

Project Development –Delivery plan sprint-2

IoT Based Safety Gadget for Child Safety Monitoring & Notification

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Creating and Connecting IBM cloud for Project and Python Code

Creating IBM Cloud Service and creating the device:

The top screenshot shows the IBM Watson IoT Platform landing page. The header includes the IBM logo and a 'Sign in' button. The main content area features a large 'Cars' title and a diagram illustrating data collection and value creation. The bottom of the page shows a Windows taskbar with various application icons and a system clock indicating 11:24 AM on 14-11-2022.

The bottom screenshot shows the 'Add Device' process in the IBM Watson IoT Platform. The interface includes a sidebar with navigation icons and a main content area with a table of device details. The table has columns for Device ID, Status, Device Type, Class ID, and Date Added. The device details are as follows:

Device ID	Status	Device Type	Class ID	Date Added
12345	Connected	MyDeviceType	Device	14 Nov 2022 11:37

Below the table, there is a section for 'Device Information' with the following details:

- Device ID: 12345
- Device Type: MyDeviceType
- Date Added: 14 Nov 2022 11:37
- Added By: 310819106036@smartintenz.com
- Connection Status: Connected
- Connection Time: 14 Nov 2022 17:15
- Client Address: 157.51.38.16 SecureToken

The bottom of the page shows a Windows taskbar with various application icons and a system clock indicating 05:16 PM on 14-11-2022. A status bar at the bottom indicates '1 Simulation running'.

Creating Python Code:

```
import json
import wiotp.sdk.device
import time
import random

myConfig = {
    "identity":{
        "orgId": "jgry6x",
        "typeId":"MyDeviceType",
        "deviceId": "12345"
    },
    "auth": {
        "token":"*eB+Vs5Pb3m6f79Vnn"
    }
}

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

while True:
    name= "Smartbridge"
    #in area location

    latitude= 17.4225176
    longitude= 78.5458842

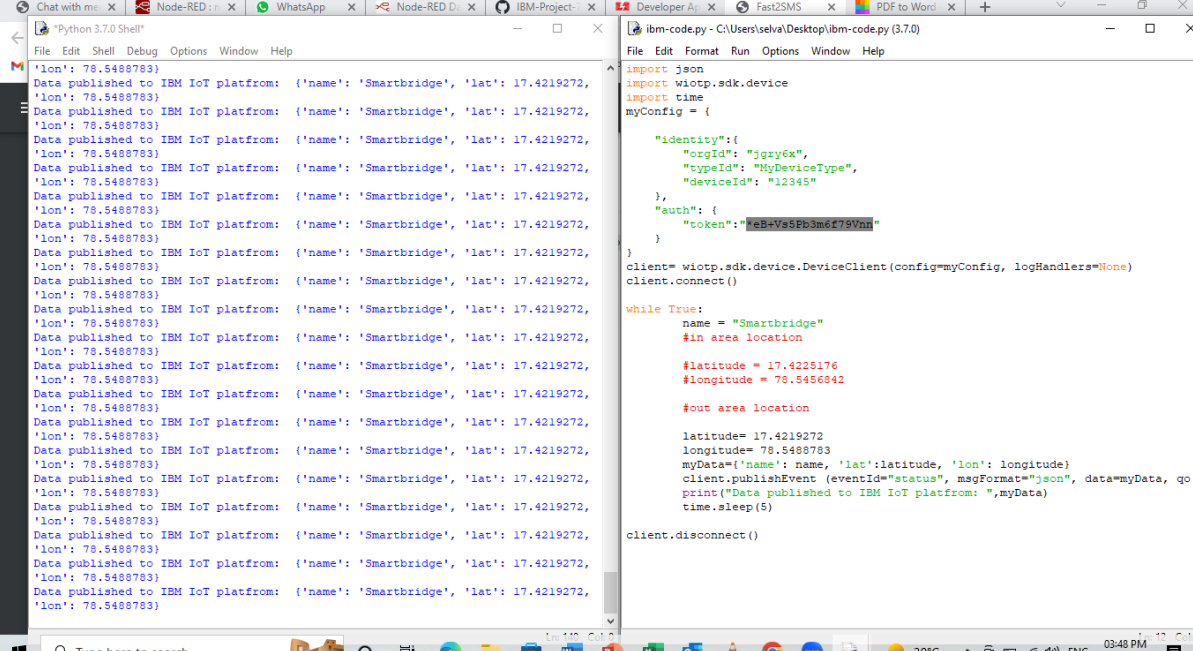
    #out area location

    #latitude= 17.4219272
    #longitude= 78.5488783
    myData={'name': name, 'lat':latitude, 'lon' :longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData,
qos=0, onPublish=None)
    print("Data Published to IBM IoT platfrom: ", myData)
    time.sleep(5)

client.disconnect()
```

Connecting IBM Watson and python Code:

In-Area Location:



The screenshot shows a Windows desktop with several open applications. The primary focus is on two windows:

- Python 3.7.0 Shell:** This window displays a continuous stream of log messages: `'lon': 78.5488783)` followed by `Data published to IBM IoT platform: ('name': 'Smartrbridge', 'lat': 17.4219272, 'lon': 78.5488783)`. This sequence repeats multiple times.
- IBM-code.py:** This is a Python script for connecting to the IBM IoT platform. It includes the following code:

```
import json
import wiotp.sdk.device
import time

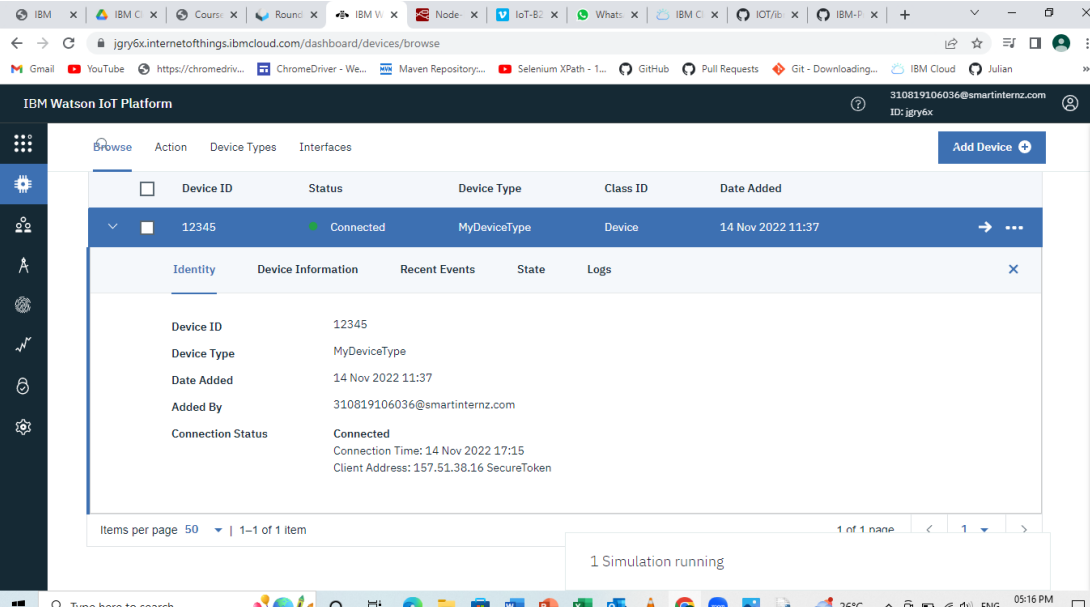
myConfig = {
    "identity": {
        "orgId": "jgry6x",
        "typeId": "MyDeviceType",
        "deviceId": "12345"
    },
    "auth": {
        "token": "teB+Vs5Pb3m6f79VnH"
    }
}

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

while True:
    name = "Smartrbridge"
    #in area location
    #latitude = 17.4225176
    #longitude = 78.5456842
    #out area location
    latitude = 17.4219272
    longitude = 78.5488783
    myData = {'name': name, 'lat': latitude, 'lon': longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qo=1)
    print("Data published to IBM IoT platform: ", myData)
    time.sleep(5)

client.disconnect()
```

The taskbar at the bottom shows the system clock as 03:48 PM on 16-11-2022.



The screenshot displays the IBM Watson IoT Platform dashboard. The main content area shows a table with one device:

Device ID	Status	Device Type	Class ID	Date Added
12345	Connected	MyDeviceType	Device	14 Nov 2022 11:37

Below the table, there is a detailed view for the selected device (12345) with the following information:

- Identity:** Device ID: 12345
- Device Information:** Device Type: MyDeviceType
- Recent Events:** Date Added: 14 Nov 2022 11:37
- State:** Added By: 310819106036@smartinternz.com
- Logs:** Connection Status: Connected
- Logs:** Connection Time: 14 Nov 2022 17:15
- Logs:** Client Address: 157.51.38.16 SecureToken

The dashboard also includes a sidebar with navigation icons and a top navigation bar with tabs for Browse, Action, Device Types, and Interfaces. A status bar at the bottom indicates "1 Simulation running".

Out-Area Location:

The screenshot shows two windows from a Windows desktop environment.

Left Window: A Python script titled "Python 3.7.0 Shell". It contains a loop that publishes data to an IBM IoT platform. Each iteration prints a log message like "Data published to IBM IoT platform:" followed by a dictionary containing 'name' ('Smartbridge'), 'lat' (17.4219272), and 'lon' (78.5488783).

```

('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
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('lon': 78.5488783)
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Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
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('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
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('lon': 78.5488783)
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('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)
Data published to IBM IoT platform: {'name': 'Smartbridge', 'lat': 17.4219272,
('lon': 78.5488783)

```

Right Window: A Python script titled "ibm-code.py - C:\Users\selsva\Desktop\ibm-code.py (3.7.0)". It defines a device configuration, sets up logging, connects to the IBM IoT platform, and publishes data in JSON format.

```

import json
import wiotp.sdk.device
import time

myConfig = {

    "identity":{
        "orgId": "jgry6x",
        "typeId": "MyDeviceType",
        "deviceId": "12345"
    },
    "auth": {
        "token": ""eBVs5Pb3mfz79Vnn"
    }
}

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

while True:
    name = "Smartbridge"
    #in area location

    latitude = 17.4225176
    longitude = 78.5456842

    #out area location

    #latitude= 17.4219272
    #longitude= 78.5488783
    myData={'name': name, 'lat':latitude, 'lon': longitude}
    client.publishEvent(eventId="status", msgFormat="json", data=myData, qo
print("Data published to IBM IoT platform: ",myData)
time.sleep(5)

client.disconnect()

```

The screenshot displays the IBM Watson IoT Platform interface. At the top, there's a dark navigation bar with the IBM logo and user information. Below this is a breadcrumb trail: 'Browse' > 'Action' > 'Device Types' > 'Interfaces'. A table lists devices, with the first device '12345' highlighted. A modal window shows the details for this device, including its ID, type, date added, and connection status. The connection status is 'Connected' with additional details like connection time and client address.

Device ID	Status	Device Type	Class ID	Date Added
12345	Connected	MyDeviceType	Device	14 Nov 2022 11:37

Identity	Device Information	Recent Events	State	Logs
Device ID	12345			
Device Type	MyDeviceType			
Date Added	14 Nov 2022 11:37			
Added By	310819106036@smarterintenz.com			
Connection Status	Connected			
	Connection Time: 14 Nov 2022 17:15			
	Client Address: 157.51.38.16 SecureToken			