

9) ~~$ ssh root@node-a8-113~~

10) reset_a8_m3

11) **miniterm.py /dev/ttyA8_M3 500000**

12) oppure

13) $ miniterm.py /dev/ttyA8_M3 500000

14) > con 2001:660:3207:400::66 1885

15) con 2001:660:5307:3000::70 1885

16) con 2001:660:5307:306e::1 1885

17) > sub test/riot

18)

There should appear the shell prompt but it does not work.