

PUBLISH DATA TO THE IBM CLOUD

Date	09 November 2022
Team Id	PNT2022TMID02630
Title	Hazardous Area Monitoring for Industrial Plant using IoT

Python Code

watson.py - C:\Users\91887\AppData\Local\Programs\Python\Python310\watson.py (3.10.0)

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

organization = "3lhmfj"
deviceType = "efgh"
deviceId = "56789"
authMethod = "use-token-auth"
authToken = "123456789 "

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")

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()

deviceCli.connect()

while True:
    temp=random.randint(0,100)
    humd=random.randint(0,100)
    data={'temp':temp, 'Humid': humd}
    def myOnPublishCallback():
        print("Published Temperature = %s C" % temp, "Humidity= %s %%" % humd, "to IBM Watson")

    success=deviceCli.publishEvent("IoTSensor", "json", data, qos=0, on_publish=myOnPublishCallback)
    if not success:
        print("Not Connected to IoT")
        time.sleep(1)

    deviceCli.commandCallback=myCommandCallback

deviceCli.disconnect()
```

Generated Values

```
Published Temperature = 12 C Humidity:10
Published Temperature = 0 C Humidity:79
Published Temperature = 95 C Humidity:56
Published Temperature = 91 C Humidity:64
Published Temperature = 25 C Humidity:78
Published Temperature = 24 C Humidity:69
Published Temperature = 92 C Humidity:50
Published Temperature = 75 C Humidity:45
Published Temperature = 44 C Humidity:9
Published Temperature = 59 C Humidity:44
Published Temperature = 67 C Humidity:12
Published Temperature = 0 C Humidity:31
Published Temperature = 3 C Humidity:21
Published Temperature = 32 C Humidity:8
Published Temperature = 7 C Humidity:90
Published Temperature = 71 C Humidity:42
Published Temperature = 99 C Humidity:76
Published Temperature = 97 C Humidity:45
Published Temperature = 10 C Humidity:95
Published Temperature = 19 C Humidity:19
Published Temperature = 95 C Humidity:13
Published Temperature = 11 C Humidity:57
Published Temperature = 70 C Humidity:86
Published Temperature = 54 C Humidity:81
Published Temperature = 59 C Humidity:8
Published Temperature = 35 C Humidity:11
Published Temperature = 39 C Humidity:42
Published Temperature = 17 C Humidity:85
Published Temperature = 69 C Humidity:46
Published Temperature = 40 C Humidity:9
Published Temperature = 90 C Humidity:90
Published Temperature = 64 C Humidity:41
Published Temperature = 70 C Humidity:81
Published Temperature = 17 C Humidity:89
Published Temperature = 20 C Humidity:58
Published Temperature = 63 C Humidity:65
Published Temperature = 60 C Humidity:82
Published Temperature = 87 C Humidity:1
Published Temperature = 58 C Humidity:37
Published Temperature = 70 C Humidity:85
Published Temperature = 90 C Humidity:43
Published Temperature = 58 C Humidity:0
```

Publishing the value to IBM cloud

IBM Watson IoT Platform

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Browse

Action

Device Types

Interfaces

Add Device

Search by Device ID

Device Simulator

Device ID	Status	Device Type	Class ID	Date Added	Descriptive Location
12345	Disconnected	abcd	Device	18 Nov 2022 23:06	
56789	Connected	efgh	Device	19 Nov 2022 08:42	

Identity

Device Information

Recent Events

State

Logs

Device ID

Device Type

Date Added

Added By

Connection Status

56789

efgh

19 Nov 2022 08:42

priyadharshini.sb.2019.it@rajalakshmi.edu.in

Connected
Connection Time: 19 Nov 2022 09:37
Client Address: 50.31.197.64 Insecure

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Browse | Action | Device Types | Interfaces
Add Device +

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	{"randomNumber":74,"temp":63,"hum":92}	json	a few seconds ago
event_1	{"randomNumber":55,"temp":46,"hum":85}	json	a minute ago
event_1	{"randomNumber":74,"temp":33,"hum":89}	json	3 minutes ago
event_1	{"randomNumber":82,"temp":65,"hum":88}	json	4 minutes ago
event_1	{"randomNumber":96,"temp":12,"hum":96}	json	5 minutes ago

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1 Simulation running