

# DEVELOP A PYTHON SCRIPT

## (PUBLISH DATA TO IBM CLOUD)

DATE	16 NOVEMBER 2022
TEAM ID	PNT2022TMID54463
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)
```

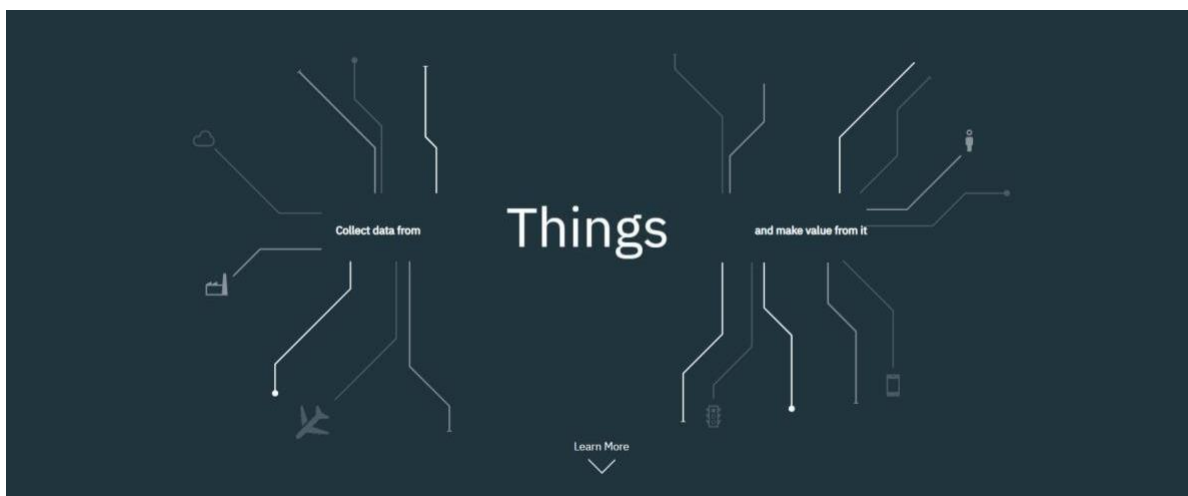
```
    hum=random.randint(0,100)    myData={'temperature':temp,
    'humidity':hum}
```

```
    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
File Edit Shell Debug Options Window Help
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
```

```
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(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('iottopic',qos=1)
client.loop_forever()
```

```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
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 displays the EdgeX Foundry user interface. At the top, there's a navigation bar with 'Browse', 'Action', 'Device Types', and 'Interfaces'. On the right, an 'Add Device' button is visible. The left sidebar contains icons for different system components. The main panel shows the 'Recent Events' tab for a device named 'abcd'. Below the tab, a message states: 'The recent events listed show the live stream of data that is coming and going from this device.' A table follows, listing five events, each with a unique ID, a JSON-formatted value (a random number), and a timestamp indicating when it was received. At the bottom of the interface, a status bar shows '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