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.
# Table of Contents

1. AWS IoT Configuration ................................................................. 1
   1.1 Add Gateway ........................................................................ 1
   1.2 Add Profiles ....................................................................... 5
   1.3 Add Destination ................................................................. 7
   1.4 Add LoRaWAN Devices ....................................................... 8
2. Gateway Configuration ............................................................... 10
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.

```plaintext
- cups.trust
- ins.trust
- 1ebf542c-6ec0-10a8-7287-7f5ec0e114c3
- 1ebf542c-6ec0-10a8-7287-7f5ec0e114c3.private.key
```
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

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.
• 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 the 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

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![Node EUI and Device Code](image)

```json
{
  "code": 0,
  "data": {
    "nodeEui": "2CF7F1C144",
    "deviceCode": "84087B90",
    "lorawanInformation": {
      "dev_eui": "2CF7F1C144",
      "app_eui": "80000000",
      "app_key": "A4903AE9C44E3"
    }
  }
}
```
● **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