

1 USER MANUAL OF CLOUD GUI

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3 TERMINOLOGY

Term or acronym	Explanation
Admin operator	Operator that has all permissions to operate the system. See Operator permissions and limitations for more info.
Base group	Operators 'root group' in tree-like group structure. The operator can see all groups and charging stations under that group.
Basic operator	Operator that has limited permissions to operate the system. See Operator permissions and limitations for more info.
Charging user	End user of the charging station. Person, who charges his/her EV at the charging station.
CSV	Comma Separated Value format. A (text based) data file that uses comma as a data column separator. CSV files can be opened and modified with all commonly used spreadsheet applications.
Free charging	Anonymous charging. Charging station does not require chargers to be identified.
Operator	Charger management system operator.
Operator domain	Operators 'horizon' over the organization. Operator domain can be equal to organization (domain), which means that the operator can see all charging groups and charging stations in the organization. Operator domain can also be only a part of the organization domain. Meaning, the operator can only see that part of the organization. Operator domain is defined by setting a 'base group' (a group in the organization's tree-like group structure) for the operator. Operator can then see everything (charging groups and charging stations) under that particular group. Operator domains can be overlapping, which means that operator who has base group higher in the group structure can see and control all base groups that derive from his base group.
Organization	Environment containing varying number or charging groups and charging stations. Operators cannot see charging groups or charging stations which reside in some other organization than their own.
Orphan charging station	A charging station that is not associated with any charging group.
RFID token	Usually, a small physical token, which is used to identify charging station user. Tokens come in various sizes and shapes. Token communicates with the charging station wirelessly.

4 OPERATOR PERMISSIONS AND LIMITATIONS

The system has two kinds of operators:

4.1 Admin operator

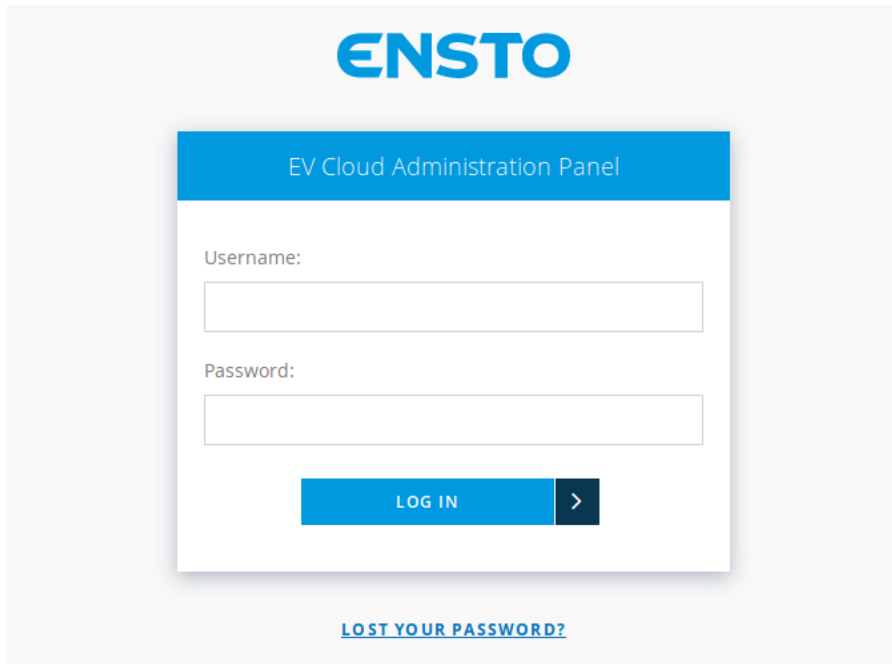
Admin operator has all permissions and no limitations.

4.2 Basic operator

Basic operator has limited permissions to operate the system. Basic operator **cannot**:

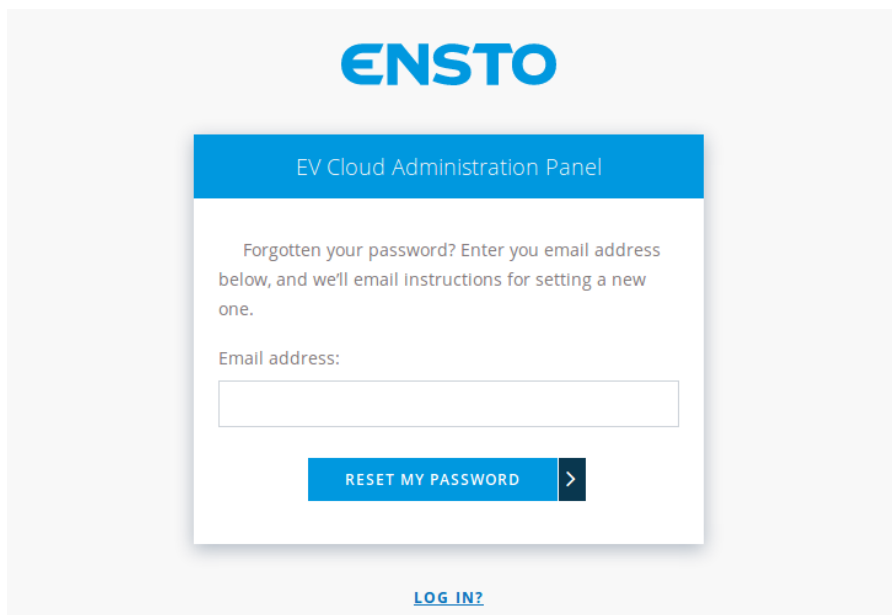
- Manage other operators (except himself).
- Add or remove charging stations.
- Remove users.
- Delete authorization tokens from charging users.
- Perform firmware updates to charging stations.

LOG IN



The image shows the login page for the ENSTO EV Cloud Administration Panel. At the top, the ENSTO logo is displayed in blue. Below it, a blue header bar contains the text "EV Cloud Administration Panel". The main form area is white and contains two input fields: "Username:" and "Password:". Below the password field is a blue button with the text "LOG IN" and a right-pointing chevron. At the bottom of the form, there is a blue link that says "LOST YOUR PASSWORD?".

Enter your username and password and then press *LOG IN*. If you have lost or forgot your password, press *LOST YOUR PASSWORD*.



The image shows the password reset page for the ENSTO EV Cloud Administration Panel. At the top, the ENSTO logo is displayed in blue. Below it, a blue header bar contains the text "EV Cloud Administration Panel". The main form area is white and contains a paragraph of text: "Forgotten your password? Enter you email address below, and we'll email instructions for setting a new one." Below this text is an input field labeled "Email address:". At the bottom of the form is a blue button with the text "RESET MY PASSWORD" and a right-pointing chevron. Below the button, there is a blue link that says "LOG IN?".

Enter your email address and press *RESET MY PASSWORD*. Shortly you should receive an email which contains instructions on resetting your password.

DASHBOARD

Dashboard gives you an overall status view on charging points of your selection.



Top row functionalities:

- [Operator functions](#)

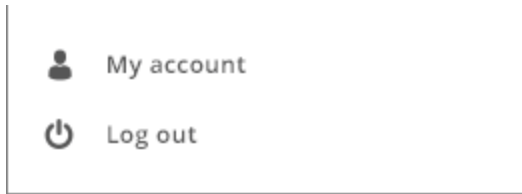
Links to different pages:

- [Dashboard](#)
- [Charging groups](#)
- [Charging stations](#)
- [Map view](#)
- [Operators](#)
- [Charging users](#)
- [Log out](#)

4.3 Operator functions



Operator functions contains operator related settings.



My account takes you to a view in which you can change your information.

Log out logs you out from the system.

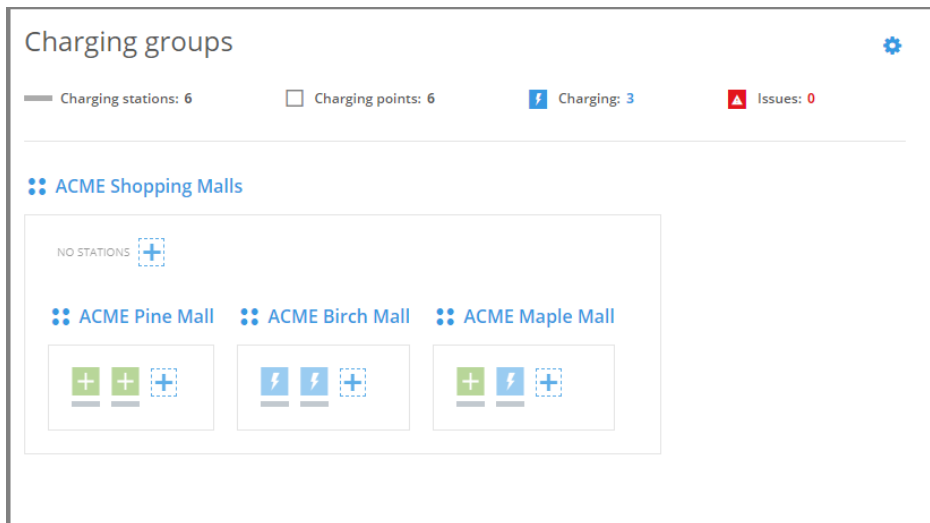
5 DASHBOARD SECTIONS

Dashboard is divided into four sections.

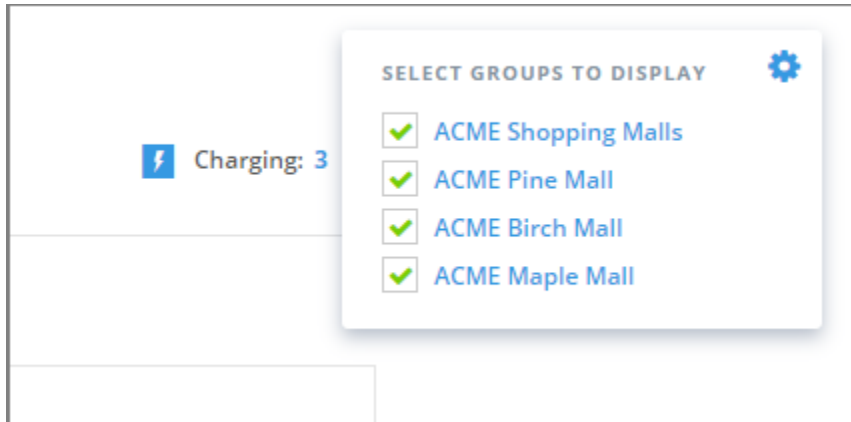
1. [Charging groups view and selection](#)
2. [Status summary](#)
3. [Cumulatives over last 24 hours](#)
4. [Consumption over selected timeframe](#)

5.1 Charging groups view and selection

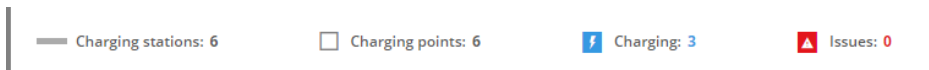
Charging group view shows you the logical grouping of charging stations.



By clicking the gearwheel image you can select which charging point groups you want to display.



Some overall status information is displayed on top of the charging groups view.



This current information shows that selected groups contain in total:

- 6 charging stations (physical devices).
- 6 charging points (one charging station can contain multiple charging points).
- 3 charging points that are currently charging.
- 0 charging points which are in some kind of error condition.








5.1.1 Meaning of charging group symbols



The name of this charging group is *ACME Shopping Malls*. All charging stations enclosed by the thin rectangle belong to this group. Charging group can also contains other charging groups.

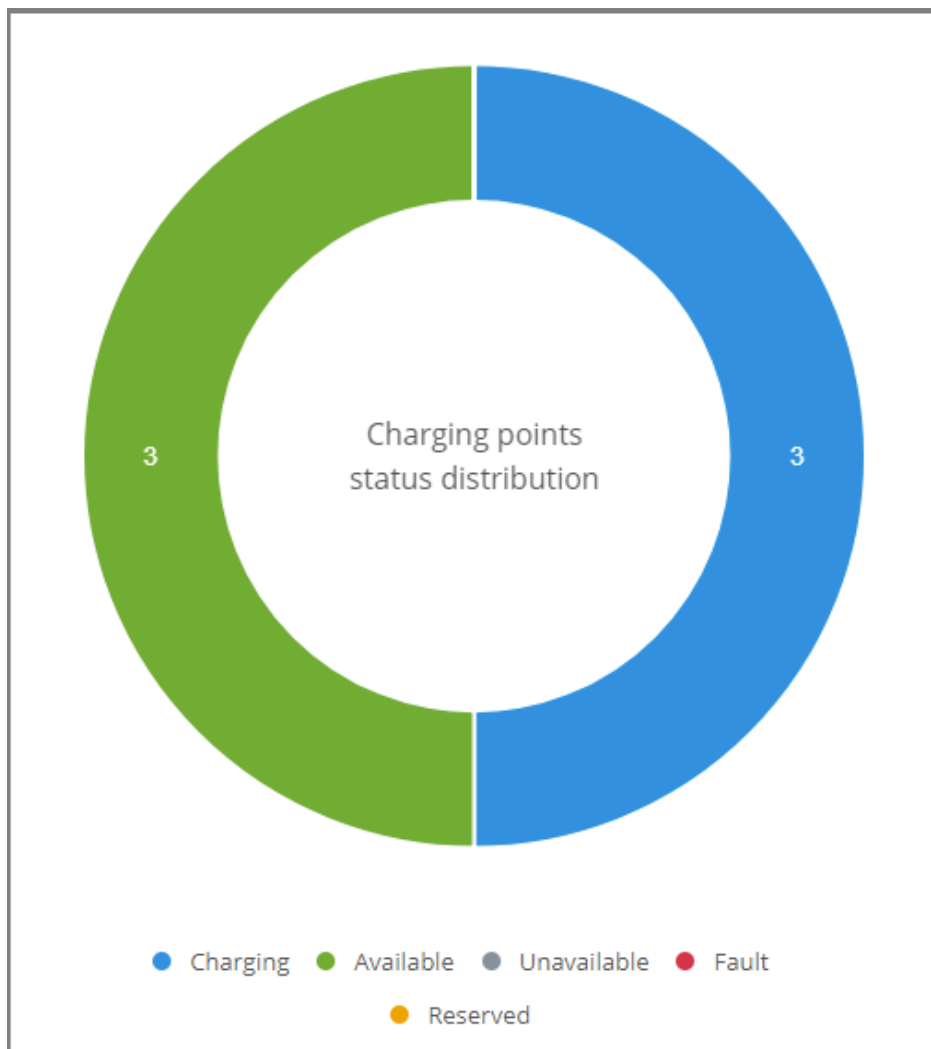


Charging station (the horizontal line below squares). This is a physical device which can contain multiple charging points (squares). This particular charging station contains 3 charging points.

						
Charging	Available	Unavailable	Issue detected	Suspended	Edit group	Disabled

Charging point information icons.

5.2 Status summary

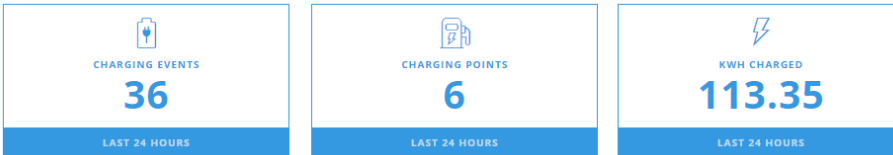


The donut diagram shows a status summary of charging points in operators domain.

5.3 Cumulatives of last 24 hours

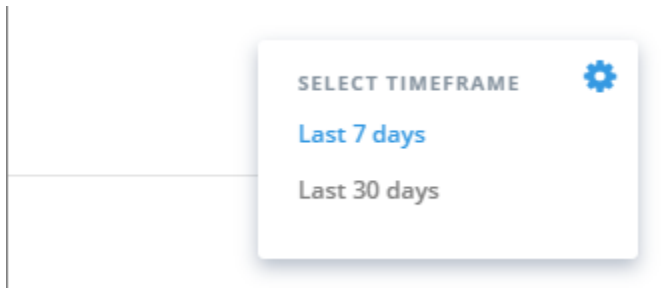
Cumulatives are calculated over charging points in operators domain. Cumulatives show:

- The number of charging events.
- The number of used charging points.
- Total amount of energy charged.

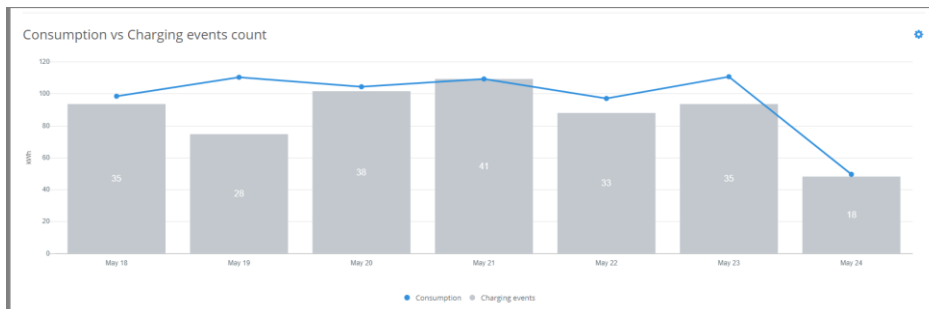


5.4 Consumption over selected timeframe

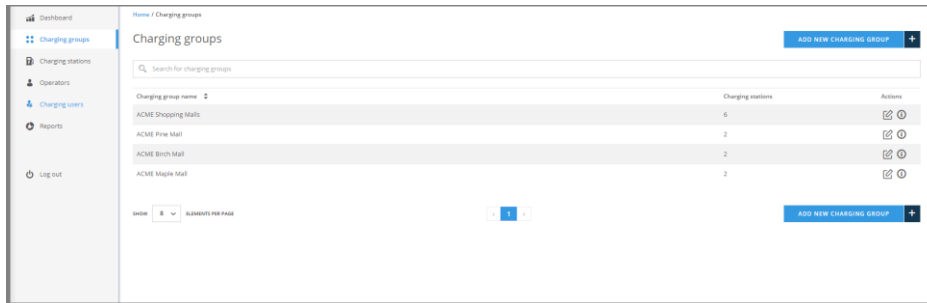
Timeframe can be selected from the gear icon at the right edge of the page.



Consumption (kWh's) over charging events count shows the amount of electricity charged and number of charging sessions as a diagram over selected time frame. Diagram shows the data over entire environment regardless of selected groups.



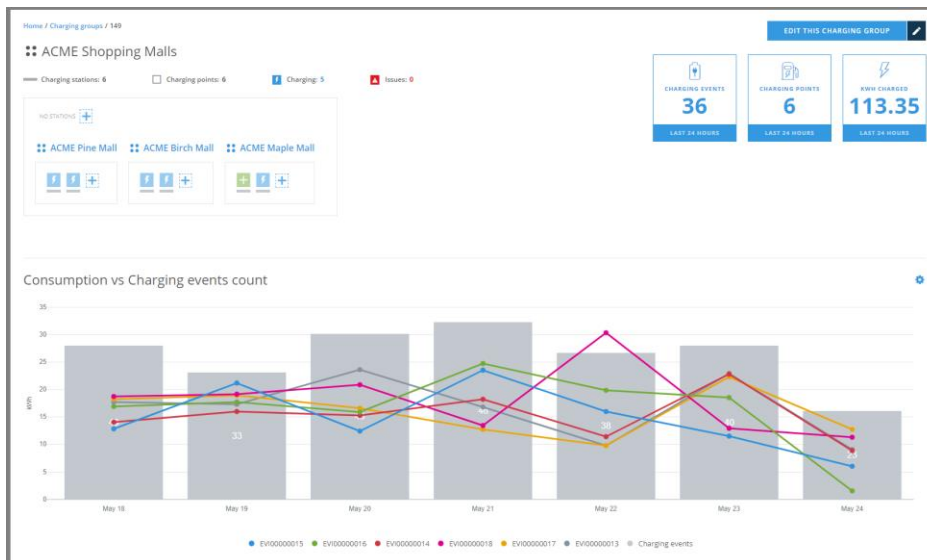
6 CHARGING GROUPS



Charging groups views allows you to manage charging groups. On charging group list view, you can:

- Jump to [charging group statistics view](#) (click group name or info button at the end of line).
- [Edit charging group](#) (click the edit button).
- [Add new charging group](#).

6.1 Charging group statistics view



On this view you can see the statistics information of this charging group, very similar than on dashboard. From this view you can jump to [edit charging point group](#) view.

6.2 Edit charging group

Home / Charging groups / 130 / Edit charging group

Edit charging group

CANCEL SAVE CHANGES

NAME
ACME Pine Mall

PARENT GROUP
ACME Shopping Malls

Charging stations

ADD CHARGING STATION TO THIS GROUP
Search for charging stations

EV100000013 Charging points: 1
EV100000014 Charging points: 1

Delete this group
DELETE THIS GROUP

CANCEL SAVE CHANGES

On this view you can:

- Change charging group name.
- Change charging group parent. Effectively that means that you move this group under some other group.
- Add charging stations to this group.
- Remove charging stations from this group.
- Delete this group. **Note!** Group to be deleted must be empty, that is, it cannot contain charging stations or subgroups. Should this group have any subgroups, they must be moved under some other group.

6.3 Add new charging group

Home / Charging groups / Add new charging group

Add new charging group

CANCEL SAVE CHANGES

NAME

PARENT GROUP
Select charging group

Charging stations

ADD CHARGING STATION TO THIS GROUP
Search for charging stations

DELETE THIS GROUP

CANCEL SAVE CHANGES

When adding a new charging group, the only mandatory information is its name. If you do not select *PARENT GROUP*, this group will be placed right under your base group.

7 CHARGING STATIONS

Charging station name	Identifier	Charging group	Charging points	Firmware	Actions
EV00000013	EV00000013	ACME Pine Mall	1	A999	[edit] [info]
EV00000014	EV00000014	ACME Pine Mall	1	A999	[edit] [info]
EV00000015	EV00000015	ACME Birch Mall	1	A999	[edit] [info]
EV00000016	EV00000016	ACME Birch Mall	1	A999	[edit] [info]
EV00000017	EV00000017	ACME Maple Mall	1	A999	[edit] [info]
EV00000018	EV00000018	ACME Maple Mall	1	A999	[edit] [info]

Charging stations view allows you to manage charging stations. On charging stations list view, you can:

- [Add new charging station](#).
- [Edit charging station](#) settings (click the edit button).
- [Issue remote commands to charging station](#) (click the info button).

7.1 Add new charging station

General information

CHARGING STATION NAME
Pine Mall entry

IDENTIFIER
acme-sta3211

PARENT GROUP
Select charging group

Information to be entered:

- **CHARGING STATION NAME** : This is a free form name of the station.
- **IDENTIFIER** : This must be the same that is configured to the physical charging station. This information links this station to the physical device.
- **PARENT GROUP** : The group this station belongs to.

7.2 Edit charging station

On this view you can:

- Change charging station name.
- Change charging station (parent) group.
- Delete this charging station. If you delete this station, it becomes an *orphan charging station*.
- Edit charging station advanced settings (available only for admin operators). For advanced settings, see [charging-station-advanced-settings](#).

7.3 Charging station advanced settings

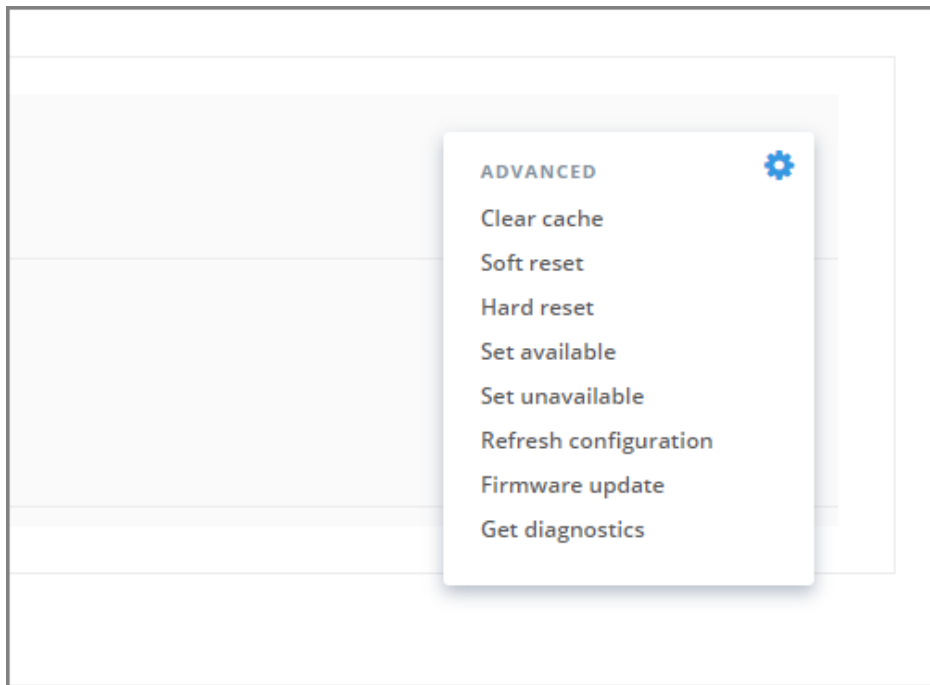
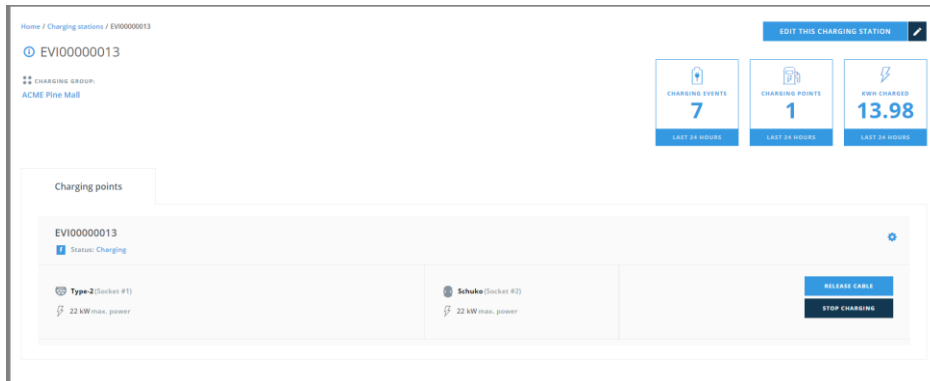
On this view you can edit charging station advanced settings. Before you edit settings, you should *REFRESH CONFIGURATION*. This gets the current settings from the charging station.

Notes:

- Grayed settings are *read-only* settings. Their values cannot be changed.

- Invalid settings may cause charging station to malfunction. Basically, you must know what you are doing.
- Most of the configuration keys are vendor specific.

7.4 Issue remote commands to charging station

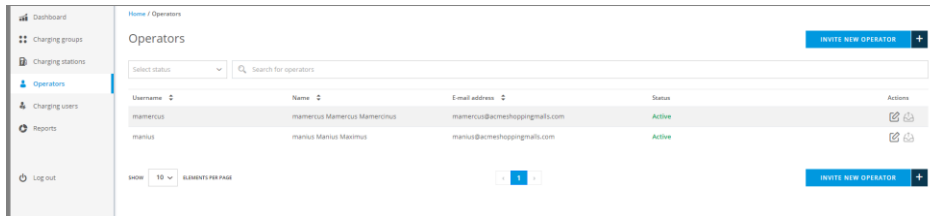


On this view you can:

- Jump to [Edit charging station](#) settings
- *RELEASE CABLE*, this releases charging cable from the charging station.
- *STOP CHARGING*, or alternatively *START CHARGING* depending on charging station *Status*.
- Send remote commands to the charging station. Commands can be found by clicking the small gearwheel image at *Charging points* box:

- *Clear cache* : clears charging station RFID cache.
- *Soft reset* : restarts charging station application.
- *Hard reset* : restarts the whole charging station.
- *Set available* : sets charging station available for charging (enable).
- *Set unavailable* : sets charging station unavailable for charging (disable).
- *Refresh configuration* : Fetches the latest configuration settings from the charging station. This command can also be issue from [charging station settings view](#).
- *Firmware update* : Updates charging station firmware. You must know where update server resides (IP address / DNS name). Also, you must have credentials to the server.
- *Get diagnostics* : Fetches diagnostics from charging station. The same applies here than what applies to *Firmware update*.

8 OPERATORS

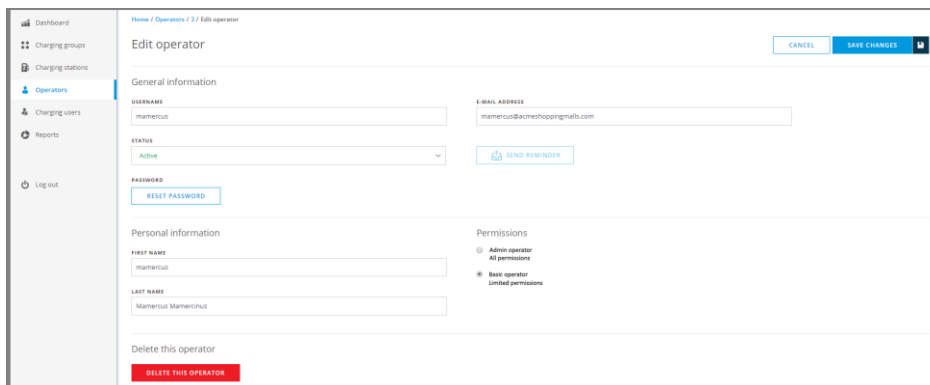


On this view you can:

- Browse and search for operators.
- [Edit operator information](#) (click the edit button).
- [Invite new operator](#).
- Resend invitation e-mail to operator (click the send button).

Note! This view is available only for admin operators.

8.1 Edit operator information



On this view you can:

- Edit operator information.
- Set operator status to *Active* or *Inactive*. Inactive operators exist in the system but they cannot log in.
- Send a reminder e-mail to operator. Reminder can be sent only if the operator has not activated his account yet.
- Send an e-mail to operator to reset his password.
- Set operator permission level.
- Delete operator.

8.2 Invite new operator

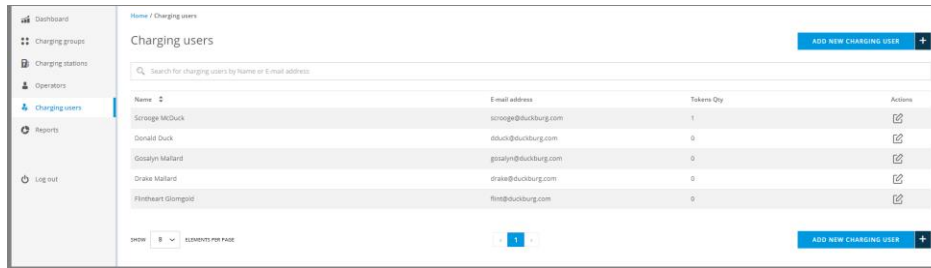


The screenshot shows a web application interface for inviting a new operator. On the left is a sidebar menu with the following items: Dashboard, Charging groups, Charging stations, Operators (highlighted), Charging users, Reports, and Log out. The main content area is titled 'Invite new operator' and contains the following fields and sections:

- Buttons: CANCEL and SEND INVITATION (with a dropdown arrow) at the top right.
- Form fields:
 - E-MAIL ADDRESS
 - CONFIRM E-MAIL ADDRESS
 - USERNAME
 - FIRST NAME
 - LAST NAME
- Permissions section:
 - System administrator
Operator with all possible permissions granted
 - Charging point operator
Operator
- Buttons: CANCEL and SEND INVITATION (with a dropdown arrow) at the bottom right.

On this view you enter the new operator information and send an invitation e-mail to the operator.

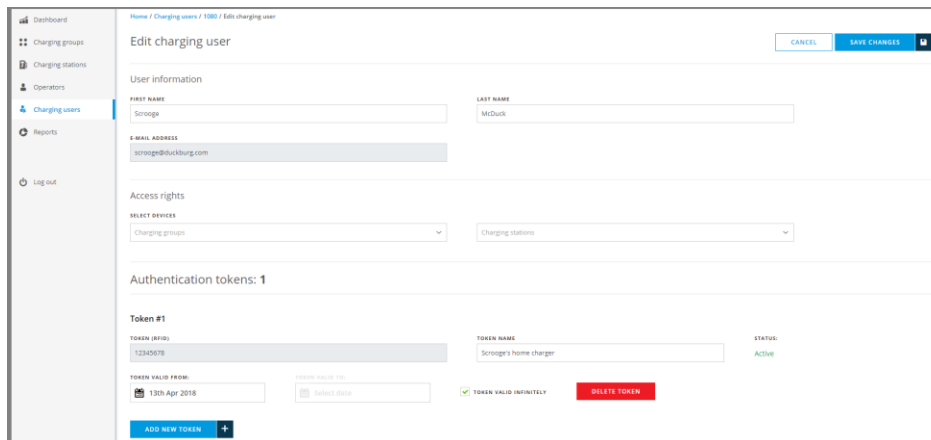
9 CHARGING USERS



On this view you can:

- Browse and search for charging users.
- [Edit charging user information](#) (click the edit button).
- [Add new charging user](#).

9.1 Edit charging user



In this view you can edit charging user information. Basically it is the same as [add new charging user](#), except that you cannot modify e-mail address and RFID token ID's.

9.2 Add new charging user

Dashboard Home / Charging users / Add charging user

Add new charging user

CANCEL SAVE CHANGES

User information

FIRST NAME LAST NAME

E-MAIL ADDRESS

Access rights

SELECT DEVICES

charging groups charging stations

Authentication tokens: 1

Token #1

TOKEN (RFID) TOKEN NAME STATUS

INACTIVE

TOKEN VALID FROM: select date TOKEN VALID TO: select date TOKEN VALID INFINITELY DELETE TOKEN

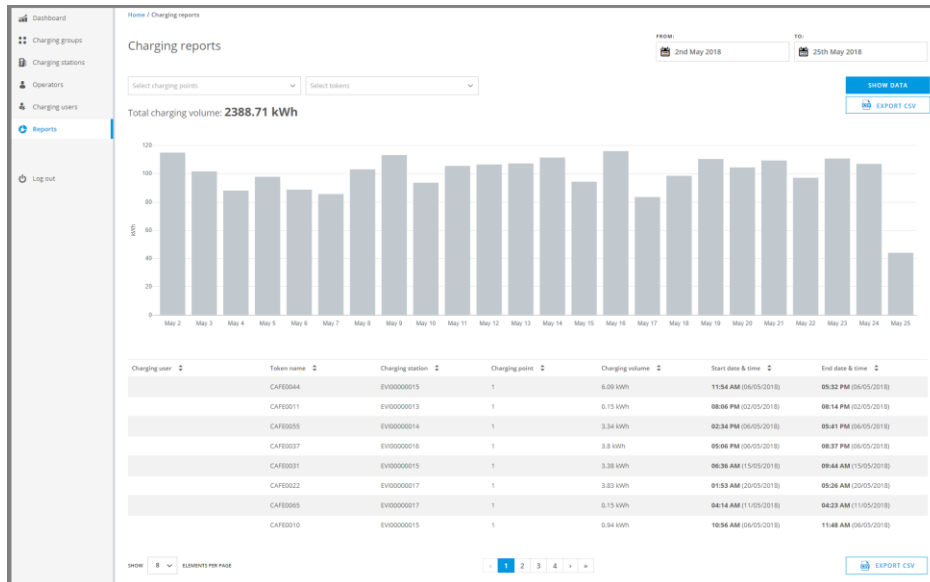
ADD NEW TOKEN +

CANCEL SAVE CHANGES

On this view you can add new charging user information. Description of fields:

- **Access rights** : Charging stations that user is allowed to use.
 - **Charging groups** : User is allowed to use all charging stations that belong to selected groups.
 - **Charging stations** : User is allowed to use selected charging stations.
- **Authentication tokens** : RFID tokens, which are used to identify the user at the charging station. The number of tokens per user is unlimited.
 - **TOKEN (RFID)** : RFID token ID. A unique ID code that charging station reads from the token.
 - **TOKEN NAME** : A friendly name of the token (e.g. *Workplace token*).
 - **TOKEN VALID FROM** : The date from which the token will be valid (usable).
 - **TOKEN VALID TO** : The end date of token validity.
 - **TOKEN VALID INFINITELY** : Token has no validity end date.
 - **DELETE TOKEN** : Deletes the token. Note! This is not allowed for basic operator.

10 REPORTS



On this view you can generate screen or CSV reports of energy consumption statistics of selected charging points and tokens. Description of fields:

- **FROM** : Starting date of report.
- **TO** : Ending date of the report.
- **Select charging points** : Charging points to be included to the report. At least one charging point must be included.
- **Select tokens** : (Charging user) RFID tokens that will be included to the report. If no tokens are selected, all charging events are included, including free charging events.
- **EXPORT CSV** : Generates (and downloads to your browser) a CSV based report file.

11 LOG OUT

Log out from the system. When you log in, the session is valid for 2 hours, that is, after 2 hours you will have to log on again whether or not you have been active with the system.