

Develop the python script

Publish data to the IBM Cloud

Date	09 November 2022
Team id	PNT2022TMID31677
Project name	Signs with smart connectivity for better road safety

To make a publisher and subscriber in the process of python and IBM cloud:

```
publish.py - C:\Users\Sri\AppData\Local\Programs\Python\Python39\publish.py (3.9.8)
File Edit Format Run Options Window Help
import paho.mqtt.client as paho
import time
import random
def on_publish(client,userdata,mid):
    print("Publish the data")
client=paho.Client()
client.connect('broker.mqttdashboard.com',1883)
client.loop_start()
while True:
    temp=random.randint(1,30)
    (rc,mid)=client.publish('lottompic',str(temp),qos=1)
    print(temp)
    time.sleep(10)
```

```
subscribe.py - C:\Users\Sri\AppData\Local\Programs\Python\Python39\subscribe.py (3.9.8)
File Edit Format Run Options Window Help
import paho.mqtt.client as paho
def on_subscribe(client,userdata,mid,grated_qos):
    print("subscribe:",str(mid)+str(grated_qos))
def on_message(client,userdata,msg):
    print(msg.topic+" "+str(msg.qos)+" "+str(msg.payload))

client= paho.Client()
client.on_subscribe = on_subscribe
client.on_message = on_message
client.connect('broker.mqttdashboard.com',1883)
client.subscribe('lcp',qos=1)
client.loop_forever()
```

Command Prompt · python publish.py

C:\Users\USER>python publish.py
15
Publish the data
4
Publish the data
9
Publish the data
1
Publish the data
9
Publish the data
24
Publish the data
16
Publish the data
11
Publish the data
13
Publish the data
26
Publish the data
17
Publish the data

Command Prompt · python publish.py

C:\Users\USER>python publish.py
15
Publish the data
4
Publish the data

Browse

Action

Device Types

Interfaces

Add Device

Browse Devices

All Devices

Diagnose

This table shows a summary of all devices that have been added. It can be filtered, organized, and searched on using different criteria. To get started, you can add devices by using the Add Device button, or by using API.

Search by Device ID

Device Simulator

	Device ID	Status	Device Type	Class ID	Date Added
>	4054	Disconnected	Sample_one	Device	Nov 7, 2022 10:15 PM

Items per page: 50 | 1-1 of 1 item

1 of 1 page

<

1

>

Activate Windows

Go to Settings to activate Windows.

IBM Watson IoT Platform

Browse Devices

Table Columns: Device ID, Status, Device Type

Device ID	Status	Device Type
4054	Disconnected	Sample_one

Items per page: 50 | 1-1 of 1 item

Simulations

1/50 Simulations Running

+ New Simulation

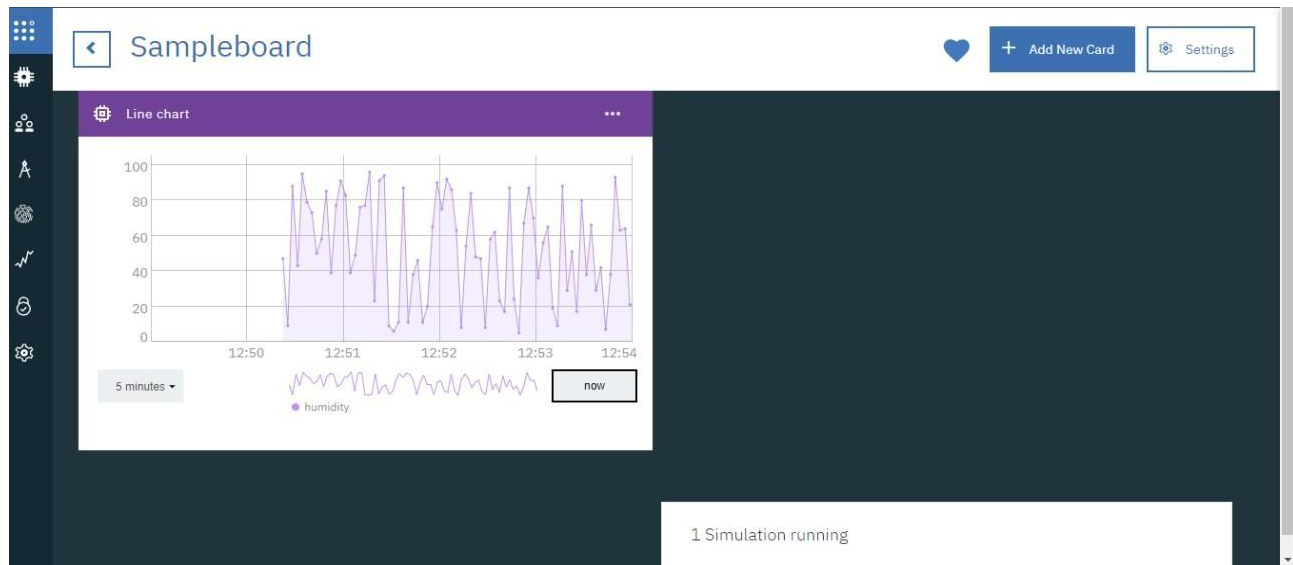
Device Type: Sample_one

1 Device

4054

1 x Create Simulated Device Use Registered Device

Activate Windows
Go to Settings to activate Windows.



CODING:

#IBM WatsonIoT Platform

```
import wiotp.sdk.device
```

```
import time
```

```
import random
```

```
myConfig = {
```

```
  "identity": {
```

```
    "orgId": "hj5fmy",
```

```
    "typeId": "NodeMCU",
```

```
    "deviceId": "12345"
```

```
  },
```

```
  "auth": {
```

```
    "token": "12345678"
```

```
  }
```

```
}
```

```
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:

    temp=random.randint(-20,125)

    hum=random.randint(0,100)

    myData={'temperature':temp, 'humidity':hum}

    client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0, onPublish=None)

    print("Published data Successfully: %s", myData)

    client.commandCallback = myCommandCallback

    time.sleep(2)

    client.disconnect()
```