



How to use ScanWAN ?

Explanatory slides



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What is ScanWAN ?

ScanWAN is an open-source mobile application created in order to make the IoT (Internet of Things) devices registration process more easier. Especially for technicians but also for every person who would register a device.

To make this process easier **ScanWAN** uses the new [LoRa Alliance](#) QR codes normalisation that contains main information to register a device like DevEUI or AppEUI.

What is ScanWAN ?

ScanWAN was created by three engineer students in Computer Science field from Polytech Grenoble, located in France.

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How to register a device from scratch ?

The next slides will explain how the **ScanWAN** application should be used in order to well register a device.

You have to know that actually, this application supports only two private networks : [Chirpstack](#) and [The Things Network](#).

In the future **ScanWAN** could be enhanced to manage with more networks including public ones.

Notice that ScanWAN provides you two methods to register a device, by QR Code and manually. However, only the QR Code way will be explained because of the similarity of the methods.

The pictures besides represents the main screen of **ScanWAN**.

ScanWAN supports two methods to register a device :

- 1 - QR Code
- 2 - Manually

Before starting the process, you firstly have to select a network account clicking on the Select a network button, otherwise you will see an error alert.

ScanWAN



1

Add a device manually

Select a network

Select an application

ScanWAN



Error

Please choose a network !

OK

Select a network

Select an application

Once you clicked on the Select a network button you should see the Network Selection screen

The two blue buttons are respectively used to add a Chirpstack or TTN account.

The TTN account is authenticate by an [API Key](#).

Notice that you could only register **ONE** account of each Network. How to manage with account will be explained later.

Network Selection

Select a network to register your node in

Add a new Network Account

Chirpstack

TTN

TTN Login

API Key

✓ Submit

Chirpstack Login

Login

Password

✓ Submit

After adding an account you will be redirected in the main screen of **ScanWAN**

This is how the Network Selection screen looks when you have registered the two different accounts.

Notice that if your login or your API Key are wrong, this screen will display nothing.

To continue in the register process, you have to select an account by clicking on it.

ScanWAN



[Add a device manually](#)

Select a network

Select an application

Network Selection

Select a network to register your node in



Chirpstack

GuestSandbox



The Things Network

Add a new Network Account

Chirpstack

TTN


Once you have selected a network, you will be redirected on the main screen.

You also unlocked the Select an application button.

This button redirects you in the Selection Application screen (figure 2). You could select an application by clicking on it.

The last picture represents the result screen. Here, you have unlocked the scanning process.

ScanWAN



[Add a device manually](#)

Chirpstack is selected

Select an application

Binome 1

PM2M_BINOME2

Binome 2

PM2M_BINOME3

Binome 3

PM2M_BINOME4

Binome 4

PM2M_BINOME5

Binome 5

PM2M_XX_YY

Application XX YY

QR_CODE_APP

Application INFO4 pour le Projet 6


QR_CODE_TEST

QR Code Test

SODAQ_EXPLORER

Sodaq Explorer <https://github.com/CampusIoT/tutorial/tree/master/sodaq>

ScanWAN



[Add a device manually](#)

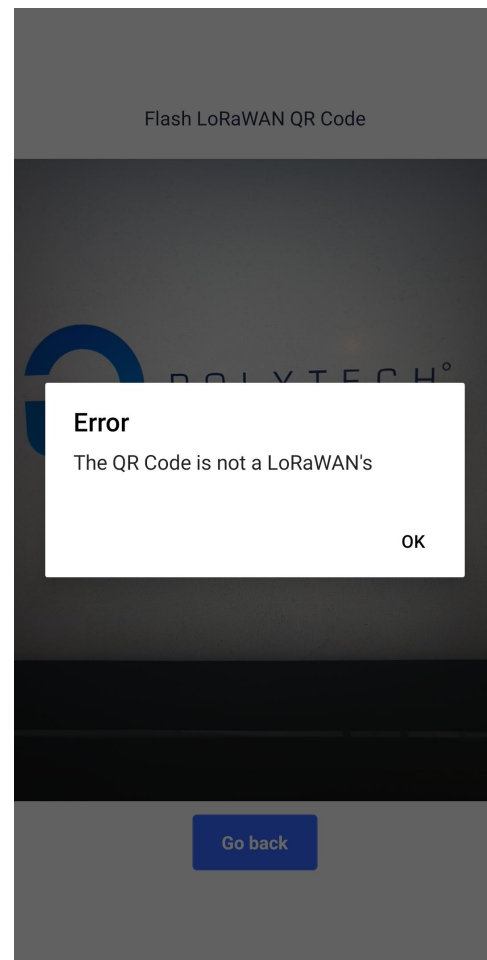
Chirpstack is selected

QR_CODE_APP is selected

Hint : You could change both network and application during the process by clicking on the main screen buttons.

Once you have clicked on the QR Code picture on the main screen, you will see this screen with the active back camera in the middle.

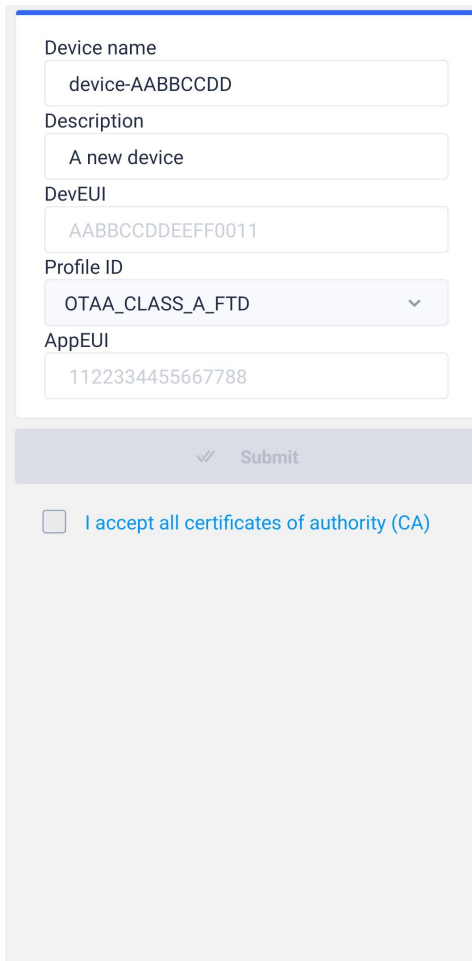
You now have to align the camera with a QR Code that respect the [LoRa Alliance](#) specification. Otherwise, you will see an error.



If the scan succeed you will be redirected on the chosen network device registration form. Here, you could see the Chirpstack one.

Each field are pre-filled by default values. You could also change the non grayed out fields like device name for example.

In order to validate this form you have to check the certificates of authority checkbox and click on the submit button.



Device name
device-AABBCCDD

Description
A new device

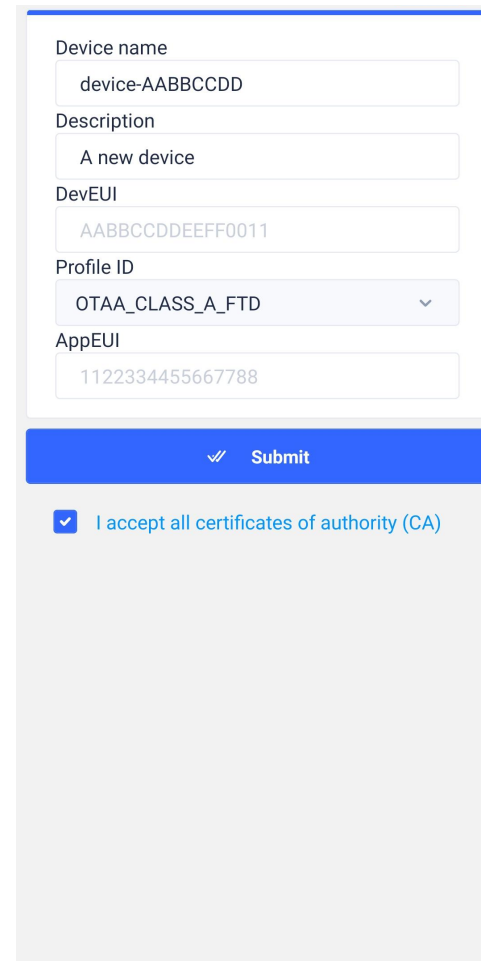
DevEUI
AABBCCDDEEFF0011

Profile ID
OTAA_CLASS_A_FTD

AppEUI
1122334455667788

✓ Submit

☐ I accept all certificates of authority (CA)



Device name
device-AABBCCDD

Description
A new device

DevEUI
AABBCCDDEEFF0011

Profile ID
OTAA_CLASS_A_FTD

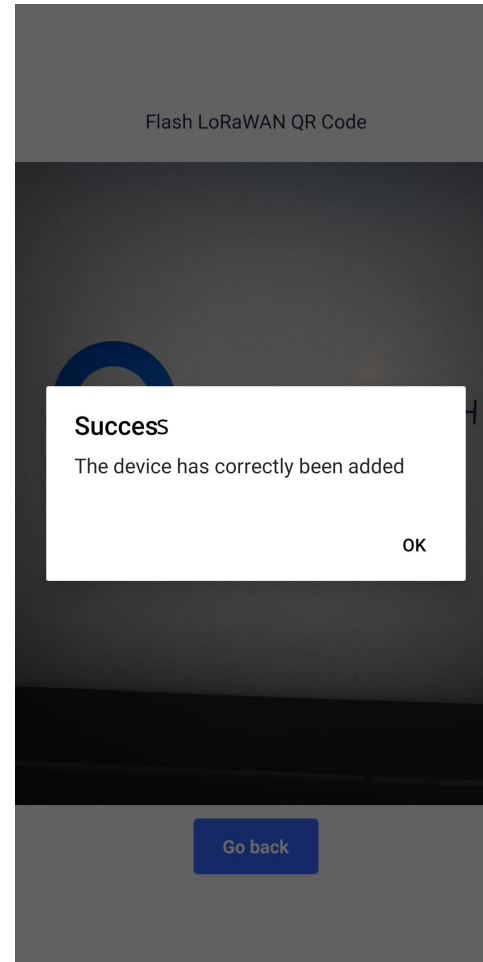
AppEUI
1122334455667788

✓ Submit

☒ I accept all certificates of authority (CA)

If the register process succeed you will see a success alert like in the picture, an error otherwise.

Here is the end of the registration process. You could just scan an other LoRaWAN QR Code or just go to the main screen and restart a new registration.



How to manage accounts ?

ScanWAN has the particularity to support only **ONE** account of each networks.

To change account you have to add a new one by the Network Selection screen.

Adding a new account in a network will delete the previous one in the same network if present.