

Beacon Südtirol - Alto Adige

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Beacon Admin Android App User Manual

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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 properly 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 Android Admin App and will provide a quick introduction for the users that want to use it to manage the beacon network.

1.1 - App Overview

Once the user launches the application, the first interface is the *Login* interface (see Figure 1). Since this application allows the user to change settings of the beacons, the login is mandatory in order to avoid misuse or misconfiguration of the beacon network. The Login credentials are the same of the Beacon Admin Webapp available at the following link:

admin.beacon.bz.it

New user that doesn't have the credential to login into the application can ask for it through the Beacon Admin Webapp or contacting directly the Beacon Support team (support@beacon.bz.it).

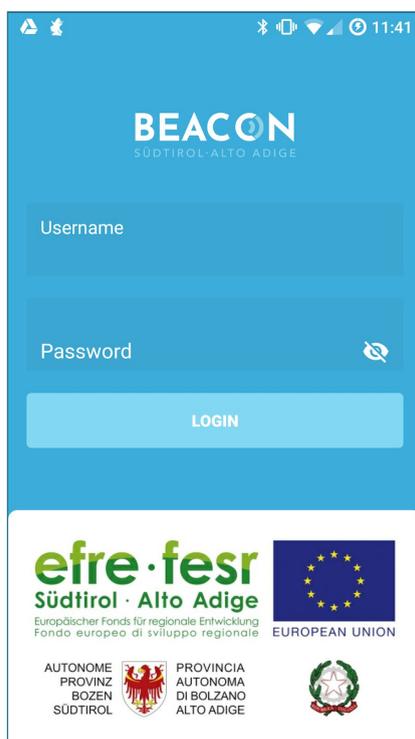


Figure 1: beacon android app login interface.

Logged users will be able, according to the rights assigned to their role, to interact with the application and access to the entire beacon list.

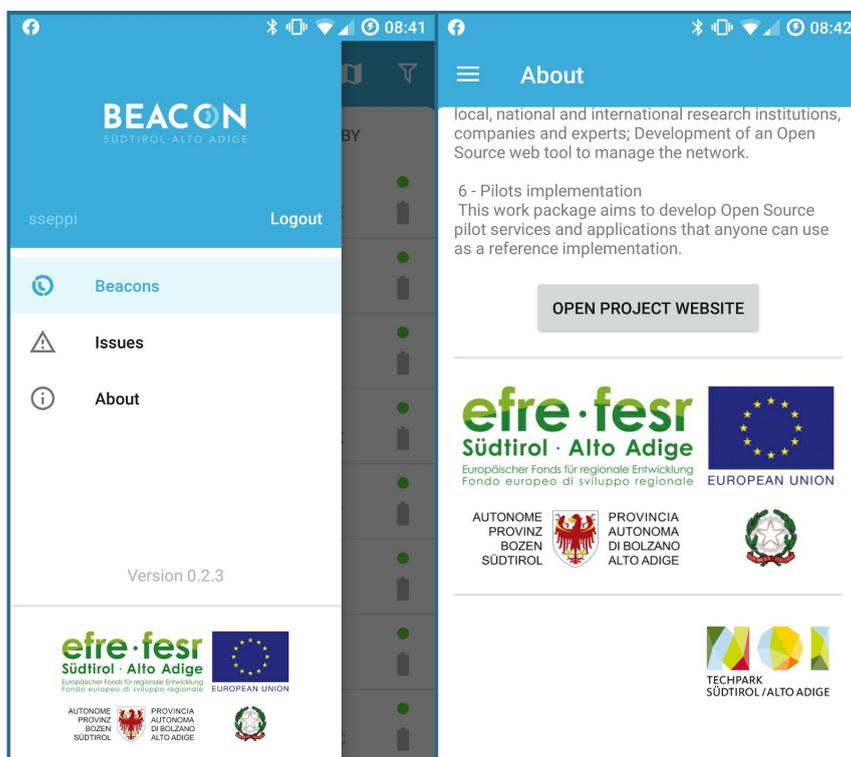


Figure 2: beacon android app menu and about section.

As can be seen in Figure 2, the user is able to navigate through the app using the menu button. In particular he can navigate the following sections:

- the **Beacon** section where the user can see the information about all beacons managed through the Beacon South Tyrol system and can manage the beacons according to the rights assigned to his role;
- the **Issue** section where the user, according to the rights assigned to his role, can see and manage the open issues of the beacons;
- the **About** section where the user finds more information about the project, the contacts and the link to the project website.

2 - Beacon section

The *Beacon* section is the one that allows the users to see all information about the beacons managed by the system and, according to the rights of the logged user, modify the configuration and the information of the beacons and push configuration on the single beacons via Bluetooth.

2.1 - Beacons view

The “*Beacons View*” (see Figure 3) allow the user to see both all beacons or only the nearby one, and their main information on a table view or a map view. The nearby beacons are the one in the bluetooth range of the smartphone.

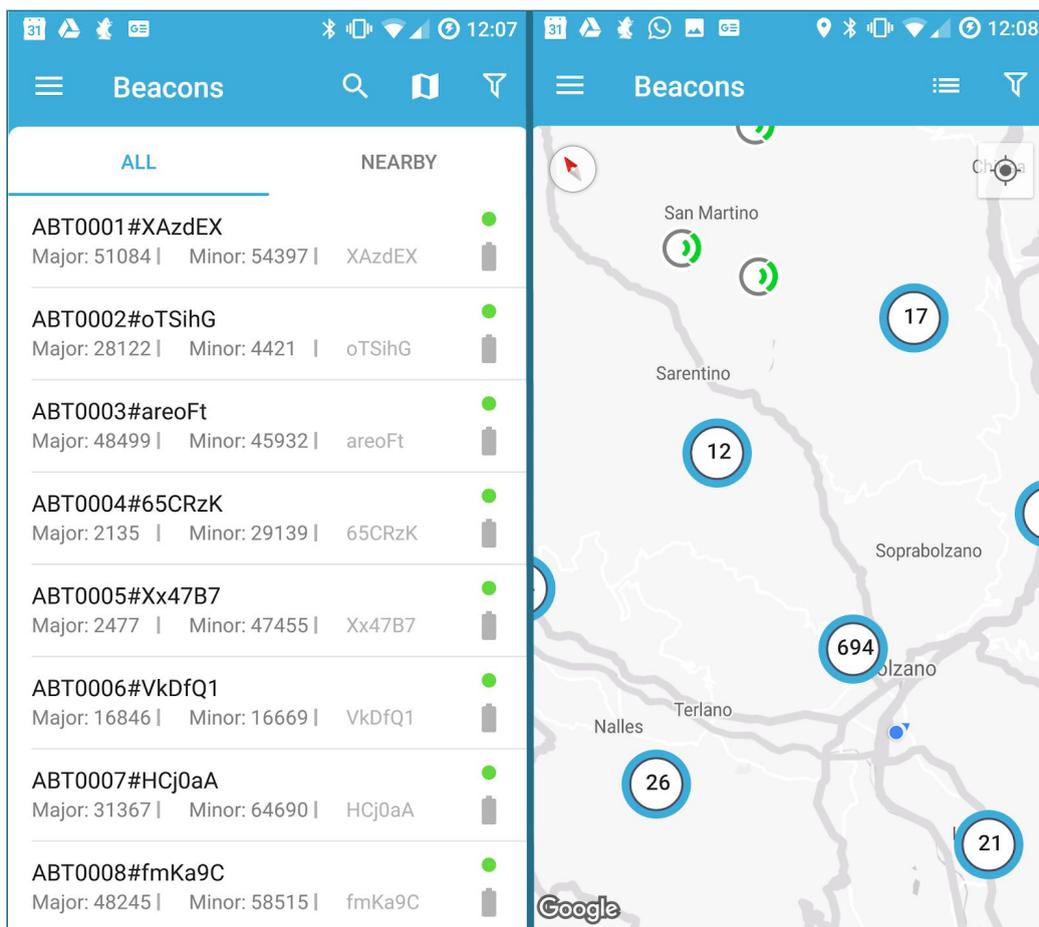


Figure 3: beacon Android app beacons table and map view.

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

- beacon name;
- beacon ID;
- Major,
- Minor;
- battery level;

- status:
 - **OK**: if the beacon is installed without any pending configuration or registered problem (low battery level, issue opened by a 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, is not seen since more than a predefined period or there is any other critical issue,

The beacons map view allow the users to see where the beacons are located. Moreover the user is allowed in both views to filter the beacons by clicking on the filter icon (top right of the view) and choosing the filter option.

2.2 - Single beacon view

By clicking on a single beacon in the “Beacons view” the user will enter in the “Single beacon view” (see Figure 4) where the user is allowed to see all beacons configurations and informations, moreover, according to his rights, he is allowed also to change the information and the configuration of the beacon.

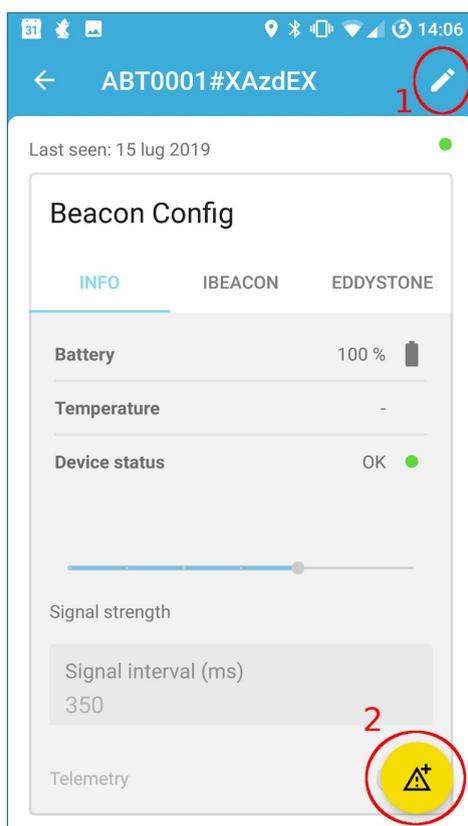


Figure 4: beacon Android app single beacon view.

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. the temperature (only in read mode if the telemetry is activated);
5. signal strength;
6. signal interval;
7. 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;
8. the address where the beacon is located;
9. 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);
10. the images that show how and where the beacon is installed.

2.2.1 - Edit beacons

The user who has the rights, are allowed to modify the beacon can enter in the “Edit” mode by clicking on the “Edit” icon on top right of the Single Beacon view interface (See circle 1 in Figure 4).

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).

2.2.2 - Upload new configuration

If there are changes in the configuration of a beacon (using both or the web app or the Android App), since the beacons aren't directly connected to the Internet, the configuration has to be uploaded on the beacon via Bluetooth by using the Beacon Android Admin App. The beacons with a pending configuration are marked by a light blue point (see circle 1 in Figure 5) in the list view and the wording “*Configuration Pending*” (see circle 2 in Figure 5) in the single beacon view.

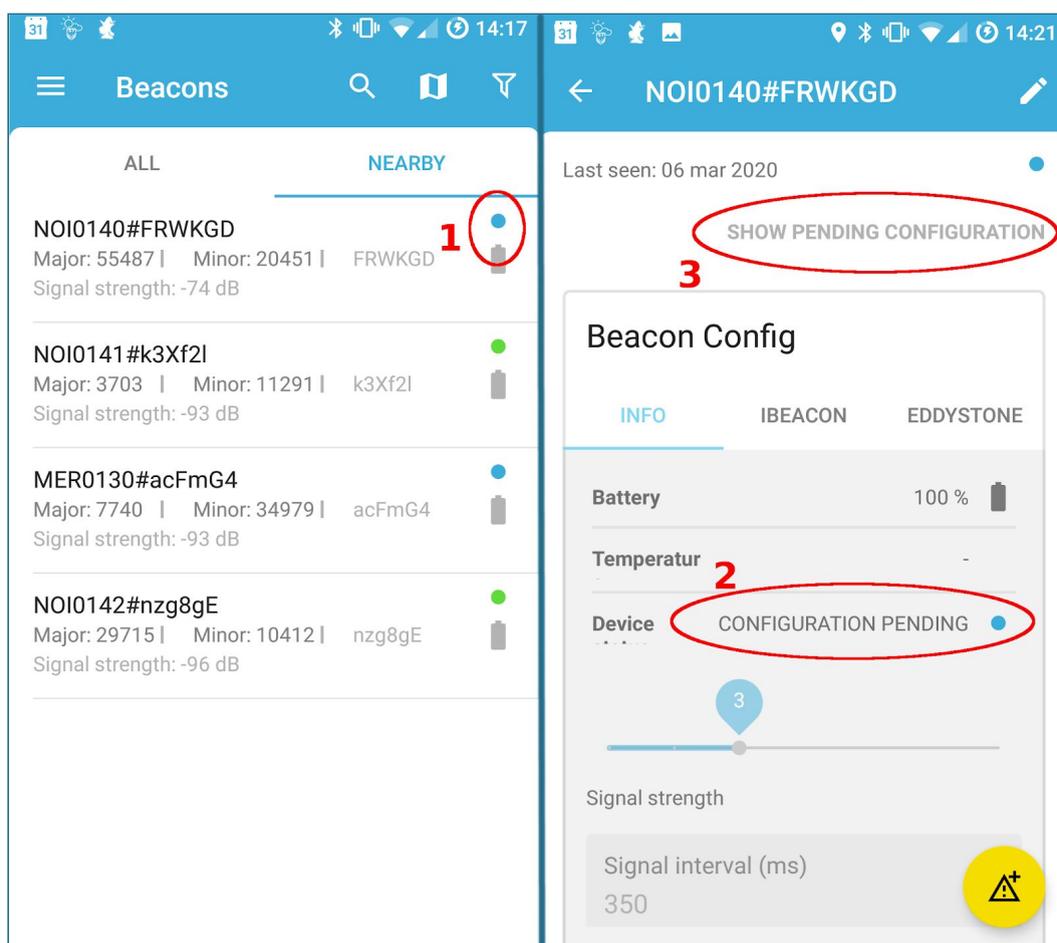


Figure 5: beacon Android app pending configuration.

The user in order to upload on a beacon the pending configuration has to fulfill the following steps:

1. select a beacon with a pending configuration;
2. click on “*Show Pending Configuration*” (see circle 3 in Figure 5) and enter in the “*Pending Configuration*” view;
3. check if the new configuration are the right one and click on “*Apply Now*”;
4. confirm the action.

At the end of the upload of the configuration the application will inform the user with the message “*Configuration applied successfully*”. The process is also described in Figure 6.

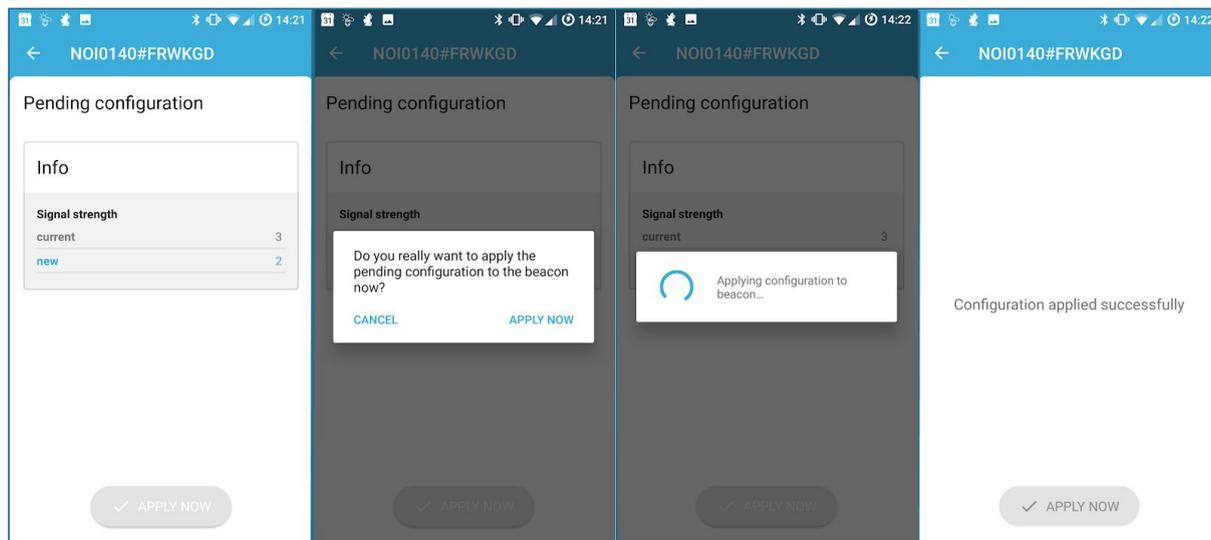


Figure 6: beacon Android app upload pending configuration process.

Please note that, in order to upload the configuration, the beacon must be reachable by the bluetooth signal of the Installer’s smartphone.

2.2.3 Open an issue

Each user is allowed to create a new issue by clicking on the “*New Issue*” yellow button in the “*Single Beacon*” view.

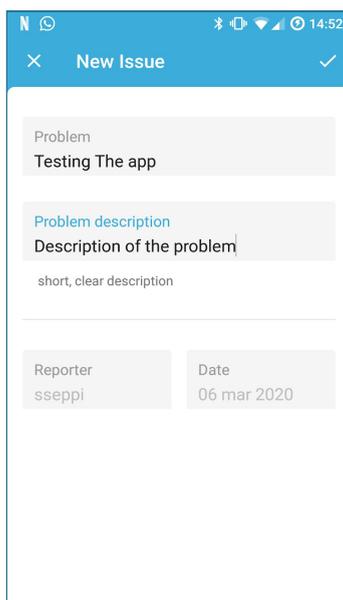


Figure 7: beacon Android app new issue mask.

The “*New Issue*” button opens the “*New Issue*” mask (see Figure 7) 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.

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.

4 - Issue section

The Issue section is the one that allows the users, according to his role and permissions, to see and manage all the open issues of the beacons managed by the system.

4.1 - Issues view

The “Issues View” (see Figure 8) allow the user to see all Open Issue and their main information (title and short description) on a table view or a map view.

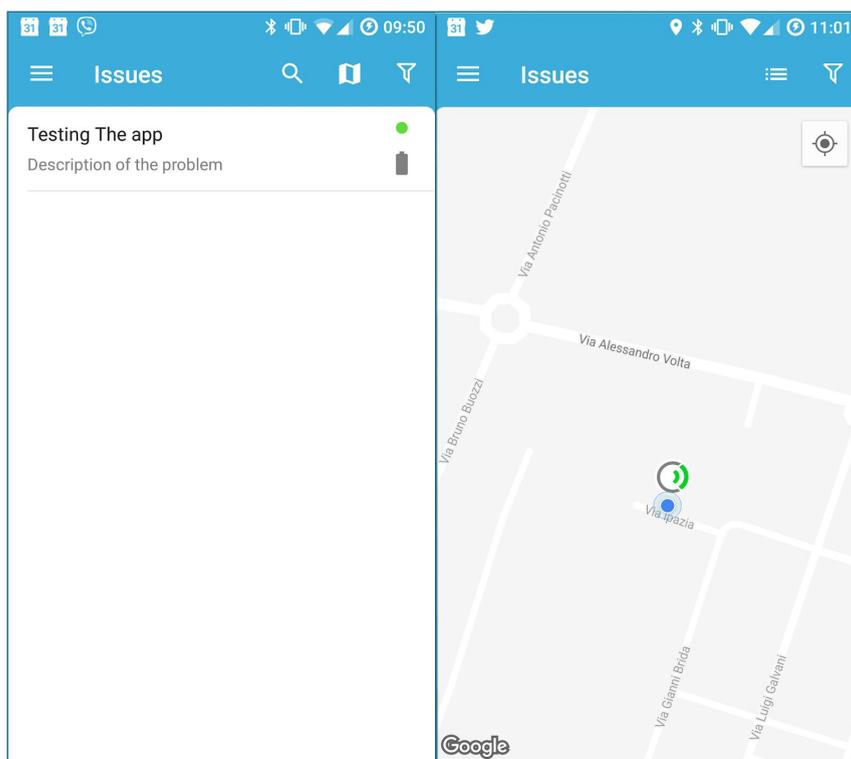


Figure 8: beacon Android app issues table and map view.

4.2 - Single issue view

By clicking on a single issue in the “Issues view” the user will enter in the “Single issue view” (see Figure 9) where the user is allowed to see, according to his role and permissions, the details of the issue and the most important information concerning the status of the beacon related to the Issue.

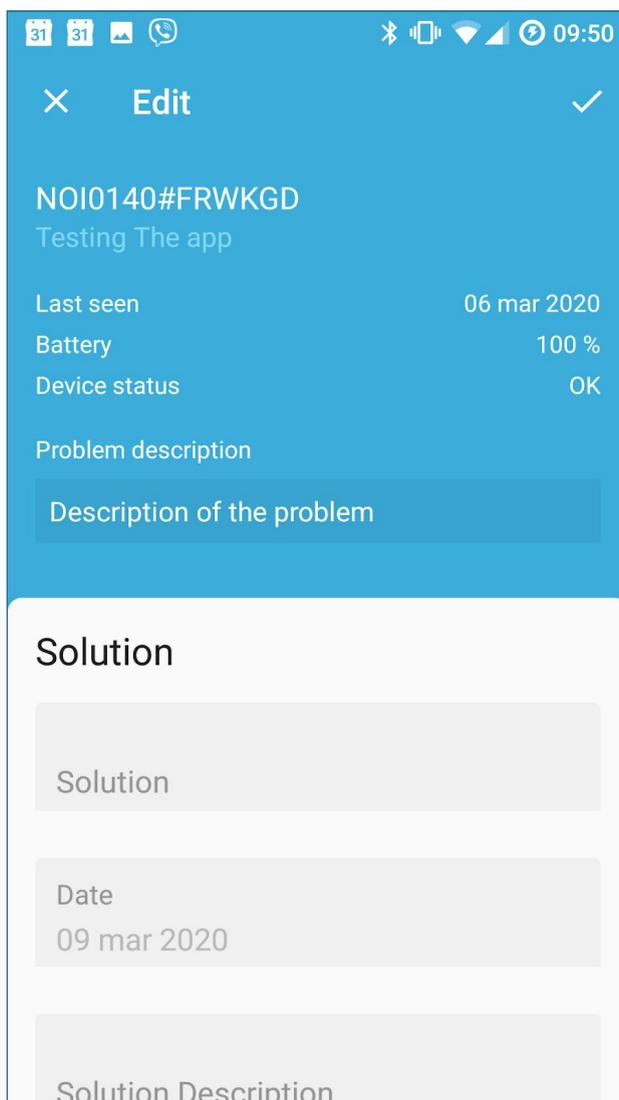


Figure 9: beacon Android app single issue view.

In this view the user is allowed to see the following information of the issue:

1. issue title;
2. problem description.

Moreover the user is able to see the following information about the beacon associated to the issue:

1. beacon name;
2. last seen (last date that a beacon has been seen by an app that uses the official SDK with a trusted user);
3. battery status;
4. device status.

4.2.1 Resolve an issue

In the “*Single beacon view*” the logged user, according to his role and permissions, is allowed also to close the issue.

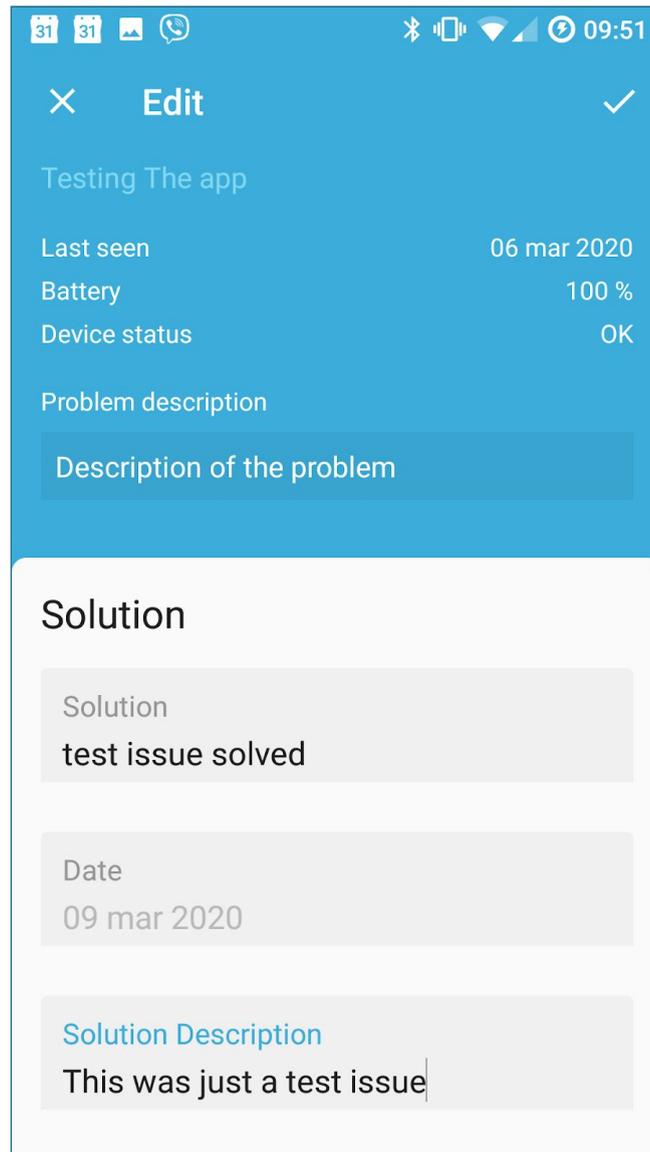


Figure 10: beacon Android app close issue.

In order to close an issue the beacon maintainer has to edit the “*Solution*” and the “*Solution Description*” fields and click on the check on top right of the view (see Figure 10).