DEVELOP A PYTHON SCRIPT

TO PUBLISH AND SUBSCRIBE TO IBM PLATFORM

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Team ID	PNT2022TMID26544
Project Name	Project -Smart farmer-IOT enabled smart Farming Application

Step:1 Python Program

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

ms=0
status='light off' myConfig
= {
   "identity": {
      "orgId": "17lsro",
      "typeId": "MyDeviceType",
      "deviceId":"12345"
   },
   "auth": {
      "token": "GkatKdiUS?UVHKvnAD"
   }
}

def myCommandCallback(cmd):
```

```
   print("Message received from IBM IoT Platform: %s" %
cmd.data['command'])              m=cmd.data['command']
if(m=="MOTOR  ON"):                print("MOTOR    IS  ON")
status='motor on'
      myData={'temperature':temp,
'humidity':hum,'soilmoisture':sm_percentage,'status':status}
      client.publishEvent(eventId="status",    msgFormat="json",    data=myData,
qos=0, onPublish=None)
      print("Published data Successfully: %s", myData)


      time.sleep(2)


   elif(m=="MOTOR   OFF"):
print("MOTOR    IS    OFF")
status='motor off'
      myData={'temperature':temp,
'humidity':hum,'soilmoisture':sm_percentage,'status':status}
      client.publishEvent(eventId="status",    msgFormat="json",    data=myData,
qos=0, onPublish=None)
      print("Published data Successfully: %s", myData)


      time.sleep(2)



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

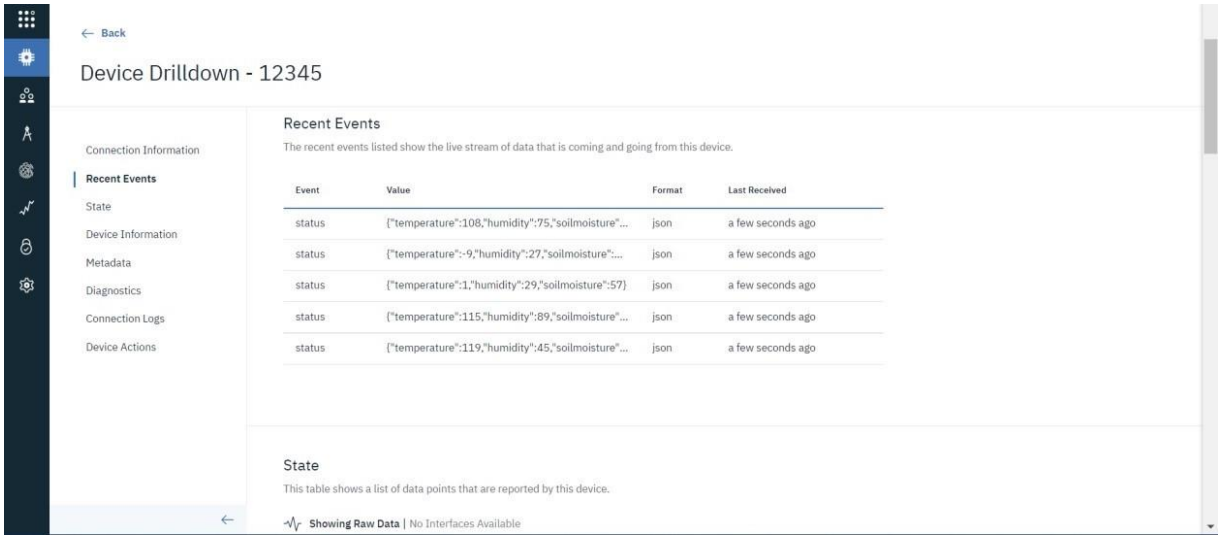
```
while True:
   temp=random.randint(-20,125)
hum=random.randint(0,100)
   soilmoisture=random.randint(0,1023)#analog sensor
sm_percentage=(soilmoisture/1023)*100
sm_percentage=int(sm_percentage)
   myData={'temperature':temp, 'humidity':hum,'soilmoisture':sm_percentage}
client.publishEvent(eventId="status", msgFormat="json", data=myData, qos=0,
onPublish=None)
   print("Published data Successfully: %s", myData)
client.commandCallback = myCommandCallback
time.sleep(2)


time.sleep(2) client.disconnect()
```

Step:2 Run the Program

```
Published data Successfully: %s {'temperature': 29, 'humidity': 16, 'soilmoisture': 97}
Published data Successfully: %s {'temperature': 26, 'humidity': 12, 'soilmoisture': 67}
Published data Successfully: %s {'temperature': 13, 'humidity': 79, 'soilmoisture': 43}
Published data Successfully: %s {'temperature': 97, 'humidity': 15, 'soilmoisture': 22}
Published data Successfully: %s {'temperature': 41, 'humidity': 63, 'soilmoisture': 4}
Published data Successfully: %s {'temperature': -14, 'humidity': 66, 'soilmoisture': 68}
Published data Successfully: %s {'temperature': 3, 'humidity': 64, 'soilmoisture': 91}
Published data Successfully: %s {'temperature': 33, 'humidity': 68, 'soilmoisture': 6}
Published data Successfully: %s {'temperature': 33, 'humidity': 81, 'soilmoisture': 58}
```

Step:3 Go To IBM WATSON IOT Platform, Under The Devices See the Status of Output


Back
Device Drilldown - 12345
Connection Information
Recent Events
State
Device Information
Metadata
Diagnostics
Connection Logs
Device Actions
Recent Events
The recent events listed show the live stream of data that is coming and going from this device.
Event
Value
Format
Last Received
status
{"temperature":108,"humidity":75,"soilmoisture"...
json
a few seconds ago
status
{"temperature":-9,"humidity":27,"soilmoisture":...
json
a few seconds ago
status
{"temperature":1,"humidity":29,"soilmoisture":57}
json
a few seconds ago
status
{"temperature":115,"humidity":89,"soilmoisture"...
json
a few seconds ago
status
{"temperature":119,"humidity":45,"soilmoisture"...
json
a few seconds ago
State
This table shows a list of data points that are reported by this device.
Showing Raw Data | No Interfaces Available