

- 1) create from the web interface dashboard 3 A3 nodes, with their profiles (traffic and performances)
- 2) \$ ssh bruzzese@saclay.iot-lab.info
- 3) iotlab-auth -u bruzzese
- 4) iotlab-experiment submit -n riot_a8 -d 120 -l 3,archi=a8:at86rf231+site=saclay
- 5)
- 6) \$ mkdir -p ~/A8/riot
- 7) \$ cd ~/A8/riot
- 8) ~~\$ git clone https://github.com/RIOT-OS/RIOT.git -b 2020.10-branch~~
- 9) git clone https://github.com/RIOT-OS/RIOT.git -b 2021.01-branch
- 10) \$ cd RIOT
- 11) \$ source /opt/riot.source
- 12) \$ make ETHOS_BAUDRATE=500000 DEFAULT_CHANNEL=19 BOARD=iotlab-a8-m3 -C examples/gnrc_border_router clean all
- 13) \$ cp examples/gnrc_border_router/bin/iotlab-a8-m3/gnrc_border_router.elf ~/A8/
- 14) \$ make DEFAULT_CHANNEL=19 BOARD=iotlab-a8-m3 -C examples/gnrc_networking clean all
- 15) \$ cp examples/gnrc_networking/bin/iotlab-a8-m3/gnrc_networking.elf ~/A8/
- 16) \$ ssh root@node-a8-228
- 17) \$ ~~iotlab_flash A8/gnrc_border_router.elf~~
- 18) flash_a8_m3 A8/gnrc_border_router.elf
- 19) \$ cd ~/A8/riot/RIOT/dist/tools/uhcpd

- 20) `$ make clean all`
- 21) `$ cd ../ethos`
- 22) `$ make clean all`
- 23) `printenv`
- 24) Take `inet6_prefix 2001:0660:3207:471`
- 25) `reset_a8_m3`
- 26) `$ ip -6 r (see if some tap or address is busy`
- 27) `$./start_network.sh /dev/ttyA8_M3 tap0`
`2001:0660:3207:471::1/64 500000`
- 28) (If not prompt the shell then open a new terminal and
reset logically the board `/usr/bin/reset_a8_m3`)
- 29)

Open now another terminal and issue the following commands :

- 1) `$ ssh bruzzese@saclay.iot-lab.info`
- 2) `$ ssh root@node-a8-227`
- 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 mqttts
    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`
- 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 bruzzese@saclay.iot-lab.info`
- 2) `$ source /opt/riot.source`
- 3) `$ cd ~/A8/riot/RIOT`
- 4) `$ make BOARD=iotlab-a8-m3 -C examples/emcute_mqttsn`
- 5) `flash_a8_m3`
`A8/riot/RIOT/examples/emcute_mqttsn/bin/iotlab-a8-m3/emcute_mqttsn.elf (this does not work!! Use the following instead)`
- 6) `$ iotlab-ssh flash-m3`
`A8/riot/RIOT/examples/emcute_mqttsn/bin/iotlab-a8-m3/emcute_mqttsn.elf -l saclay,a8,226`
- 7) `$ ssh root@node-a8-226`
- 8) `reset_a8_m3`
- 9) `$ miniterm.py /dev/ttyA8_M3 500000 -e`

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