Politenico di Milano

Dipartimento Elettronica, Informazione e Bioingegneria

Homework IoT Project

Node-Red & ThingSpeak

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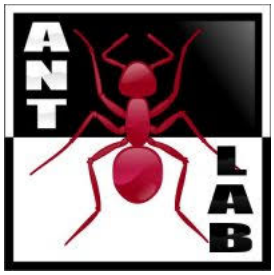

Abstract

This document contains the documentation for the forth activity for the course "Internet of Things", Academic Year 2019/2020.
This document has been also uploaded on the following GitHub repository: https://github.com/Framonti/IoT_Projects
The results were uploaded to the following TeamSpeak channel: https://thingspeak.com/channels/1063967

0.1 Node-Red Implementation

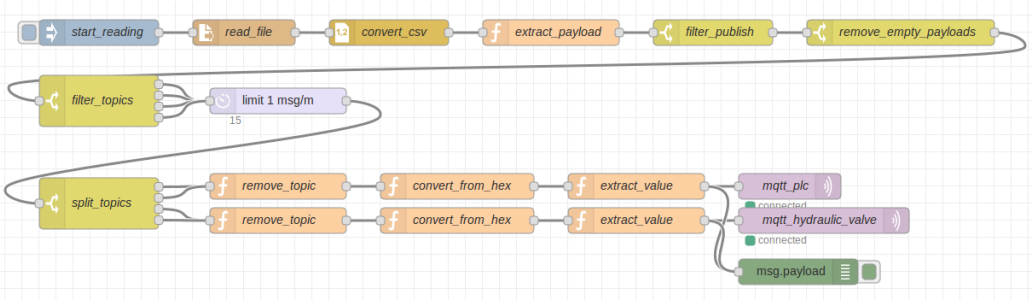

Figure 2: Red Node Implementation

In figure 2 we show our Red-Node implementation:

- The flow starts by injecting a value using the *start_reading* node, which triggers reading the csv file from disk and its conversion.
- Then, we extract the payload, keep only the publishes and remove some messages with empty payload.
- We keep only messages with the required topics[1], and then we impose a rate limiter of 1 message/minute.
- Then, we split the messages into two parallel flows, depending on the topics.
- We remove the topic, convert the actual payload from Hexadecimal and take the numerical value of the message.
- We send a MQTT message to the corresponding field in ThingSpeak.

[1] factory/department3/section3/plc doesn't have any message in the original .csv file