Running comms devices on Dance Mode - Evaluation
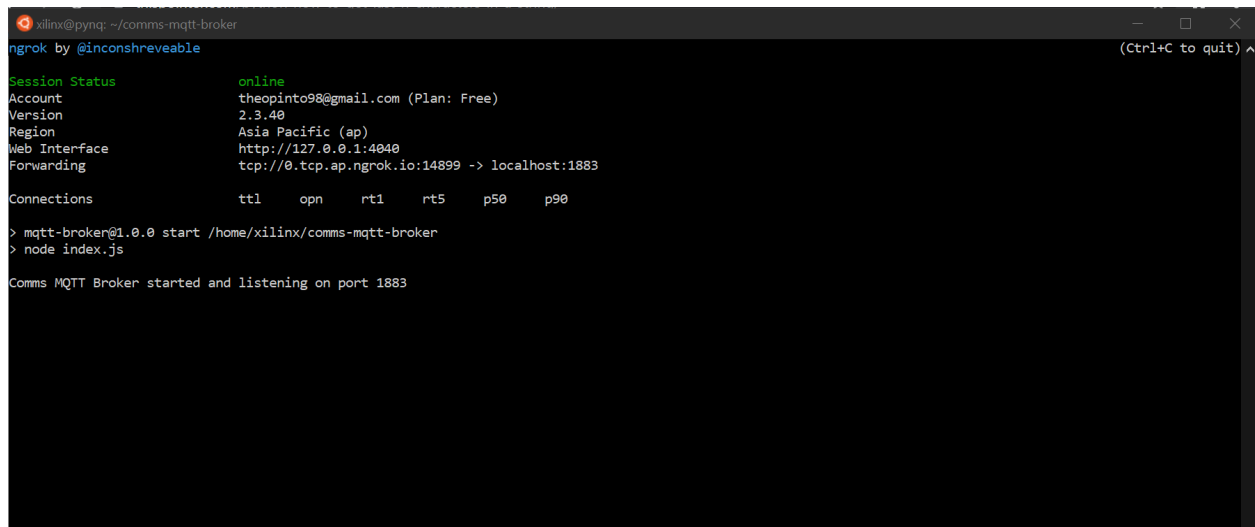
1) Ensure both beetles on each dancer are plugged to power
2) One person to run a terminal (Terminal 1) to run mqtt broker
3) One person to run a terminal (Terminal 2) to run ultra96 operations
4) Each dancer to run a terminal (Terminal 3/4/5) to run beetle-laptop operations
5) One person to run a terminal (Terminal 6) to run dashboard operations

---

Terminal 1 (MQTT Broker)
1) ssh sunfire_username@sunfire.comp.nus.edu.sg
2) ssh xilinx@137.132.86.241
    - password: xilinx
3) cd comms-mqtt-broker
4) ./start-server.sh
5) When the broker has printed that it is listening on port 1883, copy the port number at the end of the tcp link and release it to the rest of the group
    - Eg. Forwarding   tcp://0.tcp.ap.ngrok.io:14899
    - Port number is 14899

Terminal 2a (Ultra96 Demo eval server)
- ssh sunfire_username@sunfire.comp.nus.edu.sg
- ssh xilinx@137.132.86.241
    - password: xilinx
- cd eval_server_run
- Python3 eval_server.py 127.0.0.1 8000 14
- If OSError happens and this program ends unexpectedly, replace 8000 w another number
- After the eval server says it is waiting for a connection, immediately run terminal 2b

Terminal 2b (Ultra96)

6) ssh sunfire_username@sunfire.comp.nus.edu.sg
7) ssh xilinx@137.132.86.241
   - password: xilinx
8) cd ultra96-comms-scripts
9) Wait for the person running the mqtt broker to obtain the port number
10) sudo python3 ops_ultra96.py -i server_ip_address -p tcp_port

   server_ip_address: IP address of the evaluation server
   -   127.0.0.1

   tcp_port: Number obtained from the person running the mqtt broker
   Example (using localhost as evaluation server):
   -   sudo python3 ops_ultra96.py -i 127.0.0.1 -ip 8000 -p 14899

11) Once the initial setup has been done, inform dancers to run laptop operations script on their respective laptops.
12) Demo mode: Inform TA/Prof of the password to be input to encrypt/decrypt sent data
13) Test(run) mode: after the scripts load on this terminal, type the following passphrase
   -   Password for encryption: CG4002DEMOGRP_14

● Test run: 1st move may be wonky so its okay if the inference is inaccurate for this one

Terminal 3/4/5 (Laptop)
1) cd laptop-comms-scripts
2) Wait for the signal from the person running the ultra96 scripts to allow ultra96 to be ready to listen to each laptop as well as the mqtt broker to obtain the port number
3) python3 ops_laptop.py -dp dancer_initial_position -p tcp_port
   - dancer_initial_position: Initial position of the dancer
   - tcp_port: Number obtained from the person running the mqtt broker

   Example:
   - python3 ops_laptop.py -dp 1 - p 14899

4) When the dance move is displayed on the GUI of the evaluation server, move to the position and then perform the dance move

Terminal 6 (Dashboard)
1) TBC