

# Messaging Queue Telemetry Transport (MQTT)

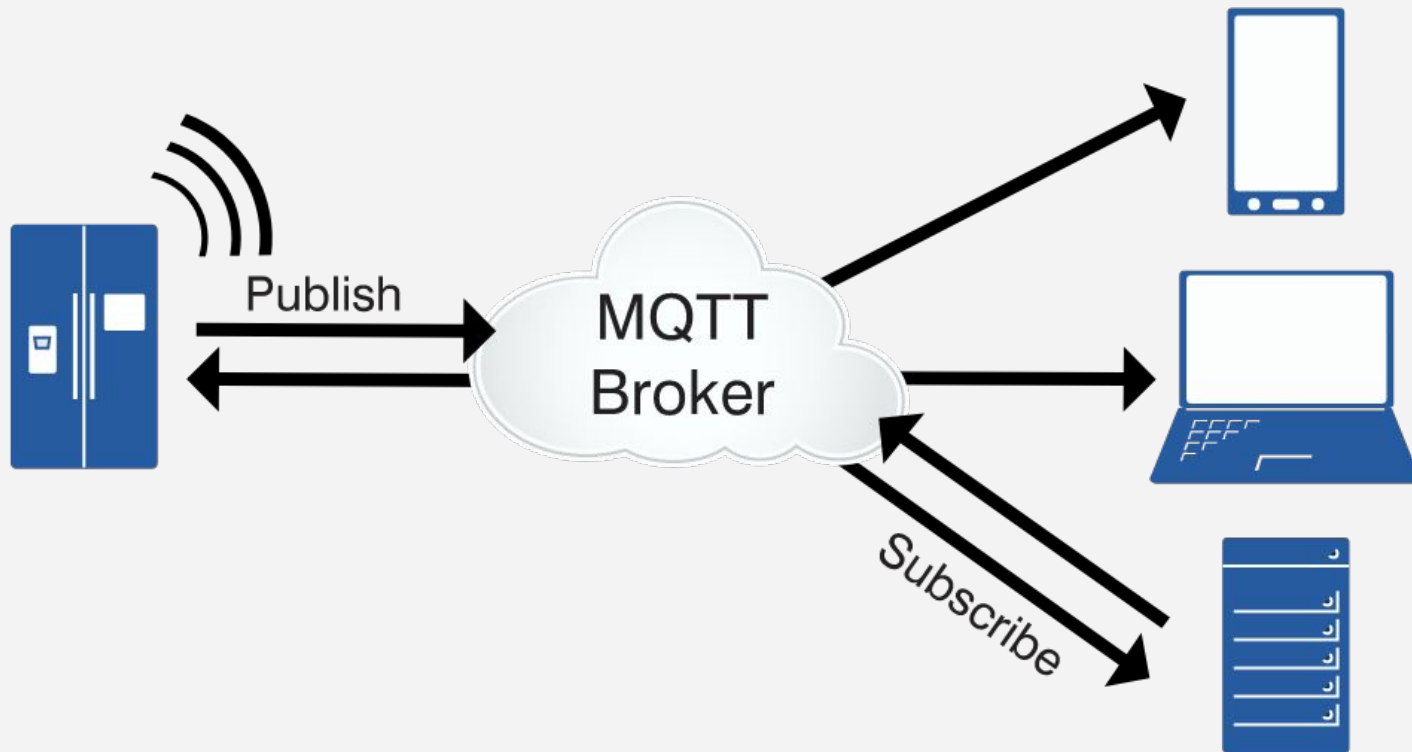
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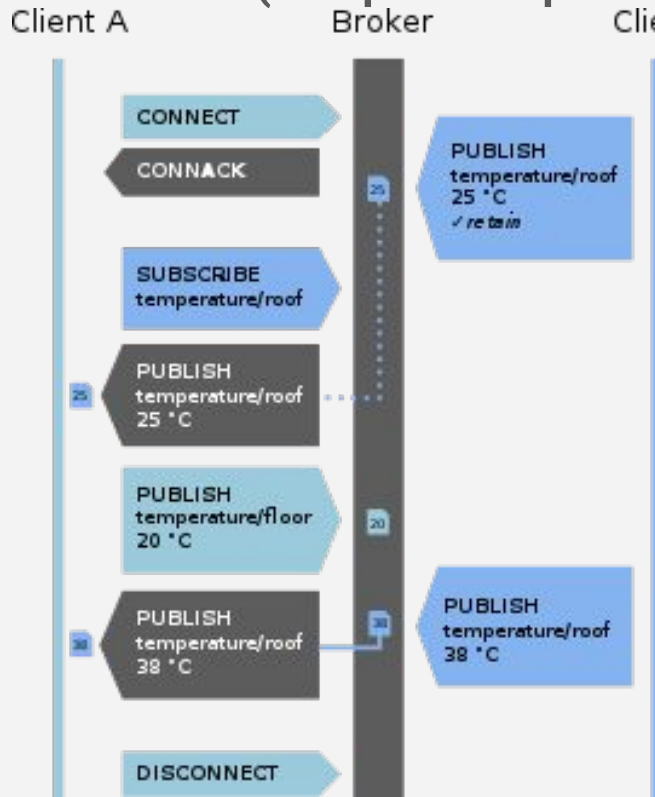
# What is it?

- Publisher Subscriber System



# Why use it?

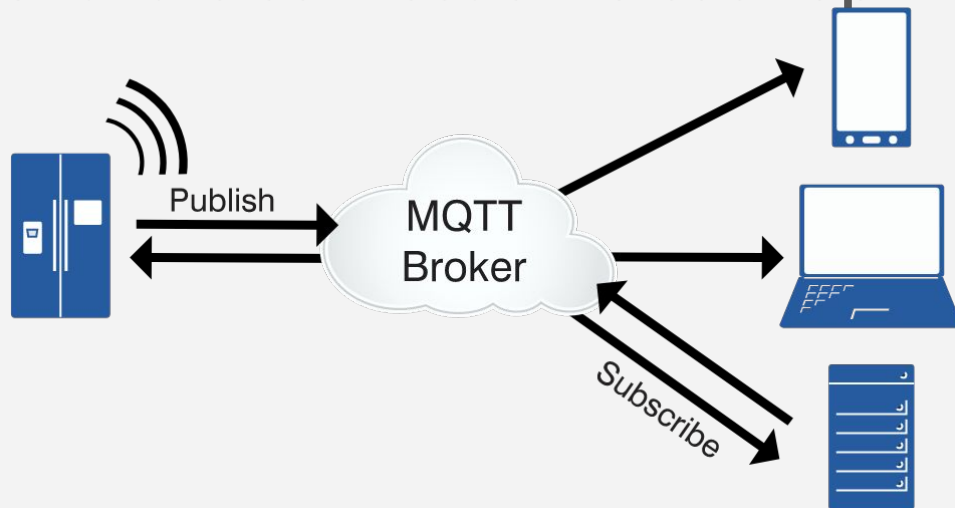
- KISS (Keep it Simple Stupid)



- Extremely Lightweight Publisher/Subscriber messaging Transport
- Usefully for sensor monitors like when my LG smart fridge tells me that I ran out of filter and doesn't stop spamming me every 5 minutes

# Why MQTT?

- MQTT client has a permanently open TCP connection to broker
- If gone then the messages are buffered on to a stack until the connection is back up



# REVIEW ON ROSS

## Nodes

- A process that *performs* actions
  - Makes the robot do stuff
- In reality, just an executable file within a ROS package

`/rosout`

`/turtlesim`

# REVIEW ON ROSS

## Topics

- Pathways over which nodes communicate with one another
- In reality, just a file or a series of files

# REVIEW ON ROSS

## Publish/Subscribe Pattern

- NODES read from and write to TOPICS
- Many nodes can read from many topics at once, all stored within the ROS environment



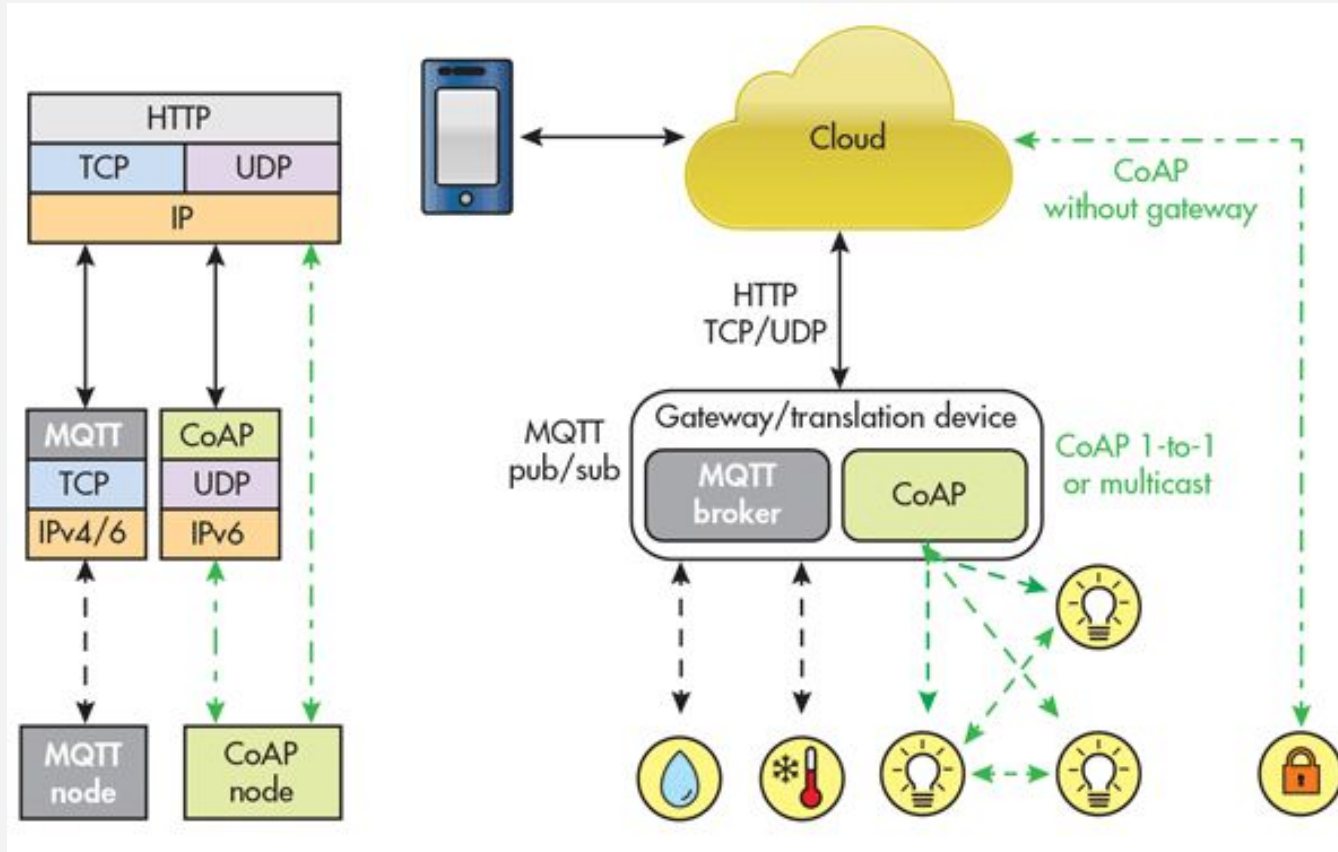
# Topics

- A topic is a simple string that can have more hierarchy levels, which are separated by a slash
- *Specific topic: house/living-room/temperature*
- *Single Wild Card: house/+ /temperature*
  - any topic with an arbitrary value in the place of living room, for example *house/kitchen/temperature*
- *Multiple Wild Card: house/#*
  - subscribing to all topics beginning with *house*.





# Practice Time!



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