

Build a Web application using NODE-RED Services

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Team ID	PNT2022TMID32919
Project Name	Project – Smart Farmer-IoT Enabled smart Farming Application

Configuring IBM-IoT to Node-RED connection

The screenshot displays the Node-RED web interface in a browser. The main workspace shows a flow with an 'IBM IoT' node connected to three function nodes labeled 'Temp', 'Hum', and 'Moisture'. The 'Edit chart node' panel is open, showing the configuration for a line chart. The chart is titled '[Smart Farm] Farm temperature' and is set to 'Line chart' type. The X-axis is labeled 'last 10 second' and the Y-axis is labeled 'min' to 'max'. The legend is set to 'None' and the interpolate is 'linear'. The debug console on the right shows messages from the 'Guru' node, including a timestamp and a payload object: { randomNumber: 4, temp: 97, hum: 26 }.

Configuration of Node-Red to collect data from OpenWeather

The Node-Red also receive data from the OpenWeather API by HTTP GET request. An inject trigger is added to perform HTTP request for every certain interval.

Service Desk x IBM Watson x Node-RED x IBM x IoT-87-1A x (6266) Fire x MIT Fire x Python Re x Untitled d x +

node-red-lzhco-2022-11-17-eu-gb.mybluemix.net/red/#flow/06e227cc67d6cb82

Gmail YouTube Maps Translate IBM Node-RED: node-r... IBM Cloud Checker Plus for G... IBM-EPBL/IBM-Proj... IBM App Developm...

Node-RED

Filter nodes

Flow 1

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

IBM IoT

connected

Edit function node

Delete Cancel Done

Properties

Name Temp

Setup On Start On Message On Stop

```
1 msg.payload = msg.payload.temp;
2 return msg;
```

debug

all nodes all

msg.payload: number

4

11/19/2022, 10:18:56 AM node: Guru
iot-2/type/abcdelid/123/ev/evntflow/fmt/json :
msg payload: Object
{ randomNumber: 73, temp: 83, hum: 39 }

11/19/2022, 10:18:56 AM node: Guru
iot-2/type/abcdelid/123/ev/evntflow/fmt/json :
msg payload: number
83

11/19/2022, 10:18:56 AM node: Guru
iot-2/type/abcdelid/123/ev/evntflow/fmt/json :
msg payload: number
39

11/19/2022, 10:18:56 AM node: Guru
iot-2/type/abcdelid/123/ev/evntflow/fmt/json :
msg payload: number
73

python-3.7.0-amd64.exe

Type here to search

31°C Haze

ENG 10:18 AM IN 11/19/2022

Output in Node-RED Dashboard:

Service x IBM Wat x Node-RED x Node-RED x IBM x IoT-87-1A x (6266) F x MIT Fire x Python x Untitled x +

node-red-lzhco-2022-11-17-eu-gb.mybluemix.net/ui/#/0?socketid=Ed2t5v4S3HEQKYNgAAAH

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Smart Farm

Humidity control

chart

38
36
34
32
30
28

10:21:00 10:21:04 10:21:08

Farm temperature

chart

100
90
80
70
60

10:21:00 10:21:04 10:21:08

SoilMoisture

gauge

12

0 10

units

python-3.7.0-amd64.exe

Type here to search

Satisfactory air

ENG 10:21 AM IN 11/19/2022