Publish Data to the IBM Cloud

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Project Name	Smart Waste Management System For Metropolitan Cities

PYTHON SCRIPT

```python
import time
import sys
import ibmiotf.application
import ibmiotf.device
import random


#Provide your IBM Watson Device Credentials
organization = "dluuhi"
deviceType = "SWMS"
deviceId = "6032"
authMethod = "token"
authToken = "311519106032"

# Initialize GPIO

def myCommandCallback(cmd):
    print("Command received: %s" % cmd.data['command'])
    status=cmd.data['command']
    if status=="lighton":
        print ("led is on")
    else :
        print ("led is off")

    #print(cmd)



try:
    deviceOptions = {"org": organization, "type": deviceType, "id": deviceId, "auth-method": authMethod, "auth-token":
    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(0,100)
    Humid=random.randint(0,100)

    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 IoTF")
    time.sleep(1)

    deviceCli.commandCallback = myCommandCallback

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

OUTPUT:

```
*Python 3.7.4 Shell*
File  Edit  Shell  Debug  Options  Window  Help
Python 3.7.4 (tags/v3.7.4:e09359112e, 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:\Python\Python37\PythonScript.py ================
2022-11-06 18:04:52,909  ibmiotf.device.Client    INFO    Connected successfully: d:dluuhi:SWMS:6032
Published Temperature = 73 C Humidity = 97 % to IBM Watson
Published Temperature = 29 C Humidity = 49 % to IBM Watson
Published Temperature = 22 C Humidity = 38 % to IBM Watson
Published Temperature = 38 C Humidity = 23 % to IBM Watson
Published Temperature = 62 C Humidity = 82 % to IBM Watson
Published Temperature = 96 C Humidity = 54 % to IBM Watson
Published Temperature = 93 C Humidity = 73 % to IBM Watson
Published Temperature = 25 C Humidity = 57 % to IBM Watson
Published Temperature = 67 C Humidity = 26 % to IBM Watson
Published Temperature = 98 C Humidity = 100 % to IBM Watson
Published Temperature = 92 C Humidity = 54 % to IBM Watson
Published Temperature = 6 C Humidity = 59 % to IBM Watson
Published Temperature = 97 C Humidity = 57 % to IBM Watson
Published Temperature = 64 C Humidity = 70 % to IBM Watson
Published Temperature = 38 C Humidity = 14 % to IBM Watson
Published Temperature = 6 C Humidity = 49 % to IBM Watson
Published Temperature = 59 C Humidity = 73 % to IBM Watson
Published Temperature = 57 C Humidity = 20 % to IBM Watson
Published Temperature = 3 C Humidity = 42 % to IBM Watson
Published Temperature = 19 C Humidity = 42 % to IBM Watson
Published Temperature = 68 C Humidity = 19 % to IBM Watson
Published Temperature = 10 C Humidity = 14 % to IBM Watson
Published Temperature = 32 C Humidity = 67 % to IBM Watson
```

DATA IN IBM CLOUD PLATFORM:

Browse   Action   Device Types   Interfaces   Add Device

6032	Connected	SWMS	Device	Nov 6, 2022 2:57 PM

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
IoTSensor	{"temp":100,"Humid":49}	json	a few seconds ago
IoTSensor	{"temp":4,"Humid":28}	json	a few seconds ago
IoTSensor	{"temp":80,"Humid":86}	json	a few seconds ago
IoTSensor	{"temp":28,"Humid":79}	json	a few seconds ago
IoTSensor	{"temp":36,"Humid":98}	json	a few seconds ago