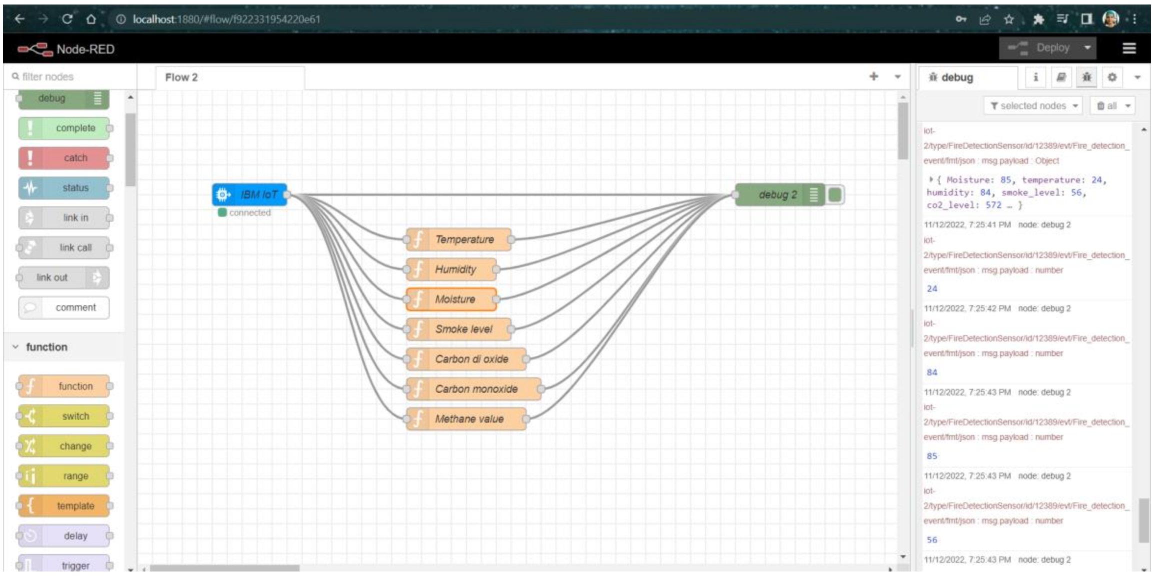
USED DASHBOARD NODES FOR CREATING UI(Web App)

Team ID	PNT2022TMID21245
Project Name	Project – Industry Specific Intelligent Fire Management System

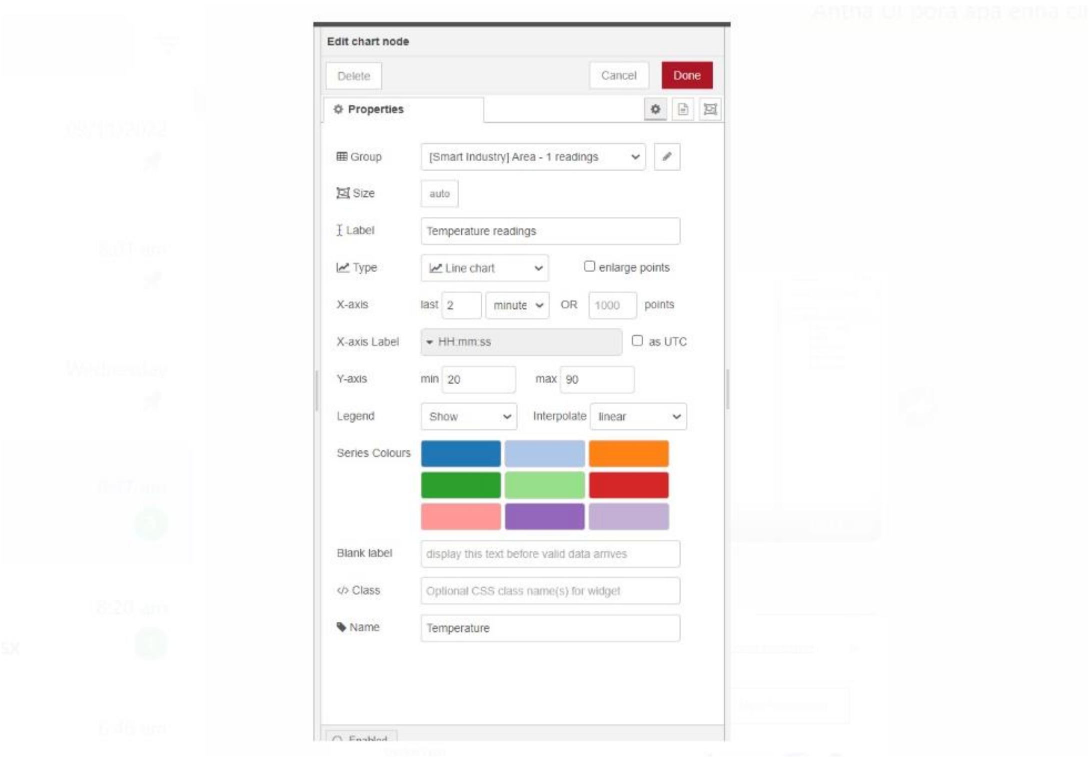
Team Leader : Lakshmi Sree S
Team member 1: Bhagyalakshmi T
Team member 2: Harsini A.M
Team member 3: Madhumitha P.R

1. After inserting the functions for temperature, humidity, moisture, smoke level, carbon di oxide, carbon monoxide and methane value between IBM iot and debug node.
    a. Then, connect it with chart node for temperature, humidity, moisture node.
    b. Gauge node with carbon di oxide, carbon monoxide and methane value node.



```
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : Object
▸{ Moisture: 85, temperature: 24, humidity: 84, smoke_level: 56, co2_level: 572 … }
11/12/2022, 7:25:41 PM   node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
24
11/12/2022, 7:25:42 PM   node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
84
11/12/2022, 7:25:43 PM   node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
85
11/12/2022, 7:25:43 PM   node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
56
11/12/2022, 7:25:43 PM   node: debug 2
```

2. Edit the chart and gauge nodes.



Edit chart node

Group [Smart Industry] Area - 1 readings

Size auto

Label Temperature readings

Type Line chart ☐ enlarge points

X-axis last 2 minute OR 1000 points

X-axis Label HH:mm:ss ☐ as UTC

Y-axis min 20 max 90

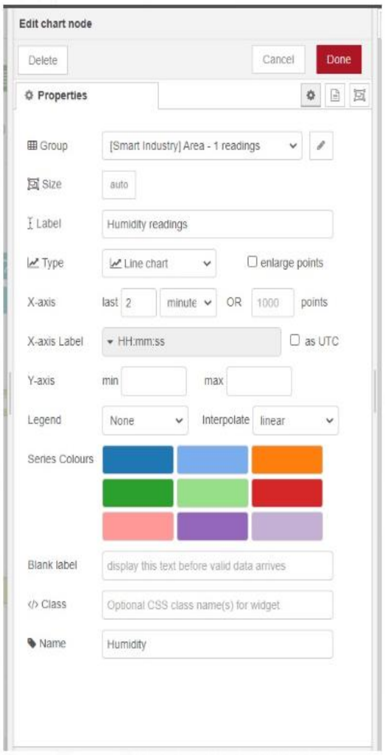
Legend Show Interpolate linear

Series Colours 🟦 🟦 🟧 🟩 🟩 🟥 🟥 🟪 🟪

Blank label display this text before valid data arrives

Class Optional CSS class name(s) for widget

Name Temperature



Edit chart node

Delete Cancel Done

⚙ Properties

Group: [Smart Industry] Area - 1 readings

Size: auto

Label: Humidity readings

Type: Line chart ☐ enlarge points

X-axis: last 2 minute OR 1000 points

X-axis Label: HH:mm:ss ☐ as UTC

Y-axis: min max

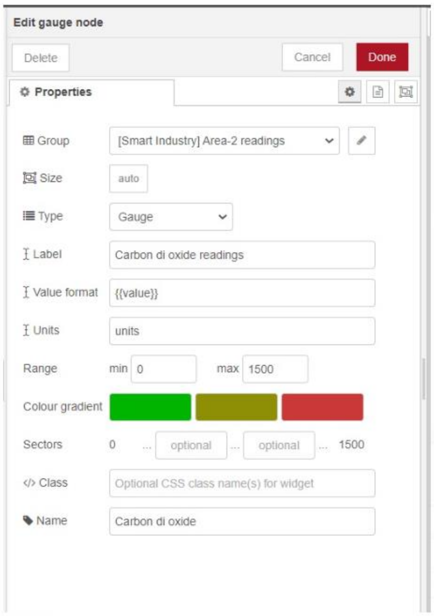
Legend: None Interpolate: linear

Series Colours: 🟦 🟦 🟧 🟩 🟩 🟥 🟥 🟪 🟪

Blank label: display this text before valid data arrives

Class: Optional CSS class name(s) for widget

Name: Humidity



Edit gauge node

Delete Cancel Done

⚙ Properties

Group: [Smart Industry] Area-2 readings

Size: auto

Type: Gauge

Label: Carbon di oxide readings

Value format: {{value}}

Units: units

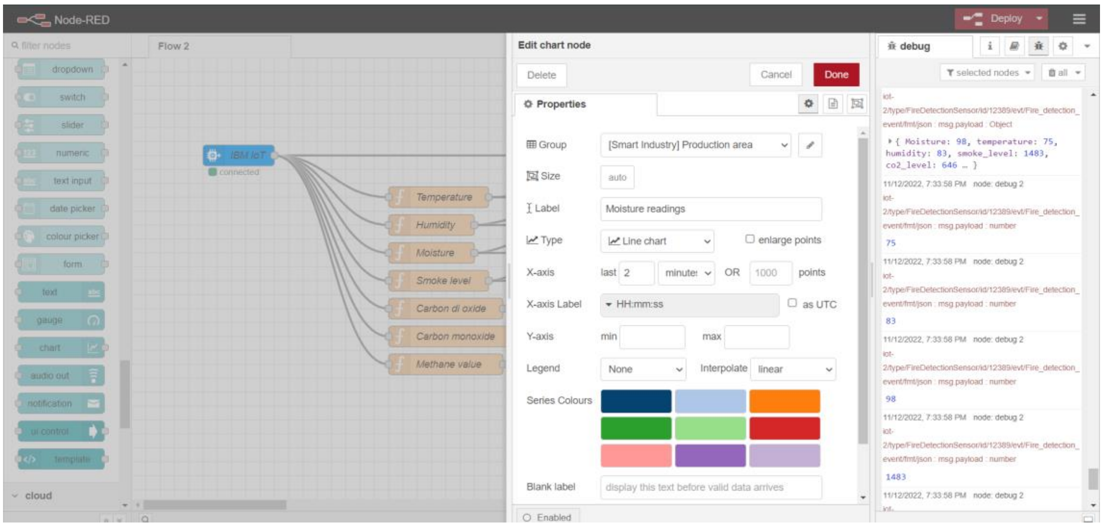
Range: min 0 max 1500

Colour gradient: 🟩 🟨 🟥

Sectors: 0 ... optional ... optional ... 1500

Class: Optional CSS class name(s) for widget

Name: Carbon di oxide



Edit chart node

Group: [Smart Industry] Production area

Size: auto

Label: Moisture readings

Type: Line chart ☐ enlarge points

X-axis: last 2 minutes OR 1000 points

X-axis Label: HH:mm:ss ☐ as UTC

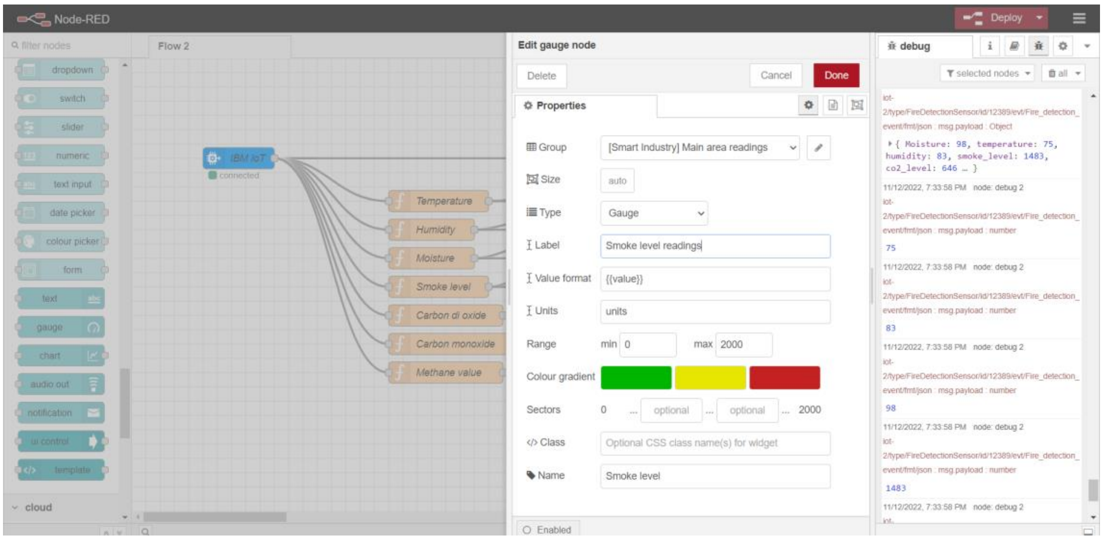
Y-axis: min max

Legend: None Interpolate: linear

Series Colours: 🟦 🟦 🟧 🟩 🟩 🟥 🟥 🟪 🟪

Blank label: display this text before valid data arrives

```
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : Object
▸{ Moisture: 98, temperature: 75, humidity: 83, smoke_level: 1483, co2_level: 646 … }
11/12/2022, 7:33:58 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
75
11/12/2022, 7:33:58 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
83
11/12/2022, 7:33:58 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
98
11/12/2022, 7:33:58 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
1483
11/12/2022, 7:33:58 PM  node: debug 2
```



Edit gauge node

Group: [Smart Industry] Main area readings

Size: auto

Type: Gauge

Label: Smoke level readings

Value format: {{value}}

Units: units

Range: min 0 max 2000

Colour gradient: 🟩 🟨 🟥

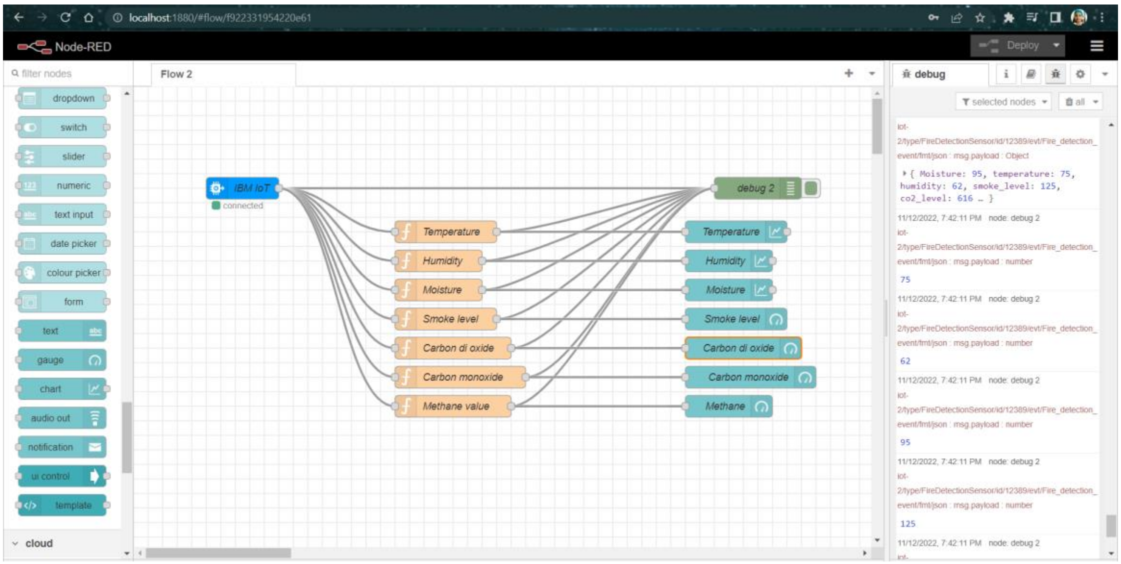
Sectors: 0 ... optional ... optional ... 2000

Class: Optional CSS class name(s) for widget

Name: Smoke level

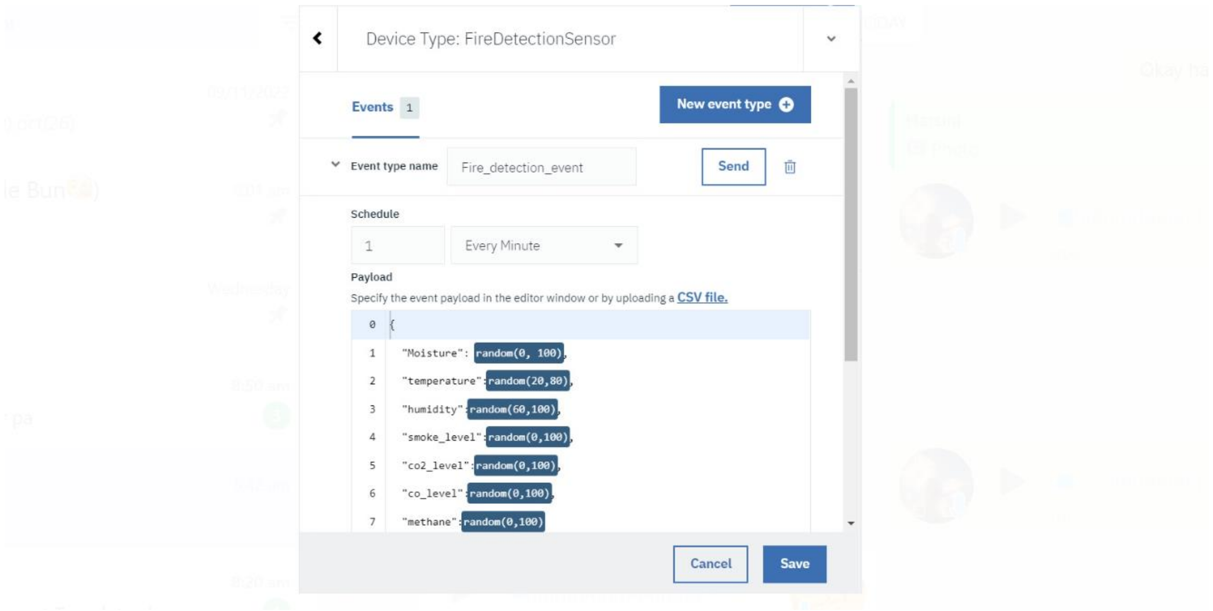
```
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : Object
▸{ Moisture: 98, temperature: 75, humidity: 83, smoke_level: 1483, co2_level: 646 … }
11/12/2022, 7:33:58 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
75
11/12/2022, 7:33:58 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
83
11/12/2022, 7:33:58 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
98
11/12/2022, 7:33:58 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
1483
11/12/2022, 7:33:58 PM  node: debug 2
```

3. The flow between nodes after connecting the functions with debug and charts and gauge.
   Click on deploy button.



```
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : Object
▸{ Moisture: 95, temperature: 75, humidity: 62, smoke_level: 125, co2_level: 616 … }
11/12/2022, 7:42:11 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
75
11/12/2022, 7:42:11 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
62
11/12/2022, 7:42:11 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
95
11/12/2022, 7:42:11 PM  node: debug 2
iot-2/type/FireDetectionSensor/id/12389/evt/Fire_detection_event/fmt/json : msg.payload : number
125
11/12/2022, 7:42:11 PM  node: debug 2
iot-
```

4. The data generated in the cloud will be displayed in the node-red.



Device Type: FireDetectionSensor

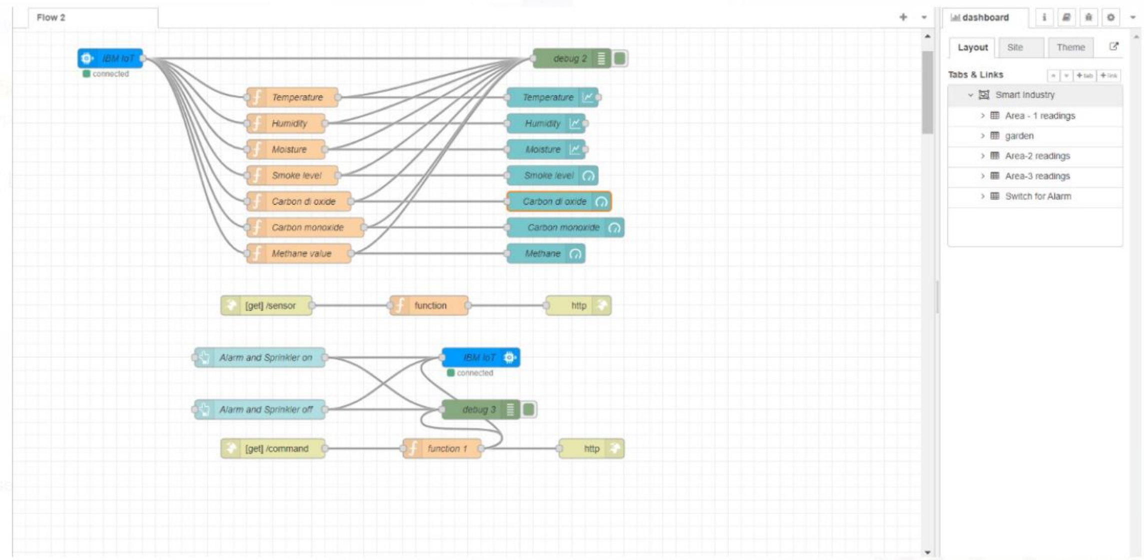
Event type name: Fire_detection_event

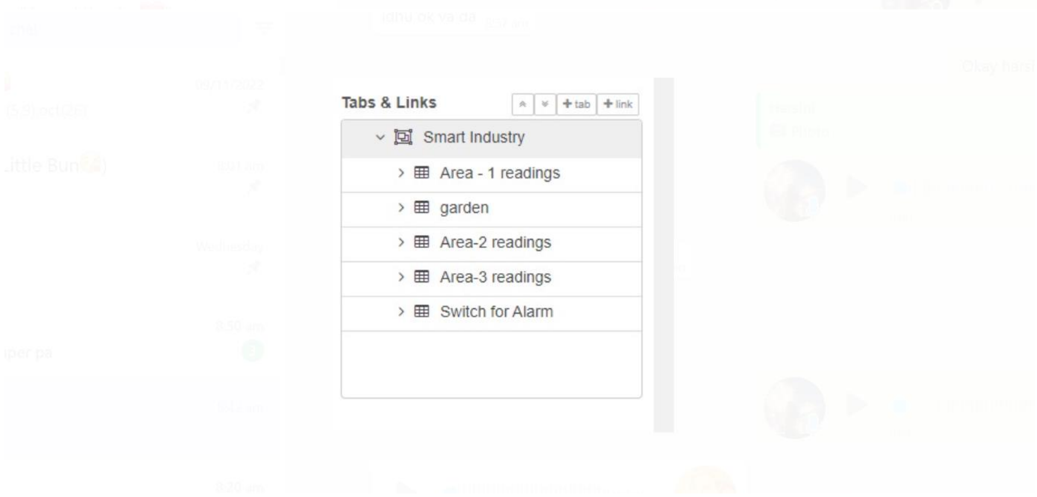
Schedule: 1 Every Minute

Payload

Specify the event payload in the editor window or by uploading a CSV file.

```
{
  "Moisture": random(0, 100),
  "temperature":random(20,80),
  "humidity":random(60,100),
  "smoke_level":random(0,100),
  "co2_level":random(0,100),
  "co_level":random(0,100),
  "methane":random(0,100)
```

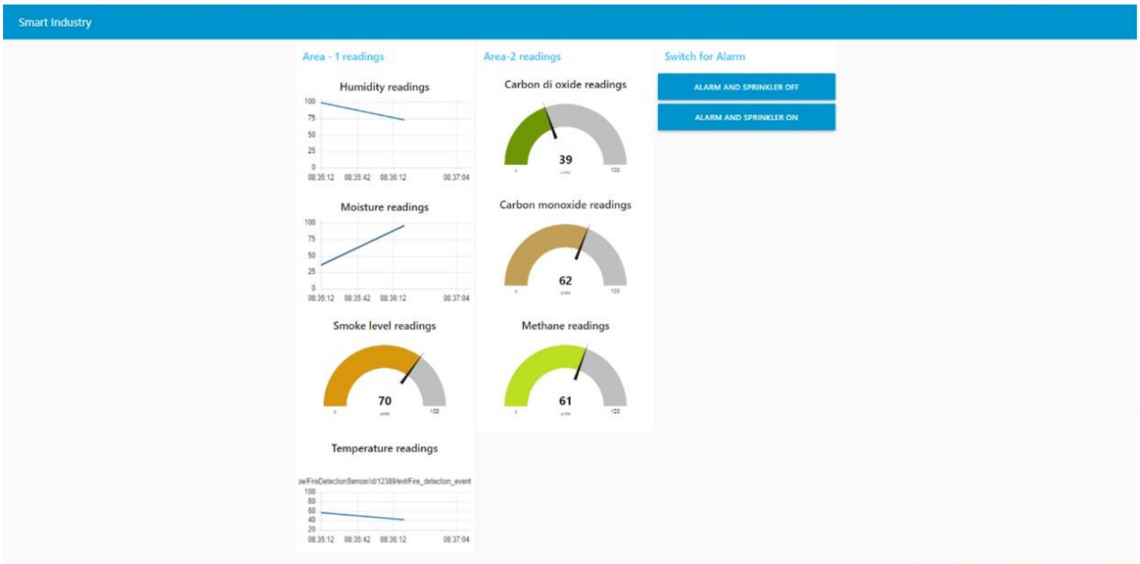




Tabs & Links

Smart Industry
- Area - 1 readings
- garden
- Area-2 readings
- Area-3 readings
- Switch for Alarm

5. The created UI


Smart Industry
Area - 1 readings
Humidity readings
100
75
50
25
0
08:35:12
08:35:42
08:36:12
08:37:04
Moisture readings
100
75
50
25
0
08:35:12
08:35:42
08:36:12
08:37:04
Smoke level readings
70
Temperature readings
se/FireDetectionSensor/id/12389/evt/Fire_detection_event
100
80
60
40
20
08:35:12
08:35:42
08:36:12
08:37:04
Area-2 readings
Carbon di oxide readings
39
Carbon monoxide readings
62
Methane readings
61
Switch for Alarm
ALARM AND SPRINKLER OFF
ALARM AND SPRINKLER ON