Milesight Devices & Thingsboard IoT Platform Integration

Version Change Log			
Version	Revision Date	Revision Details	Revised By
V1.0	20250107	Initial	Lockon
v1.1	20250108	Add TTN Platform integrate method	Lockon

1. Introduction

This document introduces a simple step-by-step guide to quickly integrate Milesight LoRaWAN devices with ThingsBoard IoT platform, enabling real-time display of LoRaWAN sensor data on the platform.

2. Requirements

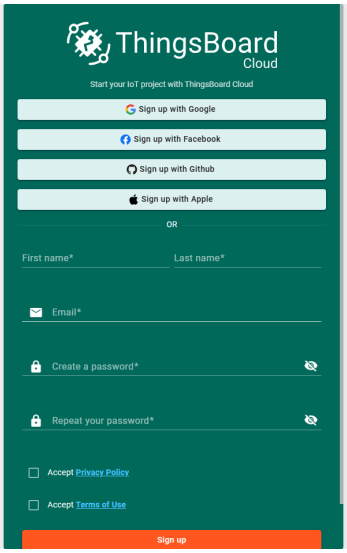
- Milesight LoRaWAN Gateway: UG56/UG65/UG67
- ThingsBoard account

  NOTE: ThingsBoard Cloud is used in this example, ThingsBoard on-premise deployment can also be used.
- Milesight LoRaWAN devices: take AM308 as example

3. Steps

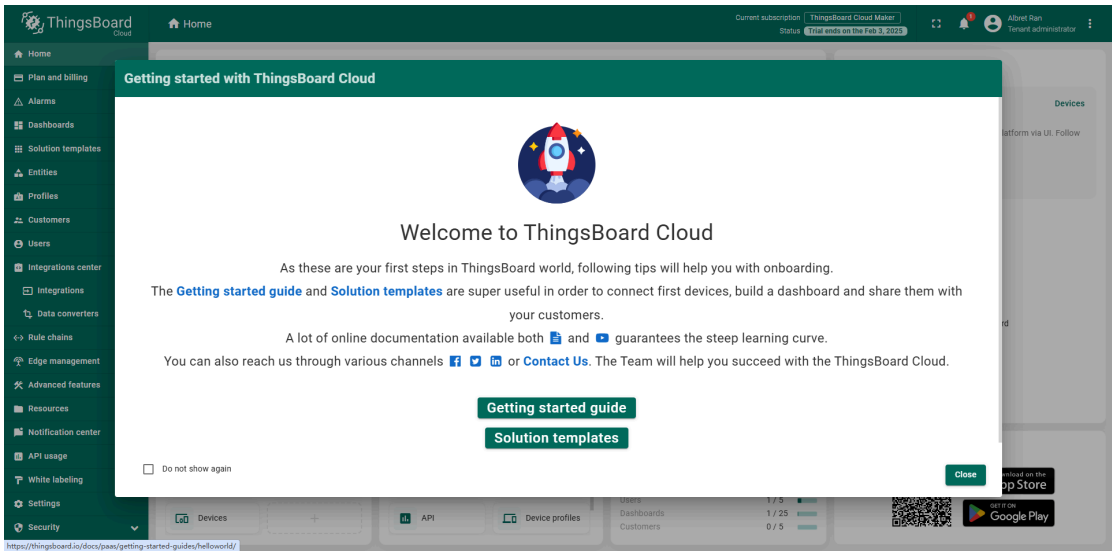
3.1. Register a ThingsBoard Account

Visit https://thingsboard.cloud/signup and follow the instructions to register an account.



3.2. Log in to ThingsBoard

Visit https://thingsboard.cloud/login.

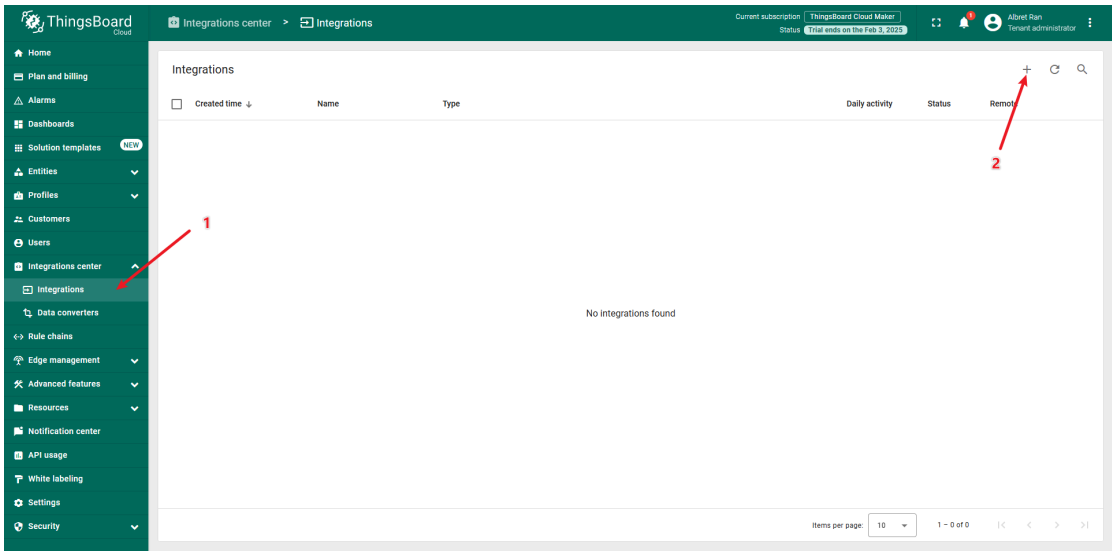


Next, choose one of the following methods for integration.

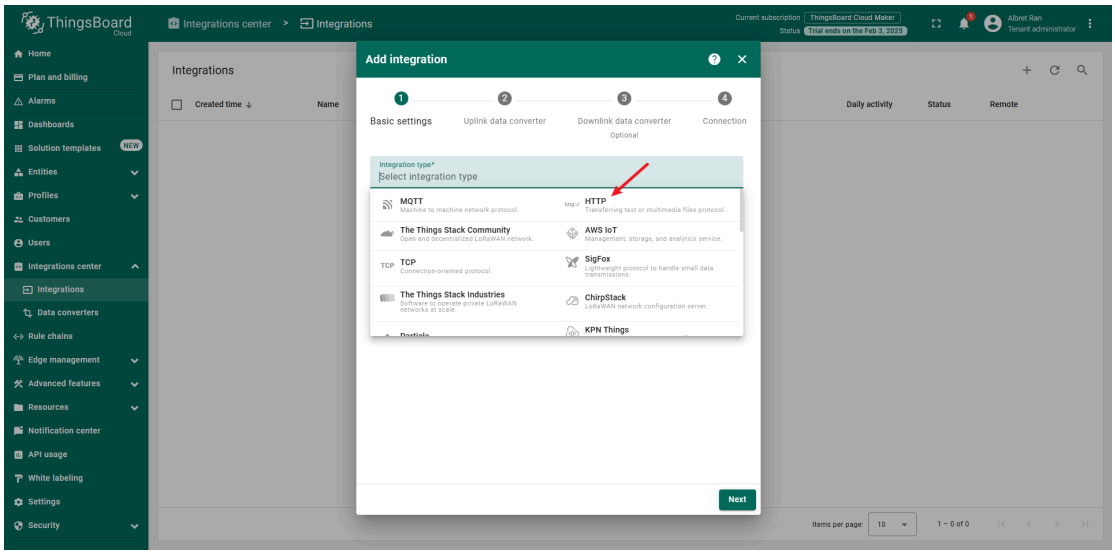
3.3. Integration via Gateway Embeded LNS (HTTP)

3.3.1. Create an HTTP Endpoint

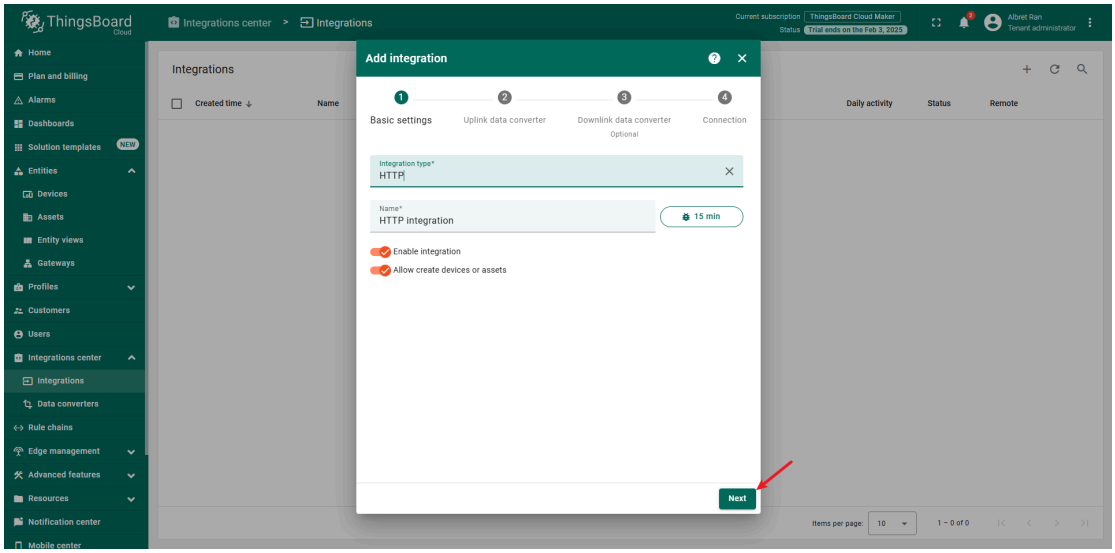
Add an integration:



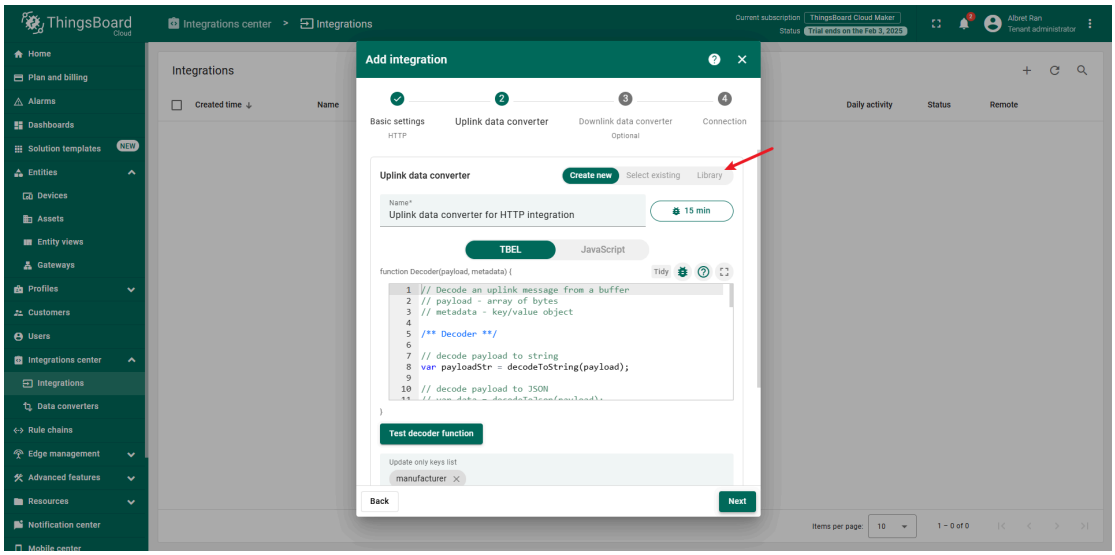
In the pop-up interface, select "HTTP":



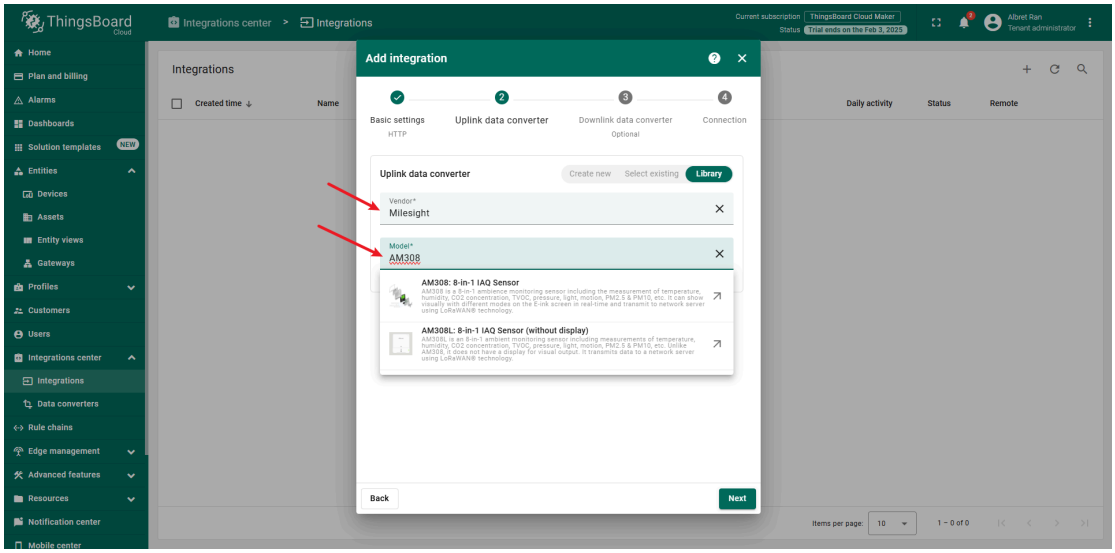
Click "Next":



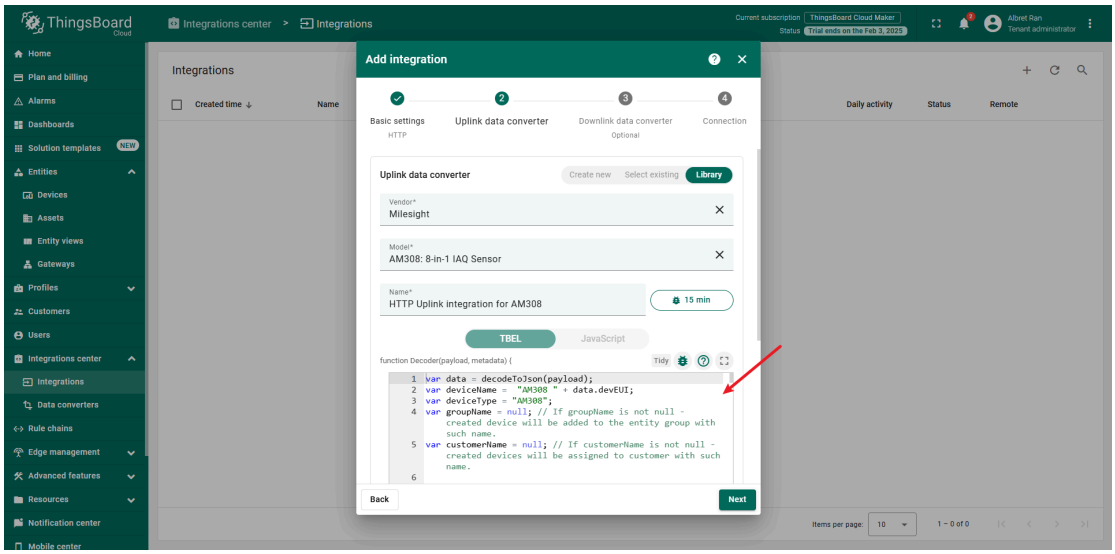
In the next interface, click "Library":



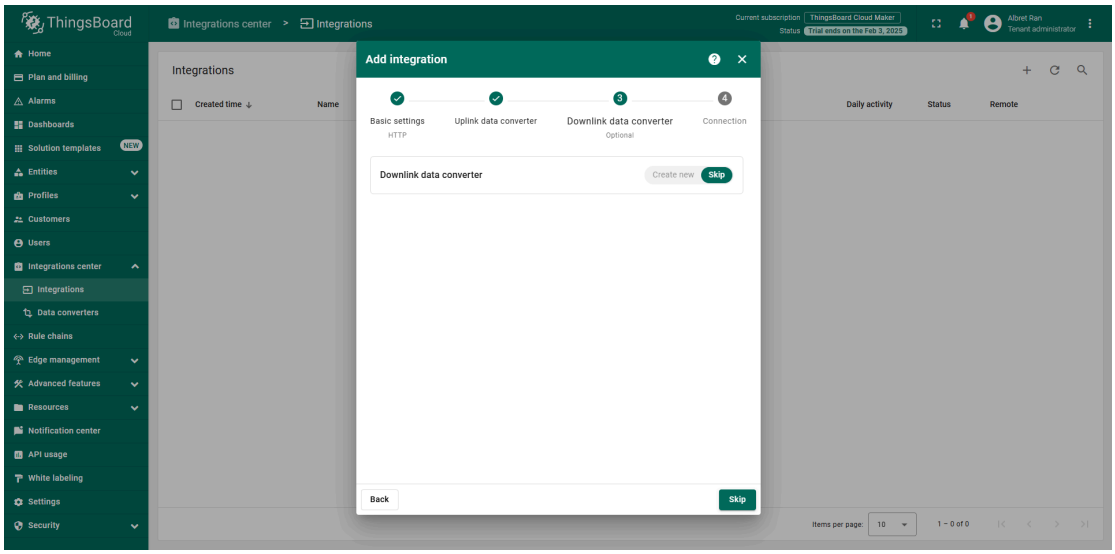
Enter "Milesight" in the Vendor field. The "Model" field will automatically display a dropdown list of all Milesight sensors. Select your sensor type. For this example, select "AM308: 8-in-1 IAQ Sensor":



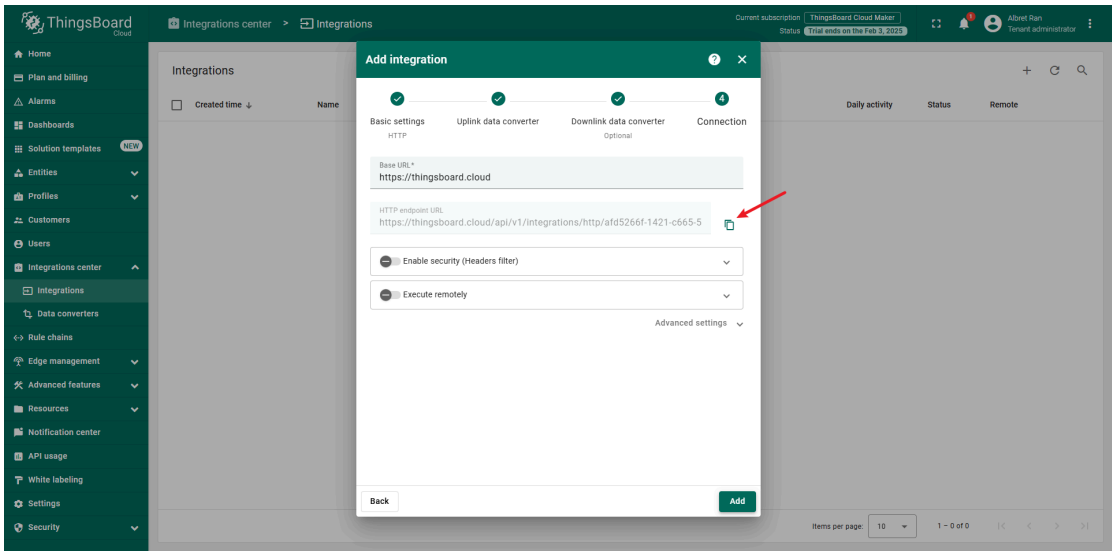
Once selected, the Decode script will be auto-populated:



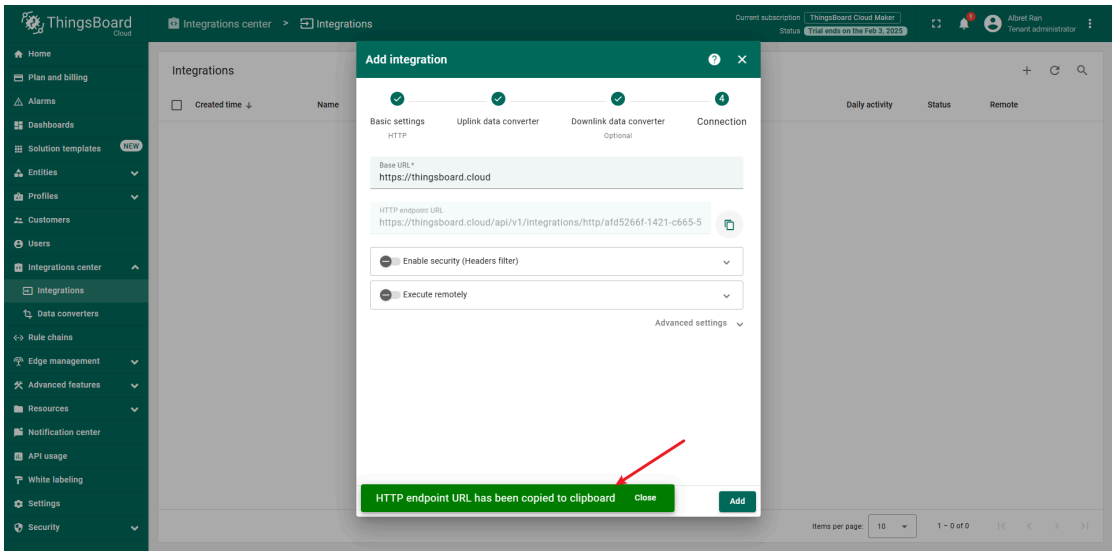
Click "Next" to create a new downlink converter or skip this step.

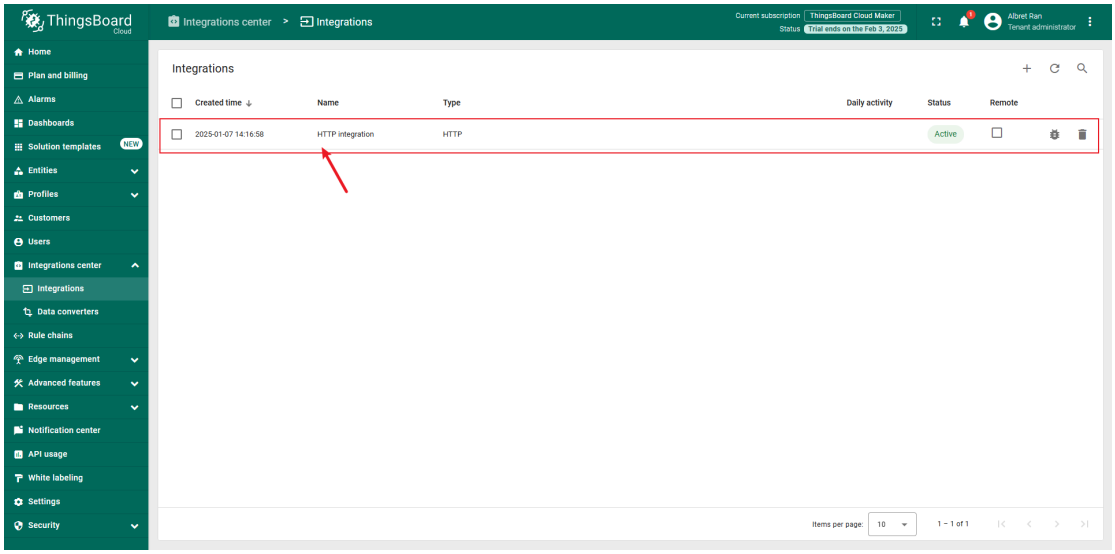


Copy the HTTP endpoint URL as it will be used later.



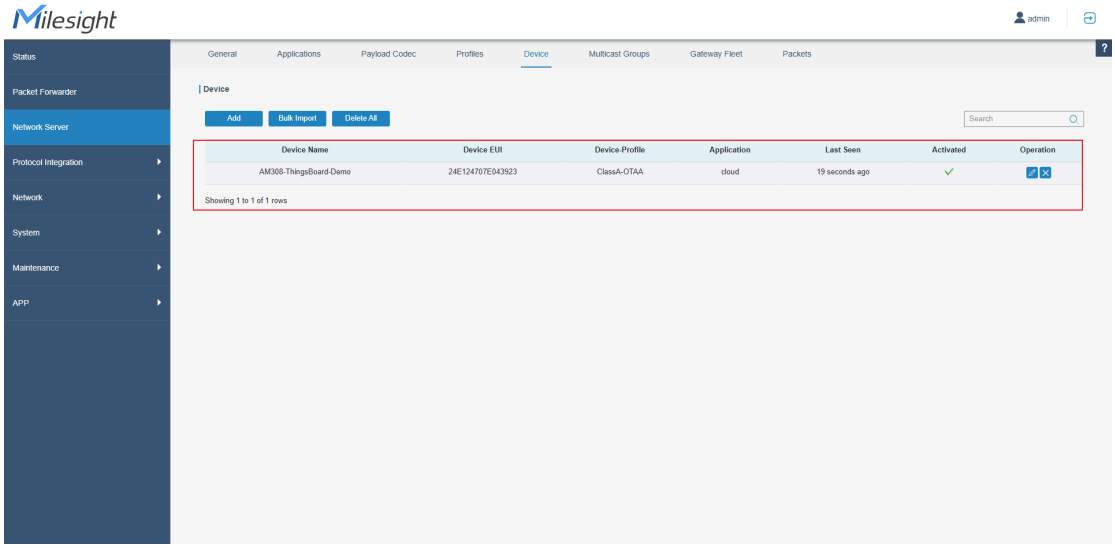
Click "Add" to complete the setup.



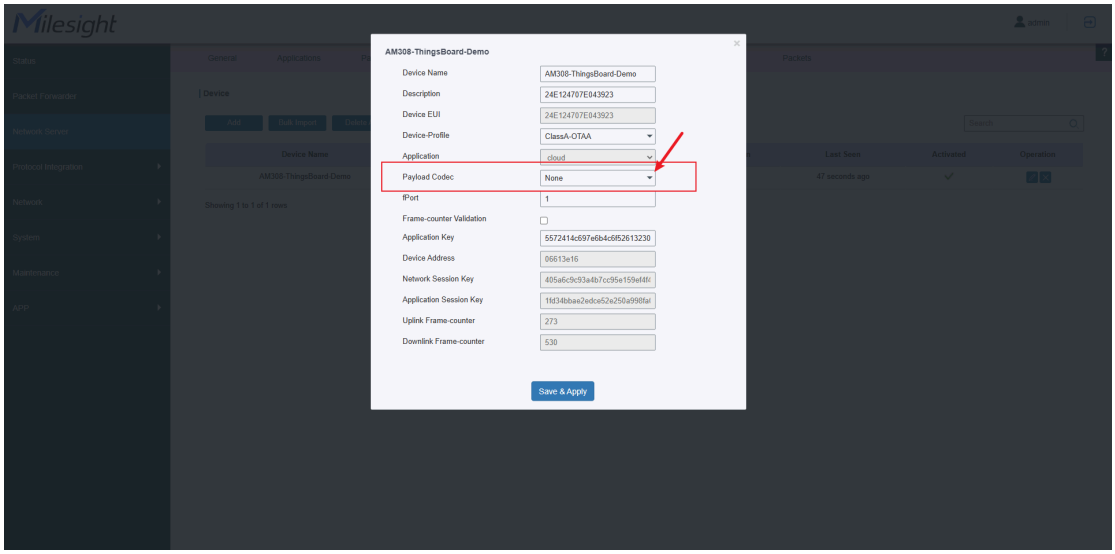


3.3.2. Add Sensors to the Gateway

Refer to artile **"How to Connect LoRaWAN Nodes to Milesight Gateway"** to add sensors to gateway.

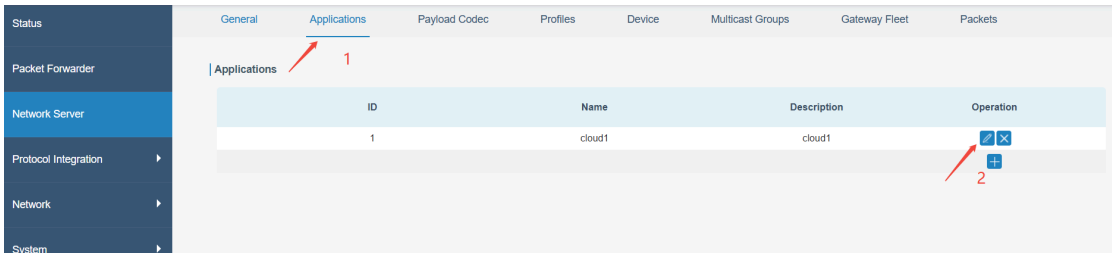


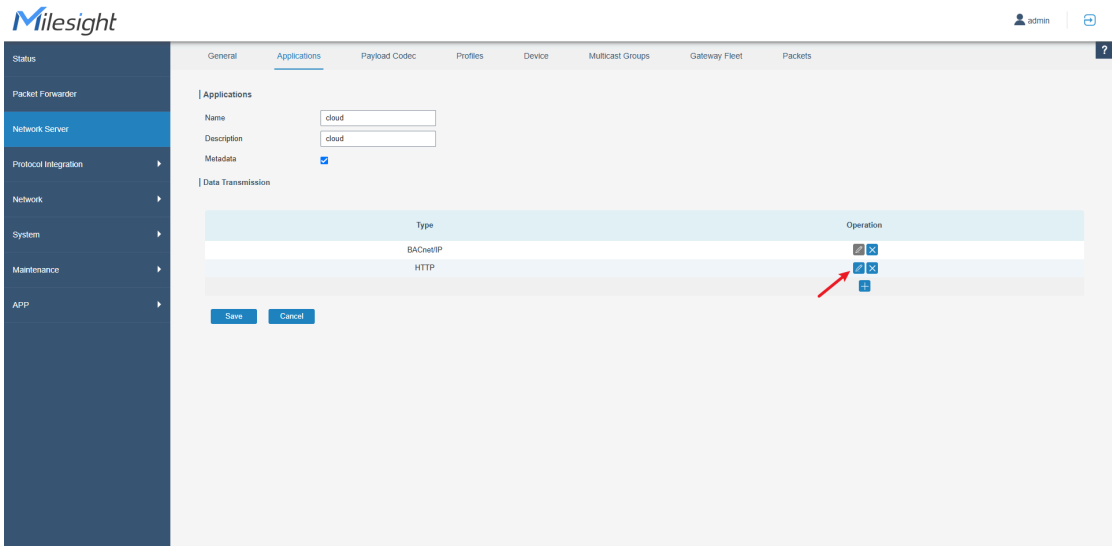
Note: Set "Payload Codec" to "None" since the decoding will be handled by ThingsBoard, not the gateway.



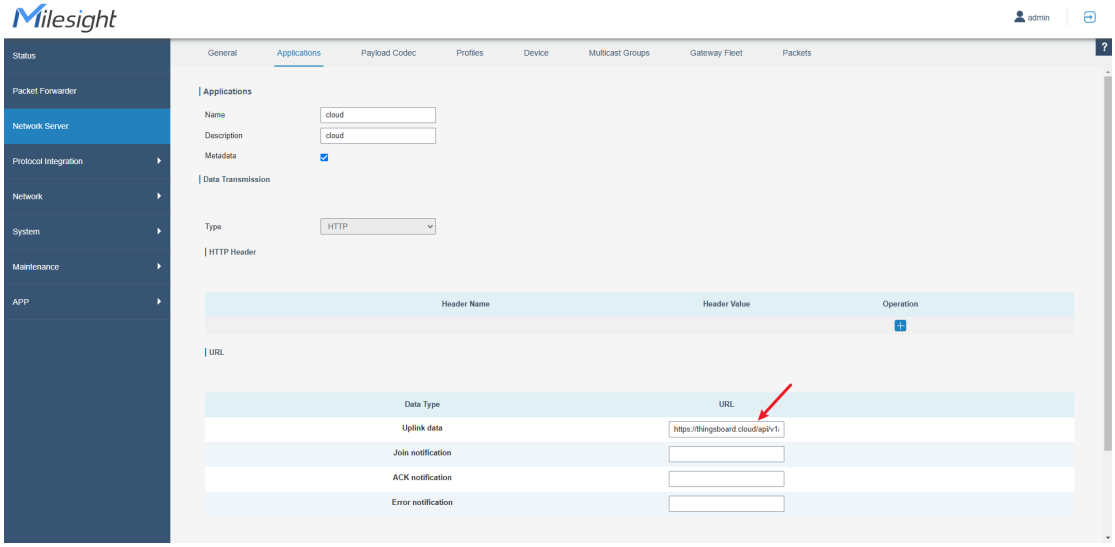
3.3.3. Add a HTTP Integration to Gateway

Go to **Application** page to add a HTTP integration:





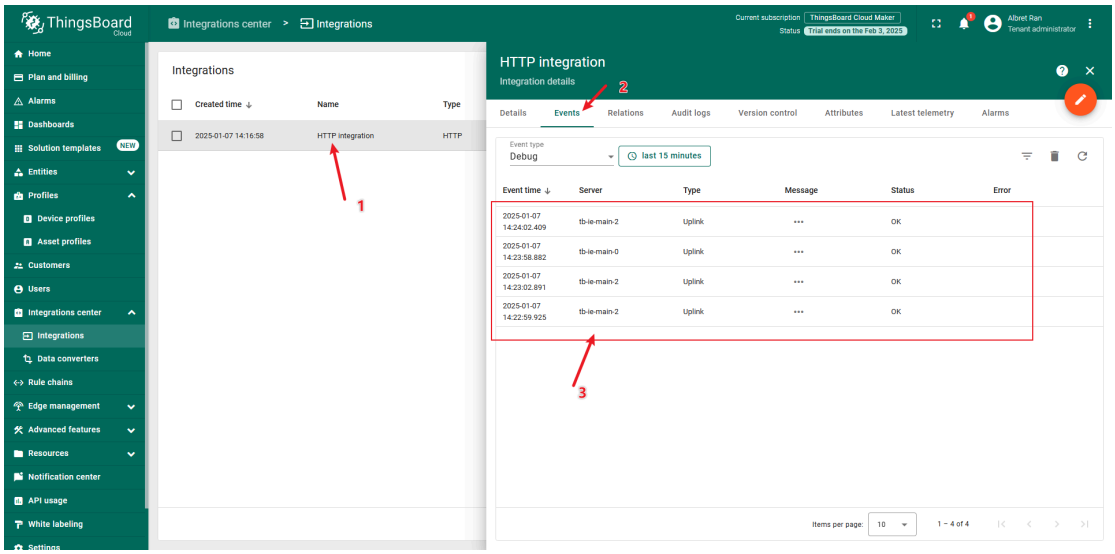
Enter the HTTP address obtained in Step 3.3.1 into the "Uplink data" configuration field.



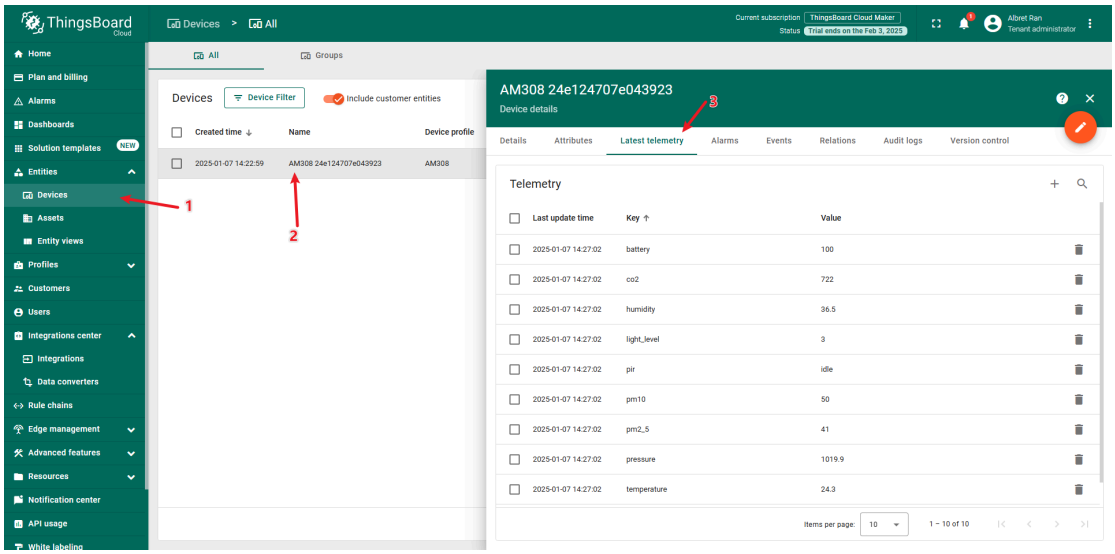
Click "Save" to complete the configuration.

3.3.4. Check Results

Click the integration:



You will see the AM308 device successfully transmitting data from UG65 to ThingsBoard.

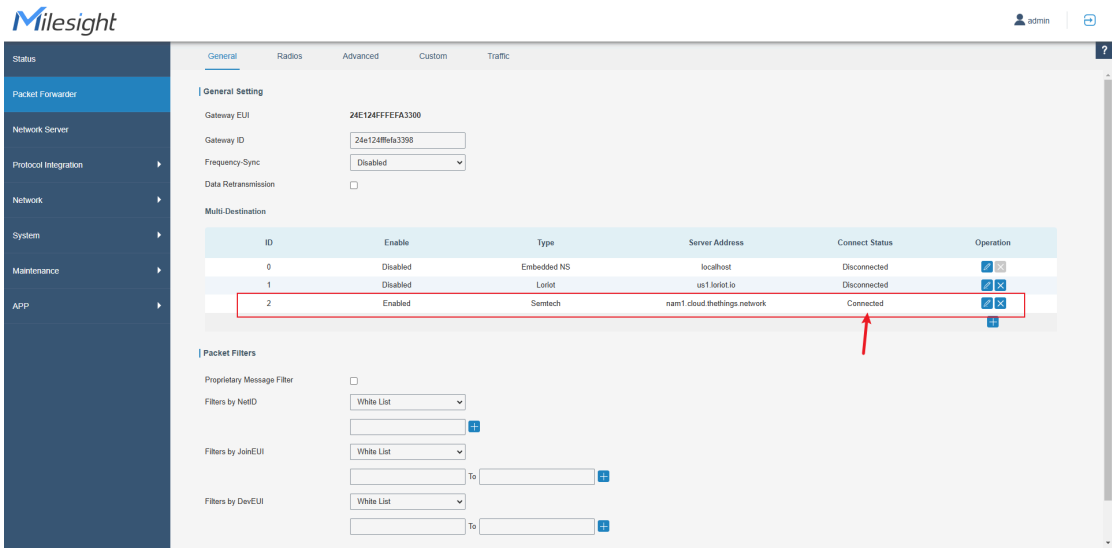


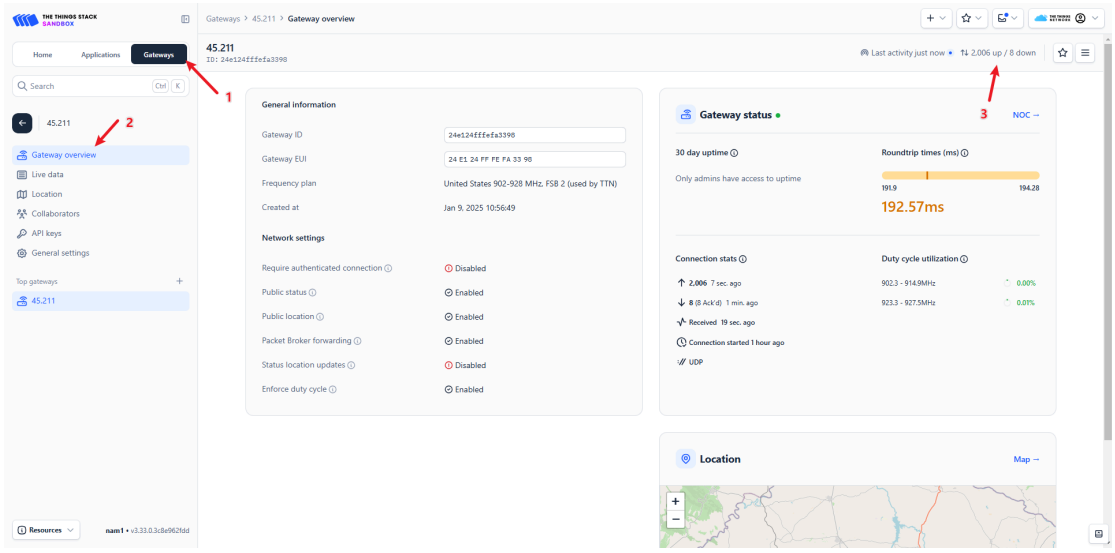
3.4. Integration via Third-Party LNS Platforms

T ake The Things Stack as example to integrate Milesight LoaWAN device s to Thingsboard.

3.4.1. Connect the Gateway to The Things Stack

Refer article " Milesight Gateway - The Things Stack(TTN) Integration via Basic Station" to connect gateway to The Things Stack and ensure the gateway is online.

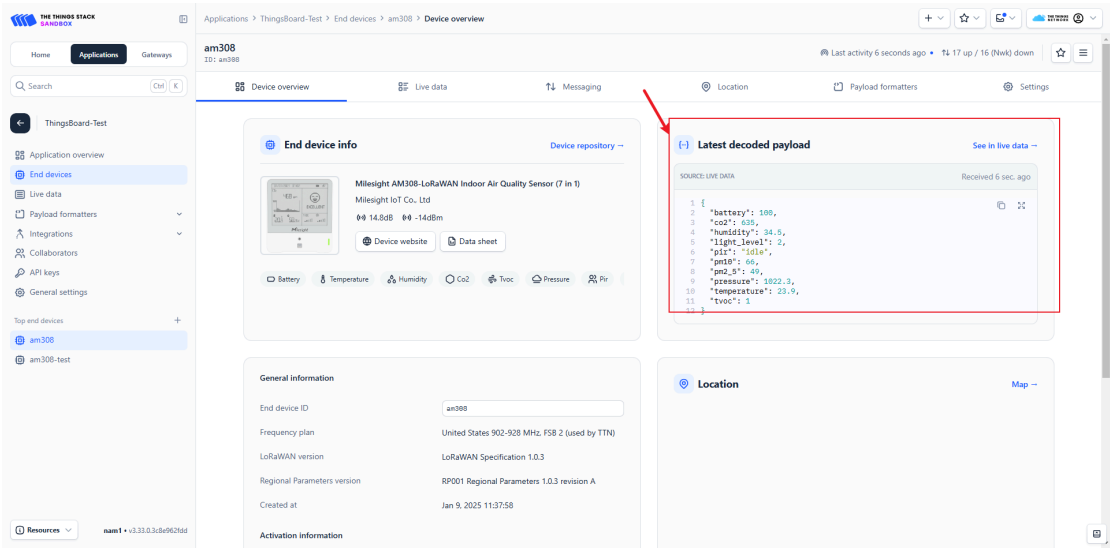


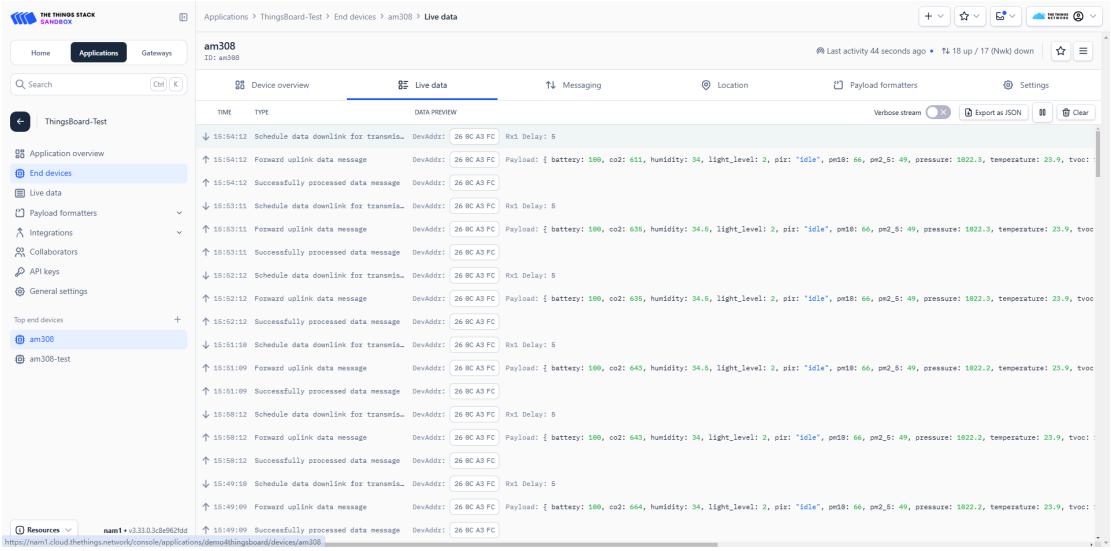


3.4.2. Add Devices to The Things Stack

Refer article "The Things Stack-Milesight LoRaWAN Device Integration" to add the LoRaWAN devices to The Things Stack.

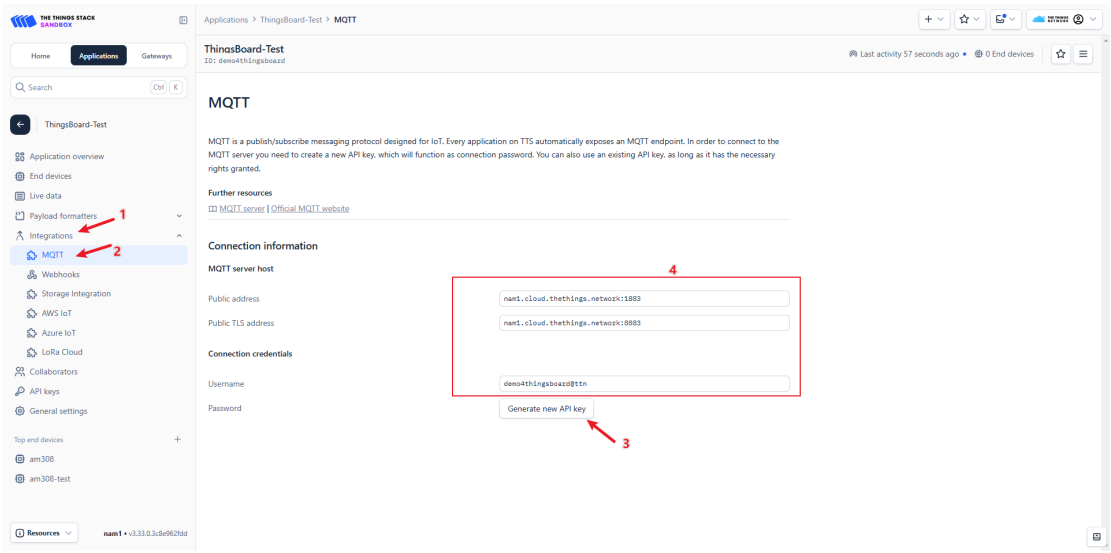
The result after adding is as follows:





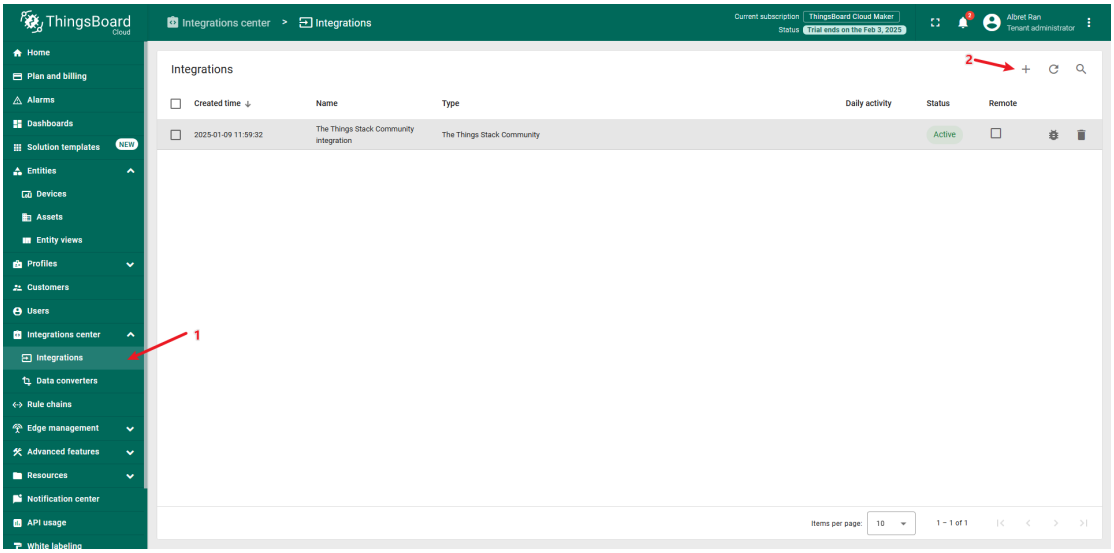
3.4.3. Get MQTT Server Information

Record the MQTT server information of The Things Stack and click “Generate new API key” to get the content of the key, which will be used in later steps.

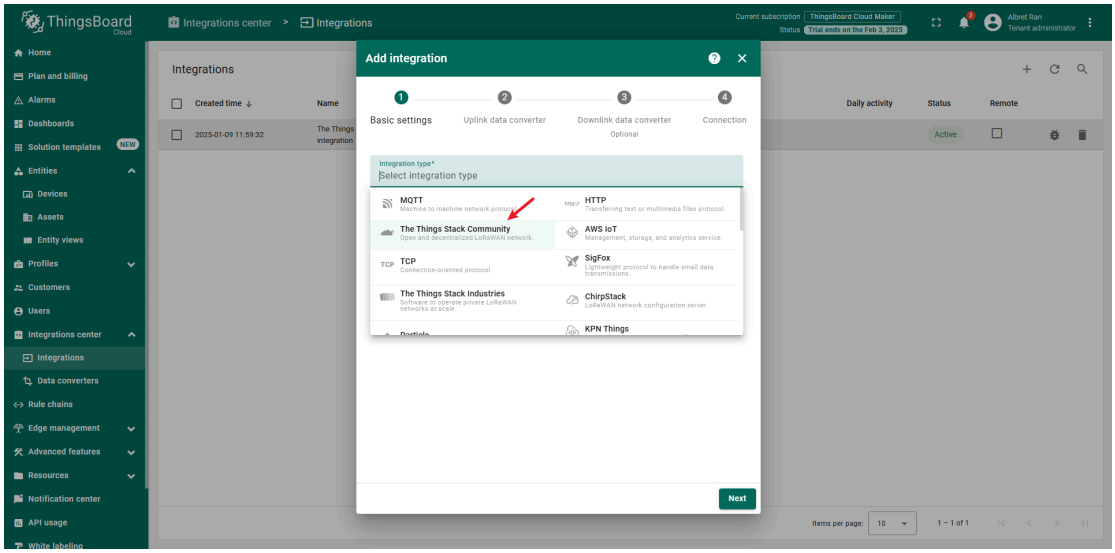


3.4.4. Create The Things Stack Community Integration

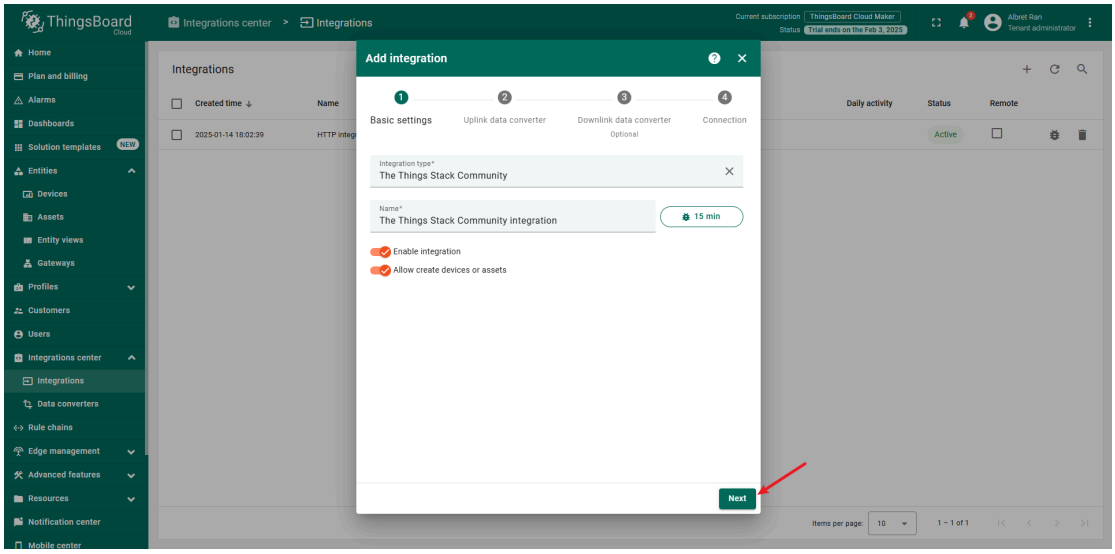
Add an integration:



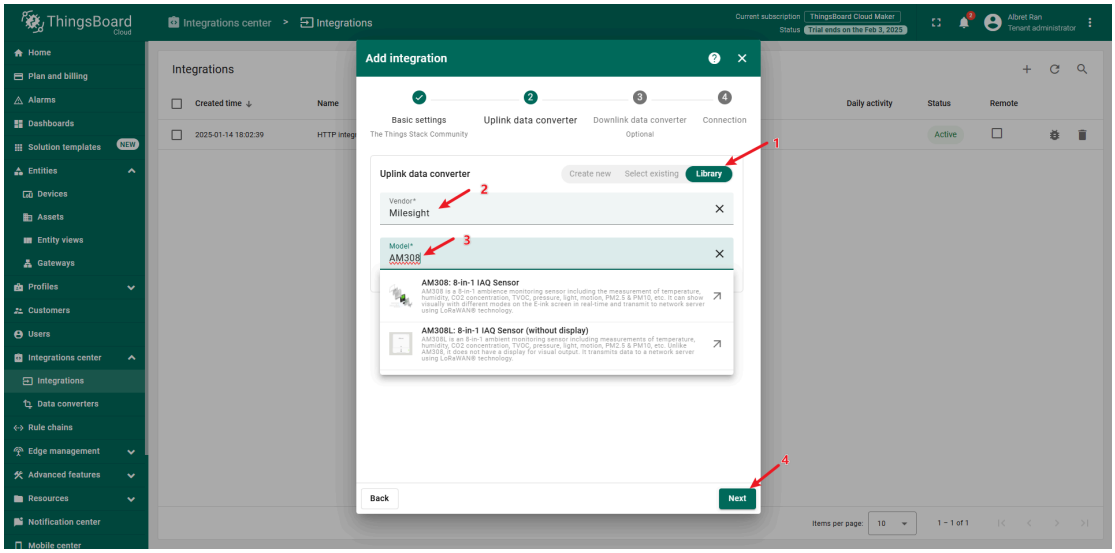
Select the option shown in the pop-up screen:



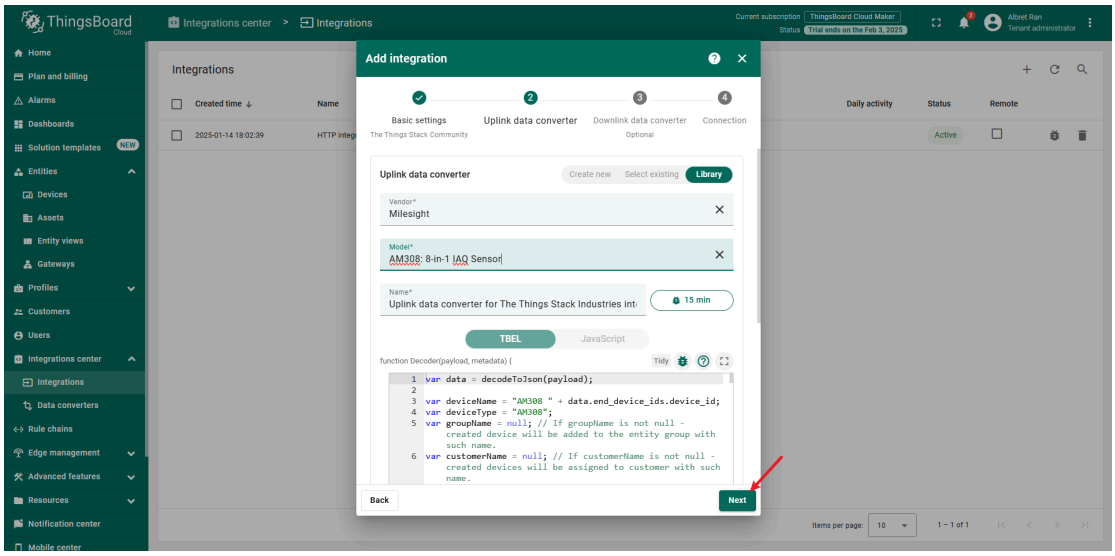
Click “Next”:



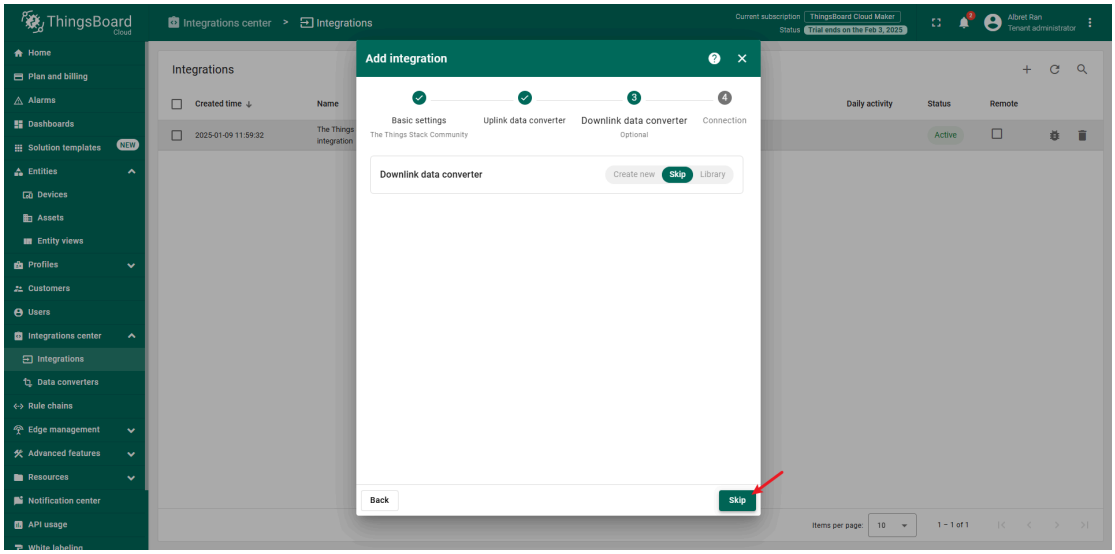
In the next interface, fill in “Milesight” for “Vendor”, then fill in ” AM308”, and scroll down to select the corresponding device:



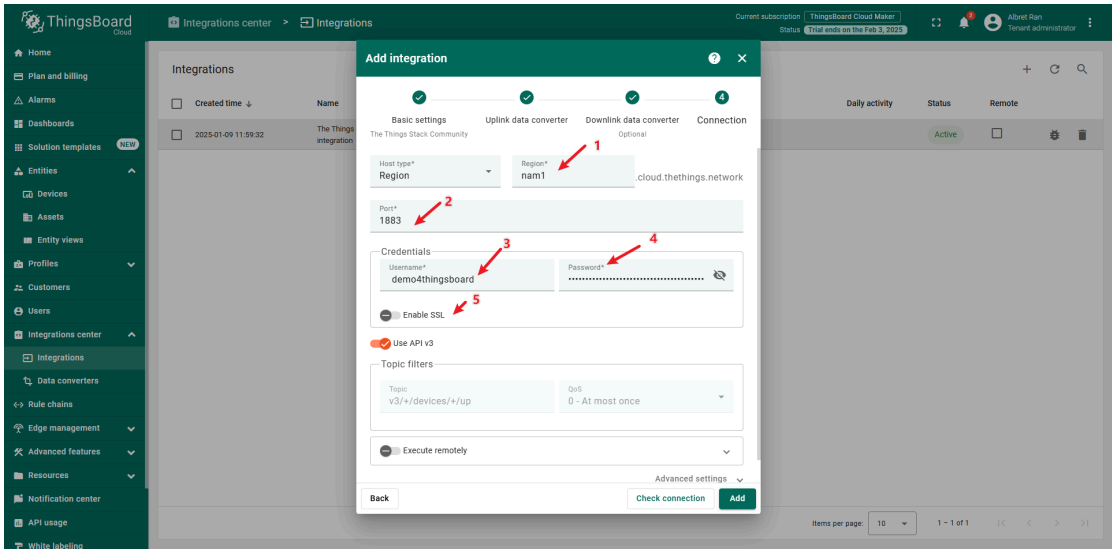
Once configured, click “Next”:



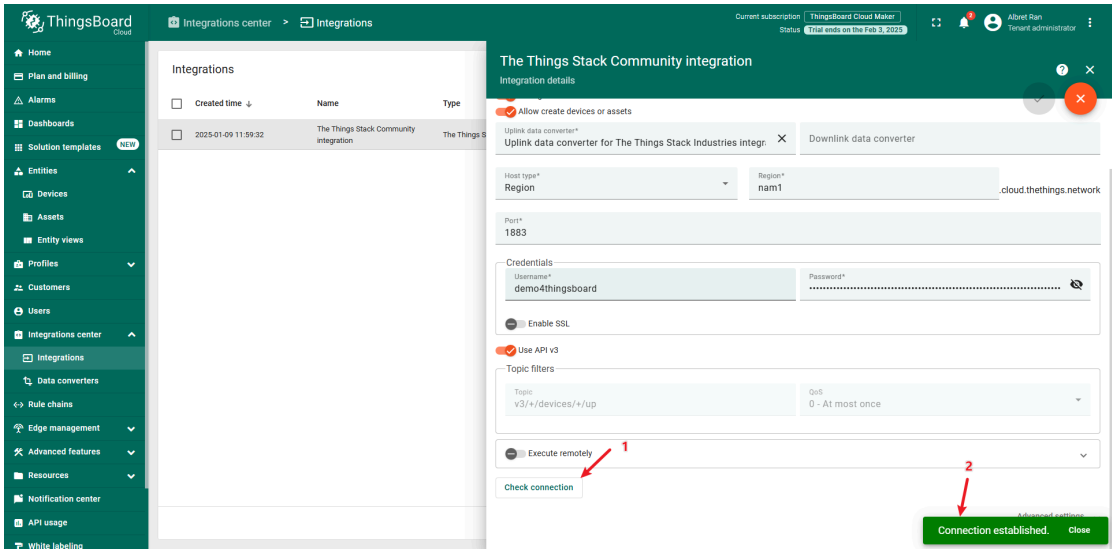
Click "Next" to create a new downlink converter or skip this step.



Just fill in the parameters as shown (all parameters here are taken from chapter 3.4.3):

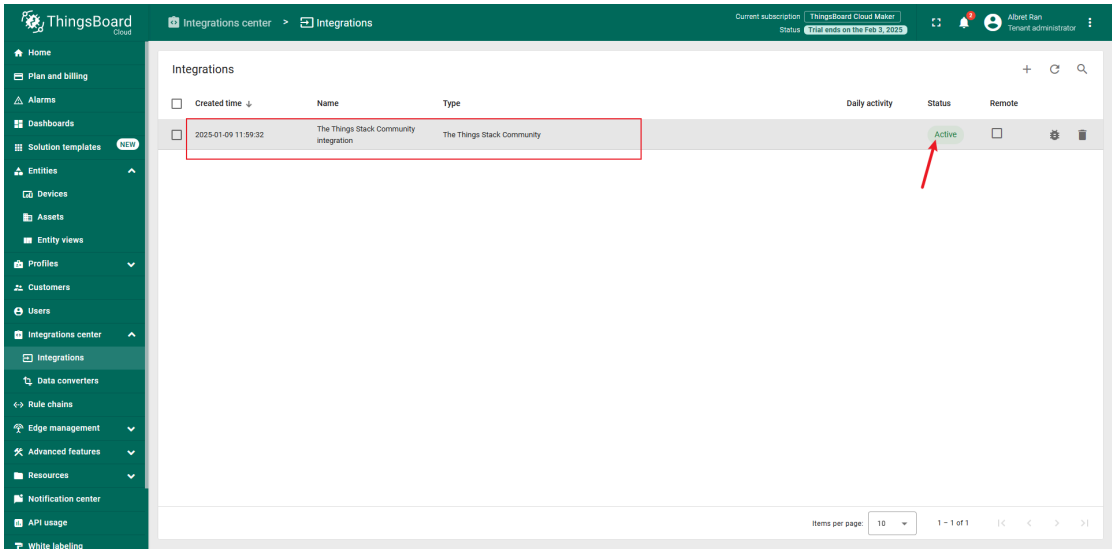


When the configuration is complete, click “Check connection”:

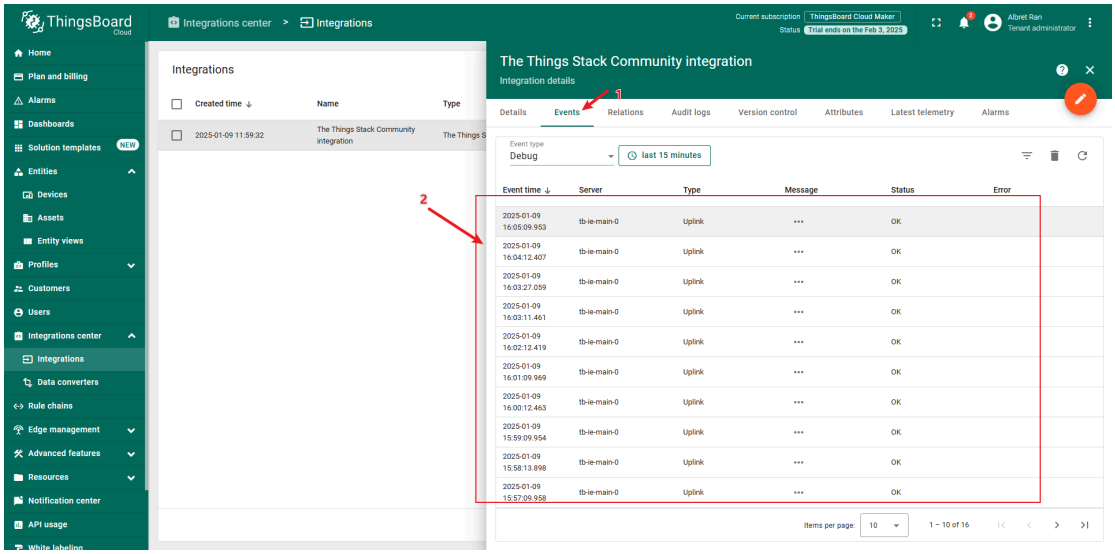


3.4.5. Check Results

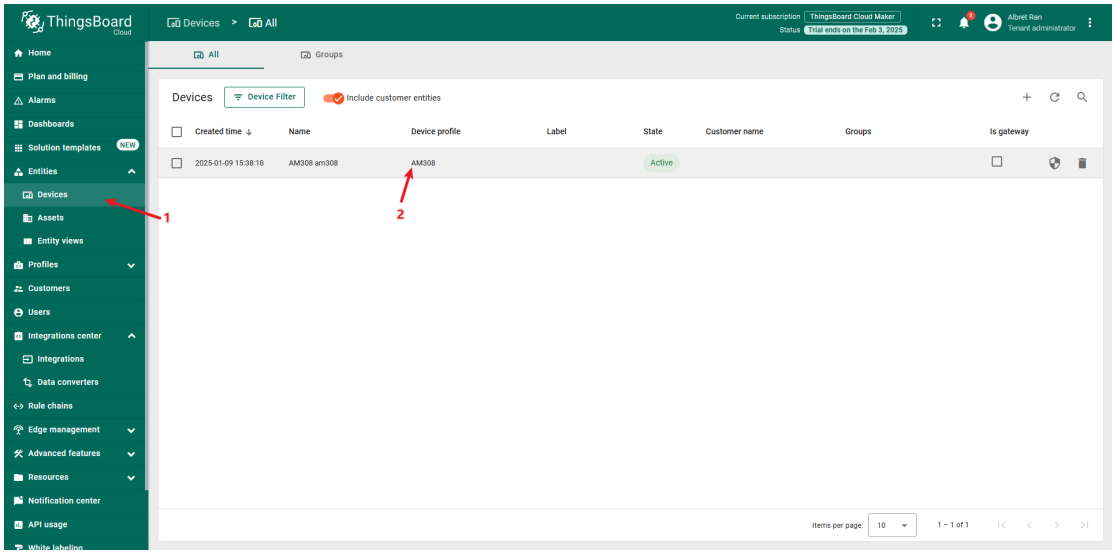
As shown in the figure, the ThingsBoard has successfully connected to The Things Stack, and the result is as follows:

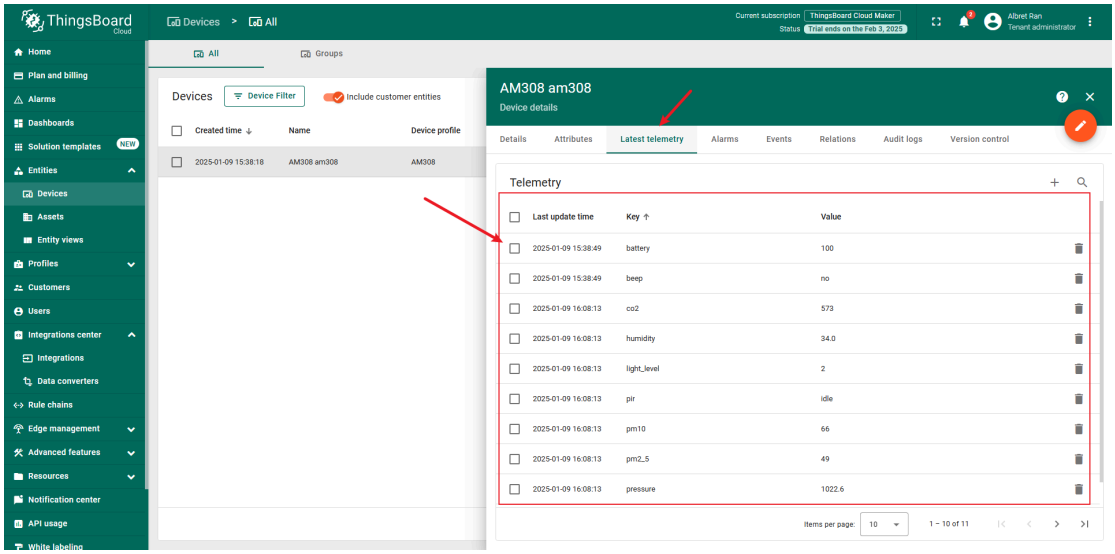


And you can see real-time device data:



And in **Devices** page, you can see the AM308 devices and see the real-time data:



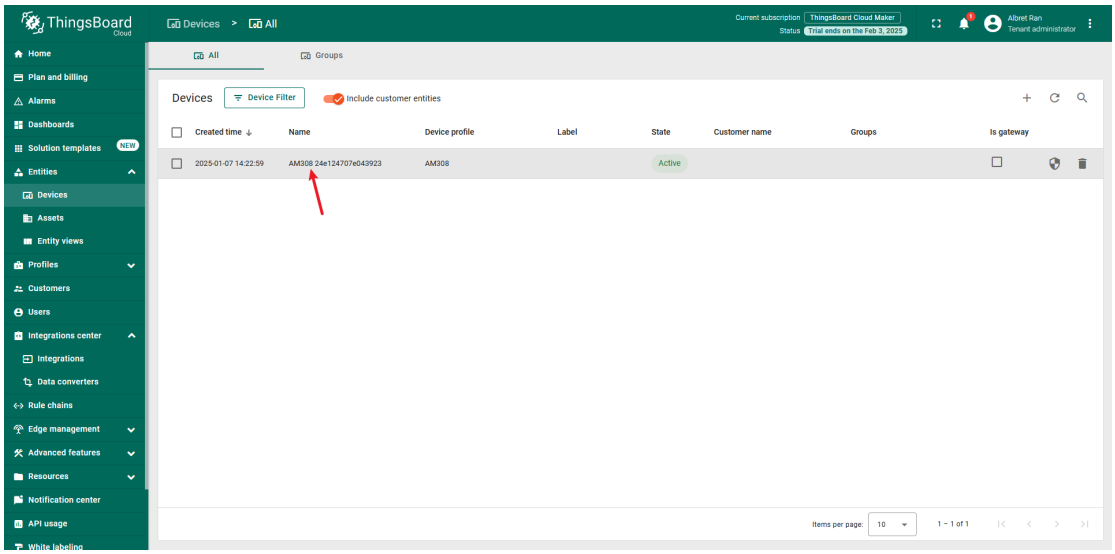


At this point, we have completed the interface between The Things Stack and the

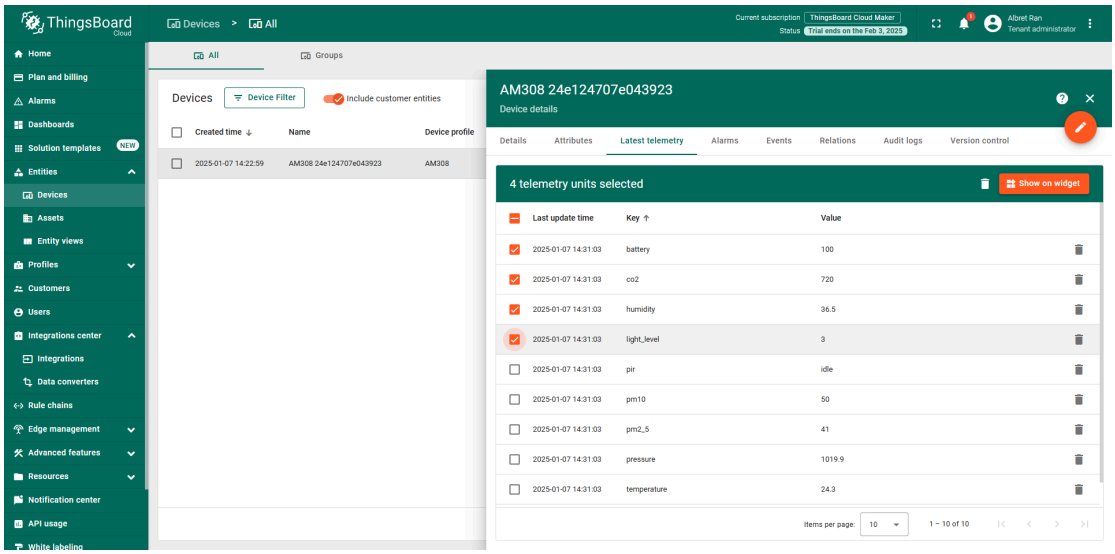
ThingsBoard platform, in which the data from the sensor AM308 is forwarded to The Things Stack through the UG65, and then forwarded to the ThingsBoard platform by The Things Stack. ThingsBoard can decode the data from AM308 in real time.

3.5. Create a Dashboard Example

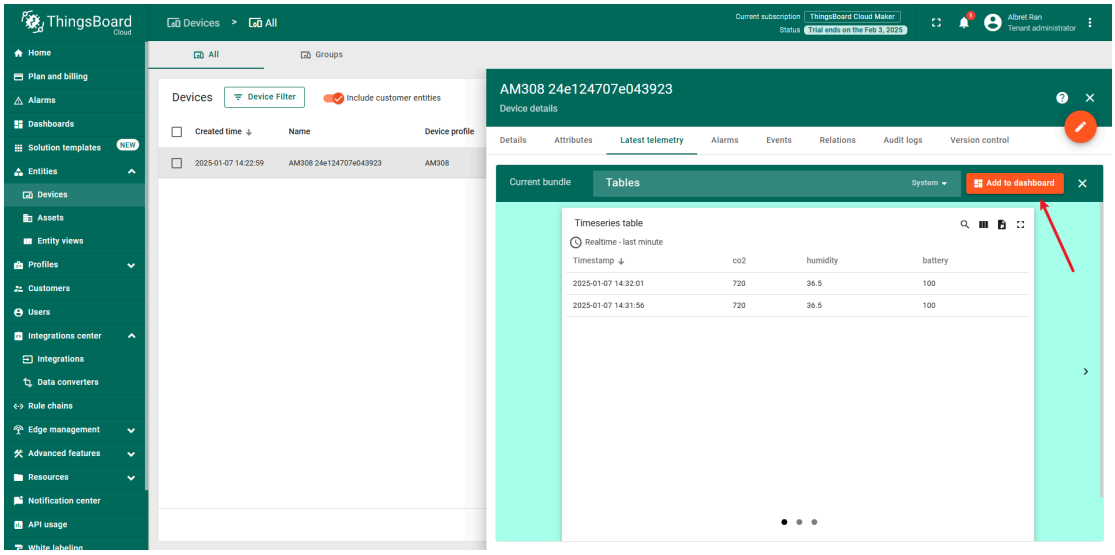
Click on the AM308 column:



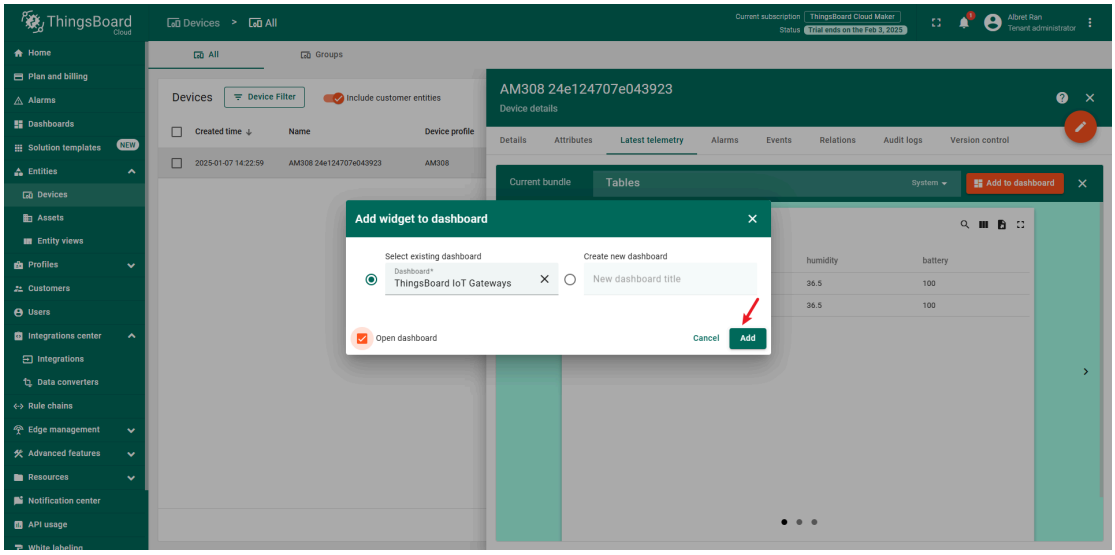
In the pop-up window, follow the configuration shown in the image and select the desired fields:



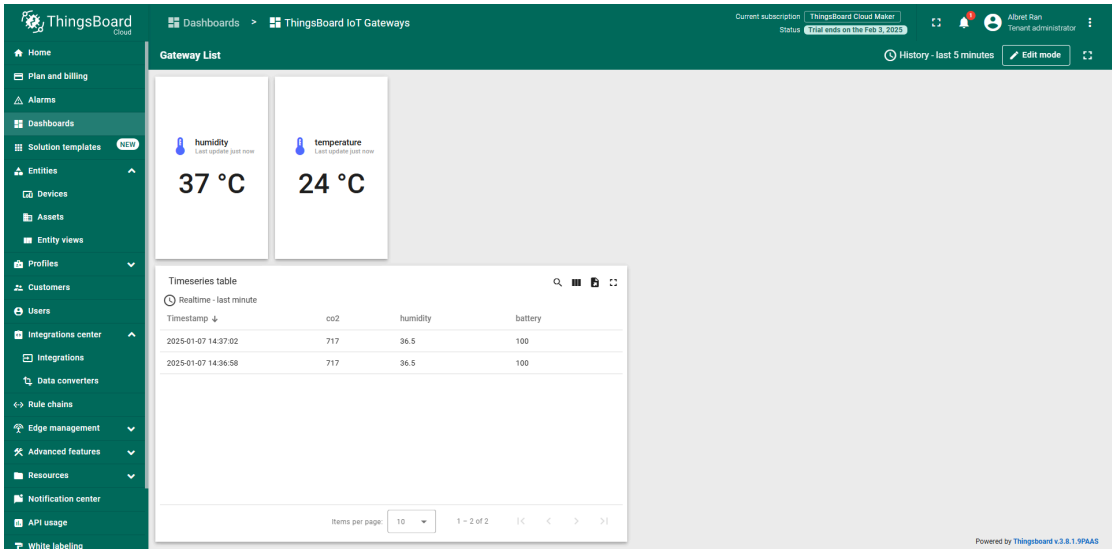
For this example, select battery, co2, humidity, and light_level. Click "Show on widget":



In the pop-up window, click "Add":



After a short wait, the Dashboard menu will display the newly created example:


ThingsBoard
Cloud
Dashboards > ThingsBoard IoT Gateways
Current subscription ThingsBoard Cloud Maker
Status Trial ends on the Feb 3, 2025
Albret Ran
Tenant administrator
Home
Plan and billing
Alarms
Dashboards
Solution templates
NEW
Entities
Devices
Assets
Entity views
Profiles
Customers
Users
Integrations center
Integrations
Data converters
Rule chains
Edge management
Advanced features
Resources
Notification center
API usage
White labeling
Gateway List
History - last 5 minutes
Edit mode
humidity
Last update just now
37 °C
temperature
Last update just now
24 °C
Timeseries table
Realtime - last minute
Timestamp
co2
humidity
battery
2025-01-07 14:37:02
717
36.5
100
2025-01-07 14:36:58
717
36.5
100
Items per page:
10
1 – 2 of 2
Powered by Thingsboard v.3.8.1.9PAAS

-END-