

TEAM ID	PNT2022TMID11010
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": "iufdwo",

"typeId": "ESP32\_Controller",

"deviceId": "BME280\_Sensor" },

"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()
```



The screenshot shows a Python IDE with two windows. The main window displays a Python script for publishing data to an MQTT broker. The script includes imports for paho.mqtt.client, time, and random. It defines a callback function on\_publish and a while loop that generates random temperature and humidity data, publishes it as JSON, and sleeps for 10 seconds. A second window shows the output of the script, which includes a restart message and three lines of published data: 'Publish the data 7', 'Publish the data 19', and 'Publish the data 10'.

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

```
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 3.8.5 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
```

IBM Watson IoT Platform

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ID: iufdwo

Device Simulator ☒

Search by Device ID

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
BML280_Sensor	Disconnected	ESP32_Controller	Device	Nov 18, 2022 11:22 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	{"data":61}	json	a few seconds ago
event_1	{"data":71}	json	a few seconds ago
event_1	{"data":21}	json	a few seconds ago
event_1	{"data":10}	json	a few seconds ago
event_1	{"data":28}	json	a few seconds ago

1 Simulation running

