IT301µ From IoT Devices to the Cloud with the IBM Node-RED Tool

Coding 4: Dashboard with user interaction

This assessment evaluates the following competencies:

- *IT101 – Understand the event-driven programming model* *(+1)*
- *IT102 – Write and launch a program with the Node-RED tool* *(+1)*
- *IT301 – Design a dashboard showing the value of a hardware sensor* *(+1)*
- *IT121 – Define JavaScript functions blocks to transform data* *(+1)*

You may also be assessed on the following competencies:

- *IT501 – Debug and test a Node-RED program* *(+1)*

In this coding assessment, you have to create a dynamic dashboard whose content can be dynamically changed through buttons. Simulate several data coming from sensors with multiple `inject` and `random` nodes that will inject messages with a value measured from a sensor, regularly. Then, uses a `dropdown` widget to select the source of the data displayed on your dashboard. Only the measures from one sensor can be displayed at a time.

To succeed the assessment, you have to:

1. Choose and define the simulated data that you are creating.

2. Design a dashboard that can show any set of measures (you can have multiple widgets).

3. Add to your dashboard a `dropdown` to select which source to display on the dashboard.

4. Explain to the teacher how you designed your Node-RED program and your dashboard and show him/her how it is working.