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LinkRay

Quick Start Guide

CE

August 2024
1.05 (Firmware Version 1.3.11)
EN

KEY STEPS

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1 Physical Setup

2 Initial Startup

3 Remote Access

4 Select Your Device

5 Log In

6 Configure the Site Power Limits

7 Network Settings

8 Charger Configuration [part 1]

9 Charger configuration [part 2]

10 Charger Configuration [part 3]

11 Charger Configuration [part 4]

12 Enable & Add Any RFID Tags (Optional) + TEST

1 Physical Setup

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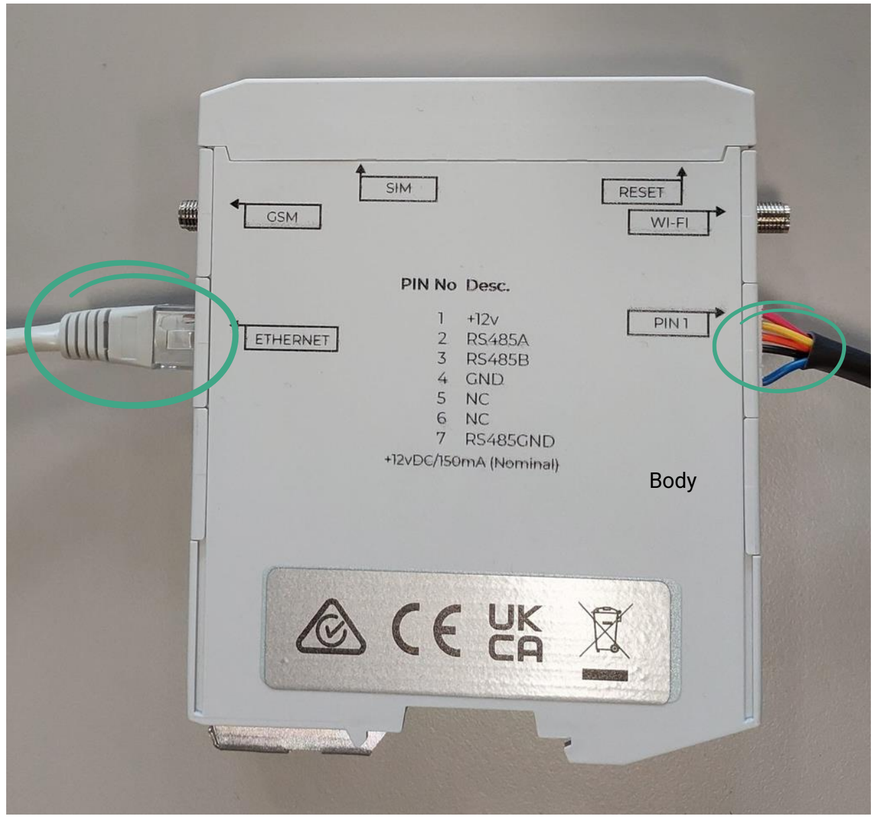
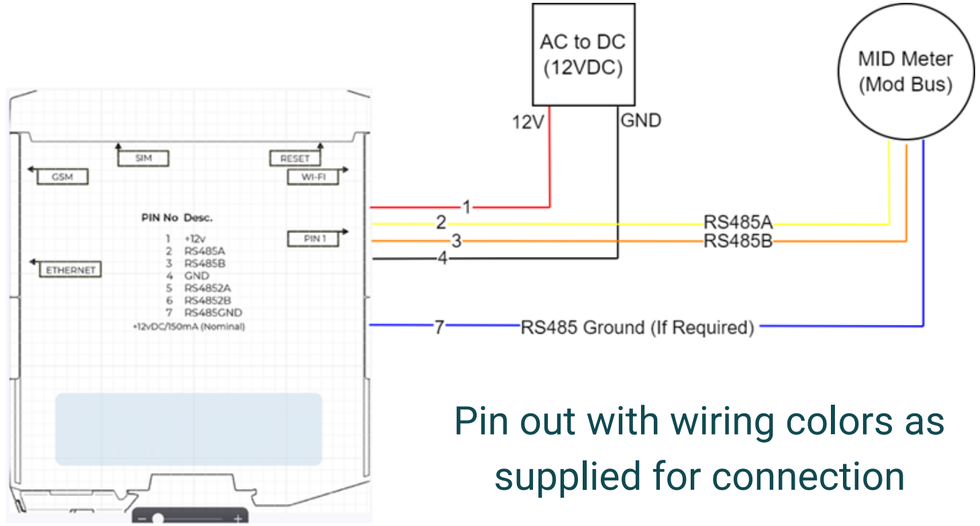
Connect the power and ethernet cables



In the wiring diagram there is also Modbus connections to a mid-meter RS485A & RS485B, this is only applicable on relevant installs



Pin out with wiring colors as supplied for connection

2 Initial Startup

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LED Patterns:

solid green - starting up

Blinking green - normal operation

solid red - Fault

The LinkRay device will follow this procedure given no faults occur:

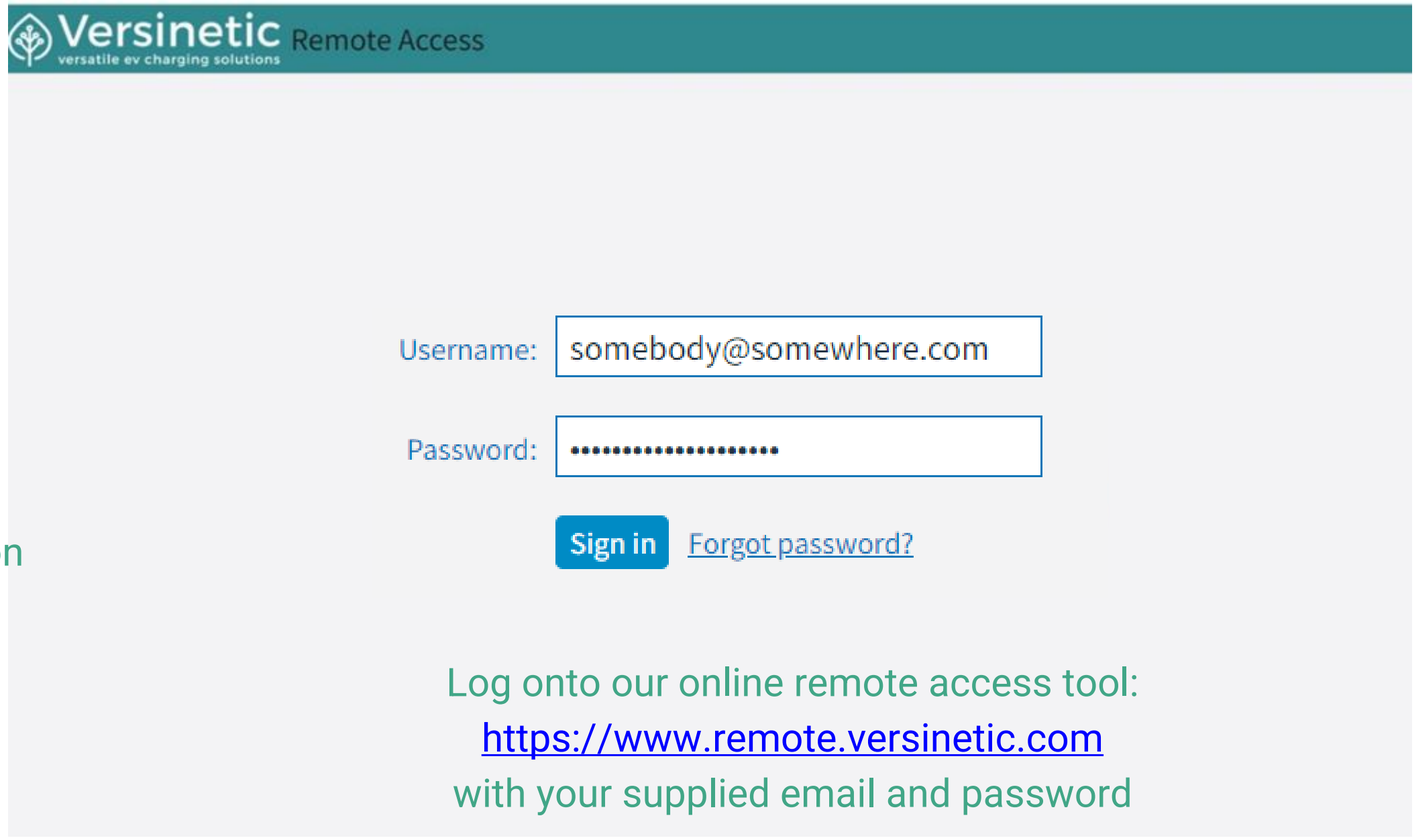
1. It will take about 2 minutes to boot and start up - LED will be ON

(If the LED is still UNBLINKING after this, it is most likely updating to the most recent software version - the time this takes varies as devices with older software versions need to update multiple times)

2. Then it will be operating normally - LED will be FLASHING green

3 Remote Access

The LinkRay device should automatically start once provided power and connection to the internet, it can now be connected to remotely



4 Select Your Device | Online Remote Access Tool

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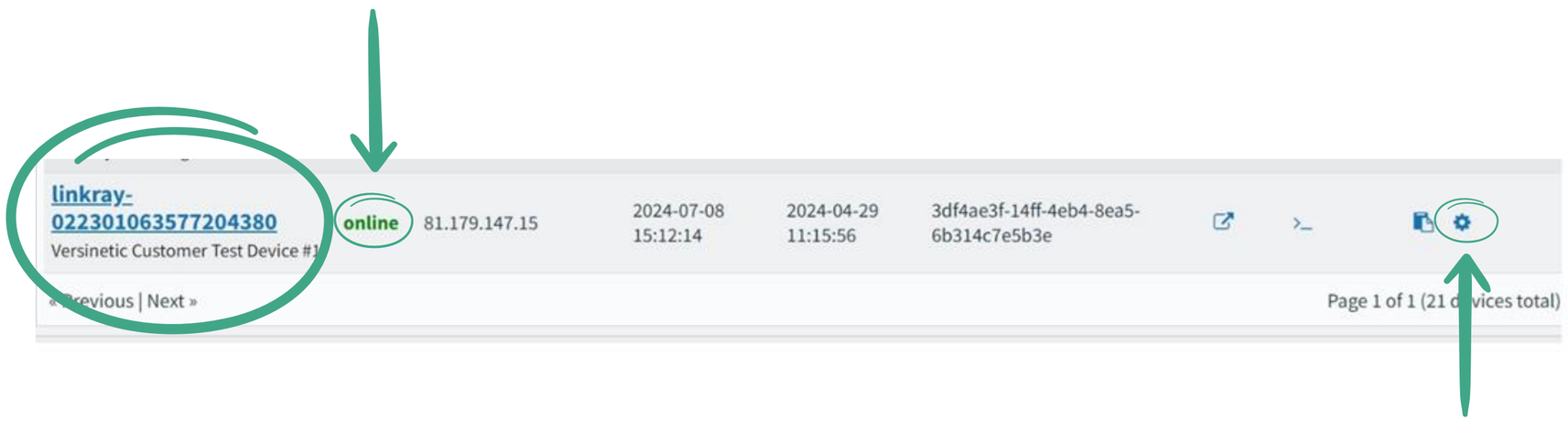
All devices on your account will be shown with their availability (on/offline)



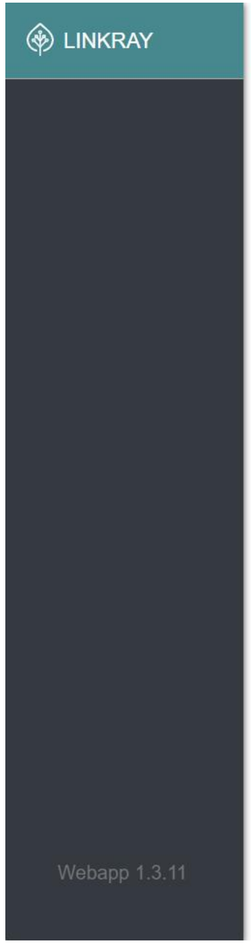
Select the LinkRay name to connect. This will take you through to the LinkRay User Interface

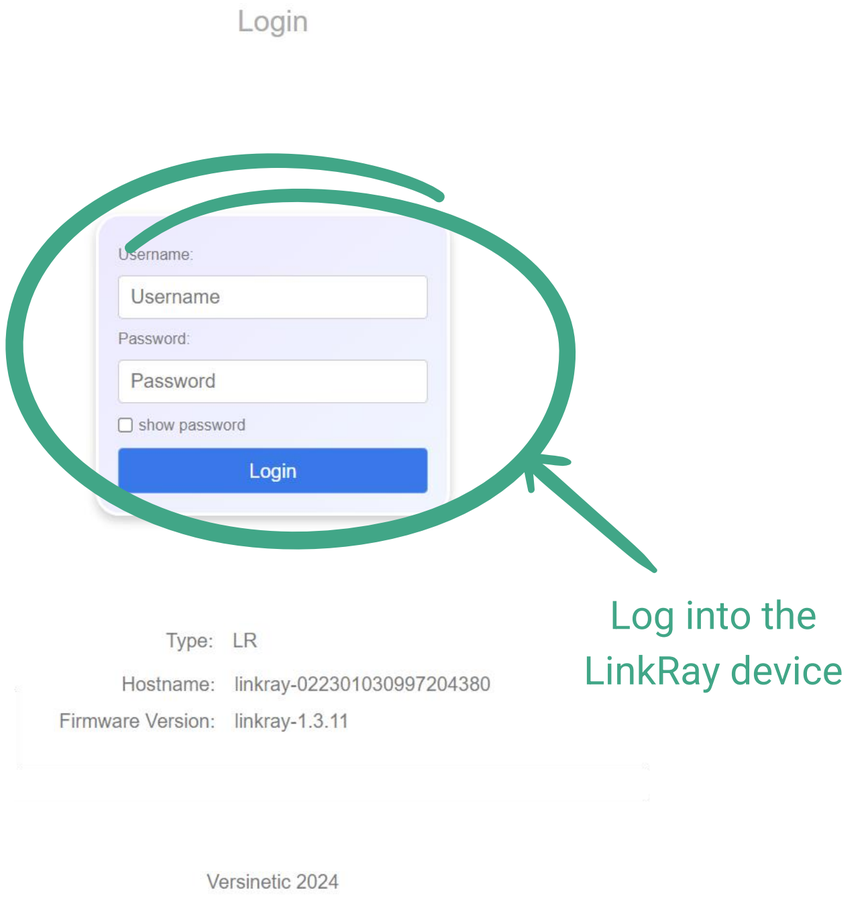
Sites can be renamed here with the cog symbol

5 Log In | LinkRay User Interface

LINKRAY USER INTERFACE

Default User: Assembler
Default Password:
2WW%[4%9nU`HWhGe





6 Configure the Site Power Limits

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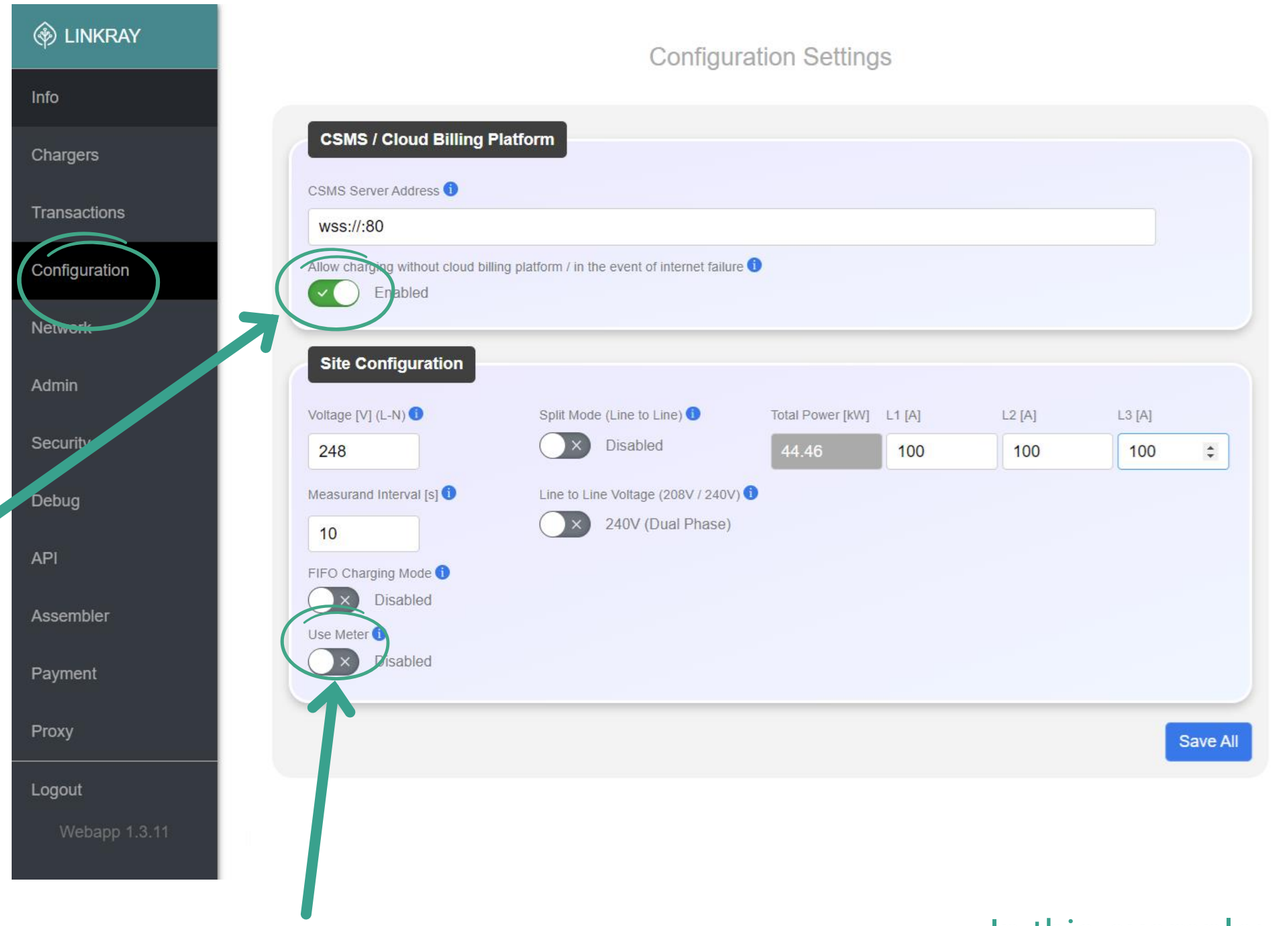
No CSMS URL (or default: ws://:80) means LinkRay is running without payment backend

‘Allow New Charging While Offline’ ENABLED indicates the LinkRay can authorise charging sessions itself (required when running offline mode)



‘Use meter’ disabled means that the LinkRay will control charging limits without monitoring for additional power usage (such as building power). In this mode, ensure that the limits cannot be exceeded by lowering the total by a safe margin

In this example:
Site power is set to ‘100A’ on each of the three phases to the site: L1, L2, L3

7 Network Settings

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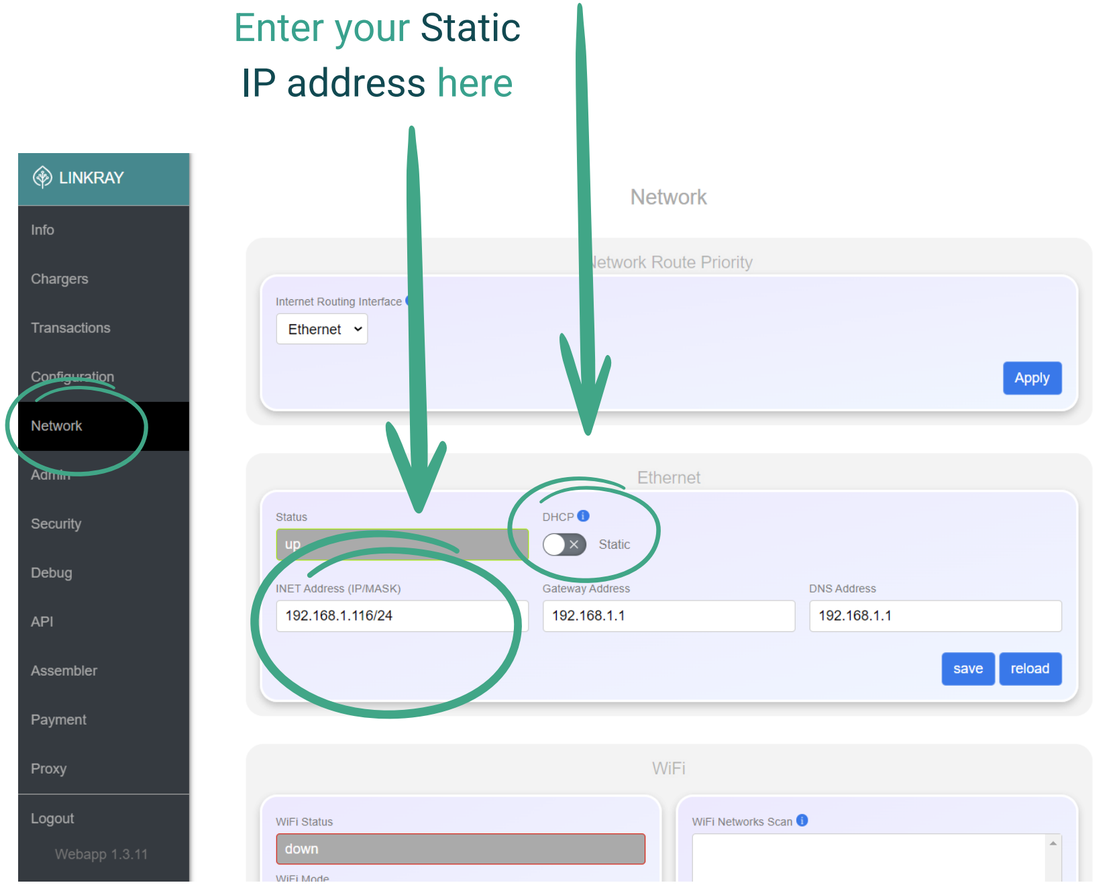
Set a Static IP address & ideally also reserve the LinkRay IP in the routers DHCP lease → (If you leave this option as dynamic, an IP address is automatically assigned)

Enter your Static IP address here



NB: after swapping between DHCP & Static, the LinkRay will need to be rebooted

Why is this important?

All chargers need to be configured to point to the LinkRay. The IP address must stay at a fixed IP for LinkRay to function

8 Charger Configuration [Part 1]

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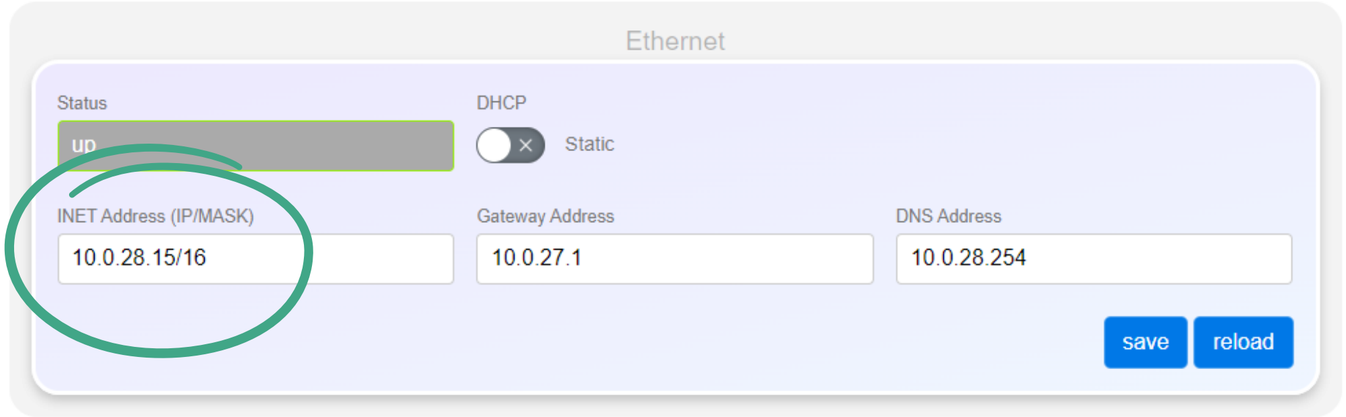
Get the IP of the LinkRay from Network -> ethernet



Add the prefix “ws://” OR “wss://”
Remove the backslash and all subsequent numbers
Add the suffix “:8887" OR “:8886"

E.G., “10.0.28.15/16" becomes “ws://10.0.28.15:8887”

You will need to copy this or write it down to enter it into a charger later, it will be referred to as CSMS URL or Server URL or

It should be in the format of: ws://aaa.bbb.ccc.ddd:8887 OR wss://aaa.bbb.ccc.ddd:8886 (where each section of numbers can be 1, 2, or 3 long)

- ws indicates a web socket (like http) - more likely to work (better for initial setup)
- wss indicates secure web sockets (like https) - more secure (more advanced)

The Subsequent 3 pages all cover the same thing: connecting a charger to the LinkRay device. They are from 3 different chargers and are only examples, your charger may differ in the steps themselves, but the principle is the same

9.i Charger Configuration [Part 2 - Example 1: AUTEL]

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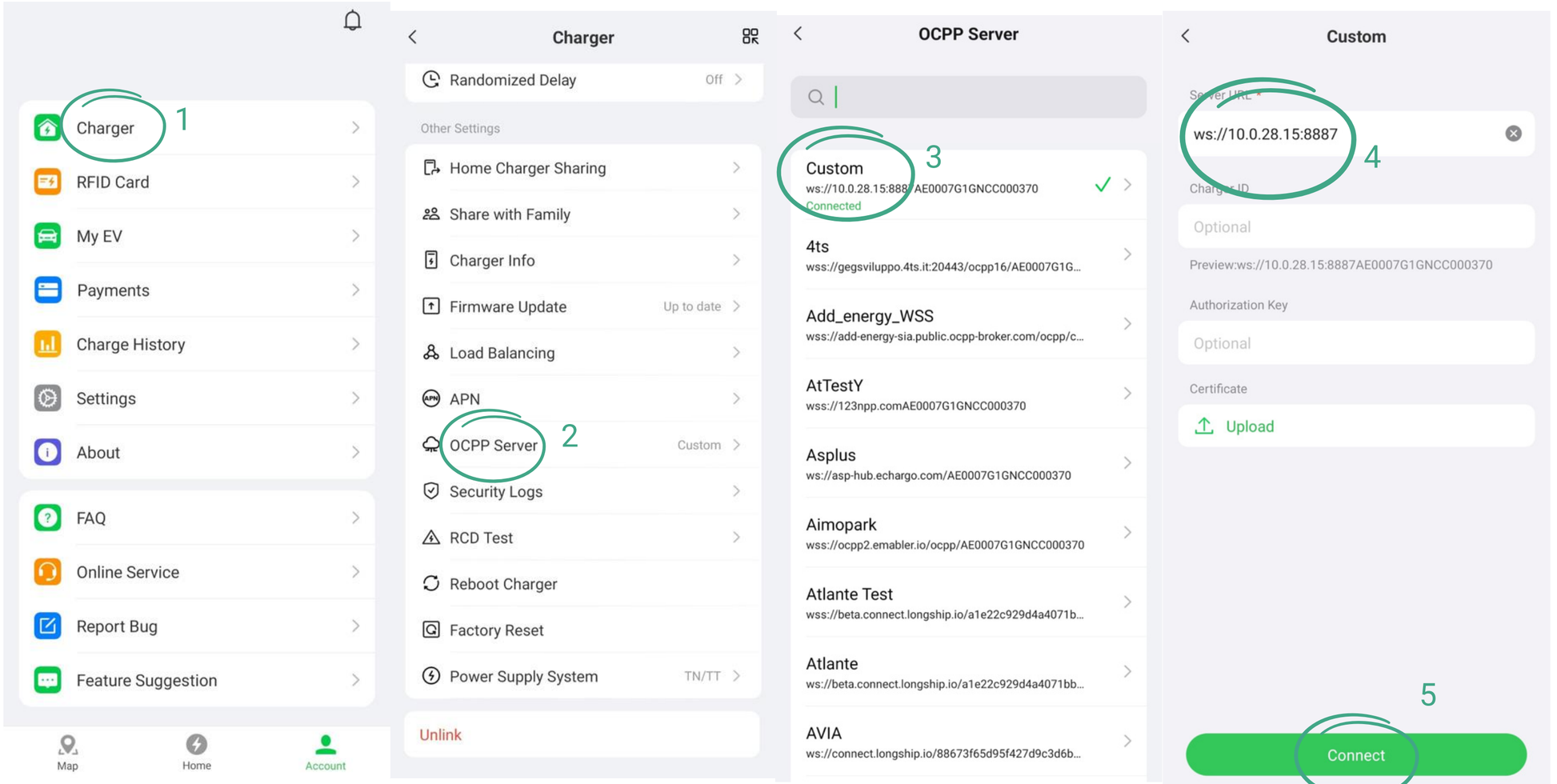
AUTEL

Download the “Autel Charge -EV Charging”
and connect to the charger via Bluetooth (done easily by scanning the QR code on the charger and then the QR code with the manual)



1. Select “Charger”
2. Scroll down and select “OCPP Server”
3. Select Custom
4. Type in the Server URL
5. Connect

9.ii Charger Configuration [Part 2 - Example 2: ABB]

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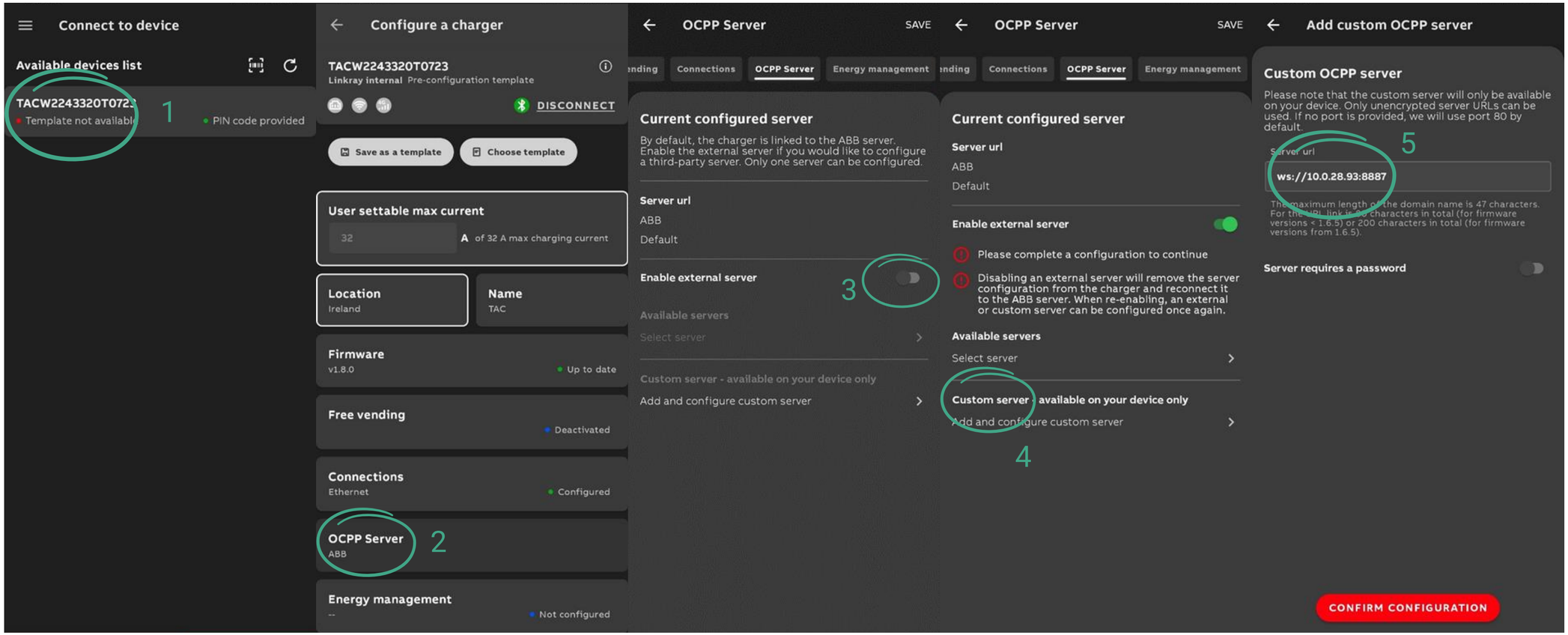
Using the ABB TerraConfig App log onto the charger using Bluetooth. You maybe required to enter the user PIN at this point.



1. Log onto the charger using Bluetooth
2. The default server will be ABB, click to update it
3. Enable the external server slider
4. Select “Add and configure custom server”
5. Enter IP address of LinkRay device

9.iii Charger Configuration [Part 2 - Example 3: EO]

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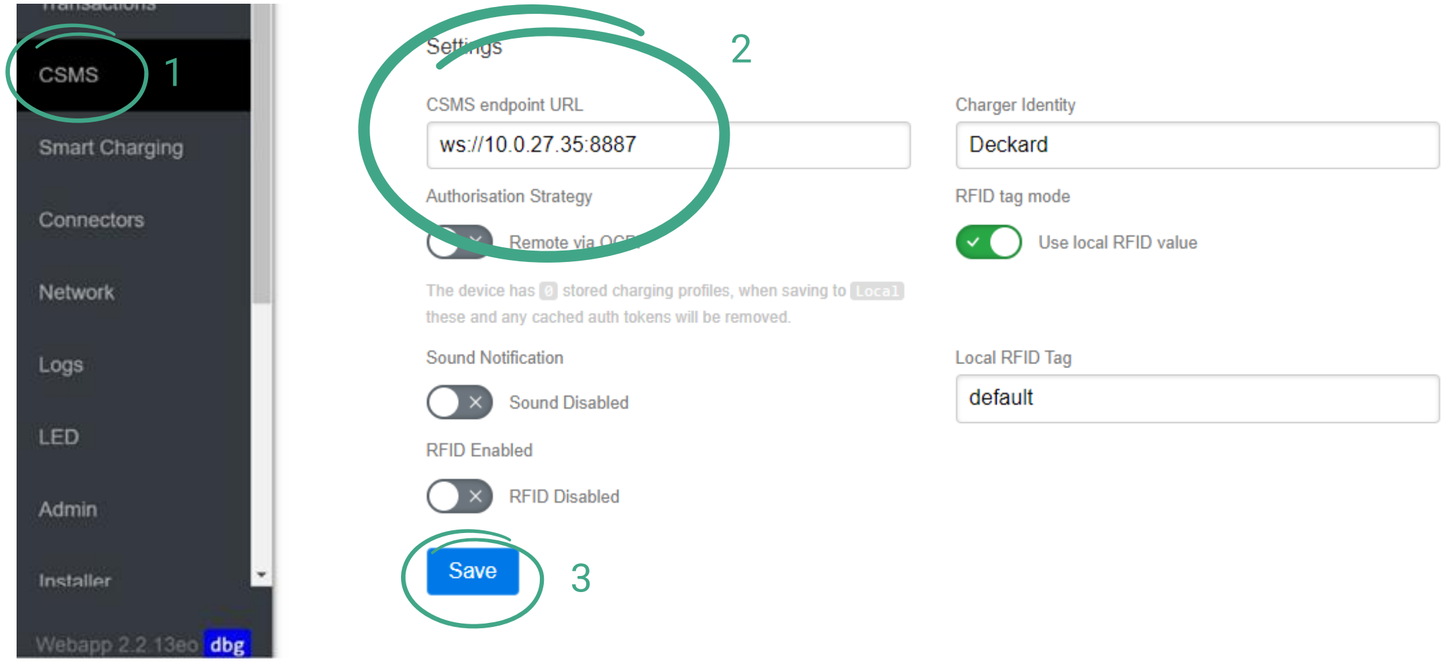

1. Navigate to the CSMS tab
2. Enter the CSMS endpoint URL
3. Save

9.iv Charger Configuration [Part 2 - Example 4: ALFEN]

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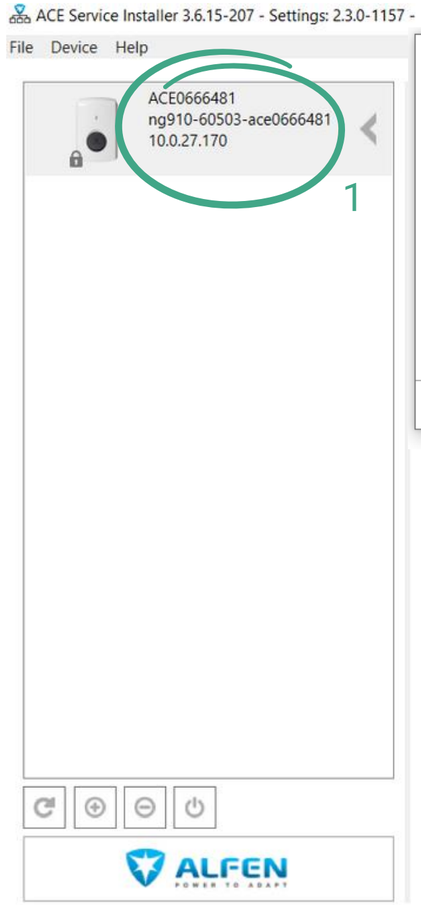
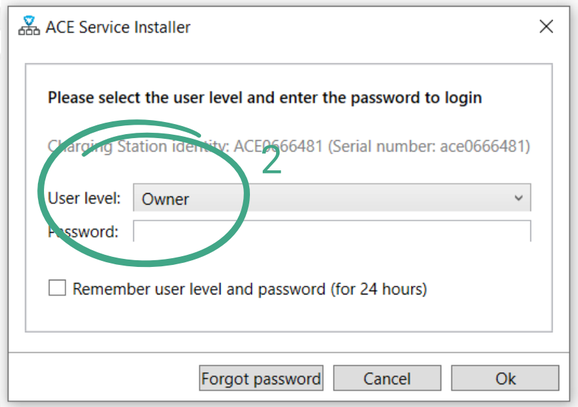
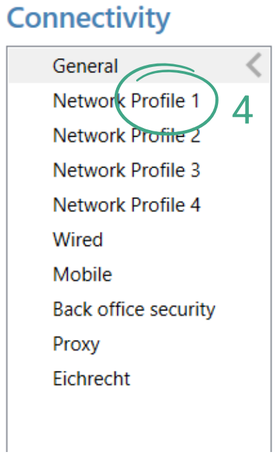
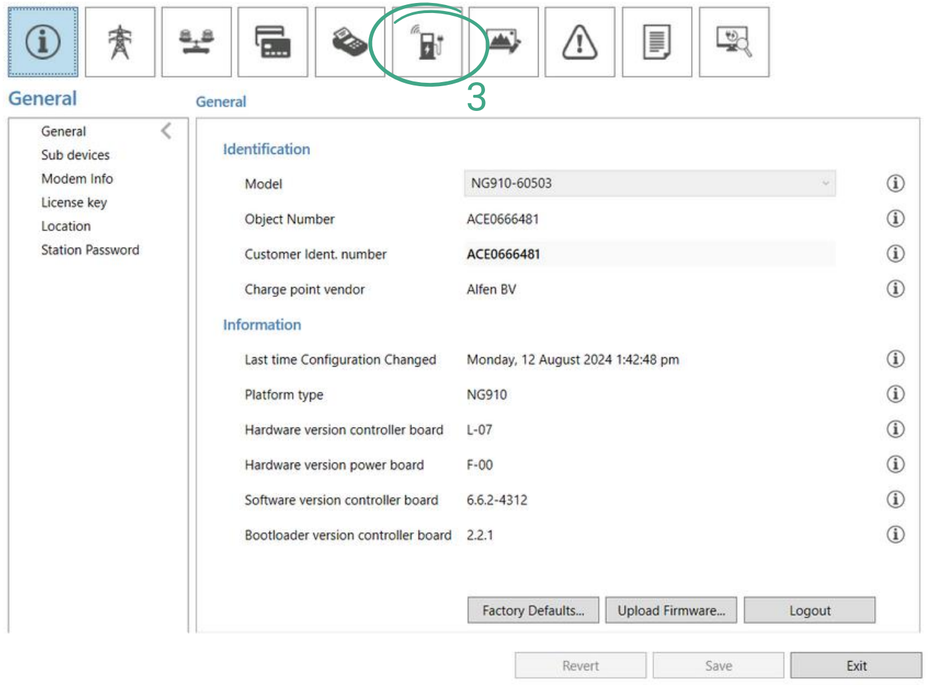
ALFEN

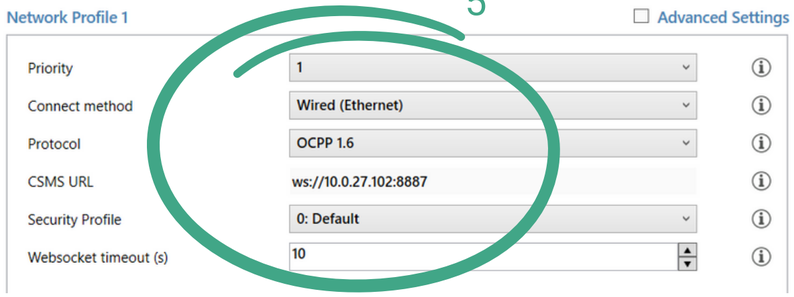
The MyEve mobile app is NOT a valid way to set up an ALFEN charger as it does not allow for custom CSMS URL's, instead you MUST install the ACE Service installer, and contact ALFEN support for details to log in. Once logged in then you can add chargers with the code found with the charger.











1. add the charger and select it
2. log in using the credentials given
3. Select the EV charging symbol
4. select "Network Profile 1"
5. Copy the drop downs as seen, but enter your own CSMS URL

10 Charger Configuration [Part 3]

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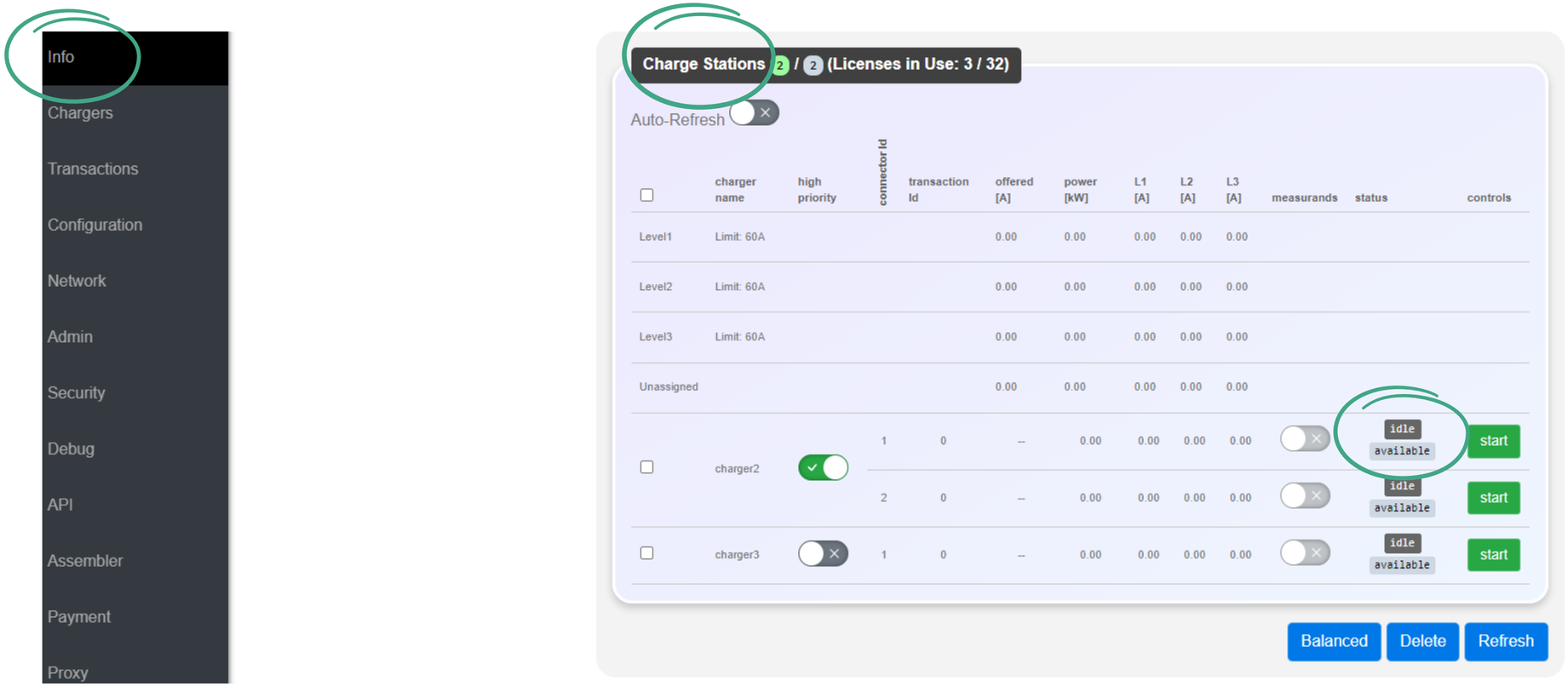

If saved correctly, the charger will appear in 'Charge Stations' & will indicate: 'idle' OR 'available' (idle status is pictured in the screengrab). You may need to refresh the page to see this

11 Charger Configuration [part 4]

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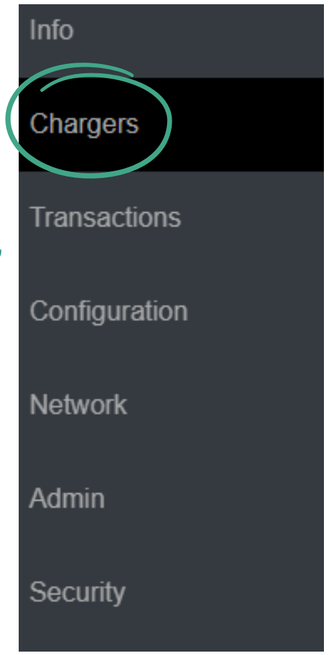
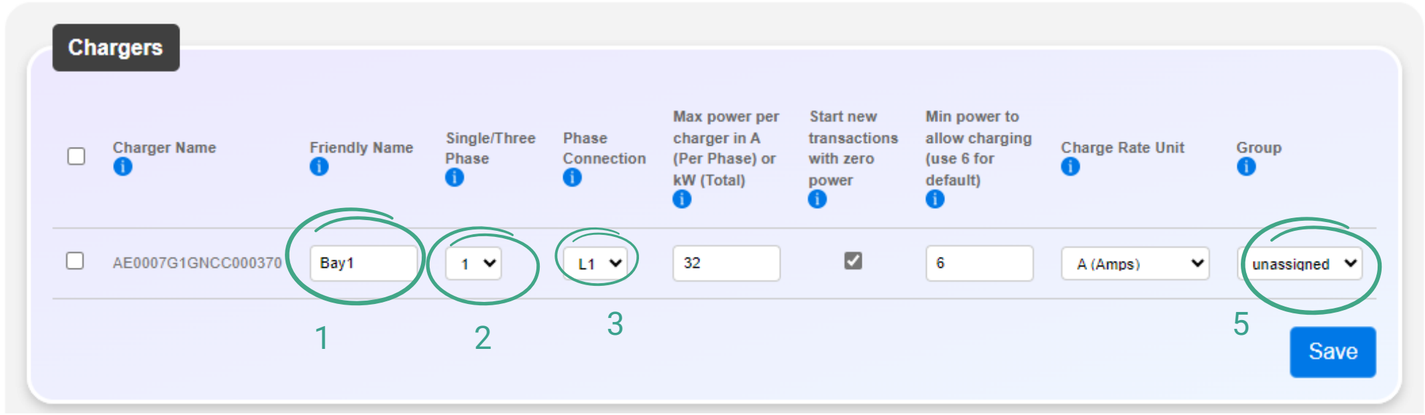
1) Select the 'Charger' tab and enter a 'Friendly Name' to aid identifying devices

2) Select if the charger is 'Single Phase' or 'Three Phase'

3) Select the physical phase connections, i.e. L1-L1/L2-L2/L3-L3





4) Optional: Chargers can be grouped with limits, per group (if required)

5) Click on SAVE

12 Enable & Add Any RFID Tags (Optional) + TEST

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1) Enable:

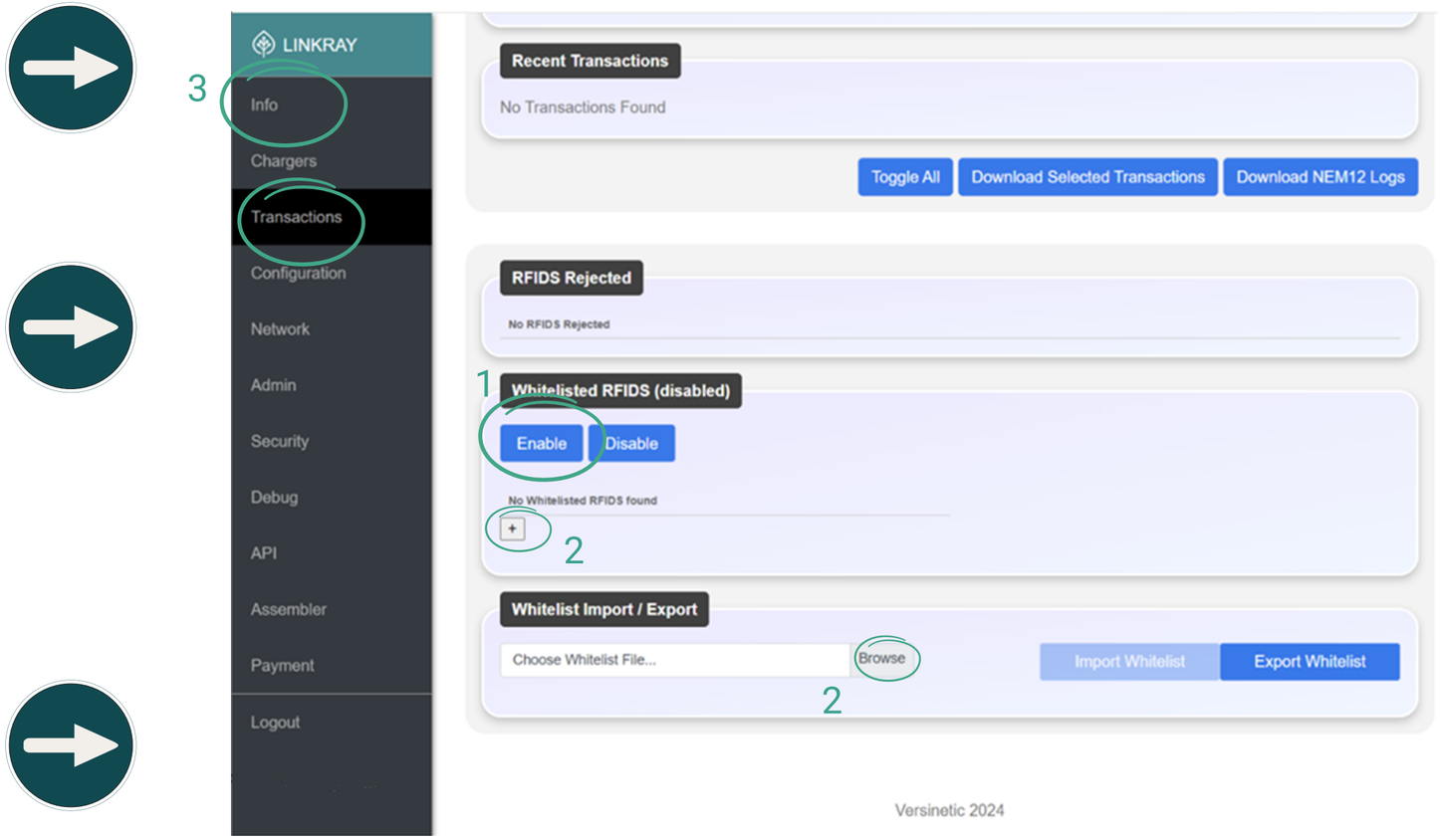
If required turn on a whitelist for RFID authorisation

2) Add tags by:

- presenting them to a configured charger (manually tap the RFID card onto the charger). Then selecting it from the “RFIDS rejected” using the tick box
- OR uploading a CSV file
- OR manually using the [+] button

3) Test:

Navigate to the ‘Info’ tab, the system is ready to be tested



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Full user manuals are available at:
https://docs.versinetic.com

Discover more about LinkRay:
https://www.versinetic.com/hardware/linkray-charge-station-load-balancing-controller/