

PROJECT DEVELOPMENT – DELIVERY OF SPRINT – 2

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Team ID	PNT2022TMID46406
Project Title	Signs With Smart Connectivity for Better RoadSafety

SPRINT-2 (USN - 4)

Develop a web using Node Red service for display weather data, by accessing the data from IBM Watson.

STEP 1: Creating a IoT device in the IBM IoT Watson Platform for updating the weather conditions of a particular city.

The screenshot displays the IBM Watson IoT Platform dashboard. The top navigation bar includes tabs for 'Browse', 'Action', 'Device Types', and 'Interfaces'. A user profile is visible in the top right corner with the email 's.gobika820319106007@gmail.com' and ID 'uaortj'. The main content area shows a device named 'Openweather_deviceid' which is 'Disconnected'. Below this, a 'Recent Events' tab is selected, displaying a table of live stream data. The table has columns for 'Event', 'Value', 'Format', and 'Last Received'. Five events are listed, each with a JSON value containing temperature, windspeed, and latitude data. A status box at the bottom right indicates '1 Simulation running'.

Event	Value	Format	Last Received
event_1	{"Temperature":52,"Windspeed":25,"Latitude":5...	json	a few seconds ago
event_1	{"Temperature":97,"Windspeed":44,"Latitude":6...	json	a few seconds ago
event_1	{"Temperature":71,"Windspeed":72,"Latitude":6...	json	a few seconds ago
event_1	{"Temperature":42,"Windspeed":40,"Latitude":3...	json	a few seconds ago
event_1	{"Temperature":63,"Windspeed":83,"Latitude":6...	json	a few seconds ago

1 Simulation running

STEP 2: Using Node – RED Flow Editor, Design a flow to display the weather details in web.

The screenshot shows the Node-RED web interface in a browser. The address bar indicates the URL: `node-red-ncvoj-2022-11-14.eu-gb.mybluemix.net/red/#flow/6ae62f755800dcd1`. The interface includes a left sidebar with a search bar and two categories: "IBM Watson" and "dashboard". The "IBM Watson" category contains nodes for "speech to text", "text to speech", and their custom builders. The "dashboard" category contains "text input" and "text" nodes. The main workspace displays "Flow 2" with the following components and connections:

- A **timestamp** node is connected to an **openweathermap** node.
- The **openweathermap** node is connected to a **msg.payload** node.
- The **msg.payload** node is connected to five output nodes: **Status**, **Location**, **Temperature**, **Humidity**, and **Wind Speed**.
- The **timestamp** node is also connected to a **Description** node.

On the right side, the **debug** console shows a log of messages. Each message is an object with the following structure:

```
{
  "coord": object,
  "weather": array[1],
  "base": "stations",
  "main": object,
  "visibility": 10000 ...
}
```

The log shows five messages, each with a timestamp and a unique node ID. The status bar at the bottom of the browser window displays the system time as 10:19 on 18-11-2022, along with weather information: 26°C Haze.

STEP 3: Displaying the output as weather details of a particular city via the Node – RED service.

