



[www.loraserver.io](http://www.loraserver.io)

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# Instalación

Mediante los siguientes videos tutoriales se hace la instalación del server:

<https://www.youtube.com/watch?v=FnTP7t47DII>

<https://www.youtube.com/watch?v=mkuS5QUj5Js>

Modificar en el loraserer.toml :

Para solucionar problemas de conexión de software (explicado en el video)

```
dsn="postgres://localhost/loraserver_ns?sslmode=disable"
```

Cambiar al plan de frecuencia utilizado:

```
# Valid values are:
# * AS_923
# * AU_915_928
# * CN_470_510
# * CN_779_787
# * EU_433
# * EU_863_870
# * IN_865_867
# * KR_920_923
# * RU_864_870
# * US_902_928
name=" AU_915_928"
```

Modificar para que los pings slot se mantengan en una frecuencia y no hagan frequency hopping.

```
ping_slot_frequency=923300000
```

# Configuración y creación de services (localhost:8080)

## Creación de network-servers [1]

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Network-servers

+ ADD

Name	Server
localhost	localhost:8000

Rows per page: 10 1-1 of 1

## Creación de network-servers [2]

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Network-servers / localhost (AU915 @ 2.6.1)

DELETE

GENERAL

GATEWAY DISCOVERY


TLS CERTIFICATES

Network-server name \*  
localhost  
A name to identify the network-server.

Network-server server \*  
localhost:8000  
The 'hostname:port' of the network-server, e.g. 'localhost:8000'.

UPDATE NETWORK-SERVER

# Creación de Gateway-profiles [1]



≡

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Search organization, application, gateway or device

admin

Gateway-profiles

+ CREATE

Name	Network-server
GatewayAU915	localhost

Rows per page: 10 1-1 of 1

## Creación de Gateway-profiles [2]

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Gateway-profiles / GatewayAU915

+ DELETE

Name \*

GatewayAU915

A short name identifying the gateway-profile.

Enabled channels \*

0, 1, 2, 3, 4, 5, 6, 7

The channels active in this gateway-profile as specified in the LoRaWAN Regional Parameters sepecification. Separate channels by comma, e.g. 0, 1, 2. Extra channels must not be included in this list.

ADD EXTRA CHANNEL UPDATE GATEWAY-PROFILE

# Creación de Service-profiles [1]

The screenshot displays the LoRaServer web interface. The top navigation bar is blue and contains the LoRaServer logo, a search bar with the placeholder text "Search organization, application, gateway or device", and a user profile icon labeled "admin". The left sidebar is a vertical list of navigation items: "Network-servers", "Gateway-profiles", "Organizations", "All users", "loraserver" (with a dropdown arrow), "Org. settings", "Org. users", "Service-profiles" (highlighted), "Device-profiles", "Gateways", "Applications", and "Multicast-groups". The main content area is titled "Service-profiles" and features a "+ CREATE" button in the top right corner. Below the title is a table with one row. The table has a header row with the label "Name" and a data row with the value "IOTServer". At the bottom right of the table, there is pagination information: "Rows per page: 10", "1-1 of 1", and navigation arrows.

Name
IOTServer

Rows per page: 10 1-1 of 1

## Creación de Service-profiles [2]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Service-profiles / IOTServer

DELETE

Service-profile name \*

IOTServer

A name to identify the service-profile.

☒ Add gateway meta-data

GW metadata (RSSI, SNR, GW geoloc., etc.) are added to the packet sent to the application-server.

☐ Enable network geolocation

When enabled, the network-server will try to resolve the location of the devices under this service-profile. Please note that you need to have gateways supporting the fine-timestamp feature and that the network-server needs to be configured in order to provide geolocation support.

Device-status request frequency

48

Frequency to initiate an End-Device status request (request/day). Set to 0 to disable.

☐ Report device battery level to application-server

☐ Report device link margin to application-server

Minimum allowed data-rate \*

3

Minimum allowed data rate. Used for ADR.

Maximum allowed data-rate \*

13

Maximum allowed data rate. Used for ADR.

UPDATE SERVICE-PROFILE



# Creación de Device-profiles [1]

The screenshot displays the LoRaServer web interface. The top navigation bar is blue and contains the LoRaServer logo, a search bar with the placeholder text "Search organization, application, gateway or device", and a user profile icon labeled "admin". The left sidebar is a vertical list of navigation items: "Network-servers", "Gateway-profiles", "Organizations", "All users", "loraserver" (with a dropdown arrow), "Org. settings", "Org. users", "Service-profiles", "Device-profiles" (highlighted), "Gateways", "Applications", and "Multicast-groups". The main content area is titled "Device-profiles" and features a "+ CREATE" button in the top right corner. Below the title is a table with a single column labeled "Name". The table contains four entries: "ClassA\_ABP", "ClassA\_OTAA", "ClassB", and "ClassC". At the bottom right of the table, there is a pagination control showing "Rows per page: 10", "1-4 of 4", and navigation arrows.

Name
ClassA_ABP
ClassA_OTAA
ClassB
ClassC

Rows per page: 10 1-4 of 4

## Creación de Device-profiles [2]

← LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassA\_ABP

DELETE

GENERAL

JOIN (OTAA / ABP)

CLASS-B

CLASS-C

Device-profile name \*  
ClassA\_ABP  
A name to identify the device-profile.

LoRaWAN MAC version \*  
1.0.3  
The LoRaWAN MAC version supported by the device.

LoRaWAN Regional Parameters revision \*  
A  
Revision of the Regional Parameters specification supported by the device.

Max EIRP \*  
30  
Maximum EIRP supported by the device.

UPDATE DEVICE-PROFILE

## Creación de Device-profiles [3]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassA\_ABP

DELETE

GENERAL

JOIN (OTAA / ABP)

CLASS-B

CLASS-C

☐ Device supports OTAA

RX1 delay \*  
1

RX1 delay (valid values are 0 - 15).

RX1 data-rate offset \*  
0

Please refer the LoRaWAN Regional Parameters specification for valid values.

RX2 data-rate \*  
8

Please refer the LoRaWAN Regional Parameters specification for valid values.

RX2 channel frequency (Hz) \*  
923300000

Factory-preset frequencies (Hz) \*  
915000000

List of factory-preset frequencies (Hz), comma separated.

UPDATE DEVICE-PROFILE

## Creación de Device-profiles [4]

The screenshot displays the LoRaServer web interface. The top navigation bar is blue and contains the LoRaServer logo, a search bar, and a user profile labeled 'admin'. The left sidebar lists various system components: Network-servers, Gateway-profiles, Organizations, All users, loraserver (selected), Org. settings, Org. users, Service-profiles, Device-profiles, Gateways, Applications, and Multicast-groups. The main content area is titled 'Device-profiles / ClassA\_ABP' and features a 'DELETE' button. Below this, there are four tabs: GENERAL, JOIN (OTAA / ABP), CLASS-B (active), and CLASS-C. The CLASS-B tab contains a checkbox labeled 'Device supports Class-B'. An 'UPDATE DEVICE-PROFILE' button is located at the bottom right of the configuration area.

# Creación de Device-profiles [5]

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassA\_ABP

DELETE

GENERALJOIN (OTAA / ABP)CLASS-BCLASS-C

☐ Device supports Class-C

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [6]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassA\_OTAA

DELETE

GENERAL

JOIN (OTAA / ABP)

CLASS-B

CLASS-C

Device-profile name \*

ClassA\_OTAA

A name to identify the device-profile.

LoRaWAN MAC version \*

1.0.3

The LoRaWAN MAC version supported by the device.

LoRaWAN Regional Parameters revision \*

A

Revision of the Regional Parameters specification supported by the device.

Max EIRP \*

30

Maximum EIRP supported by the device.

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [8]

The screenshot displays the LoRaServer web interface. The top navigation bar is blue and contains the LoRaServer logo, a search bar with the placeholder text "Search organization, application, gateway or device", and a user profile icon labeled "admin".

On the left side, there is a sidebar menu with the following items: "Network-servers", "Gateway-profiles", "Organizations", "All users", "loraserver" (selected), "Org. settings", "Org. users", "Service-profiles", "Device-profiles", "Gateways", "Applications", and "Multicast-groups".

The main content area is titled "Device-profiles / ClassA\_OTAA". In the top right corner of this area, there is a red "DELETE" button. Below the title, there are four tabs: "GENERAL", "JOIN (OTAA / ABP)" (which is the active tab), "CLASS-B", and "CLASS-C".

Under the "JOIN (OTAA / ABP)" tab, there is a single configuration item: a checked checkbox labeled "Device supports OTAA".

In the bottom right corner of the configuration area, there is a blue "UPDATE DEVICE-PROFILE" button.

# Creación de Device-profiles [9]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassA\_OTAA

DELETE

GENERALJOIN (OTAA / ABP)CLASS-BCLASS-C

☐ Device supports Class-B

UPDATE DEVICE-PROFILE



# Creación de Device-profiles [10]

The screenshot displays the LoRaServer web interface. The top navigation bar is blue and contains the LoRaServer logo, a search bar, and a user profile icon labeled 'admin'. The left sidebar is white and lists various system components: Network-servers, Gateway-profiles, Organizations, All users, loraserver (selected), Org. settings, Org. users, Service-profiles, Device-profiles, Gateways, Applications, and Multicast-groups. The main content area is titled 'Device-profiles / ClassA\_OTAA' and features a 'DELETE' button. Below the title are four tabs: GENERAL, JOIN (OTAA / ABP), CLASS-B, and CLASS-C (the active tab). The CLASS-C tab contains a checkbox labeled 'Device supports Class-C' and an 'UPDATE DEVICE-PROFILE' button.

LoRaServer

Search organization, application, gateway or device

admin

Device-profiles / ClassA\_OTAA

DELETE

GENERAL JOIN (OTAA / ABP) CLASS-B CLASS-C

☐ Device supports Class-C

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [11]

←

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassB

DELETE

GENERALJOIN (OTAA / ABP)CLASS-BCLASS-C

Device-profile name \*  
ClassB  
A name to identify the device-profile.

LoRaWAN MAC version \*  
1.0.3  
The LoRaWAN MAC version supported by the device.

LoRaWAN Regional Parameters revision \*  
A  
Revision of the Regional Parameters specification supported by the device.

Max EIRP \*  
30  
Maximum EIRP supported by the device.

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [12]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassB

DELETE

GENERAL

JOIN (OTAA / ABP)

CLASS-B

CLASS-C

☐ Device supports OTAA

RX1 delay \*

1

RX1 delay (valid values are 0 - 15).

RX1 data-rate offset \*

0

Please refer the LoRaWAN Regional Parameters specification for valid values.

RX2 data-rate \*

8

Please refer the LoRaWAN Regional Parameters specification for valid values.

RX2 channel frequency (Hz) \*

923300000

Factory-preset frequencies (Hz) \*

915000000

List of factory-preset frequencies (Hz), comma separated.

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [13]

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassB

DELETE

GENERALJOIN (OTAA / ABP)CLASS-BCLASS-C

☒ Device supports Class-B

Class-B confirmed downlink timeout \*  
20

Class-B timeout (in seconds) for confirmed downlink transmissions.

Class-B ping-slot periodicity \*  
every 2 seconds

Class-B ping-slot periodicity.

Class-B ping-slot data-rate \*  
8

Class-B ping-slot frequency (Hz) \*  
923300000

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [14]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassB

DELETE

GENERAL

JOIN (OTAA / ABP)

CLASS-B

CLASS-C

☐ Device supports Class-C

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [15]

←

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassC

DELETE

GENERAL

JOIN (OTAA / ABP)

CLASS-B

CLASS-C

Device-profile name \*

ClassC

A name to identify the device-profile.

LoRaWAN MAC version \*

1.0.3

The LoRaWAN MAC version supported by the device.

LoRaWAN Regional Parameters revision \*

A

Revision of the Regional Parameters specification supported by the device.

Max EIRP \*

30

Maximum EIRP supported by the device.

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [16]

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassC

DELETE

GENERAL

JOIN (OTAA / ABP)

CLASS-B

CLASS-C

☐ Device supports OTAA

RX1 delay \*

1

RX1 delay (valid values are 0 - 15).

RX1 data-rate offset \*

0

Please refer the LoRaWAN Regional Parameters specification for valid values.

RX2 data-rate \*

8

Please refer the LoRaWAN Regional Parameters specification for valid values.

RX2 channel frequency (Hz) \*

923300000

Factory-preset frequencies (Hz) \*

915000000

List of factory-preset frequencies (Hz), comma separated.

UPDATE DEVICE-PROFILE

# Creación de Device-profiles [17]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassC

DELETE

GENERAL JOIN (OTAA / ABP) CLASS-B CLASS-C

☐ Device supports Class-B

UPDATE DEVICE-PROFILE



# Creación de Device-profiles [18]

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Device-profiles / ClassC

DELETE

GENERALJOIN (OTAA / ABP)CLASS-BCLASS-C


☒ Device supports Class-C

Class-C confirmed downlink timeout\*  
10

Class-C timeout (in seconds) for confirmed downlink transmissions.

UPDATE DEVICE-PROFILE

# Gateways [1]

 LoRaServer

←

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles


Gateways

Applications

Multicast-groups

Gateways

+ CREATE

Name	Gateway ID	Gateway activity (30d)
RAK831	029570b6edc1ae45	

Rows per page: 10 1-1 of 1

# Gateways [2]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Gateways / RAK831

DELETE

GATEWAY DETAILS

GATEWAY CONFIGURATION

GATEWAY DISCOVERY

LIVE LORAWAN FRAMES

Gateway name \*

RAK831

The name may only contain words, numbers and dashes.

Gateway description \*

Gateway con Rak831 y RBPI 3  
lora\_pkt\_fwd -> V4.0

Gateway-profile

GatewayAU915

An optional gateway-profile which can be assigned to a gateway. This configuration can be used to automatically re-configure the gateway when LoRa Gateway Bridge is configured so that it manages the packet-forwarder configuration.

☒ Gateway discovery enabled


When enabled (and LoRa Server is configured with the gateway discover feature enabled), the gateway will send out periodical pings to test its coverage by other gateways in the same network.

Gateway altitude (meters) \*


37

When the gateway has an on-board GPS, this value will be set automatically when the network received statistics from the gateway.


Gateway location (set to current location)



# Applications [1]

 LoRaServer

Search organization, application, gateway or device

 admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Applications

+ CREATE

ID	Name	Service-profile	Description
1	LED	IOTServer	Estado del led

Rows per page: 10 1-1 of 1

# Applications [2]

←

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Applications / LED

DELETED

DEVICESAPPLICATION CONFIGURATIONINTEGRATIONS

+ CREATE

Last seen	Device name	Device EUI	Link margin	Battery
a month ago	Shield_A	000bacc9cba5e406	n/a	n/a
a month ago	Shield_B	000bacc9cba5e407	n/a	n/a
a month ago	Shield_C	000bacc9cba5e408	n/a	n/a

Rows per page: 101-3 of 3<>

# Applications [3]

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Applications / LED

DELETE

DEVICES

APPLICATION CONFIGURATION

INTEGRATIONS

Application name \*

LED

The name may only contain words, numbers and dashes.

Application description \*

Estado del led


Payload codec

None

By defining a payload codec, LoRa App Server can encode and decode the binary device payload for you.

UPDATE APPLICATION

# Applications [4]

 LoRaServer

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Search organization, application, gateway or device

admin

Applications / LED / Devices / Shield\_A

DELETE

CONFIGURATIONKEYS (OTAA)ACTIVATIONLIVE DEVICE DATALIVE LORAWAN FRAMES

Device name \*  
Shield\_A

The name may only contain words, numbers and dashes.

Device description \*  
RFM95W

Device-profile \*  
ClassA\_ABP

☒ Disable frame-counter validation

Note that disabling the frame-counter validation will compromise security as it enables people to perform replay-attacks.

UPDATE DEVICE

# Applications [5]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Applications / LED / Devices / Shield\_A

DELETE

CONFIGURATIONKEYS (OTAA)ACTIVATIONLIVE DEVICE DATALIVE LORAWAN FRAMES

Device address \*

26 00 29 9d

MSB

Network session key (LoRaWAN 1.0) \*

3e 1c 9d 5a ce d7 89 52 2c e8 df 14 35 d6 b6 4b

MSB

Application session key (LoRaWAN 1.0) \*

5b 8e 83 fa d1 62 ad 7a 81 d7 74 a3 9c 57 1f d9

MSB

Uplink frame-counter \*

0

Downlink frame-counter (network) \*

0

(RE)ACTIVATE DEVICE



# Applications [6]

←

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Applications / LED / Devices / Shield\_B

DELETE

CONFIGURATIONKEYS (OTAA)ACTIVATIONLIVE DEVICE DATALIVE LORAWAN FRAMES

Device name \*

Shield\_B

The name may only contain words, numbers and dashes.

Device description \*

KL46Z + RFM95W

Device-profile \*

ClassB

☒ Disable frame-counter validation

Note that disabling the frame-counter validation will compromise security as it enables people to perform replay-attacks.

UPDATE DEVICE

# Applications [7]

LoRaServer

Search organization, application, gateway or device

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Applications / LED / Devices / Shield\_B

DELETE

CONFIGURATIONKEYS (OTAA)ACTIVATIONLIVE DEVICE DATALIVE LORAWAN FRAMES

Device address \*

26 00 29 9e

MSB

Network session key (LoRaWAN 1.0) \*

3e 1c 9d 5a ce d7 89 52 2c e8 df 14 35 d6 b6 4b

MSB

Application session key (LoRaWAN 1.0) \*

5b 8e 83 fa d1 62 ad 7a 81 d7 74 a3 9c 57 1f d9

MSB

Uplink frame-counter \*

0

Downlink frame-counter (network) \*

0

(RE)ACTIVATE DEVICE

# Applications [8]

←

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Applications / LED / Devices / Shield\_C

DELETE

CONFIGURATION

KEYS (OTAA)

ACTIVATION

LIVE DEVICE DATA

LIVE LORAWAN FRAMES

Device name \*

Shield\_C

The name may only contain words, numbers and dashes.

Device description \*

KL46Z

Device-profile \*

ClassC

☒ Disable frame-counter validation

Note that disabling the frame-counter validation will compromise security as it enables people to perform replay-attacks.

UPDATE DEVICE

# Applications [9]

←

LoRaServer

Search organization, application, gateway or device

?

admin

Network-servers

Gateway-profiles

Organizations

All users

loraserver

Org. settings

Org. users

Service-profiles

Device-profiles

Gateways

Applications

Multicast-groups

Applications / LED / Devices / Shield\_C

DELETE

CONFIGURATIONKEYS (OTAA)ACTIVATIONLIVE DEVICE DATALIVE LORAWAN FRAMES

Device address \*

26 00 29 9f

MSB

↺

Network session key (LoRaWAN 1.0) \*

3e 1c 9d 5a ce d7 89 52 2c e8 df 14 35 d6 b6 4b

MSB

↺

🗑

Application session key (LoRaWAN 1.0) \*

5b 8e 83 fa d1 62 ad 7a 81 d7 74 a3 9c 57 1f d9

MSB

↺

🗑

Uplink frame-counter \*

0

⬆

⬇

Downlink frame-counter (network) \*

0

⬆

⬇

(RE)ACTIVATE DEVICE

# LoRa App Server REST API (localhost:8080/api)

## Generar el Token para el Login

**DELETE** /api/gateways/{id} Delete deletes the gateway matching the given mac address.

**GET** /api/gateways/{id} Get returns the gateway for the requested mac address.

**Internal Service** [Show/Hide](#) [List Operations](#) [Expand Operations](#)

**GET** /api/internal/branding Get the branding for the UI

**POST** /api/internal/login Log in a user

**Response Class (Status 200)**  
A successful response.

**Model** | **Example Value**

```
{
  "jwt": "string"
}
```

Response Content Type:

**Parameters**

Parameter	Value	Description	Parameter Type	Data Type
body	<pre>{   "password": "admin",   "username": "admin" }</pre>		body	<b>Model</b>   <b>Example Value</b> <pre>{   "password": "string",   "username": "string" }</pre>

Parameter content type:

[Try it out!](#) [Hide Response](#)

## Luego de dar “Try it out!” copiar la JWT

Parameter content type:

[Try it out!](#) [Hide Response](#)

**Curl**

```
curl -X POST --header 'Content-Type: application/json' --header 'Accept: application/json' -d '{ \
  "password": "admin", \
  "username": "admin" \
}' 'http://192.168.1.127:8080/api/internal/login'
```

**Request URL**

```
http://192.168.1.127:8080/api/internal/login
```

**Response Body**

```
{
  "jwt": "eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJhdWQiOiJsb3JhLWwC1zZXJ2ZXIiLCJleHAiOjE1NTg3NTEyMTAsIm1zcyI6Imxvc"
}
```

**Response Code**

```
200
```

**Response Headers**

```
{
  "content-length": "245",
  "content-type": "application/json",
  "date": "Fri, 24 May 2019 02:26:50 GMT",
  "grpc-metadata-content-type": "application/grpc",
  "grpc-metadata-trailer": "Grpc-Status, Grpc-Message, Grpc-Status-Details-Bin"
}
```

Pegar la JWT en la parte superior derecha de la página. Dar enter y F5. Ahora ya se pueden utilizar las APIs hasta que el Token venza.

LoRa App Server REST API

JWT TOKEN

## LoRa App Server REST API

For more information about the usage of the LoRa App Server (REST) API, see <https://docs.lorasever.io/lora-app-server/api/>.

### ApplicationService

Show/Hide | List Operations | Expand Operations

GET	/api/applications	List lists the available applications.
POST	/api/applications	Create creates the given application.
PUT	/api/applications/{application.id}	Update updates the given application.
GET	/api/applications/{application_id}/integrations	ListIntegrations lists all configured integrations.
DELETE	/api/applications/{application_id}/integrations/http	DeleteIntegration deletes the HTTP application-integration.
GET	/api/applications/{application_id}/integrations/http	GetHTTPIntegration returns the HTTP application-integration.
DELETE	/api/applications/{application_id}/integrations/influxdb	DeleteInfluxDBIntegration deletes the InfluxDB application-integration.
GET	/api/applications/{application_id}/integrations/influxdb	GetInfluxDBIntegration returns the InfluxDB application-integration.
DELETE	/api/applications/{id}	Delete deletes the given application.
GET	/api/applications/{id}	Get returns the requested application.
POST	/api/applications/{integration.application_id}/integrations/http	CreateHTTPIntegration creates a HTTP application-integration.
PUT	/api/applications/{integration.application_id}/integrations/http	UpdateHTTPIntegration updates a HTTP application-integration.

Desde la siguiente API, completando los campos, se hacen los Downlink.

**POST** /api/devices/{device\_queue\_item.dev\_eui}/queue Enqueue adds the given item to the device-queue.

**Response Class (Status 200)**  
A successful response.

Model | Example Value

```
{
  "fCnt": 0
}
```

Response Content Type:

**Parameters**

Parameter	Value	Description	Parameter Type	Data Type
device_queue_item.dev_eui	<input type="text" value="000bacc9cba5e406"/>	Device EUI (HEX encoded).	path	string

**body**

```
{
  "deviceQueueItem": {
    "confirmed": false,
    "data": "MQ==",
    "devEUI": "000bacc9cba5e406",
    "fCnt": 0,
    "fPort": 1
  }
}
```

Parameter content type:

**body** Model | Example Value

```
{
  "deviceQueueItem": {
    "confirmed": true,
    "data": "string",
    "devEUI": "string",
    "fCnt": 0,
    "fPort": 0,
    "jsonObject": "string"
  }
}
```

[Try it out!](#)