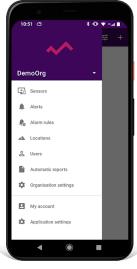
# Efento Mobile Application User Manual











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# **Efento Mobile Application User Manual**



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# 1. Registration and logging in Efento Cloud Application

In order to use the Efento mobile application you need an Efento Cloud account. Go to Google Play download the application and register. During the registration, you will be redirected to Efento Cloud website, where you must set up an account. After setting up your account, you will receive an email with an activation link, which you need to open to complete the registration process.

Users that already have a registered, active account, may skip the above steps and log in by keying in their email address and password in the application.

# 2. Creating a new Organization

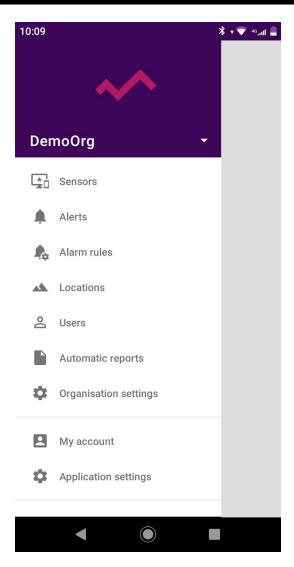
The organization allows you to share measurement data from sensors with many other users. Additionally, as a part of the Organization, you can create a structure of localizations that will allow you to organize your sensors. Users with access to your Organization can be given specific permission to view and modify individual localizations.

The organization has its own unique key, that allows you to assign sensors to it. It can be done by keying in the Organization key into Efento Gateway. Efento Gateway is a device that sends measurements from wireless sensors to Efento Cloud. All the mentioned features will be described in detail later in this manual.

If you have registered in Efento Cloud and you are not a member of any Organization, you will be asked to create a new one and to choose its name. After creating an Organization you will be able to invite new members and configure sensors assigned to your Organization. If a user has been invited to an already existing Organization, then he will be automatically assigned to it after the registration process.

After setting up your organization, you'll be able to manage it and make changes. To do this, expand the menu in the upper left corner next to the organization name. A menu will appear with the following items: Sensors, Alerts, Alarm rules, Locations, Users, Automatic reports, Organization settings, My account and Application settings. The use of these functions will be described later in this manual.





# 3. Configuration of Efento Gateway

Efento Gateway is a network device that sends the data from Efento sensors to Efento Cloud. The device may be powered by USB power supply (5V, 1A) or by PoE (802.3af).

# 3.1. Configuration of network settings

The first thing you need to do in order to send data from sensors to the Efento Cloud platform is to configure Efento Gateway settings. To do this, connect the Efento Gateway to power supply with 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

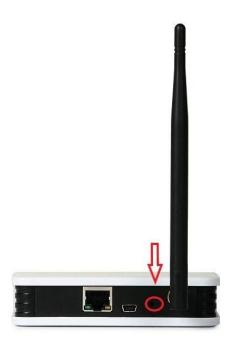
### **Efento Mobile Application User Manual**



which Efento Gateway is connected. Next 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 connection 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 router (Do not forget to turn on the DHCP on router!). After finishing this part of the 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).

You can also configure Efento Gateway through Efento Logger mobile application for Android. Launch the Efento Logger mobile application and press the button on the back of the Efento Gateway twice (the button must be pressed with a pin). After completing this operation, the gateway will switch to configuration mode, indicated by a fast flashing blue LED. The gateway will appear in the list of available devices in Efento Logger application. Select it from the list and key in the password that is on the Gateway enclosure (the default password is admin). The application will connect to the gateway and you will have access to all the settings.



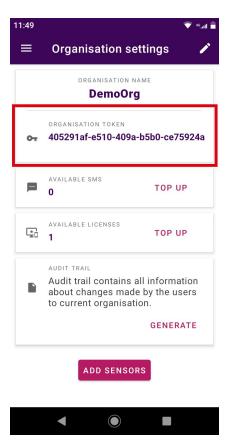


### 3.2. Organization token

Organization token is a unique number assigned to your Organisation. After inserting the token in Efento Gateway configuration, all measurement data from all sensors within its range will be automatically sent to your Organisation account in Efento Cloud. One Organisation token can be inscribed in many Efento Gateway devices, located in areas far away from each other. Thanks to that, measurement data can be sent to your Organisation account from many places away from each other, even hundreds of kilometers.

You can find your Organisation token after signing in on your account in Efento Cloud Application. Go to the main menu (tap on the menu icon in the upper left corner) -> Organisation settings and you will find the Organisation token.

Organization token should be pasted in field *Organisation token* on Efento Gateway configuration page. After keying in the token, measurements from all sensors within Efento Gateway range will be automatically sent to Efento Cloud platform and assigned to your Organisation.





### 3.3. Adding sensors

To start saving measurements from sensors in the Efento Cloud Application and be able to take full advantage of its functions (SMS notifications, automatic reports, etc.), you must add sensors to your cloud account. Enter the application main menu and select *Organisation settings*. Tap on the *Add sensors* button, a list of sensors that are within Efento Gateway range will be visible there. Tap on a sensor to add it to your organization. In order to add a sensor to the organization a license key is required. You should receive the license key along with the invoice confirming your purchase. Key in the license key in the dialog window that pops up and add selected sensors to your Organization. When adding a sensor to your Organization, you can give it a name (by default, all sensors are called *Efento*), which will be assigned to the sensor and displayed on the platform along with its serial number. It is also necessary to choose the location to which the sensor will be assigned. After doing so, click Save. If you want to change the sensor name or move it to another location, you can do it at any time.

### 3.4. Creating and managing locations

Efento Cloud Application allows you to easily organize and manage locations and sensors assigned to them. Thanks to this you can create a projection of your Organisation's structure in the form of a tree and assign a sensor to its branches. The way you group the sensors is unlimited, you can use geographic distribution (e.g. Country -> Districts -> Cities -> Objects), function distribution (e.g. Type of object -> City -> Exact location) or any other depending on your needs. Additionally, the users assigned to your Organisation can be granted specific permissions to different locations. Locations greatly simplify system administration and give the full control over user access.

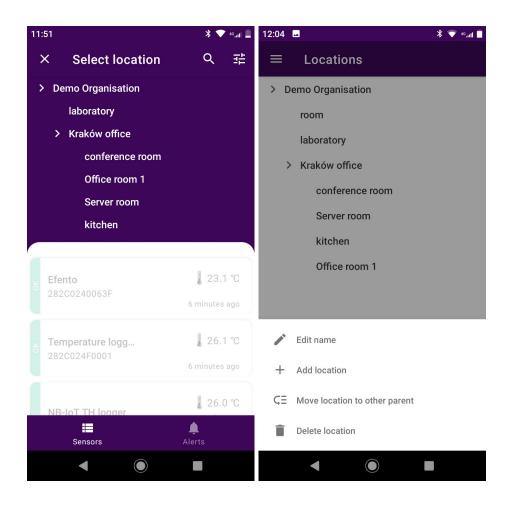
The configuration of locations is done in the *Locations* menu which can be accessed only by users with the role of Administrator or Manager. You will find there a tree of already created locations.

Tap and hold on your organization name for 3 seconds, a menu will the following options will appear:

- Add location add a location to your organization tree, enter a name for the new location and confirm with OK. The location will be automatically added to the list as a sub location
- Edit name change the name of the selected location
- Move location to another parent move the location to another place in your organization tree
- Delete location Deleting a location results in deleting its subordinate locations too. All sensors from the deleted location will be moved to section New



sensors. The sensor's measurements will not be deleted but all the rules and automatic reports assigned to the deleted location will be deleted.



# 4. Dashboard - preview of sensors added to Efento Cloud platform

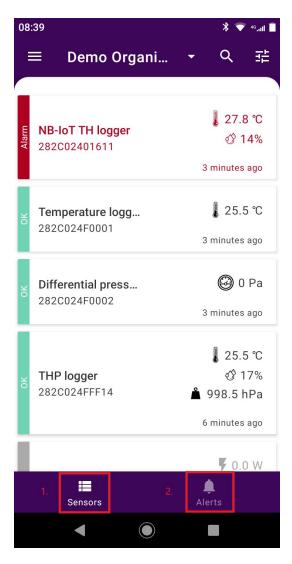
### 4.1. Dashboard

Dashboard presents measurements and other important information about all sensors added to your Organisation in Efento Cloud application. You will find there: current sensor measurements with time of the measurement, the localization of sensors in your Organisation structure. On the left side next to the sensor name its current status is visible:

- OK A green label with the word OK means that the sensor is working properly and is sending data to the platform
- Lost A gray label with the word LOST means that the platform is not receiving the data from the sensor.



- Alarm The red color with the inscription ALARM means that the alarm threshold of this sensor has been exceeded
- Battery Means that the sensor battery is getting low and needs to be replaced



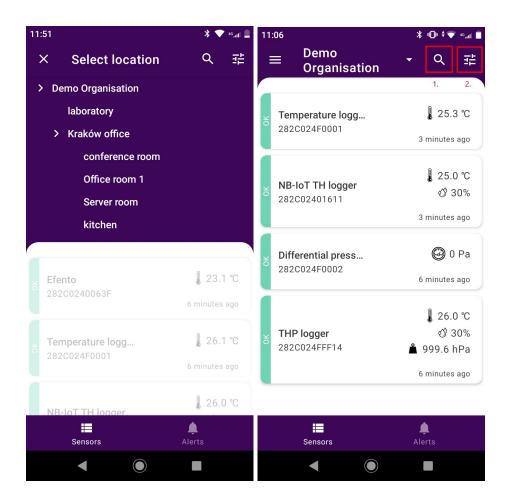
Dashboard can be accessed by every user in your Organisation, no matter what role he/she has (Analyst / Manager / Admin). You can give users access only to selected locations. At the lower part of the screen displays the Sensors (1) and Alerts (2) icons, the user can go to the view of the individual window by clicking the appropriate icon.

### 4.2. Filters, search, locations

Data displayed in *Dashboard* can be filtered so that you can easily find the information you need. The first method of filtration is based on the sensor's location. Clicking on the organization name above the sensors list and choose the location you



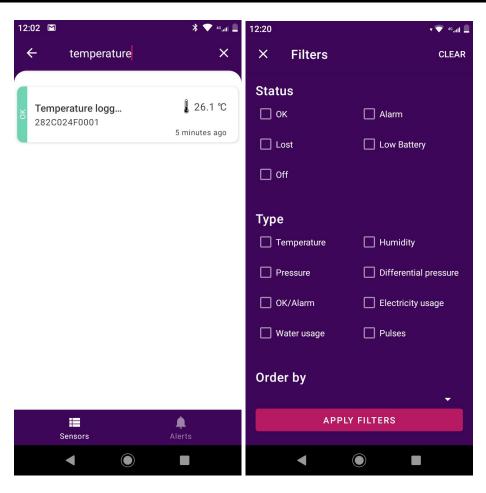
are interested to display only the sensors assigned to that location. The next methods described in this manual work only on sensors from the selected location.



The second method of filtration is searching the sensor by name or by its serial number. Tap on the magnifying glass icon (1) and key in a serial number or name of a sensor that you wish to find and the list will only show the sensors you are interested in.

You can also filter out sensors by their type or status. Tap on the filter icon (2) and select the sensor types or statuses by which you want to filter the sensors and tap *Apply filters*. After selecting a specific value(s) only the sensors that meet the filter criteria will be shown.





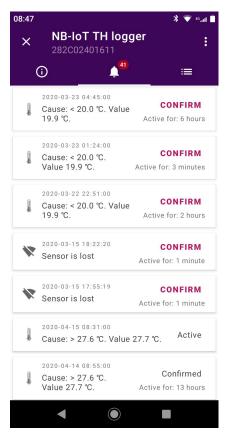
### 4.3. Preview of detailed sensor's data

After tapping the sensor on the list you will be able to browse detailed information about the selected sensor such as alarm occurrences, measurement data in a form of a chart or table and alert rules to which the sensor is assigned. You will also be able to export the sensor's measurements from any time period in the form of PDF or CSV report.





The *Overview* tab shows the current sensor data. The graph shows the measurements of a given value from the current day. Tap on the graph to open the full screen mode, which will allow you to select other data periods, zoom in and get more details. You can also find the information when the last measurement was made and the length of the measurement period. The *Generate report* button allows you to generate reports with measurements from any period of time. Detailed instructions on how to generate reports are described in chapter *5. Reports*.

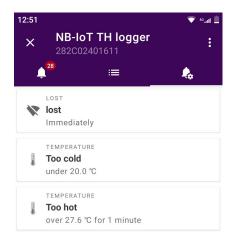


The *Alarm* tab contains a list of alarms caused by the selected sensor (details in chapter 6. *Alarms*). You will find detailed information about date and time of alarm occurrence and the reason of alarm initiation including the name of alarm rule. If the sensor has got back to its safe state, then the user can confirm the alarm was seen. After confirming the alarm, the notifications about it will not be displayed again in the platform.





The *Table* tab contains a table with all measurements sent by the selected sensor including the date and time of those measurements. Tap on the data over the table to select the date from which you want to browse the measurements.



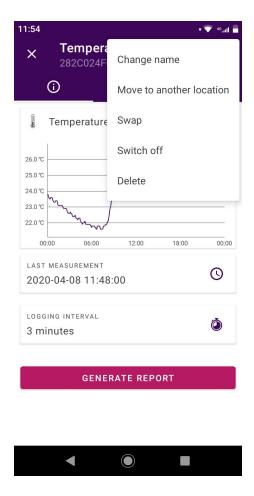
The **Alarm rules** icon shows the alarm rules assigned to a given sensor. Detailed alarms rules description can be found in chapter 7. Alarm rules).





### 4.4. Editing the sensor's name and changing its location

Tap on the three dots in the upper right corner of the sensor details screen to open the sensor settings menu. Choose option *Change name*, type in a new name and approve it by clicking OK. In the same way you can move the sensor to another location.

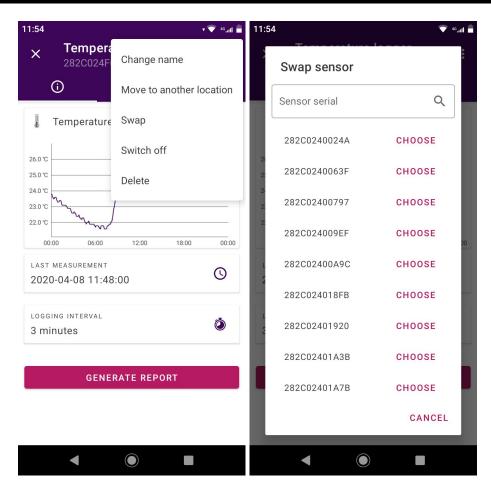


### 4.5 Swapping sensors

Thanks to the sensor swapping function, the user can freely replace the sensors without losing data and maintaining the continuity of existing measurements, e.g. in the case of periodic calibration of the sensor. Select the sensor you want to replace and then click the three dots at the upper corner of the screen and choose *Swap*. From the list that appears, select the sensor that will be used to replace it. Accept the changes by tapping OK. Measurement data and configuration (alarm rules, automatic reports) of the swapped sensor are preserved and the measurements sent by the new sensor are being saved in the platform. Information on sensors swapping is saved in the system logs.

Replacement of the sensors does not require the purchase of an additional license.





### 4.6. Switch sensor on/off

If you switch off a sensor, its measurements will not be saved in the platform and in case of alarm rules violation the notifications about that sensor will not be displayed. In order to switch off a sensor tap the three dots in the upper right corner of the sensor details screen and choose *Switch off*. To enable the disabled sensor click *Switch on*, which is located on the same menu.

### 4.7. Removing the sensor

Removing the sensor causes the complete removal from Efento Cloud platform. All measurements sent by this sensor will also be deleted. To remove the sensor, tap the three dots in the upper right corner of the sensor details screen and choose delete and confirm the action by tapping OK. The sensor will be removed.

It is impossible to restore the sensor's measurements, but you can add the sensor to the platform again in the same way you add a new sensor.



# 5. Reports

Measurements from the selected period can be exported as a PDF or CSV report anytime you wish. Additionally, Efento Cloud allows you to configure automatic reports, which will be sent with selected frequency (e.g. daily, once a week or once a month) to any e-mail address you type in.

The reports include measurements made by sensors. Additionally they can include information about events such as violation of alarm rules, connection lost or low battery level. The measurements can be saved in reports with a density of 3 / 15 / 30/ 60 minutes.

Reports can be generated on user's demand or periodically (automatic reports) with selected frequency (daily, once a week, once a month) and sent to any email address. Reports on demand can be generated by each user (Analyst, Manager and Administrator), whereas automatic reports can be configured by users with permissions of Manager or Administrator.

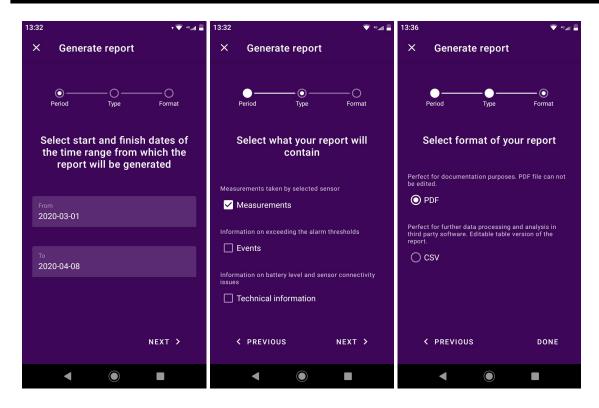
### 5.1. Generating a report on demand

Generating a report on demand allows you to export measurements from one or more sensors from any period of time in a PDF or CSV file.

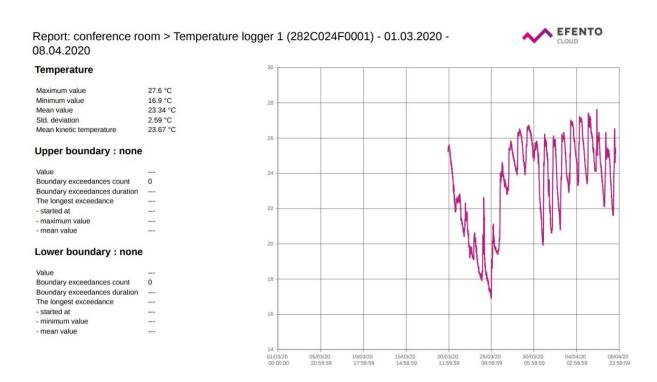
To generate a report from a given sensor, select it from the list and tap the *Generate report* button. Select the time range from which the report will be generated. Choose what information should be included in the report and select the report type (PDF or CSV). Confirm the report settings by clicking DONE.







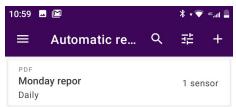
The report will be sent to the email address you have entered while creating an account in Efento Cloud. The report will be delivered within a few minutes.





### 5.2. Configuration of automatic reports

Automatic reports allow you to automate sending reports to selected email addresses. The reports will be generated and sent periodically, depending on the configuration. To configure automatic reports you need to have Administrator or Manager access permission. From the Main menu select *Automatic reports*.

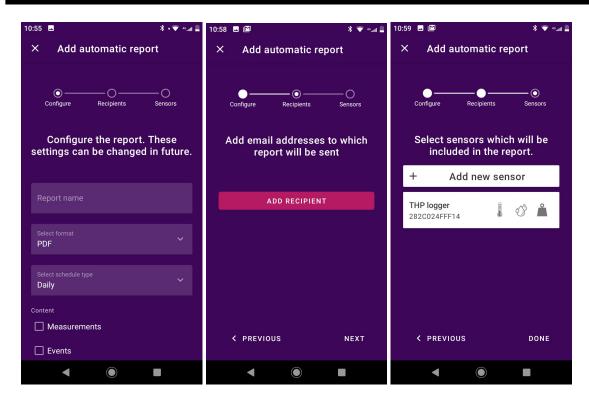




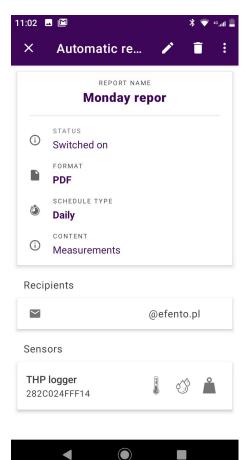
Tap the '+' icon in the upper right corner of the screen and add settings for the automatic report. Add a name to your report, choose *PDF* or *CSV* format, report sending frequency: *daily, monthly* or *sent every 1st day of the month* and add what should be included in it: *Measurements, Events* and *Technical information*. Click the next button and add the email addresses to which the report should be sent. Finally add sensors for which the report is to be generated and confirm with the *Done* button. The added report will appear in the list of automatic reports.







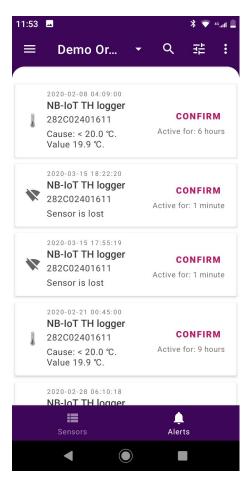
Automatic reports are generated and sent to recipients a few minutes after midnight.



ΑII configured automatic reports including information about sending report creator, frequency, report content and report recipients are visible in Automatic reports tab. To delete an automatic report click the 'trash' icon on the upper right. You can also edit an already existing report by clicking on the pencil icon. In order to disable an automatic report click the three dots icon and switch the report off.



### 6. Alarms



### 6.1. Alarm preview

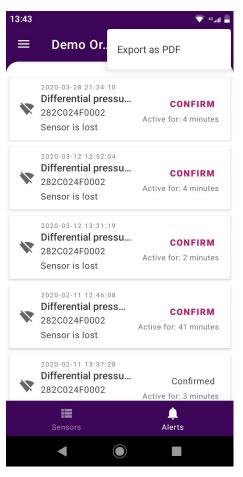
The user can display all alarms by selecting *Alerts* from the navigation menu at the bottom of the screen. Alarms are listed along with the following information:

- Name and serial number of a sensor which triggered the alert
  - Date and time when the alert occurred
- Cause of the alert (value of the threshold that has been exceeded) and value measured by the device at the moment when the alert occurred
  - Duration of the alert
- Alert status (Active, Inactive, Confirmed). If the alert's status is Inactive, a Confirm button is visible in the right part of the list. After checking the alarm, the user can tap the button to confirm that the alert was noticed and actions have been taken. While confirming the alert, users may leave a comment which will be visible to all the users who have access to the location.

The alarms can be sorted depending on the date of their occurrence, alarm type, alarm cause, current sensor measurement, alarm rule name or recipients assigned to the alarm.

In the upper right corner there are search and filters icons that allow you to find a selected sensor's alarms by entering its name, serial number or filter out the result by sensor type.





### 6.2. Export list of alarms

In order to export the alarms list, tap the three dots in the upper right corner of the screen and select *Export as PDF*. A list of alarms in the PDF file will be generated and sent to your email address.

### Alarms listing for DemoOrg

2020-03-15 01:52:24

Efento differential pressure





Unconfirmed



### 7. Alarm rules

Alarm rule is a formula that defines what events in Efento Cloud should initiate the alarm. The rule consists of impulse, condition and action, e.g.: if the temperature (impulse) increases above 10 degrees (condition) then the platform will send text message notification to selected recipients (action). The rules can be configured as you wish - e.g. sending notifications to different recipients depending on temperature level; violation of thresholds will be only registered in the platform (without sending a notification) etc.. You can define any number of alarm rules and assign sensors to each of them.

Alarm rules can be configured in *Alarm rules* menu by users with permissions of Administrator or Manager.

### 7.1. Types of alarm rules

In the Efento Cloud platform you can configure a few different types of rules depending on the impulse that initiated the alarm. These are:

- Violation of threshold (depending on the physical value measured by the sensor e.g. temperature, humidity and pressure);
- Low battery level if the sensor's battery is low then the platform will inform you about it. After initiation of low battery alarm the sensor will work for about 21 days;
- Connection lost a situation in which the senor does not send new measurements to the platform.

### 7.2. Configuration of the alarm rules

In order to add a new alarm rule go to the Main menu -> Alarm rules menu and tap '+' button in the upper right corner. The first field you need to fill in is the rule's name and choose the location. Next add phone numbers or emails which will be notified about the alarm. After keying in the email address/telephone number apply the changes with the *Ok* button. You can type in any number of recipients. The e-mail notifications are free of charge, but if you would like to receive text message notifications, then it is necessary to have the Efento platform text message balance topped up (the description of topping up the balance is in chapter 10 Text message notification).

Next configure a threshold, choose what type of event should initiate the alarm. If you have chosen a "continuous" sensor (temperature, humidity, pressure, etc.), you also have to choose whether the alarm should be initiated after exceeding the upper threshold (the value increases above the selected threshold) - option *above* or after

### **Efento Mobile Application User Manual**



exceeding the lower threshold (the value decreases below the selected threshold) - option *below* and key in the threshold value in the selected field.

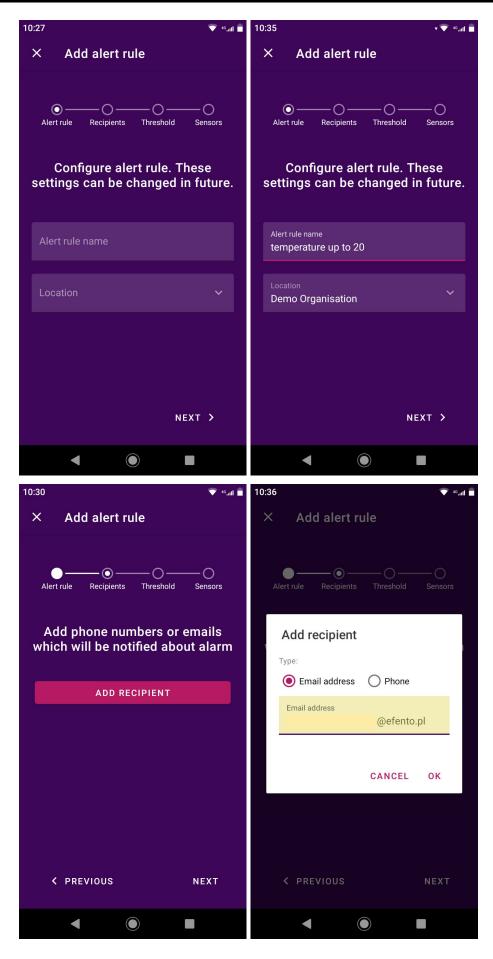
When creating an alarm rule, the user can enter in the *Delay in minutes* field the time in minutes after the alert will be on. For example: If the temperature exceeds the defined range and will stay out of this range for a number of minutes defined in the field *Delay in minutes* the alarm will be triggered. If the temperature returns to the safe range before time defined in the *Delay in minutes* field has passed, the alarm will not be triggered. If the user wants the alarm to be triggered immediately, the *Delay in minutes* should be left empty

At the end select sensors which will be affected by the alert rule. Tap the *Manage* sensors button and choose which slots should be activated. Click the icon shown on the right side of the sensor. If you want to set an alarm for the temperature measuring slot, select the thermometer icon, it will light up in pink, tap the *Save changes*.

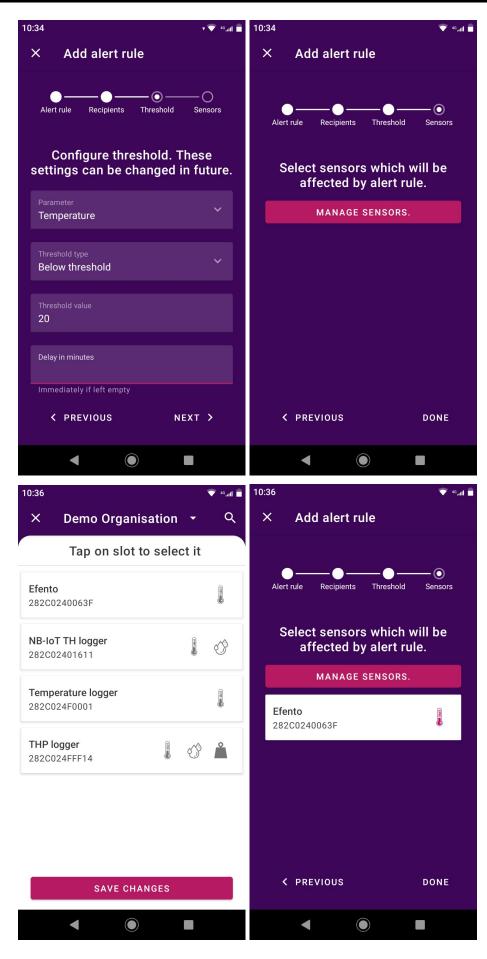
To save the alert rule, click *Done*. All assigned rules will appear in the list of alarm rules. From this moment the rule is active until its removal. The alarm rule can be edited anytime by clicking it on the rules list.

An alarm rule can be deleted at any time from the list of rules. To do this, click the rule you want to delete, select the *trash icon* in the upper right corner and confirm its removal by clicking *delete*.





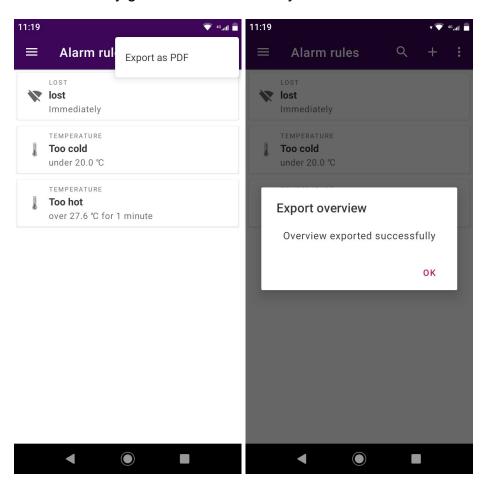






### 7.3. Export list of alarm rules

To export alarm rules, go to the Main menu -> *Alarm rules* from the menu and tap the three dots in the upper right corner of the screen, then *Export as PDF*. The list of rules will be automatically generated and sent to your email address.



### Alarm rules listing for DemoOrg



#	Rule name	Sensors	Value	Type	Threshold	Mobile recipients	E-mail recipients
1	lost	THP logger, Differential pressure logger, NB-IoT TH logger	Lost	-			
2	Too cold	THP logger, NB-IoT TH logger	Temperature	Lower	20.0 °C		
3	Too hot	NB-IoT TH logger	Temperature	Upper	27.6 °C		



# 8. Users management

Each user that is assigned to your Organisation, can be granted one of three different levels of permissions: Administrator, Manager or Analyst. Additionally the permissions are granted for specific locations. For example the user can be an Administrator in one location and an Analyst in the other one, which allows you to divide permissions and duties between different users for different locations. In Efento Cloud platform permission levels are called roles.

By creating a new Organisation you automatically get the role of Administrator to all its locations. When you invite new users to your Organisation you can grant them any level of permissions to selected locations.

Each group of permissions has access to different platform functions, as presented in the table below:

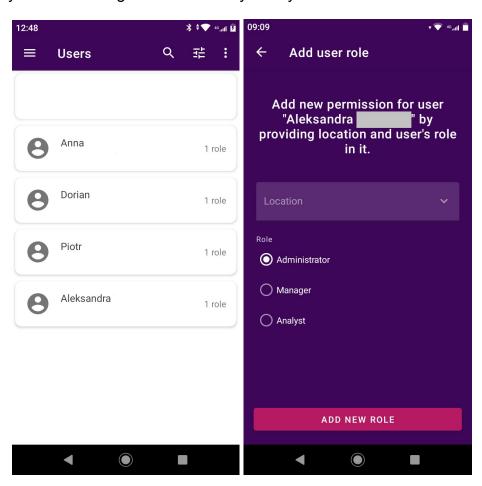
	Administrator	Manager	Analyst
Dashboard preview	<b>✓</b>	~	~
Report generation	<b>✓</b>	<b>✓</b>	<b>✓</b>
Alarm preview	<b>v</b>	<b>~</b>	<b>~</b>
Configuring automatic reports	V	~	×
Configuring alarm rules	<b>~</b>	•	×
Configuring sensors, structures and location maps	•	•	×
Permissions editing, adding and deleting users	V	×	×
System logs preveiw	V	×	×
Managing the Organisation's account	<b>~</b>	×	×



### 8.1. Adding new users to your Organisation

Adding new users is done by invitations, which can be sent only by users with Administrator rights. From the Main menu choose *Users* and tap three dots in the upper right corner of the screen. You will see a window that allows you to send invitations to your organization. Type in the email address of a person you want to invite to join your organization and choose role(s), which will be given to him after accepting the invitation. Roles can be different for different locations. After saving the changes, the new user will receive an email with an invitation to your Organisation. If a user does not already have an account in the platform, before joining your Organisation he will have to create one. If the new user has not accepted your invitation yet, you can dismiss it by tapping the *Cancel* icon next to the invitation.

You can invite any number of users to your Organisation and give them any permissions. Remember that Administrator permission allows the user to access configuration of sensors, users, alarm rules and to edit your Organisation's account, therefore you should not give them to every user you want to invite.

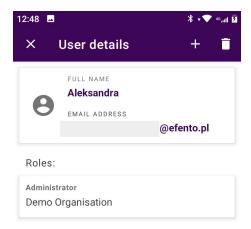




### 8.2. Editing user's permissions and deleting users

Editing users can be done in *Users* menu by users with the role of an Administrator. To edit the user's roles select the user, whose roles you want to edit, click the '+' in the upper right corner and add a new role for the user. Tap and hold already existing roles of the user to edit it.

You can also delete users added to your Organisation. Select the user which you want to remove and tap the trash icon in the upper right corner of the screen, Confirm the sanction by tapping the Delete button. The user's account will not be deleted entirely, he will only lose access to your Organisation. Only a user can completely delete his account from the platform (see 10.1 Changing username, language and password / deleting the account)

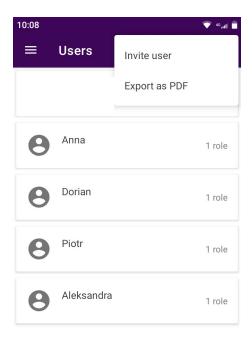






# 8.3. Export list of users

You can export the list of users in a PDF file. Tap the three dots in the upper right corner and select *Export as PDF*. The list will be sent to your email address within few minutes.





### Users listing for DemoOrg



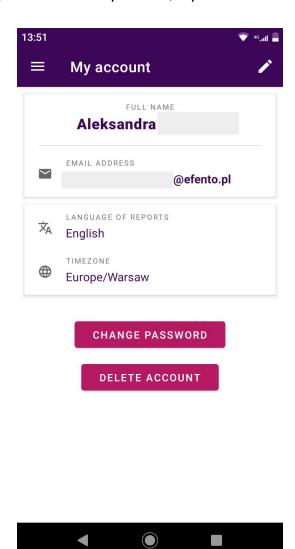
#	User	Username	E-mail	Roles	
1 alfakom alfakom		alfakomdemo	@positrex.gr	Menager Demo Organisation	
2 Anna ania			@efento.pl	Admin Demo Organisation	
3	Dorian	dozjon_k	@efento.pl	Admin Demo Organisation	
4	Piotr	piotr	@efento.pl	Admin Demo Organisation	
5	Aleksandra		@efento.pl	Admin Demo Organisation	



# 9. User profile

### 9.1. Changing username, language and password / deleting the account

By selecting from the Main menu -> My account you can edit your data such as name, surname, e-mail address and Efento Cloud account password. You can also change language and time zone. Tap the pencil icon in the upper right corner, edit what you want and save changes with the Save button. If you wish to delete your account including all your data in the platform, tap the *Delete account* button.





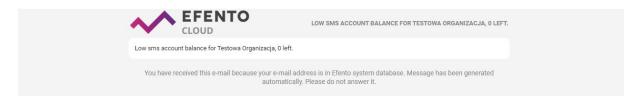
# 10. Text message notification

### 10.1. Topping up the text message balance

Efento Cloud allows you to configure text message notifications about rules violations. If you have configured text message notifications, then in order to receive them it is necessary to top-up the text messages balance. To do it, go to the Main Menu -> Organisation settings and select Top up in the Available SMS section. Key in the top-up code. If the code is valid, the balance will increase by a specified amount (100 / 500 / 1000 SMS).

### 10.2. Low text message balance notification

When the number of available SMS drops below 15, an email notification will be automatically sent to all administrators of the organization. Notifications are turned on automatically and cannot be turned off.



### 11. Audit trail

# 11.1. Audit trail export

System logs, which are the list of all changes made in Efento Cloud platform, can be browsed by users with permissions of an Administrator. To export the logs list, go to the Main Menu -> *Organisation settings* and select *Generate* in the *Audit trail* section. A PDF report with a list of all changes in your Organization will be generated and sent to your email address.