How to Integrate Milesight's Gateway and Devices into the KaaloT Platform

Version Change Log			
Version	Revision Date	Revision Details	Revised By
V1.0	20250313	Initial	Lockon

Preface

KaaIoT is a technology company focused on IoT platforms and solutions. It offers both open-source and enterprise-level IoT platforms through Kaa, which are used for device management, data collection, remote control, and analytics. The KaaIoT platform supports a variety of IoT ecosystems and helps businesses quickly build and deploy scalable IoT applications. Its solutions are widely used in smart manufacturing, smart cities, energy management, remote monitoring, and other fields, providing users with efficient, secure, and flexible IoT connectivity.

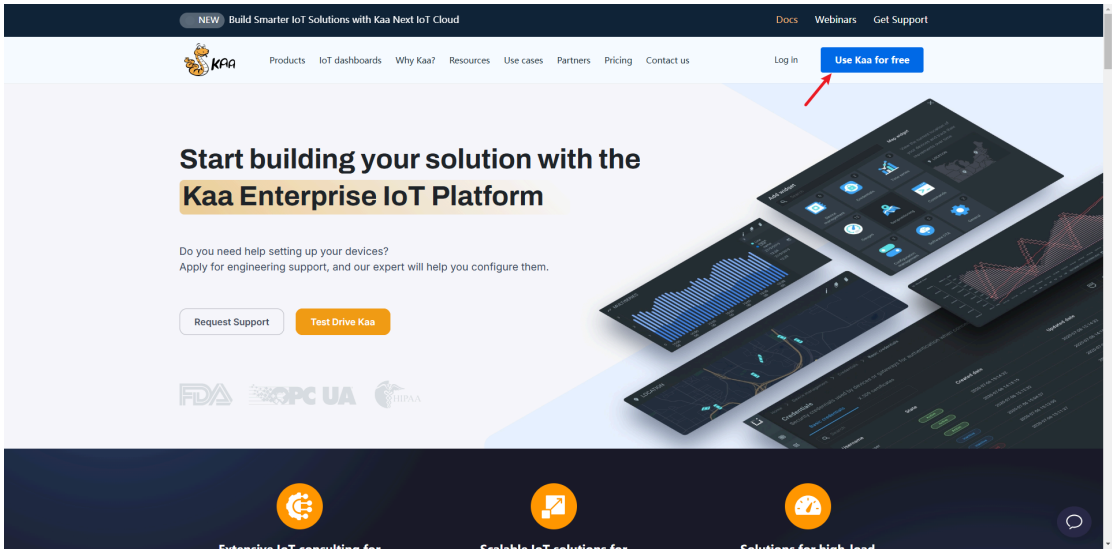
This document primarily describes the complete operational process of integrating the UG65 gateway with the KaaIoT platform (utilizing a third-party LNS, specifically the TTN platform) and adding the AM319 (Any LoRaWAN Node,take Milesight AM319 as example) device on the KaaIoT platform as an example.

1. Prerequisites

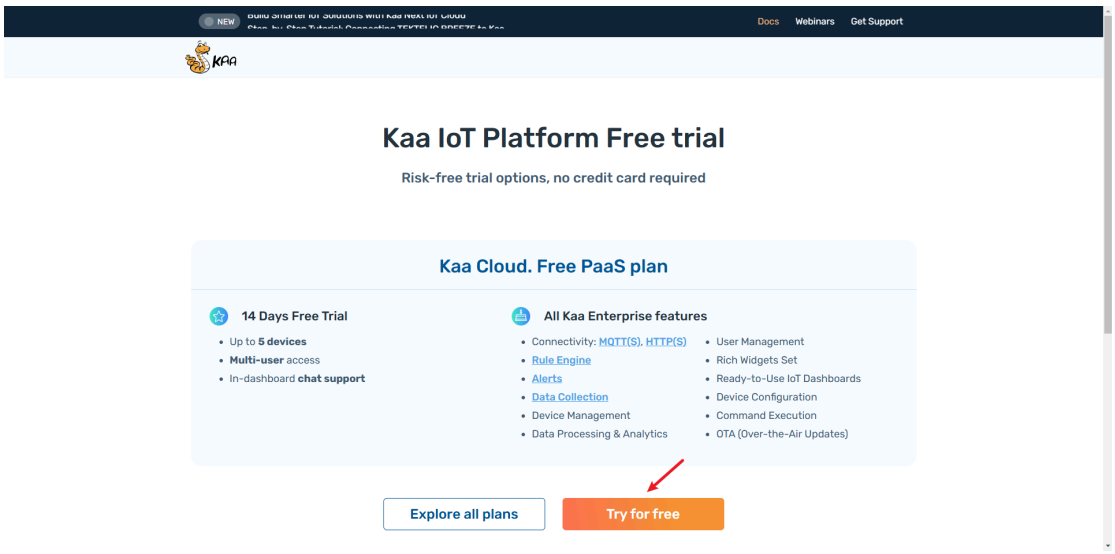
- **Gateway Model:** UG65 or UG56/UG67/SG50
- **Sensor Model:** AM319, with firmware v1.6.
- **Frequency Band for this Demo:** US915.
- **Gateway:** Must already be connected to the Internet.

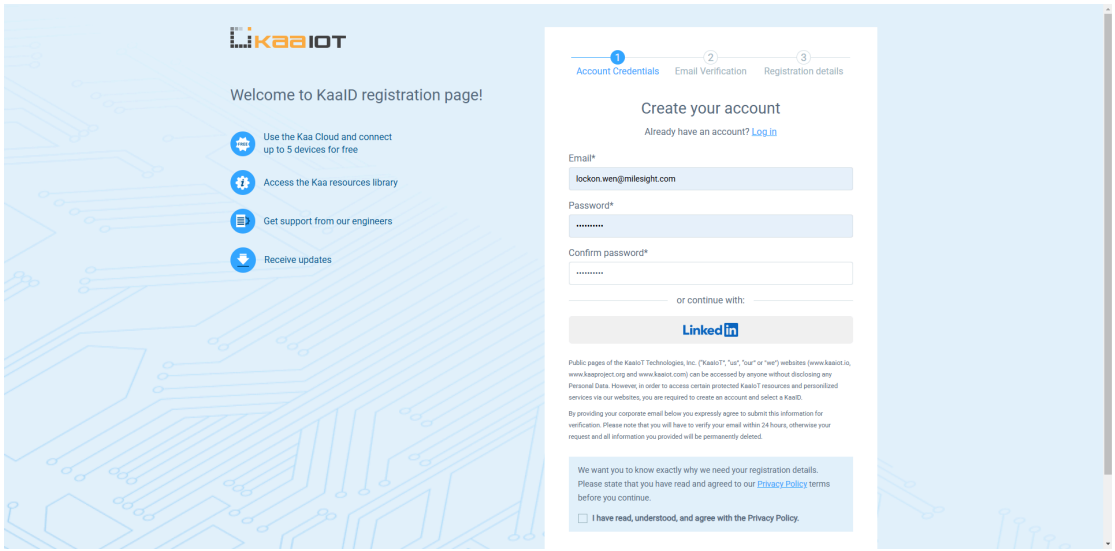
2. Register a KaaIoT Account

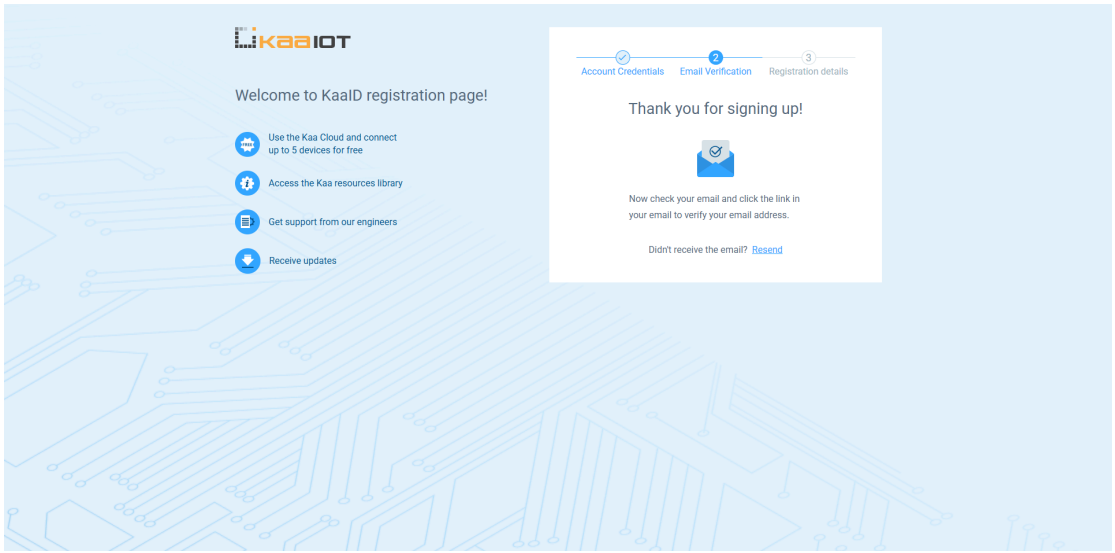
Visit ➤ **Enterprise IoT Platform with Free Plan | Kaa** and click the "**Use Kaa for free**" button.



The official site allows registration for a free 14-day trial account. Simply fill in the required information as prompted.



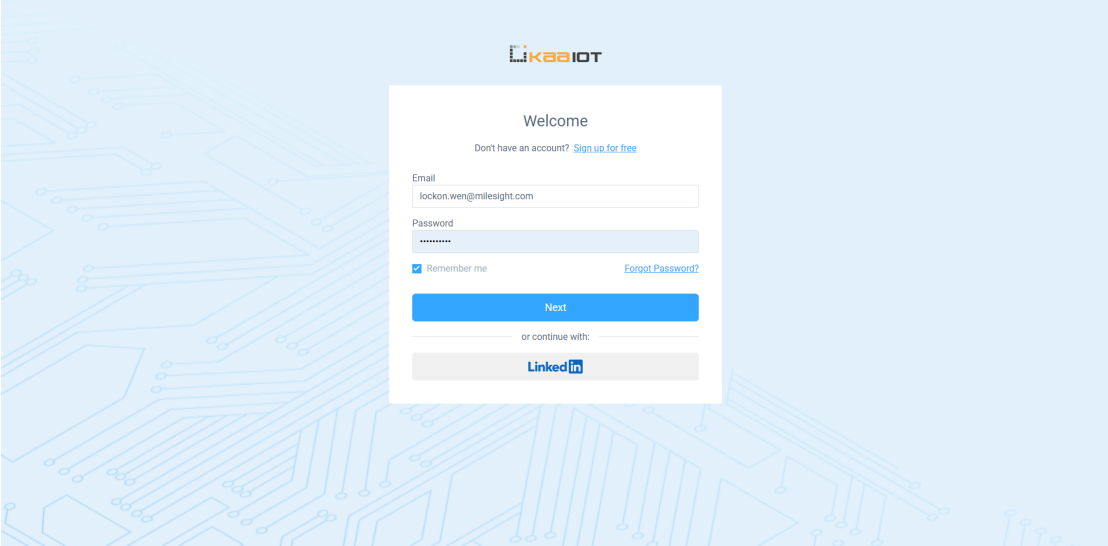


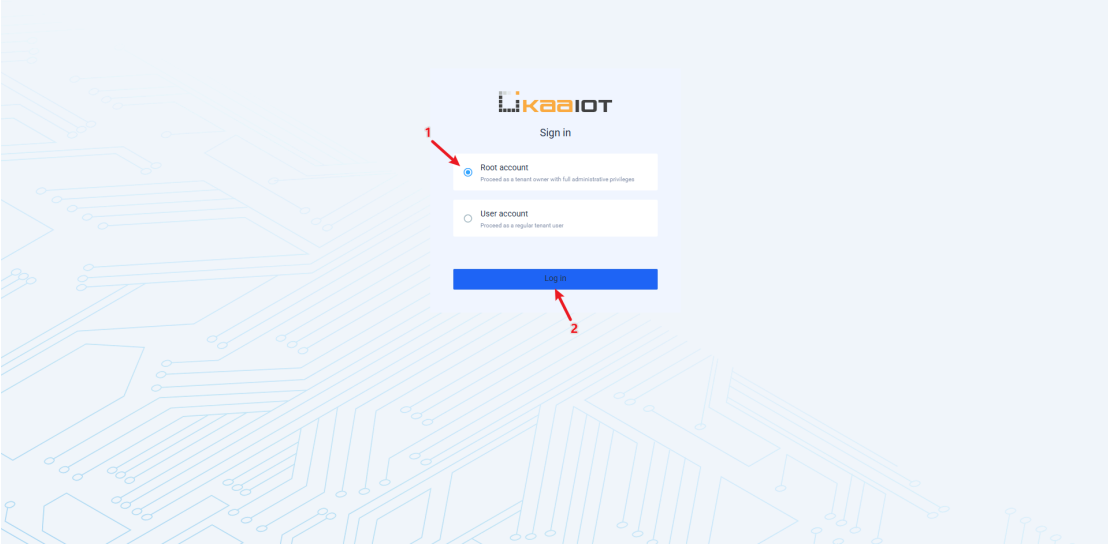


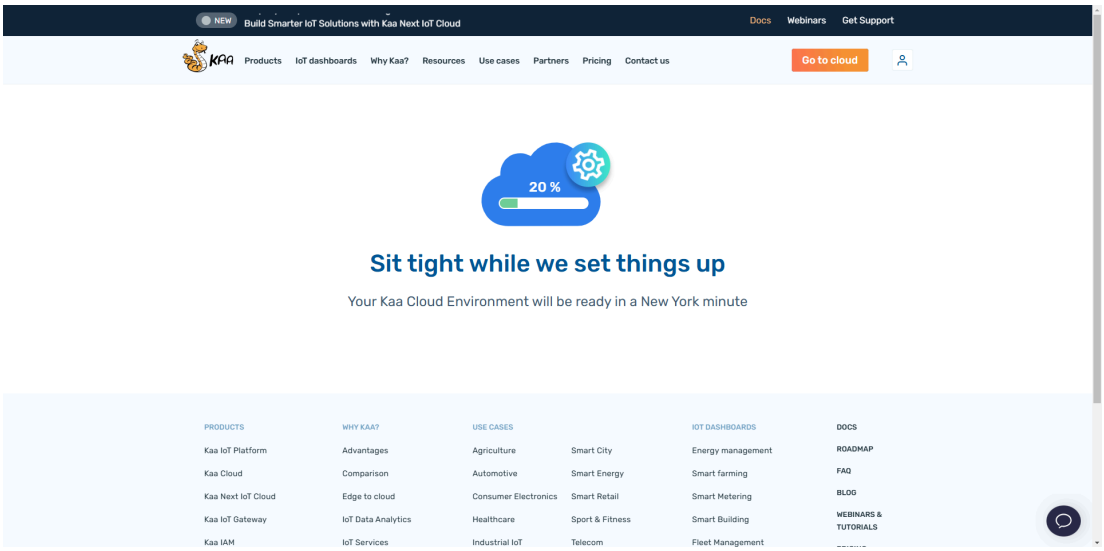
After registering, click the activation link in the email, then log in.

3. First Login

On the first login, the interface will prompt an initialization process. Wait a moment until it fully loads so that you can start using it normally.





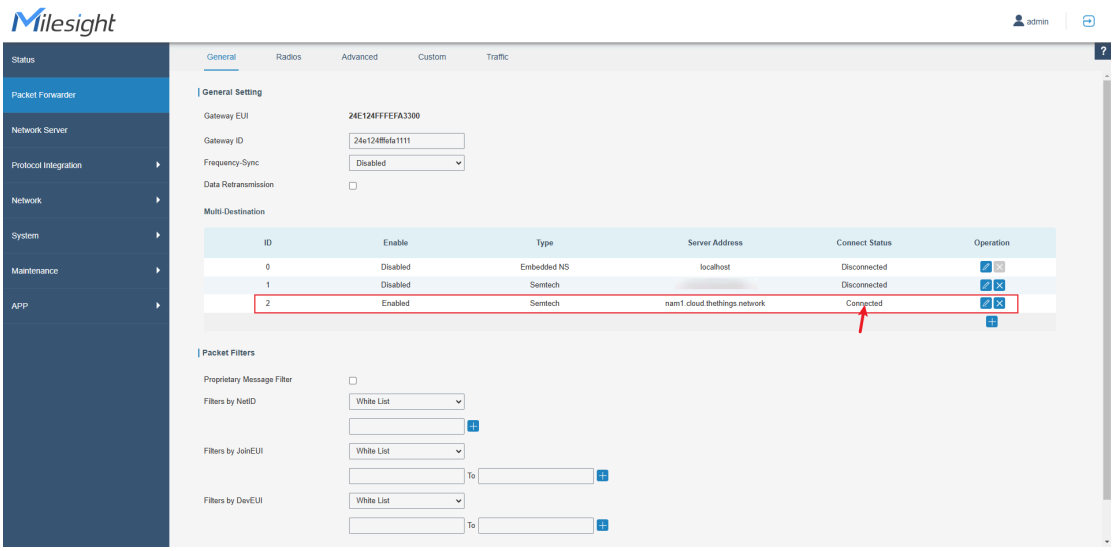


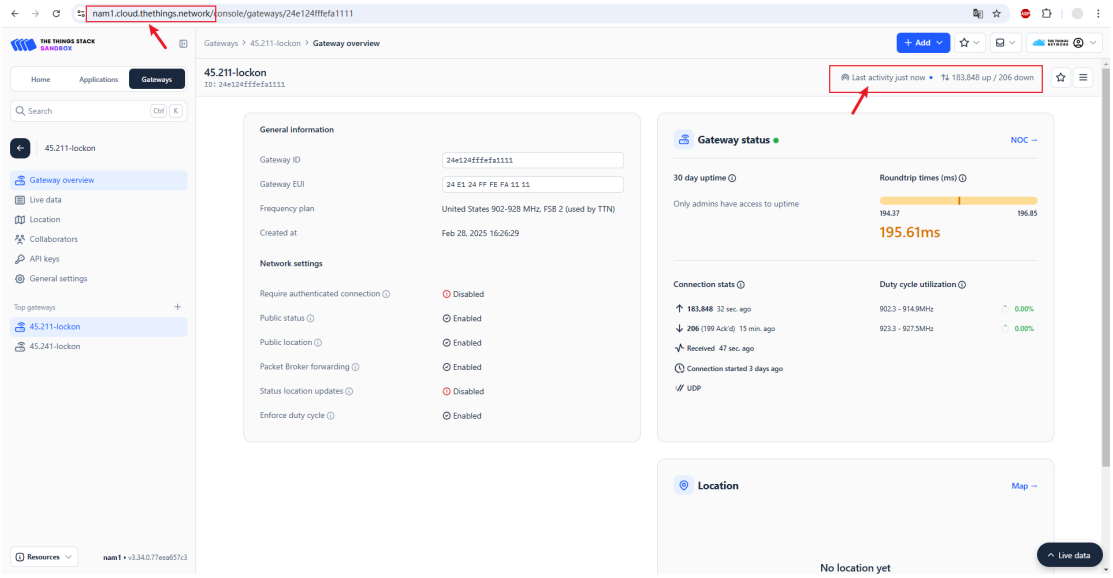
At this point, the account registration process is complete.

4. Integrate the Gateway with TTN

Since the KaaIoT platform does not natively support LNS functionality, it is necessary to use the TTN platform for integration. According to the KaaIoT official website, operations such as adding sensors must be performed on TTN beforehand. The following sections detail how to integrate the gateway with TTN, add sensors, and create an MQTT interface in TTN.

Follow the instructions provided in the reference document < The Things Stack-Milesight Gateway Integration via Semtech Packet Forwarde >. Below is a screenshot of the completed setup:



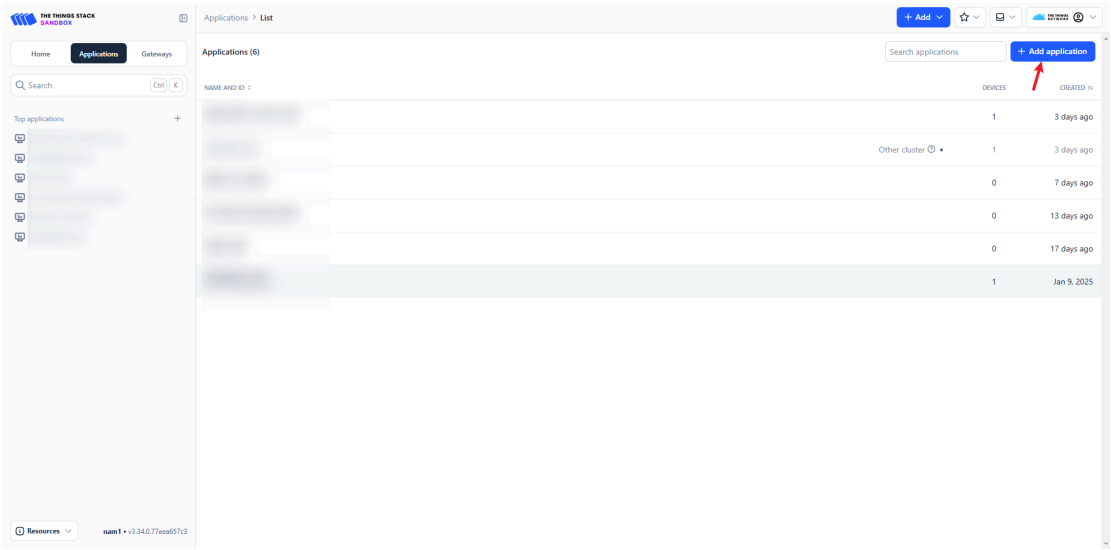


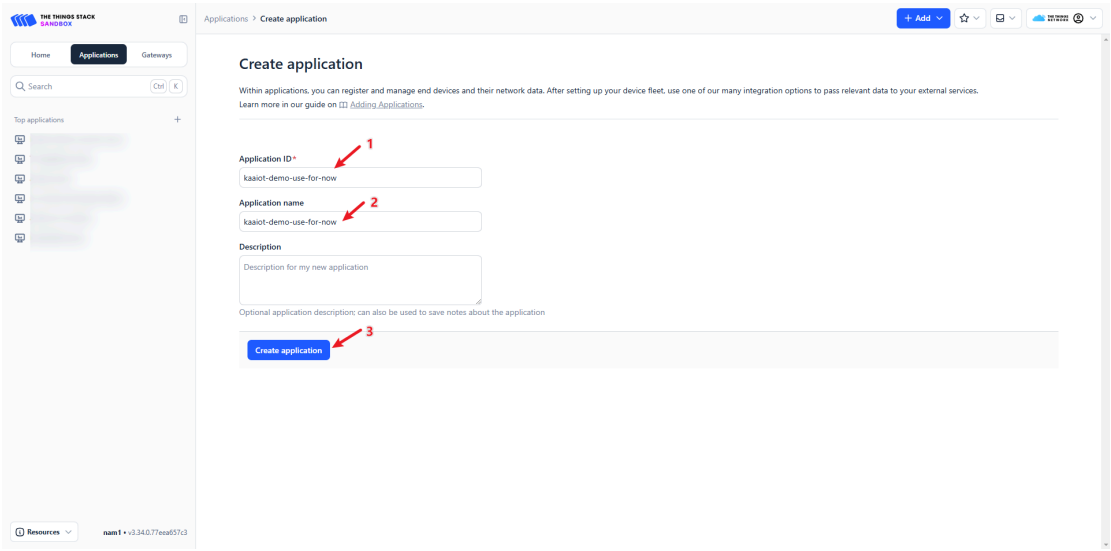
At this point, the gateway has been integrated with TTN.

Note that the TTN region used is **nam1.cloud.thethings.network** as it will be needed later.

5. Create an Application on TTN

Follow the instructions as shown in the screenshot :

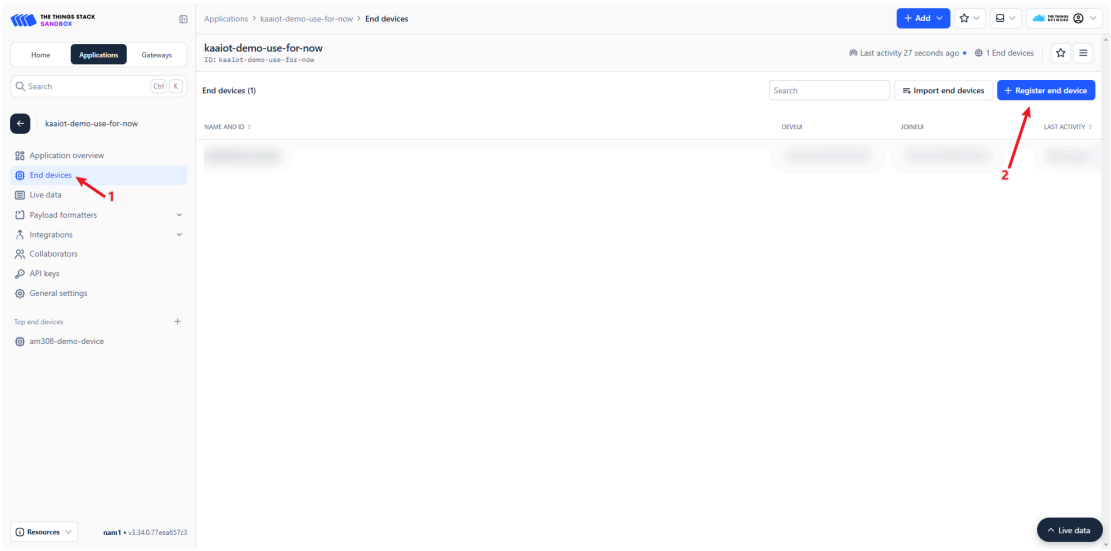


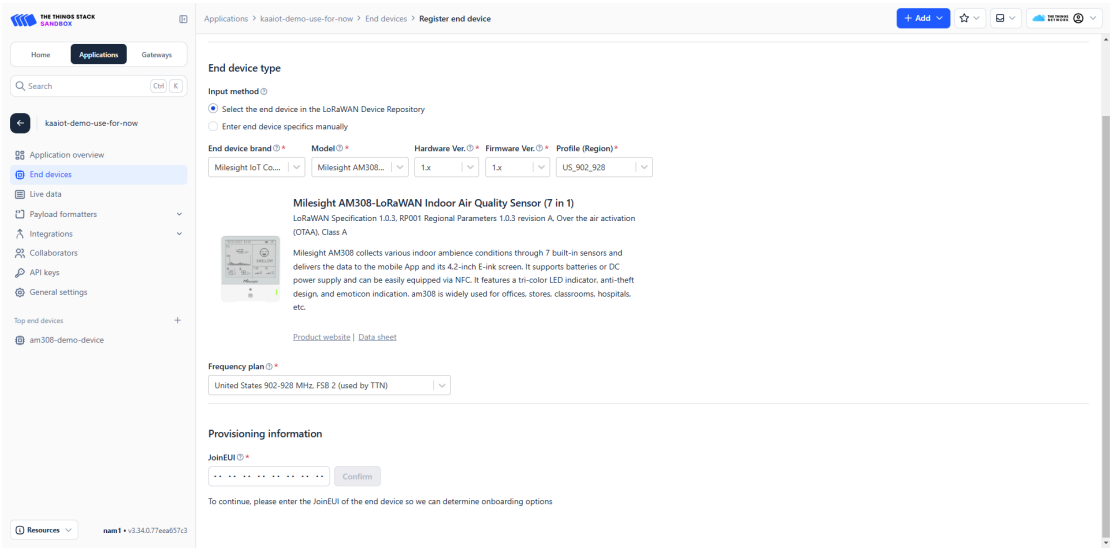


Note: In this demo, the Application ID is **kaaiot-demo-use-for-now**, which will be used later.

6. Add a Device on TTN

For this demonstration, we are using the AM308. It is necessary to add this device on TTN. Follow the instructions shown in the screenshot :

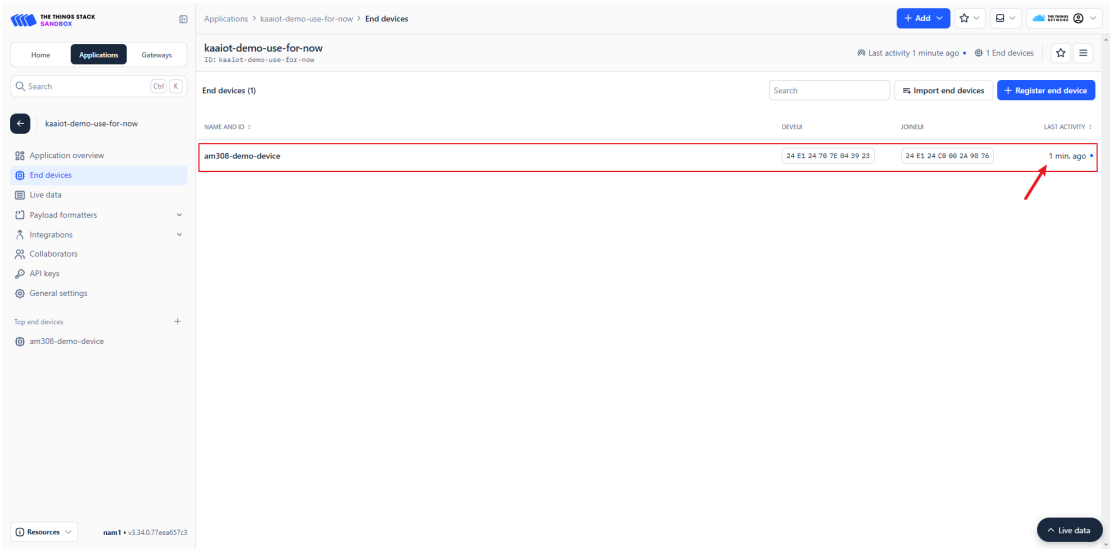




Step by step, fill in the parameters for the AM308.

Important: Ensure that you select the correct Frequency Plan as shown in the screenshot.

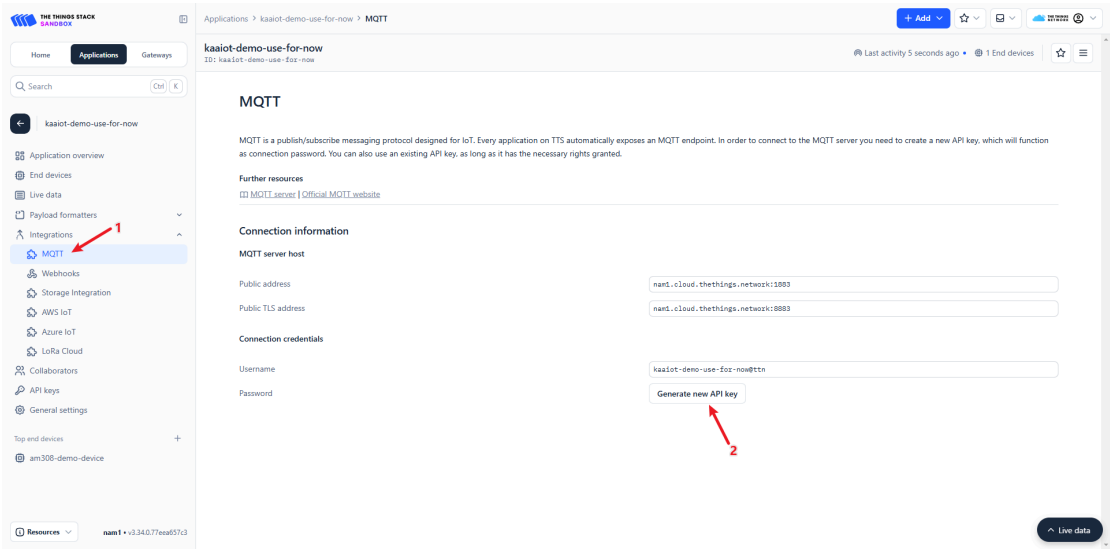
After adding, you will see the basic device information on TTN :



At this point, adding the device on TTN is complete.

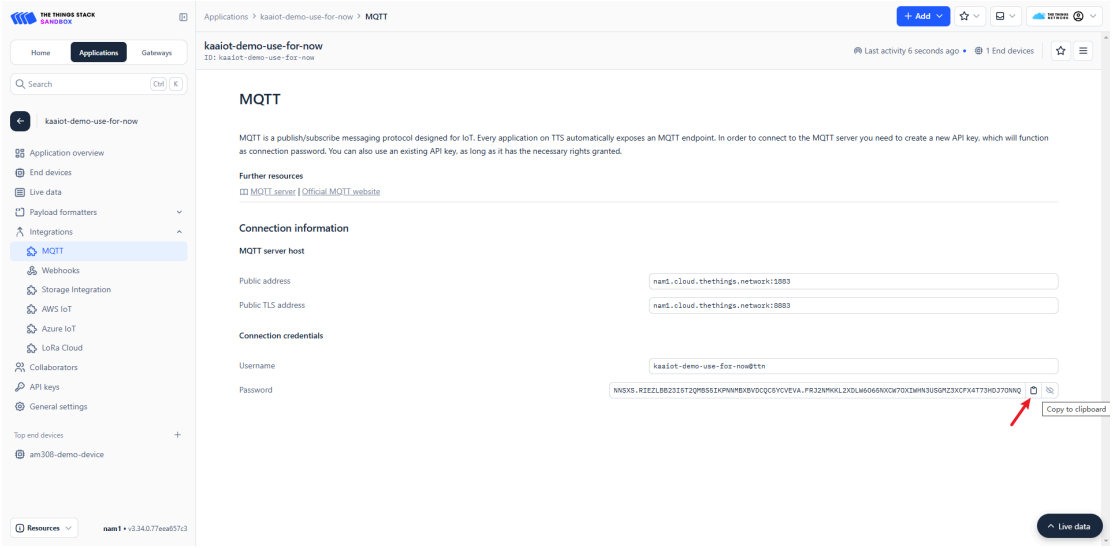
7. Create MQTT Integration on TTN

Follow the steps as shown in the screenshot:



Click "**Generate new API key**."

The plaintext key information will be displayed temporarily, make sure to save this value as it is only shown once.



For example, the plaintext key information is as follows (for demonstration purposes only).

This information is very important and will be needed later:

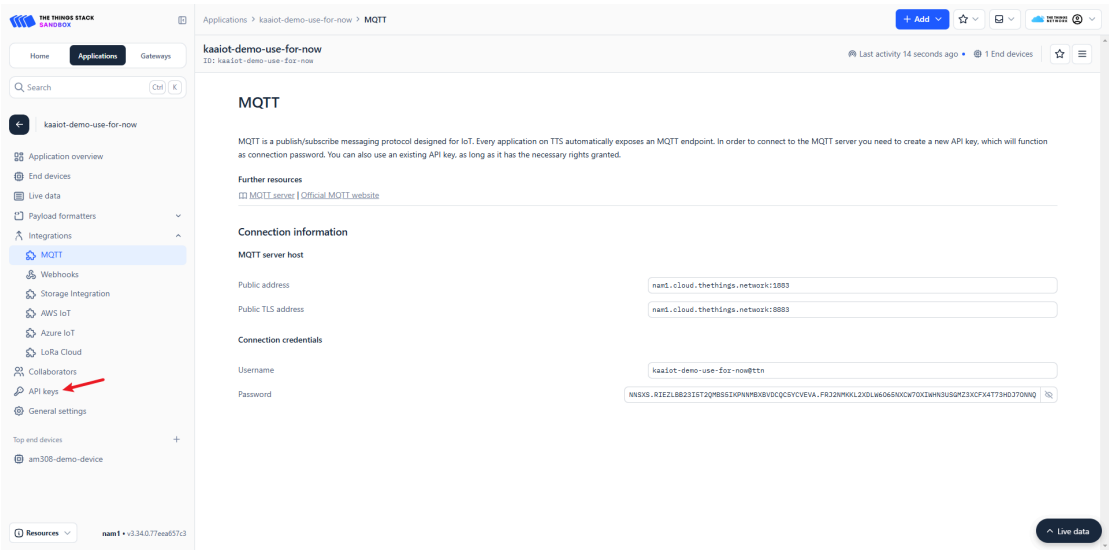
> NNSXS.RIEZLBB23I5T2QMBS5IKPNNMBXBVDCQC5YCVEVA.FRJ2NMKKL2XDLW6O65NXCW7OXIWHN3USGMZ3XCFX4T73HDJ7ONNQ

Also, note down TTN's MQTT address and Username:

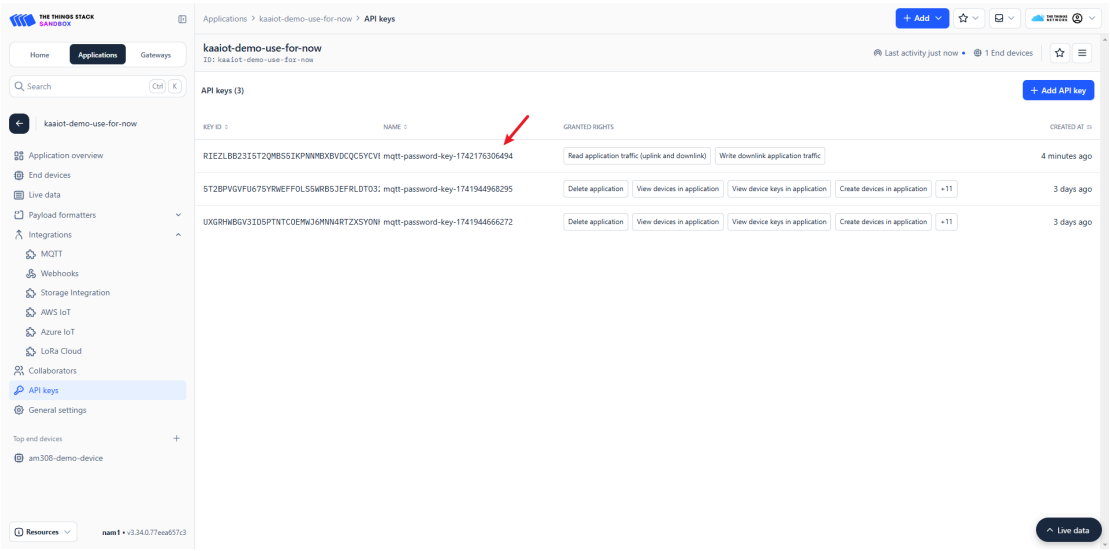
> **MQTT Address:** nam1.cloud.thethings.network:1883
> **Username:** kaaiot-demo-use-for-now@ttn

Important: The KaaIoT platform uses port **1883**, not port 8883.

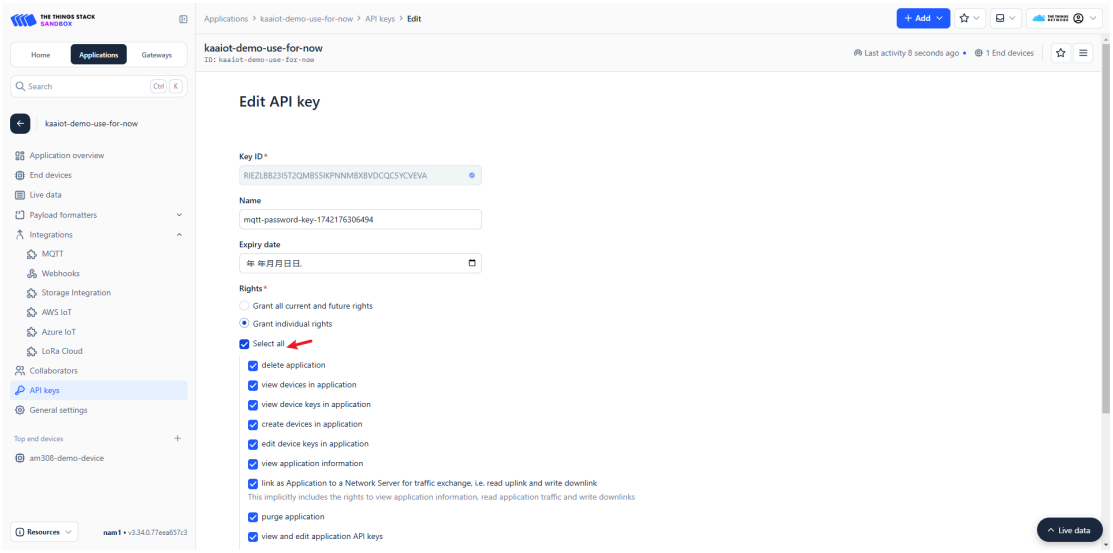
Next, configure the permissions for this key (**this step must be done; otherwise, it will not work later**).
Follow the instructions shown in the screenshot:



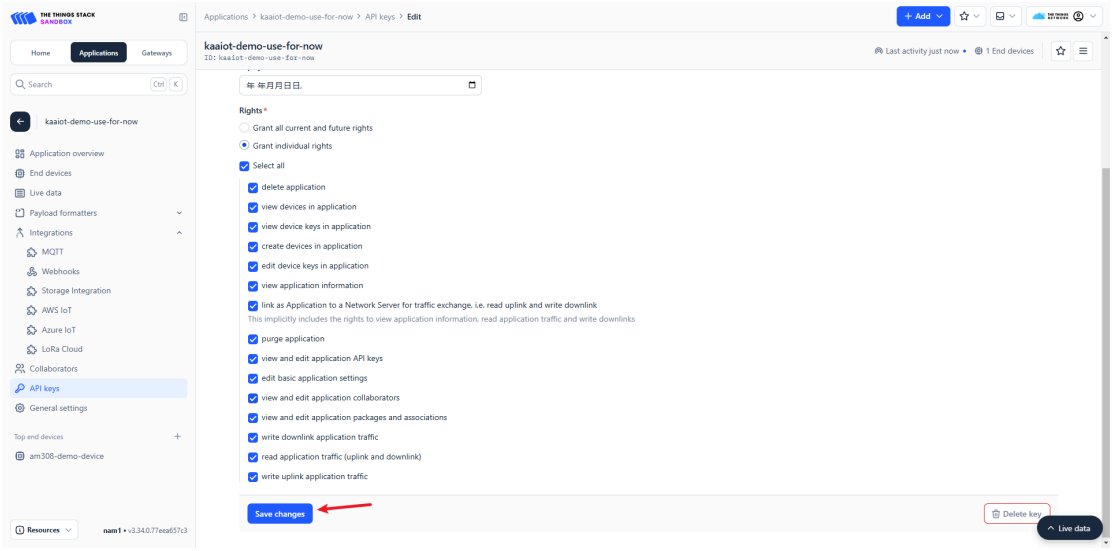
Locate the key information you just created (usually the most recent record is the one you need) :



Click into it, then check all the permissions as shown in the screenshot.



After selecting the permissions, click "**Save changes.**"



At this point, the MQTT key parameter configuration on TTN is complete. The next steps will be performed on the KaaIoT platform. Operations on TTN end here.

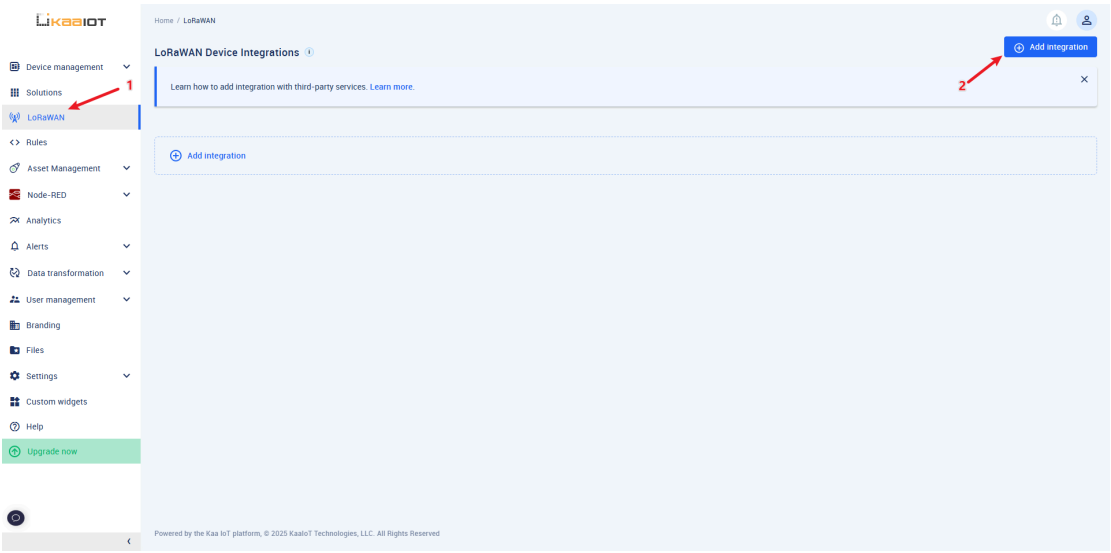
8. Create a Solution on KaaIoT

After logging into the KaaIoT platform, follow the instructions shown in the screenshot to create your first **Demo Solution**.

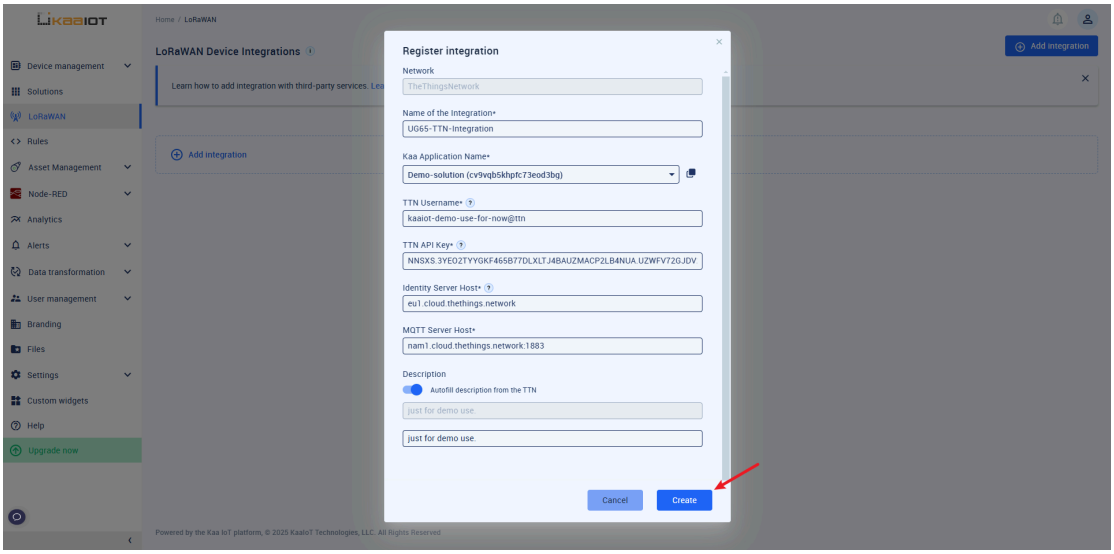
After creation, the interface will display the solution as shown:

9. Add TTN Integration on KaaIoT

Follow the instructions shown in the screenshot:



In the pop-up interface, fill in the information as follows:



Name of the Integration:

Enter "UG65-TTN-Integration" (it is recommended to name it based on the gateway).

Kaa Application Name:

Select the Solution you just created from the dropdown.

TTN Username:

Enter the parameter from step 7, which is {application id}@ttn.

TTN API Key:

Enter the parameter from step 7.

Identity Server Host:

Must be entered as eu1.cloud.thethings.network (fixed value).

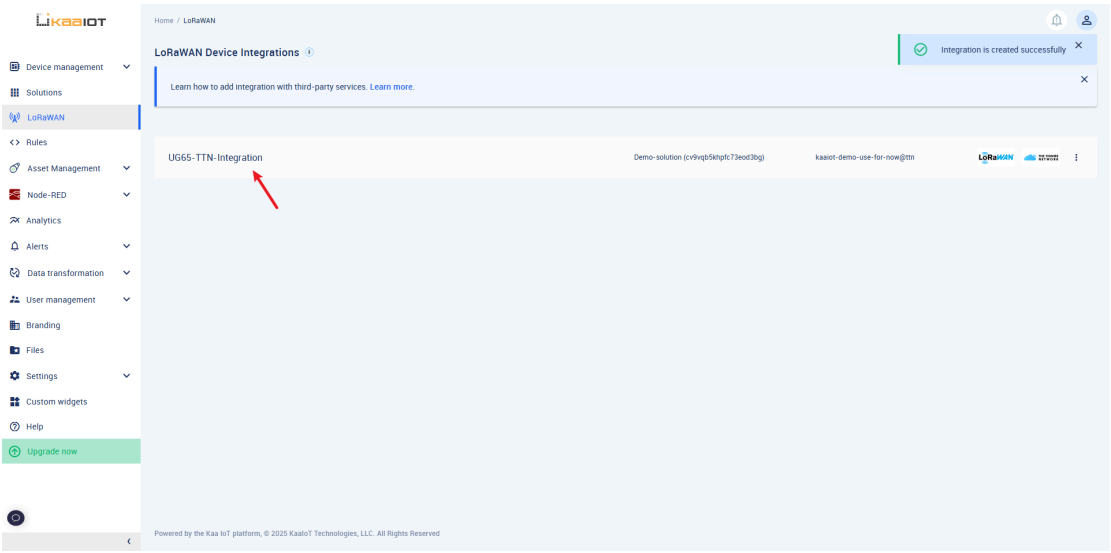
MQTT Server Host:

Enter the parameter from step 7.

Note: The value for Identity Server Host is fixed and does not depend on the TTN region

you registered.

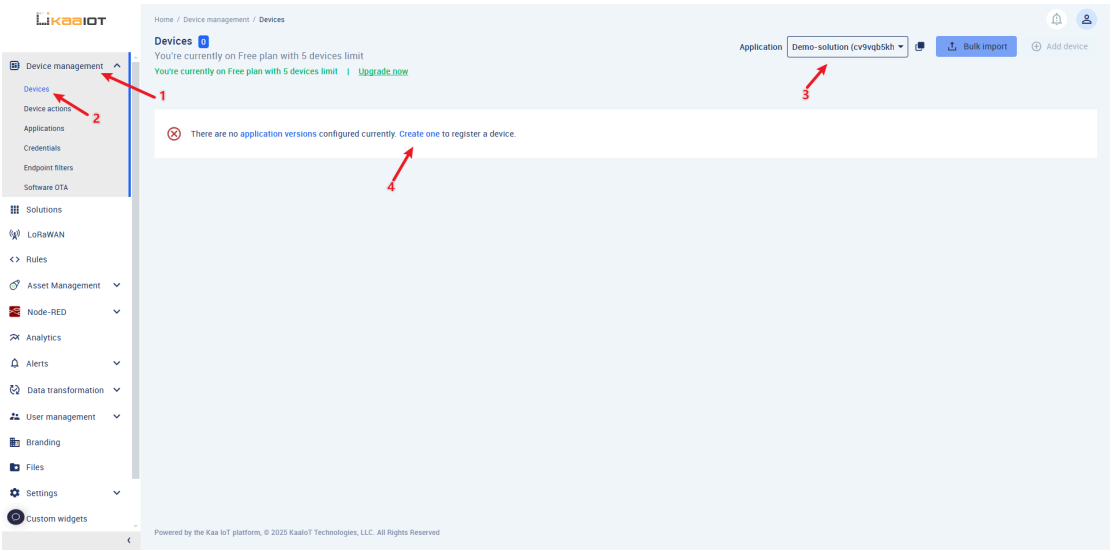
After clicking "**Create**," the interface will display as shown:

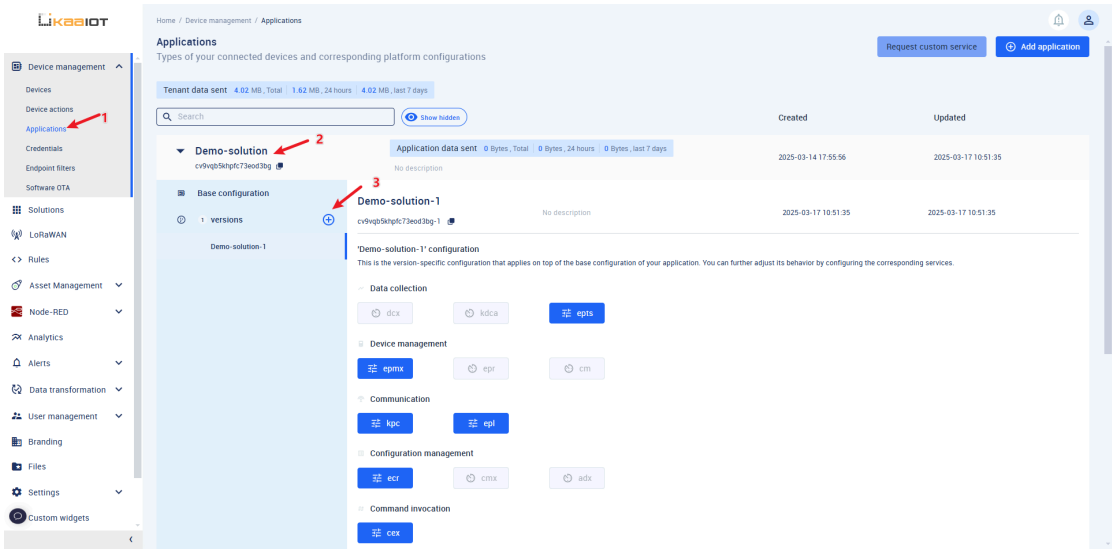


10.Add a Device on KaaIoT

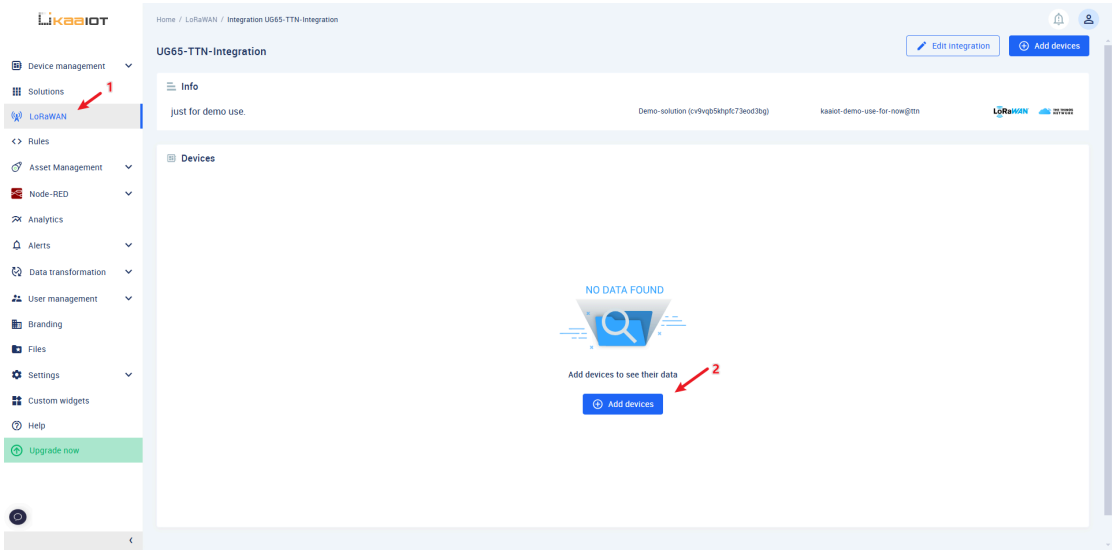
Adding a device here simply means synchronizing the MQTT interface with the device information registered on TTN.

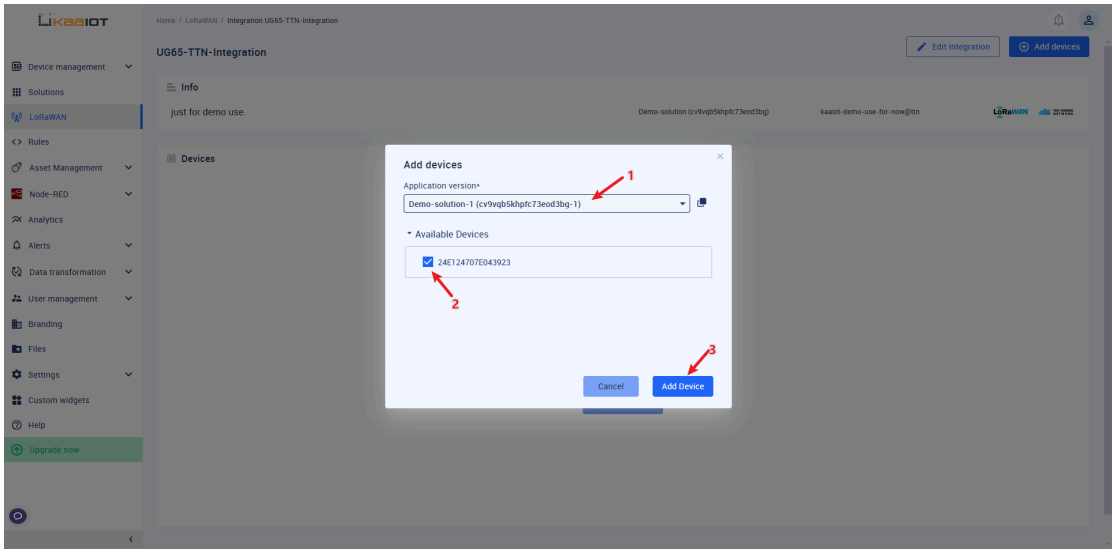
Follow the specific steps shown:



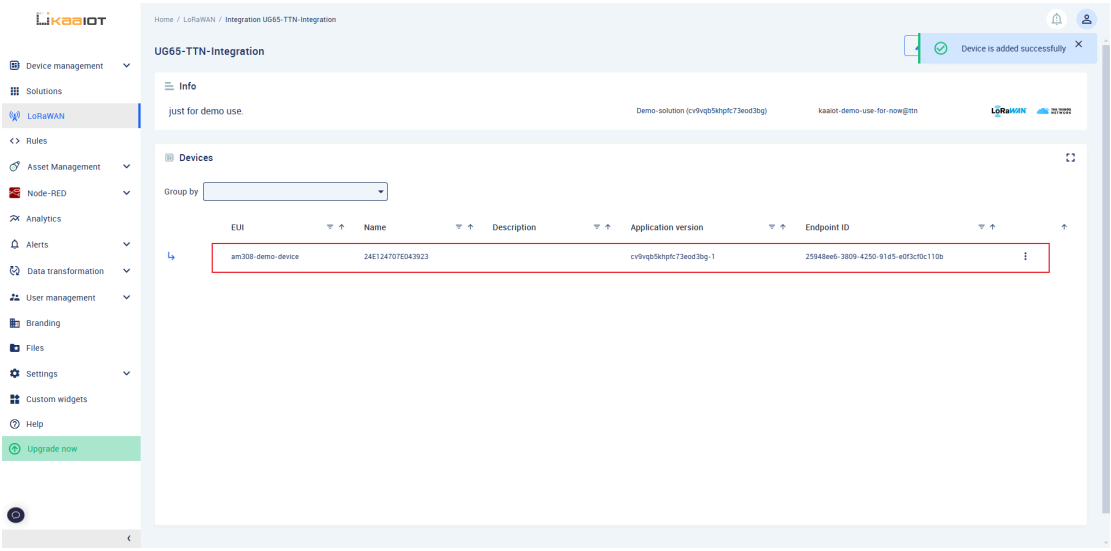


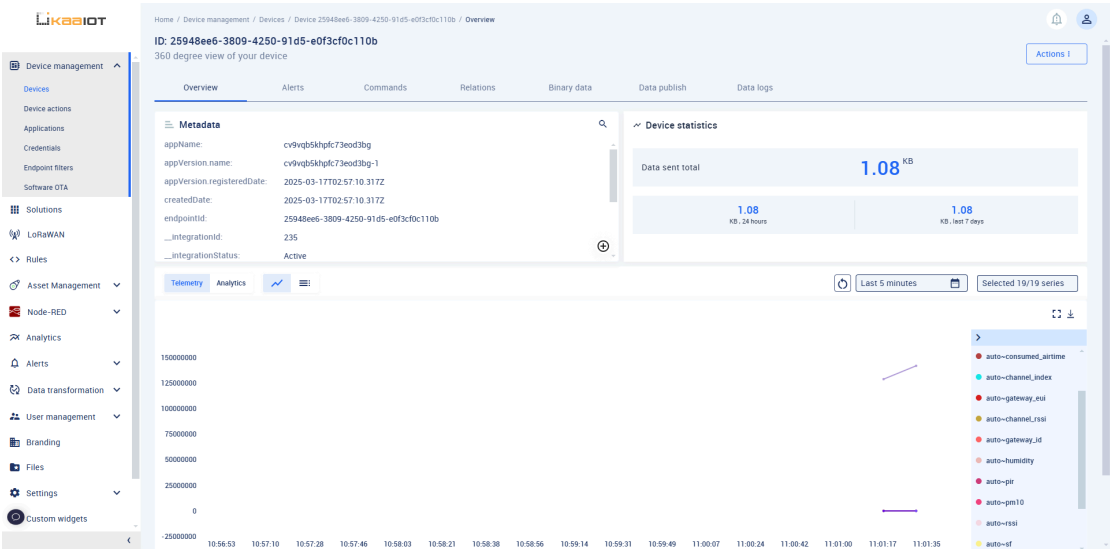
After creation, you can add the device. In the pop-up interface, you will see the Device EUI for AM308; select it and add it.





Once added, the interface will display as shown:





At this point, the AM308 sample device has been added and data can be successfully reported and displayed.

11.Create a Simple Dashboard Example


Home / Solutions / Demo-use / Dashboards / Home
Edit mode
Search
Home
This is your default home dashboard. Every solution must have one.
CO2
681.00
Battery
100.00
Line chart
auto-humidity
auto-temperature
Temperature
23.60
Last: 5m 1h 6h 1d 1w 1M
17/3/2025 10:18 - 17/3/2025 11:18
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