MQTT notes

- PubSub protocol
- https://www.youtube.com/watch?v=J5FJn-y4buM

Designed for constrained devices and low-bandwidth, high-latency, unreliable networks.

Simple | Light Weight | Publish-Subscribe | Reliable Delivery

Key Concepts

01 Publish-Subscribe

02 Client & Server

03 Topic

04 QoS

05 Session

QoS 0

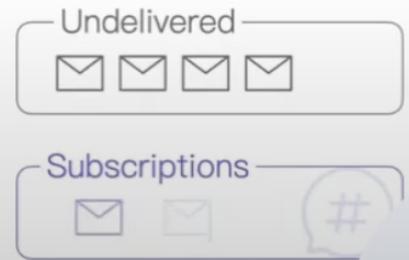Sensor Reading

QoS 1

0→1 Status Update
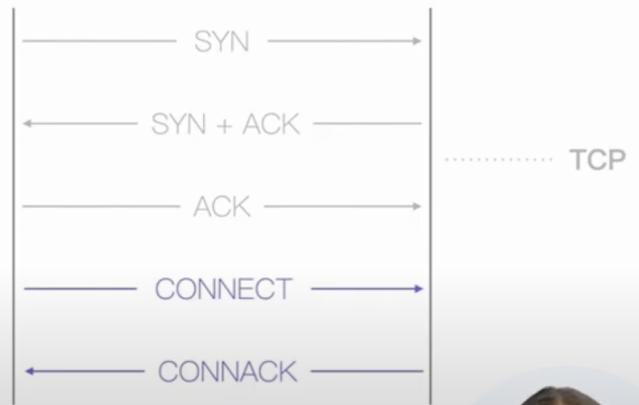
QoS 2

Control Command

Session

Session in Client

QoS 1   QoS 2

Undelivered

Session in Server

Undelivered

Subscriptions

#

Client   Server

STEP 1

Transport Protocol

SYN →

← SYN + ACK

ACK →

.... TCP

STEP 2

MQTT

CONNECT →

← CONNACK

MQTT Clients   MQTT Server   MQTT Clients

Publish ···   ·· Subscribe ··

Let the topic convey the information

home / bedroom / d2ef08 / light   home / study / 9a311e / light   home / livingroom / ce20fe / light

command / … / light   status / … / light   telemetry / … / temperature

- EMQX ports

Type	Bind
ssl	0.0.0.0:8883
tcp	0.0.0.0:1883
ws	0.0.0.0:8083
wss	0.0.0.0:8084

- Mqtt template to write to Influxdb

```
{
    "devices/+/messages": {
        "measurement": "devices",
        "tags": {
            "client_id": "$client_id"
        },
        "fields": {
            "temperature": ["$payload", "temperature"],
            "humidity": ["$payload", "humidity"]
        },
        "timestamp": "$timestamp"
    }
}
```

- Influxdb config

Set up InfluxDB through the UI

1. With InfluxDB running, visit http://localhost:8086.

2. Click **Get Started**

Set up your initial user

1. Enter a **Username** for your initial user.

2. Enter a **Password** and **Confirm Password** for your user.

3. Enter your initial **Organization Name**.

4. Enter your initial **Bucket Name**.

5. Click **Continue**.

6. Copy the provided **operator API token** and store it for safe keeping.

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