OBJENIOUS LORAWAN RANGE QUICK START

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TABLE OF CONTENT

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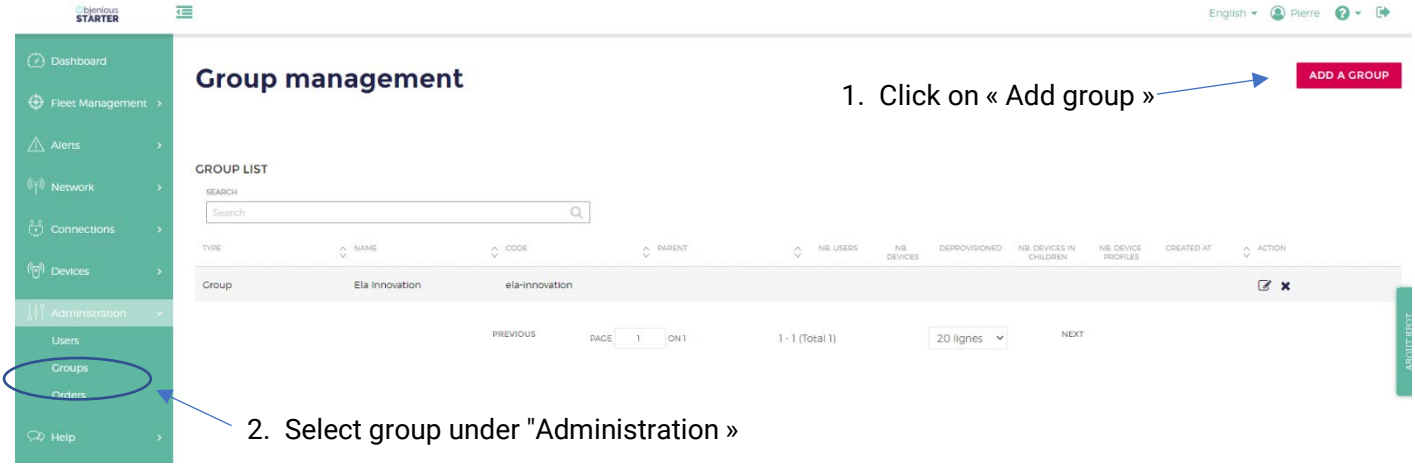
1 LORAWAN PUBLIC NETWORK

As an example, we will rely on the Objenious network (https://spot.objenious.com/login) for the implementationof Tag LR connectivity to a public LoRaWAN network.

1.1. CREATE A TAG

To visualize and analyze the data of your LR TAGs, it is necessary to create the TAGs on the Objenious platform and fill in the identifiers DEVEUI, APPEUI and APPKEY.

First, you will need to create a "group" that will contain your LR TAG. To do this, go to the "Administration" section:



In our example, the group is "Ela Innovation".

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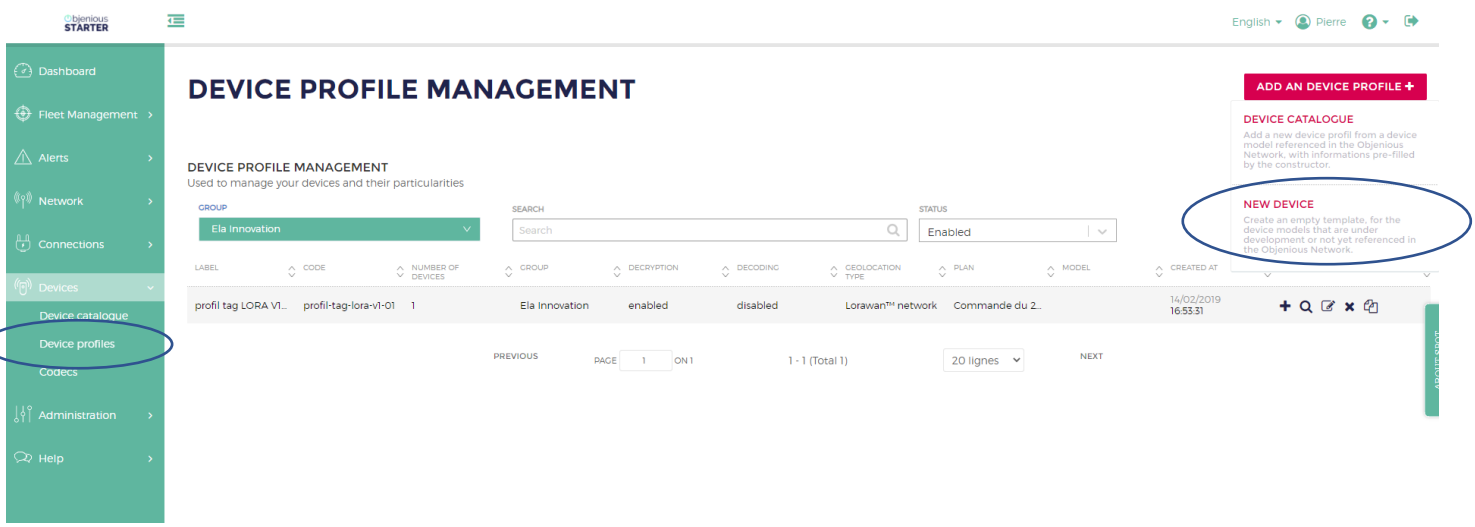
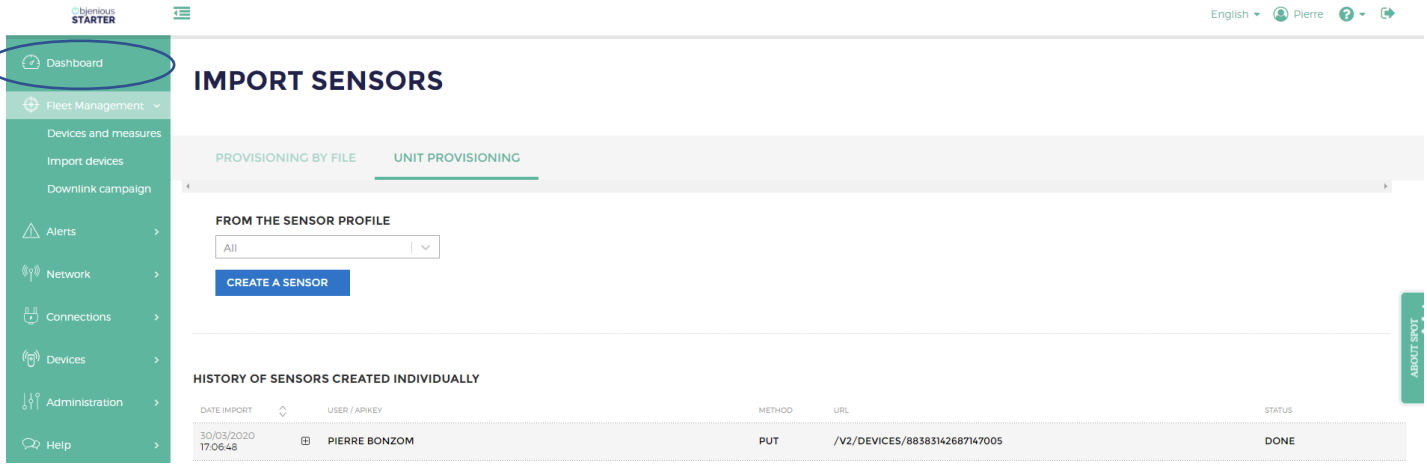
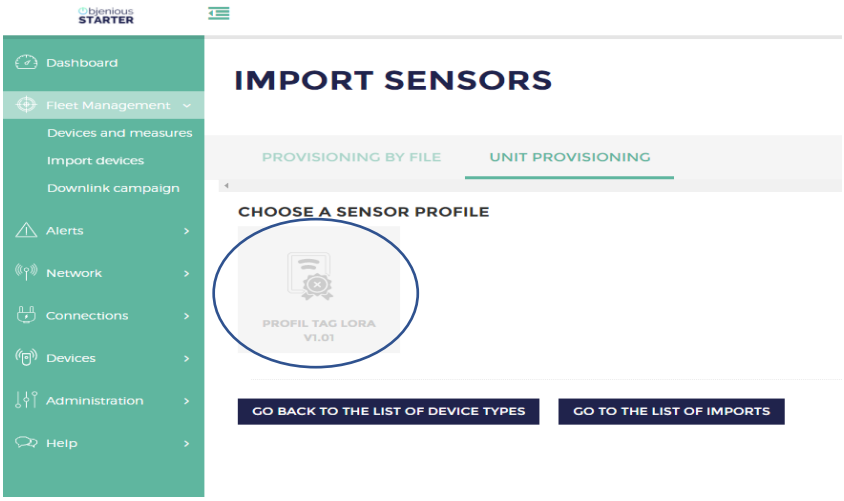
In the "DEVICES" section, click on "Device profiles" to create a sensor profile via "ADD AN DEVICE PROFILE". You can select a sensor directly in the catalog or create your own device. The ELA range is not referenced in the catalog, you will have to create a device profile :



Follow the steps to create a profile. In our example it is the "LORA tag V1.01 profile", without data decoding by Objenious. From now on, it will be possible to add a LoRa tag on the platform by clicking on "Fleet Management", "Import devices" section. Select the "UNIT PROVISIONING" tab:



Select "CREATE A SENSOR" and click on your profile.



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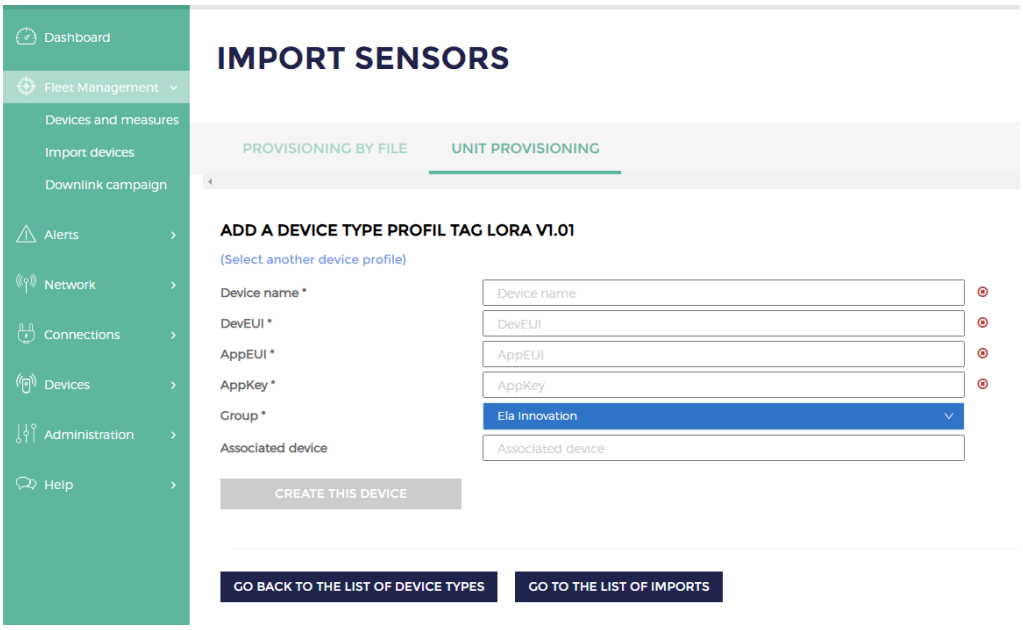
Get the three identifiers to register the TAG on the Objenious network:

- **DEVEUI:** Globally unique identifier of the device (64 bits).
- **APPEUI :** Globally unique identifier of the pairing server (64 bits).
- **APPKEY :** 128bits encryption key for the pairing between the device and the application server.

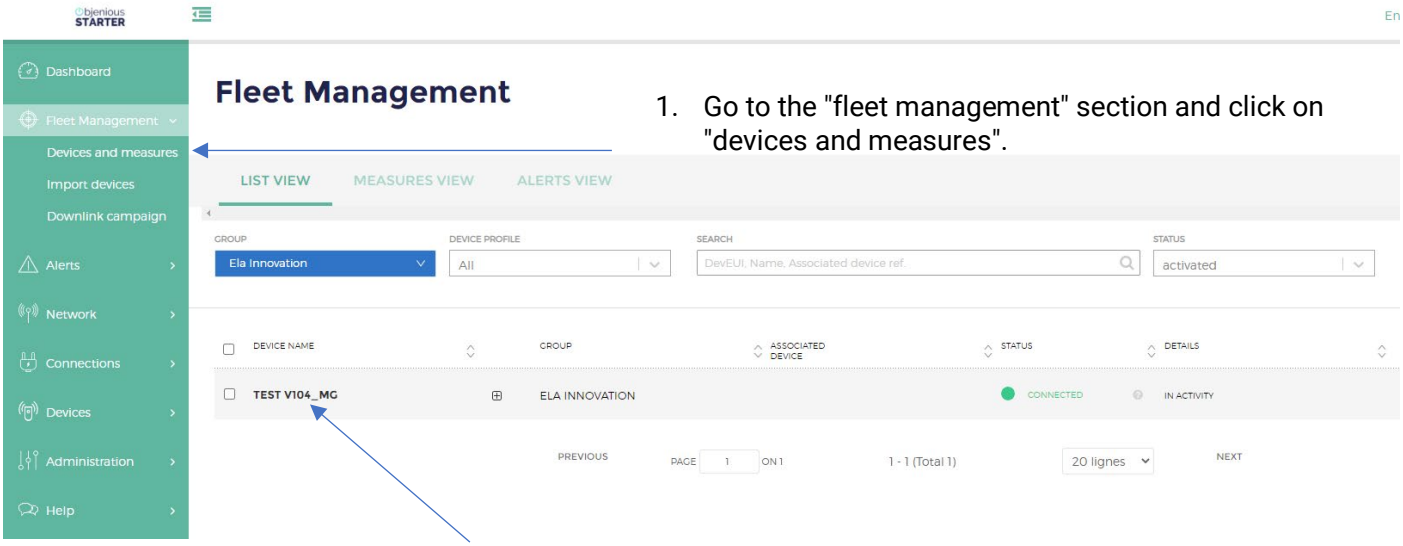
Complete the information below:



1.2. VISUALIZATION OF SENSOR DATA

On the Objenious interface:

All registered sensors will be present in the Objenious interface on "Park View".



1. Go to the "fleet management" section and click on "devices and measures".

2. Click on the name of the TAG to display

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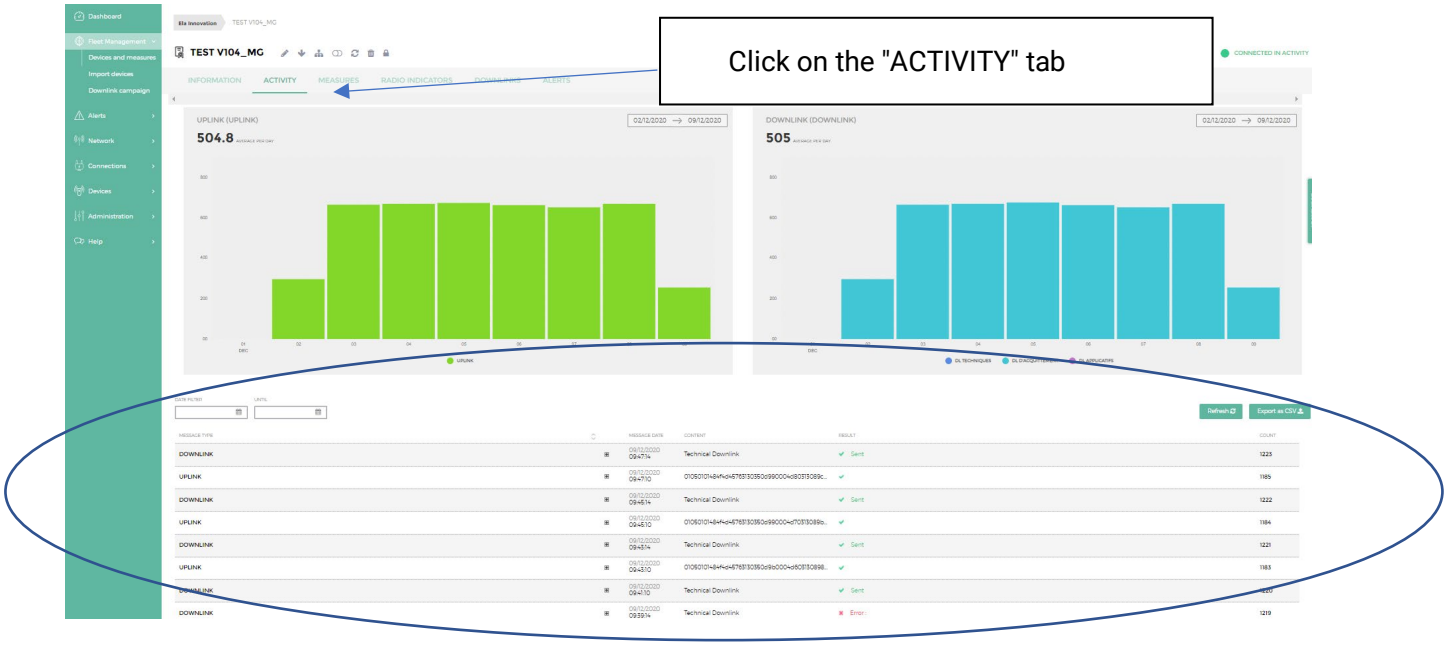

Data visualization

Note: the "Information" tab allows to display the sensor information (APPEUI, DEVEUI...). In LoRaWAN, the data emissions from the sensors to the server are the Uplink flows and the information transmitted from the server to the sensor are the Downlink flows.

Choose the type of message you want to view and click on the icon ⊞ and then on the "Content" tab to display the entire frame.

Example of contents of a frame UPLINK on a TAG LR HOME :

Details:

LEN.	TYPE	VALUE
4	0x01050101	Header Ela
8	0x484F4D4576313035	Name of the tag format ASCII : HOMEV105
2	0x0D99	Power 0x0DB0 = 3481mV
3	0x00004D8	1240 frames transmitted by the TAG
1	0x03	Periodic frame Standard mode, number of sensors = 3
1	0x13	RHT sensor code
3	0x089C32	Temperature: 0x089C=2204 * 0,01°C = **22,04°C**
		Humidity: 0x32= 50% RH
1	0x22	MAG sensor code
2	0x0000	Event counter (15MSB) = 0 magnetic field detection
		Current state (LSB)= 0 detected magnet
1	0x54	LUX sensor code
4	0x00007920	Brightness : 0xF760= 31008 * 0.01 lux = 310.08 lux

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