MQTT

MQTT stands for Message Queuing Telemetry Transport. It is a messaging protocol that works on a publish and subscribe system. It is secure, lightweight and flexible system.

It makes communication between multiple devices easier and can be used on low power devices. It can add new devices easily without touching the existing infrastructure, since they only need to communicate with the broker. This makes it popular in IoT applications.

It is used to control outputs by sending messages. These messages are published on topics, which specifies where you want to publish the data. It uses ‘/ ‘as the delimiter. These messages are sent to a broker, which reads the message and publishes it to the subscribed clients.

Implementing using python

The client is imported using the library **paho.mqtt.client** (as mqtt).

An existing broker such as mosquitto can be used to send the messages **broker= “test.mosquitto.org”**

A client instance has to be created **client=mqtt.Client(“CL”)**

The client can be connected to the broker using **client.connect(broker)** and disconnected using **client.disconnect()**.

The message is published by the client using **client.publish(“topic”,”message”)** and can be subscribed to using **client.subscribe(“topic”)**.

Callback functions have to be used to process the message, such as function **on\_message()** which will print the message. This is attached to the client using **client.on\_message=on\_message**.

We also have to start a loop to check for callback messages using **client.loop\_start()** and end it with **loop.stop()**.