

Project 2 : MQTT Broker

The goal of this second programming project is to create a MQTT Broker program capable of breaking MQTT messages. We want the program to be able to handle subscribe and unsubscribe requests, as well as handle clients that publish information to the subscribed topics.

In order to produce a viable program, using Java to be coherent with the first project, we first create a TCP server to be able to handle client connections. As soon as a MQTT Client connects to the port of the server, a thread is created to listen to client input and also be able to send responses. Every time that a client sends a message, our MQTT broker is called to process the messages and reply when necessary. Depending on the message sent, different methods are called and used to treat them and parse the data in order to manage the different functionalities that the MQTT Broker should have : CONNECT, PING, SUBSCRIBE, UNSUBSCRIBE and DISCONNECT. Moreover, we also implement the use of wildcards and retain functionality in the broker to handle them.

The server started, using MQTTeX to create multiple clients and Wireshark, we can make the clients process the different actions and check on the MQTT GUI or terminal and Wireshark that everything acts correctly.