




SPRINT-2

TEAM ID	PNT2022TMID22829
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]

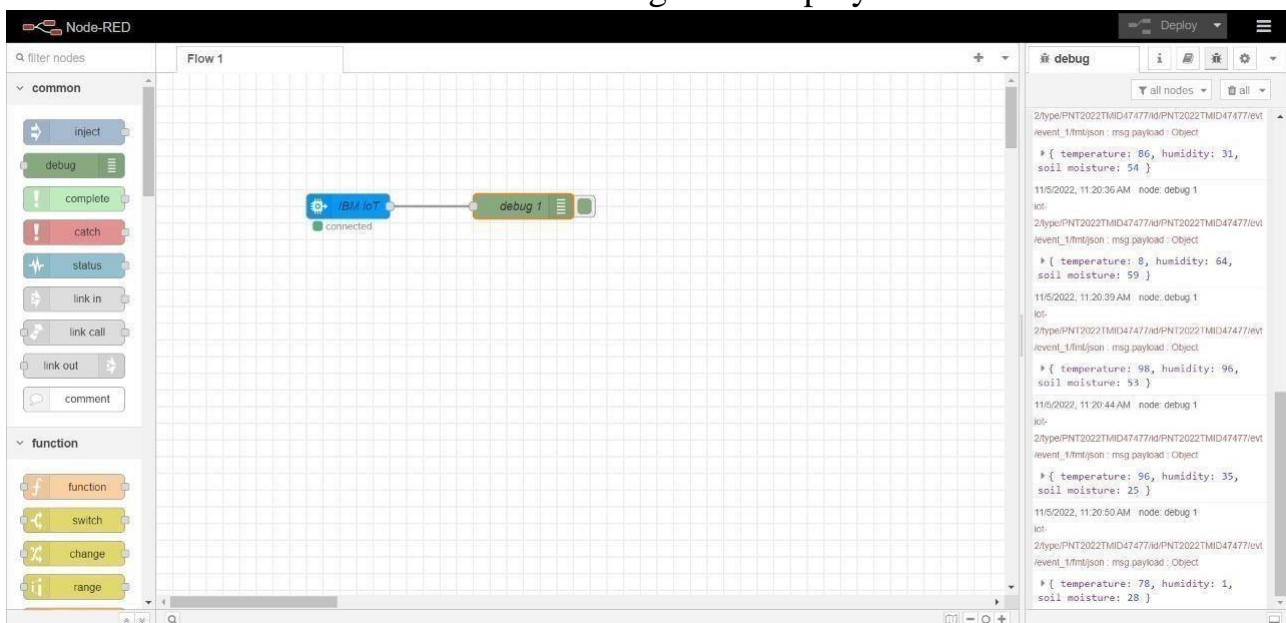
-----
Your flow credentials file is encrypted using a system-generated key.

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.

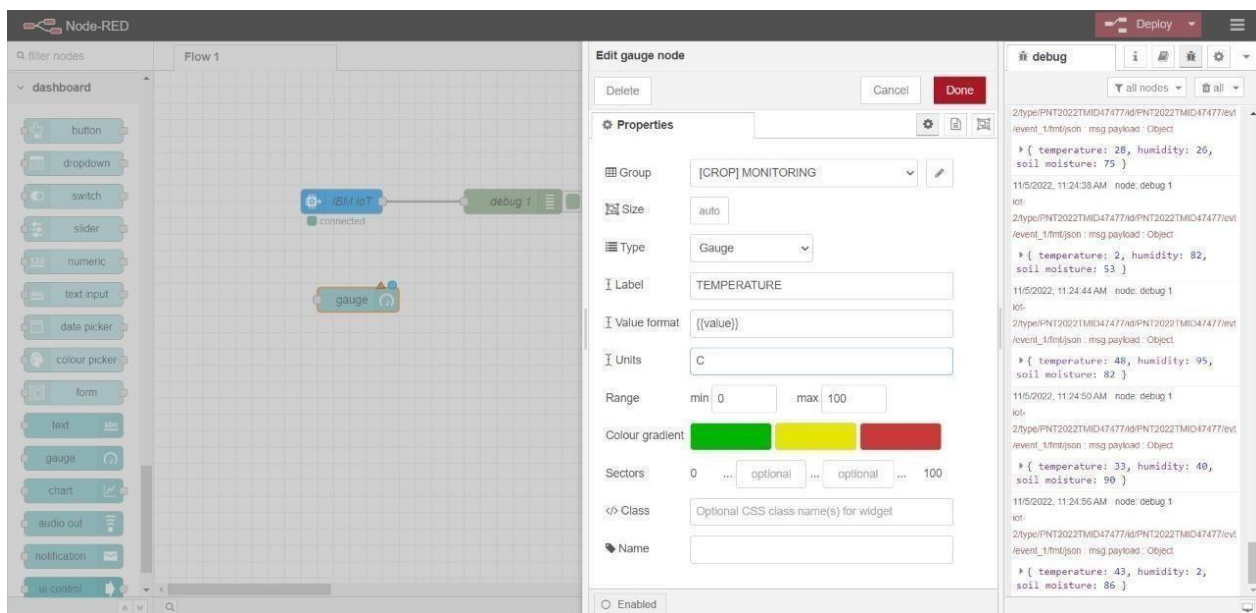
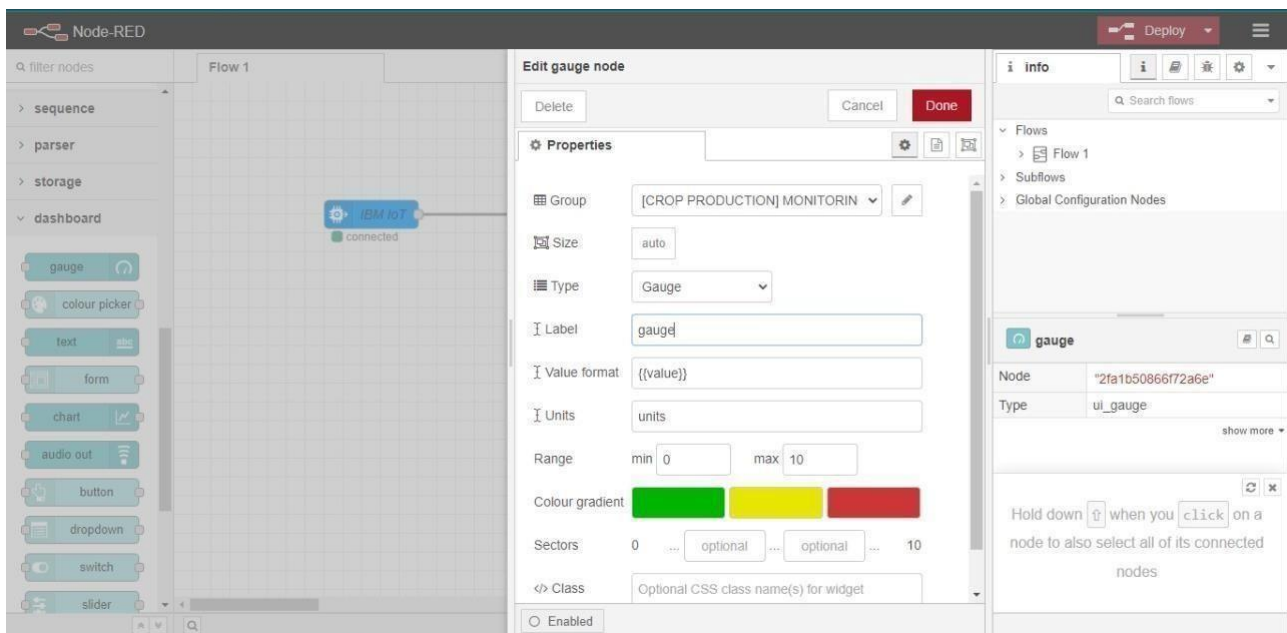
You should set your own key using the 'credentialSecret' option in
your settings file. Node-RED will then re-encrypt your credentials
file using your chosen key the next time you deploy a change.
-----

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/
```

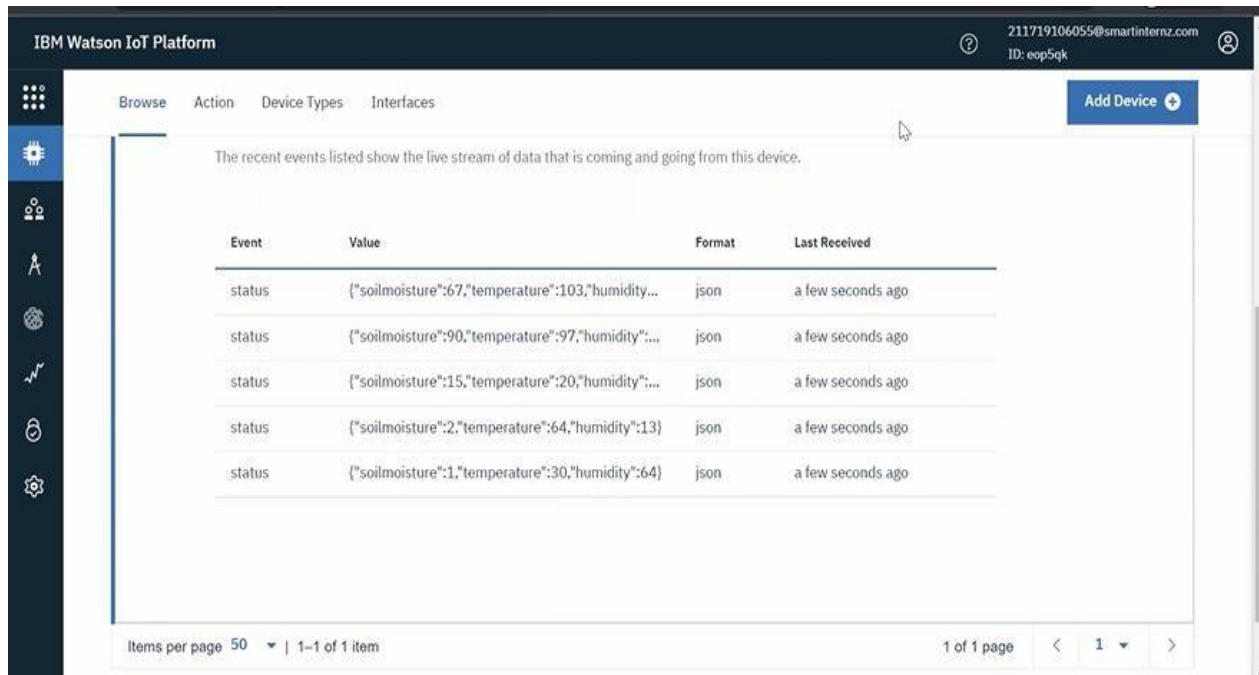
STEP3: Connect IBM IOT in and Debug 1 and deploy.



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

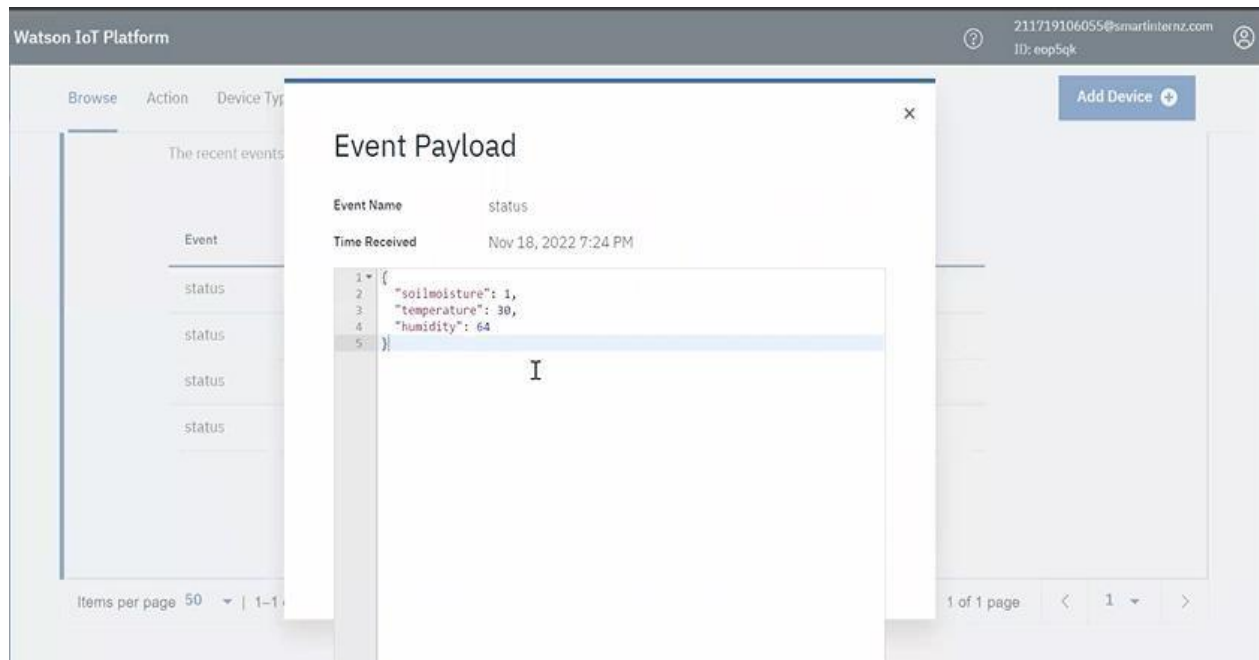


STEP 5: Simulated program to get the random values.



The screenshot shows the IBM Watson IoT Platform interface. The top navigation bar includes the platform name, a help icon, a user profile icon, and the email address 211719106055@smartinternz.com with ID: eop5qk. The main content area is titled "Browse" and shows a list of recent events for a device. The events are listed in a table with columns: Event, Value, Format, and Last Received. The events are all "status" events with JSON payloads containing soilmoisture, temperature, and humidity values. The "Last Received" column shows "a few seconds ago" for each event. A sidebar on the left contains icons for various functions. At the bottom, there is a pagination bar showing "Items per page 50" and "1 of 1 page".

Event	Value	Format	Last Received
status	{"soilmoisture":67,"temperature":103,"humidity":...	json	a few seconds ago
status	{"soilmoisture":90,"temperature":97,"humidity":...	json	a few seconds ago
status	{"soilmoisture":15,"temperature":20,"humidity":...	json	a few seconds ago
status	{"soilmoisture":2,"temperature":64,"humidity":13}	json	a few seconds ago
status	{"soilmoisture":1,"temperature":30,"humidity":64}	json	a few seconds ago



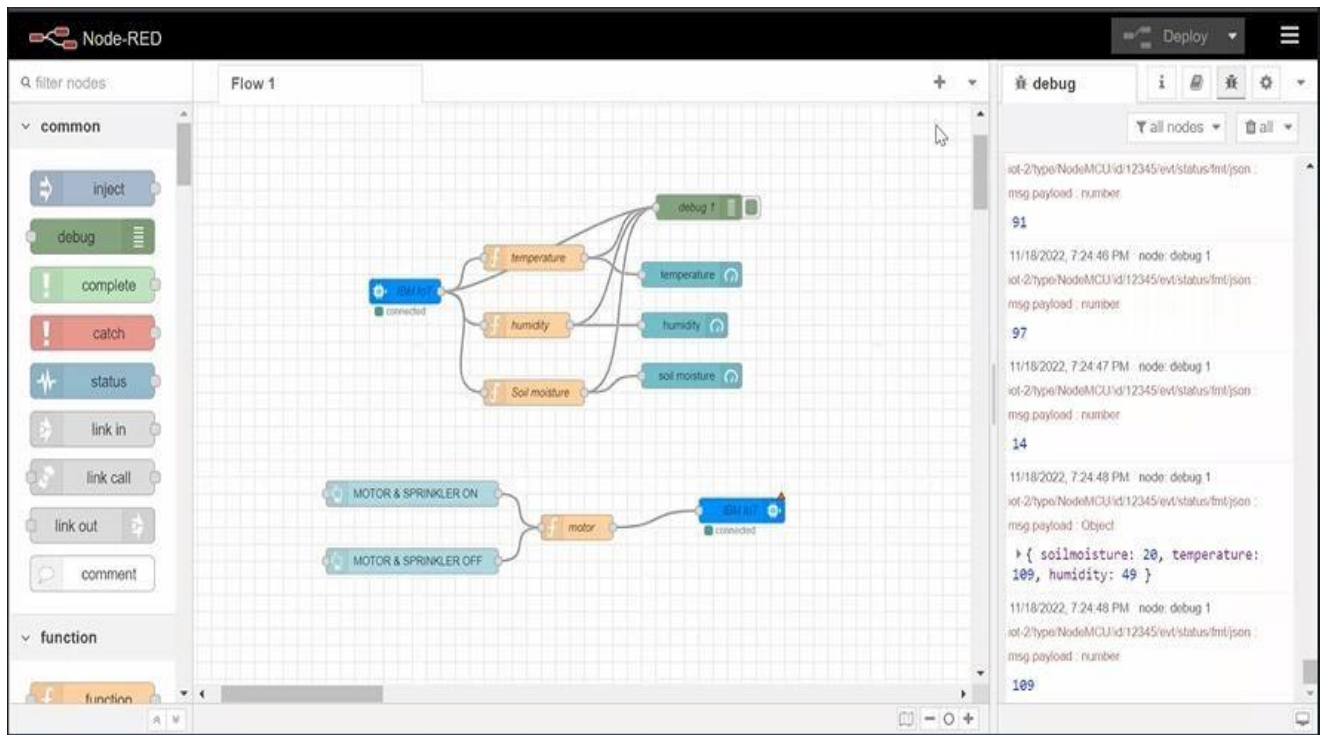
The screenshot shows the IBM Watson IoT Platform interface with the "Event Payload" modal open. The modal displays the event name "status" and the time received "Nov 18, 2022 7:24 PM". The event payload is shown as a JSON object: {"soilmoisture": 1, "temperature": 30, "humidity": 64}. The modal also includes a close button (X) and a search bar. The background shows the same list of recent events as the previous screenshot.

Event Name: status

Time Received: Nov 18, 2022 7:24 PM

```
1 {
2   "soilmoisture": 1,
3   "temperature": 30,
4   "humidity": 64
5 }
```

STEP6: Generate the debug message from Watson IoT platform and connect the nodes.



STEP 7: Output.



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