CoAP - MQTT Homework

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Question 1	What is the difference between the message with MID: 3978 and the one with MID: 22636?
Action	coap.mid == 3978 coap.mid == 22636
Answer	message with id==3978 has (con and ack) that is confirmable. message with id==22636 has (non) that means non-confirmable.

Question 2	Does the client receive the response of message No.6949?
Action	coap.mid == 28357 && coap.token == 6fb63c18
Answer	First, we find the id of message also the token. After that, if we filter based on the id and the token, it has both con and ack parameters. this means that message received.

Question 3	How many replies of type connectable and result code “Content” are received by the server “localhost”?
Action	ip.dst==127.0.0.1 && coap.type==2 && coap.code==69
Answer	**8 replies. We submit coap.type==2 because we want ack not a message.**

Question 4	How many messages with the topic “factory/department/+” are published by a client with username: “jane”?
Action	mqtt.username=="jane" mqtt && tcp.port in {42821 40989 40005 50985}
Answer	**0 message. Jane send 4 messages from 4 different port and these ports are for jane but none of them are not equal with this topic.**

Question 5	How many clients connected to the broker “hivemq” have specified a will message?
Action	(dns.qry.name=="broker.hivemq.com") && (dns.flags.response==1) (ip.addr in {3.120.68.56 18.185.199.22}) && (mqtt.conflag.willflag==1)
Answer	**16. first of all we search the ip of domain in to dns, after we filter based on fined ip also filter the will messages.**

Question 6	How many publishes with QoS 1 do not receive the ACK?
Action	mqtt.msgtype==3 && mqtt.qos==1 mqtt.msgtype==4
Answer	**50. we filter the type==3 message and Qos==1 also subtract with ack messages.**

Question 7	How many last will messages with QoS set to 0 are delivered?
Action	mqtt.conflag.willflag==1 and mqtt.conflag.qos==0 mqtt.msg in {“put messages here”} mqtt.msg contains "error" and mqtt.qos == 0 mqtt.willmsg contains "error: tvmgvjml"
Answer	**0. we filter messages that have will flag and Qos==0 and search one by one the content of will messages to understand published from broker to client or nit and finally we find zero publish message.**

Question 8	**Are all the messages with QoS > 0 published by the client “4m3DWYzWr40pce6OaBQAfk” correctly delivered to the subscribers?**
Action	mqtt.clientid == 4m3DWYzWr40pce6OaBQAfk (ip.src == 10.0.2.15 && tcp.srcport == 58313) && mqtt (mqtt.msg == “msgPayload1*”) || (mqtt.msg == “msgPayload2*”)
Answer	**1 mesaage.** **From the result of first filter we find the port address, after that We can see four messages that only one of them has Qos > 0.** **Finally, we search the content of message and find that send from side of broker to client.**

Question 9	**What is the average message length of a connect msg using MQTTv5 protocol?** **Why messages have different size?**
Answer	**The MQTTv5 packet or message format consists of a 2-byte fixed header (always present) + Variable-header (not always present) + payload (not always present).**

Question 10	**Why there are not any REQ/RESP pings in the .pcap file?**
Answer	**Client should alive the connection and the duration of time alive is more than Wireshark capture that is 166 s, so we do not have any request.**