

TITLE :	Signs with smart connectivity for better road safety
TEAM ID:	PNT2022TMID08255
PHASE :	Publish Data to the IBM CLOUD

Publish Data to the IBM Cloud :

```
import time
```

```
import sys
```

```
import ibmiotf.application
```

```
import ibmiotf.device
```

```
import random
```

```
#Provide your IBM Watson Device Credentials
```

```
organization = "nto8zt"
```

```
deviceType = "abcd"
```

```
deviceId = "12345"
```

```
authMethod = "token"
```

```
authToken = "12345678"
```

```
# Initialize GPIO
```

```
def myCommandCallback(cmd):
```

```
    print("Command received: %s" % cmd.data['command'])
```

```
    status=cmd.data['command']
```

```
    if status=="lighton":
```

```
        print ("led is on")
```

```

elif status == "lightoff":
    print ("led is off")
else :
    print ("please send proper command")

try:
    deviceOptions = {"org": organization, "type": deviceType, "id":
deviceId, "auth-method": authMethod, "auth-token": authToken}
    deviceCli = ibmiotf.device.Client(deviceOptions)
    #.....

except Exception as e:
    print("Caught exception connecting device: %s" % str(e))
    sys.exit()

# Connect and send a datapoint "hello" with value "world" into the cloud
as an event of type "greeting" 10 times
deviceCli.connect()

while True:
    #Get Sensor Data from DHT11

    temp=random.randint(90,110)
    Humid=random.randint(60,100)

    data = { 'temp' : temp, 'Humid': Humid }

```

```
#print data

def myOnPublishCallback():
    print ("Published Temperature = %s C" % temp, "Humidity = %s"
    %% " % Humid, "to IBM Watson")

    success = deviceCli.publishEvent("IoTSensor", "json", data, qos=0,
on_publish=myOnPublishCallback)

    if not success:
        print("Not connected to IoT")
        time.sleep(10)

    deviceCli.commandCallback = myCommandCallback

# Disconnect the device and application from the cloud
deviceCli.disconnect()
```

OUTPUT:

```
Python 3.7.0 Shell
File Edit Shell Debug Options Window Help
Python 3.7.0 (v3.7.0:1bf9cc5093, Jun 27 2018, 04:59:51) [MSC v.1914 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\ADMIN\AppData\Local\Programs\Python\Python37\Python_cloud.py
2022-11-20 17:39:48,219 ibmiotf.device.Client INFO Connected successfully: d:nto8zt:abcd:12345
Published Temperature = 94 C Humidity = 65 % to IBM Watson
Published Temperature = 94 C Humidity = 85 % to IBM Watson
Published Temperature = 99 C Humidity = 99 % to IBM Watson
Published Temperature = 104 C Humidity = 75 % to IBM Watson
Published Temperature = 95 C Humidity = 98 % to IBM Watson
Published Temperature = 101 C Humidity = 90 % to IBM Watson
Published Temperature = 103 C Humidity = 89 % to IBM Watson
Published Temperature = 94 C Humidity = 95 % to IBM Watson
Published Temperature = 109 C Humidity = 88 % to IBM Watson
Published Temperature = 94 C Humidity = 75 % to IBM Watson
```

The screenshot shows the IBM Watson IoT Platform dashboard. The top navigation bar includes 'Browse', 'Action', 'Device Types', 'Interfaces', and an 'Add Device' button. The main content area displays a device card for '12345' with a status of 'Connected' and a label 'abcd'. Below the card, there is a table titled 'Recent Events' showing a live stream of data. The table has two columns: 'Event' and 'Value'. The events listed are 'IoT Sensor' with values '{"temp":94,"Humid":75}' and '{"temp":109,"Humid":88}'. The bottom of the dashboard shows pagination controls: 'Items per page 50', '1-2 of 2 items', and '1 of 1 page'.

Event	Value
IoT Sensor	{"temp":94,"Humid":75}
IoT Sensor	{"temp":109,"Humid":88}