


Develop the Python Script

(Publish data to IBM cloud)

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Team ID	PNT2022TMID25436
Project Name	Industry-specific intelligent fire management system

Industry-specific intelligent fire management system



The image shows a screenshot of a Python script editor and its output console. The script is a Python program that connects to a MQTT broker and publishes random data to a topic. The output console shows the execution of the script, including a restart message and the output of the publish function.

```
#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.Mqtttdashboard.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 (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 information.
>>>
===== RESTART: E:\IBM\Others\Develop a python script/publish.py =====
7
Publish the data
19
Publish the data
10
Publish the data

```
subscribe.py - A MQTT Client/Subscriber in python using paho.mqtt
File Edit Format Run Options Window Help
import paho.mqtt.client as paho
def on_subscribe(client,userdata,mid,granted_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 3.6.1 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 1 Col 0 Ln 2 Col 11
```

MSN IndiaIBMIBM-EPBLIBM-EPBLReset youPonni NarTraining CIBM-ProjMy IBMService DIBM V xMy IBM+ - X

pp685h.internetofthings.ibmcloud.com/dashboard/devices/browse

IBM Watson IoT Platformhh0109477@gmail.comID: (select org)

BrowseActionDevice TypesInterfacesAdd Device

DEVICE IDSTATUSDEVICE TYPEVIDEO ScreenshotVIDEO AUDIO

abcdDisconnected123DeviceNov 3, 2022 12:13 PM

IdentityDevice InformationRecent EventsStateLogs

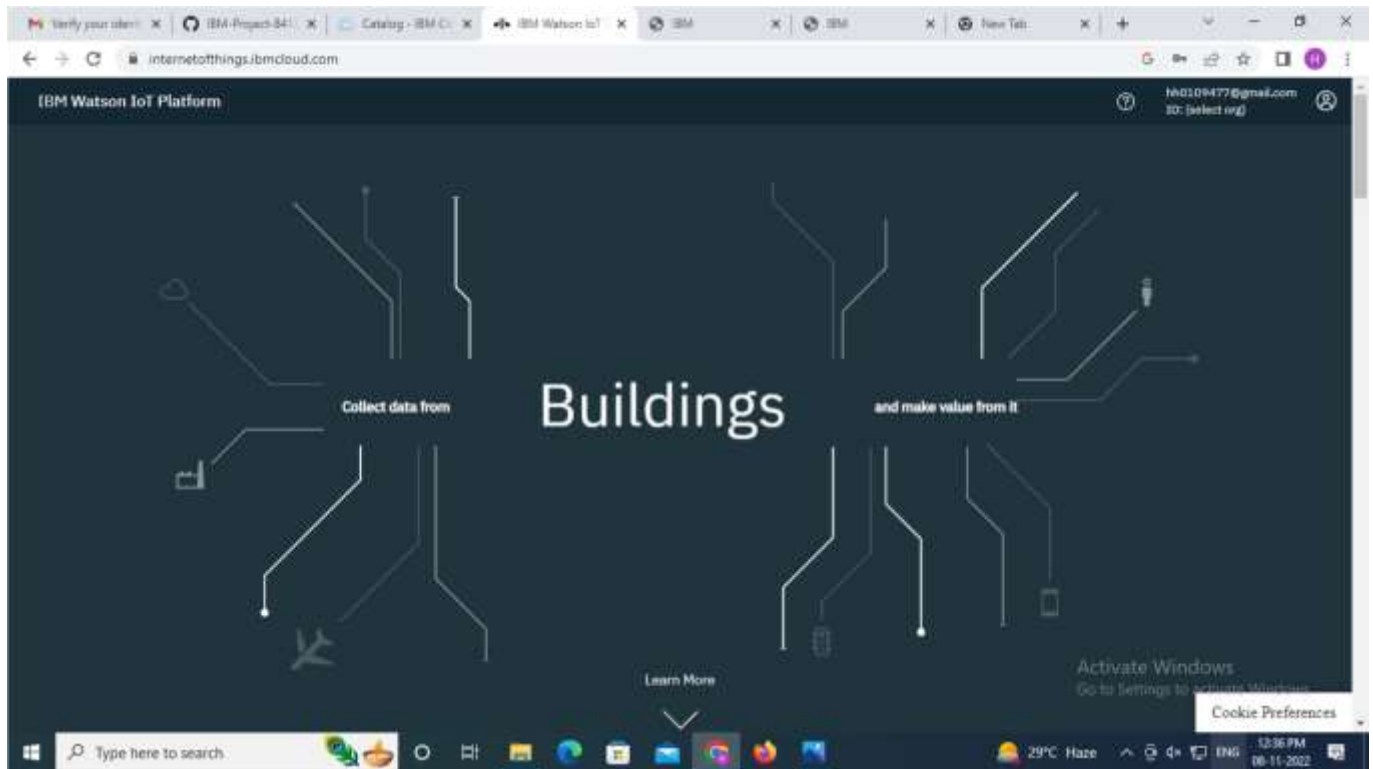
The recent events listed show the live stream of data that is coming and going from this device.

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

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Program :

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
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()
```