ESIEE

DRIO 4302B IoT Prototyping

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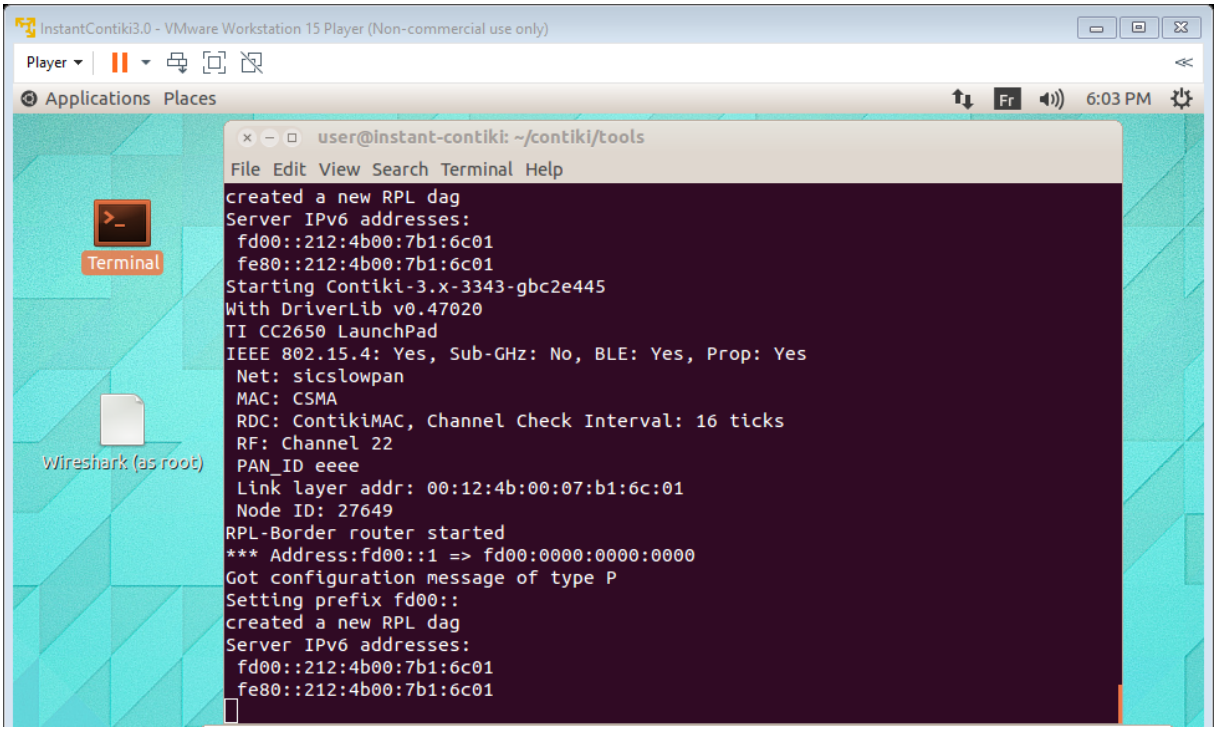
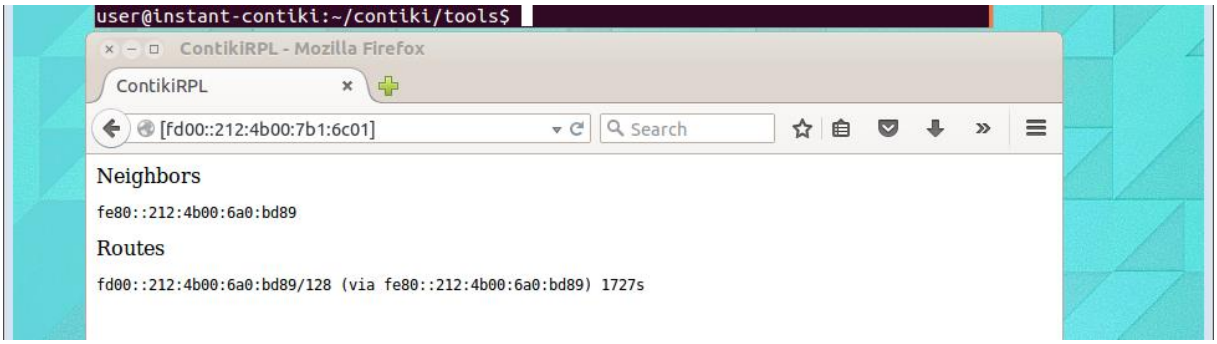
IoT Project Report

We open the virtual machine instant – contiki in VMware, then login, we plugged the launch pad on vmware; check the name and connectivity the sensor, we got this result:

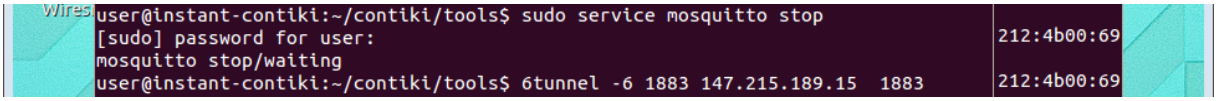


We check the edge router address with firefox as belows:



In order to run the MQTT broker first we need to stop the broker in vm machine so we did it as below:

Note: VM machine Ip address 147.215.189.15



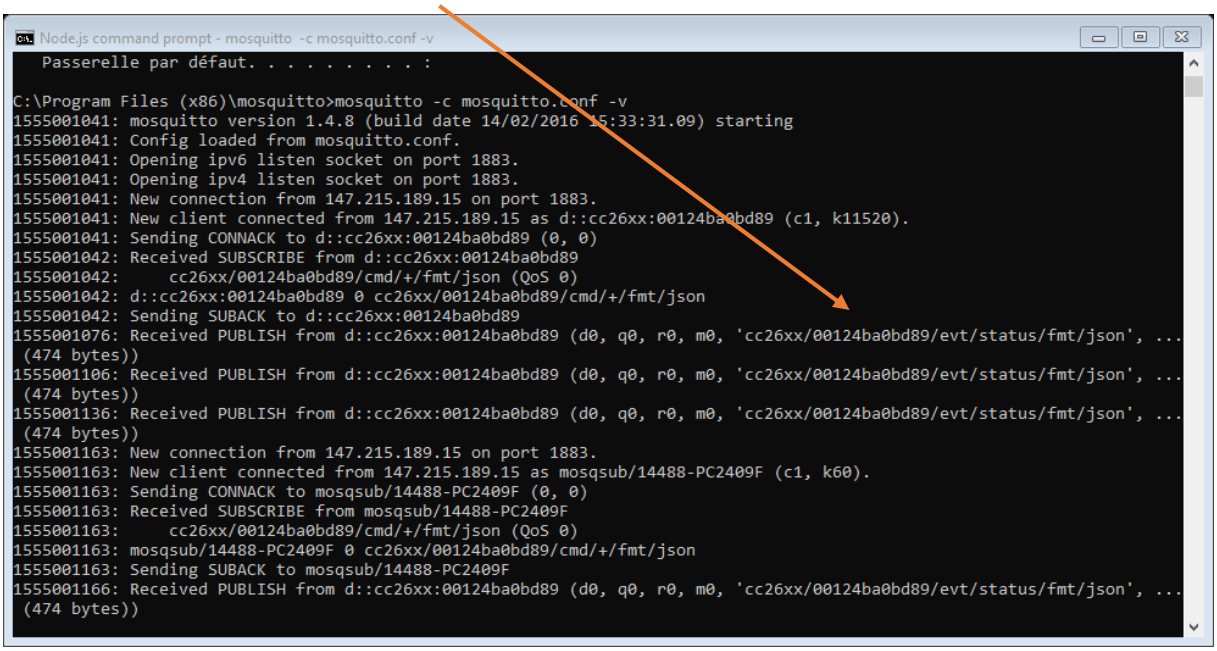
Then we run the MQTT broker on host machine to get the topic name of sensor with this command

```
Mosquitto -c mosquitto.conf -v
```

So we run the broker and we press the button of sensor to publish some information on broker

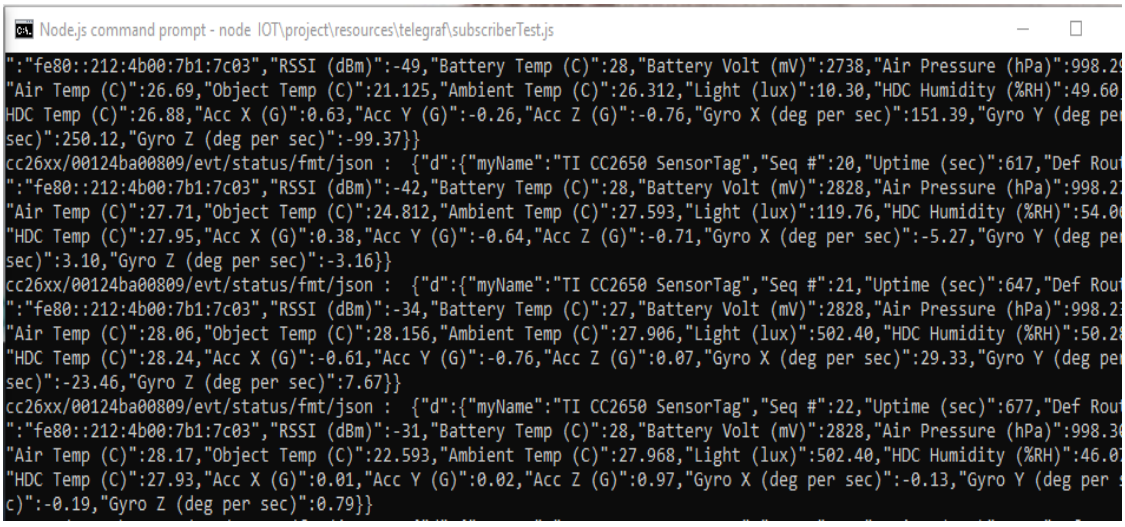
We have seen this result on broker

Note: topic name includes the MAC address of sensor



First by run this command we get the data from sensor

```
Mosquitto_sub –h  147.215.189.15 –p 1883 –t 'cc26xx/00124ba00809/evt/status/fmt/json
```



Then we use the subscriber json file to get the sensor data and parse it. In order to save the sensor data in influxdb we run the influxdb and create our db with below information:

```
Database name: mydb
```

```
Measurement name: weather
```

Also we configure the telegraf as data collector to get data from broker and write them in influxdb. We add topic names of data.

The data from subscriber need to change and be suitable to save in our db so we change the subscriber code as bellows:

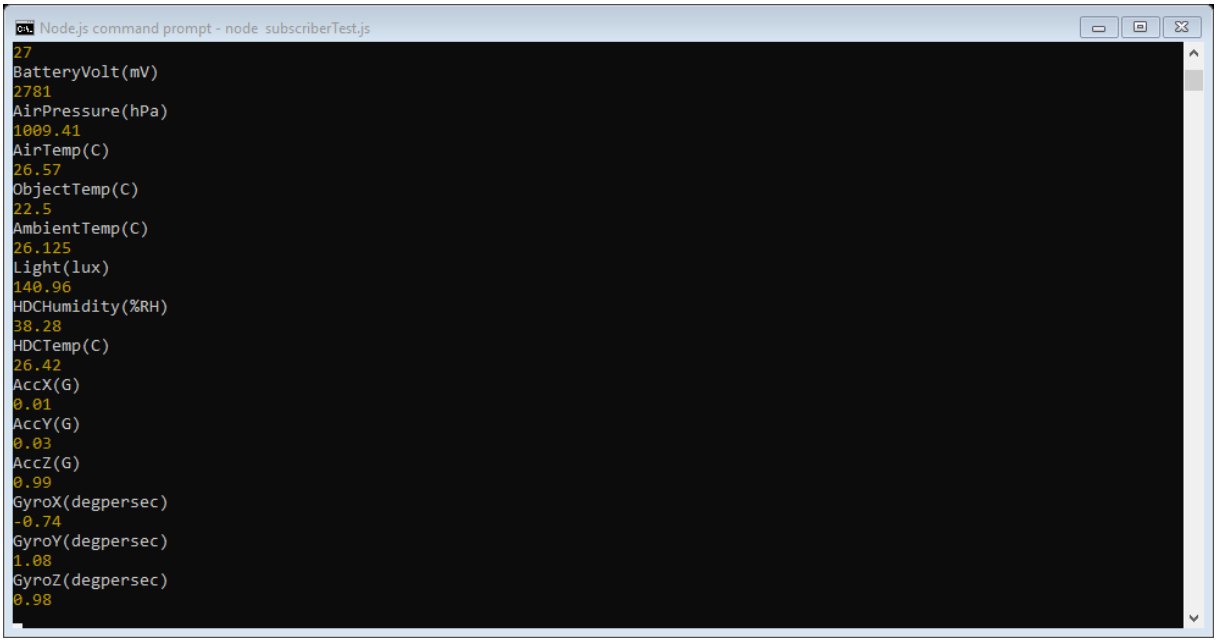
```
var mqtt = require('mqtt');
```

```
// Create an MQTT client (here using static IP of server)
var client = mqtt.connect('mqtt://192.168.213.131:1883')
// Indicate what topics we care about
client.on('connect', function () {
// get data from vm subscriber sensor
client.subscribe('cc26xx/00124ba00809/evt/status/fmt/json');
})
// Respond to message on subscribed topic(s)
client.on('message',
function (topic, message) {
//our code to parse data and remove space between words
data=JSON.parse(message)
 Object.keys(data.d).forEach(function(prop) {
     //object key change name
      console.log(prop.replace(/("[^"]*")|\s/g, "$1"))
      console.log(data.d[prop])//value
      var topicName=prop.replace(/("[^"]*")|\s/g, "$1");
      var value=data.d[prop]
}) ;
});
```

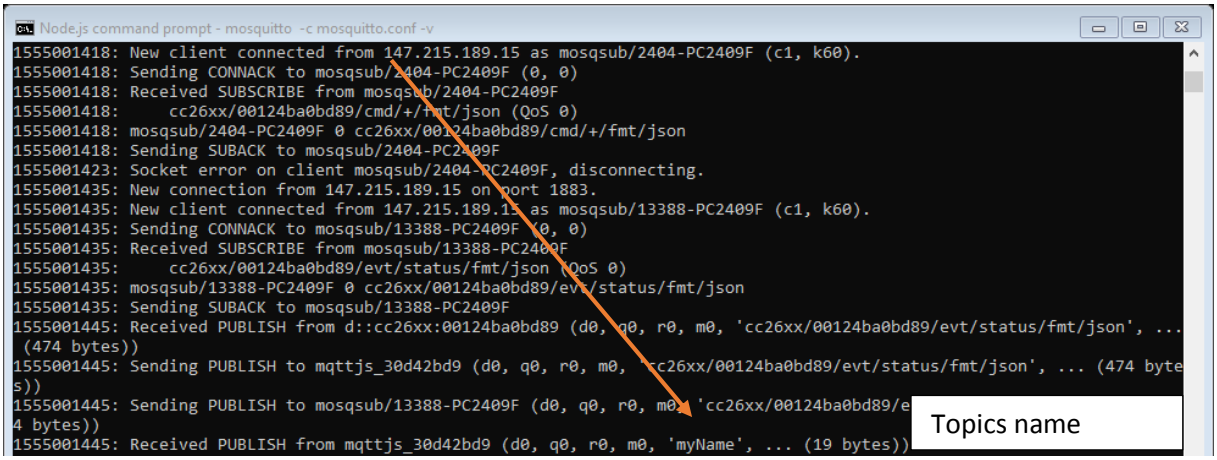
Then we need to publish data so we write publisher

```
client.publish(topicName,value.toString())
```

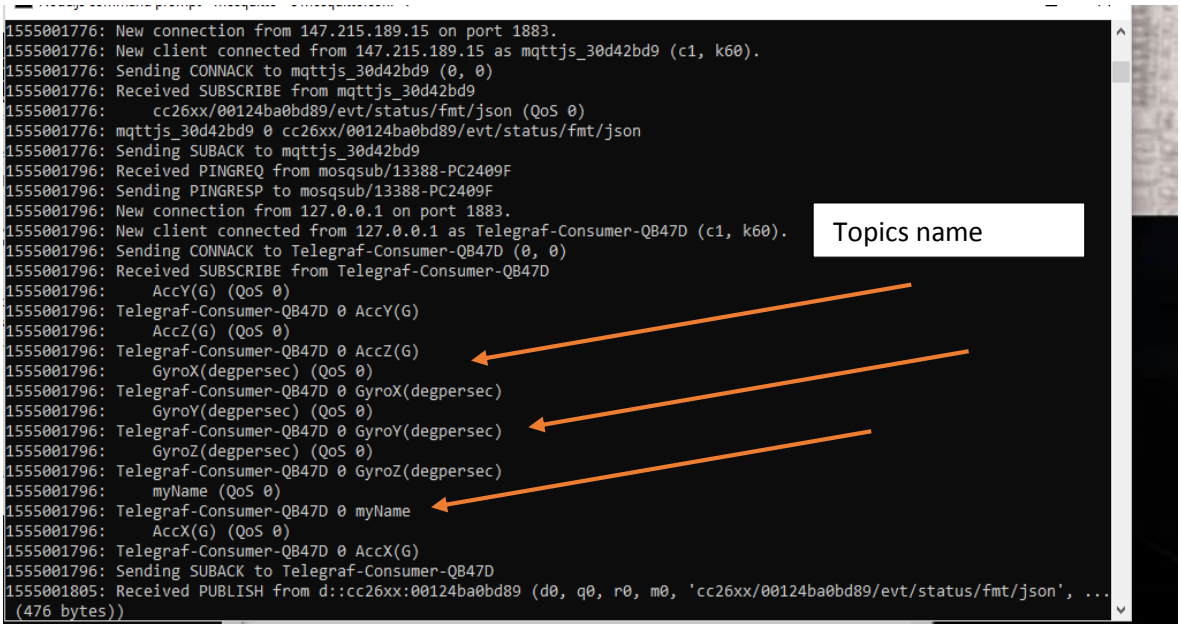
result of parsing data as bellows:



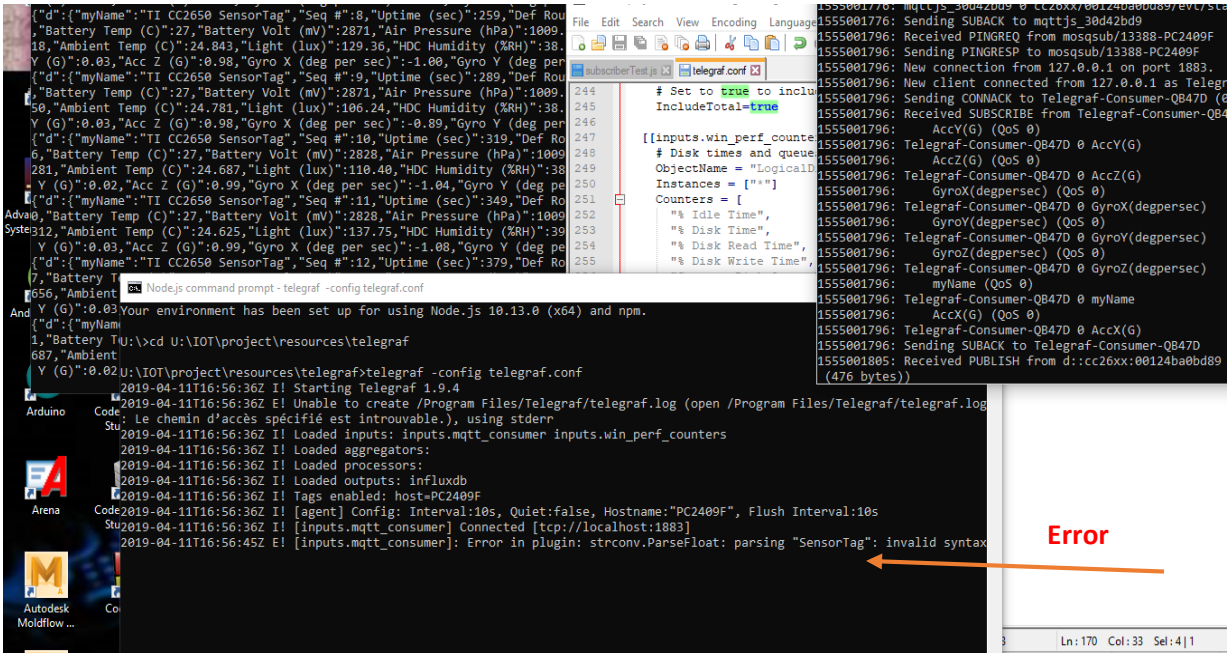
And we get these result from broker



telegraf collect data as belows:



The in writing data to influxdb we got this unfortunately



In this mini project and other TPs we have learnt how to configure the electronic devices with internet and monitor devices; we have simulated with VMWare, connected, run broker(MQTT), publish data (MQTT), collect data(Telegraf), save data (influxdb) and visualize data (grafana). But unfortunately for above error we were not able to write data on influxdb and visualize them with grafana.