# Sending email alerts with Node-RED



Wireless Mesh Network with IQ Home devices

Temperature

Humidity

CO₂

Gateway

Node-RED data processing application

Localhost UDP

Node-RED Plugin

SMTP

Email Services
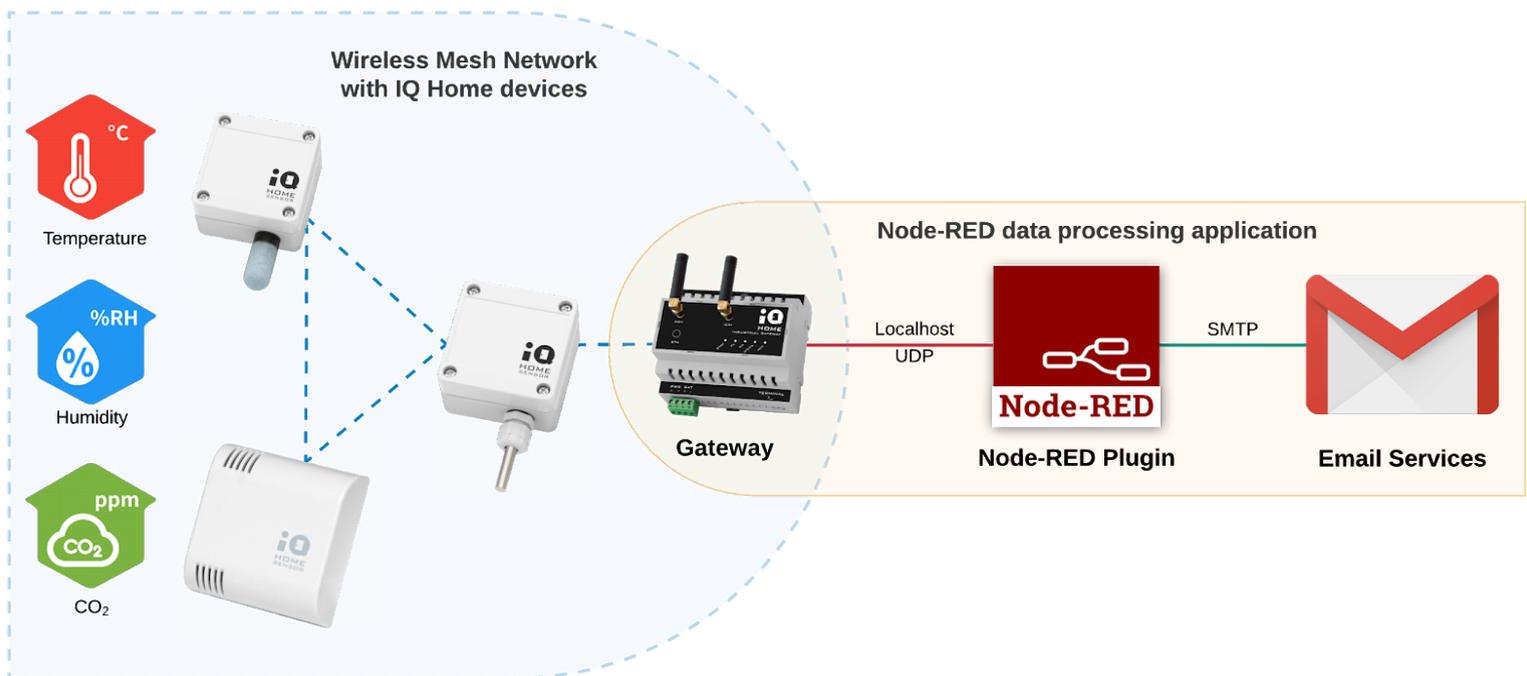
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www.iqhome.org

# Contents

# 1 Overview

In this guide, you will learn how to send **email alerts** if a sensor's measurement exceeds a given threshold in your IQHome Sensor Network.

The pre-installed Node-RED service and IQHome package on your Gateway will be used to periodically collect and monitor your sensor data.

What you will need:
- [IQ Home Gateway](#)
- [IQ Home Sensor](#)
- [Gmail Account](#)
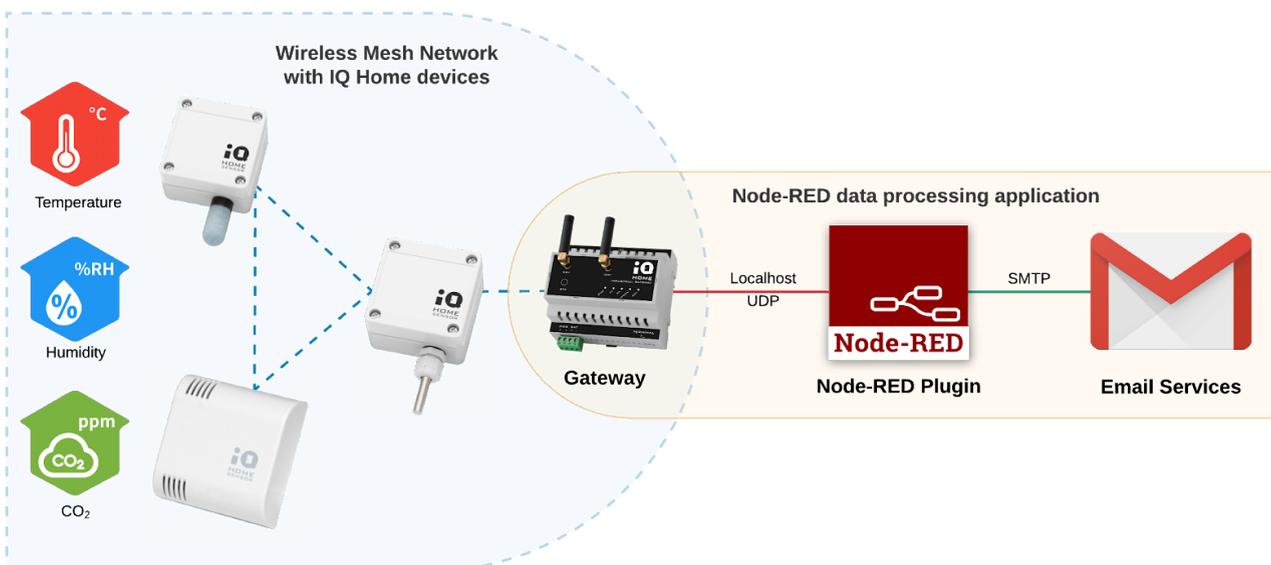
# 2 Enable the Application Interface

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)
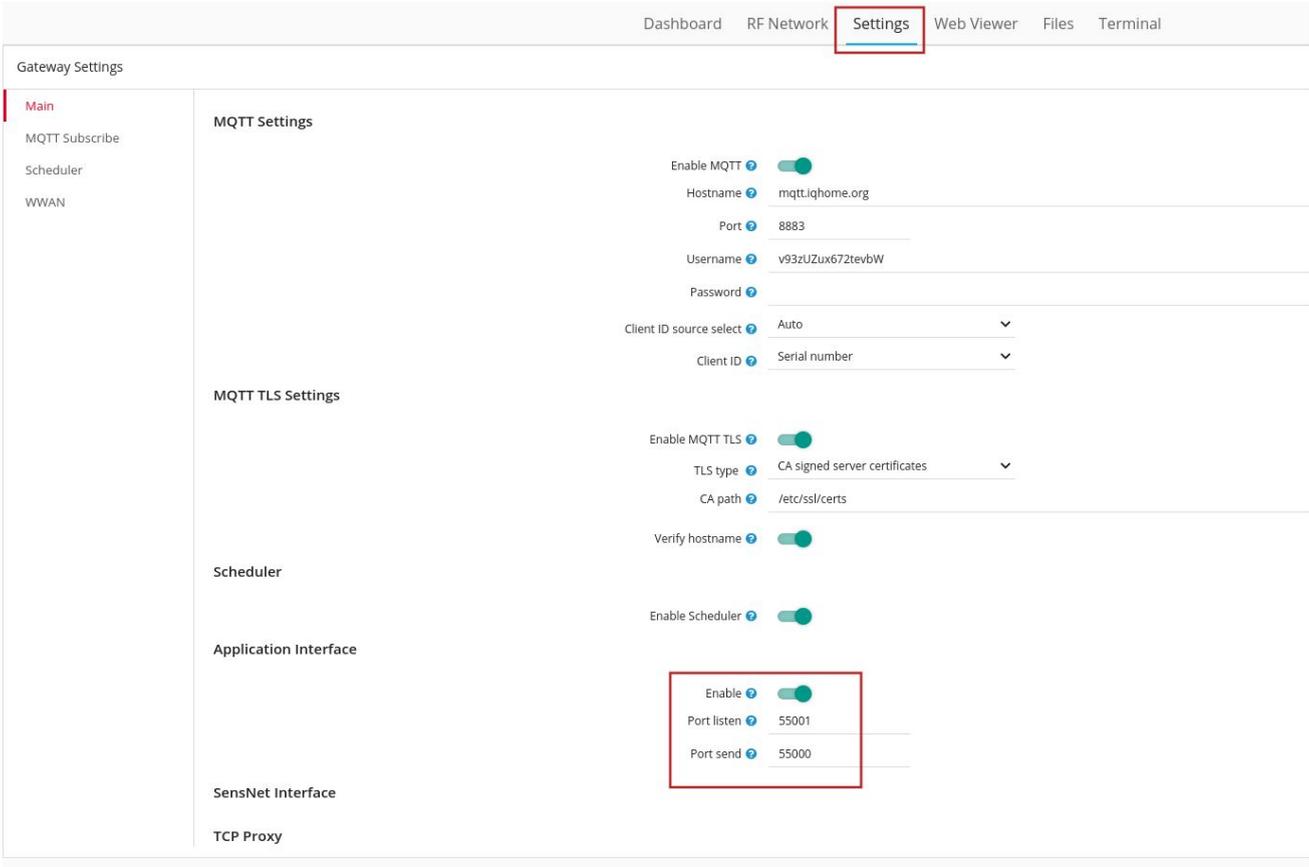


The **Port Send** value selected here will be used in Node-RED.

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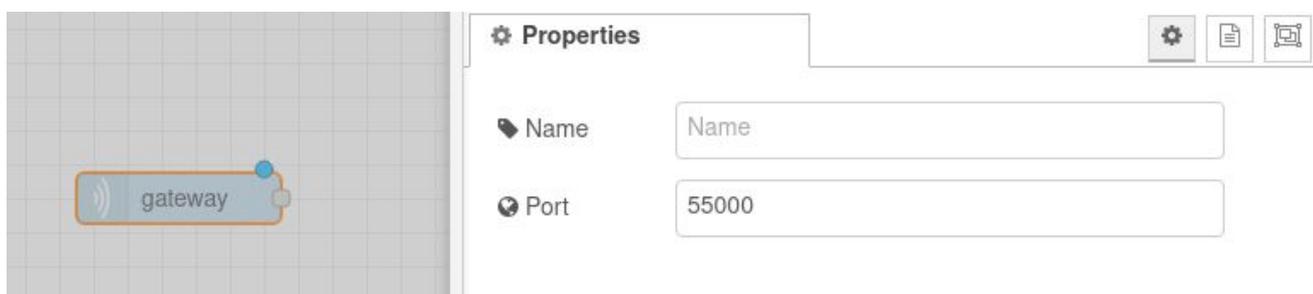
3. Add the sensor nodes corresponding to the sensors you are using in your IQHome network. In this example, we are using the **SI-T-02/SC** and **SN-TH-02** sensors, so we will add the **SI-T** and **SN-TH** nodes
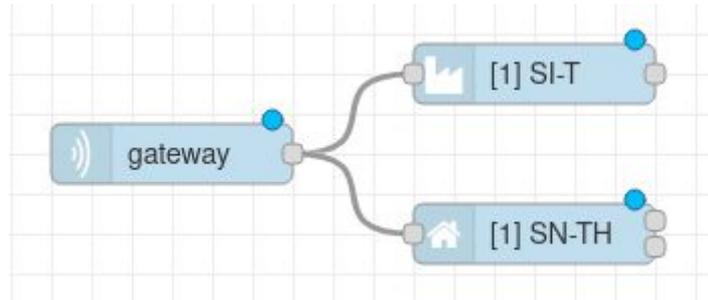


4. Set the **device addresses** corresponding to your sensor's addresses as seen in the **LinkIt! RF Network** tab by double-clicking the sensor nodes. We are using the default topic names generated by the sensor nodes, so you can leave the boxes under "Topics" empty. This topic will be the topic of the email notification.

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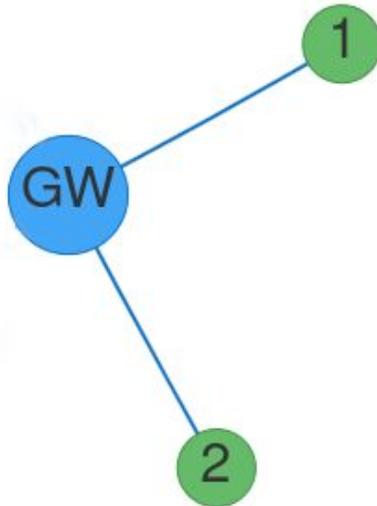
Each sensor node has outputs depending on what types of measurements can that sensor make.

5. In this demo, we will set thresholds for the **temperature** values of our sensors, so we add two **Switch** nodes to the temperature outputs of the sensor nodes. If the **temperature** measurement of either sensor crosses the threshold, Node-RED will send an email alert.
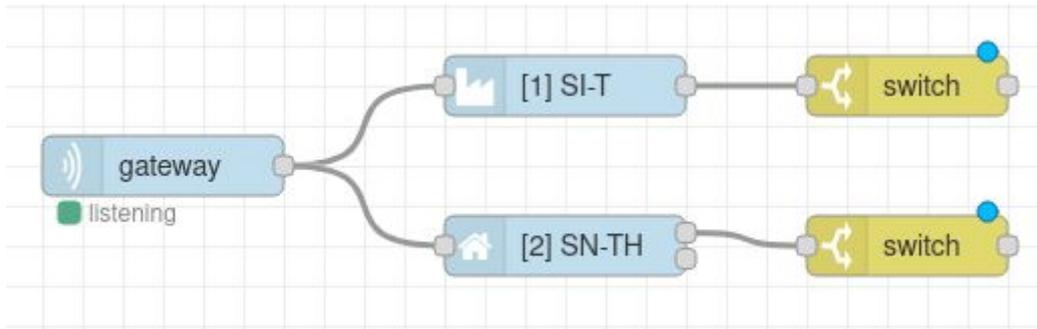


6. Open the configuration panel of the **switch** nodes by double-clicking on them. The measured values arrive in **msg.payload** as a simple value, so it's very easy to set up conditions for the incoming data. Let's set a threshold of 10 ℃ for both sensors by selecting the **">"** operator and a **number** as an argument.



7. You can customize your email alert message by adding a **template** node. **"{{payload}}"** will be replaced with the measured value sent by the sensor.
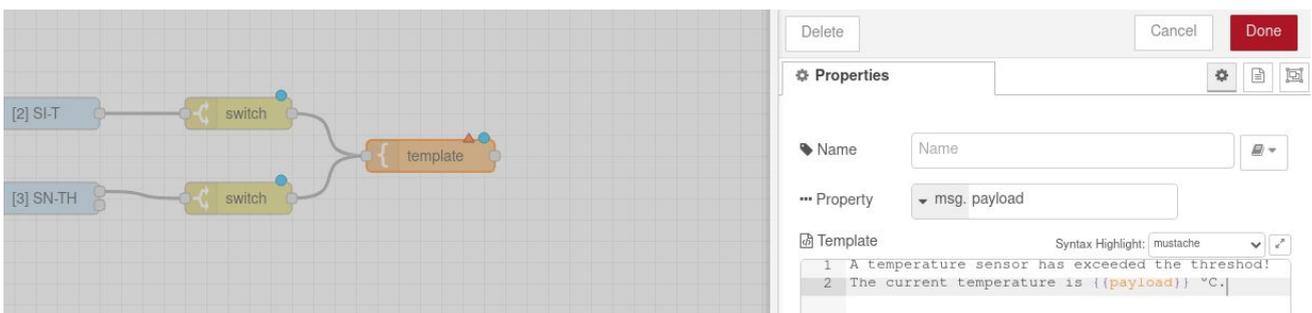
8. Add an **email** node connected to the output of the **template** node
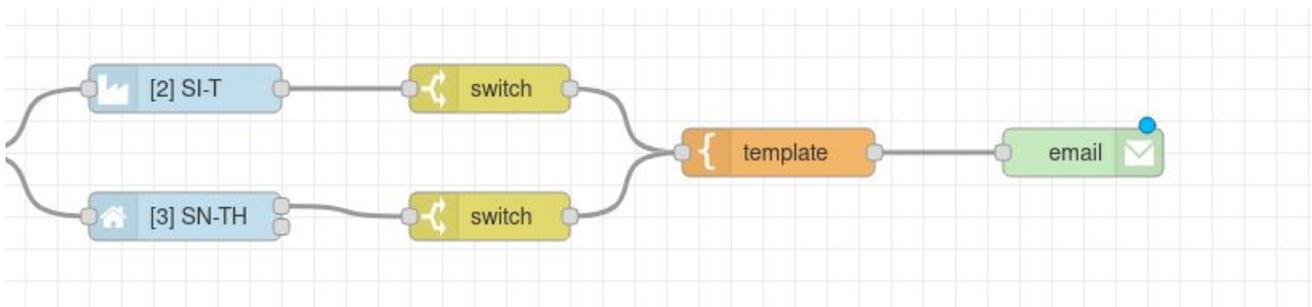


9. Configure the **email** node. If you are using Gmail, you can leave the default settings in the Server and Port fields. Fill in the email address you would like to send the alerts to in the "To" field, and your **Google** username and password in the "Userid" and "Password" fields.



**Note**

If you have two-factor authentication enabled on your Google Account, you have to use an "App Password". You can find more information here: Google Application Passwords

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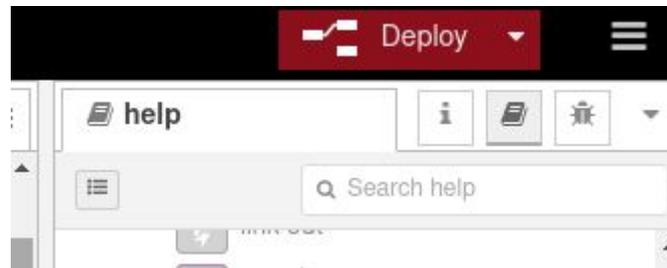


If you turn on your IQHome gateway and sensors, and a temperature measurement exceeds the given threshold (10 ℃), you will get an email like the following:



The topic of the email will be the topic set in the **Sensor nodes**. If you would like to customize the topic of the emails, you can set a custom topic there.

## ⚙ Properties

🏷 Name

Name

🌐 Address

1

## Topics

📶 Temperature

Temperature threshold exceeded on Sensor 1!