LORA / LORAWAN TUTORIAL 55

Migrate The Things Gateway from V2 to V3

INTRO

- In this tutorial I will explain how to migrate The Things Gateway from The Things Network (V2) to The Things Stack Community Edition network (V3).

PRESENTATION

- This presentation can be found at:
  https://www.mobilefish.com/download/lora/lora_part55.pdf

- All my LoRa/LoRaWAN tutorials and presentations can be found at:
  https://www.mobilefish.com/developer/lorawan/lorawan_quickguide_tutorial.html

- In this video when V2 is mentioned, V2 refers to The Things Network
  and when V3 is mentioned, V3 refers to The Things Stack Community Edition.

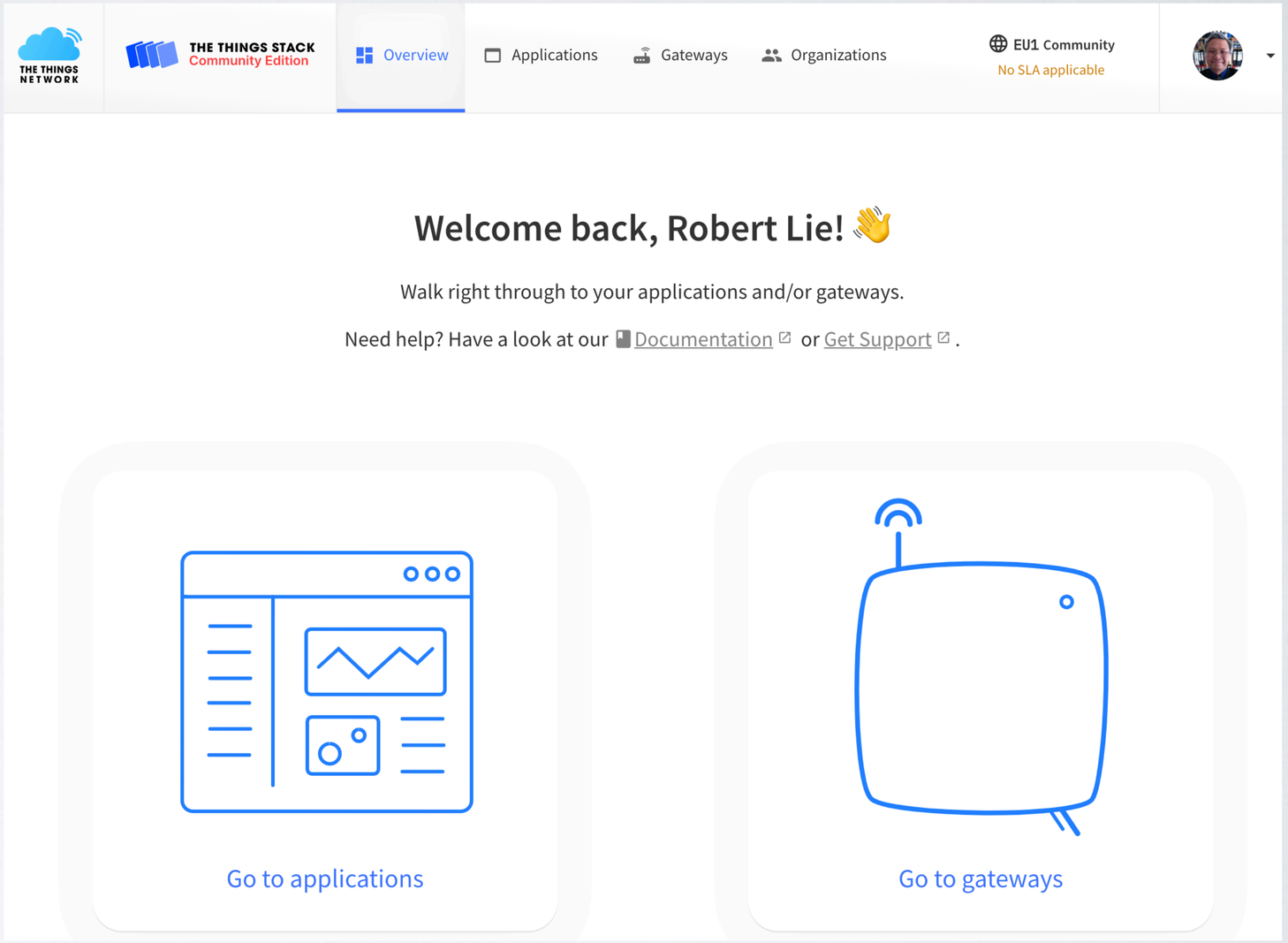
MORE INFORMATION ABOUT THE THINGS GATEWAY

- More information about The Things Gateway:
  - https://www.thethingsnetwork.org/docs/gateways/gateway/
  - https://www.thethingsindustries.com/docs/gateways/thethingskickstartergateway/

REGISTRATION PROCEDURE 1 / 14

- In this tutorial I will assume you have an account and can access the V3 console. https://console.cloud.thethings.network/

- Select Go to gateways



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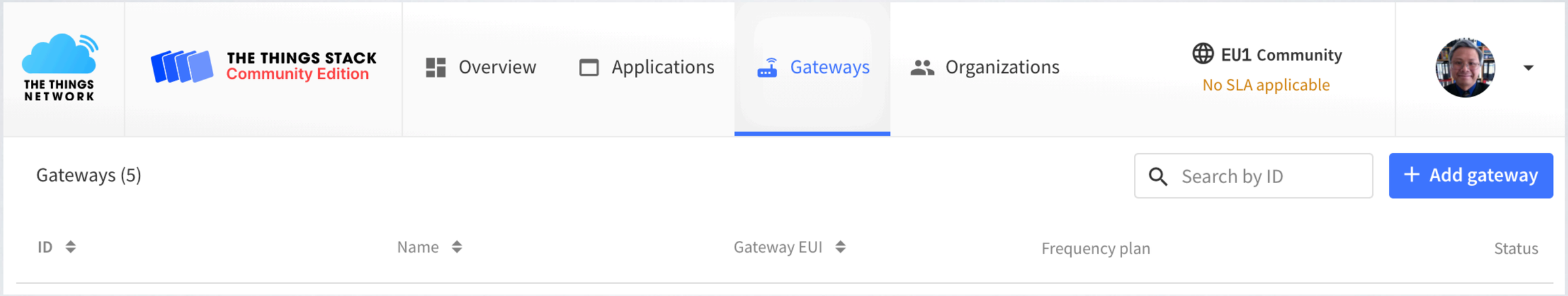
REGISTRATION PROCEDURE 2 / 14

- Select Add gateway



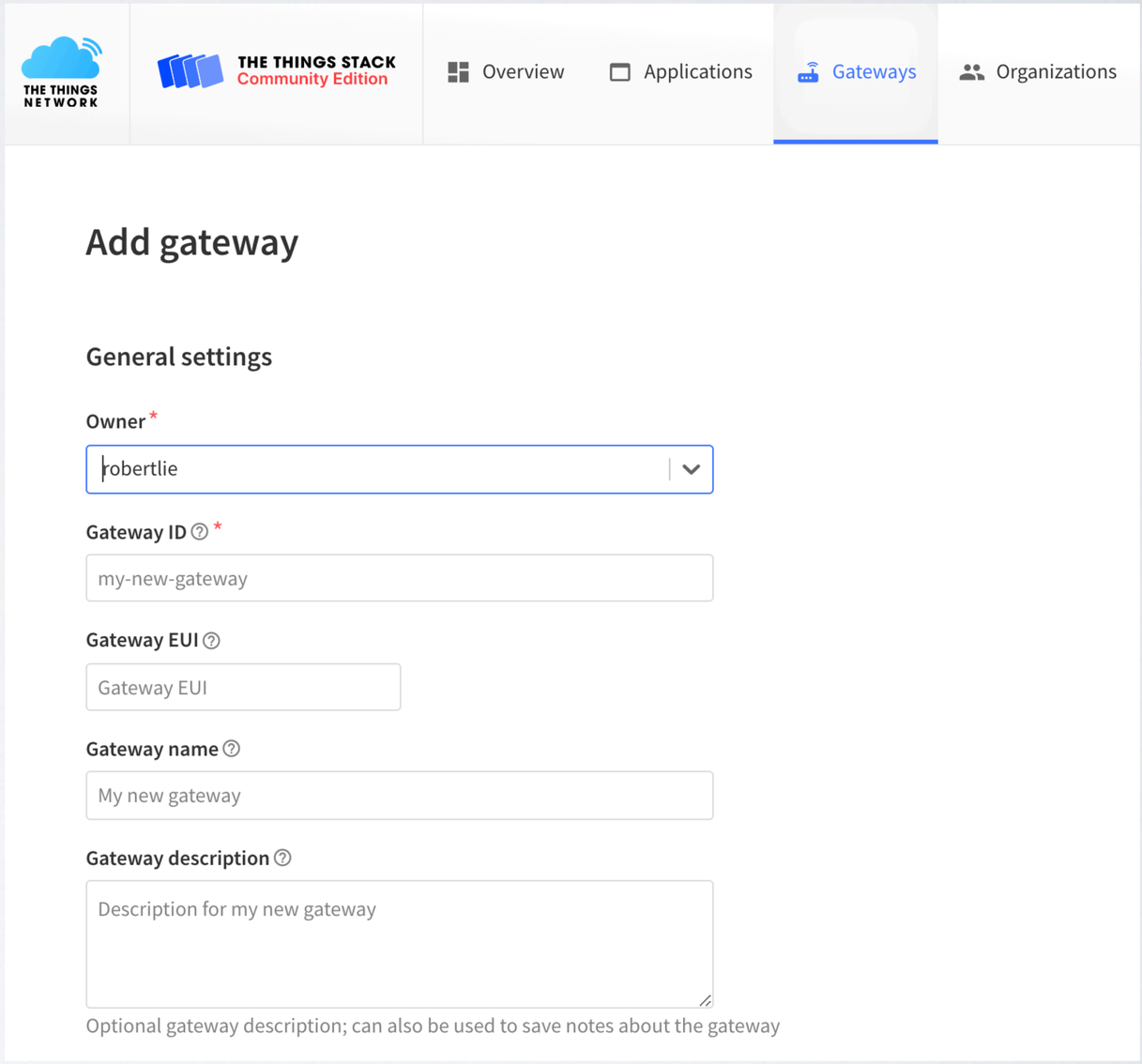
REGISTRATION PROCEDURE 3 / 14

- Enter your gateway information:

- **Gateway ID:**
  mobilefish-gateway
  Write this down, you will need it later.

- **Gateway-EUI**:
  The Things Gateway has no Gateway EUI. Leave this field empty.

- **Gateway name**:
  mobilefish-gateway

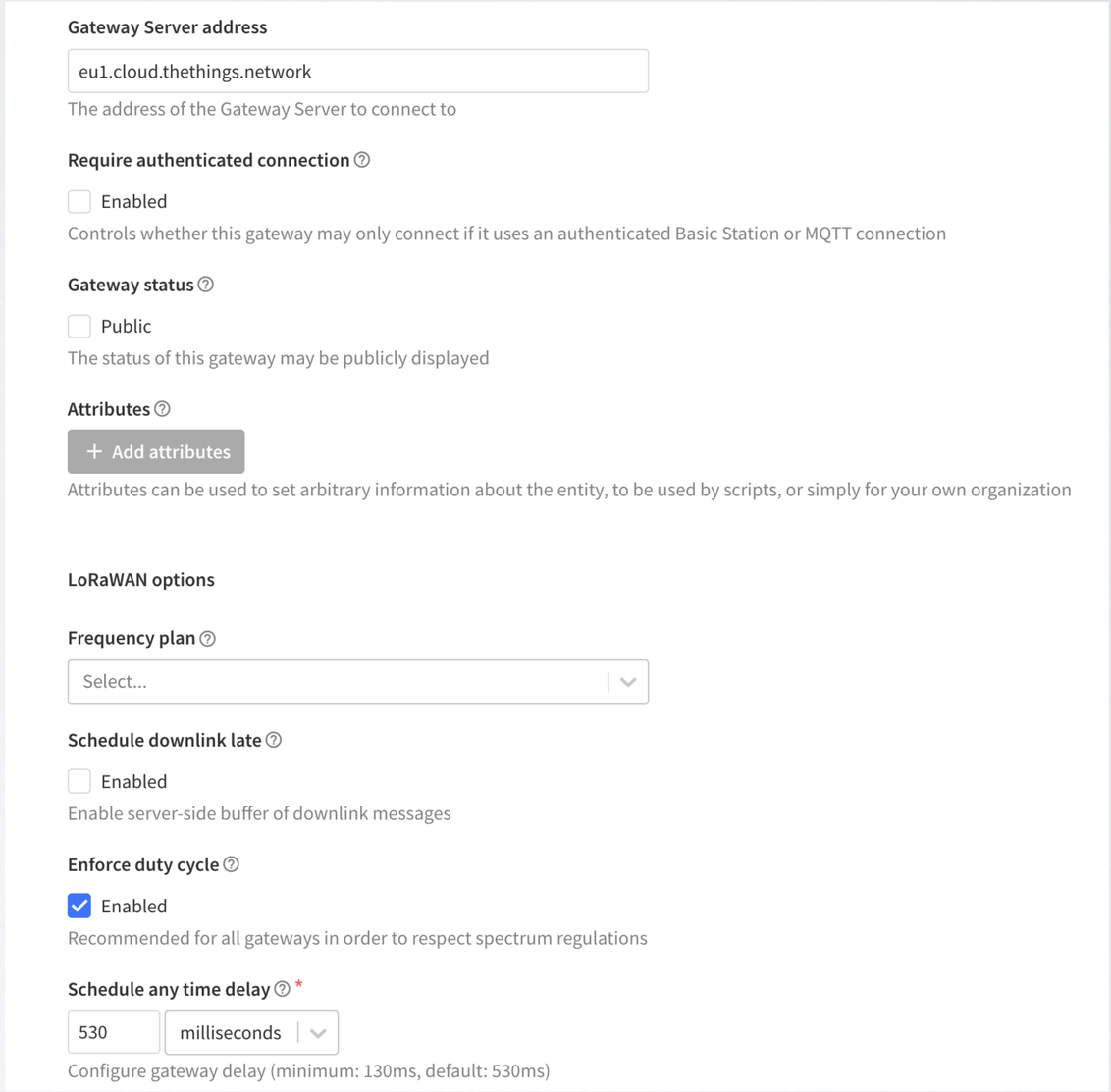


REGISTRATION PROCEDURE 4 / 14

- **Gateway Server address**

- Depending on your selected region: eu1 (Europe), nam1 (North America), au1 (Australia) the Gateway Server Address is already filled in: <region>.cloud.thethings.network

- My gateway is located in the Netherlands (Europe), the Gateway Server Address should be: **eu1.cloud.thethings.network** Write this down, you will need it later.



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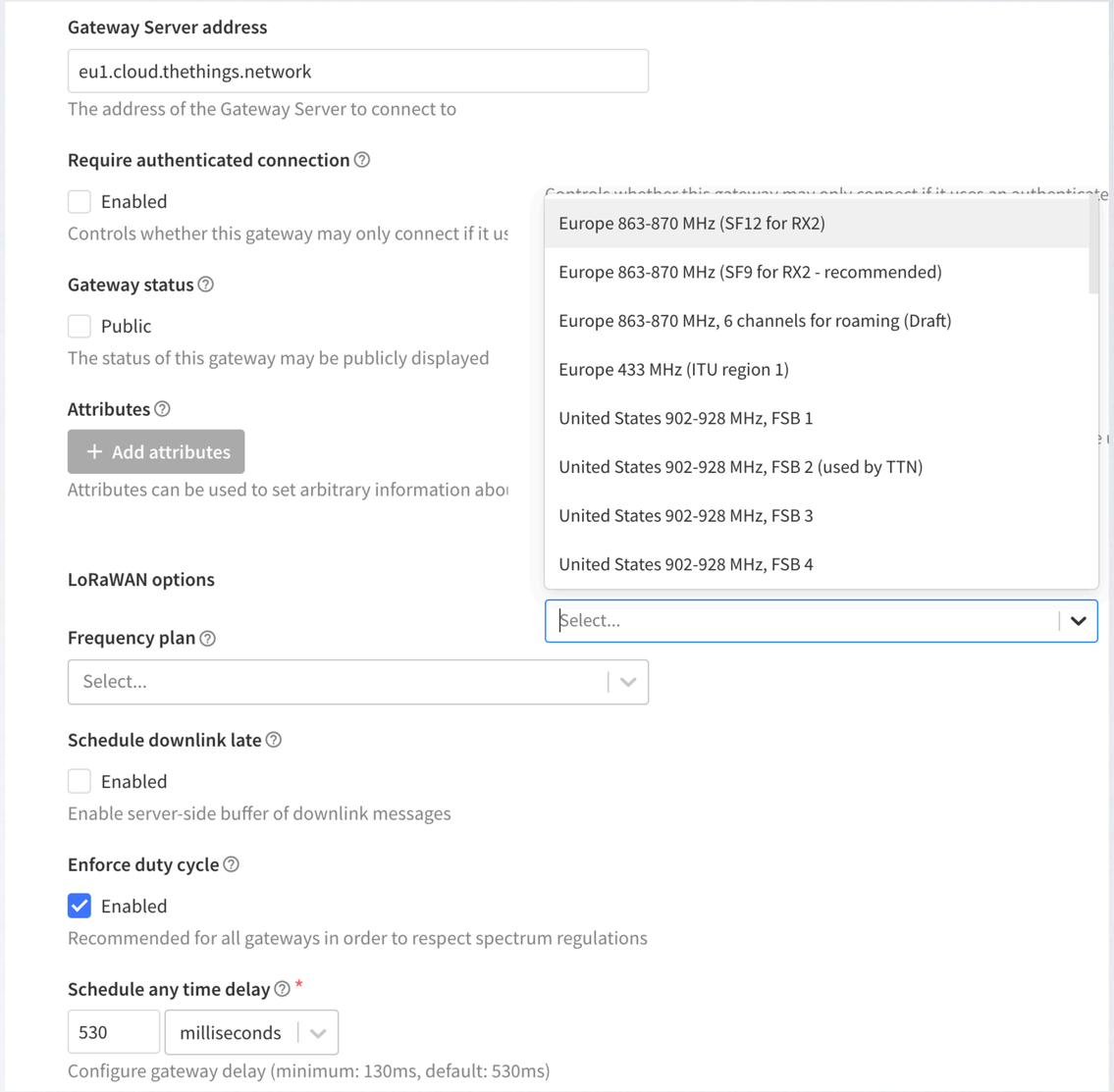
REGISTRATION PROCEDURE 5 / 14

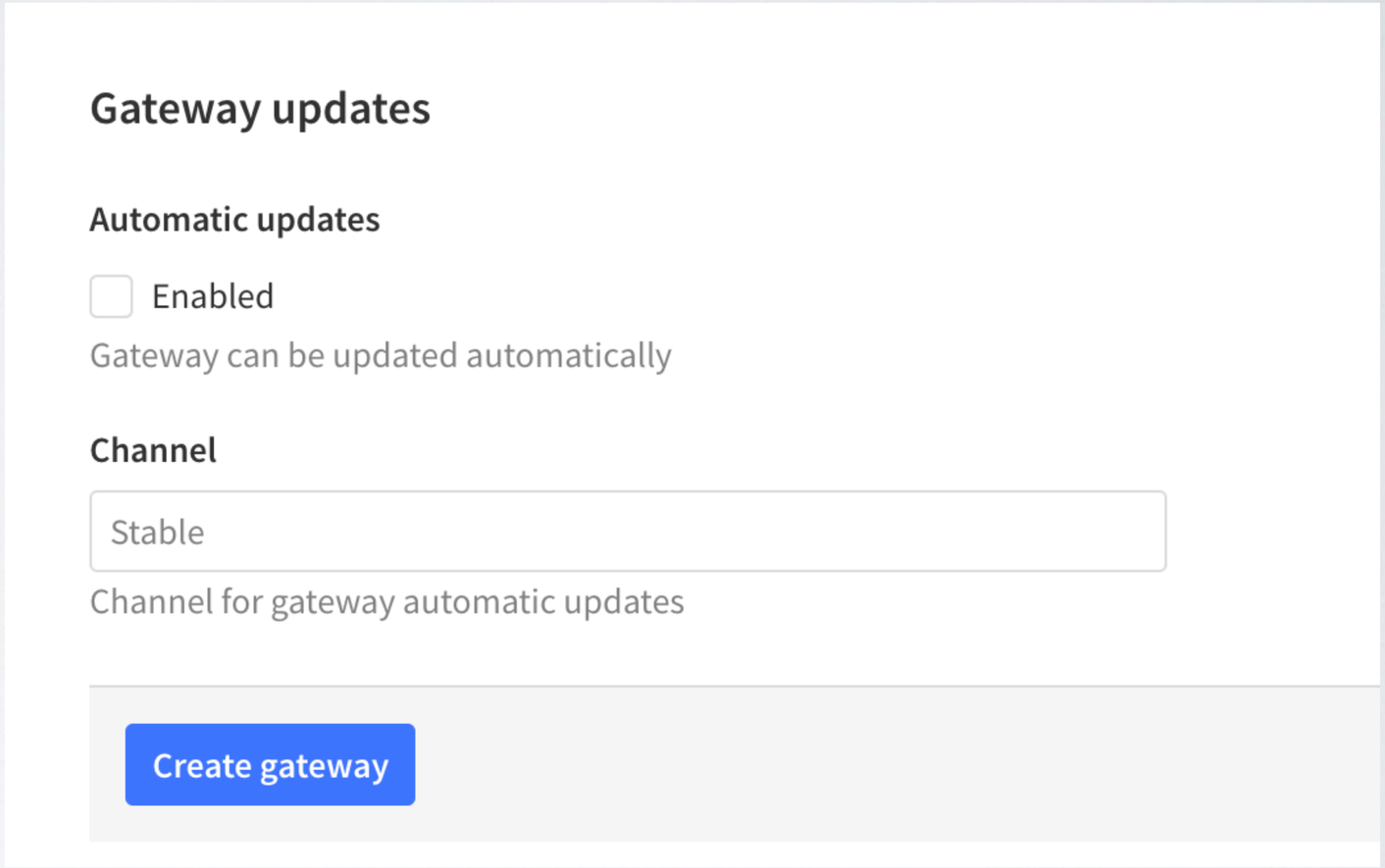
- **Frequency plan**

- My gateway is located in the Netherlands (Europe), my selected Frequency plan is:
  Europe 863-870 MHz (SF9 for RX2 - recommended)



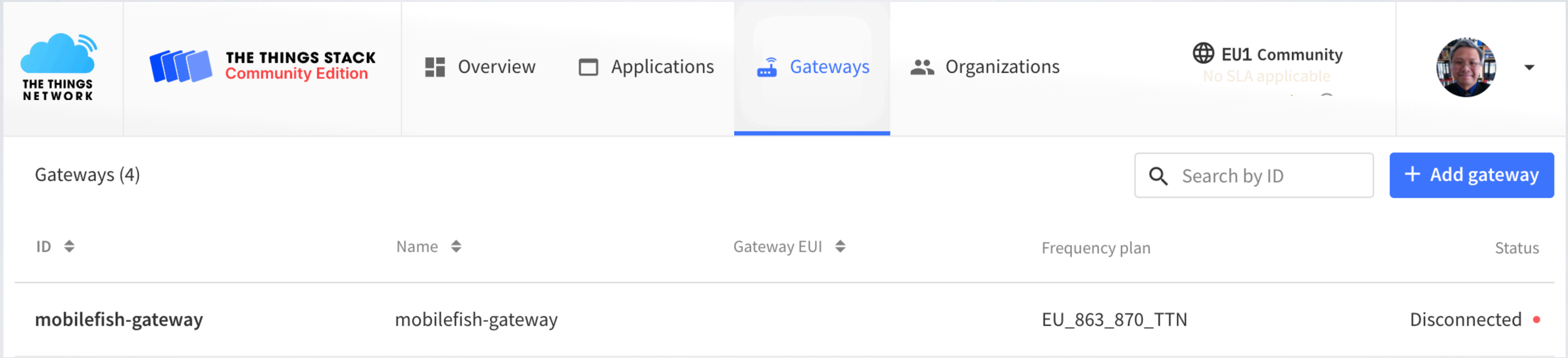
REGISTRATION PROCEDURE 6 / 14

- All other fields are not changed.
- Select Create gateway



REGISTRATION PROCEDURE 7 / 14

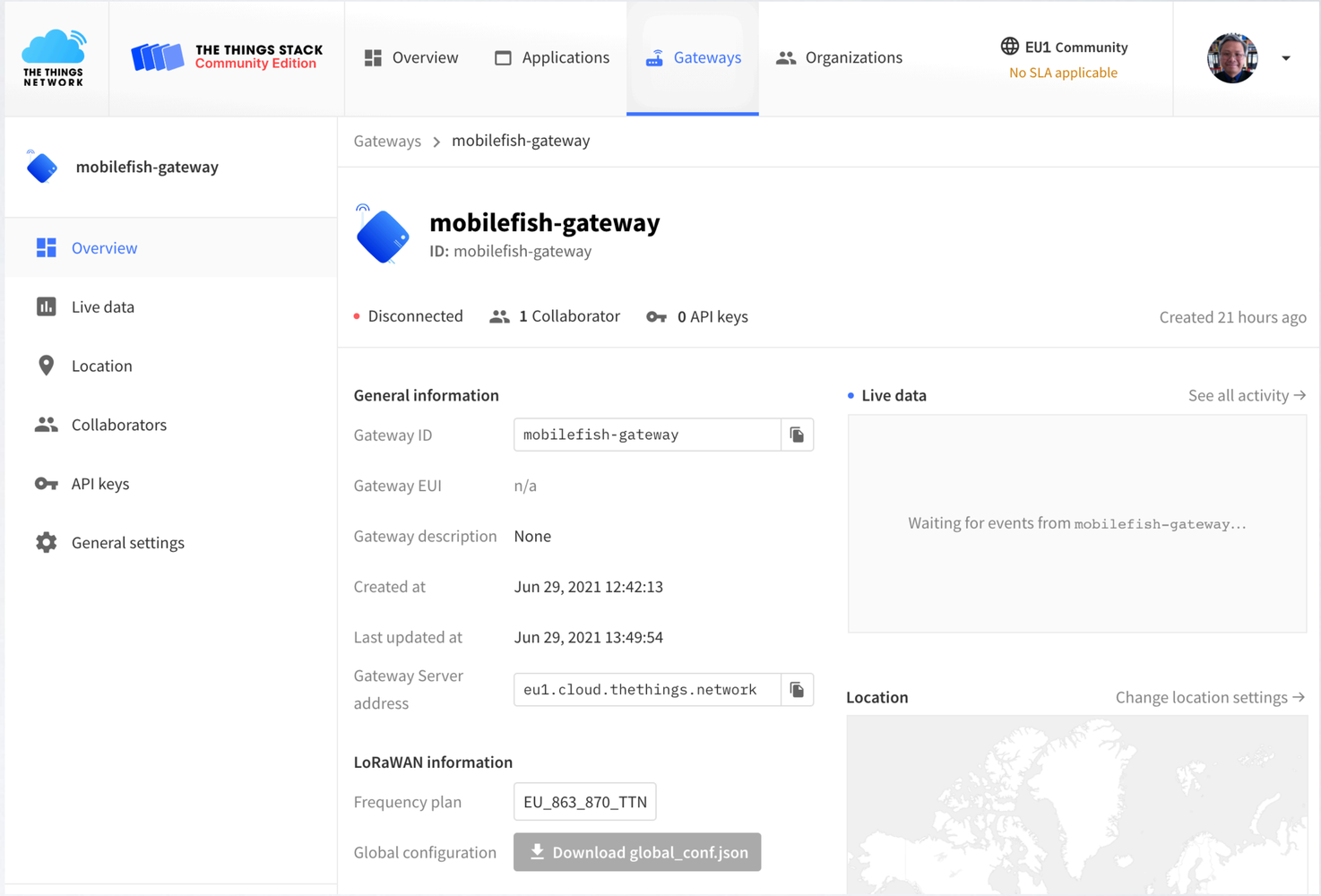
- In the Gateways overview screen you can see your gateway.



- Select the gateway, by clicking on it.

REGISTRATION PROCEDURE 8 / 14

- You can change the gateway location settings but I will not demonstrate this.
- Select API keys.



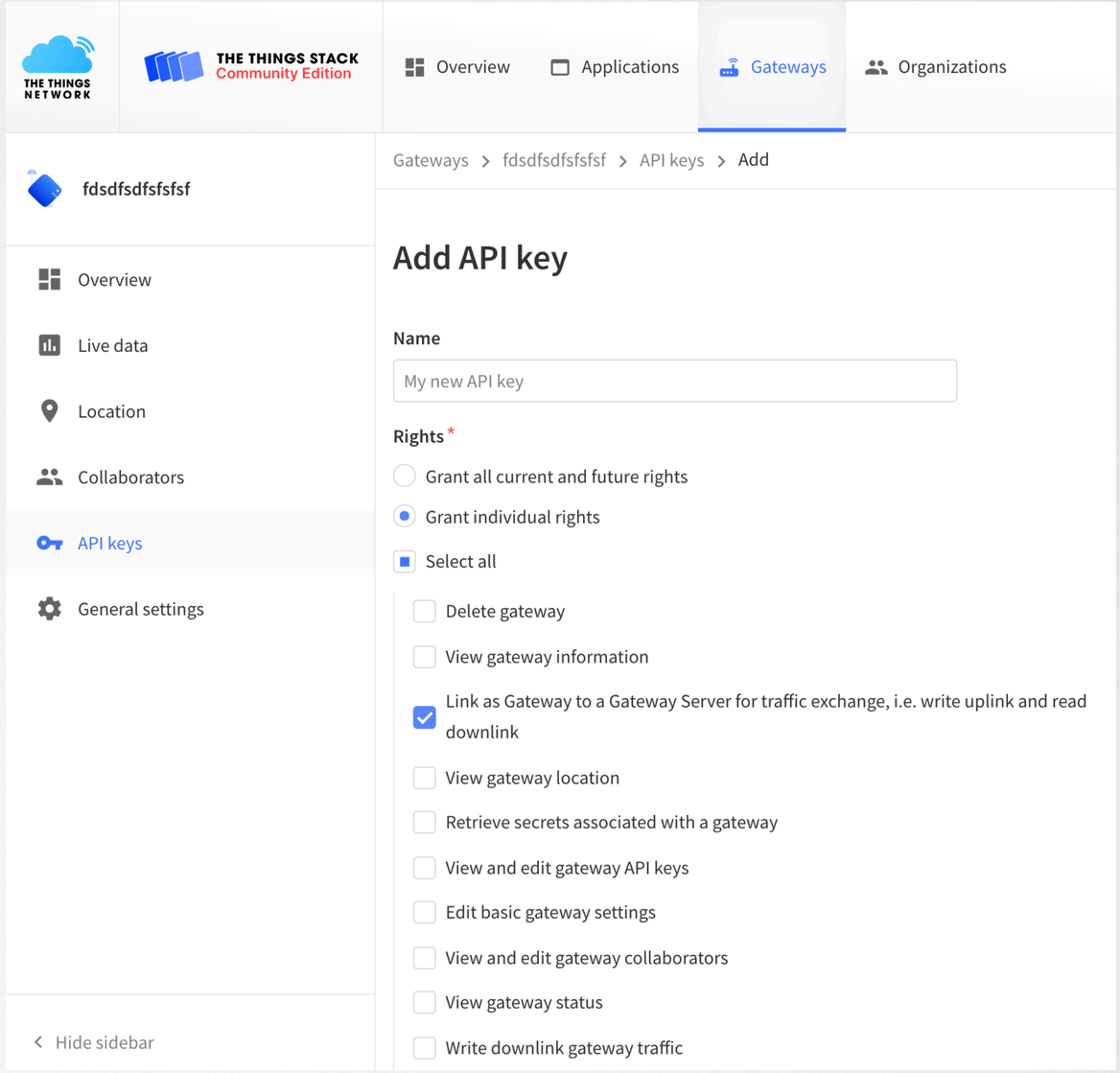
REGISTRATION PROCEDURE 9 / 14

- **Name**
  mf-key1

- **Rights**

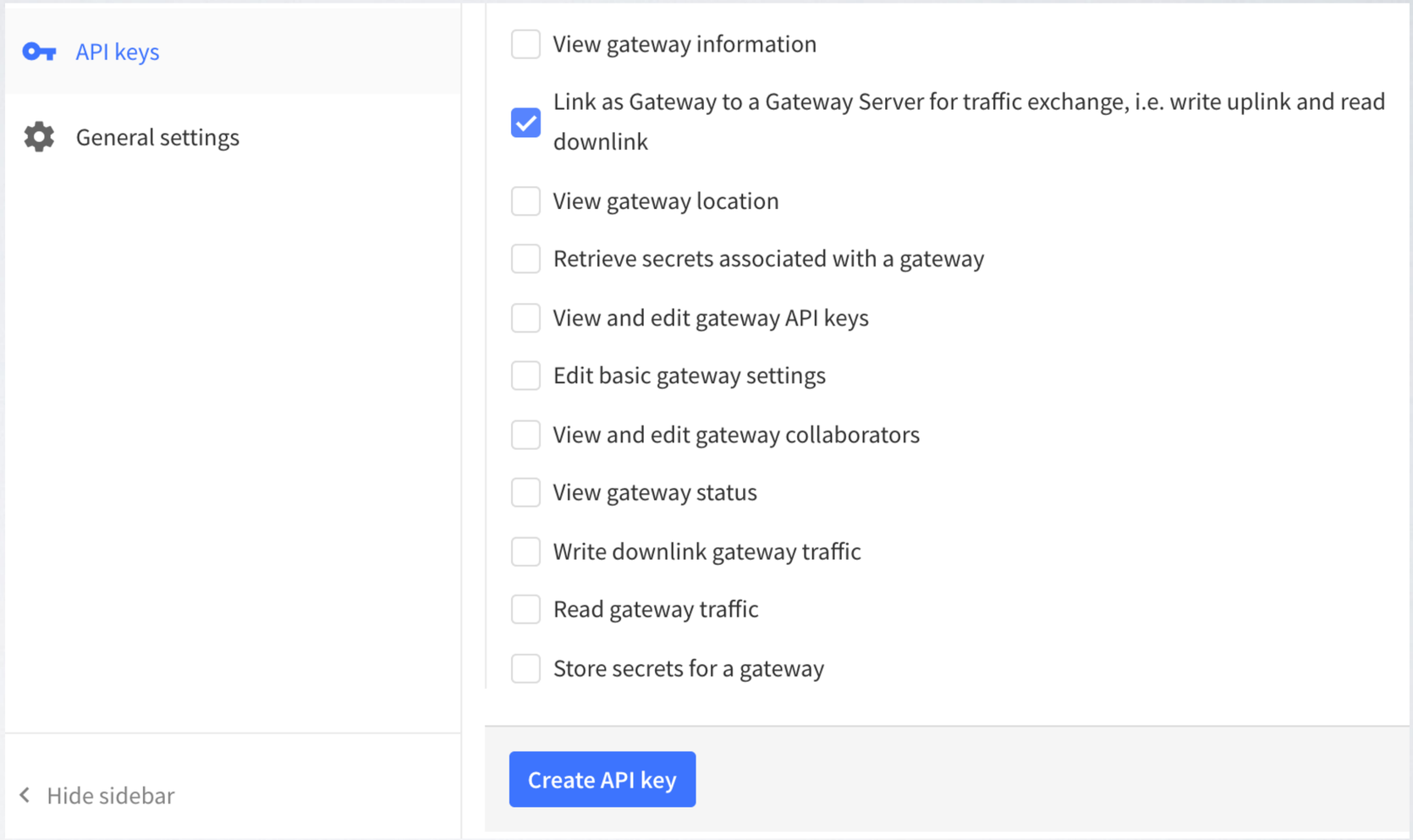
  - Select Grand individual rights

  - Select Link as Gateway to Gateway Server for traffic exchange, i.e. write uplink and read downlink



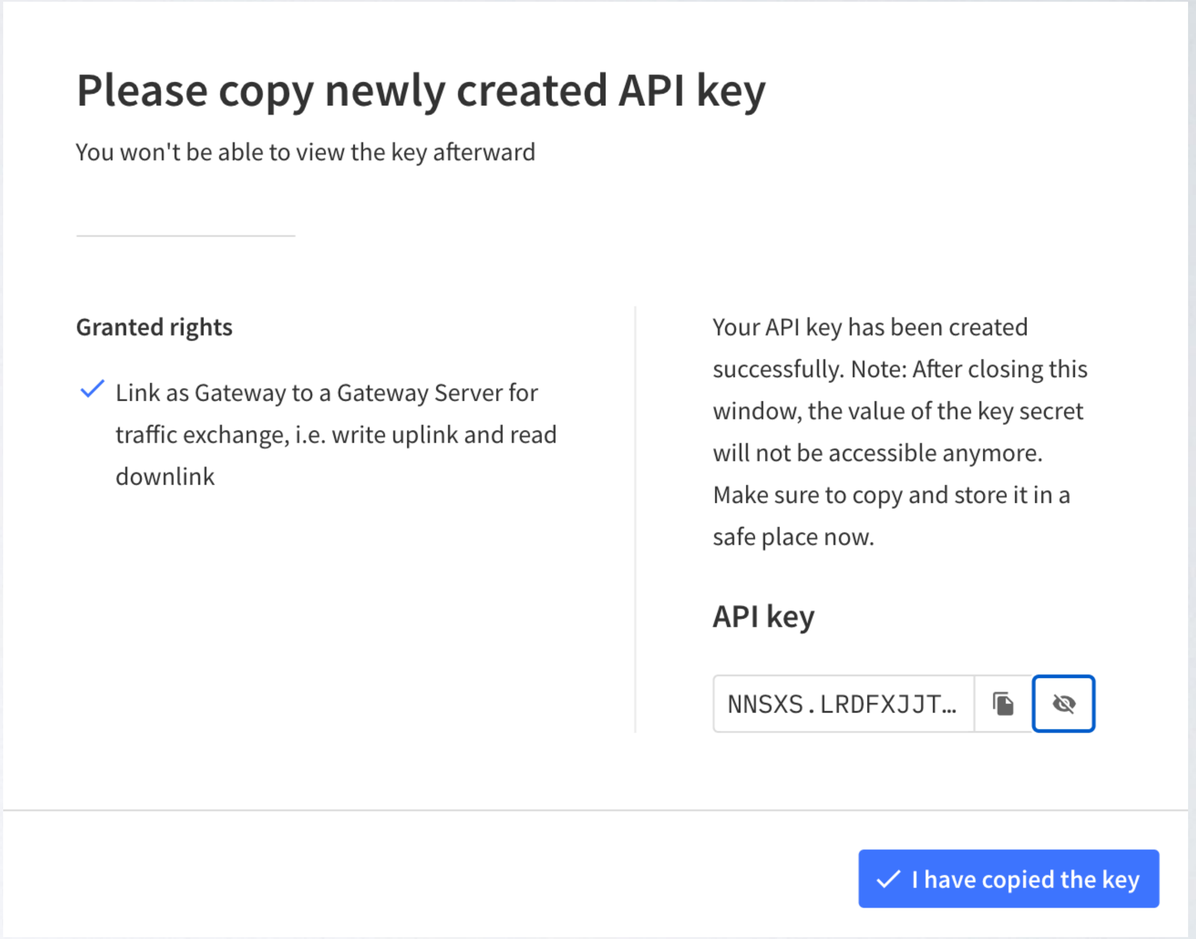
REGISTRATION PROCEDURE 10 / 14

- Select Create API key



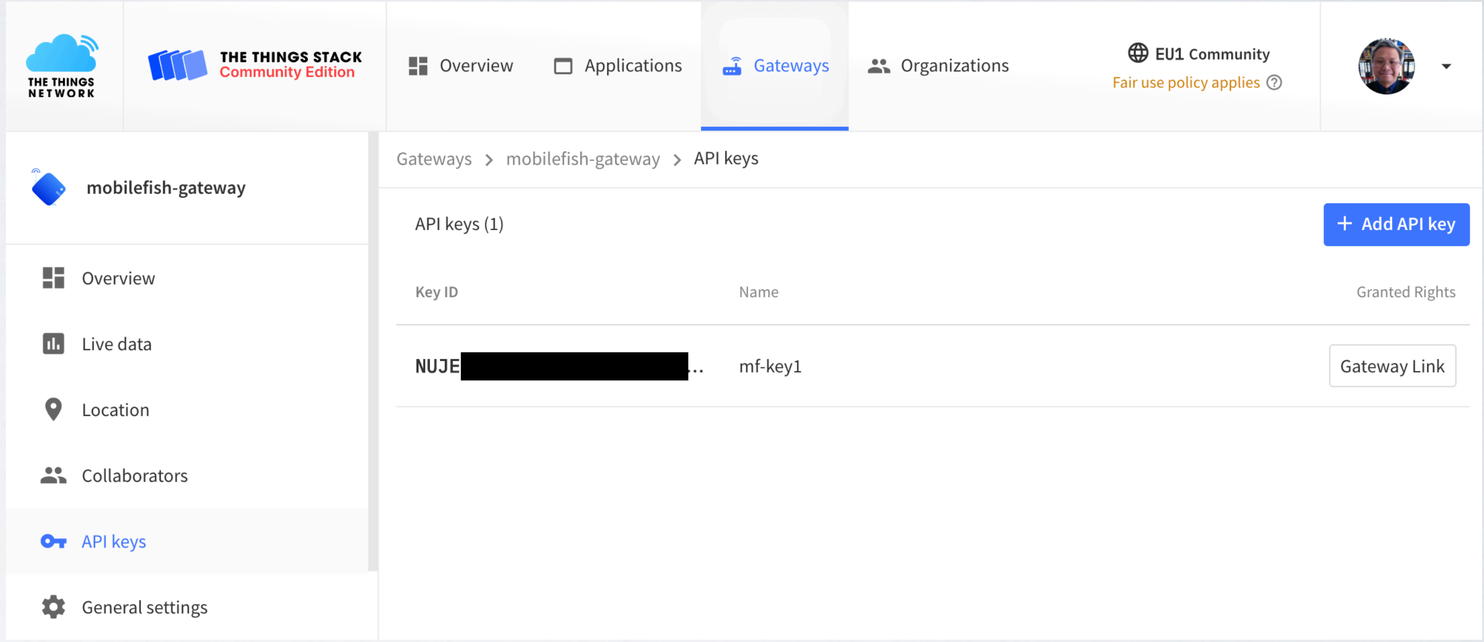
REGISTRATION PROCEDURE 11 / 14

- Copy and save the newly created API key, you will need this key later.
- You won't be able to view the key afterwards.
- You can delete this key or add new keys but I will not demonstrate this.
- Select I have copied the key.



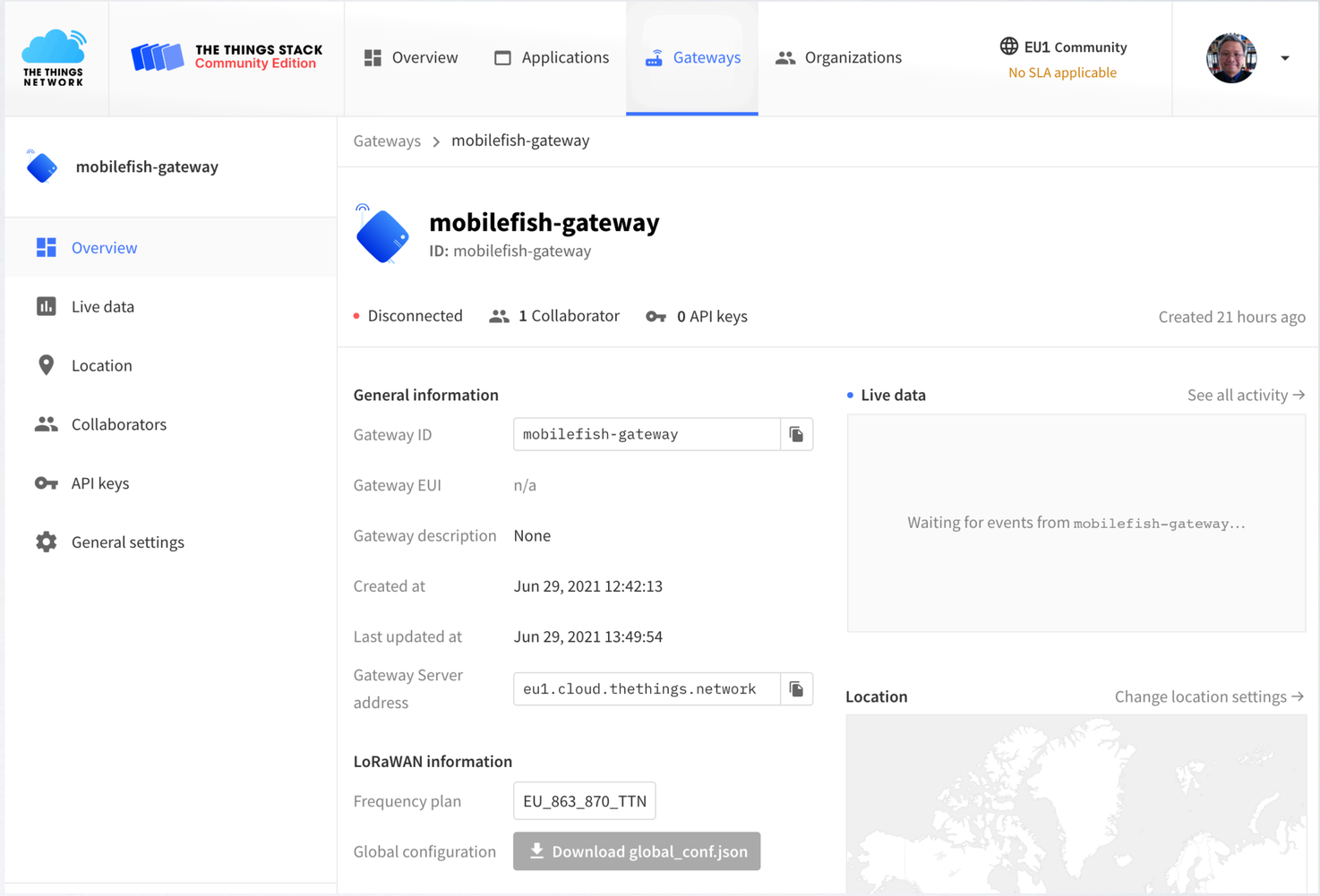
REGISTRATION PROCEDURE 12 / 14

- In the API keys overview screen you can see your created API key.
- You can make changes to this API key, by selecting Gateway Link.



REGISTRATION PROCEDURE 13 / 14

- If you made a mistake you can make changes to your gateway settings:
  - Select your gateway
  - In the left menu bar select General settings



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REGISTRATION PROCEDURE 14 / 14

- Your gateway is now registered in The Things Stack Community Edition network.

- After you have followed the procedure you should have saved the following:
  Gateway ID: **mobilefish-gateway**
  Gateway Server Address: **eu1.cloud.thethings.network**
  API Key:
  NNSXS.LRDFXJJXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
  XXX.XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
  XXXXXXXXXXXXXXXX

- Add "https://" to the Gateway Server Address:
  Gateway Server Address: **https://eu1.cloud.thethings.network**

GATEWAY PROCEDURE 1 / 8

- Now you will make changes to the gateway itself.

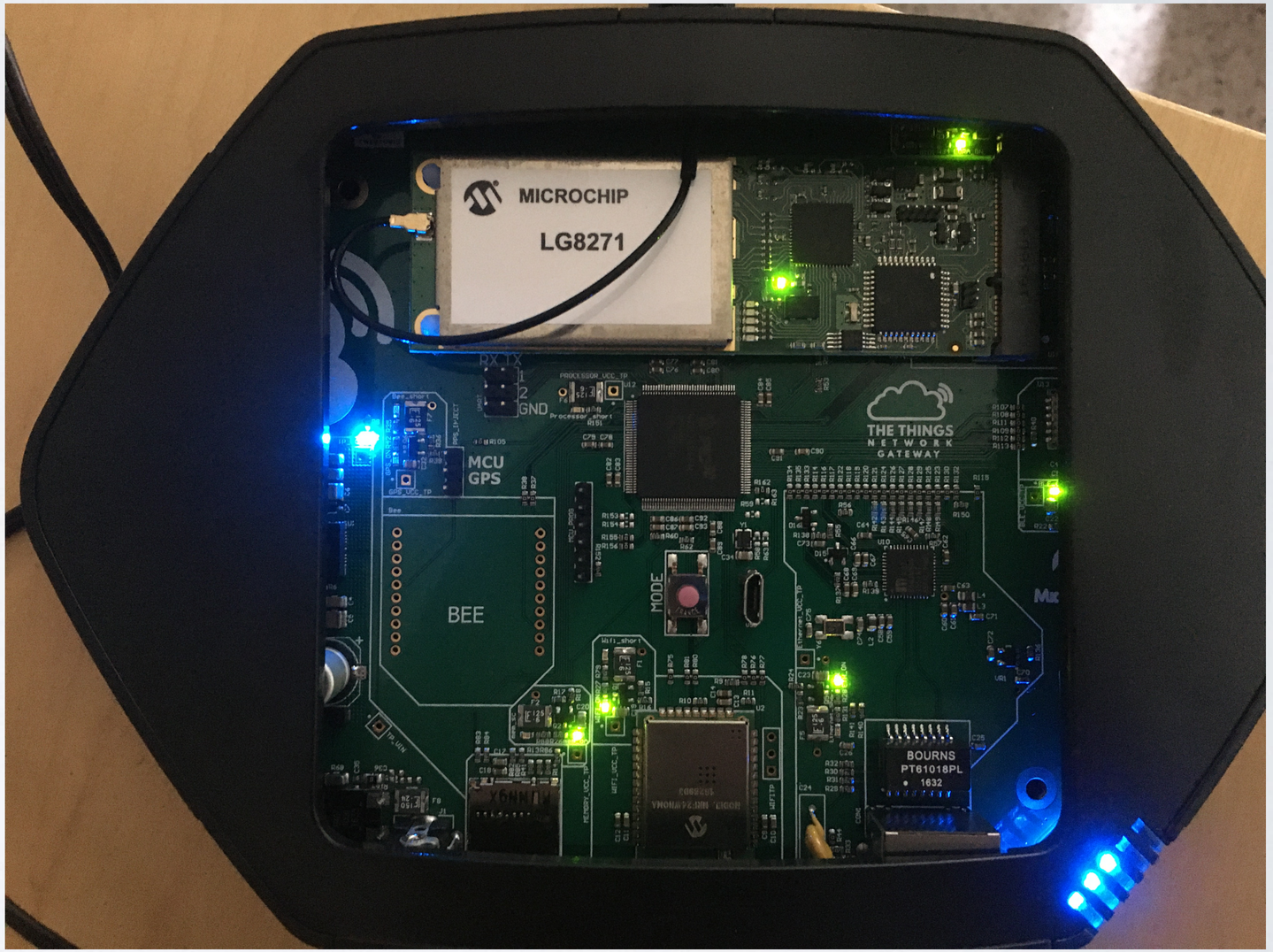
- The Things Gateway will later communicate with your router, select one of these options:

  - Ethernet cable
    If you select this option, connect The Things Gateway to your router using an ethernet cable.

  - WIFI
    If you select this option, The Things Gateway requires your router SSID and password. Keep this information at hand you will need it later.

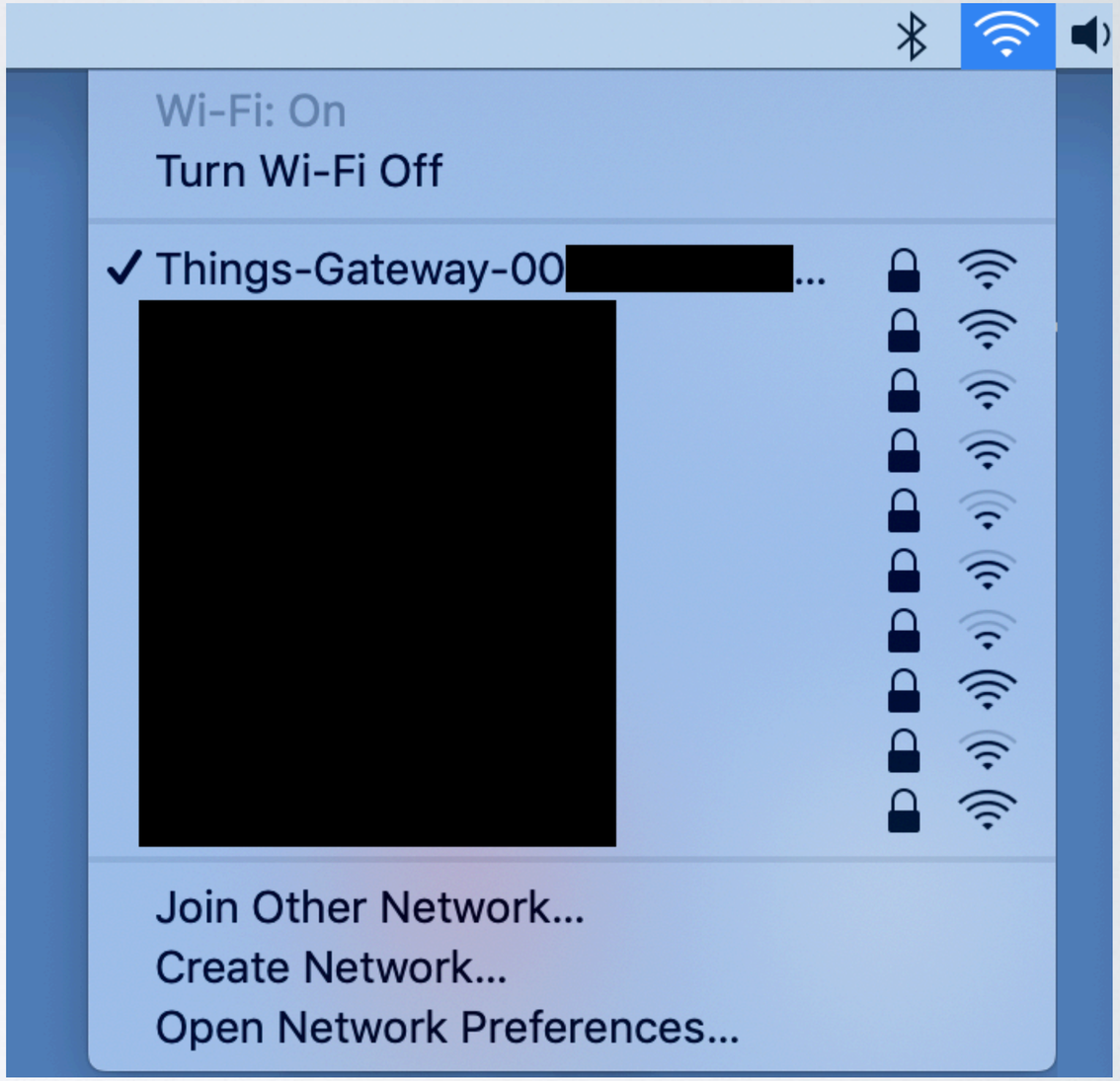
GATEWAY PROCEDURE 2 / 8

- Remove the white plastic cover.
- Make sure the antenna is connected.
- Power up the Things Gateway.
- Press the pink reset button in the middle for 5 seconds until each of the 5 LEDs illuminates.



GATEWAY PROCEDURE 3 / 8

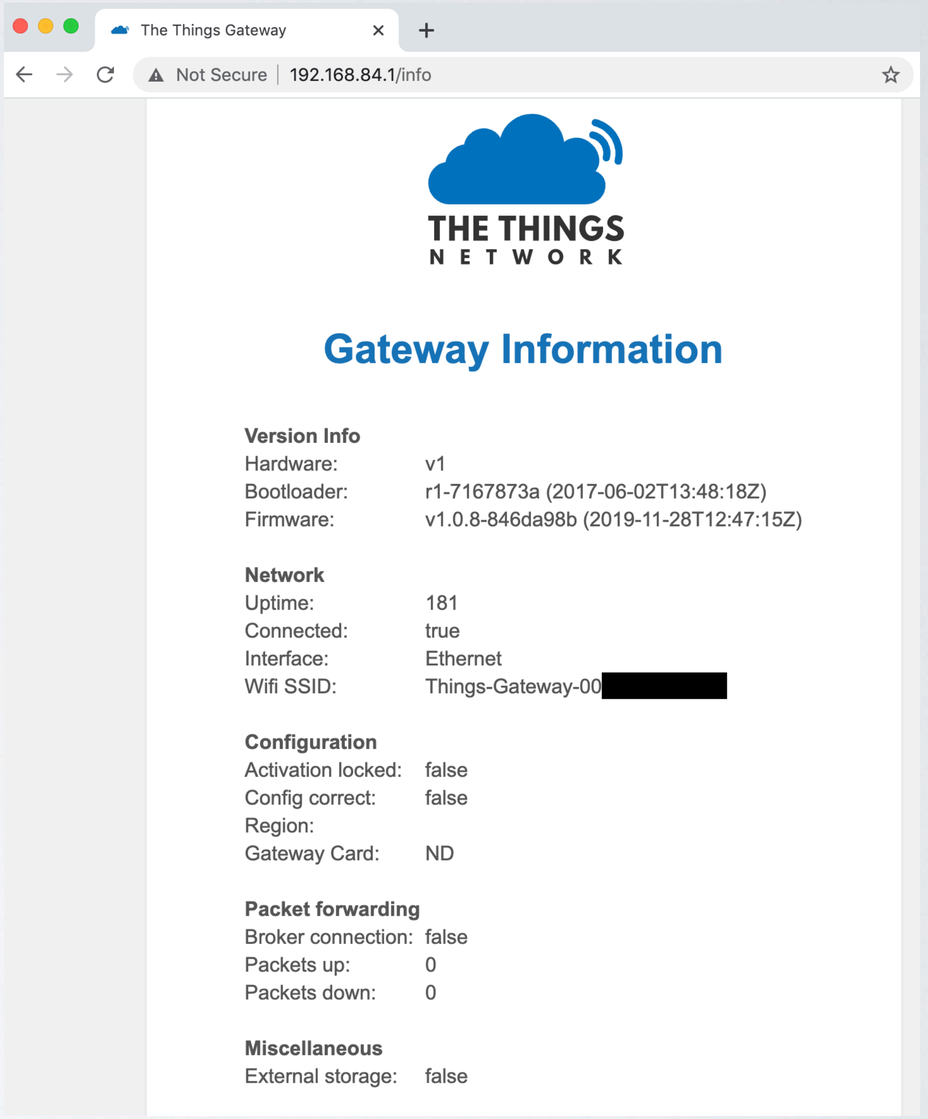
- The Things Gateway now provides a WIFI access point.
  - The Things Gateway SSID:
    Things-Gateway-xxxxx
  - Password:
    thethings
    Note: I never had to enter a password.
- On your computer connect to this WIFI access point.



GATEWAY PROCEDURE 4 / 8

- To view The Things Gateway information, open a browser and navigate to:
  http://192.168.84.1/info

- The Firmware version should be at least 1.0.8



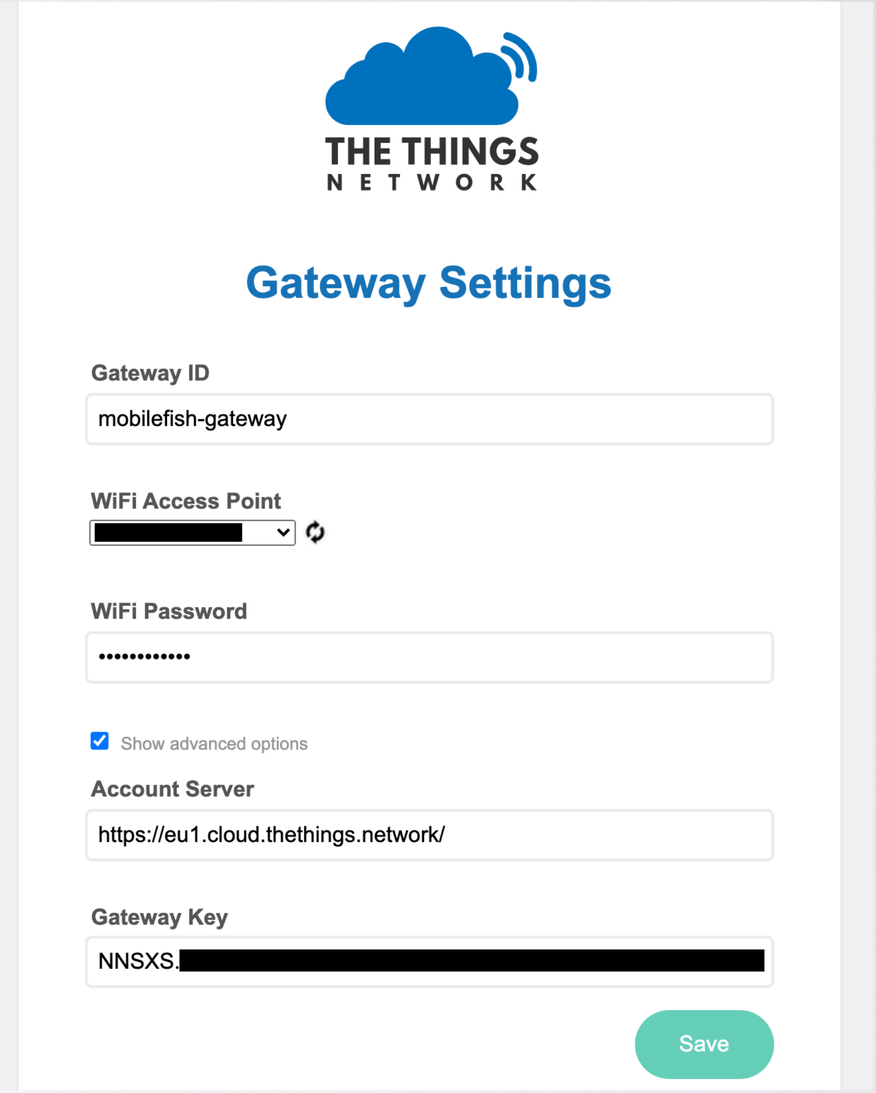
GATEWAY PROCEDURE 5 / 8

- To change The Things Gateway configuration, open a browser and navigate to:
  http://192.168.84.1

- Enter your Gateway ID.

- Select your WIFI router SSID and enter its password, if you opted for this option. Otherwise leave these two fields empty.

- Select Show advanced options.

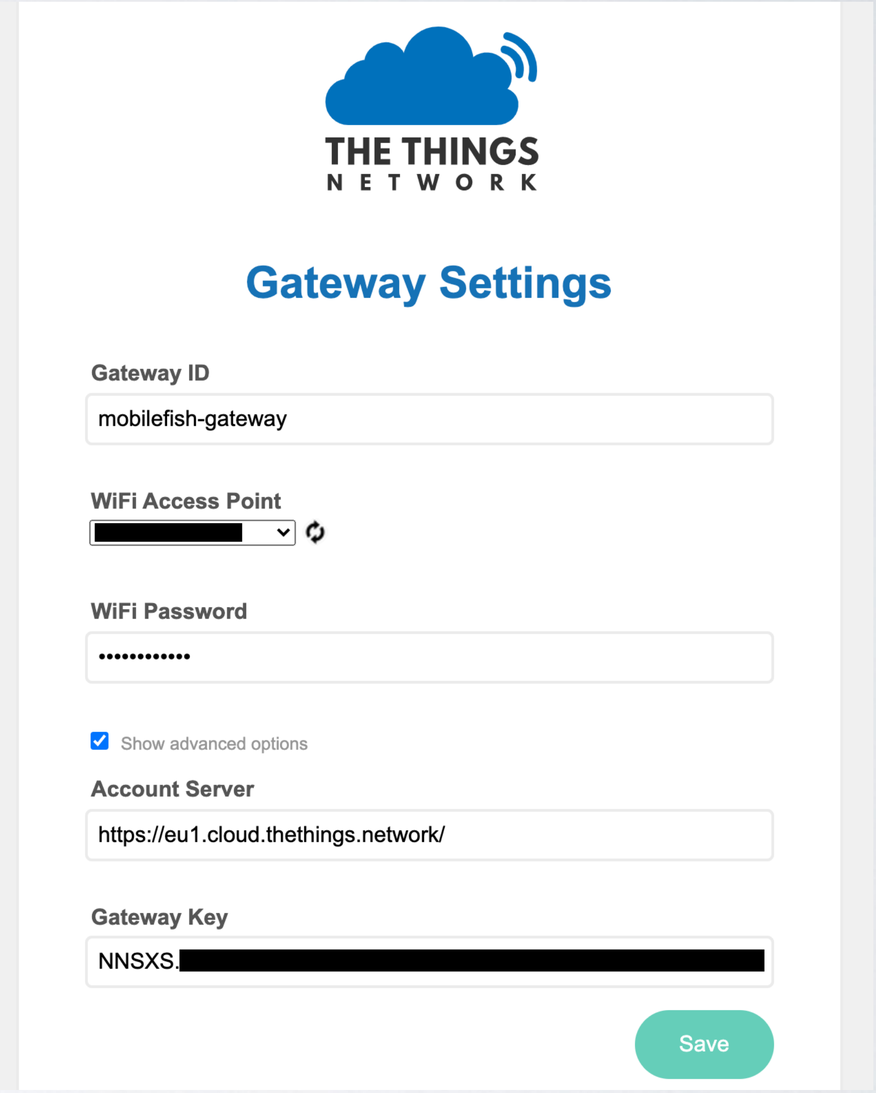


GATEWAY PROCEDURE 6 / 8

- Enter the Account Server address.
  This is the same as the Gateway Server address.

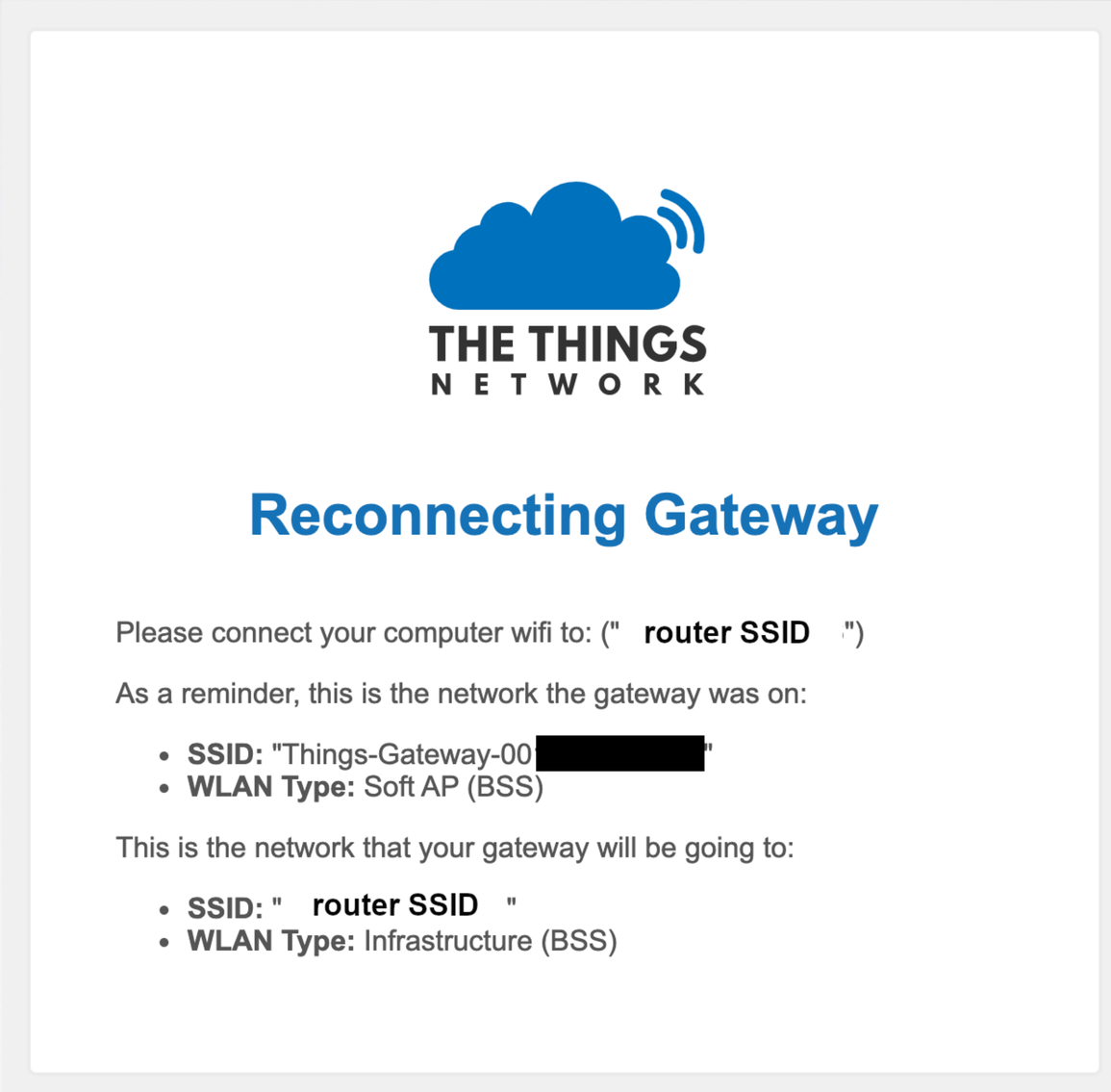
- Enter the Gateway Key.
  This is the same as the API Key you have saved.

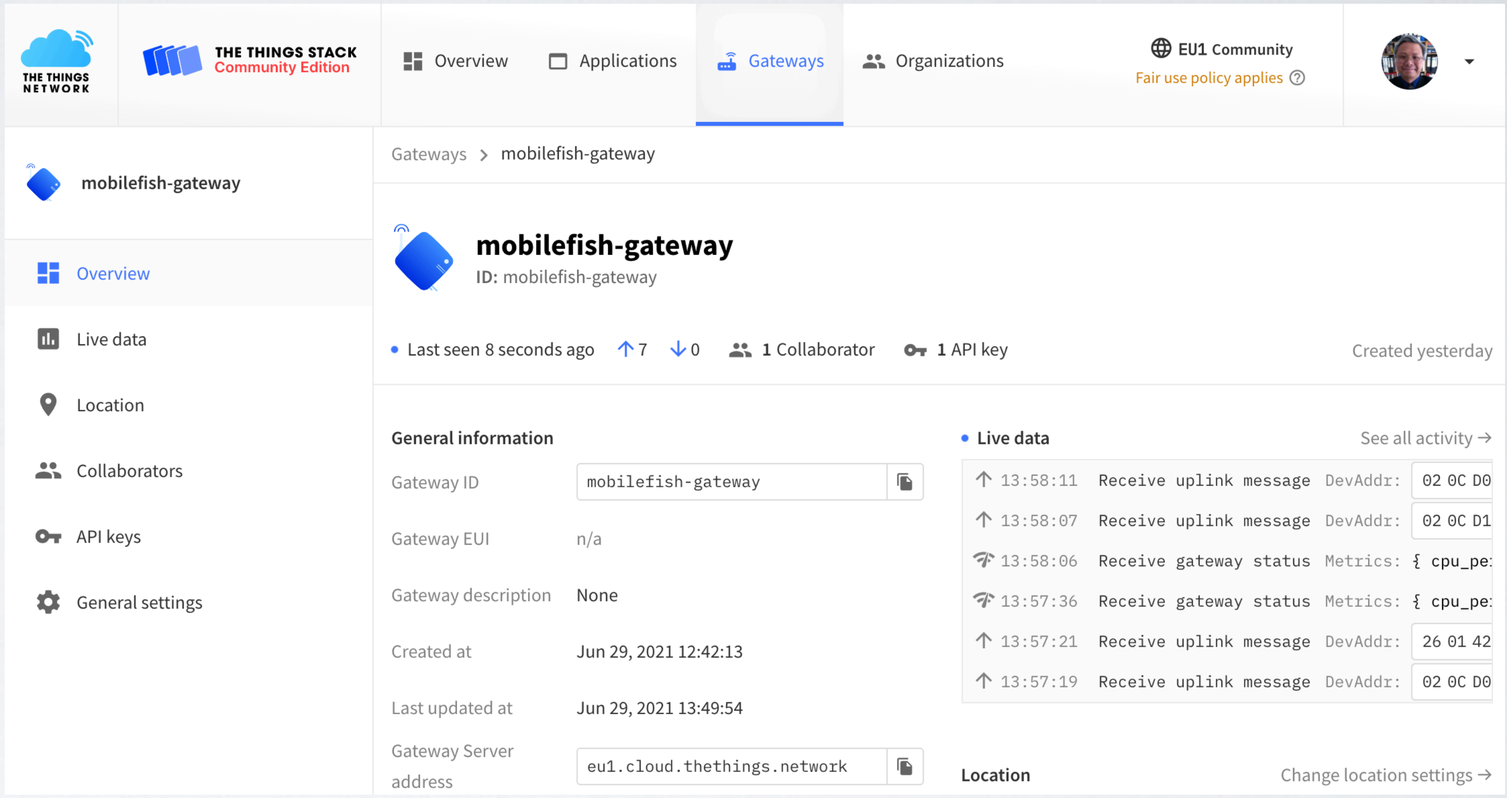
- Select Save.



GATEWAY PROCEDURE 7 / 8

- The Things Gateway is now configured.
- Now you should connect your computer WIFI to your router SSID.



GATEWAY PROCEDURE 8 / 8

- Login to The Things Stack Community Edition console.
- Go to gateways and in the gateways overview screen, select your gateway.
- After a few minutes you will see received gateway information in the Live data window.
- The Things Gateway is correctly setup.