

In this activity, you will explore:

- Pub/Sub messaging
- MQTT Broker
- MQTT Client

Software required:

- MQTT.fx (<https://www.softblade.de/>)
- Mosquitto (<https://mosquitto.org/>)
- Node.JS (<https://nodejs.org/en>)
- Node-Red (<https://nodered.org/>)

Installation Steps

Install all the software's listed above.

1. MQTT.fx (<https://www.emqx.com/en/blog/connecting-to-emqx-cloud-with-mqttfx#mqtt-fx-installation>)
2. Mosquitto (<https://team-ethernet.github.io/guides/How%20to%20install%20and%20use%20Mosquitto%20for%20Windows.pdf>)

Activity

Repeat the steps given in the lecture slides.

Exercises:

1. Use the ESP32 controller to Pub/Sub on Node-Red. The subscribe message should be printed on OLED or terminal. You can implement in WOKWI.
2. In WOKWI or through hardware implementation, implement a use case where a number of ESP32's send different data to Node-Red. Now use the contributed Node-red machine learning library for classification (<https://flows.nodered.org/node/node-red-contrib-machine-learning>)

Submit code and snapshot of your implementations.