

User manual iotroam

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1 Introduction

This document is intended as a guide for users at institutions who have rights to register and manage iotroam (IoT) devices.

This document addresses:

1. Brief description of iotroam;
2. Description of user functionalities of iotroam;
3. Manuals for registering and managing (IoT) devices in iotroam.

Note 1: The reference to terms on the portal are in English. If the language setting is set to Dutch, logically Dutch terms are displayed in the portal.

Note 2: the screenshots are from a browser on a PC or laptop. On a smartphone or tablet, it probably looks different, but the terms are the same.

1.1 Brief description of iotroam

With iotroam, the ICT administrator at an institution gets a centralized solution to design, manage and set policies for network access of all (WiFi and wired) connected IoT devices (sensors, VR glasses, cameras, access systems, etc). Authorized users within an institution can connect IoT devices to the (WiFi) network through a self-service portal in a simple, secure and traceable way. They can also view their registered devices and can change or delete them.

1.2 Description user functionalities of iotroam

A user with IoT devices, for example a teacher, student or researcher, has the ability to use the self-service portal to:

- Personal IoT devices to add, modify and delete. These are personal devices, such as smartwatches. The administrator can also determine that users will not have this ability;
- Add, modify and delete IoT devices to a group, but only in groups for which the user has permissions. For example, a student can add a lab device for his/her practicum or a robot for the time period he/she will experiment with it;
- View all IoT devices and their details within the group(s) to which the user has permissions;
- If a user is assigned the role of group owner, they can invite others to join the group. The group owner can manage the users of the group and also make another user owner.

2 Manuals

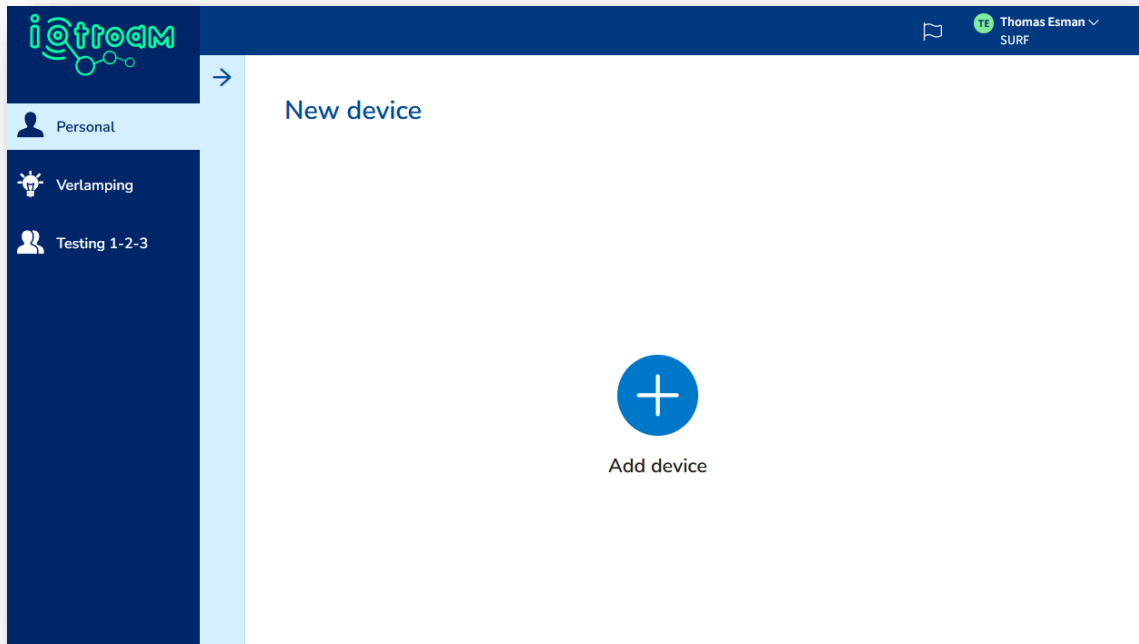
2.1 Login to the self-service portal

Go to <https://www.iotroam.nl>.

Click on 'Login'.

You will now be taken to the SURFconext login page for iotroam. Select your institution and log in with your institution account.

You are now logged in to the iotroam portal and will see the screen below.



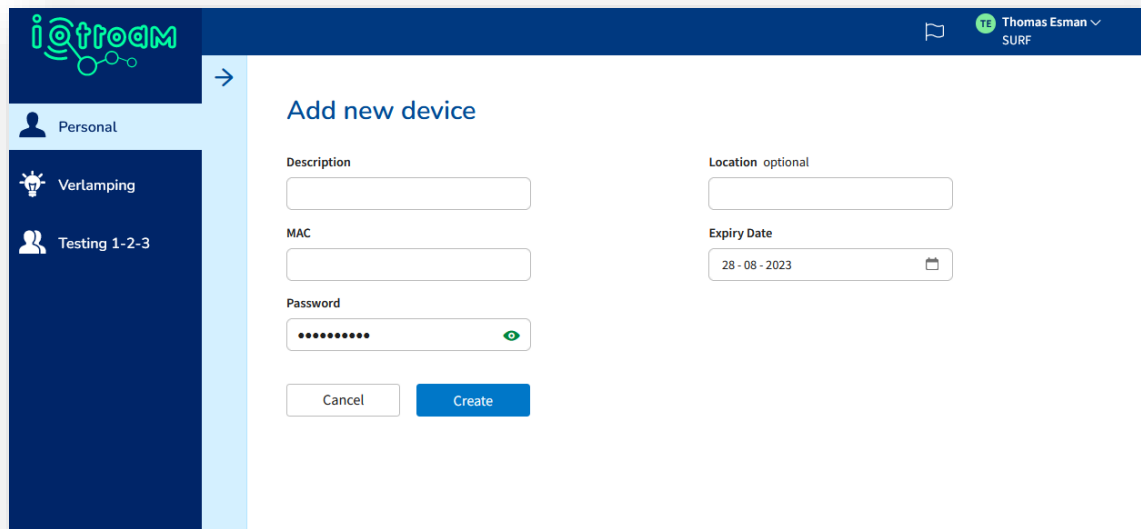
On the left side at the top is Personal. Depending on your institution's policy, you can add a number of personal devices here. Below that are the groups to which you have been granted permissions. These permissions are set by your IT department.

By clicking on the arrow in the light blue bar, you will see your personal devices or the devices in the corresponding group.

Note: If your browser window is wide enough, the light blue bar will be fully visible immediately.

2.2 Add personal device

Click on Personal on the left side. Then click on blue +-sign with 'Add device' below it. You will now see the screen below.



The screenshot shows the 'Add new device' form in the iotroam web interface. The interface has a dark blue header with the 'iotroam' logo on the left and a user profile 'Thomas Esman SURF' on the right. A sidebar on the left contains navigation options: 'Personal', 'Verlamping', and 'Testing 1-2-3'. The main content area is titled 'Add new device' and contains the following fields:

- Description:** A text input field.
- Location optional:** A text input field.
- MAC:** A text input field.
- Expiry Date:** A date picker field showing '28-08-2023'.
- Password:** A password input field with a green eye icon to toggle visibility.

At the bottom of the form are two buttons: 'Cancel' and 'Create'.

Enter a description of the device.

Find the MAC address of the device and enter it under 'MAC'. The MAC address is often found on a sticker on the device and has the following syntax XX-XX-XX-XX-XX-XX, where the X can have a value from 1 to 9 or A to F (hexadecimal).

The device location and expiration date are optional to enter. The expiration date is the date after which the device can no longer connect to the network. 14 and 7 days prior to the expiration date, the user will receive an e-mail with an opportunity to enter a new expiration date. Of course, the user can also let it expire.

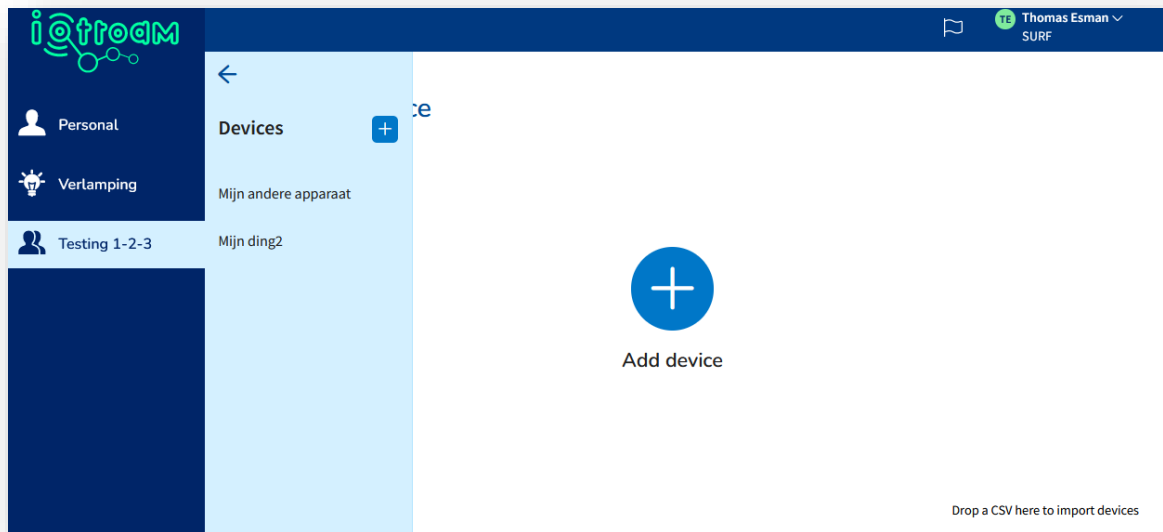
The 'Password' field contains a randomly selected and unique WiFi key. Clicking on the green eye shows the password.

Click on 'Create' to register the device.

Now the device can be connected to the WiFi network by choosing the SSID 'iotroam' and entering the iotroam password as the WiFi key or WiFi password.

2.3 Groups

A user who is a member of one or more groups will see the names of the corresponding group or groups on the left side under 'Personal'. If a group is not listed but is needed, contact the institution's IT helpdesk.



Click on the name of a group and then the arrow in the light blue bar to see a list of the registered devices in that group. Click on the a device to view its details.

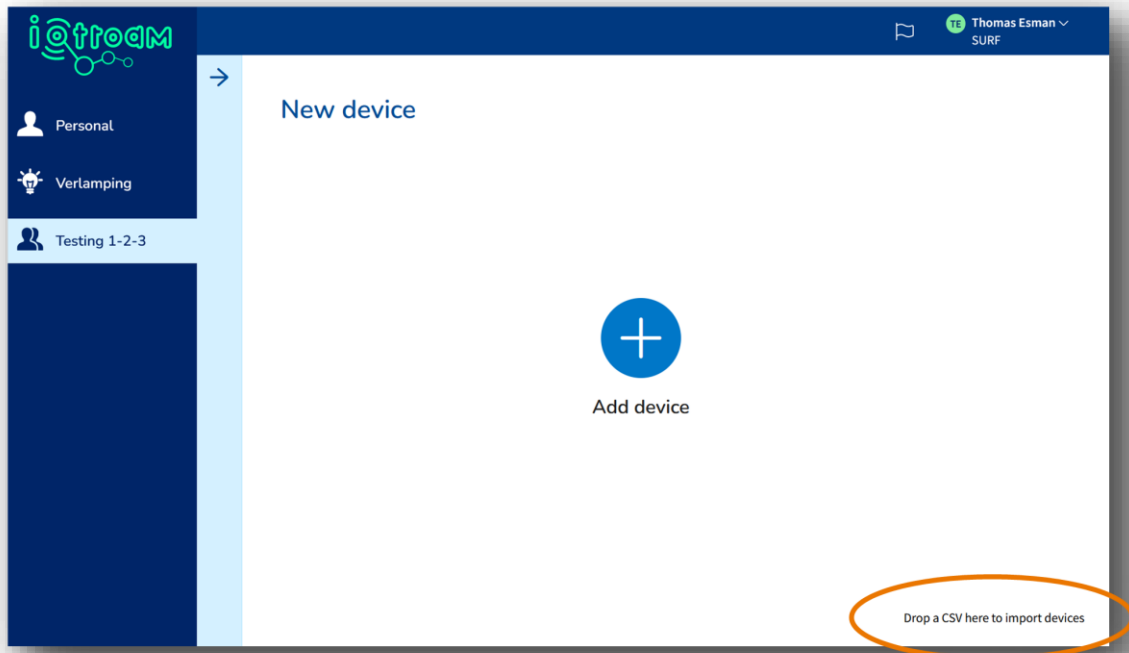
Note: If your browser screen is wide enough, the light blue bar will immediately be fully visible.

2.3.1 Add a device in a group

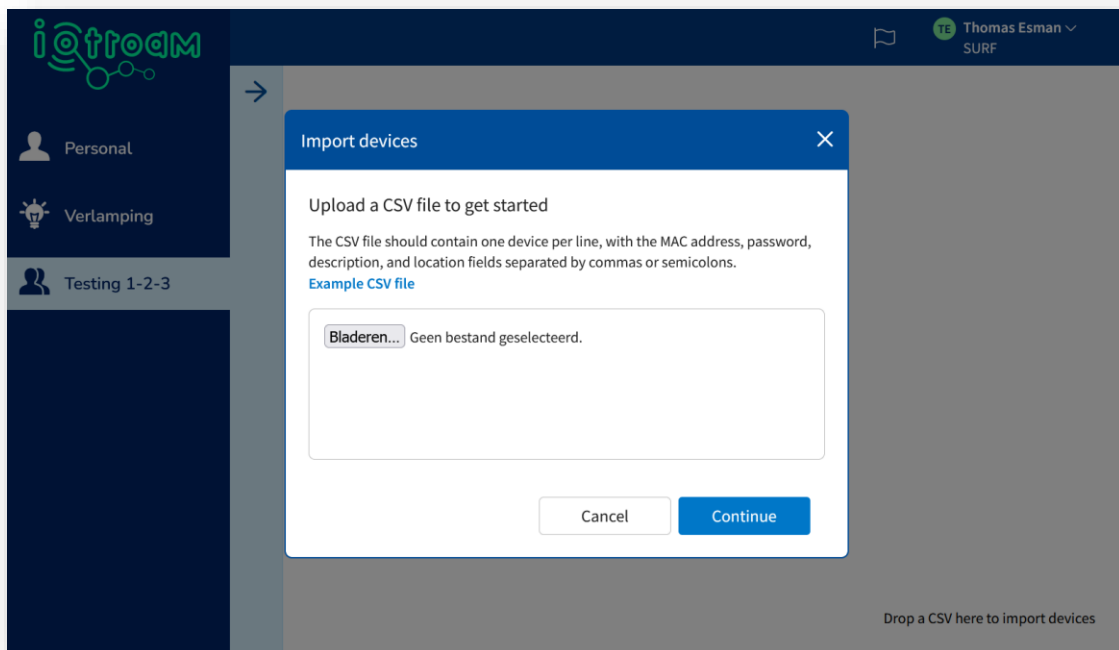
Click on the name of the group to which the device is to be added. Then click on the large +-symbol with "Add device" below it or in the device overview in the light blue bar on the + next to "Devices". Then go through the same steps as for a personal device.

2.3.2 Add devices in a group with CSV import

To add multiple devices in a group, it is possible to import them via a CSV file. An example of the CSV file can be downloaded in the portal. Click on the group where the devices should be added to. Click on the sentence 'Drag a CSV file here to import devices' in the lower right corner.



You will now see the screen below. From there, click on 'Preview CSV file' to download the preview.



When the CSV file is ready, it can be selected via 'Browse...'. After that, click on the Continue button. The list of devices is now displayed and a check is done for the correctness of the data, such as duplicate MAC addresses and whether a MAC address has the right number of characters and right characters (hexadecimal).

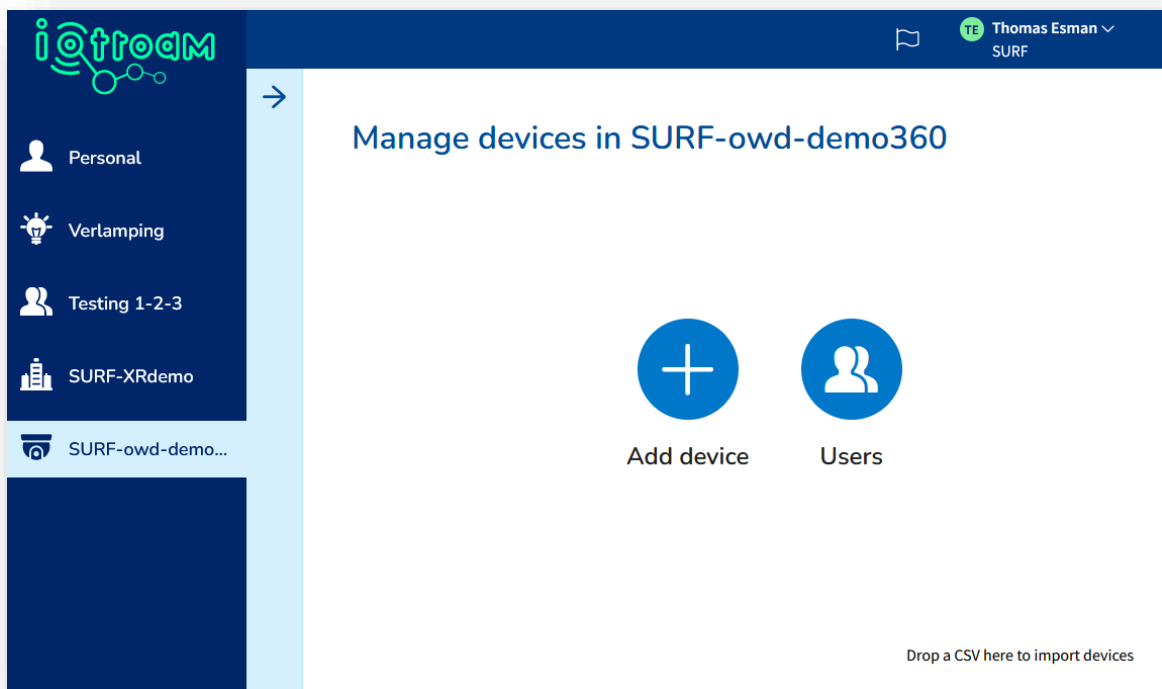
Important:

- MAC address and password are required in the CSV file, description and location are not. Description is recommended, though. If you do not want to fill a field, leave it blank and put the comma down before the next field, unless it is the last field;
- The password in the CSV file you have to generate and fill in yourself. You can choose this yourself. The reason behind this is that it takes a lot of time to find the password generated by iotroam in the iotroam portal for all imported devices afterwards. By choosing this yourself with CSV import, it is immediately known what it is with which device. You can optionally use a password generator.

2.4 Group owner

A user can be granted the rights of group owner. These rights can be granted by the institution's IT department or by another group owner. A group owner can invite users to join the group through a link or QR code. A group owner can also manage group members: delete or make them group owners. All members in a group have the same rights to add, modify or delete devices in the group.

When a user selects the group they are a group owner of, the screen below appears. The Users button is the difference from regular group members.



2.4.1 Create group invite

The group owner creates an invite within the group and can then distribute it via a QR code or a link. The first step is to click on the Users button. The screen with the current group members is displayed.

Members Manage invites

| Name | E-mail | Owner |
|----------------|--|---|
| Thomas Esman | thomas.esman@surf.nl | <input checked="" type="checkbox"/> |
| Sven de Ridder | sven.deridder@surf.nl | <input checked="" type="checkbox"/> Remove |

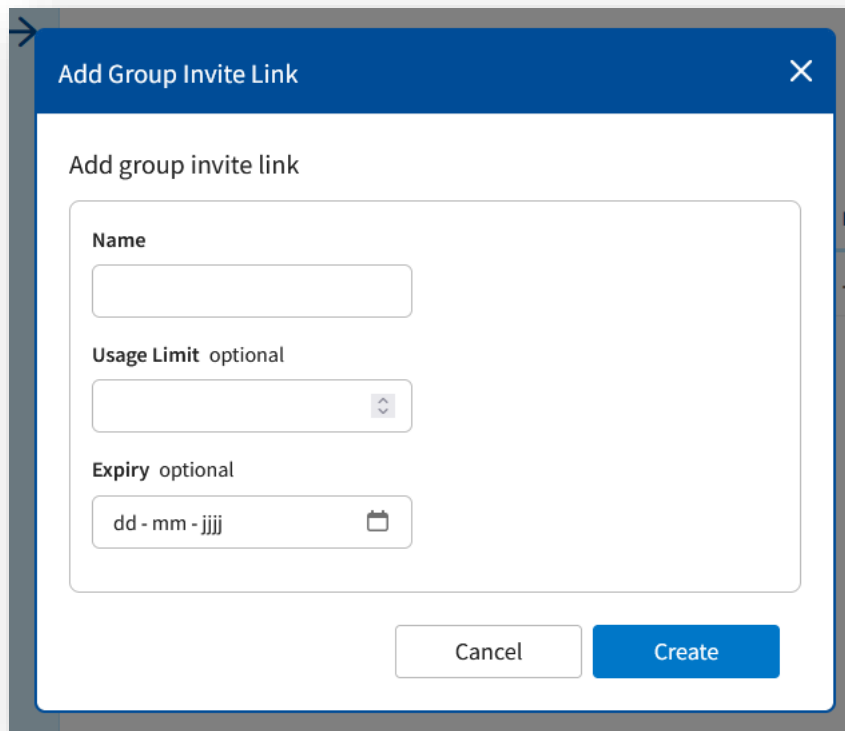
Then click Manage invites. The overview of active group invites is displayed.

Group Invite links Add

| Name | Usage | Expiry |
|-------|-------|--------|
| OWD24 | 0 | - |

< 1 >

Click on Add. The screen below is displayed.



Add Group Invite Link

Add group invite link

Name

Usage Limit optional

Expiry optional

dd - mm - jjjj

Enter a **name**.

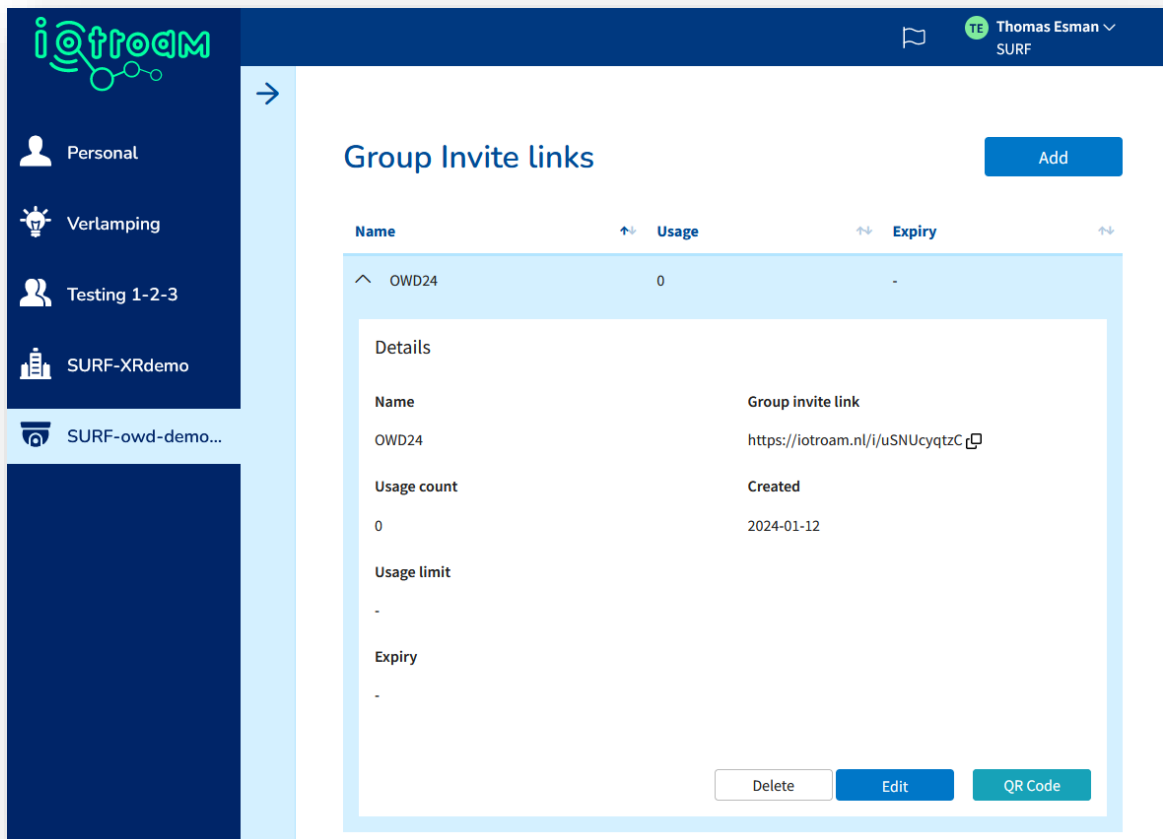
Usage limit is optional. This is the maximum number of times the invite can be used.

Expiry date is optional. After this expiration date, the invite will no longer work.

Click on Add to create the group invite. It appears in the overview of group invites.

2.4.2 Sending group invites

Start from the group invite overview screen. Click on the invite you want to send. The details of the invite are displayed as shown in the following screen.



The screenshot shows the iotroam web interface. On the left is a dark blue sidebar with the iotroam logo and navigation items: Personal, Verlamping, Testing 1-2-3, SURF-XRdemo, and SURF-owd-demo... The main content area is titled 'Group Invite links' and features an 'Add' button. Below the title is a table with columns for Name, Usage, and Expiry. A row for 'OWD24' is expanded to show details:

| Name | Usage | Expiry |
|-------|-------|--------|
| OWD24 | 0 | - |

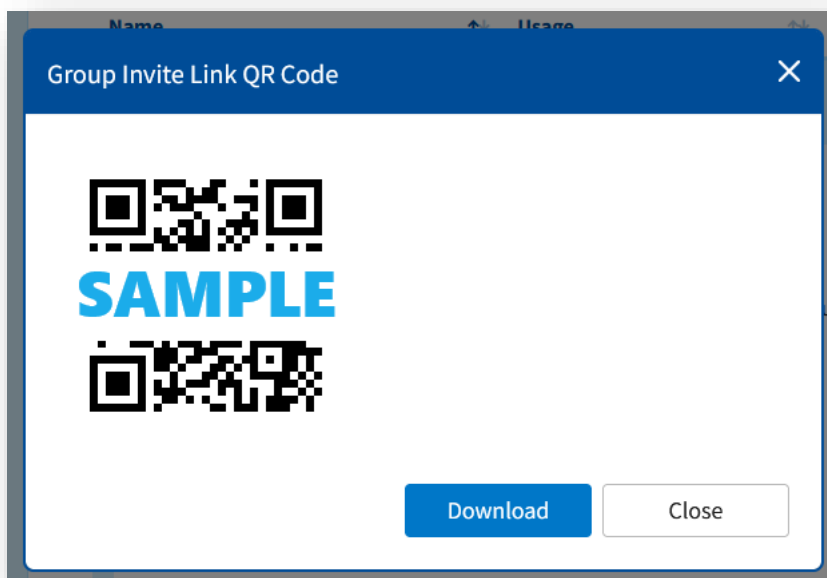
Details for the selected link:

| | |
|-------------|---|
| Name | Group invite link |
| OWD24 | https://iotroam.nl/i/uSNUcyqtzC |
| Usage count | Created |
| 0 | 2024-01-12 |
| Usage limit | - |
| Expiry | - |

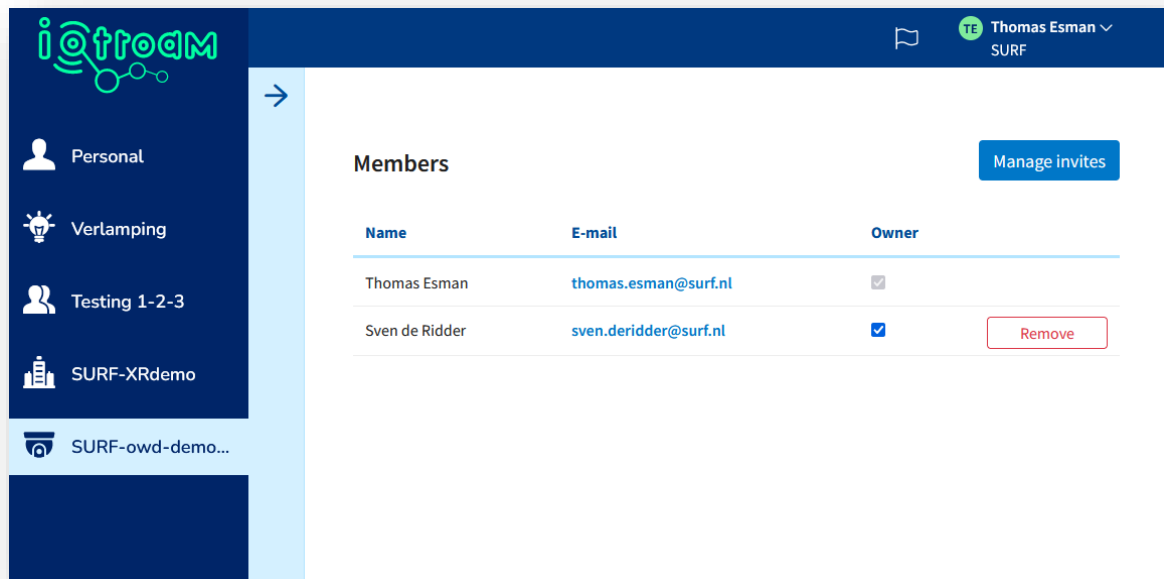
Buttons at the bottom right of the details panel: Delete, Edit, and QR Code.

Clicking on the icon to the right of the Group invite link will copy the link to the clipboard. It can then be pasted into a medium of your choice, such as an e-mail or messaging app.

It is also possible to generate a QR code. To do so, click on the QR Code button at the bottom right. The QR code for the corresponding invite will appear.



The screenshot shows a dialog box titled 'Group Invite Link QR Code'. It contains two QR codes, with the word 'SAMPLE' in large blue letters between them. At the bottom, there are 'Download' and 'Close' buttons.



A group owner removes a member from the group by clicking the Remove button. This does not remove a user from iotroam as a user, only from the group. Removing a user from iotroam can be done by the IT department.

A group owner makes a member group owner by checking the Owner checkbox behind the name of the member. Unchecking this box removes the rights of a group owner.

2.5 Extend a device

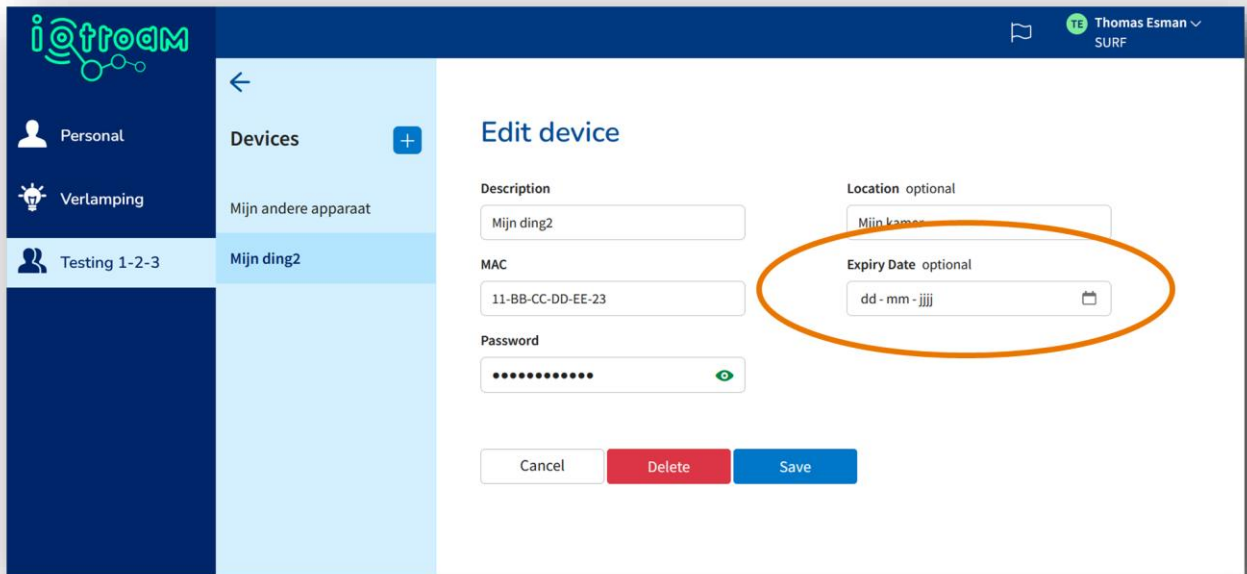
When the expiration date of a device is approaching, the owner, in case of a personal device, or the group members, in case of a device in a group, get an email with the notification that the device will expire soon (**the functionality of the reminder email is still in progress**). The default expiration time for personal devices and groups is determined by the institution's iotroam administrator. This may be a different time for each group. If a device expires in iotroam, it will not be able to connect to the network after that date. Your institutions helpdesk can activate a device when it expired unintended.

Go through the following steps to renew a device.

Log into the iotroam portal and go to the device to be extended.

Click on the Edit button.

Choose a new expiry date for the device and click Save.



The screenshot shows the 'Edit device' interface in the iotroam portal. The left sidebar contains navigation options: Personal, Verlampng, and Testing 1-2-3. The main content area is titled 'Edit device' and contains the following fields:

- Description: Mijn ding2
- Location optional: Mijn kamer
- MAC: 11-BB-CC-DD-EE-23
- Expiry Date optional: dd - mm - jjjj (highlighted with an orange circle)
- Password: [Redacted]

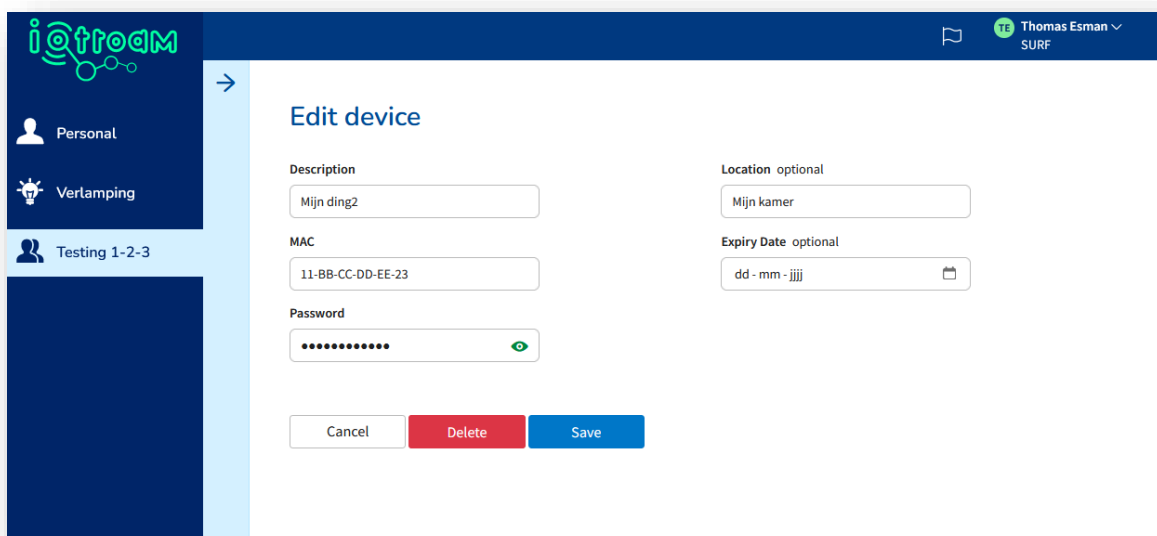
At the bottom, there are three buttons: Cancel, Delete, and Save.

2.6 Delete a device

If you want to delete a device from iotroam, follow these steps.

Log in to the iotroam portal and click on the device you wish to delete. Click Edit and then click the Delete button. The device is now deleted.

This works the same for personal and group devices.



This screenshot is identical to the previous one, showing the 'Edit device' page. The only difference is a right-pointing arrow in the sidebar next to the 'Testing 1-2-3' option.

If a device was accidentally deleted, contact your institutions helpdesk. They can arrange for the device to be restored.

2.7 Settings

As a user you have the option to choose your language. To do this, click on the little flag next to your name in the top right corner of the screen. Choose the desired language. By default, the language setting of the browser is chosen.

