

DEVELOP A PYTHON SCRIPT

(PUBLISH DATA TO IBM CLOUD)

DATE	16 NOVEMBER 2022
TEAM ID	PNT2022TMID06832
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)
```

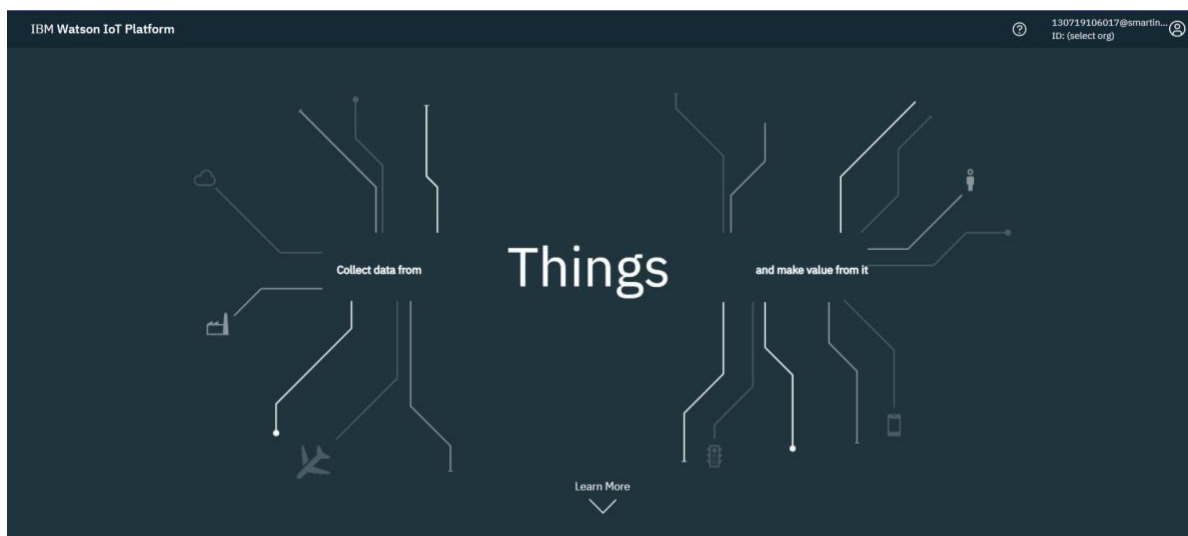
```
    hum=random.randint(0,100)    myData={'temperature':temp,  
    'humidity':hum}
```

```
    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
```

```
subscribe.py - E:\IBM\Others\Develop a python script\subscribe.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
```

The screenshot displays the EdgeX Foundry web interface. At the top, there's a navigation bar with 'Browse', 'Action', 'Device Types', and 'Interfaces'. On the right, there's an 'Add Device' button. The left sidebar contains icons for various functions. The main content area shows the 'Recent Events' tab for a device named 'abcd'. The device status is 'Disconnected' and its ID is '123'. The date and time are 'Nov 3, 2022 12:13 PM'. Below the tabs, there's a message: 'The recent events listed show the live stream of data that is coming and going from this device.' A table lists recent events with columns: Event, Value, Format, and Last Received. The events are labeled 'event_1' and contain random number strings. At the bottom, a status bar 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