


## SPRINT-2

Date	18 NOVEMBER 2022
TEAM ID	PNT2022TMID07330
Project Name	IoT Based smart crop Protection system for agriculture
Maximum mark	20 marks

### STEP1: Download and Install 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

**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]

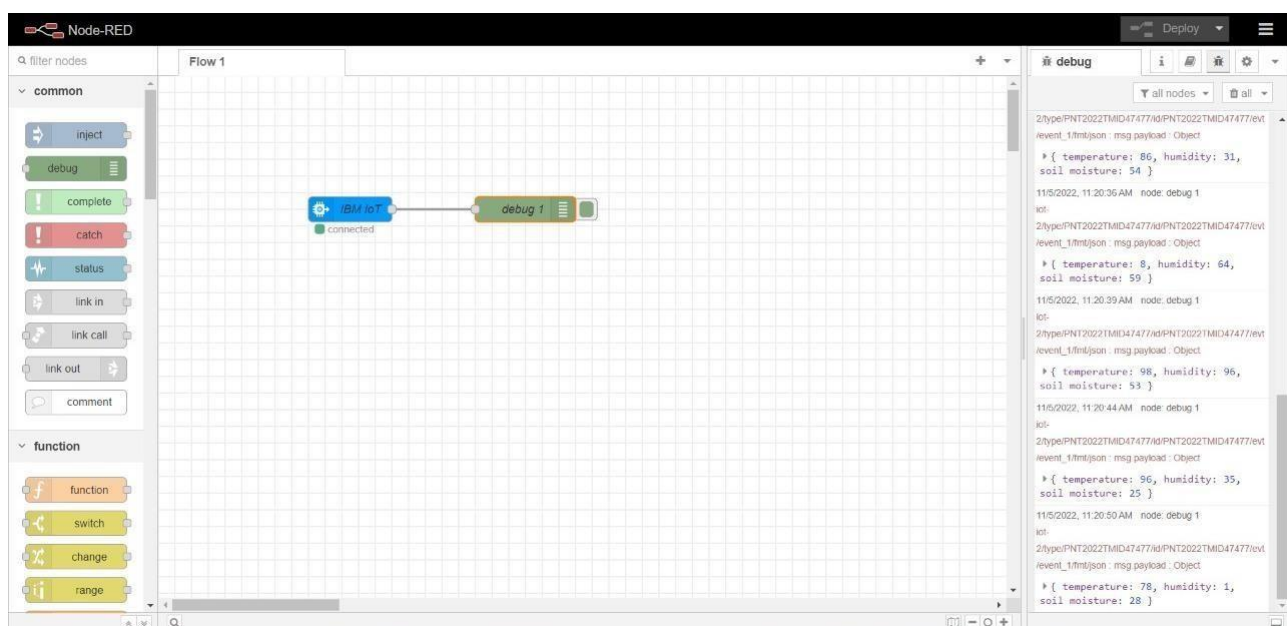
-----
Your flow credentials file is encrypted using a system-generated key.

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).

The screenshot shows the Node-RED web interface. On the left, the 'dashboard' tab is selected, and a 'gauge' node is visible in the palette. In the center workspace, a flow named 'Flow 1' contains an 'IBM IoT' node connected to a 'gauge' node. On the right, the 'Edit gauge node' dialog is open. The 'Properties' tab is active, showing the following settings:

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

On the far right, the 'info' sidebar shows the node's details: Node ID '2fa1b50866f72a6e' and Type 'ui\_gauge'.

This screenshot shows the Node-RED interface with the 'Edit gauge node' dialog open. The flow 'Flow 1' now includes a 'debug' node after the 'gauge' node. The 'Edit gauge node' dialog has the following settings:

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

The 'debug' sidebar on the right is open, displaying a log of messages. The messages are JSON objects containing temperature, humidity, and soil moisture data, such as: 

```
{ "temperature": 28, "humidity": 26, "soil moisture": 75 }
```