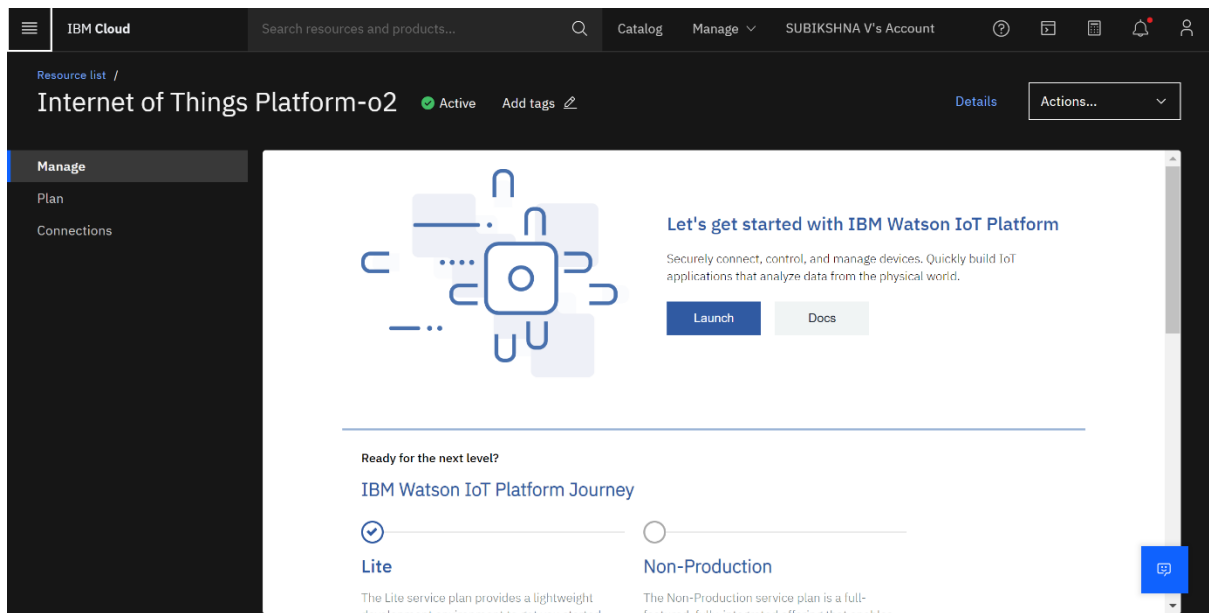


SPRINT 3

Team ID	PNT2022TMID04755
Project name	SmartFarmer - IOT Enabled Smart Farming Application

Now, Let's start with IBM Watson by clicking the Launch button.



Device Credentials:

Organization ID - flippr

Device Type - ESP32_Controller

Device ID- BME280_Sensor

Authentication Method - use-token-auth

Authentication Token - C-4ZDzZOLNhQ11Ckzr

These are the list of device types.

IBM Watson IoT Platform

subikshnav.19ece@kongu.edu
ID: flippr

Browse Action **Device Types** Interfaces

Add Device Type +

Device Types

This table lists all device types that are defined. You can filter the list and search for the name and description. You can modify and configure existing device types and add new device types.

🔍 Type the name to search...

<input type="checkbox"/>	Name	Description	Number of Devices	Class ID	Date Added
> <input type="checkbox"/>	ESP32_Controller		1	Device	Nov 15, 2022 12:08 PM

Items per page 10 | 1–1 of 1 item

1 of 1 page < 1 >

1 Simulation running

The below are the recent events by connecting the code with IBM cloud for certain time period.

The random values of temperature and humidity is ranges from 90 to 120 and 60 to 100 respectively.

IBM Watson IoT Platform

subikshnav.19ece@kongu.edu
ID: flippr

Browse Action **Device Types** Interfaces

Add Device +

ESP32_Controller Device Nov 15, 2022 12:08 PM

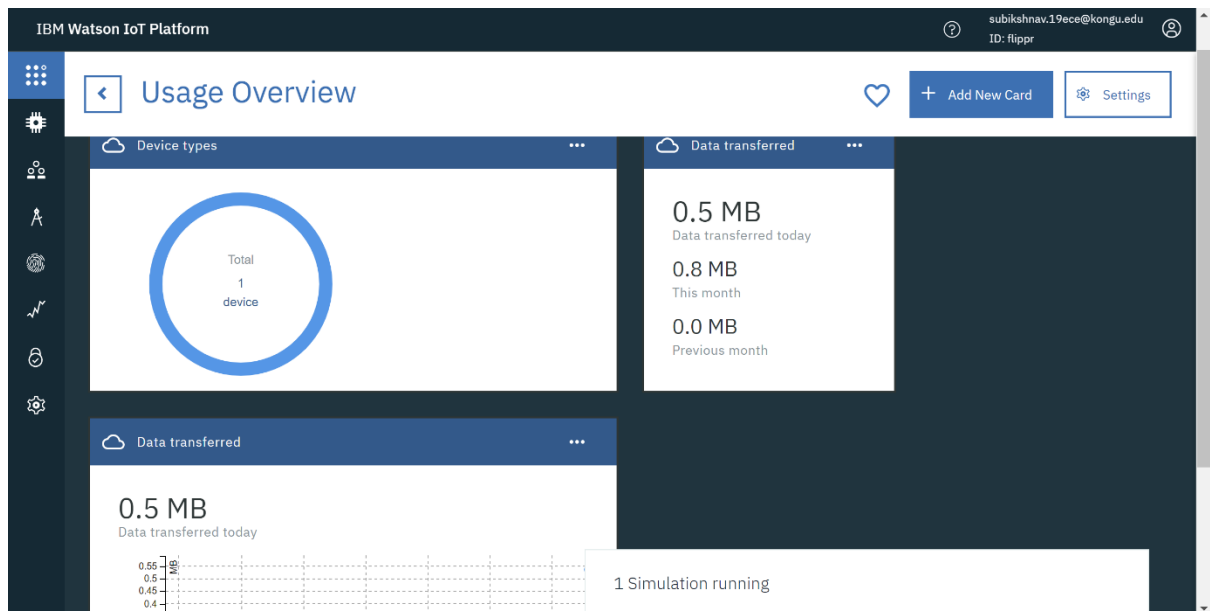
Identity Device Information **Recent Events** State Logs

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

Event	Value	Format	Last Received
eventf	{"temp":112,"hum":99}	json	a few seconds ago
eventf	{"temp":112,"hum":94}	json	a few seconds ago
eventf	{"temp":90,"hum":82}	json	a few seconds ago
eventf	{"temp":114,"hum":92}	json	a few seconds ago
eventf	{"temp":94,"hum":60}	json	a few seconds ago

1 Simulation running

By clicking the device, the usage overview is displayed. The simulator data is received from the cloud.



APP URL FOR NODE-RED:

The image shows the 'App details' page for 'Node RED DSMZK 2022-11-15' in the IBM Cloud console. The page includes a search bar, navigation tabs, and a sidebar with 'Resource list' and 'App details'.

Details:

- App URL: <http://159.122.187.178:30725>
- Source: <https://us-south.git.cloud.ibm.com/subikshnav.19ece/NodeRE...>
- Resource group: Default
- Deployment target: Kube/Helm
- Created: 11/15/2022

Services:

- Cloudant: Open dashboard, Documentation, API reference, Credentials

Deployment Automation:

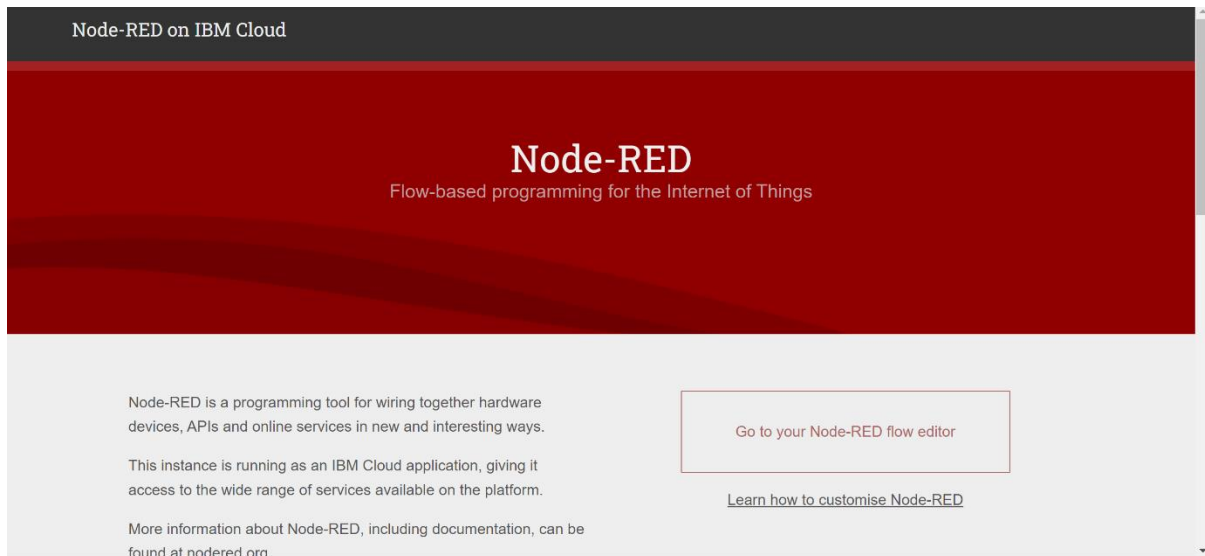
- Name: NodeREDDSMZK2022-11-15
- Location: Dallas
- Tool integrations: [Icons for CI/CD tools]

Delivery Pipelines:

- Name: ci-pipeline, Status: Success
- Name: pr-pipeline, Status: No stages detected

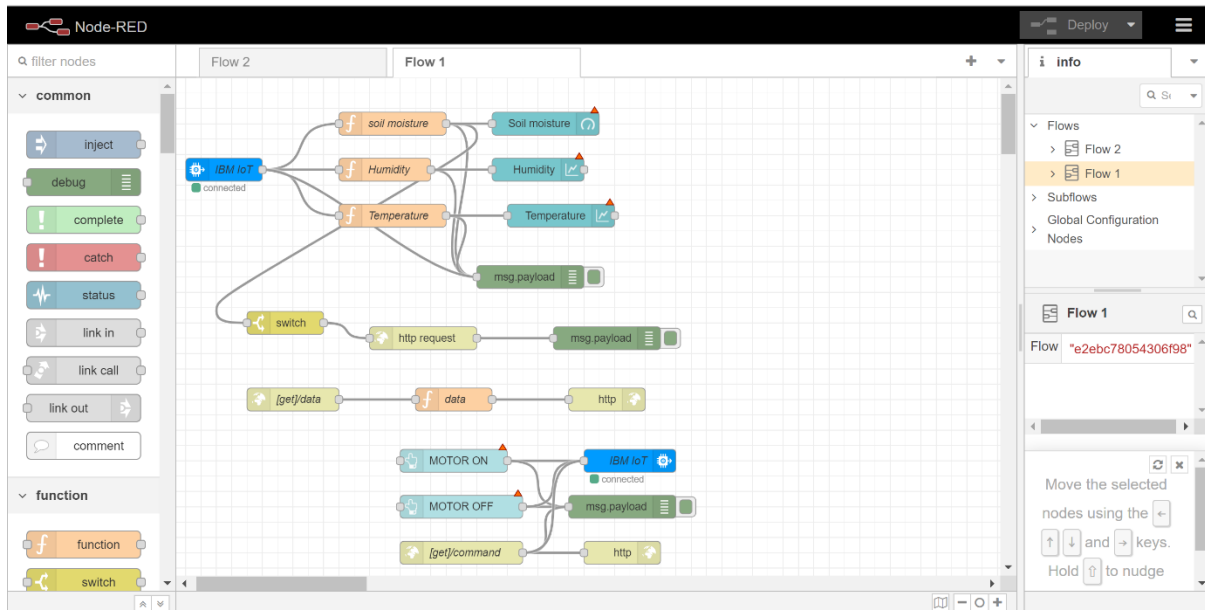
The right sidebar contains an 'ASK A QUESTION' button.

FRONT PAGE OF NODE-RED:

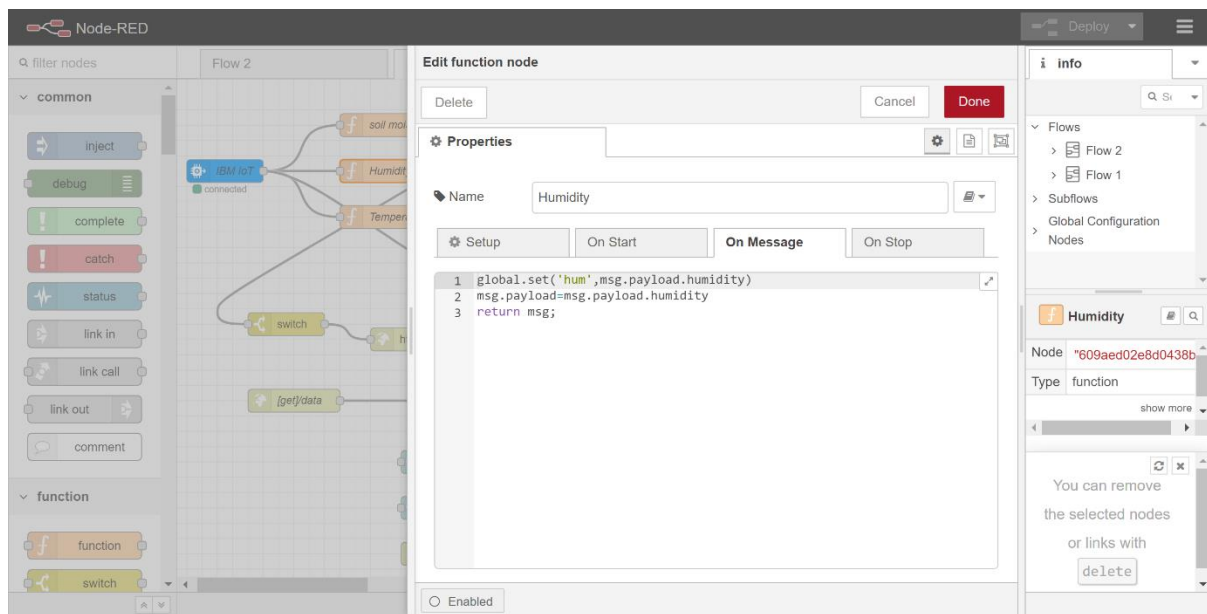


Now configure the Node-Red with IBM Watson platform to collect the IBM cloud data.

The IBM Watson is added to Node-Red. 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 to the Node-Red it receives the data from the Watson.



Connect the function node and write the Java script code to get each reading for temperature, humidity and soil moisture. Function name is renamed as temperature, humidity and soil moisture.

Json code for Soil moisture:

```
global.set('moist' , msg.payload.soil-moisture)

msg.payload = msg.payload.soil-moisture

return msg;
```

Json code for humidity:

```
global.set('hum' , msg.payload.humidity)

msg.payload = msg.payload.humidity

return msg;
```

Json code for temperature:

```
global.set('temp' , msg.payload.temperature)

msg.payload = msg.payload.temperature

return msg;
```

The output can be seen by connecting the API Key, Device ID, Device type in the IBM out node.

