

# PROJECT DEVELOPMENT PHASE

## SPRINT 2

TEAM ID	PNT2022TMID14113
TITLE	IOT BASED SMART CROP PROTECTION FOR AGRICULTURE

### CONNECTING WATSON IOT DEVICE TO NODE RED

The screenshot displays the Node-RED web interface in a browser. The top navigation bar includes tabs for 'New Tab', 'Node-RED: node-red-gvifh-2022', 'Service Details - IBM Cloud', and 'IBM Watson IoT Platform'. The address bar shows the URL: `node-red-gvifh-2022-11-09.eu-gb.mybluemix.net/red/#flow/df2b0a891b0bc3ce`. The main workspace, titled 'Flow 1', contains two nodes: a 'test hello' node connected to a 'msg.payload' node, and an 'IBM IoT' node (labeled 'connected') connected to another 'msg.payload' node. The left sidebar shows a 'filter nodes' search bar and a list of nodes under 'common' (inject, debug, complete, catch, status, link in, link call, link out, comment) and 'function'. The right sidebar features a 'debug' tab with a list of nodes and a 'msg.payload' field. The debug console shows four log entries, each representing an IoT event with a timestamp, node ID, and a JSON payload containing 'randomNumber', 'temp', and 'hum' values.

```
11/13/2022, 12:32:36 PM node: 20a81a82edf3d1b0  
iot-2/type/1234/id/12345678/evt/event_1/fmt/json :  
msg.payload : Object  
{  
  randomNumber: 24, temp: 11, hum:  
    89  
}
```

```
11/15/2022, 12:34:18 PM node: 20a81a82edf3d1b0  
iot-2/type/1234/id/12345678/evt/event_1/fmt/json :  
msg.payload : Object  
{  
  randomNumber: 45, temp: 20, hum:  
    99  
}
```

```
11/15/2022, 12:35:33 PM node: 20a81a82edf3d1b0  
iot-2/type/1234/id/12345678/evt/event_1/fmt/json :  
msg.payload : Object  
{  
  randomNumber: 3, temp: 13, hum:  
    92  
}
```

```
11/15/2022, 12:36:46 PM node: 20a81a82edf3d1b0  
iot-2/type/1234/id/12345678/evt/event_1/fmt/json :  
msg.payload : Object  
{  
  randomNumber: 16, temp: 26, hum:  
    86  
}
```

IBM Node-RED: node-red-gvifh-2022-11-09.eu-gb.mybluemix.net

node-red-gvifh-2022-11-09.eu-gb.mybluemix.net/red/#flow/df2b0a891b0bc3ce

Node-RED

Flow 1

test hello

IBM IoT

connected

Properties

Authentication: API Key

API Key: IBMIOT API KEY

Input Type: Device Event

Device Type: All or 1234

Device Id: All or 12345678

Event: All or +

Format: All or json

QoS: 0

Info

Flows

Flow 1

Subflows

Global Configuration Nodes

IBM IoT

Node: "a790e54dfb6d0b5e"

Type: ibmiot in

Hold down **↑** when you **click** on a node to also select all of its connected nodes

88°F Mostly cloudy

15:36 18-11-2022

IBM Node-RED: node-red-gvifh-2022-11-09.eu-gb.mybluemix.net

node-red-gvifh-2022-11-09.eu-gb.mybluemix.net/red/#flow/df2b0a891b0bc3ce

Node-RED

Flow 1

test

IBM IoT

connected

Edit function node

Name: Temperature

Setup

On Start

On Message

On Stop

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

Info

Flows

Flow 1

Subflows

Global Configuration Nodes

Temperature

Node: "ae0ef48bfa6686fe"


Type: function

Hold down **ctrl** when you **click** on a node port to enable quick-wiring



88°F Mostly cloudy

15:36 18-11-2022

# DOWNLOAD NODE.JS:



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## Downloads


Latest LTS Version: 18.12.1 (includes npm 8.19.2)


Download the Node.js source code or a pre-built installer for your platform, and start developing today.

LTS  
Recommended For Most Users

  
Windows Installer  
node-v18.12.1-x64.msi

Current  
Latest Features

  
macOS Installer  
node-v18.12.1.pkg

  
Source Code  
node-v18.12.1.tar.gz

Windows Installer (.msi)

Windows Binary (.zip)

macOS Installer (.pkg)

macOS Binary (.tar.gz)

Linux Binaries (x64)

32-bit	64-bit
32-bit	64-bit
64-bit / ARM64	
64-bit	ARM64
64-bit	

```
node-red
4 Nov 18:48:05 - [info] Node-RED version: v3.0.2
4 Nov 18:48:05 - [info] Node.js version: v18.12.0
4 Nov 18:48:05 - [info] Windows_NT 10.0.19044 x64 LE
4 Nov 18:48:26 - [info] Loading palette nodes
4 Nov 18:48:44 - [info] Settings file : C:\Users\ELCOT\.node-red\settings.js
4 Nov 18:48:45 - [info] Context store : 'default' [module=memory]
4 Nov 18:48:45 - [info] User directory : \Users\ELCOT\.node-red
4 Nov 18:48:45 - [warn] Projects disabled : editorTheme.projects.enabled=false
4 Nov 18:48:45 - [info] Flows file : \Users\ELCOT\.node-red\flows.json
4 Nov 18:48:45 - [info] Creating new flow file
4 Nov 18:48:45 - [warn]

-----
Your flow credentials file is encrypted using a system-generated key.

If the system-generated key is lost for any reason, your credentials
file will not be recoverable, you will have to delete it and re-enter
your credentials.

You should set your own key using the 'credentialSecret' option in
your settings file. Node-RED will then re-encrypt your credentials
file using your chosen key the next time you deploy a change.
-----

4 Nov 18:48:45 - [warn] Encrypted credentials not found
4 Nov 18:48:45 - [info] Starting flows
4 Nov 18:48:46 - [info] Started flows
4 Nov 18:48:46 - [info] Server now running at http://127.0.0.1:1880/
```