

**Project Development Phase**  
**Create a NODE RED service**

|              |  |
|--------------|--|
| Date         | 3 November 2022  |
| Team ID      | PNT2022TMID20329   |
| 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 address bar shows the URL: `node-red-wqxhm-2022-11-12.mybluemix.net/red/#flow/5a30966a75a80daa`. The 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.
- Bottom Path:** Two nodes, **Light on** and **Light off**, are linked to an **IBM IoT** node (connected).
- Intermediate Node:** A **gas** function node is connected to the **IBM IoT** node in the top path.

**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**.

**Windows Taskbar (Bottom):**

- Search bar: "Type here to search"
- Taskbar icons: File Explorer, Edge, Mail, Chrome, WhatsApp, and others.
- System tray: 25°C, 21:16, 18-11-2022, and other system icons.

## Smart Home

Hall AC

switch

LIGHT OFF

LIGHT ON

Gas

