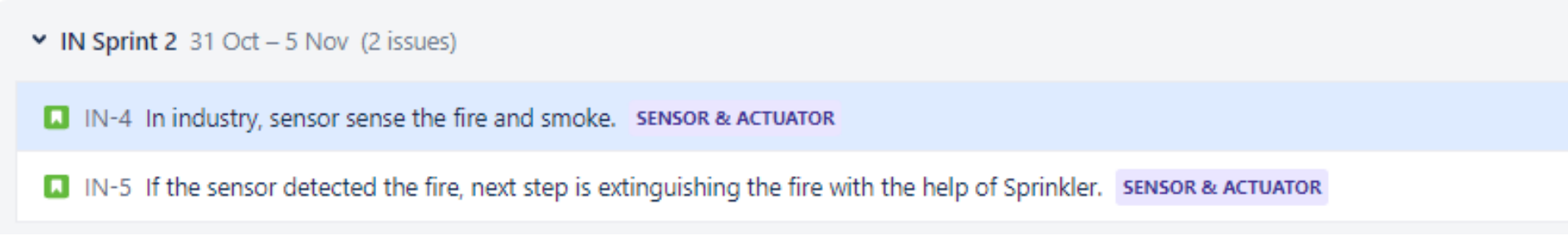
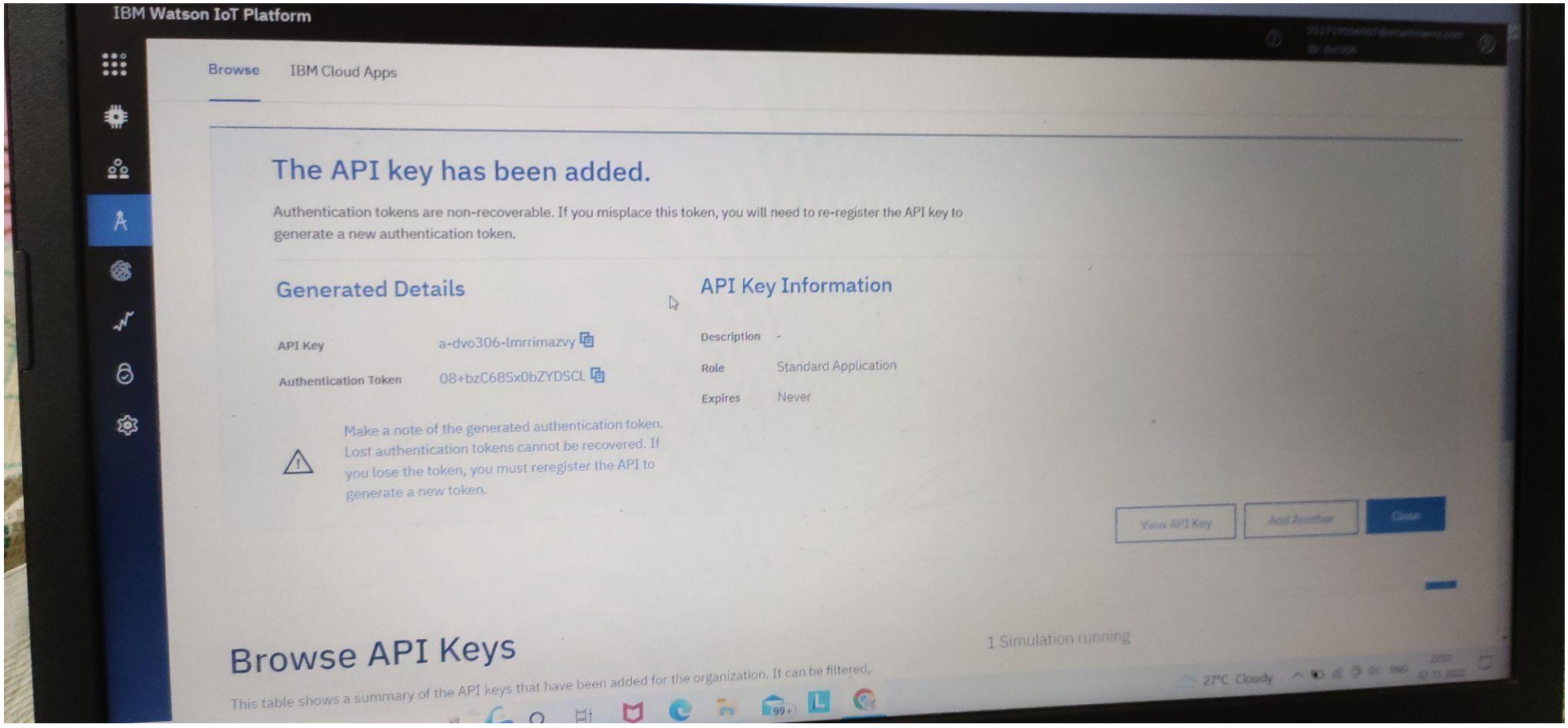
Project development phase

Sprint - 3

Date	17 November 2022
Team ID	PNT2022TMID26511
Project Name	Project - Industry-specific intelligent fire management system
Maximum Marks	20 marks



- Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IoT Platform.


IBM Watson IoT Platform
Browse
IBM Cloud Apps
The API key has been added.
Authentication tokens are non-recoverable. If you misplace this token, you will need to re-register the API key to generate a new authentication token.
Generated Details
API Key
a-dvo306-lmrrimazvy
Authentication Token
08+bzC68Sx0bZYDSCL
Make a note of the generated authentication token. Lost authentication tokens cannot be recovered. If you lose the token, you must reregister the API to generate a new token.
API Key Information
Description
-
Role
Standard Application
Expires
Never
View API Key
Add Another
Close
Browse API Keys
This table shows a summary of the API keys that have been added for the organization. It can be filtered.
1 Simulation running
27°C Cloudy

US-2 Create a Node-RED service

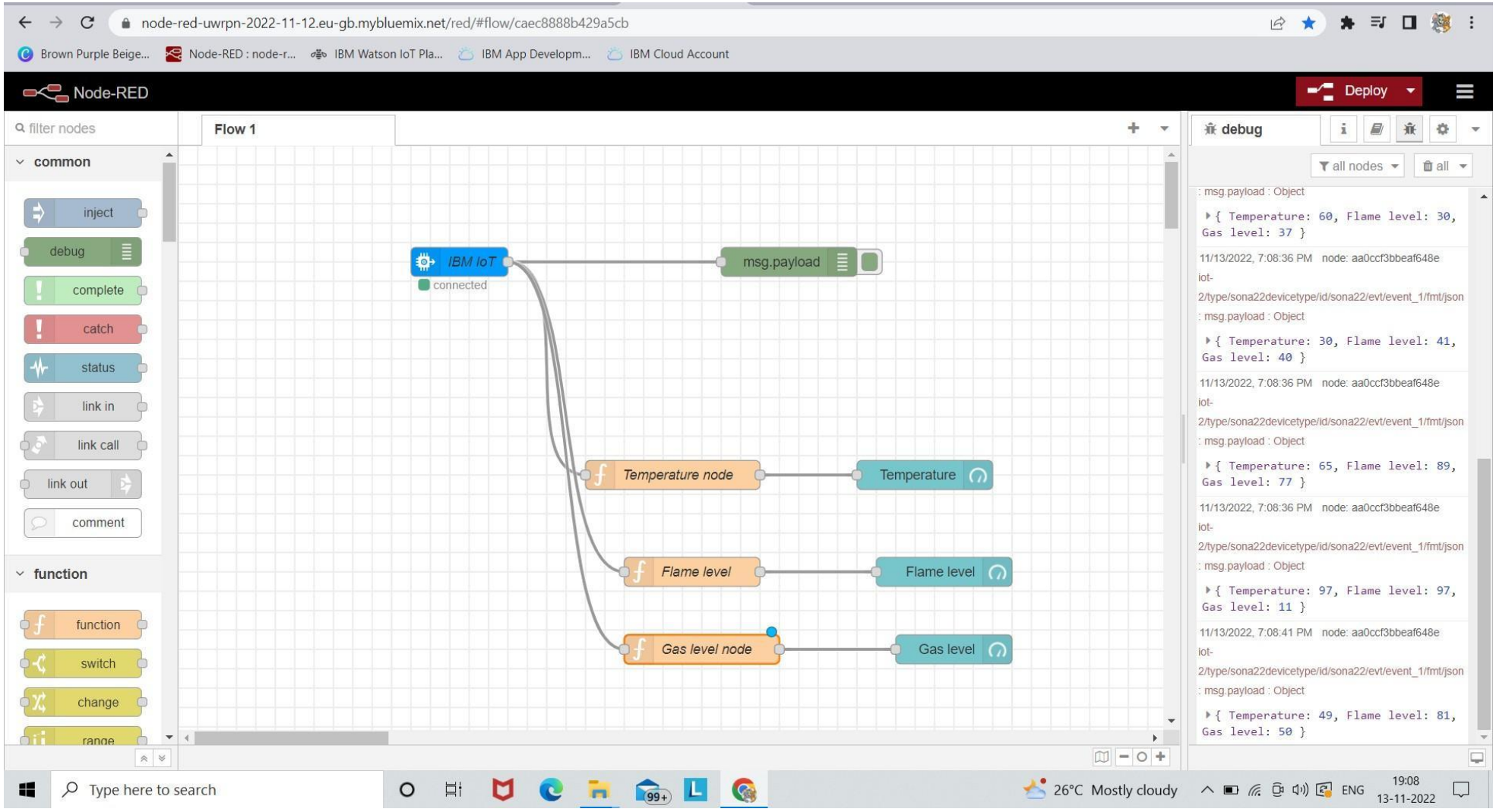
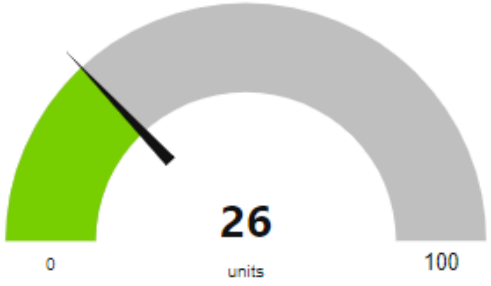


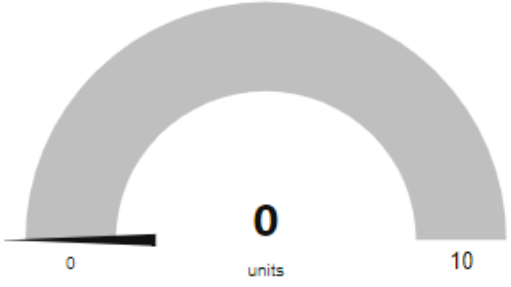
Fig1 - Monitoring the sensor values - Temperature, Flame Level, Gas Level. These values are randomly generated by IBM WATSON IOT PLATFORM.

Weather Monitoring

Flame level



Gas level



Temperature

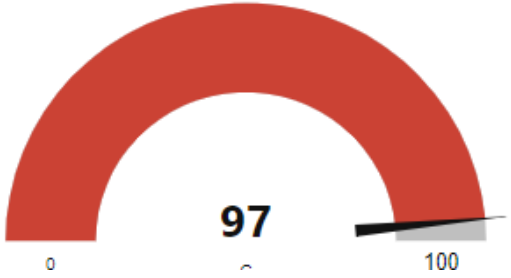


Fig 2 - Temperature, Flame Level, Gas Level values displayed in deploy tab in node-red

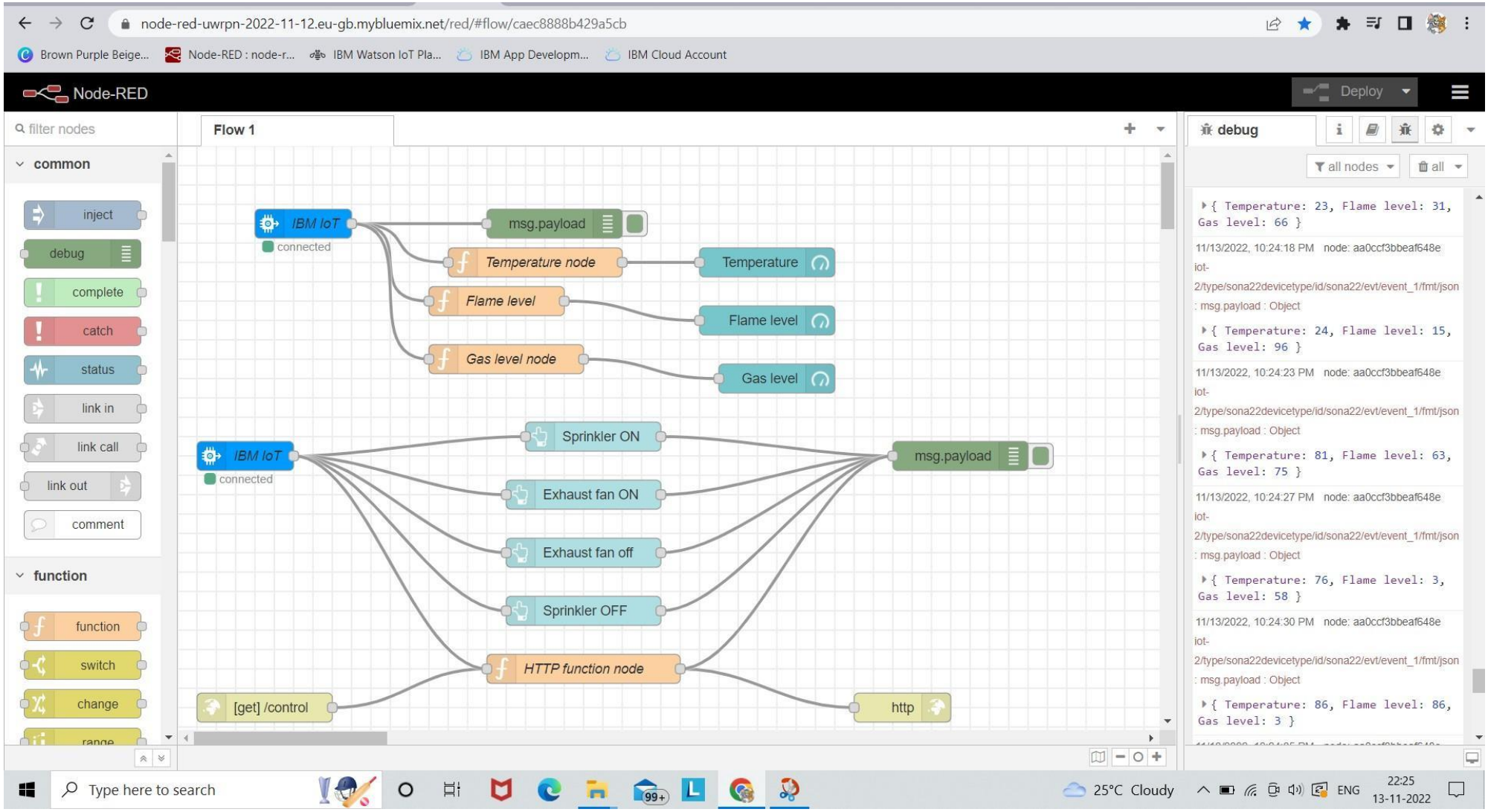


Fig 3 : Using HTTP in and HTTP response in network option ,https://node-red-uwrpn-2022-11-12.eu-gb.mybluemix.net/red/#flow/caec8888b429a5cb will display sensor values from the IBM WATSON IOT PLATFORM

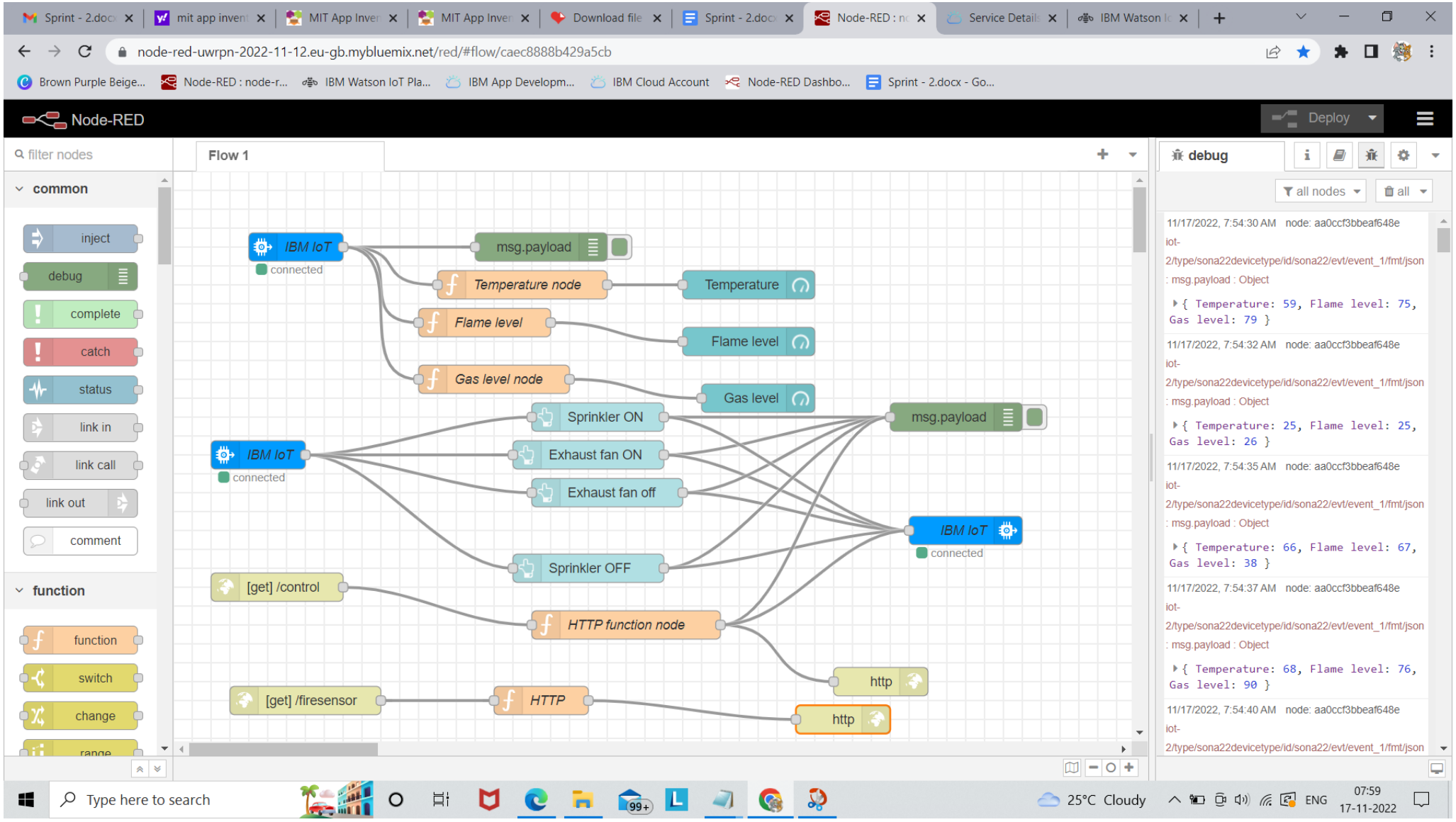


Fig 4 : Monitoring the temperature ,flame and gas sensor

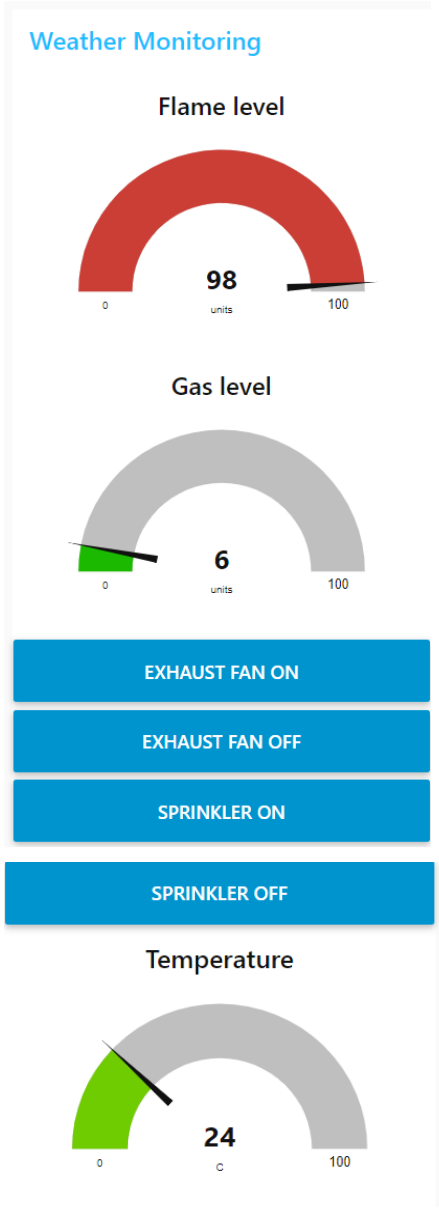


Fig 5 : Properties of ibm iot node

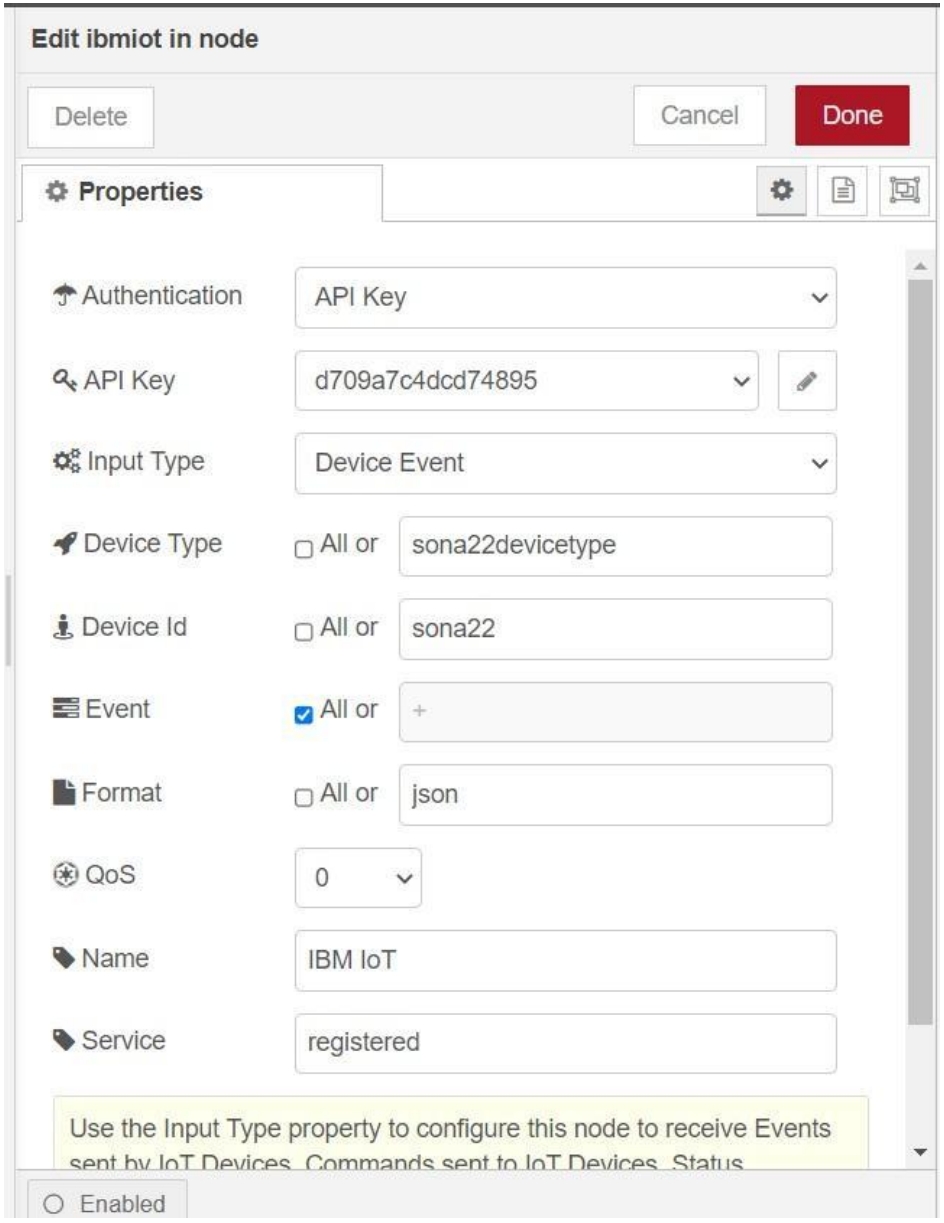


Fig 6 : Properties of temperature node

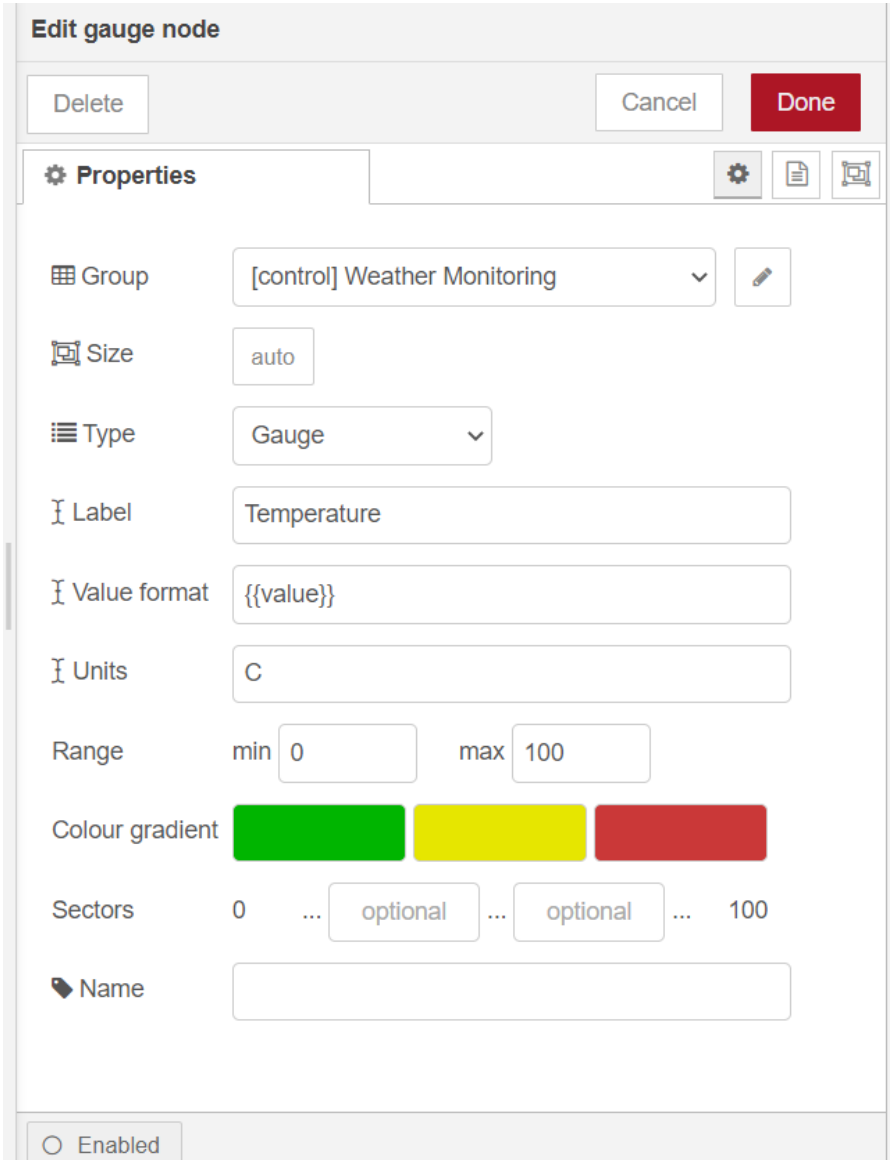


Fig 7: Properties of Flame

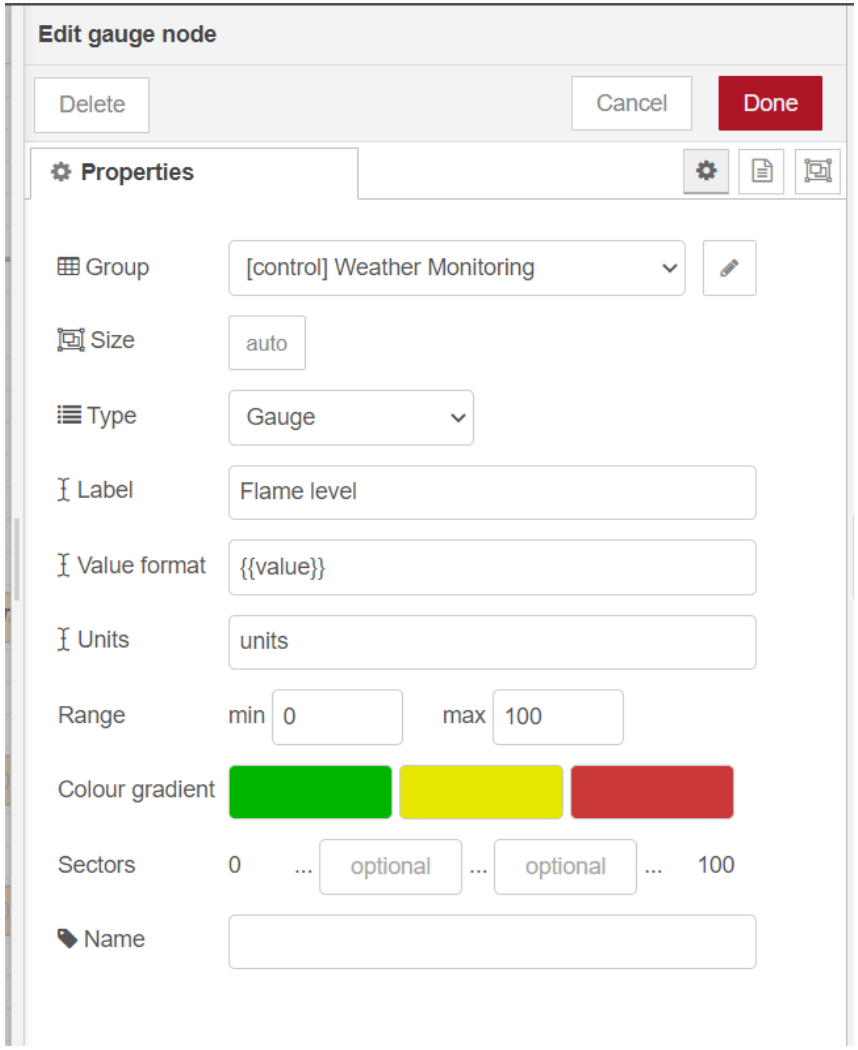


Fig 8 : Properties of Gas level node

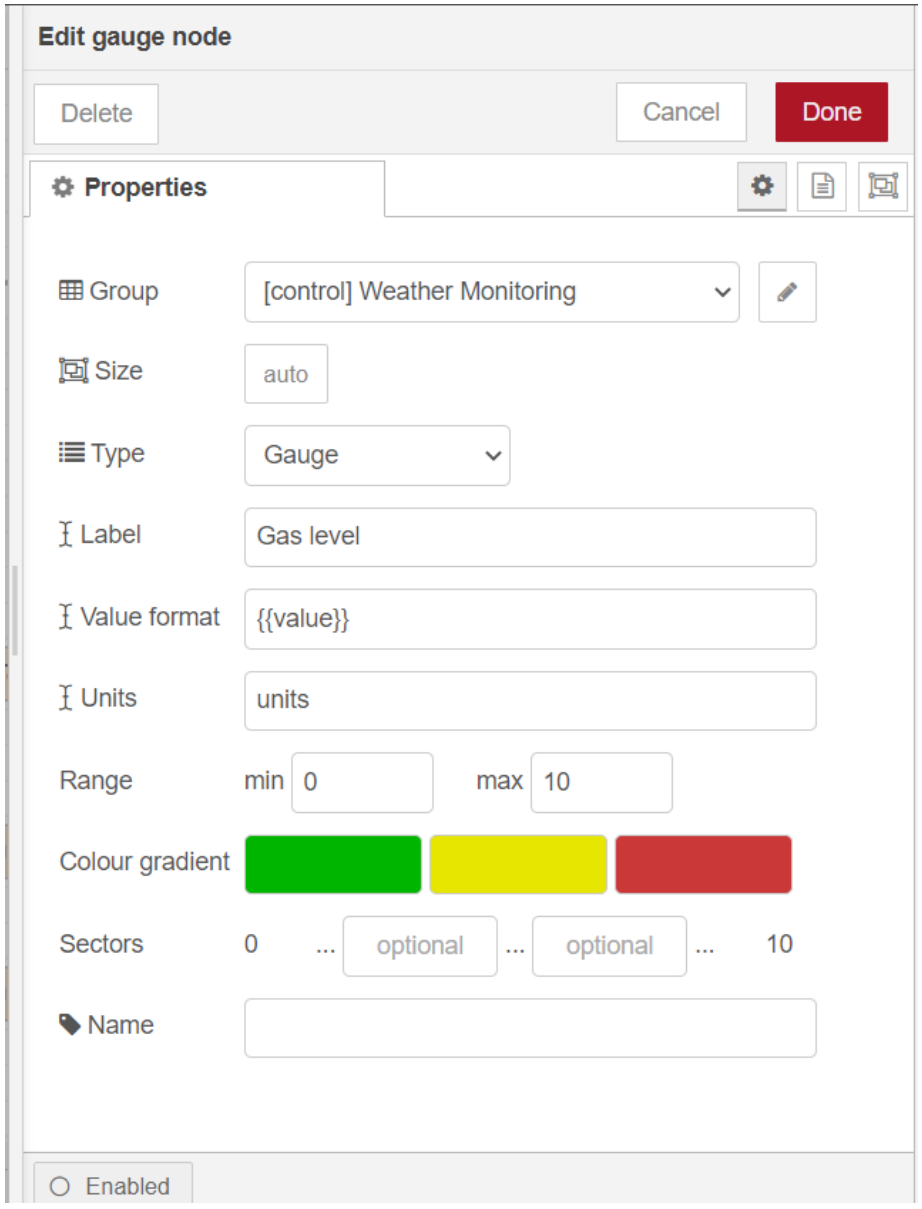
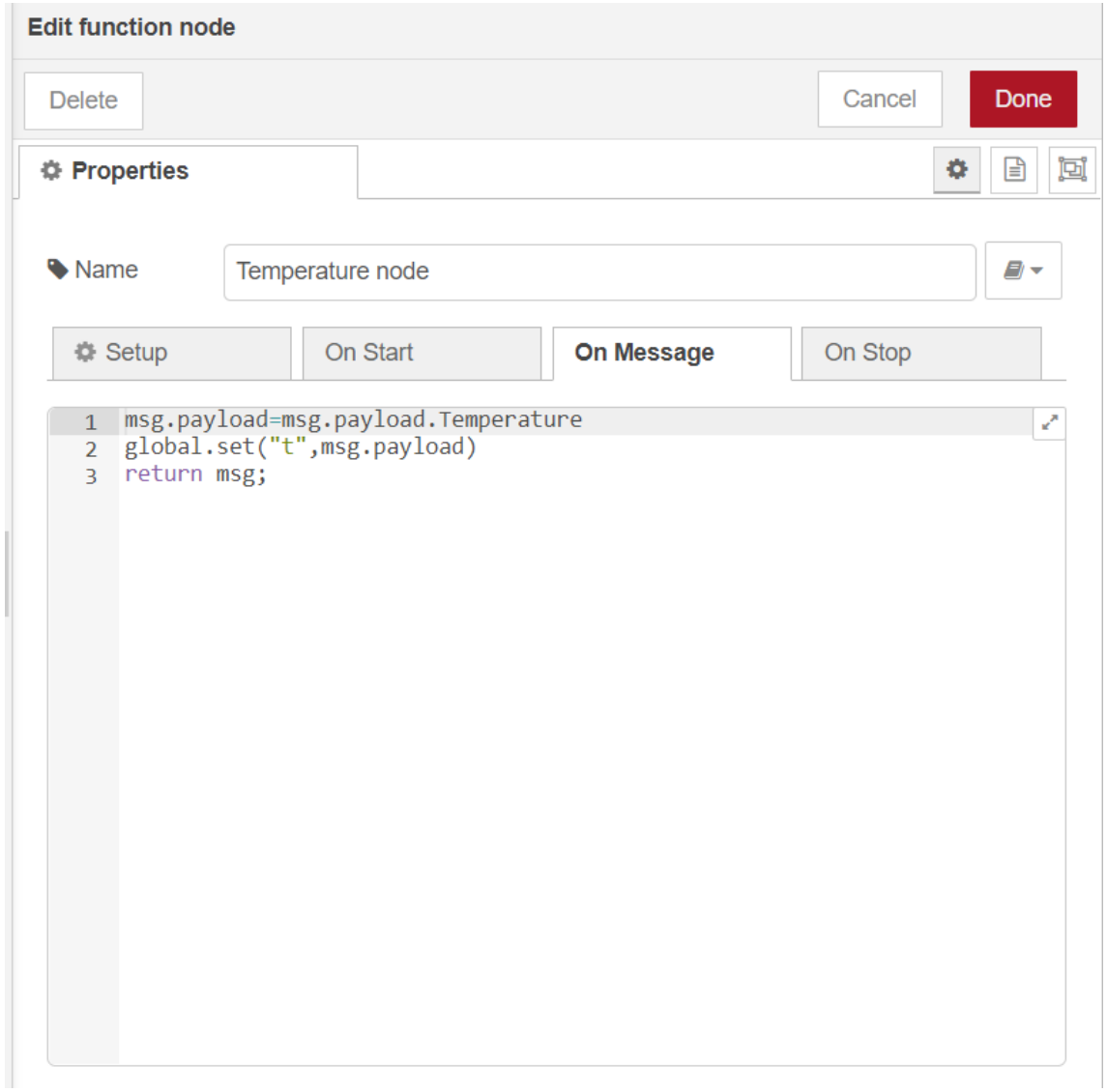
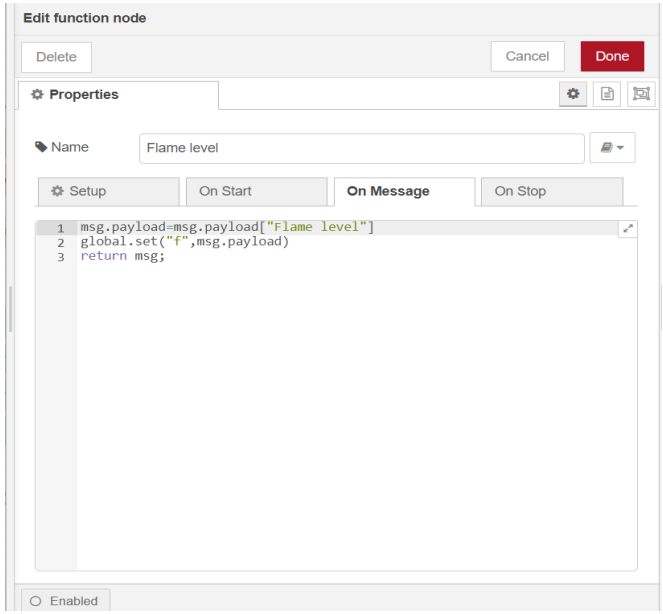


Fig 9 - Properties of IBM IOT are shown. The API key, Device Type, Device ID are taken from IBM IOT WATSON PLATFORM.


Edit function node
Delete
Cancel
Done
Properties
Name
Temperature node
Setup
On Start
On Message
On Stop
1 msg.payload=msg.payload.Temperature
2 global.set("t",msg.payload)
3 return msg;


Edit function node
Delete
Cancel
Done
Properties
Name
Flame level
Setup
On Start
On Message
On Stop
1 msg.payload=msg.payload["Flame level"]
2 global.set("f",msg.payload)
3 return msg;
Enabled

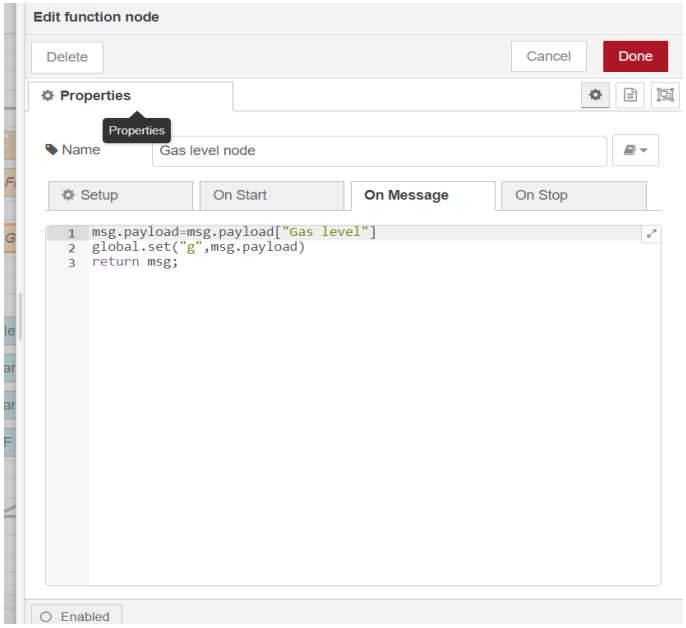

Edit function node
Delete
Cancel
Done
Properties
Properties
Name
Gas level node
Setup
On Start
On Message
On Stop
1 msg.payload=msg.payload["Gas level"]
2 global.set("g",msg.payload)
3 return msg;
Enabled

Fig 10 - Properties of HTTP request with method GET and url control

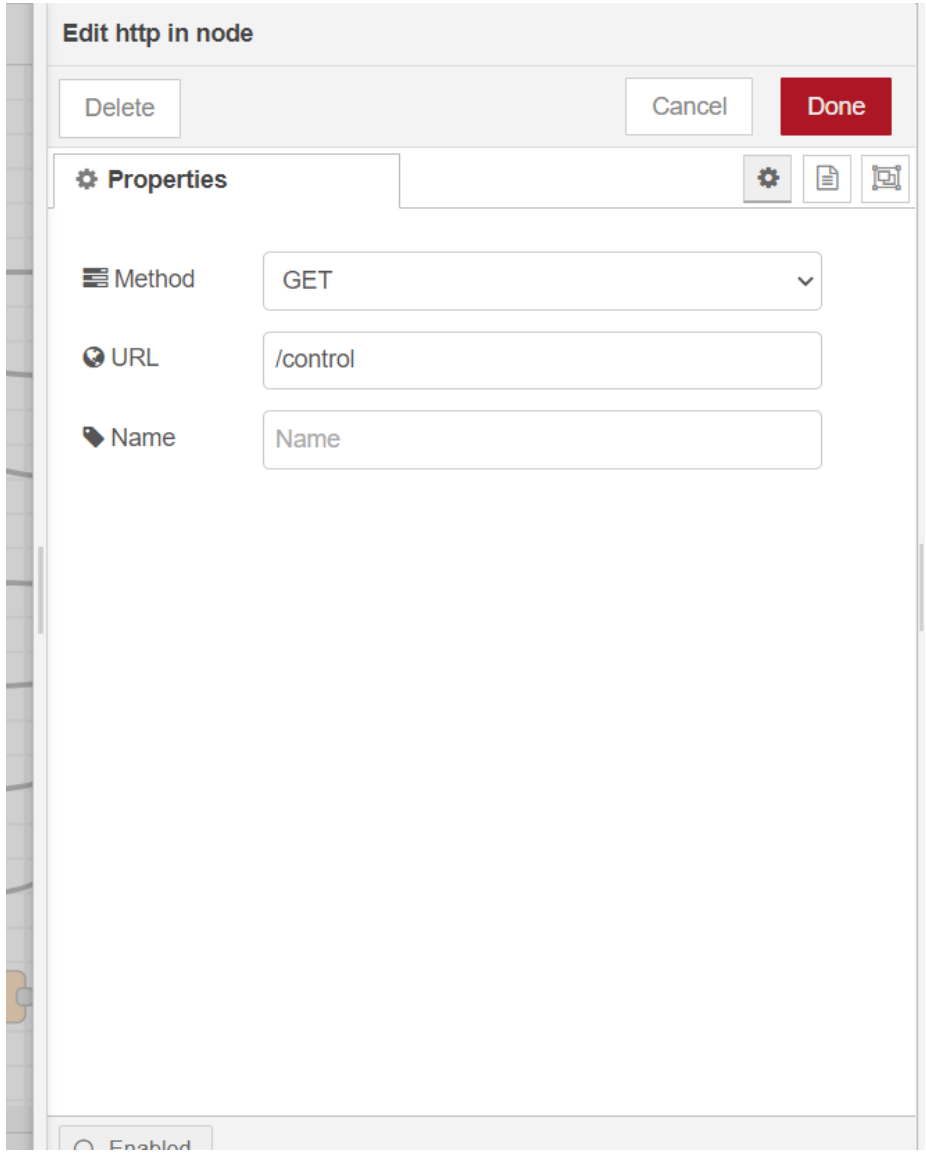
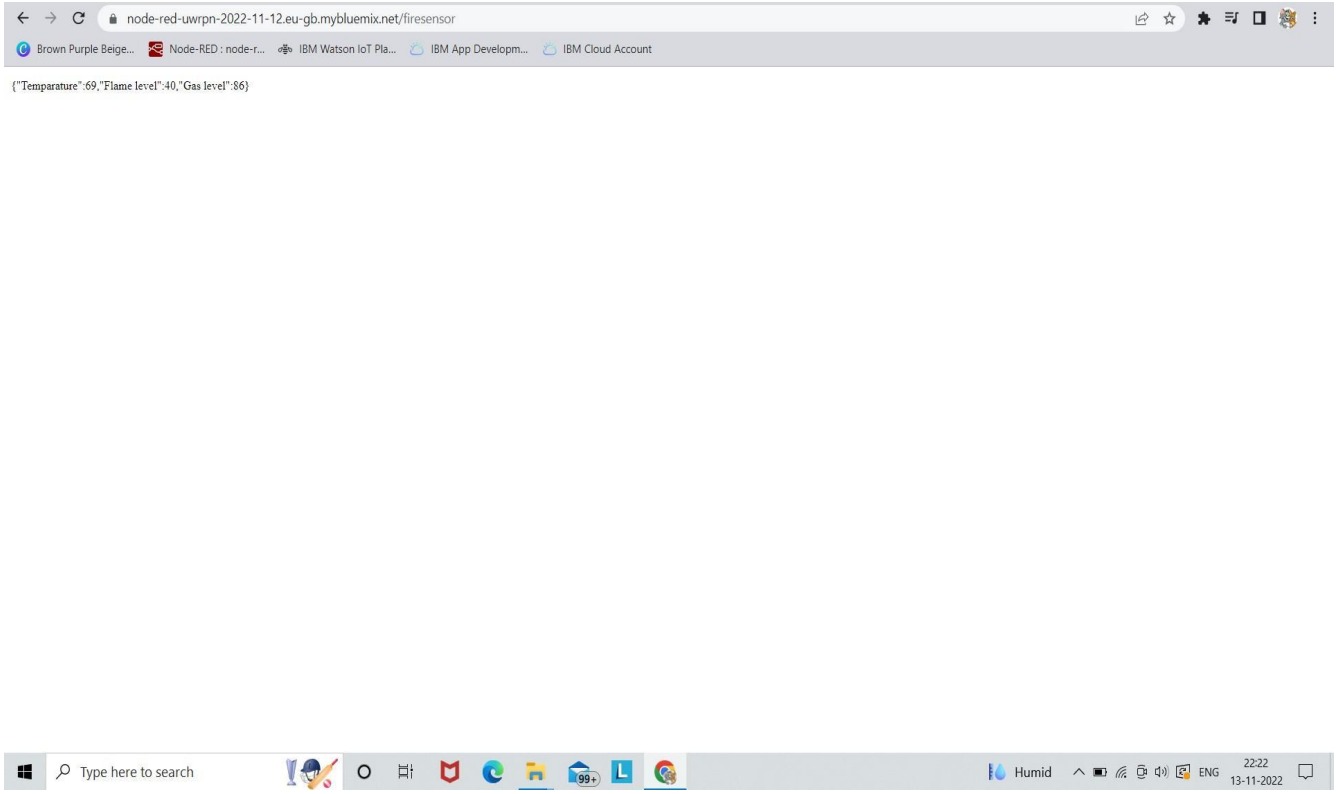


Fig 11 : HTTP request OUTPUT



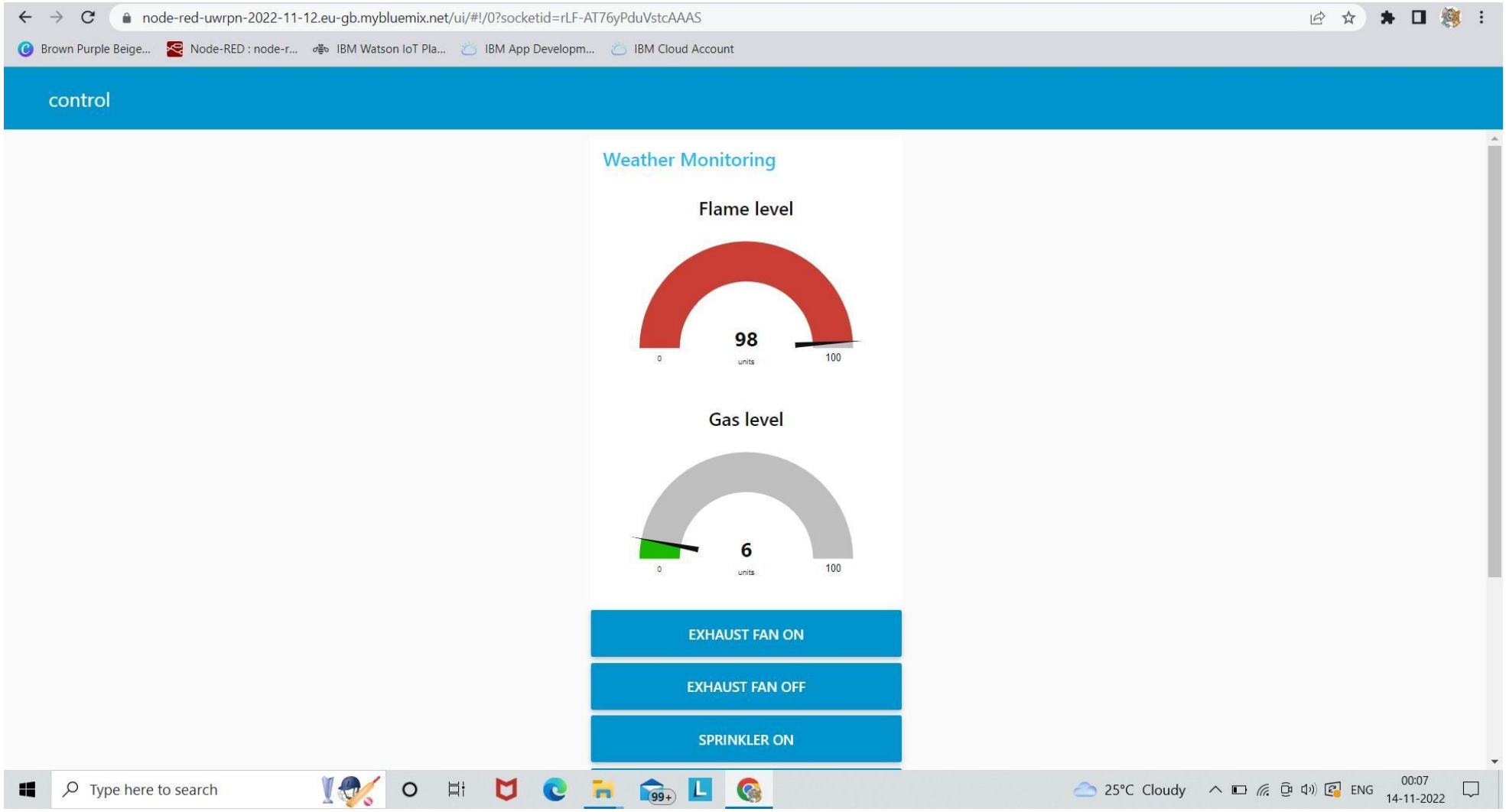

node-red-uwrpn-2022-11-12.eu-gb.mybluemix.net/ui/#!/0?socketid=rLF-AT76yPduVstcAAAS
Brown Purple Beige...
Node-RED : node-r...
IBM Watson IoT Pla...
IBM App Developm...
IBM Cloud Account
control
Weather Monitoring
Flame level
98
0
units
100
Gas level
6
0
units
100
EXHAUST FAN ON
EXHAUST FAN OFF
SPRINKLER ON
Type here to search
25°C Cloudy
ENG
00:07
14-11-2022

FIG 12 : Front -end APP for our project to display the temperature ,smoke level and flame level with control buttons like Sprinkler ,exhaust fan on and off buttons