

SPRINT-2

TEAM ID	PNT2022TMID16680
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]

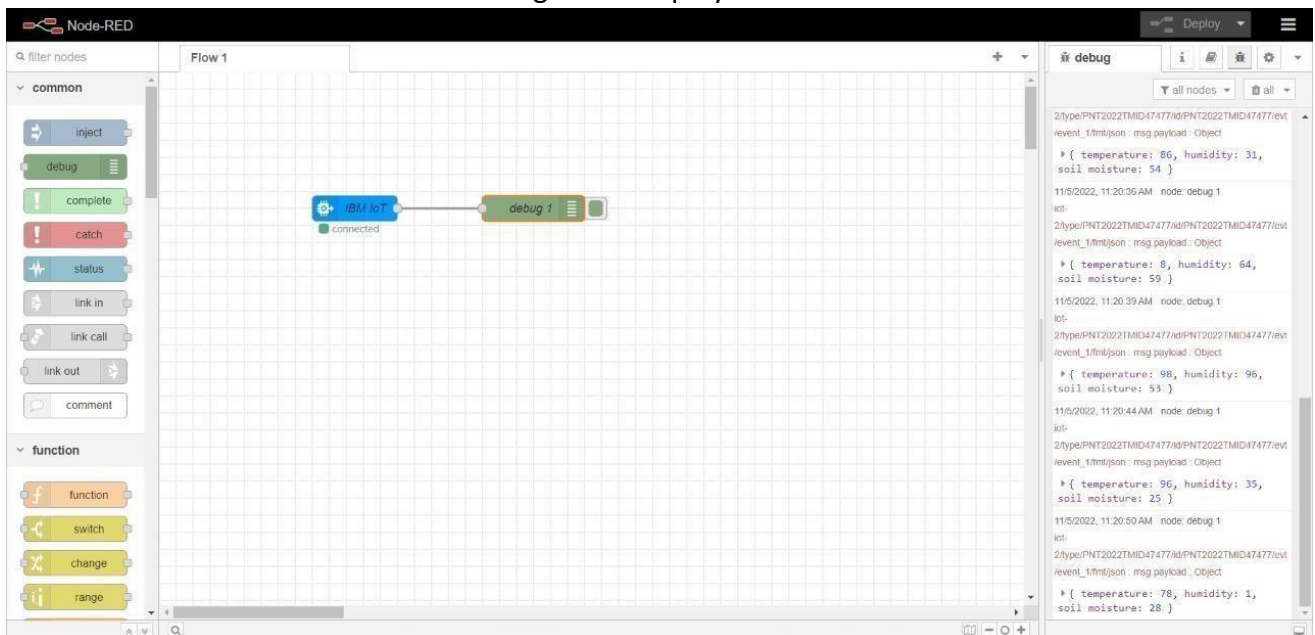
-----
Your flow credentials file is encrypted using a system-generated key.

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

filter nodes

Flow 1

sequence

parser

storage

dashboard

- gauge
- colour picker
- text
- form
- chart
- audio out
- button
- dropdown
- switch
- slider

IBM IoT

connected

Edit gauge node

Delete Cancel Done

Properties

Group [CROP PRODUCTION] MONITORIN

Size auto

Type Gauge

Label gauge

Value format {(value)}

Units units

Range min 0 max 10

Colour gradient

Sectors 0 optional optional 10

Class Optional CSS class name(s) for widget

Enabled

info

Search flows

Flows

- Flow 1

Subflows

Global Configuration Nodes

gauge

Node "2fa1b50866f72a6e"

Type ul_gauge

show more

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

Node-RED

filter nodes

Flow 1

dashboard

- button
- dropdown
- switch
- slider
- numeric
- text input
- date picker
- colour picker
- form
- gauge
- chart
- audio out
- notification
- ui control

IBM IoT

connected

debug 1

gauge

Edit gauge node

Delete Cancel Done

Properties

Group [CROP] MONITORING

Size auto

Type Gauge

Label TEMPERATURE

Value format {(value)}

Units C

Range min 0 max 100

Colour gradient

Sectors 0 optional optional 100

Class Optional CSS class name(s) for widget

Name

Enabled

debug

all nodes

2/type/PNT2022TMD47477/477/evnt/1/mf/json : msg.payload : Object

{ temperature: 26, humidity: 26, soil moisture: 75 }

11/5/2022, 11:24:38 AM node: debug 1

2/type/PNT2022TMD47477/477/evnt/1/mf/json : msg.payload : Object

{ temperature: 2, humidity: 82, soil moisture: 53 }

11/5/2022, 11:24:44 AM node: debug 1

2/type/PNT2022TMD47477/477/evnt/1/mf/json : msg.payload : Object

{ temperature: 48, humidity: 95, soil moisture: 82 }

11/5/2022, 11:24:50 AM node: debug 1

2/type/PNT2022TMD47477/477/evnt/1/mf/json : msg.payload : Object

{ temperature: 33, humidity: 40, soil moisture: 90 }

11/5/2022, 11:24:56 AM node: debug 1

2/type/PNT2022TMD47477/477/evnt/1/mf/json : msg.payload : Object

{ temperature: 43, humidity: 2, soil moisture: 86 }