



POLITECNICO
MILANO 1863



IoT Challenge #1

Packet Sniffing

Home Challenge #1

- Download the **challenge2023_1.pcap** file [here](#) or from WeBeep
- Analyse the traffic with Wireshark or writing simple scripts (Python, C++)
- Answer the following 6 questions
(IGNORE MALFORMED PACKETS)

Questions (1-3)

1. How many CoAP GET requests are directed to non-existing resources in the local CoAP server? How many of these requests are of type Non confirmable? **(0.2 pts)**
2. How many CoAP DELETE requests directed to the "coap.me" server did not produce a successful result? How many of these are directed to the "/hello" resource? **(0.2 pts)**
3. How many different MQTT clients subscribe to the public broker mosquitto using single-level wildcards? How many of these clients **WOULD** receive a publish message issued to the topic "hospital/room2/area0" **(0.2 pts)**

Questions (4-6)

4. How many MQTT clients specify a last Will Message directed to a topic having as first level "university"? How many of these Will Messages are sent from the broker to the subscribers? **(0.2 pts)**
5. How many Publish messages with QoS = 1 are received by the MQTT clients connected to the HiveMQ broker with MQTT version 5? **(0.1 pts)**
6. How many MQTT-SN (port 1885) publish messages sent after the hour 3.16PM (Milan Time) are directed to topic 9? Are these messages handled by the server? **(0.1 pts)**

Challenge deliverable

What to deliver:

- A **PDF** containing **motivated responses** with all filters used and code (if used)
- Specify your **names + person codes** in the pdf

How?

- Upload the .pdf file on the **folder #1** on WeBeep “Consegne” folder

The PDF should be named as follows:

2-teams: <personcode1>_<personcode2>.pdf

Single: <person_code>.pdf

E.g. 10692911.pdf or 10692911_10692912.pdf

PLEASE NOTE

1. Files without name/personcode or in a weird format won't be corrected (=0 points)

2. Always highlight your answer. The answer **should be clear and unique!**

Example:

Answers like this:

“If then the answer is 4, but if instead then answer is 5”

Will get 0 points. **If you have doubts on questions ask before submitting**

3. Try to produce **small but effective answers**, write only useful things and if required upload images taken e.g. from wireshark. Final answers should be written as text. (not like, “see image for the answer”)

For two-people teams:

- Choose your team leader and name the file as:
`<leader_personcode>_<other_personcode>.pdf`
- **Only the teamleader** should upload the challenge in WeBeep
Do not upload the same challenge twice
- *Can I take the challenges with the other class students (Prof. Cesana)?*
YES, but only the team leader should upload the challenge in WeBeep

Delivery Deadline

- **STRICT Deadline:**
April 8, 2023 h 23.59
- Max 2 people
- Up to 1 point

Good Luck!