IOT ENABLED SMART FARMINGAPPLICATION

SPRINT DELIVERY – 2

Date	17.11.2022
Team ID	PNT2022TMID06965
Project Name	SMART FARMER - IOT ENABLED SMART FARMINGAPPLICATION SYSTEM

Building Project

Connecting IoT Simulator to IBM Watson IoT Platform

Open link provided in above section 4.3

Give the credentials of your device in IBM Watson IoT PlatformClick on connect

My credentials given to simulator are:

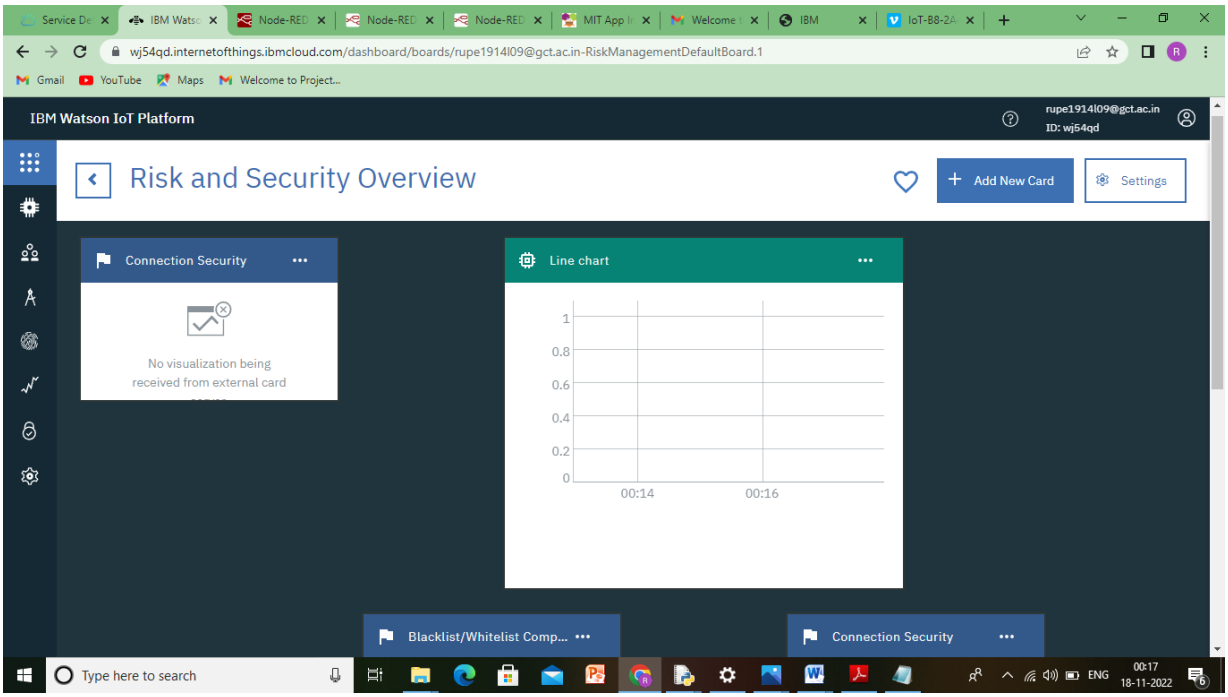
OrgID: wj54qd

api: a-wj54qd-9qn7eau55k

Device type: abc

Device ID : 123

Device Token : 12345678



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)

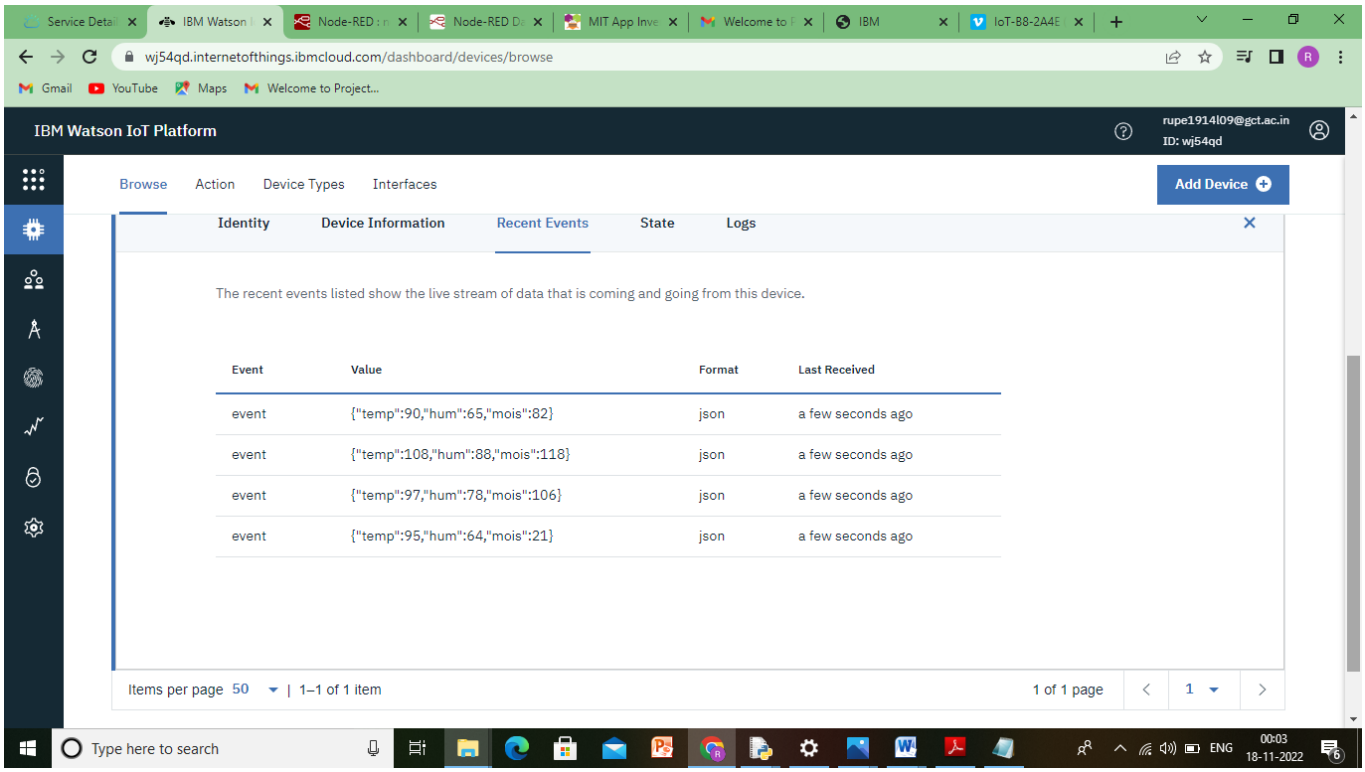
{

"d": {

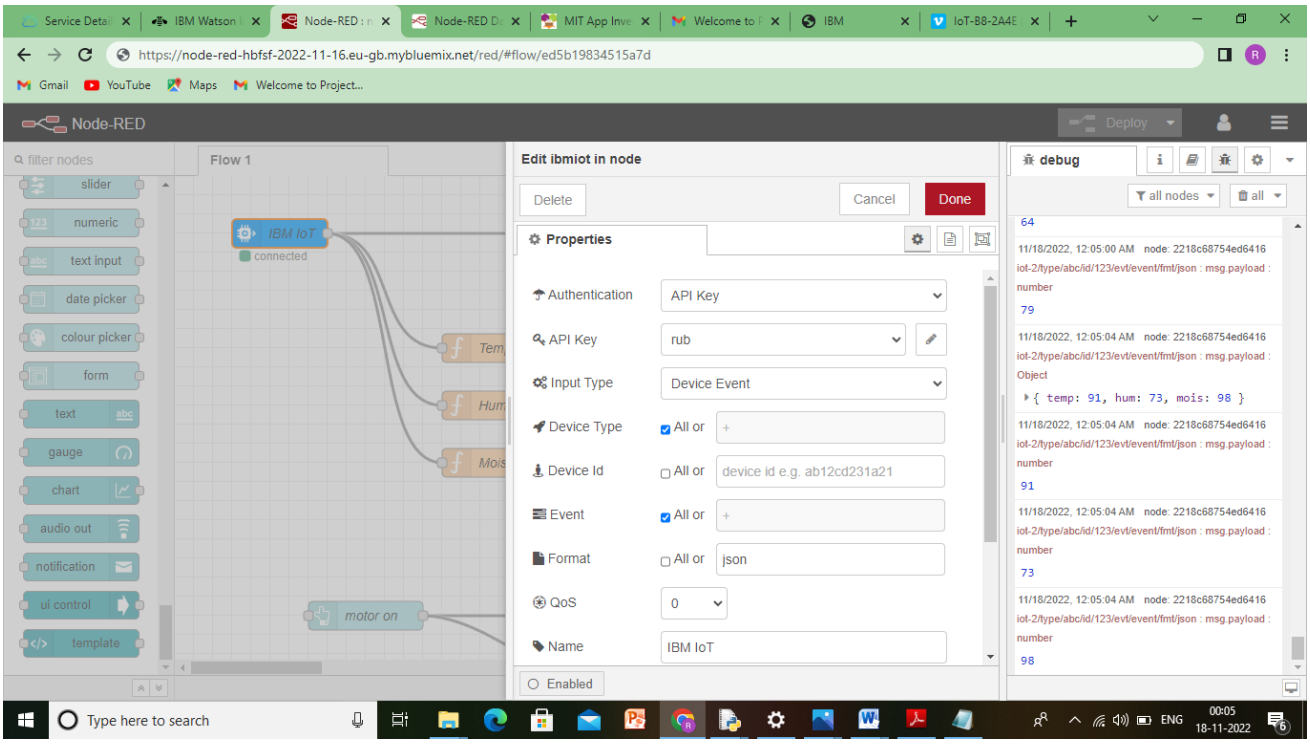
- "name": "abc",
- "temperature": 95,
- "humidity":64,
- "Moisture ": 21

}

}



Configuration of Node-Red to collect IBM cloud data



The node IBM IoT App In is added to Node-Red workflow. Then the appropriatedevice 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

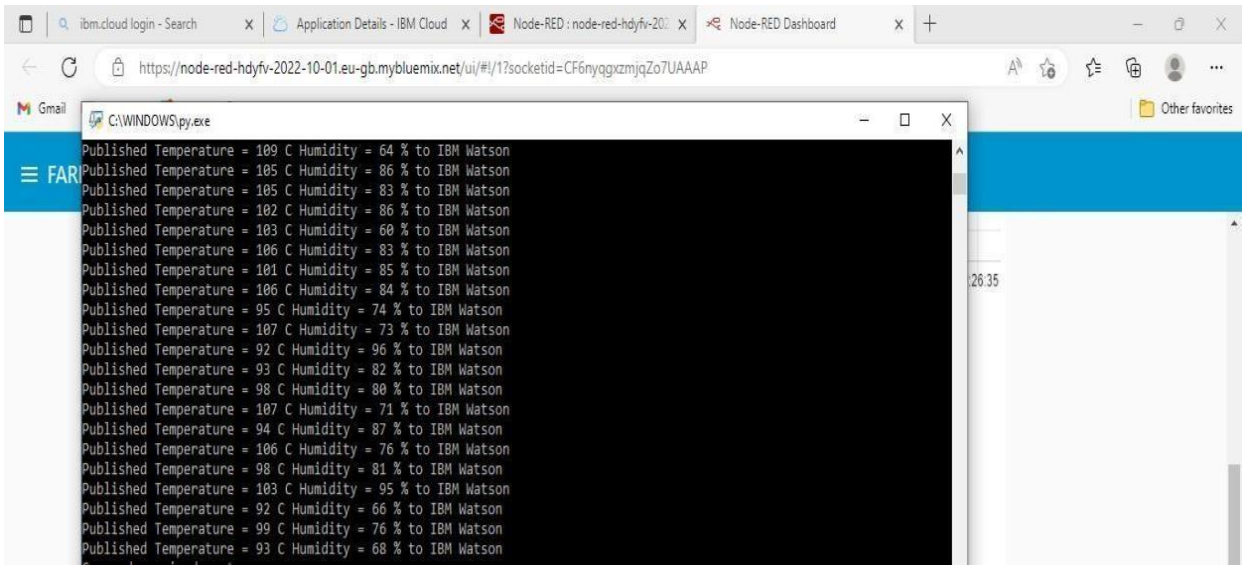
Display the data using debug node for verification

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

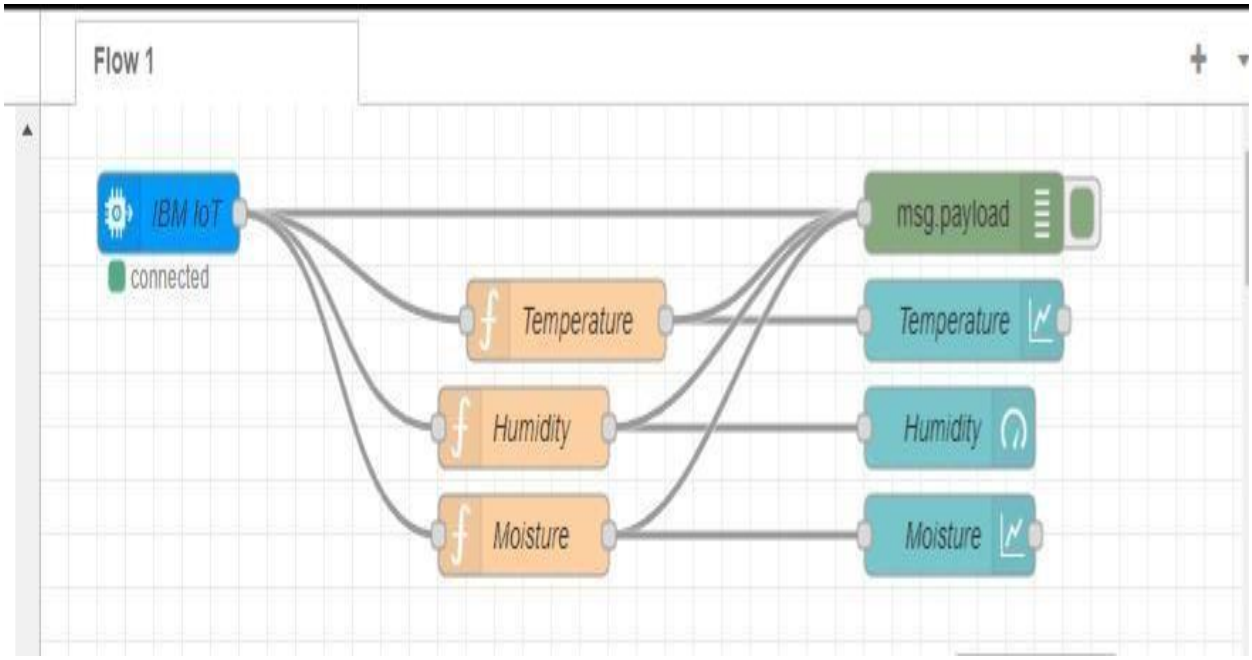
The Java script code for the function node is:

msg.payload=msg.payload.d.temperature returnmsg;

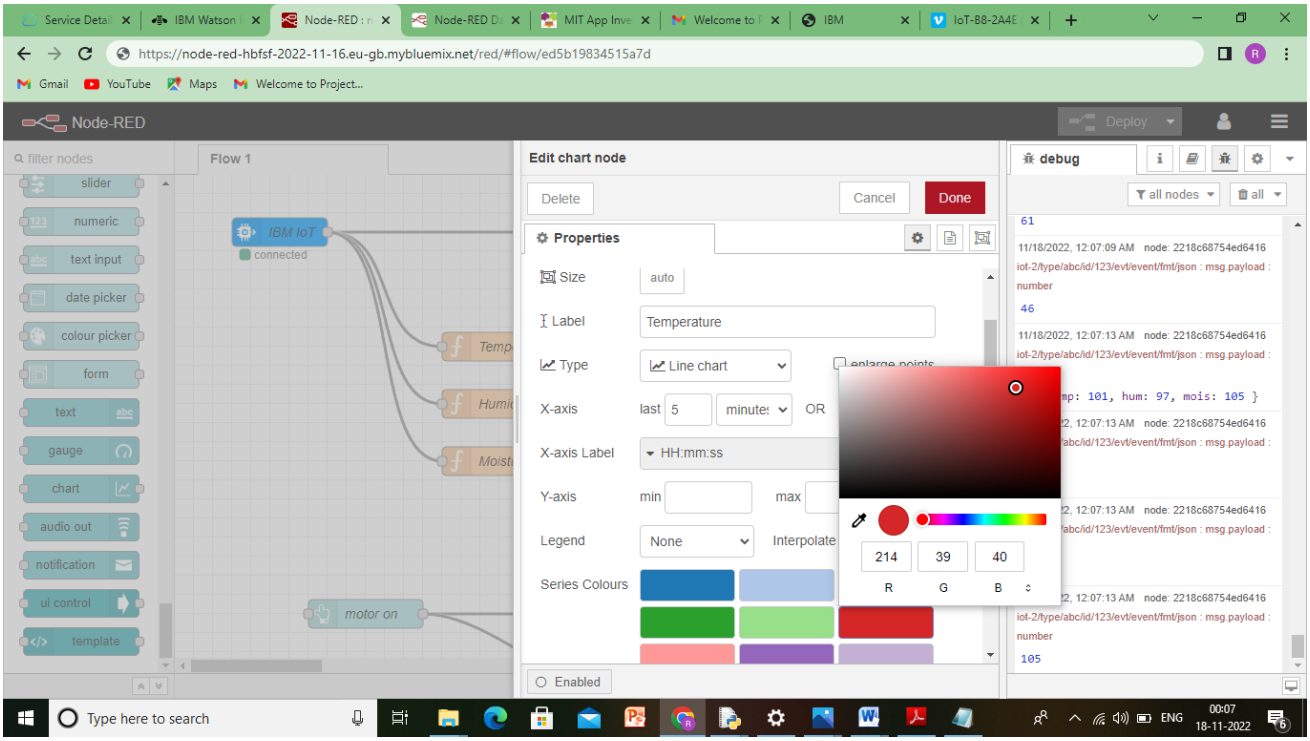
Finally connect Gauge nodes from dashboard to see the data in UI

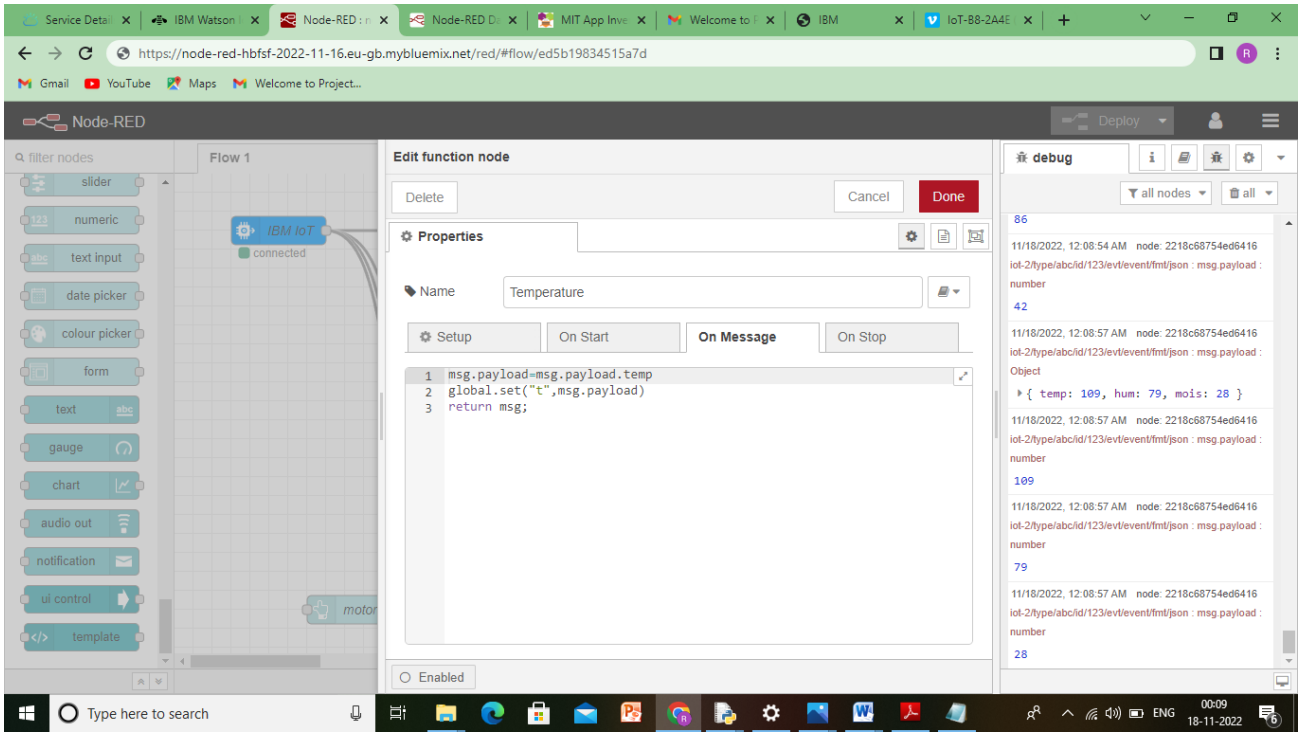


Data received from the cloud in Node-Red console



Nodes connected in following manner to get each reading separately


Node-RED
Flow 1
Edit chart node
Delete
Cancel
Done
Properties
Size
auto
Label
Temperature
Type
Line chart
X-axis
last 5 minute OR
X-axis Label
HH:mm:ss
Y-axis
min
max
Legend
None
Interpolate
Series Colours
214 39 40
R G B
Enabled
IBM IoT
connected
motor on
debug
all nodes
all
11/18/2022, 12:07:09 AM node: 2218c68754ed6416
iot-2/type/abc/id/123/evt/event/fmt/json : msg.payload : number
46
11/18/2022, 12:07:13 AM node: 2218c68754ed6416
iot-2/type/abc/id/123/evt/event/fmt/json : msg.payload : number
105
Type here to search
ENG
00:07
18-11-2022


Node-RED
Flow 1
Edit function node
Delete
Cancel
Done
Properties
Name
Temperature
Setup
On Start
On Message
On Stop
msg.payload=msg.payload.temp
global.set("t",msg.payload)
return msg;
Enabled
IBM IoT
connected
debug
all nodes
all
11/18/2022, 12:08:54 AM node: 2218c68754ed6416
iot-2/type/abc/id/123/evt/event/fmt/json : msg.payload : number
42
11/18/2022, 12:08:57 AM node: 2218c68754ed6416
iot-2/type/abc/id/123/evt/event/fmt/json : msg.payload : Object
{ temp: 109, hum: 79, mois: 28 }
109
79
28
Type here to search
ENG
00:09
18-11-2022