

Quick start Objenious

Objenious
by Bouygues Telecom

 **LoRaWAN**™



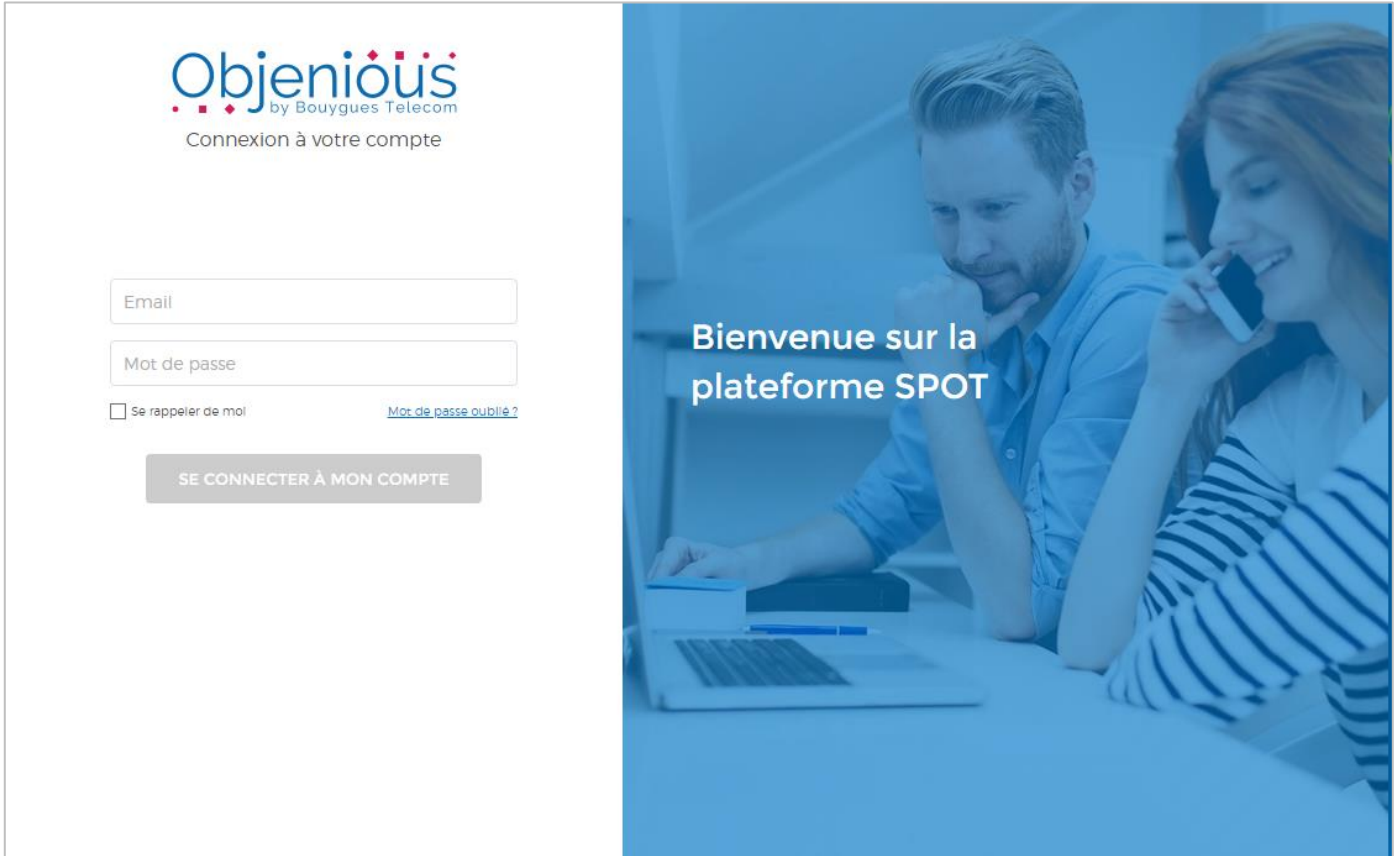
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1. Public network

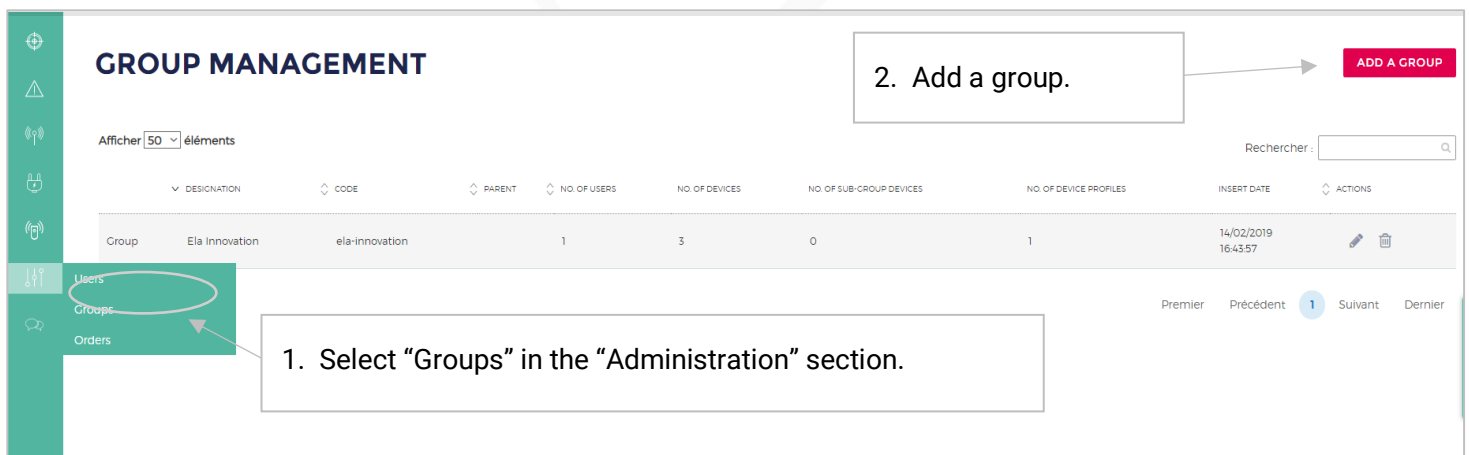
We will use the Objenious LoRa network as an example (<https://spot.objenious.com/login>) of implementing LoRa tag connectivity with a public network.



1.1 Creating the LoRa tag

To view your LoRa tags and analyze their data, you must create the tags on the Objenious platform and fill in the DEVEUI, APPEUI, and APPKEY identifiers.

The first step is to create a “group” that will contain your LoRa tags. To create a group, go to the “Administration” section.



GROUP MANAGEMENT

Afficher 50 éléments

Rechercher:

DESIGNATION	CODE	PARENT	NO. OF USERS	NO. OF DEVICES	NO. OF SUB-GROUP DEVICES	NO. OF DEVICE PROFILES	INSERT DATE	ACTIONS
Group	Ela Innovation	ela-innovation	1	3	0	1	14/02/2019 16:43:57	

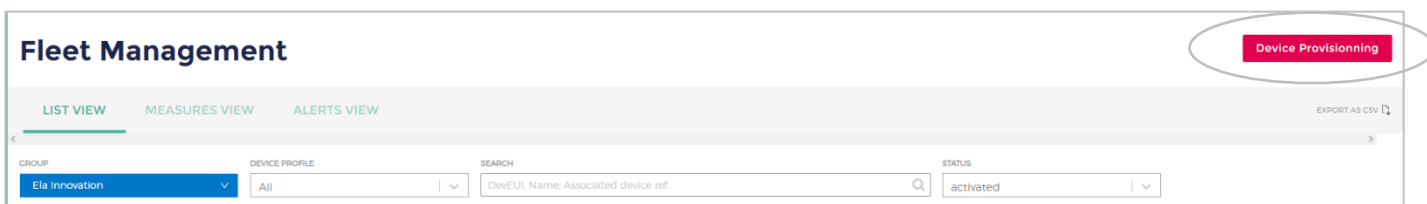
Premier Précédent 1 Suivant Dernier

1. Select “Groups” in the “Administration” section.

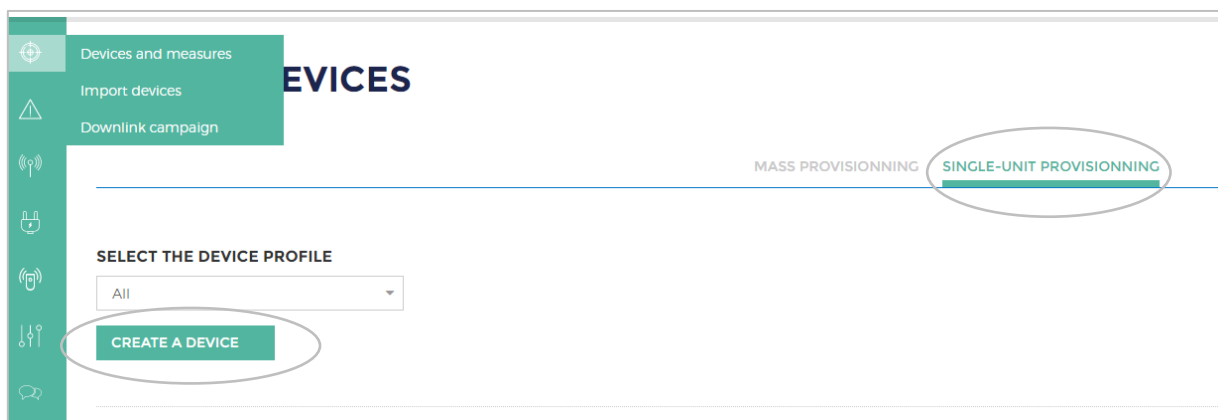
2. Add a group.

ADD A GROUP

In this example, the group is “ELA Innovation”. In the field “Devices and measures”, click on “Device Provisioning”:



A new page opens after this operation. Open the “SINGLE-UNIT PROVISIONING” tab, select the “device profile” and select “Create a device”:



Make sure you have the three identifiers to register your tag on the Objenious network:

- **DEVEUI:** globally unique device identifier (64 bits)
- **APPEUI:** globally unique identifier for pairing server (64 bits)
- **APPKEY:** 128-bit encryption key for pairing the device with the application server

Complete the information below:

ADD A DEVICE TYPE PROFIL TAG LORA V1.01

Device name *	<input type="text" value="Device name"/>	⊖
DevEUI *	<input type="text" value="DevEUI"/>	⊖
AppEUI *	<input type="text" value="AppEUI"/>	⊖
AppKey *	<input type="text" value="AppKey"/>	⊖
Group *	<input type="text" value="Ela Innovation"/>	⊖
Associated device	<input type="text" value="Associated device"/>	

1.2 Viewing sensor data

Using the Objenious interface:

All your registered sensors are listed in the Objenious interface under “Pool view”.

1. Go to “device and measures”

2. Click on the name of the tag to display.

3. Click on the “Activity” tab

MESSAGE TYPE	MESSAGE DATE	CONTENT	RESULT	COUNT
UPLINK	10/10/2019 14:48:22	010301010000030222000032009f	✓	1
UPLINK	10/10/2019 14:43:22	01090101000002022200000520017	✓	2
DOWNLINK	10/10/2019 14:38:26	Technical Downlink	✓ Sent	
UPLINK	10/10/2019 14:38:22	01030101000001022200000520000	✓	1

View data

Note: the “Information” tab shows information about the sensor (APPEUI, DEVEUI...). With LoRaWAN, data from sensors to the server is transmitted in Uplink flows. Information transmitted from the server to sensors are Downlink flows.

Choose the type of message to view and click on the  icon then on the “Contents” tab to display the entire frame.

Example of Uplink frame contents for a LoRa TEMP:

UPLINK -

Contenu crypté	079e5a2281e3be6a6e18d0
Contenu cleartext	0103010100000100020b4d
Contenu décodé	

Field	Field value	Field information	Details
ELA header	0x0103		
FW_rev	0x01	Fw rev = 1	
Protocol_rev	0x01	Protocol rev=1	
Frame_cnt	0x000001	1 frame transmitted by the tag	
Frame_type	0x00	Standard periodic frame	
SensorInfo	0x02	Temperature sensor code	
SensorData	0x0872	Temperature	0x872=2162 * 0.01°C = 21.62°C