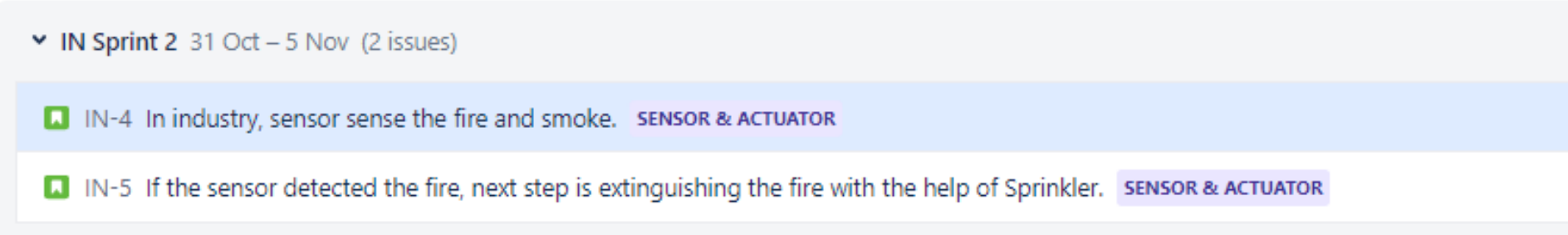
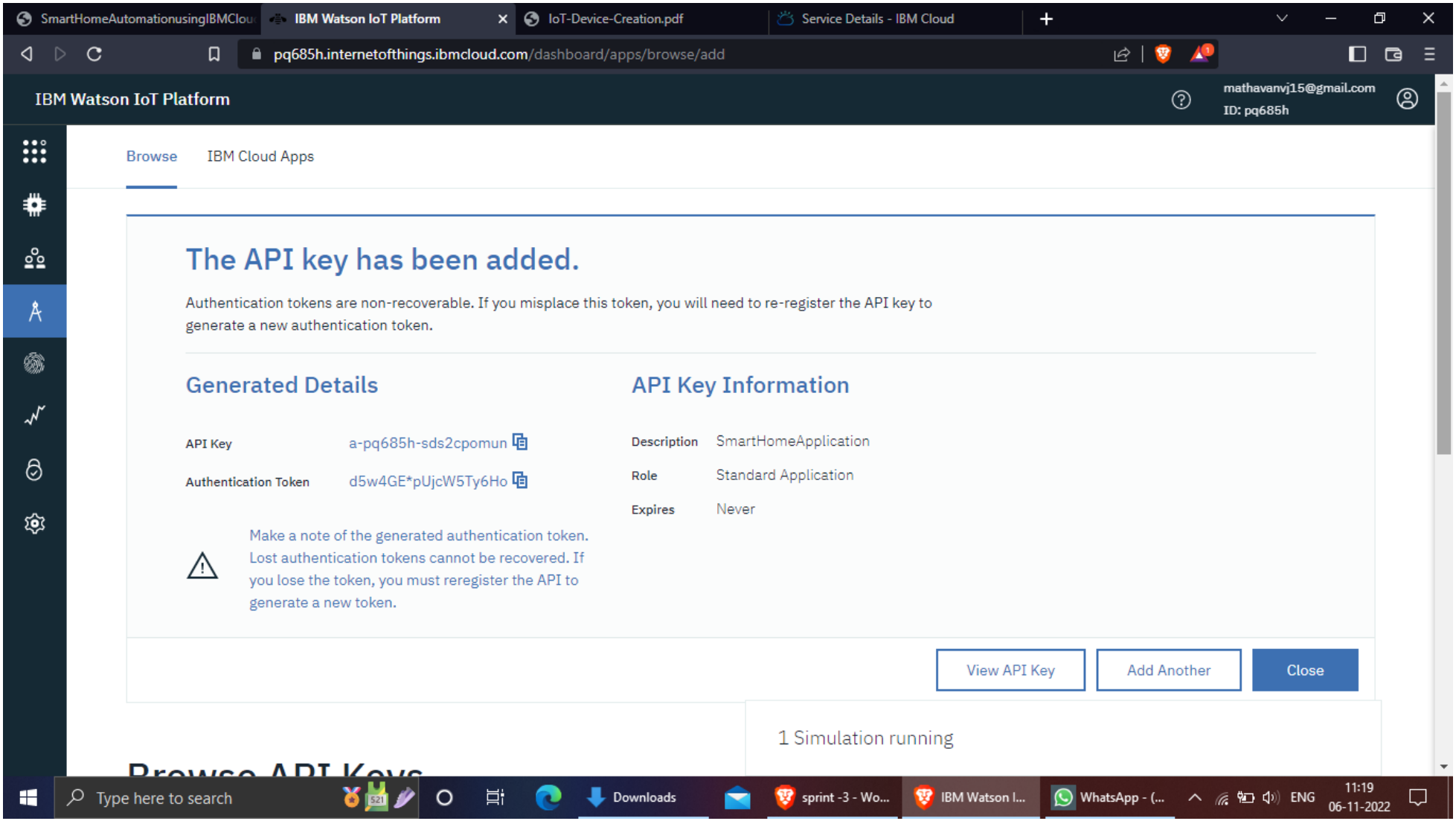
Project development phase

Sprint - II

Date	04 November 2022
Team ID	PNT2022TMID13566
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.


SmartHomeAutomationusingIBMClou
IBM Watson IoT Platform
IoT-Device-Creation.pdf
Service Details - IBM Cloud
pq685h.internetofthings.ibmcloud.com/dashboard/apps/browse/add
IBM Watson IoT Platform
mathavanvj15@gmail.com
ID: pq685h
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-pq685h-sds2cpomun
Authentication Token
d5w4GE*pUjcW5Ty6Ho
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
SmartHomeApplication
Role
Standard Application
Expires
Never
View API Key
Add Another
Close
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US-2 Create a Node-RED service

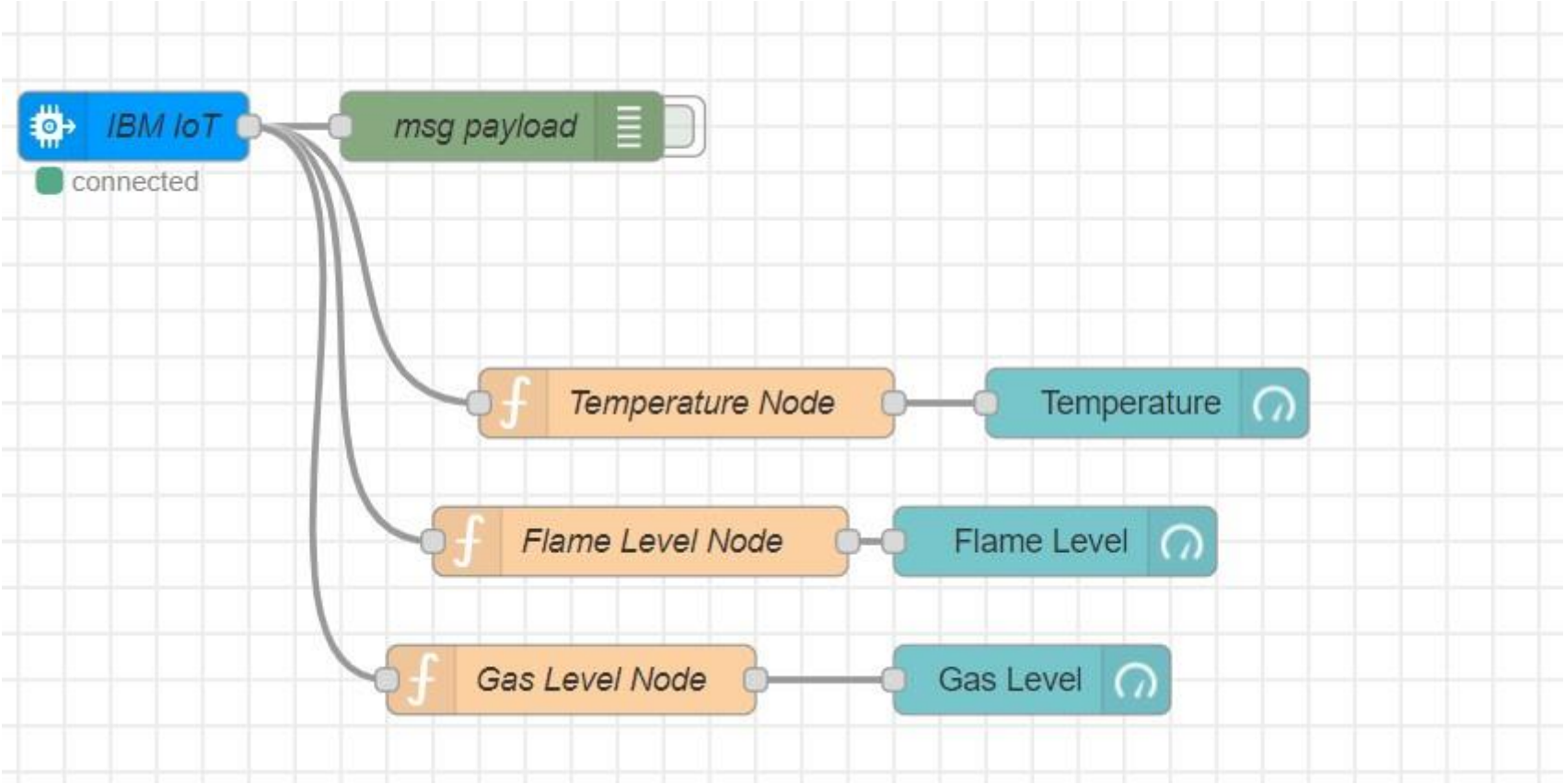


Fig1 - Monitoring the sensor values - Temperature, Flame Level, Gas Level. These values are randomly generated by IBM WATSON IOT PLATFORM.

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

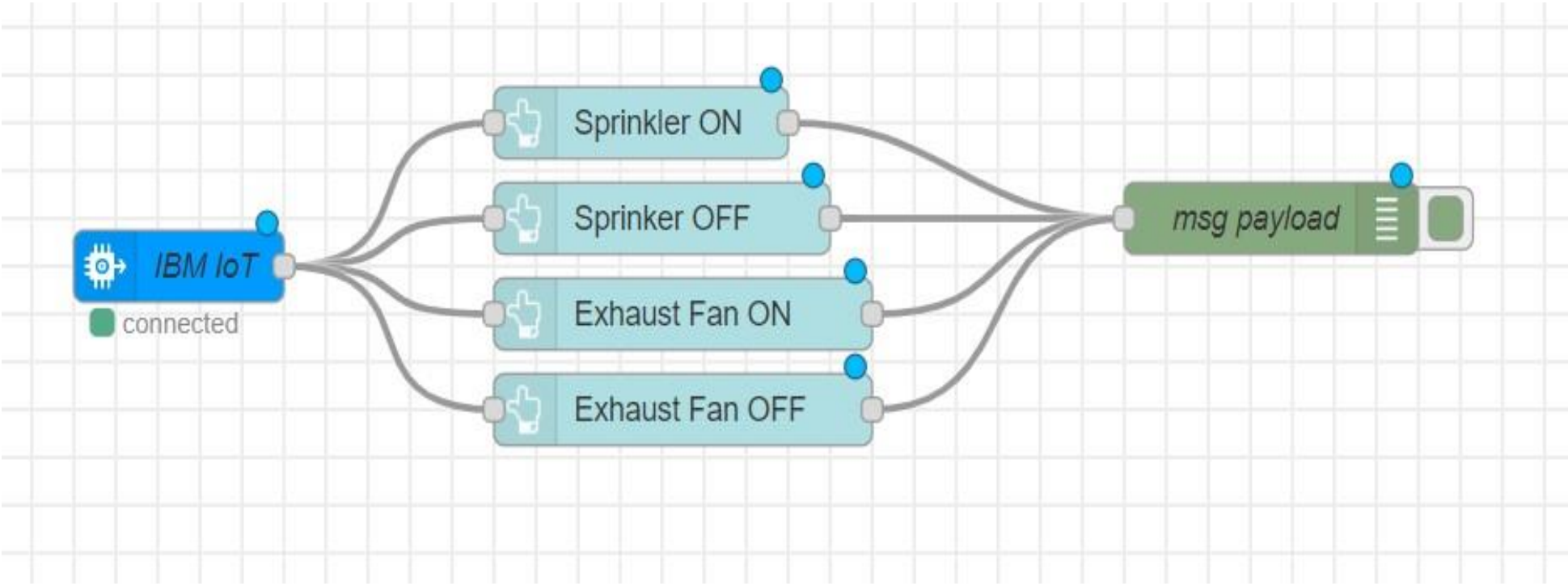


Fig 3 - Control buttons (Sprinkler ON, Sprinkler OFF, Exhaust Fan ON, Exhaust Fan OFF)

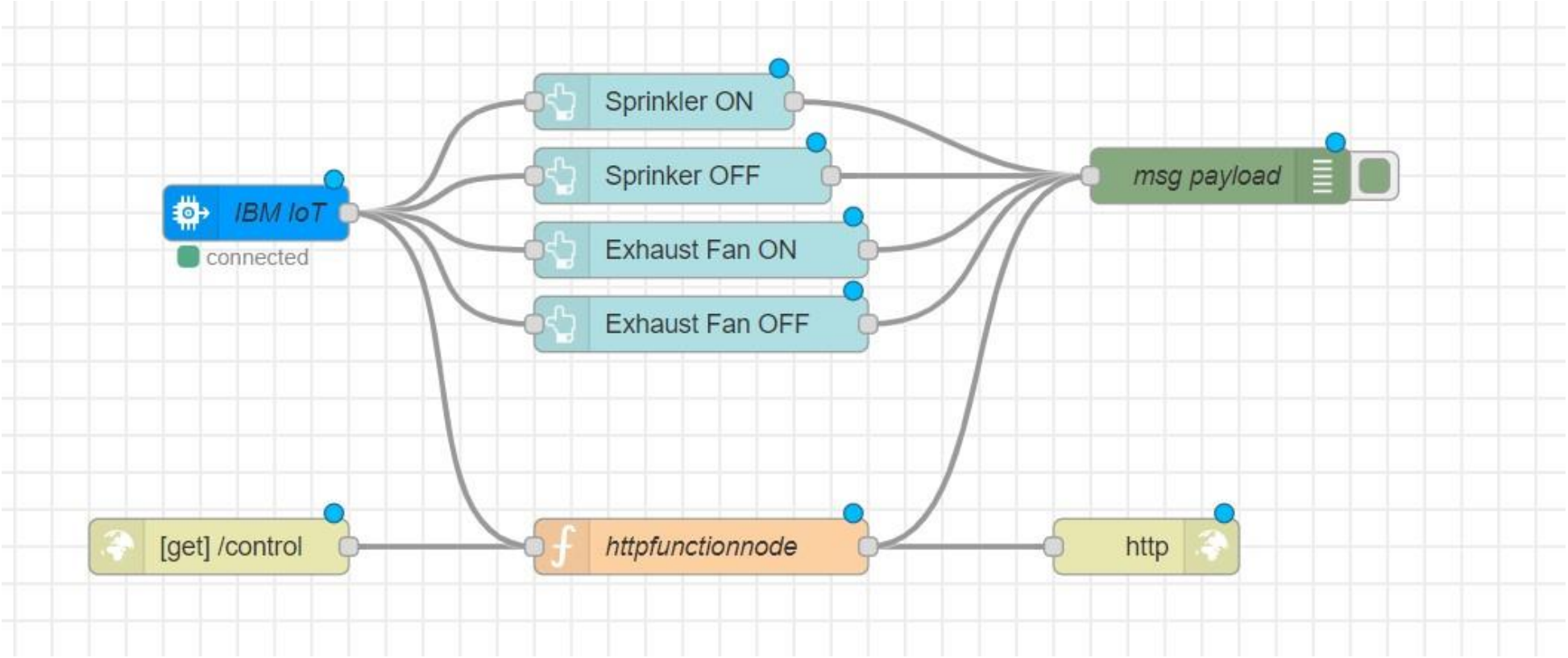


Fig 4 - Using HTTP in and HTTP response in network option, http://127.0.0.1:1880/#flow/f74f1b96473dc208/control will display the control options

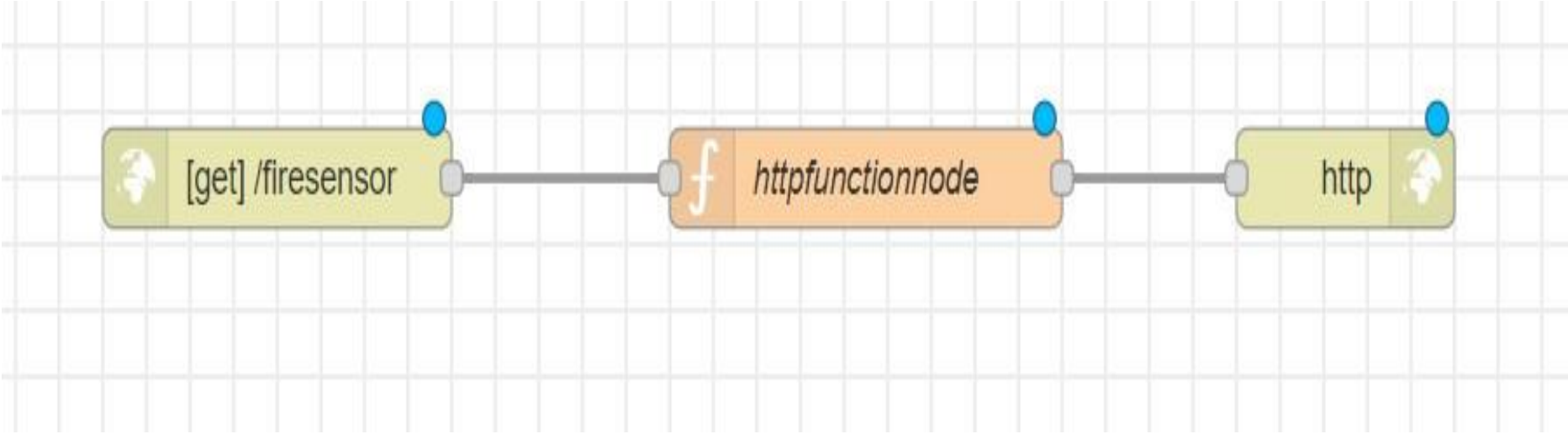


Fig 5 - Using HTTP in and HTTP response in network option, http://127.0.0.1:1880/#flow/f74f1b96473dc208/firesensor will display the sensor values like Temperature, Gas Level and Flame Level from the IBM WATSON IOT PLATFORM.

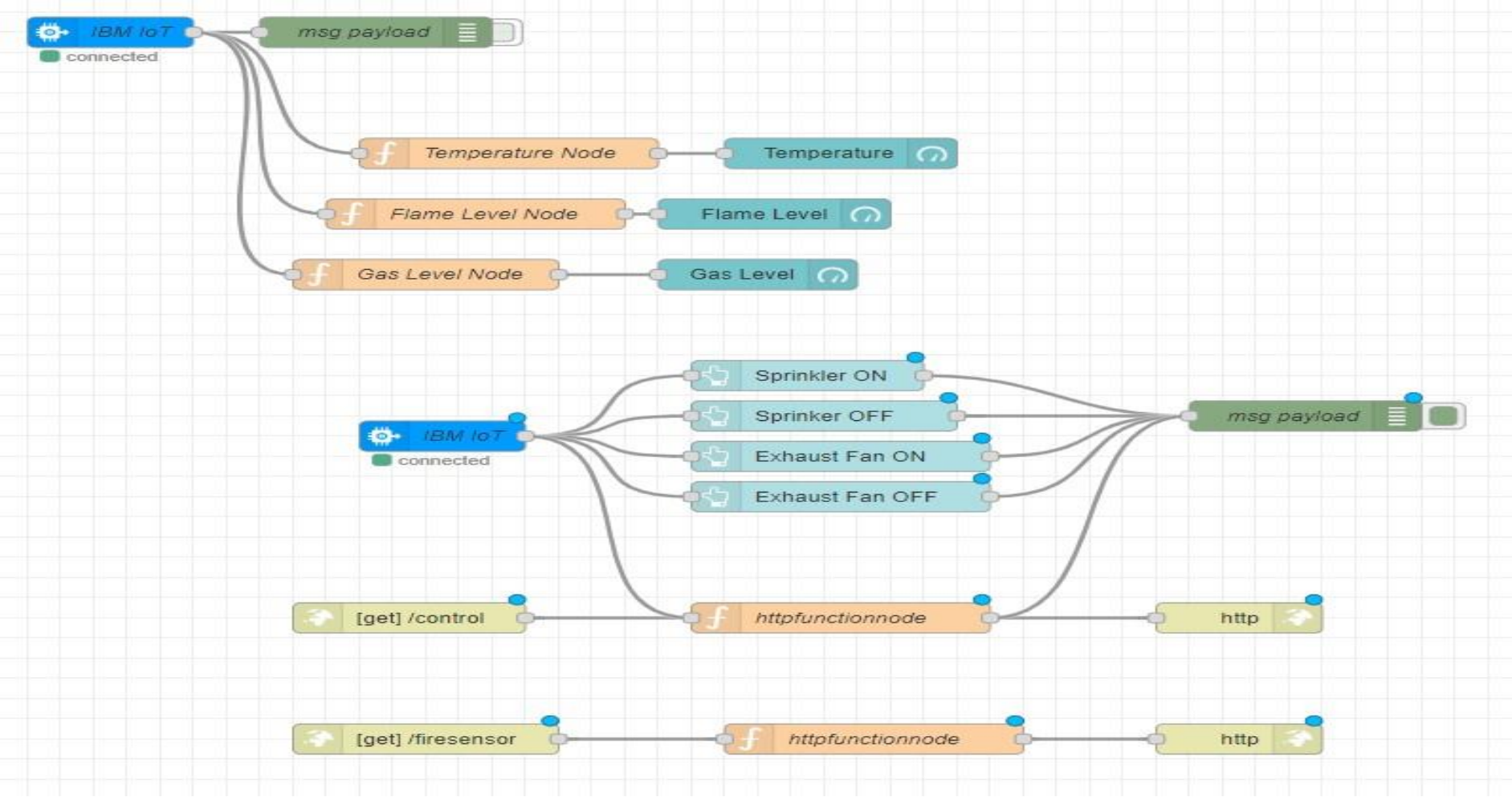


Fig 6 - Entire Node-Red connection for our project

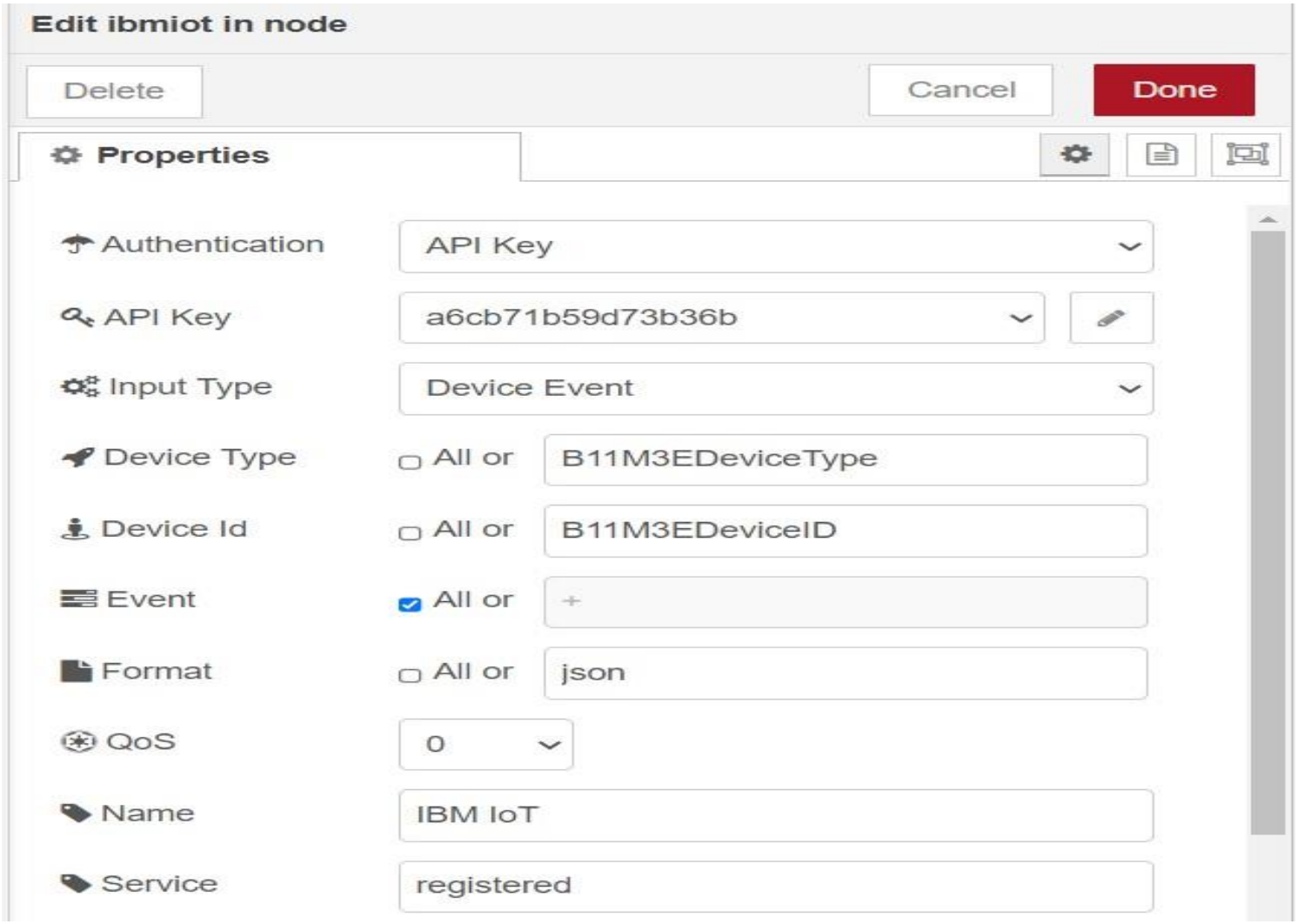
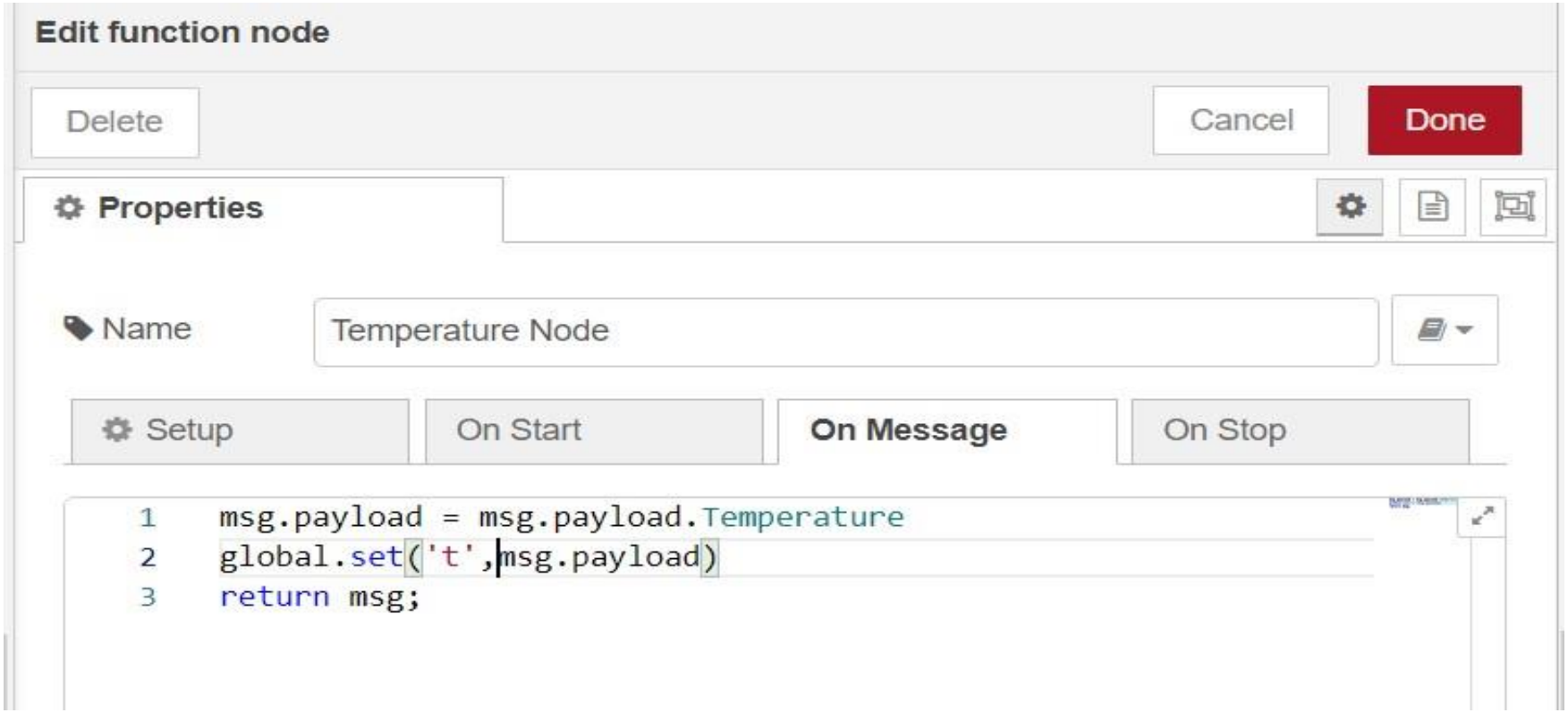


Fig 7 - Properties of IBM IOT are shown. The API key, Device Type, Device ID are taken from IBM IOT WATSON PLATFORM.




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

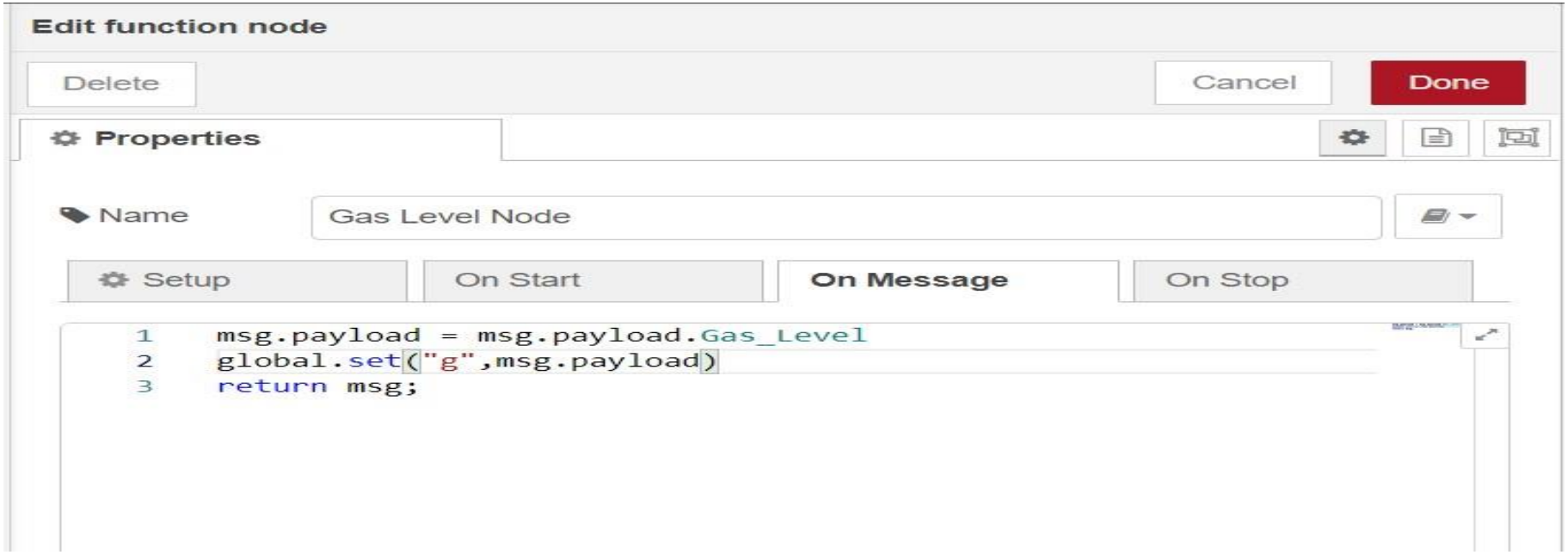

Edit function node
Delete
Cancel
Done
Properties
Name
Gas Level Node
Setup
On Start
On Message
On Stop
1 msg.payload = msg.payload.Gas_Level
2 global.set("g",msg.payload)
3 return msg;

Fig 8 - Properties of Function Node -Temperature Node, Flame Level Node, Gas Level Node.

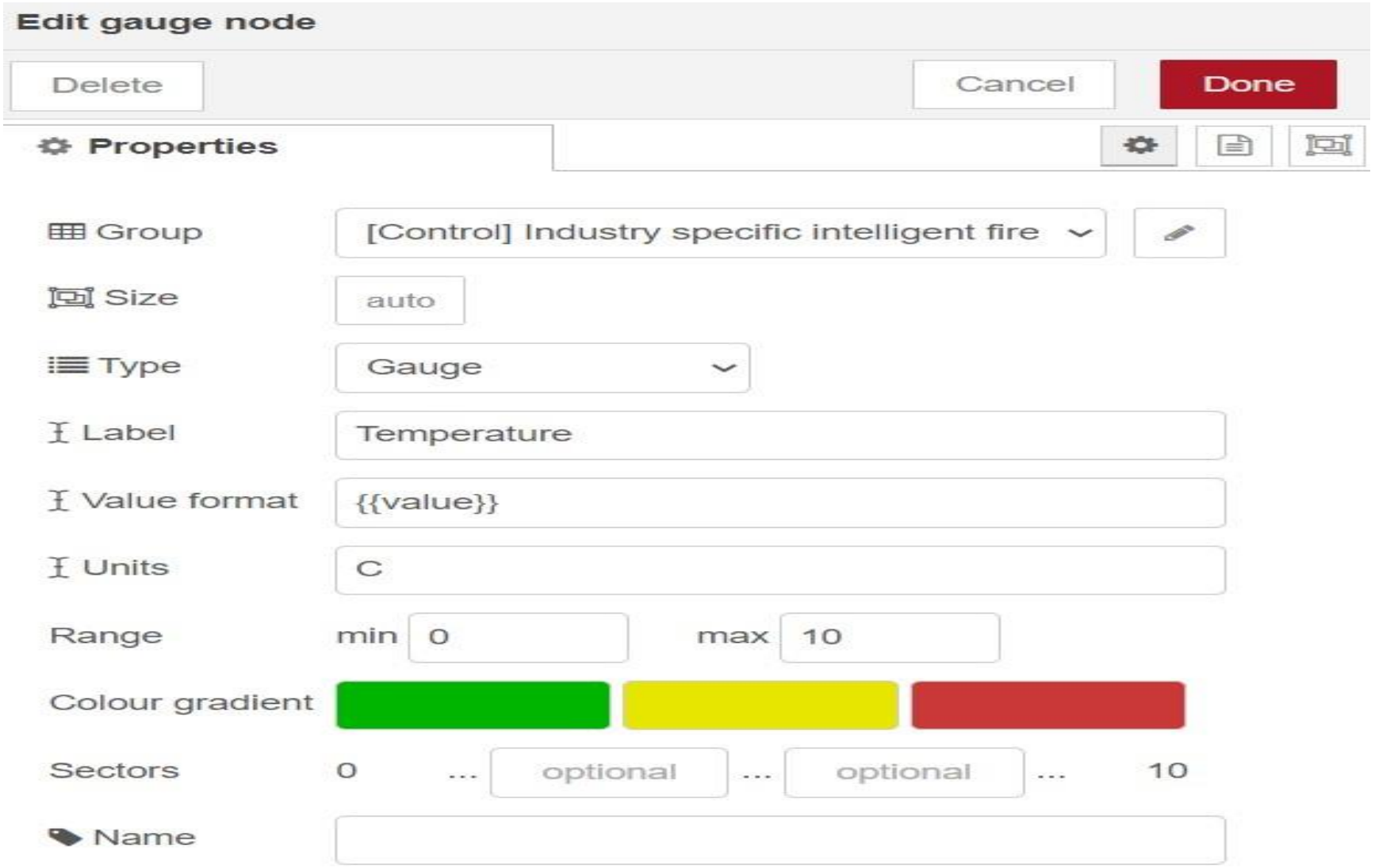


Fig 9 - Properties of Temperature Gauge.

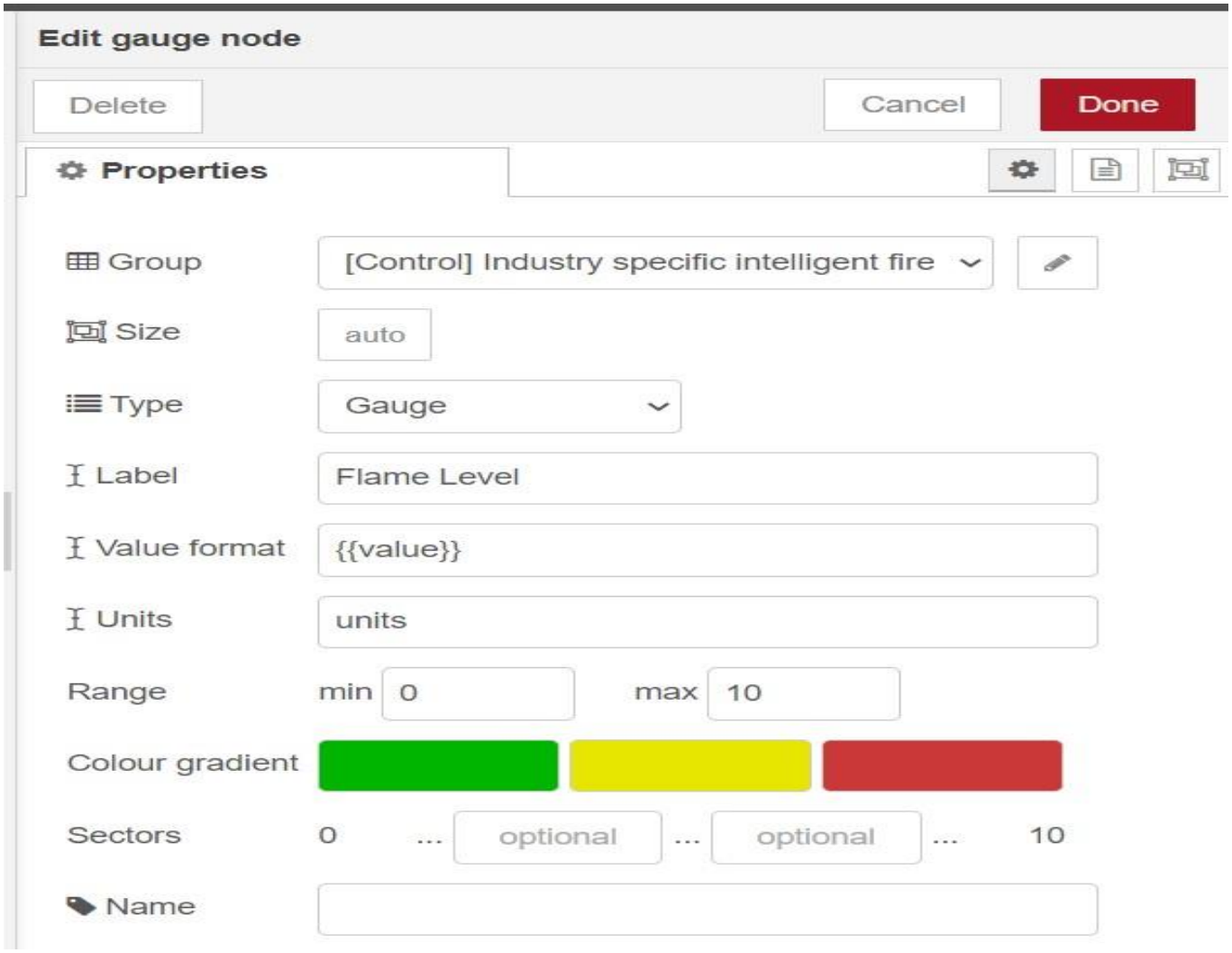


Fig 9 - Properties of Flame Level Gauge.

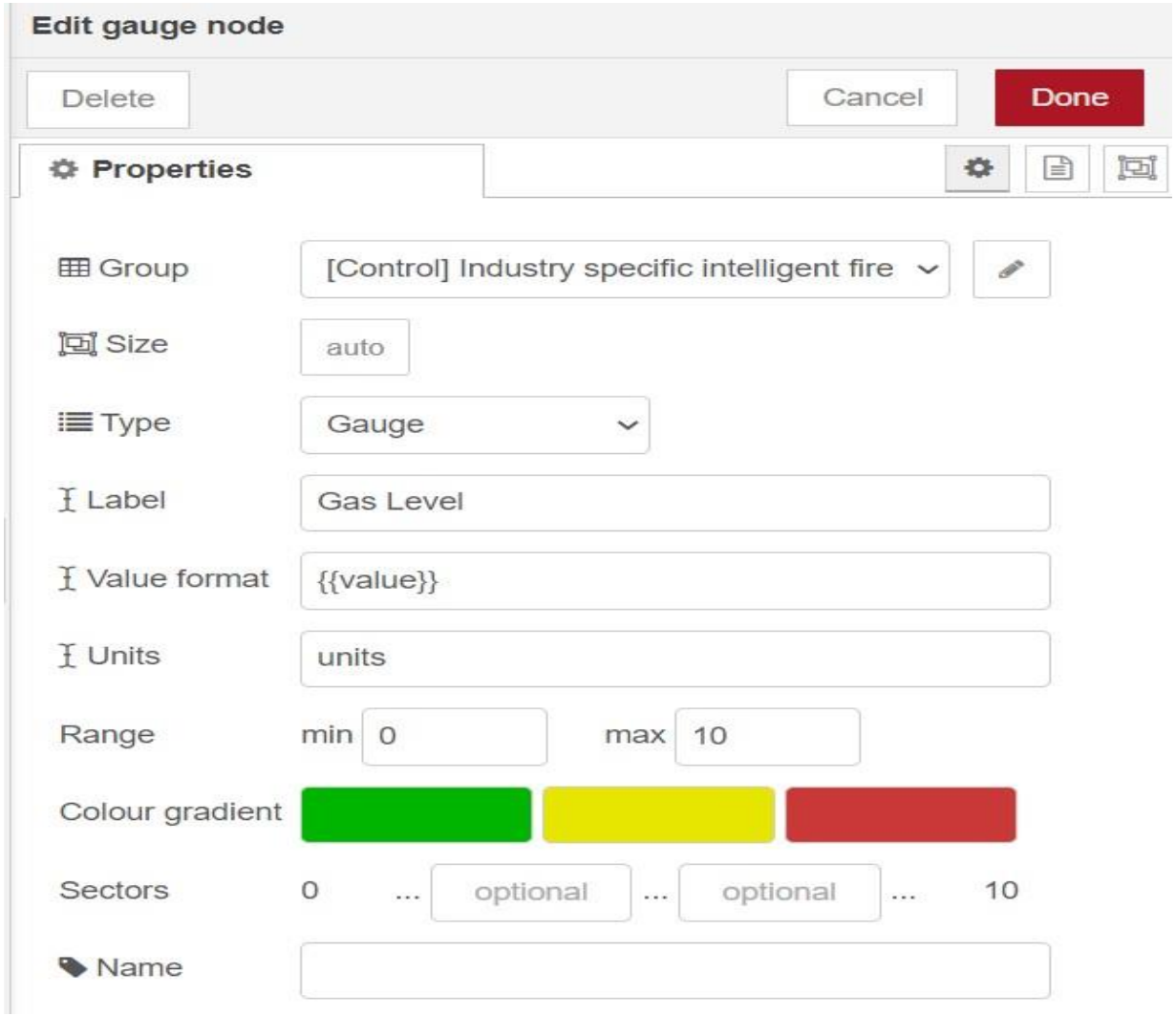


Fig 9 - Properties of Gas Level Gauge.

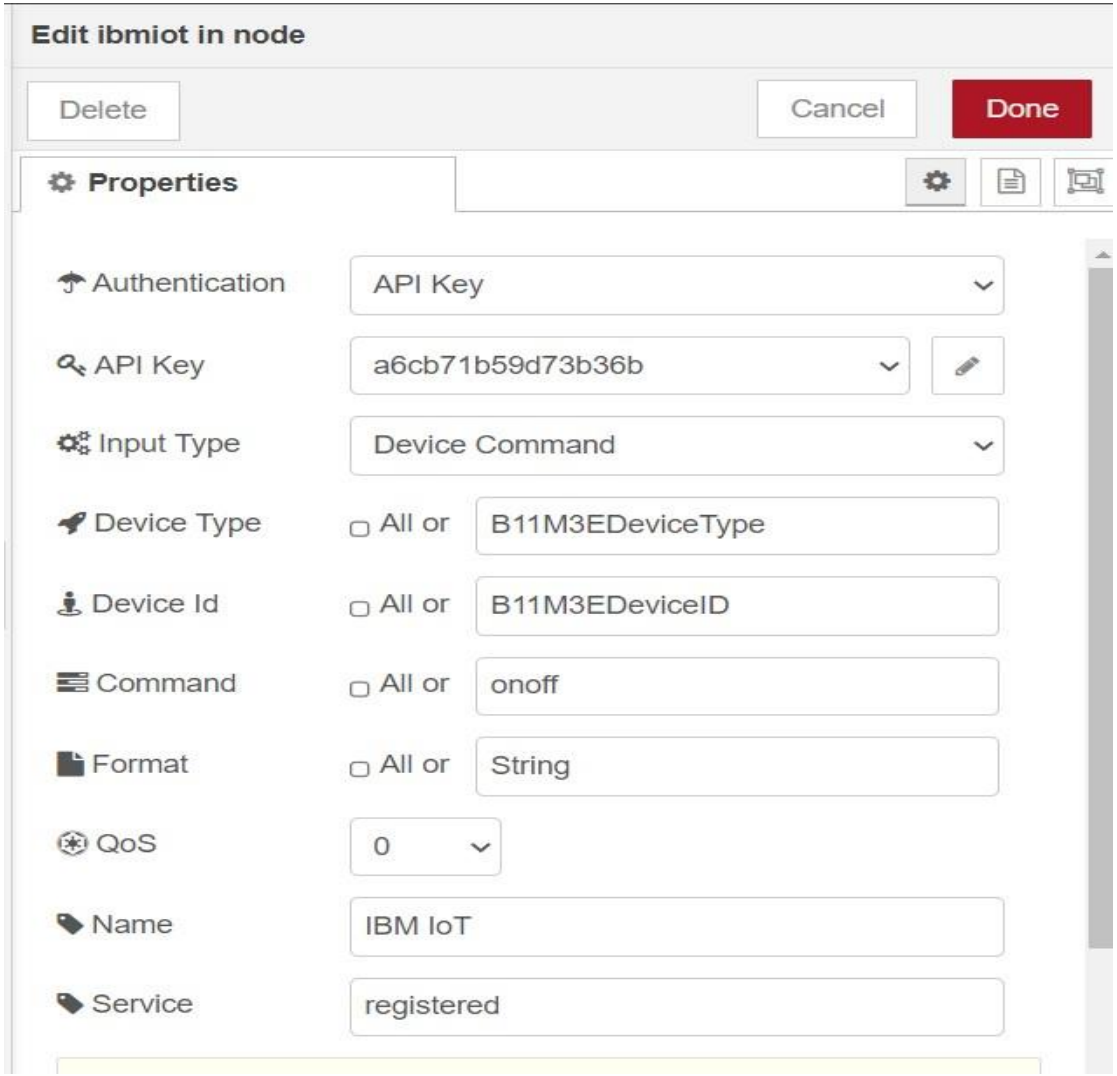


Fig 9 - Properties of IBM IOT Node.

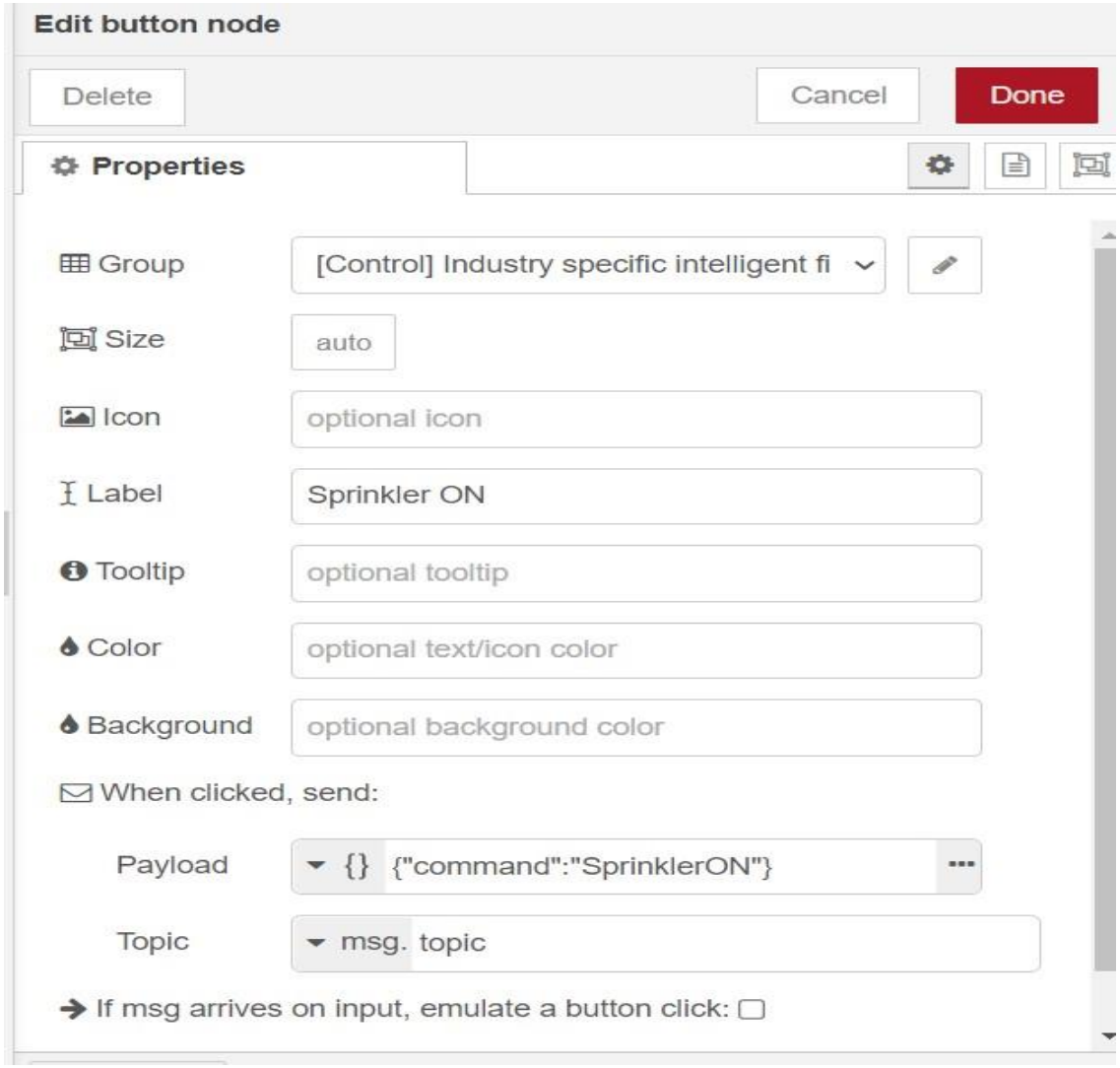


Fig 10 - Properties of Sprinkler ON button node.

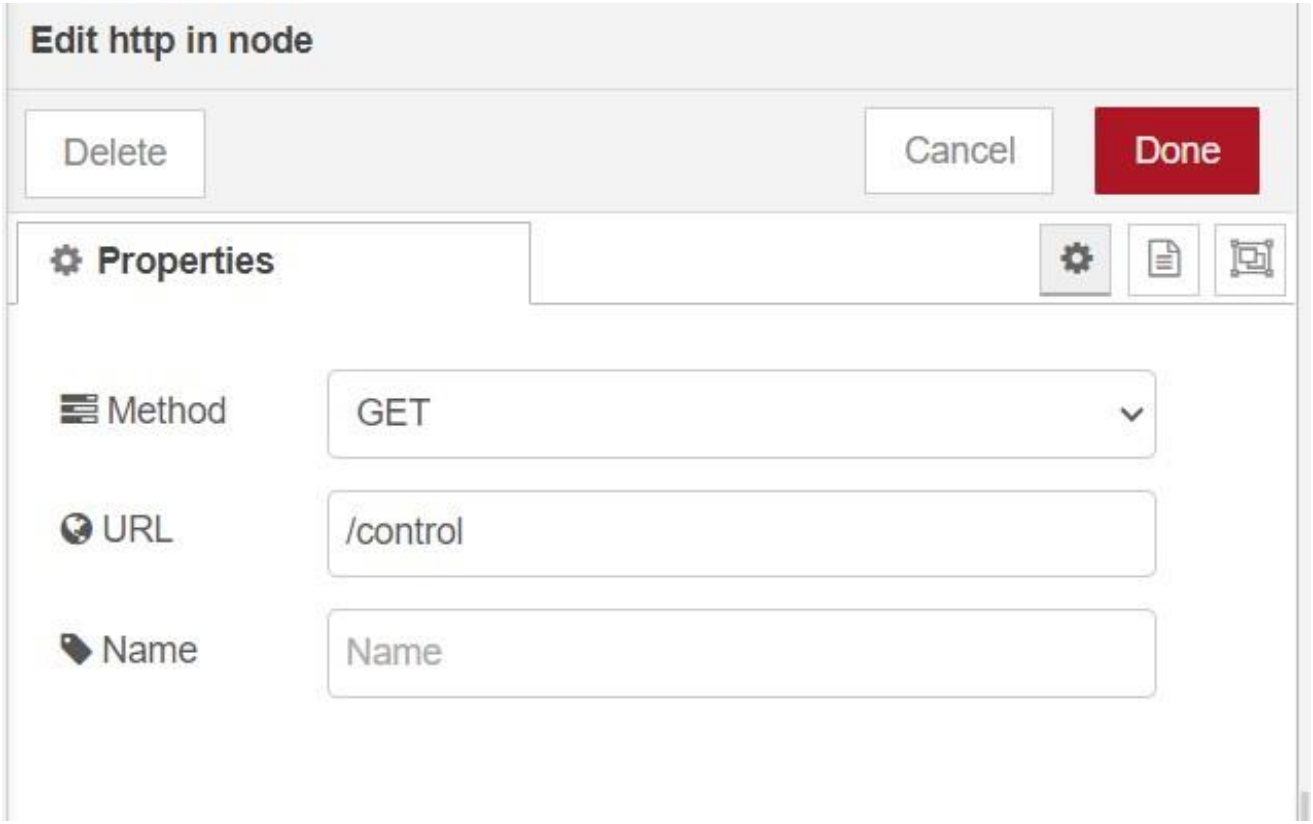


Fig 10 - Properties of HTTP Node with method GET and URL /control,

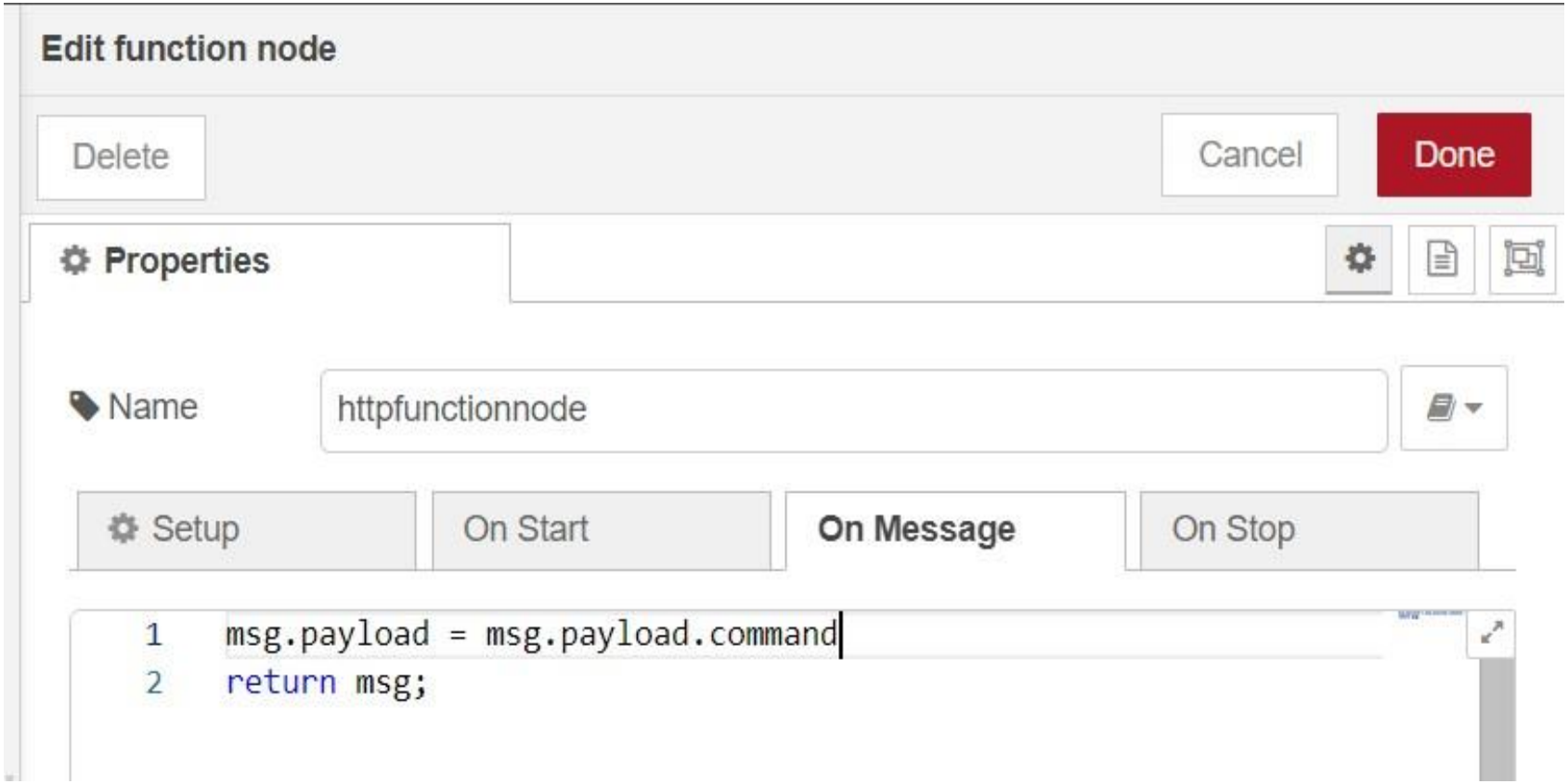
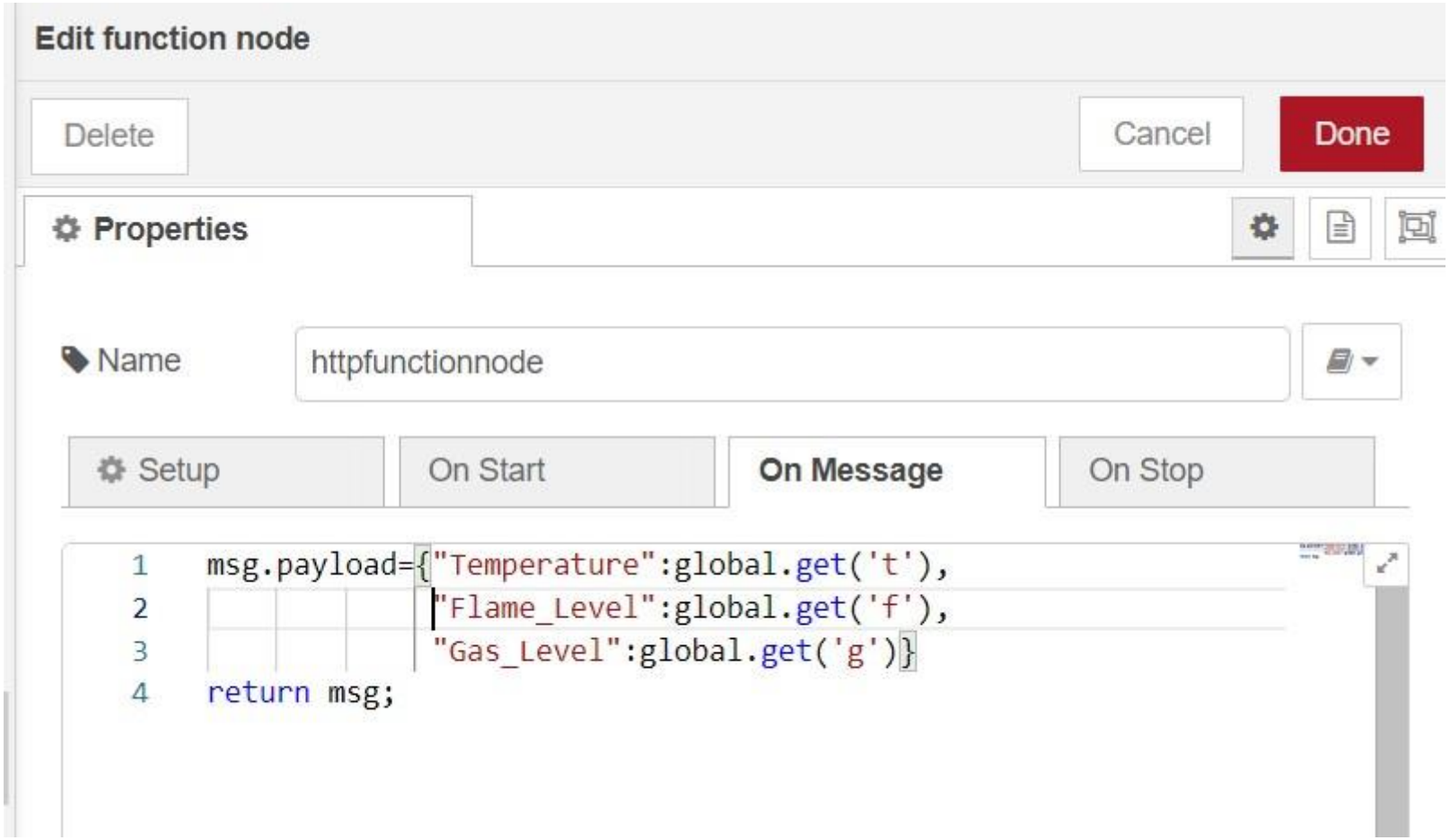
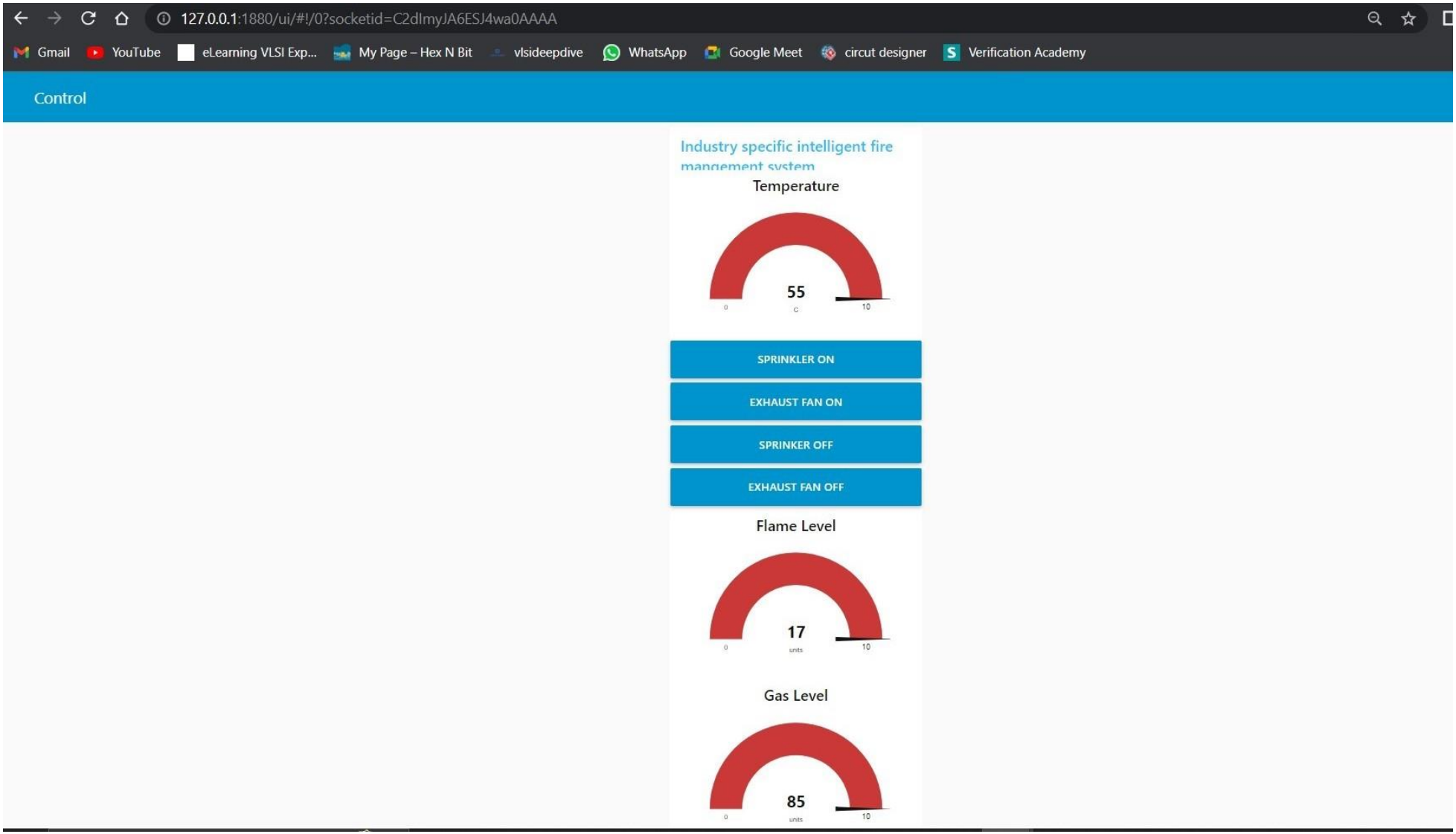


Fig 11 - Properties of Control HTTP Function Node.

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Verification Academy
Control
Industry specific intelligent fire
Temperature
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10
SPRINKLER ON
EXHAUST FAN ON
SPRINKER OFF
EXHAUST FAN OFF
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Gas Level
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units
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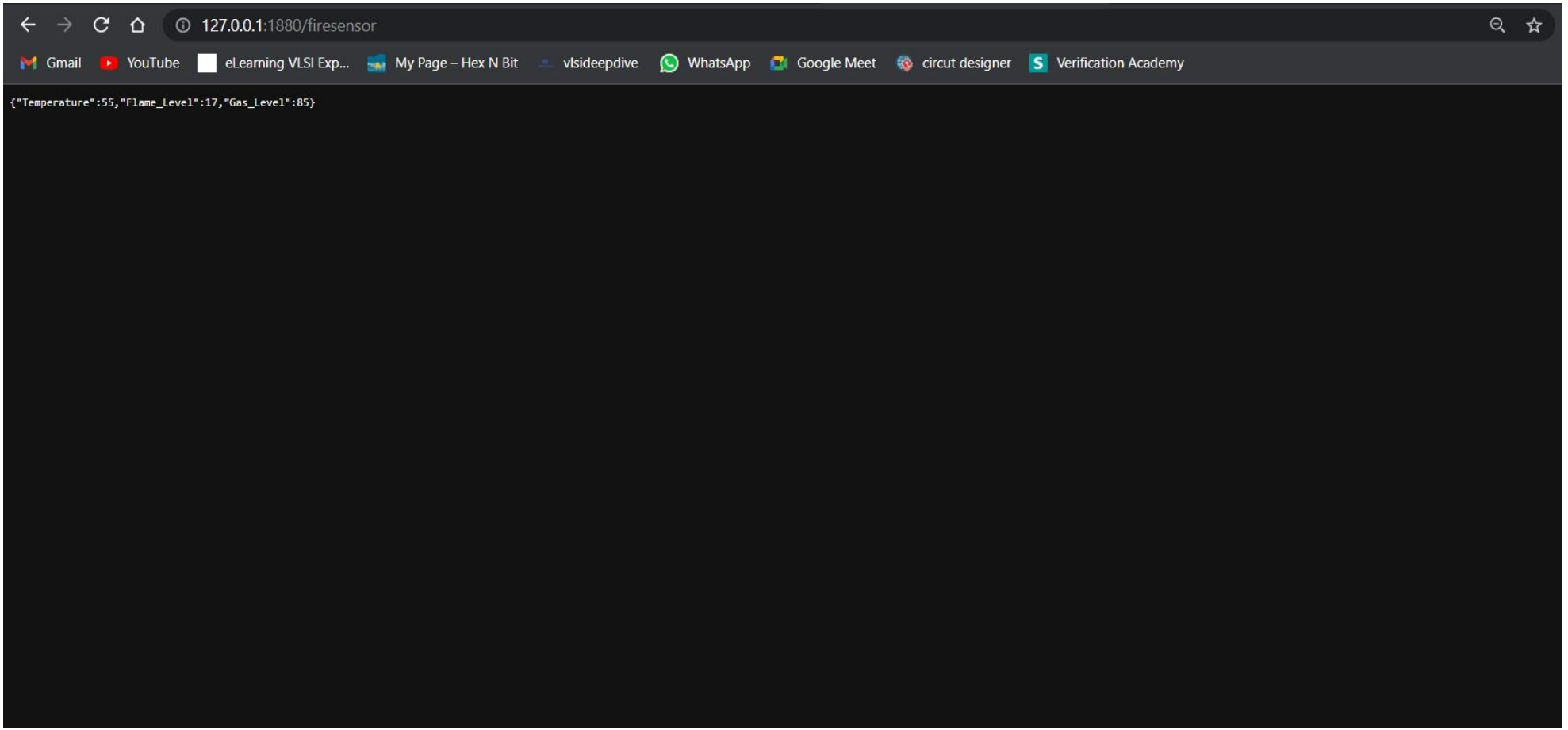
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My Page – Hex N Bit
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Verification Academy
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Fig 12 - Properties of Monitor HTTP Function Node

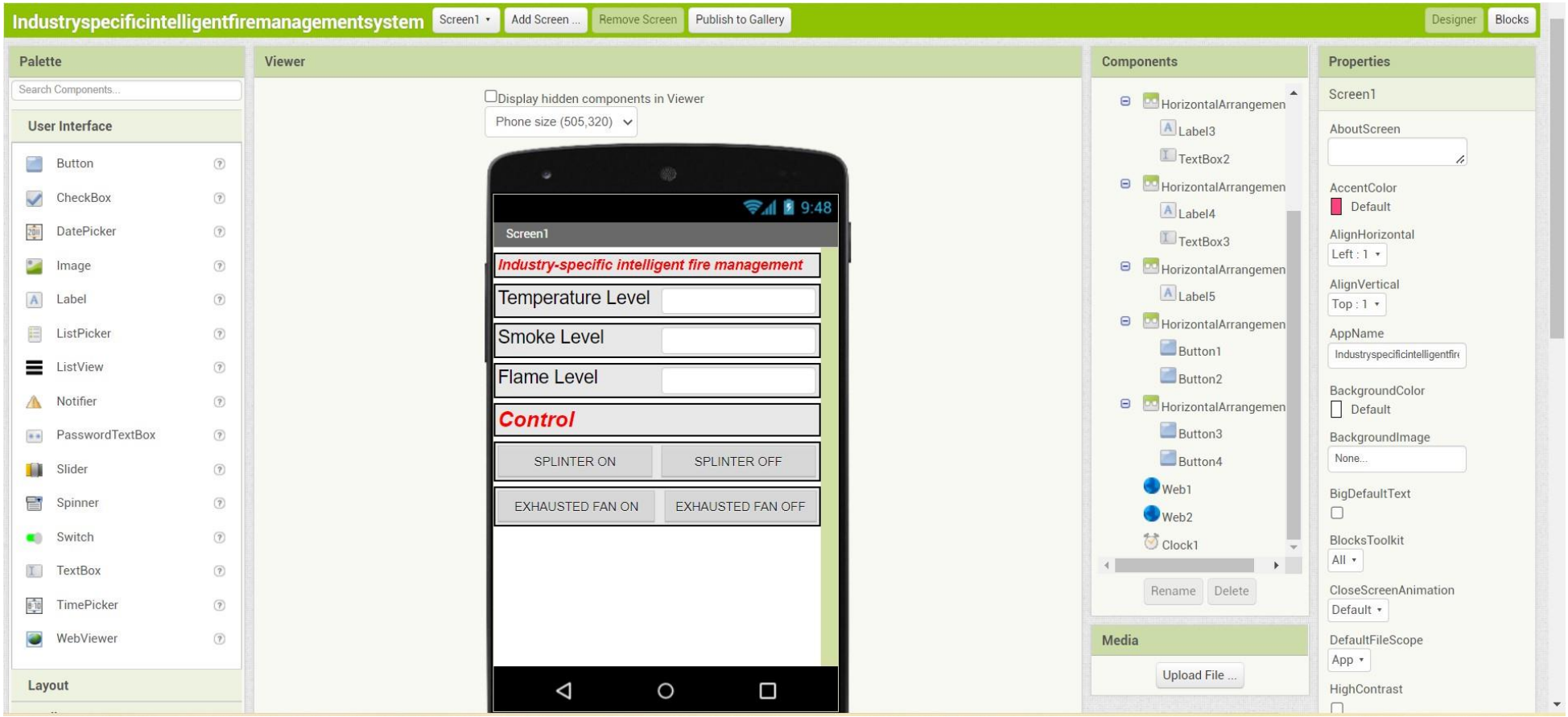

Fig 13 - Front-end APP for our project, to display the Temperature Level, Smoke Level and Flame Level with control buttons like Sprinkler ON and OFF and Exhaust Fan ON and OFF