

# How to Register a LoRa Node with RAK Gateway built-in LoRaServer?

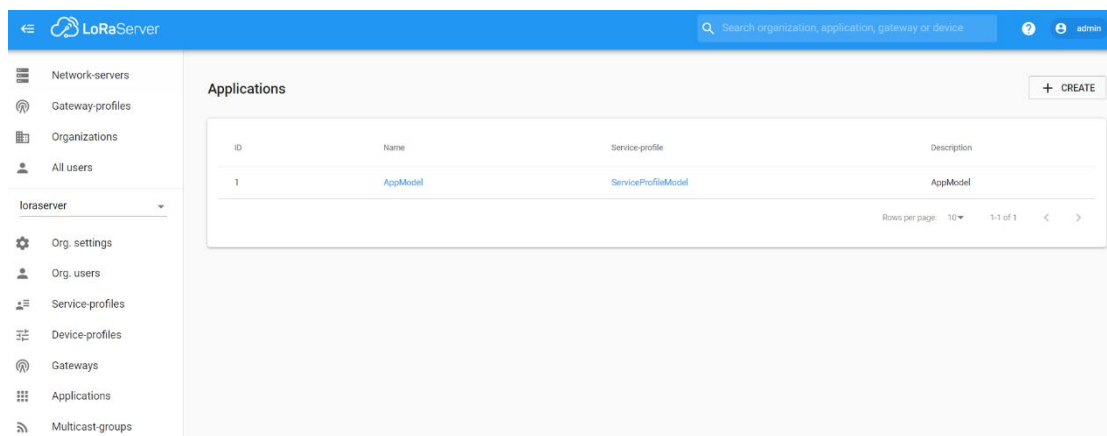
This document is used to guide users to register a LoRa node with RAK LoRa gateway built-in LoRaServer.

If you want to use RAK cloud LoRaServer, please have a look at another document:

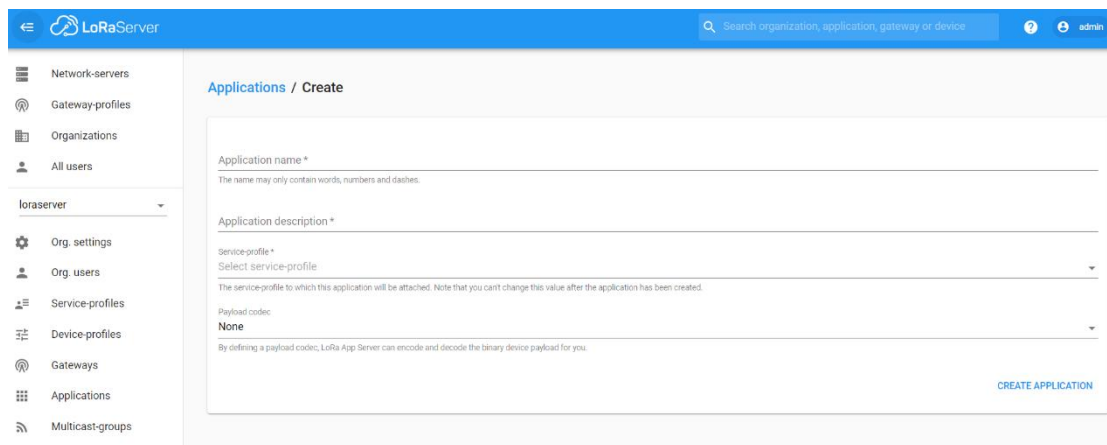
[https://downloads.rakwireless.com/en/LoRa/LoRa-Server-Cloud/Guide/How\\_to\\_use\\_RAK\\_cloud\\_LoRaServer\\_for\\_testing.pdf](https://downloads.rakwireless.com/en/LoRa/LoRa-Server-Cloud/Guide/How_to_use_RAK_cloud_LoRaServer_for_testing.pdf)

OK, let's get start!

Open the web page of the built-in LoRaServer. The link is "Gateway IP:8080".



By default, there is already one or more items in this page, you can use it or create a new item. Now, let's create a new item by click the "CREATE" button, and fill in them.



**Applications / Create**

Application name\*  
RAK7200\_test  
The name may only contain words, numbers and dashes.

Application description\*  
This application is used to test RAK7200

Service-profile\*  
ServiceProfileModel  
The service profile to which this application will be attached. Note that you can't change this value after the application has been created.

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

**CREATE APPLICATION**

“CREATE APPLICATION”.

**Applications** + CREATE

ID	Name	Service-profile	Description
1	AppModel	ServiceProfileModel	AppModel
2	RAK7200_test	ServiceProfileModel	This application is used to test RAK7200

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Click the new item name “RAK7200\_test”:

**Applications / RAK7200\_test** DELETE

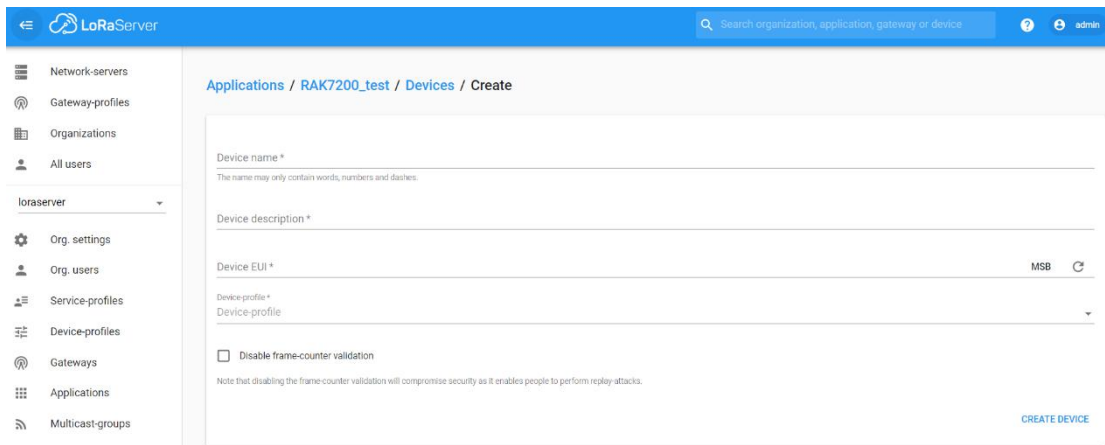
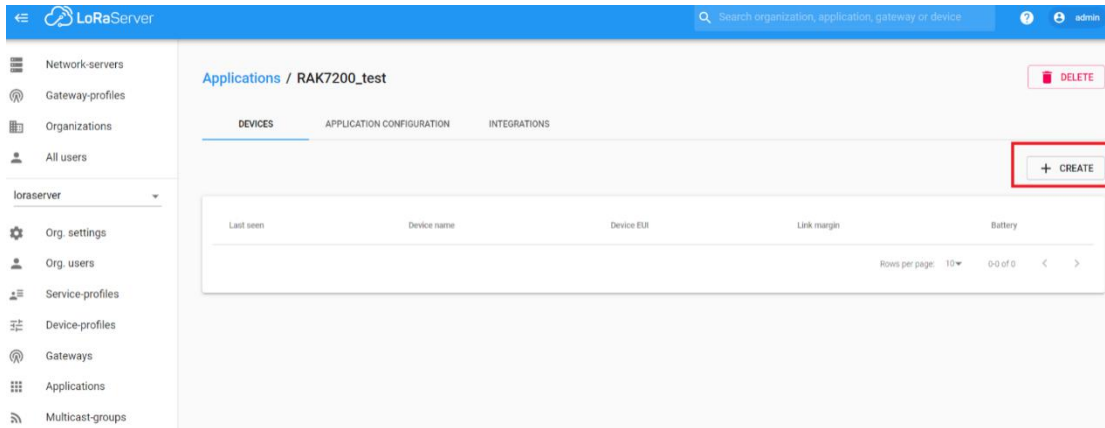
DEVICES APPLICATION CONFIGURATION INTEGRATIONS

+ CREATE

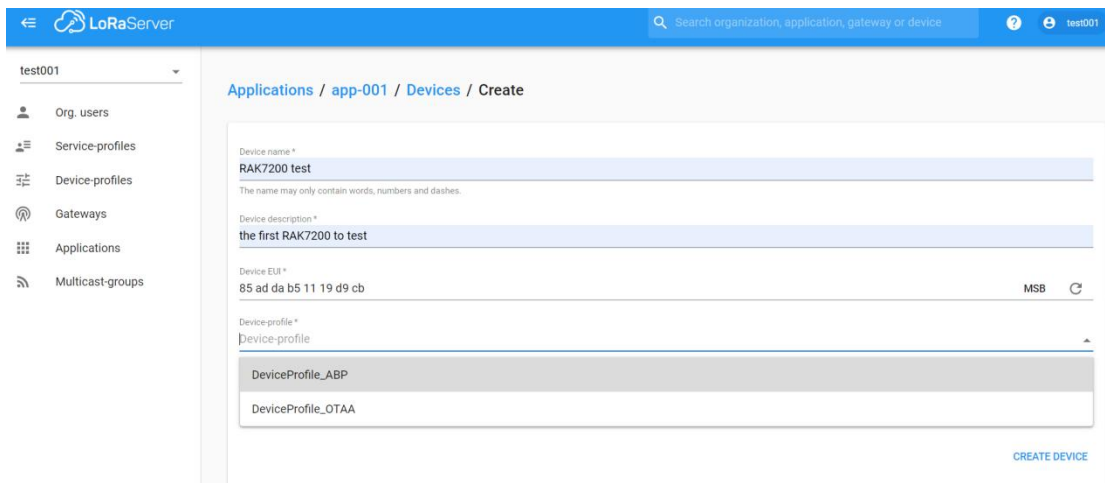
Last seen	Device name	Device EUI	Link margin	Battery
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Add a LoRa node device into LoRaServer by clicking the “CREATE” button:



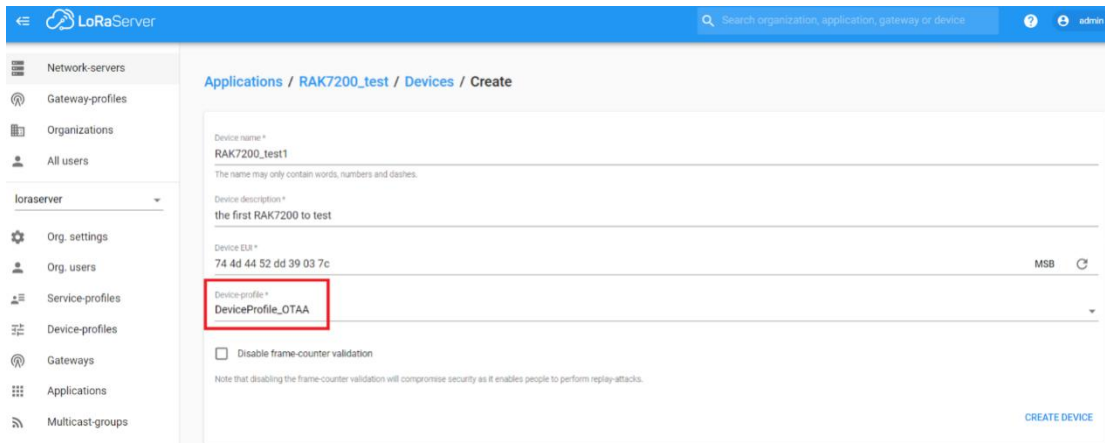
Fill in them. You can generate a Device EUI automatically by click the following icon, or you can write a correct Device EUI in the edit box.



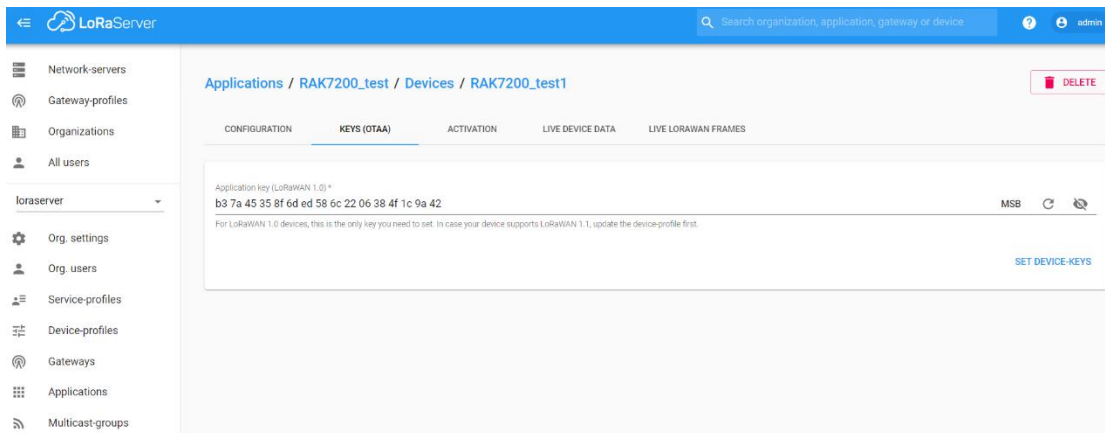
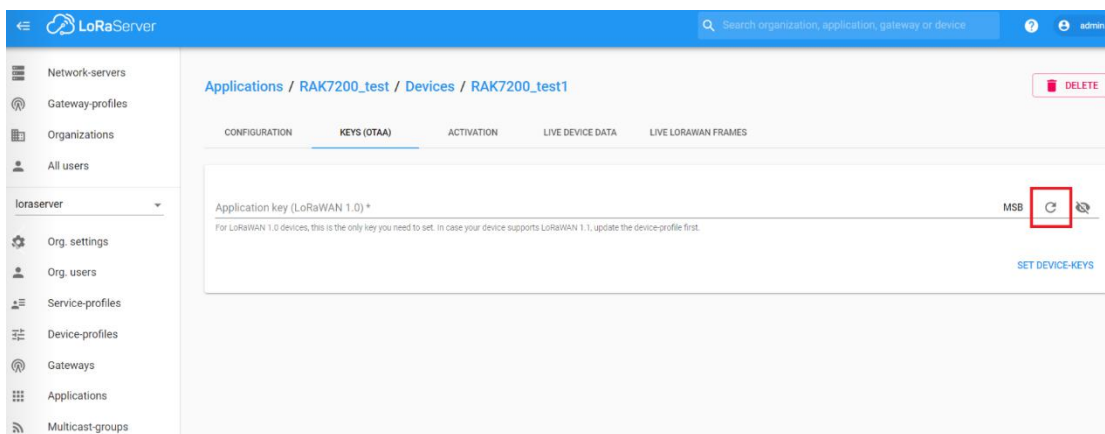
Note: If you want to join in OTAA mode, you should select “**DeviceProfile\_OTAA**” in the “Device-profile” item. If you want to join in ABP mode and other frequencies except AS923 and CN470, you should select “**DeviceProfile\_ABP**” in the “Device-profile” item. What about AS923 in ABP mode? Sorry! LoRaServer can not support it now.

### 5.1 Register a LoRa node in OTAA mode

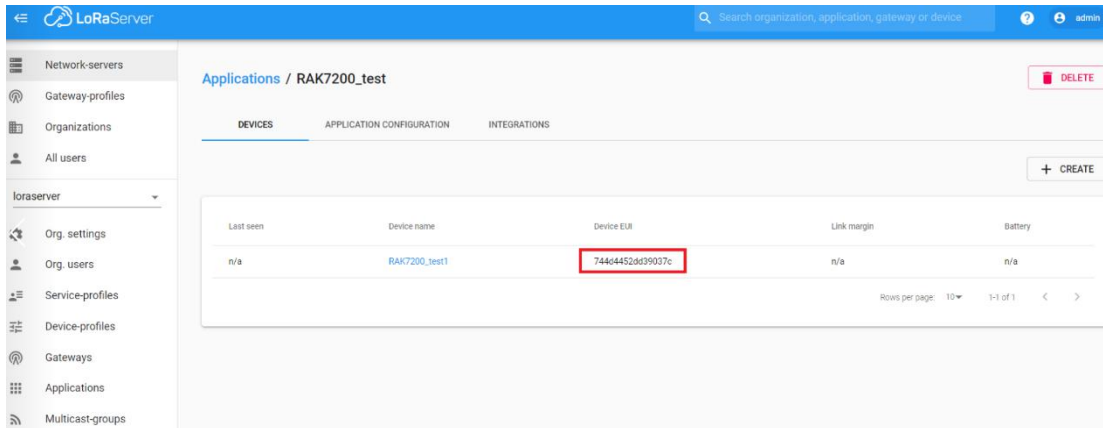
If you select “DeviceProfile\_OTAA”, it means you want to join LoRaServer in OTAA mode.



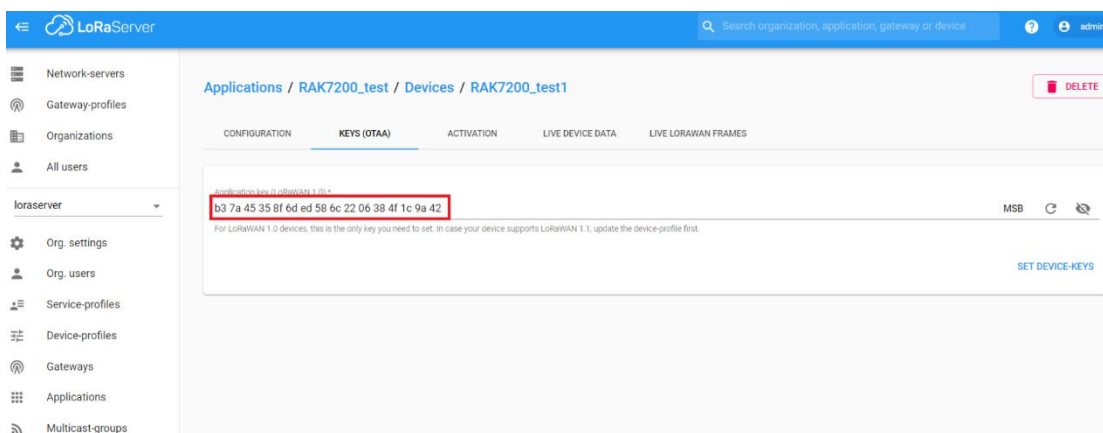
“CREATE DEVICE”. Then generate the application key in this page. You can write it by yourself or generate it automatically by clicking the following icon:



“SET DEVICE-KEYS”. That’s OK! You’ve complete the configuration on LoRaServer. As you see, the Device EUI which will be set into your LoRa node as “dev\_eui” is this one:



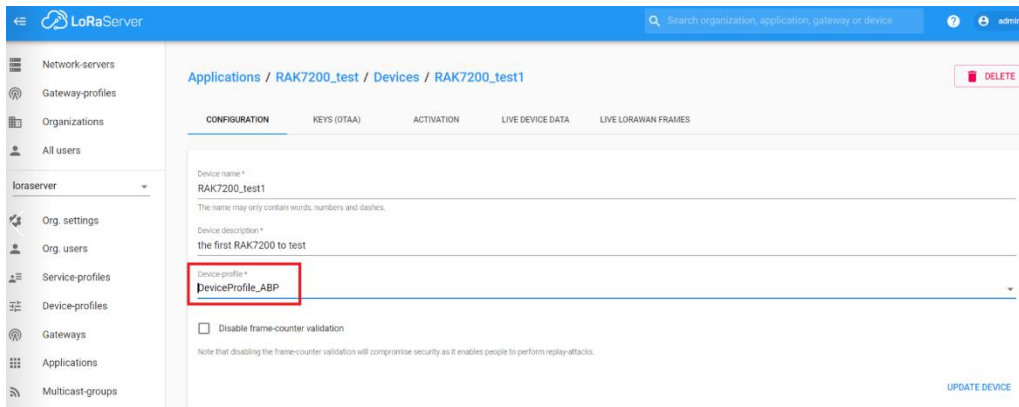
The Application Key which will be set into your LoRa node as “app\_key” is this one:



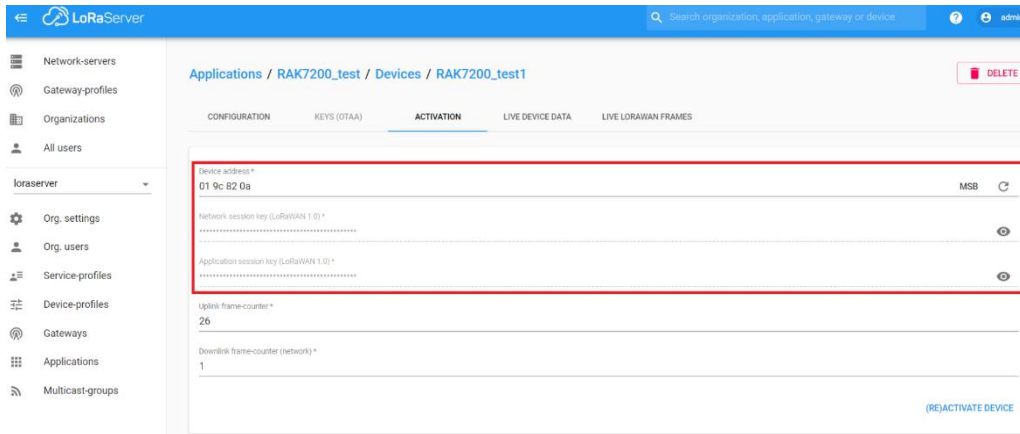
The Application EUI which will be set into your LoRa node as “app\_eui” is useless for LoRaServer, and you can set it to any value with a correct format, for example: 7083D57ED001C1CF.

## 5.2 Register a LoRa node in ABP mode

If you select “DeviceProfile\_ABP” or “DeviceProfile\_ABP\_CN470”, it means you want to join LoRaServer in OTAA mode.

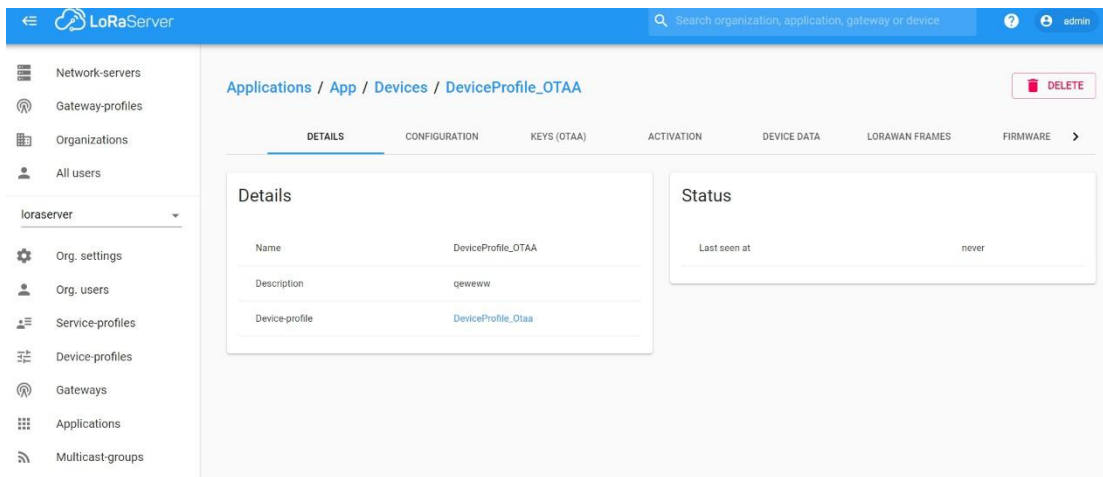


Then you can see that there are some parameters for ABP in the “ACTIVATION” item:

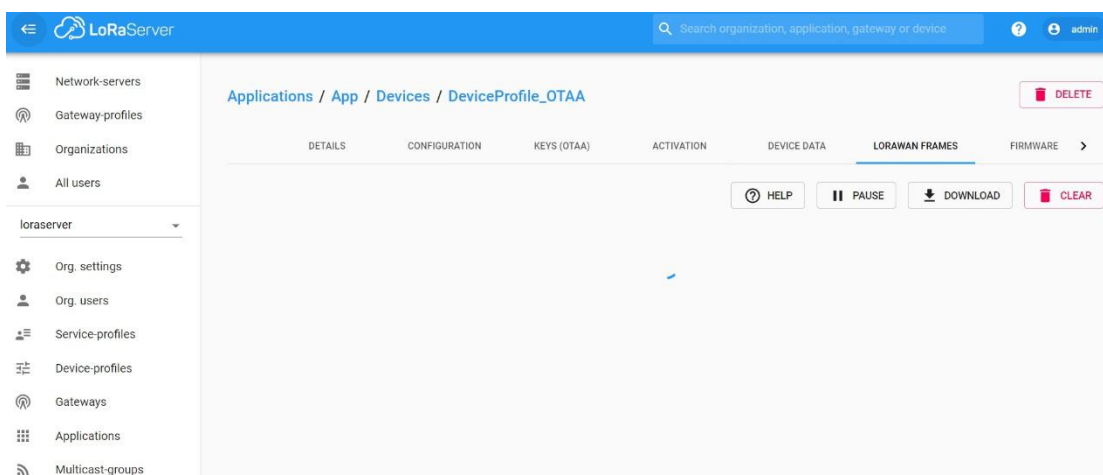


Next, let's use these key parameters to set your LoRa node by using AT command.

Finally, if your LoRa node has joined successfully, you can check the status here:



Or you can see the LoRa frames sending from LoRa node in this page:



**Please contact us if you need technical support or want to know more information.**

**Support center:** <https://forum.rakwireless.com/>

**Email us:** [info@rakwireless.com](mailto:info@rakwireless.com)