Gateway Quick Start Guide

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iQ
HOME

Contents

1 Overview

In this guide you will learn about the first steps on how to use IQ Home gateways.

2 Basic setup

You can find video tutorials for at the following link:
https://www.youtube.com/playlist?list=PLN9Mt98EPzN30TyGCDs-M0s0zSJRZdNpY
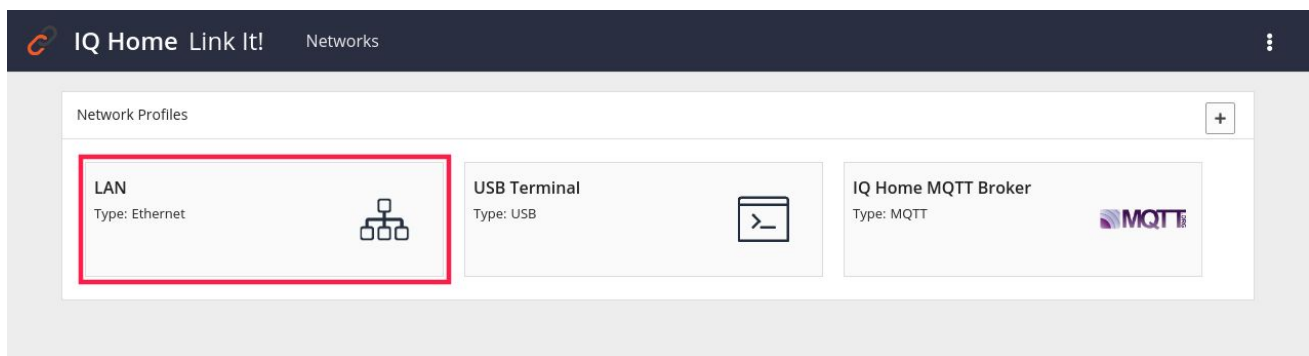
3 Connect with IP address on LAN

The LinkIt! software can discover gateways in the same local network automatically. In case the gateway is not in the same network with the computer running LinkIt! or have any IT infrastructure restrictions the gateway can be added with its IP address.
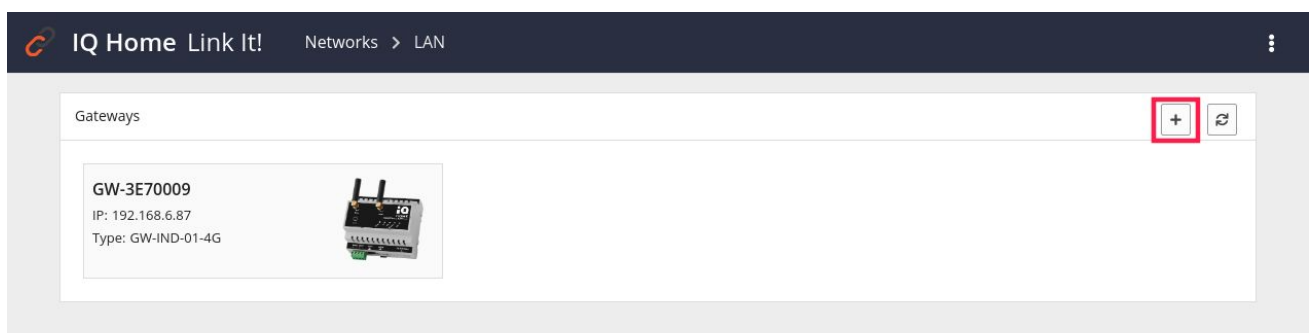
Connecting to a gateway on LAN the following ports have to enabled:
- 1313 UDP
- 13013 TCP

1. Select LAN network
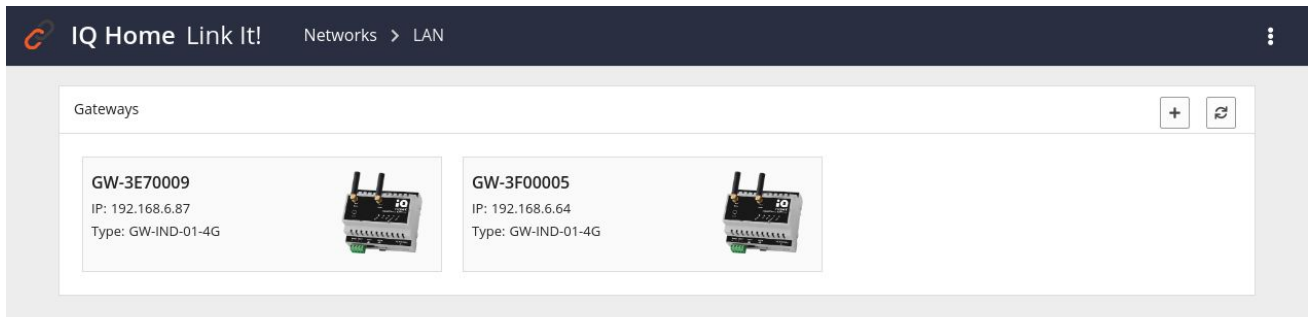

2. Click on the [+] button

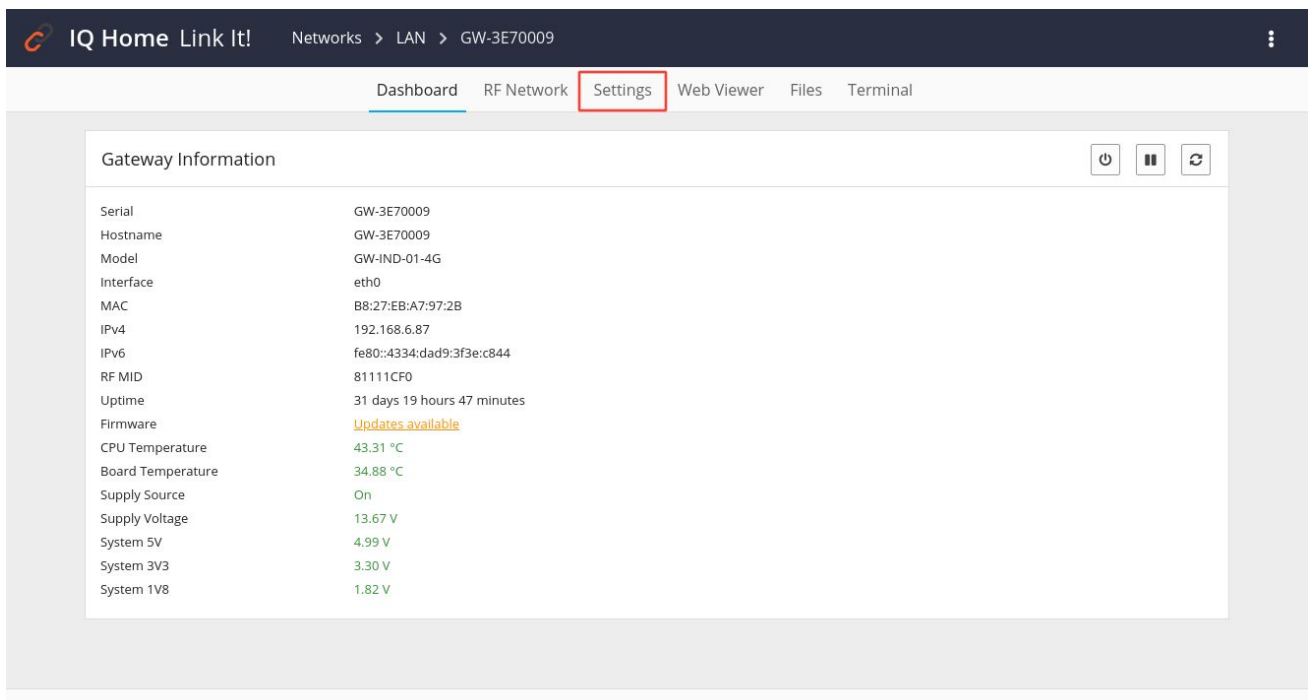3. Set the IP address of the gateway and click on ADD button

Add new gateway   ✕

IP/Hostname   192.168.6.64

                              CANCEL   ADD

4. The new gateway should appear in the list of the gateways

IQ Home Link It!   Networks > LAN   ⋮

Gateways   +   ↻

GW-3E70009   GW-3F00005
IP: 192.168.6.87   IP: 192.168.6.64
Type: GW-IND-01-4G   Type: GW-IND-01-4G

4 Configure MQTT settings

1. At first connect to the gateway as describe in 2 Basic setup
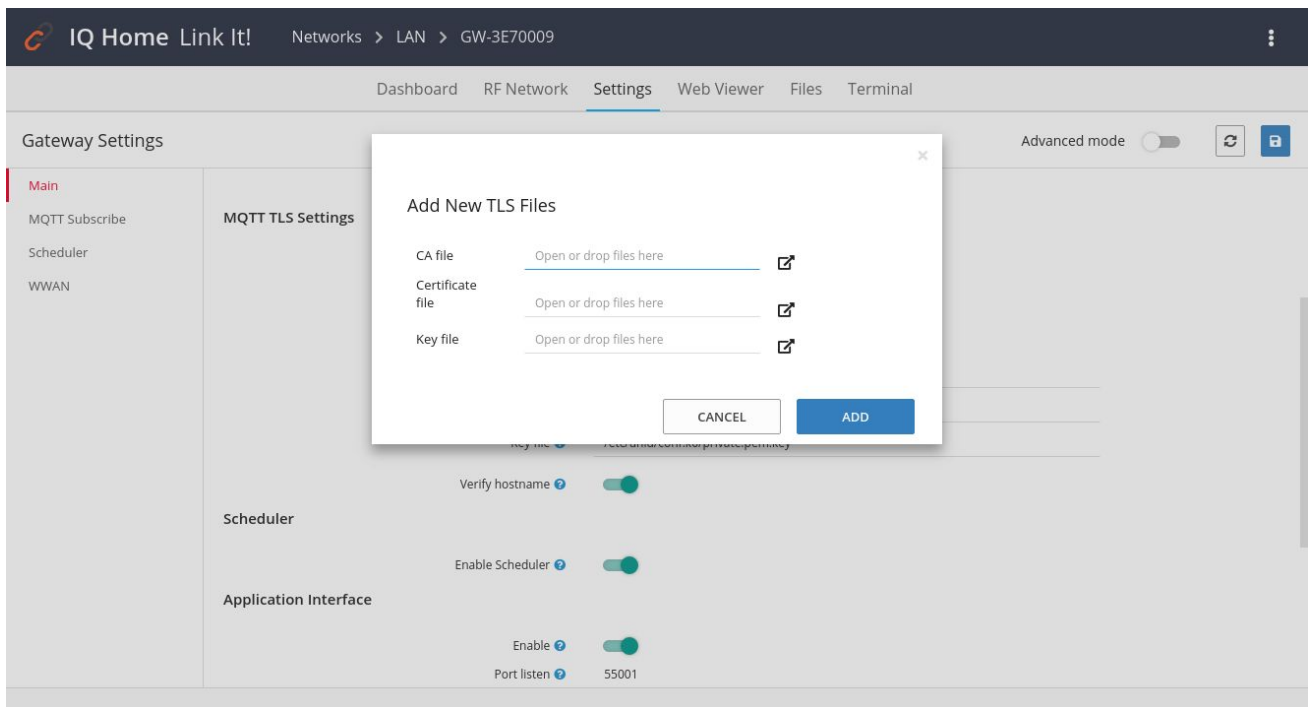2. Click on the *Settings* menu.

IQ Home Link It!   Networks > LAN > GW-3E70009   ⋮

              Dashboard   RF Network   Settings   Web Viewer   Files   Terminal

Gateway Information   ⏻   ⏸   ↻

Serial   GW-3E70009
Hostname   GW-3E70009
Model   GW-IND-01-4G
Interface   eth0
MAC   B8:27:EB:A7:97:2B
IPv4   192.168.6.87
IPv6   fe80::4334:dad9:3f3e:c844
RF MID   81111CF0
Uptime   31 days 19 hours 47 minutes
Firmware   Updates available
CPU Temperature   43.31 °C
Board Temperature   34.88 °C
Supply Source   On
Supply Voltage   13.67 V
System 5V   4.99 V
System 3V3   3.30 V
System 1V8   1.82 V

3. Modify MQTT Settings.

4. To setup MQTT TLS settings *Enable MQTT TLS* in the configuration.
    In case you need CA signed or self signed certificate can be uploaded by click on the
    UPLOAD button.
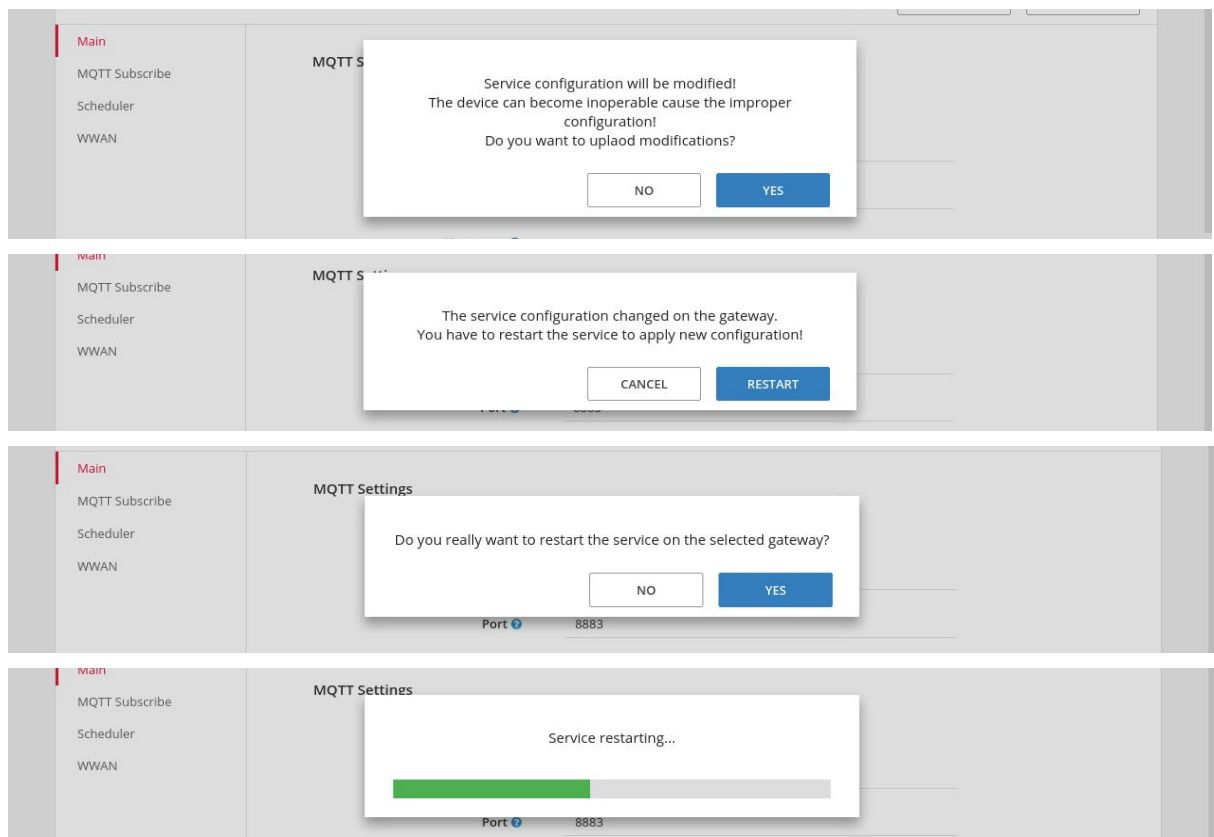

5. Open or Drag and Drop certificate and/or key files in the *Add New TLS Files* popup window
    and click on the *UPLOAD* button.

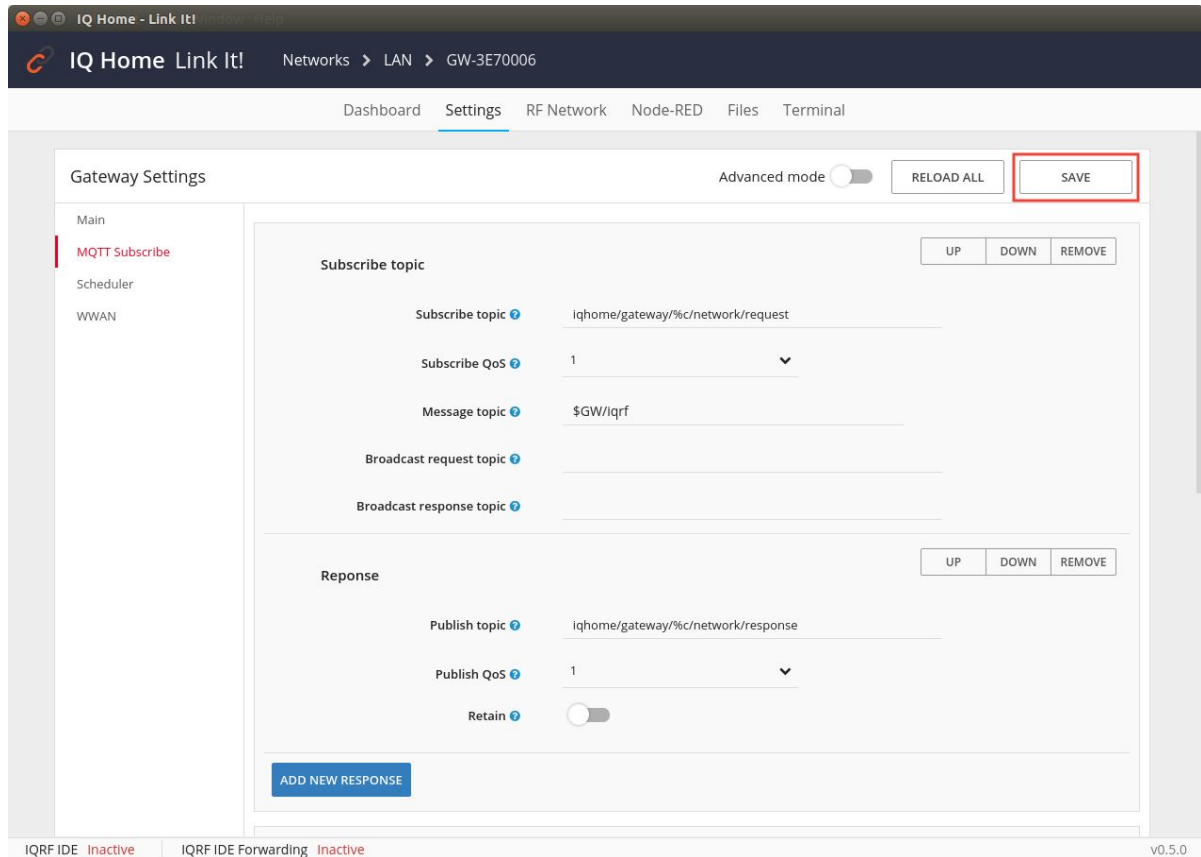6. After modified the configuration scroll down to the end of the screen and click on the *SAVE* button.

The saving process:

5 Configure MQTT subscribe settings

The MQTT subscribe configuration can be done in the *Files* menu.
1. Click on the *Settings* menu.
2. Click on the *MQTT Subscribe* on the left sidebar.
3. Modify the configuration and click on the SAVE button in the toolbar.
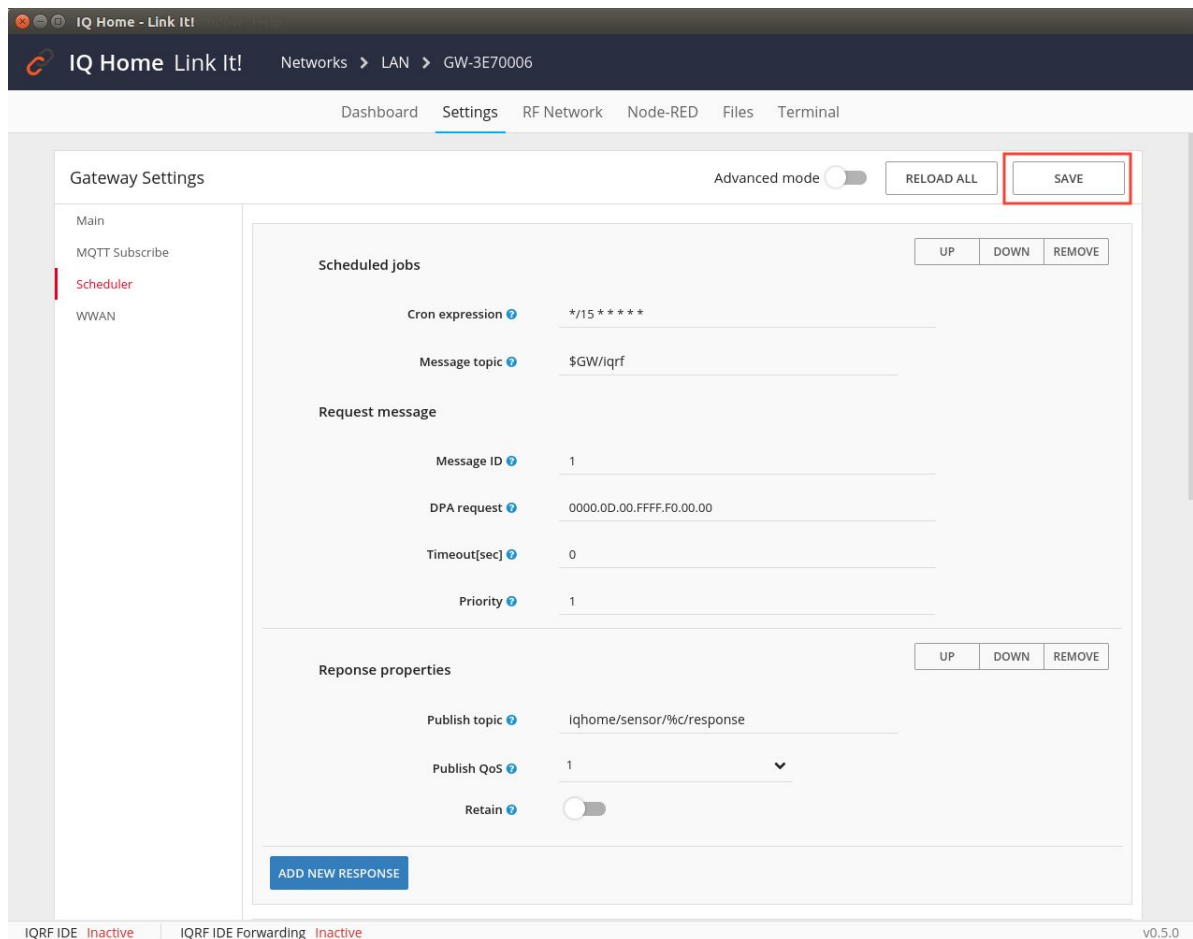

The documentation of the subscribe configuration can be found in the *Reference Manual* on the IQ Home website: https://www.iqhome.org/gateway-reference-manual

6 Configure scheduler

The MQTT scheduler configuration can be done in the *Files* menu.
1. Click on the *Settings* menu.
2. Click on the *Scheduler* on the left sidebar.
3. Modify the configuration and click on the SAVE button in the toolbar.

The documentation of the scheduler configuration can be found in the *Reference Manual* on the IQ Home website: https://www.iqhome.org/gateway-reference-manual

The scheduler configuration automatically reloads on the gateway after successful save.

Tip:
You can use $GW/iqhome message topic to receive preprocessed IQ Home sensor data.
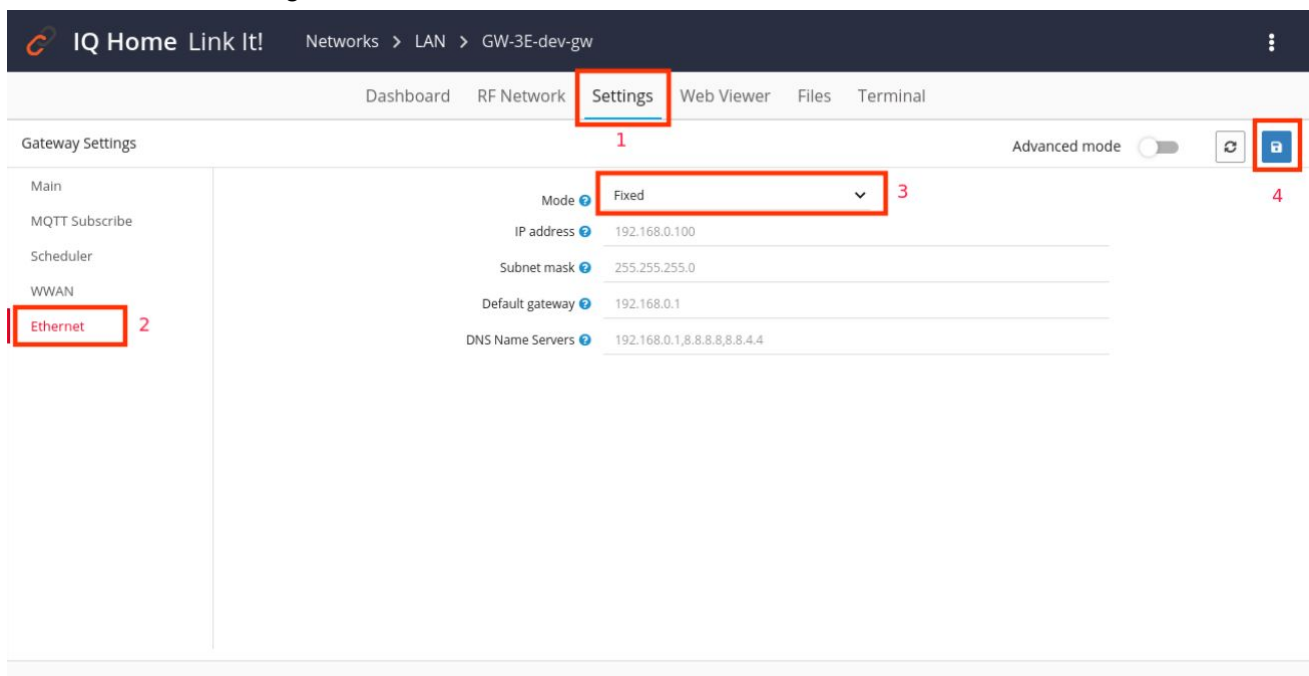
7 Configure Ethernet interface

7.1 DHCP configuration

As a default configuration the gateway uses DHCP settings and can be selected DHCP mode in Ethernet settings.
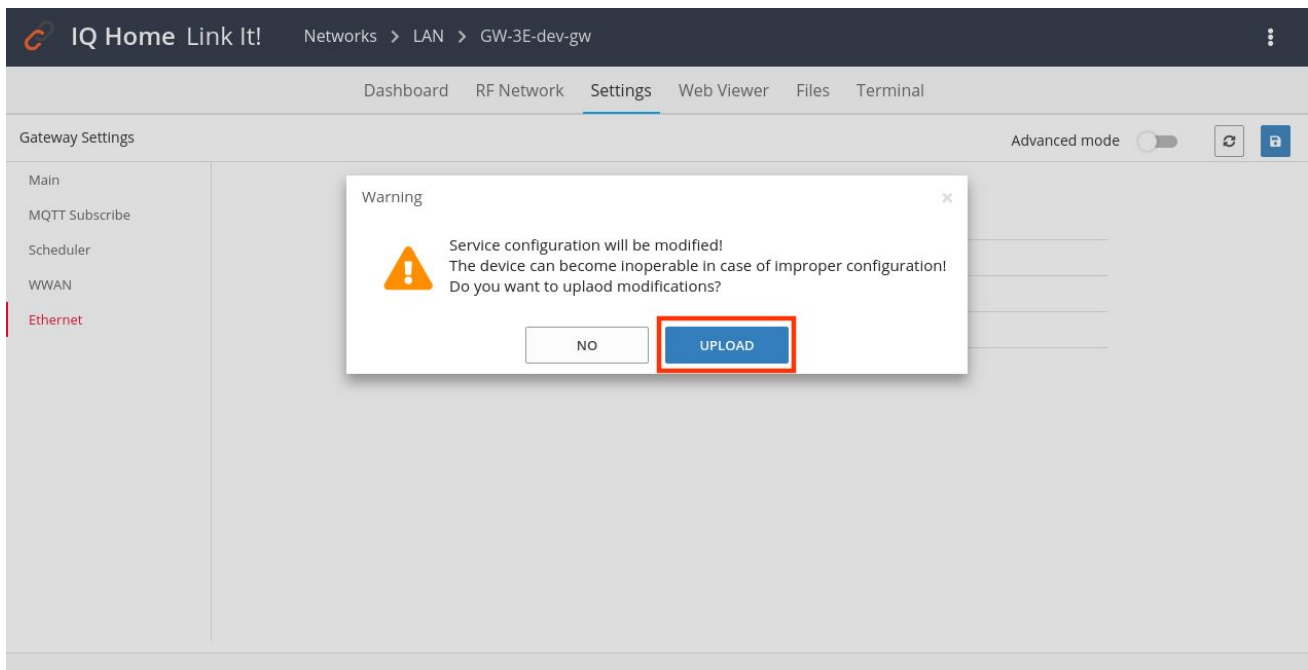
7.2 Static/Fixed IP address

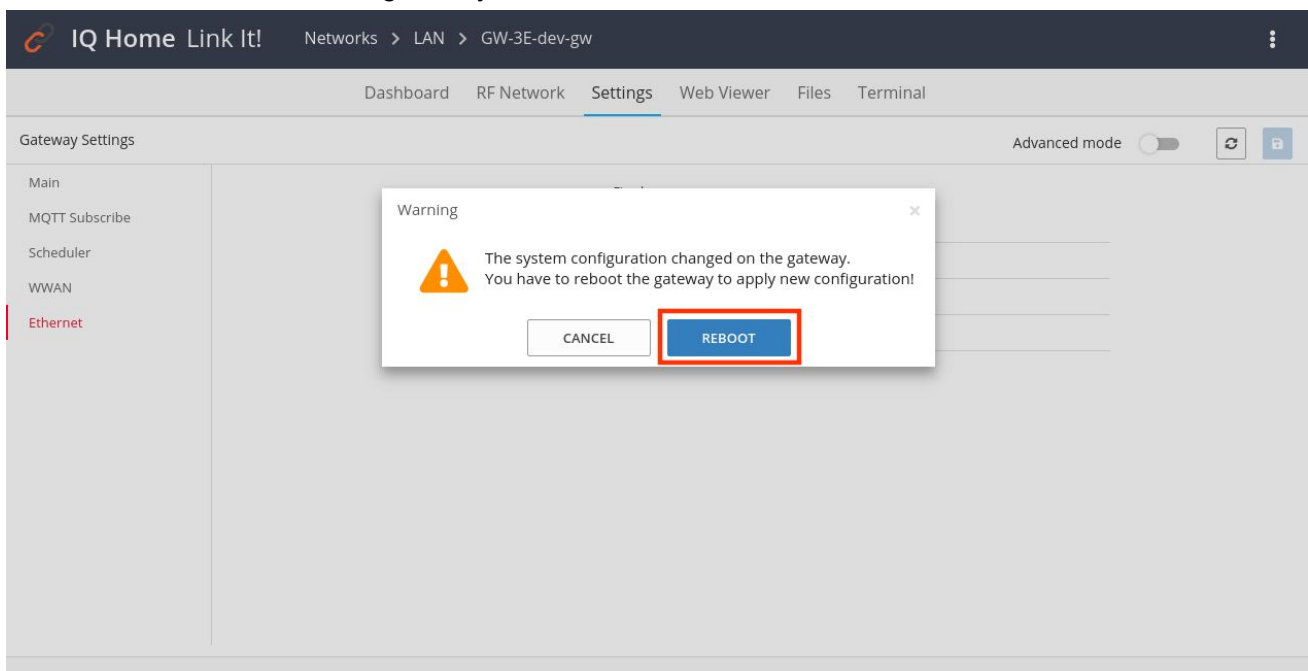The gateway supports setting up a static IP address or as known as fixed IP address.
1. Click on the Settings tab
2. Click on the "Ethernet" tab on the left sidebar
3. Select Fixed option from the drop down menu and set IP properties
4. Save the configuration

5. Confirm configuration upload

6. Confirm to reboot the gateway

8 Configure WLAN interface

Power on the gateway and connect with LinkIt! and follow the instructions how to connect to the gateway:

https://www.youtube.com/playlist?list=PLN9Mt98EPzN30TyGCDs-M0s0zSJRZdNpY

CAUTION!

The **GW-IOT** series gateways can connect to the LinkIt! via USB terminal or have to setup a temporary hotspot for the predefined factory settings:
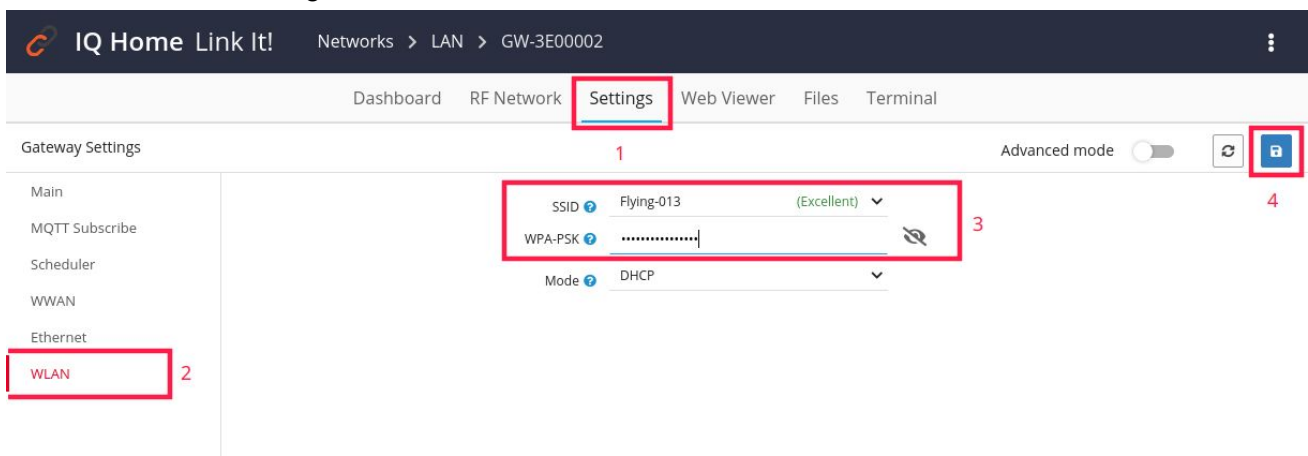SSID: IQHome
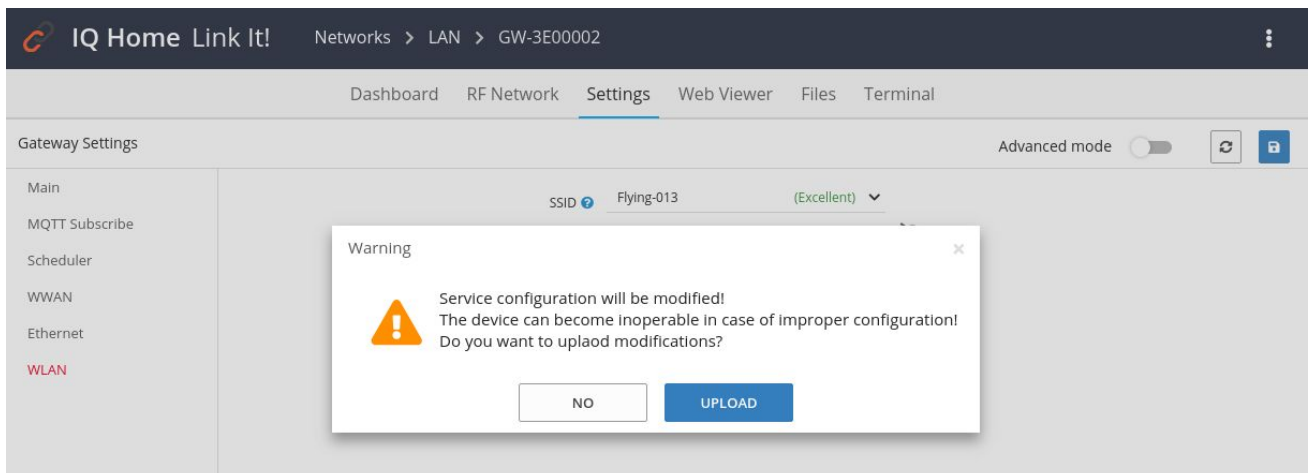PSK: iqhomesetup

8.1 Connect to WiFi hotspot

1. Click on the *Settings* menu in Link It!
2. Select WLAN settings
3. Select the preferred hotspot SSID and type the password (PSK) for the selected SSID.

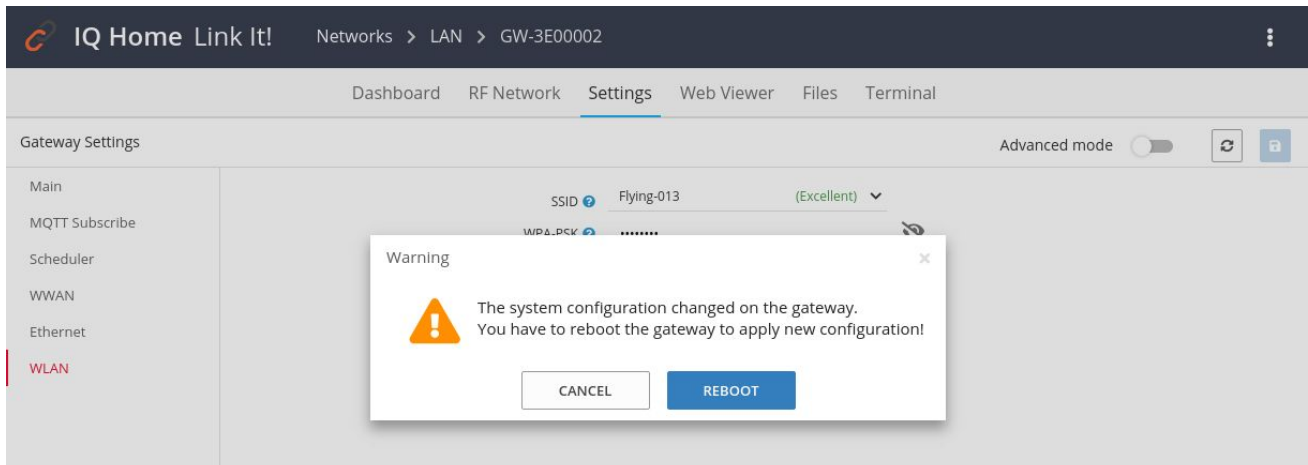   If the SSID not appear on the list try to reload the settings

4. Save new settings
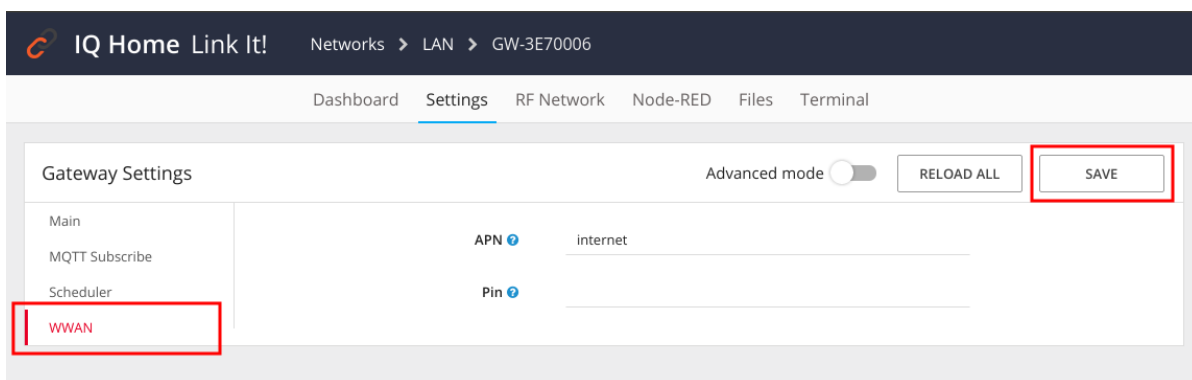

5. Upload new configuration settings
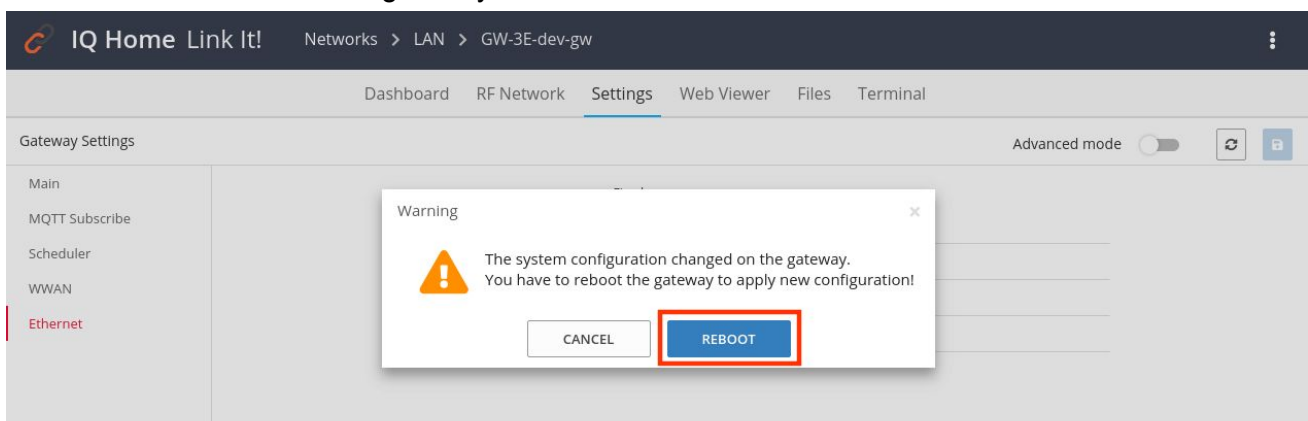
6. Reboot the gateway

9 Configure WWAN/LTE interface

The 4G/LTE capable gateways can be configured by Link It!.

7. Insert the SIM card into the slot of the gateway
8. Click on the *Settings* menu in Link It!
9. Click on the *WWAN* menu on the left sidebar
4. Modify the configuration
   a. Set the APN of your service provider
   b. Set PIN code or leave it blank if it is disabled in the SIm card
   c. To further configuration enable Advanced mode in the header
5. Click on the SAVE button in the toolbar
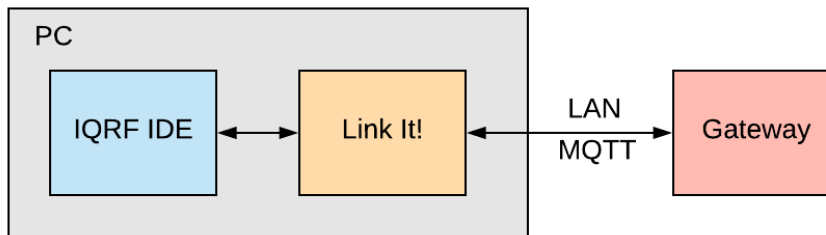6. Reboot the gateway to apply WWAN configuration

7. Confirm to reboot the gateway

10 Advanced configurations

10.1 IQRF IDE

The configuration of the gateway's IQRF coordinator and the IQRF network with IQRF IDE is possible via the Link It! management tool. The IQRF IDE can connect to the gateways via Link It!. At first you should connect to the gateway with Link It! Described in section 2.2. After that you can connect to the IQRF coordinator with IQRF IDE as described in section 2.3.
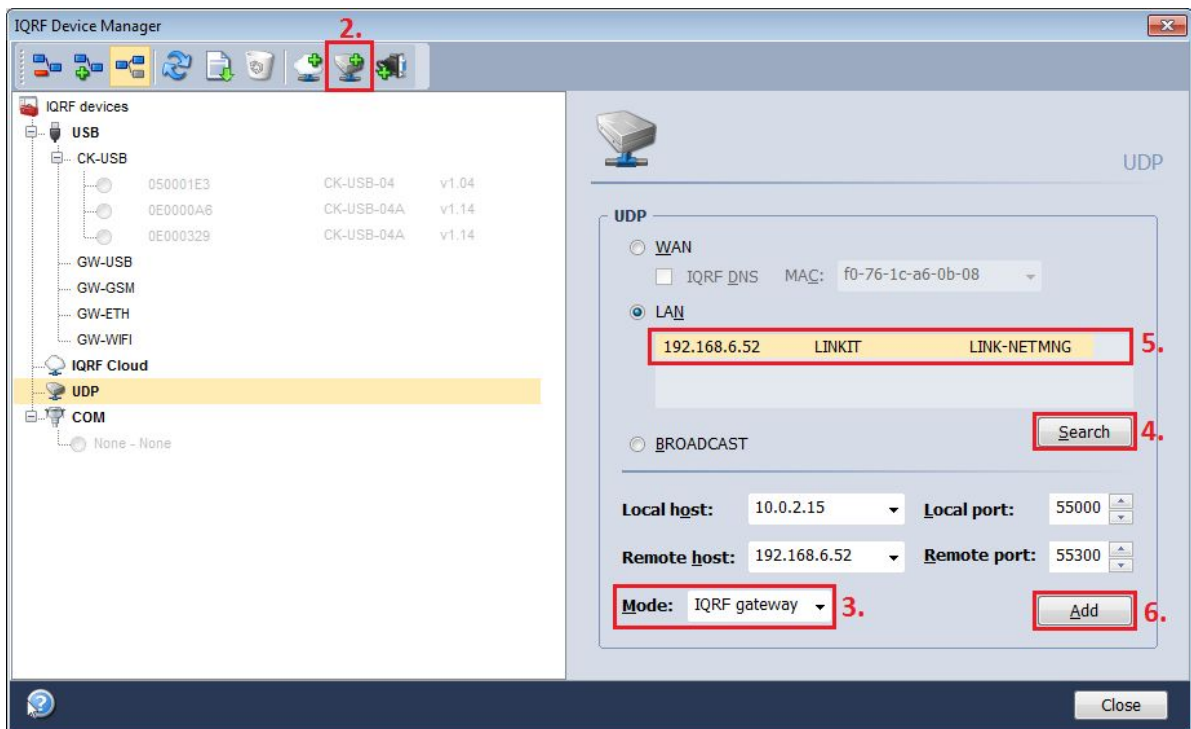

System architecture of how can connect and configure IQ Home gateways
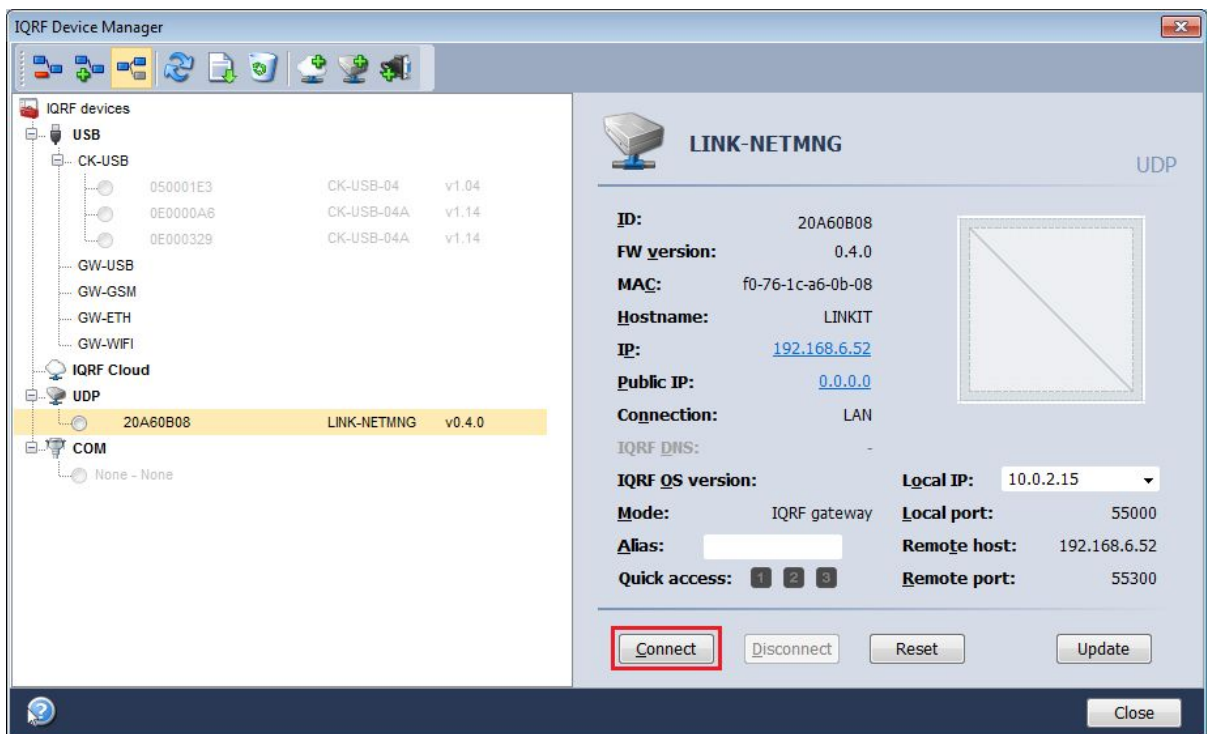
> **CAUTION!**
>
> The IQRF IDE can connect to the gateway only via the Link It! by default for security reasons! For development and/or debugging you can enable in gateway configuration but it is not recommended in production use!

Follow the few steps below to connect to the IQ Home Gateway:
1. Open the IQRF IDE, open a project and choose "IQRF Device Manager" from the "Tools" menu or press F9
2. Select Add UDP device icon   in "IQRF Device Manager" (or press Shift+Ctrl+D)
3. Select *Mode: IQRF gateway*
4. Click on the *„Search"* button
5. Select your gateway from the list. If the list still empty check your network settings
6. Click on the *Add* button

7. After add gateway click on the *Connect* button and close the "IQRF Device Manager" window.

8. The connection indicator displays the status in the left bottom corner.

9. In the bottom status bar of the Link It! now you can see the IQRF IDE status. If you connected to a selected gateway the *IQRF IDE Forwarding* status should be *Active*.

IQRF IDE Network Management Mode | IQRF IDE Forwarding Active

10. Now you can use IQRF IDE to configure the IQRF coordinator and the IQRF network.
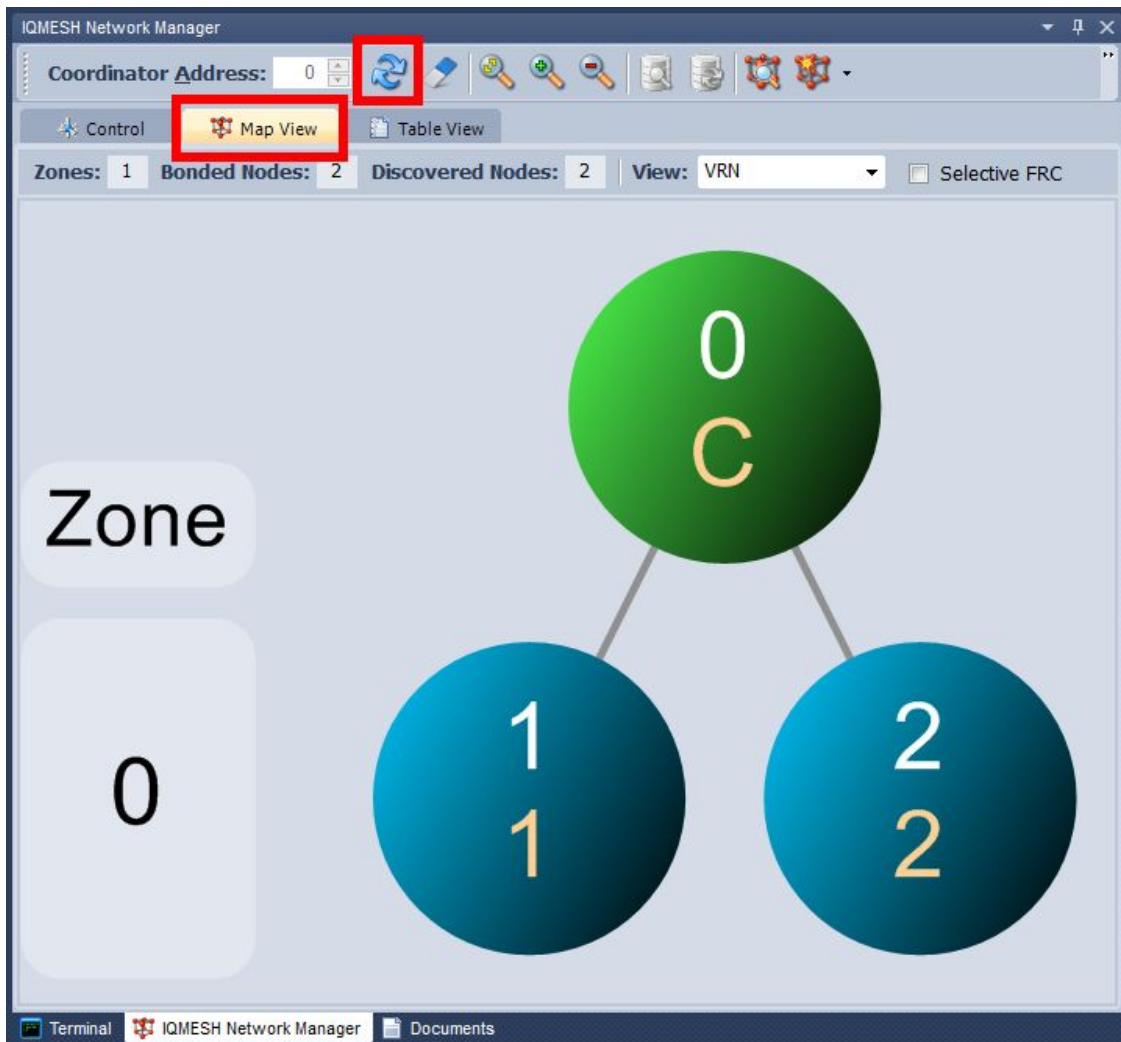
10.2 Modify TR configuration of IQRF coordinator

The TR configuration of IQRF coordinator module in the IQ Home gateways can be modified with IQRF IDE.
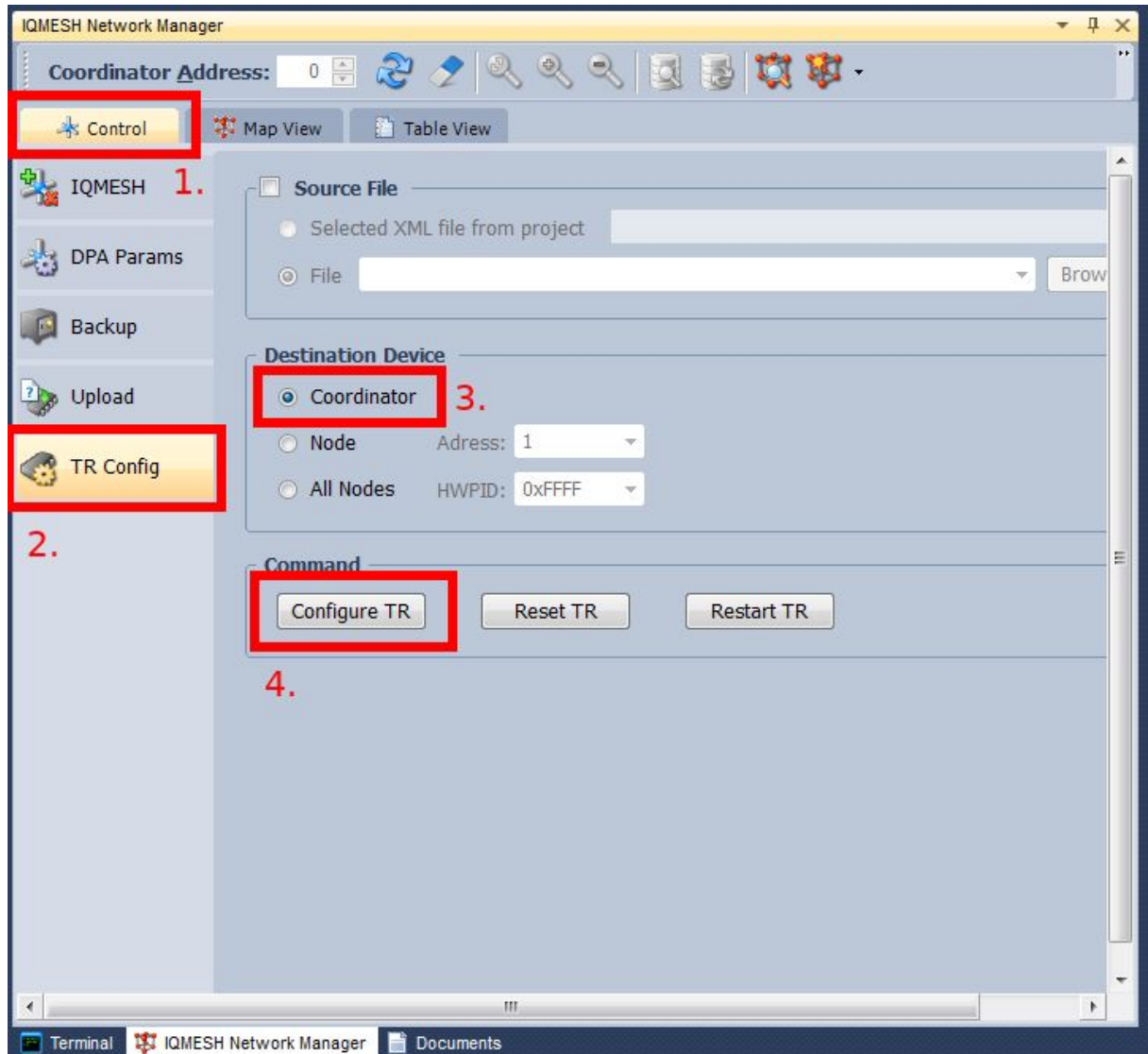
1. Connect to the gateway in IQRF IDE as described in 2.3. IQRF IDE.
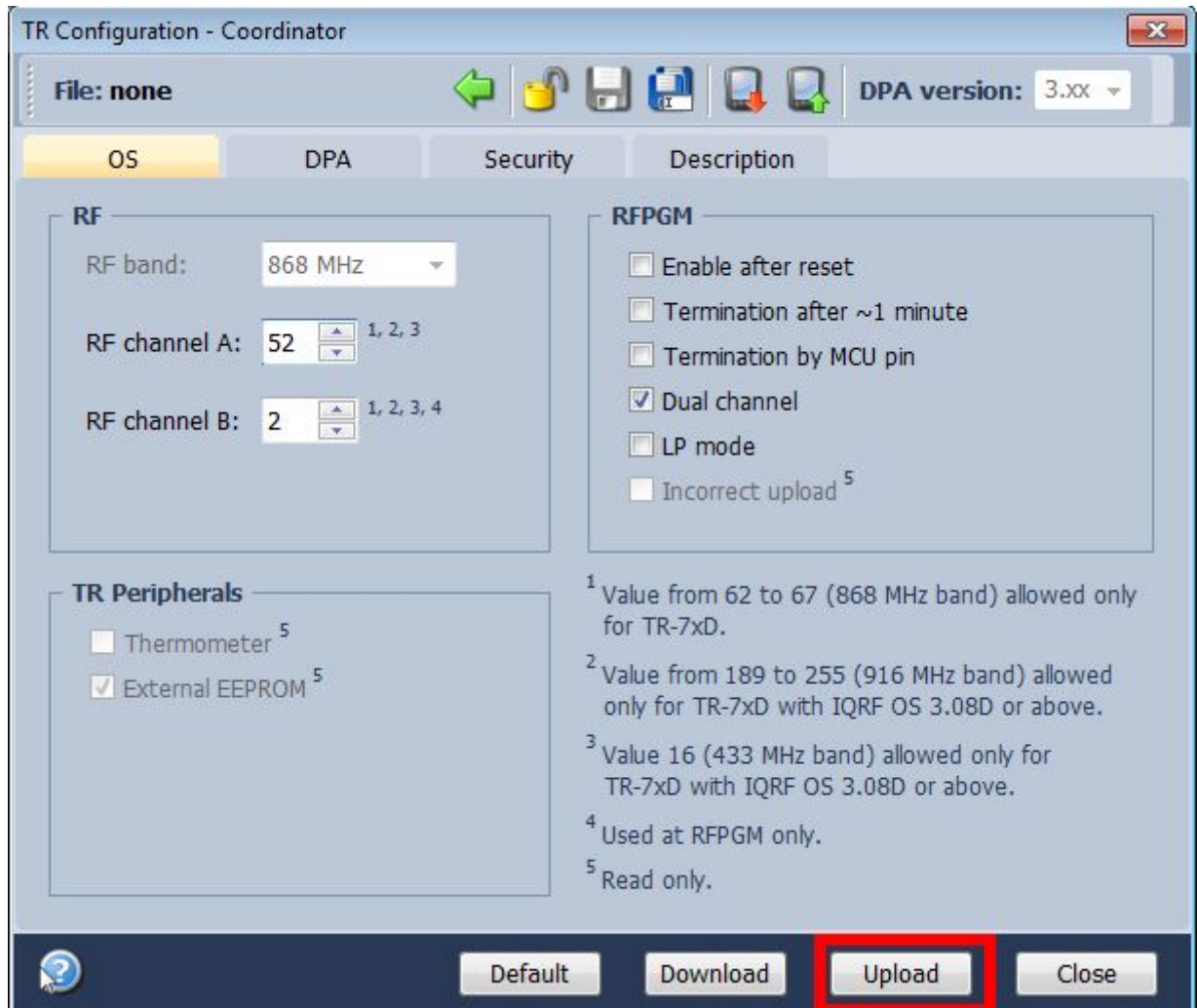2. Open IQMESH Network Manager in *Tools>QMESH Network Manager.*

3. In the *IQHMESH Network manager* window update the network information by click on the *Update Data* icon in the *Map View* tab.

4. After the network information updated:
   1. Click on the *Control* tab
   2. Click on *TR Config*
   3. Select *Coordinator*
   4. Open TR configuration by click on the *Configure TR* button

5. When the TR configuration window opens the coordinator TR configuration will be downloaded. Modify configuration and upload to the coordinator by click on the *Upload* button.

6. Close the TR configuration window and reset the coordinator module by click on the *Reset TR* button. The RX and TX LEDs on the gateway blinking after the TR reset.