POLITECNICO
MILANO 1863

Node-RED
Evaluation Lab

Luca Mottola

luca.mottola@polimi.it

http://mottola.faculty.polimi.it

Sensor Data Monitor

- Sensed data originating from different sources is not necessarily coherent
- You are to implement a Node-RED flow that checks whether OpenWeatherMap and **`sensor.community`** produce coherent data
  - Compute the average temperature from MQTT over **`neslabpolimi/smartcity/milan`** over a sliding window of ten consecutive readings
  - Query OpenWeatherMap once every minute
  - Check whether the two differ for more than a value **K**
- If the data is not coherent, publish “"Temperature data is not coherent!” over **`neslabpolimi/nsds/eval24/alarm`**

Notes

- The value K comes from MQTT over **`neslabpolimi/nsds/eval24/k`**
  - It is periodically published there
  - It may change over time!
- You are to compute the average temperature also for incomplete windows
- You can use Celsius or Kelvin measurements
- Be careful with context: choose the appropriate scope!

Rules

- Complete the README.md file with
  - Your group identifier
    - From the group registration document
  - Name of each group member
  - A 200-word (max) description of the message flows in your solution
    - What node sends what message to what other node, when, …
  - List of extensions possibly used besides the ones seen during the regular labs
- Submit a single zip file with **only** the flow file and README.md
  - Remove everything that is not the project you want to submit
    - Other flows in different tabs, notes, …
    - Make sure to export **the whole flow!**
  - Name of the file: nodered-groupXX.zip
    - XX is the group identifier from the group registration document
  - Submit by the user corresponding to the contact email specified in the group registration document
- Failure to stick to these rules yields a detraction of one point