SPRINT 2

Model Creation

Date	15 November 2022
Team ID	PNT2022TMID27080
Project Name	Project - Gas Leakage Monitoring and Alerting System for Industries.

Model Creation:

- Pre-processed data are sent to the cloud in order to be processed, analysed, or modelled in order to build smart applications. Because IoT devices usually don't emit data at regular intervals, IoT time series data is highly irregular regarding their sampling rate within as well as across devices.

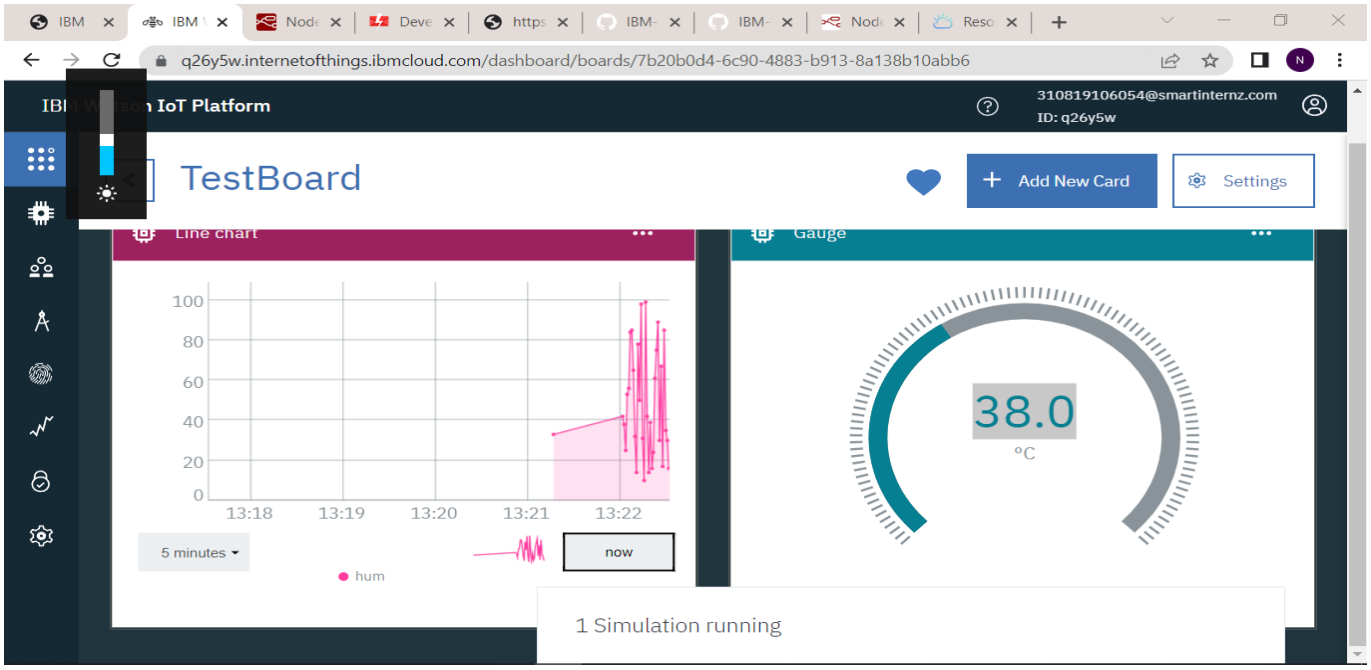
Name: - Gas Leakage Monitoring and Alerting System for Industries.
Device Type: Detecting the leakage of the gas in industry
Kind: Sensor
Producer: By the rate of leakage
Frequency: Every time when the leakage is detected.

5.Building Project:

5.1 Connecting IoT Simulator to IBM Watson IoT Platform:

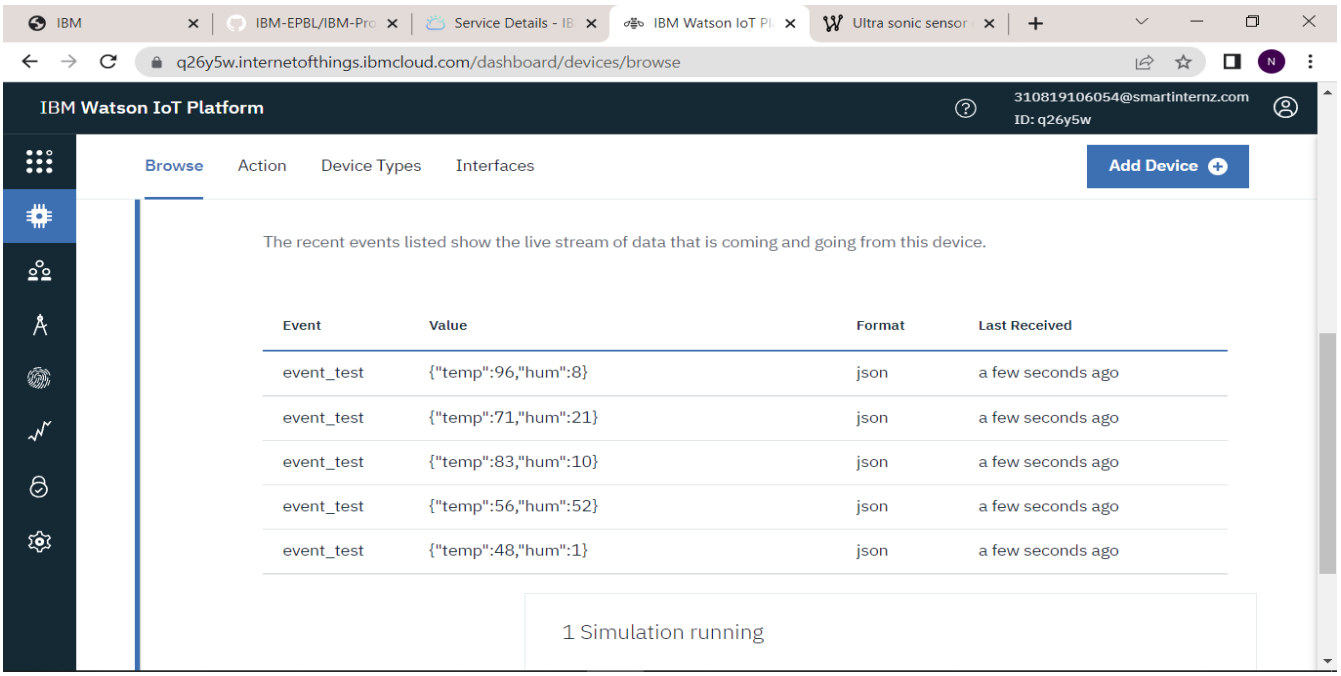
- Open link provided in above section 4.3
- Give the credentials of your device in IBM Watson IoT Platform
- Click on connect
- My credentials given to simulator are:

Organization ID: q26y5w
Device Type: TestDeviceType
Device ID: 2022
Authentication Method: use-token-auth
Authentication Token: uu(rZQw9292EfSFGDX



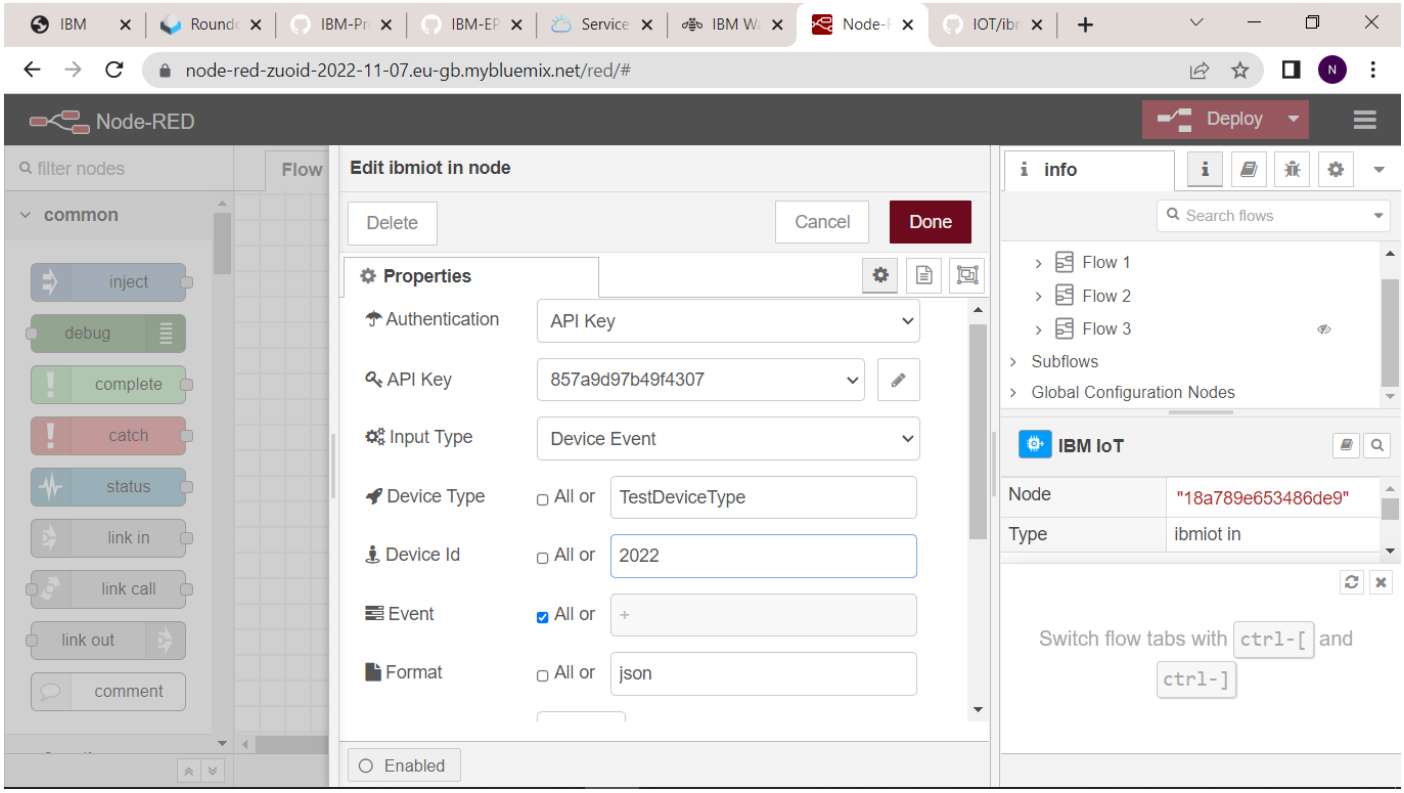
You can see the received data in graphs by creating cards in Boards tab

- You will receive the simulator data in cloud
- You can see the received data in Recent Events under your device
- Data received in this format(json)



5.2 Configuration of Node-Red to collect IBM cloud data:

The node IBM IoT App In is added to Node-Red workflow. Then the appropriate device credentials obtained earlier are entered into the node to connect and fetch device telemetry to Node-Red.



Once it is connected Node-Red receives data from the device

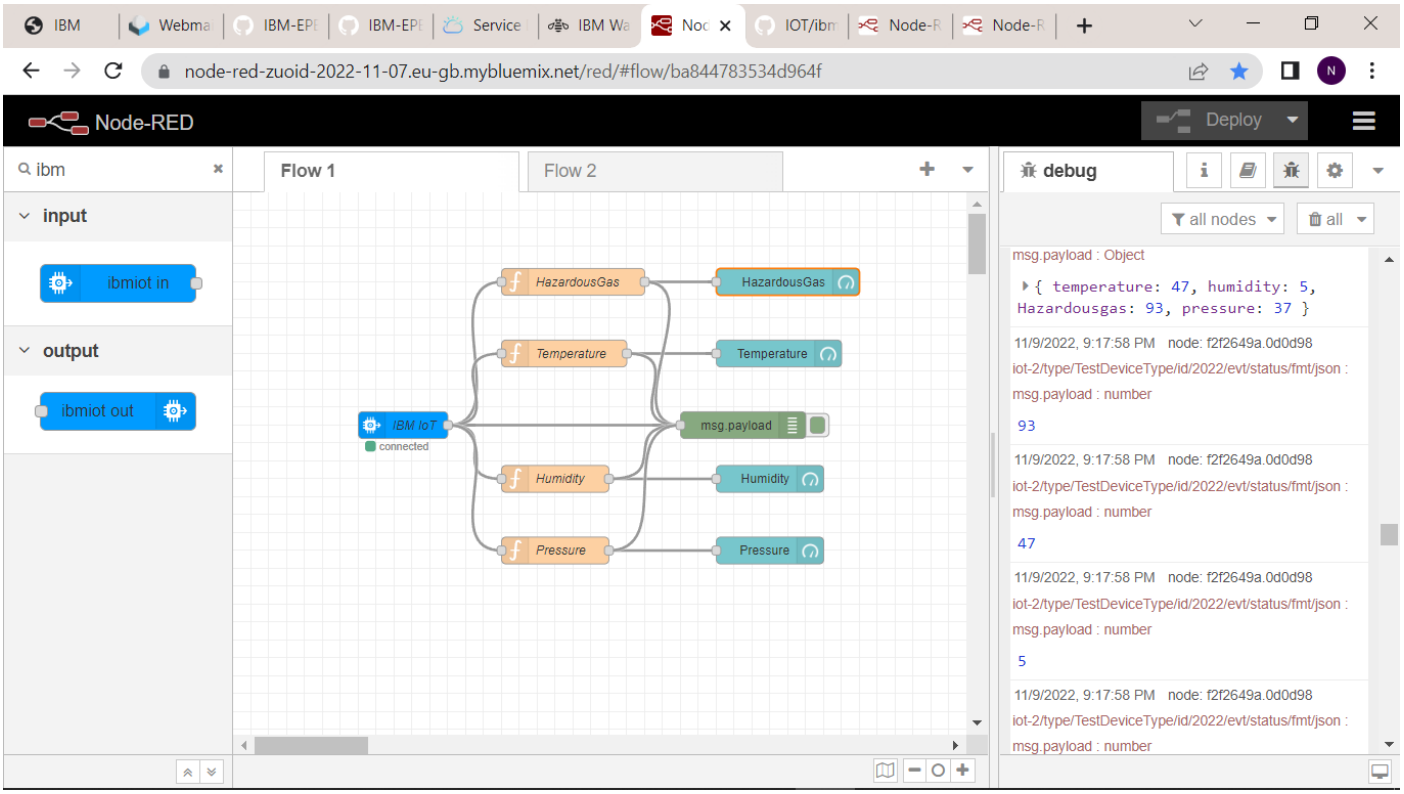
Display the data using debug node for verification

Connect function node and write the Java script code to get each reading separately.

The Java script code for the function node is

Type msg.payload=msg.payload.Temperature
Type msg.payload=msg.payload.Humidity
Type msg.payload=msg.payload.HazardousGas
Type msg.payload=msg.payload.d.Pressure

Finally connect Gauge nodes from dashboard to see the data in UI


node-red-zuoid-2022-11-07.eu-gb.mybluemix.net/red/#flow/ba844783534d964f
Node-RED
Deploy
ibm
input
ibmiot in
output
ibmiot out
Flow 1
Flow 2
HazardousGas
Temperature
Humidity
Pressure
IBM IoT
connected
msg.payload
debug
all nodes
all
msg.payload : Object
{ temperature: 47, humidity: 5, Hazardousgas: 93, pressure: 37 }
11/9/2022, 9:17:58 PM node: f2f2649a.0d0d98
iot-2/type/TestDeviceType/id/2022/evt/status/fmt/json : msg.payload : number
93
47
5