

## Develop the web application using Node-red

Date	09 November 2022
Team ID	PNT2022TMID05741
Project Name	Gas leakage monitoring and alerting system for industries

This screenshot shows the Node-RED web interface in a browser. The main workspace displays a flow with a 'connected' node, two function nodes, and two 'ibmiot' nodes. The right-hand panel is open to the 'Edit ibmiot in node' configuration for the selected 'ibmiot' node. The configuration includes the following fields:

- Authentication:** API Key
- API Key:** 6fad9ec5209956a0
- Input Type:** Device Command
- Device Type:** ☐ All or ☐ node
- Device Id:** ☐ All or ☐ 2221
- Command:** ☒ All or ☐ data
- Format:** ☐ All or ☐ json
- QoS:** 0
- Name:** IBM IoT
- Service:** registered

At the bottom of the configuration panel, there is a checkbox for 'Enabled' which is currently checked. A note at the bottom of the panel states: 'Use the Input Type property to configure this node to receive Events'.

This screenshot shows the Node-RED web interface with the 'Edit function node' configuration panel open on the right. The main workspace shows the same flow as the previous screenshot. The configuration panel for the selected function node includes the following details:

- Name:** temperature
- Setup:** ☐ **On Start:** ☐ **On Message:** ☒ **On Stop:** ☐
- Code:**

```
1 global.set('temperature',msg.load.d.temperature)
2 msg.payload=msg.payload.d.temperature
3 return msg;
```
- Enabled:** ☐ Enabled

node-red-zwfhv-2022-11-11-au-syd.mybluemix.net/red/#flow/1bd14e33f907ceb9

Node-RED

Flow 1

common

- inject
- debug
- complete
- catch
- status
- link in
- link call
- link out
- comment

function

- function
- switch
- change

connected

Edit function node

Properties

Name: humidity

Setup On Start On Message On Stop

```
1 global.set('humidity',msg.load.d.humidity)
2 msg.payload=msg.payload.d.humidity
3 return msg;
```

Enabled

26°C Rain off and on

Search

ENG IN 09:37 AM 12-11-2022

node-red-zwfhv-2022-11-11-au-syd.mybluemix.net/red/#flow/1bd14e33f907ceb9

Node-RED

Flow 1

common

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function

- function
- switch
- change

connected

Edit gauge node

Properties

Group: [Home] Default

Size: auto

Type: Gauge

Label: temperature

Value format: {{value}}

Units: units

Range: min 0 max 10

Colour gradient: [Green, Yellow, Red]

Sectors: 0 optional optional 10

Class: Optional CSS class name(s) for widget

Name:

Enabled

26°C Rain off and on

Search

ENG IN 09:38 AM 12-11-2022

Node-RED interface showing a flow diagram and the 'Edit gauge node' configuration panel.

**Flow Diagram:** A flow starting with a 'connected' node, branching into two parallel paths, each containing a function node, and then merging into a single output node.

**Edit gauge node configuration:**

- Group: [Home] Default
- Size: auto
- Type: Gauge
- Label: humidity
- Value format: {{value}}
- Units: units
- Range: min 0, max 10
- Colour gradient: [Green, Yellow, Red]
- Sectors: 0, optional, optional, 10
- Class: Optional CSS class name(s) for widget
- Name:
- Enabled: ☐

Node-RED interface showing a flow diagram and the 'Edit http in node' configuration panel.

**Flow Diagram:** A flow starting with a 'connected' node, branching into two parallel paths, each containing a function node, and then merging into a single output node.

**Edit http in node configuration:**

- Method: GET
- URL: /dta
- Name: Name
- Enabled: ☐

node-red-zwfhv-2022-11-11-au-syd.mybluemix.net/red/#flow/1bd14e33f907ceb9

Node-RED

Flow 1

common

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function

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- switch
- change

connected

Edit function node

Properties

Name

Setup On Start On Message On Stop

```
1 msg.payload={'temperature':global.get("temperature"),'humidity':global.get("humidity")}
2 return msg;
```

Enabled

26°C Rain off and on

09:46 AM 12-11-2022

node-red-zwfhv-2022-11-11-au-syd.mybluemix.net/red/#flow/1bd14e33f907ceb9

Node-RED

Successfully deployed

Flow 1

common

- inject
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- link call
- link out
- comment

function

- function
- switch
- change

connected

https://node-red-zwfhv-2022-11-11-au-syd.mybluemix.net/red/#

26°C Rain off and on

09:33 AM 12-11-2022