

SPRINT-2

TEAM ID	PNT2022TMID33619
Project Name	IoT Based smart crop Protection system for agriculture
Maximum mark	20 marks

STEP1: Download and Install NODE JS.

node

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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	Current Latest Features	
 Windows Installer node-v18.12.1-x64.msi	 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	

STEP2: Setup node.js and configure command prompt for error check.open node-red from the generated link.

```
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]

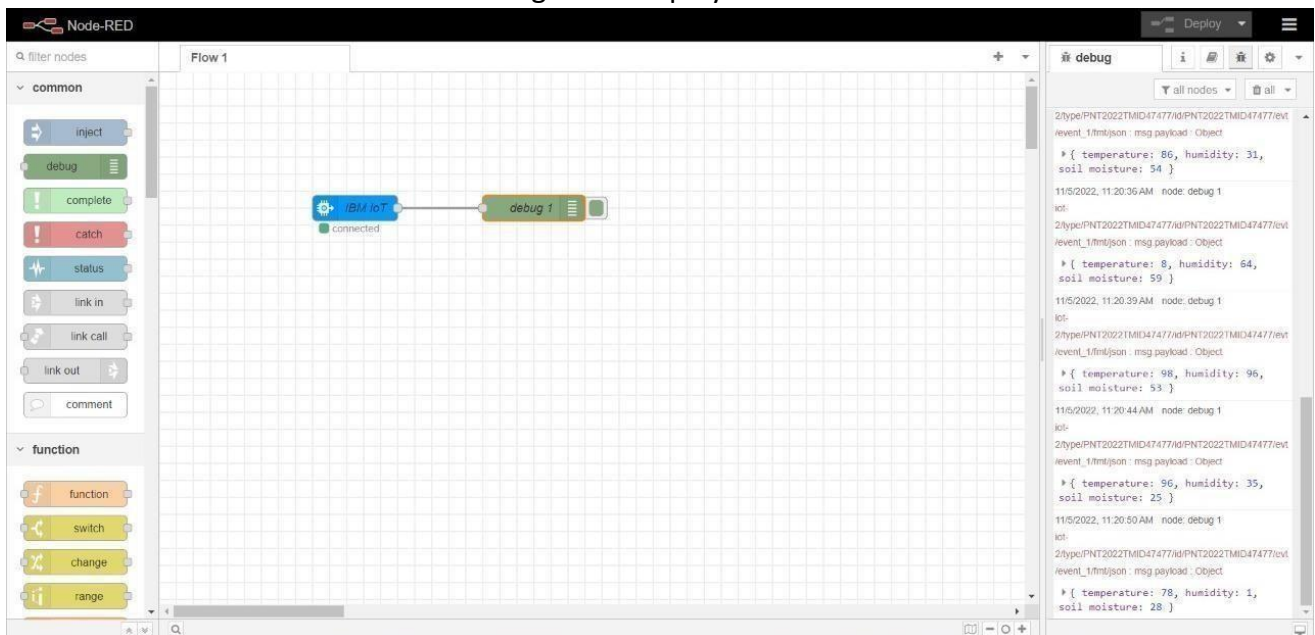
-----
Your flow credentials file is encrypted using a system-generated key.

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/
```

STEP3: Connect IBM IOT in and Debug 1 and Deploy.



STEP4: Edit gauge node (Here the gauge nodes are named as Temperature, Humidity and Soil moisture).

Node-RED interface showing the configuration of a gauge node.

Flow 1: A flow containing an `IBM IoT` node connected to a `gauge` node.

Edit gauge node Properties:

- Group: `[CROP PRODUCTION] MONITORIN`
- Size: `auto`
- Type: `Gauge`
- Label: `gauge`
- Value format: `{{value}}`
- Units: `units`
- Range: min `0`, max `10`
- Colour gradient: `green`, `yellow`, `red`
- Sectors: `0`, `optional`, `optional`, `10`
- Class: `Optional CSS class name(s) for widget`
- Enabled: ☐

Info Panel:

- Flows: `Flow 1`
- Subflows: `Global Configuration Nodes`
- Node: `"2fa1b5086672a6e"`
- Type: `ui_gauge`

Node-RED interface showing the configuration of a gauge node and the debug console.

Flow 1: A flow containing an `IBM IoT` node connected to a `debug` node and a `gauge` node.

Edit gauge node Properties:

- Group: `[CROP] MONITORING`
- Size: `auto`
- Type: `Gauge`
- Label: `TEMPERATURE`
- Value format: `{{value}}`
- Units: `C`
- Range: min `0`, max `100`
- Colour gradient: `green`, `yellow`, `red`
- Sectors: `0`, `optional`, `optional`, `100`
- Class: `Optional CSS class name(s) for widget`
- Name:
- Enabled: ☐

Debug Console:

```
2/type/PNT2022TMD47477/ID/PNT2022TMD47477/revt_1fntjson : msg payload : Object
{
  temperature: 28, humidity: 26,
  soil moisture: 75
}
11/5/2022, 11:24:38 AM node debug 1
2/type/PNT2022TMD47477/ID/PNT2022TMD47477/revt_1fntjson : msg payload : Object
{
  temperature: 2, humidity: 82,
  soil moisture: 53
}
11/5/2022, 11:24:44 AM node debug 1
2/type/PNT2022TMD47477/ID/PNT2022TMD47477/revt_1fntjson : msg payload : Object
{
  temperature: 48, humidity: 95,
  soil moisture: 82
}
11/5/2022, 11:24:50 AM node debug 1
2/type/PNT2022TMD47477/ID/PNT2022TMD47477/revt_1fntjson : msg payload : Object
{
  temperature: 33, humidity: 40,
  soil moisture: 90
}
11/5/2022, 11:24:56 AM node debug 1
2/type/PNT2022TMD47477/ID/PNT2022TMD47477/revt_1fntjson : msg payload : Object
{
  temperature: 43, humidity: 2,
  soil moisture: 86
}
```