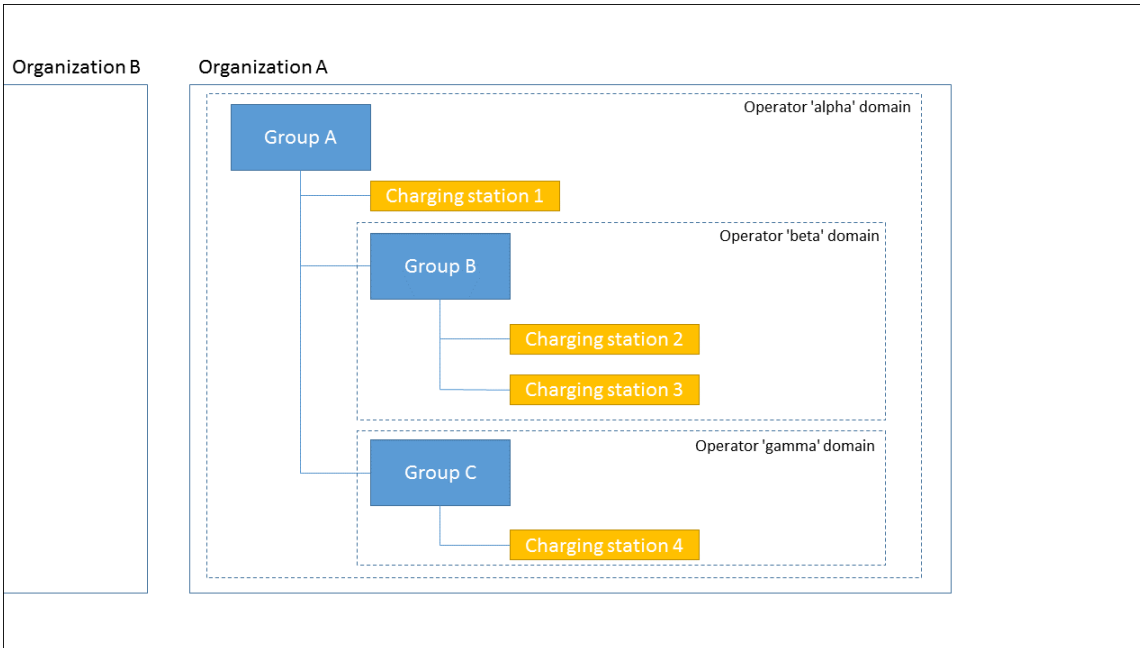# User Manual of EV Manager - V4

Table of contents

Document changes since V3

- Added Invoices.
- New filters on Dashboard.
- New items on Scheduler.
- Added Scheduler event feed.
- Multiple small fixes and changes.

Terms and acronyms

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.
Charging point	A physical EV charging device, which contains one or more charging sockets. Charging sockets on charging point may or may not be used simultaneously, that is, if sockets are not possible to be used simultaneously, reserving one socket reserves the whole charging point.
Charging station	A physical device, which contains one or more charging points.
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.
EV	Electric Vehicle.
Free charging	Anonymous charging. Charging station does not require chargers to be identified.
Operator	Charging point 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. See the image below, which illustrates the operator domain concept.
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.
Socket	In this context, a physical socket at the end of charging cable. There are many different socket standards, and usually EV user must select a charging station which contains a socket that is compatible with his/her EV.

Operator domains

This picture illustrates the concept 'operator domain'.

- Operators in organization 'A' cannot see or manage anything in organization 'B'.
- Operator 'gamma' can manage group 'C' and charger '4'.
- Operator 'beta' can manage group 'B' and charging stations '2' and '3'.
- Operator 'alpha' can manage groups 'A', 'B' and 'C' and charging stations '1', '2', '3' and '4'.

Operator permissions and limitations

The system has two kinds of operators, admin operators and basic operators.
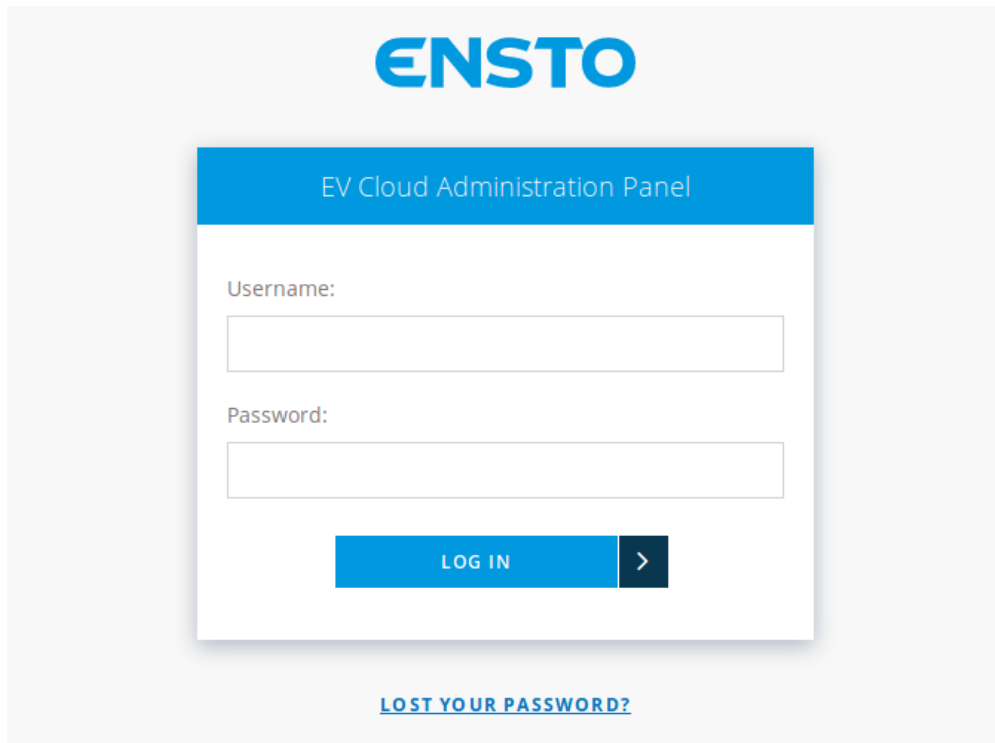
Admin operator

Admin operator has all permissions and no limitations.

Basic operator

Basic operator has limited permissions to operate the system. Basic operator **can not**:
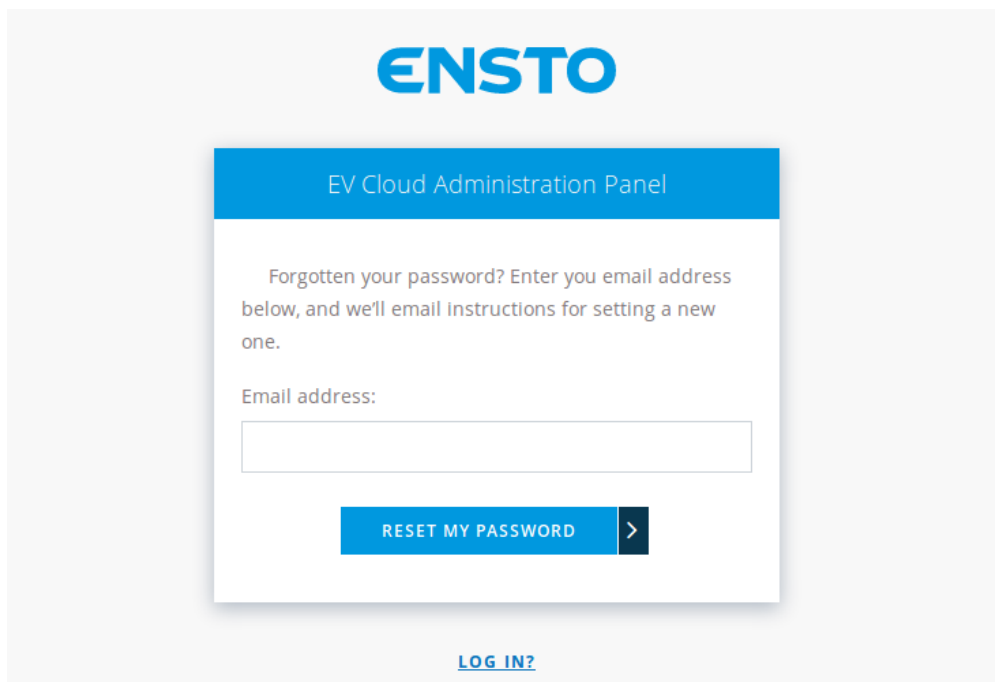
- Manage other operators (except himself).
- Add or remove charging stations.
- Remove users.
- Delete authorization tokens from charging users.
- Perform firmware updates to charging stations.
- Manage scheduled tasks.
- Add or edit charging user groups.
- Manage invoices.

Log in

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

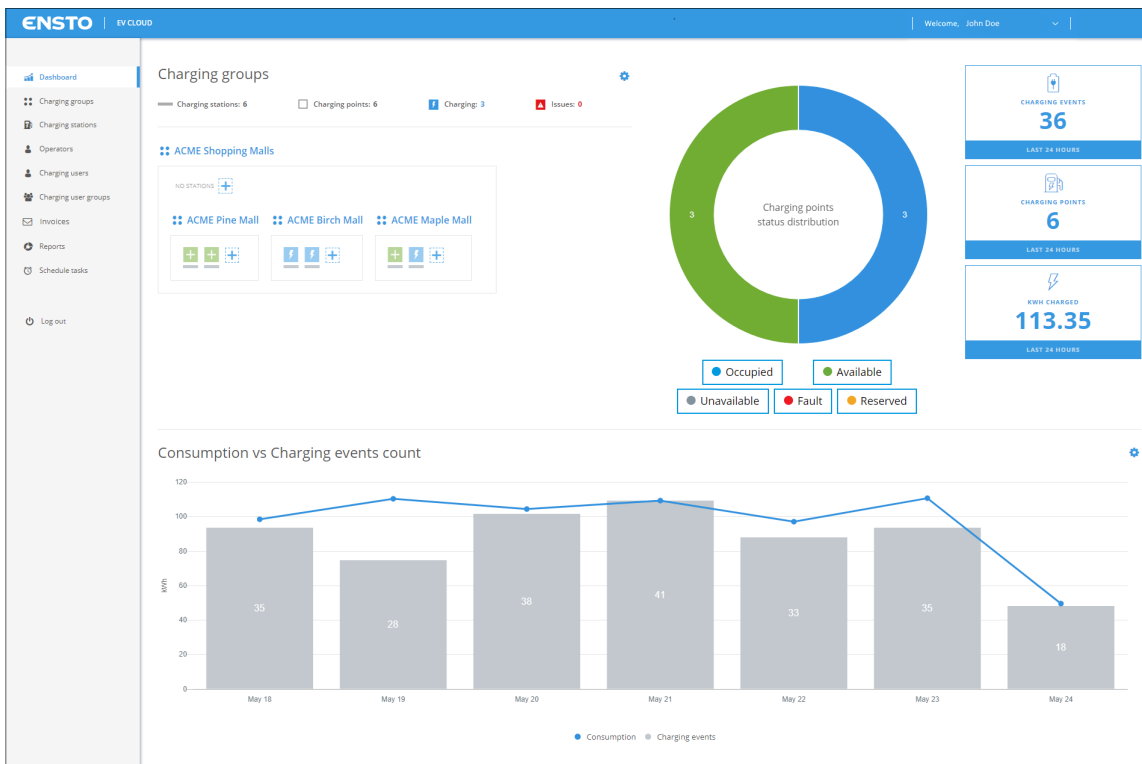Enter your email address and press *RESET MY PASSWORD*. Shortly you should receive an email, which contains instructions on resetting your password.

Dashboard

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

Top right corner functionalities:

- Operator functions

Links to different pages:

- Dashboard
- Charging groups
- Charging stations
- Operators (this link is present only if you are logged in a an admin operator)
- Charging users
- Charging user groups
- Invoices (this link is present only if you are logged in a an admin operator)
- Reports
- Schedule tasks (this link is present only if you are logged in a an admin operator)
- Log out

Operator functions

Operator functions contains operator related settings.
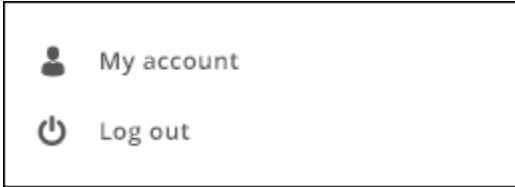
My account takes you to a view in which you can change your information.

Log out logs you out from the system.

# 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

Charging groups view and selection

Charging group view shows you the logical grouping of charging stations. Operator can define charging groups according to his/her needs. See C harging groups for more info.
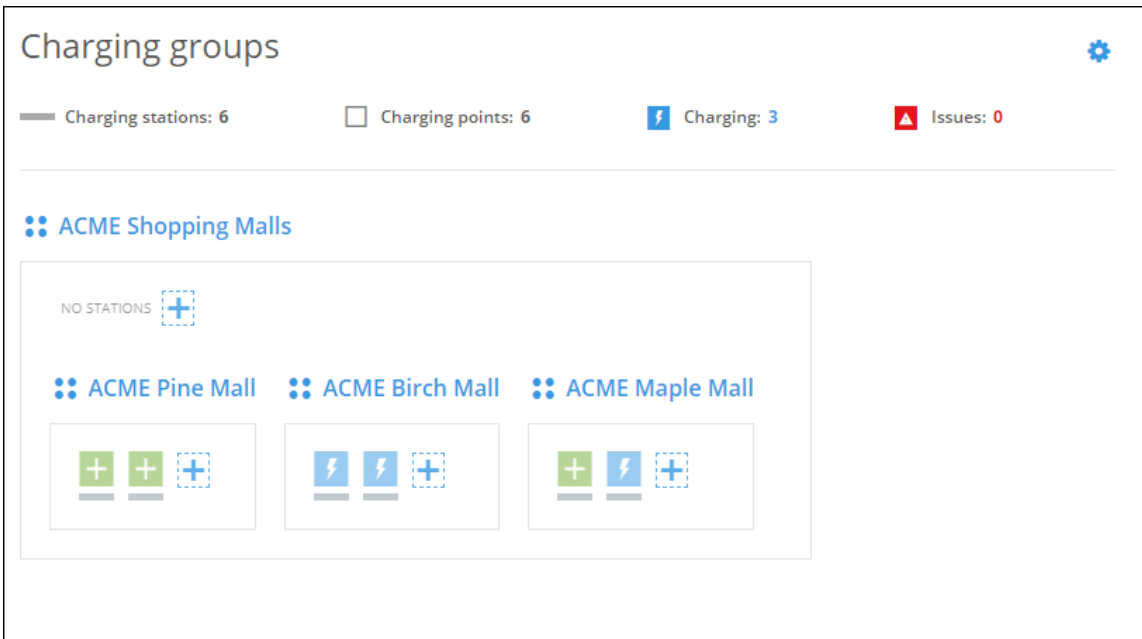
By clicking the gearwheel image you can select which charging point groups you want to display.
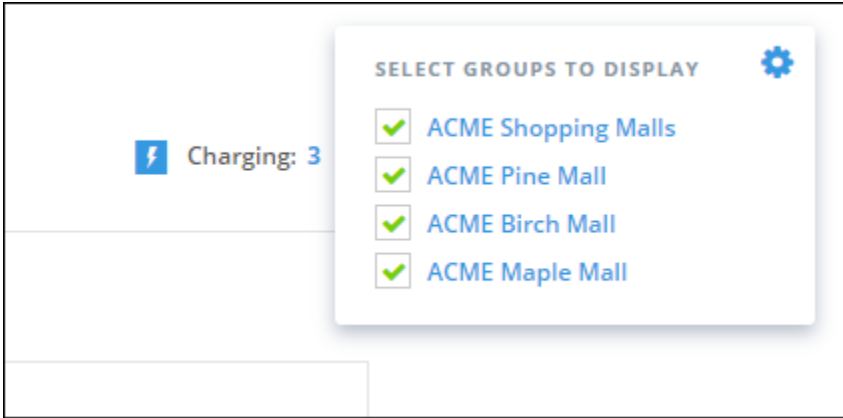
Some overall status information is displayed on top of the charging groups view.
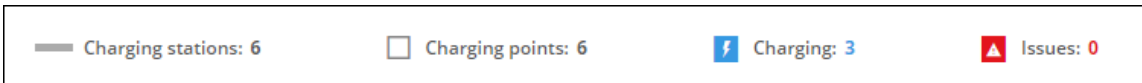
This current information shows that selected groups contain in total:

- 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.

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 contain 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.

Status summary
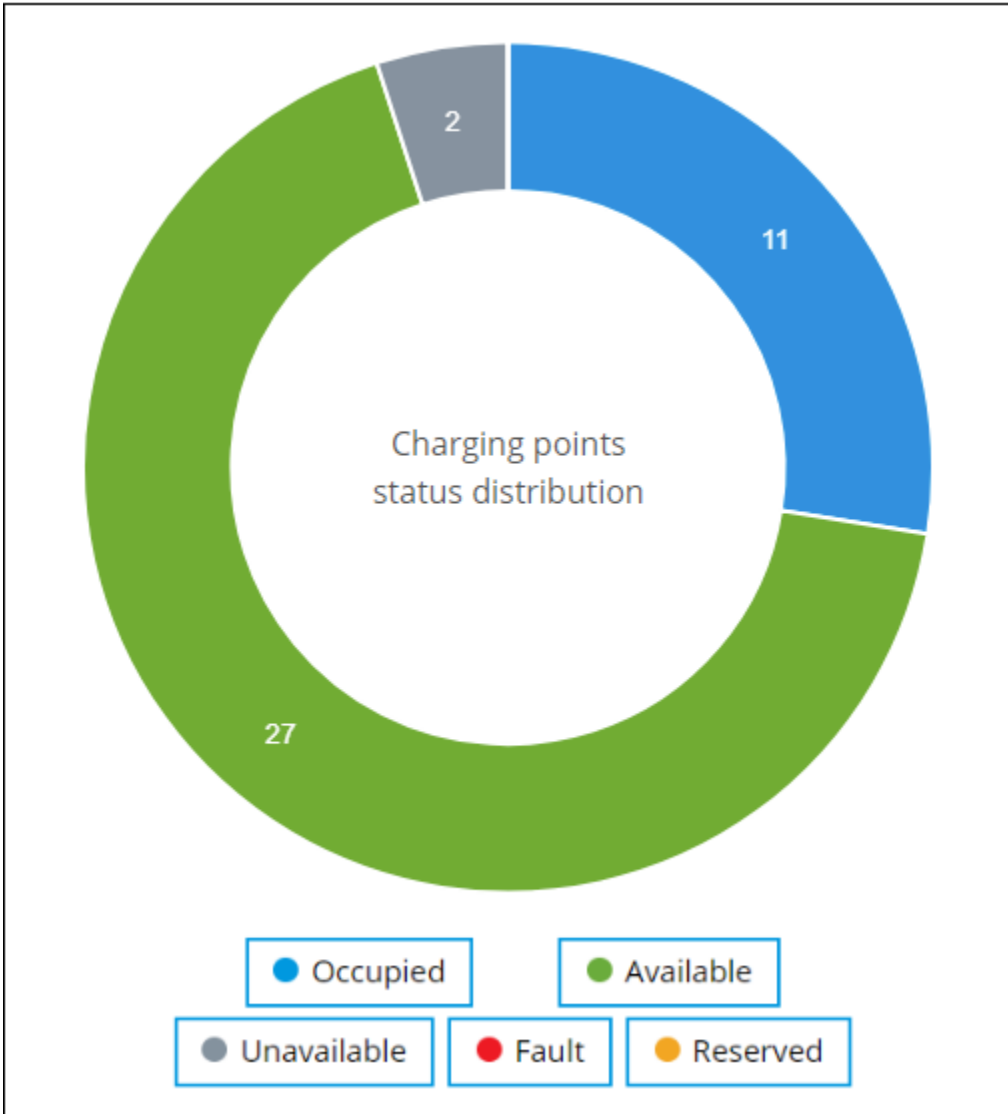
The donut diagram shows a status summary of charging points in operators domain. By clicking individual state buttons, you can select which states are shown at dashboard. For example, if you click *Fault* button, only charging stations which have charging points at faulted state are displayed.

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.

CHARGING EVENTS	CHARGING POINTS	KWH CHARGED
36	**6**	**113.35**
LAST 24 HOURS	LAST 24 HOURS	LAST 24 HOURS
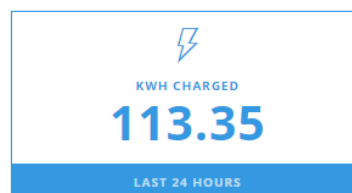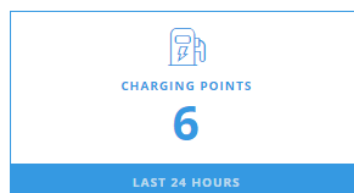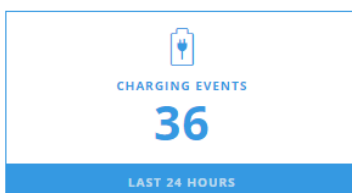
Consumption over selected timeframe

Timeframe can be selected from the gear icon at the right edge of the page.
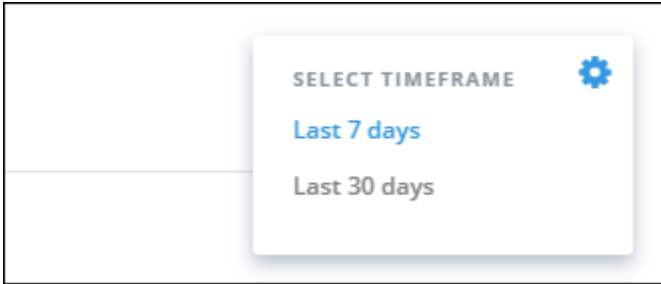
Consumption (kWh's) over charging events count shows the amount of electricity charged and number of charging sessions as a diagram over selected time frame. Diagram shows the data over entire environment regardless of selected groups.
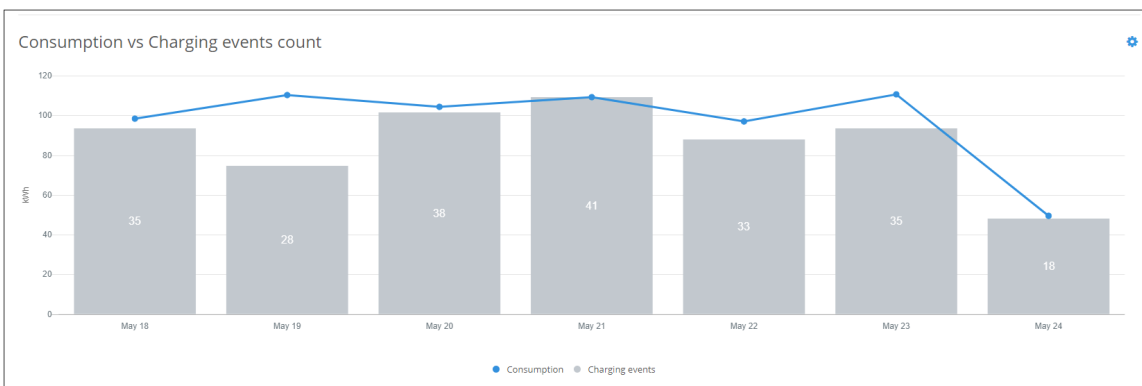
Charging groups
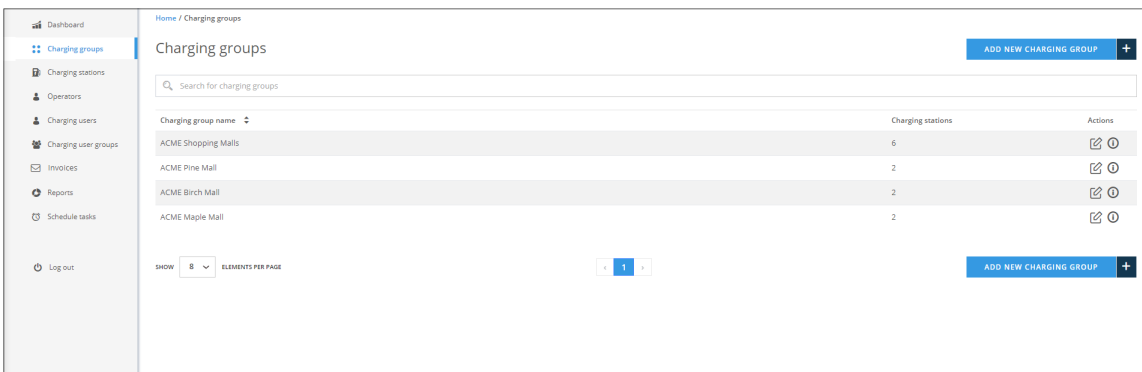
Charging groups views allows you to manage charging groups. On charging group list view, you can:

- 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.

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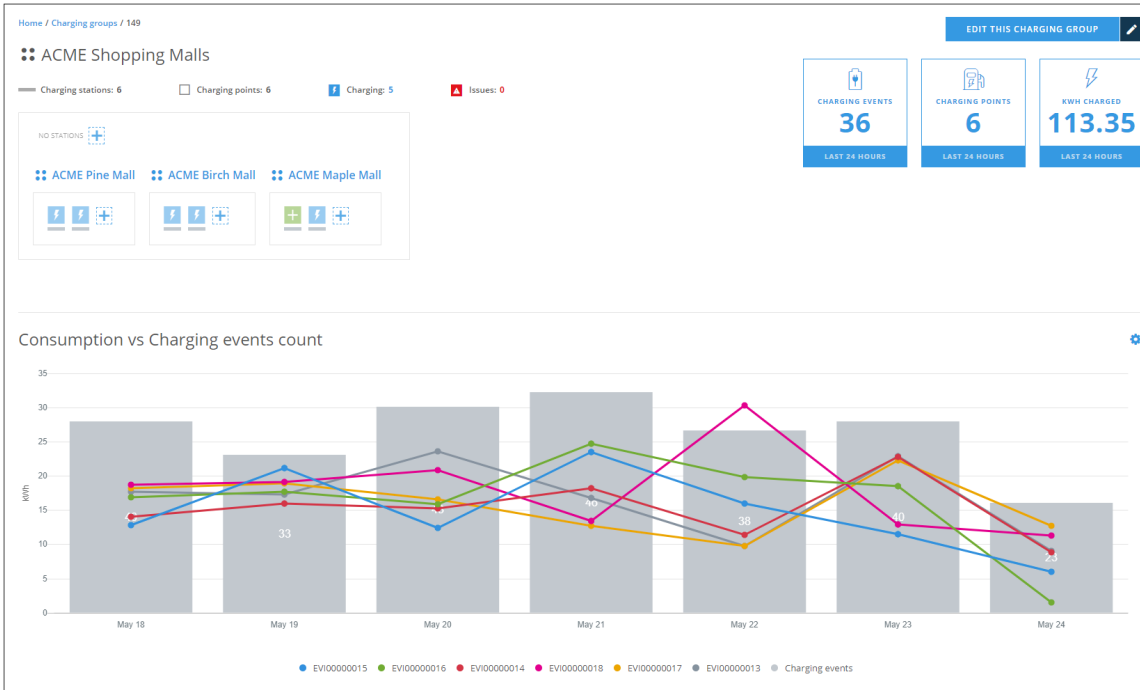
On this view you can see the statistics information of this charging group, very similar than on dashboard. From this view you can jump to edit charging point group view.

Edit charging group

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.

Add new charging group

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.

Charging stations

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).

Add new charging station

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.

ⓘ **Charging station name vs. identifier**

Note that charging station identifier **cannot** be changed after station has been created. Charging station name can be edited, if needed. That will not effect the communication between EV Manager and charging station. However, if the identifier is incorrect to begin with, charging station will have to be deleted and recreated.
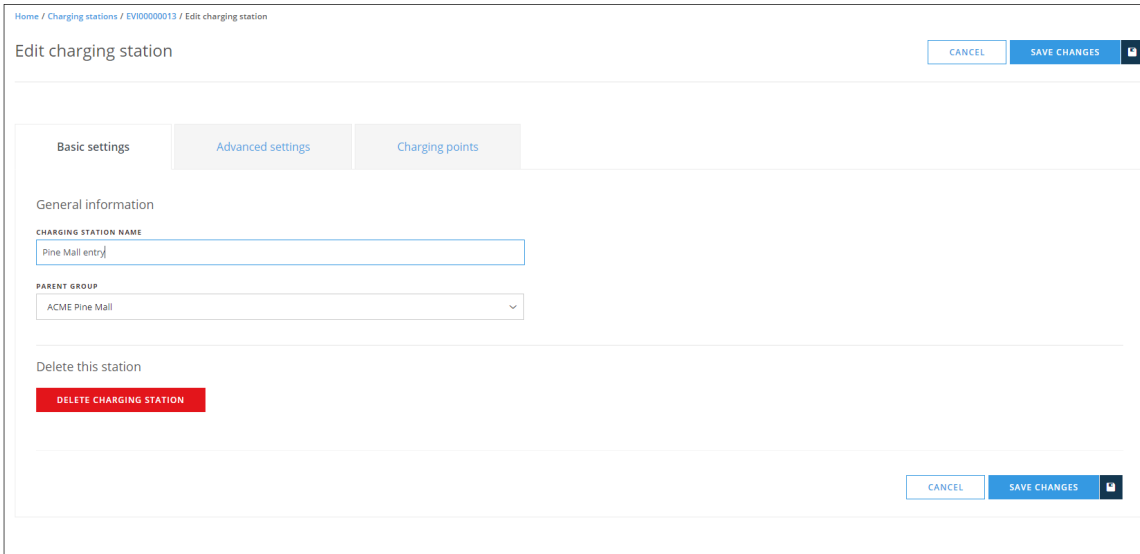
ⓘ **Composition of identifier**

Use only letters A...Z, a...z, dash '-', underscore '_' and numbers 0...9 on identifier. Forbidden characters like slash '/' will produce an error.

ⓘ **Charging stations inside EV Manager and out there**

It should be noted that adding a charging station to EV Manager does not magically create a real device somewhere. The link between real charging station and station in EV Manager is established, when the physical device connects to backend system **with same identifier** that is configured here. After that it's possible to control and monitor the charging station.

Edit charging station (basic settings)

Home / Charging stations / EVI00000013 / Edit charging station

Edit charging station   CANCEL   SAVE CHANGES 💾

Basic settings   Advanced settings   Charging points

General information

CHARGING STATION NAME
Pine Mall entry

PARENT GROUP
ACME Pine Mall   ⌄

Delete this station

🟥 DELETE CHARGING STATION

                                          CANCEL   SAVE CHANGES 💾

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. For advanced settings, see charging-station-advanced-settings.

⚠ **Note**

Only admin operators can edit charging stations.

Edit charging station (advanced settings)

On this view you can edit charging station advanced settings. Before you edit settings, you must *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. Do not change these settings, if you are not sure what they do.
- Most of the configuration keys are vendor specific.

Edit charging stations (Charging points)

On this view you can define socket types for charging points. Here, one charging point can have at maximum 4 sockets (usually it has 2 or 1). Socket definitions do not serve any functional purpose. They are only information for operators.

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. See the note below.

- *Get diagnostics* : Fetches diagnostics from charging station. See the note below.

ⓘ **Firmware update and Get diagnostics**

Firmware update and *Get diagnostics* require very specific information about servers that are used in conjunction with EV Manager. Please, contact Ensto for more details (https://www.ensto.com/support/service-request/)

View charging station events

On this view you can browse charging station events. Charging station sends a *StatusNotification* message to central system when something notable happens. Each event contains following data fields:

- *Info* : Additional information to notification message.
- *Charging point* : Charging point ID. Number zero refers to whole charging station and non-zero number refers to a single charging point.
- *Status* : Charging station or charging point status, defined by OCPP standard.
- *Error type* : Type of error (including no error), defined by OCPP standard.
- *Date & time* : Date and time of the event occurrence.

Charging station statistics
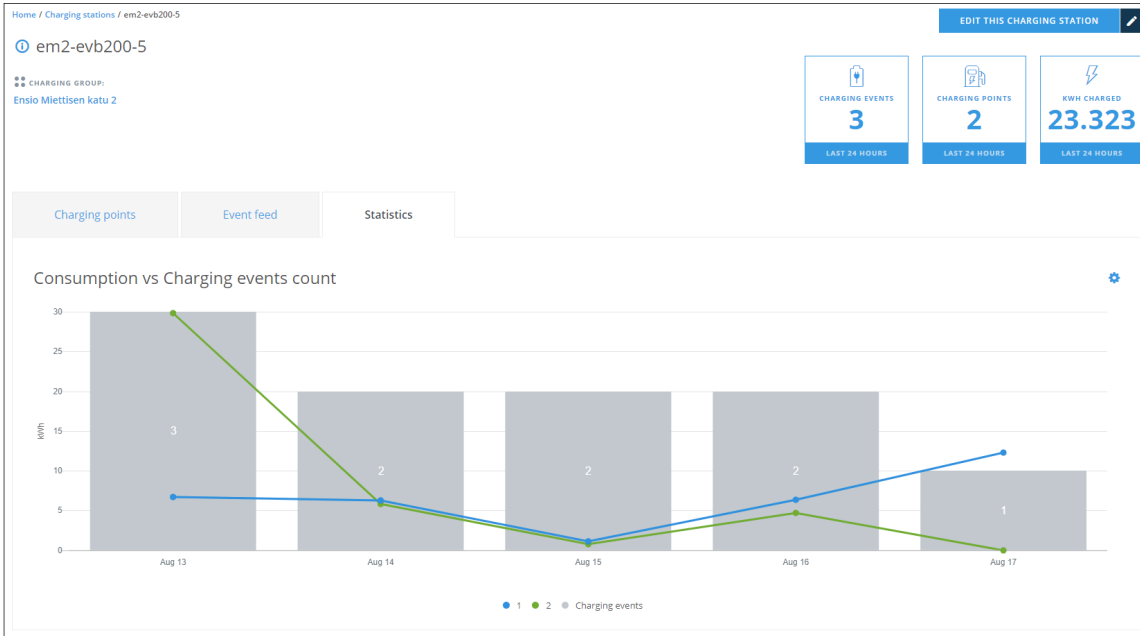
On this view you can examine charging station usage statistics. For statistics you can select 7 or 30 days time span.

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.

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.

Invite new operator

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

Charging users

On this view you can:

- Browse and search for charging users by name, email address or user RFID tag.
- Edit charging user information (click the edit button).
- Add new charging user.

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.

Add new charging user

Add new charging user   CANCEL   SAVE CHANGES

User information

FIRST NAME

LAST NAME

E-MAIL ADDRESS

USER CHARGING GROUP
Select...

Access rights

SELECT DEVICES
Charging groups   Charging stations

Authentication tokens: 1

Token #1

TOKEN (RFID)   TOKEN NAME   STATUS:
                                                              Inactive

TOKEN VALID FROM: TOKEN VALID TO:
Select date   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. See the note below.

> ⚠ **Note**
>
> Only admin operators can delete (RFID) tokens.

Charging user groups

Charging user groups makes it possible to group charging users into logical groups.

> ⚠ **Note**
>
> Charging user can belong only to one charging user group.

Charging user groups can be used with:

- Schedule tasks (user group activation or deactivation).
- Reports (create reports by charging user groups).

On this view you can:

- Browse and search for charging user groups.
- Edit charging user group information (click the edit button).
- Add new charging user group.

Edit charging user group

On this view you can edit charging user group name, add or remove group members and delete the group (given that the group does not contain any members).

Add new charging user group

On this view you can create a new charging user group. Give the group a name, select its members and press SAVE NEW CHARGING USER GROUP.

Invoices

About invoices

You can generate and send invoices to charging users. Invoices are in PDF format and are sent to users via e-mail.

On this view you can browse invoices and search for some particular invoice with various search terms.

You can also:

- Mark invoices paid or unpaid. If you want to mark an invoice unpaid, you get a confirmation window to make sure that you don't accidentally mark paid invoices as unpaid.
- Change invoice settings.
- Add new invoices.
- View some particular invoice by clicking its info button on *Actions* column.

Invoice statuses

Invoices can have the following statuses:

- *preview* : Invoice has been generated but not sent yet.
- *sent* : Invoice has been sent but not paid yet.
- *paid* : Invoice has been paid.
- *overdue* : Invoice is overdue. It has not been paid before due date.

Invoice settings

Description of fields:

- *RECIPIENT BIC* : Payee's bank (Bank Identification Code).
- *RECIPIENT IBAN* : Payee's bank account number (International Bank Account Number).
- *RECIPIENT NAME* : Payee's name.
- *RECIPIENT ADDRESS 1* : Payee's address #1.
- *RECIPIENT ADDRESS 2* : Payee's address #2.
- *BUSINESS ID* : Payee's business ID.
- *TELEPHONE* : Payee's telephone number.
- *WWW* : Payee's WWW address.
- *EMAIL* : Payee's e-mail address.
- *LOGO* : Payee's company logo. Small images, like 100x100 pixels (JPG or PNG), give best results. If the logo image cannot be found or is invalid in some way, logo will not be printed on invoices.
- *REF NR START* : Start of reference number series. Note that a checksum number will be added to the end of reference number on each invoice.
- *KWH PRICE* : Electricity unit price per kWh (including VAT).
- *MONTHLY PRICE* : Fixed monthly price (including VAT). For example, if monthly price is 5€ and report period length is 3 months, that would total up to 15€.
- *INVOICE PERIOD* : Invoice period length in months.
- *CUTOFF DAY* : Cutoff day of the invoice period. 31st would effectively mean the last day of every month.
- *PAYMENT TERMS* : Invoice payment terms, length in days.
- *VAT* : VAT in percents.
- *PENALTY INTEREST* : Invoice penalty interest in percents.
- *EMAIL CONTENT* : Invoice email contents. Invoice will be attached to the email as a PDF document. Contents can be formatted with HTML elements. For example, **bolding** some word would be done like *this*. See more about HTML elements here: https://www.w3schools.com/tags/ref_byfunc.asp.

Most of these fields are printed as is on the invoice. See the invoice example.

Invoice example

Invoice

Total *Including VAT*	26.85 €	②

Donald Duck
donald@duckburg.com ①

Invoice date	28.3.2019	③
Invoice period	1.11.2018 - 28.2.2019	④
Due date	11.4.2019	⑤
Payment terms	14	⑥
Penalty interest	8 %	⑦

Invoice

Vehicle charging invoice

	Amount	Unit price € *including VAT* ⑨	Total € *including VAT* ⑩	VAT % ⑪	VAT € ⑫
Usage (kWh)	99.03	0.15	14.85	24%	2.88
No. of months	4	3.00	12.00	24%	2.32

⑧

Total (VAT 0%) €	21.66
VAT €	5.20 ⑬
To be paid €	26.85

Company	Ensto charging solutions Oy	Telephone +3585012345678
Address	Ensio Miettisenkatu 2, 06600 Porvoo	E-mail operator@acme.com
Business ID	Ensto Oy	WWW www.ensto.com

Recipient bank account	FI21 1234 5600 0007 85	ALONFI213245

Recipient	Ensto charging solutions Oy
	Ensio Miettisenkatu 2
	06600 Porvoo

Vehicle charging

1.11.2018 - 28.2.2019

⑭

Reference No	108986	
Due date	11.4.2019	26.85 €

Example invoice field descriptions:

1. Payers name and e-mail address.
2. Total amount to be payed.
3. Date when invoice was generated.
4. Invoice period.
5. Invoice due date.
6. Invoice payment terms (in days).
7. Invoice penalty interest (in percents).
8. Total unit amounts (kWh's or months). Note that only **full months** are counted here. Month is considered full when period end date is the last day of that month.
9. Unit prices (including VAT).
10. Calculated line amounts (including VAT).
11. VAT (in percents).

12. VAT amounts of individual line sums.
13. Total sum without VAT, the VAT amount and total sum with VAT.

Add invoice

On this view you can add new invoices. Description of fields:

- *FROM* : Invoice period start date.
- *TO* : Invoice period end date. Note that month is included to monthly price calculation only if you select the last day of the month as the period end date. For example, period 1.3.2019 - 29.4.2019 would count as one month (in regards of monthly price), whereas 1.3.2019 - 30.4.2019 would count as two months.
- *KWH PRICE* : Electricity unit price per kWh (including VAT). This setting overrides price on settings.
- *MONTHLY PRICE* : Fixed monthly price (including VAT). This setting overrides price on settings.
- *Charging user groups* : From here you can select entire charging user groups. If the group contains users that do not have e-mail address set, you will get a confirmation window on whether you want to create invoices to those group members who have e-mail address set or cancel the operation.
- *Charging users* : From here you can select individual charging users. Note that this list contains only users that have their e-mail address set.

When you have filled the form, click *INVOICE PREVIEWS* to preview invoices.

ⓘ **Time range and price fields**

Default values to *FROM*, *TO*, *KWH PRICE* and *MONTHLY PRICE* come from settings. Prices here can override prices on settings, but changes here do not affect the actual settings. *TO* field here is by default set to the *CUTOFF DAY* (on settings) of the last month. *FROM* date here is set by computing *INVOICE PERIOD* amount of months back from the last day of last month. Of course, you can change the dates and prices here, should you so choose.

Example:

Today is 2.4.2019

CUTOFF DAY on settings is 31st.

INVOICE PERIOD on settings is 3.

TO would be 31.3.2019 (last day of last month).

FROM would be 1.1.2019 (three months back from *TO* date).

Preview invoices

If you decide to preview multiple invoices, which usually is the case, you may get a popup window which informs you that it will take a lot of time to generate the invoices. You will also get an estimate on how long it takes. When invoices are ready, you will get an e-mail confirmation. If you have only a few invoices, *Invoices preview* view open after a while. If you have many invoices, you will get a link to *Invoices preview* view in an e-mail.

On this view you can:

- View invoices by clicking info button on *Actions* column.
- Select invoices to be sent to charging users.
- Search for some particular invoice with various search terms.

After you have selected invoices you want to send, click *SEND INVOICES*. After that you will be back in *Invoices* view and sent invoices will be added to invoices list.

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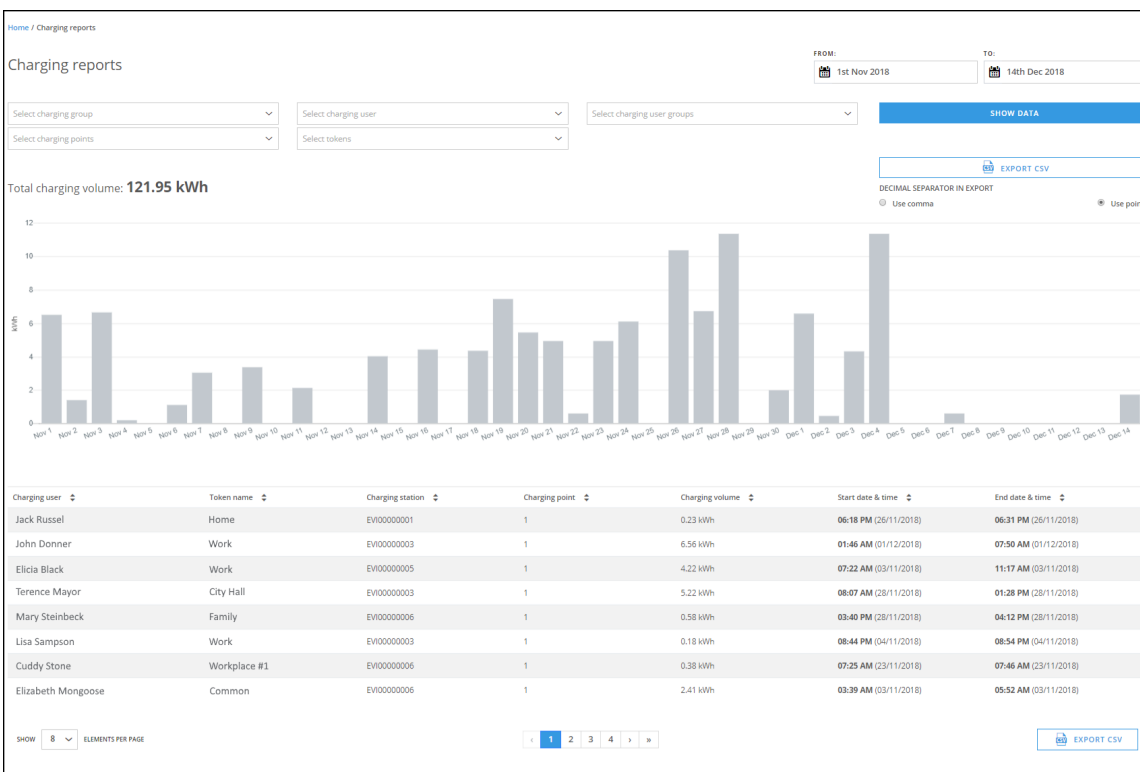
On this view you can generate screen or CSV reports of energy consumption statistics of selected charging points and tokens. Description of fields:

- *FROM* : Starting date of report.
- *TO* : Ending date of the report.
- *Select charging group* : Charging point groups to be included to the report.

- *Select charging points* : Charging points to be included to the report.
- *Select charging user* : Charging users to be included to the report.
- *Select charging user groups* : Charging user groups to be included to the report.
- *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.

How to generate a report

- Select starting and ending dates for report.
- Select charging stations to be included to the report.
- Select RFID tokens to be included to the report.
- Click *SHOW DATA*, now you see the report data on screen.
- Click *EXPORT CSV*, now you get the CSV formatted report downloaded to your browser.

> (i) **Sometimes it takes time...**
>
> If you generate a report with large number of charging stations and/or charging users and use a long time range, report generating might take some time.

Schedule tasks

What are scheduled tasks?

Scheduled tasks allows to schedule certain operations to certain objects. For example, scheduling allows to change maximum charging current at some charging station based on monthly (day of month), weekly (day of week) or daily (time of day) schedule.

> ⚠ **Note**
>
> Only admin operators can create, edit and view scheduled tasks.

> ⊘ **Warning**
>
> Should scheduled task fail for some reason, there is no fallback mechanism to correct the failure. Therefore, for example with maximum charging current setting, it must be kept in mind that if task fails for any reason, new current value does not take effect.

Objects that can have schedules

- Single charging station (*singular* task).
- Single charging user.
- Charging user group (*group* task).

Subjects of schedules

- Maximum charging current of charging station.
- Maximum charging current of charging station group.
- Charging permissions (allowed or disallowed).
- Update firmware (for charging station groups).

Types of schedules

- Monthly (day of month and time of day).
- Weekly (days of week and day of time).

- Daily (time of day).
- One shot (triggered only once).

Examples

Limit charging current on charger X to 6 Amps between 01:00 and 06:00.

- Create a new scheduled task.
- Add task name.
- Select task type as *Max current allowed per charger*.
- Select *Key* (a single charging station in this case) as the charging station you want to limit the current on.
- Edit the *Max current* field to the desired value.
- Select *Schedule* as *Daily*.
- Edit *Hour* and *Minute* to 01:00.
- Save the schedule by pressing *Schedule task*.
- Copy the existing task as a template to the new schedule (press *copy task*) at scheduled tasks list view.
- Change the *Max current* to be what ever the original current was.
- Change *Hour* and *Minute* to 06:00.
- Save the schedule by pressing *Save changes*.
- On scheduled task view, tick *Active* on on both tasks.

Allow charging user X to charge on weekdays but not on weekends.

- Create a new scheduled task.
- Add task name.
- Select task type as *User activation*.
- Select *Key* as the charging user under discussion.
- Select *User active* as *Active*,
- Select *Schedule* as *Weekly*, also tick (only) *Monday*.
- Change *Hour* and *Minute* to 00:00.
- Save the schedule by pressing *Schedule task*.
- Copy the existing task as a template to the new schedule (press *copy task*) at scheduled tasks list view.
- Change *User active* to *inactive*.
- Clear tick from *Monday* and tick *Friday*.
- Change *Hour* and *Minute* to 23:59.
- Save the schedule by pressing *Save changes*.
- On scheduled task view, tick *Active* on on both tasks.

Allow charging user group X to charge on 15th of every month.

- Create a new scheduled task.
- Add task name.
- Select task type as *User group activation*.
- Select *Key* as the charging user group under discussion.
- Select *Group active* as *Active*.
- Select *Schedule* as *Monthly*.
- Change *Day of month* to 15.
- Change *Hour* and *Minute* to 00:00.
- Save the schedule by pressing *Schedule task*.
- Copy the existing task as a template to the new schedule (press *copy task*) at scheduled tasks list view.
- Select *Group active* as *Inactive*.
- Change *Hour* and *Minute* to 23:59.
- Save the schedule by pressing *Save changes*.
- On scheduled task view, tick *Active* on on both tasks.

On this view you can:

- Filter scheduled tasks by task type or task name.
- Activate or deactivate task(s).
- Add new task.
- Delete, duplicate or edit task.

Add new (scheduled) task

On this view you can add new scheduled tasks.

Edit (scheduled) task

On this view you can edit existing scheduled tasks. Basically this view is the same than *Add new task*.

> ⚠️ **Time zone**
>
> Scheduler times are in UTC. For example, if your time zone is UTC+2 and you want to schedule something to happen at 13:00 **your time**, the time on task should be 15:00.

Scheduler event feed

On scheduler event feed you can monitor the results of executed tasks.

On this view you can:

- View results of task executions per day. You can select new date with *Select a date*, *PREVIOUS DAY* and *NEXT DAY*.
- Filter executions by status (*OK* or *Failures*).
- Search for some particular task result with *Search for tasks*.

Description of fields:

- *Task name* : Task name defined by user.
- *Status* : Execution status (*OK*, *n tasks failed* or *all tasks failed*). See more info below.
- *Date (DMY) & time* : Task execution time (in UTC).
- *Retry* : Failed tasks can be retried by pressing the retry button. See more info below.

Task statuses:

- *OK* : Task(s) executed successfully. For singular and group tasks.
- *n tasks failed* : For groups tasks, 'n' executions failed.
- *All tasks failed* : For group tasks, all executions failed.

Retrying tasks

Failed tasks executions can be retried. In that case, a copy of failed task is created with name *Retry: <task name>* and the task is executed within a few minutes. In case of group task, all group members are targeted for re-execution regardless on how many actions failed. For example, if task is to set maximum current for a group of chargers, even if only one of those chargers failed to receive the new current value, all chargers would be targeted for re-execution.

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.

Error messages

This section describes all error messages the system can emit.
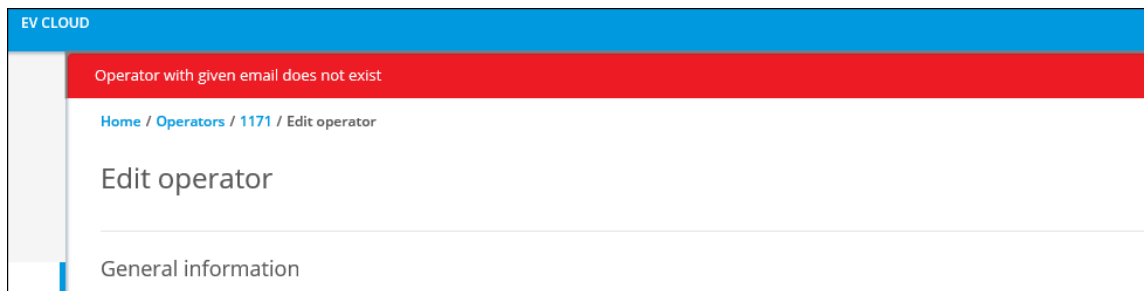
An example of an error message.

Error message	Context	Description	Remedy (if any)
Error #XX encountered. If this error persists, please consult user manual for further actions.	All	System error. Please refer instructions after this table on how to proceed.[(1]	
Operator with given email does not exist.	*Edit operator*	If you try to execute *RESET PASSWORD* on *Edit operator* view and someone else has changed operators email address just before you execute the command, you will have this error.[(2]	Exit *Edit operator* view, refresh page and re-edit the operator.
Invalid charging station identifier.	*Add new charging station*	Charging station identifier contains forbidden characters. Do not use special characters in identifiers. Avoid characters like slash, backslash, colon, etc. Minus sign (-) and underscore (_) are allowed.	
Identifier contains forbidden characters.			
Charging station already exists for that identifier.	*Add new charging station*	Duplicate charging station identifier. Identifiers must be unique within organization.	Check that the identifier is spelled correctly. If so, locate the already existing charging station and see if it has misspelled identifier.
Charging point configuration error.	*Edit charging station (Advanced)*	Setting or reading charging station configuration parameter failed.	Check that the value you are providing, is correct. Note that invalid values on configuration can cause unpredictable results.
Token already exists.	*Edit charging user*	You tried to add a duplicate RFID token for user. Tokens must be unique.	
Remote command execution failed.	*Charging station remote commands*	Charging station responded with error to remote command.	Retry.
Operator is inactive.	*Log in*	Operators status has been set to *Inactive*. Operator cannot log in until status is set to *Active*.	Operator must be set active from *Edit operator* page.
Operator is not active.			
Access denied.	All	Current operator does not have permissions to perform the action at hand. For example, admin operator has permissions that basic operator does not.	
Wrong credentials.	*Log in*	Operators log in credentials do not exist or are misspelled.	Check your credentials.
Error while updating operator.	*Edit operator*	Editing operator information failed.	Retry.
Adding a new charging user failed.	*Add new charging user*	Transient problem with adding a new charging user.[(3]	Retry.
Charging user updating failed.	*Edit charging user*	Transient problem with saving charging user information changes.[(3]	Retry.
Adding a new group failed. Parent group is required.	*Add new charging group*	When basic user is adding a new group, parent group is required.	
Charging station deletion failed.	*Edit charging station*	Transient problem with deleting charging station.[(3]	Retry.
Charging station does not exist.	*Edit or view charging station*	Charging station does not exist in operators environment. It may have been moved or deleted by some other operator.[(2]	Exit current view, refresh page and retry.
Username already exists.	*Add new charging user*	Duplicate username. Usernames must be unique.	

Password does not conform to password policy.	Change operator password	Very likely the new password is not complex enough. Try longer password or add special characters or numbers to it.	Try more complex password.
Problem with email address.	Invite new operator or edit operator	Some problem with email address when inviting a new operator, sending a reminder to operator or resetting password.	Try again after a while or try with a different email address.
Operator not found.	Invite new operator or edit operator	Can happen when inviting new operator or changing operator status (active or inactive).[2]	Exit current view, refresh page and retry.
Operator access forbidden.	All	Can happen when operator is modifying resources (s)he does not have permission to. One case might be, when someone demotes you from admin to basic operator while you are modifying some resources which require admin operator permissions.[2]	Retry.
Charging user not found.	Add new charging user, edit charging user	Can happen when some other operator is modifying the same charging user as you are.[2]	Retry.
Operator invitation failed.	Invite new operator	Transient problem with new operator invitation.[3]	Retry.

1) Should you encounter this kind of error message, try again a few times whatever function caused the error. If the error persists, please fill in a service request form (https://www.ensto.com/support/service-request/).

To your feedback, attach at least the following information:

- Your contact information
- Date and (approximate) time of the incident
- What was tried to do
- Error number
- Other mentionable factors, if any

2) *Concurrent modification problem* may emerge if someone else is modifying the same resources (operator, charging user, charging station, charging group) simultaneously. These cases are very rare and they are usually 'fixed' by refreshing the view.

3) Transient problems can be caused by myriad different sources inside or outside system. Well designed and implemented systems are resilient to these kinds of problems. They only cause minor discomfort.