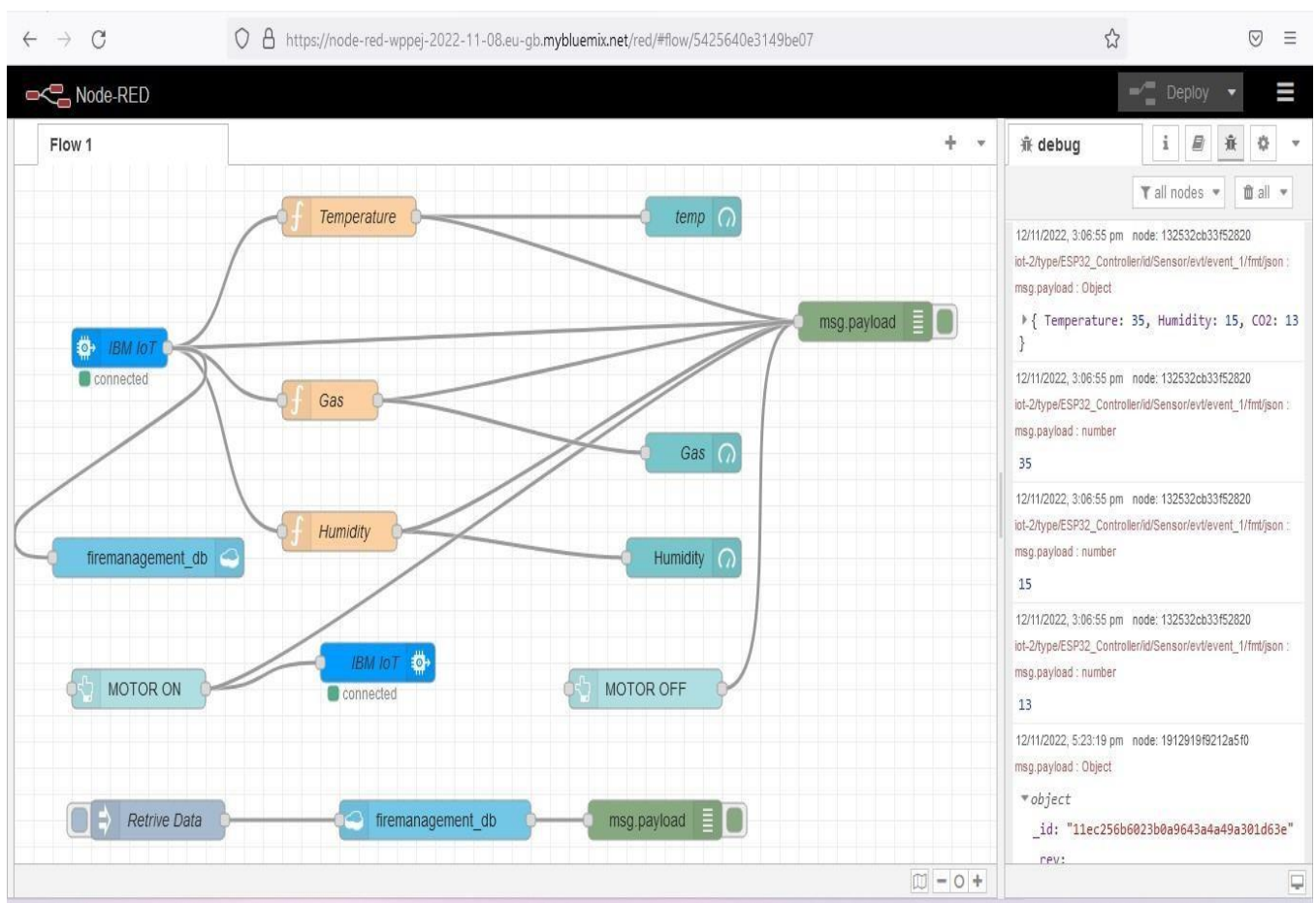


# Develop The Web Application Using Node-RED

Date	12-11-2022
Team ID	PNT2022TMID42644
Project Name	Industry – specific intelligent fire management system

Configure the Node-RED flow to receive data from the IBM IoT platform :



### IoT Watson Cloud Output :

The screenshot displays the IBM Watson IoT Platform interface. At the top, the browser address bar shows the URL: `0bm892.internetofthings.ibmcloud.com/dashboard/devices/browse`. The page header includes the text "praveenkumaraj111@gmail.com" and "ID: 0bm892". The main navigation bar contains tabs for "Browse", "Action", "Device Types", and "Interfaces". A blue button labeled "Add Device" with a plus icon is located on the right side of the navigation bar.

The main content area is titled "The recent events listed show the live stream of data that is coming and going from this device." Below this text is a table with the following columns: "Event", "Value", "Format", and "Last Received". The table contains five rows of data, all with the event name "event\_1". The values are JSON strings representing sensor data: `{"Temperature":21,"Humidity":31,"CO2":26,"Fla...`, `{"Temperature":2,"Humidity":57,"CO2":2,"Flame...`, `{"Temperature":33,"Humidity":85,"CO2":23,"Fla...`, `{"Temperature":10,"Humidity":85,"CO2":28,"Fla...`, and `{"Temperature":77,"Humidity":36,"CO2":36,"Fla...`. The format for all events is "json", and the last received time for all is "a few seconds ago".

At the bottom of the screen, there is a status bar showing a dropdown menu with "ultra" selected, a "Disconnected" status, and the device type "ESP". A notification box in the bottom right corner states "1 Simulation running".

Event	Value	Format	Last Received
event_1	<code>{"Temperature":21,"Humidity":31,"CO2":26,"Fla...</code>	json	a few seconds ago
event_1	<code>{"Temperature":2,"Humidity":57,"CO2":2,"Flame...</code>	json	a few seconds ago
event_1	<code>{"Temperature":33,"Humidity":85,"CO2":23,"Fla...</code>	json	a few seconds ago
event_1	<code>{"Temperature":10,"Humidity":85,"CO2":28,"Fla...</code>	json	a few seconds ago
event_1	<code>{"Temperature":77,"Humidity":36,"CO2":36,"Fla...</code>	json	a few seconds ago

### Use Cloudbant DB nodes to store the received sensor data in the cloudbant DB:

The screenshot displays the Node-RED web interface. The main workspace shows a flow named 'Flow 1'. The flow starts with an 'IBM IoT' node (blue) connected to a 'firemanagement\_db' node (blue). This node branches into three function nodes: 'Flame' (orange), 'Gas' (orange), and 'Humidity' (orange). Each function node connects to a corresponding output node: 'Flame' (blue), 'Gas' (blue), and 'Humidity' (blue). These output nodes all connect to a 'msg.payload' node (green). A separate flow at the bottom shows a 'Retrieve Data' button (orange) connected to a 'firemanagement\_db' node (blue), which then connects to a 'msg.payload' node (green). The right sidebar shows the 'debug' console with a log entry for a message payload object.

```

12/11/2022, 7:11:55 pm node: 1912919f9212a5f0
msg.payload: Object
  object
    _id: "0c7a9d83b6c2ccccfc705c9b921d79e4"
    _rev:
      "1-823452fd0277366df39fc3ddab64afde"
    topic: "iot-2/type/ESP32_Controller
      /id/Sensor/evt/event_1/fmt/json"
    payload: object
      Temperature: 5
      Humidity: 50
      CO2: 50
      Flame: 93
      deviceId: "Sensor"
      deviceType: "ESP32_Controller"
      eventType: "event_1"
      format: "json"
  
```

## Storing Data in Cloudant DB :

← → ↻ 988ad731-90dd-4efd-8885-5354ddc244e9-bluemix.cloudant.com/dashboard.html#database/firemanagement\_db/\_all\_docs

firemanagement\_db Document ID Options {} JSON

All Documents +

Query

Permissions

Changes

Design Documents +

Log Out

Table Metadata {} JSON Create Document

	id	key	value
<input type="checkbox"/>	0c7a9d83b6c2ccccfc705cfb921d79e4	0c7a9d83b6c2ccccfc705cfb921d79e4	{ "rev": "1-823452fd0277366df39fc...
<input type="checkbox"/>	0c7a9d83b6c2ccccfc705cfb921fed3e	0c7a9d83b6c2ccccfc705cfb921fed3e	{ "rev": "1-f66d54506f51c9c8a2571...
<input type="checkbox"/>	0c7a9d83b6c2ccccfc705cfb9220c6f0	0c7a9d83b6c2ccccfc705cfb9220c6f0	{ "rev": "1-b1964621284efd5b37fe...
<input type="checkbox"/>	0c7a9d83b6c2ccccfc705cfb92227d81	0c7a9d83b6c2ccccfc705cfb92227d81	{ "rev": "1-2796390cb5ded6c72072...
<input type="checkbox"/>	0c7a9d83b6c2ccccfc705cfb92296d06	0c7a9d83b6c2ccccfc705cfb92296d06	{ "rev": "1-35c25093322e143ef0f22...
<input type="checkbox"/>	0c7a9d83b6c2ccccfc705cfb922ea0f9	0c7a9d83b6c2ccccfc705cfb922ea0f9	{ "rev": "1-bf119ea41c91dc75ace98...
<input type="checkbox"/>	1904e7f6289ceabbe74bba25d46a4f...	1904e7f6289ceabbe74bba25d46a4f...	{ "rev": "1-21ea0132ec21b00dd7f46...
<input type="checkbox"/>	227aa9af201bc2d02790a57e7ab25...	227aa9af201bc2d02790a57e7ab25...	{ "rev": "1-0492498ea34f19a0ed06f...
<input type="checkbox"/>	2503fe0aebab0fa98b9cc5c76aea93f1	2503fe0aebab0fa98b9cc5c76aea93f1	{ "rev": "1-874687a42b1a135d3b0cf...
<input type="checkbox"/>	3536e866b44c21924eaf2fb368e7...	3536e866b44c21924eaf2fb368e7...	{ "rev": "1-7eb00af2e5bf22f1f2f7f1d...

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