Screenshots of Work And Output

Team ID	PNT2022TMID43411
Team Members	JOTHI KRISHNA T - 715519106018 KARTHIKEYAN A - 715519106020 NITHIYANANTH S - 715519106031 VIPIN L - 715519106059
Project Title	Gas Leakage Monitoring And Alerting System For Industries

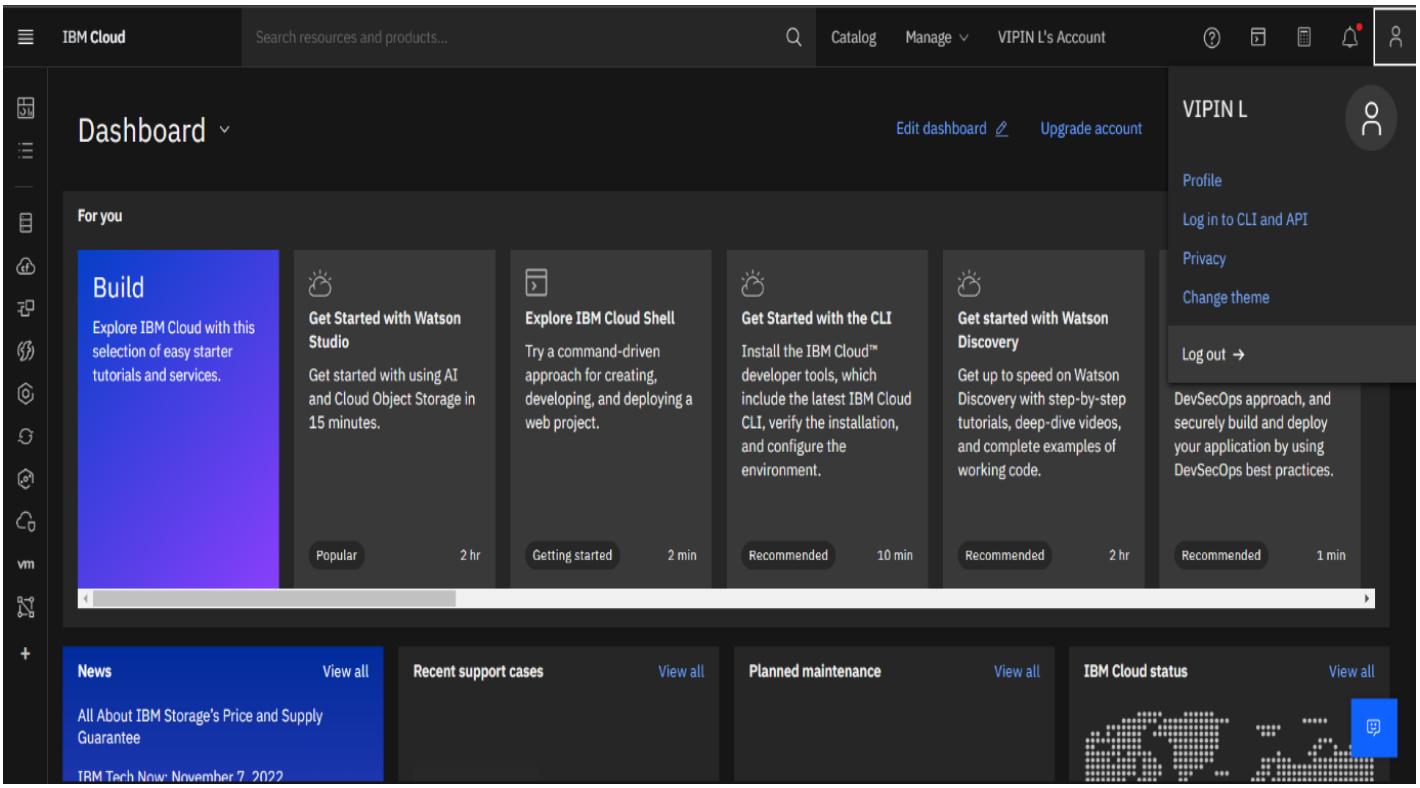
IBM Cloud Services

IBM Cloud Services:

IBM is one of the large cloud computing providers on the planet. The “IBM Cloud” label is an umbrella category that encompasses its hardware, software and services for helping enterprises build private clouds. Protecting the company’s data is critical. Cloud storage with automated backup is scalable, flexible and provides peace of mind.

IBM Cloud Accounts:

VIPIN L – 715519106059



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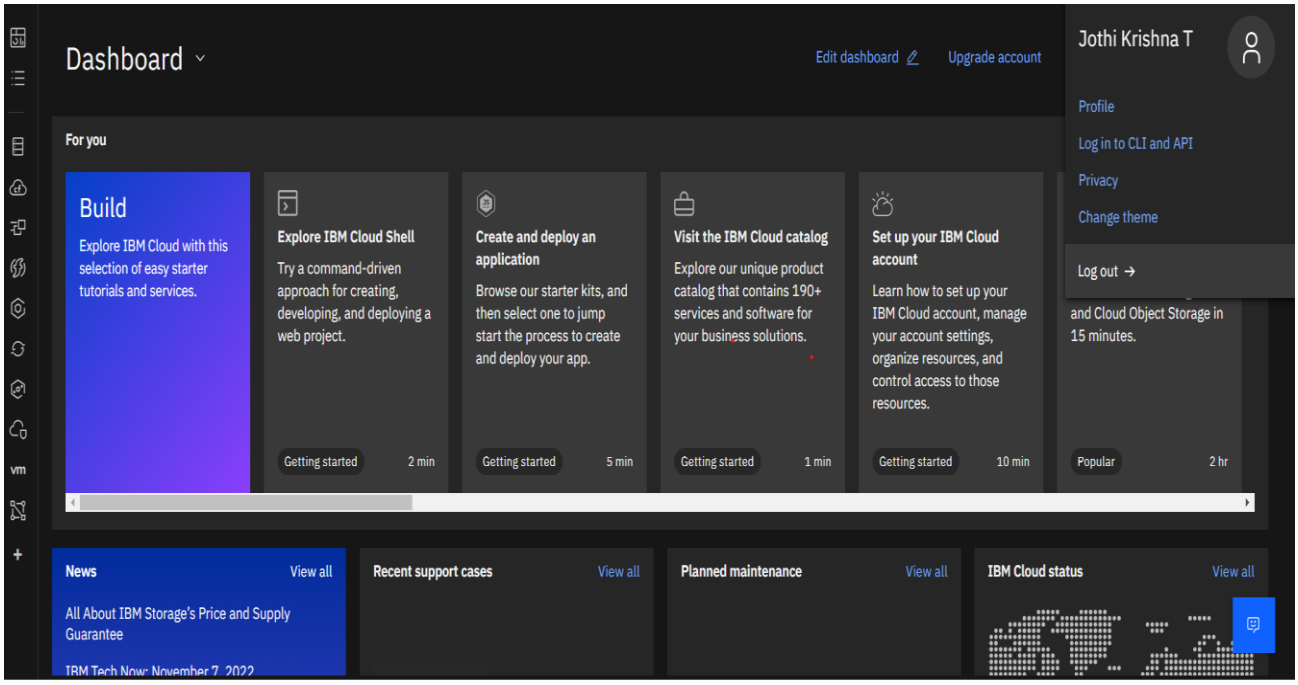

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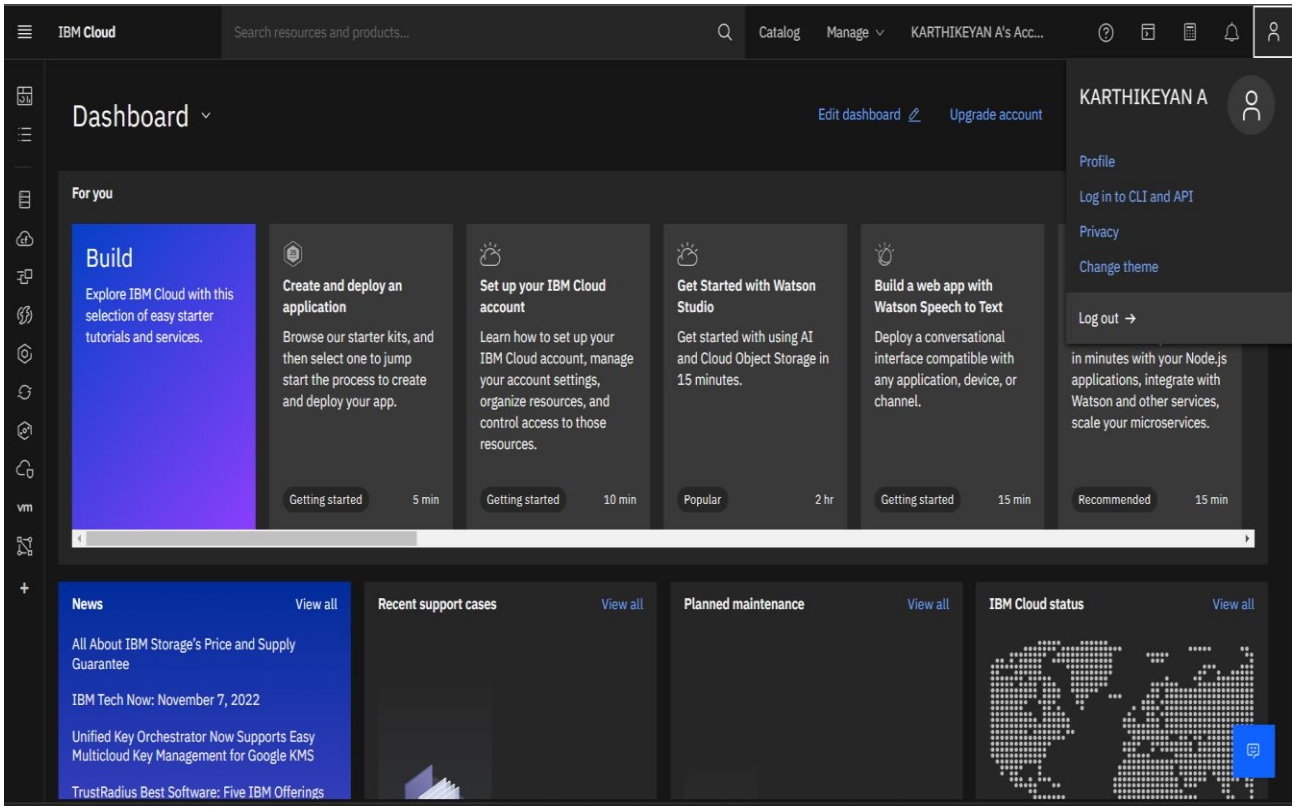

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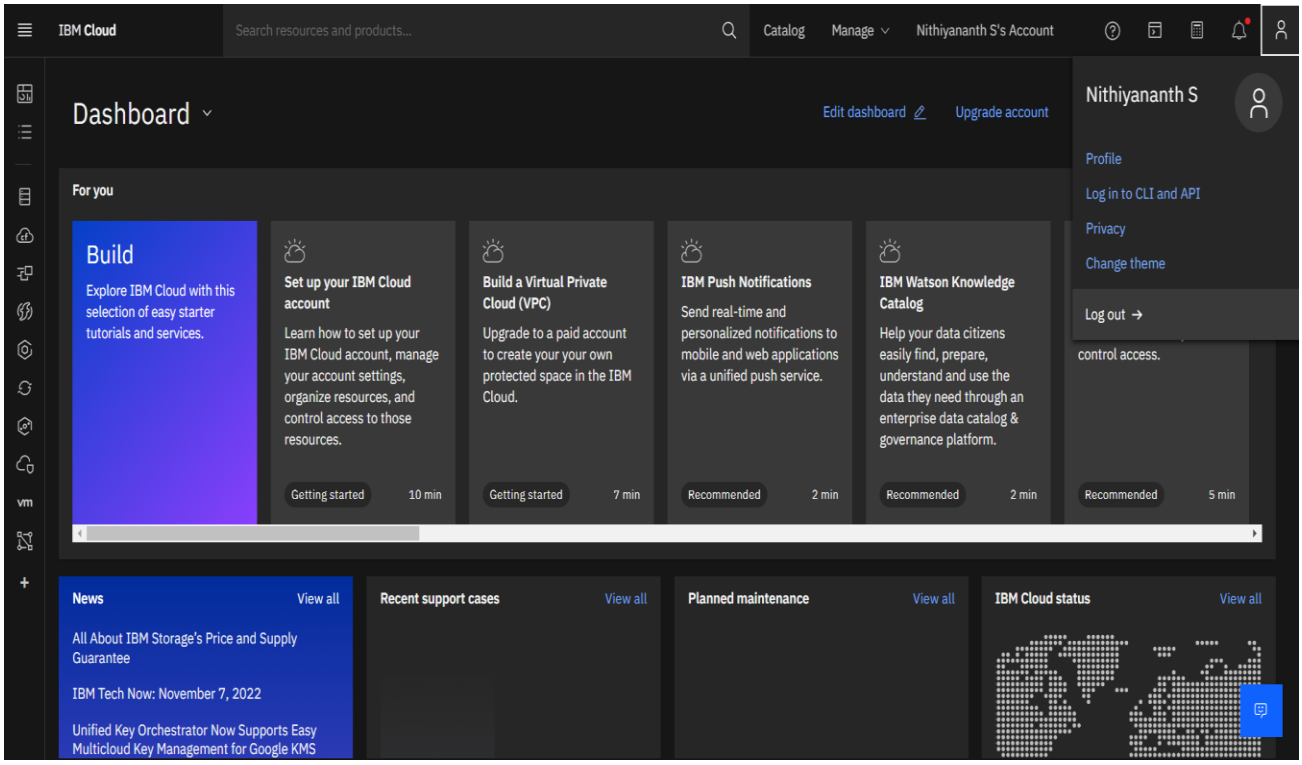
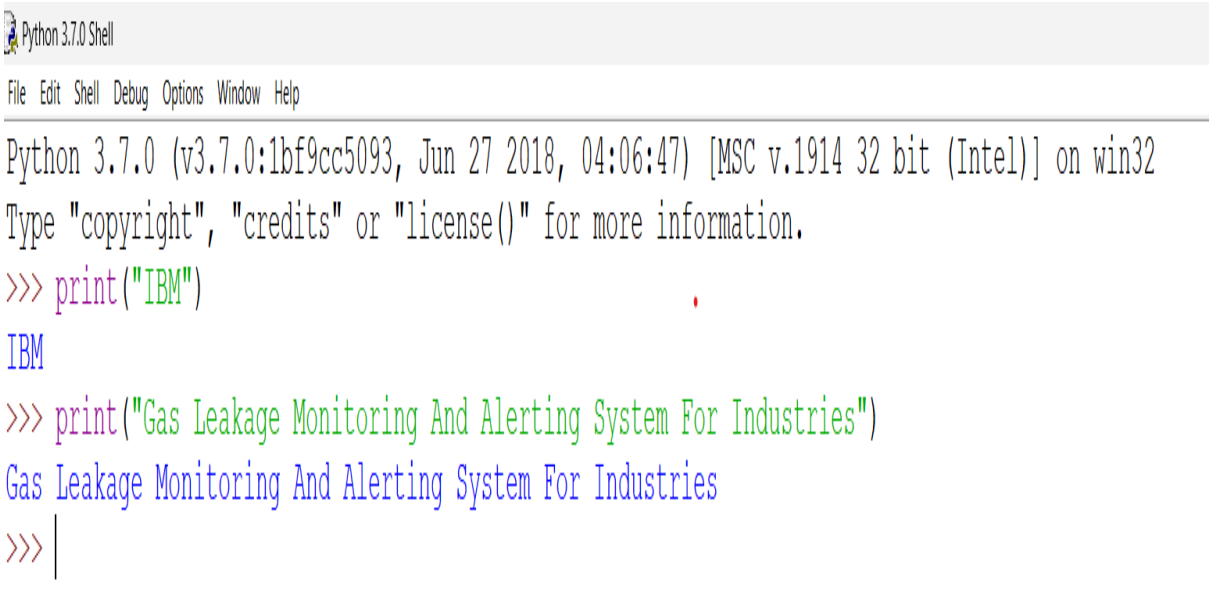
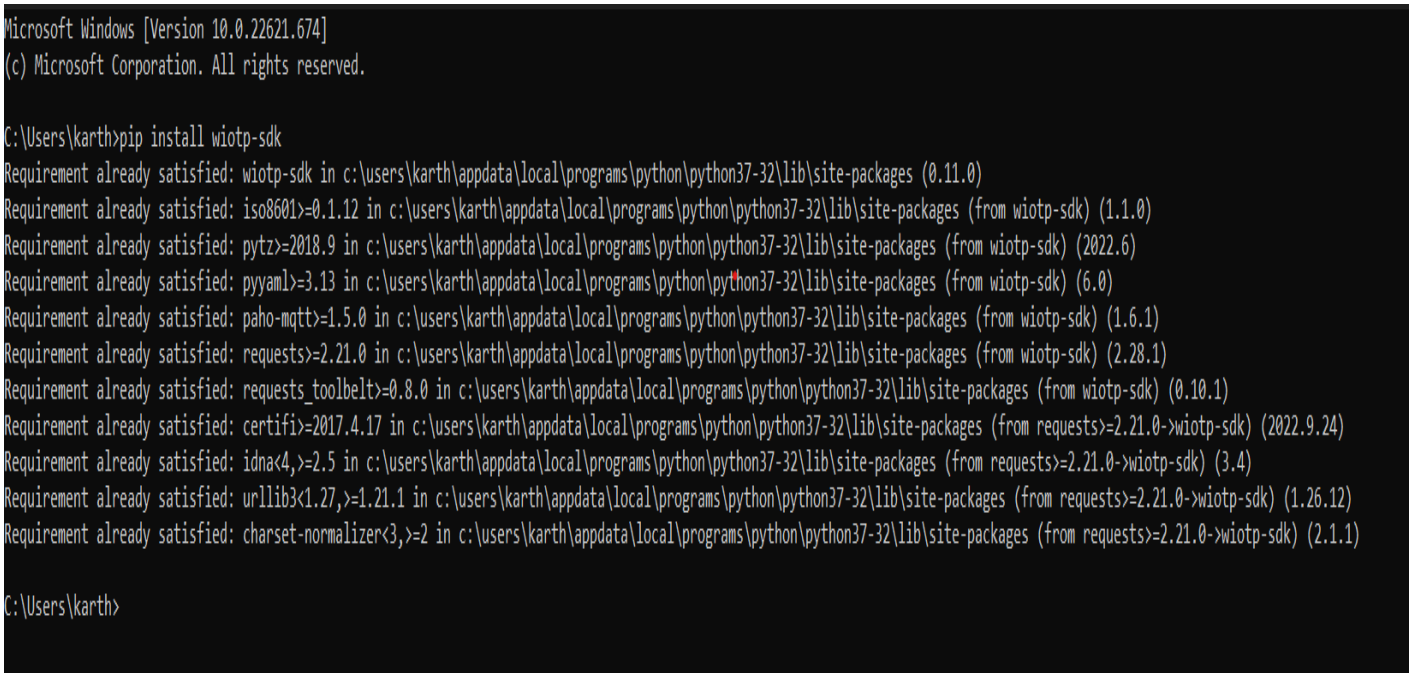


SOFTWARE:



Libraries to integrate with IBM Cloud Services:

pip install wiotp-sdk
pip install requests
pip install paho.mqtt
pip install ibmiotf
pip install opencv-python
python -m pip install pip
pip install numpy
pip install--upgrade "ibm-watson>-6.1.0"



Create The IBM Watson IOT Platform And A Device

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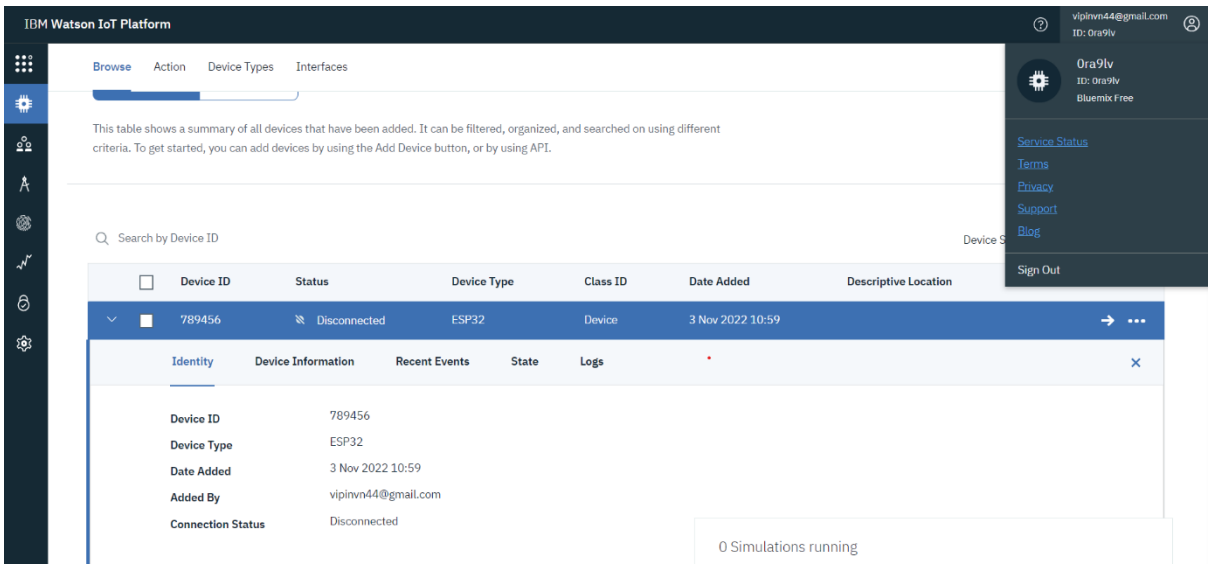

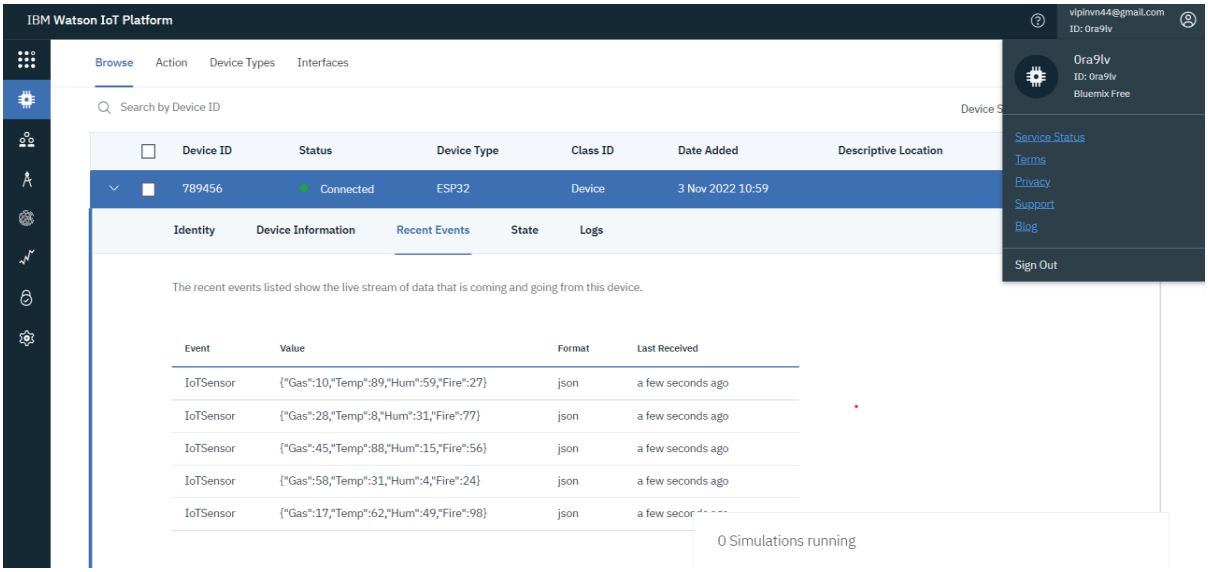

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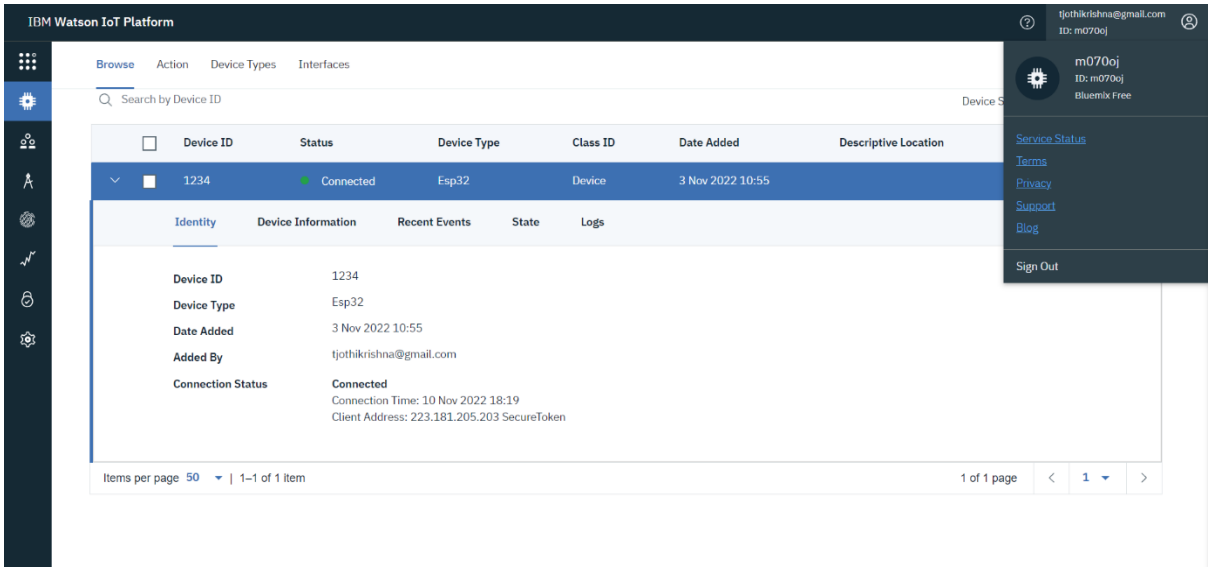

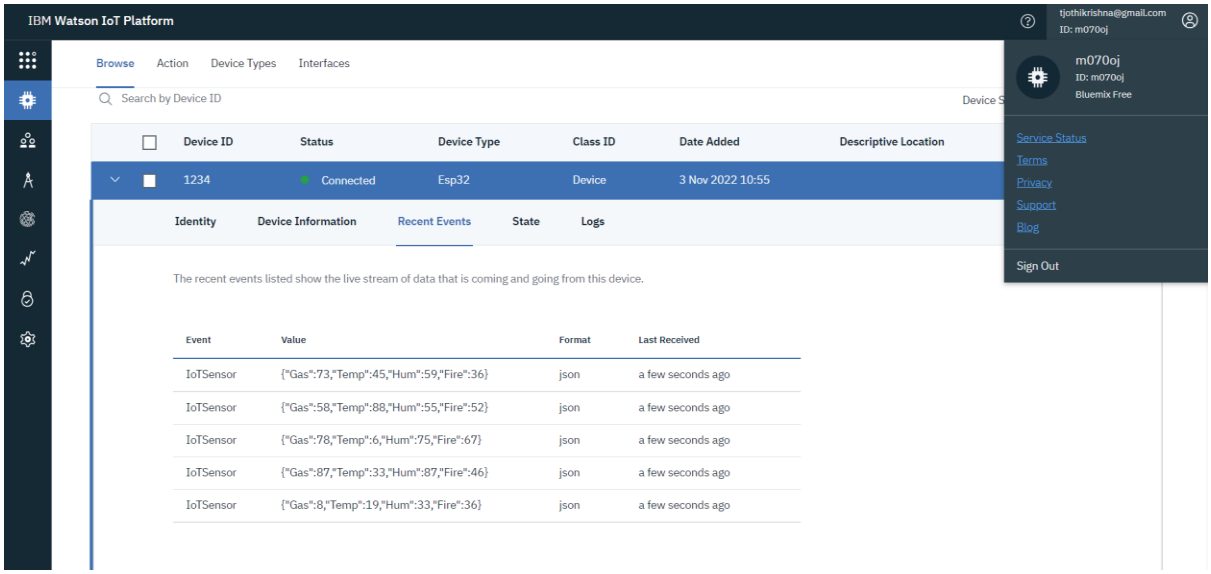

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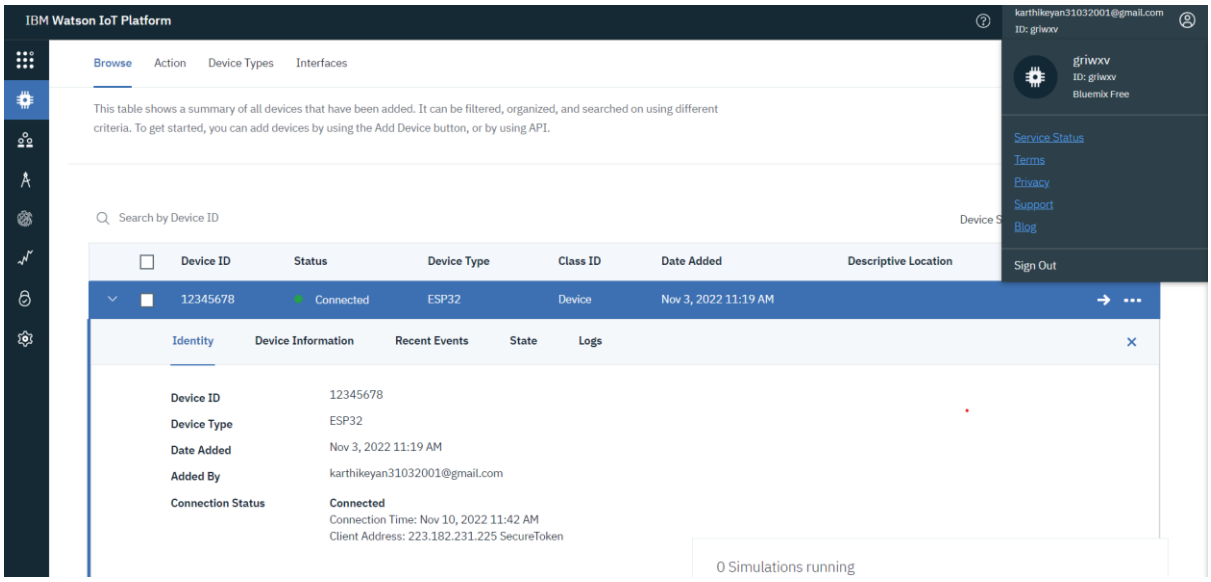
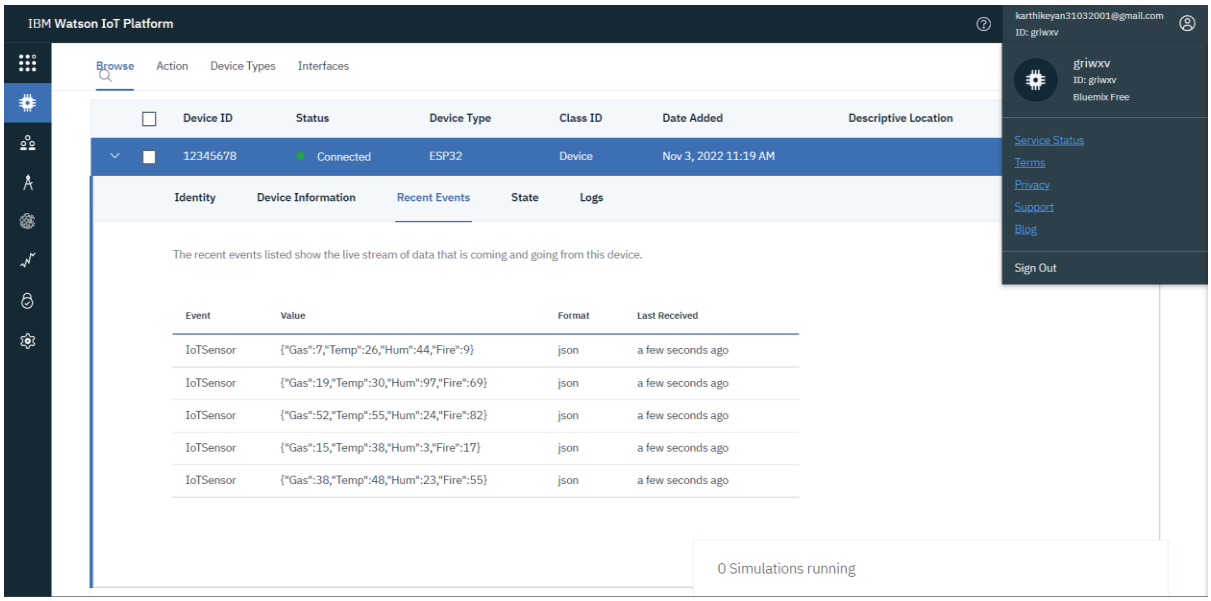
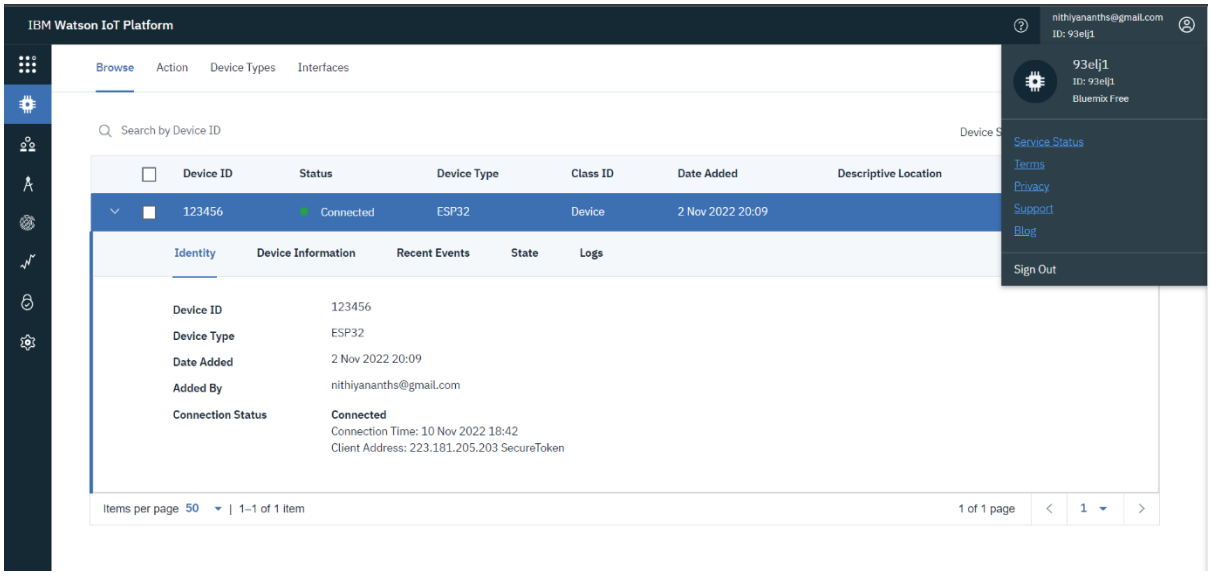
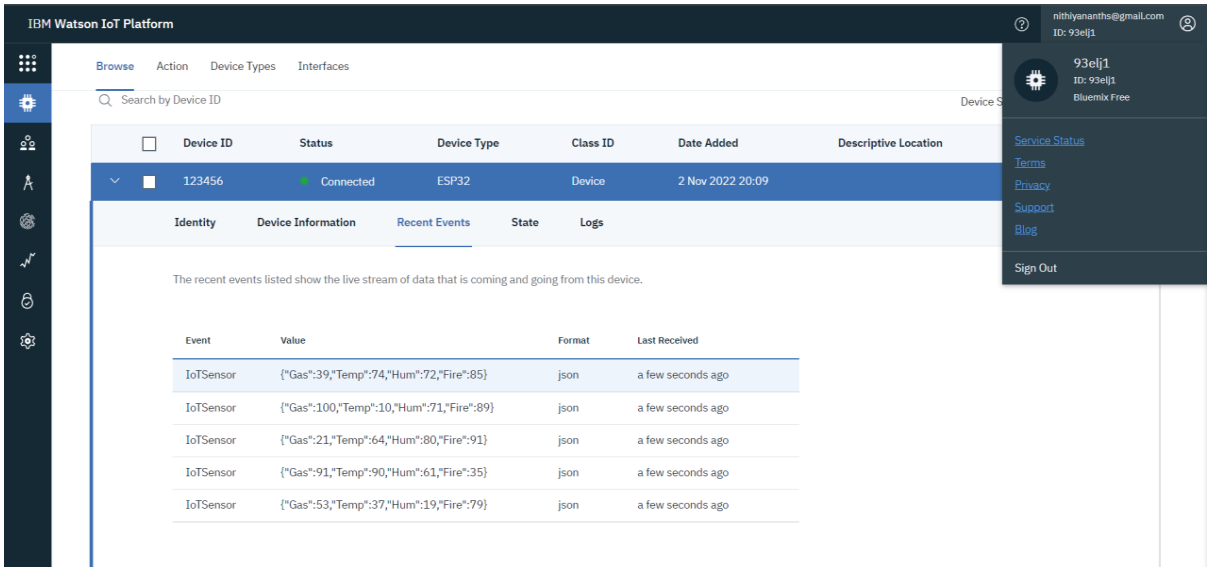




NITHIYANANTH S – 715519106031





Create Node-RED Service

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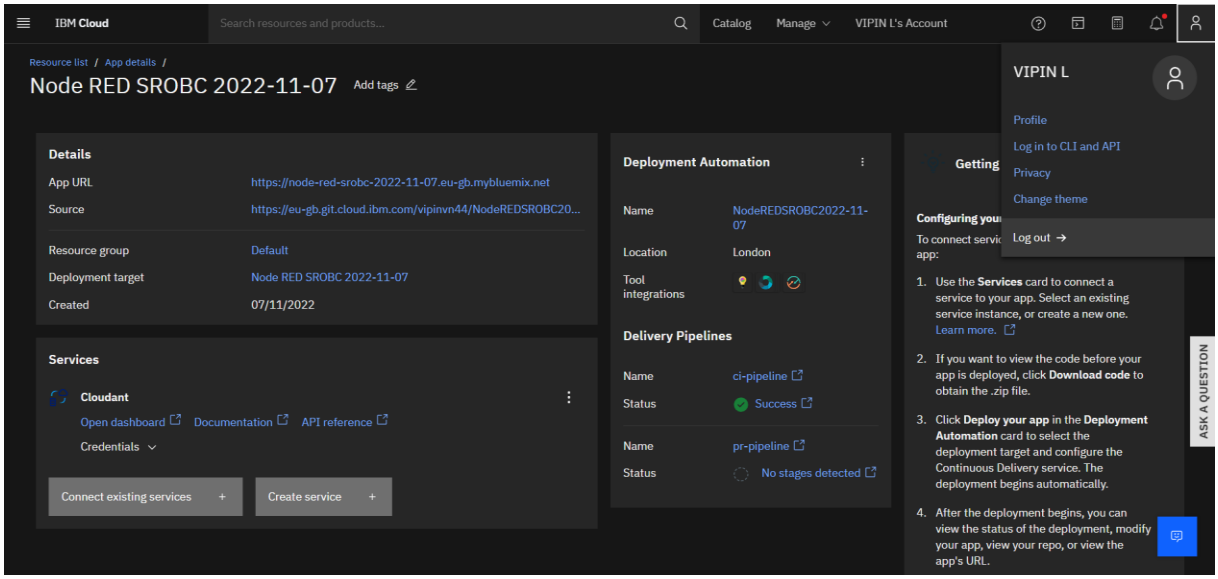
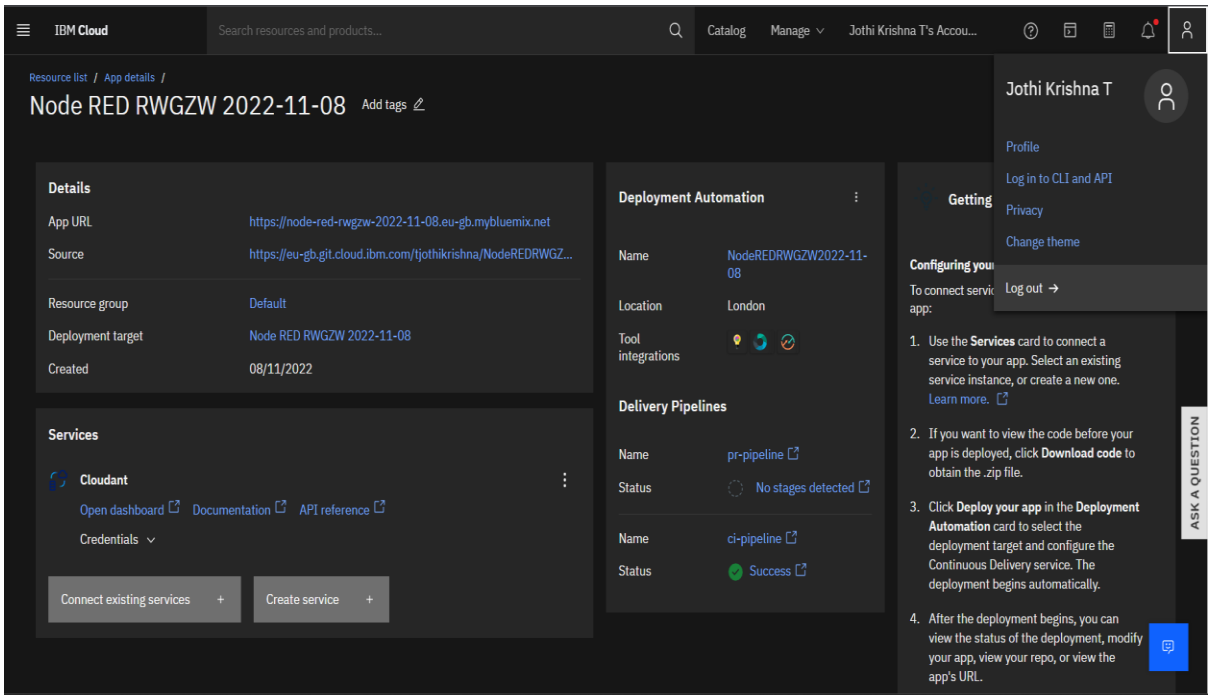


JOTHI KRISHNA T – 715519106018



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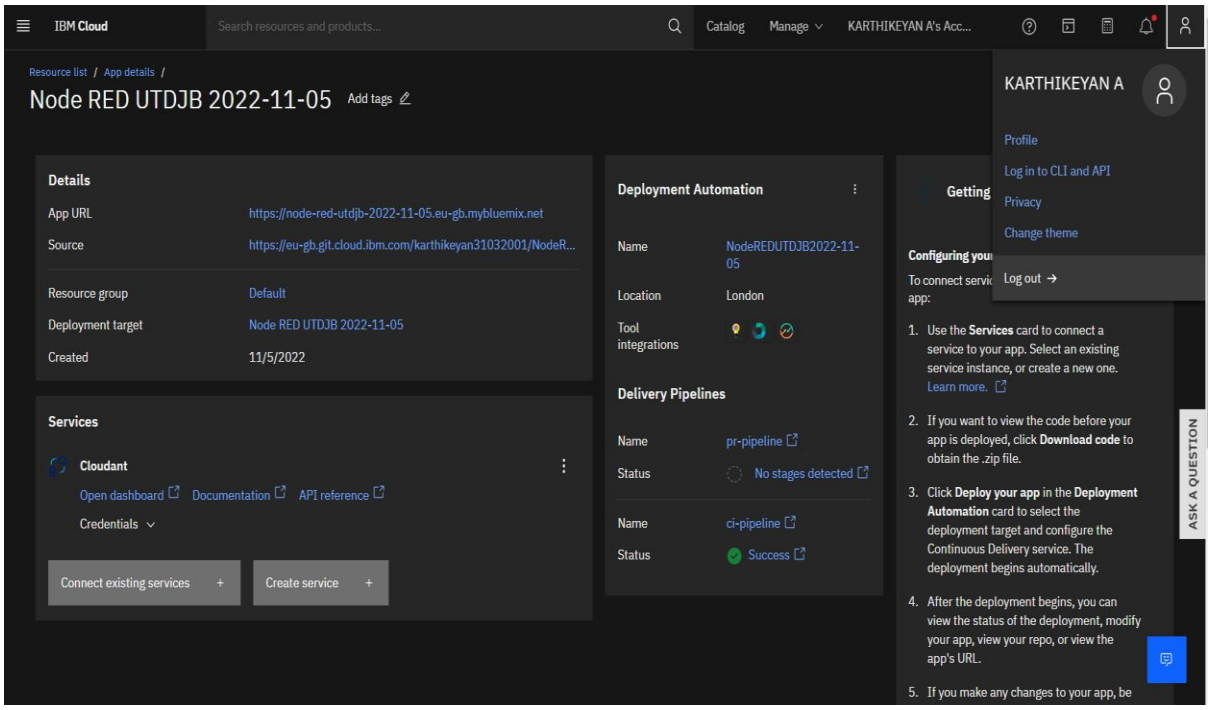

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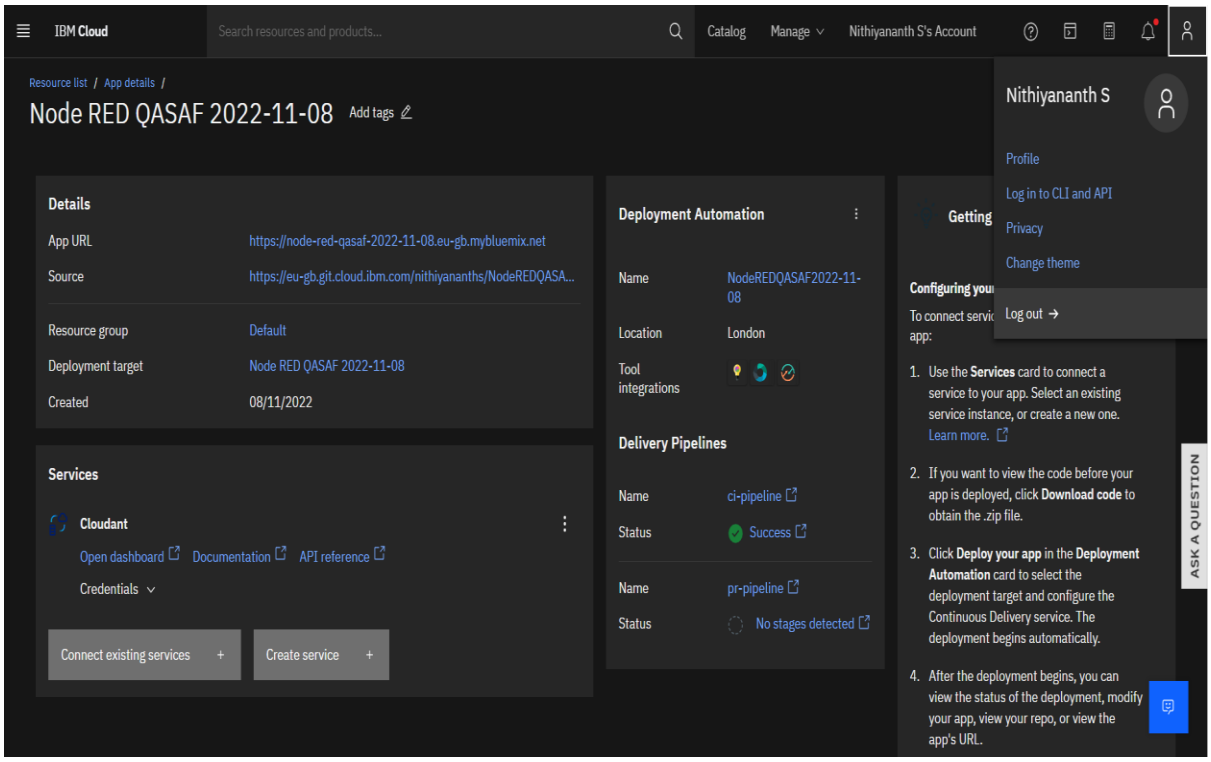
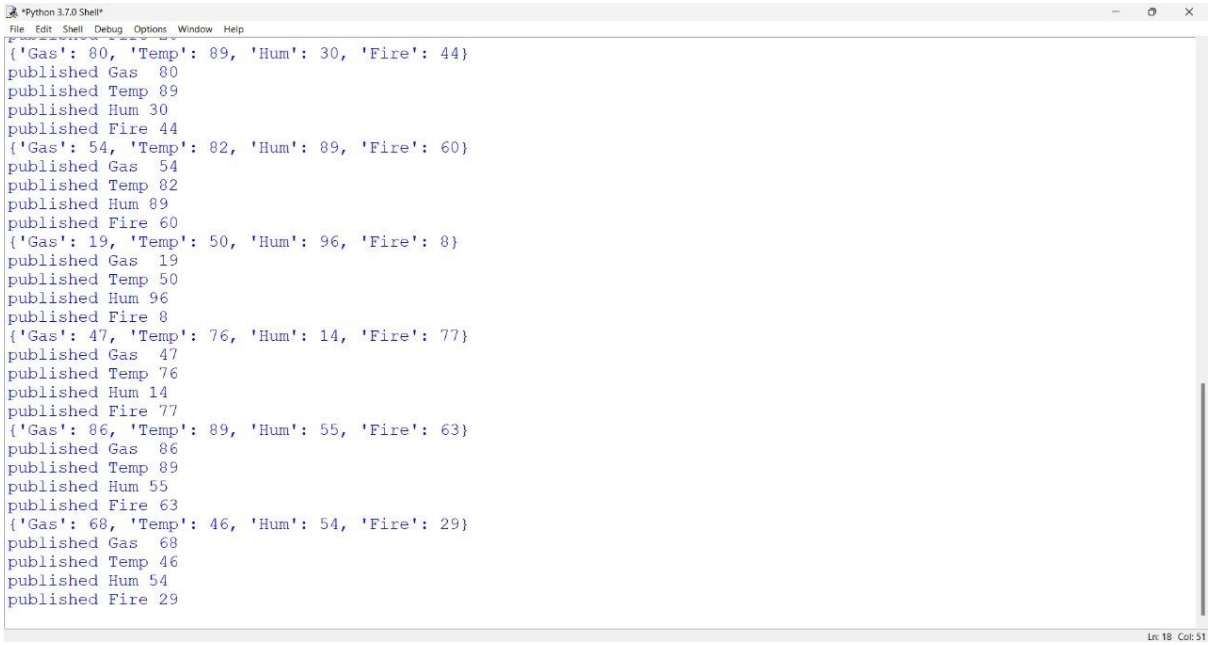


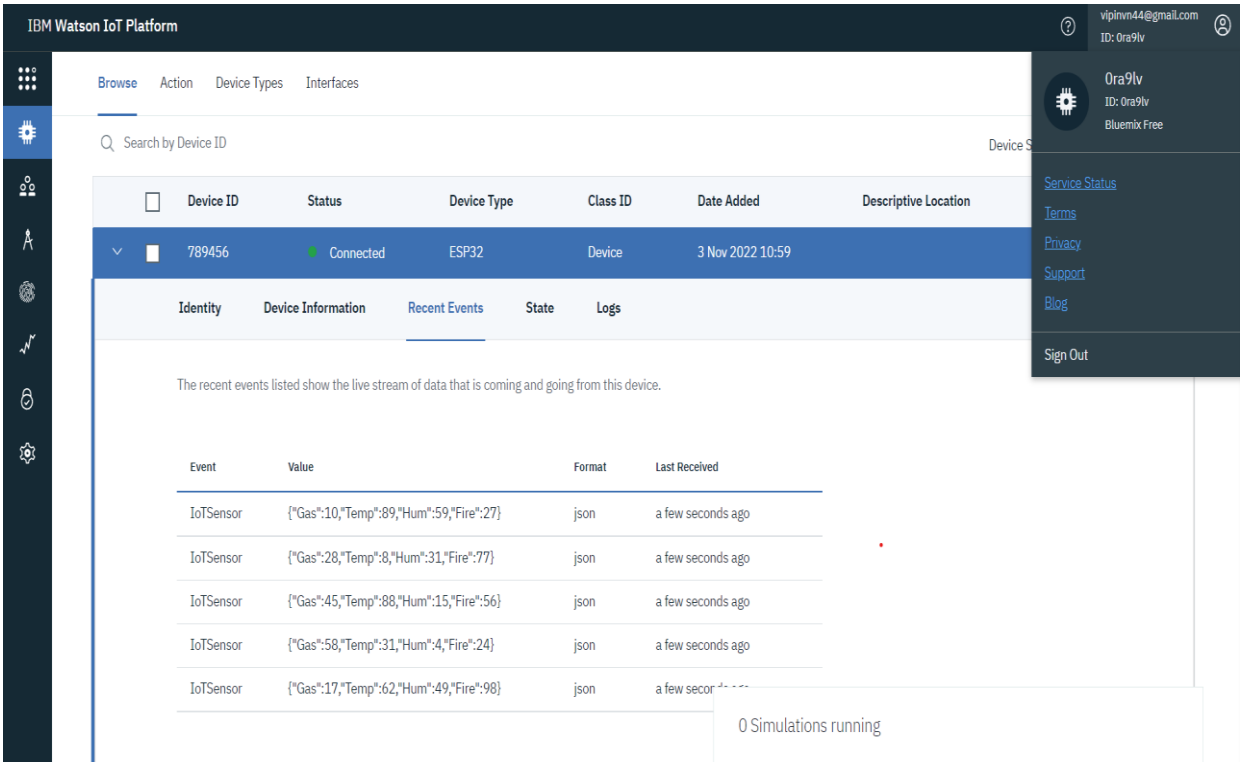
The output obtained from the python code is:



The data has been published to the IBM cloud. Thus in the python script, the values for the gas, temperature, humidity and fire have been generated and published to IBM cloud platform.

This is achieved by importing the required libraries in the python script and also specifying the organization, deviceType, deviceid, authMethod and authToken to integrate with the specific cloud account, so that the data will be published to IBM cloud platform.

VIPIN L - 715519106059



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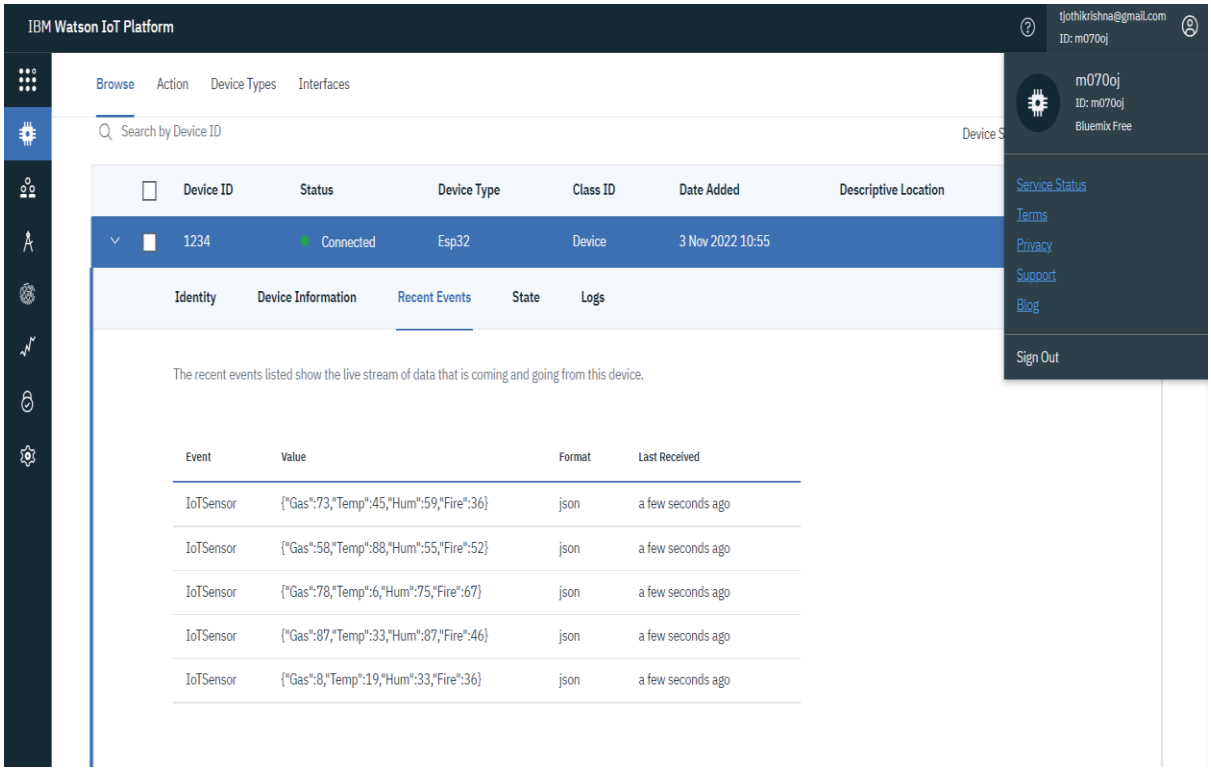

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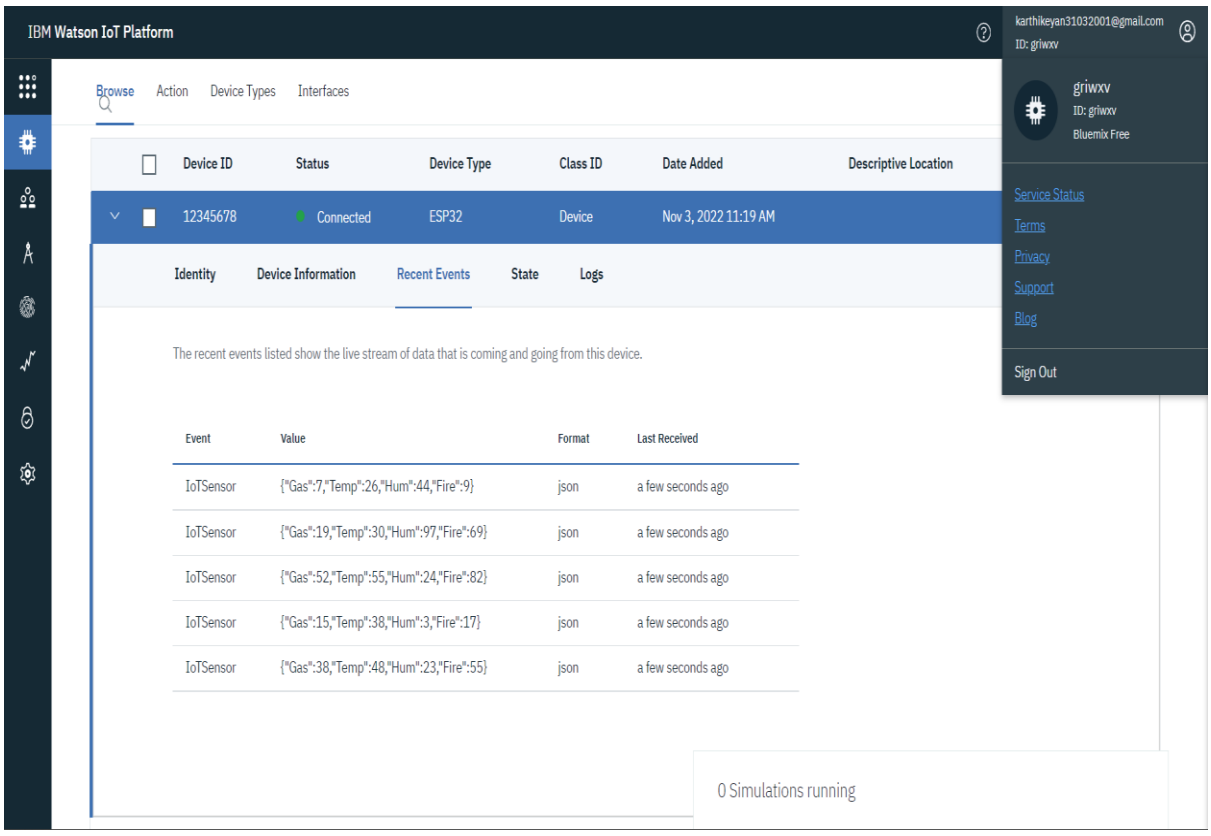

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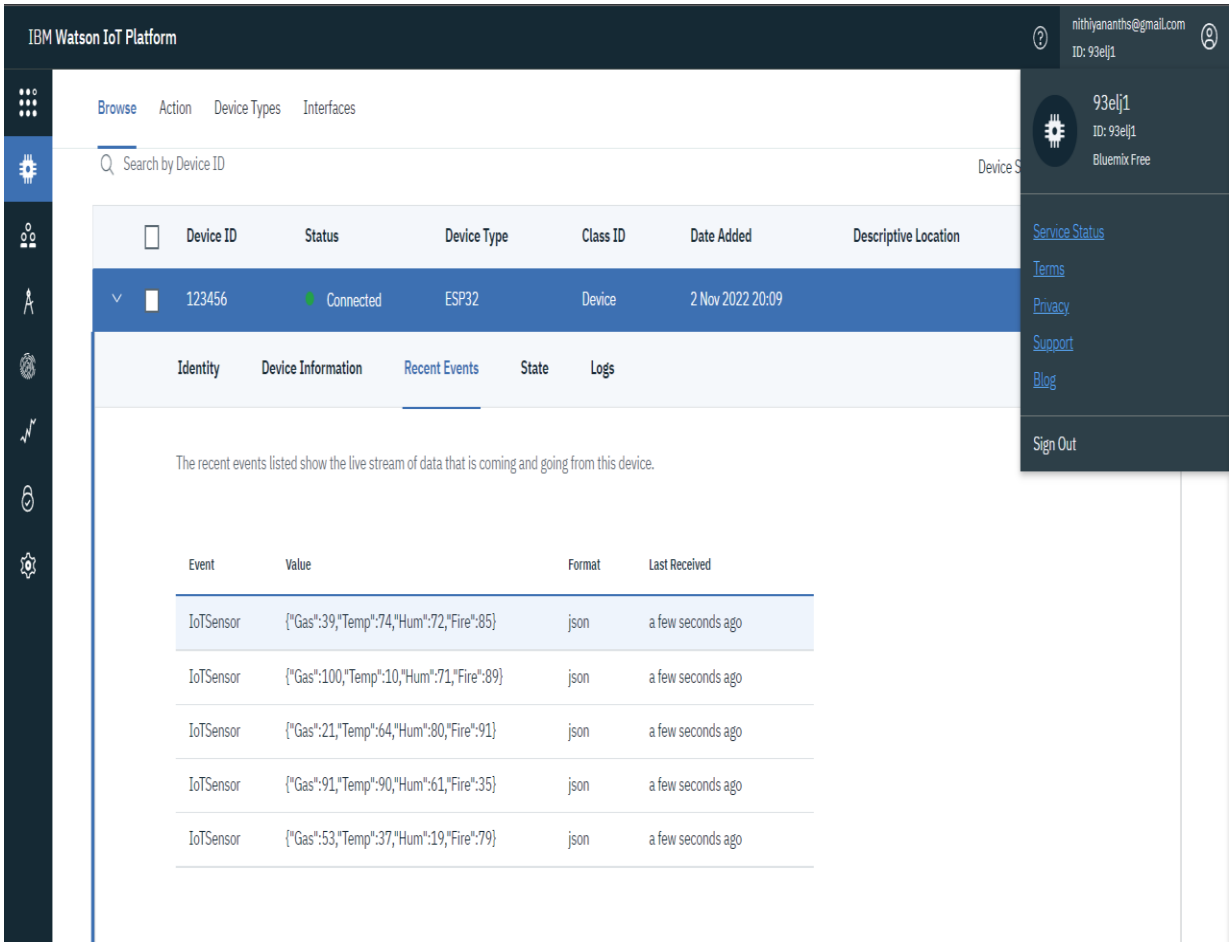
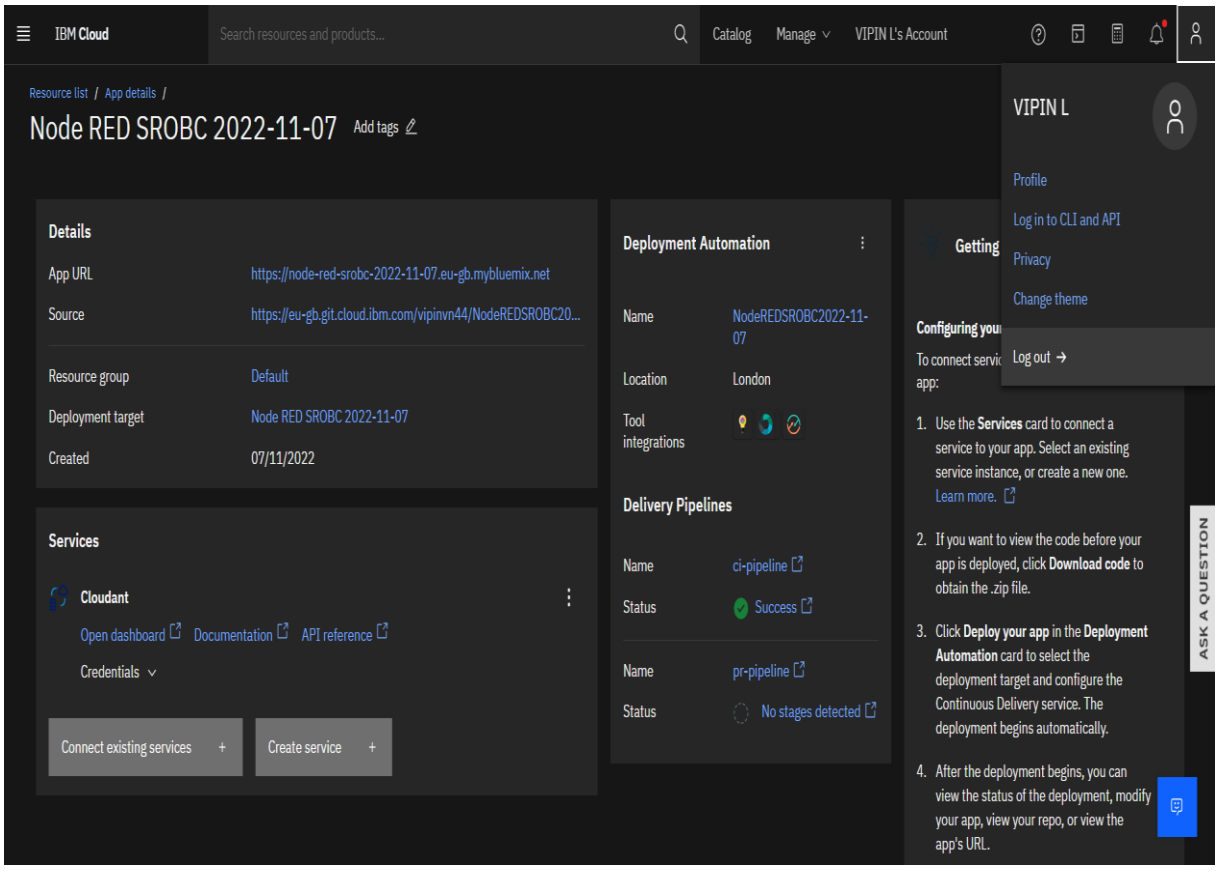


Dashboard Nodes For Creating UI

And Develop The Web Application Using Node-RED

VIPIN L - 715519106059



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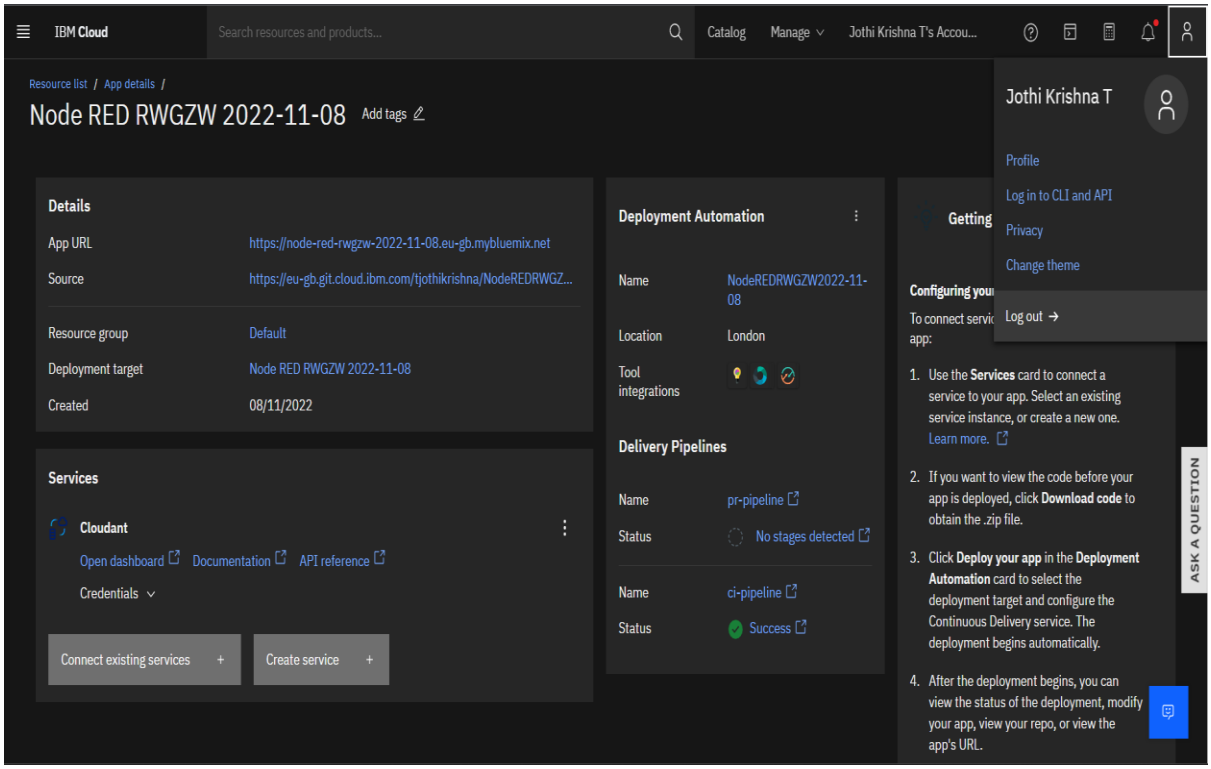

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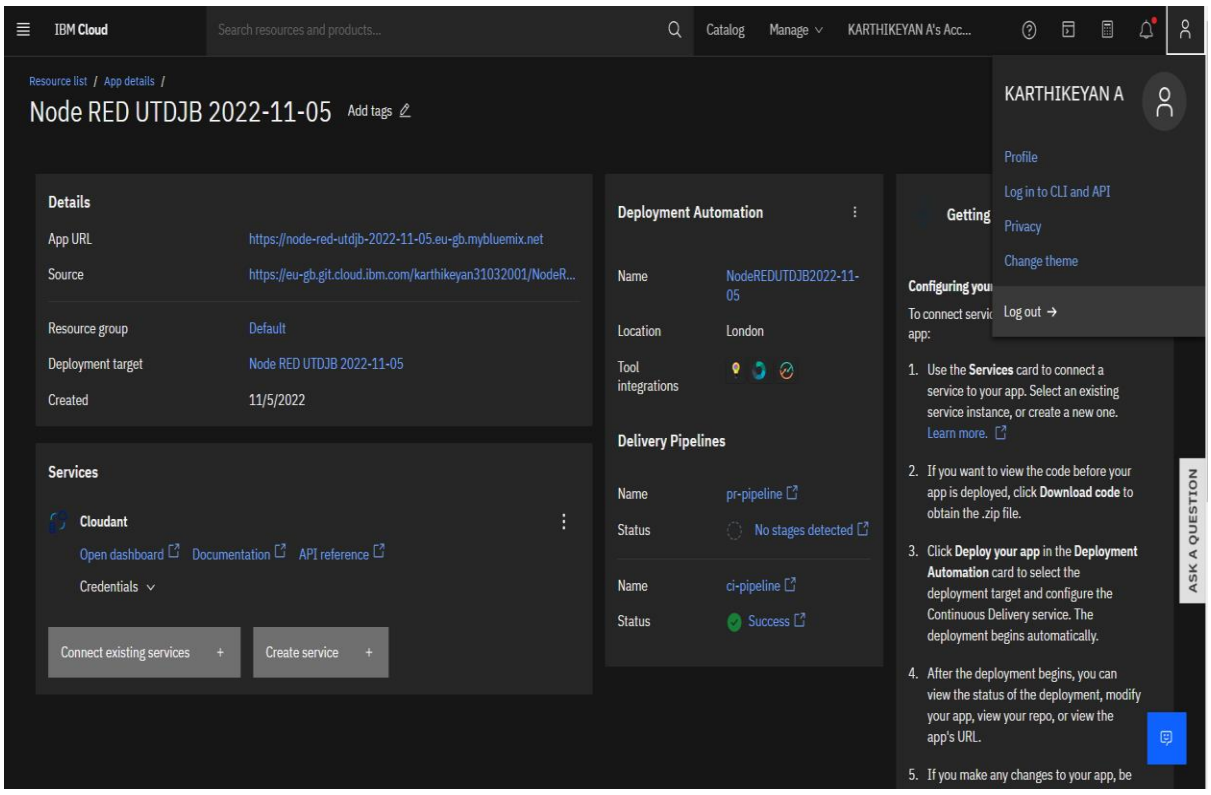

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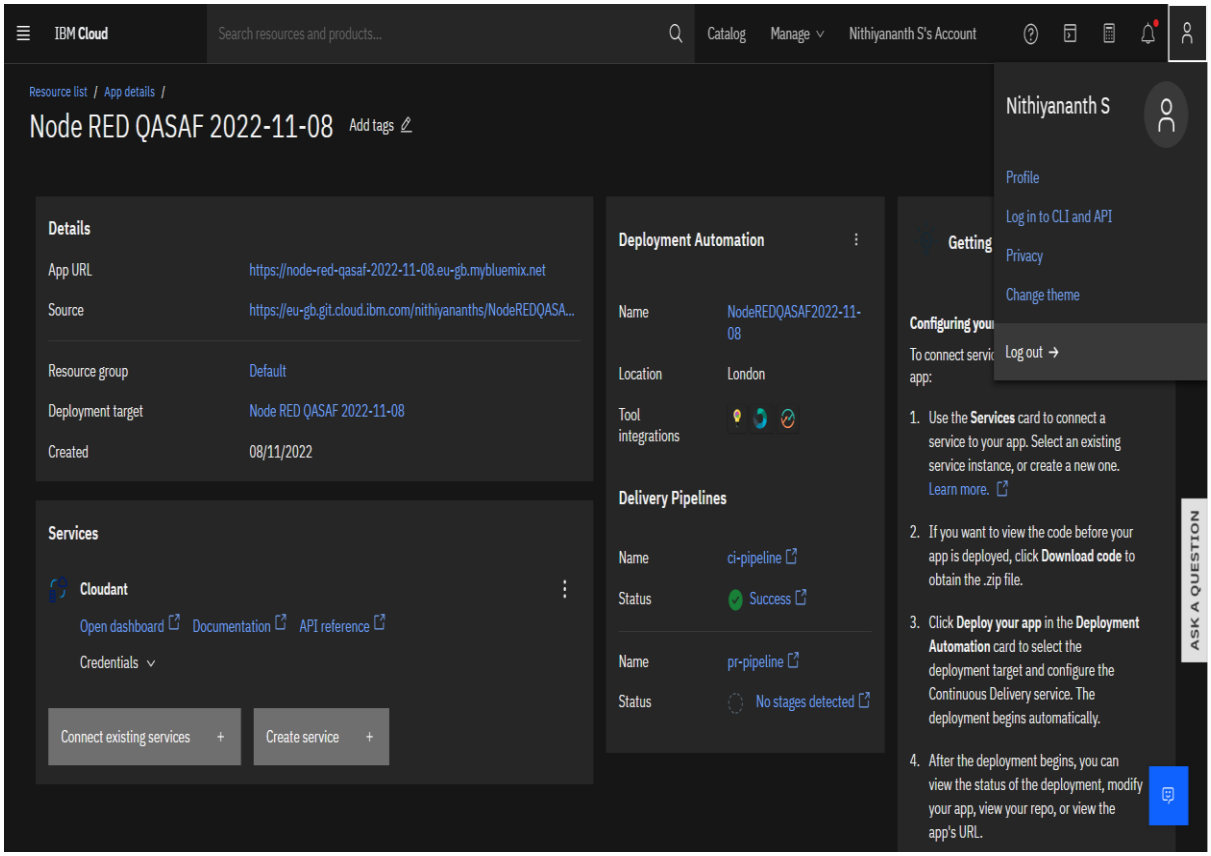
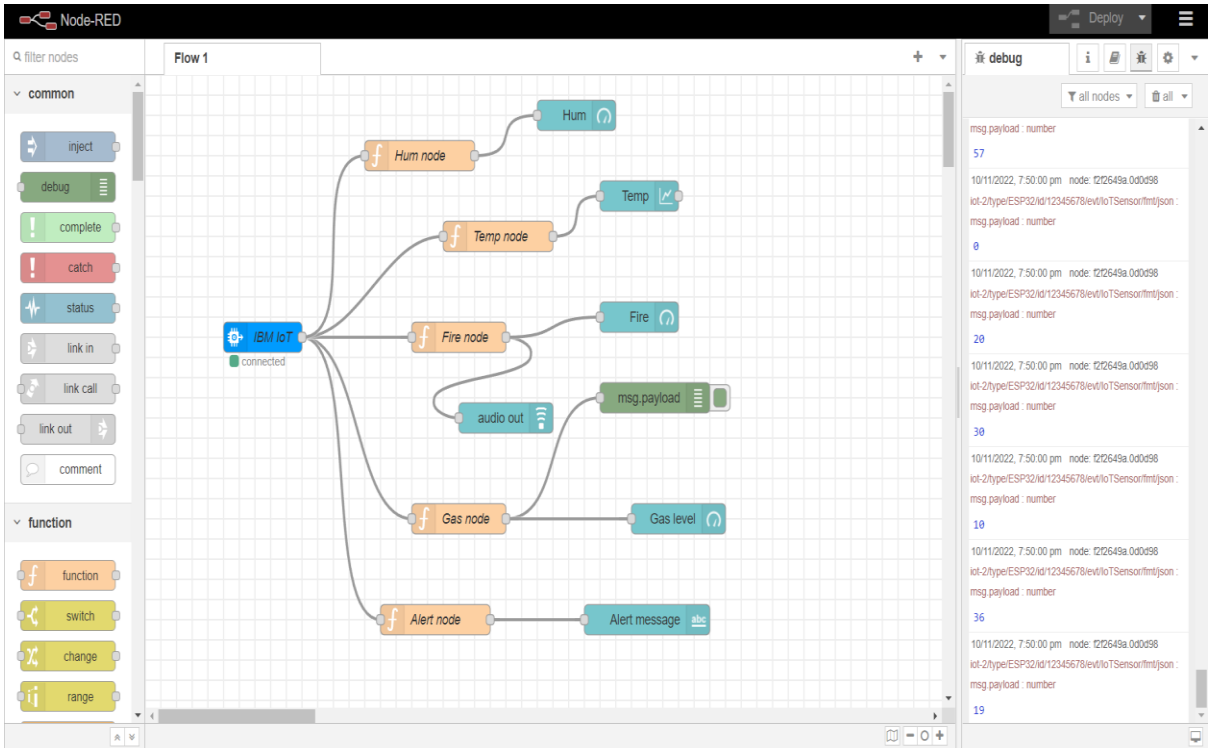
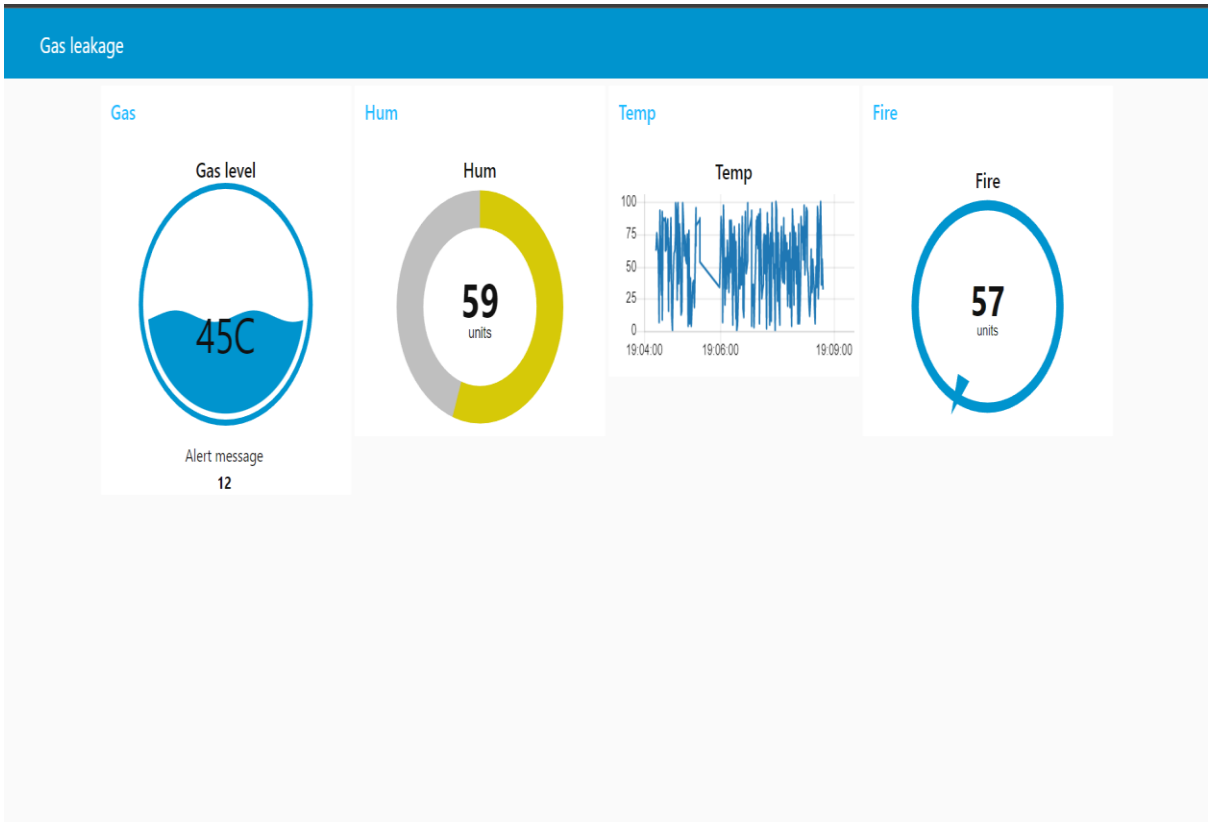



Node-RED
Deploy
filter nodes
Flow 1
debug
common
inject
debug
complete
catch
status
link in
link call
link out
comment
function
function
switch
change
range
Hum
Hum node
Temp
Temp node
IBM IoT
connected
Fire node
Fire
audio out
msg.payload
Gas node
Gas level
Alert node
Alert message
all nodes
all
msg.payload : number
57
10/11/2022, 7:50:00 pm node: f2f2649a.0d0d98
iot-2/type/ESP32/id/12345678/evt/IoTSensor/fmt/json : msg.payload : number
0
20
30
10
36
19


Gas leakage
Gas
Gas level
45C
Alert message
12
Hum
Hum
59
units
Temp
Temp
100
75
50
25
0
19:04:00
19:06:00
19:09:00
Fire
Fire
57
units