

Project Development Phase Sprint Delivery - II	
Team ID	PNT2022TMID07016
Project Name	Smart Farmer - IoT Enabled Smart Farming Monitoring Application

Building Project

Connecting IoT simulator to IBM Watson IoT

Give the credentials of your device in IBM Watson IoT Platform

Click to connect

My credentials given to simulator are:

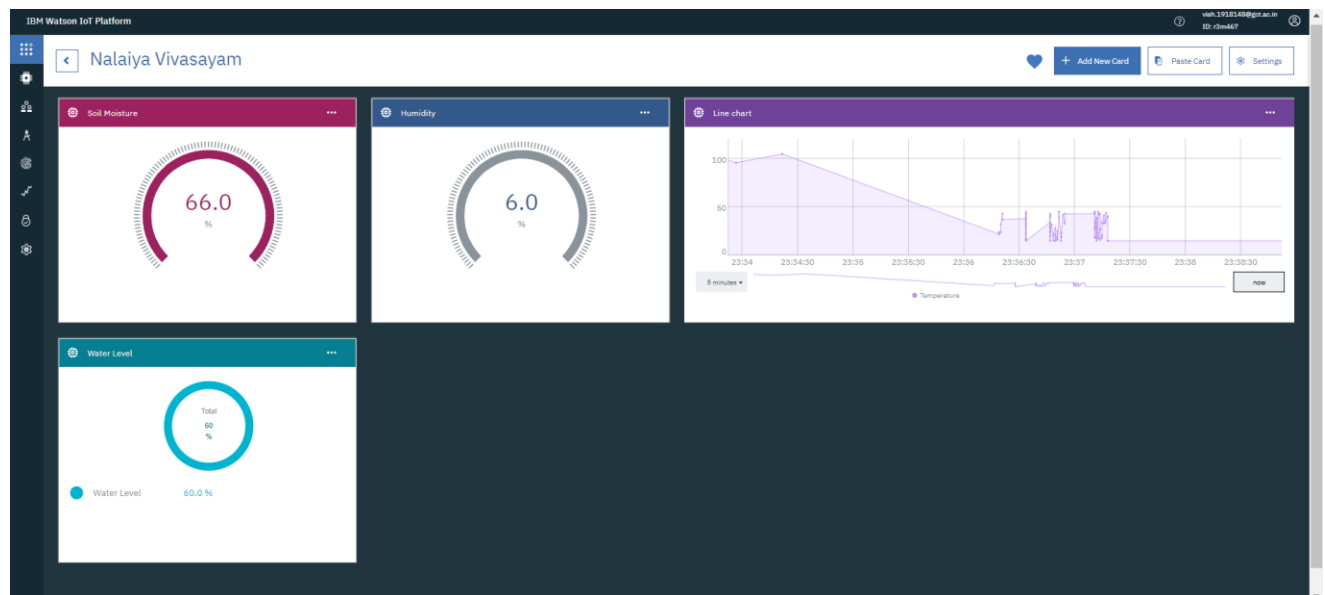
Organization ID r3m467

Device Type NalaiyaThiran

Device ID NalaiyaThiran

Authentication Method use-token-auth

Authentication Token NalaiyaThiran



You can see the received data in graphs by creating cards in Boards tab

- You will receive the simulator data in cloud
- You can see the received data in Recent Events under your device
- Data received in this format (json)

```
{
  "d": {
    "name": "xyz",
    "temperature": 27,
    "humidity": 26,
    "Moisture ": 31,
    "Water_Level": 60
  }
}
```

The image displays two screenshots of the IBM Watson IoT Platform interface, specifically the 'Device Drilldown - NalaiyaThiran' page. The top screenshot shows the 'State' tab, which displays a table of data points reported by the device. The bottom screenshot shows the 'Recent Events' tab, which displays a table of live stream data coming from the device.

Top Screenshot: State Tab

Connection Information

Recent Events

State

Device Information

Metadata

Diagnostics

Connection Logs

Device Actions

State

This table shows a list of data points that are reported by this device.

Showing Raw Data | No Interfaces Available

Property	Value	Type	Event	Last Received
Temperature	20	Number	IoT Sensor	a few seconds ago
Humidity	16	Number	IoT Sensor	a few seconds ago
Moisture	98	Number	IoT Sensor	a few seconds ago
Water Level	60	Number	IoT Sensor	a few seconds ago

Device Information

View basic device information including location and manufacturer.

Edit Device Information

Bottom Screenshot: Recent Events Tab

Connection Information

Recent Events

State

Device Information

Metadata

Diagnostics

Connection Logs

Device Actions

Correlation Time: Nov 10, 2022 11:40 PM
Client Address: 157.51.133.21 SecureToken

Recent Events

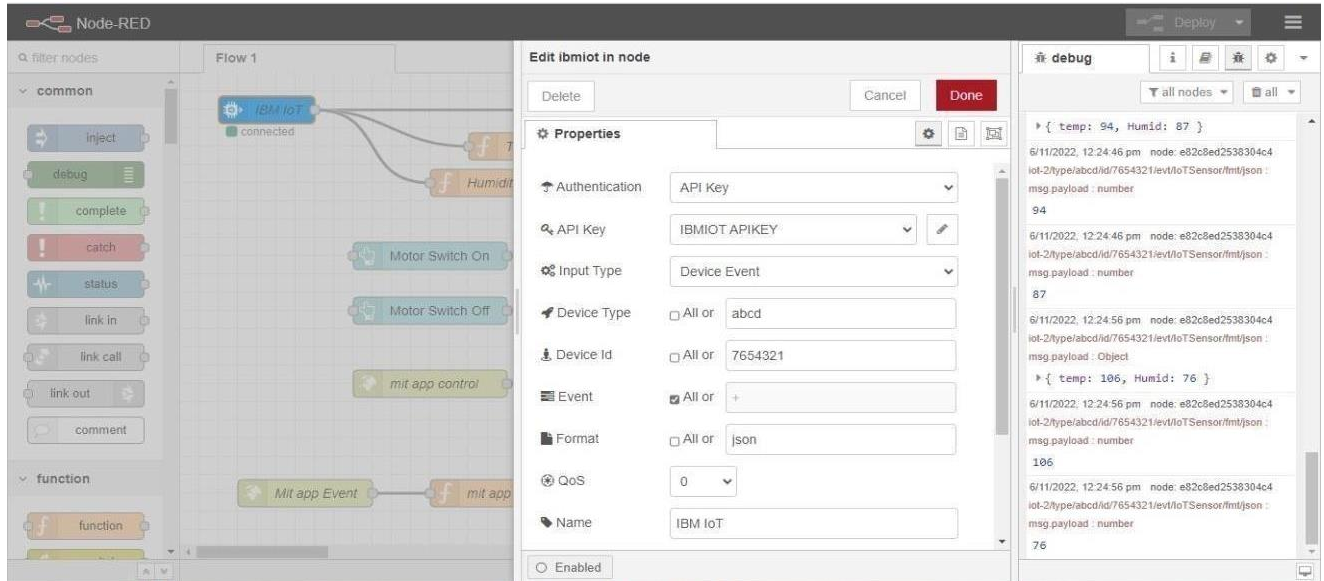
The recent events listed show the live stream of data that is coming and going from this device.

Event	Value	Format	Last Received
IoT Sensor	{"Temperature":19,"Humidity":23,"Moisture":58,...	json	a few seconds ago
IoT Sensor	{"Temperature":37,"Humidity":19,"Moisture":93,...	json	a few seconds ago
IoT Sensor	{"Temperature":16,"Humidity":82,"Moisture":90,...	json	a few seconds ago
IoT Sensor	{"Temperature":15,"Humidity":40,"Moisture":12,...	json	a few seconds ago
IoT Sensor	{"Temperature":15,"Humidity":0,"Moisture":43,...	json	a few seconds ago

State

Configuration of Node-Red to collect IBM cloud data

The node IBM IOT App In is added to Node-Red workflow. Then the appropriate device credentials obtained earlier are entered into the node to connect and fetch device telemetry to Node-Red.



Once it is connected Node-Red receives data from the device

Display the data using debug node for verification

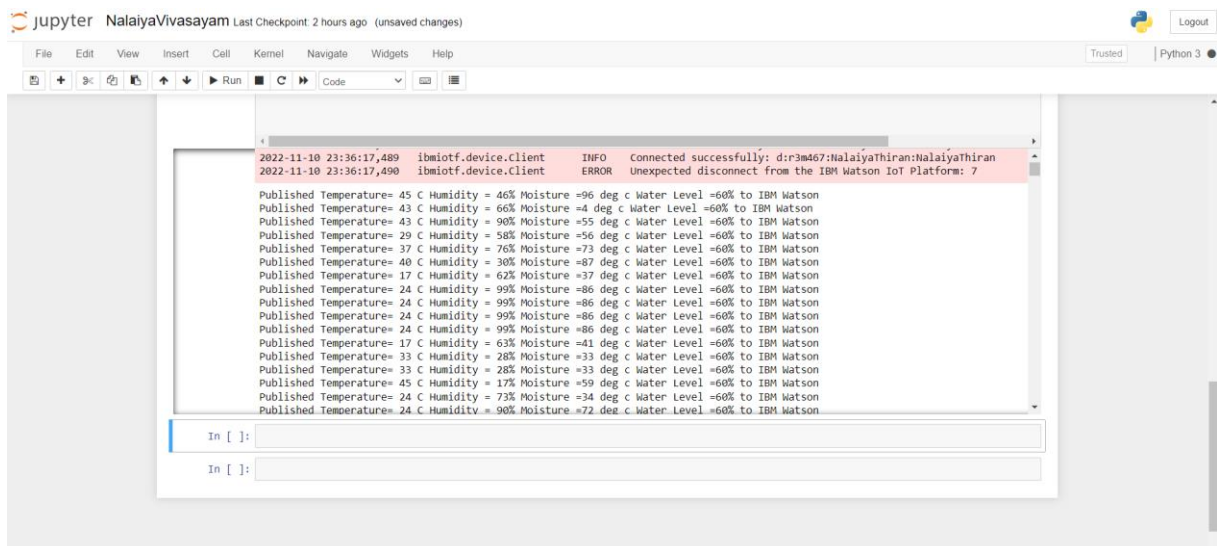
Connect function node and write the Java script code to get each reading separately.

The Java script code for the function node is:

```
msg.payload = msg.payloadadd.temperature
```

```
return msg;
```

Finally connect Gauge nodes from dashboard to see the data in UI



Data received from the cloud d in Node-Red console

