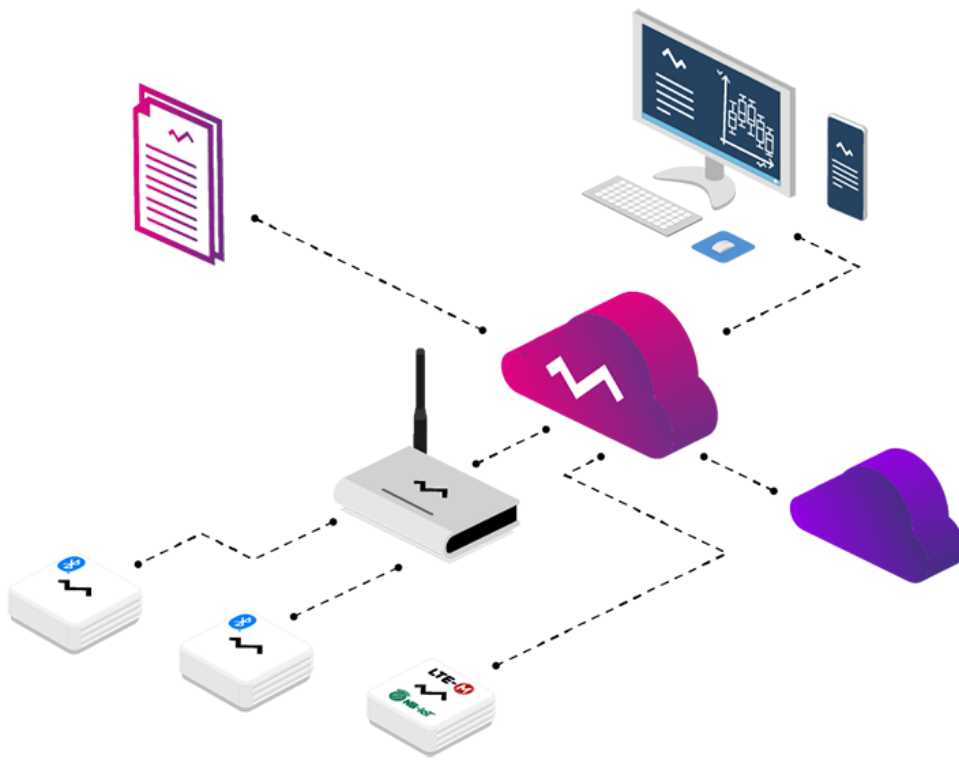


Efento Cloud User manual



V 2.3



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1. Registration and logging in to Efento Cloud

Using Efento Cloud requires creating an account. To register, go to cloud.efento.io and click “sign up”. You will be asked to provide the data necessary for registration (username, first name, last name, e-mail address, password) and to accept the terms and conditions of using the service. A message with an activation link will be sent to the email address provided. After filling in all the required fields, click Register and then open the verification message on your mailbox. After clicking the link in the email, your account will be activated and you can log in to it.

Users who already have a verified, active account, can skip the steps described above, and log in by entering their email address or username and password.

2. Organization

Organizations enable the sharing of measurement data from sensors with many users. Additionally, within the Organization, you can create a location structure that allows you to organize your sensors. You can grant the users who have access to your Organization the right to view or modify individual locations. The organization has its own unique key, thanks to which specific sensors can be assigned to it. This is done by entering the Organization key in Efento Gateway - a device that sends measurements from wireless sensors to Efento Cloud or directly in NB-IoT sensors. All these steps will be described in detail in the next chapters of this manual.

If you have registered with Efento Cloud and are not yet a member of any Organization, you will be asked to create a new Organization and choose its name. After entering this data, you will get full access to managing your Organization, inviting other users to it and configuring sensors. If a new user has been invited to an existing Organization, he will be automatically assigned to it after successful registration of his account.

If you are already a member of an Organization and you want to create a new one, go to *Profile* and click the *New Organization* button in the *My Organizations* section.

3. Configuration of Efento Gateway

Efento Gateway is a device connected to the network that receives the data from Efento wireless sensors within its range and sends it to Efento Cloud. The device can be powered by a USB power supply (5V, 1A) or PoE (802.3af).

3.1. Configuration of Efento Gateway using the Efento mobile application

The fastest and easiest way to configure Efento Gateway is to configure it using the Efento mobile application. Download the application from the [Play Store](#), run it and log in to your Efento Cloud account. After logging in, enter the main menu of the application (three lines in the upper left corner), then select *Organization settings* -> *Add sensors* -> *Bluetooth Low Energy* -> *Add gateway* and follow the instructions on the screen.

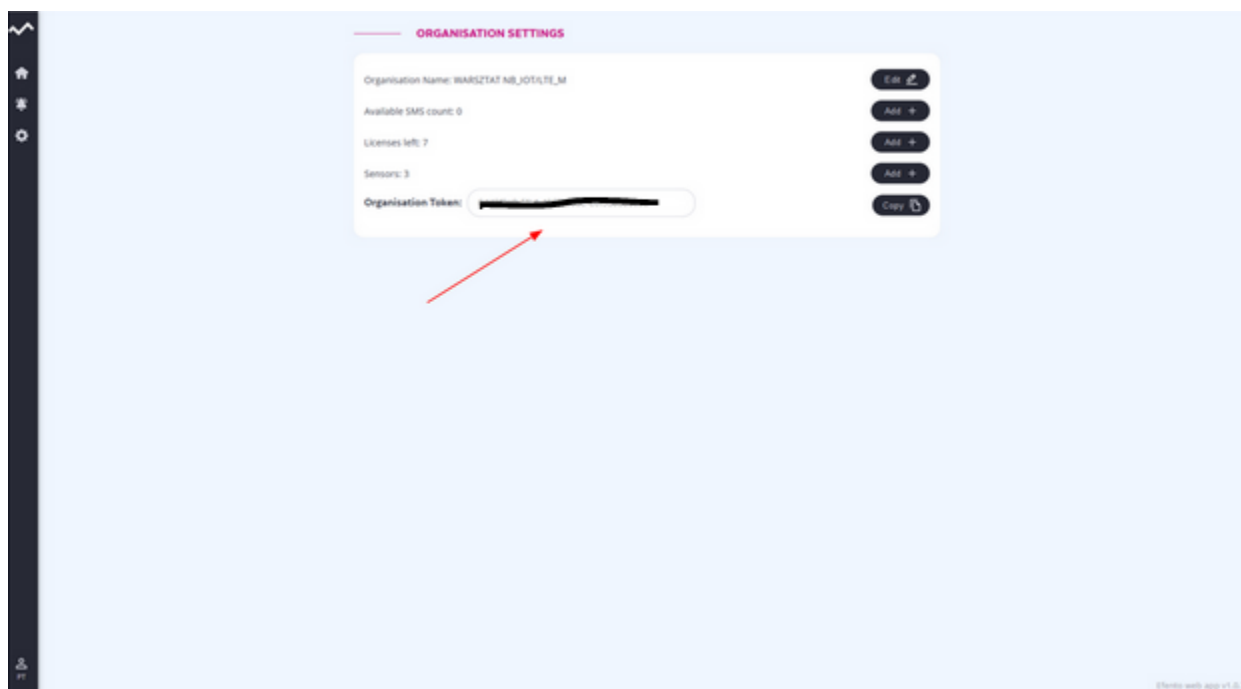
3.2. Configuration of Efento Gateway using the computer

In order to configure the Efento Gateway using your computer, connect Efento Gateway to the power supply with a USB cable and to the computer by Ethernet cable. After setting the connection, choose the IP address from subnet 192.168.120.0/24 (e.g. 192.168.120.2, subnet mask 255.255.255.0) and set it on the network card, to which Efento Gateway is connected. Open an Internet browser on your computer and go to address 192.168.120.89 (default Efento Gateway address). Configure the Efento Gateway, so that it has Internet access. In the *Configuration* section, configure all network settings (IP address of the Efento Gateway, IP address of network gateway, subnet mask, DNS address). Apply all changes by clicking Save. Efento Gateway supports DHCP. If you choose option ON next to DHCP, then all network configuration of Efento Gateway will be downloaded from the router (Do not forget to turn on the DHCP on the router!).

After finishing this part of configuration, unplug the Efento Gateway from the computer and connect it to the network with Ethernet cable. Efento Gateway can be powered by PoE (Power over Ethernet). If you have a switch / router / injector that supports PoE technology (802.3af), then you can plug in only Ethernet cable, which will set up a connection to the network and will also work as a power supply. Otherwise, you also have to plug in a USB power supply (5V, 1A).

Assigning the gateway to your Organization is done by entering the Organization Key. Organization Key is a unique number assigned to your Organization. After entering the key in Efento Gateway, measurement data from all sensors within its range will be automatically sent to your Organization's account in Efento Cloud. One Organization key can be entered in many Efento Gateway, located even in distant places. Thanks to this, measurement data can go to your Organization's account from many facilities, even hundreds of kilometers away from each other.

You will find your Organization key after logging in to your Efento Cloud account. From the menu on the left, select the settings icon (gear) and then *Organization settings*.

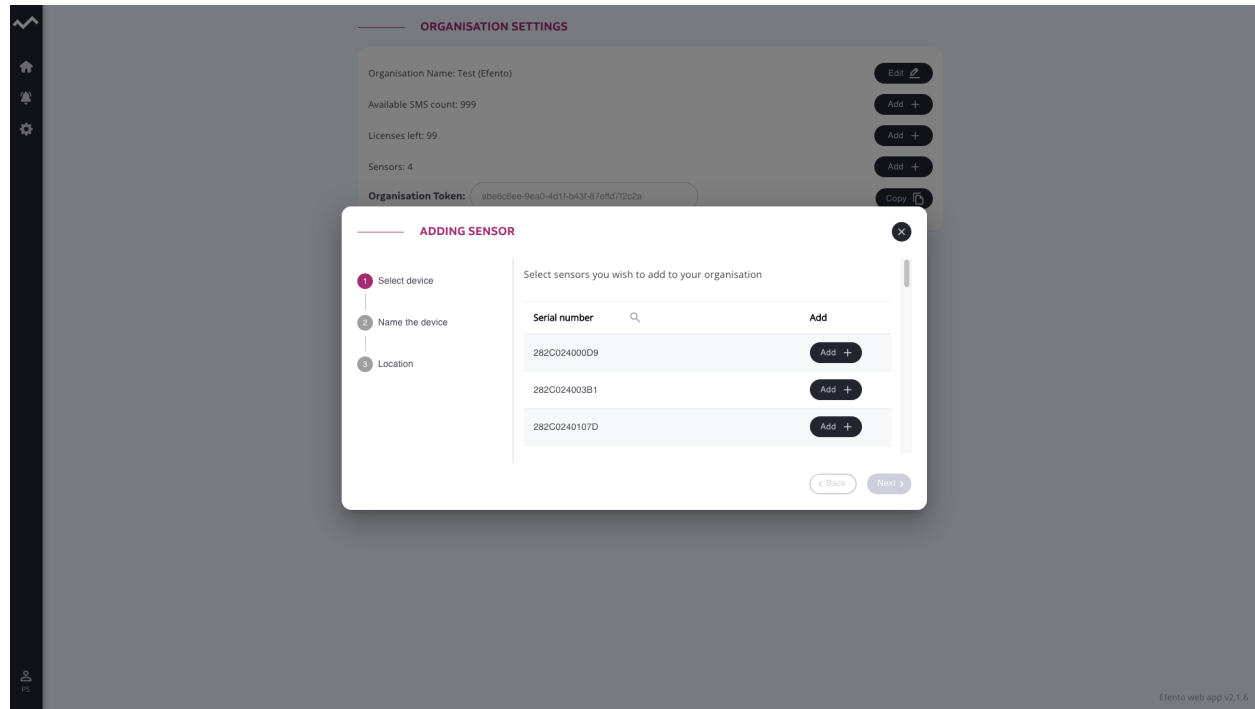


View with the Organization key

Organization key should be entered in the *Organization key* field in the Efento Gateway configuration page. After entering the Organization key, measurements from all sensors within the Gateway's range will be automatically sent to the Efento Cloud platform.

To assign the sensors to your Organization login to Efento Cloud at cloud.efento.io go to *Settings -> Organization Settings*, and click the *Add* button next to *Licenses left*. Key in the license code that you received when purchasing Efento products. Once the license key is added, you will be able to add sensors to your Organization. Click the *Add* button next to *Sensors*. If the gateway has been configured correctly, the serial numbers of all sensors within its range will be visible on the list. Press the *Add* button next to the

sensor you want to add to your Organization, name it and select the location to which it will be assigned.



Adding sensor

4. Configuration of NB-IoT sensors

The only way to configure NB-IoT sensors is to configure using the Efento mobile application. Download the application from the Play Store, run it and log in to your Efento Cloud account. After logging in, enter the main menu of the application (three lines in the upper left corner), then select *Organization settings* -> *Add sensors* -> *NB-IoT* and follow the instructions on the screen.

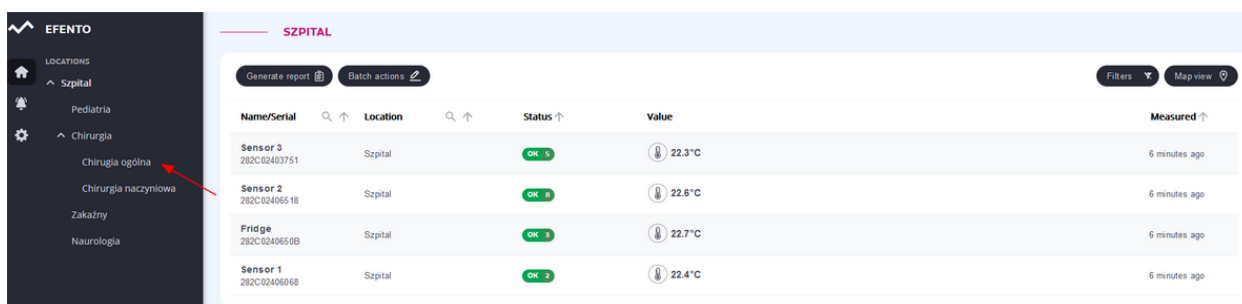
5. Dashboard - preview of sensors added to Efento Cloud

The *Dashboard* menu presents measurements and other important information about all sensors added to your Organization in the Efento Cloud platform. There you will find: current sensor measurements along with information when the measurement was made, the number of alarm occurrences, the location in the organization structure to which the sensor is assigned and the sensor status. In the *Status* column, the number

of unconfirmed alarms for the given sensor (active and these waiting for confirmation) is displayed.

5.1. Filtering of display results

The data displayed in the Dashboard can be filtered so that you can easily find the information you need. The first way is filtering by location. In the *Locations* section, on the left side of the view, select the location you are interested in, and the list of sensors will be narrowed down to those assigned to it. The other described filters only work on sensors from the selected location.

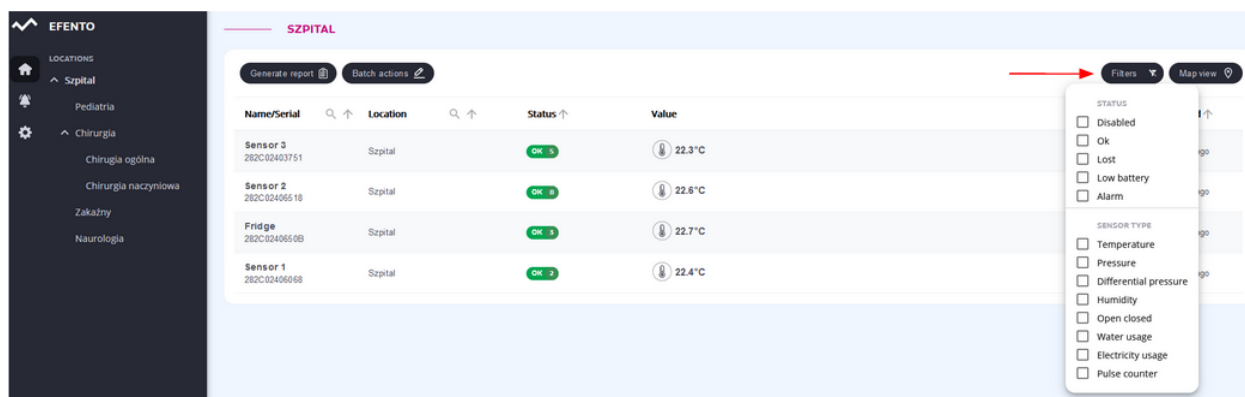


Name/Serial	Location	Status	Value	Measured
Sensor 3 282C02403751	Szpital	OK	22.3°C	6 minutes ago
Sensor 2 282C02406518	Szpital	OK	22.6°C	6 minutes ago
Fridge 282C02406508	Szpital	OK	22.7°C	6 minutes ago
Sensor 1 282C02406068	Szpital	OK	22.4°C	6 minutes ago

The second way is to search by name or serial number of the sensor. In the header of the table, which presents information about sensors, there is the *Name / Serial number* field. Enter the serial number or the name of the sensor you want to find in this field, and only the results you are interested in will remain in the list. If several sensors have a similar name or serial number, then by entering its fragment, the names / serial numbers containing the phrase you entered will be automatically filtered. Next to the names of the other columns in the table, there are arrows that allow you to sort values in descending or ascending. To clear the filter and restore the default sorting, delete the phrase entered in the table header.

You can also sort the sensors according to any value of the list. To do this, click on the arrow symbols next to the desired value (*Name / Serial No.*, *Location*, *Status*).

Using the *Filters* button in the upper right corner of the table. You can filter out the sensors of the selected type (e.g. temperature / humidity / pressure) or the sensors according to their status (Ok, Alarm, Battery, Lost, Off). By default, the platform shows all sensors, regardless of their status.



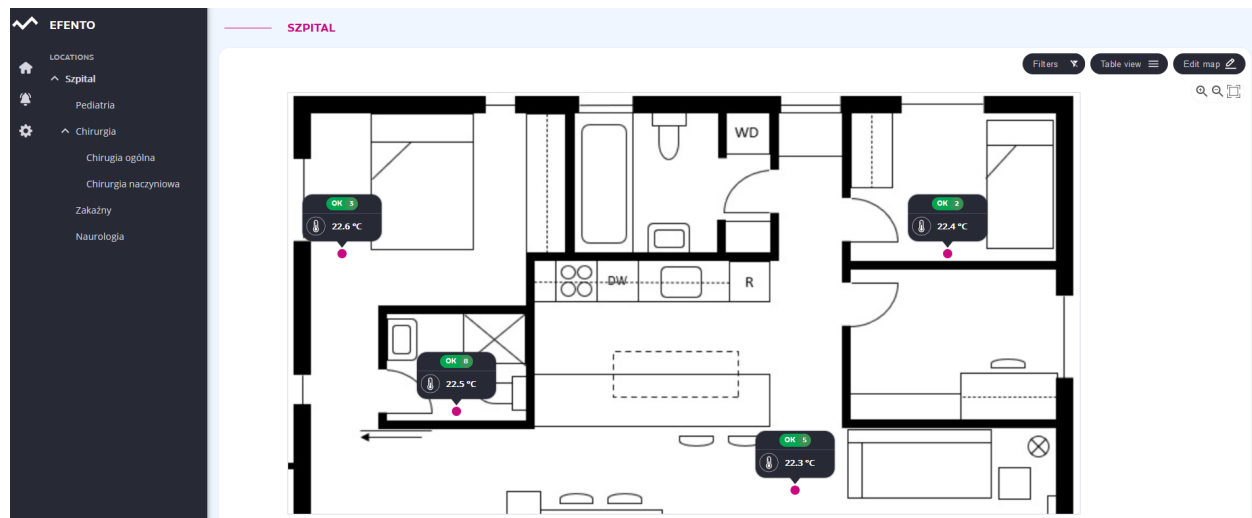
Filters menu

5.2. Location map

The location map allows you to upload a building or room plan and place sensors on it for more convenient monitoring of their condition. The location map can be uploaded by a user with Administrator or Manager rights. The platform allows you to upload one map for each location.

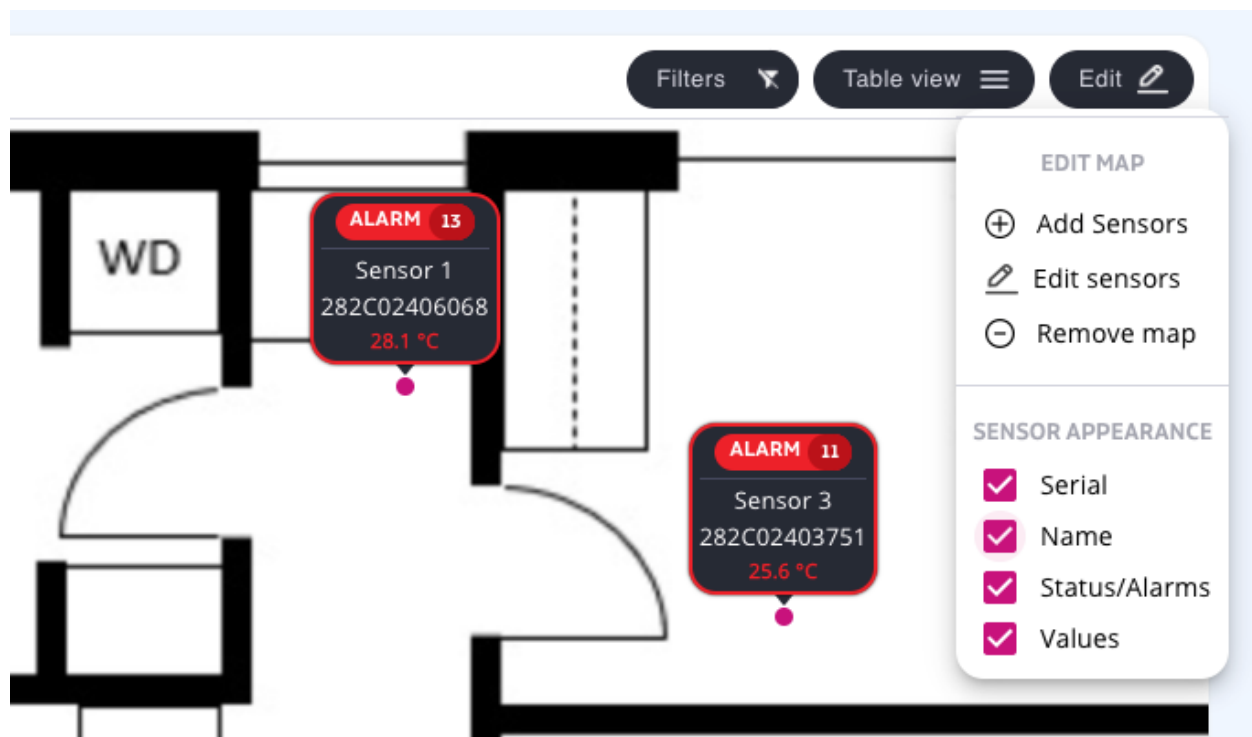
You can preview the sensors together with their location on the map by clicking the *Location map* button in the *Dashboard* tab. The map displays the current status of sensors and measurement results, and clicking on the selected sensor takes you to its detailed data.

To change the map image, add / remove / place sensors on the map, click the *Edit* button in the top right corner of the screen. If you haven't added a map before, a blank field will be displayed with the *Add Map* button in the middle. Select the file you want to upload and click *open*. The platform allows you to upload maps / floor plans in PNG, JPEG, BMP and GIF format, and the maximum file size is 4 MB. For large images, adding the map may take several minutes. Removing a previously added map is as simple as clicking the *Remove map* button in the *Map editing* menu in the upper right corner of the view. To place sensors on the map, select *Add sensors* from the menu, click on the sensors you want to add, then drag them with the mouse cursor to the place of your choice on the map and save the changes with the *Save* button. If you want to edit or remove a sensor, select *Edit sensors* from the map editing menu. After adding a map, it will be visible to all users with access to the given location.



Location map

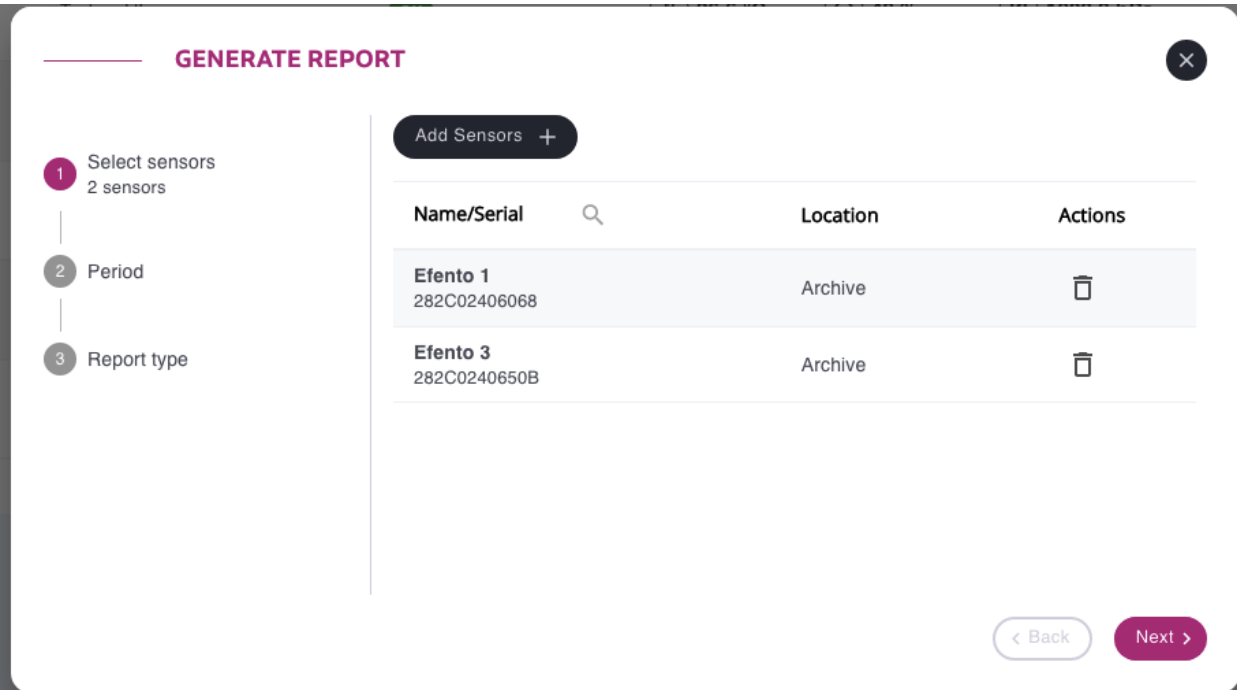
The user can adjust the way of displaying the sensor information to their needs. After clicking the *Edit* button, it is possible to select the information to be displayed: name, serial number, status, current measurements. If all the fields are unchecked, the sensors will be displayed in the form of dots with a color representing their status (green - ok, red - alarm, yellow - low battery, gray - lost).



Location

5.3. Reports

Efento Cloud allows you to export measurements from any period of time, from one or more sensors in PDF (chart / table) or CSV format. To generate a report, press the *Generate Report* button in the upper left corner of the table. Press the *Add sensors* button, and then select the sensors that will be included in the report. You can select any number of sensors to be included in the report. If there are many sensors in a given location, to find the sensor you are interested in, enter its name / serial number in the search field above the table with sensors. After selecting the sensors, press *Next*.



GENERATE REPORT

1 Select sensors
2 sensors

2 Period

3 Report type

Add Sensors +

Name/Serial	Location	Actions
Efento 1 282C02406068	Archive	
Efento 3 282C0240650B	Archive	

< Back

Next >

In the *Period* section, set: the period from which the measurements are to be exported - enter the dates from - to or select a time period from the list (last 7 days, last month, etc.) and save the changes with the *Next* button.

Select PDF table / chart or CSV report type and generate the report by clicking the *Generate* button. This will generate it in the selected format and automatically send it to the e-mail address you provided when registering on the platform. The report will be delivered in a few minutes.

GENERATE REPORT

✓ Select sensors
2 sensors

✓ Period
13/09/2022 - 13/09/2022

3 Report type

Choose extension of your report

☐ PDF - chart
Measurements presented on a chart. PDF file can not be edited, what makes it perfect for documentation purposes.

☐ PDF - table
Measurements presented in a table. PDF file can not be edited, what makes it perfect for documentation purposes

☐ CSV
Perfect for further data processing and analysis in third party software. Editable version of the report.

☐ Include information on exceeding the alarm thresholds

< Back

Generate >

5.4. Preview detailed sensor data

After clicking on the sensor on the list in the *Dashboard* or on the *Location Map*, you can see detailed information about the sensor: alarm occurrences with date and time, measurement data in the form of a plot and table, and you can also change the sensor settings or export measurements relevant any period of time in the form PDF chart / table or CSV report.



Sensor details

The *Alarms* tab contains a list of all types of alarms (a detailed description of alarms can be found in section 11. *Alarms*). Details of the time, date and reason of the alarm occurrence with the name of the alarm rule are provided here. If the sensor status bounces back to normal, the user has the option of confirming the alarm in order to mark the occurrence of irregularities and suppress notifications regarding this particular alarm.

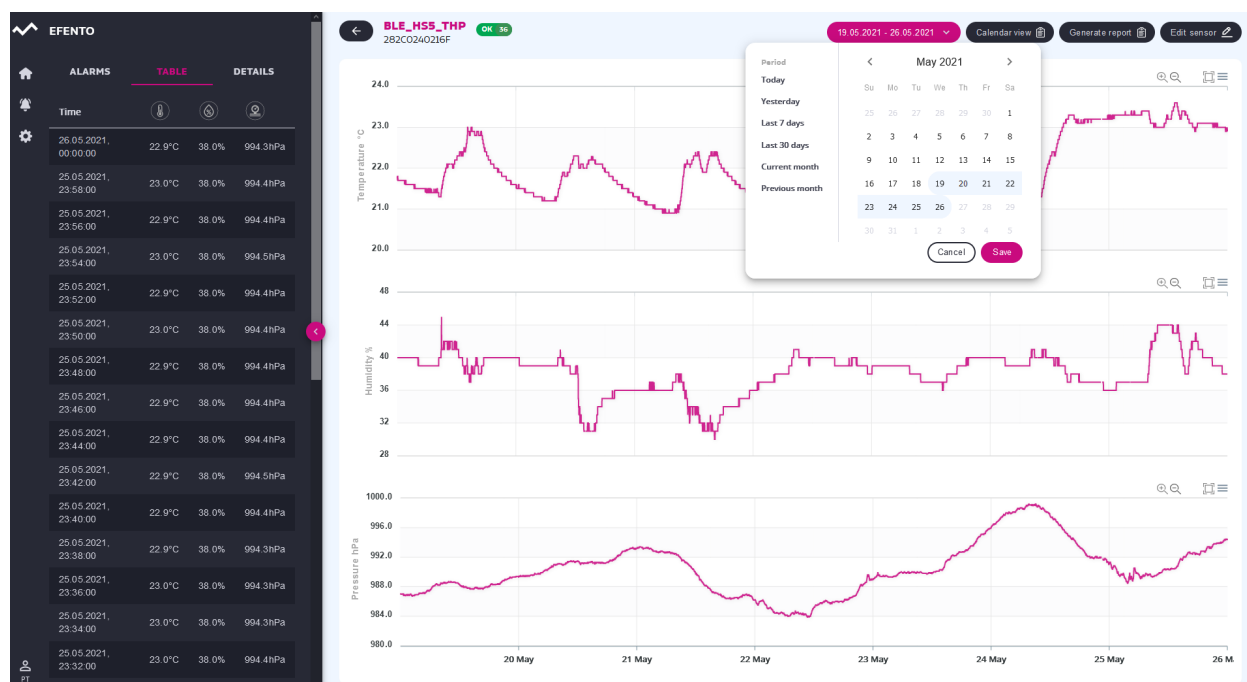
The *Table* tab contains measurements presented in tabular form. The data range in the table can be changed using the date selection button in the upper right corner of the screen.

The *Details* tab contains additional information about the sensor - measurement period, minimum and maximum value in the measurement series and the alarm rules assigned to the sensor.

In the right part of the view there is a graph with measurements. Depending on the physical quantities measured by the sensor, it can be a graph of temperature, humidity, pressure, etc. If the sensor measures more than one physical value, they will be presented on several plots, one below the other. In order to zoom in the chart, select the range with the cursor. To return to the default scale, click the Zoom Out button (four arrows icon) in the upper right corner of the graph.

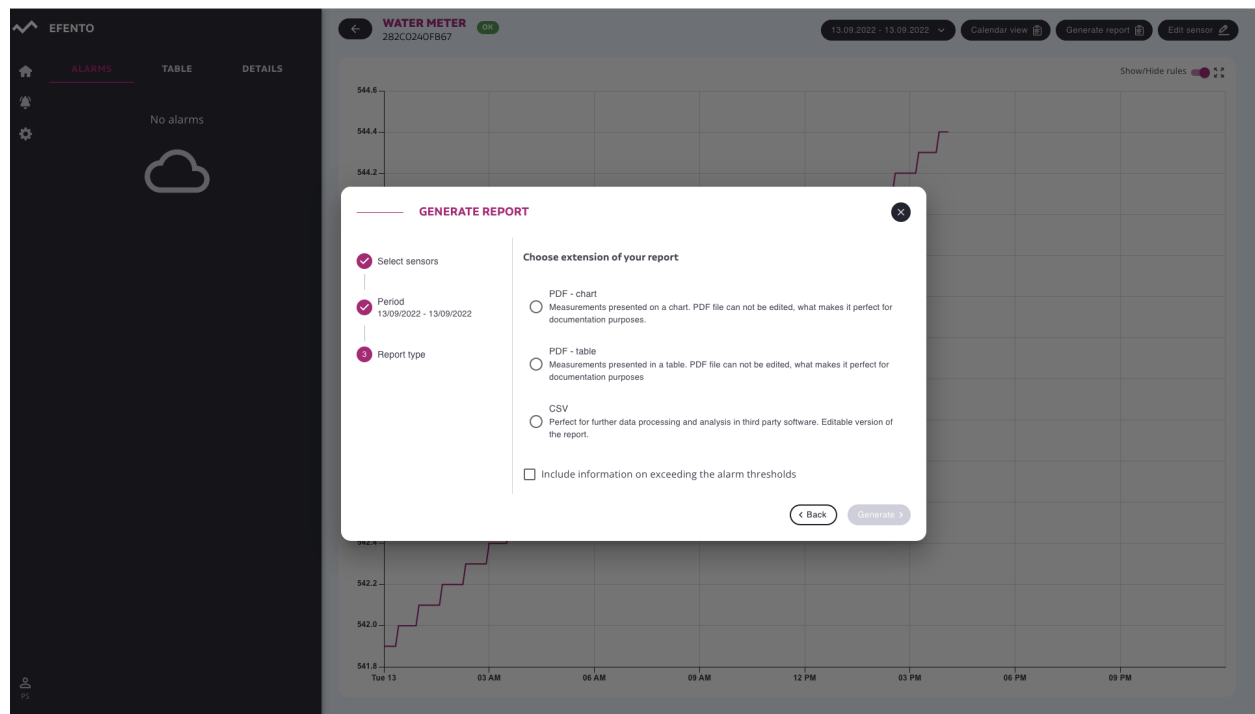
If alarm rules are set for a given sensor, they will be visible on the graph in the form of horizontal lines - the red line represents the upper alarm thresholds, the blue line represents the lower thresholds. Each of the thresholds is described by the name of the rule.

Using the date selection button in the upper right corner of the view, you can select the range that you want to be visible on the chart / table. You can select a range by clicking on the suggested ranges on the right side of the menu (Today, Yesterday, Last 7 Days, ...) or by selecting the exact date range from the calendar.



Temperature measurement graph - select a date range

The *Generate report* button allows you to generate reports with measurements from any period of time. To generate a report, select the start and end date of the report, the content of the report (measurements sent to the platform by the sensor, event list - alarm threshold exceeded, loss of communication with the sensor, etc. and technical information) and the type of report - PDF (chart / table) or CSV. The report will be generated and automatically sent to your e-mail address within a few minutes.



Generating report on demand

6. Sensor configuration

If the user has Administrator or Manager rights, the *Edit sensor* button is visible in the upper right corner of the screen in the sensor view. After clicking this button, the user can change the settings of the selected sensor.



6.1. Change the location of the sensor

To change the location of the sensor, select *Change location* from the edit menu. In the window that will open, select the new location of the sensor and save the changes with the *Save* button. After saving the changes, the selected sensor will be moved to the new location.

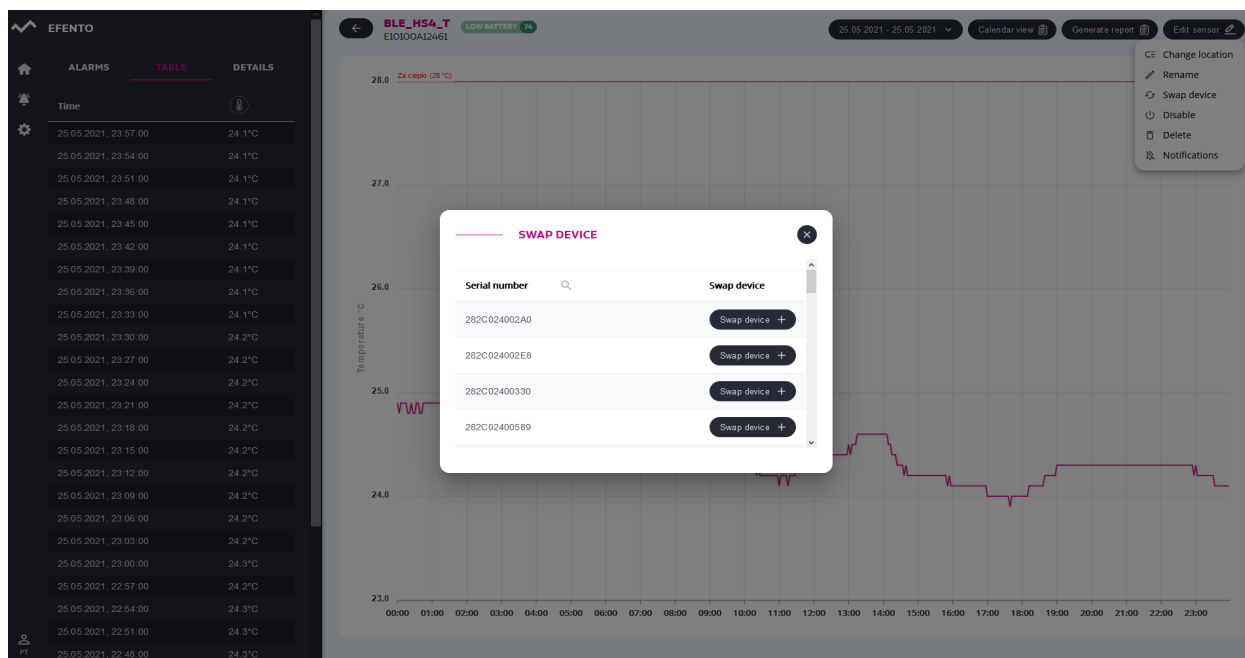
6.2. Change the name of the sensor

To change the location of the sensor, select *Rename* from the edit menu. In the window that will open, enter the new name of the sensor and save the changes with the *Save* button.

6.3. Replacement of sensors

Thanks to the sensor replacement function, the user can straightforwardly replace the sensors without losing data and maintaining the continuity of existing measurements, e.g. in the case of periodic calibration of the sensor. Replacing the recorder does not require the purchase of an additional license.

To replace the logger, select *Swap Device* from the sensor editing menu. From the list that appears, select the sensor that will be used for replacement. After doing this, the sensor will be replaced and will be visible in the list of available sensors.



Swap device window

Measurement data and configuration (alarm rules, automatic reports) of the replaced recorder are retained and the new sensor starts sending data. Information about the replacement will be saved in the system logs.

6.4. Disable and enable sensors

Disabling the sensor means that the sensor measurement data is not saving in the platform, and if the set thresholds are exceeded, no alarms are triggered. To disable a sensor select *Disable* from the sensor edit menu. To turn the sensor back on, click the *Enable* button. After the sensor is turned off, it will change its status to “Off” until it is turned on again.

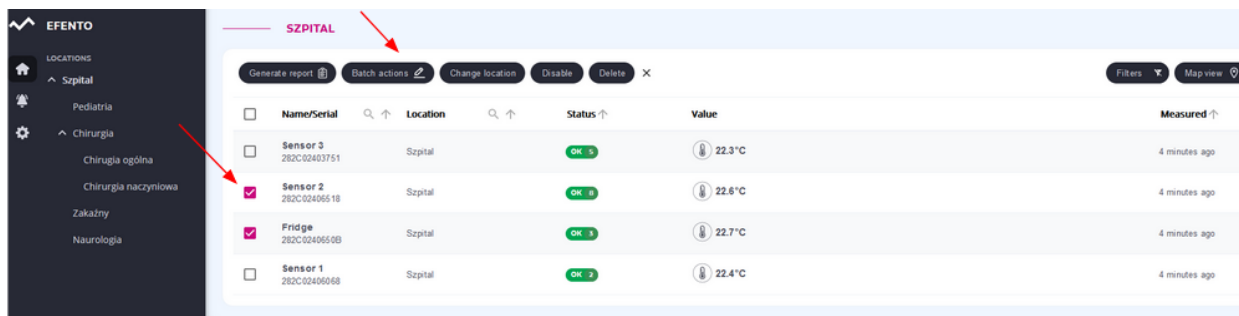
6.6. Remove the sensor

Removing the sensor completely removes it from the Efento Cloud platform. All measurements sent by the sensor will also be deleted. To remove a sensor, select *Delete* from the sensor editing menu and confirm deletion.

Attention! Restoring the measurements from a removed sensor is not possible, but it is possible to add the sensor to the platform again in the same way as adding new sensors (described in section 9.1 Adding sensors).

6.7. Batch actions

Some of the operations described above can be performed on sensor groups in the Dashboard view. If you have Administrator or Manager rights, the batch *actions* button is visible in the upper left corner of the table with sensors. After selecting it, a checkbox will appear next to each of the sensors on the list. Select the sensors you want to edit, then select an option from the menu at the top of the table: Remove, change location, or disable sensors.



The screenshot shows the Efento Cloud interface. On the left is a sidebar with a menu. The main area displays a table of sensors for a location named 'SZPITAL'. At the top of the table, there are buttons: 'Generate report', 'Batch actions' (highlighted with a red arrow), 'Change location', 'Disable', and 'Delete'. Below these buttons is a table with columns: Name/Serial, Location, Status, Value, and Measured. The table contains five rows of sensor data. The second and third rows are selected, indicated by checkboxes in the first column.

Name/Serial	Location	Status	Value	Measured
Sensor 3 262C02403751	Szpital	OK 5	22.3°C	4 minutes ago
<input checked="" type="checkbox"/> Sensor 2 262C02406518	Szpital	OK 5	22.6°C	4 minutes ago
<input checked="" type="checkbox"/> Fridge 262C02406508	Szpital	OK 5	22.7°C	4 minutes ago
<input type="checkbox"/> Sensor 1 262C02406068	Szpital	OK 2	22.4°C	4 minutes ago

Batch actions

7. Users

Each user who has access to your Organization in the Efento Cloud platform can be assigned one of three levels of permissions: Administrator, Manager and Analyst. Additionally, authorizations in the system are assigned to a specific location. Thanks to this solution, the user can be an administrator in one location (i.e. he can edit other users and sensors assigned to this location and its sub-locations) and an analyst in others (i.e. they can only display measurement data from sensors assigned to these locations).

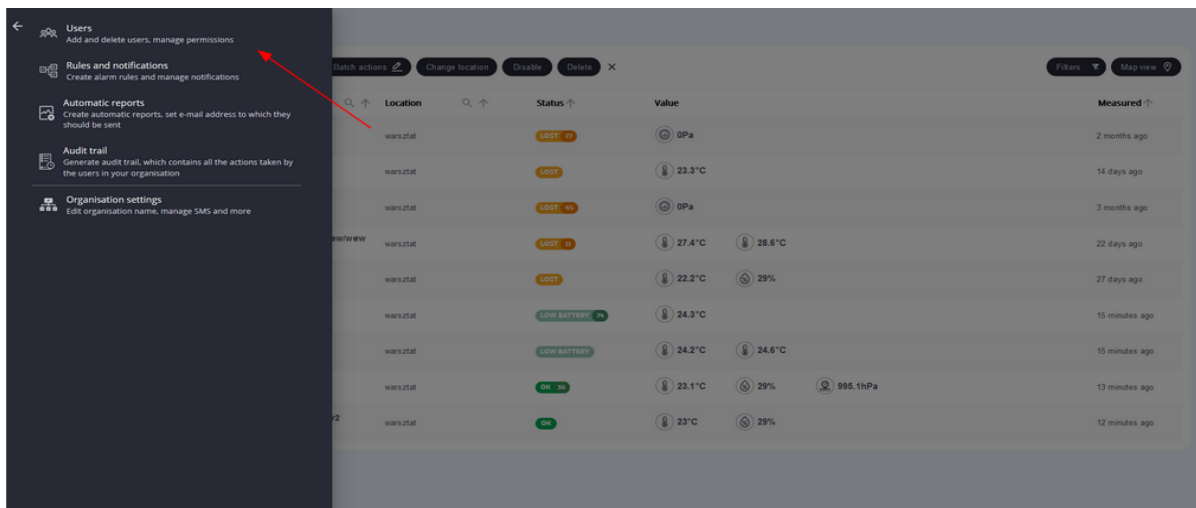
When you form a new Organization, you automatically get Administrator rights to all locations within it. By inviting other users to join your organization, you can assign them any level of permissions to selected locations.

Each of the authorization groups has access to other platform functions, as shown in the table below:

	Administrator	Manager	Analyst
Dashboard review	✓	✓	✓
Generating reports	✓	✓	✓
Alarm preview	✓	✓	✓
Configuration of automatic reports	✓	✓	✗
Configuration of alarm rules	✓	✓	✗
Sensors, structures and location maps configuration	✓	✓	✗
Editing of rights, adding and removing users	✓	✗	✗
System logs preview	✓	✗	✗
Organization account management	✓	✗	✗

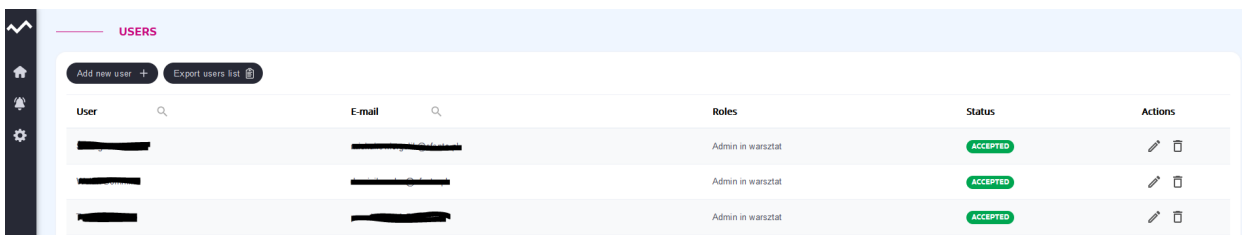
7.1. Users management

Adding and editing users is possible in the Users menu by users with Administrator rights. From the menu on the left, select the settings icon (gear) and then select *Users*.



Location	Status	Value	Measured
warsztat	LOST	0Pa	2 months ago
warsztat	LOST	23.3°C	14 days ago
warsztat	LOST	0Pa	3 months ago
warsztat	LOST	27.4°C 28.6°C	22 days ago
warsztat	LOST	22.2°C 29%	27 days ago
warsztat	LOW BATTERY	24.3°C	15 minutes ago
warsztat	LOW BATTERY	24.2°C 24.6°C	15 minutes ago
warsztat	OK	23.1°C 29% 995.1hPa	13 minutes ago
warsztat	OK	23°C 29%	12 minutes ago

The table shows all users with access to your organization, along with the permission level they have been granted.



User	E-mail	Roles	Status	Actions
[REDACTED]	[REDACTED]	Admin in warsztat	ACCEPTED	[Pencil] [Trash]
[REDACTED]	[REDACTED]	Admin in warsztat	ACCEPTED	[Pencil] [Trash]
[REDACTED]	[REDACTED]	Admin in warsztat	ACCEPTED	[Pencil] [Trash]

User rights can be edited by clicking the pencil icon next to the user name. Editing options include changing the user's permission level at specific locations within your Organization.

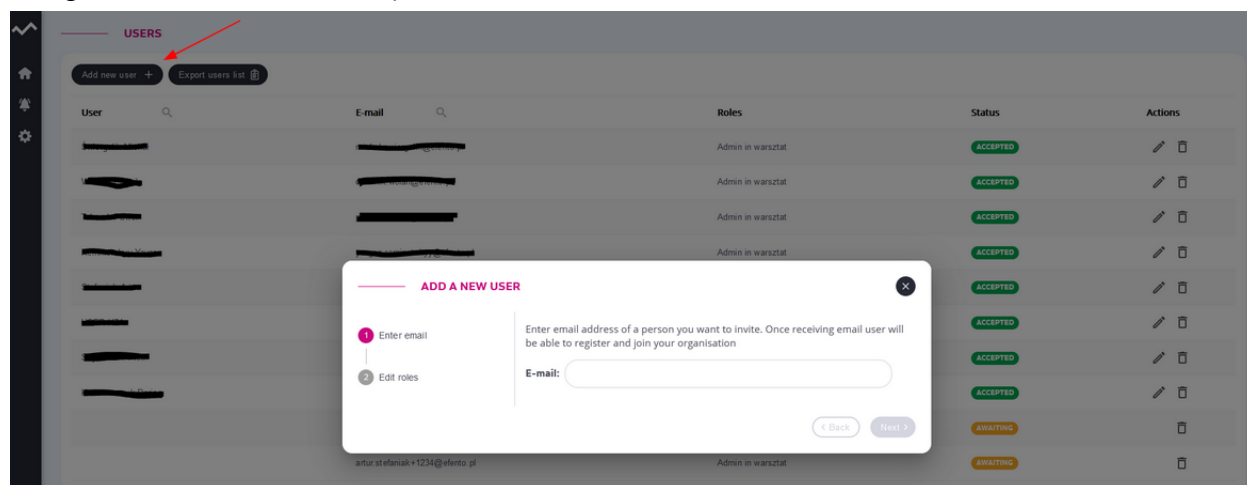
To revoke the user's access to data from your organization, click on the trash can icon. The user account will not be removed from the platform, it will only lose access to your Organization. Only the user can remove the account from the platform completely (cf. 12.1. Changing the username, language and password and deleting the account).

7.2. Adding new users

Adding new users is done using the invitation system. To edit users, select the settings icon (gear) and then *Users* from the menu on the left.

To add a new user to your organization, select *Add New User* in the upper left corner of the table. In the window that appears, enter the email address of the person you want to

invite to your organization and select the level of permissions that will be assigned to them if they accept the invitation. The permission level assigned to a user may be different in different locations. Thanks to this solution, the user can be an administrator in one location (i.e. they can edit other users and sensors assigned to this location) and an analyst in others (i.e. they can only display measurement data from sensors assigned to these locations).







Inviting new users to organization

After saving the changes, the invited user will receive an email inviting them to join the Organization. If he or she does not have an account in the system yet, they will have to create one before joining the organization.

You can invite any number of users to your Organization and assign them any permissions, but remember that assigning Administrator rights to a user allows him to fully configure users, sensors, alarm rules and edit your Organization's account, and you should not assign these rights to untrusted people.

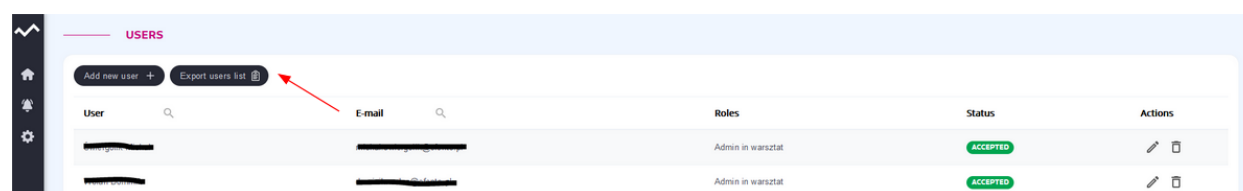
After generating the invitation, a new user will appear on the list with the status "Sent". This means that an invitation email has been sent to the user but the user has not yet registered an account on the platform. After successful registration, the user's status will be changed to "Accepted".





		Admin in warsztat	ACCEPTED	 
		Admin in warsztat	AWAITING	
		Admin in warsztat	AWAITING	

[View the list of users with an active invitation](#)

7.3. Export of users list

To export the list of users as a PDF file, click the Export users list button in the upper left corner of the table. The list of users in the PDF file will be sent to the e-mail address assigned to your Efento Cloud account.

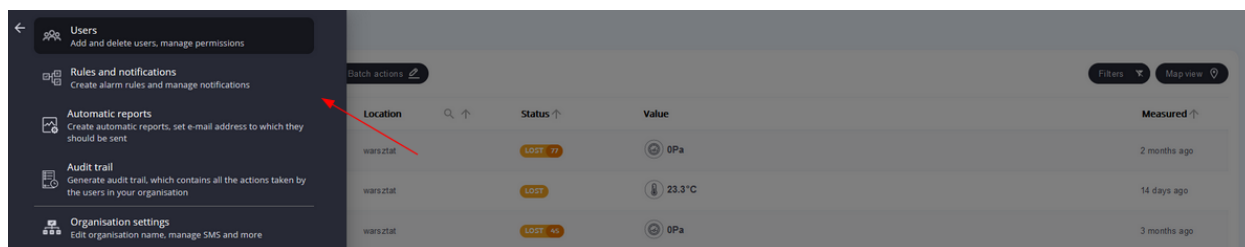


User	E-mail	Roles	Status	Actions
		Admin in warsztat	ACCEPTED	 
		Admin in warsztat	ACCEPTED	 

8. Alarm rules configuration

The alarm rule is a formula that defines which events in Efento Cloud are to initiate the alarm. The rule consists of a stimulus, condition and action, for example: if the temperature (stimulus) rises above 10 degrees (condition), the platform will send an SMS notification to selected recipients (action). The rules can be configured in any way, e.g. sending notifications to different recipients depending on the exceeded threshold, exceeding the set thresholds is only to be recorded in the system (without sending the notification), etc. Users can also define any number of alarm rules and assign sensors to each rule.

To configure the rule, select *Rules and notifications* from the settings menu. The configuration of alarm rules is available to users with Administrator or Manager rights.



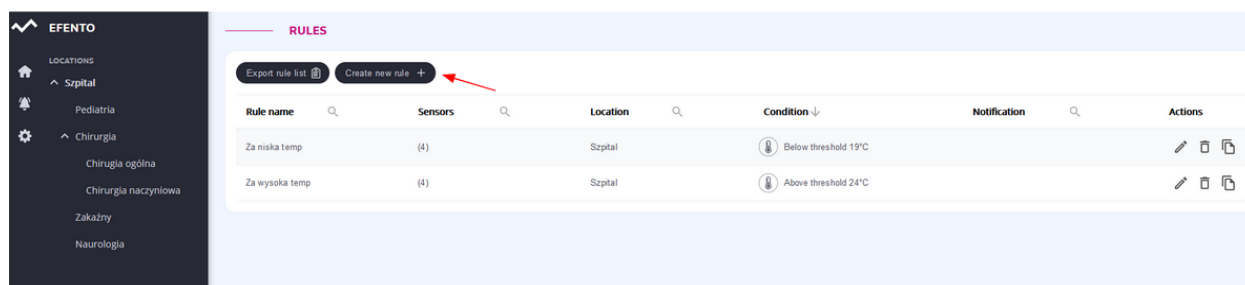
8.1. Types of rules

In the Efento Cloud platform, you can configure several different types of rules depending on the stimulus that initiates the alarm. These are:

- exceeding the set threshold (depending on the physical quantity measured by the sensor, e.g. temperature, humidity or pressure);
- low power level - if the sensor's battery is low, the platform will notify you about it. After a low battery alarm occurs, the sensor will continue to work for approximately 30 days;
- lost connection with the sensor - if the sensor does not send data to the platform for 15 minutes.

8.2. Adding new alarm rules

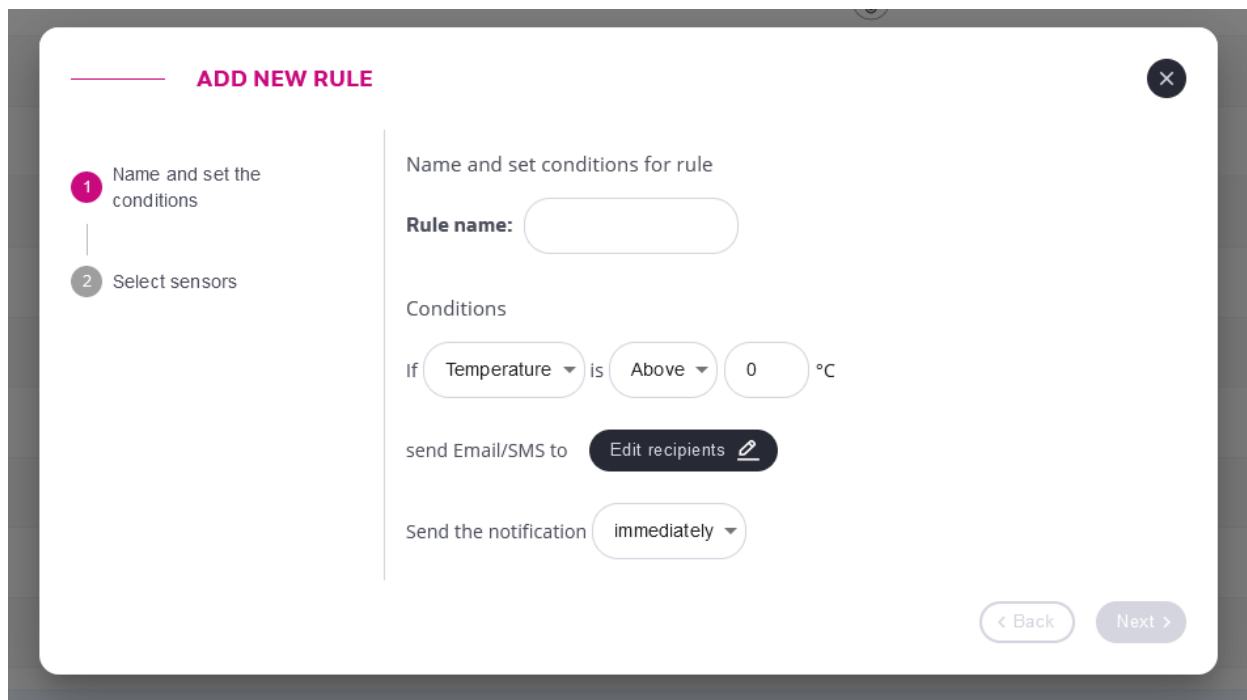
To add a new alarm rule, click the *Add rule* button in the upper left corner of the screen.



List of rules with the button for adding a new rule selected

The first field to be filled is the name of the rule, which can be any but not longer than 50 characters. Then select what event the alarm should concern (i.e. the stimulus that initiates the alarm). If you have selected the temperature / humidity / pressure option, you must also select whether the alarm should concern the upper threshold exceeded

(the measurement value exceeds the set threshold) - the Above option, or the lower threshold exceeded (the measurement value falls below the set threshold) - the Below option, and enter the threshold value in the designated box. In the case of rules regarding low battery or loss of connection with the sensor, there is no need to complete any additional fields.

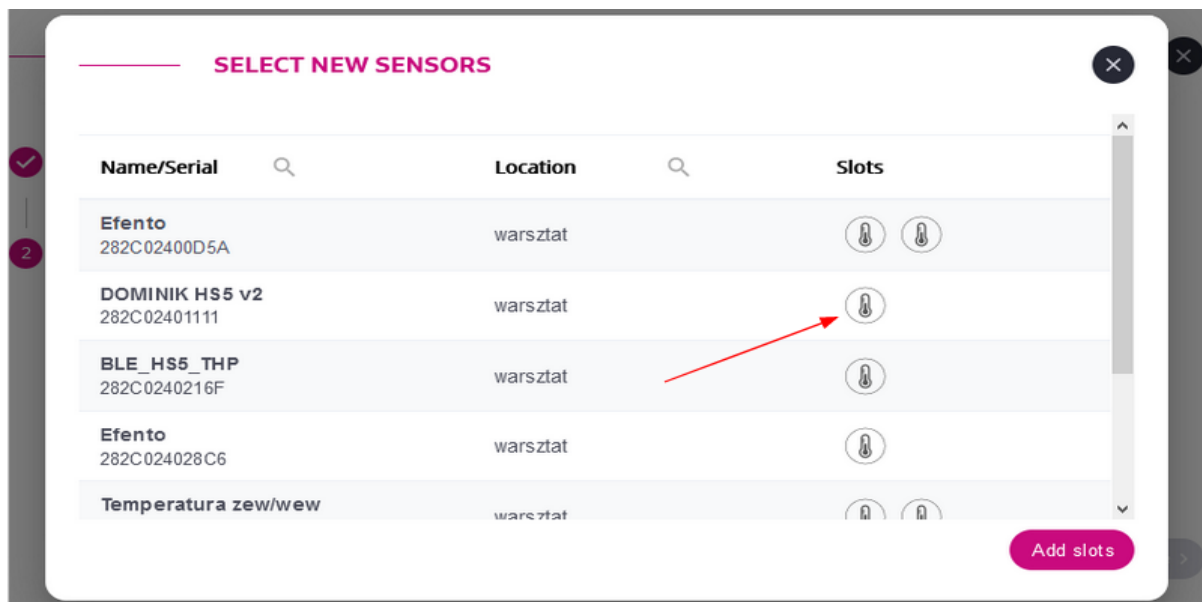


The screenshot shows the 'ADD NEW RULE' form. On the left, there are two steps: '1 Name and set the conditions' (active) and '2 Select sensors'. The main form area is titled 'Name and set conditions for rule'. It contains a 'Rule name:' field, a 'Conditions' section with a dropdown menu showing 'Temperature' is 'Above' '0' °C, a 'send Email/SMS to' section with an 'Edit recipients' button, and a 'Send the notification' section with a dropdown menu showing 'Immediately'. At the bottom right, there are '< Back' and 'Next >' buttons.

The next step is to add notification recipients. You can add both email addresses and phone numbers. If you do not add any recipient, the alarm alerts will be displayed only on the Efento Cloud platform. Press the *Edit* recipients button, add email addresses and phone numbers and save the changes with the *Save* button. You can enter any number of recipients. E-mail notifications are free, but if you want to receive SMS notifications, you need to have a top-up pool of available SMS messages on the platform (for a description of topping up the pool, see Chapter 13. Topping up the SMS pool).

The *Send notifications* field is used to enter the value in minutes after which the alarm is to be initiated. If the measurement exceeds a predefined threshold and does not fall below the alarm threshold for a set period of time, an alarm will be triggered. If the measurement returns to the safe range within the time defined in this field, the alarm will not be triggered. By default, the value is set to immediate, which means that the alarm is triggered when the set threshold is exceeded.

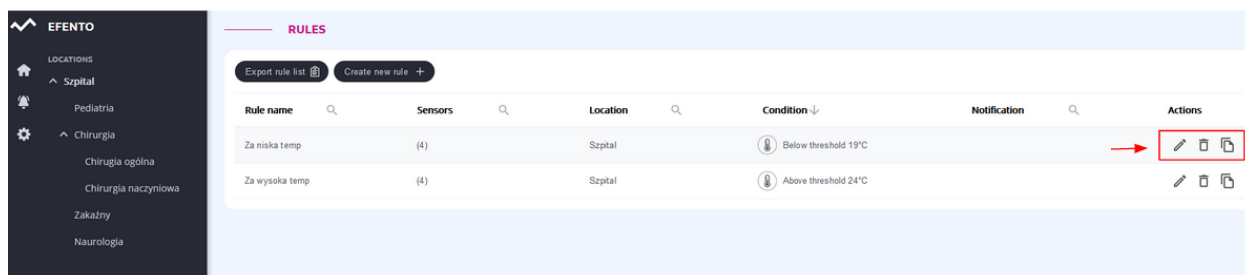
The last step in configuring the rule is selecting the sensors it should apply to. In the *Select sensors* section, click the *Add sensors* button and then select which channels are to be included in the rule by clicking on the icon symbolizing the type of measurement. The selected channels will be marked in pink. Save the changes with the *Add* button.



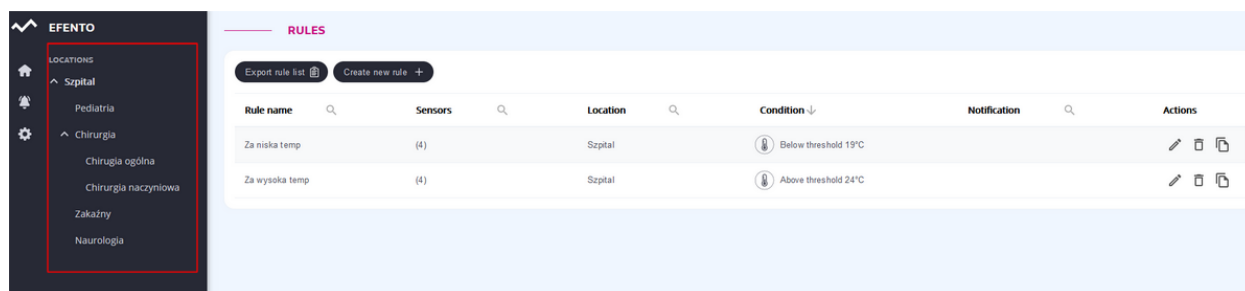
Select the measurement type icon to add a sensor to the alarm rule

Sensors added to the alarm rule are visible in the configuration summary. If you want to remove any of the sensors, usually click on the trash can icon in the right part of the window. To save the alarm rule, click the Save button. An alarm rule can be edited at any time by clicking on it on the list of added alarm rules.

All configured rules are visible on the list along with information about the value and type of the threshold, recipients and sensors covered by the rule. In the right part of the table, in the Actions column, there are actions that you can perform for a given rule - editing (pencil icon), deleting (trash can icon), cloning. Cloning a rule will create exactly the same rule (same threshold, recipients, sensors). This function is useful if you want to create many similar rules for selected sensors.



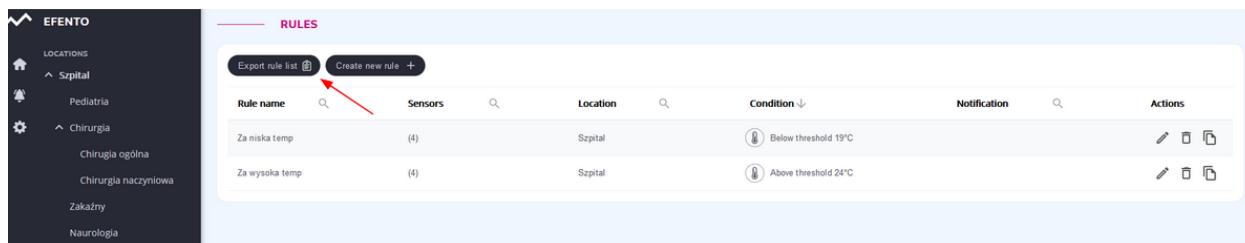
On the left side of the Rules view, there is a location tree that allows you to quickly and easily filter the rules assigned to individual locations. Thanks to this, by selecting, for example, the Active location, we can see all the alarm rules concerning sensorów assigned to active location, while other alarm rules are not visible. This allows for convenient grouping of rules, especially in large organizations.



Location tree for alarm rules

8.3. Export rule list

Exporting the list of alarm rules, after pressing the Export rule list button, the list of alarm rules in a PDF file is sent to the e-mail address assigned to your account.



Alarm rules listing for WARSZTAT_BLE

#	Rule name	Sensors	Location	Value	Type	Threshold	Mobile recipients	Alarm delay	Email recipients
1	TEST 2 H		warsztat	Humidity	More than	42.0		0	
2	TEST 1 OZ		warsztat	Open/Close				0	
3	Za zimno		warsztat	Temperature	Less than	18.0		50	
4	Za ciepło	BLE_HS4_T	warsztat	Temperature	More than	28.0		50	
5	temp3		warsztat	Temperature	Less than	15.0		0	
6	temp4		warsztat	Temperature	Less than	14.0		0	
7	TEST 2 T		warsztat	Temperature	More than	27.0		0	
8	temp2		warsztat	Temperature	More than	24.0		0	
9	TestowaTemp	Efento	warsztat	Temperature	More than	33.0		0	
10	temp1		warsztat	Temperature	More than	25.0		0	
11	LOST	BLE_HS4_T, BLE_HS4_DP, BLE_HS5_TmP, BLE_HS5_DP, Temperatura zwolnow	warsztat	Lost				0	

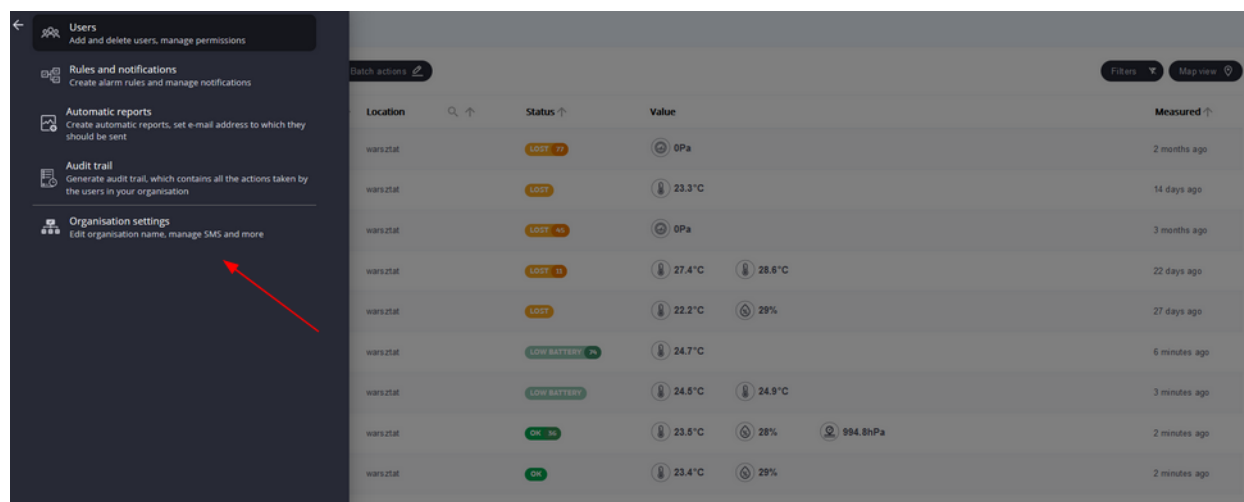
View of the window with the "Rules" tab active and an example of the generated list of alarm rules

9. Configuration

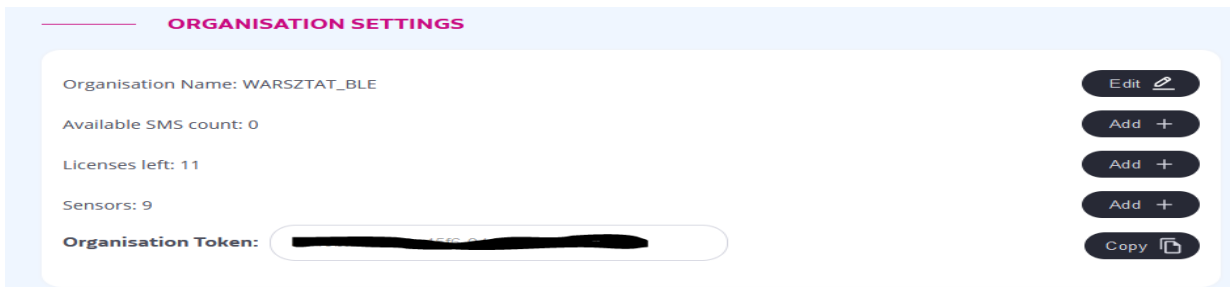
Users with Administrator or Manager privileges have access to the organization account configuration.

9.1. Adding sensors

To start saving measurements from sensors in the Efento Cloud platform and to be able to fully use the functions it offers (SMS notifications, automatic reports, etc.), you must activate the sensor in the platform. This is done by adding a license key - Cloud Key to the organization. This is a unique number that allows you to enter a specific number of registrars in the platform. To add Cloud Key to your organization, select Organization Settings from the settings menu (the gear icon on the left).



The number of available licenses is shown in the Free licenses field. To add sensors, you must have free licenses. Click the Add button next to the licenses left field and in the window that appears, enter your license key. After adding the license key, you can add any sensors as long as you don't exceed the number of licenses you have.



ORGANISATION SETTINGS

Organisation Name: WARSZTAT_BLE Edit

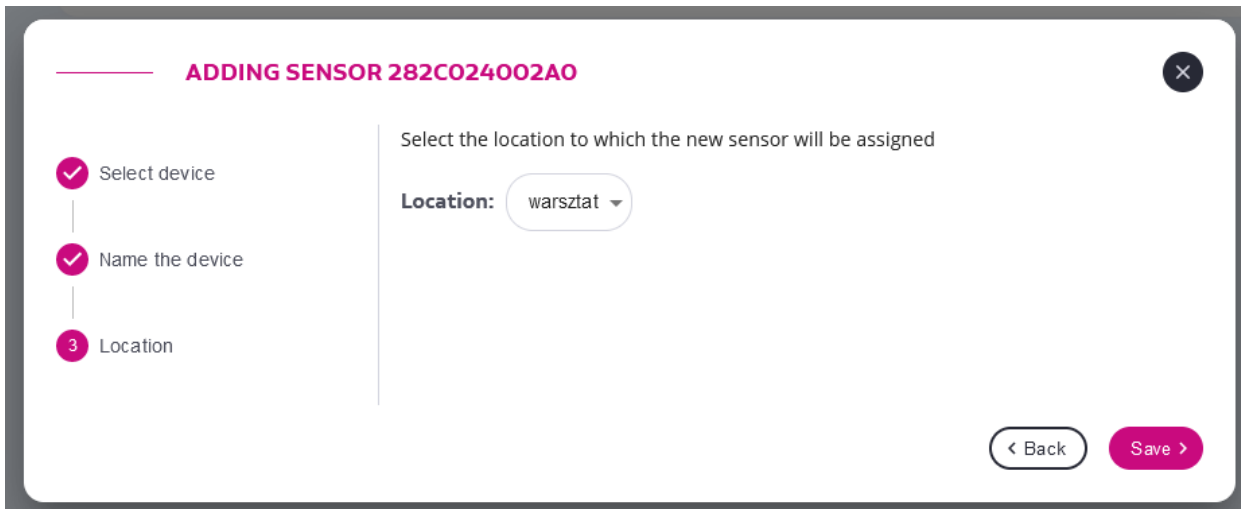
Available SMS count: 0 Add +

Licenses left: 11 Add +

Sensors: 9 Add +

Organisation Token: Copy

To add sensors, click the Add button next to the Sensors field. From the list that appears, select the sensor you want to add, and then give it a name (by default, all sensors are called New Sensor), which will be assigned to a given sensor and displayed on the platform along with its serial number. It is also necessary to select the location to which the sensor will be assigned. After completing these steps, click Save.



ADDING SENSOR 282C024002A0

Select the location to which the new sensor will be assigned

Location: warsztat

< Back Save >

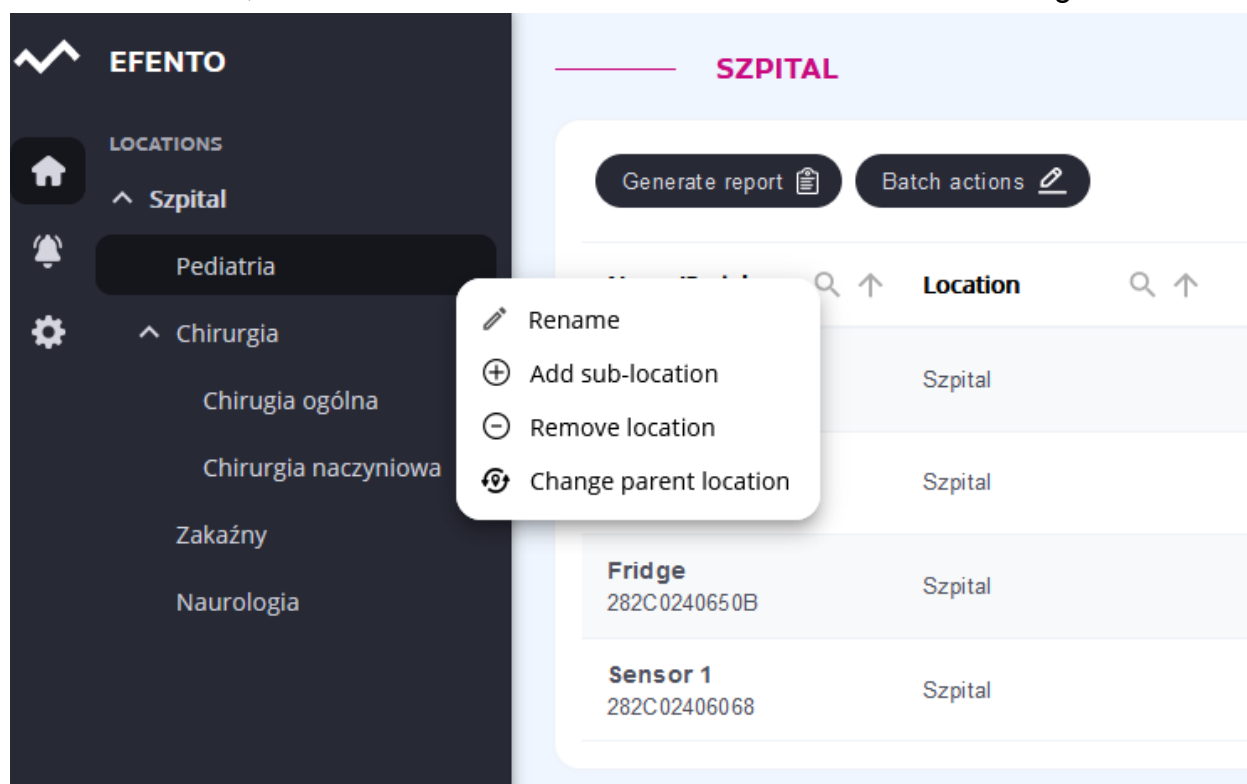
If you want to rename the sensor or move it to another location, you can do it at any time. The description of these activities can be found in chapter 6. Sensor configuration.

9.2. Create and manage locations

Thanks to Efento Cloud, you can easily organize locations and sensors assigned to them. The platform allows you to map the structure of your organization in the form of a tree and assign individual sensors to its branches. The grouping method is not subject to any limitations, you can use a geographical division (eg Country -> States -> Cities -> Objects), functional (eg Object type -> City -> Exact location) or other, better suited to your Organization. Additionally, by assigning permissions to users in your Organization, you can assign them to a specific location. Locations significantly facilitate system administration and give full control over user access.

Location configuration is available to users with Administrator or Manager privileges. Locations are edited from the organization structure panel on the left side of the screen. There you will find a tree of already created locations, the root of which is the root cannot be deleted (by default, its name is the name of your Organization). All successively added locations are subordinate to and are part of the primary location.

To edit a location, select its name and then click on the three dots on the right.



To add a new sub-location, select Add sub-location from the menu. In the window that appears, enter the name of the new location, and then save the changes.

To change a location in the locations tree, select Change parent location from the menu, set a new location in the location hierarchy and save the changes with the Save button.

To remove a location, select Remove Location from the menu. If a location has sub-locations or any sensors assigned to it, you need to remove them first.

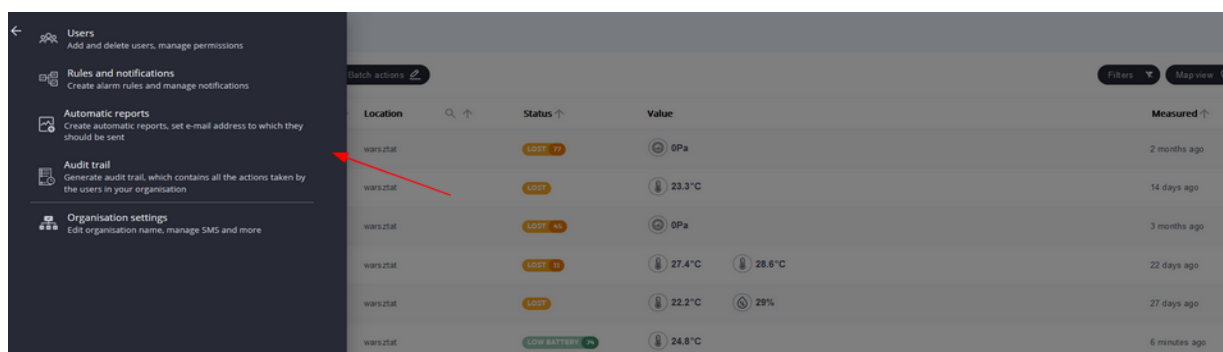
10. Automatic reports

Efento Cloud enables automatic sending of reports in PDF (chart / table) or CSV file format. Reports can be sent to any e-mail address with a selected frequency (e.g. once a day, once a week, once a month).

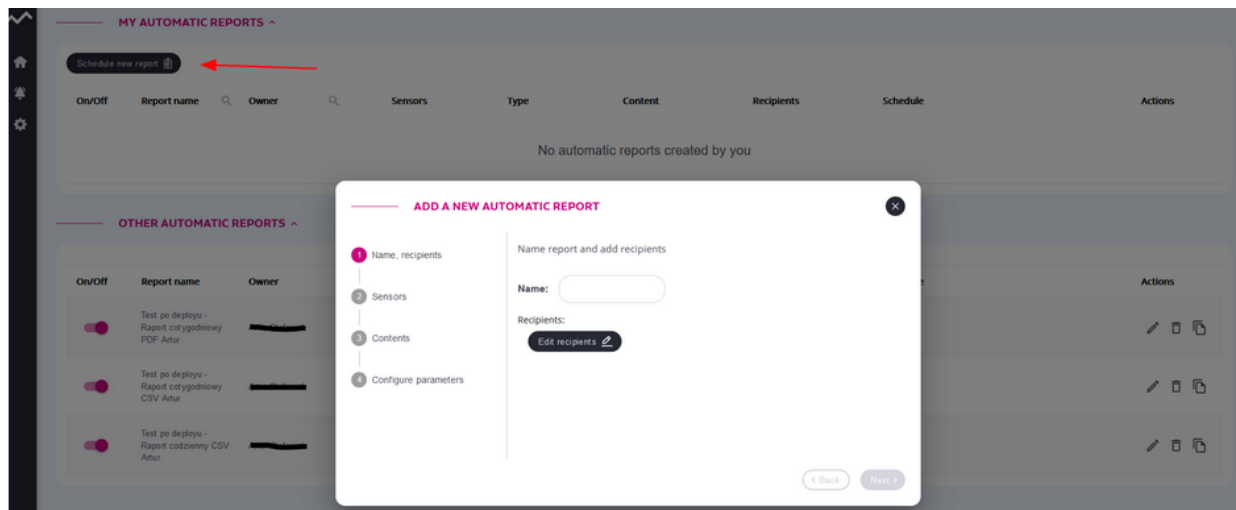
Reports contain measurements made by sensors, additionally they can contain information about events (exceeded alarm thresholds, loss of communication, low battery level, etc.). Measurements in reports can be saved every 3/15/30/60 minutes.

10.1. Automatic reports settings

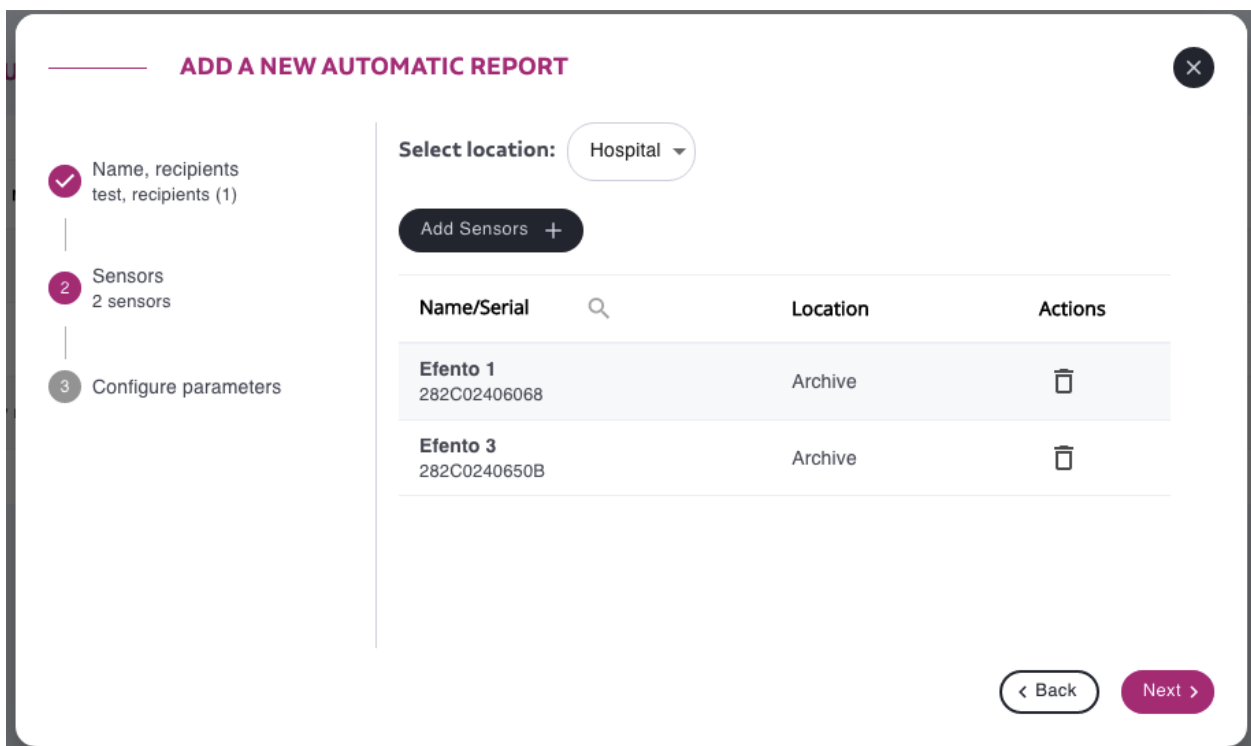
Automatic reports can be configured by users with Manager or Administrator privileges. To configure automatic reports, select Settings (the gear icon) from the menu on the left, and then Automatic reports.



Click on the Schedule new report button in the upper left corner of the table. Enter the name of the new report and add e-mail addresses of the recipients of the report and save the changes with the Next button.

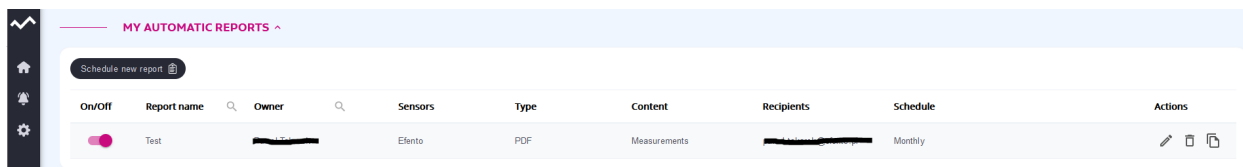





Press the Add sensors button and then select the sensors that will be included in the automatic report. You can select any number of sensors to be included in the report. If there are many sensors in a given location, to find the sensor you are interested in, enter its name / serial number in the search field above the table with sensors. After selecting the sensors, press Next.



The last step is to set the report format (PDF or CSV) and the shipping period (daily, weekly or monthly). After filling in all the fields, press the Save button, which will create an automatic report. From now on, the automatic report is active and will be sent with the frequency you set. Automatic reports are generated and sent to recipients at 4:00 AM on the scheduled shipment date.

All configured reports are visible in the Automatic reports tab. To delete a configured auto report, click the trash can icon in the right part of the table with the defined reports. You can also edit a defined report by clicking the pencil icon. If you want to create a new automatic report, similar to a report which is already scheduled, click on the clone icon. Automatic reports can be disabled - to disable a report, use the switch next to the report you want to disable.



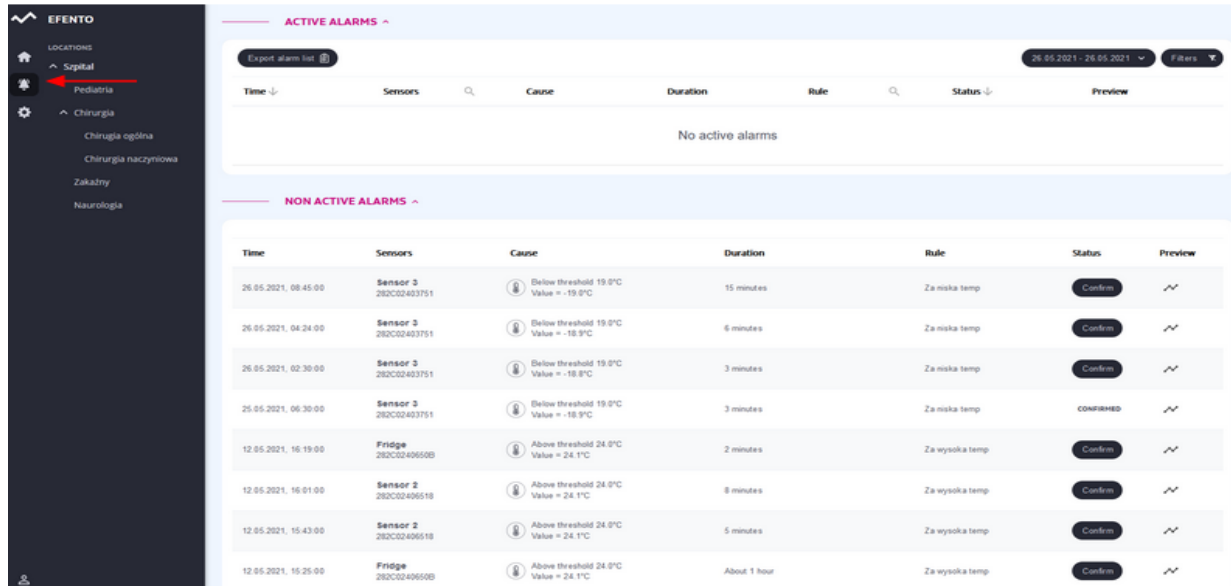
On/Off	Report name	Owner	Sensors	Type	Content	Recipients	Schedule	Actions
<input checked="" type="checkbox"/>	Test	efento	Elento	PDF	Measurements	efento@efento.com	Monthly	  

11. Alarms

11.1. Alarms preview

By going to the Alarms menu, you will find a preview of all alarms currently active and those that have occurred in the past. The list of alarms is divided into two sections: Active alarms (the alarm threshold is still exceeded) and Inactive alarms (the threshold has been exceeded in the past). Additionally, the Status column shows whether the report has already been confirmed (another user has reacted to the alarm; the rule is no longer exceeded), or is waiting for confirmation (the alarm threshold is no longer exceeded, but one of the users must confirm that the alarm was recorded). The alarms can only be confirmed when the measurements sent by the sensor do not exceed the alarm threshold. Alarms can be sorted by date of occurrence, alarm type, cause, current sensor measurement, name of rule or recipients of notifications assigned to the alarm. It is also possible to search for specific sensors on the list by entering their name or serial number. It is also possible to limit the date range of displayed alarms. The buttons in the upper right corner of the table with alarms are used for this. Additionally, it is possible to

display only the alarms related to the selected location by selecting it from the menu on the left side of the view.



ACTIVE ALARMS

Export alarm list

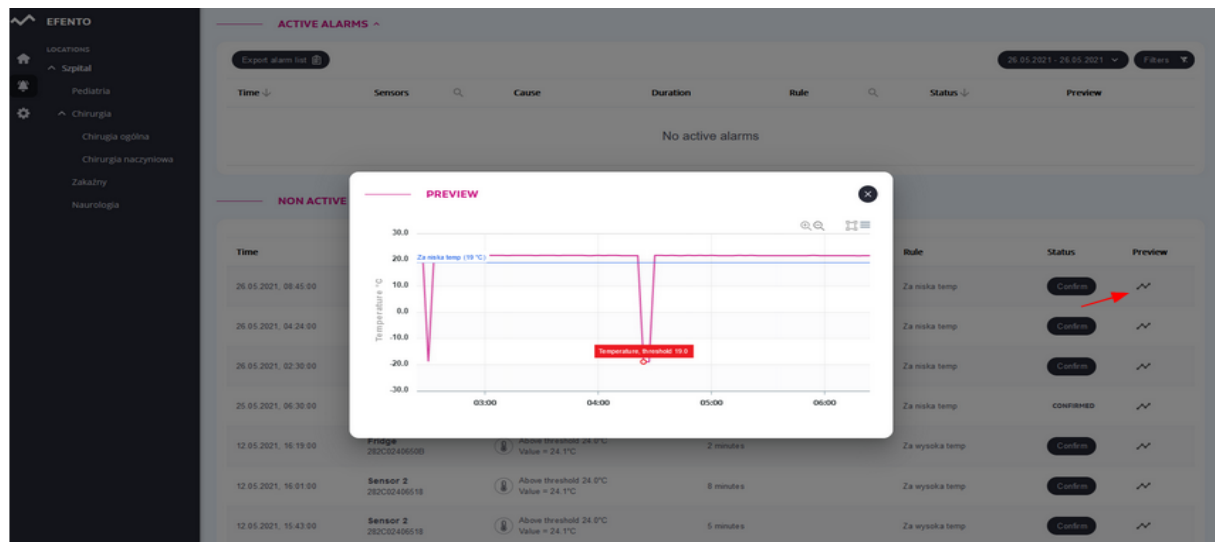
26.05.2021 - 26.05.2021 Filters

Time	Sensors	Cause	Duration	Rule	Status	Preview
No active alarms						

NON ACTIVE ALARMS

Time	Sensors	Cause	Duration	Rule	Status	Preview
26.05.2021, 08:45:00	Sensor 3 282C02403751	Below threshold 19.0°C Value = -19.0°C	15 minutes	Za niska temp	Confirm	Preview
26.05.2021, 04:24:00	Sensor 3 282C02403751	Below threshold 19.0°C Value = -18.9°C	6 minutes	Za niska temp	Confirm	Preview
26.05.2021, 02:30:00	Sensor 3 282C02403751	Below threshold 19.0°C Value = -18.8°C	3 minutes	Za niska temp	Confirm	Preview
25.05.2021, 06:30:00	Sensor 3 282C02403751	Below threshold 19.0°C Value = -18.9°C	3 minutes	Za niska temp	CONFIRMED	Preview
12.05.2021, 16:19:00	Fridge 282C02406508	Above threshold 24.0°C Value = 24.1°C	2 minutes	Za wysoka temp	Confirm	Preview
12.05.2021, 16:01:00	Sensor 2 282C02406518	Above threshold 24.0°C Value = 24.1°C	8 minutes	Za wysoka temp	Confirm	Preview
12.05.2021, 15:43:00	Sensor 2 282C02406518	Above threshold 24.0°C Value = 24.1°C	5 minutes	Za wysoka temp	Confirm	Preview
12.05.2021, 15:25:00	Fridge 282C02406508	Above threshold 24.0°C Value = 24.1°C	About 1 hour	Za wysoka temp	Confirm	Preview

On the right side of the table with alarms there is a preview icon (chart symbol). Clicking on it will open a window with a graph showing when the alarm occurred.



PREVIEW

Temperature °C

30.0
20.0
10.0
0.0
-10.0
-20.0
-30.0

03:00 04:00 05:00 06:00

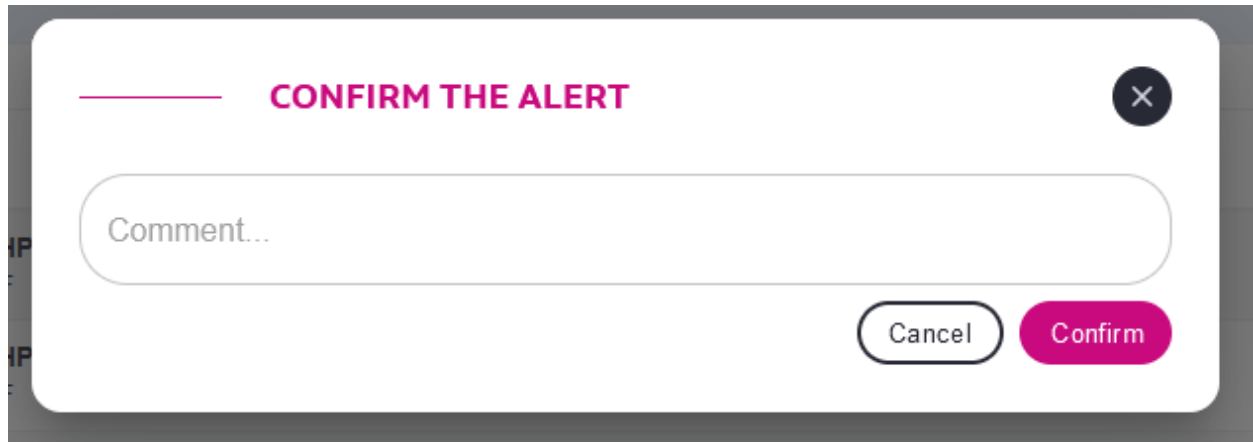
Temperature threshold 19.0

Za niska temp (19.0°C)

Rule Status | Preview || Za niska temp | Confirm | Preview |
Za niska temp	Confirm	Preview
Za niska temp	Confirm	Preview
Za niska temp	CONFIRMED	Preview
Za wysoka temp	Confirm	Preview
Za wysoka temp	Confirm	Preview
Za wysoka temp	Confirm	Preview

To confirm the alarm, click the Confirm button. You can enter a comment about the alarm in the newly opened window. This can be helpful in identifying the alarm, the

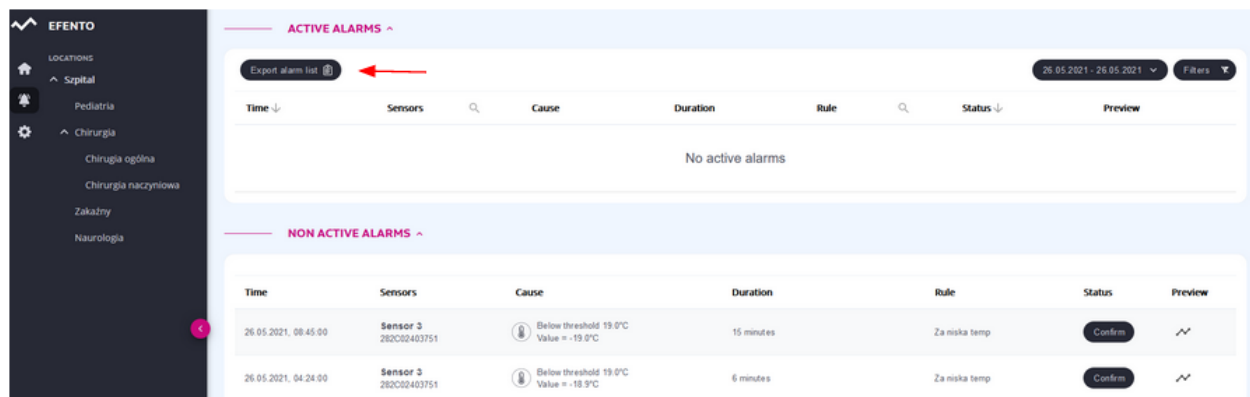
comment will appear on the alarm list after hovering the cursor over the word Confirmed. Entering a comment is optional.



A modal dialog box titled "CONFIRM THE ALERT" with a close button (X) in the top right corner. It features a text input field labeled "Comment..." and two buttons at the bottom: "Cancel" and "Confirm".

11.2. Export alarm list

Alarm list export - After pressing the Export alarm list button, the alarm list is sent in a PDF file to the e-mail address assigned to the logged-in user account.



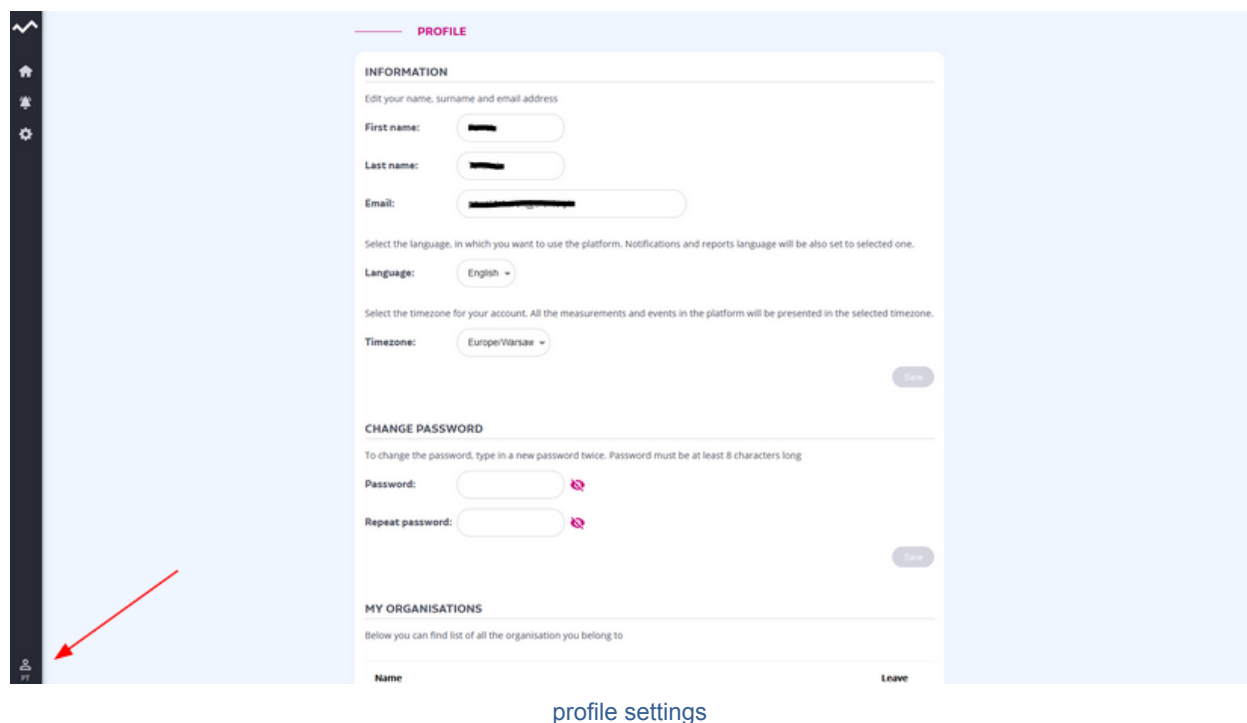
The interface shows the "ACTIVE ALARMS" section with an "Export alarm list" button highlighted by a red arrow. Below it, the "NON ACTIVE ALARMS" section displays a table of historical alarms.

Time	Sensors	Cause	Duration	Rule	Status	Preview
26.05.2021, 08:45:00	Sensor 3 282C02403751	Below threshold 19.0°C Value = -19.0°C	15 minutes	Za niska temp	Confirm	✓
26.05.2021, 04:24:00	Sensor 3 282C02403751	Below threshold 19.0°C Value = -19.9°C	6 minutes	Za niska temp	Confirm	✓

12. Editing user and organization data

12.1. Changing the username, language and password, and deleting the account

When you click on your initials in the lower left corner of the screen, the user account options will expand. There, you have the option to log out of your account or go to your user profile. In the Profile tab, you can edit your data such as: name, surname, e-mail address and password for the account in the Efento Cloud platform. It is also possible to change the language and time zone. After making changes, click Save to accept them.

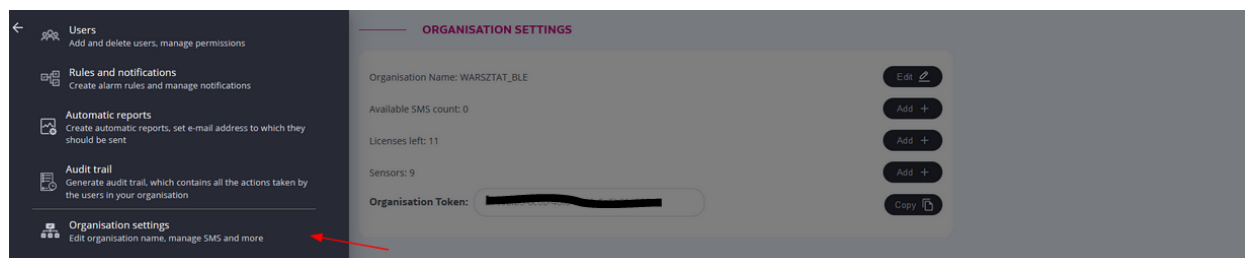


In the Profile tab, you can also leave the selected organization. To do this, in the My Organizations section, click the Leave Organization button next to the organization you want to leave. Leaving an organization means losing access to its measurements. If you are the last member of a given organization, when you leave it, it will be removed from Efento Cloud along with all measurements made by sensors that were added to this organization.

To delete an account, click the Delete Account button. This way you will delete your account along with all the information entered in the system (name, surname, e-mail address, password).

12.2. Change of Organization data

To make changes to the Organization data, select Settings (the gear icon) from the menu on the left, and then Organization settings.

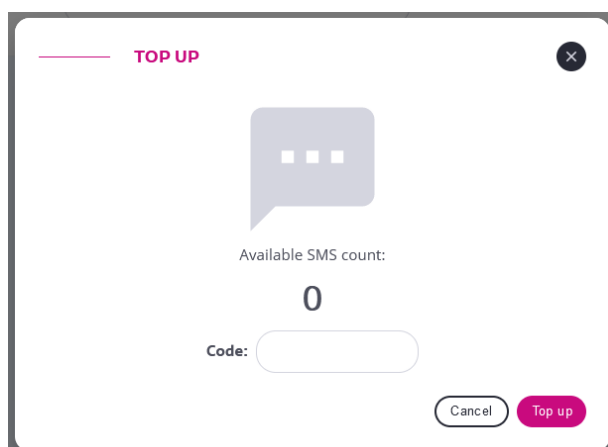


In this view you can change the name of the organization, top up the SMS pool, add new sensors and licenses, and view the organization Token.

13. Topping up the SMS pool

13.1 Topping up the SMS pool

If you want to receive SMS notifications about alarms, it is necessary to have available SMSes in the pool. You can check the number of available SMSs in the organization's edit menu. To increase the pool of available SMSes, click the Add button next to the Available SMS field. In the window that will appear, enter the top-up code and click the Top up button. If the code was correct, the pool of available SMSs will be increased by a specific value (100/500/1000 SMS).

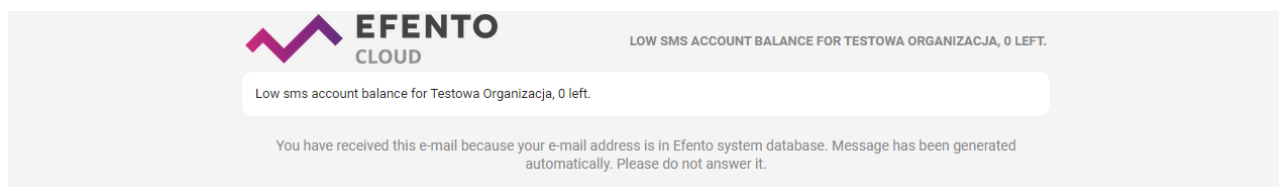


SMS low status notification

13.2 Low SMS balance notification

When the number of available SMSes drops below a certain level, an e-mail notification will be automatically sent to all administrators of the organization with information about the current status of the SMS account. By default, the platform will notify the administrators, if the number of available SMSes drops below 10. Notifications will be resent, if the number of the available SMSes drops below 5 and 0.

It is possible to set the available SMS threshold, at which the notifications will be sent. To change the threshold value, go to *Settings -> Organization settings* and enter the threshold value in the *Low SMS notification threshold* field. Efento Cloud will send the notifications once the number of available SMSes drops to that value, drops to 50% of that value, 25% of that value and to 0.

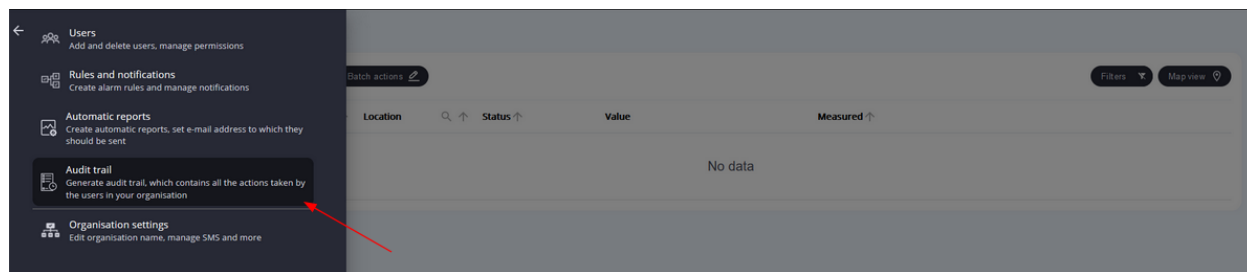


Email notification for low SMS status

14. System logs



14.1 System logs preview









System logs, that is a list of all changes made to the Efento Cloud platform, can be viewed by users with Administrator rights. There you will find information on changes made to the configuration of sensors, locations, reports, rules and changes to user and Organization data. To view system logs, from the menu on the left, select Settings (the gear icon), and then Audit trail.



The list of changes can be filtered in terms of the date of their occurrence, the user who made the change or the type of action (add, delete, change).

AUDIT TRAIL

Export logs list  26.05.2021 - 26.05.2021 Filters 

Date ↓	User	Actions	Parameters
26.05.2021, 12:36:24		Removed Report Test	
26.05.2021, 12:36:18		Added Report Test	name: Test format: pdf schedule: monthly content: measurements
26.05.2021, 12:36:14		Added Report Test	name: Test format: pdf schedule: monthly content: measurements
24.05.2021, 10:19:42		Added Role Dorian Kaczmarczyk Admin warsztat	name: admin location: warsztat
24.05.2021, 10:19:37		Removed Role Dorian Kaczmarczyk Analyst warsztat	
24.05.2021, 10:18:55		Added Role Dorian Kaczmarczyk Analyst warsztat	name: reporter location: warsztat
24.05.2021, 10:18:30		Removed Role Dorian Kaczmarczyk Admin warsztat	
21.05.2021, 14:54:37		Added Role Dorian Kaczmarczyk Admin warsztat	name: admin location: warsztat

System logs preview

14.2 Export system logs

To export the system logs, press the “Export logs list” button, the list will be sent in a PDF file to the e-mail address assigned to the logged in user account.