

**DEVELOP A PYTHON SCRIPT TO PUBLISH AND SUBSCRIBE TO IBM IoT PLATFORM
PUBLISH VALUES TO THE IBM IoT PLATFORM**

Team ID	PNT2022TMID41307
Project Name	Gas Leakage Monitoring and Alerting System for Industries

Python Code:

```
#IBM Watson IOT Platform
#pip install wiotp-sdk
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity":
    {
        "orgId": "9yby55",
        "typeId": "Gas",
        "deviceId": "18"
    },
    "auth":
    {
        "token": "zlbdsvljWkP@1S34*&"
    }
}

def myCommandCallback(cmd):
    print("Message received from IBM IoT Platform: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="sprinkleron":
        print (" Rainwater sprinkler is ON")
    elif status=="sprinkleroff":
        print (" Rainwater sprinkler is OFF")
    else:
        print ("please send proper command")

client = wiotp.sdk.device.DeviceClient(config=myConfig, logHandlers=None)
client.connect()
```

while True:

```
    TemperatureZ1=random.randint(0,100)
```

```
    HumidityZ1=random.randint(0,100)
```

```
    GasLevelZ1=random.randint(0,100)
```

```
    PressureZ1=random.randint(0,100)
```

```
    TemperatureZ2=random.randint(0,100)
```

```
    HumidityZ2=random.randint(0,100)
```

```
    GasLevelZ2=random.randint(0,100)
```

```
    PressureZ2=random.randint(0,100)
```

```
myData={'TemperatureZ1':TemperatureZ1,'HumidityZ1':HumidityZ1,'GasLevelZ1':GasLevelZ1,
```

```
'PressureZ1':PressureZ1,'TemperatureZ2':TemperatureZ2
```

```
'HumidityZ2':HumidityZ2,'GasLevelZ2':GasLevelZ2,'PressureZ2':PressureZ2}
```

```
client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,  
onPublish=None)
```

```
print("Published data Successfully: %s", myData ,"to the IBM Platform")
```

```
client.commandCallback = myCommandCallback
```

```
time.sleep(2)
```

```
client.disconnect()
```

IBM IoT PLATFORM:

The screenshot displays the IBM Watson IoT Platform interface and a terminal window. The dashboard shows a list of devices, with one device (ID 18) selected, displaying its recent events. The terminal window shows the execution of a Python script that publishes data to the IBM IoT Platform.

IBM Watson IoT Platform Dashboard:

- Search by Device ID: 18
- Device ID: 18, Status: Disconnected, Device Type: Gas
- Recent Events:

Event	Value	Format	Last Received
status	{'TemperatureZ1':4,'HumidityZ1':72,'GasLevel...	json	a few seconds ago
event_1	{'TemperatureZ1':105,'HumidityZ1':80,'GasLev...	json	a few seconds ago
status	{'TemperatureZ1':19,'HumidityZ1':43,'GasLev...	json	a few seconds ago
event_1	{'TemperatureZ1':104,'HumidityZ1':61,'GasLev...	json	a few seconds ago
status	{'TemperatureZ1':16,'HumidityZ1':93,'GasLev...	json	a few seconds ago

Python 3.7.4 Shell:

```
Python 3.7.4 (tags/v3.7.4:099359112e, Jul 8 2019, 20:34:20) [MSC v.1916  
64 bit (AMD64)] on win32  
Type "help", "copyright", "credits" or "license()" for more information.  
>>>  
===== RESTART: C:\Users\sthir\Documents\IBM py\Py code z1,z2.py =====  
2022-11-11 18:38:43,789 wiotp.sdk.device.client.DeviceClient INFO C  
onected successfully: d:9yby55:Gas:18  
Published data Successfully: %s {'TemperatureZ1': 54, 'HumidityZ1': 17, '  
GasLevelZ1': 45, 'PressureZ1': 18, 'TemperatureZ2': 0, 'HumidityZ2': 25,  
'GasLevelZ2': 71, 'PressureZ2': 4} to the IBM Platform  
Published data Successfully: %s {'TemperatureZ1': 81, 'HumidityZ1': 30, '  
GasLevelZ1': 72, 'PressureZ1': 25, 'TemperatureZ2': 59, 'HumidityZ2': 94,  
'GasLevelZ2': 10, 'PressureZ2': 86} to the IBM Platform  
Published data Successfully: %s {'TemperatureZ1': 85, 'HumidityZ1': 53, '  
GasLevelZ1': 79, 'PressureZ1': 42, 'TemperatureZ2': 81, 'HumidityZ2': 75,  
'GasLevelZ2': 50, 'PressureZ2': 48} to the IBM Platform  
Published data Successfully: %s {'TemperatureZ1': 93, 'HumidityZ1': 93, '  
GasLevelZ1': 77, 'PressureZ1': 74, 'TemperatureZ2': 2, 'HumidityZ2': 68,  
'GasLevelZ2': 21, 'PressureZ2': 27} to the IBM Platform  
Published data Successfully: %s {'TemperatureZ1': 16, 'HumidityZ1': 93, '  
GasLevelZ1': 55, 'PressureZ1': 51, 'TemperatureZ2': 42, 'HumidityZ2': 8,  
'GasLevelZ2': 37, 'PressureZ2': 100} to the IBM Platform  
Published data Successfully: %s {'TemperatureZ1': 19, 'HumidityZ1': 43, '  
GasLevelZ1': 55, 'PressureZ1': 27, 'TemperatureZ2': 2, 'HumidityZ2': 51,  
'GasLevelZ2': 92, 'PressureZ2': 5} to the IBM Platform  
Published data Successfully: %s {'TemperatureZ1': 4, 'HumidityZ1': 72, 'G  
asLevelZ1': 91, 'PressureZ1': 56, 'TemperatureZ2': 54, 'HumidityZ2': 84,  
'GasLevelZ2': 17, 'PressureZ2': 11} to the IBM Platform
```

