

Project Development Phase

Delivery of Sprint 4

Date	3 November 2022
Team ID	PNT2022TMID20334
Project Name	Project –Gas leakage monitoring and alerting system for industries

Task:

Sensed data is brought to Node-RED and displayed in the dashboard

Steps:

1. IBM IoT node is used to gather sensor data.
 - a. Necessary API key is provided to establish a connection.
2. Using functions namely Temperature, Humidity, and Gas the data is obtained independently and displayed in the dashboard.
3. Dashboard Nodes are used to display the sensed data to the user in a portal.

Source code:

```
Temperature: msg.payload = msg.payload.Temp;  
return msg;  
Humidity: msg.payload = msg.payload.Hum;
```

```
return msg;
```

```
Concentration of Gas: msg.payload = msg.payload.gas;
```

```
return msg;
```

OUTPUT :

The screenshot displays the Node-RED web interface in a browser. The browser's address bar shows the URL: `node-red-wqxhm-2022-11-12.mybluemix.net/red/#flow/5a30966a75a80daa`. The Node-RED interface includes a left sidebar with a node palette, a central workspace for 'Flow 1', and a right sidebar with a dashboard and tabs & links.

Node Palette (Left Sidebar):

- websocket out**
- tcp in**
- tcp out**
- tcp request**
- udp in**
- udp out**
- input**
 - ibmiot in**
- output**
 - OpenWhisk**
 - ibmiot out**
- sequence**

Flow 1 (Central Workspace):

- Top Path:** An **IBM IoT** node (connected) is linked to a **msg.payload** node, which is then linked to a **Gas** node. A **gas** function node is also connected to the **IBM IoT** node.
- Bottom Path:** Two input nodes, **Light on** and **Light off**, are linked to an **IBM IoT** node (connected).

Right Sidebar:

- dashboard** tab is active.
- Layout**, **Site**, and **Theme** tabs are visible.
- Tabs & Links** section shows a **Smart Home** category with sub-items: **Hall AC** and **switch**.

The Windows taskbar at the bottom shows the system clock as 21:16 on 18-11-2022, along with various system icons and the search bar.

Smart Home

Hall AC

switch

LIGHT OFF

LIGHT ON

Gas

