

DEVELOP THE PYTHON SCRIPT

Publish data to the IBM Cloud

Team ID : PNT2022TMID03062

Project Title: SIGNS WITH SMART CONNECTIVITY FOR BETTER ROAD SAFETY

TO Make a publisher and subscriber in the process of python and IBM cloud

```
File Edit Format Run Options Window Help
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)
    (rc,mid)=client.publish('iottopic',str(temp),qos=1)
    print(temp)
    time.sleep(10)
```

Output:

```
CA Command Prompt - python publish.py

C:\Users\USER>python publish.py
15
Publish the data
4
Publish the data
_
```

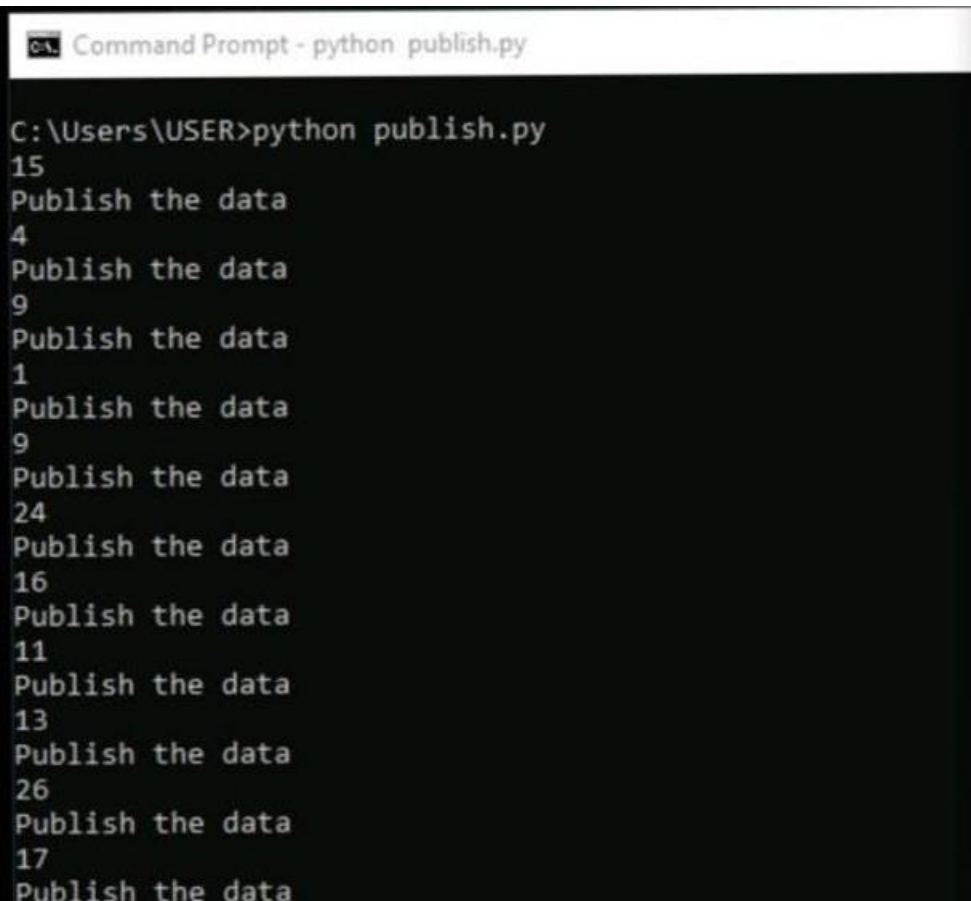
File Edit Format Run Options Window Help

```
import paho.mqtt.client as paho
def on_subscribe(client,usrdata,mid,grated_qos):
    print("subscribe:" + str(mid) +str(granted_qos))

def on_message(client, usrdata,msg):
    print(msg.topic + " " + str(msg.qos) + str(msg.payload))

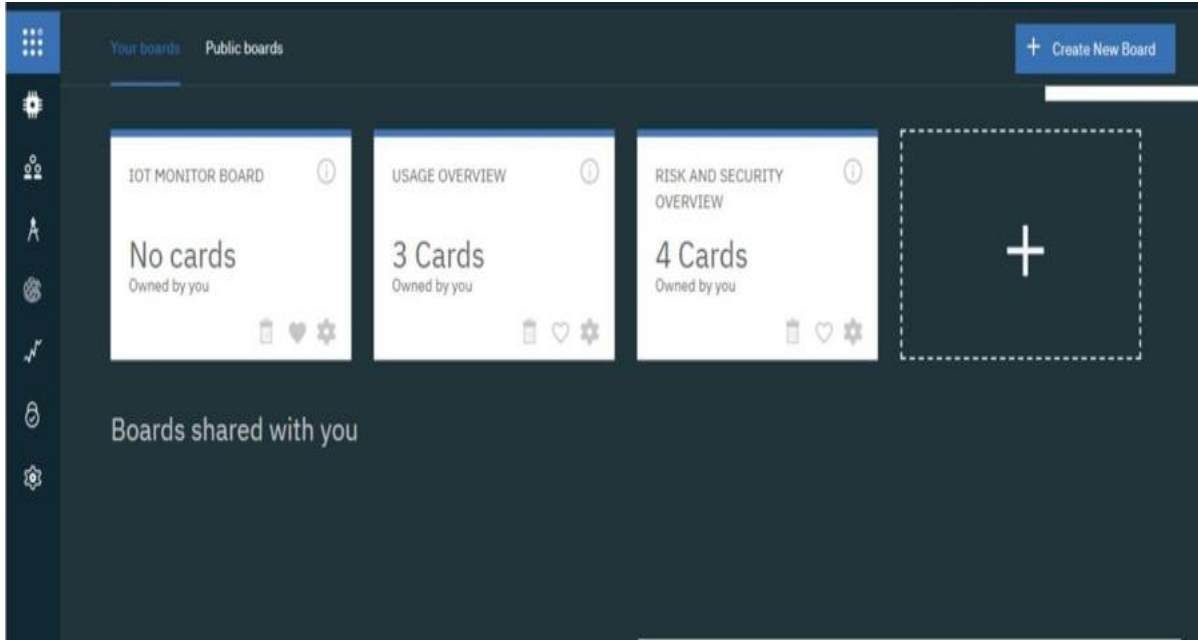
client=paho.Client()
client.on_subscribe = on_subscribe
client.connect('broker.mqttdashboard.com', 1883)
client.subscribe('iottopic',qos=1)
client.loop_forever()
```

Output:



```
Command Prompt - python publish.py

C:\Users\USER>python publish.py
15
Publish the data
4
Publish the data
9
Publish the data
1
Publish the data
9
Publish the data
24
Publish the data
16
Publish the data
11
Publish the data
13
Publish the data
26
Publish the data
17
Publish the data
```



The screenshot shows the IBM Cloud Dashboard interface. At the top, there is a search bar and a navigation menu. Below this, there is a "Dashboard" section with a dropdown menu. To the right of the dashboard, there are links for "Edit dashboard", "Upgrade account", and a "Create resource" button. Below the dashboard, there is a "For you" section with a "Select an option" dropdown. This section contains several cards for different services:

- Build**: Explore IBM Cloud with this selection of easy starter tutorials and services.
- Set up your IBM Cloud account**: Learn how to set up your IBM Cloud account, manage your account settings, organize resources, and control access to those resources. (Getting started, 10 min)
- Get Started with Watson Studio**: Get started with using AI and Cloud Object Storage in 15 minutes. (Popular, 2 hr)
- IBM Watson Internet of Things Platform**: Communicate with connected devices, monitor and analyze data in real time, connect your own IoT apps and add Watson AI to the solution. (Recommended, 2 min)
- Build a web app with Watson Speech to Text**: Deploy a conversational interface compatible with any application, device, or channel. (Getting started, 15 min)
- Build and deploy Node.js apps**: Go from zero to production in minutes with your Node.js applications, integrate with Watson and other services, scale your microservices. (Recommended, 15 min)

Below the "For you" section, there is a "News" section with a "View all" link. The news items include:

- All About IBM Storage's Price and Supply Guarantee
- IBM Tech Now: November 7, 2022
- Unified Key Orchestrator Now Supports Easy Multicloud Key Management for Google KMS

To the right of the news section, there are sections for "Recent support cases", "Planned maintenance", and "IBM Cloud status", each with a "View all" link. The "IBM Cloud status" section shows a world map with a blue square indicating the current status.

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()
```