

TEAM ID	PNT2022TMID54021
PROJECT NAME	Smart Waste Management System for Metropolitan Cities

### Publish Data to the IBM Cloud

#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()
```

```
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 informati
n.
>>>
===== RESTART: E:/IBM/Others/Develop a python script/
publish.py =====
7
Publish the data
19
Publish the data
10
Publish the data
```

```
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
File Edit Shell Debug Options Window Help
Publish the data
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Publish the data
3
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Publish the data
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Publish the data
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Publish the data
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Publish the data
```

IBM Watson IoT Platform

Search: ID: hqbfatm

Browse Action Device Types Interfaces Add Device

Device ID: abc123 Status: Disconnected Device type: 123 Last seen: Nov 4, 2022 11:51 AM

Identity Device Information Recent Events State Logs

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":75}	json	a few seconds ago
event_1	{"randomNumber":6}	json	a few seconds ago
event_1	{"randomNumber":33}	json	a few seconds ago
event_1	{"randomNumber":56}	json	a few seconds ago
event_1	{"randomNumber":67}	json	a few seconds ago

1 Simulation running

IBM Watson IoT Platform

Search: ID: (select org)

Collect data from Cars and make value from it

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