SYNC EV.CHARGE

User Manual

Introduction

This document is intended for the operator and focuses on the functionalities of the admin panel of SYNC EV.CHARGE and how specific tasks are performed in the admin panel. Depending on the admin user's level of access, some of the described functionalities may not be available.

Dashboard

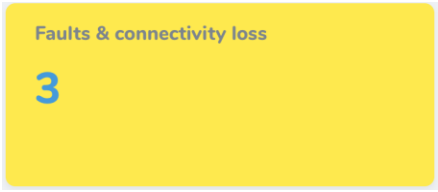
The dashboard shows quick stats in the form of "cards" and a map with the locations, each displayed with a pin on the map.

Quick Stats Cards

Depending on the initial configuration of the system and the role of the admin account that you are logged in with, different cards could be shown at the dashboard and not necessarily in the order described below.

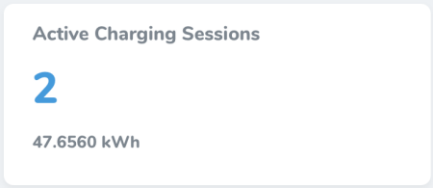
Card: Faults & connectivity loss

Shows the number of charging stations that are currently offline or have a hardware fault status. Only charging stations with system status "Active" or "Out of Order" are monitored. The number is a link to a list of the charging stations with a fault or connection loss.



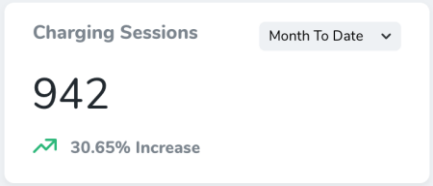
Card: Active Charging Sessions

Shows the number of active charging sessions at the moment and the current total power consumption of all active sessions in kWh. The number of active sessions is a link to a list of the active sessions.



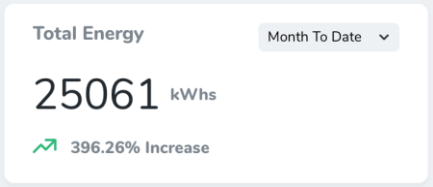
Card: Charging Sessions

Shows the number of Charging Sessions during the select period. With the drop-down in the card you can change the period. Below the total number of charging sessions during the selected period is shown the increase/decrease in % compared to the preceding period.



Card: Total Energy

Shows the total energy delivered during the selected period. The change in % compared to the preceding period is displayed below the total kWhs.



Card: Total Revenue

Shows the total revenue generated during the selected period. For each supported currency a separate card is shown.

Card: New charge points

Shows the total number of new charge points added in the system during the selected period.

Card: New users

Shows the total number of newly registered users during the selected period.

Card: EVSEs by max power (kW)

Shows the breakdown of EVSEs by the max power of the EVSE.

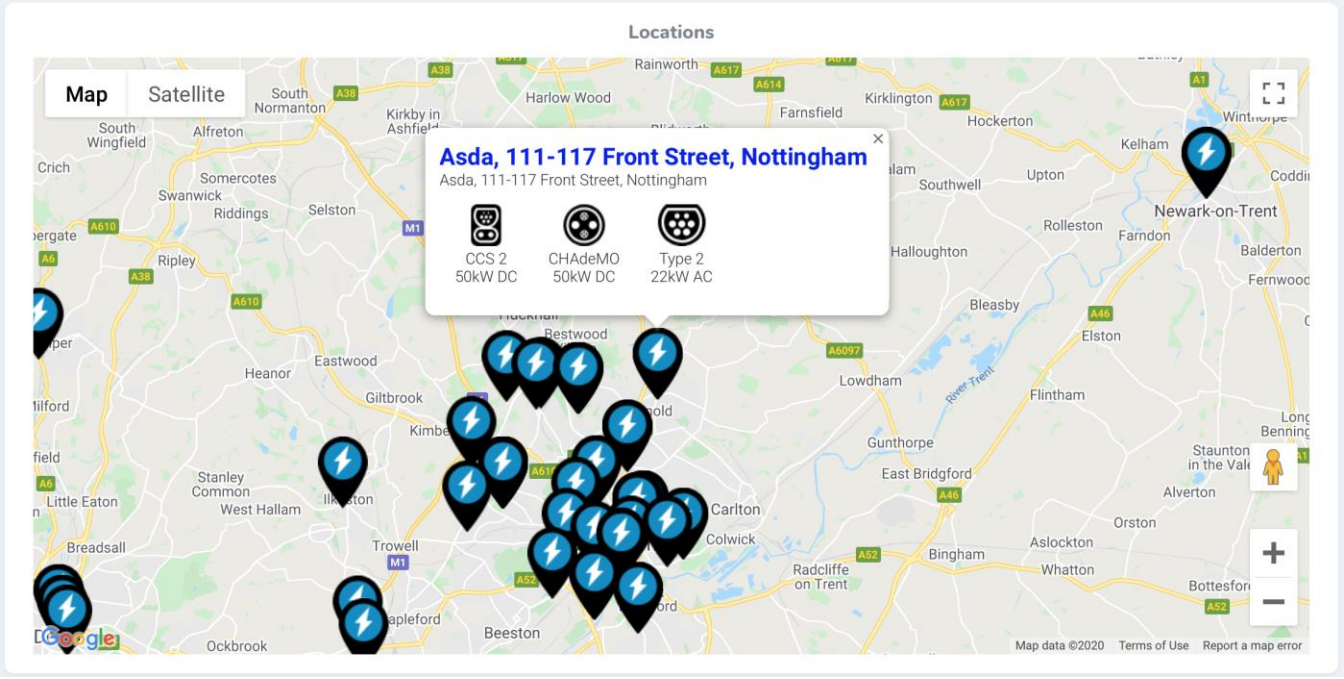
Card: Charge points by access type

Shows a breakdown of the charging stations in the system by the type of access (public/private).

Card: Locations by city

Shows a breakdown of your locations by city. The number of locations for each of the top 3 cities is shown separately.

Locations map

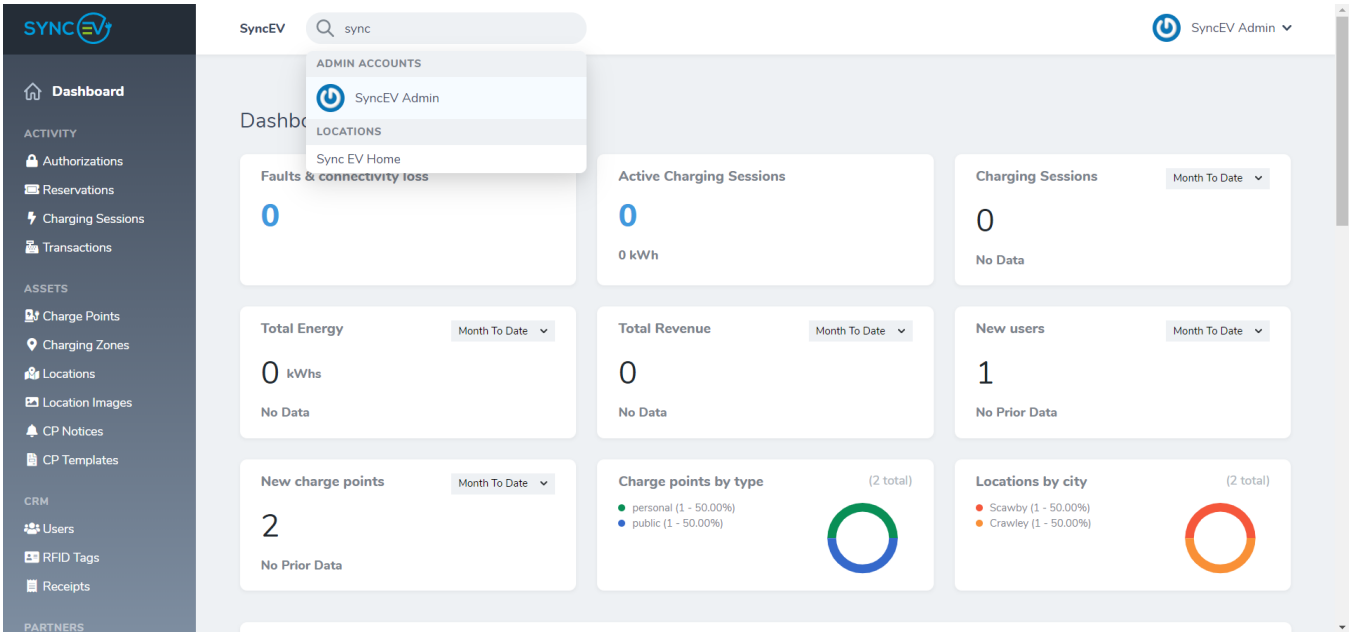


Shows your locations on a map. Each pin is a single location. When you click on a pin, it opens a tooltip with information about the types of EVSEs at this location and the title of the location is a link to view the location page.

Universal Search

In the admin panel header is located the universal search bar. You can use it to quickly find a customer, a location or even a specific charging station. Here are a few examples:

Searching for the name of location - in this example - the name of the Location Sync EV Home".

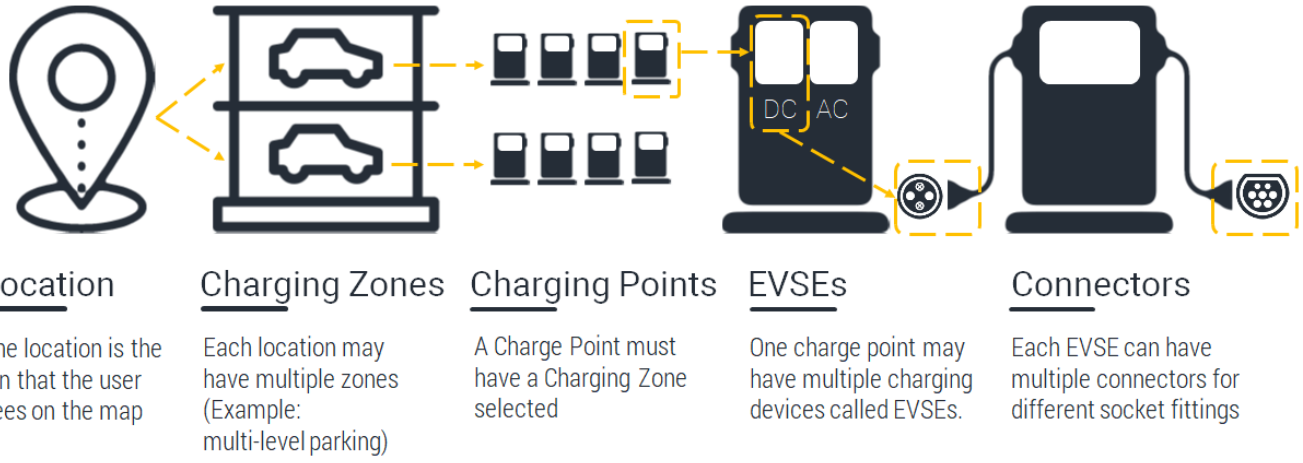


The results include the charging stations installed at the SYNC EV HOME (SYNC EV 7kw), the Location and the Charging Zone but also the partner account of the SYNC EV HOME and a partner contract that has been created for them.

Clicking on any of these results will open its profile and you would be able to view more information and depending on the admin role - edit, run actions, export data, etc.

Managing "Assets"

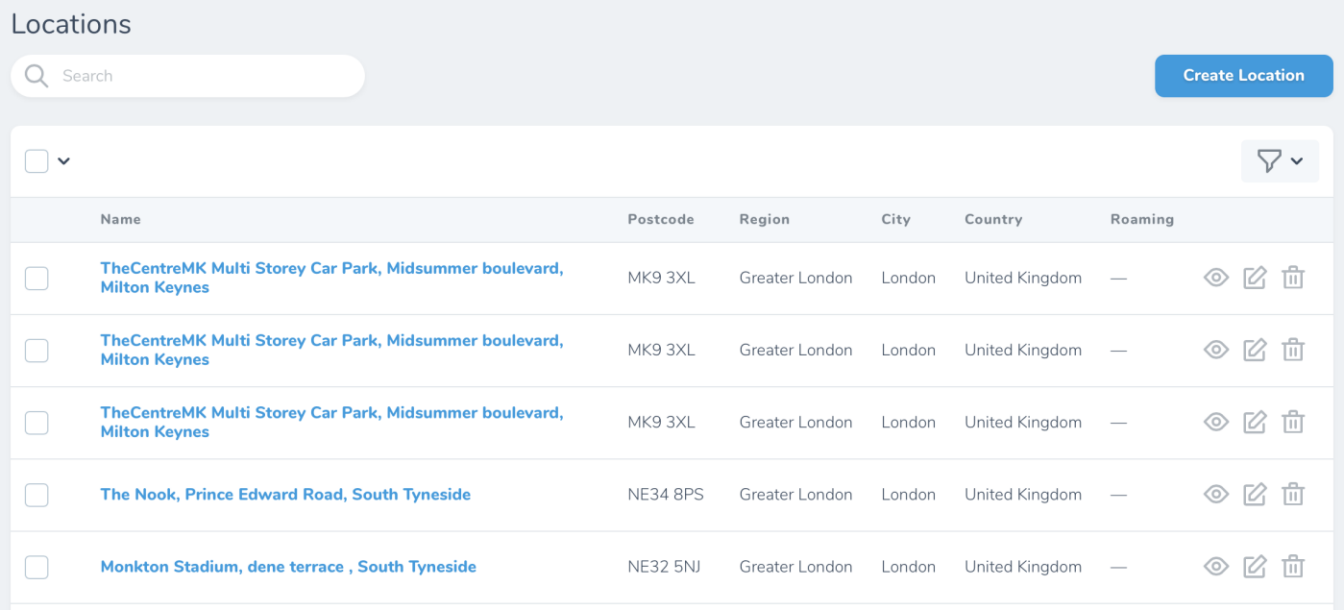
The main asset in the context of SYNC EV.CHARGE is a charging station, which represents the actual hardware device installed onsite. To show charging stations on the map and to allow users to find and use a specific connector on a charging station, SYNC EV.CHARGE uses the following organization:



A Location represents the actual pin on the map shown to the EV driver - it has coordinates and an address and at each location there could be multiple Charging Zones.

Usually however there is just one Charging Zone at a location and by default it is not even shown to the EV driver. But if at a certain location you have, for example, a multi-story parking and you have charging stations on different stories, the Charging Zones could be used to group Charging Stations at the Location and to show some additional information to the EV driver.

Locations

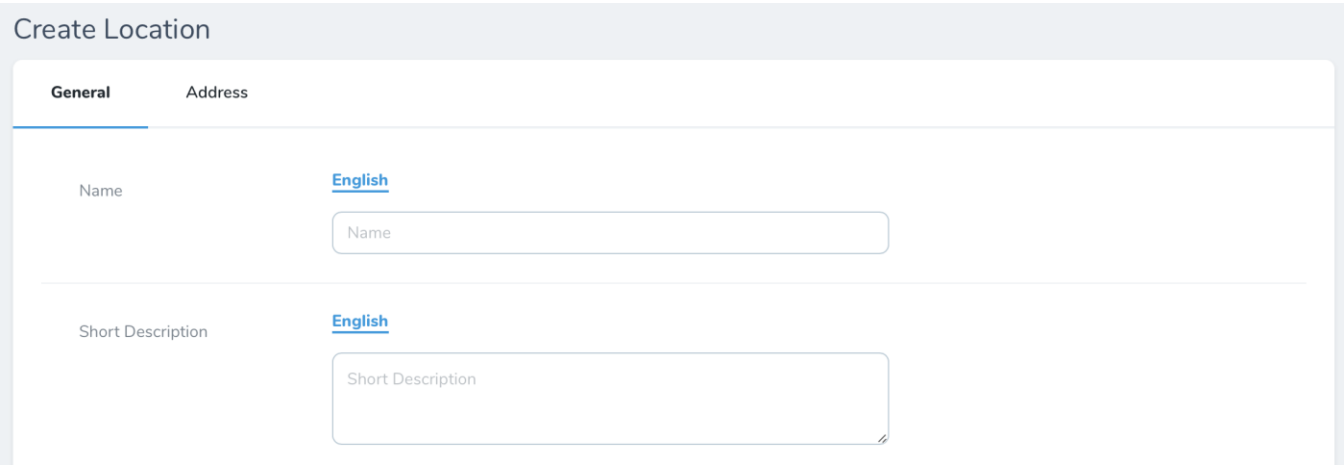


Locations hold the actual geographic position of your charging stations. Each location that you create is displayed as a single pin on the map. The location also has an address, description and even photos. For details see the information about adding a location below.

Roaming locations - when locations are received through roaming they are marked as such. The initial information about the location is retrieved from the roaming CPO but it could be edited in your admin panel afterwards to put your own description, images, etc.

Adding a Location

You add a new location by pressing “Create Location”.

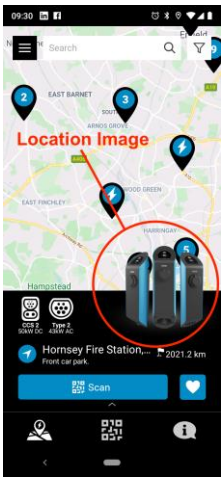


General

1. Name
   Free descriptive text that should be short (30-40 chars is recommended) this is shown to the EV Driver in the mobile applications as the title for this location.

2. Short Description
   This is shown in the EV drivers' app just below the name of the location. It could be the address or other short description (1 sentence, not longer) of the location.

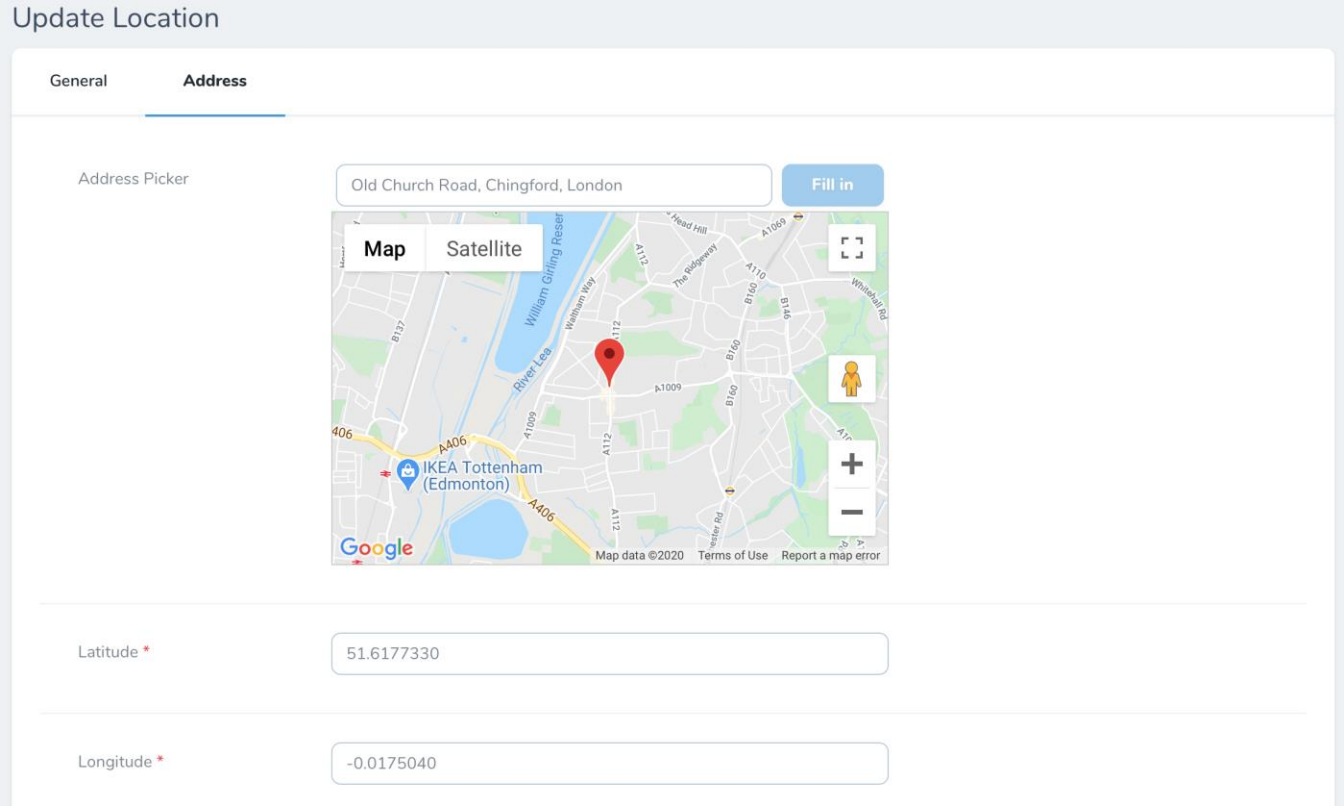
3. Description
   This is shown in the Sync EV Driver's app as a more detailed description.
   You can use this to specify working hours, specific access instructions, etc.



4. Location image
   This is a selection of a predefined set of images available in the system.
   This image is shown to the user in the EV driver's app when they tap on a pin on the map and the location details are displayed.
   The location images are managed from "ASSETS > Location Images".

5. Images
   This field allows you to upload pictures that will be shown to the EV Driver when viewing details about this specific location. Multiple images can be uploaded which can be an actual image of the location of the charging stations, advertisements by the location host or anything else that would be useful.

Address



Filling in an address:

1. Use the **Address picker** -> search for an address, adjust the location pin if needed and this will automatically fill in the Latitude and Longitude and the Address fields.
2. Type in **Latitude** and **Longitude** -> Address should be filled in automatically in the default language.
3. Review the **Address description** and if needed enter/edit manually. Keep in mind that the Address field is multilingual, so fill in the corresponding languages manually if needed.
4. **What3words address** - this is an optional field that you fill in by clicking the button “Fill What3words below” or manually in the format: word1.word2.word3. What3words is a precise and incredibly simple way to talk about location. The world has been divided into a grid of 3m x

3m tiles and each tile has been assigned a unique 3-word address. Learn more at https://what3words.com.

Charging Zones

Charging zones allow you to group charging stations at a given location based on where exactly the charging stations are positioned at the location (ground level or underground level of parking), specific descriptions or any other reason that will be useful to the EV Driver when shown in the mobile application.

In most cases, a charging location has only one default charging zone and no info about the charging zone is shown to the EV Driver.

Adding a Charging Zone

1. Name
   Name of the charging zone. This is NOT shown to the EV Driver. It is a good practice to name it the same way like the Location with Zone at the end.

2. Status
   Active or Disabled. If the status is set to “Disabled”, none of the charging stations at this zone would be visible in the EV driver’s mobile app. You can use this to setup the zone and charging stations in the system before actually activating them for the public.

3. Location
   Selection of already existing Location. For how to add locations refer to “Adding a Location”

4. Additional info in client app
   If selected additional fields are presented to allow information to be entered and shown to the EV Driver. Both fields are multilingual.

   a. Title (in client app)

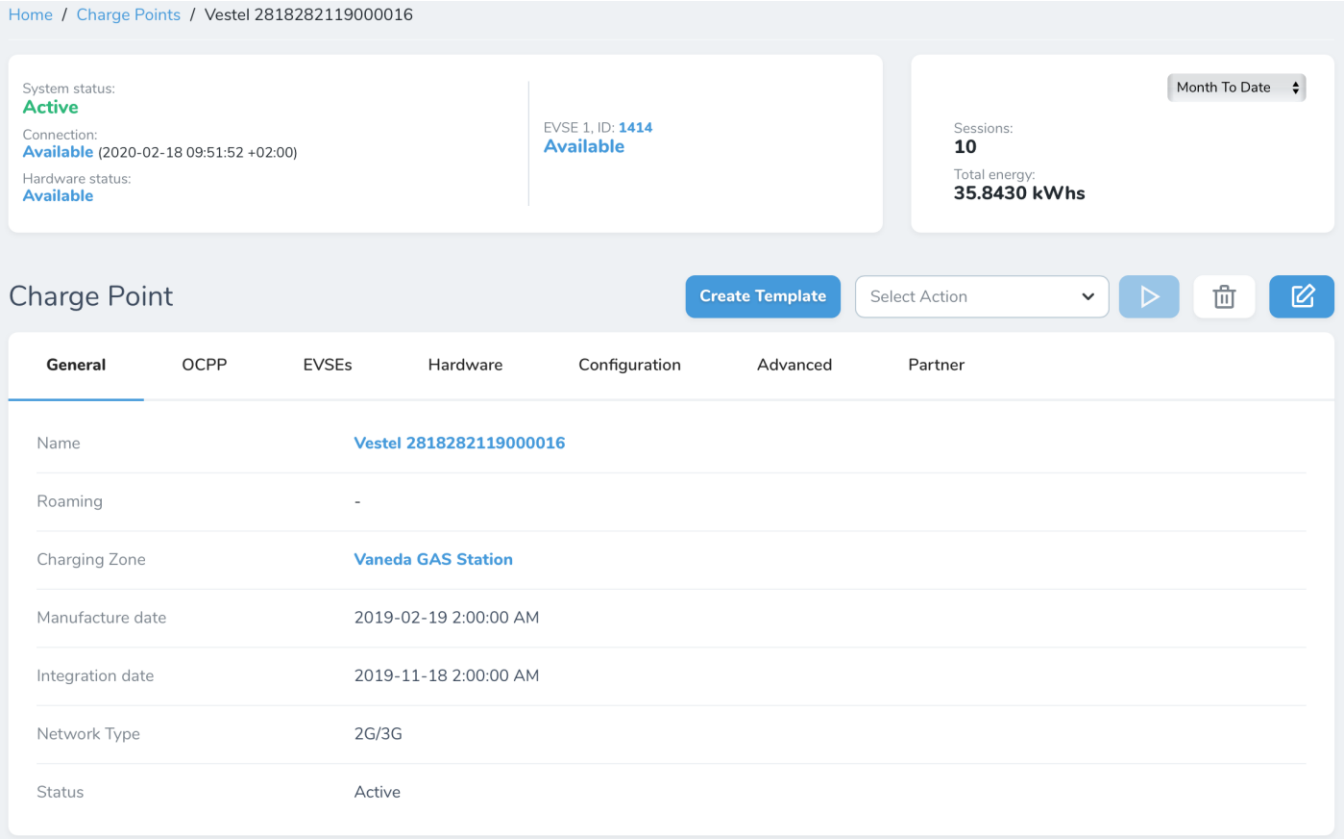
   b. Description (in client app)

Charge Points

A charge point is the physical device for charging, usually a single charging station. One charge point can have multiple EVSEs (AC and/or DC) and connectors (Type 1, Type 2, CHAdeMO, CCS2, etc).

Charge Point details

When viewing a charge point there are several sections.



1. **Status Card** - this is the first section and it shows information about the status of the charge point.

    a. System status - the system status is controlled by the admin. An “Active” status means that the station should be operational, as long as the connection and hardware status are “Available”. Other charge point system statuses are Disabled, Out of order and Demo - described in more detail below in the “Adding a Charge Point” section.

b. Connection - the state of the internet connector the charge point. The status is changing automatically. Details about the state of the connection can be found in the Network status log. Possible statuses:

   i. Available - the charge point connection is OK.

   ii. Temp. unavailable - when the connectivity with the charging station is lost for 120* seconds the network status is set to Temporary unavailable. If connectivity is not restored before 300* seconds, the status is set to Long-term unavailable.

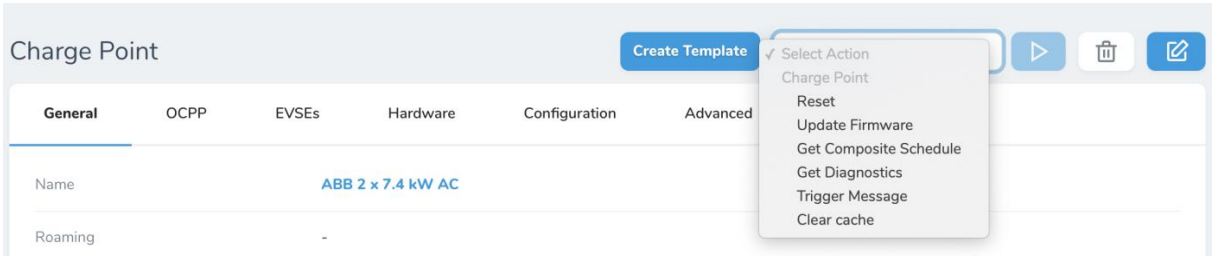
   iii. Long-term unavailable - when the status is Long-term unavailable the charging station is shown as "Out of order" in the EV Driver's app.
   ** The exact timeout values are defined in the Settings menu, these are the default ones.*

c. Hardware status - if the charge point reports any hardware failures they will be shown here.

d. Connectors - it will show the status of each connector of the charge point. Possible statuses are Available, Charging (a car is connected / charging), Fault.

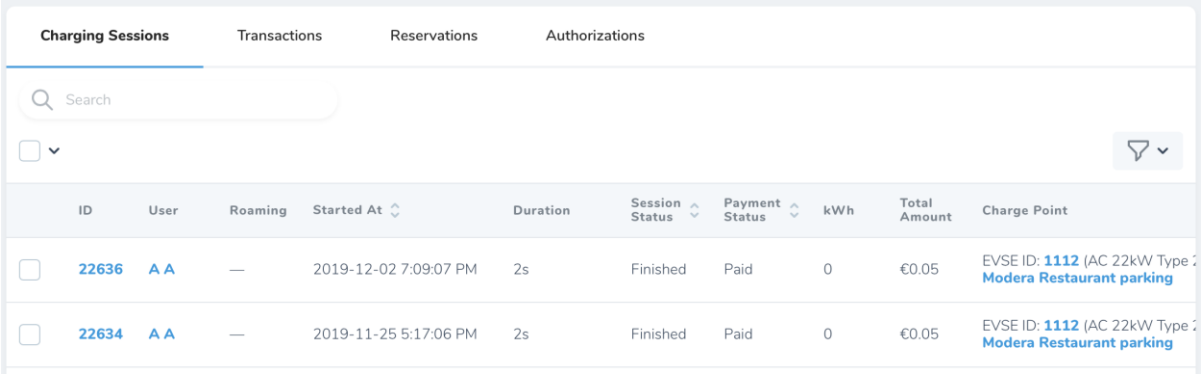
2. **Create Template**
   With this button you can save an existing charge point profile as a template to use when you create a new charge point. This would save you time as you won't have to enter manually the EVSE details, instead it would be populated from the template. Templates are managed in the "ASSETS > CP Templates" section.

3. **Actions**
   A drop-down with actions that you can run on the charging station. Refer to the "Charge Point Actions" section for details.



4. **Charge Point details** -> General, Network, Partner, etc…
   See the section "Adding a Charge Point" for details.

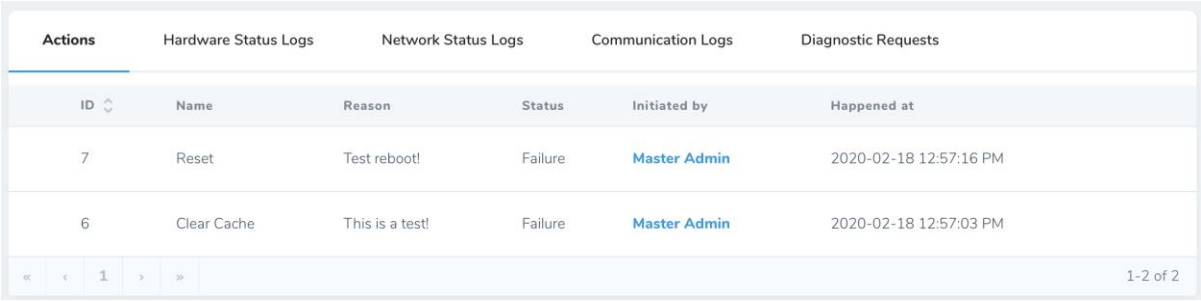
5. **Charging sessions**
   Shows all charging sessions at this charge point. Clicking on the session ID opens detailed information about the charging session.



6. **Transactions**
   Shows all transactions (payments) at this charge point

7. **Reservations**
   Shows all reservations at this charge point. Reservations are optional functionality, which is activated in the Settings menu and could be managed for each EVSE individually.

8. **Logs**



   a. Actions
      Shows a log of the Charge Point Actions run by admin.

   b. Hardware Status Logs
      Any changes of the hardware status, such as hardware faults, are shown in this log.

   c. Network Status Logs
      Any changes to the network connectivity to the charge point.

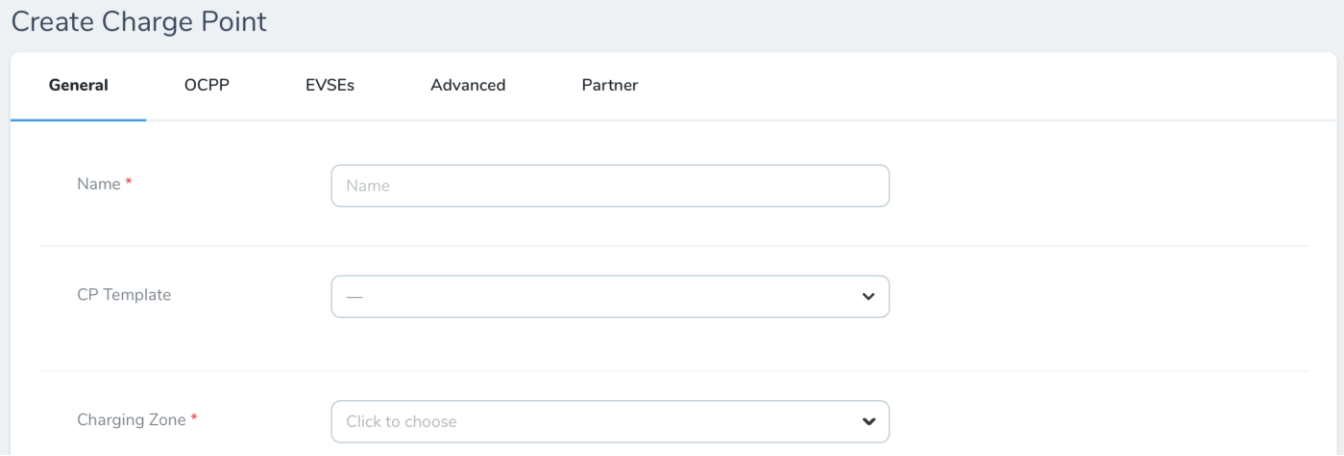
d. Communication Logs
A detailed log of the messages exchanged between the system and the charging station.

e. Diagnostic Requests
Whenever a “Get Diagnostics” action is run, the result returned by the charging station is logged here.

Adding a Charge Point

To add a new charging station at an existing Location and an existing Charging Zone, you can start from “ASSETS > Charge Points” and use the “Create Charge Point” button.

IMPORTANT: *If you need to add a new charge point at a new location, start with creating the Location and the Charging Zone first!*



General

1. Name
The name of the charging station is only shown in the admin panel and is NOT visible to the EV Driver. A good practice is to name the CP after the model and also include power or or serial number to differentiate it from other charging stations at the same location.

IMPORTANT: *If you are going to use a template, first select the CP Template and then edit the name, as it would otherwise be replaced once you select the template!*

2. CP Template
Templates fill in some of the details to save you time. It make sense to have templates of

charge point models that you have already installed, so when you add a new one you won't have to enter all details again (such as the EVSE details, for example).

3. Charging Zone
   Select the charging zone where the charge point is located. The charging zone needs to be created in advance. If you are adding a charge point to an existing one, just start typing the name of the Charging Zone and the system will show you the matching results to select the right one.

4. Manufacture Date
   You can select the approximate date when the charging station was manufactured, so you can use this for maintenance scheduling afterwards.

5. Integration Date
   You can select the date when the charging station was installed onsite, so you can use this for maintenance scheduling afterwards.

6. Network Type
   Choose the connection type for reference. This does not affect the operation of the charging station, it is only for internal information.

7. Access Type
   Define the access type - Public or Private.

   a. Public
      If the access type is set to Public, the charge point will be visible to all users.

   b. Private
      If the access type is set to Private, the charge point would only be visible to users, who have been explicitly invited and allowed to access the private infrastructure of the Partner, who owns/hosts this charging station.
      If you check the "Show to public with notice" checkbox, the charge point would be shown to all users but can only be used by the ones invited by the Partner. In that case you can select the notice (text) that would be shown to public users. These notices are managed in the CP Notices section.

8. Status

   a. Active
      The charge point is visible in the EV Driver's app and charging sessions can be started.

b. Disabled
The charge point is not visible in the EV Driver's app and charging sessions cannot be started.

c. Demo
To be used only when there is no actual charge point, but we want to be able to show it in the mobile application and run mockup charging session for demo purposes.

d. Out of order
The charge point is shown in the EV Driver's app with status "Out of order" and cannot be used.

OCPP

This tab is used to specify details on how the charge point will connect with the platform via OCPP.

1. Managed By Operator
All charging stations that are connected to the platform with a real-time connection should be marked as Managed by Operator.
If the checkbox is not selected, then the charge point would only be shown as a point of interest, but it won't actually be managed through the platform. In that case you have to select a notice (text) to be shown to the users when they access this charge point in the EV Drivers' app.
This is useful if you want to list charging stations that are not connected or managed by any operator.

2. Network Protocol
Select the OCPP protocol version that would be used for communication with the charge point.

3. Charge Point ID
This is the unique identifier (ID) of the charge point when communicating over OCPP. Below the ID field you can see the system URL that the charge point should use to connect to the backend. This URL in combination with the Charge Point ID is set up on the charging station to connect it to the backend.

Note! Use the *433* port when using a *"wss"* connection when setting up the management URL. *The standard URL looks like this: ws://cpc.demo.dev.charge.ampeco.tech:80/demo/ChargePointID, where "80" is the port used.*)

4. Network Password
Optional field can be used if the charge point supports it.

5. Plug-n-charge without authorization
   When this is selected the charge point will start charging when a car is connected, without requiring any type of authorization (mobile app or RFID). All sessions in this case are anonymous but all other information about the charging sessions is recorded. Such charging sessions cannot be paid through the system.

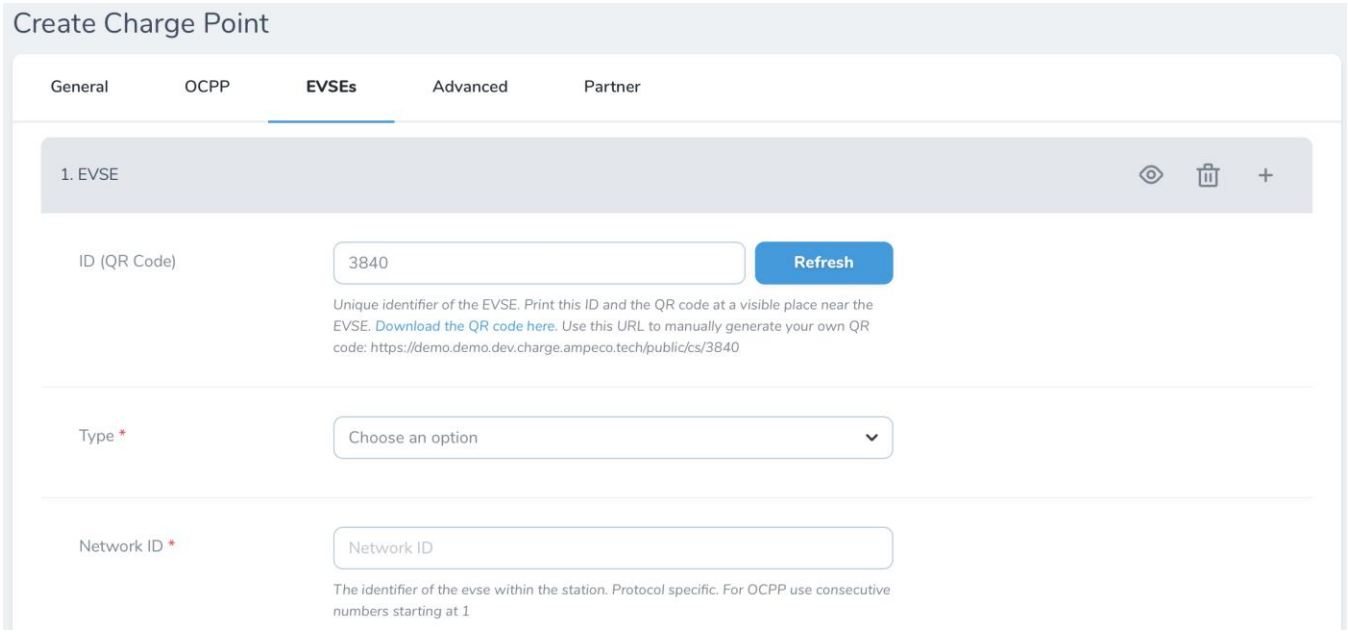
6. Enable Local Auth List
   If selected, it would allow you to add users, who can use the charging station even if it's offline. The system will provide the RFID tags of these users to the charge point, which would save it locally and use this local list if there is no connection to the backend to allow these users to start a charging session.

EVSEs

This tab describes the EVSEs and connectors (plugs) connected to each of them. If you have used a template, the EVSE details are populated with the ones from the template, otherwise you have to add the EVSEs one by one.

A charge point with 2 connectors (for example, two Type 2 sockets), would usually have 2 EVSEs, each with 1 connector (socket).

EVSE



1. ID (QR Code)
   The system generates a unique ID for the EVSE. You can use the “Refresh” button to generate a new one. You can also set the ID manually but make sure it is not already used by another EVSE, as these have to be unique. This ID is used to generate the QR code, which you should place at the charge point (sticker). There is a link “Download QR code here”, which would open the QR code for you to download. The QR code contains a URL, which is also shown below the ID field.

2. Type
   Choose the EVSE type, which could be either AC or DC.

3. Network ID
   The local network identifier of the EVSE within the charge point. Under the OCPP protocol this is how each EVSE is identified. Usually the first EVSE has ID 1, then the second is 2, etc.

4. Reservation Time (minutes)
   If left empty, the default value configured in Settings will be used. To disable reservation for this EVSE, set to 0.

5. Display Max Power (kW)
   Number presenting the max power in kW. This is displayed for the EVSE in the app, it is NOT enforced and does not affect the actual max power.

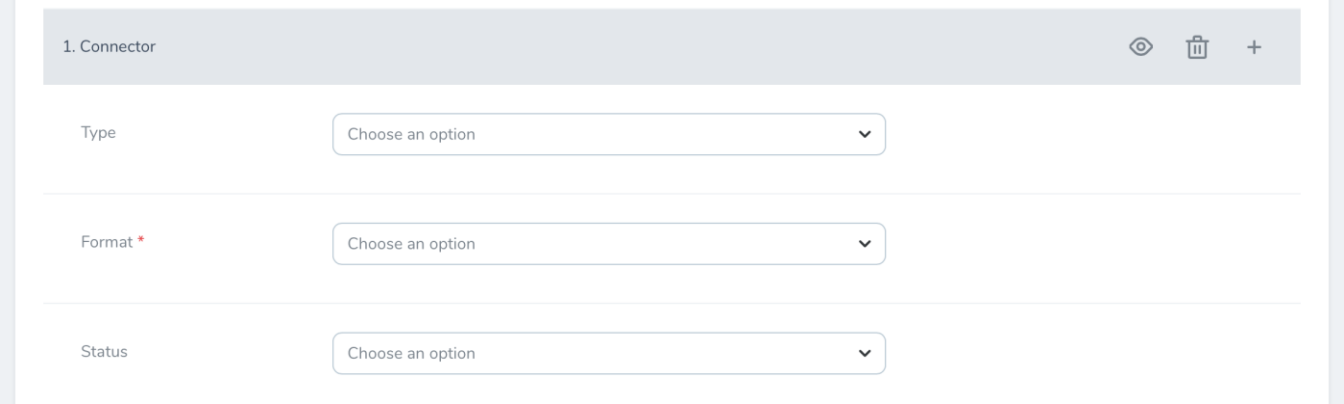
6. Tariff Group
   Dropdown to define the Tariff Group that applies to the EVSE. You can create and manage these in “TARIFFS & VOUCHERS > Tariff Groups”.

7. Tags
   Allows to mark EVSE with specific tags for future reporting, filtering, etc. In “ANALYTICS > Reports” you can filter by these tags.

8. Status
   Active, Disabled or Out of order.

9. Dynamic Load Management Settings
   The settings in this section are optional. These settings are applied ONLY if the “Load Management” option is enabled for the charge point in the Advanced tab

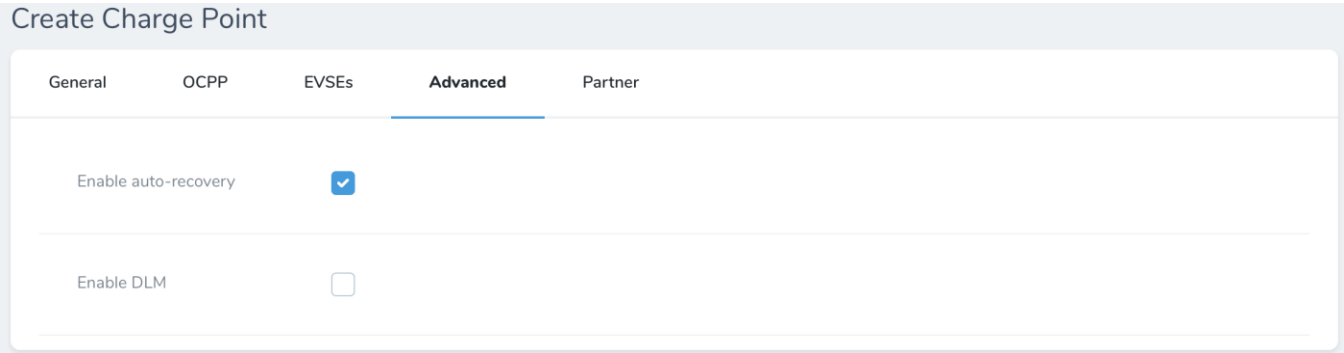
Connectors



Each EVSE can have one or more connectors depending on the model of the charge point. A common case is for DC charging that has both CCS2 and ChAdeMO connectors at a single EVSE, meaning that there are two cables - one with a CCS2 plug and another with a CHAdeMO plug but when one is in use, the other cannot be.

1. Type
   Dropdown of predefined plug types like Type1, Type2, CCS2, etc.
2. Format
   Socket or Cable options
3. Status

Advanced



In the Advanced tab you have the following options:

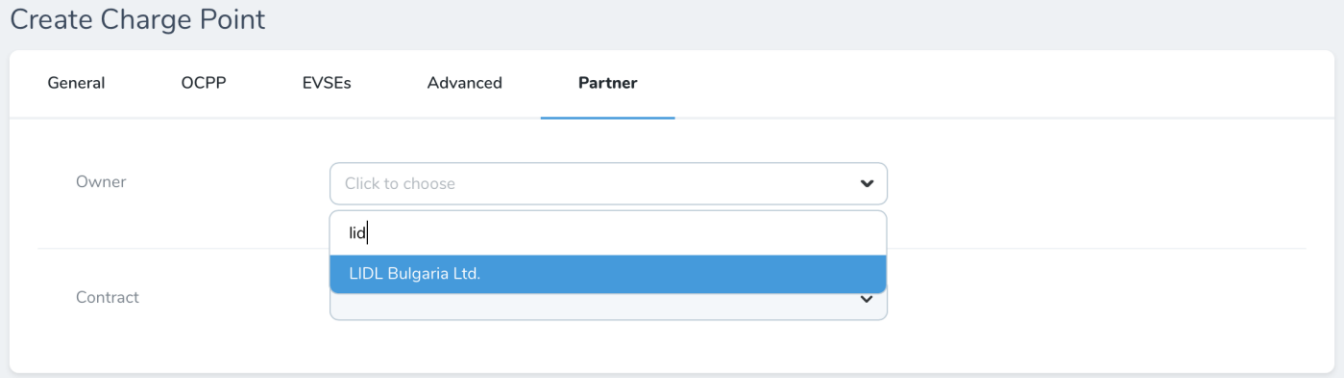
1. Enable Auto-Recovery
   The auto-recovery function is an automated active monitoring and fault resolution service, which

monitors the charge point for any faults and attempts to resolve them automatically. Whenever a fault occurs, the system would attempt to recover and then send an e-mail to admin with the result and additional information.
Only charging stations with system status “Active” are monitored.

2. Enable DLM
   DLM stands for Dynamic Load Management. If enabled, you would be able to setup the Max A limit for the charging station, choose the number of phases (single/3-phase) and select the phase rotation.
   When DLM is enabled, the charge point can be added to a Circuit.

Partner

This tab is used in cases when the charge point will be assigned to a partner account. The fields are optional. Learn more about Partners here.



1. Owner
   Select the Partner by typing the name, the system would suggest matching results for you to select from.

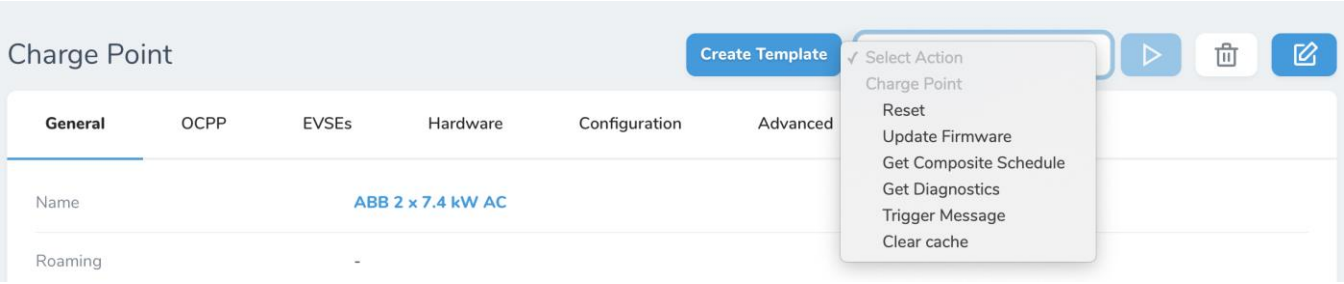
2. Contract
   Dropdown list with the type of contracts that specify terms between the operator and the partner. Refer to the “Partners Contracts” section for more information.

Create Charge Point Button

When you are ready to submit the form, press the “Create Charge Point” button. If there are any errors, the system will let you know and in that case, go through the tabs and correct them before submitting again.

Charge Point Actions

To run an action on a charge point, select it from the drop-down menu and then press the button next to it. A confirmation popup will open where you may have to enter additional details or at least provide a reason, which will be logged with your action in the “Actions” logs section for future reference.



Reset

Allows you to reboot the charging station. Opens a popup where you can select between “Soft” and “Hard” reset. The soft reset only reboots the controller, while the hard reset reboots the entire charge point.

Update Firmware

Opens a popup to schedule a firmware update. The required fields are explained in the form. In short - you can specify the FTP address of the firmware update file and schedule the firmware update time.

Get Composite Schedule

Requests the composite schedule of the charge point for the next 60 minutes. The returned profile is recorded and shown in the “Advanced” tab under “Current profile”.

Get Diagnostics

Requests a diagnostics report from the charge point. The result is recorded in the Diagnostics Requests log.

Trigger Message

Allows you to manually trigger a message from the charge point. Usually the charger would send a message whenever the status of an EVSE changes (for example, from “available” to “preparing” - when

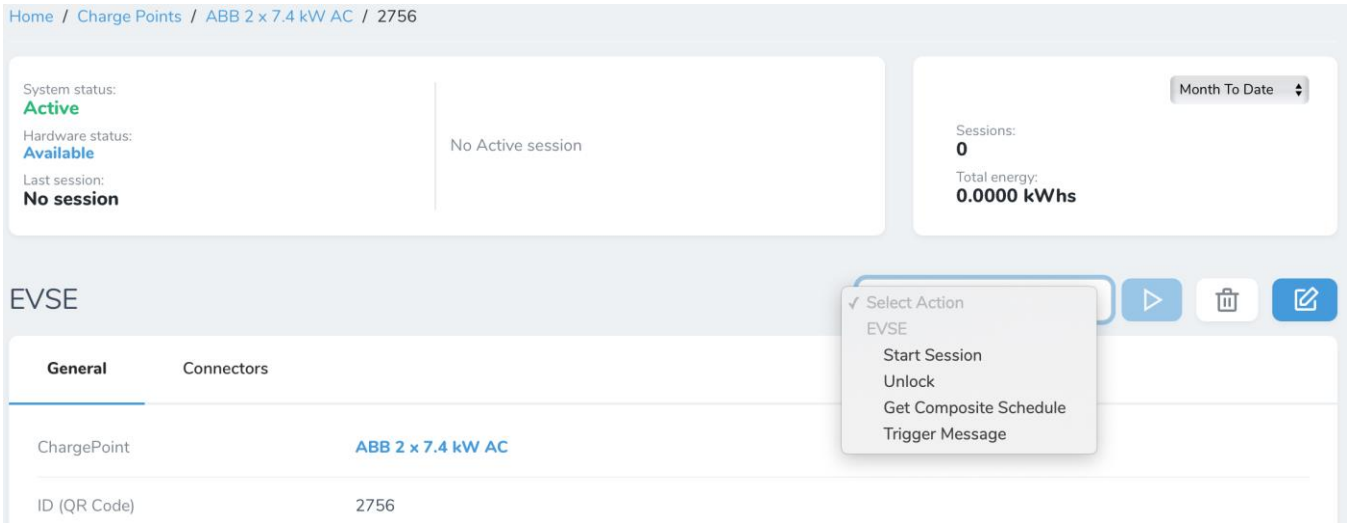
a car is plugged in). With Trigger Message you can manually ask the charger to send a status notification, for example.

Clear Cache

Clears the local idTag cache - this clears the RFID cards saved locally at the charge point.

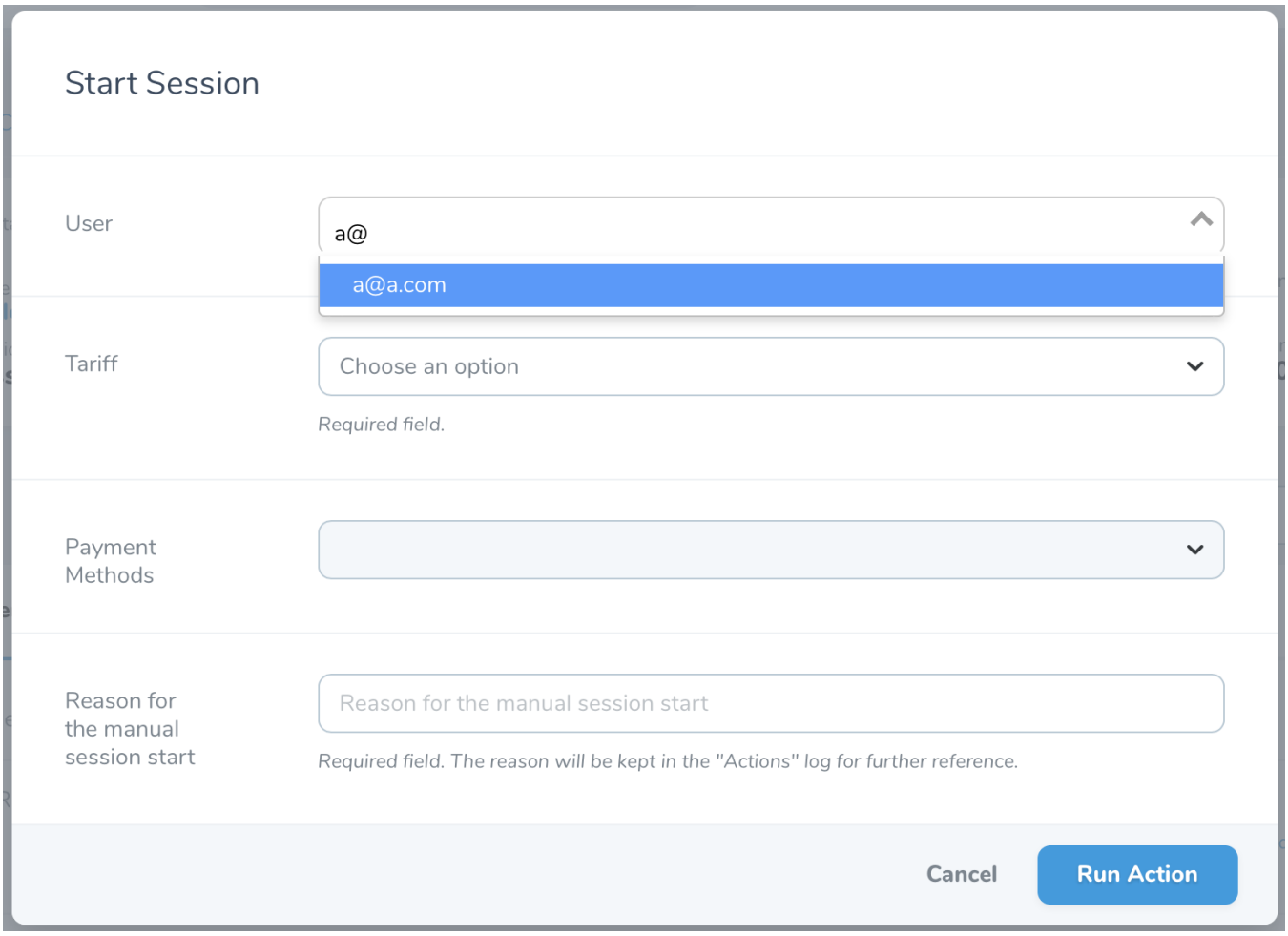
EVSE Actions

At the EVSE level you can also run actions and this is where you can start/stop a charging session remotely from the backend.



Starting a Session

With the Start Session action you can remotely activate the charger to start a charging session on behalf of any registered user. Select the action and press the button next to the drop-down menu.



1. User
   Select the user, to which the session will be associated with. Just start typing and the system will suggest matching user accounts for you to select from.

2. Tariff
   Select the tariff that will be applied. If the EVSE has a paid tariff assigned, you can select it and then the session would actually be billed to the customer. You can also always select “Free” to make the charging session free for the user.

3. Payment Method
   Select the user’s payment method, which would be charged for this session.

4. Reason
   A mandatory explanation for the action. Example: EV Driver had problems with internet connection and called for a remote start.

Reserving an EVSE

With the “Reserve” action from the list you can reserve an EVSE for any specific user in the system.

Unlock a connector

It sends a command to the charge point to unlock the connector. This could be used in case a connector is stuck locked, to try and unlock it remotely. Usually the connector would be unlocked at the end of the session automatically.

Stop Session

When a charging session is running a Stop session action is available in the dropdown. It would allow you to stop the session remotely.

Get Composite Schedule

Requests the composite schedule of the EVSE for the next 60 minutes. The returned profile is recorded and shown in the Communication Logs.

Trigger Message

Allows you to manually trigger a message from the EVSE. Usually the charger would send a message whenever the status of an EVSE changes (for example, from “available” to “preparing” - when a car is plugged in). With Trigger Message you can manually ask the charger to send a status notification, for example.

CP Templates

In the CP Templates menu you can view the charge point templates, you can rename and delete templates. You cannot create a template from this menu. To create a template, open a Charge Point and use the “Create Template” button.

Location Images

Location images that can be used when creating a location are managed in the “ASSETS > Location Images” menu.

Mind that for the location image to be displayed adequately in the EV driver app, a template must be used that is specific to your custom mobile app design. Please refer to the SYNC EV support staff for assistance with creating new Location Images and acquiring the template for your specific design.

When editing a Location Image you can replace the actual media (image), which would mean that the new image would be automatically shown to all Locations that use this Location Image.

Tariffs

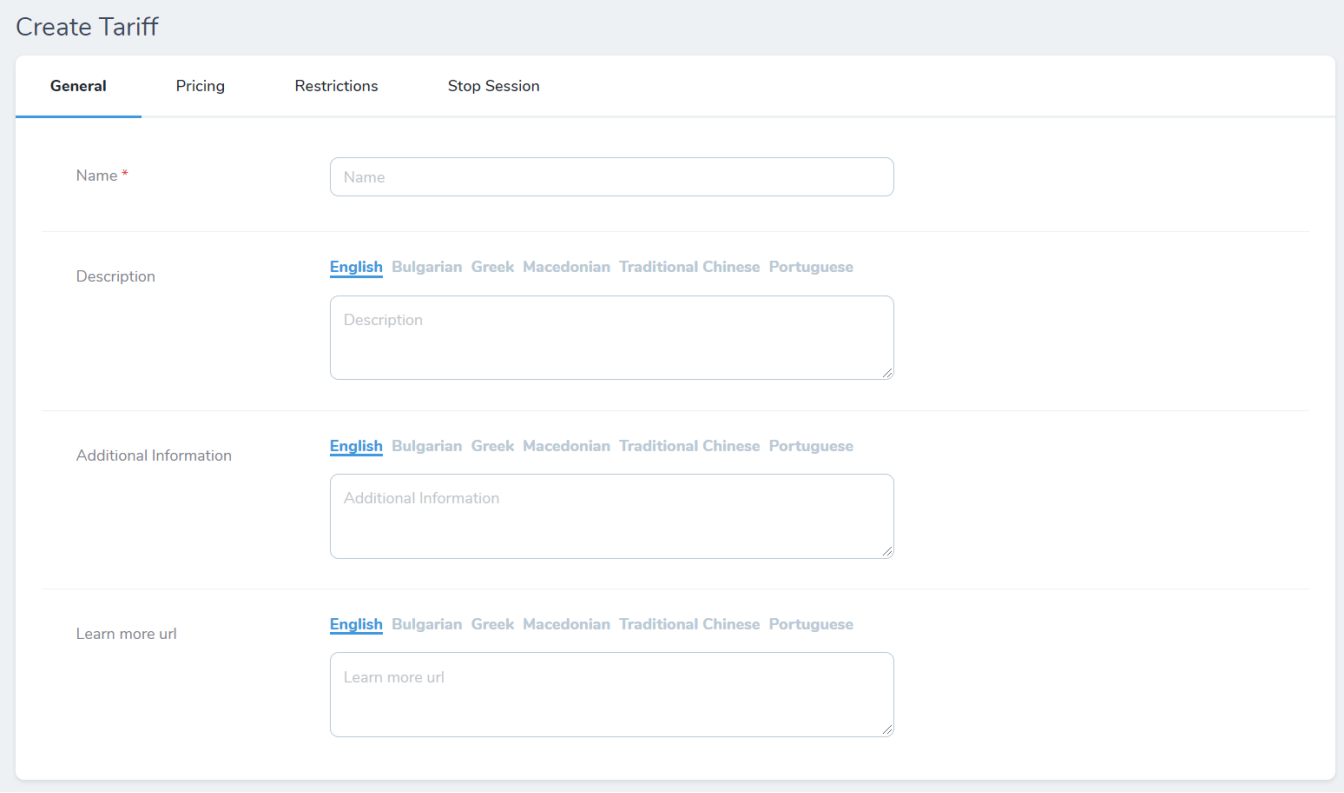
In “TARIFFS & VOUCHERS > Tariffs” you can set up and edit tariffs, which could then be grouped into Tariff Groups. Tariff Groups are applied when adding a new charge point or more precisely, to a specific EVSE of a charging station.

The reason why tariffs are grouped in Tariff Groups is so you can have different pricing for the same charge point for specific users. For example: You may have a free tariff for corporate users, but use a standard base tariff for public users.

Mind that just creating a tariff isn’t enough - for this tariff to be actually used, you then have to attach it to a Tariff Group. When creating a charge point, you choose which Tariff Group to be used for any of the charge point’s EVSE’s.

IMPORTANT: *If you are just starting with tariffs, it is recommended to start with creating a Tariff Group as it would immediately create one so called “Base Tariff” attached to this tariff group and in some cases when you don’t need to have more than one tariff you would just edit this base tariff to set the pricing.*

Creating a Tariff



Press the “Create Tariff” button to add a new tariff. The first tab you will see is the “General” tab.

General

1. Name
   The name of the tariff, only visible to the admins, not shown to the EV drivers.

2. Description
   This is shown to the user in the EV driver’s app at the screen where the user can start a charging session. Use a short text here. If you want to provide a longer description, enter it in the “Additional Information” field.

3. Additional Information
   If you enter anything in this field, the user would see an “info” icon next to the tariff’s short description in the app and when they tap on this icon, this detailed information would be displayed in a popup.

4. Learn More URL
   In the “Additional Information” popup shown to the user, a “Learn More” button would be displayed linking to the URL that you enter here.

Pricing

1. Type
   Choose one of the available types from the drop down menu. Depending on the type that you select, different fields for the price will be displayed for you to fill-in:

   A. Free
      In some cases you may want to set the session to be free of charge. It is best done through the backend as all the data about the user and usage is still saved in your system.

      You may want to use the Free tariff if you are managing company fleets, and you want to have some special user groups or maybe you are installing public charge points and the tender requirements are that these will be used for free.

   B. Flat Rate
      The price is calculated per session regardless of Energy used or Duration. You have to set the price in the “Price per session” field.

   C. Duration + Energy
      With this type you can charge both per minute and per kWh charged. You have to set the prices in the corresponding fields. An empty field is set to 0. You can also add a connection fee. It is a fixed fee that is applied at the start of the charging session.

   D. Duration + Energy TOD (time of day)
      With this type you can set both day and night tariffs and their respective prices per minute and per kWh. It is required you set the times when the Day & Night tariffs start. You can leave the field “Price per minute” blank if you want to charge per kWh or vice versa. A connection fee is also available for this tariff type.

   E. Power levels
      With this type you can set up a price per minute, which would be different depending on the average speed (kW) of charging during the charging session. You can create as many power levels as you would like. For each power level you set the price per minute and the maximum avg. speed of charging. See an example below.

Power Levels tariff - an example:

For this example the Power Levels tariff is applied to AC EVSE's with max power of 22 kW.

Power Level 1
Max average power (kW): 7.4
Price per minute: 0.10

Power Level 2
Max average power (kW): 11
Price per minute: 0.12

Power Level 3
Max average power (kW): 22
Price per minute: 0.15

If an EV driver starts charging a car that is capable of 22 kW charging at AC charges for 1 hour and the average speed of charging during this one hour is anywhere between 11 kW and 22 kW, the EV driver will pay 0.15 / min or a total of 9.00 for the 1 hour of charging.

Another driver with a car capable of AC charging of max. 7.4 kW would pay 0.10 / min or for one hour the bill would be 6.00.

Restrictions

Here you select to whom this tariff applies to.

1. Users of the CP owner
   Makes the tariff apply to users of the partner, who is set as the owner of the charge point

2. Users of all roaming Partners
   Makes the tariff apply to users of all eMSPs, which are roaming partners

3. Ad-hoc users (non-registered)
   Makes the tariff valid for non-registered users(ad-hoc charging)

4. Users of specific Partners
   Use the dropdown menu to select the specific partner.

5. User groups
   Use the dropdown menu to select the specific user group.

Stop Session

In certain scenarios you may want to limit the charging session by duration or maximum energy consumed.

1. Session max time
   Sets the maximum minutes a session is allowed to run. Leave empty for no time limit.

2. Energy exceeds
   Sets the maximum energy (kWh) allowed per session. Leave empty for no energy limit.

Additionally, in this tab, depending on how the User billing settings are set up for your system, you may see the following options:

If the billing strategy in "User billing settings" is set to "Require payment method and authorize certain amount before starting session":

3. Stop when Pre-authorisation amount falls below
   Say the pre-authorized amount is 20, if you want to stop the session once its price has reached 19, then set the amount here to 1 (20 minus 19). This way you can make sure that the pre-authorized amount will be sufficient to cover the session price.

If the billing strategy in "User billing settings" is set to "Require payment method OR minimum amount in balance":

4. Minimum balance required to start session
   The user would ONLY be able to start a session if they have at least that much in their account balance.

5. Auto stop amount
   If you want to make sure that the user has enough in their balance to cover the price of the session, set an amount here that would trigger the auto-stop of the session. Say you set it to 1 and the user has 20 in their balance, this way the session will be stopped automatically when the price reaches 19.

Tariff Groups

In “TARIFFS & VOUCHERS > Tariff Groups” you can set up and edit Tariff Groups, which then can be applied when adding a new charge point or more precisely - to a specific EVSE of a charge point. The reason Tariff Groups are applied to an EVSE and not at the charge point level is because you may want to have different Tariff Groups for the different EVSEs on a single charge point. A notable example is a fast charging station with both a DC and an AC EVSEs, which you would probably want to have different Tariff Groups for.

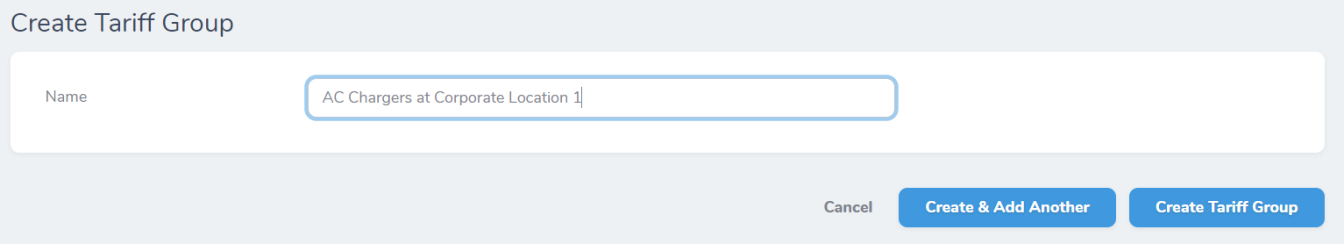
[Example TG1]Here is a simple use case of Tariff Groups: At a single location you may want to have public users charging at standard rates, corporate users charging at discounted rates, and the owners of the charging stations using them for free.

Also, let’s assume there are both AC and DC chargers installed at this location.

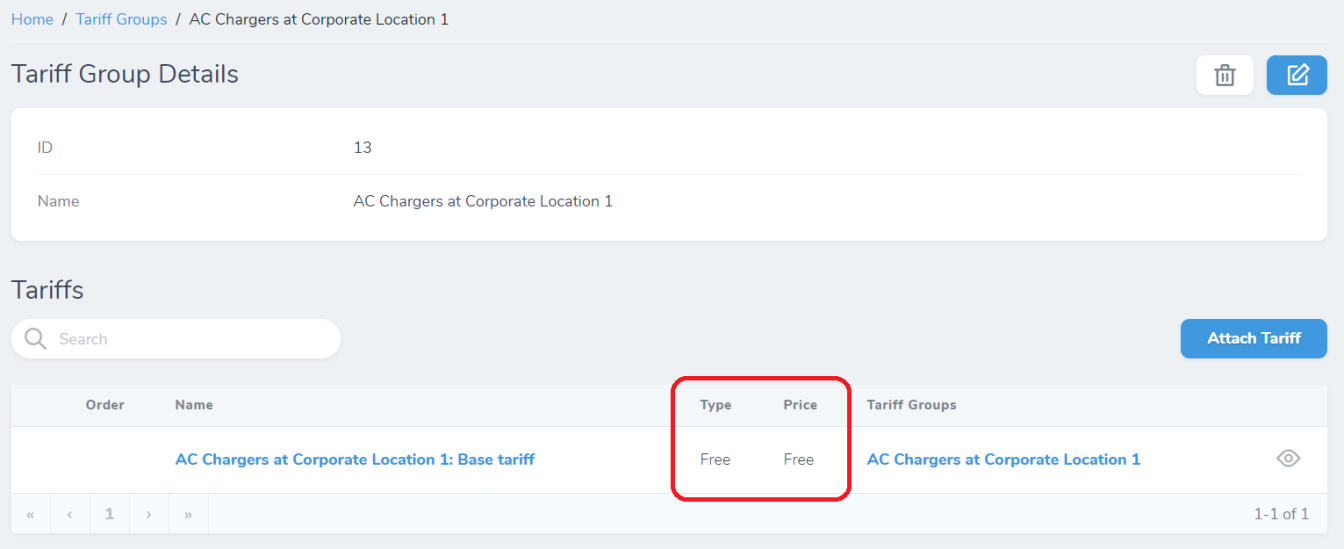
In that case you want to create 2 separate Tariff Groups - one for AC chargers and one for DC chargers. And to have different prices for each of the 3 different user groups mentioned above, you would have to create 3 Tariffs in each of the Tariff Groups.

You start with creating the Tariff Groups.

Creating a Tariff Group



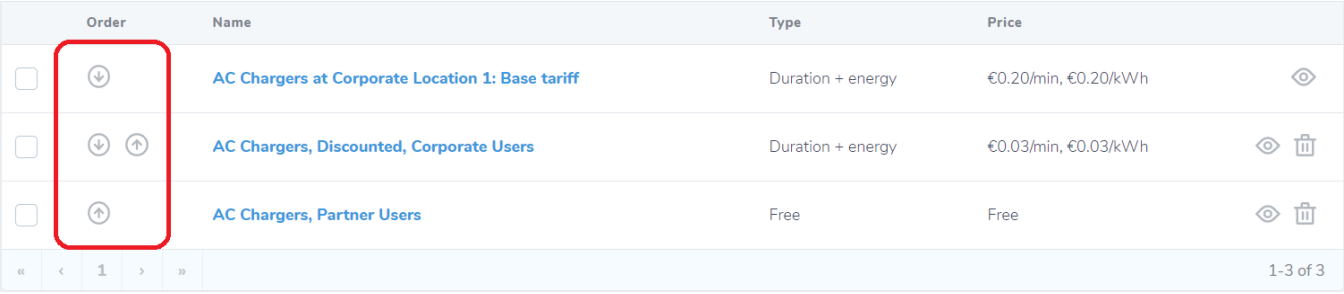
In “TARIFFS & VOUCHERS > Tariff Groups” press the Create Tariff Group button. Enter a name for the Tariff Group. If you are following the example above, you may name this one “AC Charging”



For every Tariff Group a default Base tariff is created automatically in the system. It is initially set to free, which you could later edit, but you cannot remove it from the group. The base tariff cannot have any User Group Restrictions (see Tariff > Restrictions), as it should encompass all user groups. So think of this as the “fall-back” tariff - the one, which is valid for any user that doesn’t have a special tariff.

Use the “Attach Tariff” button to select a tariff you want to attach to this tariff group. Use the dropdown menu to select from all the Tariffs you have previously created.

Important! Tariff Ordering

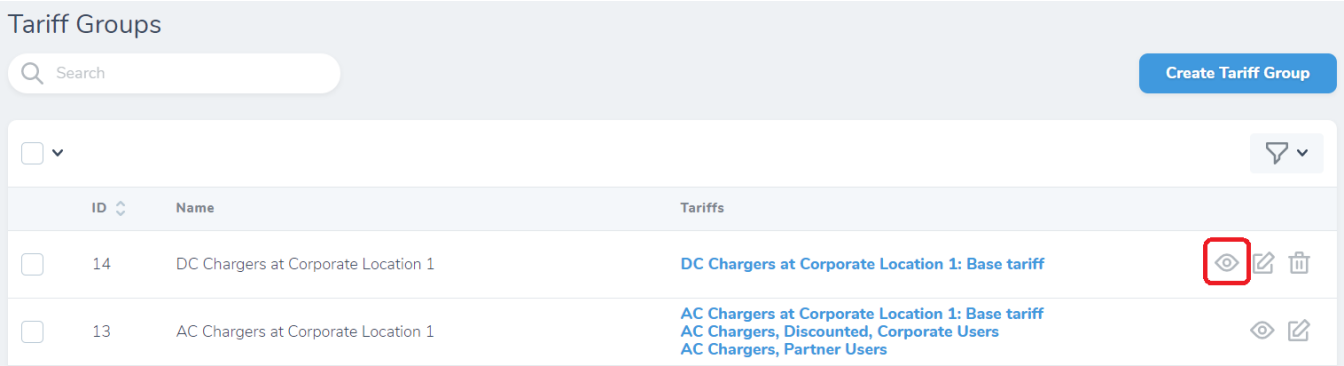


Tariff order is crucial for the proper implementation of the Tariff Group functionality. If you have users that fall into the restrictions of multiple tariffs, the tariff with the lowest order will be applied. Lowest meaning lowest in the list. The Base Tariff is always on the top and it cannot be reordered, as it applies to all users that don’t fall into any of the other tariffs

If you follow ‘Example TG1’, you would want to put the free tariff for Partner Users at the bottom, as it only applies to a few people. You want to put the tariff for Corporate Users at the second position, as it is less restrictive than the ‘Partner Users’ tariff. Base tariff is at the top, but changed so that it charges a Connection Fee + per Duration + per kWh.

Attaching Tariffs to a Tariff Group

You can attach tariffs to tariff groups at a later stage through the eye icon to the right of a Tariff Group in the list in “TARIFFS & VOUCHERS > Tariff Groups”.



Changing the Name of a Tariff Group

You can change the name of a tariff group through the edit icon to the right of a Tariff Group in the list in “TARIFFS & VOUCHERS > Tariff Groups”.

Deleting a Tariff Group

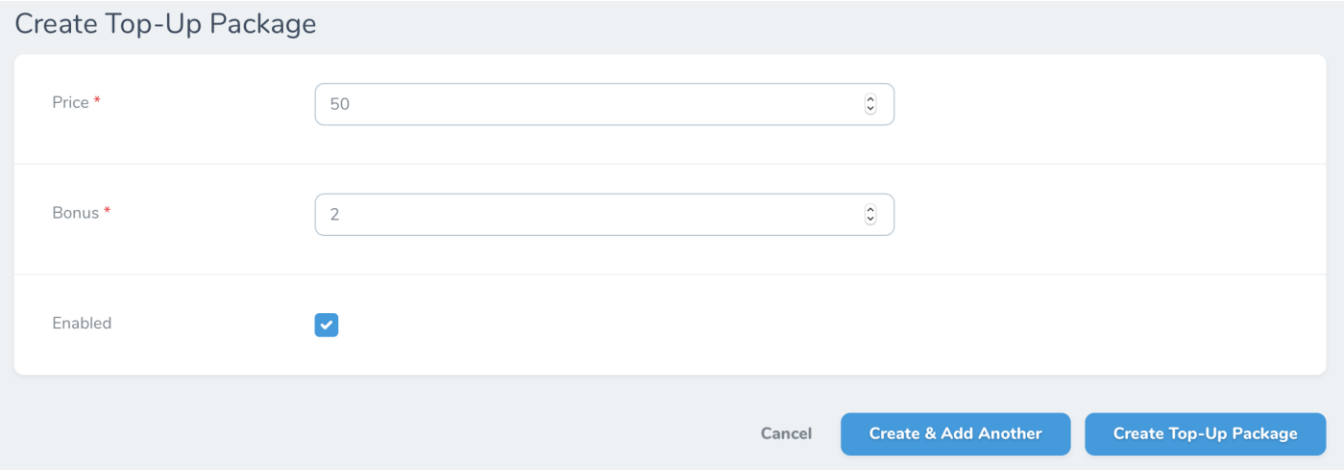
You can easily delete any tariff group unless it is used by an EVSE, then you will find that the delete button is not available. You have to first unassign the tariff group from all EVSEs that are using it or you could redact and rename the tariff group to fit your new needs.

Top-Up Packages

If the top-up packages option is enabled for the system, it allows you to create packages, which can be purchased by the users to top-up their account balance.

Creating a Top-Up Package

You start by creating the top-up packages in “TARIFFS & VOUCHERS > Top-Up Packages”. Click on the “Create Top-Up Package” button.

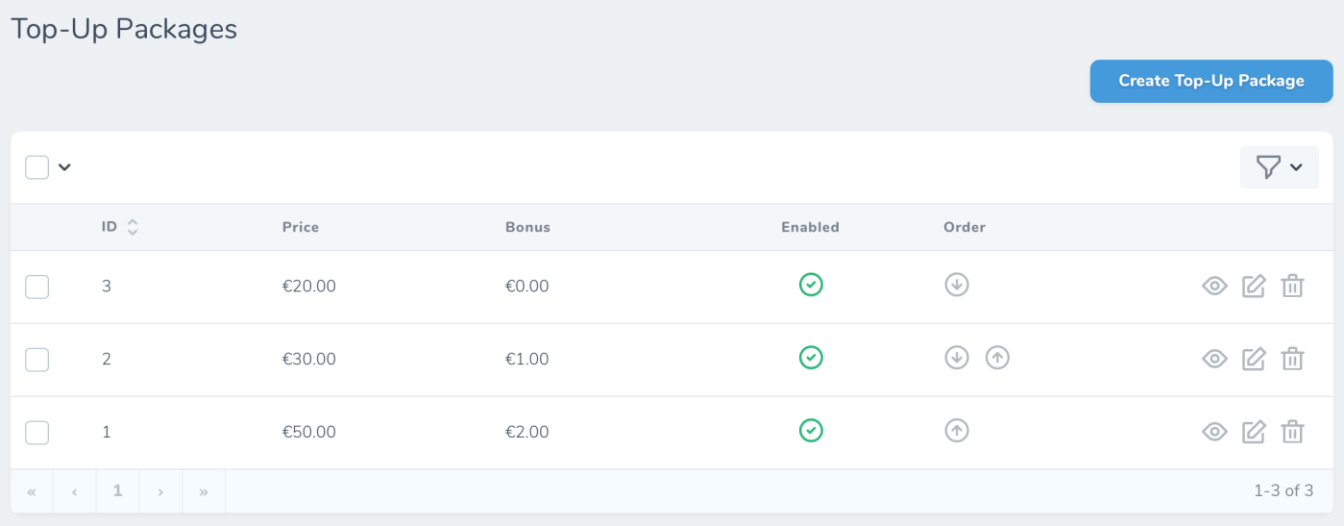


The price is what the user would pay. The bonus is added to the amount paid and the total is added to the user’s balance. This way you can encourage users to top-up with a bigger amount to get a higher bonus. In the example above the user will be charged EUR 50.00 and a total of EUR 52.00 will be added to their balance because there is a EUR 2.00 bonus.

To make the package visible to users, make sure you check the “Enabled” box. When ready, press “Create Top-Up Package” - it will immediately become available to users.

Re-ordering Top-Up Packages

The listing allows you to change the order in which packages are shown in the EV Drivers’ app. Use the buttons in the “Order” column to move packages up and down.



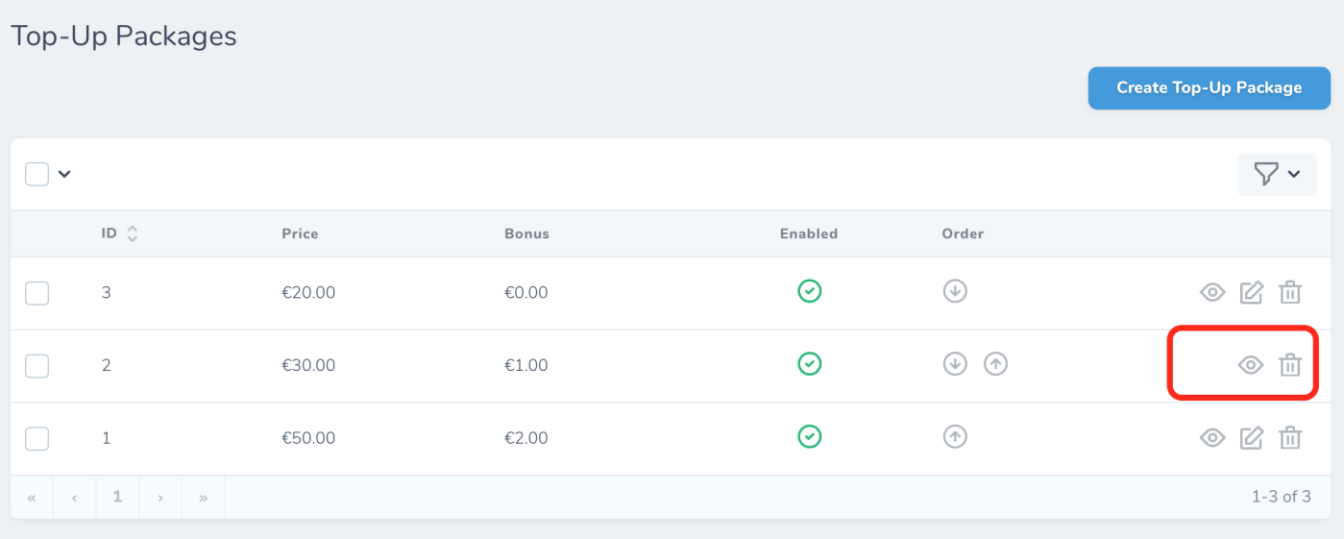
Deleting a Top-Up Package

You can delete any top-up package in “TARIFFS & VOUCHERS > Top-Up Packages” by using the trash can icon. Mind that some of the packages may be used by users for auto top-up and if you delete the package this would also disable the auto-top up for all users that have enabled auto top-up with this package.

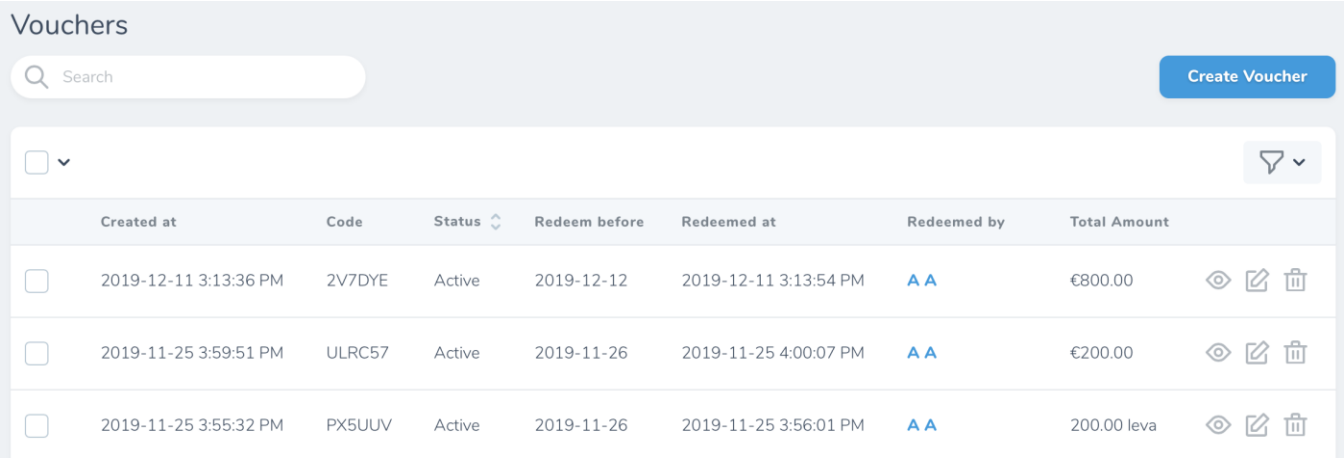
Editing a Top-Up Package

In “TARIFFS & VOUCHERS > Top-Up Packages” you can edit a package as long as it isn’t currently enabled for auto top-up by any user.

If any user has enabled auto top-up with this package, there is no edit option, as shown in the example below. You can only delete such packages but mind that this would turn off the auto top-up for all users that have enabled auto top-up with that package.

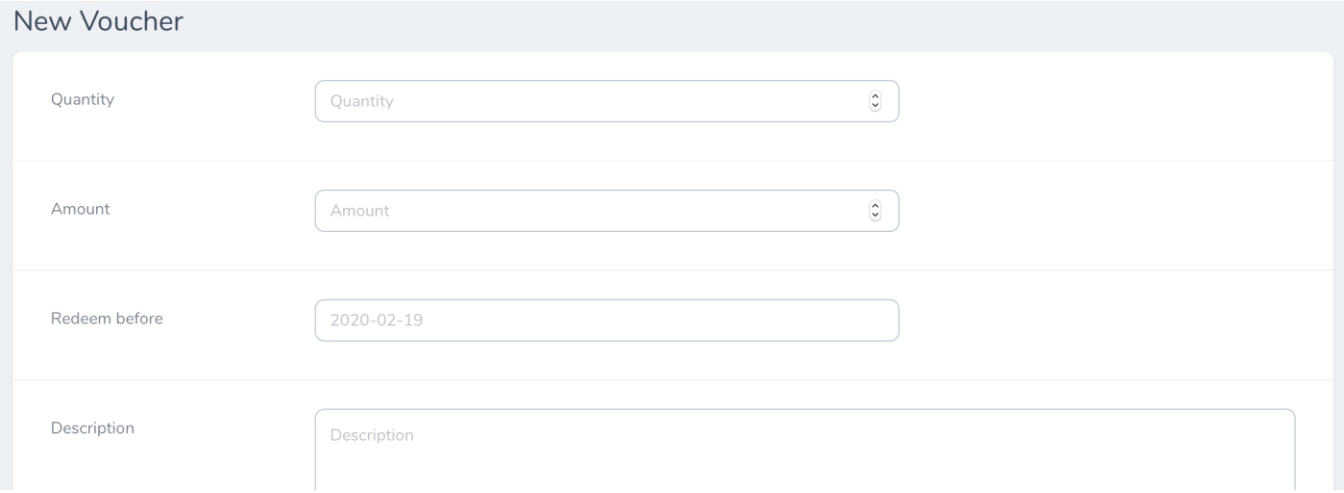


Vouchers



In “TARIFFS & VOUCHERS > Vouchers” you can create pre-paid vouchers that could then be redeemed by EV drivers and the amount of the voucher is then added to their balance to be used to pay for charging. You can use vouchers for marketing, compensation or even sell them to EV drivers as a pre-paid service.

Creating Vouchers



To create vouchers, press the “Create Voucher” button, which would open a form for you to fill in the following:

1. Quantity
   The number of vouchers to be generated. You can just type “1” if you want to generate just one voucher or you can enter any number to generate vouchers at bulk.

2. Amount
   This is the amount of the voucher. When redeemed, this is the amount, which would be added to the user’s balance.

3. Redeem before
   The expiration date of the voucher. If it’s not redeemed before this date, it would expire and would not be redeemable anymore.

4. Description
   This is only for your reference, it is not displayed to the end-users.

Vouchers Listing

At the main Vouchers page you can also view and filter all Vouchers that have been created. You can also find all processed user top-ups, as well as admin top up generated by the “Add balance” action on the user’s profile, as user and admin top-ups in fact generate a voucher that is immediately redeemed to the user's account, so these auto-generated vouchers for balance top-ups are also listed here.

Using the filters at the upper right corner of the table you can filter the vouchers shown by type, date created, date redeemed, etc. You can use multiple filters at the same time.

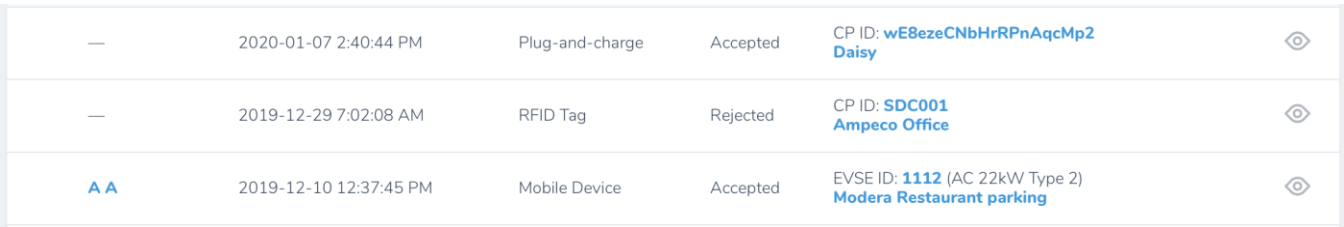
Exporting Vaucher & Top-Up Data

You can export data for multiple entries by selecting them in the list and Running the action ‘Export’ from the dropdown. In the CSV you will get all the columns that are visible on the page, but you also find additional 2 columns containing information about who ‘Created’ the vaucher (meaning the admin account that was used to log into the backend), and also a field with the ‘Description’ of the Voucher/Top-Up.

Activity

Authorizations

Each time a user taps an RFID card/chip at a charge point or initiates charging from the EV driver’s app, this creates an authorization record in the system. Authorizations are also created when a car is plugged into a charge point that supports “Plug-and-Charge”.



In the “ACTIVITY > Authorizations” menu you can review all authorizations at any of your charge points.

If you want to register a new RFID card and you don’t know it’s tag ID, you can tap it at any of your charging stations, which would generate an authorization. It would be rejected, since the RFID tag is not recognized but when you click to view the authorization details you can see the RFID tag, copy it and then add it to a user in the system. For details on registering an RFID tag, see this section.

Reservations

Reservations by EV drivers are recorded and you can review them in “ACTIVITY > Reservations”.

Charging Sessions

In the “ACTIVITY > Charging Sessions” menu you can view all charging sessions at your charging stations. Note that the “Failed” status does not necessarily indicate a problem - usually “Failed” sessions are just ones that were initiated by the EV driver but then the car was not plugged in within the timeout limit configured in the system (usually 60 seconds).

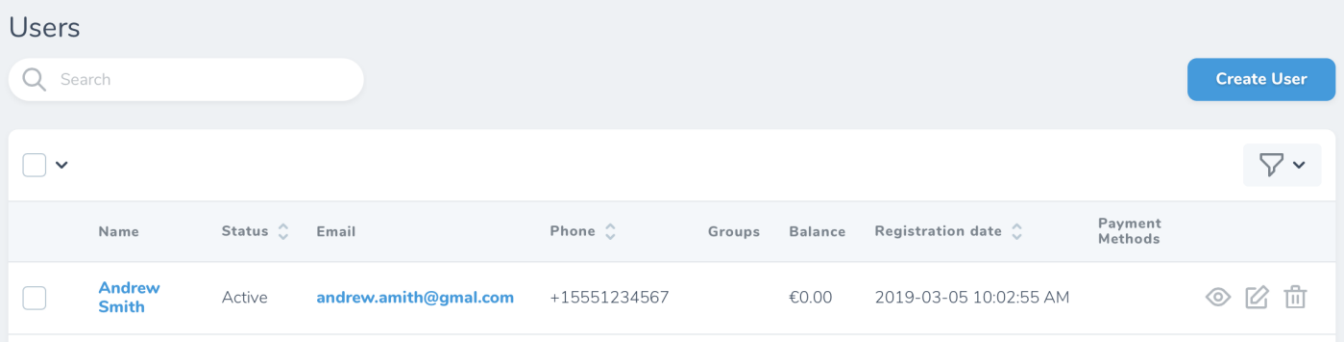
When you open a single charging session you can view all details, including a list of the transactions associated with this session, if it was a paid one.

Transactions

In the “PAYMENTS > Transactions” menu you can view a full list of all transactions in your system. Transactions are usually related to a charging session but depending on your payment gateway configuration there may be transactions that were generated when adding a payment method to an EV Driver’s account.

Note: Under the Transactions list, you will not find any Top-Ups made by users, as they are not considered transactions. Hence, they are not counted towards your Revenue Reports. You can view all processed Top-Ups at ‘Viewing and Filtering all Vouchers & Top-Ups’

Users

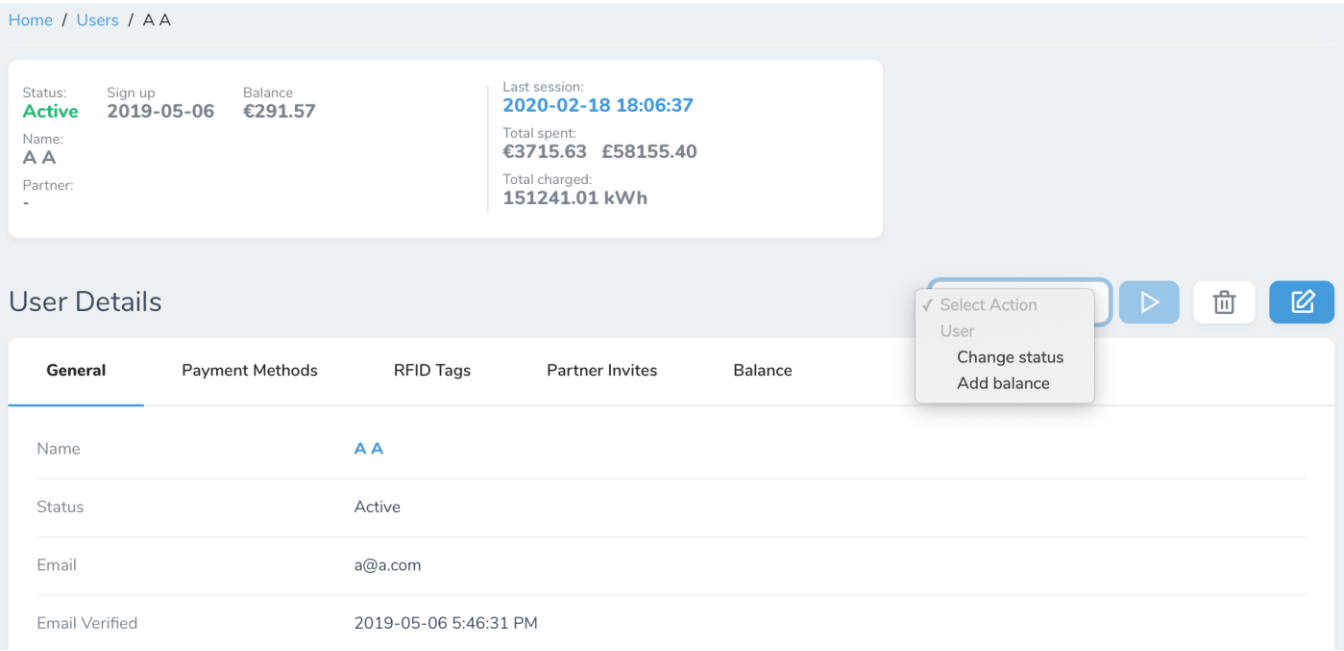


Users register in the system through the EV drivers' app. In the admin panel you can view user accounts and data and you can suspend a user account if necessary.

You can add a user account from the backend using the "Create User" button.

User Profile

In the user profile page in the admin panel you can see when the user signed up, how much they have spent and charged in total, their last sessions and transactions, their contact details, payment methods and RFID tags.



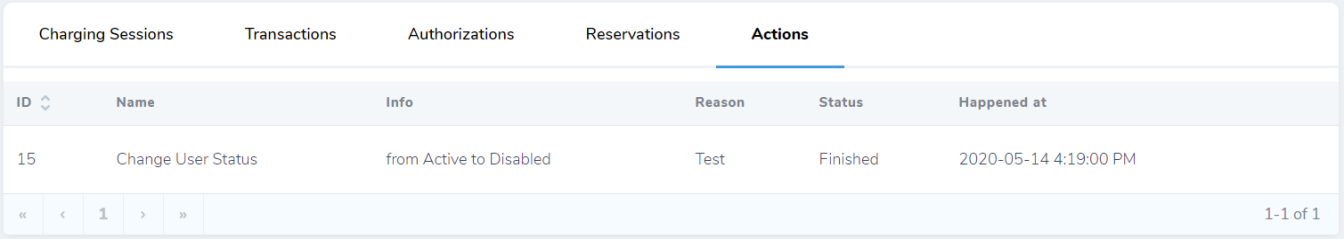
Disable user account

Occasionally, there may be a need to disable a user account, for example, if the user has abused the service. To do so, go to “CRM > Users” and find the user account or use the Universal Search to find the account.

From the “Select Action” drop-down select the “Change status” action and press the apply button next to the drop-down. In the dialog window that opens, select the status “Disabled”, type in a reason and apply the action to disable the user account.

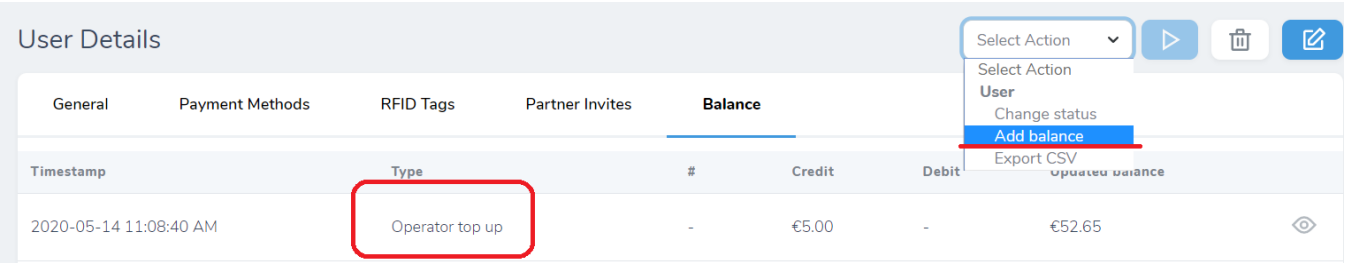
While the account’s status is “Disabled” the user will not be able to login and use the service. You can activate the account by changing the status to “Active”.

You will find the data log about this status change in the ‘Actions’ tab on the ‘User Details’ page.



Add to User’s Balance

You can add to the user’s balance from the user’s profile using the “Add balance” action. The amount that you enter would be immediately credited to the user’s balance. This action is saved in the system as an “Operator top up”. Technically to add to the user’s balance the system generates and redeems a voucher to the user’s account, so you will also see a voucher generated for this in Vouchers.



User's Details

All information about the user is displayed in the following tabs:

General

Shows the user account information and contact details of the user.

Payment Methods

Shows the payments methods that the user has registered for their account.

RFID Tags

Each user account can have one or more RFID tags associated with it. Whenever any of these RFID tags is used, the system recognizes the user. Each RFID tag can be associated with a specific payment method or corporate account, so when it is used, the charging fee is billed directly to this payment method or corporate account. You can add an RFID tag to the user account from this tab in the user profile or you can go to the "CRM > RFID Tags" section to manage RFID tags.

Partner Invites

A list of the partner invites of the user. Whenever a partner invites a user to their partner account, a "Partner Invite" is created. The user can then accept it or if the system is setup to auto-accept invites, it would be automatically accepted. Depending on what the partner selected when creating the invite, this may grant the user access to the Partner's private charging stations and/or allow the user to bill their charging fees to the Partner's company (corporate account).

In this tab you can manage the Partner Invites for the user and even create a new one, to link the user account with a partner in the system.

Note: You cannot send multiple invites to 1 email. This means that if for some reason you want to re-send an invite to an email you have previously sent to, you need to first delete this invite from the list.

Balance

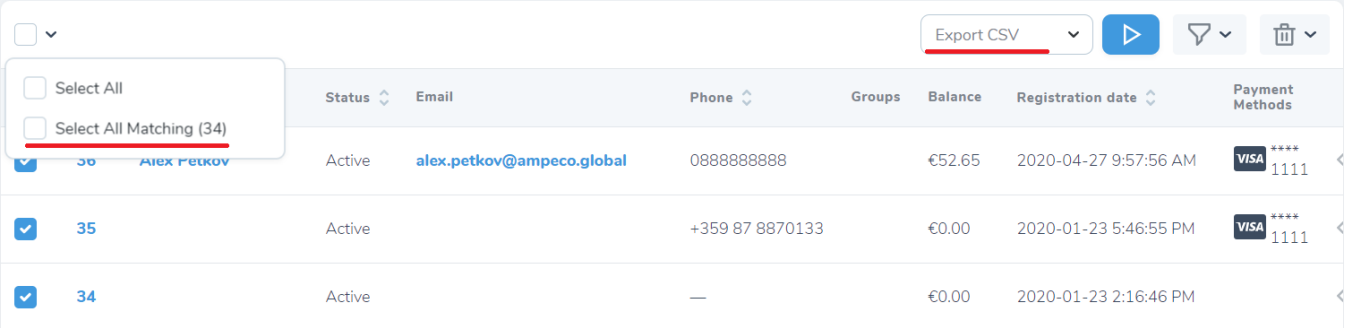
A detailed history of all balance transactions.

User's Activity

Below the user's details, there is a section with all of their activity and the actions log (any admin actions to the user account).

Exporting Users

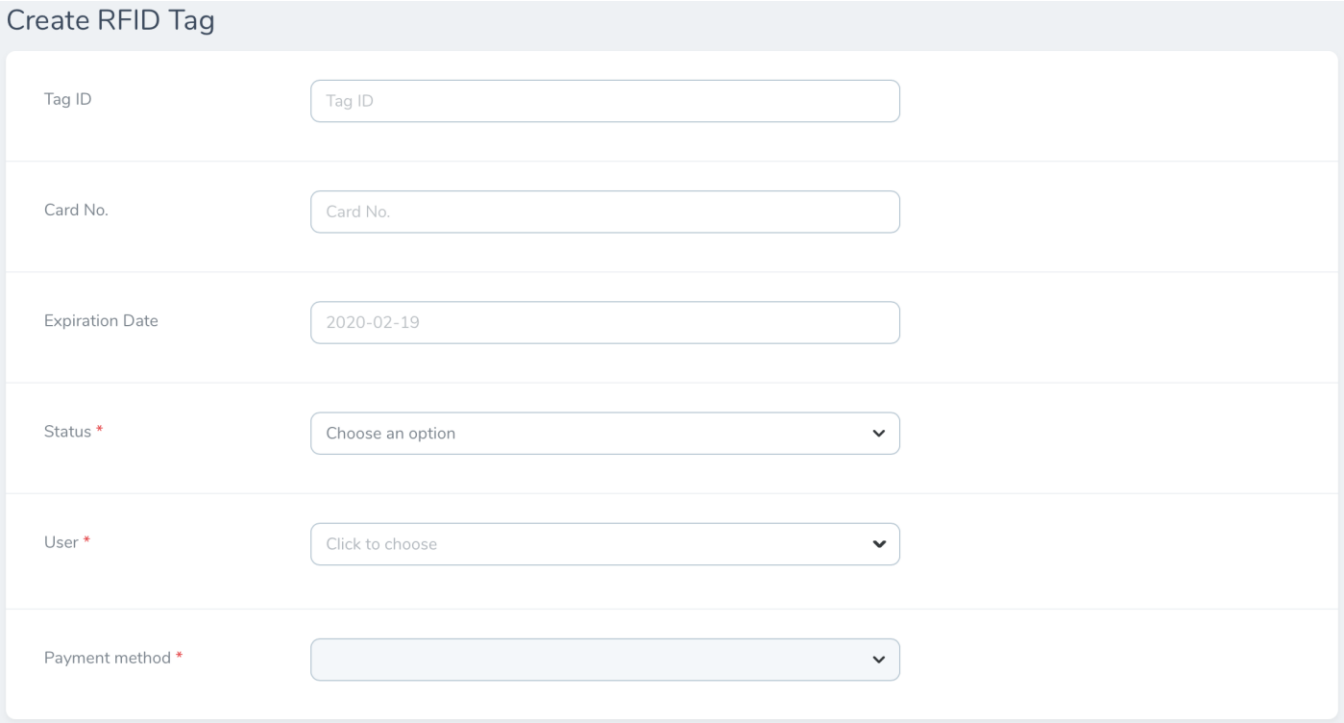
Exporting user data can be done through the Actions menu on the "CRM > Users" page. You can either select users manually or by using the filters and selecting all that match the criteria.



RFID Tags

In the RFID Tags section you can find and manage all RFID tags registered to any user account in the system.
Each user account can have one or more RFID tags associated with it. Whenever any of these RFID tags is used, the system recognizes the user. Each RFID tag can be associated with a specific payment method or corporate account, so when it is used, the charging fee is billed directly to this payment method or corporate account. You can add an RFID tag using the "Create RFID" button.

Add RFID tag (card) for user



1. Tag ID
   Paste the public tag ID or if you are using a USB card reader, click on that field and tap the card on the reader to fill in the Tag ID.

2. Card No.
   If you want to assign a card number or any other identification to this RFID tag, enter it here. This is also visible to the user.

3. Expiration Date
   If you want to set an expiration date, select it here. Once an RFID tag expires, it would no longer work.

4. Status
   Set the status to “Active” to make the RFID tag operational.

5. User
   Choose the user account by entering the e-mail or name of the user (this step is not necessary if you start from the user account).

6. Payment method
   Select which payment method will be used when the user uses this RFID tag. You can link the RFID tag to a specific payment method or just leave it to “Last used”.

Receipts

Receipts to EV driver’s are generated monthly (unless configured otherwise for your system). In the “CRM > Receipts” menu you can view a list of all receipts generated by the system. Whenever a receipt is generated it is sent to the EV driver via e-mail and is also available to download in the EV driver’s app.

Content Management

Terms & Policies

In the “CONTENT > Terms & Policies” menu you can add and edit the Terms displayed to the EV drivers when they signup for the service. These Terms are also shown in the EV driver’s app in the “Terms of Service” menu so the EV drivers can review them at any time.

The terms should be entered for each language supported in the Driver’s app. The form allows for formatting but a more convenient way to format the text would be by using Google Docs or another web-based text editor and then copy-paste the contents to the form, which would keep the formatting.

FAQ

The Frequently Asked Questions are displayed in the Driver’s app in the Info Center section. You can add and edit the FAQ from the “CONTENT > FAQ” menu.

Contacts

In the Driver’s app the support e-mail and phone number are displayed in the Info Center section. You can edit the contact details in the “CONTENT > Contacts” menu.

Configuration

Admin Accounts

In the “CONFIGURATION > Admin Accounts” menu you can add, edit and remove accounts that have access to your admin panel. When creating an admin account you enter the login credentials and select the role.

By default, there are 3 roles:

- Super User
  Full-access to all menus and actions.
- Operator
  Has access to all menus and actions except the Admin Accounts management.
- Analyst
  Has access only to ACTIVITY and ANALYTICS sections of the admin panel.

Your system may have different roles and the permissions of each role may differ depending on the requirements and setup that you require upon configuring the system.

Settings

In the “CONFIGURATION > Settings” menu you can add, edit and remove the global settings for the system that will be used across the backend and the app. Here is a detailed explanation of the most important settings you have to cover in no particular order.

Charge point configuration defaults

Usually we set the system to send a “Heartbeat” every 300 sec, which tells our system that the Charge Point is still connected to our system.
We set “MeterValueSample” to 60 sec as it returns information about the session and the health of the charge point. You will be looking at meter value data on the “Communications Log” tab when you are troubleshooting a charge point.

Allow Partner to view Users that have accepted invite

This will give access to all user data to the Partner for the user he has invited. This may include personal emails if the user has used such when signing for the first time.

Auto accept partner invites

If this is enabled whenever a partner sends an invite to an e-mail that matches the e-mail address of a registered user, the invitation would be accepted automatically. However if the invitation is sent to an e-mail address that does not match one of a registered user, the regular invitation process would commence where the user has to confirm accepting the invitation.

Maximum number of payment methods per customer allowed

Usually we set this to “No limit” by leaving the field empty.

Payment Processor Testing

This is used for testing a different payment processor than the one activated for the system. The setting allows a testing payment processor to be selected and to enter the e-mail of a user in the system that would see/use the testing processor instead of the regular one.

Session Timeout

1. Fail starting after (seconds)
   Sets the timeout (in seconds) for starting a session. If the user fails to plug their EV in that time, the session is discarded. A recommended setting is 60s.

2. Reset stopping after (seconds)
   If the system sends a “Stop Session” command to the charge point and no response is received back within the set time limit, an error message would be displayed to the user, and they can attempt to stop again. A recommended setting is 60s.

3. Finish after inactivity (minutes)
   During a charging session the charge point would report meter values at a set period of time. If charging is stopped by the user outside of the system (for example the user unplugs the cable or uses the interface on the charge point), the charge point has to report this to the backend and stop the session.

   Due to poor OCPP implementation some charging stations do not always do this and instead they may just stop reporting meter values. This setting defines the inactivity (period without meter values during the session), which should make the system consider the session terminated and stop it in the backend as well. This is a safety mechanism to deal with poor OCPP implementation on the hardware side. A recommended setting is 120 minutes.

User billing settings

This setting will define the global billing settings. Here are the different options you have:

- Enable balance top up
  By enabling this feature, users will be able to top up their balance not only by redeeming a voucher but also by using any of their valid payment methods.
- Enable auto top up
  By enabling this feature, users will be able to set the system to auto top up their balance when it reaches a certain limit.
- Auto top up when balance amount reaches
  The limit that defines when the user's balance will be auto topped up.

  Next, you can select 1 of 4 Billing Strategies:

1. Require payment method and bill it AFTER the end of the session
   This only requires the user to have a payment method to start the charging session.

   This billing strategy will not authorize a user to start a charging session if she falls under a free tariff, unless she meets the above criteria.

2. Require payment method and authorize certain amount before starting session.
   Using this billing strategy will always try to first authorize a certain amount from the user's payment method (credit/debit card), and if it fails the system will not authorize the charging session.

   - Pre-authorize amount
     The amount that will be blocked on the user's payment method (credit/debit card) at the start of the session

   - Stop when Pre-authorisation amount falls below
     Leaving this field empty means that the session will not stop even if the amount due is above the Pre-authorized amount.

     It is recommended to set the value above 0, as the system gets Meter Values once every 60s from the charge point. In Europe for AC chargers it makes sense to set this

value to be above 0.5 EUR. Otherwise, the system may not be able to stop the charging session in time, so the transaction will fail if the user doesn't have enough balance.

In that case, the authorized amount will be paid and the user will have an outstanding balance. This will prevent her from starting a new charging session, unless they pay their balance due.

This billing strategy will not authorize a user to start a charging session if she falls under a free tariff, unless she meets the above criteria.

3. Require payment method OR minimum amount in balance.
   Selecting this billing strategy will not authorize charging sessions unless the user has a payment method OR a minimum amount in her balance. In some cases the user may only have a balance from using a voucher to start a charging session.

   - Do not allow direct use of payment method for payment
     If checked the user will NOT be able to select any of their payment methods when starting the session and instead the balance will be used to pay for the session. In this case payment methods would only be used for balance top up!
   - Minimum balance required to start session
     If checked the user will NOT be able to start a session unless there is at least this amount in their balance. If the amount is lower than that the user will be asked to first top up their balance before starting a session.
   - Automatically stop session when the available balance falls below this amount
     Usually you want this amount to be lower than the "Auto top up when balance amount reaches" amount, so that the charging session stops only if the user's payment method cannot pay for an additional top-up.

     This billing strategy will not authorize a user to start a charging session if they fall under a free tariff, unless they meet the above criteria.

4. Do NOT require payment method and do NOT require any amount in balance
   Selecting this billing strategy does NOT require any payment method or amount in the balance.

User profile fields

You will find a list of possible fields you may want your users to fill in when signing in.
Different fields can have 1 of 4 different statuses:

1. Enabled
   Is seen by the user, but not required.

2. Disabled
   Is NOT seen by the user.

3. Required
   Is required by the user to successfully sign-in.

4. Requires Verification
   Requires the user to verify that data by additional steps. Currently, this is used for Email and Phone verification.

Notification e-mail addresses

When creating a tenant for your system we set a default email for “Generic Notifications” and for “Auto-recovery & faults”. However, this setting allows you to override the default email.

Reservations

Enabling this feature will give the users the option to reserve a charge point through the app. You are able to control: the duration of the reservation in minutes; remaining time of the reservation notification to be sent to the user; the maximum number of reservations a user can make per day; cool-down time between reservations in minutes.

Default location

Default location is used on the different maps in the system. This is important, so that you can use the location search properly.

Timezone

Set the base time zone for the system. This affects the timestamps in “Analytics > Reports” and also in all exports (CSV) of all listings, such as sessions, transactions, etc.

When displaying times in the backend (except for Reports), however, it is the local timezone of the admin user that is used, not the system time zone. So if you have operators in different time zones logged in to the backend, when they see any timestamps, they see them in their own time zone. In exports however and in the Analytics > Reports tool, the default time zone for the system is used.

App Settings

Set the appropriate values of “Cable Only”, “Free Only” and “Enable pins grouping on zoom-out” that will be used when users filter charge points on the map within the app.

Here you will be also able to set the default language and all the possible languages you want your users to see your app translated to.

Set station connection status to "Temporary unavailable" after

This is usually set to 120 sec for you to be able to filter charge points by availability when troubleshooting.

Set station connection status to "Long term unavailable" after

This is usually set to 300 sec and it will be seen in the “DASHBOARD> Faults”. The end user will not be able to see that status unless you specifically set the station status to be “Out of Order”.

Base VAT

Select your base VAT from the list that will be used for Receipts and Settlement Reports or create a new one in “CONFIGURATION > VAT”.

Base Currency

By default the base currency in the system is set to EUR. You can change that at any time from the list of available currencies or create a new one from “CONFIGURATION > Currencies”.

Payment Processor

IMPORTANT!: *This section will soon be an option in Settings.*

Select the Payment Processor from the drop down menu. The only visible options will be the Payment Processors for which you have created an integration in Integrations. Please, advise with your account manager to set up the integration properly.

Integrations

IMPORTANT!: *Please, advise with your account manager to set up all appropriate integrations for your account.*

Invoices Processor

IMPORTANT!: *This section will soon be an option in Settings.*

Select the Invoices Processor from the drop down menu. The only visible options will be the Invoice Processors for which you have entered the needed information in Integrations. Please, speak to your account manager to set up the integration properly.

Company Details

IMPORTANT!:*This section will soon be an option in Settings.*

These are your own company details. They are shown in Receipts issued to EV drivers and also in Settlement Reports for your partners.

Company Details are used in Receipts and Settlement Reports between you and your Partners.

VAT

You have to predefine the VAT percentages you will be using. There are 2 fields - Name and the VAT percentage that you will be using for the given scenario or country. Mind that prices that you enter in Tariffs (for EV drivers) are always entered with VAT). However when you enter platform fees for partners, these are entered without VAT (as indicated in the respective forms).

As for displaying prices - to users the prices are always shown with VAT. Only in the Receipt generated for the user there is a breakdown showing the total with and without VAT.

For partners, platform fees are displayed without VAT and all subtotals and totals in Revenue & Expenses and in Settlement Reports are without VAT (as stated in these sections of the backend and in the respective documents).

SMS Processor

IMPORTANT!:*This section will soon be an option in Settings.*

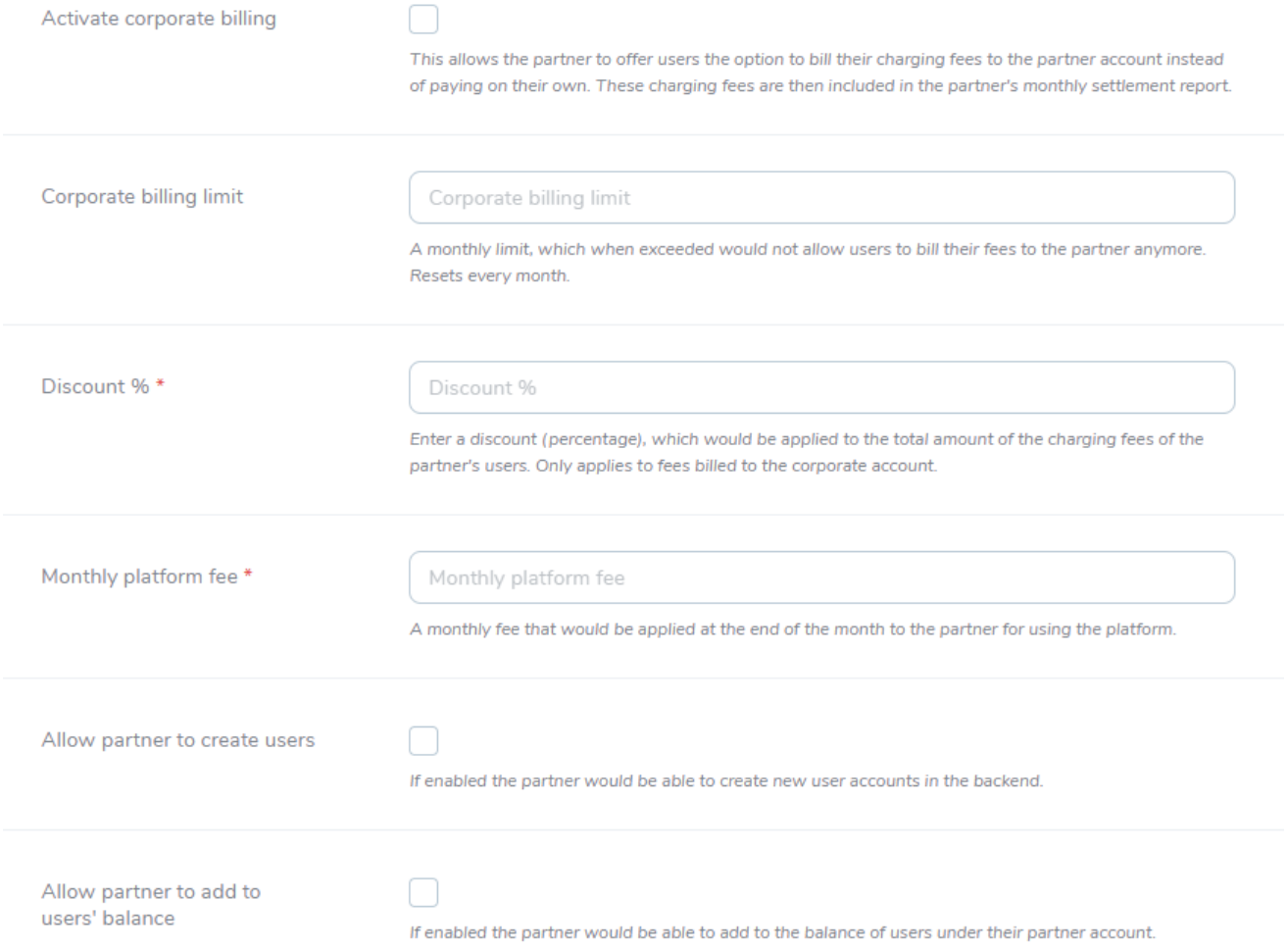
Select the SMS Processor from the drop down menu. The only visible options will be the SMS Processors for which you have entered the needed information in Integrations. Please, speak to your account manager to set up the integration properly. SMS processor is used for sending SMS verification to users (only) if you have this enabled in User profile settings.

Partners

The Partners module allows you to define your relations with location hosts and corporate accounts. In some cases a partner may be both - they may have charging stations but also users, who can bill their charging fees to the corporate billing account.

Create Partner

To set up a partner account you fill in a form where you enter the company and contact details. At the end of the form you enable certain settings and permissions for the partner:



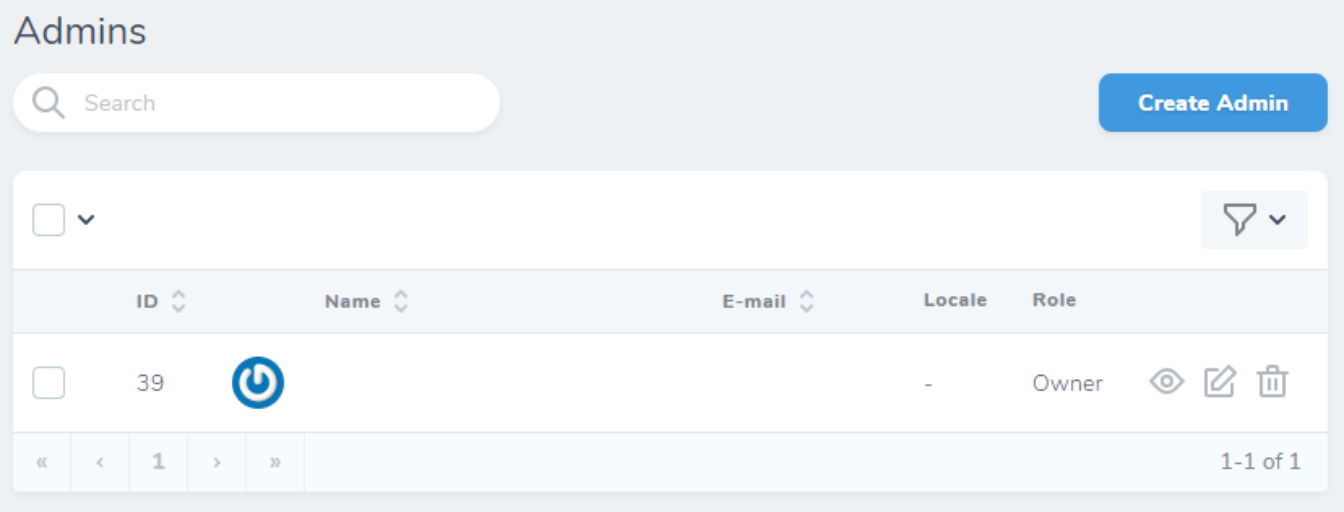
- Corporate Account Billing
  If this is enabled, the partner would be able to invite users to their partner account and let them bill their charging fees to the partner's account. Then at the end of the month the partner can pay at bulk for all charging sessions of all of their users.

- Corporate Billing Limit
  Is the monthly limit, which when exceeded the system would not allow users to bill their fees to the partner anymore. Resets every month.

- Discount Percent
  If you want to give the partner a discount on the total charging fees for all of their users' charging sessions, you can define the discount % here.

- Monthly Platform Fee
  If you want to charge the partner a monthly platform fee, you can define it here.
- Allow partner to create users
  This would allow the partner to create users in the backend. Even without this checkbox enabled the partner would still be able to invite users but then if they don't have an account yet, they would have to sign up using the EV driver's app. This checkbox would enable the partner to directly create user accounts in the backend.
- Allow partner to add to users' balance
  If enabled the partner would be able to add to the balance of users under their partner account.

Create and Manage Partner Admin Account(s)



Once you have created a partner account you can create admin account(s) for the partner to access the back-end. To do this, open the partner profile (find it in the Partners section and click on the name), then scroll down to the Admins section. This is where you can see the partner's admin accounts and add a new one using the "Create Admin" button.

The "Owner" role would allow the partner admin to create other admin accounts under their partner account. The "Operator" role would not have permission to add other admins.

You can then send the partner the login credentials and a link to the backend.

Partner Roles

The following table describes the Permissions for every Partner Account role. The “*” sign is used to direct your attention to the notes in the last section of the table called “ADDITIONAL” as some features are enabled only through the main account and cannot be activated through the partner account.

Feature\Role	Owner	Operator	Analyst	Notes
Dashboard	x	x	x	View
ACTIVITY				
Authorizations	x	x	x	View
Charging Sessions	x	x	x	View
Reservations	x	x	x	View
Transactions	x	x	x	View
ASSETS				
Charge Points	x	x		View & Remote Control
Charging Zones	x	x		View
Locations	x	x		View
CONFIGURATION				
Admin accounts	x			Create & Manage
Company details	x			Edit
CRM				
Invites	x	x		Create & Manage
(Optional)* RFID Tags	x	x		Create & Manage
(Optional)* Users	x	x		Create & Manage
PAYMENTS				
Revenue & Expenses	x	x		View & Export
Settlement Reports	x	x		View
ANALYTICS				

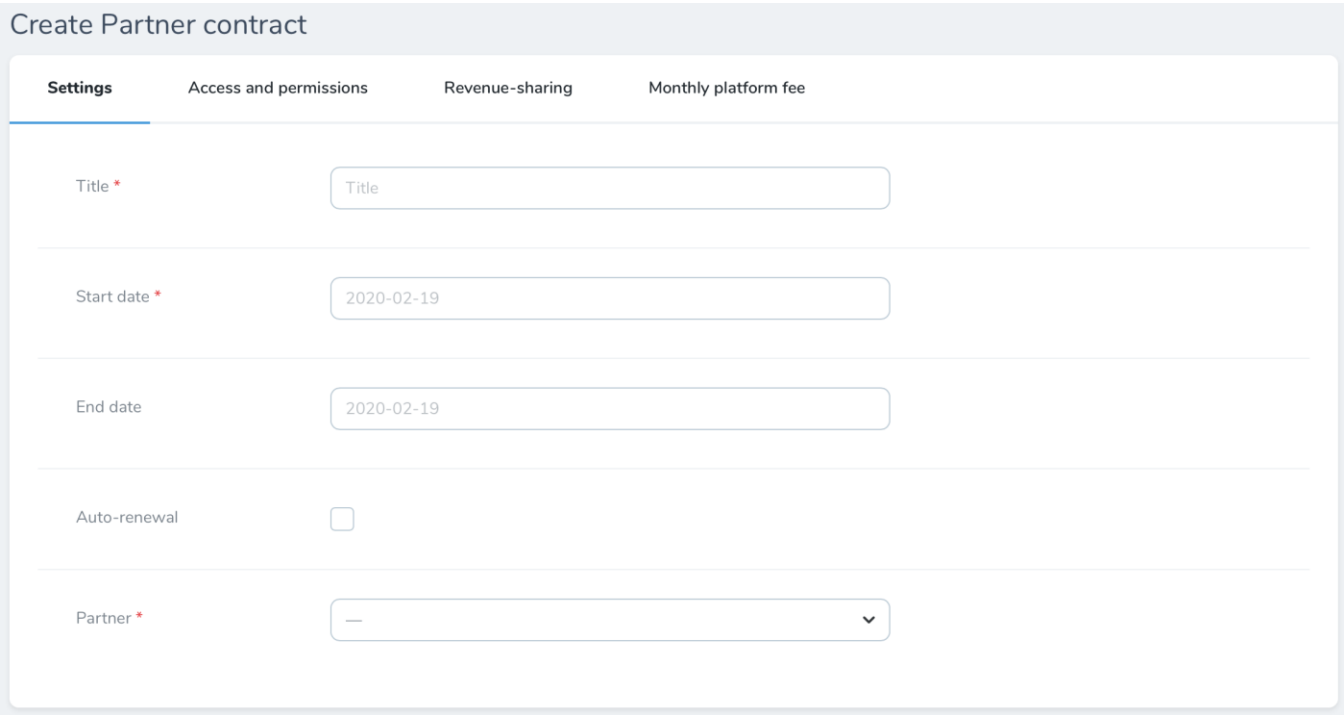
Saved reports	x	x	x	Create & Manage
Reports	x	x	x	Create & Manage
ADDITIONAL *if enabled by the Main account. Cannot be controlled by the partner account.*				
* Allow partner to add to users' balance. In Partner settings	x	x		Requires *Allow Partner to view Users that have accepted invite*
* Allow partner to create users. In Partner settings	x	x		Requires *Allow Partner to view Users that have accepted invite*
* Allow Partner to view Users that have accepted invite	x	x		In CONFIGURATION > Settings
Auto accept partner invites - CONFIGURATION > Settings				

Partner Contracts

The Partner Contracts are a set of rules that define the level of access that the partner has to the charging stations under this contract but also the monthly fees (if any) and the revenue sharing model.

Create Partner Contract

You can create a new partner contract using the “Create Partner Contract” button situated under the Admins section when you are on the page of a specific partner.



Settings

1. Title
   This title is visible both to you and the partner.

2. Start date
   The start date of the contract. This would not affect the operation of the charging stations under this contract, it is just for your reference.

3. End date
   The end date of the contract. This would not affect the operation of the charging stations under this contract, it is just for your reference.

4. Auto-renewal
   Just for your reference.

5. Partner
   Select the partner account.

Access & Permissions

Here you can select what access and control the partner would have for the charging stations under this contract.

Revenue-sharing

Setup the revenue-sharing model for any paid charging sessions at the charging stations under this contract. You define the partner's share and it could be different for AC and for DC. For example, if you set the Partner's Share to 80%, this means that you would keep 20% of the collected payments from users charging at the partner's charging stations and the remaining 80% would have to be paid out to the partner.

Monthly platform fee

Set the monthly platform fees that would be applied to the partner based on each of their charge points or on each of their EVSEs that are managed in your system.

If you want to charge them only per charge point, enter the amount in the "Per Charge Point" field and in the other two, enter 0. If you want to charge them a monthly fee per EVSE, enter 0 in the "Per Charge Point" field and enter the corresponding amount in the "Per AC EVSE" and "Per DC EVSE" fields.

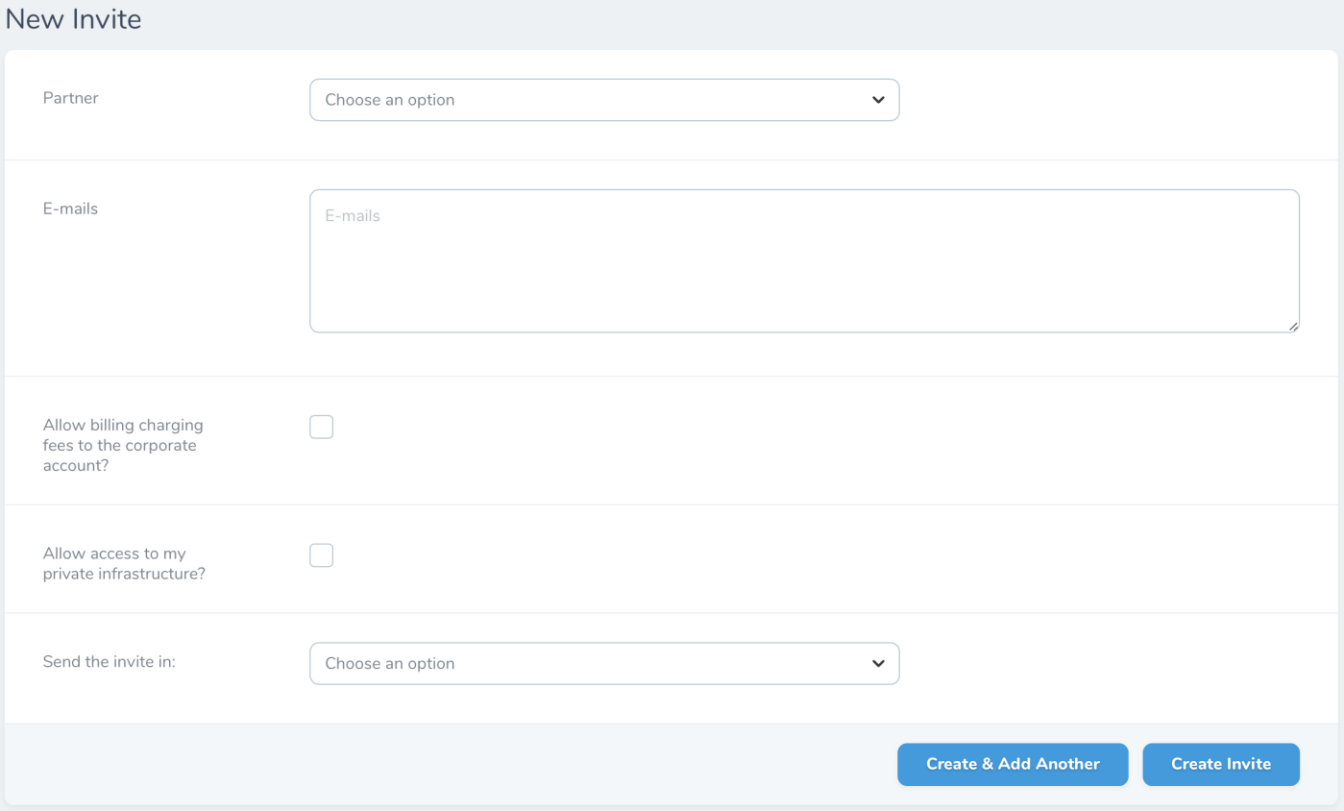
Once you create a partner contract, you can use it when adding/editing a charge point. You can select the Partner and the Partner Contract and this would put the charge point under the selected contract.

Partner Invites

A list of the partner invites to end-users. Whenever a partner invites a user to their partner account, a "Partner Invite" is created. The user can then accept it or if the system is setup to auto-accept invites, it would be automatically accepted. Depending on what the partner selected when creating the invite, this may grant the user access to the Partner's private charging stations and/or allow the user to bill their charging fees to the Partner's company (corporate account).

You can manage the Partner Invites and even create a new one, to link a user account with a partner in the system.

Create a Partner Invite



The form for inviting a user to a partner account has the following fields:

1. Partner
   Select the partner account. Start typing the name and the auto-complete will suggest options.

2. E-mails
   You can enter one or more e-mails to send the invite to. The e-mails do not have to match the e-mail which the user used to register with. However, if the partner invite “auto-accept” setting is enabled for your system only exact matches would result in an auto-accept of the invite. Otherwise the user would receive an e-mail with a link to accept the invite and will be able to accept it using this link even if the registration e-mail doesn’t match the e-mail to which the invite was sent to.

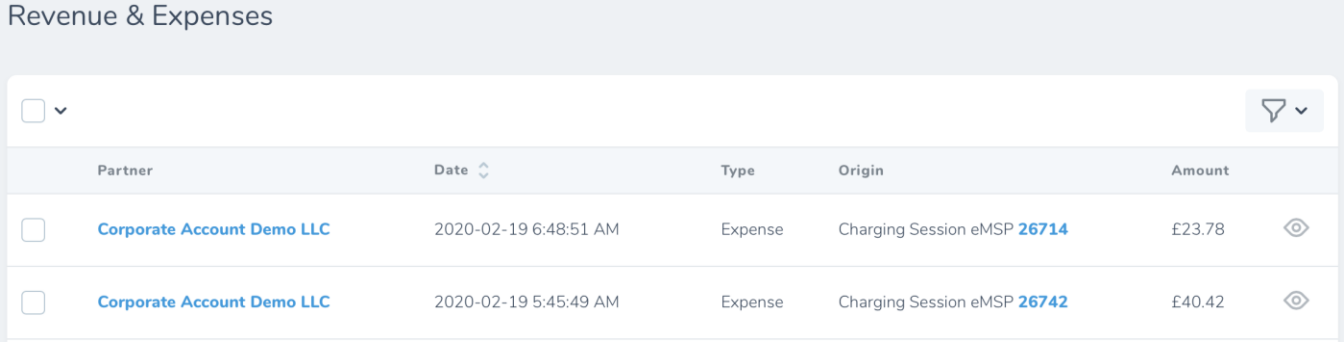
3. Allow billing charging fees to the corporate account?
   If enabled the invited user(s) will be able to bill their charging fees to the partner’s account. In

the EV driver's app when the user is about to start a session they would be able to select the partner's account as a "Pay via" method.

4. Allow access to my private infrastructure?
   If enabled the invited user(s) will have access to the private charging stations of the partner.
5. Send the invite in:
   Choose the language in which the e-mail with the invite would be sent to the user.

Revenue & Expenses

The Revenue & Expenses section shows all "Revenue" and "Expenses" records generated by the Partner module. Each of these is from the perspective of the partner, so where you see "Revenue", it is revenue for the partner and where you can see "Expense" it is expense for the partner.



The partner also has access to this section but only sees their own Revenue & Expenses records.

Paid charging sessions at Partner's charging stations generate revenue for the partner, based on the revenue sharing rules in the corresponding Partner Contract.

Paid charging sessions of Partner's own users (invitees), who have billed their fees to the partners corporate account would generate "Expense" for the partner, as these are fees that the partner has to pay on behalf of their users.

The monthly fees per charge point and/or per EVSE based on the partner's contracts would also generate "Expenses" for the partner.

Settlement Reports

The Settlement Reports are generated at the end of each month for each partner in the system. They include all Revenues and all Expenses of the partner during the month and serve to show the monthly ending balance.

The settlement report is from the perspective of the partner! Negative balance in the settlement report means that the partner owes money to you and positive balance means that the partner is owed money.

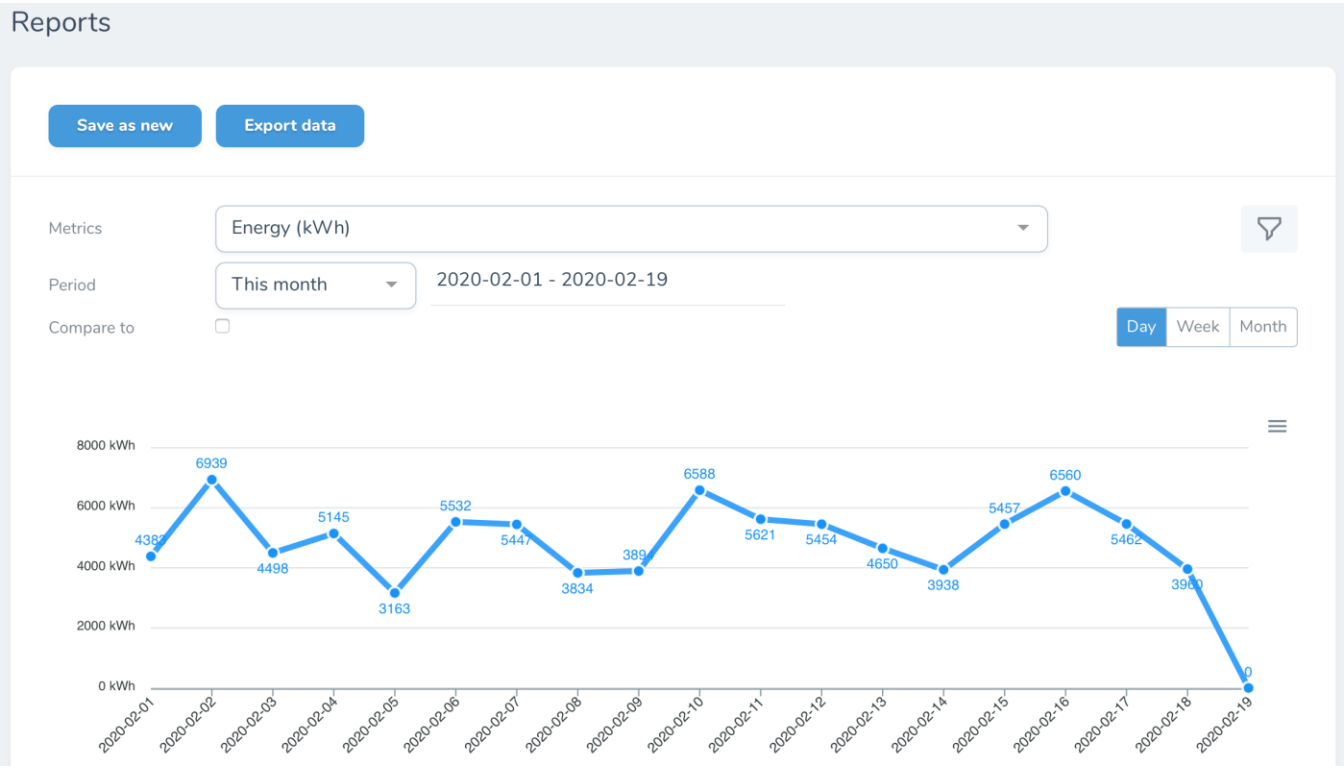
Settlement Records

Below the settlement report's breakdown, there is a section called "Settlement Records" where you can add records of any payments (from the partner or to the partner) with regards to the selected Settlement Report.

Analytics

Reports

The Reports module, accessible via "ANALYTICS > Reports" allows you to generate and view reports, visually represented with graphs and charts.



Metrics

You can choose between a variety of metrics to run a report for, such as “Total Revenue”, “Energy”, “New Users” and many more. Select the metric from the drop-down menu and it would instantly show a report for this metric.

Period

Select the period that you want to see the statistics for. You can choose between dynamic period, such as “This month”, “Last month”, etc. or select “Custom” and enter the start and end date yourself.

Compare to

Select the checkbox to select a period that you want to compare to. The data will be displayed in the same graph for easy comparison.

Filters

Click on the filter icon in the upper right corner. A popup opens where you can select different filters to apply to the report, such as the type of the charge point (AC/DC), a specific location and many more.

Grain (day / week / month)

You can switch the grain of the data in the graph using the day / week / month switch just above the graph.

Breakdown Analysis

The breakdown analysis shows how the metric that you have selected is distributed between different charge point types (AC/DC), Countries, Partners and Locations.

Save Report

To save the report that you are looking at - with the same filters applied and the period selected, use the “Save as new” button. You can then access your saved reports in “ANALYTICS > Saved Reports”.

Export Data

To export the data of the report that you have generated, click on “Export Data”. A “CSV” file will be downloaded containing the metric’s data as per the selected grain (day, week or month) as well as the breakdown categories as separate columns.

Saved Reports

A list of your saved reports. You can click on any of your saved reports to run it. You can then edit and save the changes or you can save the edit version as new.

Roaming

Roaming is supported over OCPI. In the “ROAMING > Platforms” menu you can setup a new platform (roaming partner) to connect with.

Creating a Roaming Platform

When creating a new platform, you can either create an invite or accept an invite, depending on who initiated the process (you or the other party).

Accept an invitation

To accept an invitation you enter the URL and the Token provided by the other party.

Creating an Invite

When you create an invite, a URL and a Token are generated, which you have to provide to the other party in order for them to accept the invite and thus establish the roaming link.

Dynamic Load Management

Purpose and General Use Case

Dynamic Load Management is used in the cases where there are more chargers installed at a location than the local electrical network can support at full capacity.

For example: at a residential car parking there are 4 slots that you want to install AC chargers. You want those chargers to be 7.4 kW to make sure they fit the needs of the EV drivers there.

If all of the 4 chargers work at full capacity the total amperage would amount to 64 A. However, the local electrical network for the car parking car supports only up to 45 A.

In this case you can benefit from the Dynamic Load Management solution that will regulate the power supply to the different chargers making sure that the total limit of 45 A is not exceeded.
You create a Circuit, which is basically a group of charging stations that are managed together and you set a maximum amperage for the Circuit to 45 A (following the above example). You add the charging stations to the circuit and the system ensures the optimal power management, based on the maximum amperage, the capabilities of the charge points in the circuit and the cars charging at the moment.

A major benefit of using a software solution is that you can have advanced priorities based on charger or specific user groups.

Prerequisites:

1. In order to enable Dynamic Load Management for a set of chargers, you need all of the chargers within the circuit to fully support “Smart Charging Profiles” through OCPP. Please, advise with your Charge Station manufacturer.
2. You need to either connect all of the Charge Stations connected on a single circuit controlled by a single breaker to our back-end or account for them. This means that if the breaker has a limit of 45 A and there are any other electrical appliances that cannot be controlled from our system - their maximum A usage should be extracted from the breakers limit which is 45A.
3. You have to know how the phases of the stations are physically connected to the network. You will also have to check how the phases for the different EVSEs within the Charge Station are rotated if there are more than 1. This usually is explained in the Charge Station’s vendor specs sheet.

Notes:

- You can only add 1 station to 1 DLM circuit.
- Don’t activate DLM when creating a Charging Station unless you are going to add it to a circuit right away.

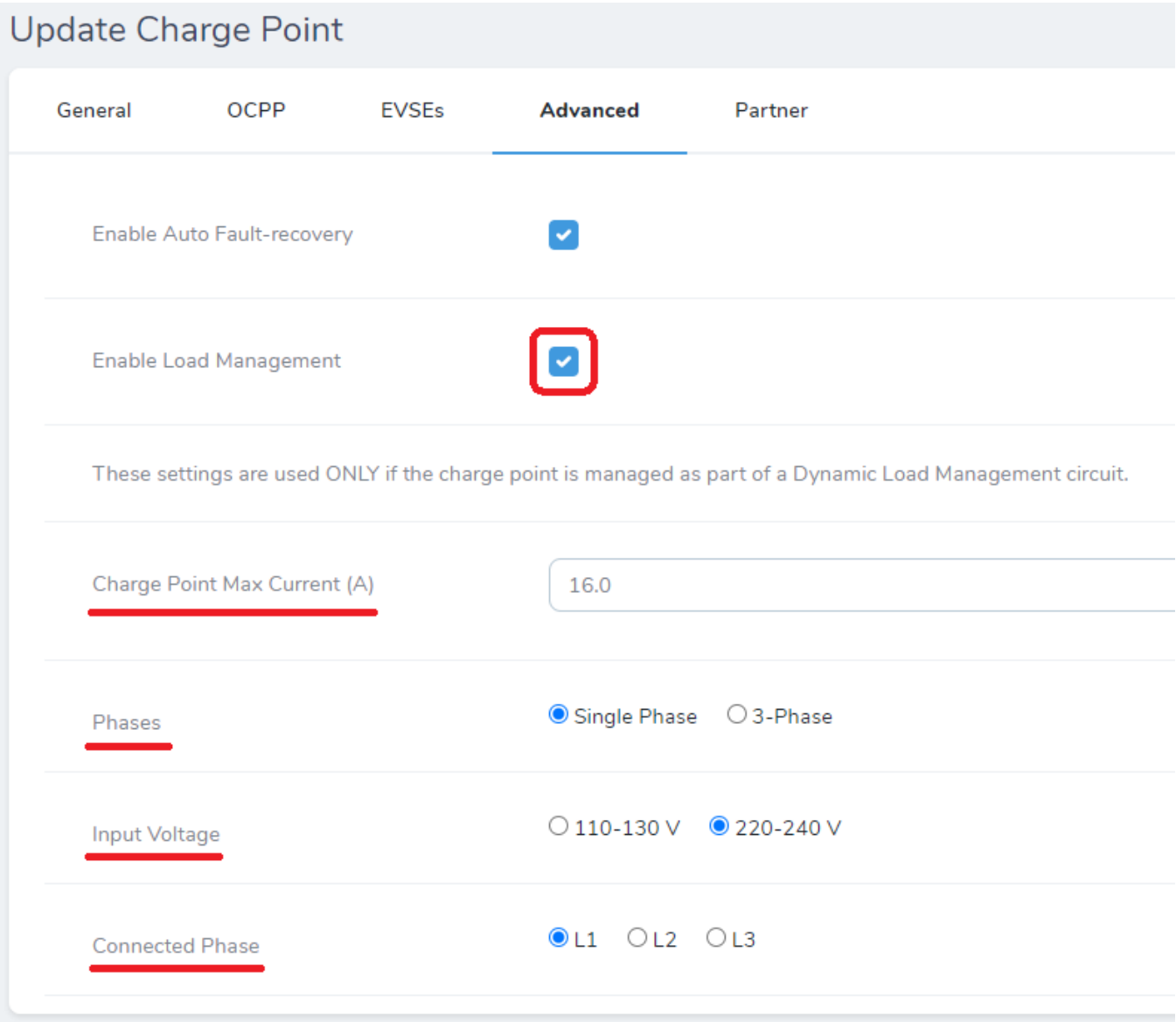
Creating a DLM circuit

There are 3 steps that need to be done to create a successful DLM circuit:

Enabling DLM on the Advanced tab for a Charge Point

A charge point can only be added to a DLM circuit if you Enable Load Management for the charge point and specify the characteristics below. In order to do that you either have to create a new charge point

or edit some of your existing ones.

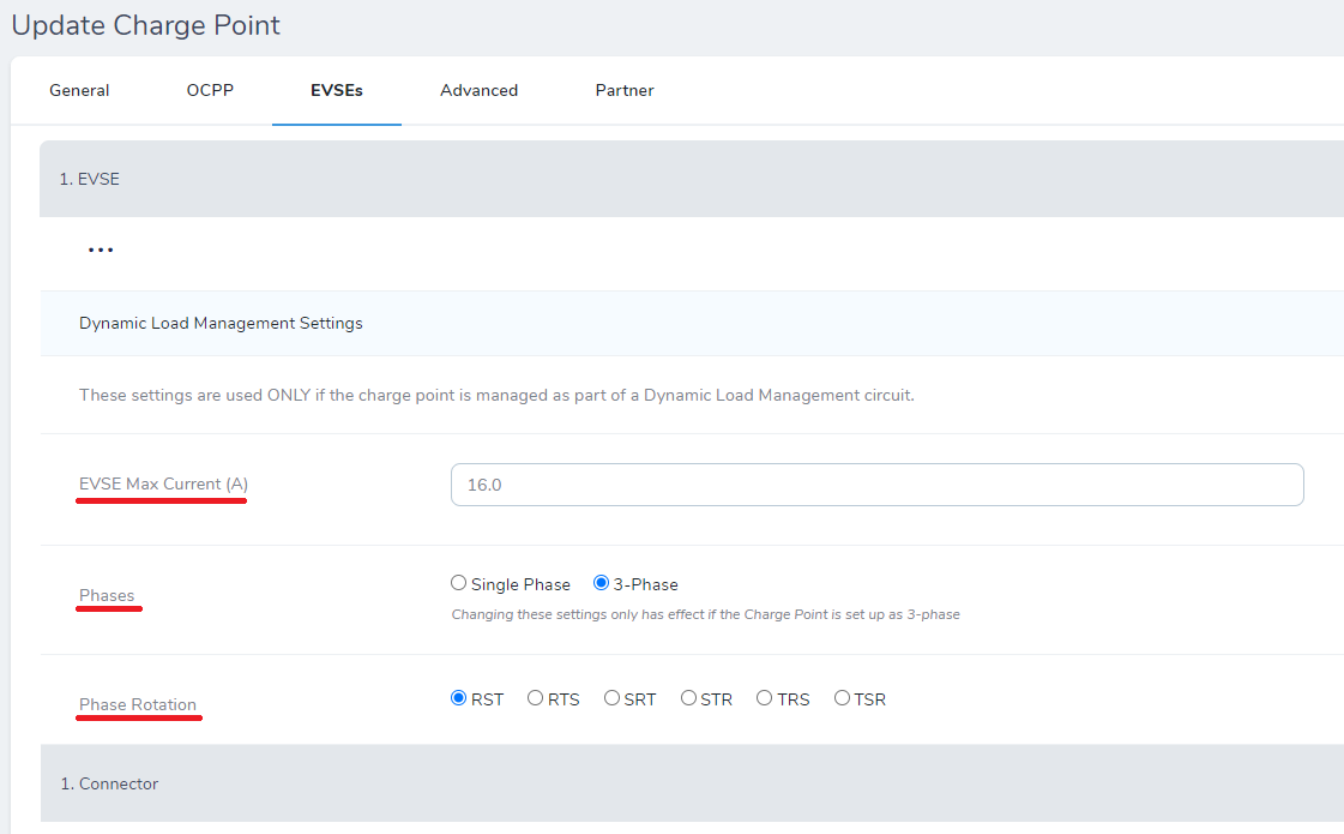


- Tick the “Enable Load Management” checkbox.
- Define the Maximum Current for the charge point. This information should be supplied by the Charge Station’s manufacturer.
- Select whether the Charge Station is wired to the network through a “Single Phase” or “3-Phase” setup.
- Select the Input Voltage.

- Depending whether the Charge Station is wired through a Single Phase or 3-Phases you will have to select which is the “Connected Phase” or what is the “Phase Rotation”. This should be discussed and provided by your Installer.

Define DLM properties per EVSE for a Charge Point

When Charge Station has more than one charging unit called EVSE you have to specify it is wired within the station. This information is found in the manufacturer’s technical specifications for the charging station.



- Max Current for the EVSE
- Phases
- Connected Phase or Phase Rotation

Creating a Circuit and Adding Charge Points

After you have enabled DLM for the Charge Points you want to connect to a single breaker you can add them to a circuit. To create one you need to go to ‘Dynamic Load Management’ > Circuits > Create Circuit.

USER MANUAL

Version: 1.5