

IT301 μ From IoT Devices to the Cloud with the IBM Node-RED Tool

Coding 2: Deploying an API server with Node-RED

This assessment evaluates the following competencies:

- *IT102 – Write and launch a program with the Node-RED tool* (+1)
- *WP501 – Define, launch and test an HTTP server* (+2)
- *WP502 – Test an HTTP API server with Postman* (+1)

You may also be assessed on the following competencies:

- *IT501 – Debug and test a Node-RED program* (+1)
- *IT301 – Design a dashboard showing the value of a hardware sensor* (+1)
- *IT121 – Define JavaScript functions blocks to transform data* (+2)

In this coding assessment, you have to deploy an API server with Node-RED and try it with the Postman tool, that you can download on the following website: <https://www.postman.com>. You have to define two routes:

- `POST /api/measures` appends the positive integer number that is in the body of the request into a list stored on the server.
- `GET /api/measures` returns the list of all the values stored on the server.

To succeed the assessment, you have to:

1. Think about how you will store the list of values on the server.
2. Write the described program and run it.
3. Test the program with the Postman tool.
4. Explain to the teacher how you designed your Node-RED program and what data is flowing between the nodes and show him/her how it is working.

You may extend your program by adding a simple webpage available on `/view` that displays the list of values stored on the server on an HTML webpage. Also, you may consider using the JSON format for the data used by the API server.