

Launch of a race

First of all, make sure that the motors of your robot are properly connected to port A for the right engine and B for the left engine. And also make sure that the color sensor is connected to port 3 and is pointing to the ground without pointing to a red color during a race.

After installing an MQTT server (see doc «MQTT_mosquitto_paho»), launch the server in a terminal with the command: `mosquitto -c mosquitto2.conf -v` (mosquitto2.conf is located in the root folder Capstone of the git « transfo-protocoles »).

Then, after turning on the EV3, launch the "RaceControllerSwing" and select the number of players who make the race (the race can be made from 1 to 4 players). Then run the "RaceControllerSwing" connection and run the VehicleController program on the robot. (You just have to change the content of the "topicWithServer" by Car1, Car2, Car3 or Car4. This topic corresponds to the channel between the robot and the raceControllerSwing so for each vehicle of the race, you have to put one of these 4 topic and put it only once. And don't forget to put the address of the MQTT server at line 68 of the VehicleController program.

Before launching the app, please connect your smartphone to your ev3 via Bluetooth (see how to pair your smartphone to your ev3 via Bluetooth on <https://ev3.univ-nantes.fr/connexions/>) Then launch the RemoteVehicle remote control on your smartphone (to know how to put the remote control on your mobile phone, see the document «AndroidStudio - Run app on mobile device»).

On robots, when the message "Socket is ..." is displayed, put the MAC address of your robot on the appropriate area of RemoteVehicle. The MAC address can be found in the Bluetooth tab -> Info -> Mac address of the brick ev3.

On the RaceControllerSwing, when all the vehicles are ready, start the race and steer your vehicle with your smartphone. Normally, you could advance your vehicle only when the remote shows "start" but due to the latency of the bluetooth, you could advance it before even if in the code, it's set that the vehicle can be advance only when the "start" is received. (but play the game)