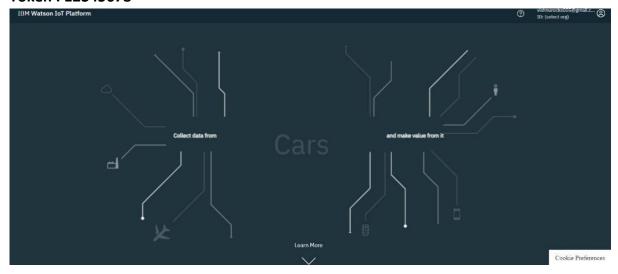
# **SPRINT 2**

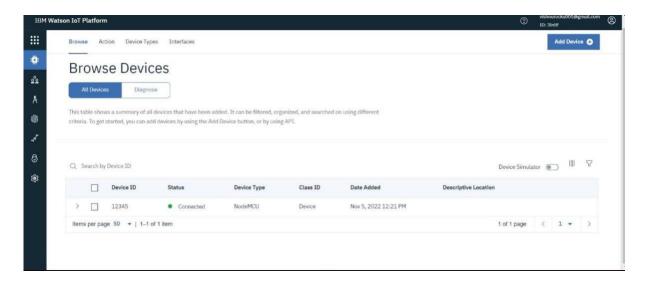
TEAM ID	PNT2022TMID018038
PROJECT NAME	Smart Farmer - IoT Enabled Smart Farming Application
Date	05 November 2022

### **IBM WATSON CLOUD:**

## Give the credentials of your device in IBM Watson IoT Platform

Click on connect Device Id: 12345 Token: 12345678

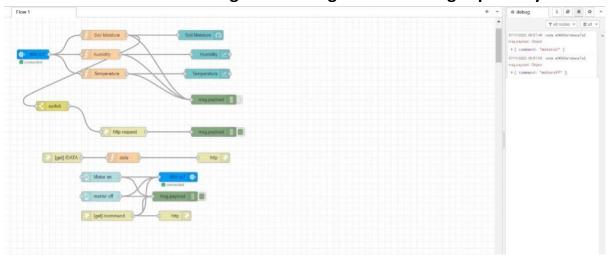






### **NODE - RED:**

### Nodes connected in following manner to get each reading separately



1","disabled":false,"info":"","env":[]},{"id":"dd8948acf63987d6","type":"ibmiot
in","z":"55532a3a9414ada1","authentication":"apiKey","apiKey":"64009416e5d88d75","inputTyp
e":"evt","logicalInterface":"","ruleId":"","deviceId":"12345","applicationId":"","deviceType":"No
deMCU","eventType":"+","commandType":"","format":"json","name":"IBM

[{"id":"55532a3a9414ada1","type":"tab","label":"Flow

 $loT","service":"registered","allDevices":"","allApplications":"","allDeviceTypes":false,"allLogicalInterfaces":"","allEvents":true,"allCommands":"","allFormats":"","qos":0,"x":90,"y":200,"wires":[["cc5ee96d1fe8c0ec","4640bf220608c2b5","8878c5a96c8bd6c7"]]},{"id":"cc5ee96d1fe8c0ec","type":"function","z":"55532a3a9414ada1","name":"Soil}$ 

Moisture","func":"global.set('moist',msg.payload.soil\_moisture)\nmsg.payload=msg.payload.soil\_moisture\nreturn

msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":330,"y":140,"wires":[["be4ecf dbd3805c1c","234da12208d57a19","823ed8368aa8fa6a"]]},{"id":"4640bf220608c2b5","type":"fu

```
nction","z":"55532a3a9414ada1","name":"humidity","func":"global.set('hum',msg.payload.humi
dity)\nmsg.payload=msg.payload.humidity\nreturn
msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":300,"y":200,"wires":[["42e41d
121e826584","234da12208d57a19"]]},{"id":"8878c5a96c8bd6c7","type":"function","z":"55532a3a
9414ada1","name":"Temperature","func":"global.set('temp',msg.payload.temperature)\nmsg.pa
yload=msg.payload.temperature\nreturn
msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":310,"y":260,"wires":[["e006a1
f31e1084f2","234da12208d57a19"]]},{"id":"42e41d121e826584","type":"ui_chart","z":"55532a3a
9414ada1","name":"","group":"32c77595865857f1","order":1,"width":"0","height":"0","label":"
Humidity","chartType":"line","legend":"false","xformat":"HH:mm:ss","interpolate":"linear","nod
ata":"","dot":false,"ymin":"","ymax":"","removeOlder":1,"removeOlderPoints":"","removeOlder
Unit":"3600","cutout":0,"useOneColor":false,"useUTC":false,"colors":["#1f77b4","#aec7e8","#ff7f
0e","#2ca02c","#98df8a","#d62728","#ff9896","#9467bd","#c5b0d5"],"outputs":1,"useDifferentC
olor":false,"x":640,"y":200,"wires":[[]]},{"id":"e006a1f31e1084f2","type":"ui_chart","z":"55532a3
a9414ada1","name":"","group":"32c77595865857f1","order":2,"width":"0","height":"0","label":"
Temperature", "chartType": "line", "legend": "false", "xformat": "HH:mm:ss", "interpolate": "linear", "
nodata":"","dot":false,"ymin":"","ymax":"","removeOlder":1,"removeOlderPoints":"","removeOl
derUnit":"3600","cutout":0,"useOneColor":false,"useUTC":false,"colors":["#1f77b4","#aec7e8","#
ff7f0e","#2ca02c","#98df8a","#d62728","#ff9896","#9467bd","#c5b0d5"],"outputs":1,"useDiffere
ntColor":false,"x":630,"y":260,"wires":[[]]},{"id":"be4ecfdbd3805c1c","type":"switch","z":"55532
a3a9414ada1","name":"","property":"payload","propertyType":"msg","rules":[{"t":"eq","v":"20"
,"vt":"str"}],"checkall":"true","repair":false,"outputs":1,"x":150,"y":360,"wires":[["6cc86205e442
77fb"]]},{"id":"0215325ab54b8d51","type":"debug","z":"55532a3a9414ada1","name":"","active":
true,"tosidebar":true,"console":false,"tostatus":false,"complete":"payload","targetType":"msg","
statusVal":"","statusType":"auto","x":650,"y":440,"wires":[]},{"id":"6cc86205e44277fb","type":"
request","z":"55532a3a9414ada1","name":"","method":"GET","ret":"txt","paytoqs":"ignore","url
":"https://www.fast2sms.com/dev/bulkV2?authorization=w3caxunBXmh5pO4KYsbdQEvAoS96UZ
7tegHiGIN0yflLWr8JkjXAbmHyVvoj5SJGMlls419xckpi0rwf&route=q&message=low%20soil%20moi
sture%20level&language=english&flash=1&numbers=8870252283","tls":"","persist":false,"proxy"
:"","authType":"","senderr":false,"x":370,"y":440,"wires":[["0215325ab54b8d51"]]},{"id":"234da
12208d57a19","type":"debug","z":"55532a3a9414ada1","name":"","active":false,"tosidebar":tru
e,"console":false,"tostatus":false,"complete":"false","statusVal":"","statusType":"auto","x":630,"
y":340,"wires":[]},{"id":"3ddbcc7ae9c17a4e","type":"function","z":"55532a3a9414ada1","name":
"data","func":"msg.payload = {\n \"temperature\":global.get('temp'),\n \"humidity\":
global.get('hum'),\n \"moisture\": global.get('moist')\n}\nreturn
msg;","outputs":1,"noerr":0,"initialize":"","finalize":"","libs":[],"x":370,"y":520,"wires":[["72cb90
bf9a4ea129"]]},{"id":"72cb90bf9a4ea129","type":"http
response","z":"55532a3a9414ada1","name":"","statusCode":"","headers":{},"x":650,"y":520,"wir
es":[]},{"id":"a32037baad643597","type":"http
in","z":"55532a3a9414ada1","name":"","url":"/DATA","method":"get","upload":false,"swaggerD
oc":"","x":180,"y":520,"wires":[["3ddbcc7ae9c17a4e"]]},{"id":"e9c894340e352161","type":"ui_bu
tton","z":"55532a3a9414ada1","name":"","group":"5a9be2a7.35e99c","order":0,"width":"3","hei
ght":"2","passthru":false,"label":"Motor
on","tooltip":"","color":"","bgcolor":"","icon":"","payload":"{\"command\":\"motoron\"}","payl
oadType":"json","topic":"","topicType":"str","x":300,"y":580,"wires":[["e00aec1775ab7ba1","af4
693e1abeca7a2"]]},{"id":"e00aec1775ab7ba1","type":"ibmiot
out","z":"55532a3a9414ada1","authentication":"apiKey","apiKey":"64009416e5d88d75","output
```

Type":"cmd","deviceId":"12345","deviceType":"NodeMCU","eventCommandType":"cmd","forma t":"json","data":"data","qos":0,"name":"IBM

IoT", "service": "registered", "x":540, "y":580, "wires": []], {"id": "436ec2969a88e928", "type": "ui\_butt on", "z": "55532a3a9414ada1", "name": "", "group": "5a9be2a7.35e99c", "order": 1, "width": "3", "heig ht": "2", "passthru": false, "label": "mortor

off","tooltip":"","color":"","bgcolor":"","icon":"","payload":"{\"command\":\"motoroff\"}","payloadType":"json","topic":"topic","topicType":"str","x":300,"y":640,"wires":[["af4693e1abeca7a2", "e00aec1775ab7ba1"]]},{"id":"af4693e1abeca7a2","type":"debug","z":"55532a3a9414ada1","na me":"","active":true,"tosidebar":true,"console":false,"tostatus":false,"complete":"payload","targ etType":"msg","statusVal":"","statusType":"auto","x":530,"y":640,"wires":[]},{"id":"dd8a9df81aa ebedf","type":"http

in","z":"55532a3a9414ada1","name":"","url":"/command","method":"get","upload":false,"swag gerDoc":"","x":320,"y":700,"wires":[["05c851ba0d5bf5de","af4693e1abeca7a2","e00aec1775ab7ba1"]]},{"id":"05c851ba0d5bf5de","type":"http

response","z":"55532a3a9414ada1","name":"","statusCode":"","headers":{},"x":530,"y":700,"wir es":[]},{"id":"823ed8368aa8fa6a","type":"ui\_gauge","z":"55532a3a9414ada1","name":"","group":"2a4abd11.a253a2","order":0,"width":0,"height":0,"gtype":"gage","title":"Soil

Moisture", "label": "units", "format": "{{value}}", "min": 0, "max": "100", "colors": ["#00b500", "#e6e60 0", "#ca3838"], "seg1": "", "seg2": "", "x": 650, "y": 140, "wires": []}, {"id": "64009416e5d88d75", "type": "ibmiot", "name": "API", "keepalive": "60", "serverName": "", "cleansession": true, "appId": "", "shared": false}, {"id": "32c77595865857f1", "type": "ui\_group", "name": "Default", "tab": "5f4c2ea5.dc4e3", "order": 3, "disp": true, "width": "6", "collapse": false}, {"id": "5a9be2a7.35e99c", "type": "ui\_group", "name": "Default", "tab": "5f4c2ea5.dc4e3", "order": 2, "disp": true, "width": "6", "collapse": false}, {"id": "2a4abd11.a253a2", "type": "ui\_group", "name": "Soil

 $moisture", "tab": "513e92a0.840a9c", "order": 1, "disp": true, "width": "8", "collapse": true \}, {"id": "5f4c 2ea5.dc4e3", "type": "ui_tab", "name": "Home", "icon": "dashboard", "disabled": false, "hidden": false \}, {"id": "513e92a0.840a9c", "type": "ui_tab", "name": "Home", "icon": "dashboard", "order": 1, "disabled": false, "hidden": false \}]$