How to Integrate Milesight Gateways and Devices into the Zoho IoT Platform

Version Change Log			
Version	Revision Date	Revision Details	Revised By
V1.0	20250320	Initial	Lockon

Preface

Zoho IoT is an IoT solution launched by Zoho, aimed at helping enterprises manage and monitor IoT devices, enabling data collection, remote control, and automated operation and maintenance. The platform supports multiple protocols, offers visual dashboards, a rules engine, and API interfaces. It is applicable to scenarios such as smart industry, intelligent buildings, and remote asset management. As a globally recognized software company, Zoho's IoT solution integrates seamlessly with its ecosystem, helping businesses improve operational efficiency and data-driven decision-making.

This document mainly explains how to use a UG65 gateway to connect to the Zoho IoT platform , and demonstrates the complete process of adding AM308 devices to Zoho IoT as examples.

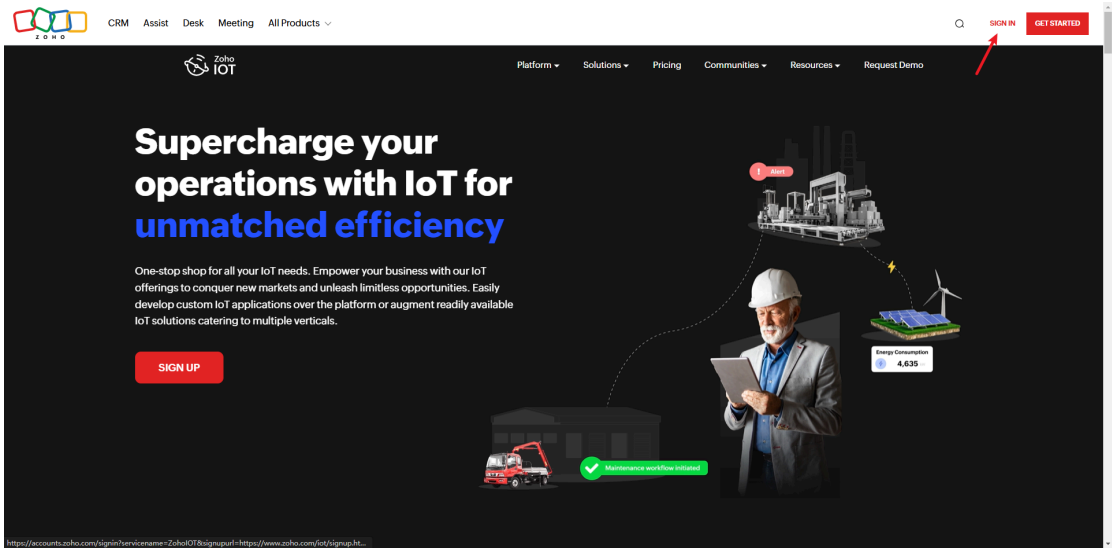
1. Prerequisites

- **Gateway model:** UG65 or UG56 / UG67 also supported
- **Sensor models:** AM308
- **Frequency band used in this demo:** US915
- **The gateway must be connected to the internet**

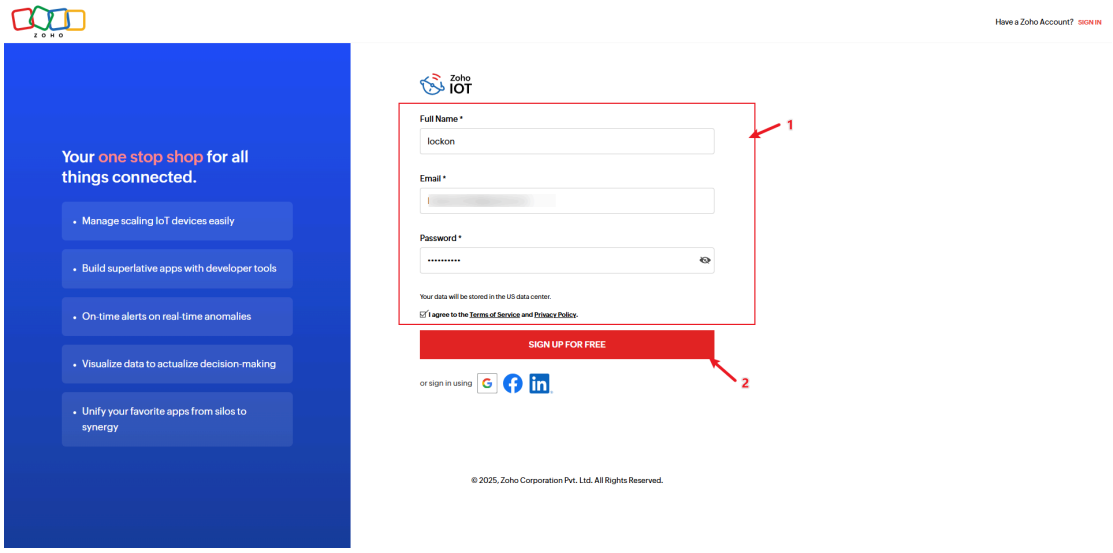
Note: You may use other LoRaWAN devices based on your actual needs. The AM devices mentioned here are for demonstration purposes only. This does not imply that other types of LoRaWAN devices are unsupported.

2. Register a Zoho IoT Account

Visit https://www.zoho.com/iot/ and click **SIGN IN** in the top right corner:



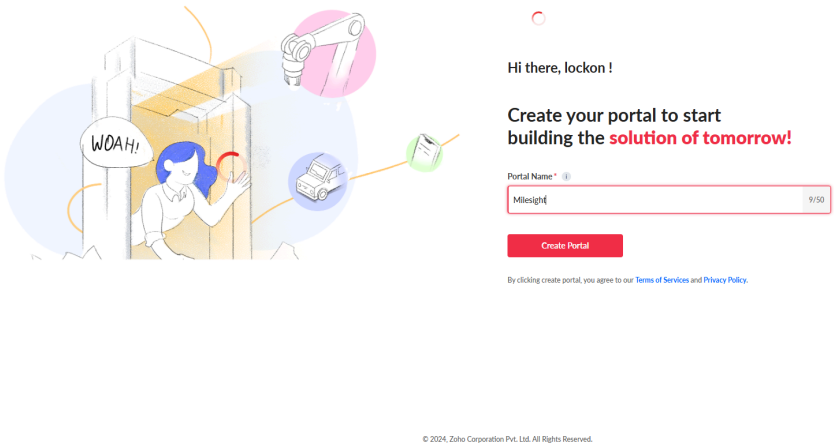
On the redirected page, fill in your basic information as required:



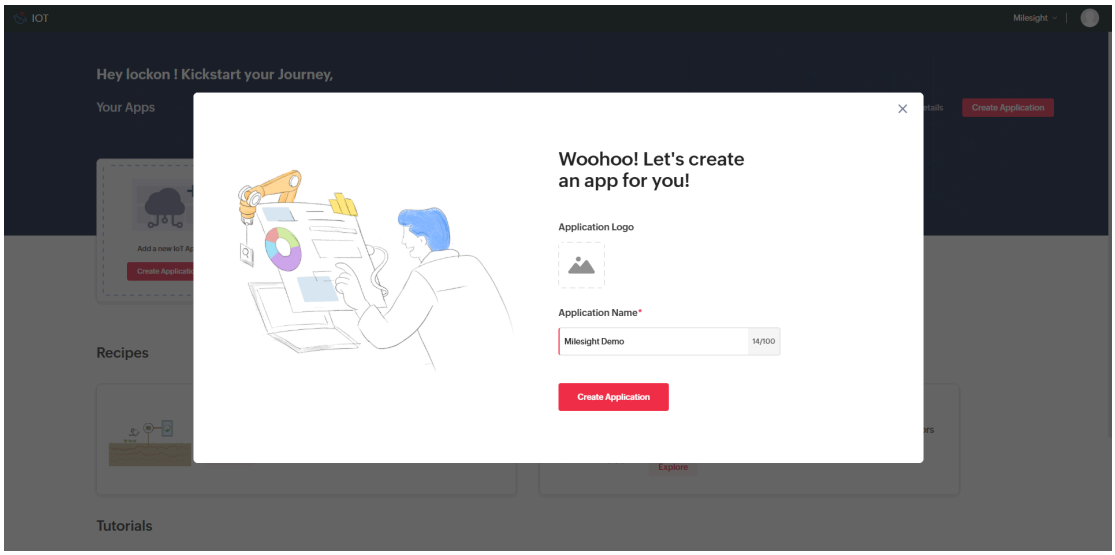
3. First Login

After logging in for the first time, the platform will guide you to create your first Portal.

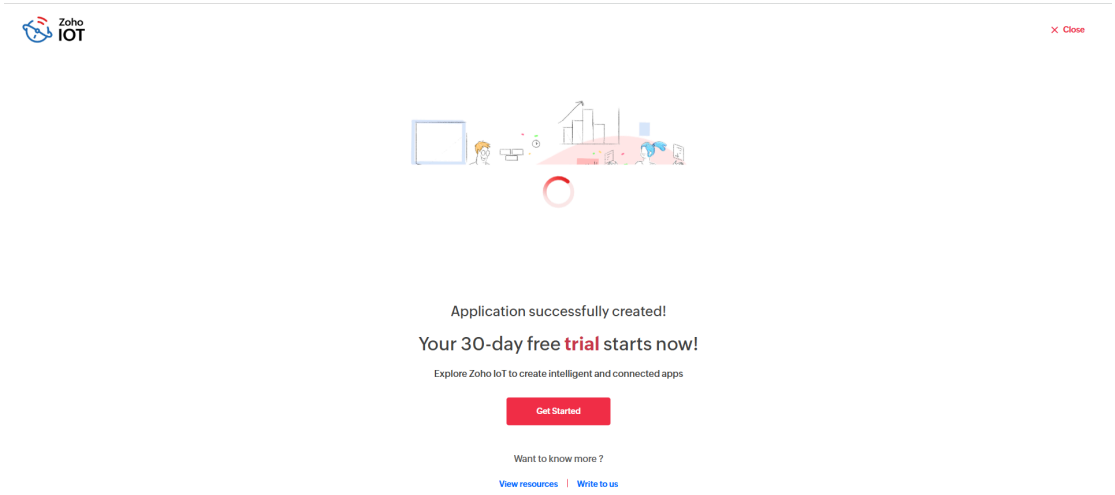
Use “Milesight” as an example name, or choose any name based on your situation:

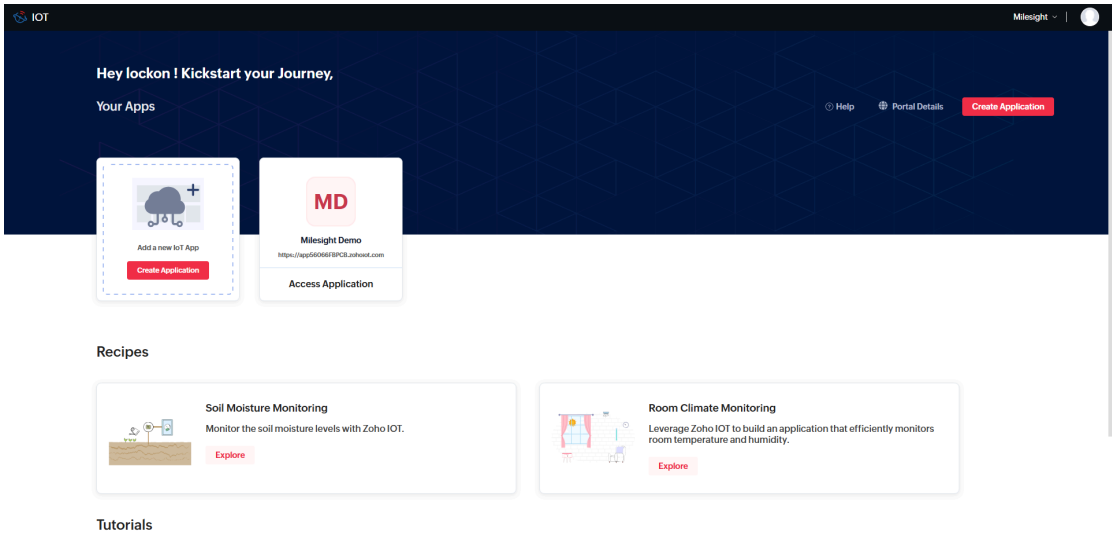


Next, you'll be prompted to create your first Application.
Here, we use "**Milesight Demo**" as an example:



Since we're using a Free account, there's a 30-day free trial. You can modify or extend the trial later based on your needs:

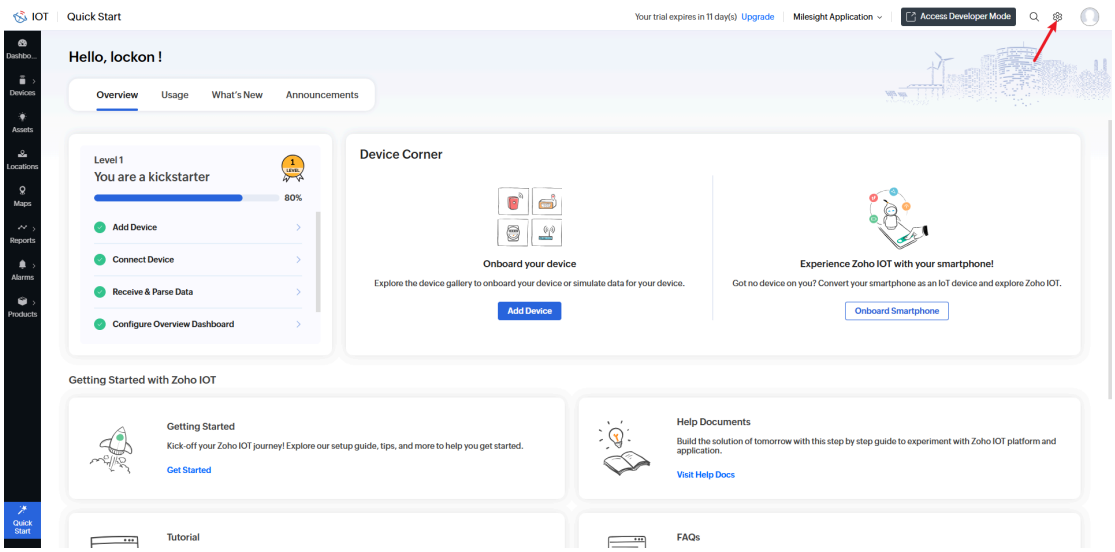


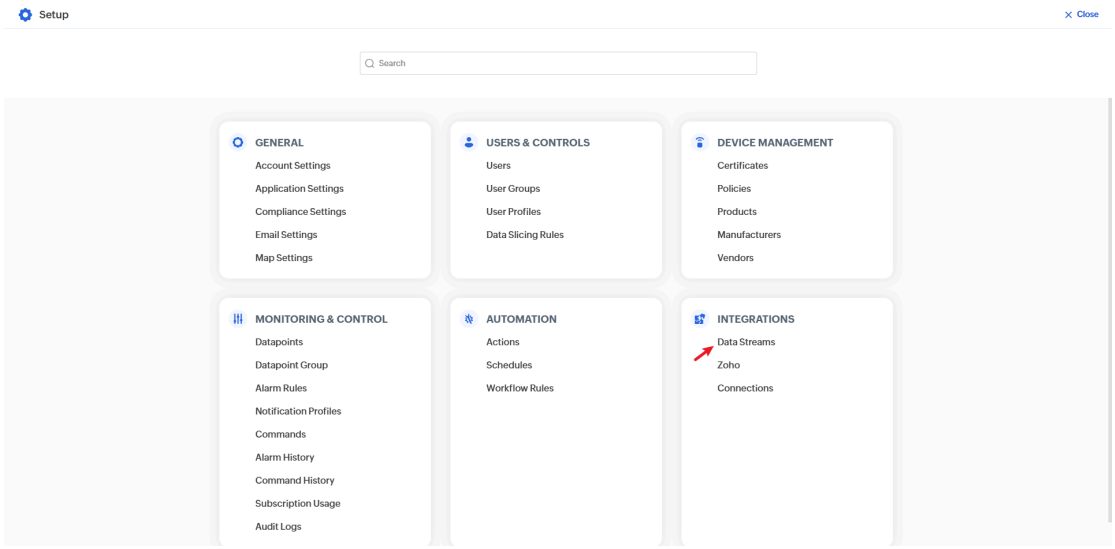


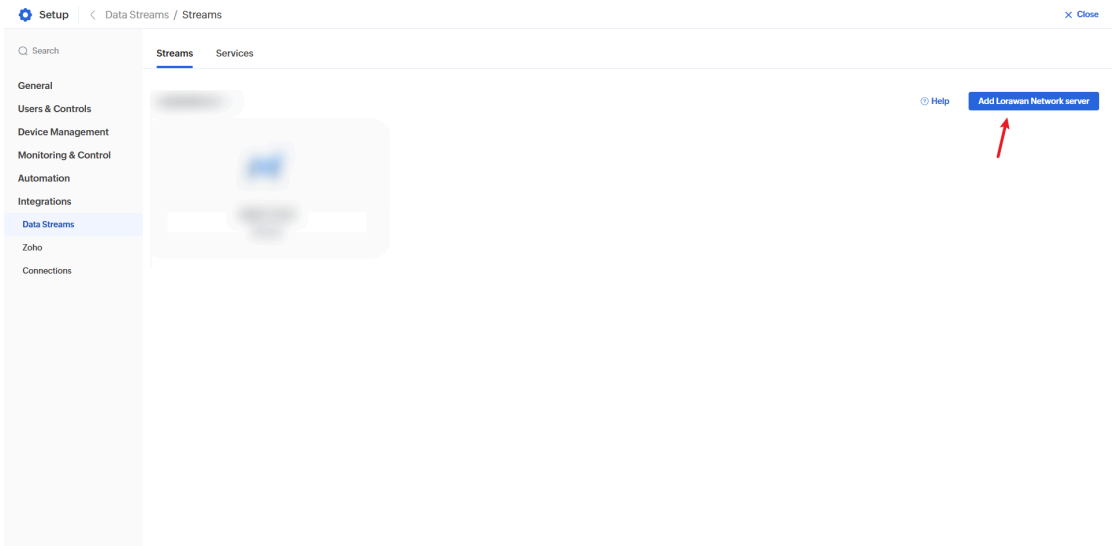
At this point, your first **Application** is created. All subsequent configurations will be done within this application.

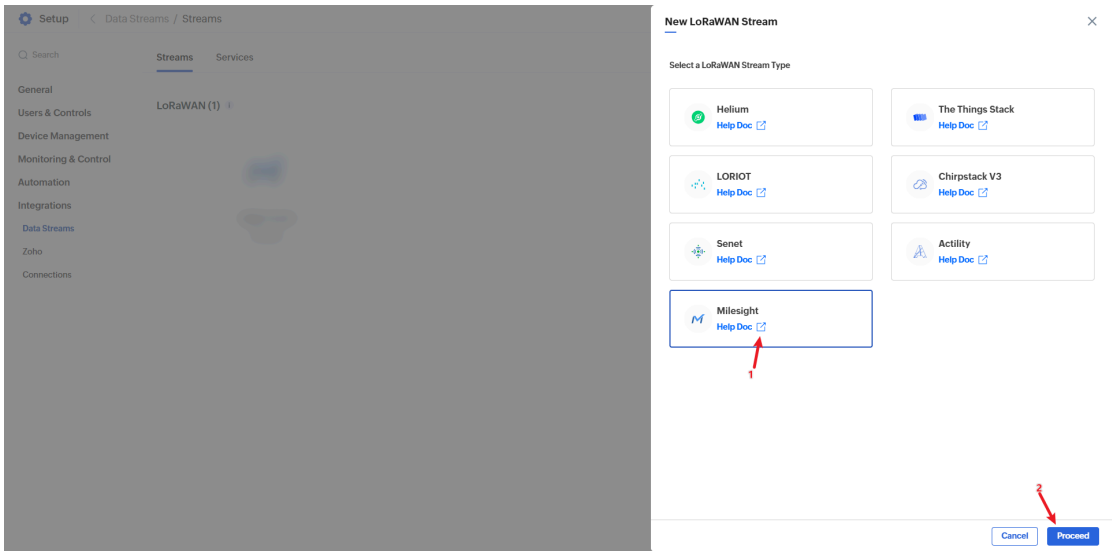
4. Create Data Streams

Follow the operation steps shown in the figure:

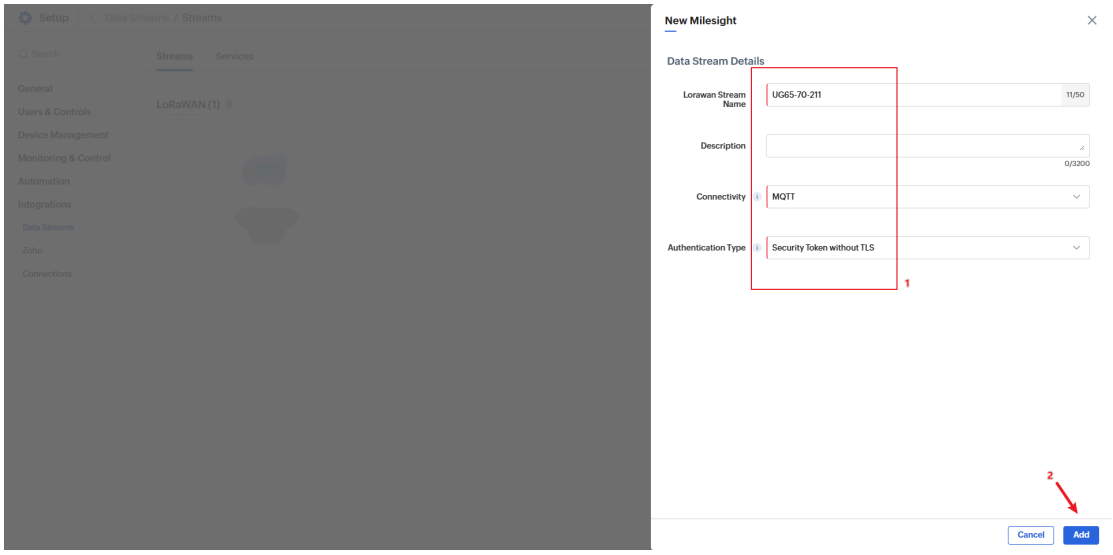

IOT
Quick Start
Your trial expires in 11 day(s) Upgrade
Milesight Application
Access Developer Mode
Hello, lockon !
Overview
Usage
What's New
Announcements
Level 1
You are a kickstarter
80%
Add Device
Connect Device
Receive & Parse Data
Configure Overview Dashboard
Device Corner
Onboard your device
Explore the device gallery to onboard your device or simulate data for your device.
Add Device
Experience Zoho IOT with your smartphone!
Got no device on you? Convert your smartphone as an IoT device and explore Zoho IOT.
Onboard Smartphone
Getting Started with Zoho IOT
Getting Started
Kick-off your Zoho IOT journey! Explore our setup guide, tips, and more to help you get started.
Get Started
Help Documents
Build the solution of tomorrow with this step by step guide to experiment with Zoho IOT platform and application.
Visit Help Docs
Tutorial
FAQs
Quick Start


Setup
Close
Search
GENERAL
Account Settings
Application Settings
Compliance Settings
Email Settings
Map Settings
USERS & CONTROLS
Users
User Groups
User Profiles
Data Slicing Rules
DEVICE MANAGEMENT
Certificates
Policies
Products
Manufacturers
Vendors
MONITORING & CONTROL
Datapoints
Datapoint Group
Alarm Rules
Notification Profiles
Commands
Alarm History
Command History
Subscription Usage
Audit Logs
AUTOMATION
Actions
Schedules
Workflow Rules
INTEGRATIONS
Data Streams
Zoho
Connections


Setup
Data Streams / Streams
Close
Search
General
Users & Controls
Device Management
Monitoring & Control
Automation
Integrations
Data Streams
Zoho
Connections
Streams
Services
Help
Add Lorawan Network server

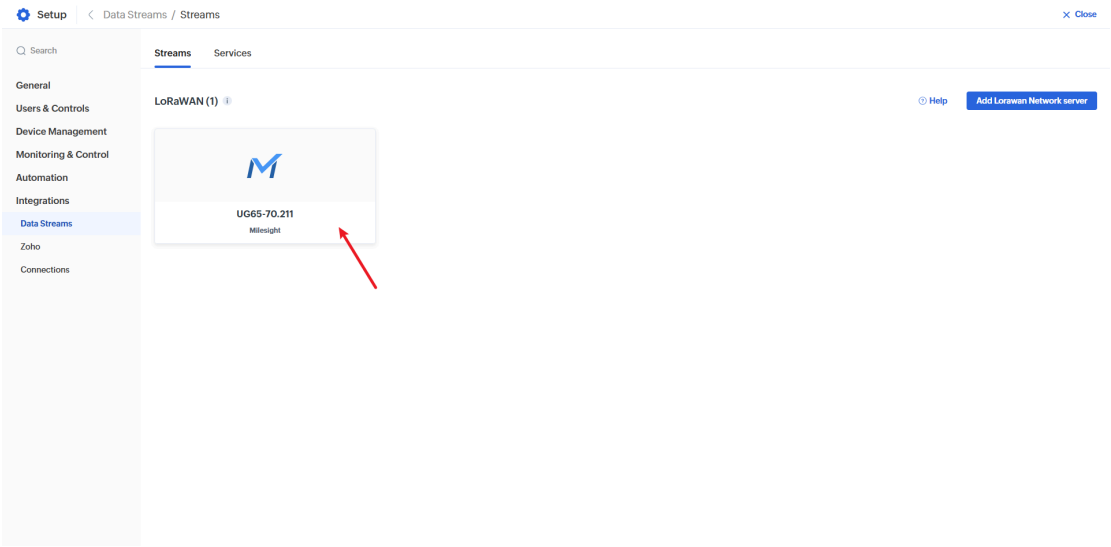


Configure the data stream according to the following information:



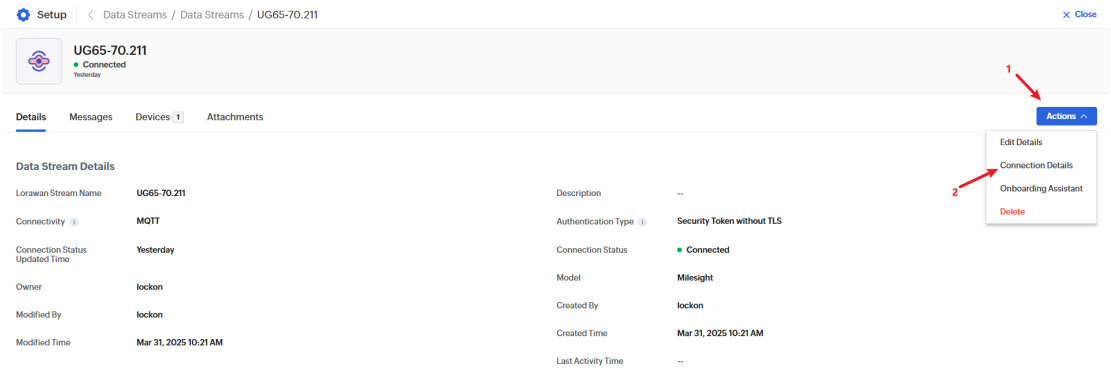
Note: For demonstration purposes, security authentication is disabled here. Please configure the settings based on your actual requirements.

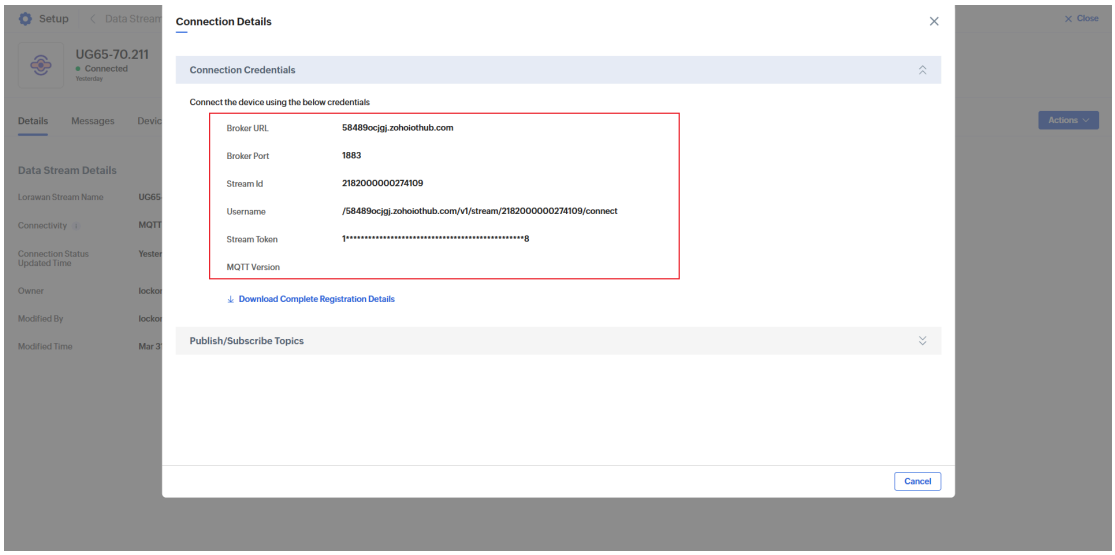
After adding, the result should look like this:

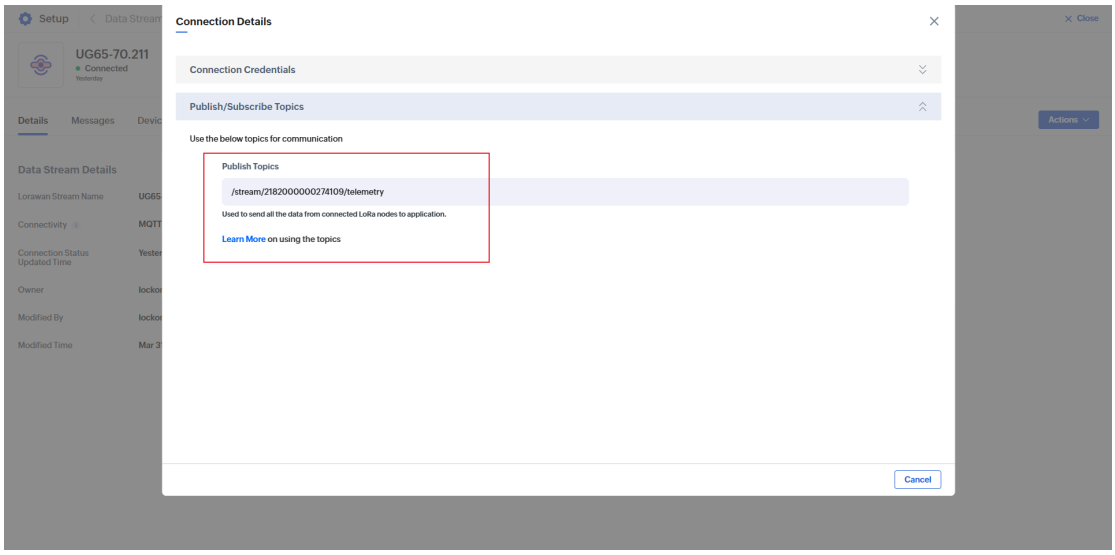


Click on the created data stream.

Follow the screenshot below to obtain the MQTT connection information from the platform:





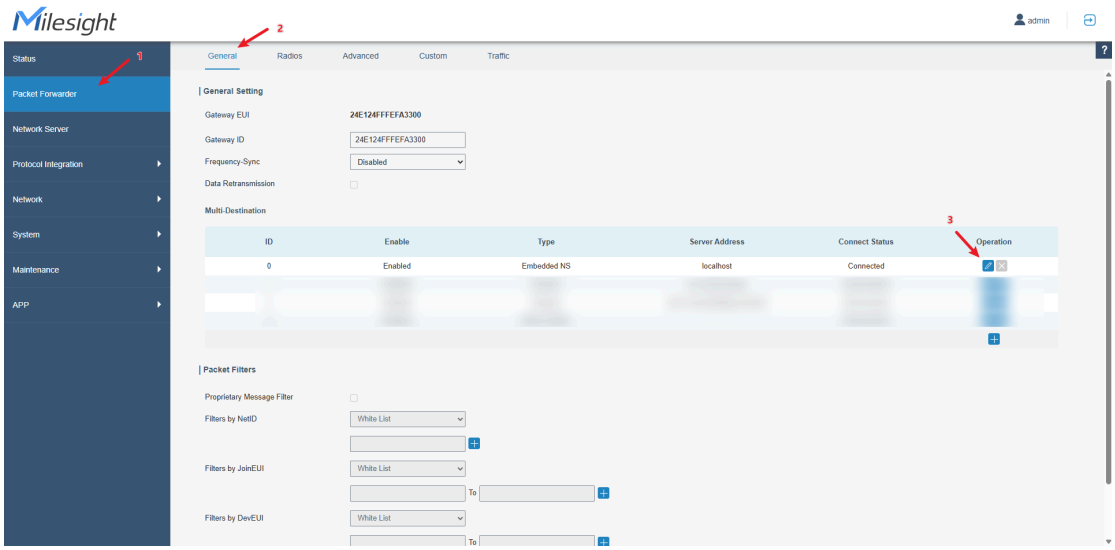


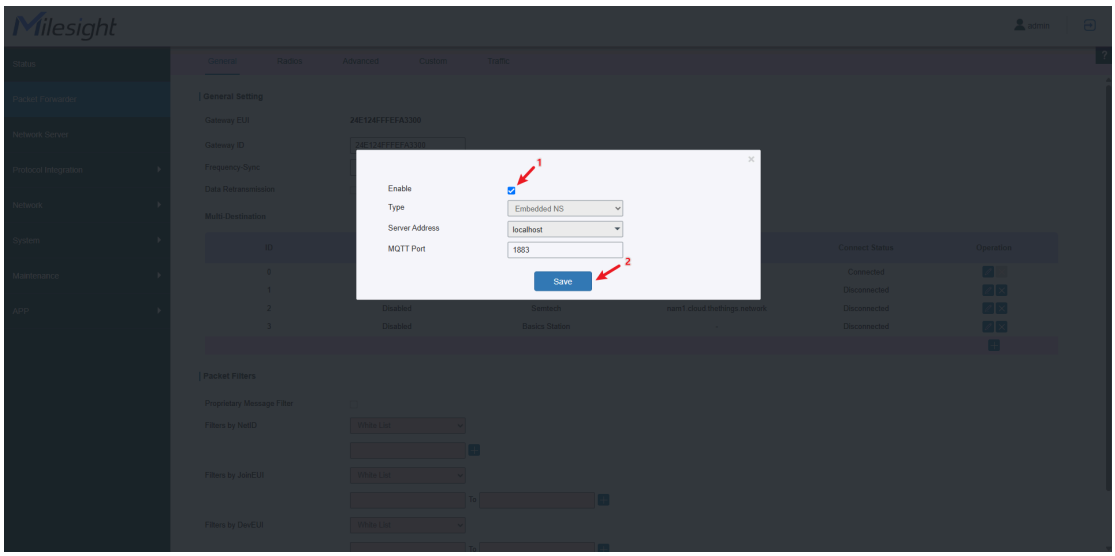
Record this information as it will be needed later when configuring the gateway.

5. Configure the Gateway

5.1. Enable Built-in Network Server

Log into the gateway's web interface. Follow the steps shown in the screenshot (skip this step if it's already enabled):

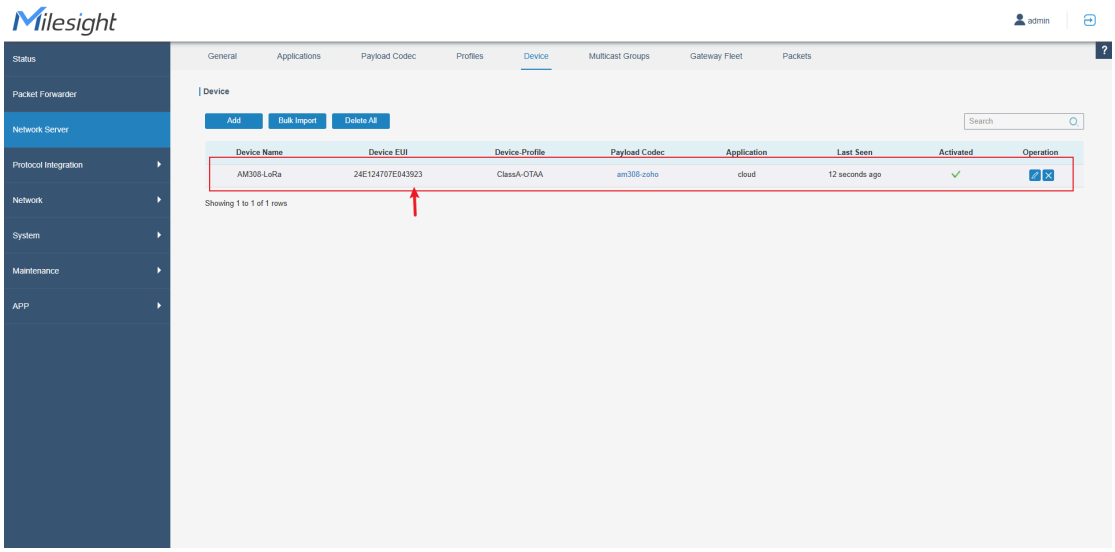




Now the built-in network server is enabled.

5.2. Add AM308 Device

Refer to the guide <How to Connect LoRaWAN Nodes to Milesight Gateway> for this step. Once added, the result should look like this:

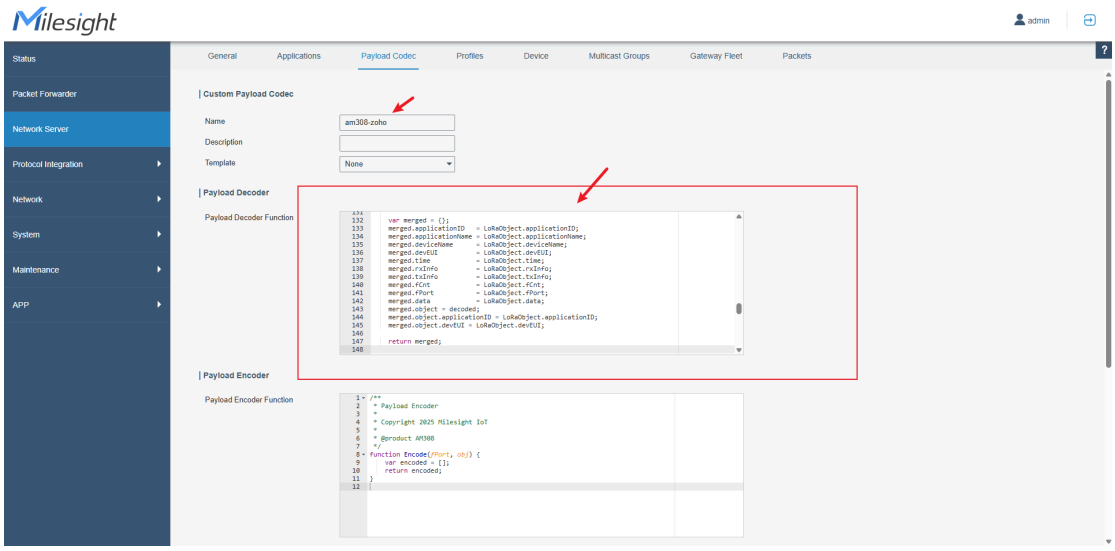


5.3. Configure Decode Code

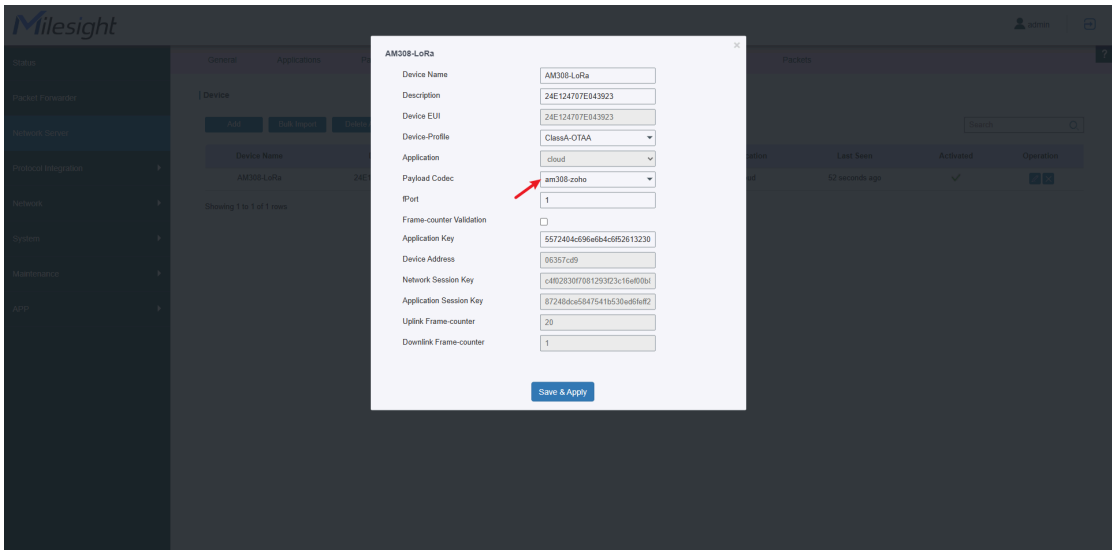
Refer to <How to Use Payload Codec on Milesight Gateway>. In addition to the original decode code, add the following content:

```
var merged = {};
merged.applicationID = LoRaObject.applicationID;
merged.applicationName = LoRaObject.applicationName;
merged.deviceName = LoRaObject.deviceName;
merged.devEUI = LoRaObject.devEUI;
merged.time = LoRaObject.time;
merged.rxInfo = LoRaObject.rxInfo;
merged.txInfo = LoRaObject.txInfo;
merged.fCnt = LoRaObject.fCnt;
merged.fPort = LoRaObject.fPort;
merged.data = LoRaObject.data;
merged.object = decoded;
merged.object.applicationID = LoRaObject.applicationID;
merged.object.devEUI = LoRaObject.devEUI;
```

After editing, the result should look like this:

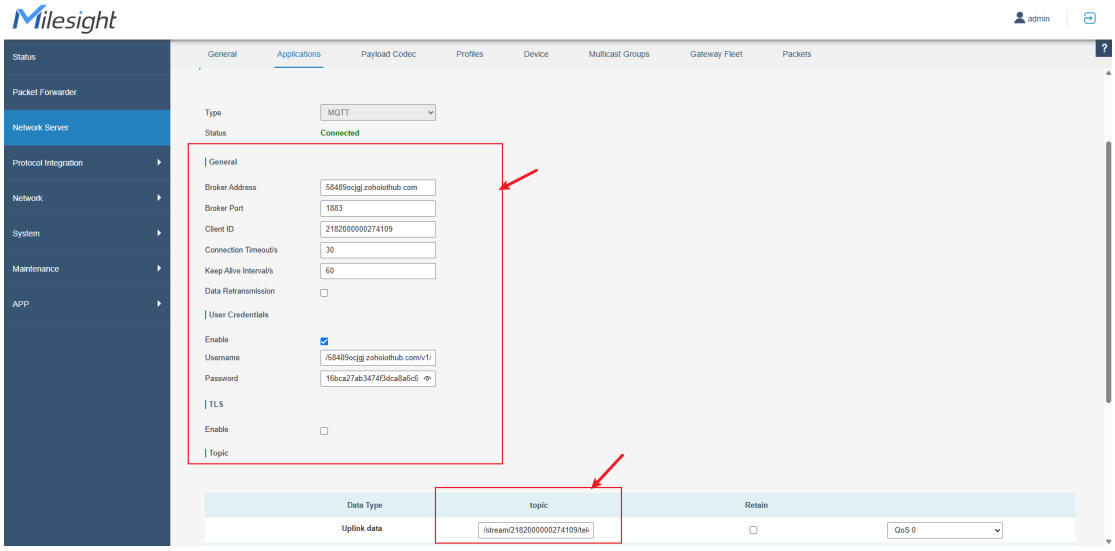


Then, go back and update the previously added AM308 device to associate it with the modified decode configuration:



5.4. Configure MQTT Parameters

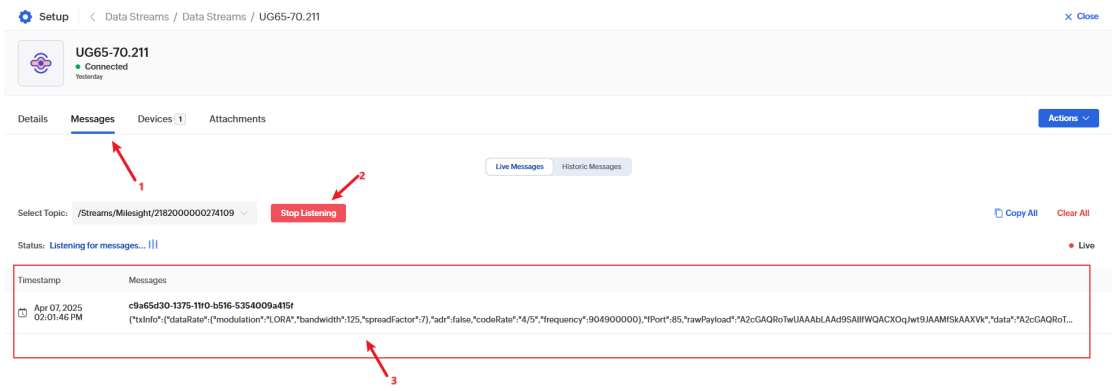
Refer to <How to Connect LoRaWAN Gateway to MQTT Broker> for this step. Once completed, your settings should resemble the screenshot below:



Note: All parameters here are obtained from Step 4.

Save and wait a few seconds. If it shows a green "**Connected**" status, it means the configuration was successful.

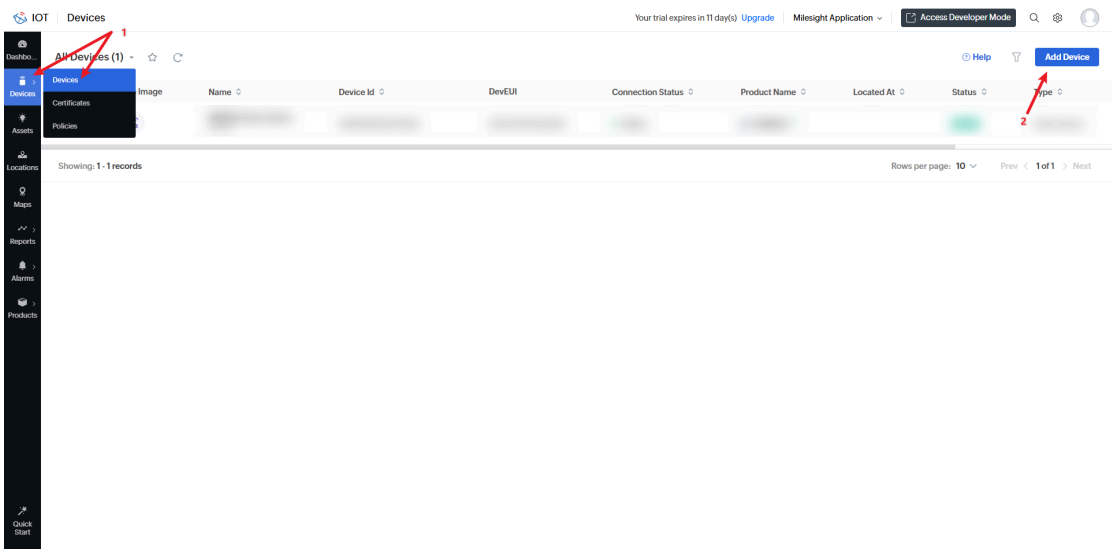
At the same time, go back to the Data Streams page on Zoho and follow the screenshot below. If you can see incoming data, it means the data link between the gateway and platform has been successfully established.

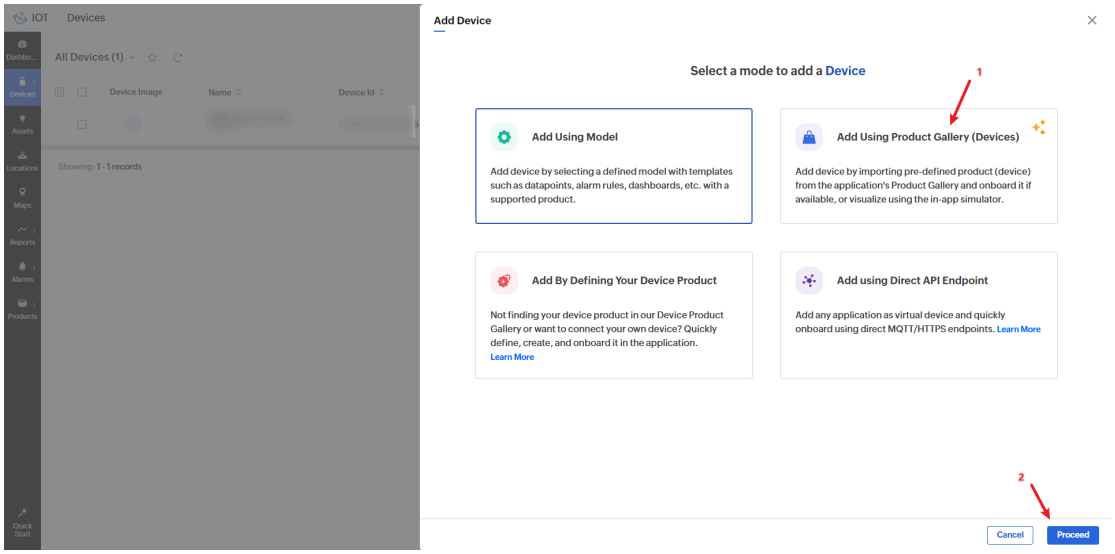


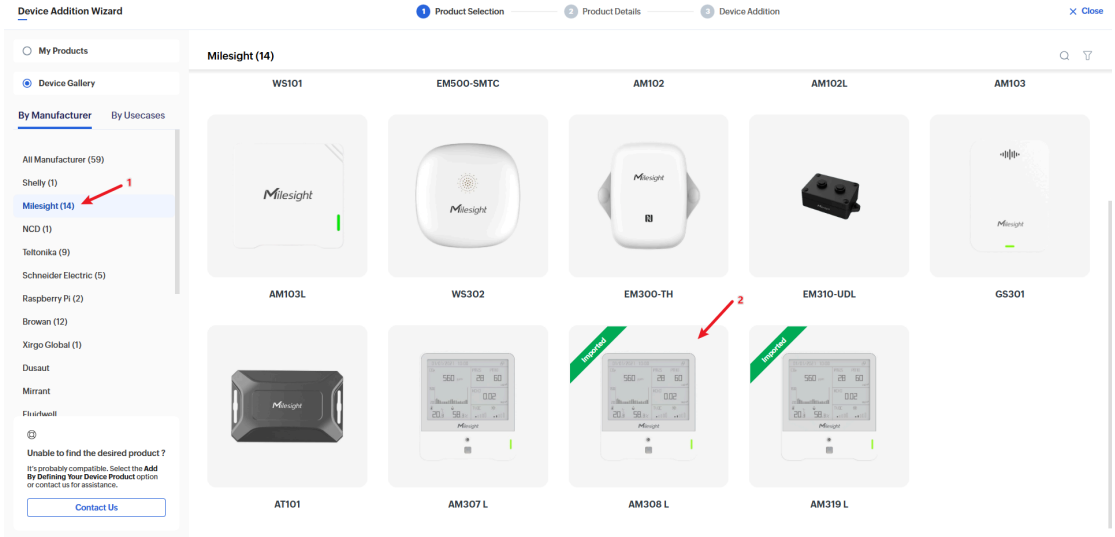
The gateway configuration is now complete.

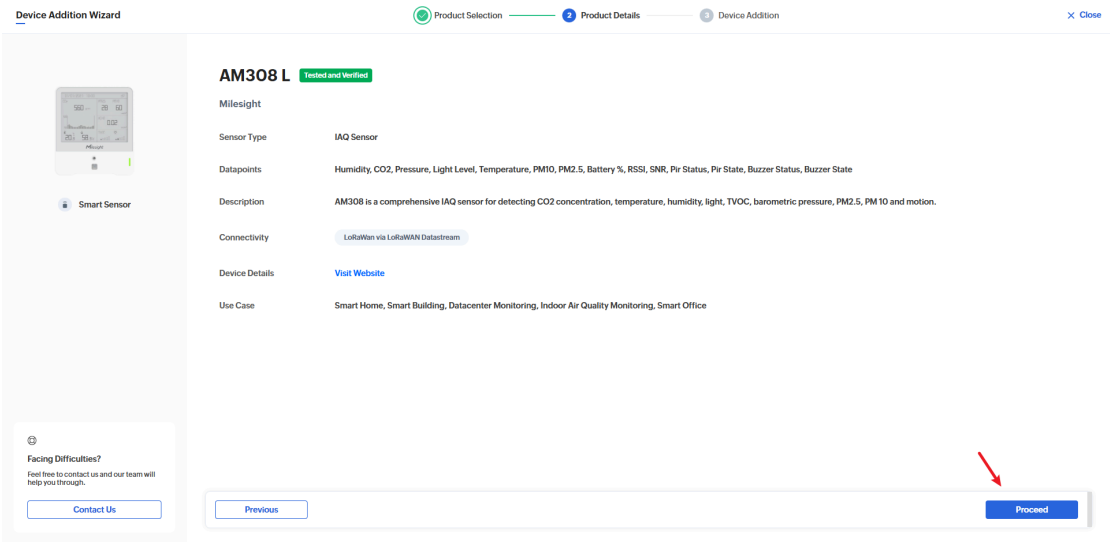
6. Add Device to Zoho

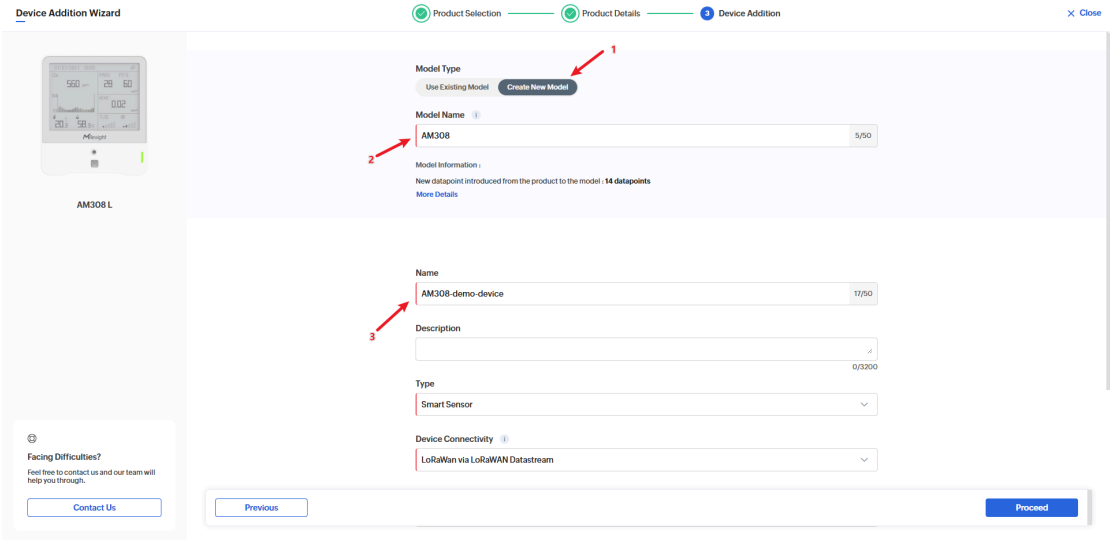
Follow the steps shown below to add a new device:

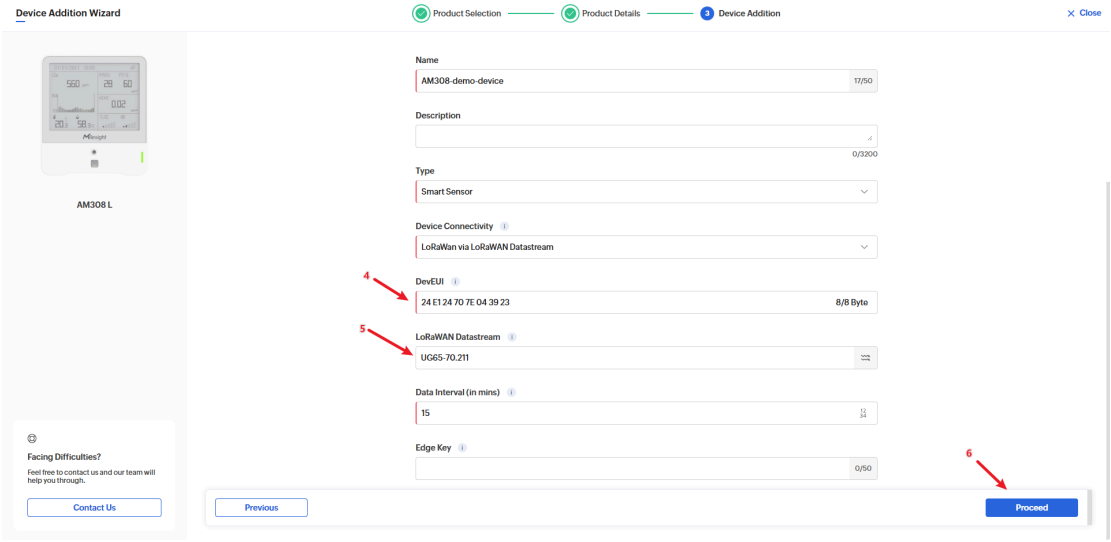

IOT
Devices
Your trial expires in 11 day(s) Upgrade
Milesight Application
Access Developer Mode
All Devices (1)
Help
Add Device
Devices
Certificates
Policies
Device Image
Name
Device Id
DevEUI
Connection Status
Product Name
Located At
Status
Type
Showing: 1 - 1 records
Rows per page: 10
Prev
1 of 1
Next
Dashbo...
Assets
Locations
Maps
Reports
Alarms
Products
Quick Start
1
2


IOT
Devices
All Devices (1)
Add Device
Select a mode to add a Device
Add Using Model
Add device by selecting a defined model with templates such as datapoints, alarm rules, dashboards, etc. with a supported product.
Add Using Product Gallery (Devices)
Add device by importing pre-defined product (device) from the application's Product Gallery and onboard it if available, or visualize using the in-app simulator.
Add By Defining Your Device Product
Not finding your device product in our Device Product Gallery or want to connect your own device? Quickly define, create, and onboard it in the application.
Learn More
Add using Direct API Endpoint
Add any application as virtual device and quickly onboard using direct MQTT/HTTPS endpoints. Learn More
Cancel
Proceed
1
2

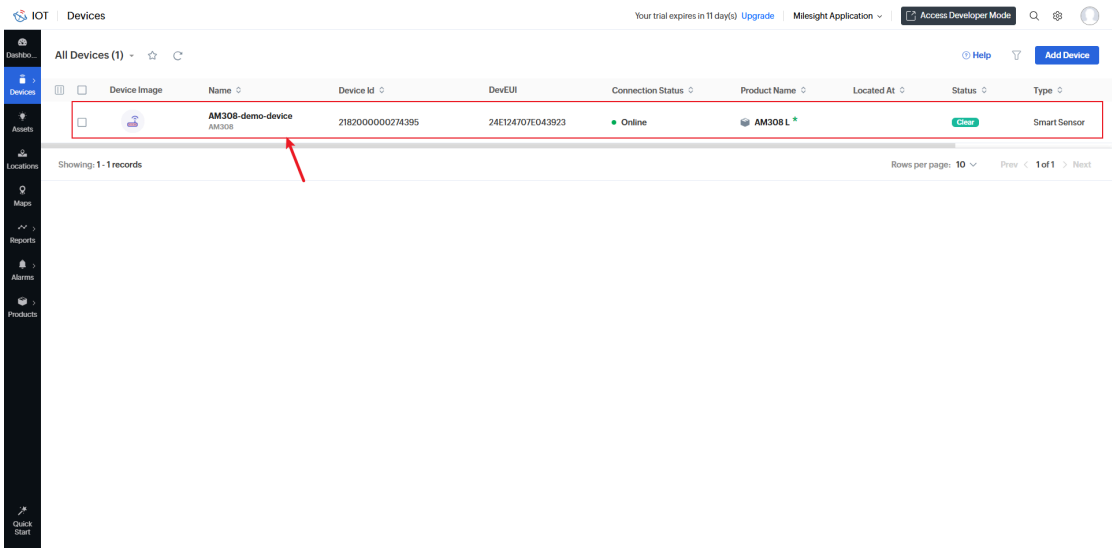

Device Addition Wizard
1 Product Selection
2 Product Details
3 Device Addition
Close
My Products
Device Gallery
By Manufacturer
By Usecases
All Manufacturer (59)
Shelly (1)
Milesight (14)
NCD (1)
Teltonika (9)
Schneider Electric (5)
Raspberry Pi (2)
Browan (12)
Xirgo Global (1)
Dusaut
Mirrant
Unable to find the desired product ?
It's probably compatible. Select the Add By Defining Your Device Product option or contact us for assistance.
Contact Us
Milesight (14)
WS101
EM500-SMTC
AM102
AM102L
AM103
AM103L
WS302
EM300-TH
EM310-UDL
GS301
AT101
AM307 L
AM308 L
AM319 L
Imported
1
2



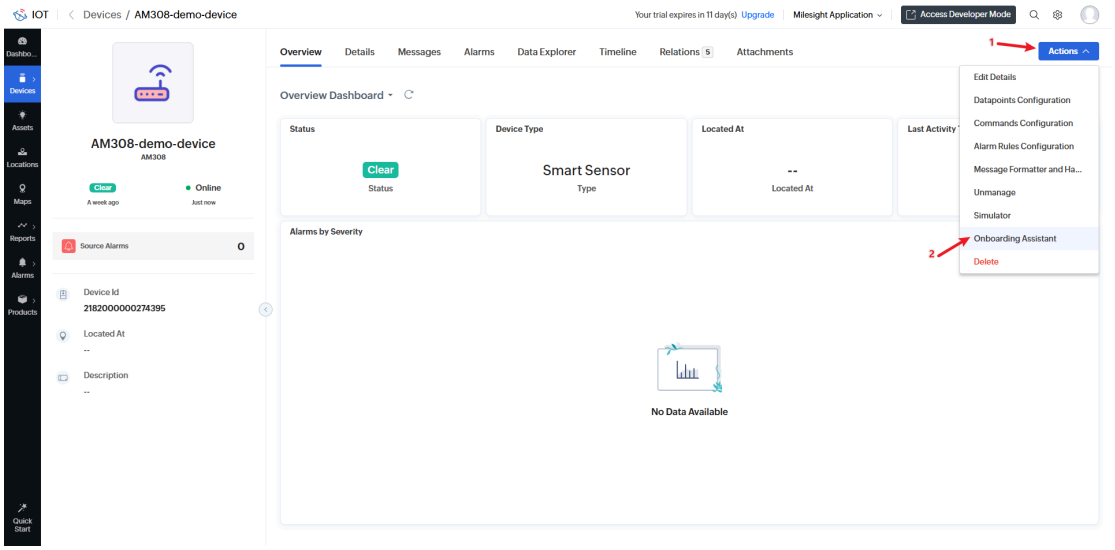


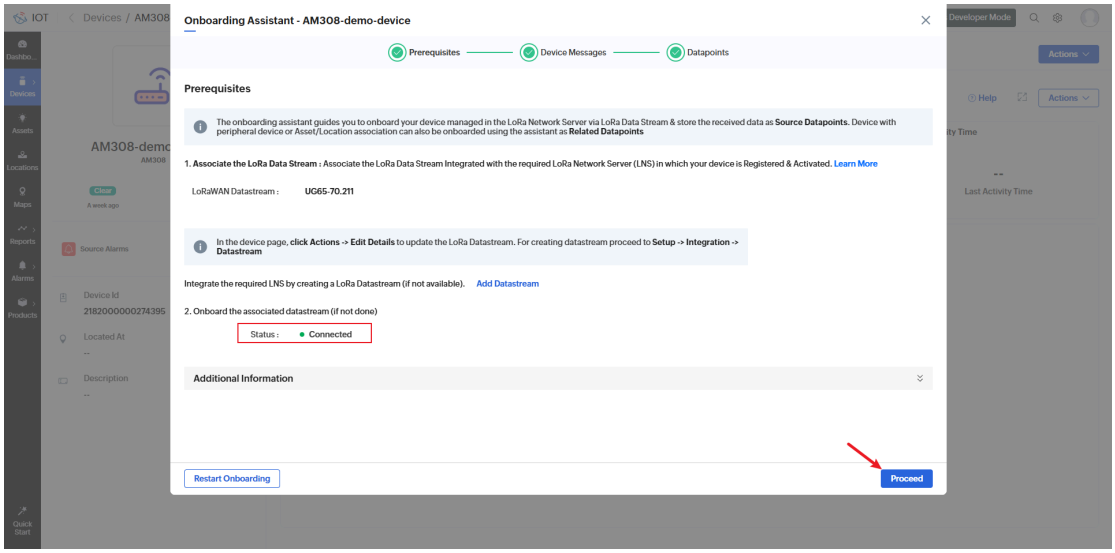


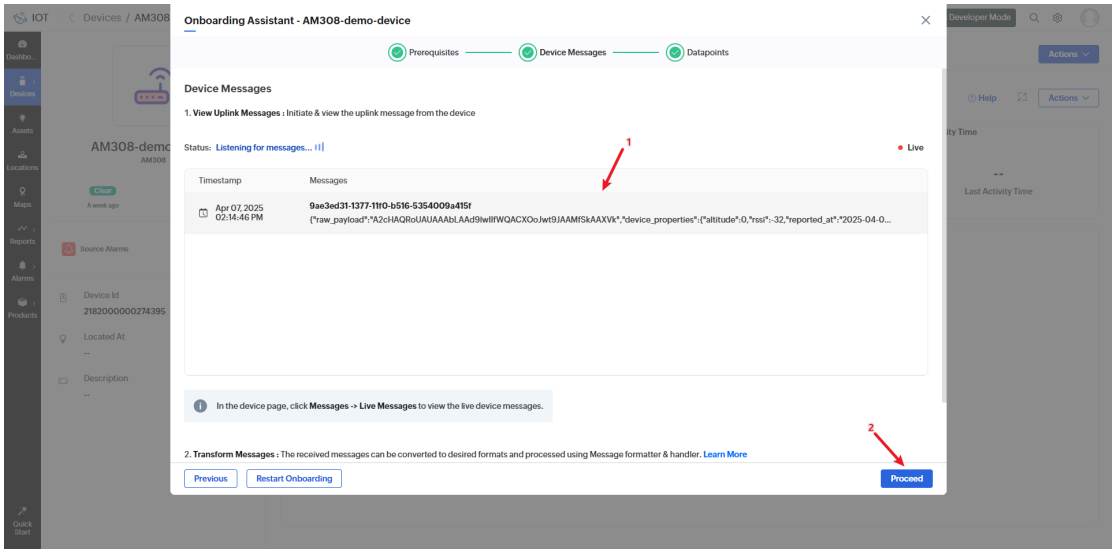
Once added, it should look like this:

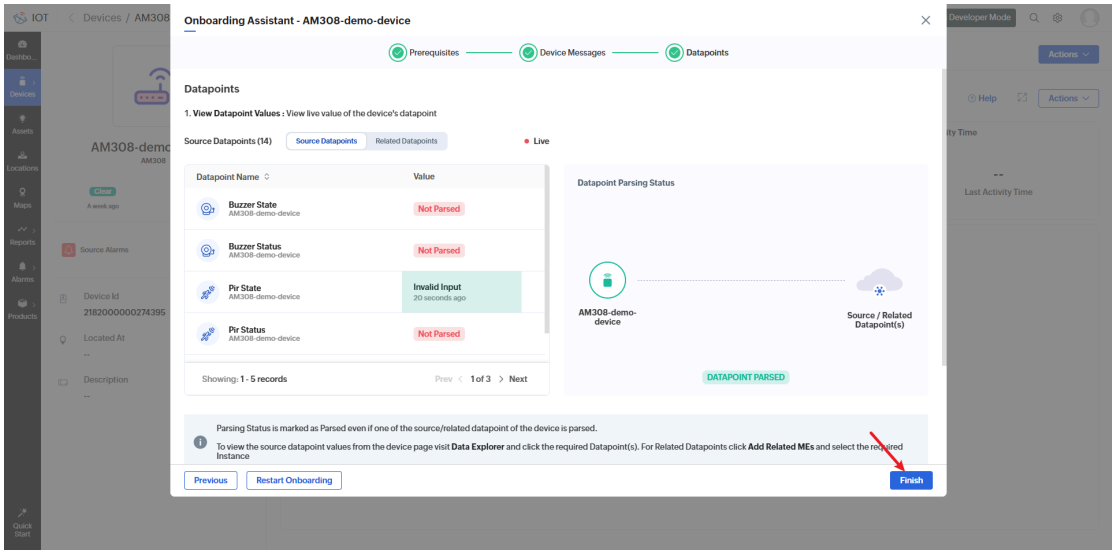


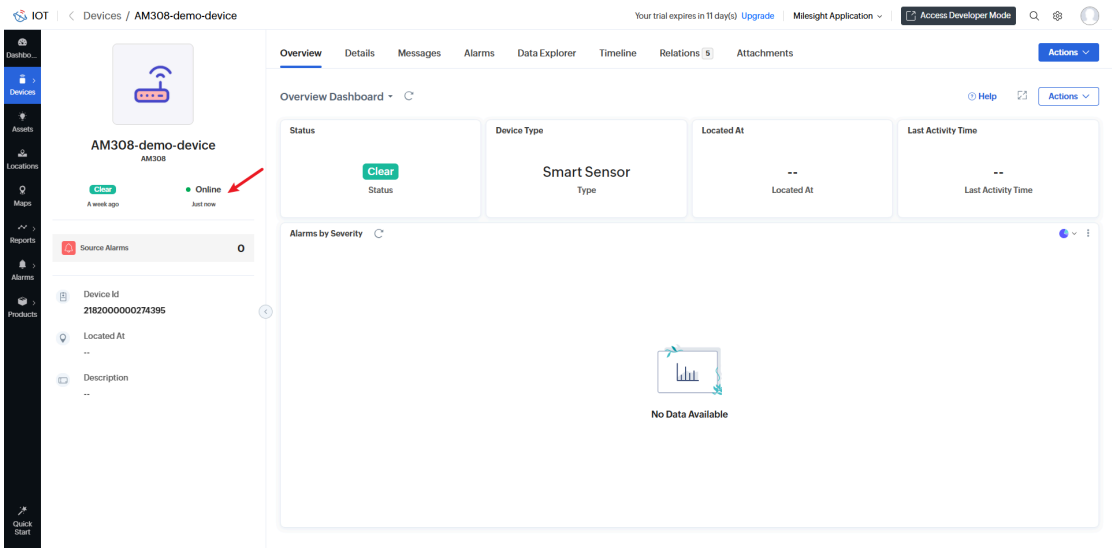
Click into the device and proceed with further configuration, following the steps below:

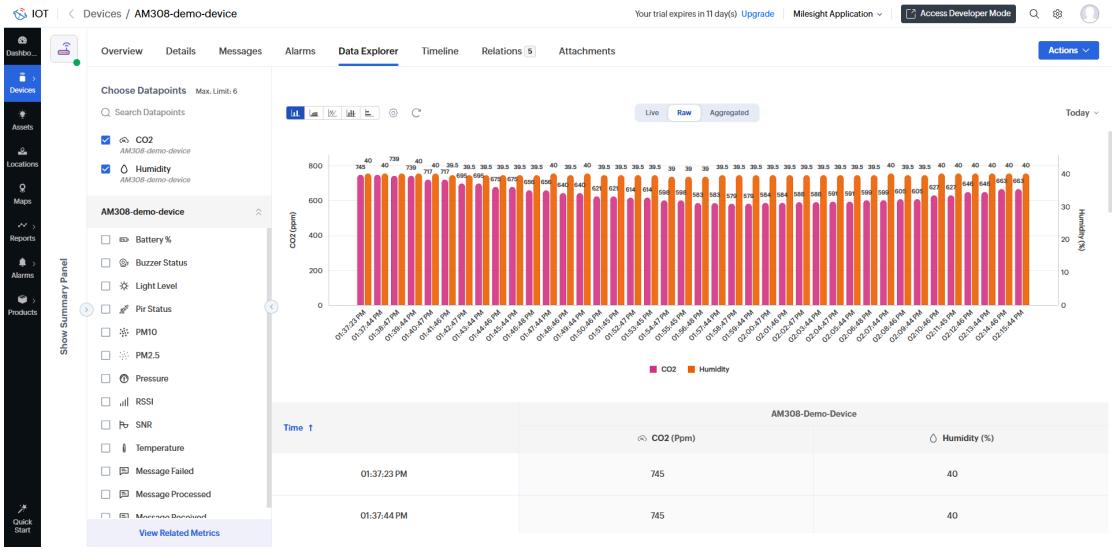



Onboarding Assistant - AM308-demo-device
Prerequisites
Device Messages
Datapoints
Prerequisites
The onboarding assistant guides you to onboard your device managed in the LoRa Network Server via LoRa Data Stream & store the received data as Source Datapoints. Device with peripheral device or Asset/Location association can also be onboarded using the assistant as Related Datapoints
1. Associate the LoRa Data Stream : Associate the LoRa Data Stream Integrated with the required LoRa Network Server (LNS) in which your device is Registered & Activated. Learn More
LoRaWAN Datastream : UG65-70.211
In the device page, click Actions -> Edit Details to update the LoRa Datastream. For creating datastream proceed to Setup -> Integration -> Datastream
Integrate the required LNS by creating a LoRa Datastream (if not available). Add Datastream
2. Onboard the associated datastream (if not done)
Status : Connected
Additional Information
Restart Onboarding
Proceed


Onboarding Assistant - AM308-demo-device
Prerequisites
Device Messages
Datapoints
Device Messages
1. View Uplink Messages : Initiate & view the uplink message from the device
Status: Listening for messages...
Live
Timestamp
Messages
Apr 07, 2025 02:14:46 PM
9ae3ed31-1377-11f0-b516-5354009a415f
{"raw_payload":"A2cHAQRoUAUAAAbLAAd9IwIlfWQACXOoJwt9JAAMfSkAAXVk","device_properties":{"altitude":0,"rssi":-32,"reported_at":"2025-04-0...
In the device page, click Messages -> Live Messages to view the live device messages.
2. Transform Messages : The received messages can be converted to desired formats and processed using Message formatter & handler. Learn More
Previous
Restart Onboarding
Proceed

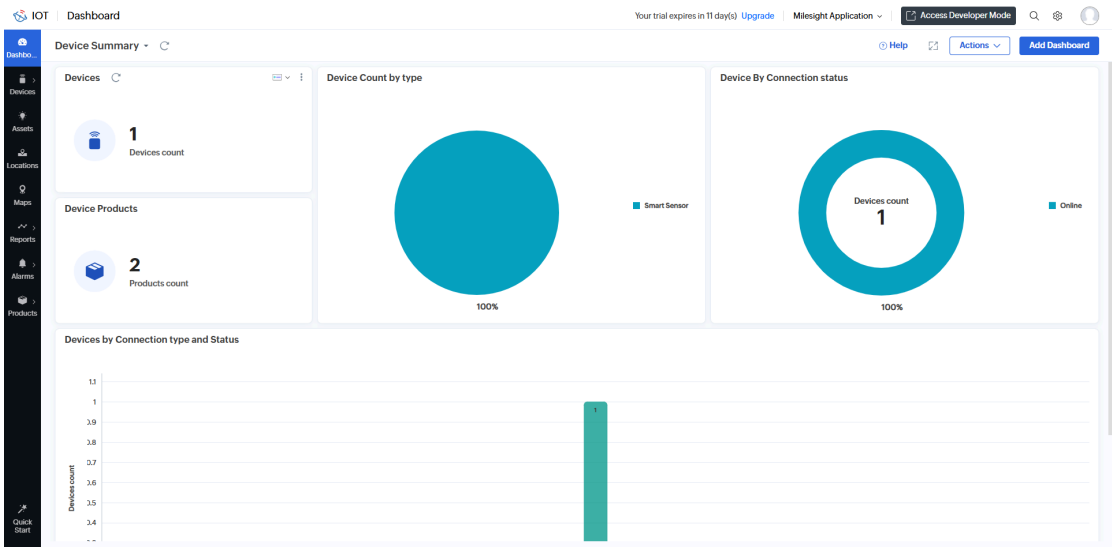

Onboarding Assistant - AM308-demo-device
Prerequisites
Device Messages
Datapoints
Datapoints
1. View Datapoint Values : View live value of the device's datapoint
Source Datapoints (14)
Source Datapoints
Related Datapoints
Live
Datapoint Name
Value
Buzzer State
AM308-demo-device
Not Parsed
Buzzer Status
AM308-demo-device
Not Parsed
Pir State
AM308-demo-device
Invalid Input
20 seconds ago
Pir Status
AM308-demo-device
Not Parsed
Showing: 1 - 5 records
Prev 1 of 3 Next
Datapoint Parsing Status
AM308-demo-device
Source / Related Datapoint(s)
DATAPOINT PARSED
Parsing Status is marked as Parsed even if one of the source/related datapoint of the device is parsed.
To view the source datapoint values from the device page visit Data Explorer and click the required Datapoint(s). For Related Datapoints click Add Related MEs and select the required Instance
Previous
Restart Onboarding
Finish





At this point, the AM308 device has been successfully added to the Zoho IoT platform and is displaying real-time data.

Back in the default Dashboard view, you should see data similar to the figure below:



This concludes the entire integration process.

-END-