

Controlling the robot via MQTT and Python

- [Reading joint states with an MQTT client from a Mosquitto MQTT broker !\[\]\(1207edb9a08751d3d55970560645ed23_img.jpg\)](#)

Reading joint states with an MQTT client from a Mosquitto MQTT broker

Install an MQTT Client

1. Install a mosquitto  client for example [MQTTX](#)

Connect to the WIFI

Connect to the same WI-FI the MQTT-Broker is in.

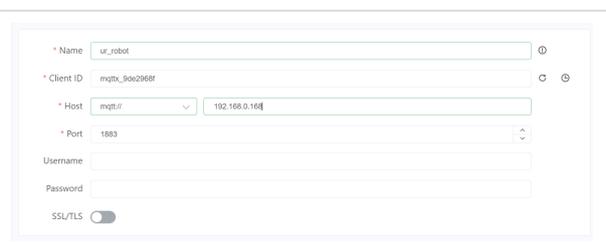
In our case the WI-FI's name is '**ROOM_240**'

In our case the device running the broker is an RaspberryPi  with the IP **192.168.0.168**

Subscribe to a topic via your MQTT client

1. Setup a new connection by clicking  :

Setup a new connection to a "broker" in our case this is the Raspberry Pi  connected to the Robot. Provide a name and leave the username and password fields blank.



The screenshot shows a form for setting up a new MQTT connection. The fields are as follows:

- Name:
- Client ID:
- Host:
- Port:
- Username:
- Password:
- SSL/TLS:

Click on "connect" and you'll see the joint positions coming in and constantly updated!

The screenshot shows a ROS 2 interface with a sidebar on the left containing navigation icons. The main window is titled "robot" and has a "Connections" tab. A connection to "robot@192.168.0.168..." is listed. Below the connection list, there are fields for "Name" (robot), "Client ID" (mox_78608e2), "Username", "Password", "Keep Alive" (60), and "Clean Start" (true). A green "Connect" button is visible. Below the connection fields, there is a "New Subscription" button and a list of subscriptions, including "ur_robot/joint_pos... QoS 0". The main content area shows a message received on the "ur_robot/joint_pos... QoS 0" topic. The message is in JSON format and contains joint positions for six joints. The timestamp is 2023-10-20 18:25:34.961. Below the message, there are dropdown menus for "JSON", "QoS 0", "Retain", and "Meta". A "Topic" field shows the message content: {"msg": "hello"}. A green checkmark is visible in the bottom right corner.

```
["joint1": 0.8998223638534546,
"joint2": -2.2567044697203578,
"joint3": 0.9117935339557093,
"joint4": -1.4395540717416399,
"joint5": 1.040284352178955,
"joint6": 10.51977480251031]
```

```
{
  "msg": "hello"
}
```