

SPRINT-2

TEAM ID	PNT2022TMID51293
Project Name	IoT Based smart crop Protection system for agriculture
Maximum mark	20 marks

STEP1: Download and Install NODE JS.

node

HOME | ABOUT | DOWNLOADS | DOCS | GET INVOLVED | SECURITY | CERTIFICATION | NEWS

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]

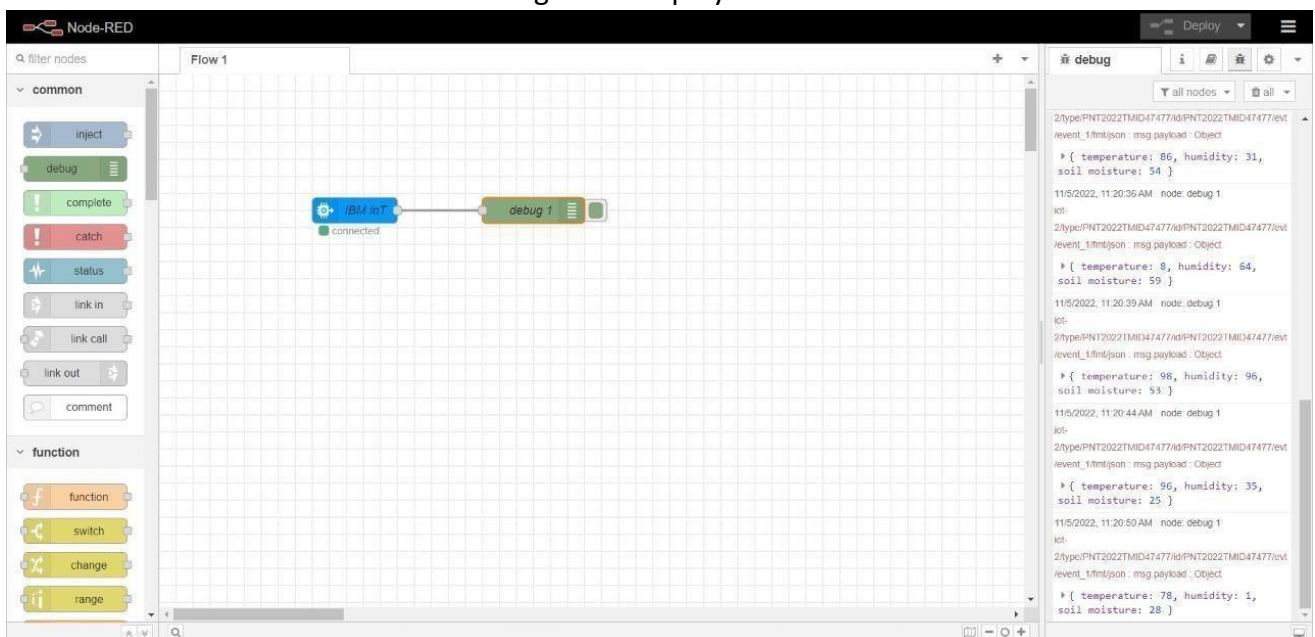
-----
Your flow credentials file is encrypted using a system-generated key.

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 displays the Node-RED web interface. On the left, the 'dashboard' palette is visible, containing various nodes like 'gauge', 'colour picker', 'text', 'form', 'chart', 'audio out', 'button', 'dropdown', 'switch', and 'slider'. The main workspace shows a flow named 'Flow 1' with an 'IBM IoT' node connected to a 'gauge' node. The 'Edit gauge node' panel is open, showing the following configuration:

- Delete**: Button
- Cancel**: Button
- Done**: Button
- 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**: Radio button
- Info**:
 - Node**: "2fa1b50866f72a6e"
 - Type**: ui_gauge

The screenshot displays the Node-RED web interface. On the left, the 'Node Palette' shows various widgets, with 'gauge' selected. The main workspace shows a flow named 'Flow 1' containing an 'IBM IoT Gateway' node (blue) connected to a 'debug 1' node (green). Below the flow, a 'gauge' widget is visible. On the right, the 'Edit gauge node' panel is open, showing configuration options for a gauge widget. The 'Properties' section includes fields for 'Group' (set to '[CROP] MONITORING'), 'Size' (set to 'auto'), 'Type' (set to 'Gauge'), 'Label' (set to 'TEMPERATURE'), 'Value format' (set to '{value}'), 'Units' (set to 'C'), 'Range' (min: 0, max: 100), 'Colour gradient' (a bar with green, yellow, and red segments), 'Sectors' (0, optional, optional, 100), 'Class' (Optional CSS class name(s) for widget), and 'Name'. The 'Enabled' checkbox is checked. On the far right, a 'debug console' shows the output of the 'debug 1' node, displaying a JSON object with temperature, humidity, and soil moisture data.