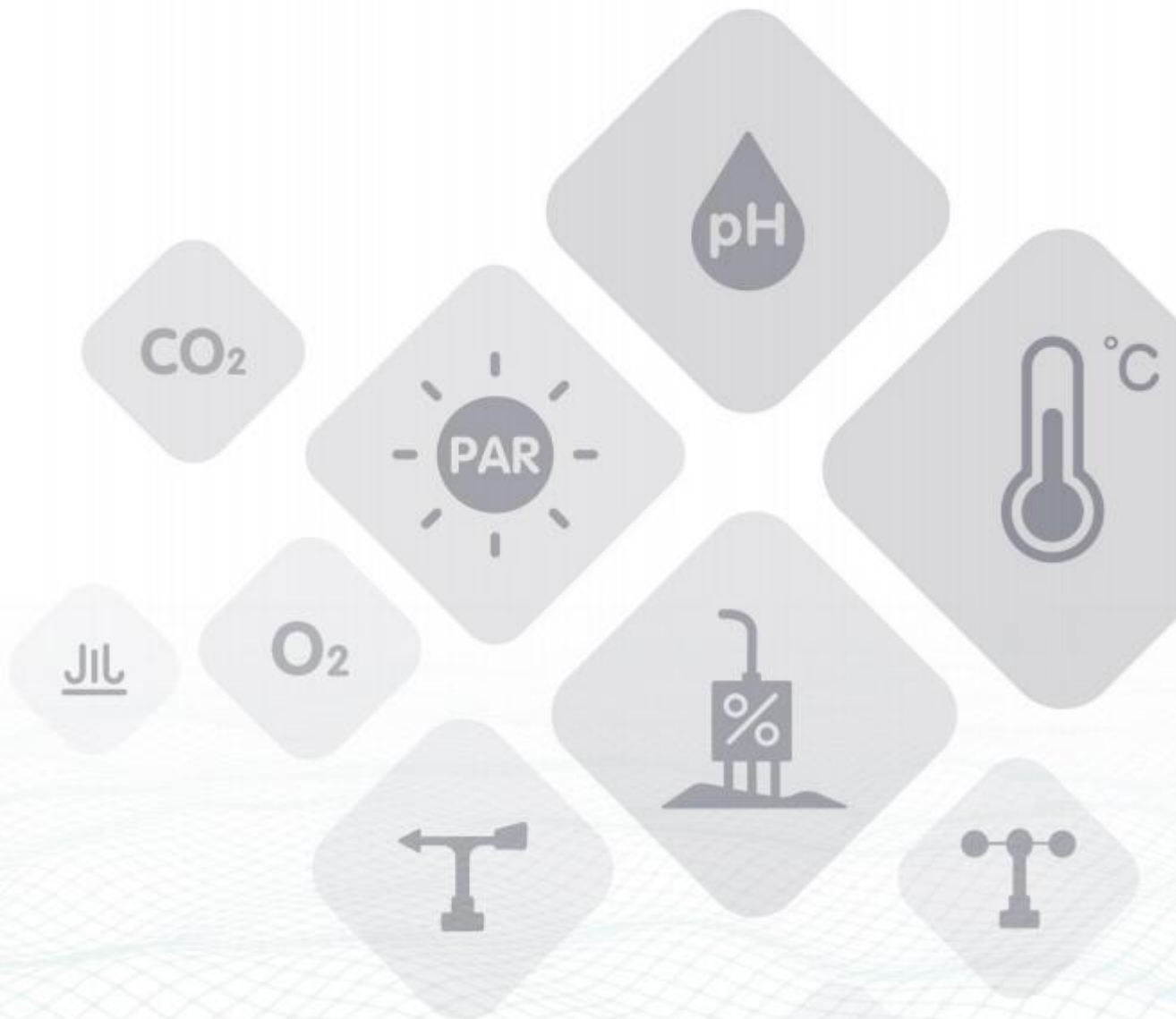




SENSECAP

# Connect M2 Multi-Platform Gateway to AWS IoT

This tutorial will guide users to set up a private LoRaWAN® network by connecting the LoRaWAN® sensors and M2 Multi-Platform Gateway to the AWS Cloud.

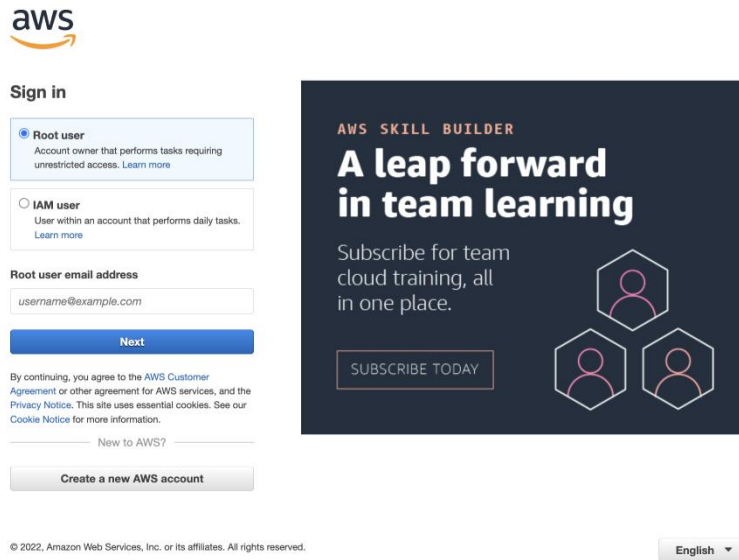


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# 1. AWS IoT Configuration

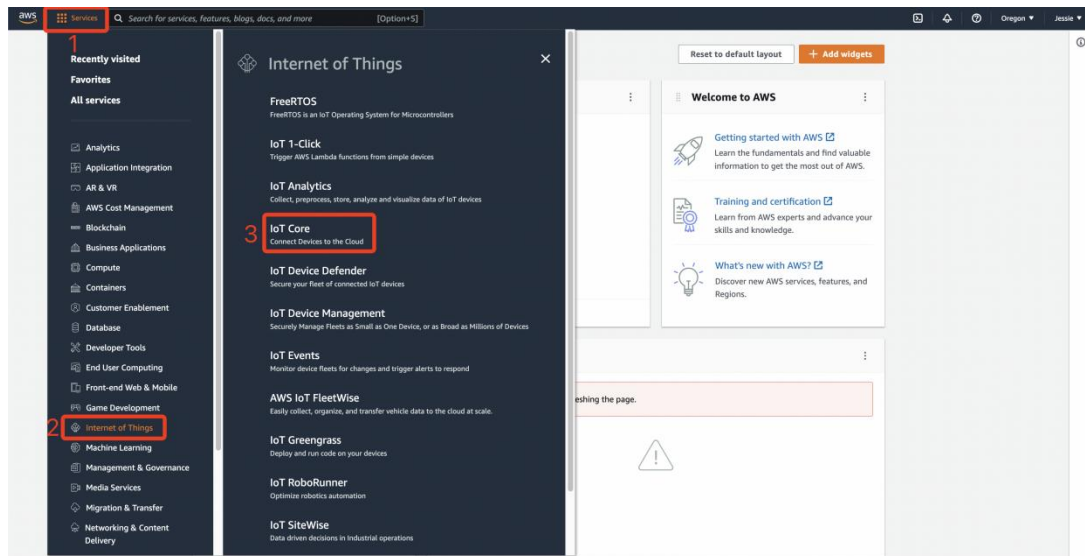
Log in to [AWS](#). If you don't have an AWS account, please create a new account first.



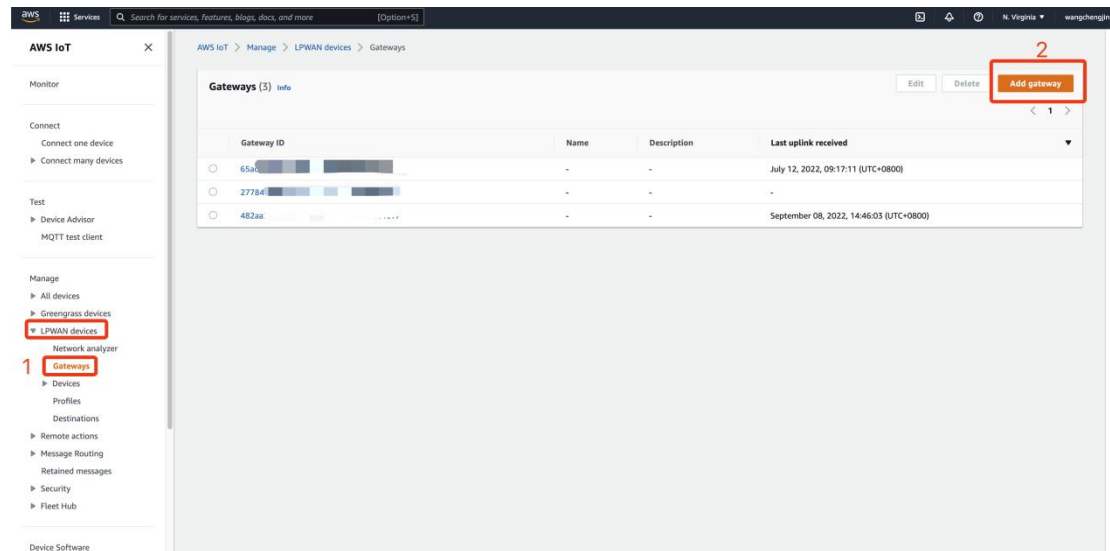
## 1.1 Add Gateway

- **Step 1: Add gateway**

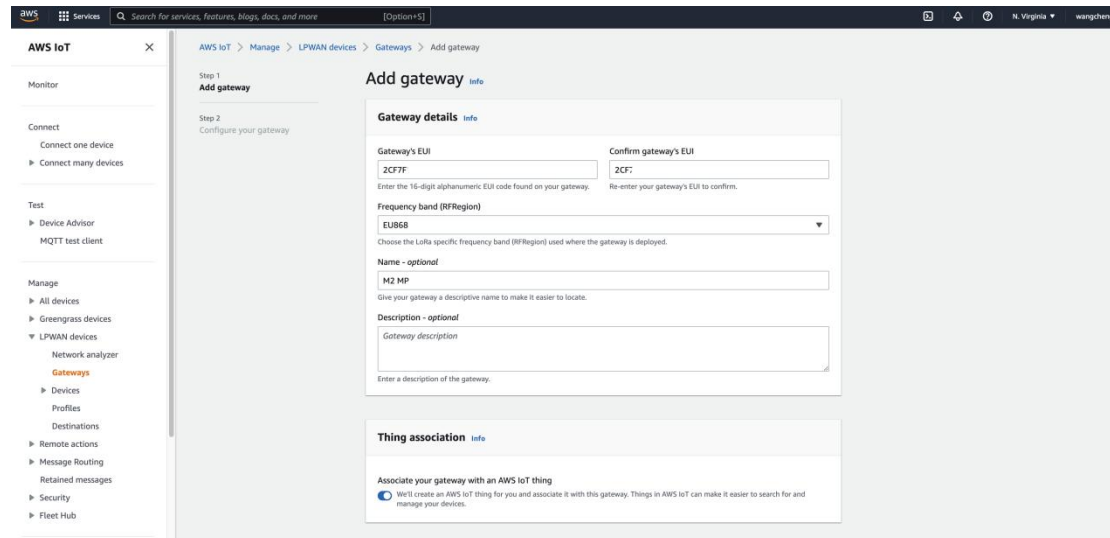
Navigate to **Internet of Things > IoT Core**



Select **LPWAN devices** > **Gateway** to add a gateway

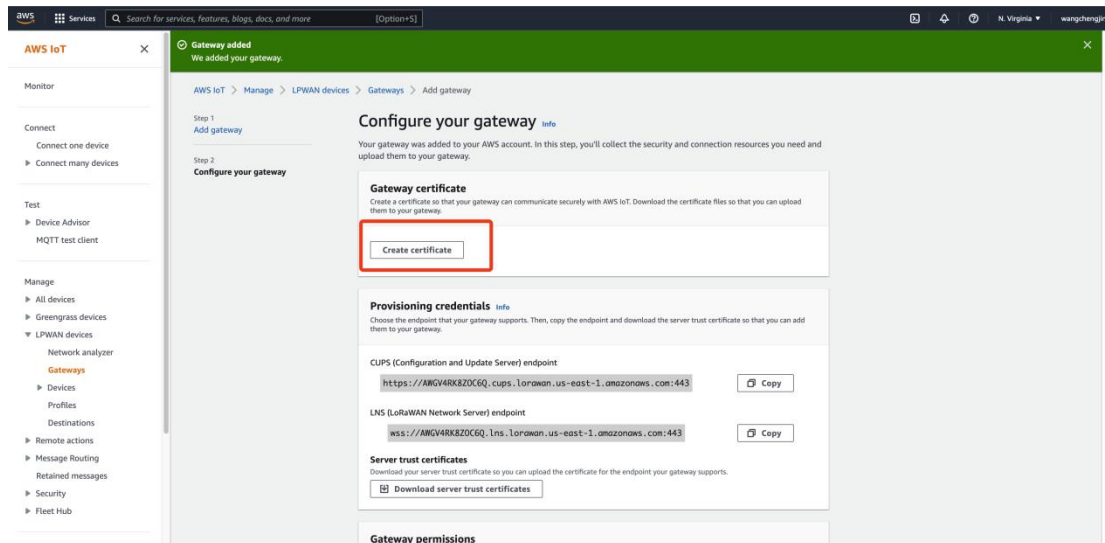


**Gateway's EUI:** The gateway EUI can be found on the device label or [Local Console](#)  
**Frequency band:** Select the Frequency plan according to the actual choice.

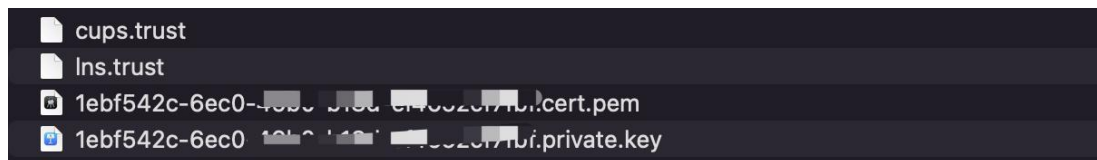
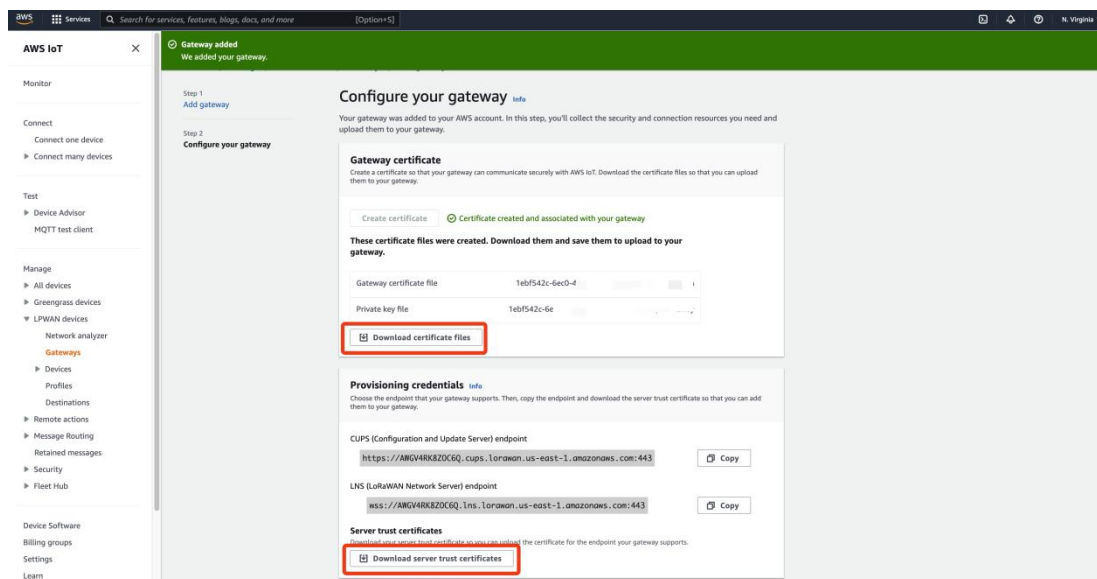


- **Step 2: Configure your gateway**

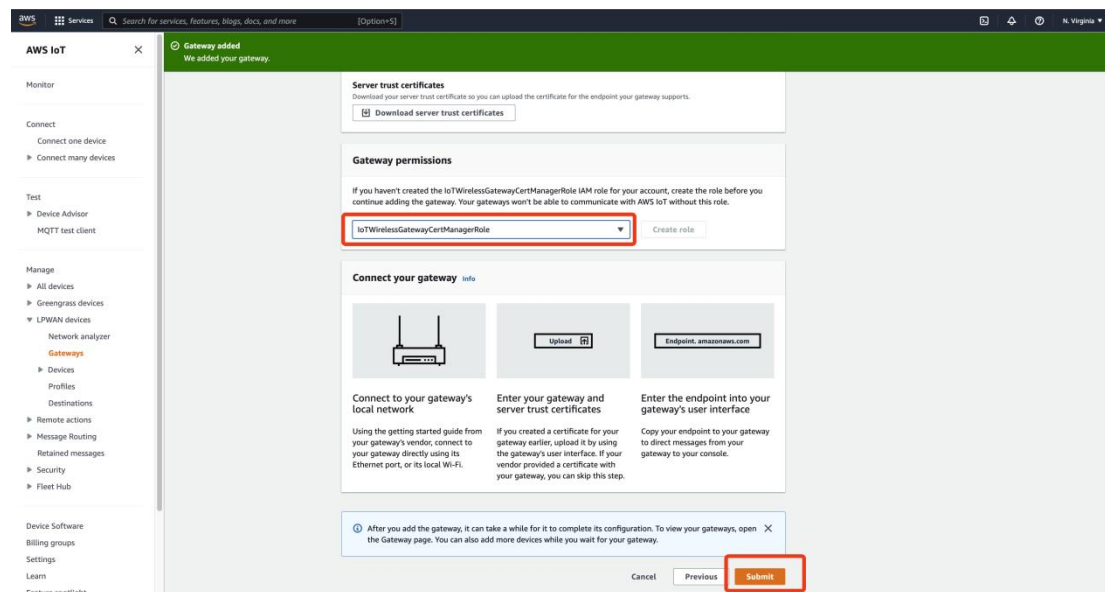
## Create certificate



## Download the certificate files and server trust certificates.



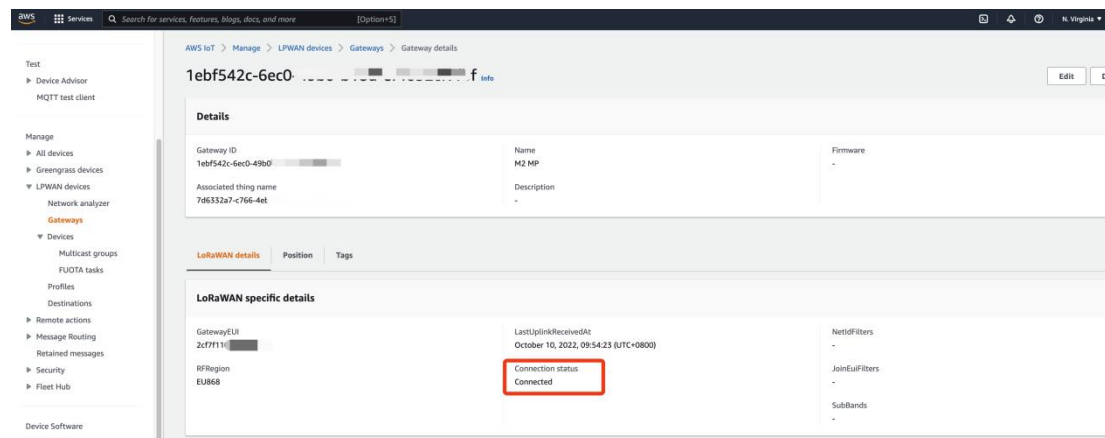
Choose the Role: **IoT Wireless Gateway Cert Manager Role**, then submit the configuration.



● **Step 3: Check gateway connection status**

Navigate to the Gateways page and choose the gateway you've added.

In the LoRaWAN specific details section of the Gateway details page, you'll see the connection status and the date and time the last uplink was received.



## 1.2 Add Profiles

Device and service profiles can be defined to describe common device configurations. These profiles describe configuration parameters that are shared by devices to make it easier to add those devices. AWS IoT Core for LoRaWAN supports device profiles and service profiles.

### ● Step 1: Add devices profiles

Navigate to **Devices > Profiles**, click Add device profile

The screenshot shows the AWS IoT console interface. On the left sidebar, the 'Profiles' menu item is highlighted with a red box and a '1'. In the main content area, the 'Add device profile' button is highlighted with a red box and a '2'. The console displays a table of existing device profiles and a table of service profiles.

Profile ID	Device profile name	MACVersion	RegParamsRevision	MaxEIRP	RfRegion
861af593-a	US915-A-OTAA	1.0.3	RPO02-1.0.1	15	US915

Profile ID	Service profile name	AddGWMetadata
df4d52f6-8862	TEST	On

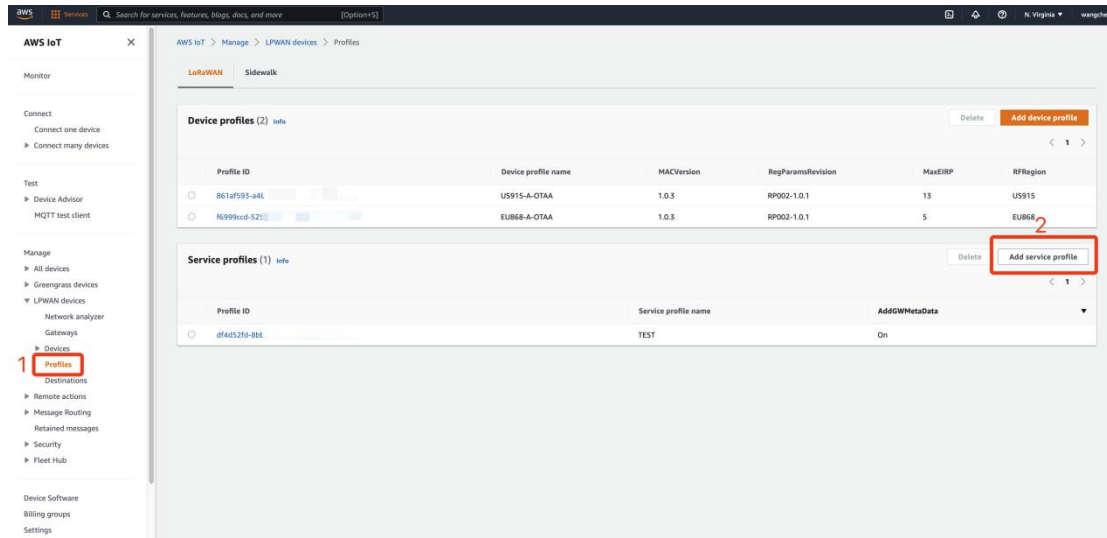
Provide a Device profile name, select the Frequency band (RfRegion) that you're using for the device and gateway, and keep the other settings to the default values.

The screenshot shows the 'Add device profile' form in the AWS IoT console. The form fields are filled with default values:

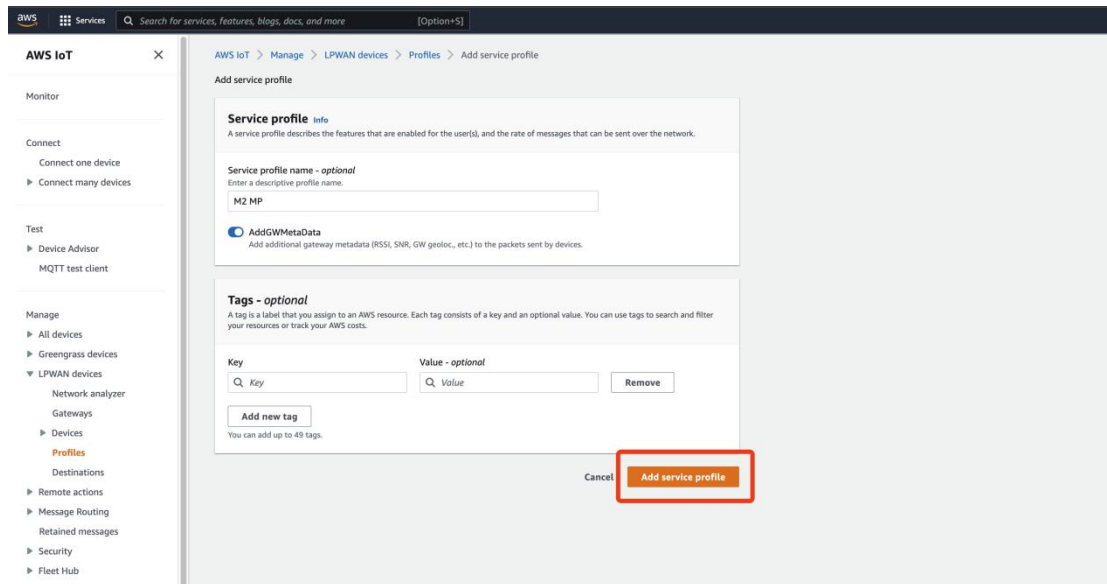
- Device profile name: EU868-A-OTAA
- Frequency band (RfRegion): EU868
- MAC version: 1.0.3
- Regional parameters version: RPO02-1.0.1 (recommended)
- MaxEIRP: 5
- Supports Class B:
- Supports Class C:
- Supports Join:
- Optional settings:
  - RXDelay1: 7
  - RXDataRate2: 0
  - RXDROffset1: (empty)
  - RXFreq2: (empty)

● **Step 2:** Add service profiles

Navigate to **Devices > Profiles**, click Add service profile



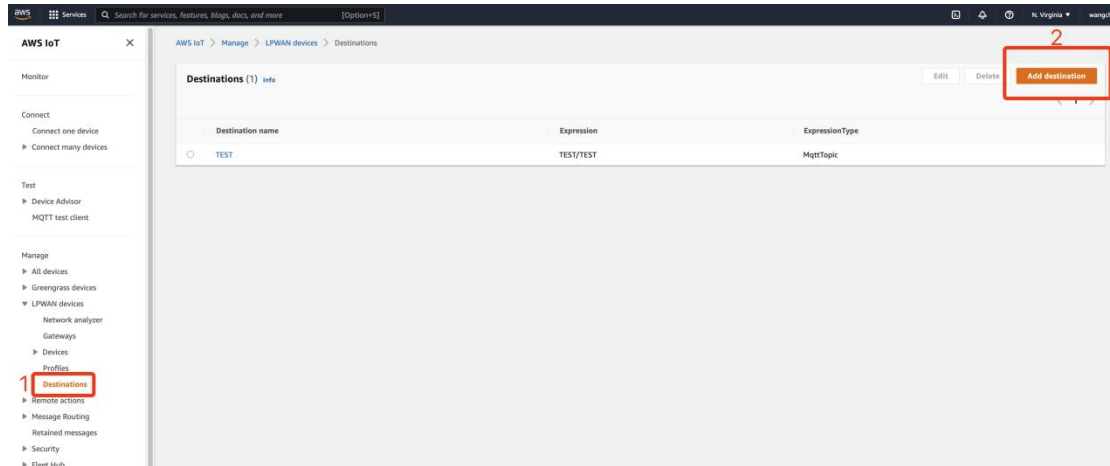
It's recommend that you leave the setting AddGWMetaData enabled so that you'll receive additional gateway metadata for each payload, such as RSSI and SNR for the data transmission.





## 1.3 Add Destination

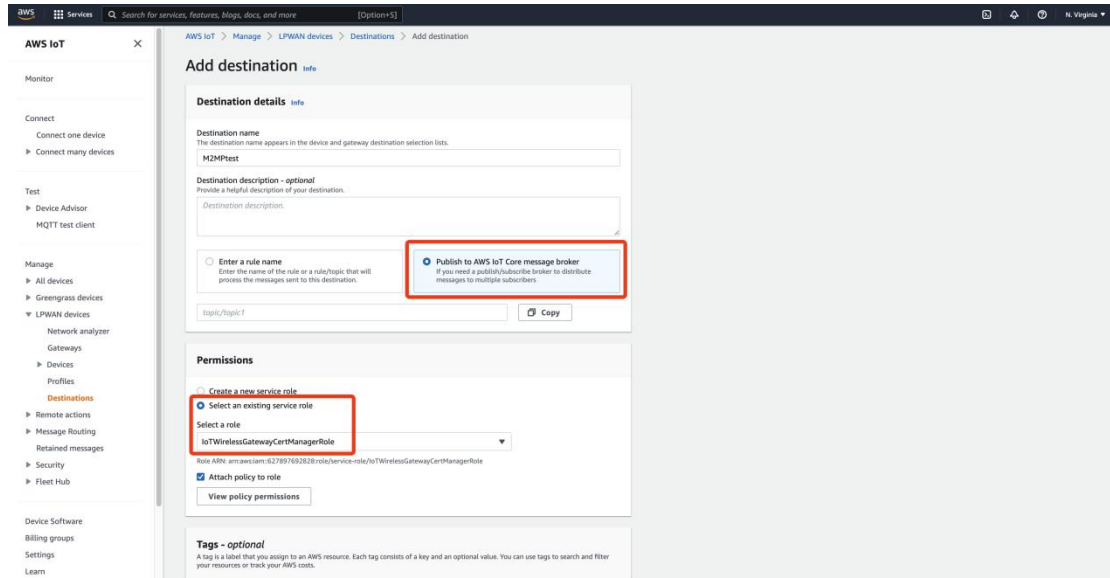
Navigate to **Devices > Destination**, click Add destination



Publish to AWS IoT Core message broker

**Permissions:** Select an existing service role > IoT Wireless Gateway Cert Manager Role

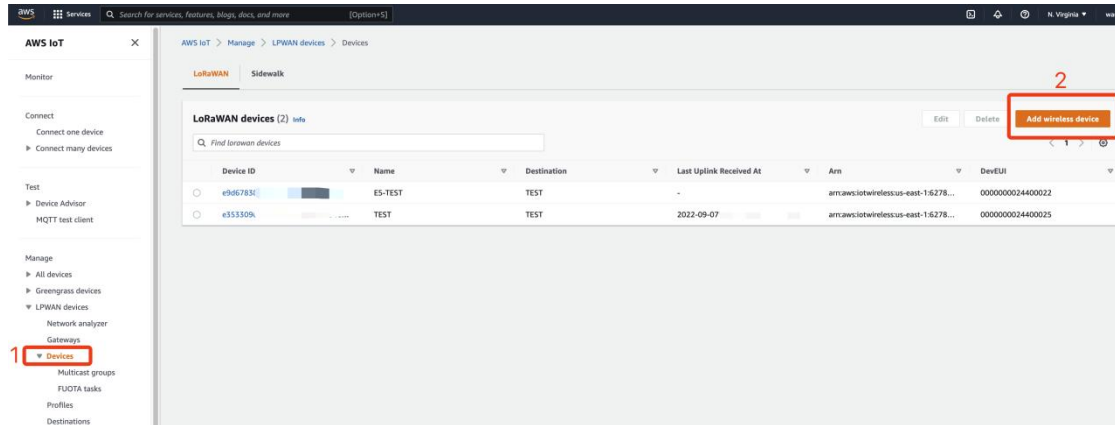
Note: A destination name can only have alphanumeric, - (hyphen) and \_ (underscore) characters and it can't have any spaces.



## 1.4 Add LoRaWAN Devices

- **Step 1:** Add wireless device

Navigate to **LPWAN devices > Devices**, click Add wireless device



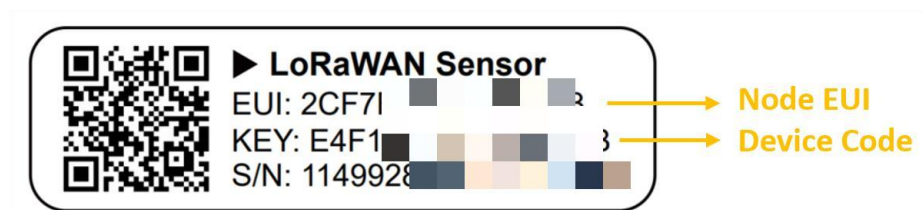
- **Step 2:** Configure device

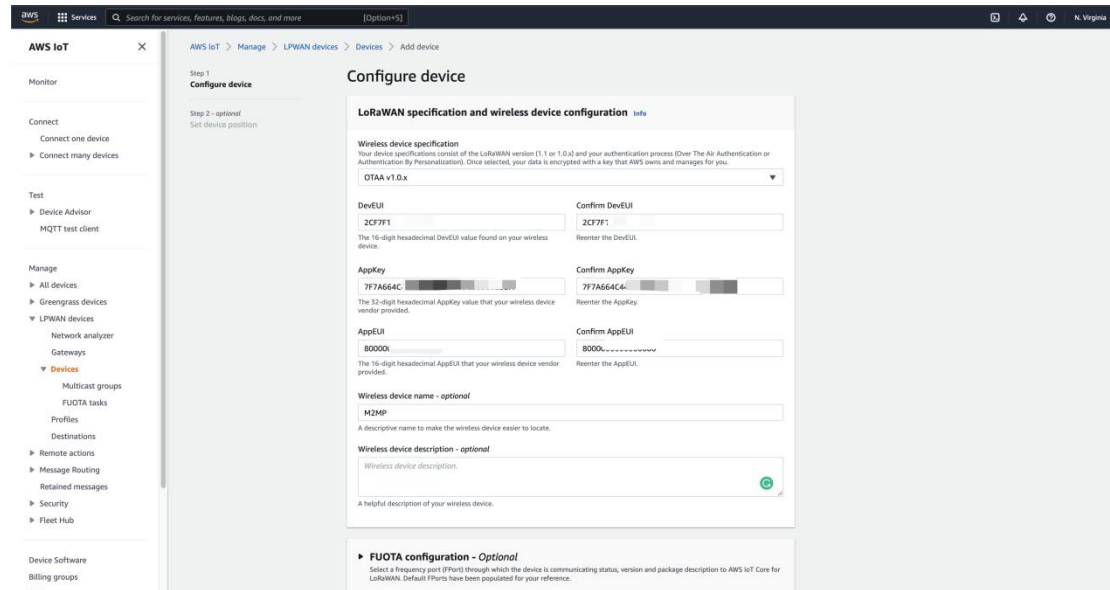
**Wireless device specification:** OTAA v1.0x (when you use OTAA, your LoRaWAN device sends a join request and the Network Server can allow the request)

**DevEUI:** The device EUI can be found in the device label or Local Console

**App Key** and **App EUI** can be found in this HTTP API:

[https://sensecap.seeed.cc/makerapi/device/view\\_device\\_info?nodeEui=xxx&deviceCode=xxx](https://sensecap.seeed.cc/makerapi/device/view_device_info?nodeEui=xxx&deviceCode=xxx)

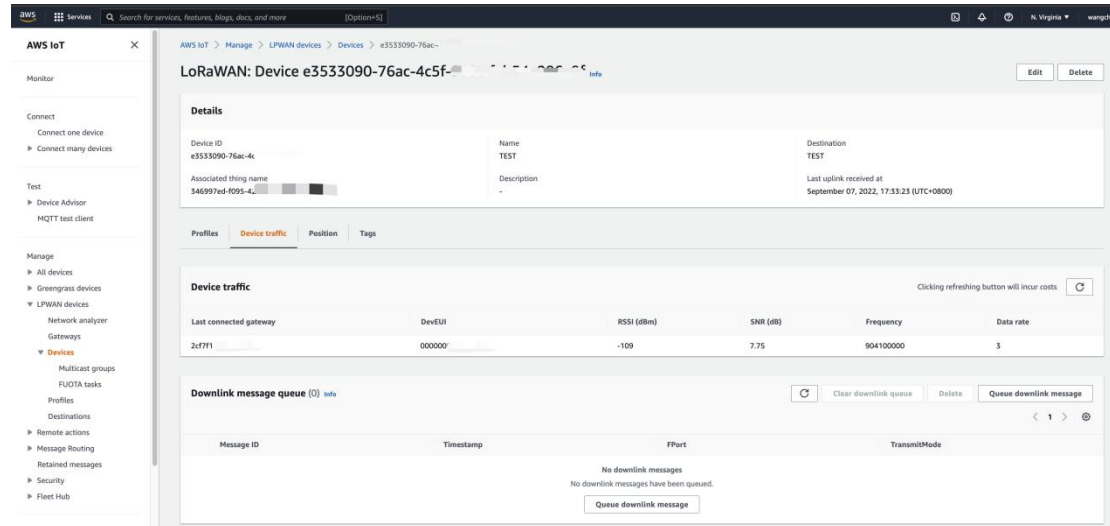




● **Step 3:** Check device connection status

Navigate to the **Devices** page and choose the device you've added.

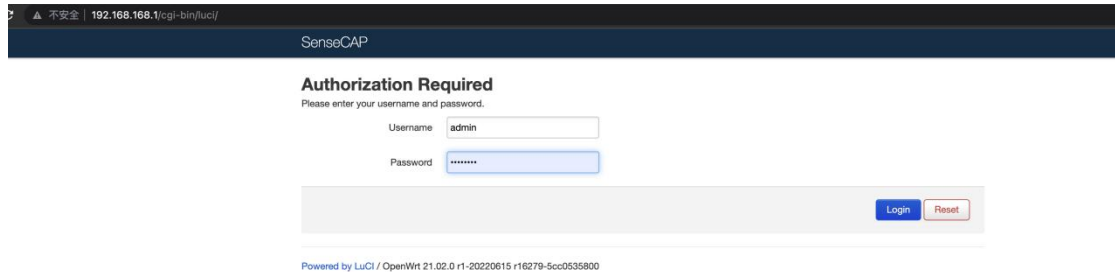
In the Details section of the Wireless devices details page, you'll see the date and time the last uplink was received.



## 2. Gateway Configuration

- **Step 1: Log into Local Console**

Check out the device's [Quick Start](#) to login.



- **Step 2: LoRaWAN Network Settings**

Navigate to **LoRa > LoRa Network**

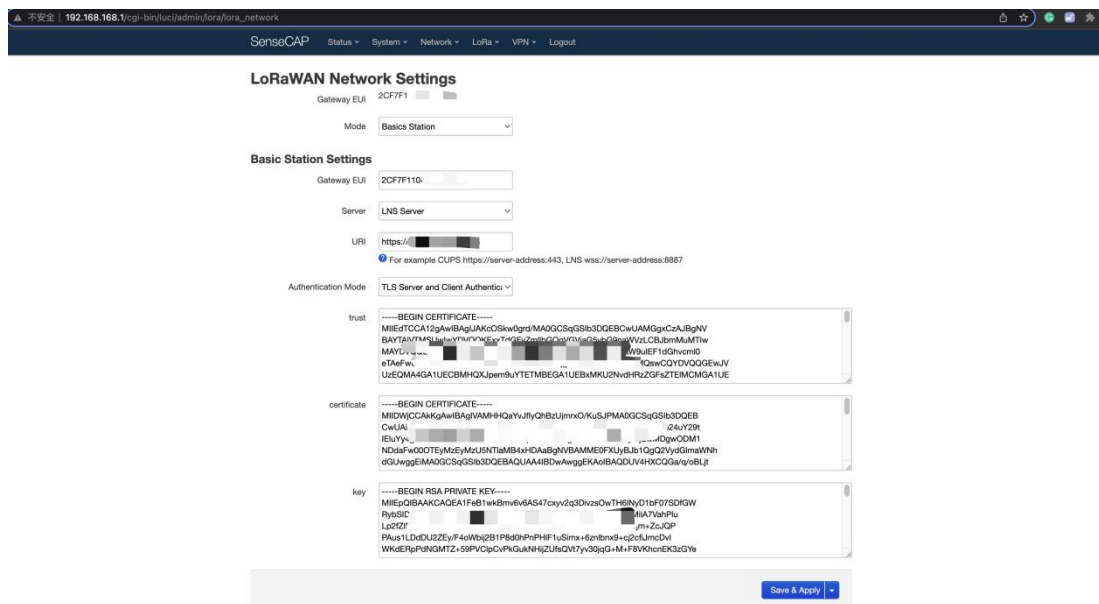
**Mode:** Basics Station

**Gateway EUI:** It will automatically get the EUI of the connected gateway

**Server:** Choose CUPS Server or LNS Server (For CUPS, port is 443; for LNS, port is 8887)

Learn more about [CUPS and LNS Server](#)

**Authentication Mode:** TLS Server and Client Authentication



Copy the data content of the certificate files we downloaded before to the configuration page (the certificate can be opened in text form)



Click on Save&Apply when you finish the settings