

DEVELOP A PYTHON SCRIPT

(PUBLISH DATA TO IBM CLOUD)

DATE	18 NOVEMBER 2022
TEAM ID	PNT2022TMID20364
PROJECT NAME	INDUSTRY-SPECIFIC INTELLIGENT FIRE MANAGEMENT SYSTEM
MAXIMUM MARKS	4 MARKS

PROGRAM:

```
#IBM Watson IOT Platform
```

```
#pip install wiotp-sdk
```

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

```
import time
```

```
import random
```

```
myConfig = {
```

```
    "identity": {
```

```
        "orgId": "kojkab",
```

```
        "typeId": "1234",
```

```
        "deviceId": "lee123"
```

```
    },
```

```
    "auth": {
```

```
        "token": "987456321"
```

```
    }
```

```
}
```

```
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()
```

```
publish.py - E:\IBM\Others\Develop a python script\publish.py (3.6.5)
File Edit Format Run Options Window Help

#Through python coding we are going to access the subscriber
import paho.mqtt.client as paho
import time
import random

def on_publish(client, userdata, mid):
    print("Publish the data ")

client = paho.Client()
client.on_publish = on_publish
client.connect("broker.mqttdashboard.com", 1883)
client.loop_start()
while True:
    temp = random.randint(1,30)
    (re,mid) = client.publish("iottopic",str(temp),qos=1)
    print(temp)
    time.sleep(10)
```

Python 3.6.5 Shell

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MS
C v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more informatio
n.
>>>
===== RESTART: E:\IBM\Others\Develop a python script\
publish.py =====
7
Publish the data
19
Publish the data
10
Publish the data
```

Ln 5 Col 0 Ln 17 Col 18

```
subscriber.py - E:\IBM\Others\Develop a python script\subscriber.py (3.6.5)
File Edit Format Run Options Window Help

import paho.mqtt.client as paho
def on_subscribe(client,userdata,mid,grated_qos):
    print("subscriber:" + str(mid)+str(granted_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("iottopic",qos=1)
client.loop_forever()
```

Python 3.6.5 Shell

```
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MS
C v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more informatio
n.
>>>
===== RESTART: E:\IBM\Others\Develop a python script\
subscriber.py =====
Publish the data
13
Publish the data
3
Publish the data
25
Publish the data
19
Publish the data
2
Publish the data
7
Publish the data
9
Publish the data
```

Ln 5 Col 0 Ln 2 Col 15

The screenshot shows the OpenStack Dashboard interface. The top navigation bar includes 'Browse', 'Action', 'Device Types', and 'Interfaces'. The 'Add Device' button is visible in the top right. The main content area displays the details for a device named 'abcd', which is in a 'Disconnected' state. The 'Recent Events' tab is selected, showing a table of events. The table has four columns: 'Event', 'Value', 'Format', and 'Last Received'. All events are 'event_1' with a value of a random number. The events are listed with their format (json) and the time they were received (a few seconds ago or a minute ago). A status bar at the bottom indicates '1 Simulation running'.

Event	Value	Format	Last Received
event_1	{"randomNumber":74}	json	a few seconds ago
event_1	{"randomNumber":47}	json	a few seconds ago
event_1	{"randomNumber":45}	json	a minute ago
event_1	{"randomNumber":19}	json	a minute ago
event_1	{"randomNumber":79}	json	a minute ago

1 Simulation running