

Instruction to configure embedded Chirpstack Network Server in the Gateway

Embedded Chirpstack Network Server Information

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

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

Where [Gateway_IP] is the IP of the 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 LoRaWAN Gateway web interface. On the left is a dark blue sidebar with a menu: General Information, System, LoRa, Packet Forwarder (selected), Watcher, Logs, Network Server, Tools, and Network. The main area is titled 'LoRa Packet Forwarder' and shows the service is 'Active' with a timestamp '2025-05-05T10:40:10+07:00'. The 'Channel Plan' is set to 'AS 923_2'. Below this are three tabs: 'Gateway Info' (active), 'Gain', and 'Radio and Channel Settings'. The 'Gateway Info' tab contains several configuration fields: Gateway ID (2CCF67FFFE267867), Server Address (localhost), Server Uplink Port (1700), Server Downlink Port (1700), Keep Alive Interval (10 seconds), Statistics display Interval (30 seconds), and Push Timeout (100 milliseconds). An 'Apply' button is located in the top right corner of the configuration area.

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. The left sidebar contains a menu with 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, showing fields for Name (filled with 'my gateway'), Description, Gateway ID (EUI64) (filled with 'c0ee40ffff29abcd'), Stats interval (secs) (filled with '30'), and Location (a map area with a '+' button). The top right of the interface has a search bar, a help icon, and a user profile dropdown labeled 'admin'. The bottom left corner 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 menu is the same as 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, showing fields for Name (filled with 'AS923_2_PROFILE'), Description, Region (dropdown menu), Region configuration (dropdown menu), MAC version (dropdown menu), Regional parameters revision (dropdown menu), ADR algorithm (dropdown menu), Flush queue on activate (checkbox), and Allow roaming (checkbox). The top right of the interface has a search bar, a help icon, and a user profile dropdown labeled 'admin'. The bottom left corner 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

ChirpStack

Search...

admin

Tenants / ChirpStack / Applications / Add

Add application

General Tags

* Name

Description

Submit

Version: v4.11.1

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

ChirpStack

Search...

admin

Tenants / ChirpStack / Applications / TEST_APP / Add device

Add device

Device Tags Variables

* Name

PPS

Description

* Device EUI (EUI64)

353138315130ABCD MSB C

Join EUI (EUI64)

0102030405060708 MSB C

* Device profile

AS9232_2_PROFILE

Device is disabled

Disable frame-counter validation

Submit

Version: v4.11.1

Further reference

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

Integrations of Applications for the Globiots

1. Open a Applications on Network Server Chipstack
2. Click Integrations Tag
3. Find and Click "+" HTTP
4. Fill in all the information requested by the destination server.

Update HTTP integration

- * Payload encoding

JSON

* Event endpoint URL(s) 

<https://resources.globiots.com/rest/api/v1/lora-service/uplink-message>

Headers

Authorization

Basic YXBwLWtleS04YTQzZWZmZi05YTl4LTRiNzktYjEwMi00YWFiZjlmYmNlMWM6c2VjcmV0LWtleS1jOGYxNGQ4YS05YzJkLTQ1NTItYjRhOS02OTA2MWRmLn

+ Add header

Submit

Management ▾ Configuration ▾ Administrators ▾

Organization Chart

- ⊞ AEON DELIGHT (152/500)
 - ⊞ AEON Thanh Khê
 - ⊞ AEON VAN GIANG
 - ⊞ Aeon Midori Binh Duong
 - ⊞ ALARM
 - ⊞ BACNET
 - 🔊 MDO_BMSAlarm
 - 🔊 MDO_HIWTTank
 - 🔊 MDO_KOF_FEF_
 - 🔊 MDO_LoWTTank
 - 🔊 MDO_WS_Pump_
 - ⊞ DIGITAL
 - 🔊 MDO_AEONCafe
 - 🔊 MDO_DBBakery
 - 🔊 MDO_DBNoodle
 - 🔊 MDO_DBServer
 - 🔊 MDO_DBSocket
 - 🔊 MDO_FirePump
 - 🔊 MDO_FishKitc
 - 🔊 MDO_FoodRefi
 - 🔊 MDO_Gensets_
 - 🔊 MDO_MeatKitc
 - 🔊 MDO_ProKitch
 - 🔊 MDO_SDB_Pwr1
 - 🔊 MDO_SDB_Pwr2
 - 🔊 MDO_SDB_Pwr3

Category*

Daviteq Raw Payload Sensor

Payload Decoder

Auto Decode ☒

System will be decode by [Daviteq Raw Payload Sensor]

Uplink Message ?

The Base URL:

https://resources.globiots.com

Path:

/rest/api/v1/lora-service/uplink-message

The HTTP method to use:

POST

Authorization:

Header name: Authorization

Header value:

Basic YXBwLWtleS04YTQzZWVmZi05YTI4LTRlbnZktYjEwMi00YWFiZjlmYmNmMWM=

5. Add Other for Integrations

HTTP

HTTP://

The HTTP integration forwards events to a user-configurable endpoint as POST requests.

MQTT



The MQTT integration forwards events to a MQTT broker.

[Get certificate](#)

AWS SNS



The AWS SNS integration forwards events to an AWS SNS topic.

+

Azure Service-Bus



The Azure Service-Bus integration forwards events to an Azure Service-Bus topic or queue.

+

GCP Pub/Sub



The Google Cloud Pub/Sub integration forwards events to a GCP Pub/Sub topic.

+

IFTTT



The IFTTT integration forwards events to the IFTTT Webhooks integration.

+

InfluxDB



The InfluxDB integration writes events into an InfluxDB time-series database.

+

myDevices



The myDevices integration forwards events to the myDevices platform.

+

Pilot Things



The Pilot Things integration forwards messages to a Pilot Things instance.

+

Semtech LoRa Cloud™



The Semtech LoRa Cloud integration provides Modem & Geolocation Services.

+

ThingsBoard



The ThingsBoard integration forwards events to a ThingsBoard instance.

+