D4.4.1

Beacon Admin Web-app

User Manual

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Indice

1 - Introduction

In the WP 4 "Beacon Network" the Beacon project team in cooperation with Konverto has:

- installed a beacon network over the whole South Tyrol;
- developed the software tools to proper manage and use the beacon network:
  - a **Beacon Admin Web-App** that the installer, the managers and the maintainers use in order to manage, configure and have an overview about the status of the network;
  - a **Beacon Admin Android App** that the installer, the managers and the maintainers use in order to manage, configure and have an overview about the status of the beacon network. Moreover the Android Application allows to configure (e.g. change power signal and frequency of transmission, enable/disable telemetry functionality, etc.) each beacon of the network;
  - a set of **API** that can be used by the developer to retrieve information about the single beacon of the network;
  - an **iOS SDK** and an **Android SDK** that can be used by the app developers in order to interact with the beacons and easily get information about it. Moreover the SDKs allow the trusted user to get the battery status of the beacons and store it in the backend.

This document is focused on the Beacon Admin Web-App and will provide a quick introduction for the users that want use it to manage the beacon network. This web application is available at the following link:

https://admin.beacon.bz.it.

In the following chapters it will be presented how to access and use the application to manage the beacon network.

2 - Access and user management

As already said before the application can be accessed through the following link:

admin.beacon.bz.it.

2.1 - The login interface

The first page is the login interface (see Figure 1), where the user is able to:

- login into the application by inputting his credentials in the fields "*username*" and "*password*";
- reset his credentials by clicking on the "*Reset password*" link;
- contact the project team by clicking on the "*Support*" link.
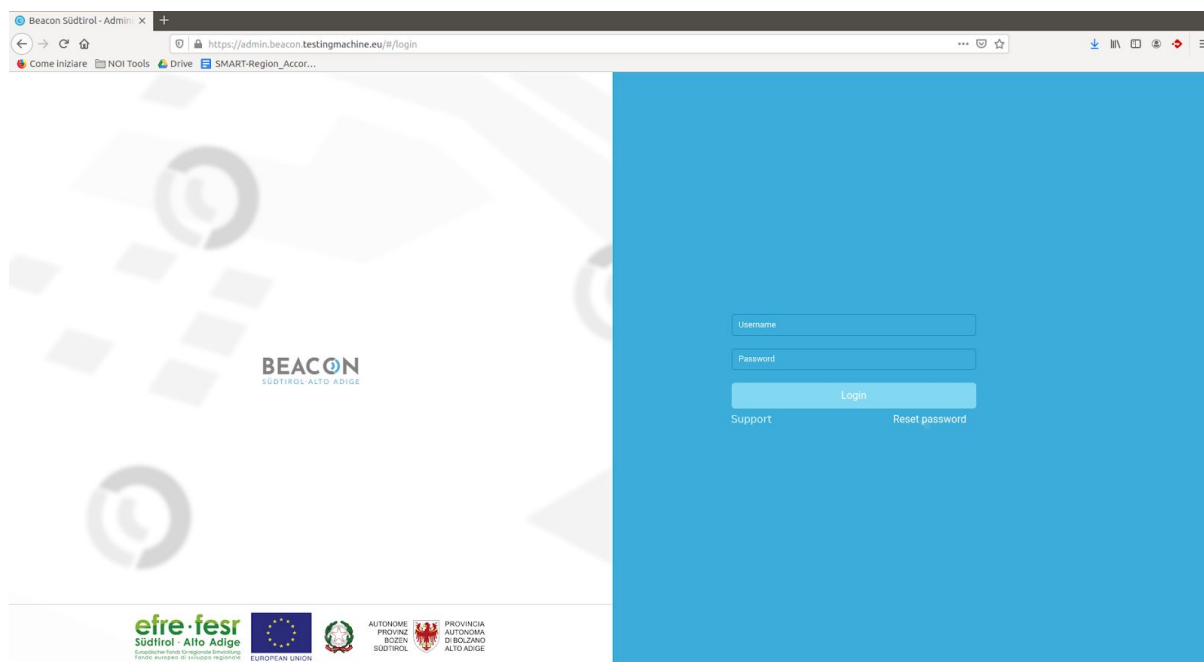
Figure 1: beacon web app login interface.

A new user can ask for the credentials by clicking on the "*Support*" link. The link allows the user to send an email to the support team and ask for new credentials. Moreover this link can be used by already registered users in order to notify problems and issues to the project team.

As mentioned before, in case of forgotten password, the user is able to reset his password by clicking the "*Reset Password*" link and inputting the registered email. The system will then send to the user a new temporary password.

At the first login or after a password reset the user is forced to change the temporary password automatically created by the system (see Figure 2).

Figure 2: beacon web app reset password interface.

2.2 - The user management system

The user management system of the entire beacon system allows the creation of groups and the creation of users with different roles.

2.2.1 - The groups

The beacon management system allows to create groups to limit for the users to edit and/or configure only the beacon assigned to their group. The list of the groups is available in the "*Groups*" section of the web app (see Figure 3).
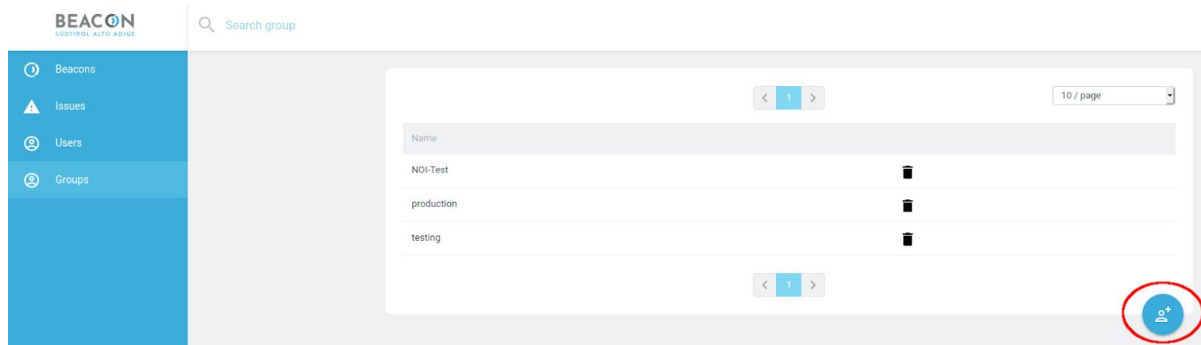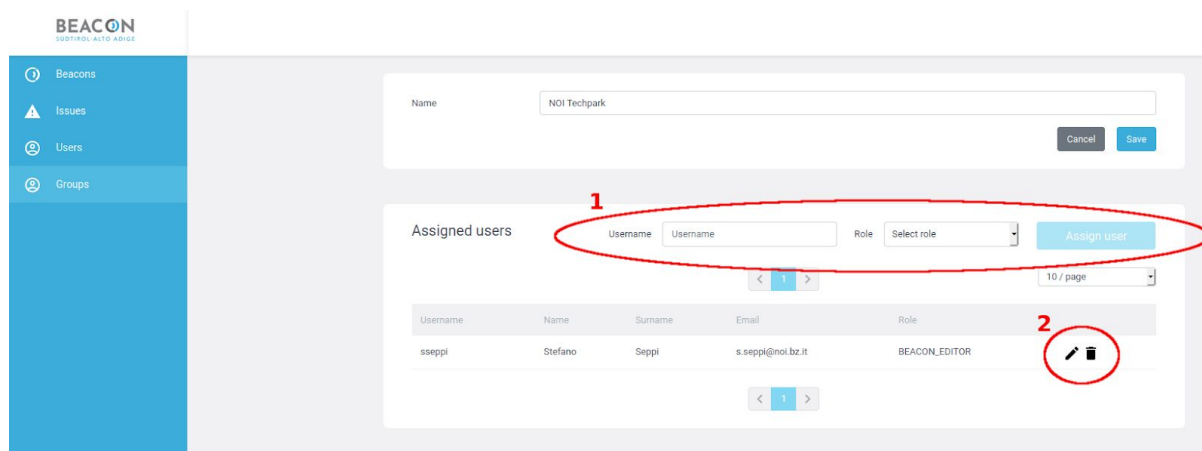

Figure 3: beacon web app group section..

Only the admin users of the system are allowed to create new groups by clicking on the icon in the red circle in Figure 3 and inserting a unique group name. Please note that the group name has to be unique and is case insensitive, this means that the group name "NOI" is the same as "noi".

All users can see the groups and its members, but only the admin users or the group managers (each group manager user can manage the groups assigned to him with the role "*Group Manager*") can manage the group (e.g. change group

name, add/remove users, add/remove beacons etc.). The beacons that aren't assigned to a group can be managed and edited only by admin users.

The admin user and the Group Managers are able to manage the single groups by entering in the single group management section (see Figure 4) where the name of the group and the list of assigned users are shown.

Figure 4: *beacon web app single group management section.*

The admin user can change the name of the group by inserting the new name in the decated field and clicking on save. Group manager and admin users can add new users to the group by inputting the user name and his role in the dedicated fields (see circle 1 in Figure 4) and clicking on "*Assign user*". Moreover admin users and group managers are allowed to delete and/or change the role of the users assigned to the group by clicking on the dedicated icons near the user information (see circle 2 in Figure 4).

2.2.2 - The roles

In order to proper manage the right of each user in each group the systems allows to assign to each user different roles. Please note that a single user can be assigned to more groups with different roles. The roles that are actually defined by the system are:

- **beacon viewer:** is able only to see all information about the beacons assigned to the group but can't change any information or configuration. This is the default role assigned to each user for each group;
- **beacon editor:** has all the functionalities of the beacon viewer and is able to change the configuration and the information of the beacon assigned to his group;
- **beacon manager:** has all the functionalities of the beacon editor and is able to add new beacons to his groups. Moreover this user is also able to add new user in his group and change the roles of all the user assigned to his groups;

- **admin:** is the admin of the entire system and is able to manage all beacons, all users and groups without any limitation.

2.2.3 - The users

All users are able to see the list of all users of the system and its assigned groups with the role, but only the admin user can create new users and manage (change password) already existing users.

The list of the users is available in the "*Users*" section (see Figure 5). The admin user is allowed to create a new user by clicking on the dedicated icon in the "*Users*" section (see the circle in Figure 5).
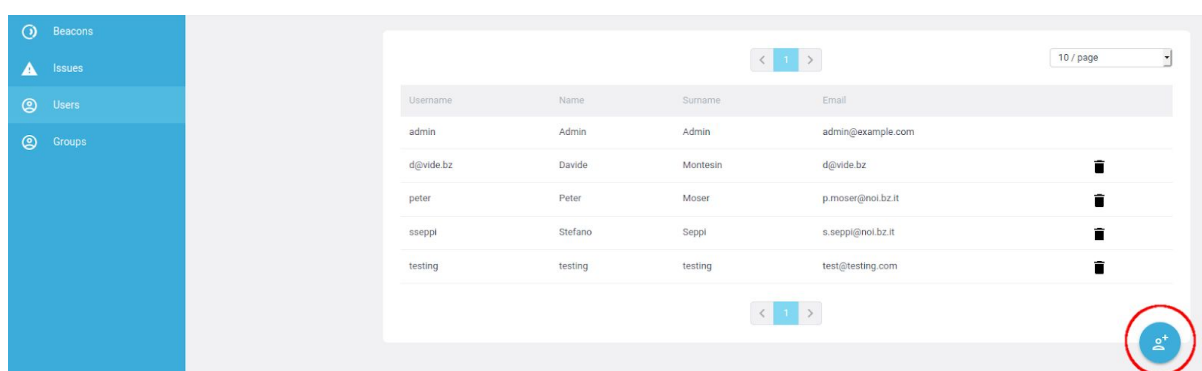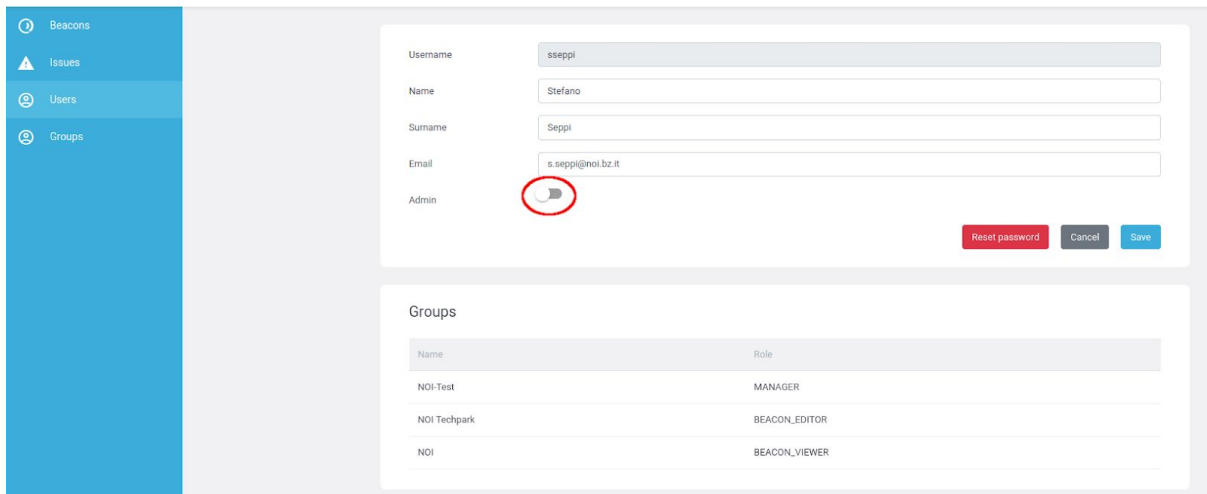
Figure 5: *beacon web app users section.*

In order to create a new user the admin user has to input the username, the name, the surname, the email and the password. Please note that for the creation of a new user email and username has to be unique. The username as for the group name is case insensitive so the user "mariorossi" is the same as "MARIOROSSI".

In order to see the groups assigned to each user the single users has to be selected. By clicking on a single user line the system will enter in the "Single *user management*" section (see Figure 6). This section allows all users to see the groups assigned to a single user. Moreover the admin user, through this interface, is able to manage the single user. In particular the admin user can:

- change the name, surname and the email of the user by inserting the new information in the dedicated fields and clicking on the "*Save*" button;
- change the password of the user by clicking on the "*Reset password*" button, insert the new password twice and clicking on the "Reset" button. Please note that, for security reasons, every time that the password is reseted by the system or the admin the user is forced to change the default password at the first access after the reset;
- activate the admin rights for the user by activating the switch in the circle in Figure 6 and clicking on the "Save" button.

Figure 6: *beacon web app single user management section.*
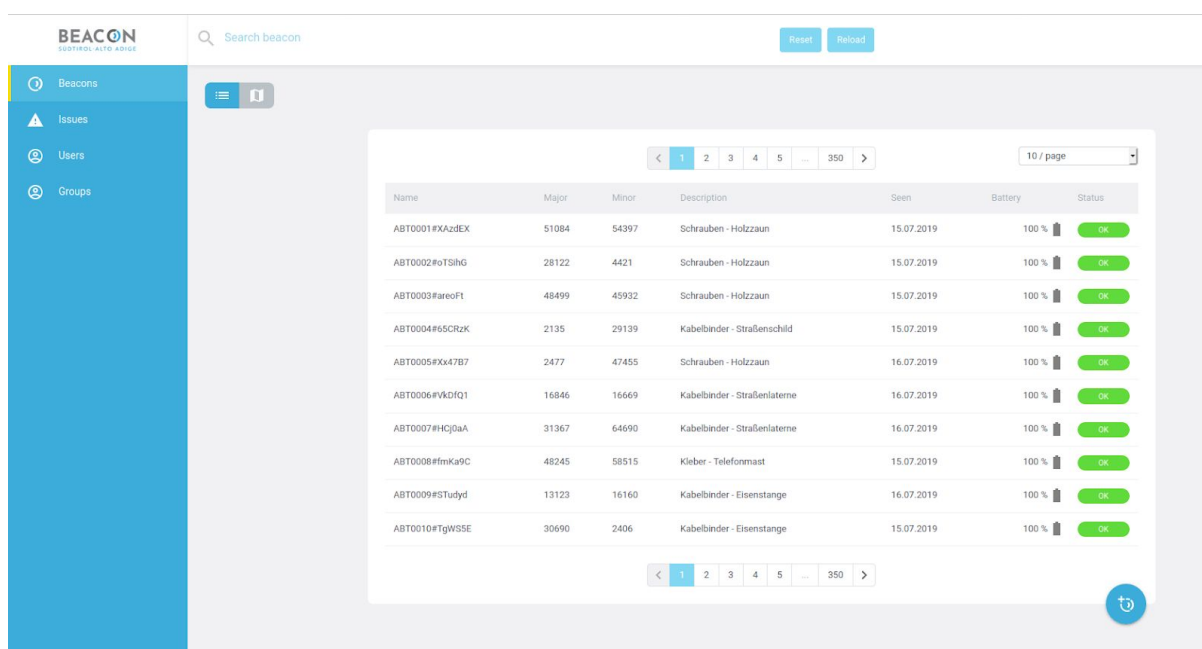
3 - Beacon management

The *Beacon Management* section allows the users to see all information about the beacons managed by the system, modify the configuration and the information of the beacons where he has the rights to do it and, if he has the rights, add new beacons to the system.

3.1 - Beacons view

The "*Beacons View*" (see Figure 7 for the list view and Figure 8 for the map view) allow the user to see all beacons and their main information on a table view or a map view.
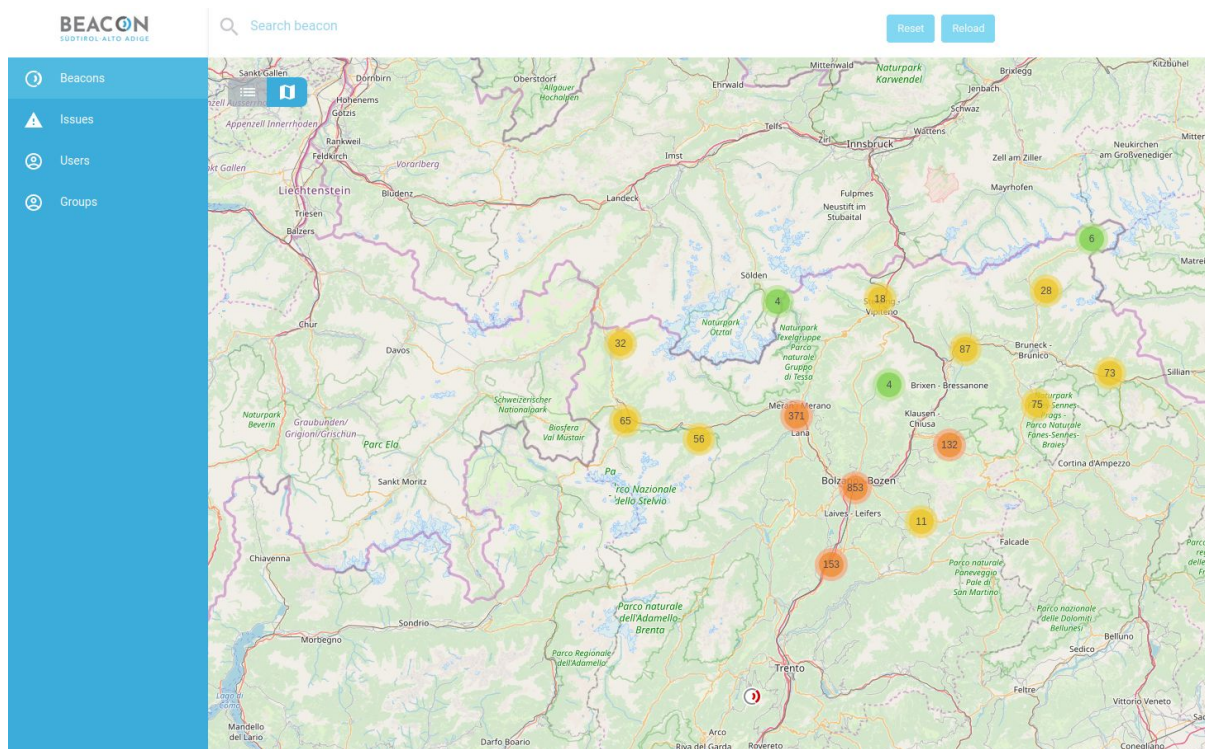

***Figure 7:** beacon web app beacon table view.*

In the beacons table view all beacon are listed with the main information:

- beacon name;
- Major, Minor;
- Description of the installation
- last seen;
- battery level;
- status:
  - **OK**: if the beacon is installed without any pending configuration or registered problem (low battery level, issue opened by an user);
  - **Issue**: if someone inserted an issue with the beacon or the battery status is low;
  - **Pending**: if there is a pending configuration that has to be applied by using the Admin Android webapp;

○ **NO signal**: if the beacon has still to be installed, or if the beacon is not seen for more than a certain period or there is any other critical issue.
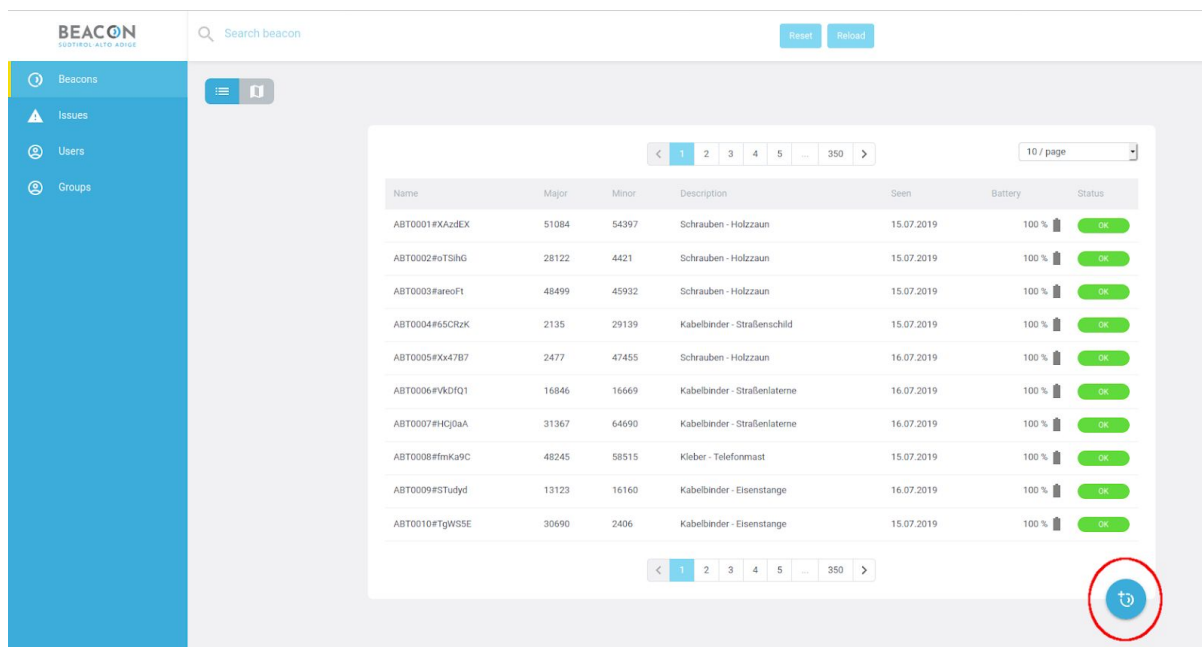

Figure 8: beacon web app beacon map view.

The beacons map view allows the users to see where the beacons are located. Moreover the user is allowed in both views to filter and search for beacons by typing the key word of the search in the search field located on top of the table or the map view.

3.1.1 - Add beacons

As said in the previous chapter, the admin user and the group managers are allowed to add new beacons to the system. In order to insert new beacon in the system the user has to input the order ID of Kontakt.io (actually this functionality works only with kontakt.io, for other beacon producer the interface between the beacon system and the API of the producer, if existing, has to be implemented) and the system will get all beacon information directly through the kontakt.io APIs. In this way the user doesn't have to input the single beacons information by itself. This functionality is available in the beacons table view (see Figure 9).
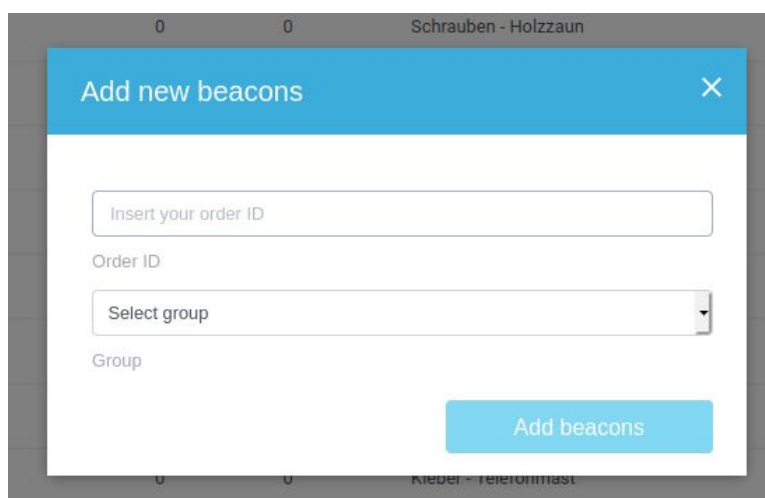
Figure 9: beacon web app beacon table view add beacon.

The user is able to add new beacons by clicking the blue icon (in the red circle in Figure 9) at the bottom right of the beacon table view.

*Figure 10:* beacon web app add beacon mask.

By clicking on the icon the system will open the add beacon mask where the user has to input:

- the kontakt.io order ID;
- the group where the beacons are assigned.

Both fields are mandatory and, concerning the groups, the admin user can select all groups and the group managers can select only the groups that they are managing.

3.2 - Single beacon view

In the single beacon view (see Figure 11) the user is allowed to see all beacons configurations and information, moreover, if the user has the rights, he is allowed also to change the information and the configuration.
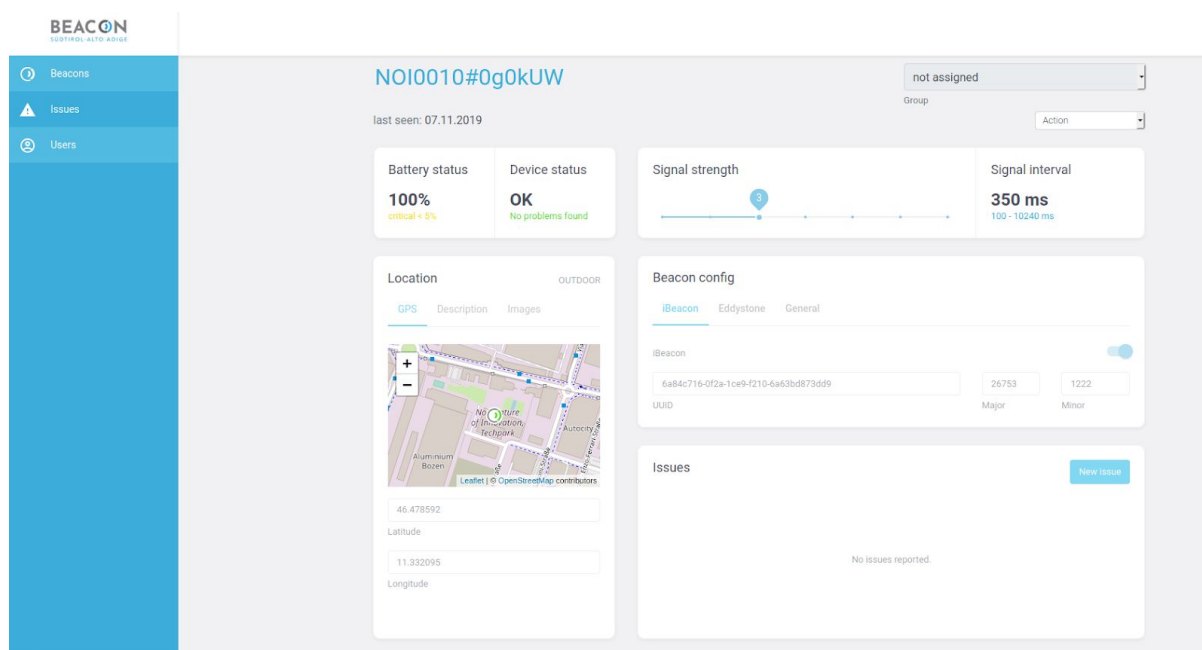

Figure 11: *beacon web app single beacon view.*

In this view the user is allowed to see/change the following information:

1. the beacon name;
2. the assigned group;
3. battery and device status (can't be configured);
4. signal strength;
5. signal interval;
6. the location where the beacon is installed with:
   a. map view;
   b. GPS coordinates;
   c. description of the beacon installation;
   d. in case of indoor beacons also the floor where the beacon is installed;
   e. pictures where the beacon is installed;
7. the beacon configuration:
   a. iBeacon parameters (active/deactive, UUID, Major and Minor);
   b. Eddystone parameters (Eddystone UID, Eddystone URL, etc.);
   c. general (active/deactive telemetry);
8. the open issues.

3.2.1 - Edit beacons

The users who have the rights to modify the beacon can enter in the "*Edit*" mode using the "*Action*" dropdown menu located on top right of the page under the assigned group name.
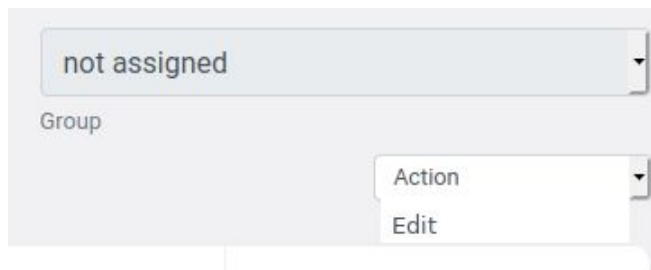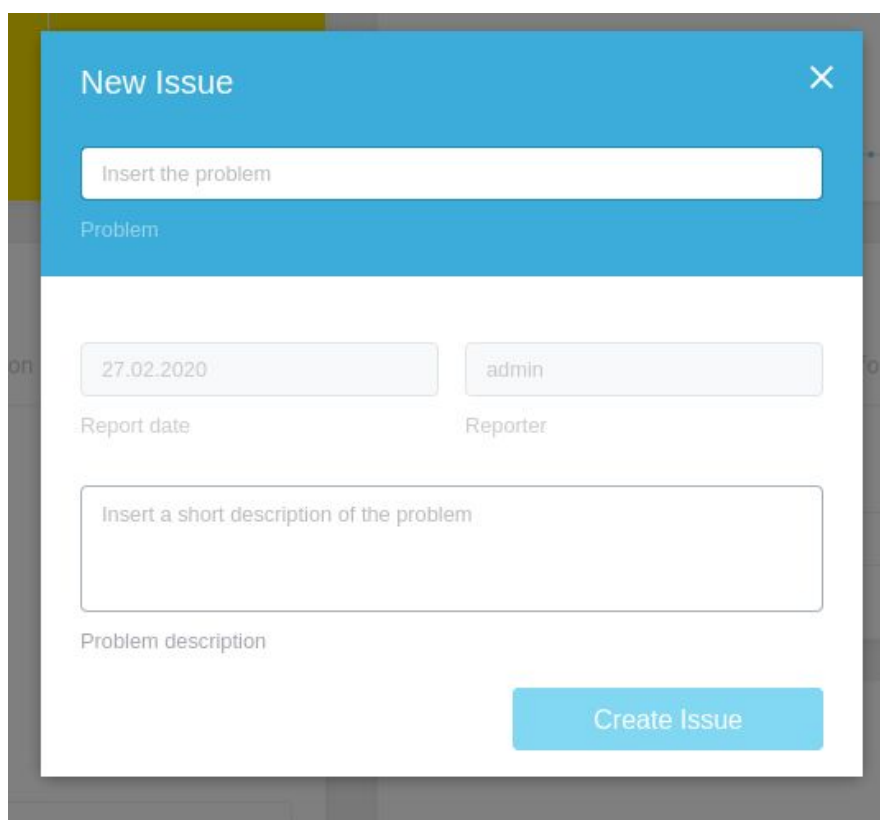

Figure 12: beacon web app action dropdown.

In the "*Edit*" mode the user can change the following information/configuration:

1. the beacon name;
2. the assigned group;
3. signal strength and signal interval (this configuration has also effect on the battery duration);
4. the location where the beacon is installed:
   a. GPS coordinates;
   b. description of the beacon installation;
   c. in case of indoor beacons, also the floor where the beacon is installed;
   d. upload from his define one or more pictures of the location where the beacon is installed;
5. the beacon configuration:
   a. iBeacon parameters (active/deactive, UUID, Major and Minor);
   b. Eddystone parameters (Eddystone UID, Eddystone URL, etc.);
   c. active/deactive telemetry (this configuration has also effect on the battery duration).

3.2.2 - Open an issue

Each user is allowed to create a new issue by clicking on the "*New Issue*" button. The "*New Issue*" buttons opens the "*New Issue*" mask (see Figure 13) where the user has to insert:

- a title in the "*Insert the problem*" text field;
- a short description of the problem in the "*Problem description*" text field.

Figure 13: *beacon web app new issue mask.*

Once the issue has been created the issue will appear:

- in the issue box of the single beacon view;
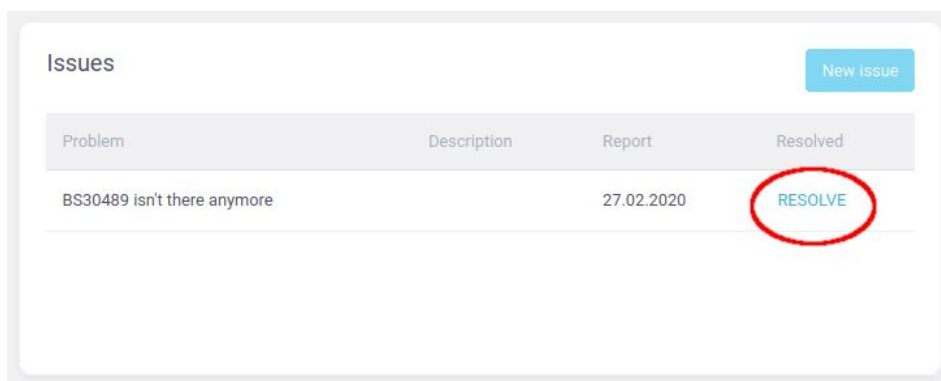- in the list of all issues in the Issue view.

Moreover every time that an issue is created the maintainers will receive a notification per email.

3.3 - Issue view

The *Issue View* is the is the same of the Beacon view but it shows only the beacons where there are still open issues that has been reported by the users.

3.3.1 - Resolve an issue

In order to resolve an issue the beacon maintainer has to select one of the beacons shown in the *Issue view*. Once the user is in the single beacon view, in the "*Issues*" box (see Figure 14), he can see all open issues reported for the selected beacon and plan the maintenance of it.
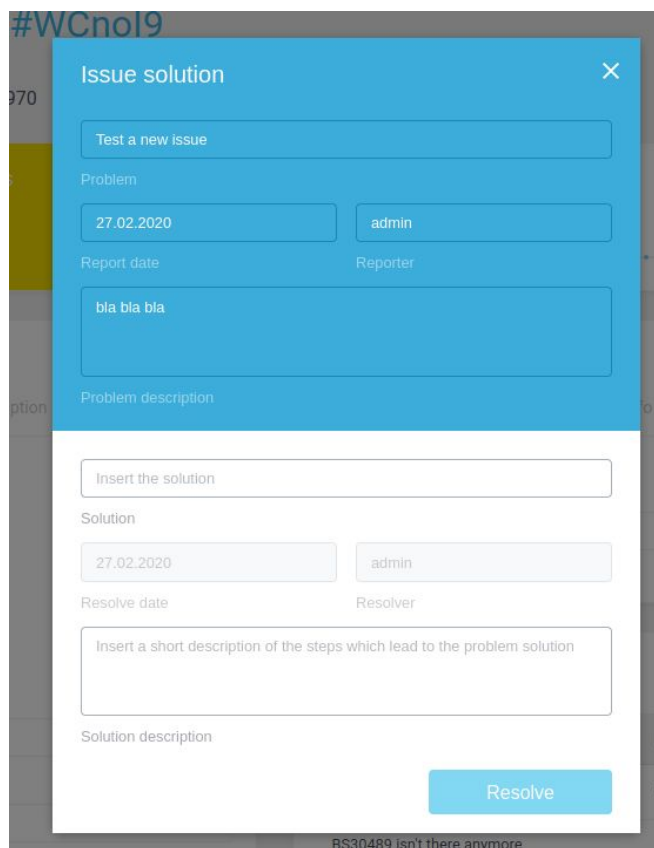
Figure 14: *beacon web app new issue box.*

Once the maintainer has resolved the problem, he can close the issue by clicking on "*Resolve*" (see in the red circle in Figure 14) and inserting the following information in the "*Resolved Issue*" mask (see Figure 15):

● the solution title in the "*Insert the solution*" text field;
● the solution description in the "*Solution description*" text field.

Figure 15: *beacon web app resolved issue mask.*

Once an issue has been resolved the issue will remain marked as resolved in the "*Issue*" box. By clicking on a resolved solution the "*Resolved Issue*" mask will be

opened in read only mode. The mask will show to the user the following information:

- the issue title;
- the date when the issue was opened;
- the user that opened the issue;
- the issue description;
- the solution title;
- the date when the issue has been resolved;
- the user that solved the problem;
- the description of the solution.