



# **Wanesy Management Cockpit**

## ***Release note of version 4.8***

V1.1 – November 2024





## 1. New features

- a) Backhaul configuration at gateway level
- b) Bulk feature
- c) Alerting feature – Notification by Webhook
- d) Other features & improvements

## 2. Restrictions solved

## 3. Constraints and restrictions



## **1.a NEW FEATURES**

**Backhaul configuration at  
gateway level**



# Backhaul configuration – Introduction

- Add possibility to **configure the backhaul interfaces of a gateway**:
  - The feature is only allowed for SERVICE\_ADMIN and CHANNEL\_ADMIN roles
  - ⚠ Configuring the backhaul interfaces is only possible at gateway level, it will be possible at group level (for a batch of gateways) in a next release
  - New entry added in gateway overview menu:




The screenshot displays the 'Gateway overview' page for a specific gateway (ID: 7076FF0064040698). The 'CONFIGURATION' tab is selected, and a dropdown menu is open, highlighting the 'Backhaul' option. The 'General' section shows the gateway is 'OPERATIONAL' with details like EUI, creation date, customer, name, description, backhaul type (Ethernet), and public IP address. A map shows the gateway's location. The 'Health' section displays CPU, RAM, and disk usage. The 'Active alerts' section shows a table of alerts. The 'Cellular' section shows IMEI and ICCID. The 'Installed packages' section shows the 'keros' package version 6.1.2.

Alert type	Start date	Acknowledged
Ethernet consumption forecast	2024-10-14 03:11:20	<input type="checkbox"/>


Name	Version
keros	6.1.2




# Backhaul configuration – Introduction

- New dedicated page **Gateway backhaul configuration**, including two parts:
  - The backhaul configuration of the gateway
  - The informations related to the last configuration command sent to the gateway (if any)

  Gateway backhaul configuration 7076FF00640401C8 - 7076FF00640401C8 ACTIONS 


### Backhaul configuration

*Last configuration received from gateway: 2024-10-10 13:40:25* 



 GENERAL  ETHERNET  CELLULAR

Sort backhaul interfaces by priority.

Priority 1



 Ethernet Enabled

Priority 2

 Cellular  Enabled

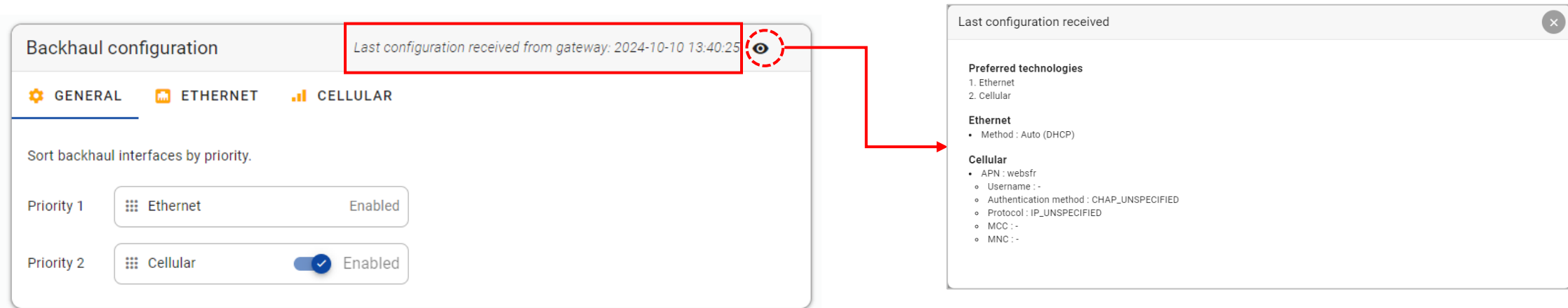
SEND CONFIGURATION

### Last configuration sent

Creation date	Application date	Status
2024-10-10 13:35:06	2024-10-10 13:38:18	  Sent

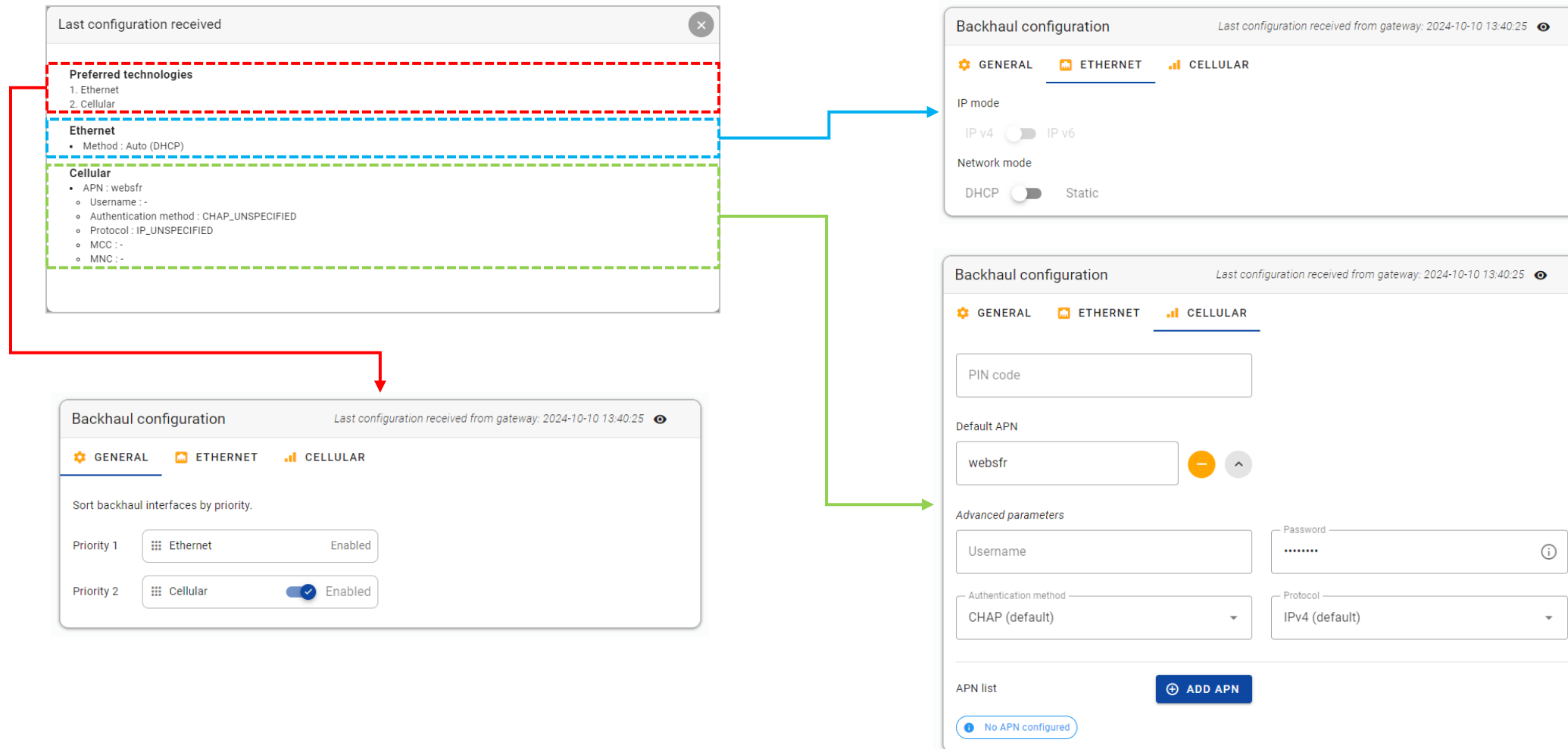


- The gateway reports its backhaul configuration to the Wanesy Management Cockpit in the following cases:
  - When the configuration is locally modified, manually or through the Web interface
  - When a configuration requested by the Wanesy Management Cockpit has been applied
- The date and the content of the last backhaul configuration received from the gateway are displayed in the header of the block:





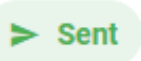
# Backhaul configuration – Reception from gateway






- Once received from the gateway, the backhaul configuration is displayed in the tabs:



# Backhaul configuration – Last configuration sent

- The following **informations related to the last backhaul configuration command sent to the gateway** (if there has already been one sent) are displayed:
  - The creation date of the configuration command
  - The application date of the configuration command (corresponding to the date when it was sent to the gateway, in response to the receipt of a telemetry message)
  - The content of the configuration command sent (displayed in a popup)
  - The status of the configuration command
  - A button to cancel the configuration command (if not already sent)

Last configuration sent			
Creation date	Application date	Status	
2024-10-10 13:35:06	2024-10-10 13:38:18		

	Created	Command created
	Pending	Command ready to be sent to the gateway
	Sent	Command sent to the gateway
	Cancelling request	Cancellation of command requested
	Cancelled	Command cancelled



# Backhaul configuration – Activation & priority

- Configuration of **activation & priority of backhaul interfaces**:
  - Possibility to **change priority between backhaul interfaces** by dragging and dropping blocks
  - Possibility to **disable a backhaul (WiFi or Cellular)**, but not the Ethernet one

Backhaul configuration Last configuration received from gateway: 2024-10-10 13:40:25

⚙️ GENERAL **ETHERNET** 📶 CELLULAR

Sort backhaul interfaces by priority.

Priority 1	⌵ Ethernet	Enabled
Priority 2	⌵ Cellular	<input checked="" type="checkbox"/> Enabled

Backhaul configuration Last configuration received from gateway: 2024-10-21 09:41:27

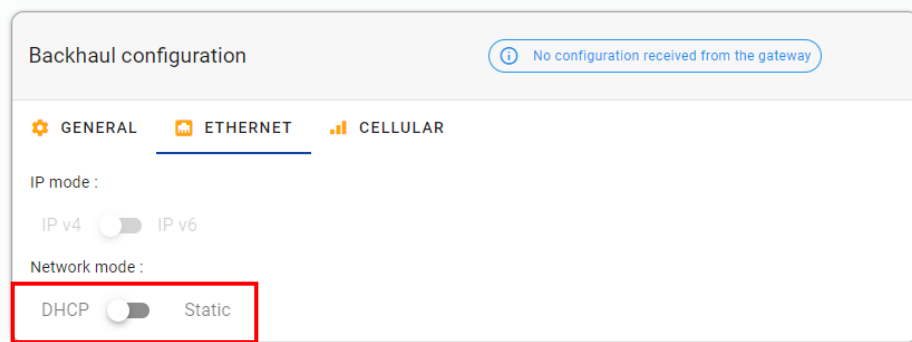
⚙️ GENERAL **ETHERNET** 📶 WIFI

Sort backhaul interfaces by priority.

Priority 1	⌵ Wifi	<input checked="" type="checkbox"/> Enabled
Priority 2	⌵ Ethernet	Enabled

⚠️ Only the backhaul interfaces supported by the gateway are displayed

- Configuration of **Ethernet interface**:
  - Network mode: DHCP (default), Static IP



Backhaul configuration No configuration received from the gateway

GENERAL **ETHERNET** CELLULAR

IP mode :

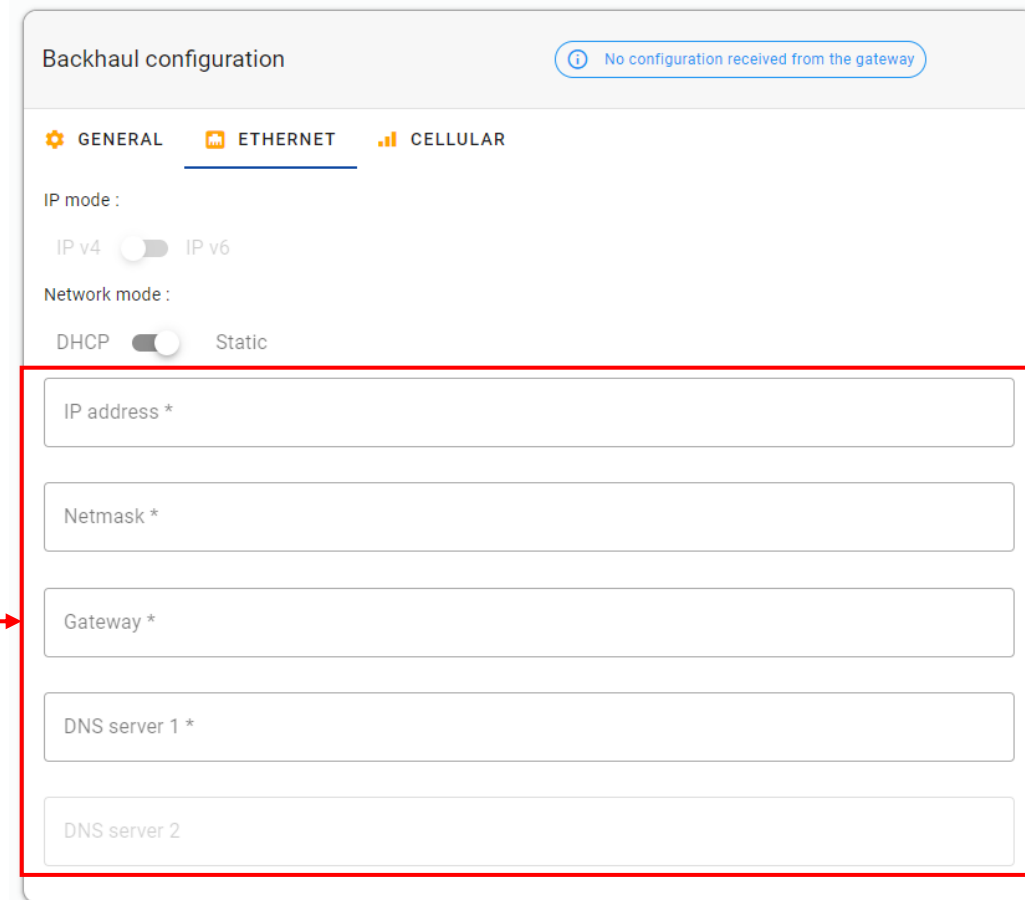
IP v4 ☐ IP v6 ☐

Network mode :

DHCP ☒ Static ☐

- Parameters in case of Static IP:

- IP address (*mandatory*)
- Netmask (*mandatory*)
- Gateway (*mandatory*)
- DNS server 1 (*mandatory*)
- DNS server 2



Backhaul configuration No configuration received from the gateway

GENERAL **ETHERNET** CELLULAR

IP mode :

IP v4 ☐ IP v6 ☐

Network mode :

DHCP ☐ Static ☒

IP address \*

Netmask \*

Gateway \*

DNS server 1 \*

DNS server 2

- Configuration of **WiFi / Access Point list**:
  - Possibility to **add several Access Points** in the list, with the following parameters for each one:
    - SSID (*mandatory*)
    - Passphrase (*mandatory*)
  - Possibility to **update the passphrase of an Access Point** in the list:
    - ⚠ The already configured passphrase is hidden for security reason
  - Possibility to **remove** an Access Point from the list

Backhaul configuration No configuration received from the gateway

GENERAL ETHERNET **WIFI**

**+ ADD ACCESS POINT**

SSID \* Passphrase \*

Backhaul configuration Last configuration received from gateway: 2024-10-09 15:37:50

GENERAL ETHERNET **WIFI**

**+ ADD ACCESS POINT**

SSID \* Kerlink-Staff Passphrase \* .....

- Configuration of **Cellular / PIN code**:
  - ❗ The already configured PIN code is hidden for security reason
- Configuration of **Cellular / Default APN**:
  - APN
  - Username & password:
    - ❗ The already configured password is hidden for security reason
  - Authentication method: CHAP (default), PAP
  - Protocol: IPv4 (default), IPv6, IPv4 + IPv6

The screenshot shows the 'Backhaul configuration' interface with three tabs: GENERAL, ETHERNET, and CELLULAR. The CELLULAR tab is active. At the top right, a status message says 'No configuration received from the gateway'. The main configuration area includes a 'PIN code' field, a 'Default APN' field with an upward arrow, and an 'Advanced parameters' section. This section contains 'Username' and 'Password' fields, and two dropdown menus for 'Authentication method' (set to 'CHAP (default)') and 'Protocol' (set to 'IPv4 (default)'). At the bottom, there is an 'APN list' section with a blue 'ADD APN' button and a status message 'No APN configured'.

- Configuration of **Cellular / APN list**:
  - Possibility to **add several APNs** in the list, with the following parameters for each one:
    - **APN (mandatory)**
    - **MCC & MNC (mandatory)**
    - **Username & password**
    - **Authentication method: CHAP (default), PAP**
    - **Protocol: IPv4 (default), IPv6, IPv4 + IPv6**
  - Possibility to **update an APN** in the list:
    - ⚠ The already configured password is hidden for security reason
  - Possibility to **remove** an APN from the list

Backhaul configuration No configuration received from the gateway

GENERAL ETHERNET **CELLULAR**

PIN code

Default APN

Default APN

APN list ADD APN

APN \* MCC \* MNC \* ⬆

Advanced parameters

Username Password

Authentication method CHAP (default) Protocol IPv4 (default)

# Backhaul configuration – Send a configuration

- Once triggered with the **SEND CONFIGURATION** button, the **backhaul configuration command will be sent to the gateway when the next telemetry message is received**
- It is possible to cancel a backhaul configuration command only if it has not yet been sent to the gateway, i.e. when its status is **+ Created** or **⌚ Pending**

Last configuration sent			
Creation date	Application date	Status	
2024-10-22 16:58:22	-	<b>+ Created</b>	<b>CANCEL CONFIGURATION</b>



Last configuration sent			
Creation date	Application date	Status	
2024-10-22 16:58:22	-	<b>⌚ Pending</b>	<b>CANCEL CONFIGURATION</b>



Last configuration sent			
Creation date	Application date	Status	
2024-10-22 16:58:22	2024-10-22 16:59:34	<b>➤ Sent</b>	

Last configuration sent			
Creation date	Application date	Status	
2024-10-22 16:58:22	-	<b>⌚ Cancelling request</b>	



Last configuration sent			
Creation date	Application date	Status	
2024-10-22 16:58:22	2024-10-22 16:59:34	<b>⌚ Cancelled</b>	



- When a backhaul configuration command is pending:
  - The **backhaul configuration displayed is the expected one** (once it has been sent and taken into account by the gateway)
  - It is not possible to send a new configuration command as long as the current one has not been sent to the gateway or cancelled

The screenshot displays the 'Backhaul configuration' interface. At the top, a status bar indicates 'No configuration received from the gateway'. Below this, there are tabs for 'GENERAL', 'ETHERNET', and 'CELLULAR'. The 'GENERAL' tab is active, showing options to 'Sort backhaul interfaces by priority'. Two priorities are listed: 'Priority 1' with 'Cellular' selected and 'Enabled', and 'Priority 2' with 'Ethernet' selected and 'Enabled'. A blue 'SEND CONFIGURATION' button is at the bottom. A yellow warning banner at the bottom of the configuration panel states: 'A configuration action is already pending, please wait for it to complete or cancel it before you can send a new one.'

To the right, a 'Last configuration sent' table shows the configuration status. The table has columns for 'Creation date', 'Application date', and 'Status'. The status is 'Pending', indicated by a red eye icon and a red arrow pointing to a detailed configuration window. A 'CANCEL CONFIGURATION' button is also present.

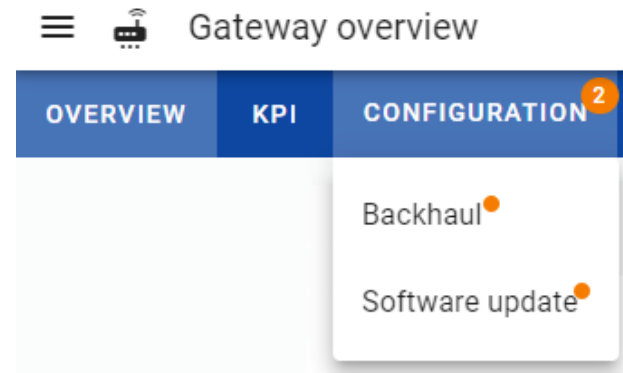
Creation date	Application date	Status
2024-10-23 09:00:30	-	Pending

**Last configuration sent details:**

- Preferred technologies**
  - Cellular
  - Ethernet
- Cellular**
  - APN : testapn.fr
  - Username : -
  - Authentication method : CHAP\_UNSPECIFIED
  - Protocol : IP\_UNSPECIFIED
  - MCC : -
  - MNC : -

# Backhaul configuration – Pending configuration

- A pending backhaul configuration command on a gateway is identified by displaying:
  - A red dot next to the Backhaul entry in the CONFIGURATION menu
  - The total number of pending actions (including configuration and software update) in the CONFIGURATION menu
  - A status badge with the total number of pending actions (including configuration and software update) in gateway list (with filtering option)



Gateways										
<input type="checkbox"/>	Status ⓘ		Gateway EUI		Creation date	Name	Description	Backhaul	Actions	
<input type="checkbox"/>	OPERATIONAL		7076FF0056050928		2023-12-09 09:53:53	7076FF0056050928	iStation 868	Ethernet		
<input type="checkbox"/>	OPERATIONAL		7076FF00640401C8		2024-03-20 12:55:55	7076FF00640401C8	iFemto-evo 868	Ethernet		
<input type="checkbox"/>	OPERATIONAL		7076FF0064040698		2024-04-23 08:53:40	7076FF0064040698	iFemto-evo 868	Undefined		
<input type="checkbox"/>	OPERATIONAL		7076FF007F04000C		2024-01-10 16:01:19	7076FF007F04000C	iZepto-C 868	Cellular		
<input type="checkbox"/>	OPERATIONAL		7276FF002E0505AE		2024-06-19 15:41:14	7276FF002E0505AE	iBTS 868	Ethernet		

Items per page: 5 1-5 of 10 < > 1 > >|



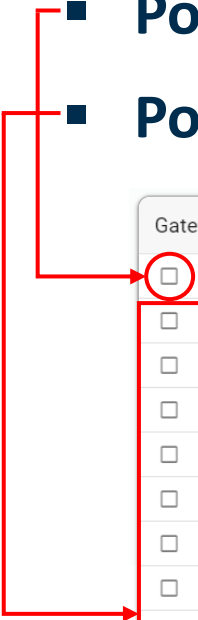
# **1.b NEW FEATURES**

## **Bulk feature**



# Bulk feature – Basket management

- Bulk feature is based on a basket concept, accessible from gateway list:
  - Possibility to select all gateways from the current page (after filtering)
  - Possibility to select gateways one by one



<input type="checkbox"/>	Status ⓘ	Gateway EUI		Creation date	Name	Description	Backhaul	Actions
<input type="checkbox"/>	OPERATIONAL	7076FF0056050928		2023-12-09 09:53:53	7076FF0056050928	iStation 868	Ethernet	
<input type="checkbox"/>	UNREACHABLE	7076FF00560603CF		2023-12-09 09:53:53	7076FF00560603CF	iStation 868	Ethernet	
<input type="checkbox"/>	UNREACHABLE	7076FF00640401C8		2024-03-20 12:55:55	7076FF00640401C8	iFemto-evo 868	Ethernet	
<input type="checkbox"/>	OPERATIONAL	7076FF0064040698		2024-04-23 08:53:40	7076FF0064040698	iFemto-evo 868	Ethernet	
<input type="checkbox"/>	UNREACHABLE	7076FF007804003A		2023-12-09 09:53:53	7076FF007804003A	iZepto-E 868	Ethernet	
<input type="checkbox"/>	UNREACHABLE	7076FF007F030024		2023-12-09 09:53:53	7076FF007F030024	iZepto-C 868	Cellular	
<input type="checkbox"/>	OPERATIONAL	7076FF007F04000C		2024-01-10 16:01:19	7076FF007F04000C	iZepto-C 868	Cellular	
<input type="checkbox"/>	OPERATIONAL	7276FF002E0505AE		2024-06-19 15:41:14	7276FF002E0505AE	iBTS 868	Ethernet	
<input type="checkbox"/>	WARNING	7276FF003903001D		2024-09-16 10:15:44	7276FF003903001D	iFemto 868	Ethernet	
<input type="checkbox"/>	WARNING	7276FF00390302C6		2024-01-11 09:47:09	7276FF00390302C6	iFemto 868	WiFi	
<input type="checkbox"/>	UNREACHABLE	7276FF00390304D6		2024-06-24 10:57:36	7276FF00390304D6	iFemto 868	Ethernet	
<input type="checkbox"/>	OPERATIONAL	7276FF003904023B		2024-02-05 15:16:43	7276FF003904023B	iFemto 868	Ethernet	
<input type="checkbox"/>	OPERATIONAL	7276FF003907025A		2023-12-09 09:53:53	7276FF003907025A	iFemto 868	WiFi	
<input type="checkbox"/>	OPERATIONAL	7276FF00440707A6		2023-12-09 09:53:53	7276FF00440707A6	iFemto 915	Ethernet	

Items per page: 25 1-14 of 14 < < 1 > >

# Bulk feature – Basket management

- Gateway list with **selection in basket**:

Number of gateways selected in basket

Option to select all gateways from all pages

Link to bulk operations page

Option to unselect all gateways

Option to unselect gateways one by one

### Gateways

You have selected 10 gateways [Select all 18 gateways](#)

<input checked="" type="checkbox"/>	Status ⓘ	Gateway EUI	Name	Description	Backhaul	Actions
<input checked="" type="checkbox"/>	OPERATIONAL	<a href="#">7076FF0056050928</a>	7076FF0056050928	iStation 868	Ethernet	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	UNREACHABLE	<a href="#">7076FF00560603CF</a>	7076FF00560603CF	iStation 868	Ethernet	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	UNREACHABLE	<a href="#">7076FF00640401C8</a>	7076FF00640401C8	iFemto-evo 868	Ethernet	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	UNREACHABLE	<a href="#">7076FF0064040698</a>	7076FF0064040698	iFemto-evo 868	Undefined	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	UNREACHABLE	<a href="#">7076FF007804003A</a>	7076FF007804003A	iZepto-E 868	Ethernet	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	UNREACHABLE	<a href="#">7076FF007F030024</a>	7076FF007F030024	iZepto-C 868	Cellular	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	OPERATIONAL	<a href="#">7076FF007F04000C</a>	7076FF007F04000C	iZepto-C 868	Cellular	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	UNREACHABLE	<a href="#">7276FF002E0505AE</a>	7276FF002E0505AE	iBTS 868	Ethernet	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	UNREACHABLE	<a href="#">7276FF003903001D</a>	7276FF003903001D	iFemto 868	Ethernet	<a href="#">✎</a> <a href="#">🗑</a>
<input checked="" type="checkbox"/>	OPERATIONAL	<a href="#">7276FF00390302C6</a>	7276FF00390302C6	iFemto 868	Ethernet	<a href="#">✎</a> <a href="#">🗑</a>

Items per page: 10 1-10 of 18

# Bulk feature – Basket management

- Dedicated page available for **bulk operations**:

Bulk operations

Bulk operation

Bulk operation

ADD TO GROUP

REMOVE FROM GROUP

MOVE GATEWAYS

DELETE GATEWAYS

Please select the group to which you want to add the selected gateways.

Select a group

ADD TO GROUP

Current selection

List of selected gateways

Gateway EUI		Name	Description	Groups	
7076FF0056050928		7076FF0056050928	iStation 868	kpi-group1-all non-communicating-gw	
7076FF0064040698		7076FF0064040698	iFemto-evo 868 - gpi	demo2811	
7076FF007F04000C		7076FF007F04000C	iZepto-C 868 - Cost Warning	grenoble	
7276FF002E0505AE		7276FF002E0505AE	iBTS 868		
7276FF00390302C6		7276FF00390302C6	iFemto 868 - KerOS6	grenoble	
7276FF003907025A		7276FF003907025A	iFemto 868 - Helium GPI	grenoble	
7276FF00440707A6		7276FF00440707A6	iFemto 915	kpi-group1-all	

Items per page: 25

1-7 of 7

1

Option to unselect all the gateways

Option to unselect gateways one by one



- **Add gateways to a group:**

Bulk operation

ADD TO GROUP

REMOVE FROM GROUP

MOVE GATEWAYS

DELETE GATEWAYS

Please select the group to which you want to add the selected gateways.

Select a group

grenoble

ADD TO GROUP

!

The group must have been created beforehand

- **Remove gateways from a group:**

Bulk operation

ADD TO GROUP

REMOVE FROM GROUP

MOVE GATEWAYS

DELETE GATEWAYS

Please select the group from which you want to remove the selected gateways.

Select a group

kpi-group1-all

REMOVE FROM GROUP

- **Move gateways from one customer to another:**

Bulk operation

ADD TO GROUP

REMOVE FROM GROUP

MOVE GATEWAYS

DELETE GATEWAYS

Current customer: kpi-development

 → Current customer to which the gateways belong

Please select the customer to whom you want to move the selected gateways.

Select a customer

cockpit

MOVE TO SELECTED CUSTOMER

- **Delete gateways:**

Bulk operation

ADD TO GROUP

REMOVE FROM GROUP

MOVE GATEWAYS

DELETE GATEWAYS

Are you sure you want to delete all the selected gateways ?

DELETE



## **1.c NEW FEATURES**

Alerting feature –  
Notification by Webhook



# Alerting feature – Notification by Webhook

- Add possibility to be notified of alerts on your gateways by configuring a Webhook as an alert destination to receive associated events:

The screenshot displays the 'Group alerting configuration' interface. At the top, there is a navigation bar with tabs for 'OVERVIEW', 'CONFIGURATION', and 'ALERTING', with 'ALERTING' being the active tab. Below this, the 'Alerting configuration' panel is shown, containing 'ALERT SETTINGS' and a 'NOTIFICATION' sub-tab. Under the 'Webhook' section, the 'Activate notification' toggle is turned on. The 'Url' field is populated with 'http://testoverview.com'. There is an 'ADD HEADER' button and a note stating 'No Custom Header configured'. At the bottom, the 'Security' options are set to 'None'. 'VALIDATE' and 'CANCEL' buttons are located at the bottom left of the configuration panel.

- The notification applies to all the gateways in the alerting group
- All the events (opening, updating, closing) related to each alert triggered are published

# Alerting feature – Notification by Webhook

- Each alert event is sent as an HTTP POST command with a JSON-encoded payload
- Examples for opening, updating and closing an alert:

```
{
  "alert_type": "LoRaWAN uplink disruption",
  "gw_eui": "7076FF00660405DE",
  "customer_name": "kerlink",
  "customer_id": 340261,
  "group_name": "alerting-group",
  "group_id": 736449,
  "date": "2024-10-25T09:00:41.216388Z",
  "operation": "open",
  "status": "anomaly",
  "reason": "No valid LoRaWAN message received for 24 hours."
}
```

**Alert opening**

```
{
  "alert_type": "LoRaWAN uplink disruption",
  "gw_eui": "7076FF00660405DE",
  "customer_name": "kerlink",
  "customer_id": 340261,
  "group_name": "alerting-group",
  "group_id": 736449,
  "date": "2024-10-25T10:01:27.628380Z",
  "operation": "update",
  "status": "anomaly",
  "reason": "No valid LoRaWAN message received for 24 hours."
}
```

**Alert updating**

```
{
  "alert_type": "LoRaWAN uplink disruption",
  "gw_eui": "7076FF00660405DE",
  "customer_name": "kerlink",
  "customer_id": 340261,
  "group_name": "alerting-group",
  "group_id": 736449,
  "date": "2024-10-25T11:02:28.308452Z",
  "operation": "close",
  "status": "correct",
  "reason": "Valid LoRaWAN messages received during the last 24 hours."
}
```

**Alert closing**

# Alerting feature – Configuration of Webhook

- Configuration of **Webhook / URL & Headers**:
  - Possibility to **enable/disable notification**
  - URL where you want to receive the alert events (*mandatory*)
  - Possibility to **add several Custom Headers** in the list, with the following parameters for each one:
    - Key (*mandatory*)
    - Value (*mandatory*)
  - Possibility to **update a Custom Header** in the list:
    - ❗ The already configured values are hidden for security reason
  - Possibility to **remove** a Custom Header from the list

The image displays two screenshots of the 'Alerting configuration' interface, specifically the 'NOTIFICATION' tab. The top screenshot shows the 'Webhook' section with a red box highlighting the 'Url' field. The bottom screenshot shows the 'Custom Headers' section with a red box highlighting the 'Key' and 'Value' fields, and a yellow dashed circle around a minus icon for removing a header.

**Alerting configuration** \* required

**ALERT SETTINGS** **NOTIFICATION**

**Webhook**

☒ Activate notification

Url \*

**Custom Headers** **ADD HEADER**

☒ No Custom Header configured

**Security**

☒ None ☐ mTLS ☐ Basic Authentication

**VALIDATE** **CANCEL**

**Alerting configuration** \* required

**ALERT SETTINGS** **NOTIFICATION**

**Webhook**

☒ Activate notification

Url \*

**Custom Headers** **ADD HEADER** ☒ More headers can be added when the key and value are filled.

Key \* Value \*

KeyA ....

Key \* Value \*

**Security**

☒ None ☐ mTLS ☐ Basic Authentication



# Alerting feature – Configuration of Webhook

- Configuration of **Webhook / Security**:
  - Possibility to select security from 3 options
  - **None** (default)
  - **mTLS**, with parameters:
    - Certificate (*mandatory*)
    - Key (*mandatory*)
    - CA certificate
  - **Basic Authentication**, with parameters:
    - Username (*mandatory*)
    - Password (*mandatory*)

The screenshot shows the 'Alerting configuration' form with the 'NOTIFICATION' tab selected. The 'Webhook' section has 'Activate notification' turned on and a 'Uri' field. The 'Custom Headers' section has an 'ADD HEADER' button and a message 'No Custom Header configured'. The 'Security' section is highlighted with a red border and shows 'mTLS' selected as the security option. Below this, there are three fields: 'Certificate \*', 'Key \*', and 'CA certificate', each with a file upload icon to its left.

The screenshot shows the same 'Alerting configuration' form, but with 'Basic Authentication' selected as the security option in the 'Security' section, which is highlighted with a red border. The 'Certificate \*', 'Key \*', and 'CA certificate' fields are no longer visible. Instead, there are two fields: 'Username \*' and 'Password \*'.



# **1.d NEW FEATURES**

## Other features & improvements



- Adding **number of gateways** in group list & overview:

The screenshot displays two parts of the Kerlink interface. The top part is a 'Groups' table with columns: Name, Number of gateways, Description, Alerting group, and Actions. The bottom part is the 'Group overview' page for 'kpi-group1-all', showing details like Customer, Name, Description, Alerting group, and Gateways. Red boxes and arrows highlight the 'Number of gateways' column in the table and the '6 in group' and '26 in customer' buttons in the overview page. A text box explains that these are clickable and redirect to the filtered gateway list.

Name	Number of gateways	Description	Alerting group	Actions
grenoble	4 / 26	grenoble	⊗	✎ ✖
kpi-group1-all	6 / 26	kpi-group1 all	⊗	✎ ✖
toulouse	8 / 26	toulouse	⊗	✎ ✖

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Group overview

OVERVIEW CONFIGURATION

kpi-group1-all ✎ ✖ ↺

General

Customer kpi-development

Name kpi-group1-all

Description kpi-group1 all

Alerting group ⊗ Disabled

Gateways 6 📶 in group 26 📶 in customer

Both number of gateways (in group and customer) are clickable and automatically redirect to the filtered gateway list

- Adding possibility to **filter on a batch of gateways by copy/paste a list of EUIs**:
  - Number of EUIs that can be copied/pasted is limited to 100
  - Accepted separators: comma, semicolon, pipe, space and tab

Filter

Select status

Gateway EUI(s)

7076FF0056050928

7076FF00640401C8

7276FF002E0505AE

+ 2 Gateways

Name

Description

Select backhaul

IMEI

ICCID

Actions in progress

SEARCH

Gateway EUI(s)

7076FF0056050928

7076FF00640401C8

7276FF002E0505AE

+ 2 Gateways

☒ 7076FF0056050928

☒ 7076FF00640401C8

☒ 7276FF002E0505AE

☒ 7276FF00440707A6

☒ 7076FF007F04000C

Gateways

<input type="checkbox"/>	Status ⓘ	Gateway EUI	Creation date	Name	Description	Backhaul	Groups	Actions
<input type="checkbox"/>	OPERATIONAL	7076FF0056050928	2023-12-09 09:53:53	7076FF0056050928	iStation 868	Ethernet	kpi-group1-all supervised	
<input type="checkbox"/>	OPERATIONAL	7076FF00640401C8	2024-03-20 12:55:55	7076FF00640401C8	iFemto-evo 868	Ethernet	kpi-group1-all supervised	
<input type="checkbox"/>	OPERATIONAL	7076FF007F04000C	2024-01-10 16:01:19	7076FF007F04000C	iZepto-C 868	Cellular	grenoble	
<input type="checkbox"/>	OPERATIONAL	7276FF002E0505AE	2024-06-19 15:41:14	7276FF002E0505AE	iBTS 868	Ethernet	kpi-group1-all	
<input type="checkbox"/>	OPERATIONAL	7276FF00440707A6	2023-12-09 09:53:53	7276FF00440707A6	iFemto 915	Ethernet	grenoble supervised	

Items per page: 25 1-5 of 5 < > 1 > >|

- Adding possibility to **filter the gateways on a part of EUI**:

Filter

Select status

OPERATIONAL

Gateway EUI(s)

7276FF

Creation date

Name

Description

Select backhaul

Select a group

IMEI

ICCID

Actions in progress

SEARCH

Gateways

<input type="checkbox"/>	Status ⓘ	Gateway EUI	Creation date	Name	Description	Backhaul	Groups	Actions
<input type="checkbox"/>	OPERATIONAL	7276FF002E0505AE	2024-06-19 15:41:14	7276FF002E0505AE	iBTS 868	Ethernet	kpi-group1-all	
<input type="checkbox"/>	OPERATIONAL	7276FF00390302C6	2024-01-11 09:47:09	7276FF00390302C6	iFemto 868	Ethernet	grenoble supervised	
<input type="checkbox"/>	OPERATIONAL	7276FF003907025A	2023-12-09 09:53:53	7276FF003907025A	iFemto 868	WiFi	grenoble	
<input type="checkbox"/>	OPERATIONAL	7276FF00440707A6	2023-12-09 09:53:53	7276FF00440707A6	iFemto 915	Ethernet	kpi-group1-all supervised	

Items per page: 25 1-4 of 4

- Adding **cellular signal strength** in gateway list:
  - Information displayed in a new column, hidden by default
  - Possibility to sort column by signal strength

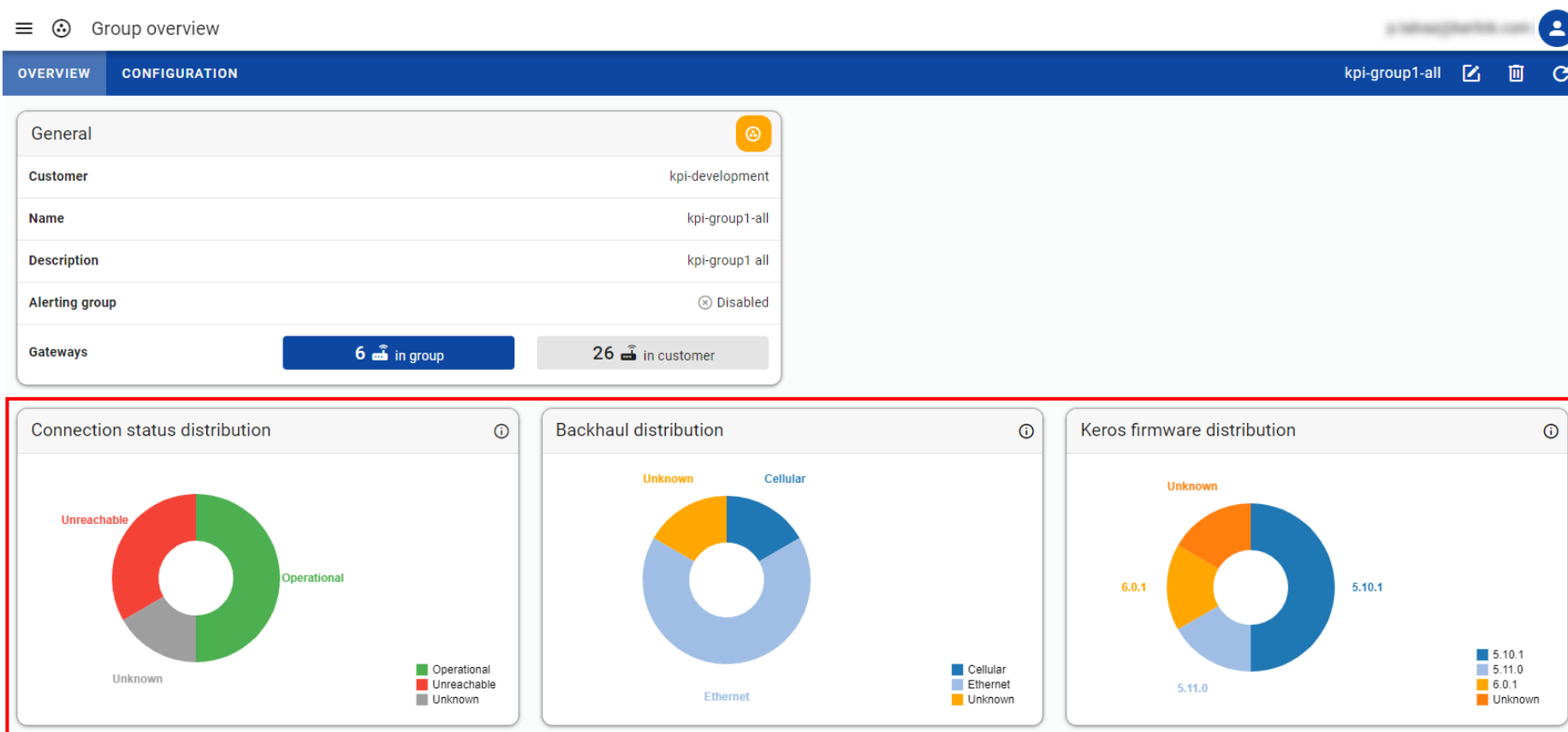
Gateways									
<input type="checkbox"/>	Status ⓘ	Gateway EUI		Creation date	Name	Description	Backhaul	Cellular strength ↑ 1	Actions
<input type="checkbox"/>	UNREACHABLE	7076FF007F030024		2023-12-09 09:53:53	7076FF007F030024	iZepto-C 868	Cellular	45 %	
<input type="checkbox"/>	UNREACHABLE	7076FF00640401C8		2024-03-20 12:55:55	7076FF00640401C8	iFemto-evo 868	Ethernet	60 %	
<input type="checkbox"/>	OPERATIONAL	7076FF007F04000C		2024-01-10 16:01:19	7076FF007F04000C	iZepto-C 868	Cellular	74 %	
<input type="checkbox"/>	OPERATIONAL	7276FF003903001D		2024-09-16 10:15:44	7276FF003903001D	iFemto 868	Ethernet	-	
<input type="checkbox"/>	UNREACHABLE	7276FF003904023B		2024-02-05 15:16:43	7276FF003904023B	iFemto 868	Ethernet	-	
<input type="checkbox"/>	OPERATIONAL	7276FF002E0505AE		2024-06-19 15:41:14	7276FF002E0505AE	iBTS 868	Ethernet	-	
<input type="checkbox"/>	UNREACHABLE	7076FF00560603CF		2023-12-09 09:53:53	7076FF00560603CF	iStation 868	Ethernet	-	
<input type="checkbox"/>	OPERATIONAL	7076FF0056050928		2023-12-09 09:53:53	7076FF0056050928	iStation 868	Ethernet	-	
<input type="checkbox"/>	OPERATIONAL	7276FF00440707A6		2023-12-09 09:53:53	7276FF00440707A6	iFemto 915	Ethernet	-	
<input type="checkbox"/>	UNREACHABLE	7076FF007804003A		2023-12-09 09:53:53	7076FF007804003A	iZepto-E 868	Ethernet	-	
<input type="checkbox"/>	UNREACHABLE	7276FF00390304D6		2024-06-24 10:57:36	7276FF00390304D6	iFemto 868	Ethernet	-	
<input type="checkbox"/>	OPERATIONAL	7276FF003907025A		2023-12-09 09:53:53	7276FF003907025A	iFemto 868	WiFi	-	
<input type="checkbox"/>	OPERATIONAL	7076FF0064040698		2024-04-23 08:53:40	7076FF0064040698	iFemto-evo 868	Ethernet	-	
<input type="checkbox"/>	OPERATIONAL	7276FF00390302C6		2024-01-11 09:47:09	7276FF00390302C6	iFemto 868	WiFi	-	

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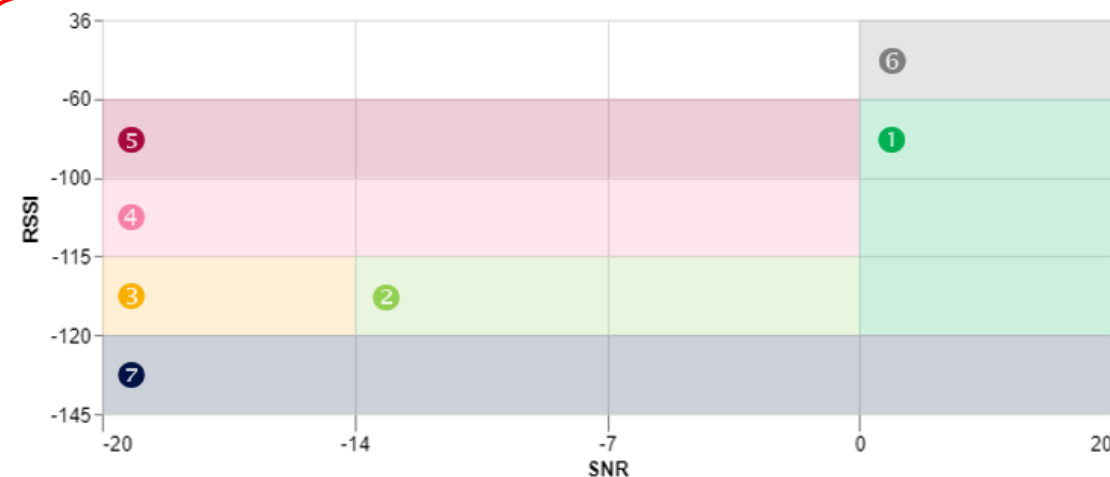
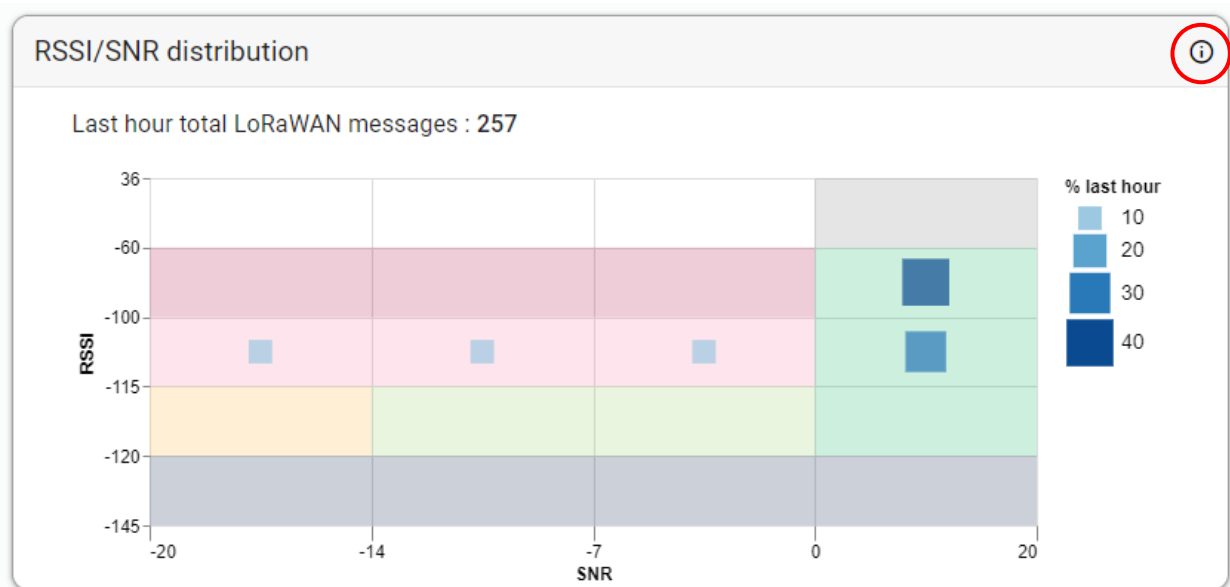
- Adding **KPI graphs in group overview:**

- KPI graph [Connection status] distribution
- KPI graphs [Backhaul] & [Keros firmware] distribution



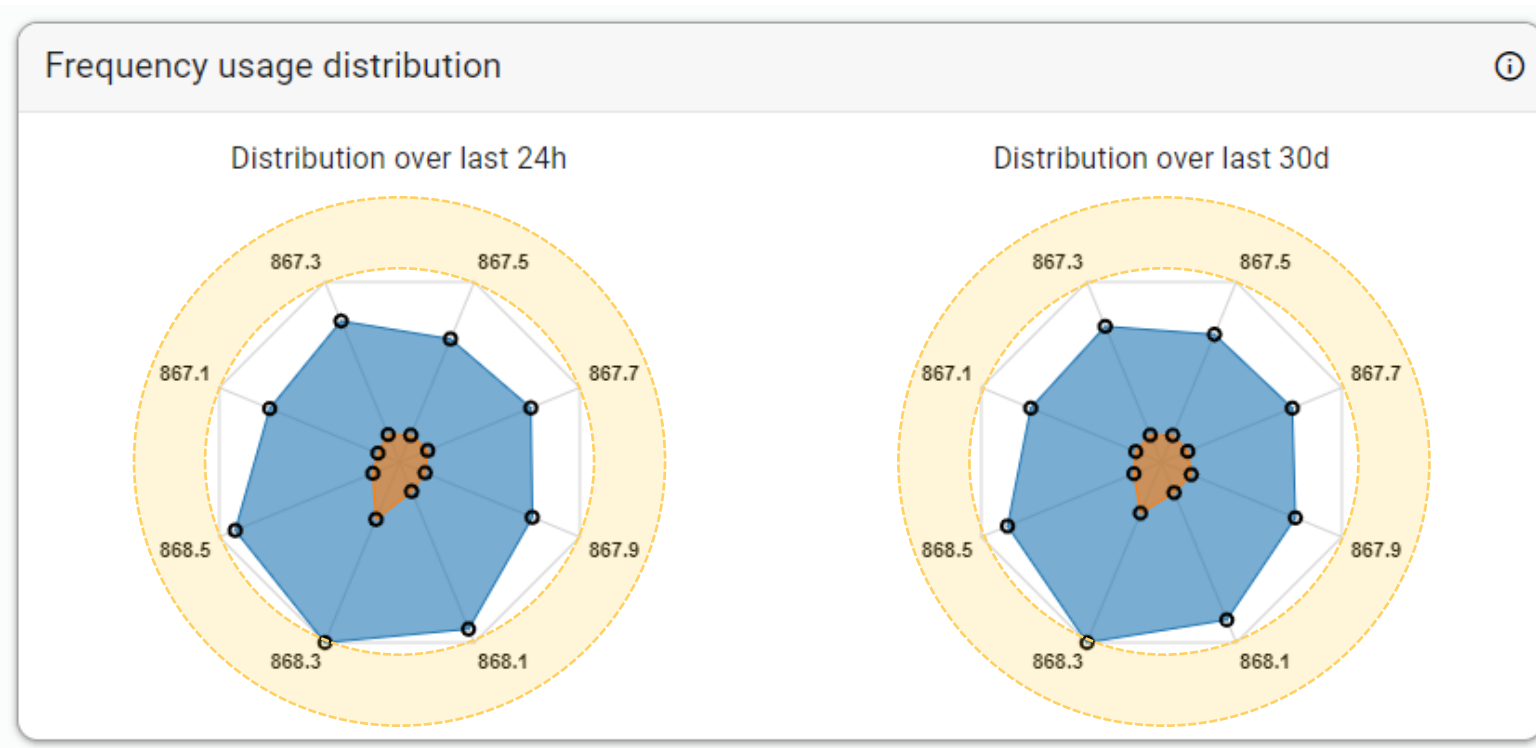
- KPI graph [RSSI/SNR distribution]:

- Adding **color code on message reception areas** to help evaluating the radio link quality
- Color code explained in information popup



- ① Optimal radio conditions
- ② Good radio conditions
- ③ Weak radio signal
- ④ Noisy environment or collisions, risk of message loss
- ⑤ Very noisy environment or high-level blockers
- ⑥ Devices too close to the gateway
- ⑦ Problem of RSSI measurement (bad calibration of antenna gain, feeder losses or defective receiver)

- KPI graph [Frequency usage distribution]:
  - Improvement by using the **same set of frequencies for both graphs 24h and 30d**
  - Allow to ease comparative analysis of the total number of messages received and those received with CRC error across the different frequencies used





## 2. RESTRICTIONS SOLVED



- Some fixes on gateway list filtering feature:
  - Filtering on status does not work if creation date is less than 1 hour [SOLVED]
  - Incorrect total count when no gateway to return with status filtering [SOLVED]
  - Results of filtering with all status filter and no filter are not equals [SOLVED]
- Can't try again after CSV import failure [SOLVED]
- Bulk selection is not kept after changing page [SOLVED in 4.8.1]



### **3. CONSTRAINTS & RESTRICTIONS**





- Configuring the backhaul interfaces is only possible at gateway level, it will be possible at group level (for a batch of gateways) in a next release
- Minimal mode for get logs command is not available for gateways with KerOS 6 FW
- RSSI/SNR distribution graph is only available for last hour
- A relogin is necessary for the changes on the user's rights to be applied
- Feature for importing gateways by CSV file is limited to Kerlink team (no access for customer), please contact Kerlink support team if you need to declare many gateways



# Thank you!



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