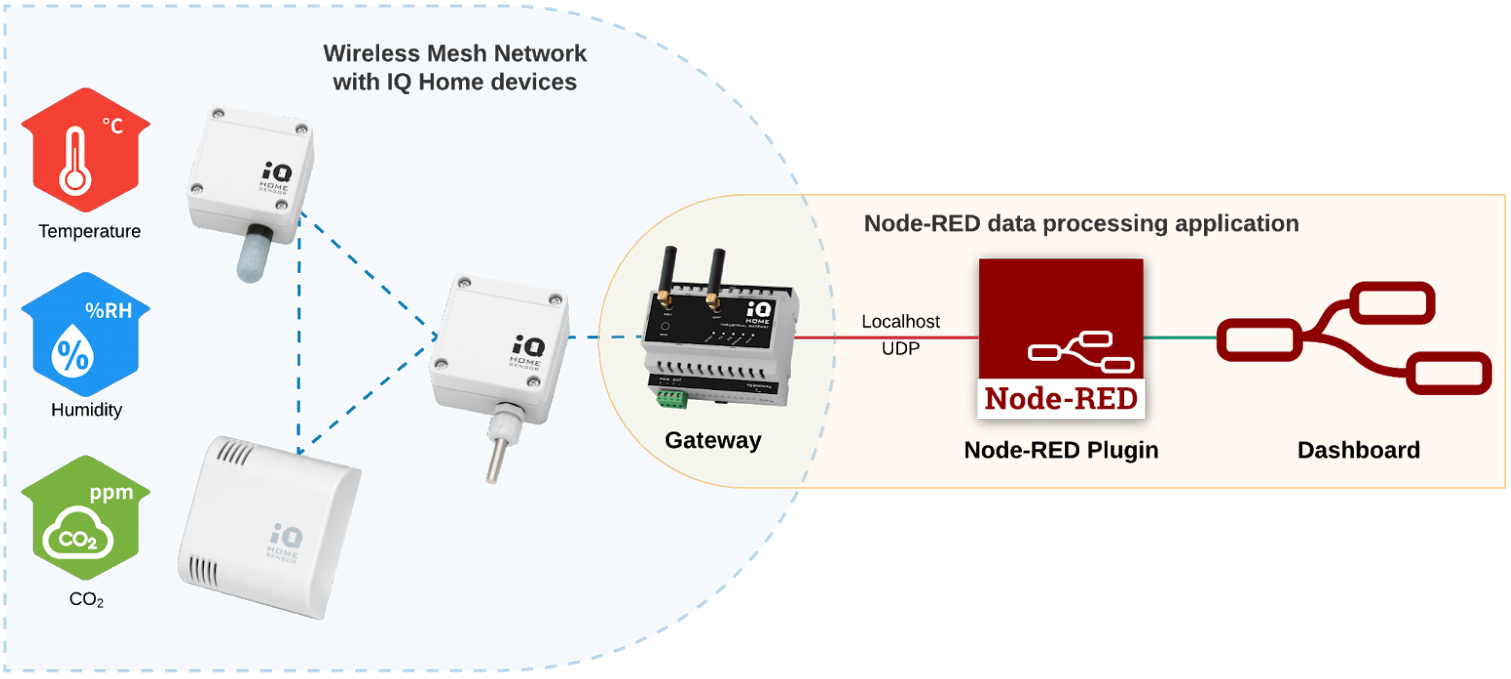
Visualizing sensor data using Node-RED Dashboard



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Contents

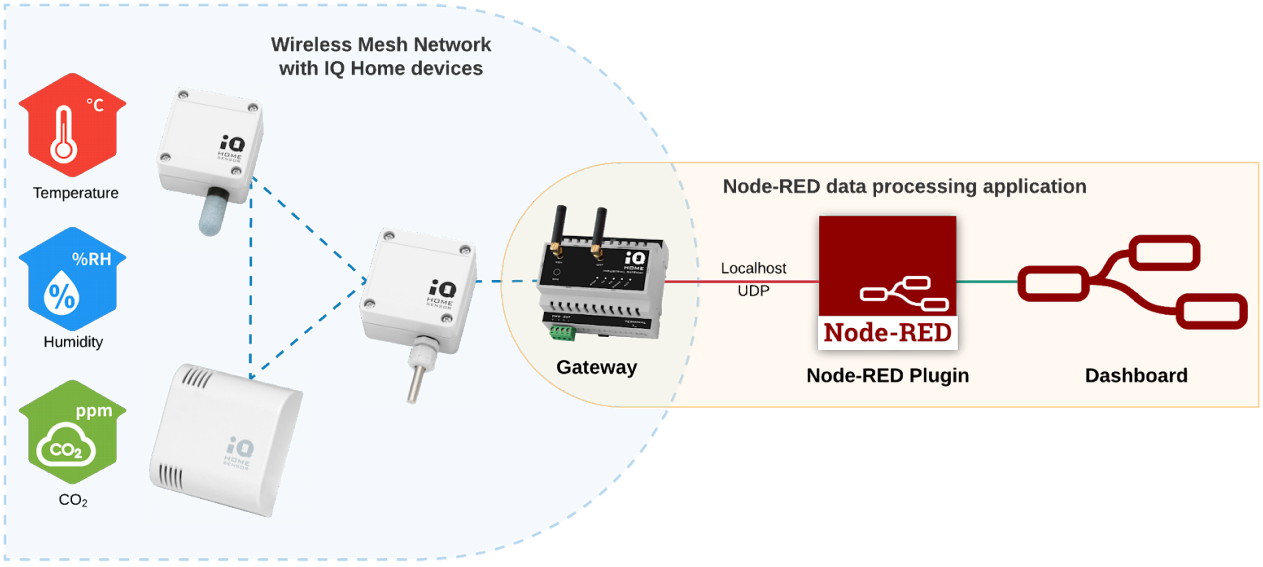
1 Overview

In this guide, you will learn about how to visualize periodically collected sensor data from your IQ Home sensor network using **Node-RED Dashboard** hosted on your Gateway.

The pre-installed Node-RED service and Dashboard plugin on the gateway will be used to create the web visualization.

What you need:

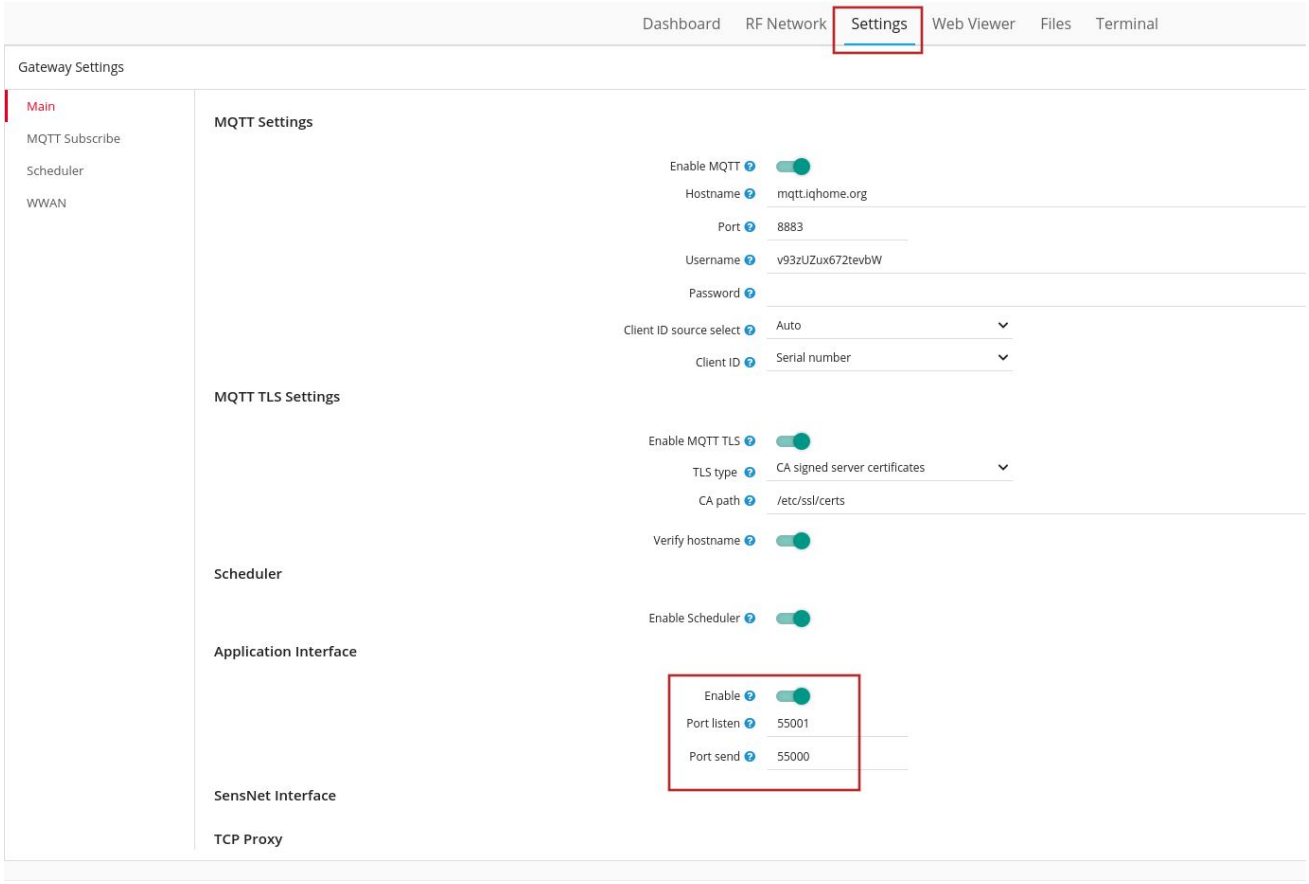
- IQ Home Gateway
- IQ Home Sensor



2 Enable the Application Interface

To collect sensor data with Node-RED, first, we need to enable the Application Interface feature on the gateway.

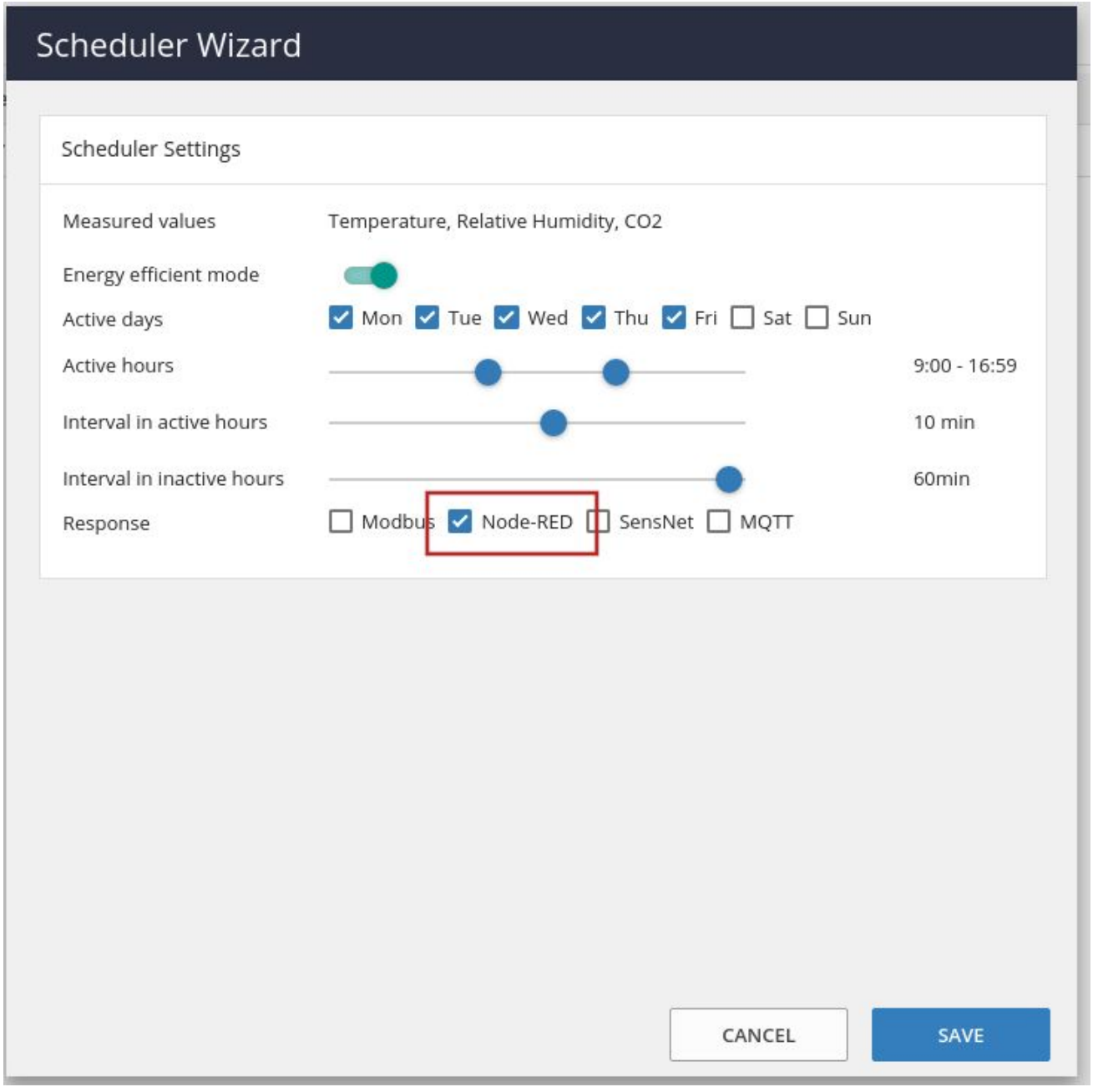
1. Connect to the Gateway using the “**Link It!**” Software
2. Go to the “**Settings**” tab
3. Enable “**Application Interface**” and set a “**Port Send**” value (e.g. 55000)



The **Port Send** value selected here will be used in Node-RED.

Then enable the Node-RED scheduler for the sensors.

1. Open the “**RF Network**” tab
2. Switch to **“Sensor Data”**
3. Click on the clock icon in the top right corner labeled “**Create Scheduler”**
4. Enable the “**Node-RED**” Response option



You can also set the time intervals between the sensor measurements.

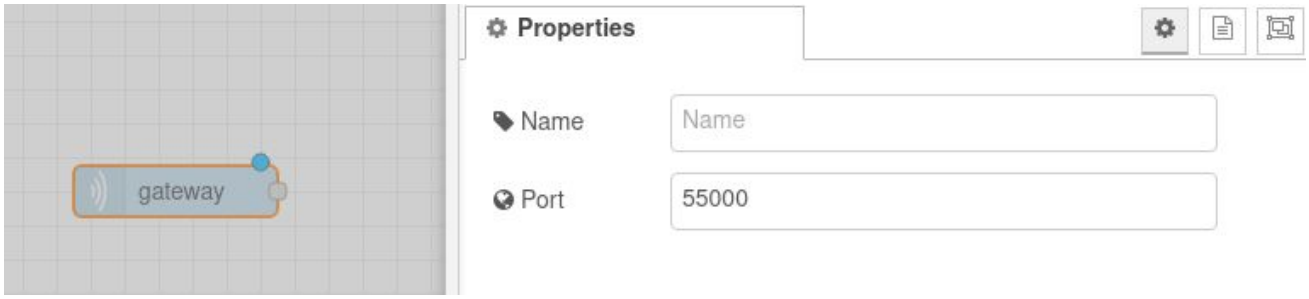
3 Set up a Node-RED network to forward the sensor data

For this demo, we will be using a **Temperature Sensor** [SI-T-02/SC] and a **Temperature and Relative Humidity Sensor** [SN-TH-02].

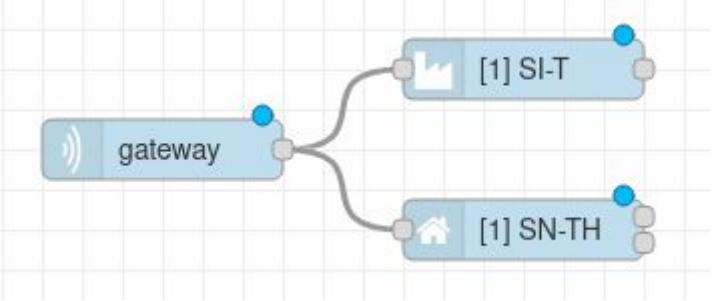
1. Switch to the **Node-RED** tab in **LinkIt!**

The **IQHome** nodes can be found in the bottom of the panel on the left side of your screen.

2. Add an iqhome **gateway** node. If you changed the used port in the first step, you can set it here by double-clicking on the node



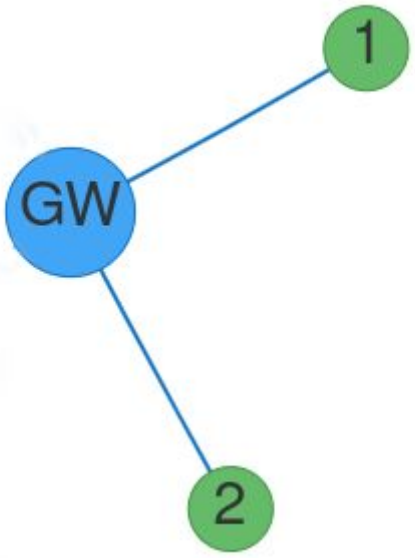
3. Add the sensor nodes corresponding to the sensors you are using in your IQHome network. In this example, we are using the **SI-T-02/SC** and **SN-TH-02** sensors, so we will add the **SI-T** and **SN-TH** nodes

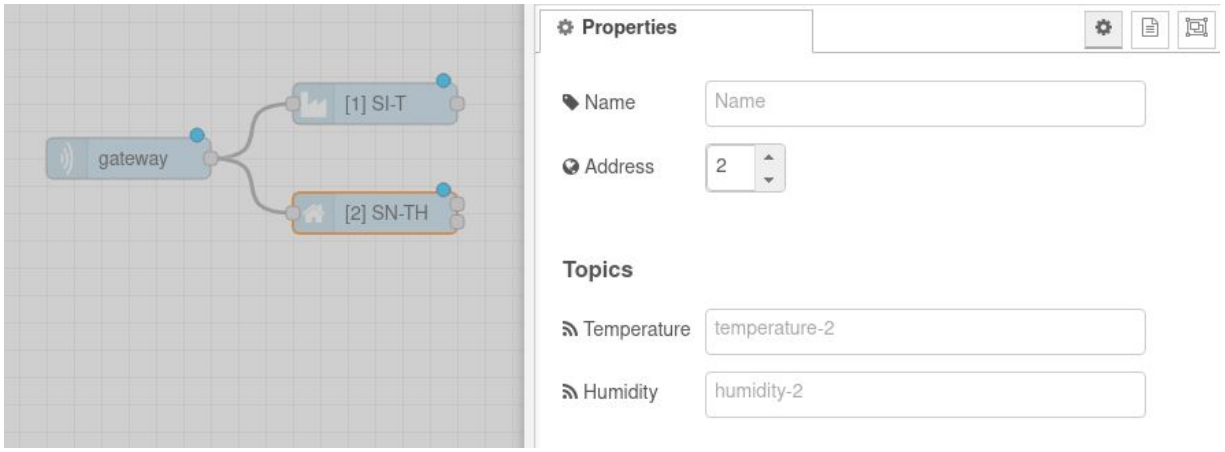


4. Set the **device addresses** corresponding to your sensor's addresses as seen in the **LinkIt! RF Network** tab by double-clicking the sensor nodes. We are using the default topic (feed) names generated by the sensor nodes, so you can leave the boxes under "Topics" empty. If you used a different topic (feed) name on the Adafruit website, you have to write the same topic names here.

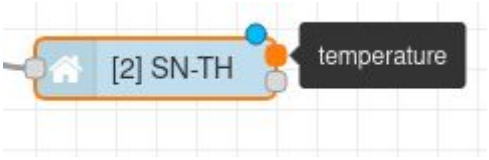
Note

You can easily identify your sensors and their device addresses by using the "**indicate"** button in the right-click menu of the sensors under the **RF Network** tab in **LinkIt!** and finding the blinking LED on the sensor.

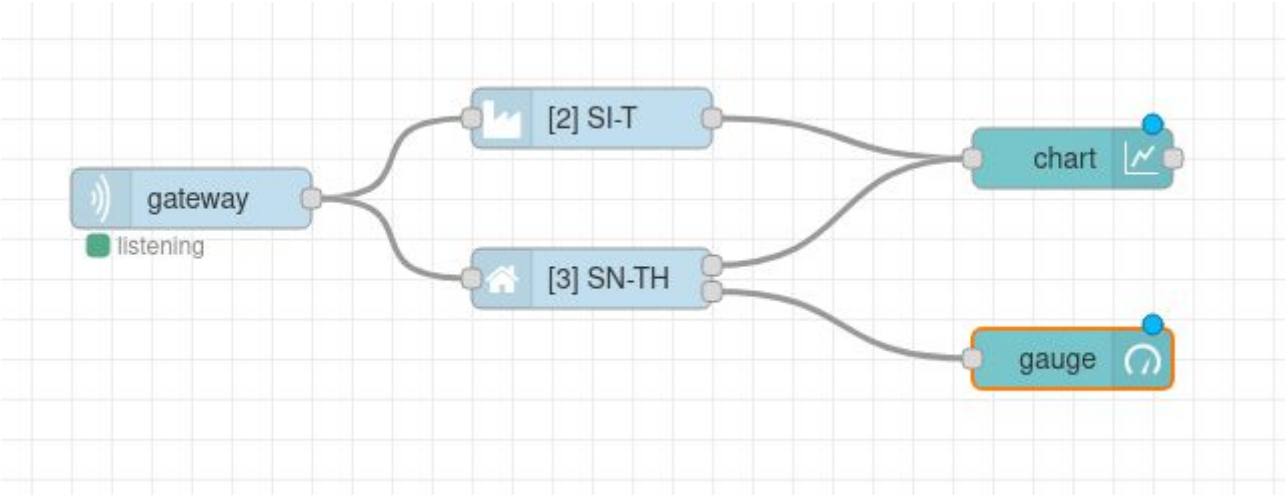




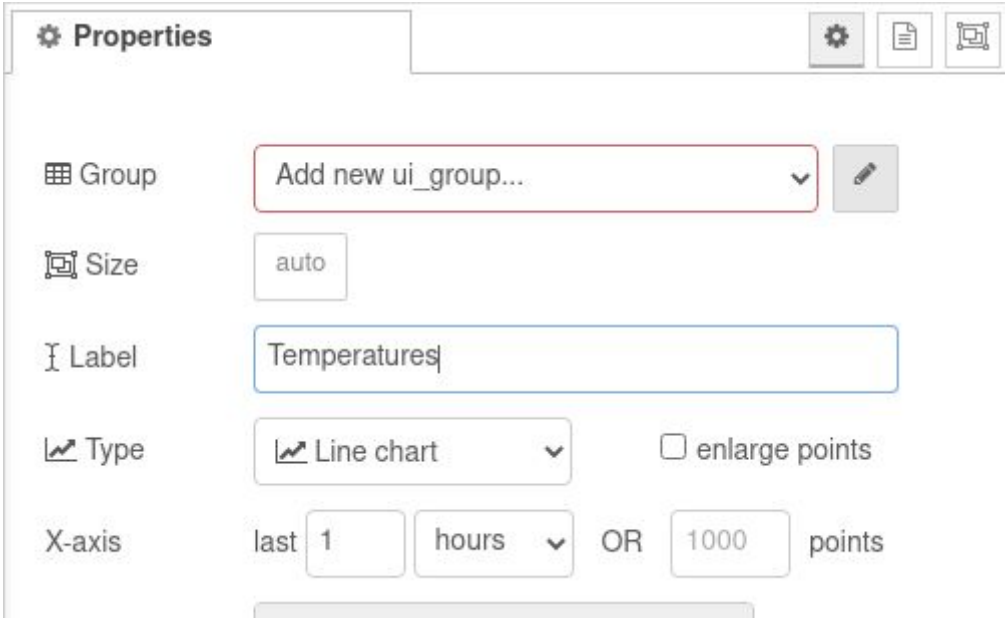
Each sensor node has outputs depending on what types of measurements can that sensor make.



5. For this demo, we are going to create a line chart for the two temperature values and a gauge for the humidity. Add a **gauge** and a **chart** node and connect them to the corresponding sensor outputs.



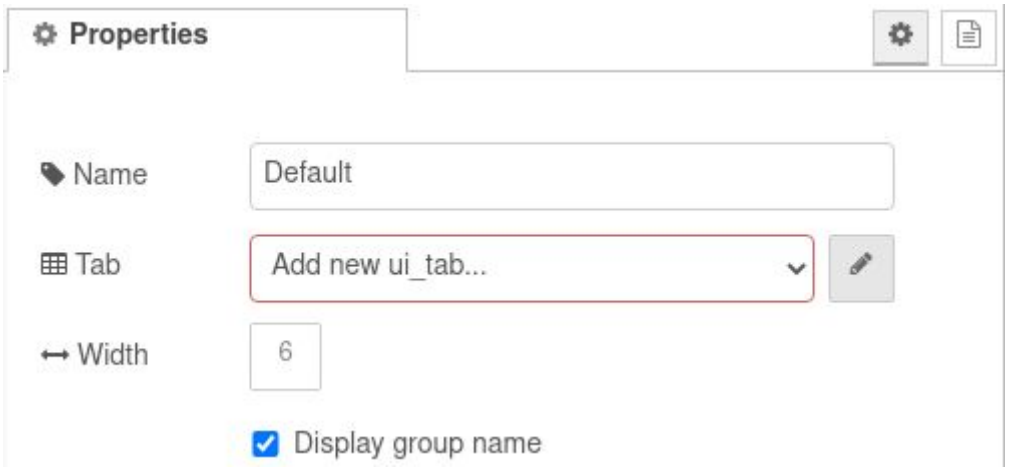
6. Configure the **chart** node by double-clicking on it. Give a label to the chart, then click on the **pencil icon** next to **Add new ui_group...**



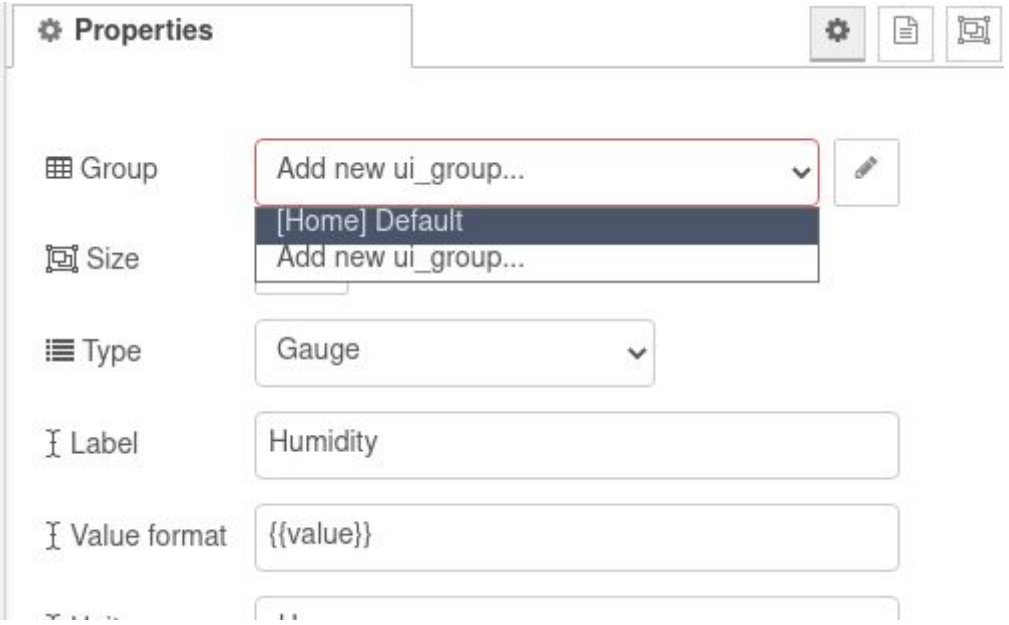
Note

You can also customize the settings of the chart in this panel, but for now, the defaults are fine.

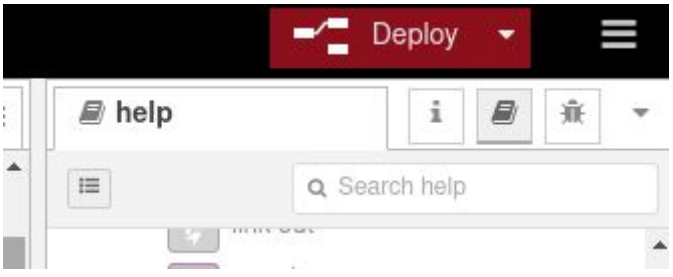
7. Then click on the **pencil icon** next to **Add new ui_tab…** and click the red **Add** button twice



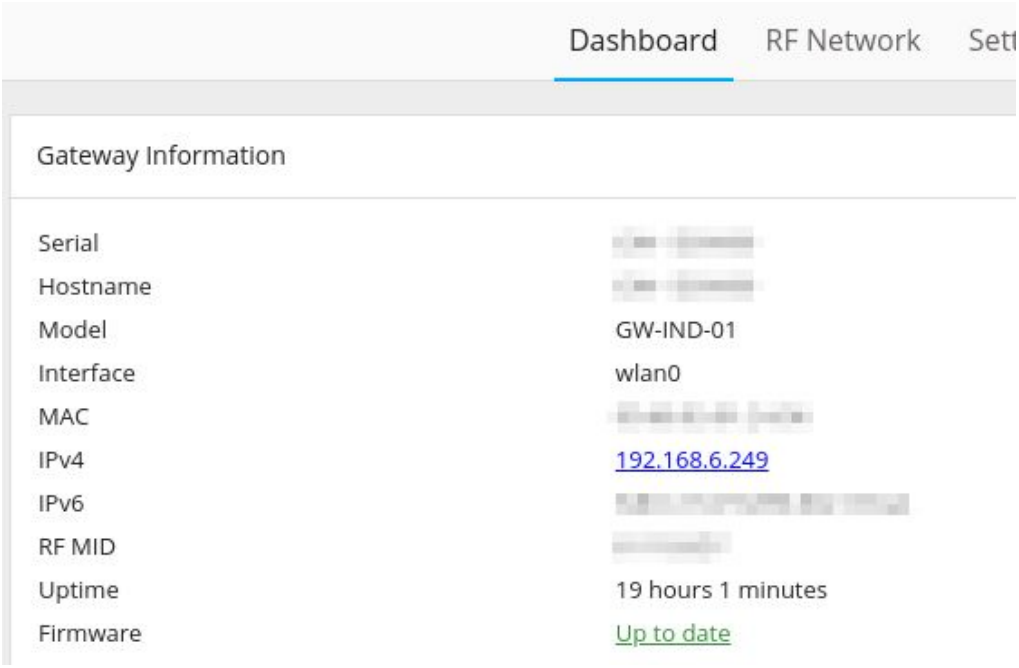
8. Configure the **gauge** node by double-clicking on it. Select the **Group** created in the previous step, and give a **label** to the gauge.



9. **Deploy** your Node-RED network by clicking the **Deploy** button in the top right corner of your window



10. Open the **Node-RED Dashboard** by switching to the **Dashboard** tab in **LinkIt!**, and clicking on the link next to **IPv4**



If you turn on your IQHome gateway and sensors, you will see the incoming data in your Node-RED Dashboard: