

# Instruction to configure embedded Chirpstack Network Server in PINEX

## Embedded Chirpstack Network Server Information

The version of embedded Chirp Stack Network Server in the PINEX gateway firmware 6 is v4.

## Configure Gateway to forward data from LoRaWAN gateway to Embedded Network Server

1. Access web UI via URL of [http://\[PINEX\\_IP\]:4050](http://[PINEX_IP]:4050)

Where [PINEX\_IP] is the IP of the PINEX gateway in the network

1. Navigate to LoRa menu on the left panel → Packet Forwarder
2. Configure the following and click Apply to save settings

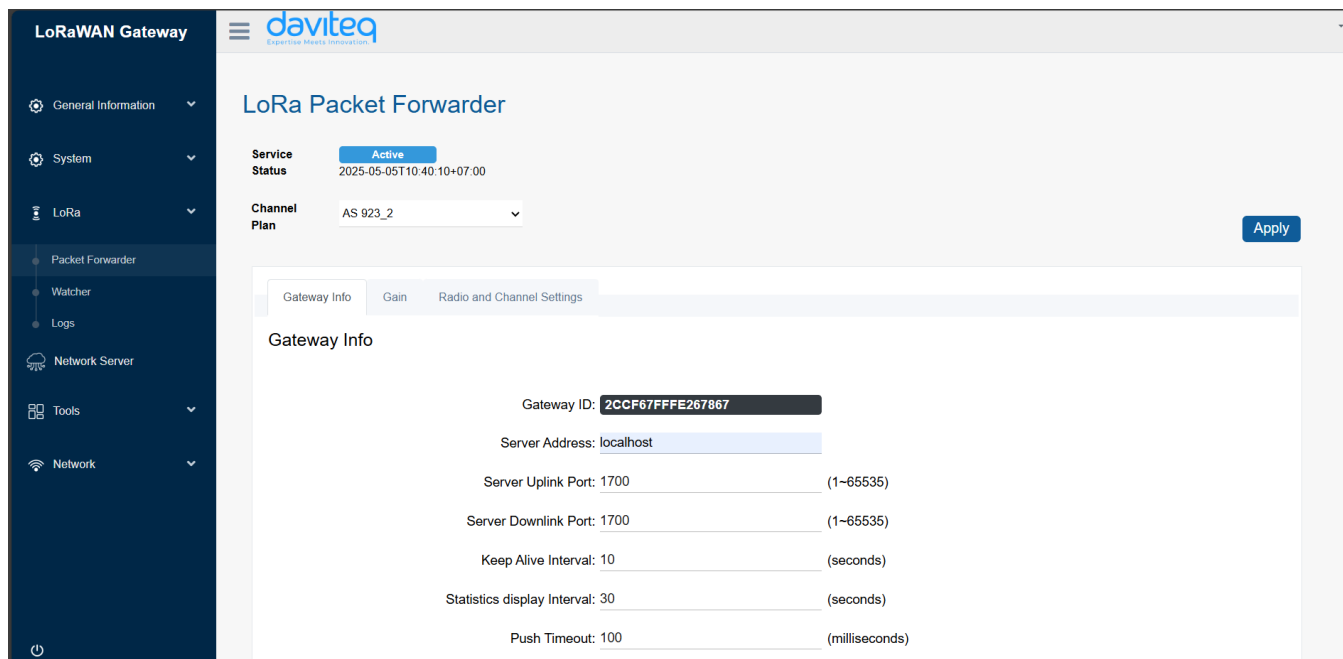
Server Address: localhost

Uplink Port: 1700

Downlink Port: 1700

LoRaWAN Region: Depend on your region e.g., EU868, US915, AS923...

Other settings: keep default values



The screenshot shows the Daviteq web interface for a LoRaWAN Gateway. The left sidebar contains a navigation menu with options: General Information, System, LoRa, Packet Forwarder (selected), Watcher, Logs, Network Server, Tools, and Network. The main content area is titled 'LoRa Packet Forwarder' and shows the service status as 'Active' with a timestamp of 2025-05-05T10:40:10+07:00. The 'Channel Plan' is set to 'AS 923\_2'. Below this, there are three tabs: 'Gateway Info', 'Gain', and 'Radio and Channel Settings'. The 'Gateway Info' tab is active, displaying the following configuration fields:

Field	Value	Unit/Range
Gateway ID	2CCF67FFFE267867	
Server Address	localhost	
Server Uplink Port	1700	(1-65535)
Server Downlink Port	1700	(1-65535)
Keep Alive Interval	10	(seconds)
Statistics display Interval	30	(seconds)
Push Timeout	100	(milliseconds)

## Turn on Network Server

Navigate to Network Server on the left panel → click Start Network Server then click Open New Tab

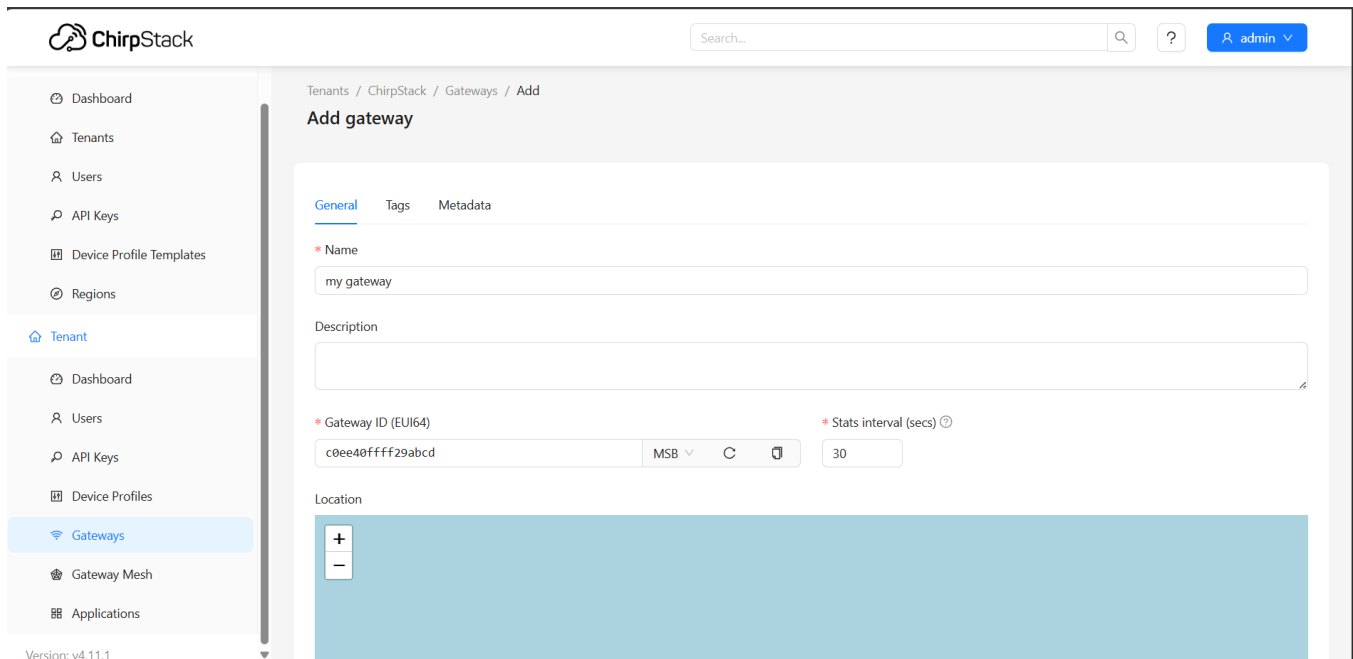
## Add Gateway

1. Log in to the Chirp Stack web interface: After clicking Open New Tab, web UI to login appear, and login to Chirpstack with user of admin and password of admin
2. From the left menu, go to Gateways.
3. Click on the "Add gateway" button in the top right corner.
4. Fill in the following fields:

Gateway ID: Enter the unique EUI (e.g., c0ee40ffff29abcd) of the gateway.

Name: fill name of gateway (e.g., My Gateway).

Scroll down to click SUBMIT to save



The screenshot shows the ChirpStack web interface for adding a gateway. The left sidebar contains navigation options: Dashboard, Tenants, Users, API Keys, Device Profile Templates, Regions, Tenant (selected), Dashboard, Users, API Keys, Device Profiles, Gateways (highlighted), Gateway Mesh, and Applications. The main content area is titled 'Add gateway' and has tabs for 'General', 'Tags', and 'Metadata'. The 'General' tab is active. Fields include: 'Name' (text input with 'my gateway'), 'Description' (text area), 'Gateway ID (EUI64)' (text input with 'c0ee40ffff29abcd', a dropdown set to 'MSB', and a copy icon), 'Stats interval (secs)' (input with '30'), and 'Location' (a large blue area with '+' and '-' buttons). The top right has a search bar, a help icon, and a user profile 'admin'. The bottom left shows 'Version: v4.11.1'.

## Add Device Profiles

1. From the left menu, go to Device Profiles.
2. Click on the "Add device profiles" button in the top right corner.
3. Fill in the following fields:

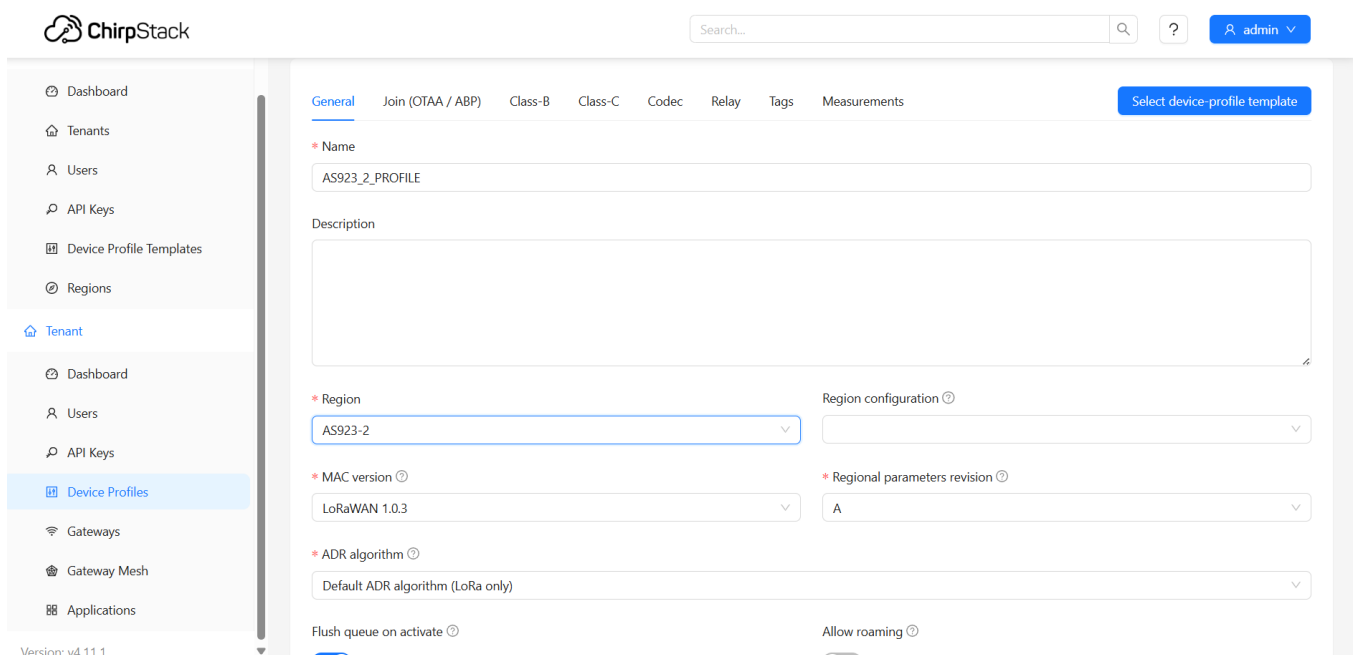
Name: fill name of profile(e.g., AS923\_2\_PROFILE).

Region: Select LoRaWAN region (e.g., AS923-2)

MAC version: Select LoRaWAN 1.0.3

Regional parameters revision: Select A

Scroll down to click submit to save

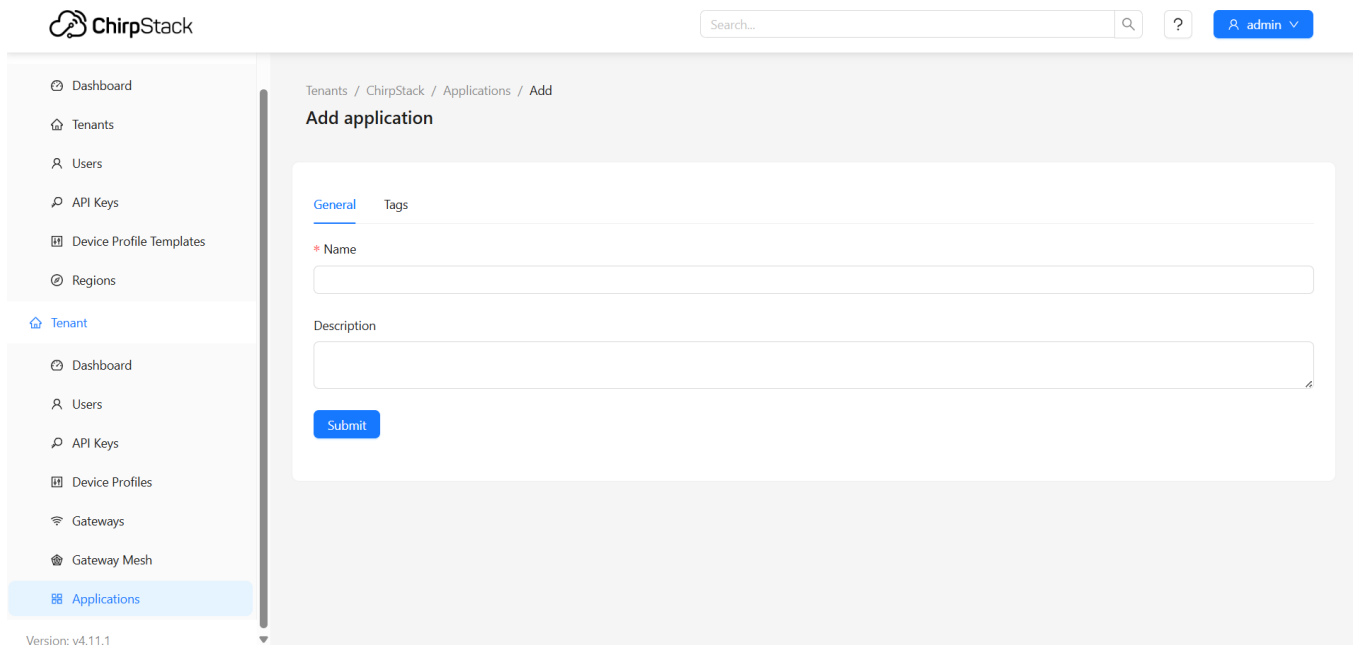


The screenshot shows the ChirpStack web interface for adding a device profile. The left sidebar is the same as in the previous screenshot, but 'Device Profiles' is highlighted. The main content area is titled 'Add device profile' and has tabs for 'General', 'Join (OTAA / ABP)', 'Class-B', 'Class-C', 'Codec', 'Relay', 'Tags', and 'Measurements'. The 'General' tab is active. Fields include: 'Name' (text input with 'AS923\_2\_PROFILE'), 'Description' (text area), 'Region' (dropdown with 'AS923-2'), 'Region configuration' (dropdown), 'MAC version' (dropdown with 'LoRaWAN 1.0.3'), 'Regional parameters revision' (dropdown with 'A'), 'ADR algorithm' (dropdown with 'Default ADR algorithm (LoRa only)'), 'Flush queue on activate' (checkbox), and 'Allow roaming' (checkbox). The top right has a search bar, a help icon, and a user profile 'admin'. The bottom left shows 'Version: v4.11.1'.

## Add Application

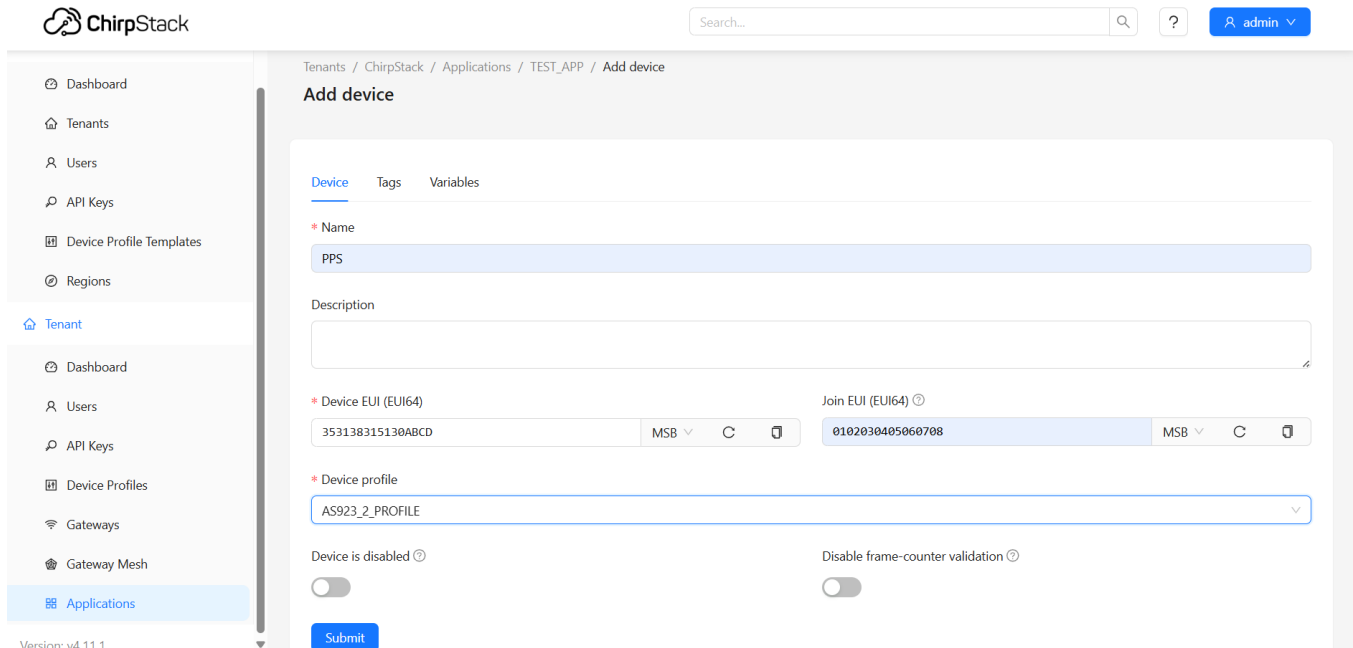
1. From the left menu, go to Applications.
2. Click on the "Add Application" button in the top right corner.

3. Fill in the following fields: fill name of application (e.g., TEST\_APP).
4. Click submit to save



## Add Device

1. From the right menu of application, click Add device.
2. Fill in the following fields:
3. Name: fill name of device(e.g., PPS).
4. Device EUI (EUI64): Enter device EUI of device (e.g., 353138315130ABCD)
5. Join EUI (EUI64) Enter appEUI of device (e.g., 0102030405060708)
6. Device Profile: Select device profile (e.g., AS9232\_2\_PROFILE)
7. Click SUBMIT to save



## Further reference

For further reference on Chirp Stack Network Server, please access the referenced document at link [ChirpStack open-source LoRaWAN Network Server](#)

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★ Created Mon, May 5, 2025 8:16 AM by [Phan Van Luc](#)

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