

Gateway Quick Start Guide



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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 Configure MQTT settings

1. At first connect to the gateway as describe in section [2.2](#)
2. Click on the *Settings* menu.

The screenshot shows the IQ Home Link It! web interface. The top navigation bar includes 'Networks > LAN > GW-3E70009'. Below this, a tabbed interface has 'Settings' selected and highlighted with a red box. The 'Gateway Information' section displays various system metrics in a table format.

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.

The screenshot shows the 'Gateway Settings' page for a device labeled 'GW-3E70009'. The 'Settings' tab is selected. On the left sidebar, 'Main' is highlighted. The 'MQTT Settings' section is active, showing the following configuration:

- Enable MQTT: ☒
- Hostname: mqtt.iqhome.org
- Port: 8883
- Username: cbee754a11a792cb9eaa0fa8a66a68d3
- Password: (empty)
- Client ID source select: Auto
- Client ID: Serial number

The 'MQTT TLS Settings' section is also visible, with the following configuration:

- Enable MQTT TLS: ☒
- TLS type: CA signed server certificates
- CA path: /etc/ssl/certs
- Verify hostname: ☒

The 'Scheduler' section is partially visible at the bottom.

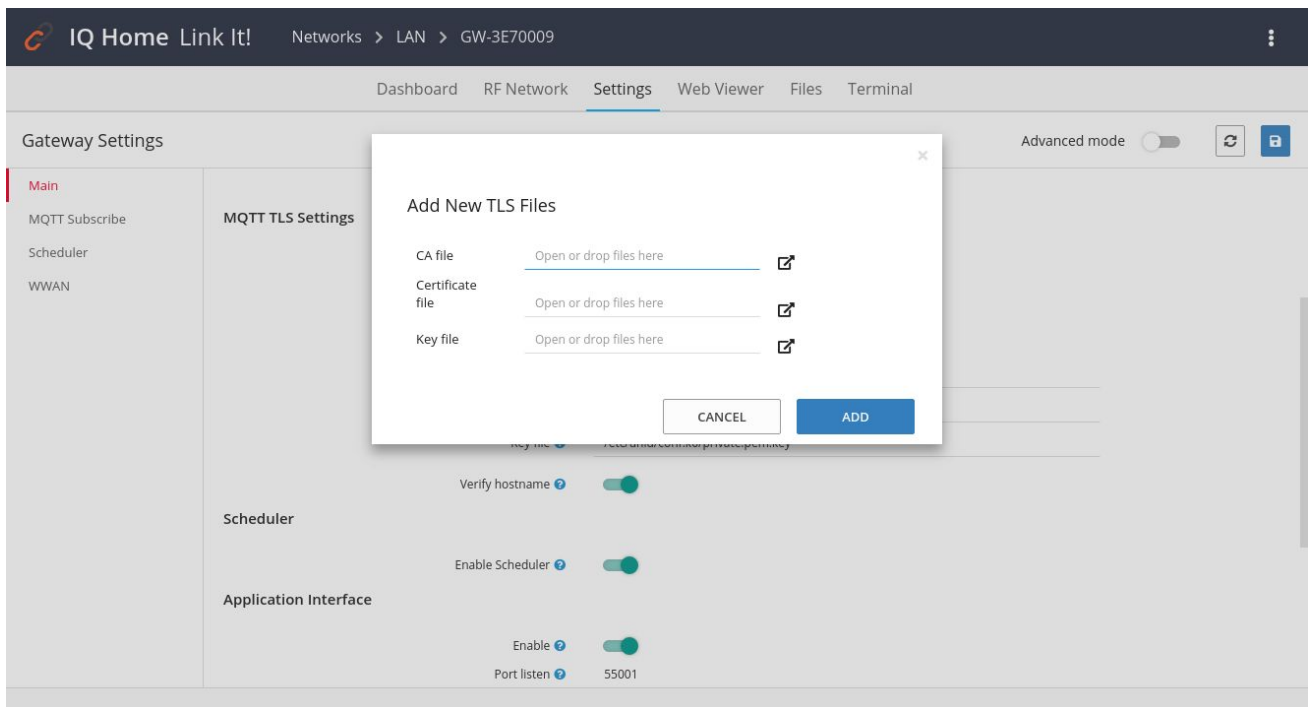
- To setup MQTT TLS settings *Enable MQTT TLS* in the configuration.
In case you need CA signed or self signed certificate can be uploaded by click on the **UPLOAD** button.

This screenshot shows the 'MQTT TLS Settings' section of the 'Gateway Settings' page. The 'Client ID' is set to 'Serial number'. The 'Enable MQTT TLS' toggle is checked. The 'TLS type' is set to 'Self-signed certificates'. A red box highlights the 'UPLOAD' button, which is used to upload new configuration files. Below this, the following fields are visible:

- CA file: /etc/uid/conf.k0/rootCA.pema
- Certificate file: /etc/uid/conf.k0/certificate.pem.crt
- Key file: /etc/uid/conf.k0/private.pem.key
- Verify hostname: ☒

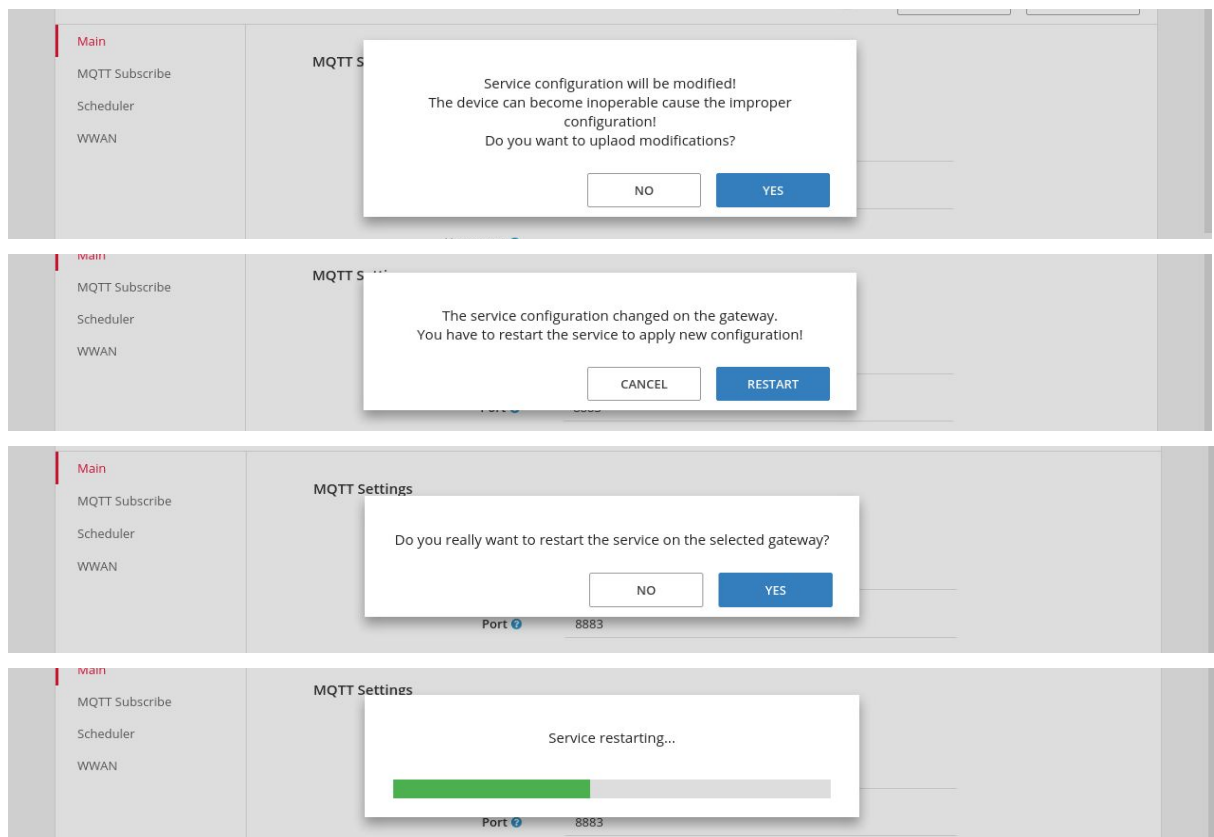
The 'Scheduler' section shows 'Enable Scheduler' checked. The 'Application Interface' section shows 'Enable' checked and 'Port listen' set to 55001.

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



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

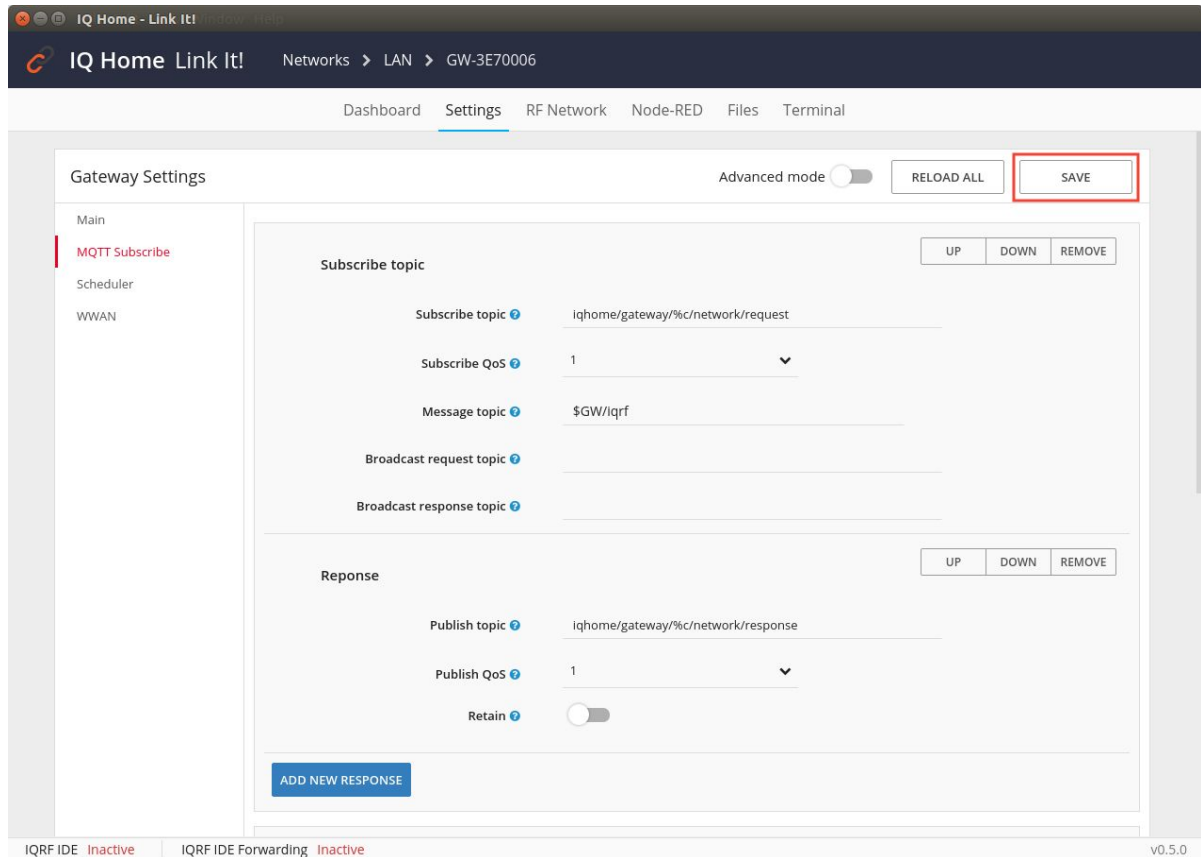
The saving process:



4 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.

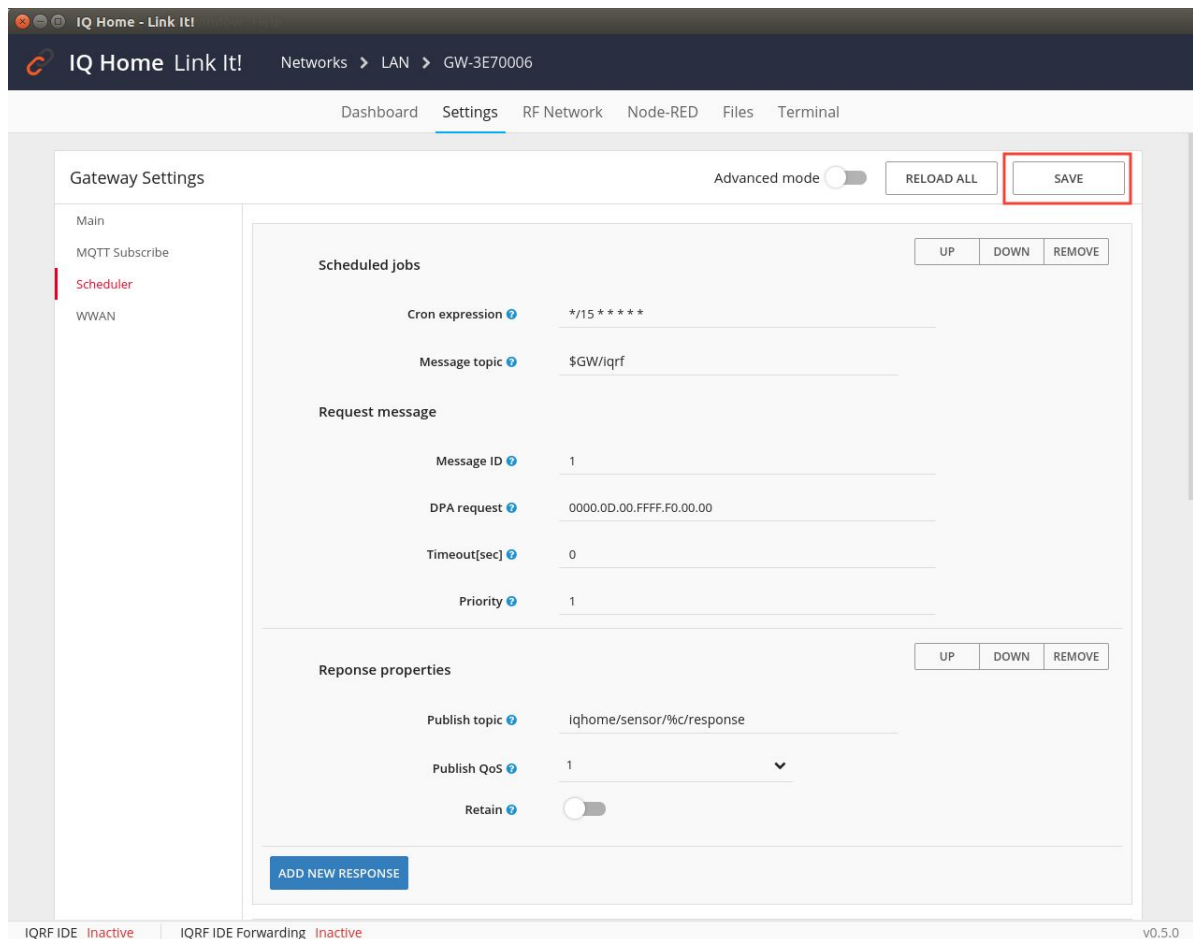


The documentation of the subscribe configuration can be found in the *Reference Manual* on the IQ Home website: <https://www.iqhome.org/gateway-reference-manual>

5 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.

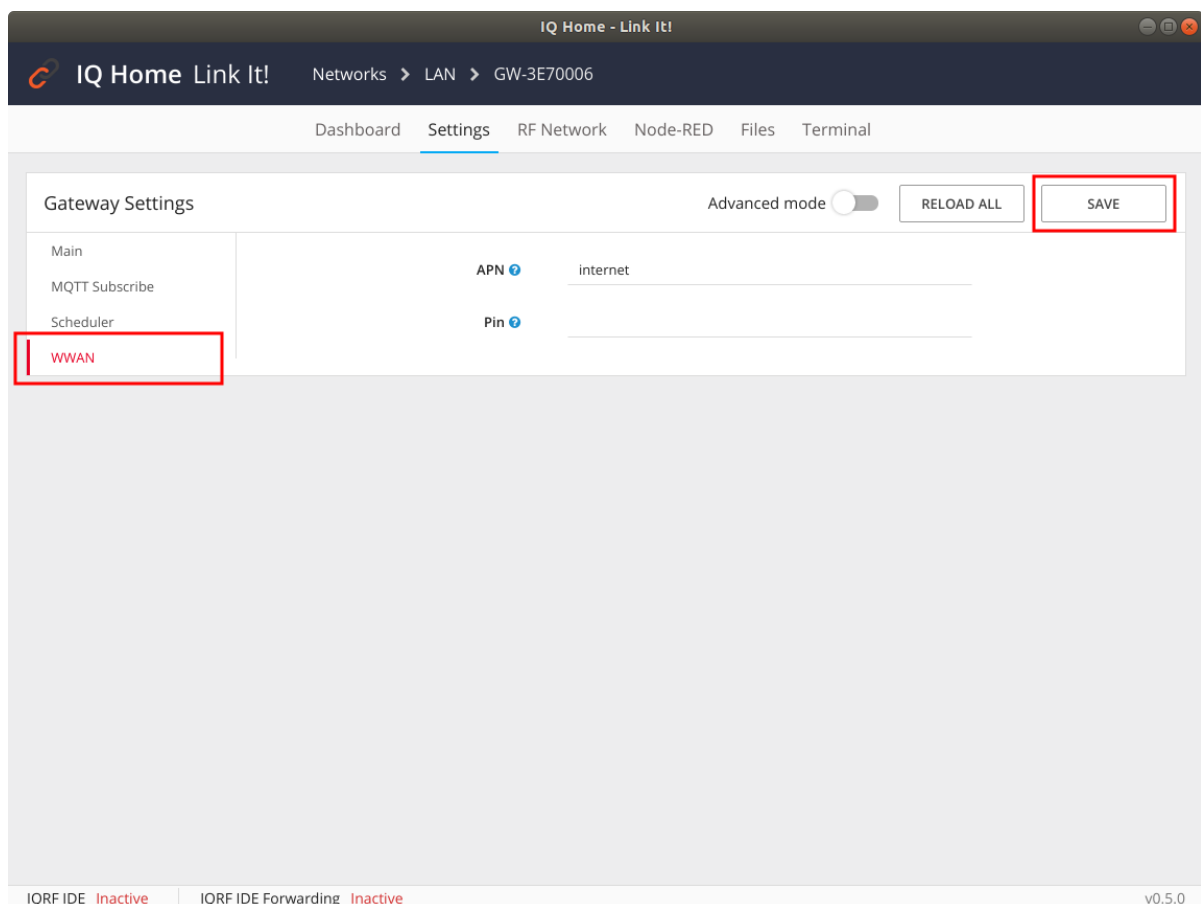
Tip:

You can use \$GW/iqhome message topic to receive preprocessed IQ Home sensor data.

6 Configure WWAN configuration

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

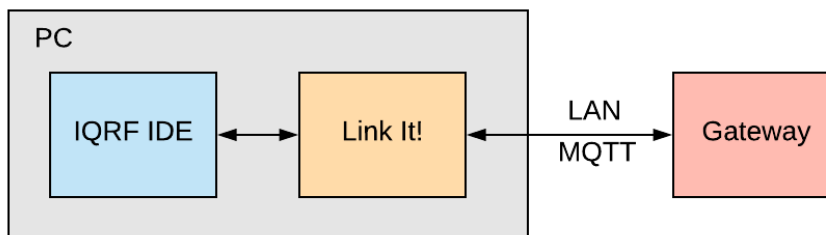
1. Insert the SIM card into the slot of the gateway
2. Click on the *Settings* menu in Link It!
3. Click on the *WWAN* menu on the left sidebar
4. Modify the configuration
 - a. Set the APN of your service provider
 - b. Set PIN code or leave it blank if it is disabled in the SIM card
 - c. To further 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 Advanced configurations

7.1 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](#).



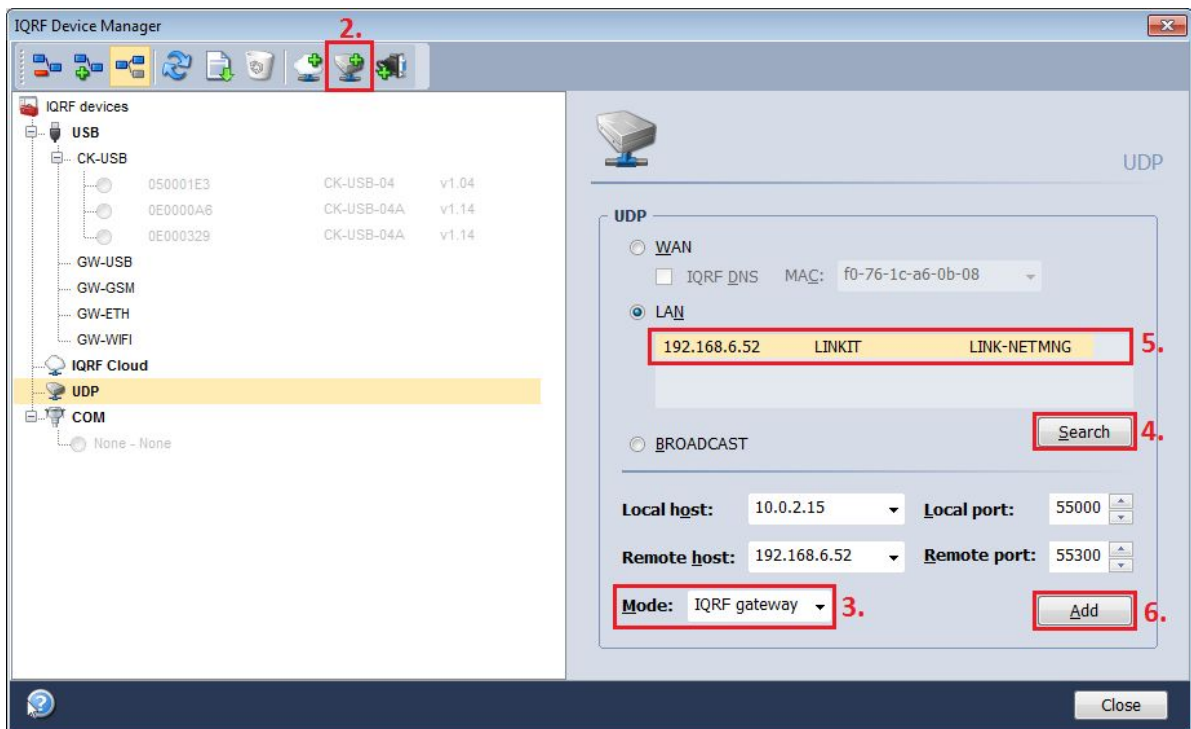
System architecture of how can connect and configure IQ Home gateways

CAUTION!

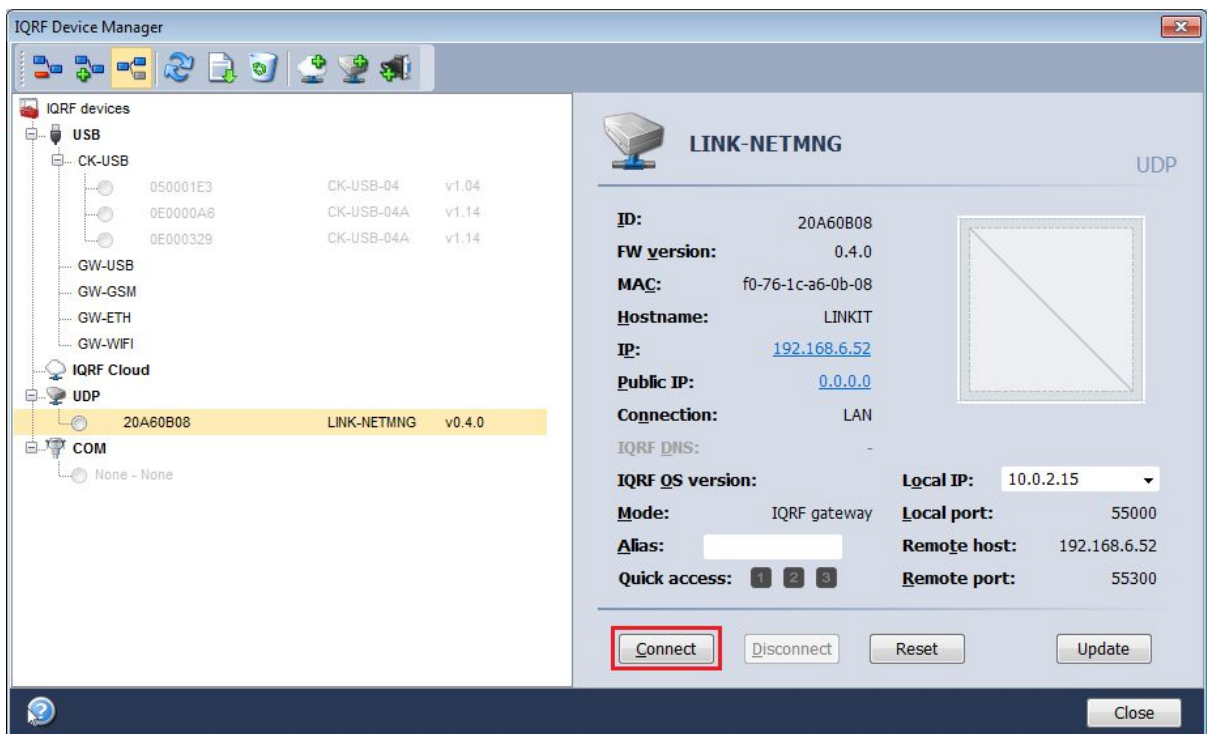
The IQRF IDE can connect to the gateway only via the Link It! by default for security reasons! For development and/or debugging you can enable in gateway configuration but it is not recommended in production use!

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.

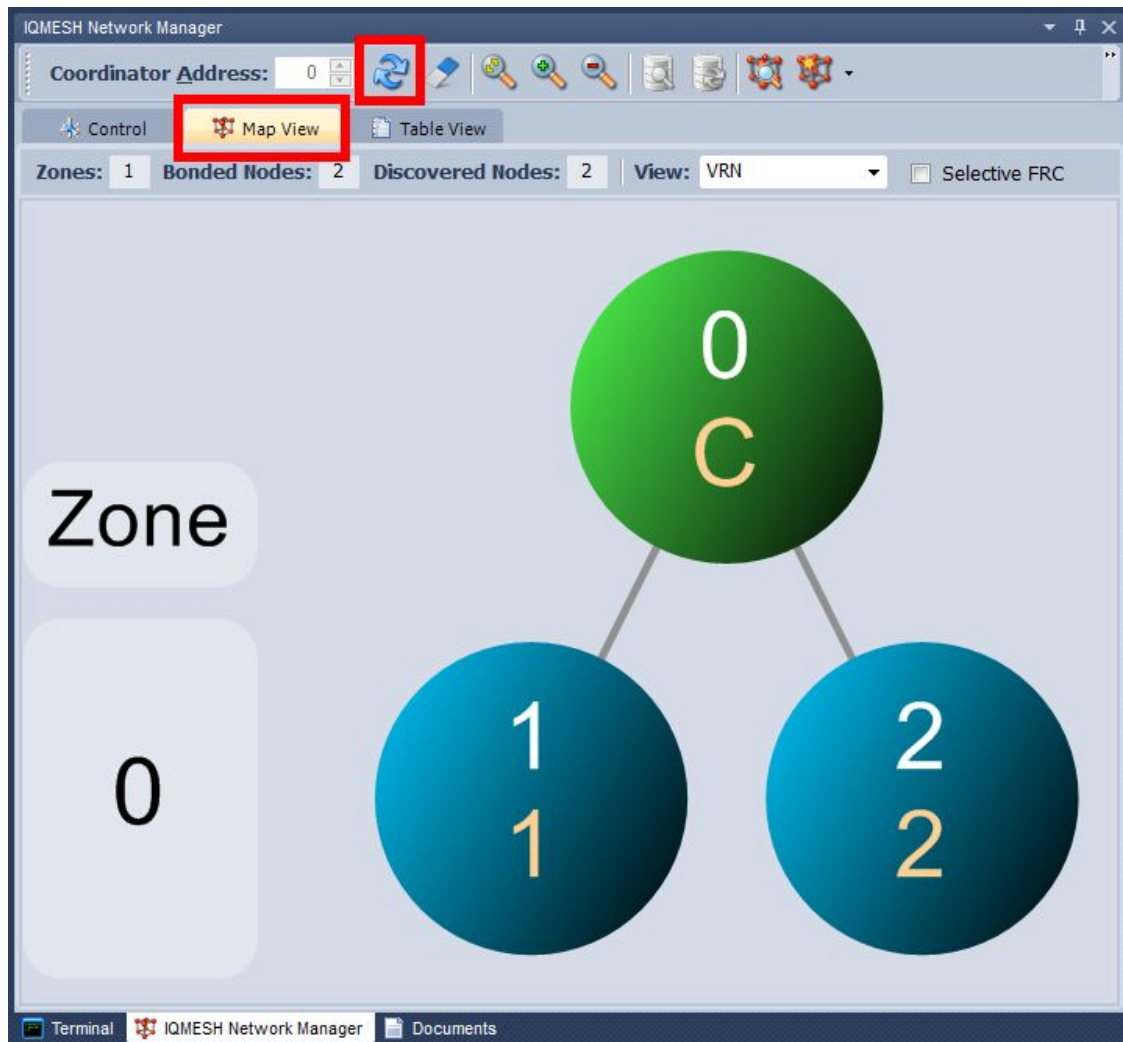
7.2 Modify TR configuration of IQRF coordinator

The TR configuration of IQRF coordinator module in the IQ Home gateways can be modified with IQRF IDE.

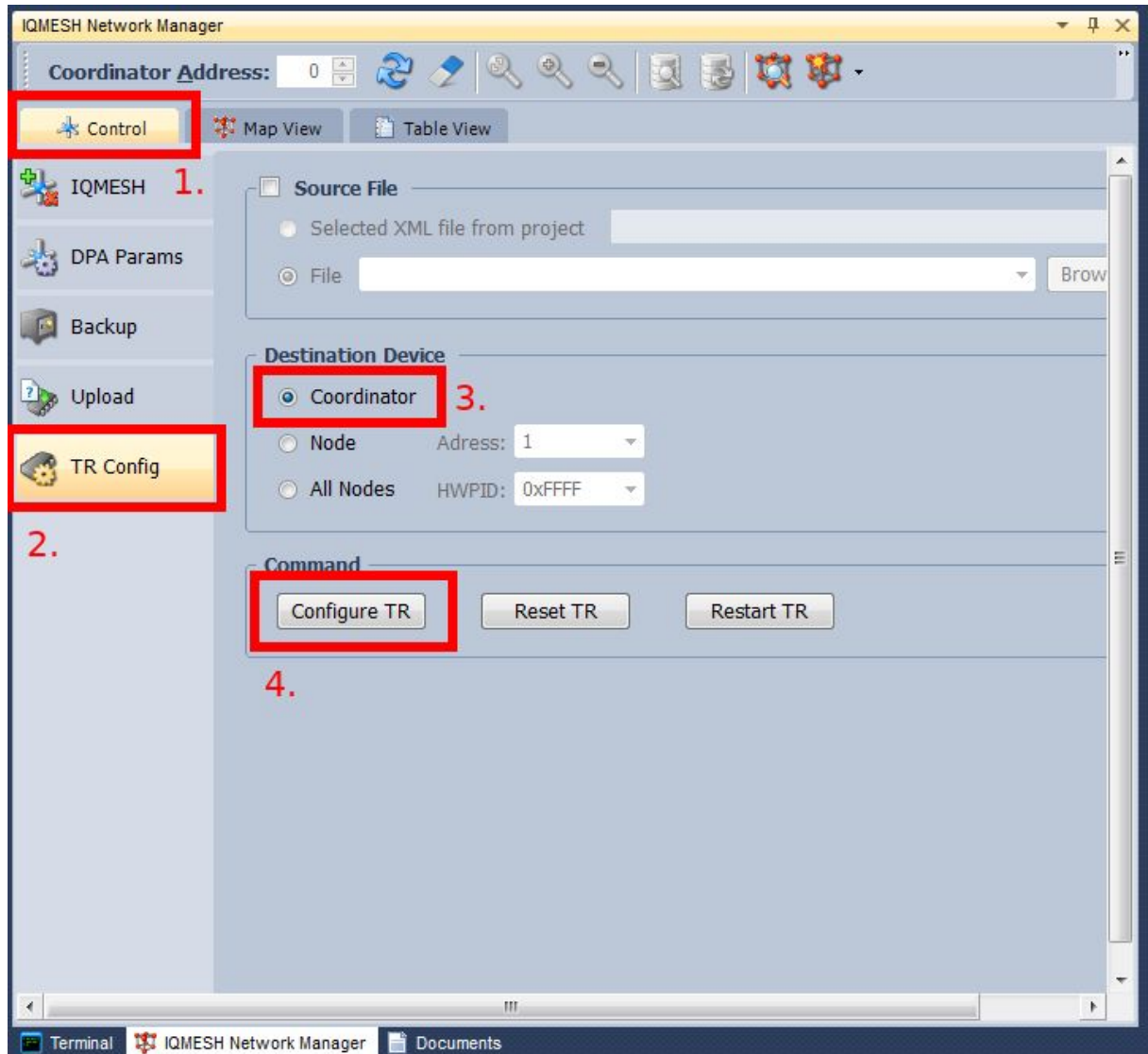
1. Connect to the gateway in IQRF IDE as described in [2.3. IQRF IDE](#).
2. Open IQMESH Network Manager in *Tools>QMESH Network Manager*.



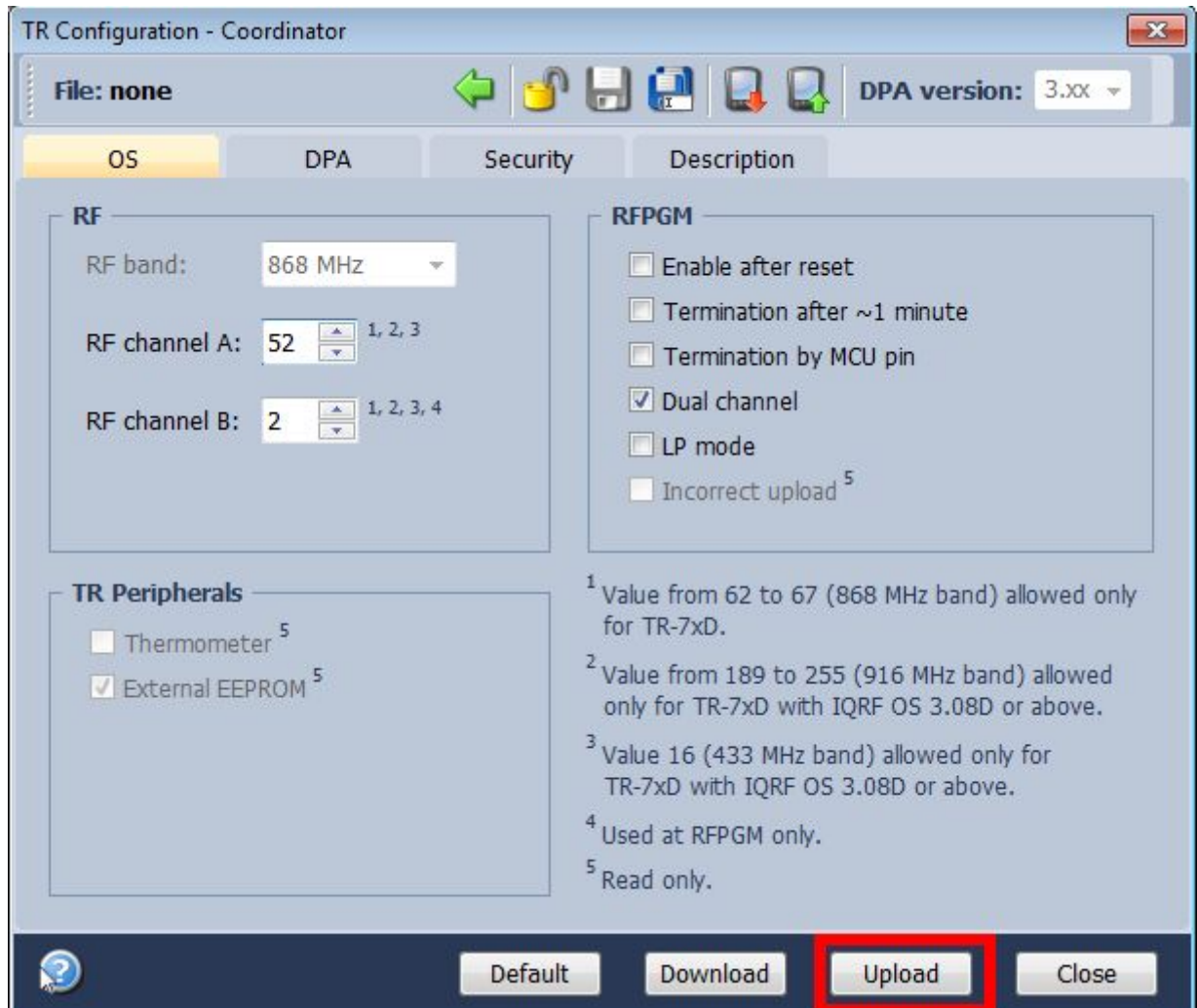
3. In the *IQHMESH Network manager* window update the network information by click on the *Update Data* icon in the *Map View* tab.



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.

