# Project Development Phase

## Sprint-2

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|---|---|
| Date | 05 November 2022 |
| Team Id | PNT2022TMID30274 |
| Project Name | Gas Leakage Monitoring & Alerting System for Industries |

In this sprint, we are getting the Data from python Code for random sensor data of Hazardous gas levels

Solution:

```
import wiotp.sdk.device

import time

import random

myConfig = {

  "identity": {

    "orgId": "b31tni",

    "typeId": "print1",

    "deviceId":"printid"

  },

  "auth": {

    "token": "z?7tcRfcekcO08R6f2"

  }

}
```

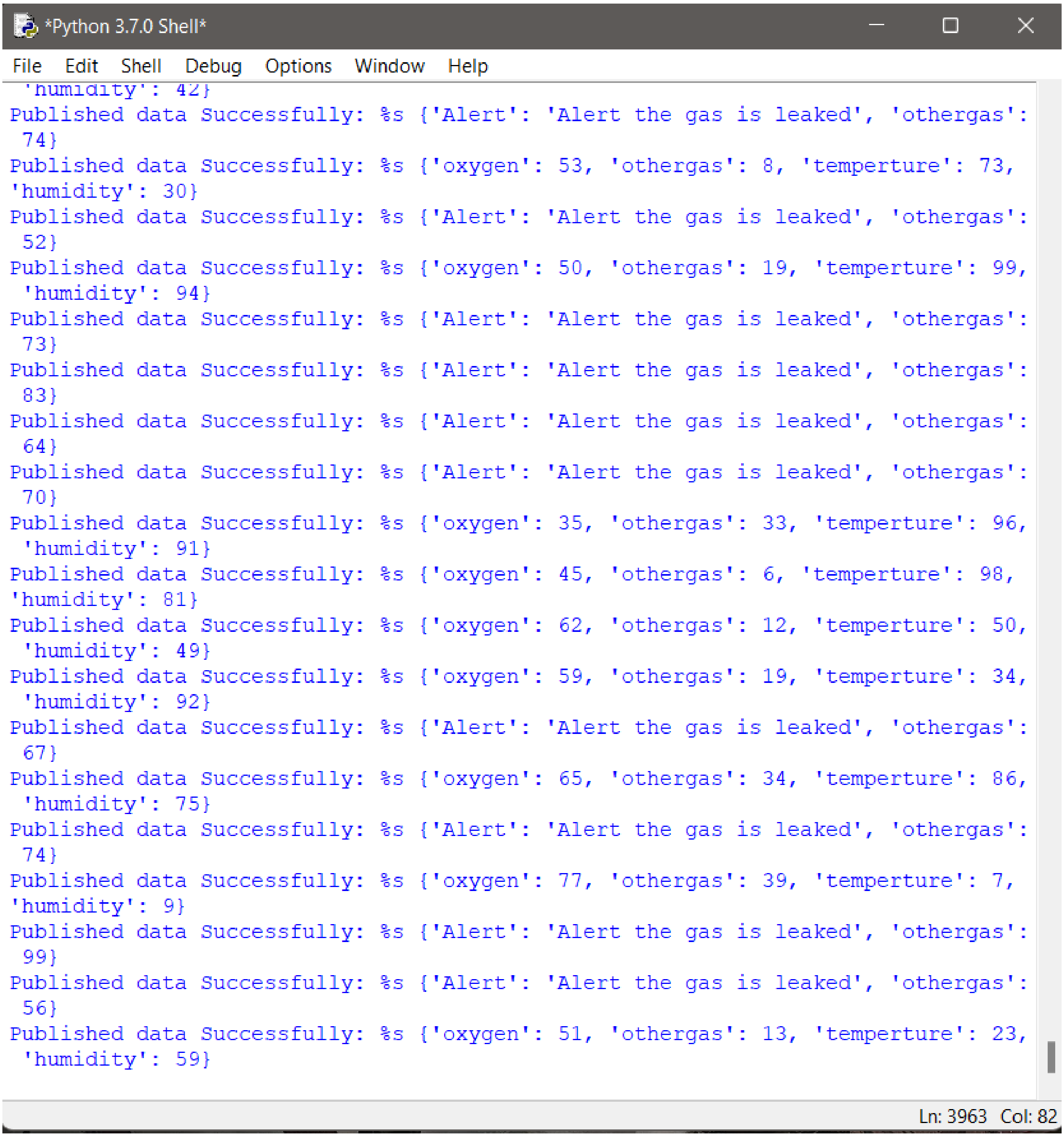
```
def myCommandCallback(cmd):
   print("Message received from IBM IoT Platform: %s" %
cmd.data['command'])
   m=cmd.data['command']


client = wiotp.sdk.device.DeviceClient(config=myConfig,
logHandlers=None)
client.connect()


while True:
   o2=random.randint(25,100)
   def my_function():
      othergas=random.randint(0,100)
      time.sleep(5)
      return othergas
   othergas=my_function()
   temp=random.randint(0,100)
   humidity=random.randint(0,100)
   limit=50
   if(othergas >= limit):
      myData = { 'Alert': "Alert the gas is leaked",'othergas':othergas}
   else:
      myData={'oxygen':o2, 'othergas':othergas,
'temperture':temp,'humidity':humidity}
```

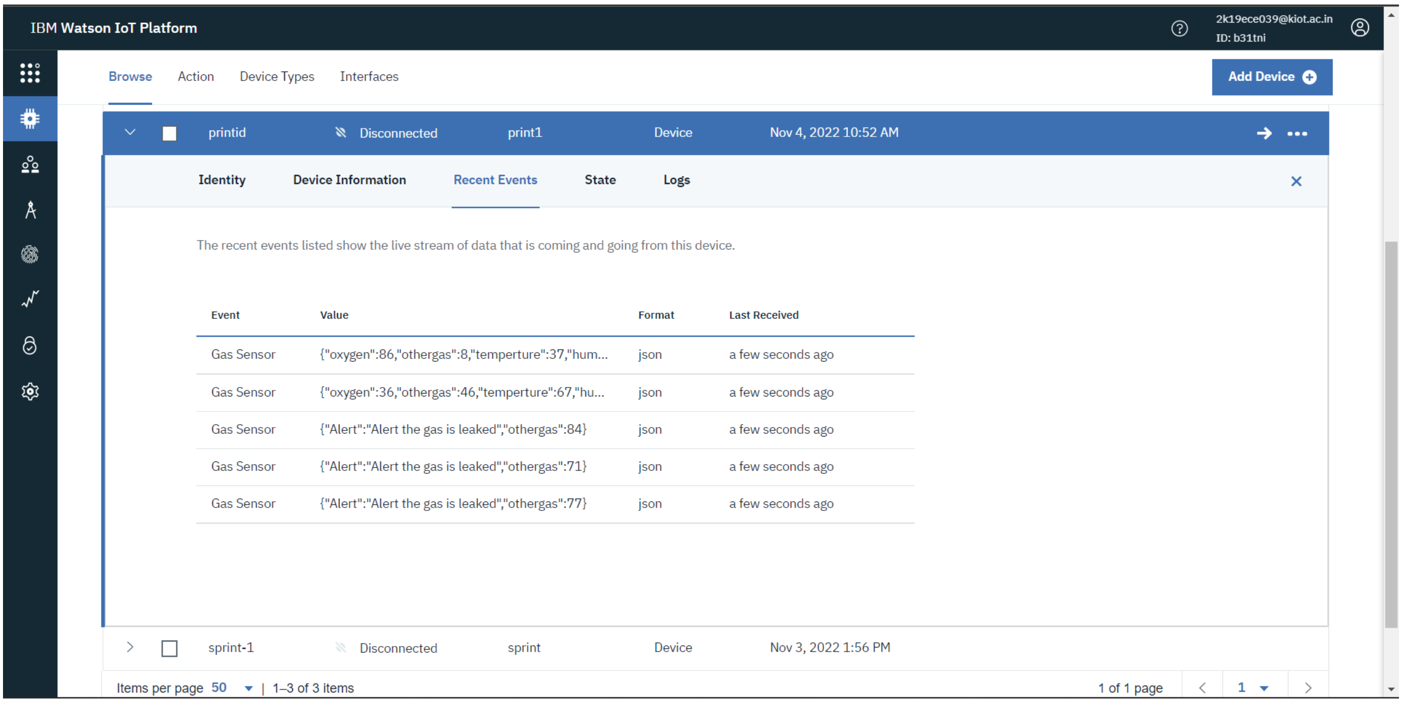
```
    client.publishEvent(eventId="Gas Sensor", msgFormat="json",
data=myData, qos=0, onPublish=None)
    print("Published data Successfully: %s", myData)
    client.commandCallback = myCommandCallback
    time.sleep(5)
client.disconnect()
```

Output:



```
 'humidity': 42}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 74}
Published data Successfully: %s {'oxygen': 53, 'othergas': 8, 'temperture': 73,
'humidity': 30}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 52}
Published data Successfully: %s {'oxygen': 50, 'othergas': 19, 'temperture': 99,
 'humidity': 94}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 73}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 83}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 64}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 70}
Published data Successfully: %s {'oxygen': 35, 'othergas': 33, 'temperture': 96,
 'humidity': 91}
Published data Successfully: %s {'oxygen': 45, 'othergas': 6, 'temperture': 98,
'humidity': 81}
Published data Successfully: %s {'oxygen': 62, 'othergas': 12, 'temperture': 50,
 'humidity': 49}
Published data Successfully: %s {'oxygen': 59, 'othergas': 19, 'temperture': 34,
 'humidity': 92}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 67}
Published data Successfully: %s {'oxygen': 65, 'othergas': 34, 'temperture': 86,
 'humidity': 75}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 74}
Published data Successfully: %s {'oxygen': 77, 'othergas': 39, 'temperture': 7,
'humidity': 9}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 99}
Published data Successfully: %s {'Alert': 'Alert the gas is leaked', 'othergas':
 56}
Published data Successfully: %s {'oxygen': 51, 'othergas': 13, 'temperture': 23,
 'humidity': 59}
```

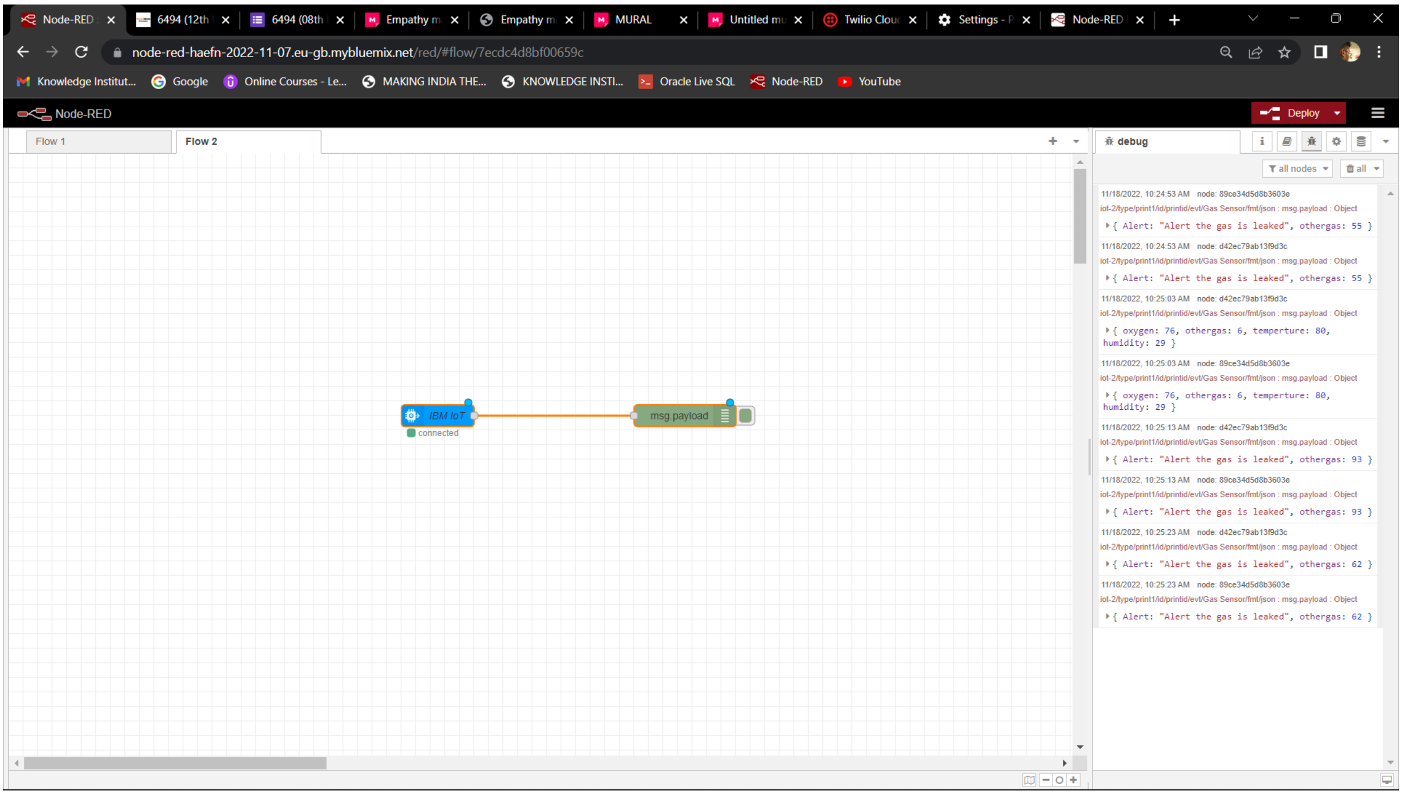
# IBM Cloud:



The recent events listed show the live stream of data that is coming and going from this device.

| Event | Value | Format | Last Received |
|---|---|---|---|
| Gas Sensor | {"oxygen":86,"othergas":8,"temperture":37,"hum... | json | a few seconds ago |
| Gas Sensor | {"oxygen":36,"othergas":46,"temperture":67,"hu... | json | a few seconds ago |
| Gas Sensor | {"Alert":"Alert the gas is leaked","othergas":84} | json | a few seconds ago |
| Gas Sensor | {"Alert":"Alert the gas is leaked","othergas":71} | json | a few seconds ago |
| Gas Sensor | {"Alert":"Alert the gas is leaked","othergas":77} | json | a few seconds ago |

# Node-Red Receiver:



```
11/18/2022, 10:24:53 AM   node: 89ce34d5d8b3603e
iot-2/type/print1/id/printid/evt/Gas Sensor/fmt/json : msg.payload : Object
▸{ Alert: "Alert the gas is leaked", othergas: 55 }
11/18/2022, 10:24:53 AM   node: d42ec79ab13f9d3c
iot-2/type/print1/id/printid/evt/Gas Sensor/fmt/json : msg.payload : Object
▸{ Alert: "Alert the gas is leaked", othergas: 55 }
11/18/2022, 10:25:03 AM   node: d42ec79ab13f9d3c
iot-2/type/print1/id/printid/evt/Gas Sensor/fmt/json : msg.payload : Object
▸{ oxygen: 76, othergas: 6, temperture: 80,
humidity: 29 }
11/18/2022, 10:25:03 AM   node: 89ce34d5d8b3603e
iot-2/type/print1/id/printid/evt/Gas Sensor/fmt/json : msg.payload : Object
▸{ oxygen: 76, othergas: 6, temperture: 80,
humidity: 29 }
11/18/2022, 10:25:13 AM   node: d42ec79ab13f9d3c
iot-2/type/print1/id/printid/evt/Gas Sensor/fmt/json : msg.payload : Object
▸{ Alert: "Alert the gas is leaked", othergas: 93 }
11/18/2022, 10:25:13 AM   node: 89ce34d5d8b3603e
iot-2/type/print1/id/printid/evt/Gas Sensor/fmt/json : msg.payload : Object
▸{ Alert: "Alert the gas is leaked", othergas: 93 }
11/18/2022, 10:25:23 AM   node: d42ec79ab13f9d3c
iot-2/type/print1/id/printid/evt/Gas Sensor/fmt/json : msg.payload : Object
▸{ Alert: "Alert the gas is leaked", othergas: 62 }
11/18/2022, 10:25:23 AM   node: 89ce34d5d8b3603e
iot-2/type/print1/id/printid/evt/Gas Sensor/fmt/json : msg.payload : Object
▸{ Alert: "Alert the gas is leaked", othergas: 62 }
```