

Configuration for Kerlink Gateways.

Version 1.0.

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Any feedback is welcome, just write to support@allthingstalk.com

1.	Addition of the gateway on the LoRaWAN Network	1
2.	Configuration on the device to work with Lorient	3
3.	Checking the main connectivity (Ethernet)	3
4.	About the backup connectivity	3
Reaching the web Interface of the gateway.....		3
Logging in.....		4
General Overview		5
Configuring backup connectivity on GSM Model		6
Configuring backup connectivity on WiFi Model.....		7
5.	Checking the backup connectivity	8
ANNEX: Manual configuration for Lorient (in case it is needed).....		8
Accessing the device.....		9
Installation of the Lorient software:		9
GSM Model		9
WiFi Model.....		10

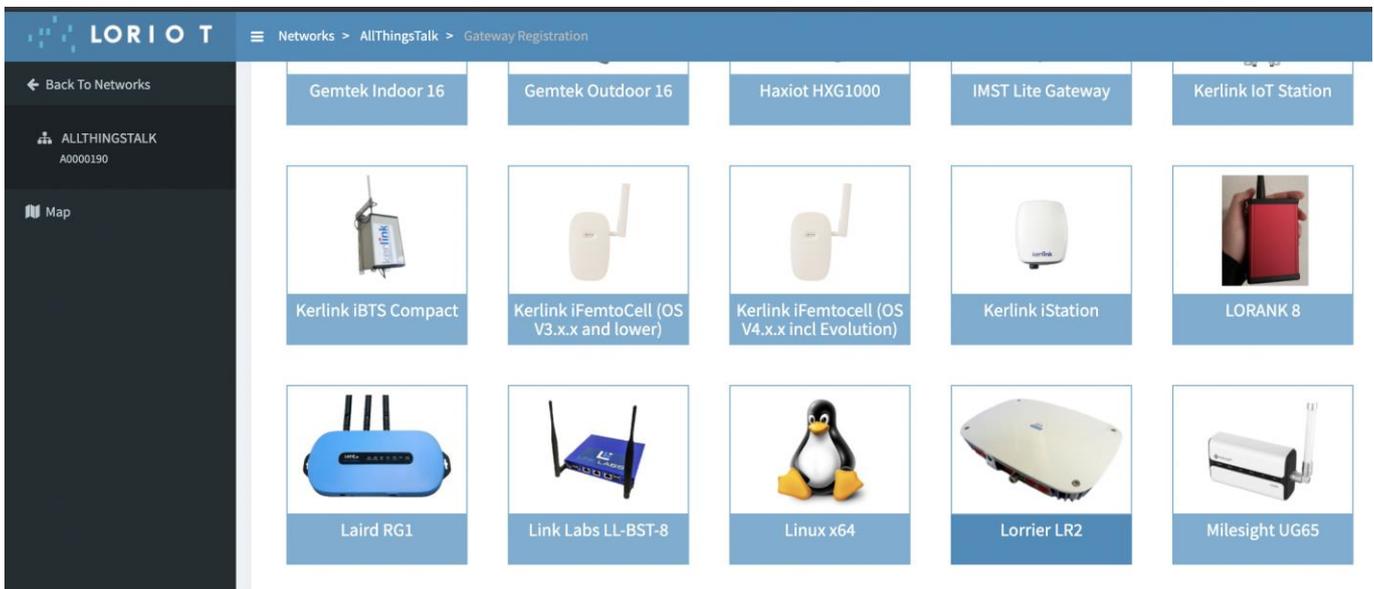
1. Addition of the gateway on the Lorient LoRaWAN Network

For this, user should go to the LoRa Portal and on the corresponding network, add the corresponding Gateway.

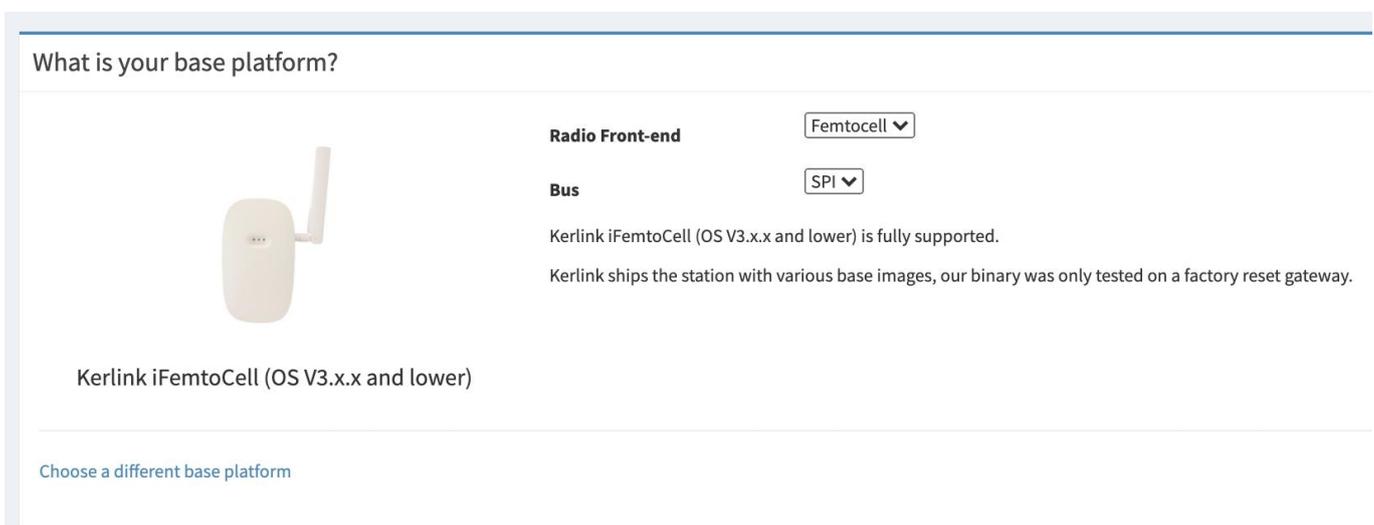
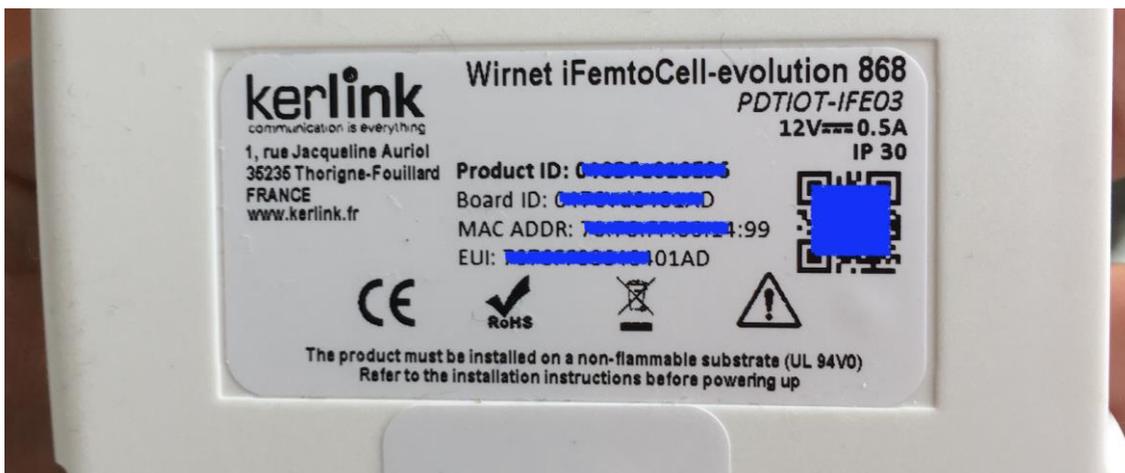
Both Models can be found on the options presented by Lorient:

Kerlink iFemtoCell Evolution (GSM Version)

Kerlink iFemtoCell (WiFi Version)



After selecting the model, the corresponding MAC address should be entered. The MAC details appear on a label under the Kerlink device, here an example:



After entering the MAC, the device should be registered by clicking on “register”

2. Configuration on the device to work with Lorient

The Kerlink Gateway comes configured in a way that the configuration for the LoRaWAN will be downloaded and installed automatically the moment the device is connected to the power and the internet. In Kerlink terminology, this is known as “Zero Touch Configuration”. Important to notice that the “Zero Touch Configuration” should be explicitly requested to Kerlink with the order of the device.

“Zero Touch Configuration” this basically means that a after connecting the device to power and internet, it downloads and installs all what is needed. The device will restart a couple of times, after that everything should be Ok. Resetting the device will also trigger the “Zero Touch Configuration”.

After the configuration has been done, a double check in Lorient is recommended to confirm that the device actually has the status connected.

3. Checking the main connectivity (Ethernet)

For the end user, the best way to check the actual status of the gateway (connected or disconnected), is by having a look at the IoT Ground and noticing if the devices are already active, this could take from 10 mins to a couple of hours. If after few hours none of the devices is reporting any data, reach our support team.

4. About the backup connectivity

Kerlink devices can manage an alternative connectivity that would be used when the main connectivity (Ethernet) is down. Please proceed with the configuration of the backup only when the main connectivity is already tested and working fine.

These are the 2 models available:

Kerlink iFemtoCell Evolution, using GSM as secondary connectivity. This is the preferred model.

Kerlink iFemtoCell, using WiFi as secondary connectivity.

If the internet connectivity has an issue on the customer site, it’s very likely that both WiredLAN and WiFi will be impacted. That is the reason why if there is a need for a real backup, then the Mobile connectivity is strongly advised (and not the WiFi)

[Reaching the web Interface of the gateway](#)

For both devices, the configuration of the backup connectivity (GSM or WiFi) is done by using the web interface of the Kerlink device. The simplest way to have access is:

- Connect a Windows PC on the same network, then open a browser and type an address that looks like that:

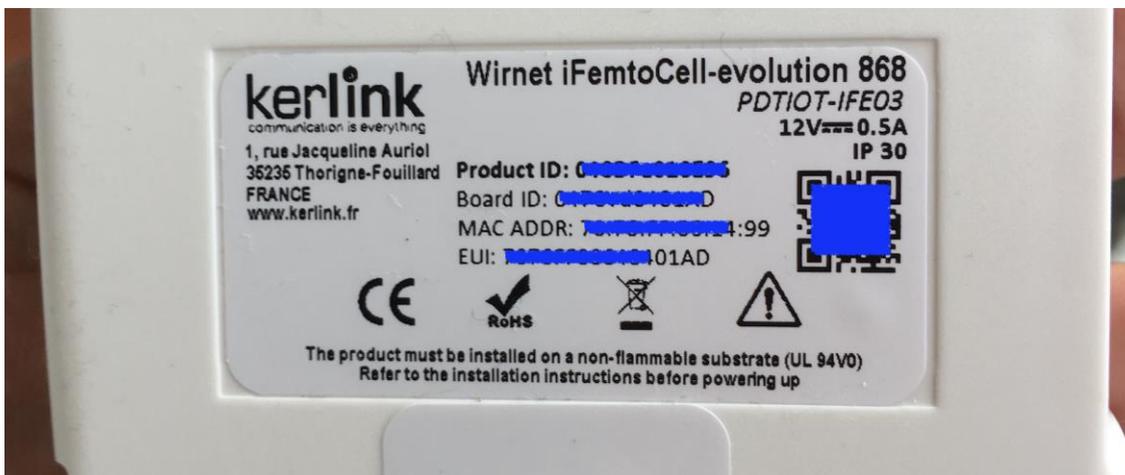
<http://klk-fevo-0401ad/>

<http://klk-fevo-0b01ca/>

<http://klk-fevo-1c1edc/>

...

The last 6 characters are different for each gateway and they correspond to the **last 6 characters of the Board ID**. This information can be found on the label (under the gateway).



If for some reason the URL address of the Web Interface doesn't work, then:

- Find the IP address of the Kerlink gateway (checking on your other network devices or using a tool like <https://www.advanced-ip-scanner.com/>).

- Then, With a browser, go directly to the IP address of the gateway, these are some examples:

<http://192.168.0.4/>

<http://192.168.0.27/>

<http://192.168.0.23/>

...

Logging in

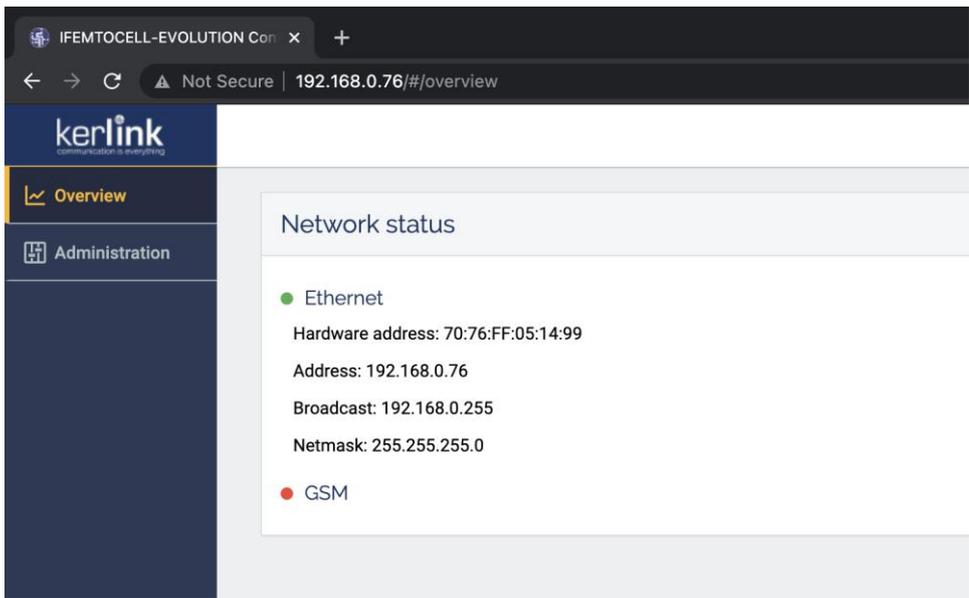
On the Web interface, connect to the device with user **admin** and password **pwd4admin**. These are the values by default, we strongly recommend to change the password, keeping note of the new one.

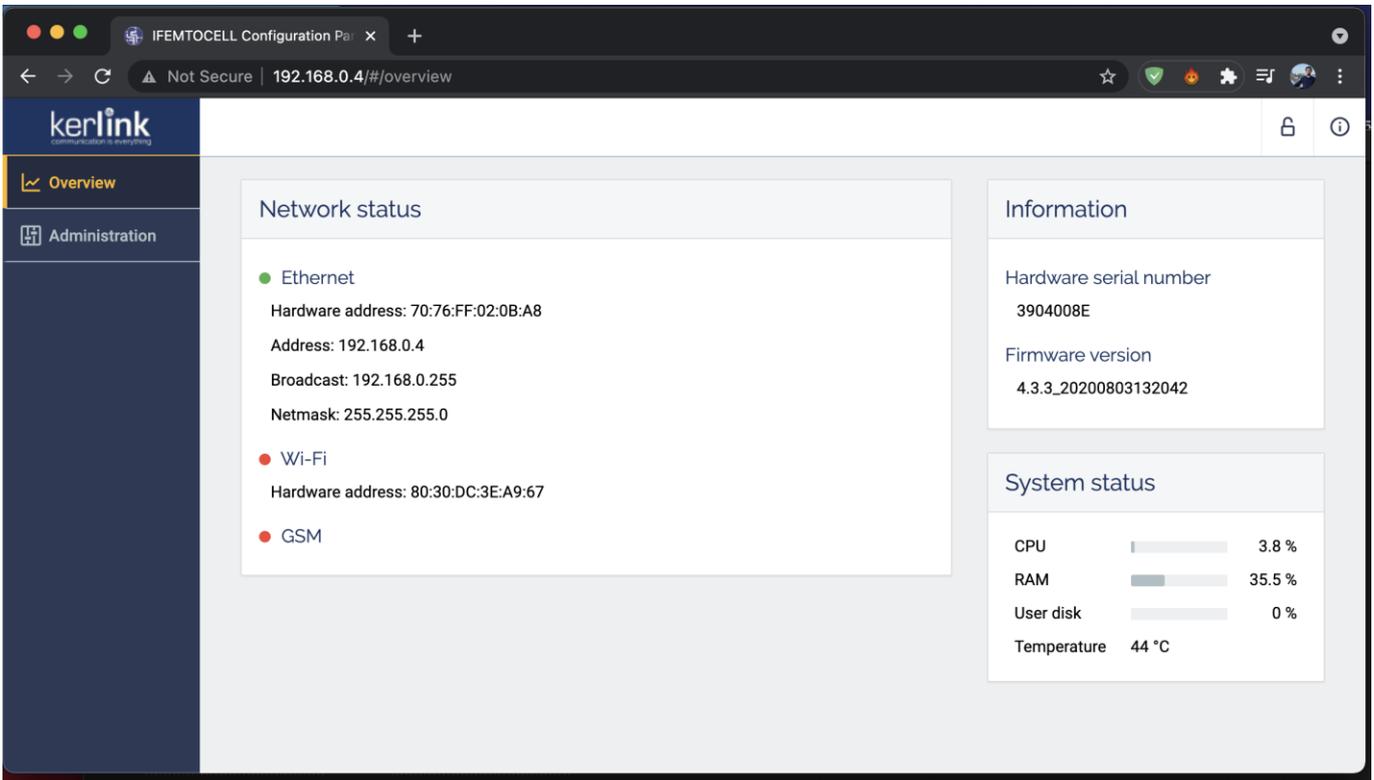


General

Overview

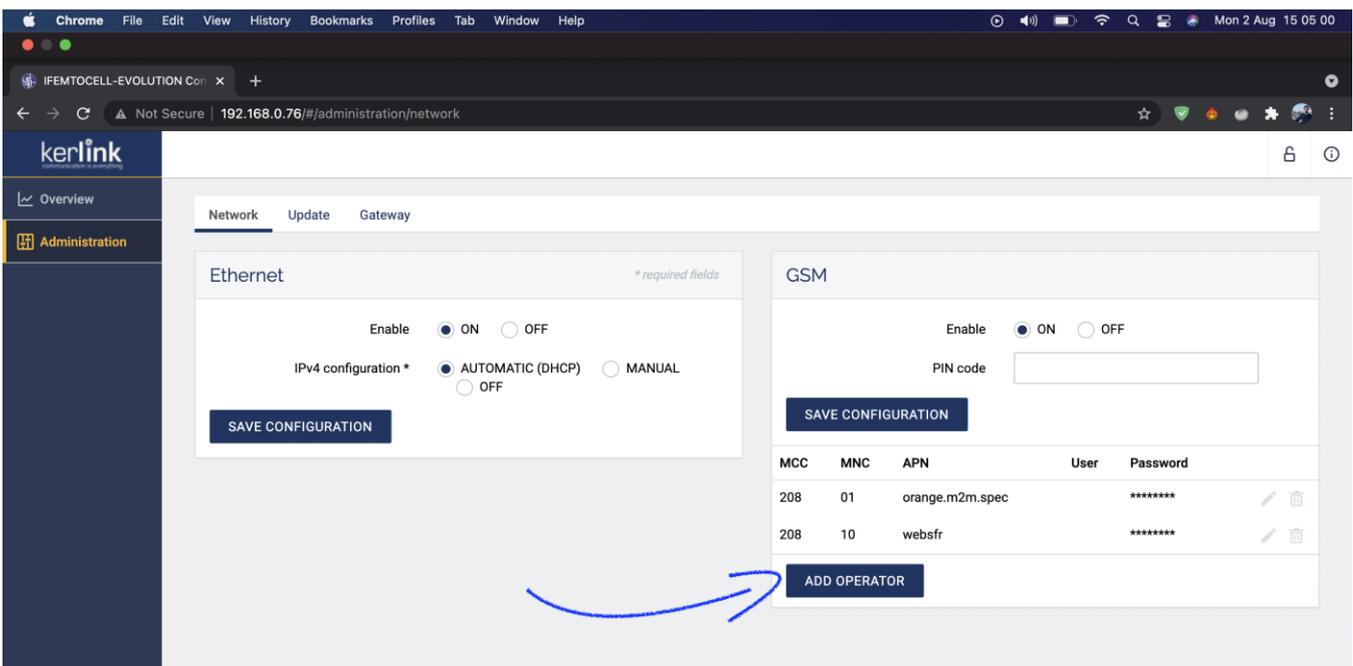
After the log in is done, general information can be found on the Overview section. Ethernet interface will be ON (green). Backup connectivity (that is the GSM but could also be the WiFi, according to the model) will appear OFF (red).



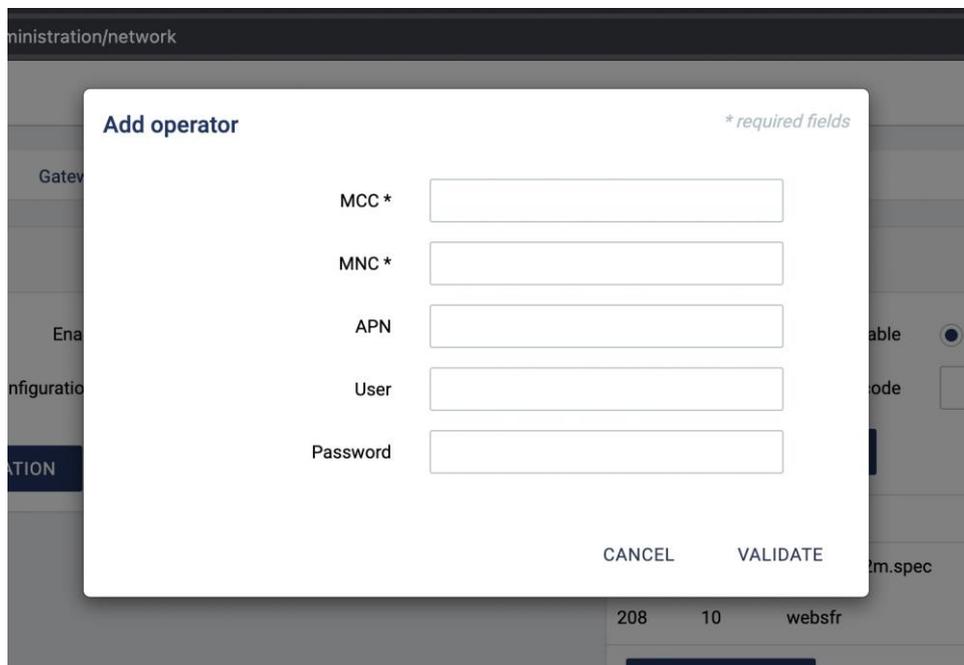


Configuring backup connectivity on GSM Model

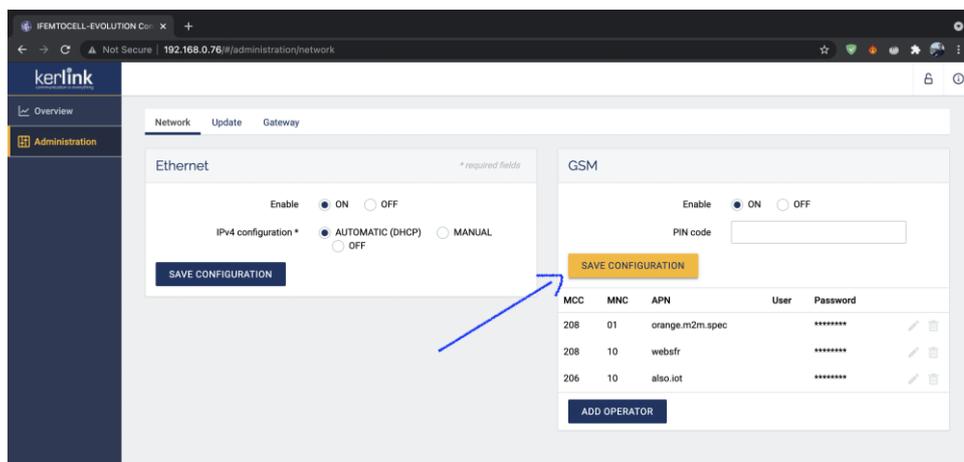
To configure the GSM backup connectivity, go to Administration and then, on the GSM section select: Add operator.



On the GSM section, the gateway will ask for “MCC”, “MNC”, “APN”, GSM User and GSM Password needed for the SIM that will be used. Very often the GSM User and GSM password are not used so these fields are empty. The other parameters (“MCC”, “MNC”, “APN”) should be provided by the mobile operator (as they are different for each operator).



After the information is entered, then click on “Validate”, then click on “Save Configuration”.

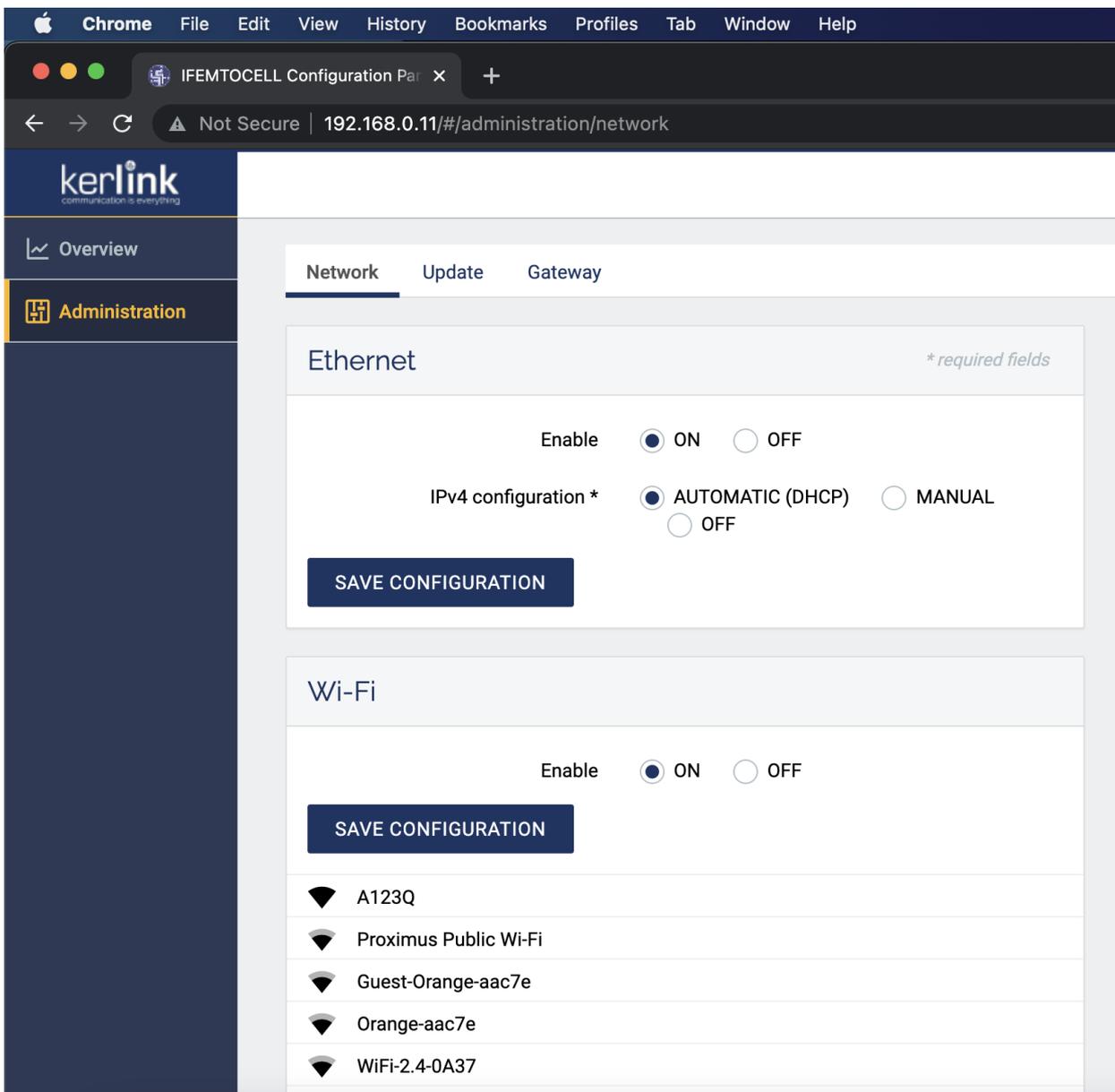


That's all.

Configuring backup connectivity on WiFi Model

Go to Administration and then, on the WiFi section, select and add your WiFi network.

After that, click “Save Configuration”



That is all.

5. Checking the backup connectivity

To check the backup connectivity, the most simple way is disconnecting the cable on the Ethernet interface of the device. Data from the devices might be interrupted during some minutes, then, it should come back to normal once the backup interface starts working.

ANNEX: Manual configuration for Lorient (in case it is needed)

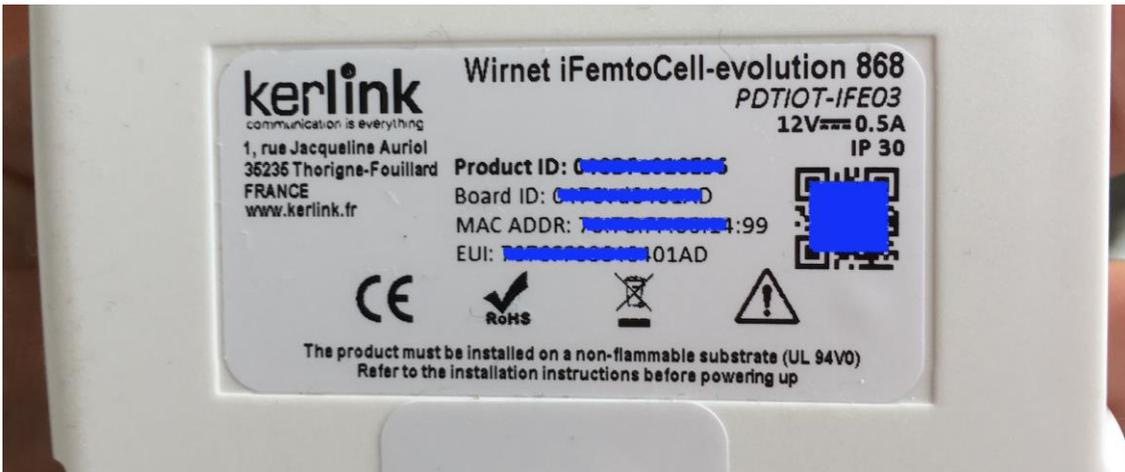
The “Zero Touch configuration” is the preferred way to work as it is definitively the simplest way, specially if the reconfiguration to the original settings is needed by user, for instance.

In case the “Zero Touch Configuration” is not available, the Lorient configuration on the device will need to be done manually, as follows.

Accessing the device

Connect using SSH is needed.

User needed for the configuration purposes should be **root**. The corresponding password will be **pdmk-** together with the last 6 characters from board ID written on the label for that gateway. For this example, it will be assumed that the last 6 characters of the Board ID are ABC123.



On that case, to connect what is used is

User: root

Password: pdmk-ABC123

Installation of the Lorient software:

Once connected, the corresponding software needs to be downloaded (from Lorient website) and installed on the gateway, as it is mentioned on the Lorient site:

<https://docs.lorient.io/display/LNS/Kerlink+iFemtoCell+Evolution>

<https://docs.lorient.io/display/LNS/Kerlink+iFemtoCell>

GSM Model

LORIENT Gateway self-extracting installer

Once connected on the gateway with an SSH console. Run the following commands :

- `cd /tmp`
- `wget https://eu2.loriot.io/home/gwsw/loriot-kerlink-evolution-SPI-0-latest.sh -O loriot-install.sh`
- `chmod +x loriot-install.sh`
- `./loriot-install.sh -f -s eu2.loriot.io`
- `reboot`

WiFi Model

LORIOT Gateway self-extracting installer

Once connected on the gateway with an SSH console. Run the following commands :

- `cd /tmp`
- `wget https://eu2.loriot.io/home/gwsw/loriot-kerlink-ifemtocell-kerlink_femtocell-SPI-0-latest.sh -O loriot-install.sh`
- `chmod +x loriot-install.sh`
- `./loriot-install.sh -f -s eu2.loriot.io`
- `reboot`

After a successful start, the gateway process will daemonize and run in background. A LORIOT log file should be present on the /tmp folder.