Lighting Controls

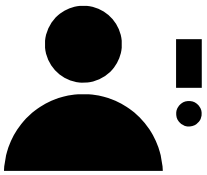
groupCONTROL – configTOOL

Manual

TRIDONIC

About this document

About this document



NOTE: *This document is a "**living document**", which means that it is constantly maintained and updated by the team at Tridonic.*

In order to ensure that you have the most up-to-date version of this document, please login to the Tridonic website at:

www.tridonic.com

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1. Scope of documentation

This operating instruction is valid for the following release version of the groupCONTROL configTOOL.

Software Version	Valid with release
1.5	12.2022

TRIDONIC GmbH & Co KG is constantly striving to develop all its products. This means that there may be changes in form, equipment and technology.
Claims cannot therefore be made on the basis of information, diagrams or descriptions in these instructions.
The latest version of these operating instructions is available on our home page.

1.1 Copyright

We are always open to comments, corrections and requests. Please send them to info@tridonic.com

1.2 Imprint

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2. List of Acronyms

Acronym	Description
AES	Advanced Encryption Standard
CMS	Central Management System
eSIM	Embedded SIM
EUICC	Embedded Universal Integrated Circuit Card
GFSK	Gaussian Frequency Shift Key
GPS	Global Positioning System
HDLC	High-Level Data Link Control
IPv6/6LoWPAN	IPv6 over Low-Power Wireless Personal Area Networks
LED	Light Emitting Diode
LTE	Long Term Evolution
LWM2M	Lightweight Machine to Machine
MCU	Microcontroller Unit
NA	Not Applicable
NFC	Near Field Communication
OTA	Over-the-Air
PoE	Power Over Ethernet
RTC	Real Time Clock

3. Warnings for Installers and Users

The following instructions provide important precautions to safely install, use and maintain the product. Please read and follow them carefully before operating the unit. Failure to comply may compromise the safety of installation personnel and may also result in damage to the equipment itself.

Table 1 – Symbols Used in this Document

Symbol	Description
	Warning: failure to follow these instructions properly may result in personal injury and/or product damage, which may be serious depending on the circumstances
	Important notice: be sure to follow the instructions

Table 2 – Warnings

List of warnings

The product is intended to be used in countries have IT-type electrical supply systems

The equipment is intended for installation, service and repair by trained and skilled personnel only (no operator access).

Unpack the product and check for possible damages before installing and operating the product.

Before connecting the product, make sure that the product voltage ratings correspond to the mains power supply voltage.

Before cleaning or servicing the product, disconnect it from mains power.

Dispose of packaging or product must be in compliance with applicable local and national waste disposal regulations.

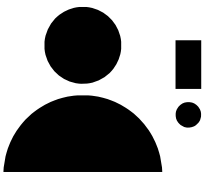
Keep this document for future use and reference.

PART 1: Introducing the groupCONTROL configTOOL

4. Product Description

The groupCONTROL configTOOL is a hardware tool used by network installers and field engineers to aid the process of installing SIDEREA Smart City network devices and Smart City network infrastructure.
The Config Tool is a portable, battery-powered device and is used to setup and configure communication between a mobile device (such as a mobile phone carrier by a network installer or field engineer) and the 6LoWPAN network devices.

The Config Tool is versatile to be used with SIDEREA products that communicate over the 6LoWPAN network. Using the Config Tool, network installers and field engineers interact directly with SIDEREA Smart devices for multiple use cases during installation, maintenance, troubleshooting.



NOTE: *All communication between the mobile device (phone or laptop) of the user and the groupCONTROL configTOOL is completely performed though Wi-Fi. Therefore, Wi-Fi must be enabled on mobile device.*

The groupCONTROL configTOOL communicates in Link-Local mode (which means direct device-to-device communication) with other SIDEREA Smart devices. In order to provision changes to the device, the groupCONTROL configTOOL can connect to the SIDEREA smart devices to update them, as shown in the Figure below.

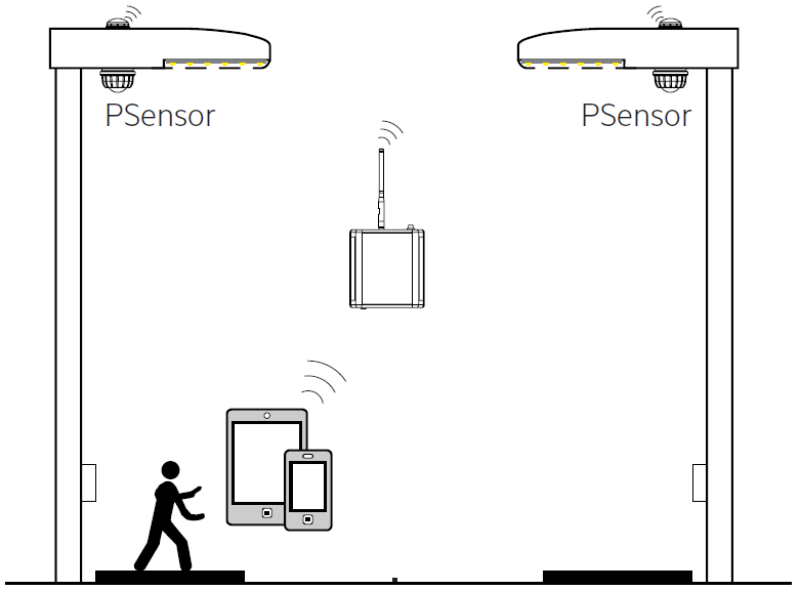


Figure 1: The groupCONTROL configTOOL Overview

5. Prerequisites and Target Audience

5.1 Box Contents

Below is a list of the items that are shipped with the groupCONTROL configTOOL

- External antenna
- AC/DC power supply, wall socket
- DC/DC power supply, automotive socket

Figure 2: The Box Contents

5.2 Prerequisites Needed Before Using the groupCONTROL configTOOL

Below is a list of items needed in order to effectively use the groupCONTROL configTOOL:

- Any of the following portable computing devices
  - A Windows 10 laptop computer with both a wireless network card and a physical Ethernet port (or)
  - an Android device (or)
  - an iOS device
- A web browser installed on the portable computing device

5.3 Target Audience

The Target Audience of the groupCONTROL configTOOL are service professionals who have the skillset necessary for installing, configuring, removing, and decommissioning SIDEREA smart devices for Smart Cities

PART 2: Setting up the groupCONTROL configTOOL

6. Connecting Power and Charging the Internal Battery

6.1 Turn ON the groupCONTROL configTOOL and Connect Power

The first step to utilize the groupCONTROL configTOOL is to connect the device to its included power supply and activate the switch located at the top of the device (see Figure below). When the switch is ON and the power supply has been connected, then the internal battery of the groupCONTROL configTOOL will charge.

NOTE: *Please ensure that the groupCONTROL configTOOL has charged for a **minimum of 3 hours** before disconnecting the device and using it for field installations of SIDEREA Smart devices.*

Figure 3: groupCONTROL configTOOL

Now that the groupCONTROL configTOOL device has been started, it will scan the area looking for a device with the application (a **mobile device** with the PE SUN app, or a **Windows 10 laptop** with the proper configuration). Please follow the steps in the next sections depending upon your choice of device.

NOTE: *When the Config Tool is operating, ensure that the ON/OFF button is ALWAYS switched to ON, regardless if it is supplied by battery or AC/DC power supply.*

7. Option 1: Setting Up the groupCONTROL configTOOL for Android Devices (*Estimated time: 7 mins*)

7.1 Download the PE SUN Config Tool from the Google Play Store

In order to get started with the groupCONTROL configTOOL, the first step is to download the application from the Google Play store.

https://play.google.com/store/apps/details?id=com.pdxeng.configtool

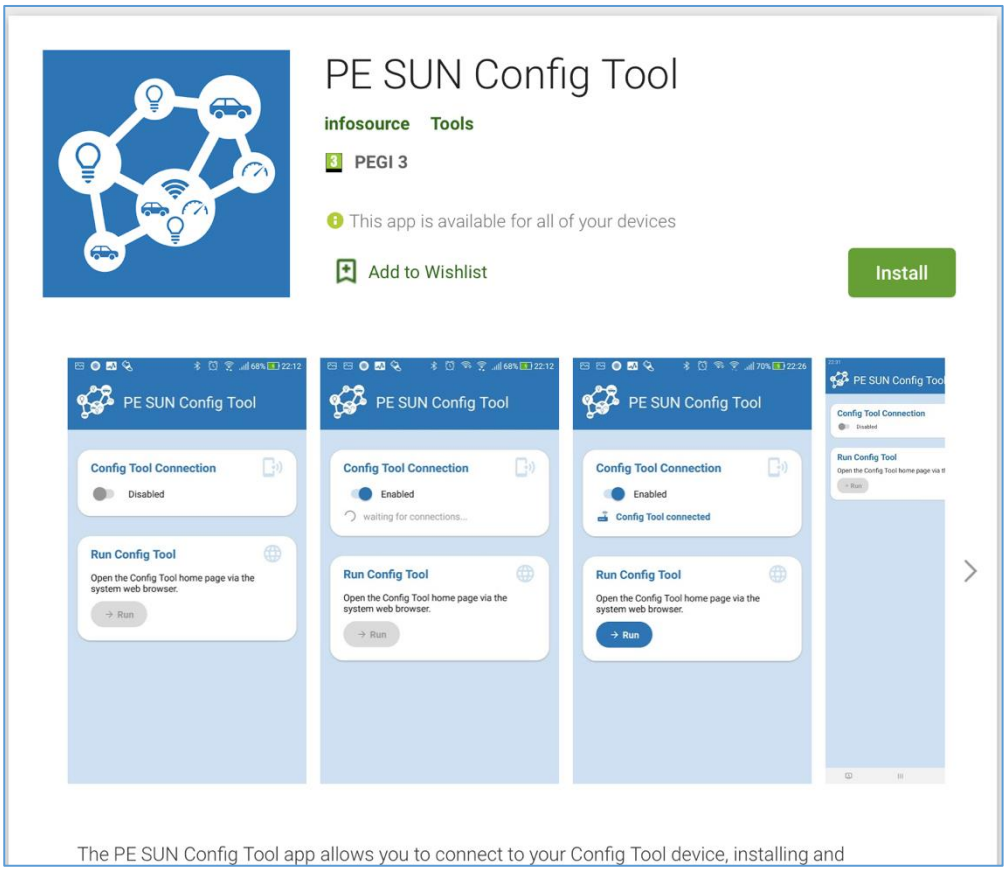


Figure 4: The PE SUN Config Tool in The Google Play Store

Option 1: Setting Up the groupCONTROL configTOOL for Android Devices (Estimated time: 7 mins)

7.2 Launch the PE SUN App and Verify that Wi-Fi is Enabled on Your Android Device

After the application has downloaded, please launch the PE SUN app. If your Wi-Fi connection is not enabled, please enable it before proceeding.

After the application has been launched, be sure to examine the Config Tool connection panel (as shown in the figure below) to ensure that the connection is enabled.

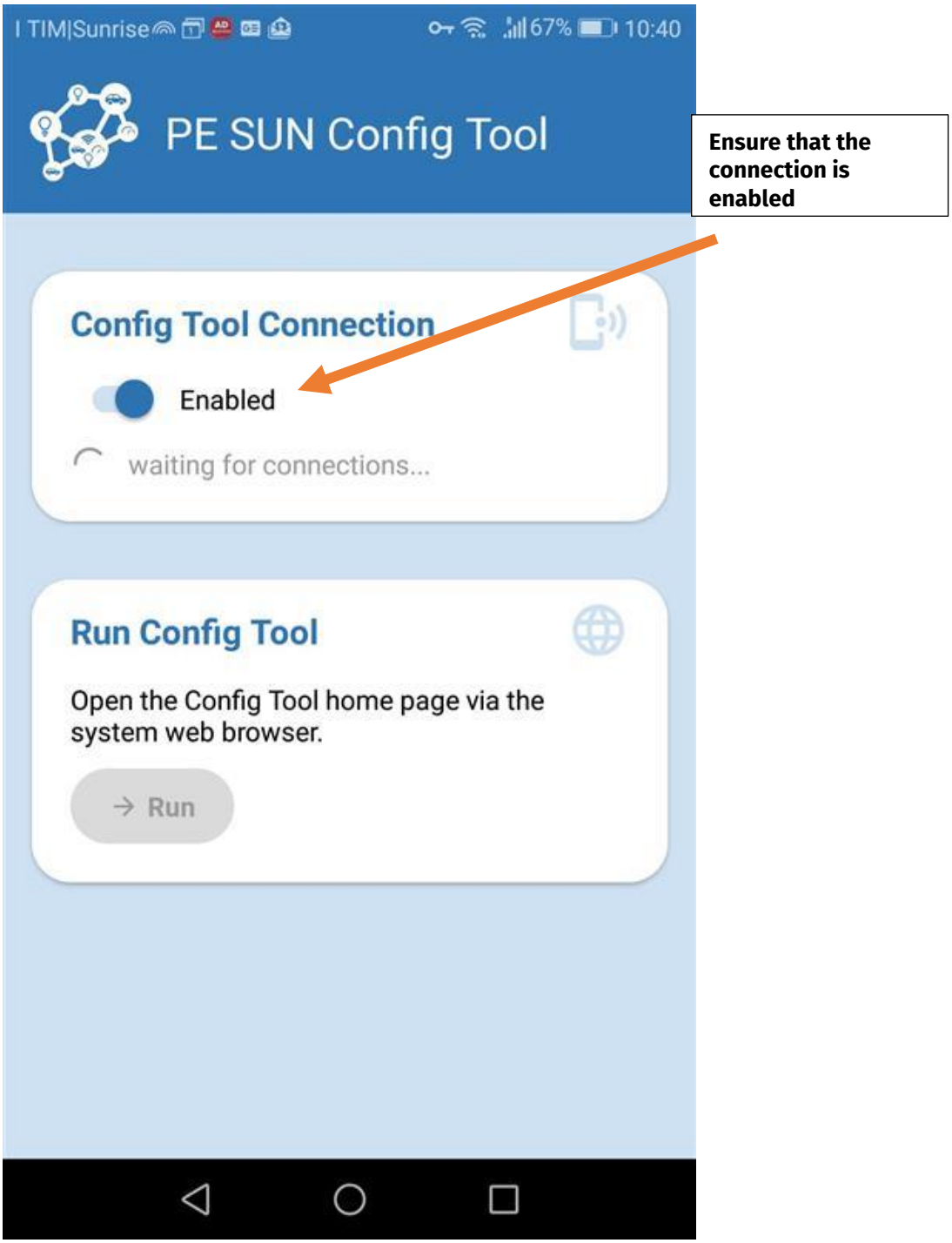


Figure 5: The groupCONTROL configTOOL App

Option 1: Setting Up the groupCONTROL configTOOL for Android Devices (Estimated time: 7 mins)

7.3 Wait for the Config Tool Device to Scan and Find the PE SUN App

After the application has been launched, the Config Tool device will continuously scan the area looking for the PE SUN app. When the Config Tool device has found the PE SUN app, you will be prompted to connect (as shown in the figure below).

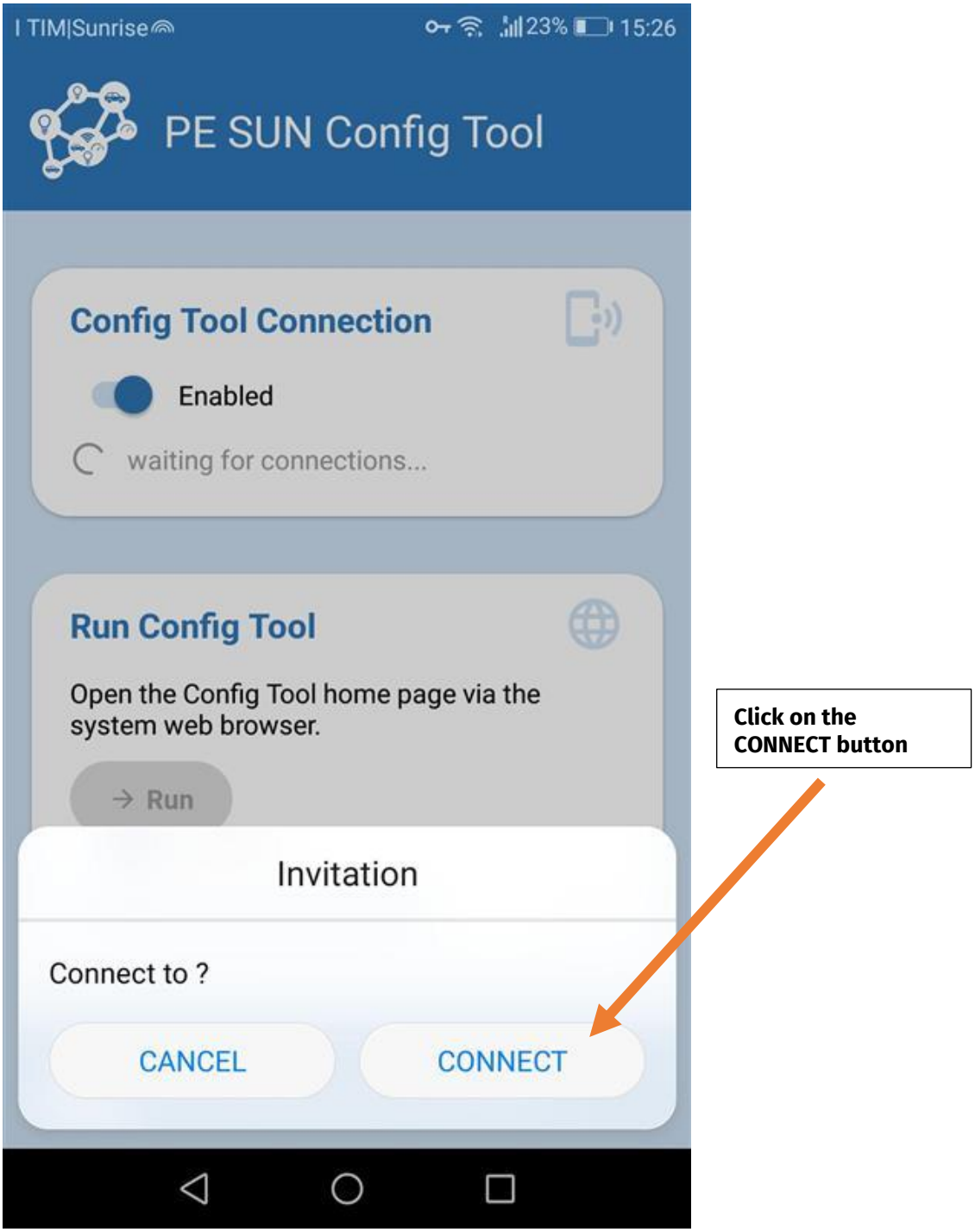


Figure 6: The PE SUN App

Option 1: Setting Up the groupCONTROL configTOOL for Android Devices (Estimated time: 7 mins)

7.4 Wait for the Connection to be Established, then Click the Run Button

After clicking the **CONNECT** button in the previous step, please wait for the connection to be established between the Config Tool device and PE SUN app.

Afterwards, the **Run** button will be enabled. Click on the **Run** button to run the groupCONTROL configTOOL in the web browser of your mobile device.

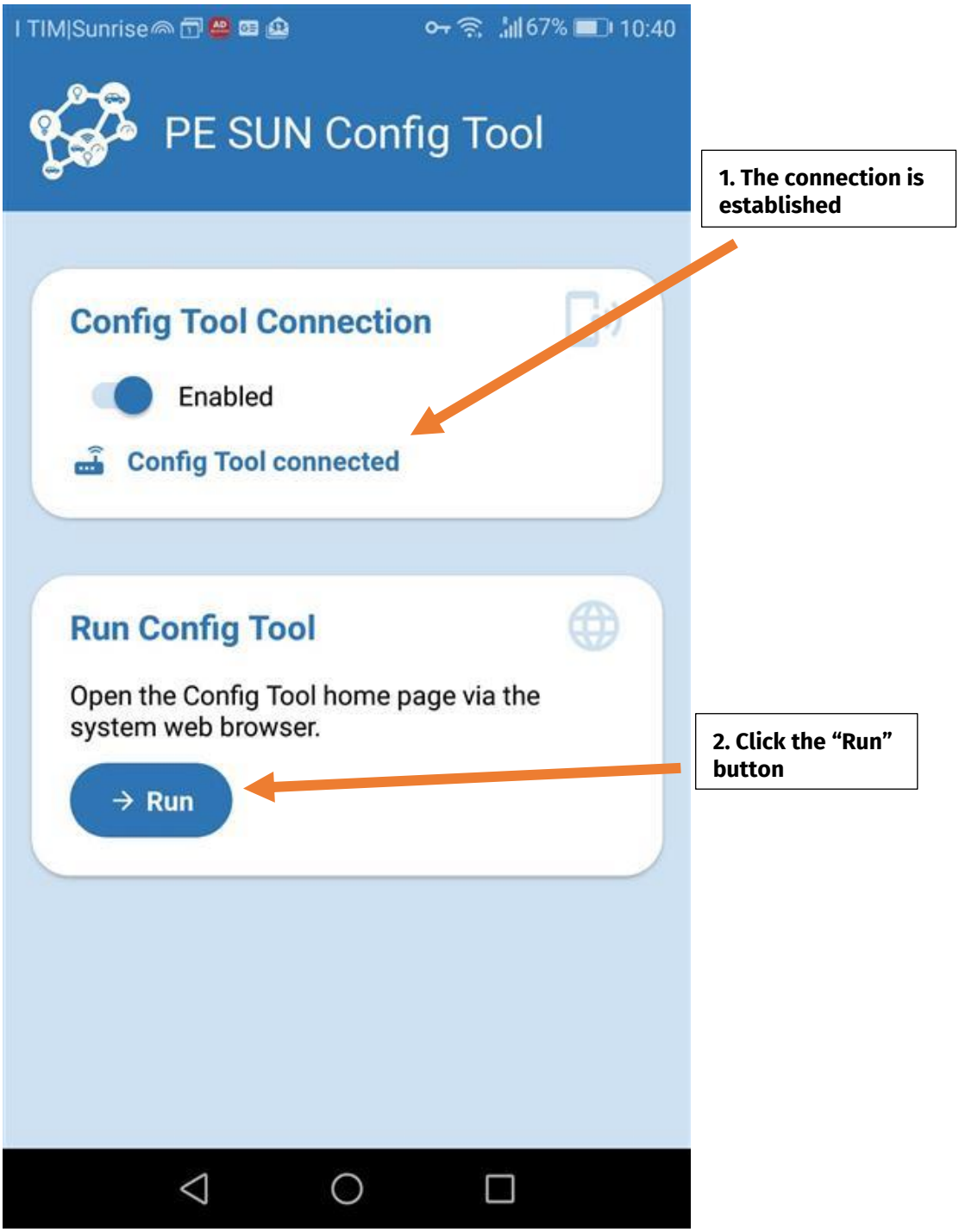


Figure 7: Click the Run Button

Option 1: Setting Up the groupCONTROL configTOOL for Android Devices (Estimated time: 7 mins)

7.5 Install the Digital Certificate in the Browser

After clicking the **Run** button on the previous screen, the web browser on your mobile device will prompt you to install the Digital Certificate in order to secure the connection between the Config Tool device and the PE SUN app. Please note that this step only needs to be performed once.

Click on the **Install Certificate** button to proceed.

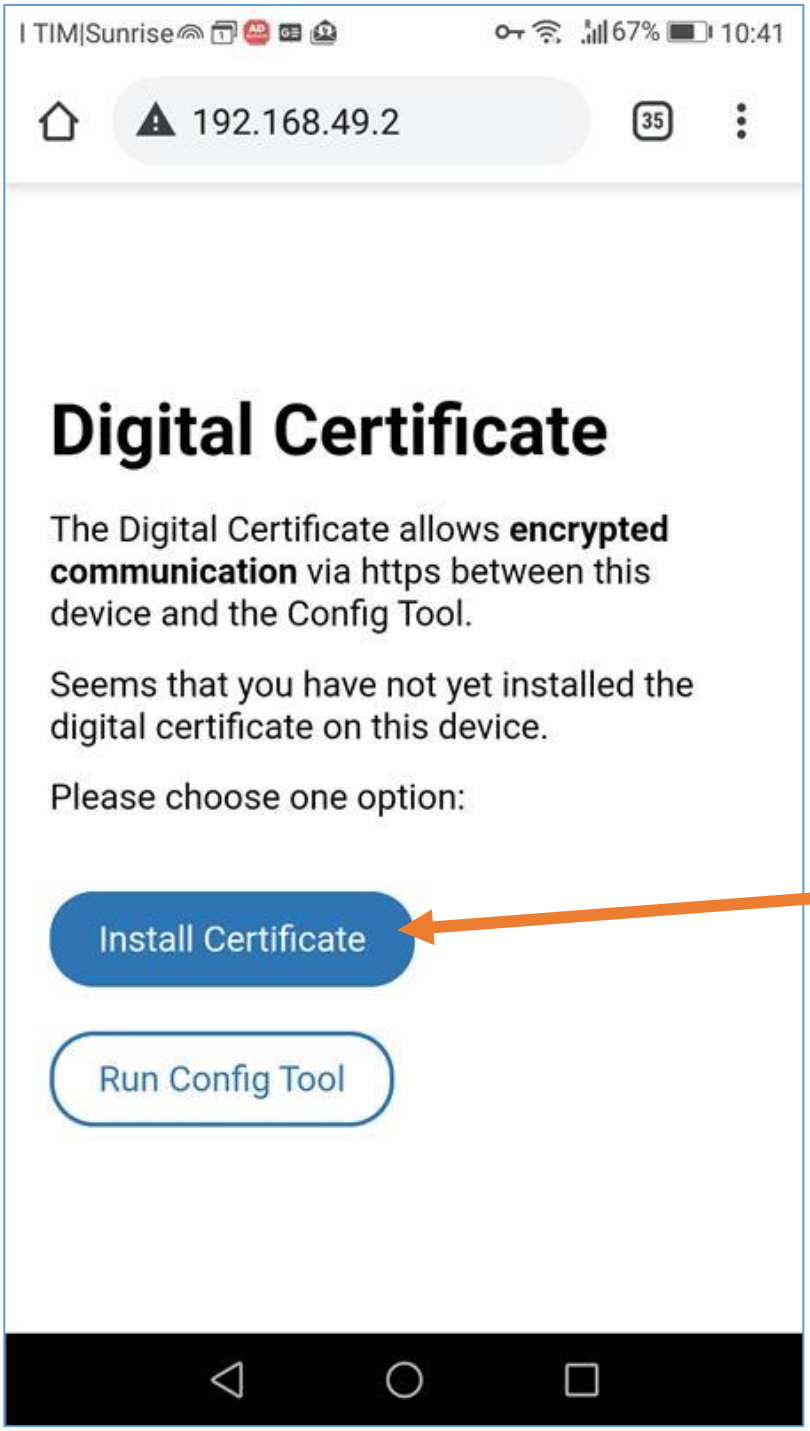


Figure 8: Installing the Certificate

Option 1: Setting Up the groupCONTROL configTOOL for Android Devices (Estimated time: 7 mins)

7.6 Install the Digital Certificate in the Browser (Continued)

The next step is to follow the prompts until you are presented with a screen to provide a name for the certificate.

Name the digital certificate, "**PE**" as shown in the figure below.

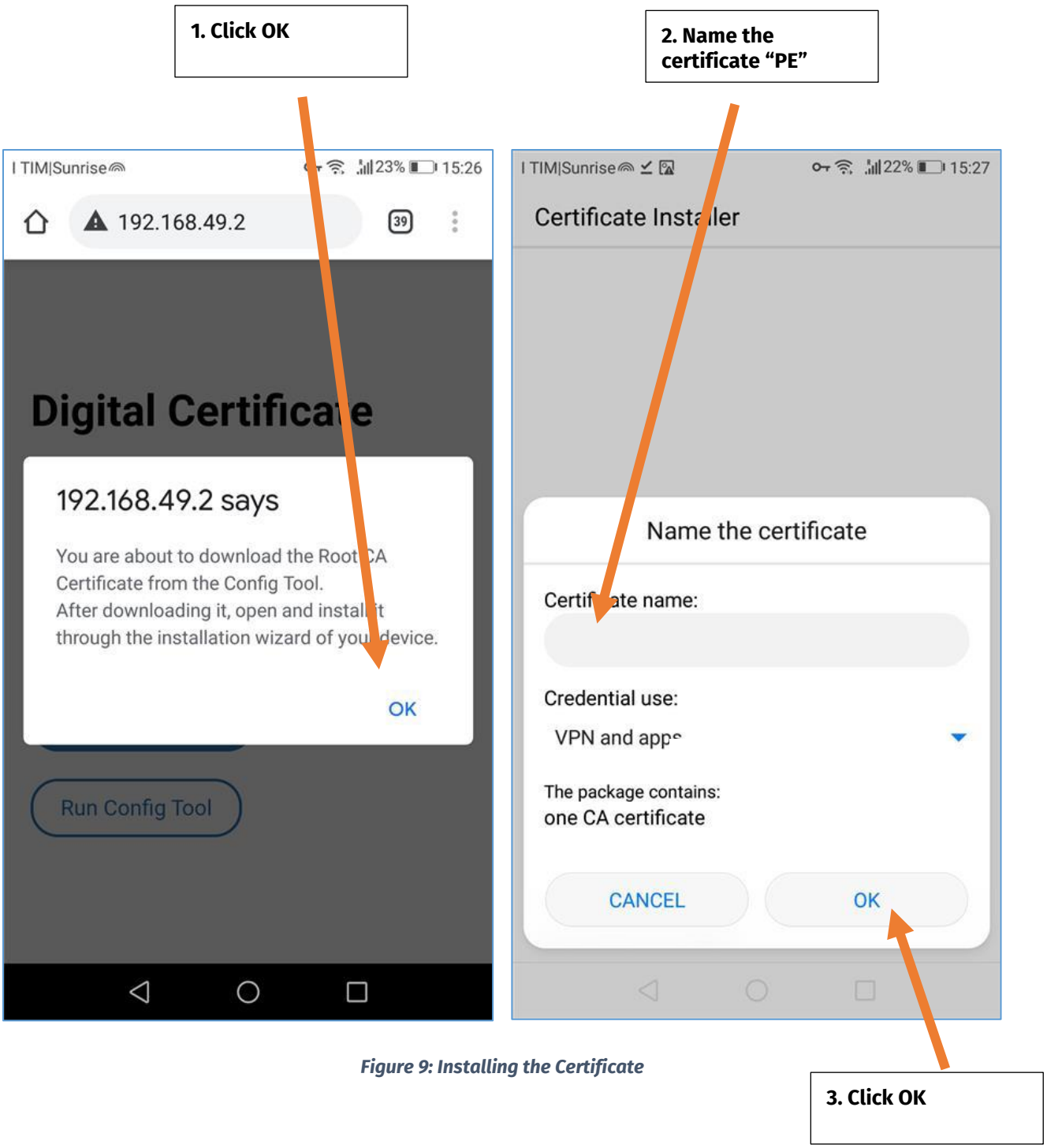


Figure 9: Installing the Certificate

Option 1: Setting Up the groupCONTROL configTOOL for Android Devices (Estimated time: 7 mins)

7.7 Exit the Browser, and Return Back to the PE SUN App

After the digital certificate has been installed, exit the web browser and return back to the PE SUN app.

Click on the **Run** button to proceed to the Login page of the Config Tool.

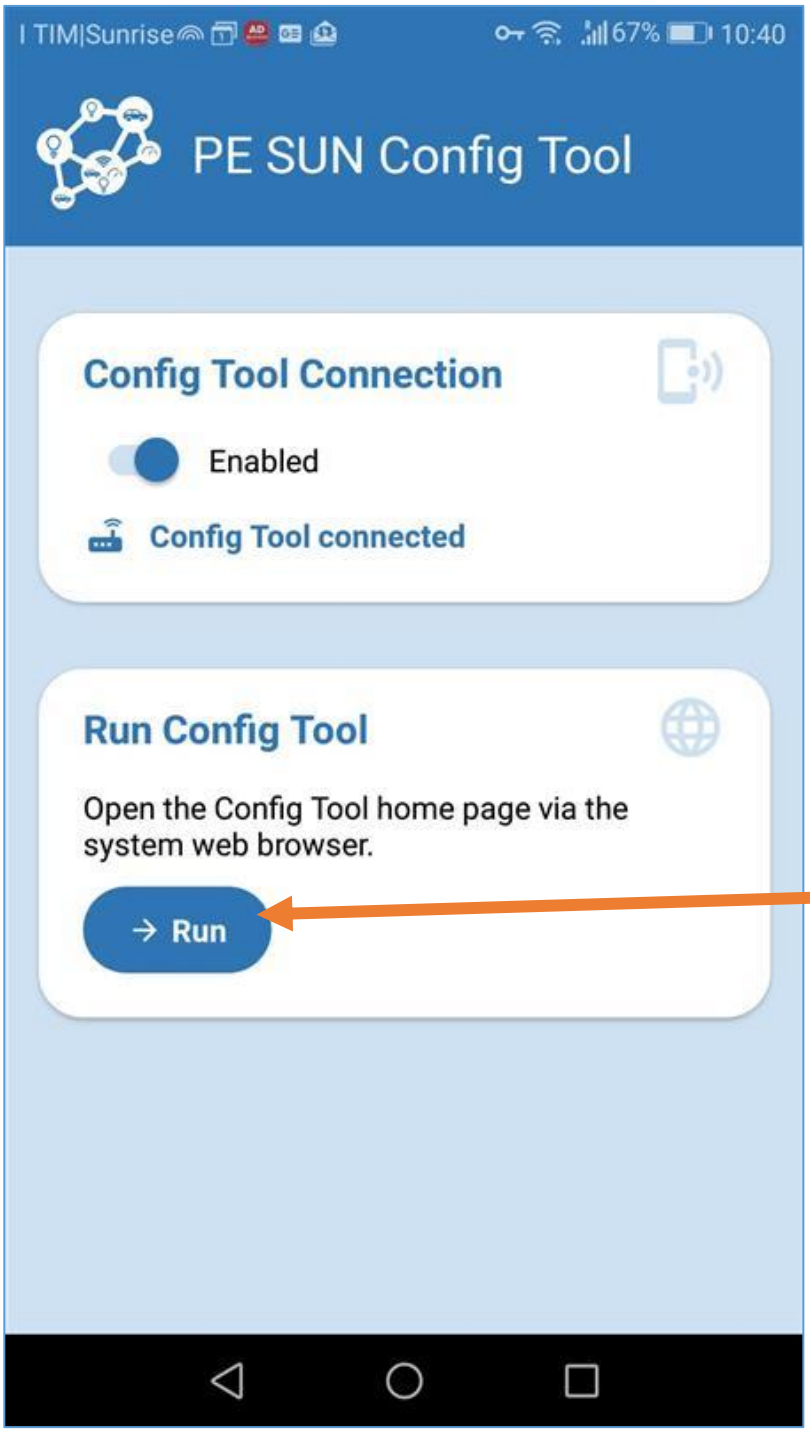


Figure 10: Running the Config Tool

Now that the Config Tool Device is connected and secured, please skip to “**Section 8 - Logging into the Config Tool”** in this manual**.**

Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (Estimated time: 7 mins)

8. Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (*Estimated time: 7 mins*)

8.1 Download the PE SUN from the Apple App Store

In order to get started with the groupCONTROL configTOOL, the first step is to download the application from the Apple App store.

https://apps.apple.com/in/app/pe-sun-config-tool/id1548927903

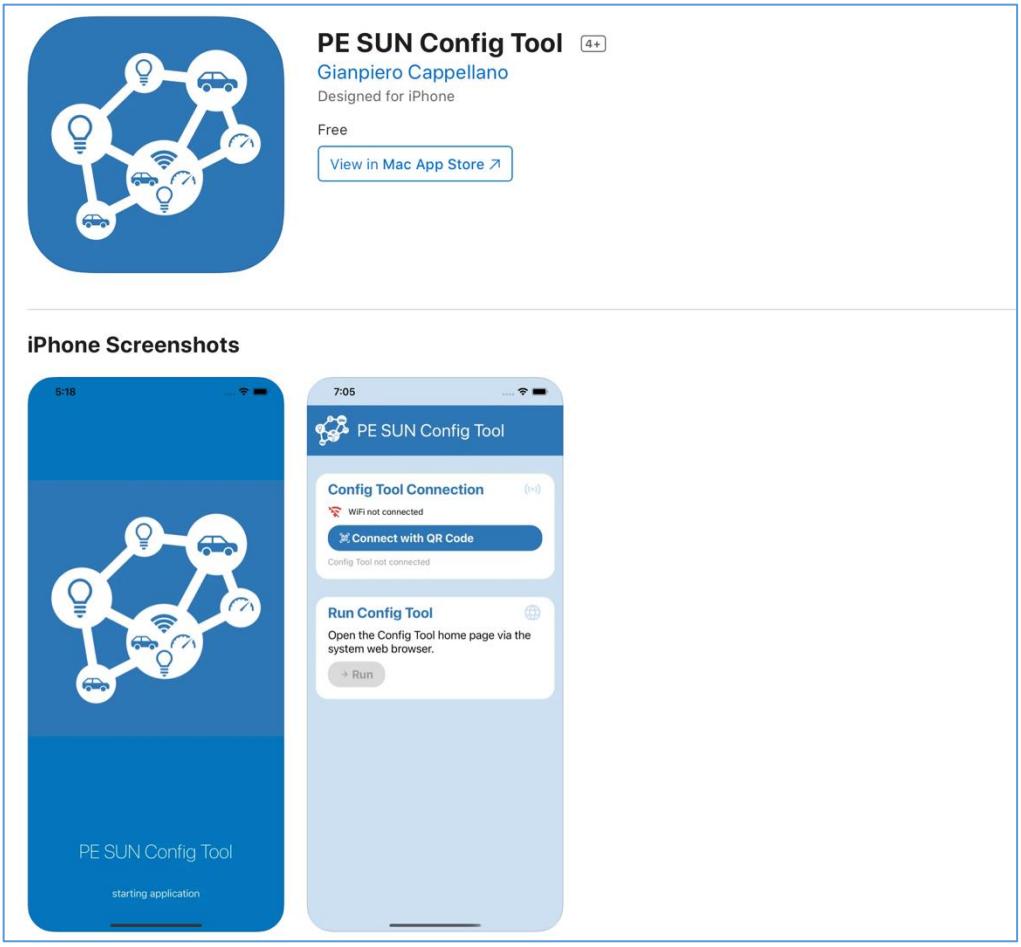


Figure 11: The PE SUN Config Tool in the Apple App Store

Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (Estimated time: 7 mins)

8.2 Launch the PE SUN App

After the application has downloaded, please ensure that Wi-Fi is enabled on your device, and launch the PE SUN pp.

After the application has been launched, click the **Connect with QR Code** button as shown in the figure below.

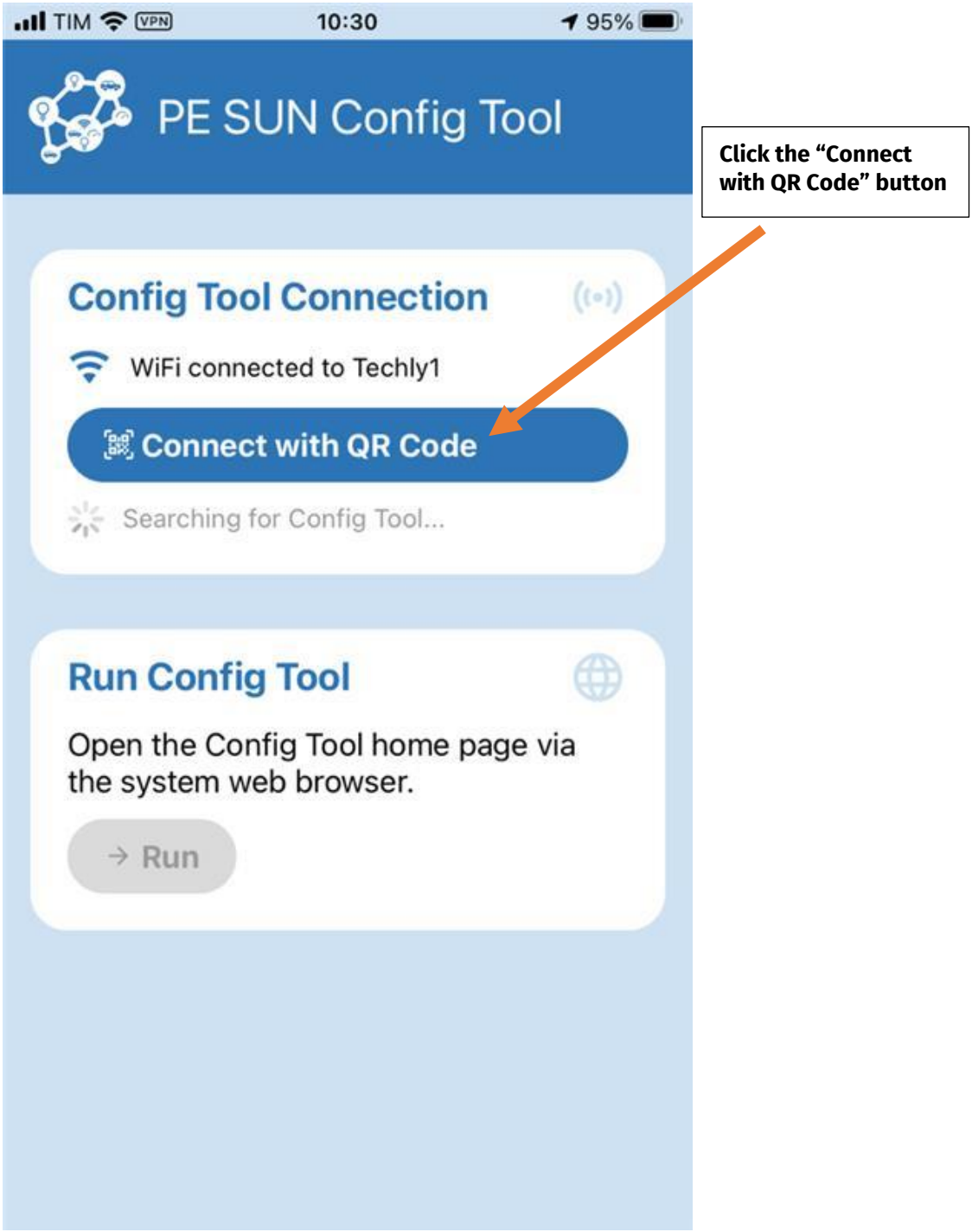


Figure 12: The PE SUN App

Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (Estimated time: 7 mins)

8.3 Scan the QR Code on the Bottom of the Config Tool Device

After clicking on the button in the previous step, your mobile device will open your camera to enable you to scan the QR code on the bottom the Config Tool device.

Scan the QR code and click the **Yes** button, followed by the **Join** button as shown in the figure below.

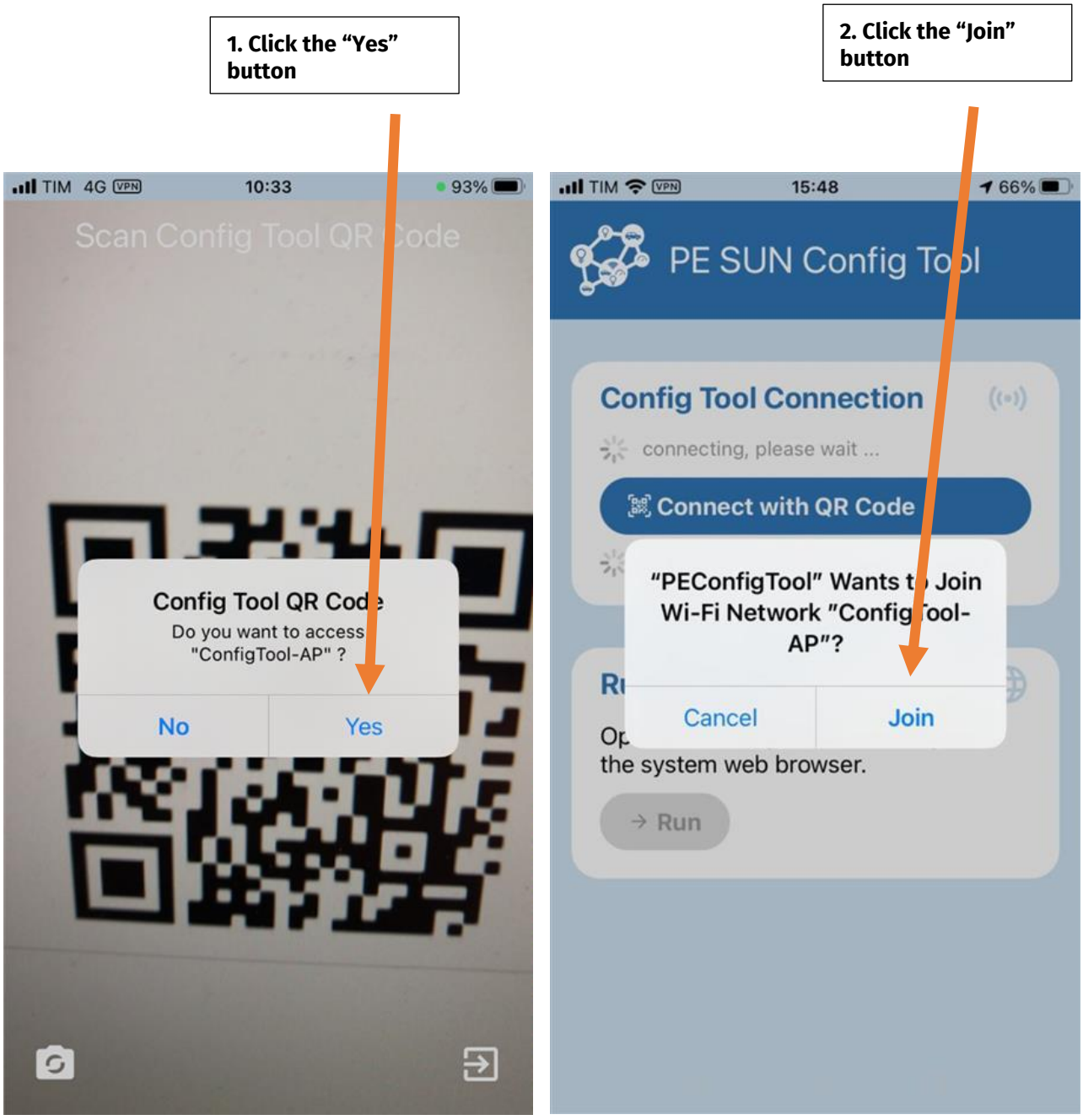


Figure 13: Scanning the QR Code

Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (Estimated time: 7 mins)

8.4 Wait for the Network Connections to be Established, then Click the Run Button

Wait for the network connections to be established between the Config Tool device and PE SUN app.

Afterwards, the **Run** button will be enabled. Click on the **Run** button to run the groupCONTROL configTOOL in the web browser of your mobile device.

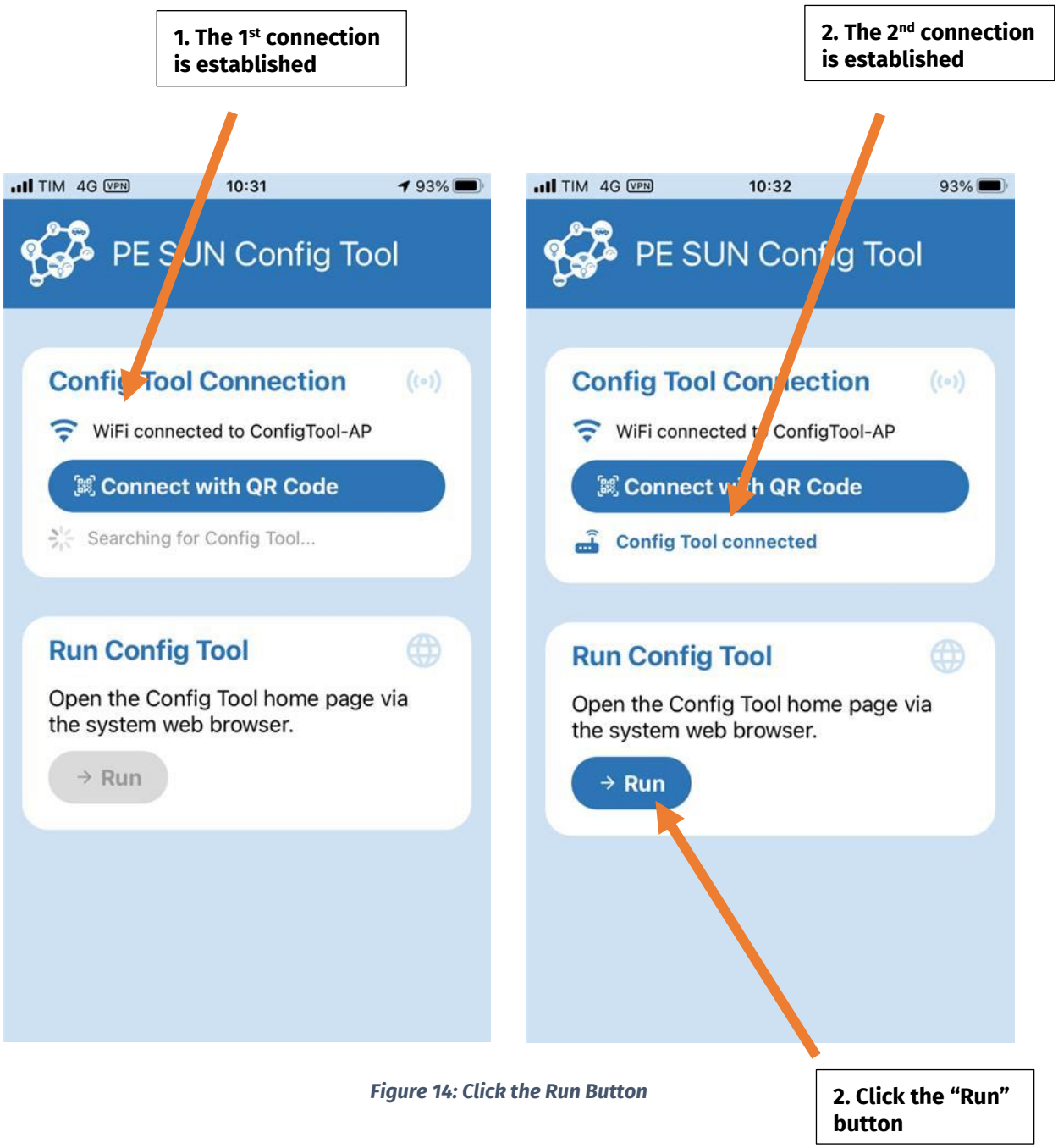


Figure 14: Click the Run Button

Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (Estimated time: 7 mins)

8.5 Install the Digital Certificate in the Browser

After clicking the **Run** button on the previous screen, the web browser on your mobile device will prompt you to install the Digital Certificate in order to secure the connection between the Config Tool device and the PE SUN app. Please note that this step only needs to be performed once.

Click on the **Install Certificate** button to proceed.

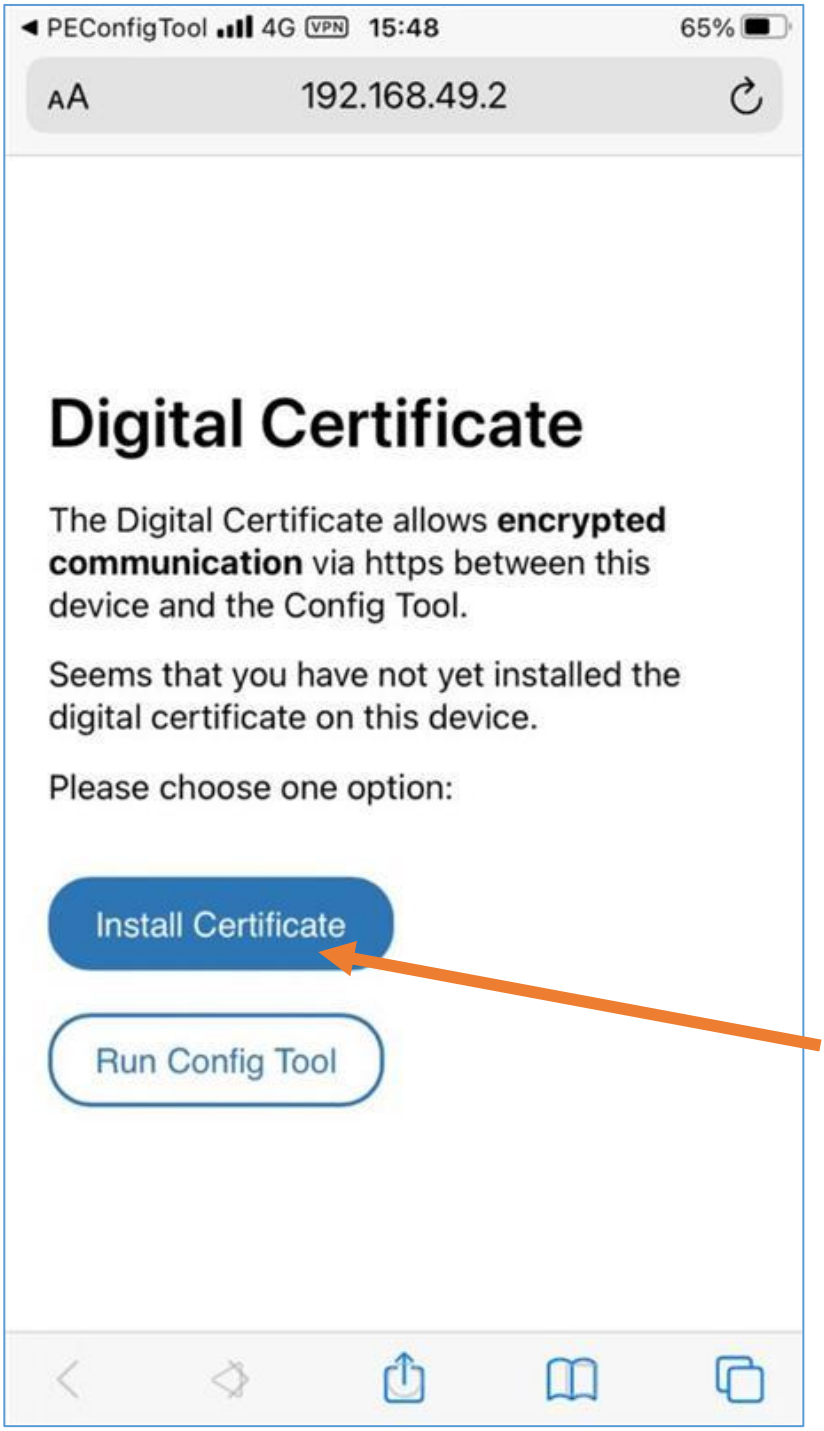


Figure 15: Installing the Certificate

Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (Estimated time: 7 mins)

8.6 Install the Digital Certificate in the iOS Settings App

Open the Settings app on the iOS device, and then click on **General** followed by **Profile**. You will see the Tridonic Certificate Authority displayed a "**PE CA**" as a downloaded profile.

Tap on "**PE CA**" as shown in the figure below.

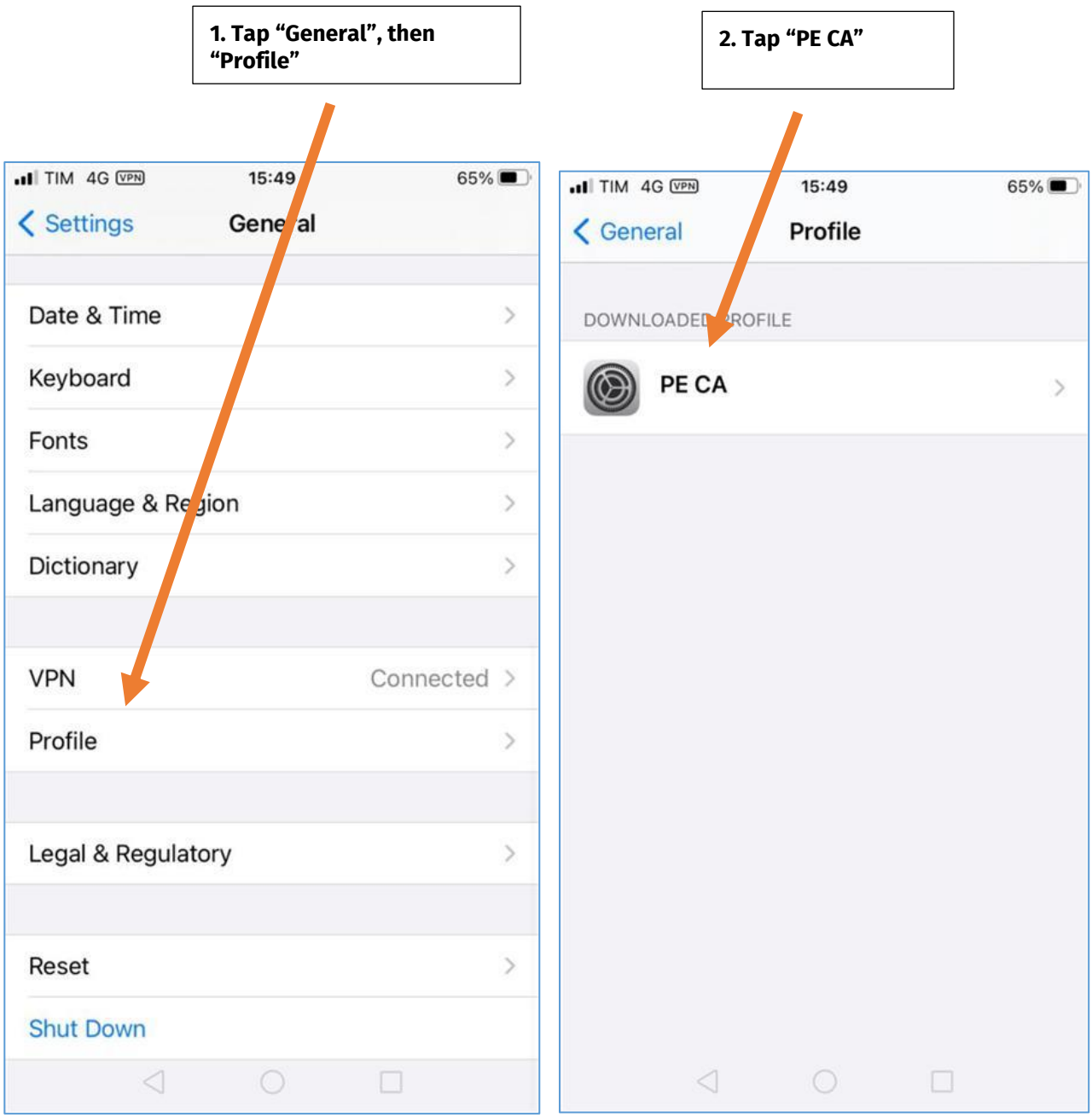


Figure 16: Installing the Certificate

Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (Estimated time: 7 mins)

8.7 Install the Digital Certificate in the iOS Settings App (Continued)

Tap the **Install** button, followed by the **Done** button shown in the figure below.

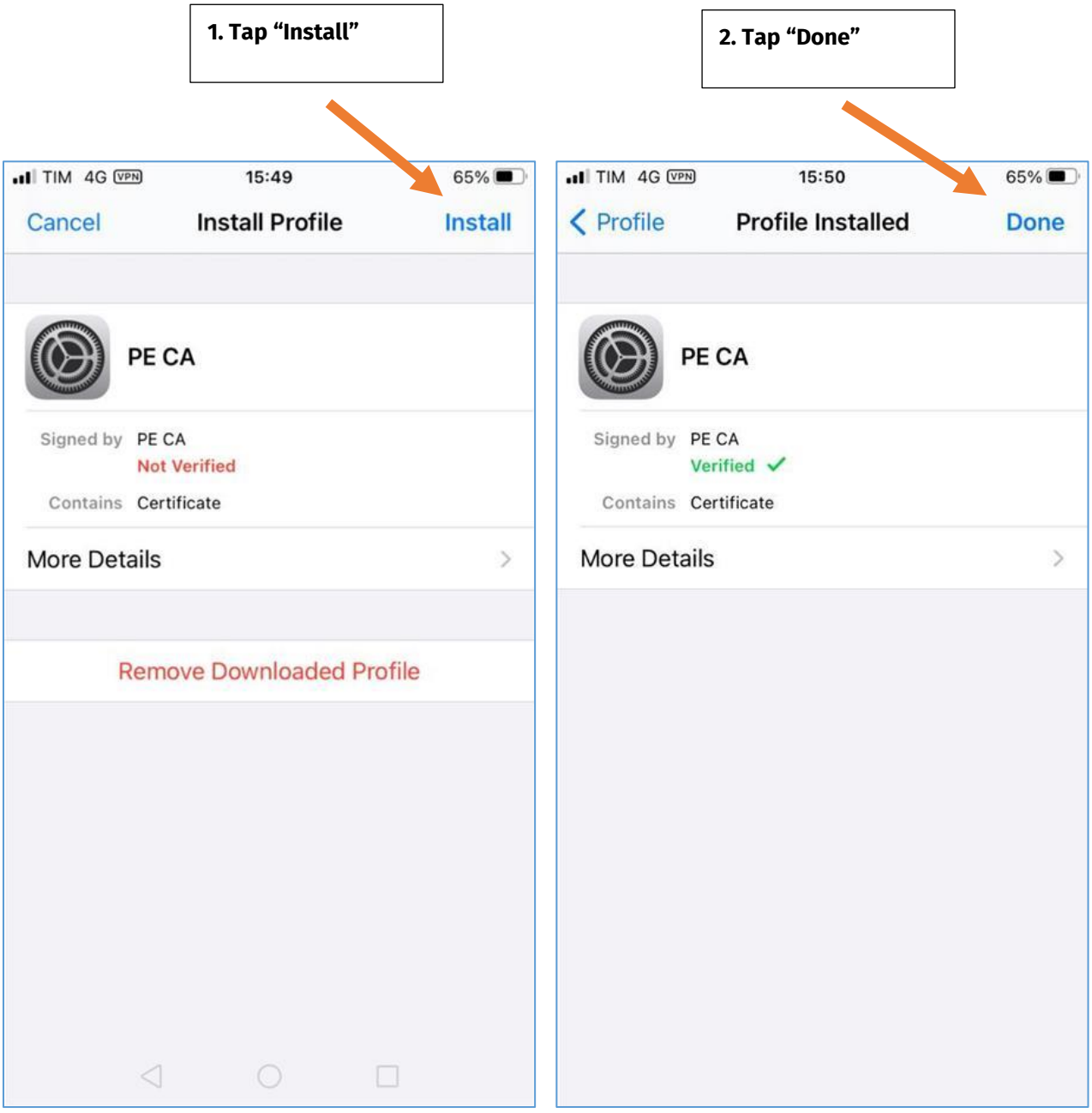


Figure 17: Installing the Certificate

Option 2: Setting Up the groupCONTROL configTOOL for iOS Devices (Estimated time: 7 mins)

8.8 Exit the Browser, and Return Back to the PE SUN App

After digital certificate has been installed, exit the web browser and return back to the PE SUN app.

Click on the **Run** button to proceed to the Login page of the Config Tool.

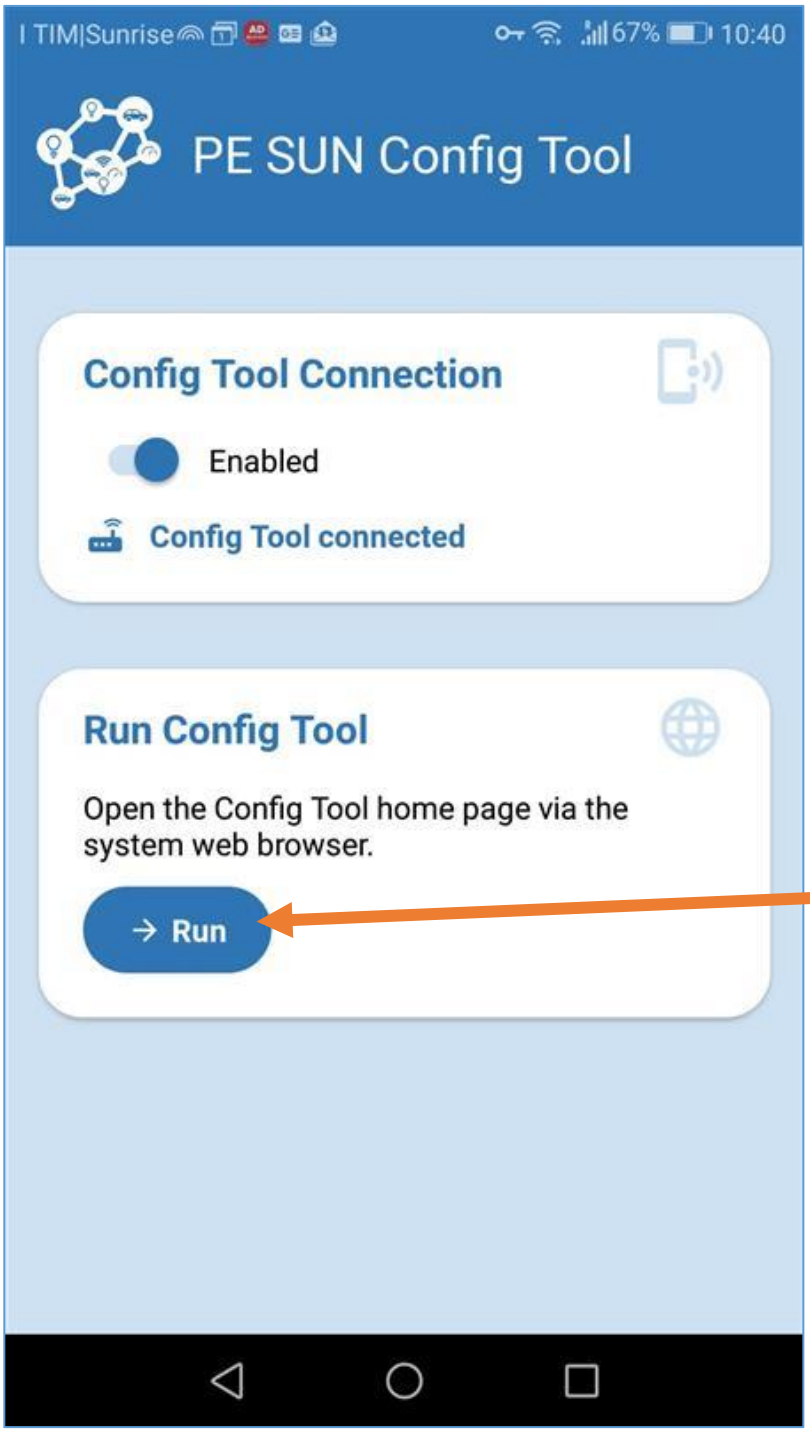


Figure 18: Running the Config Tool

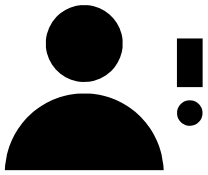
Now that the Config Tool Device is connected and secured, please skip to “**Section 8 - Logging into the Config Tool”** in this manual**.**

Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (Estimated Time: 10 mins)

9. Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (*Estimated Time: 10 mins*)

If you're using a laptop computer, open the Settings application and click on the '**Network and Internet**" option. The resulting screen is shown in the figure below.

Click on the "**Mobile Hotspot**" menu item.



NOTE: *You should only use this option if your laptop already has a physical ethernet connection to the network/Internet.*

*In other words, if your laptop **ONLY** uses Wi-Fi to connect to the Internet, then you cannot use this option. Please use Option 1 or Option 2 with a mobile device.*

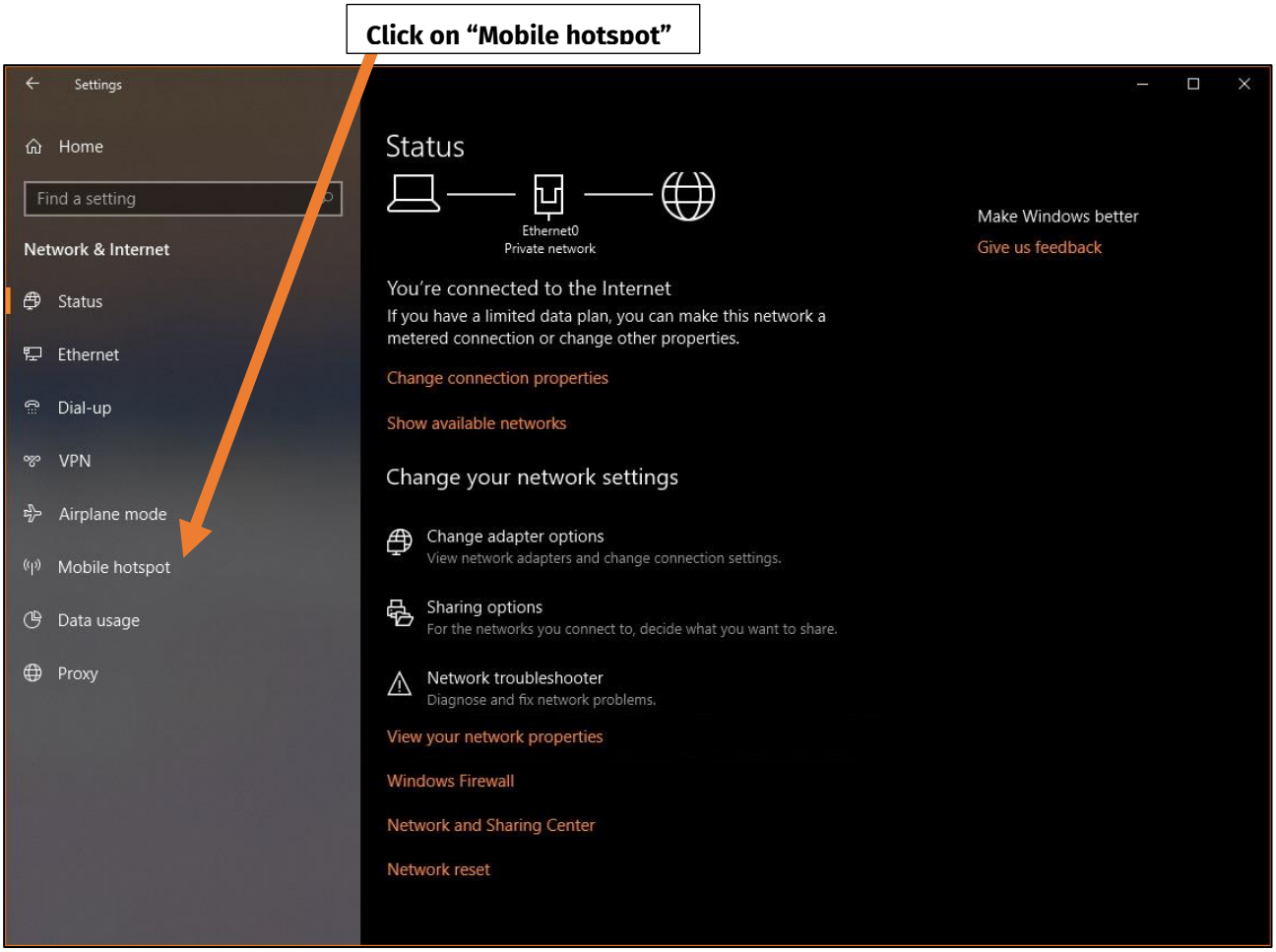


Figure 19: Windows 10 Network and Internet Settings Menu

Under the section labeled, "**Share my Internet connection over**", click on the option named, "**WiFi**". Afterwards, click the "**Edit**" button.

Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (Estimated Time: 10 mins)

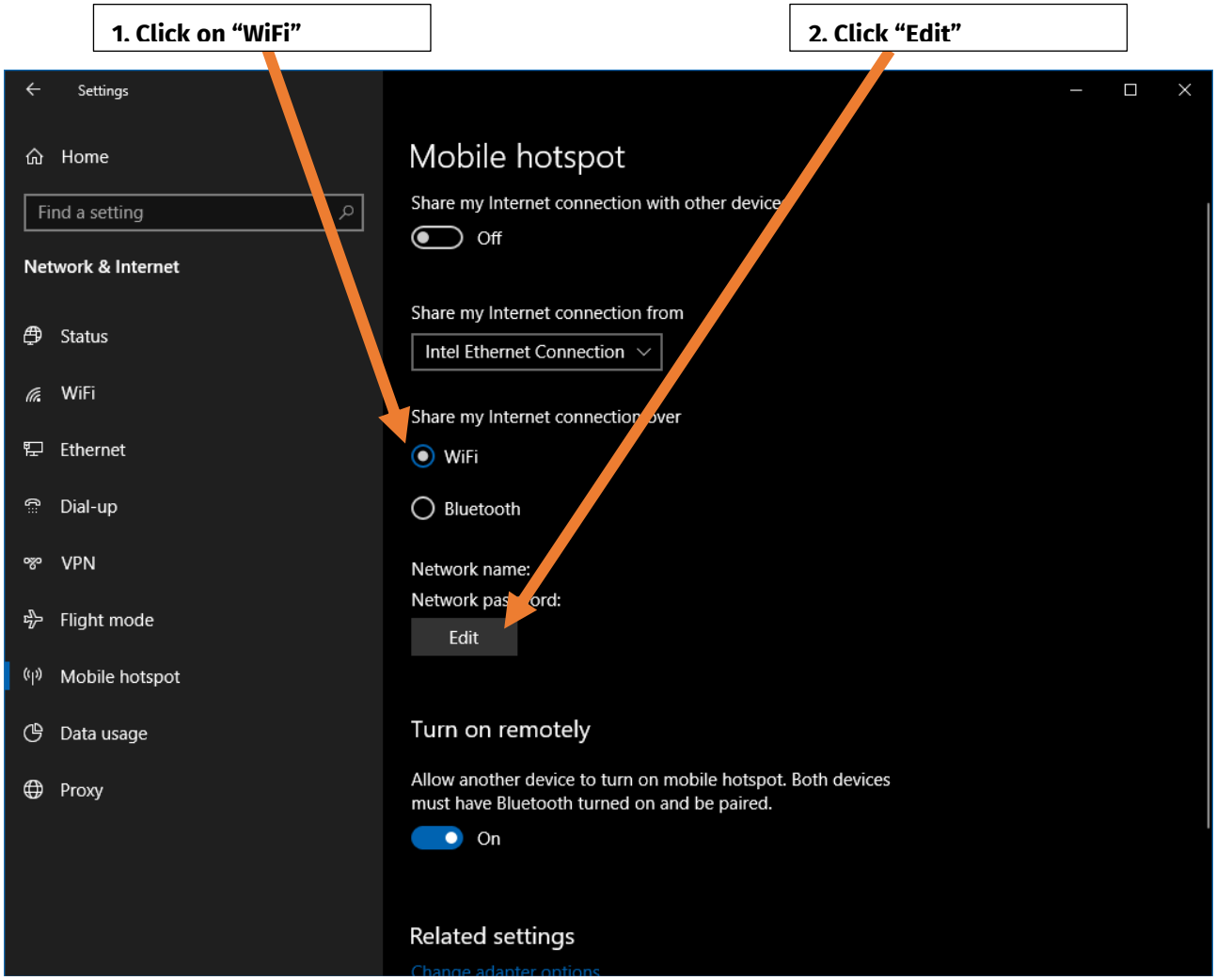


Figure 20: Creating a Mobile Hotspot

Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (Estimated Time: 10 mins)

In the field labeled, "**Network name**", type "**AP_CTnet1234**". The password needs to be "**123456789**". Click the "**Save**" button to proceed.

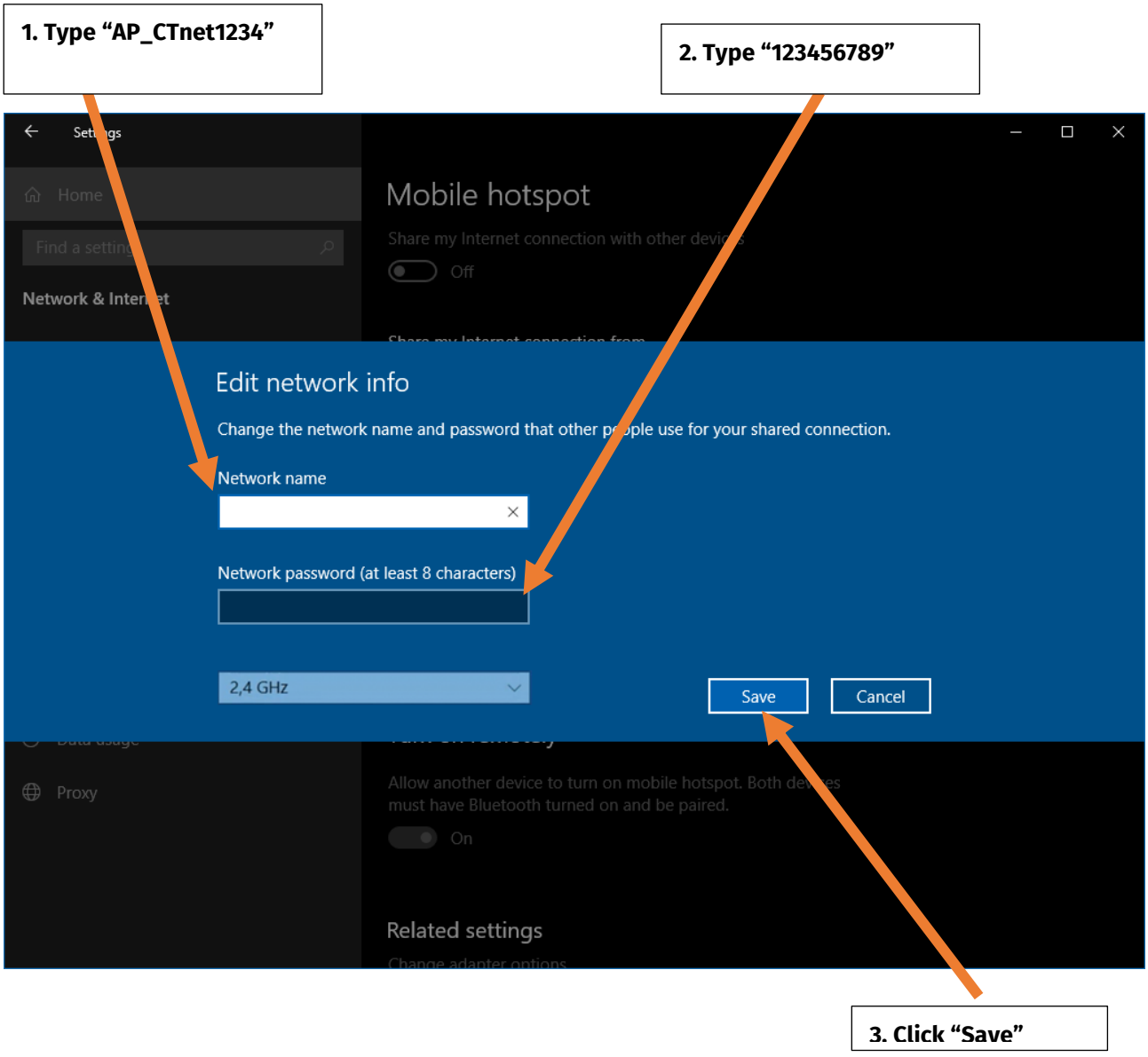


Figure 21: Windows 10 Network and Internet Settings Menu

Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (Estimated Time: 10 mins)

Afterwards, you are returned to the previous screen where you need to enable the option labeled, "**Share my internet connection with other devices**".

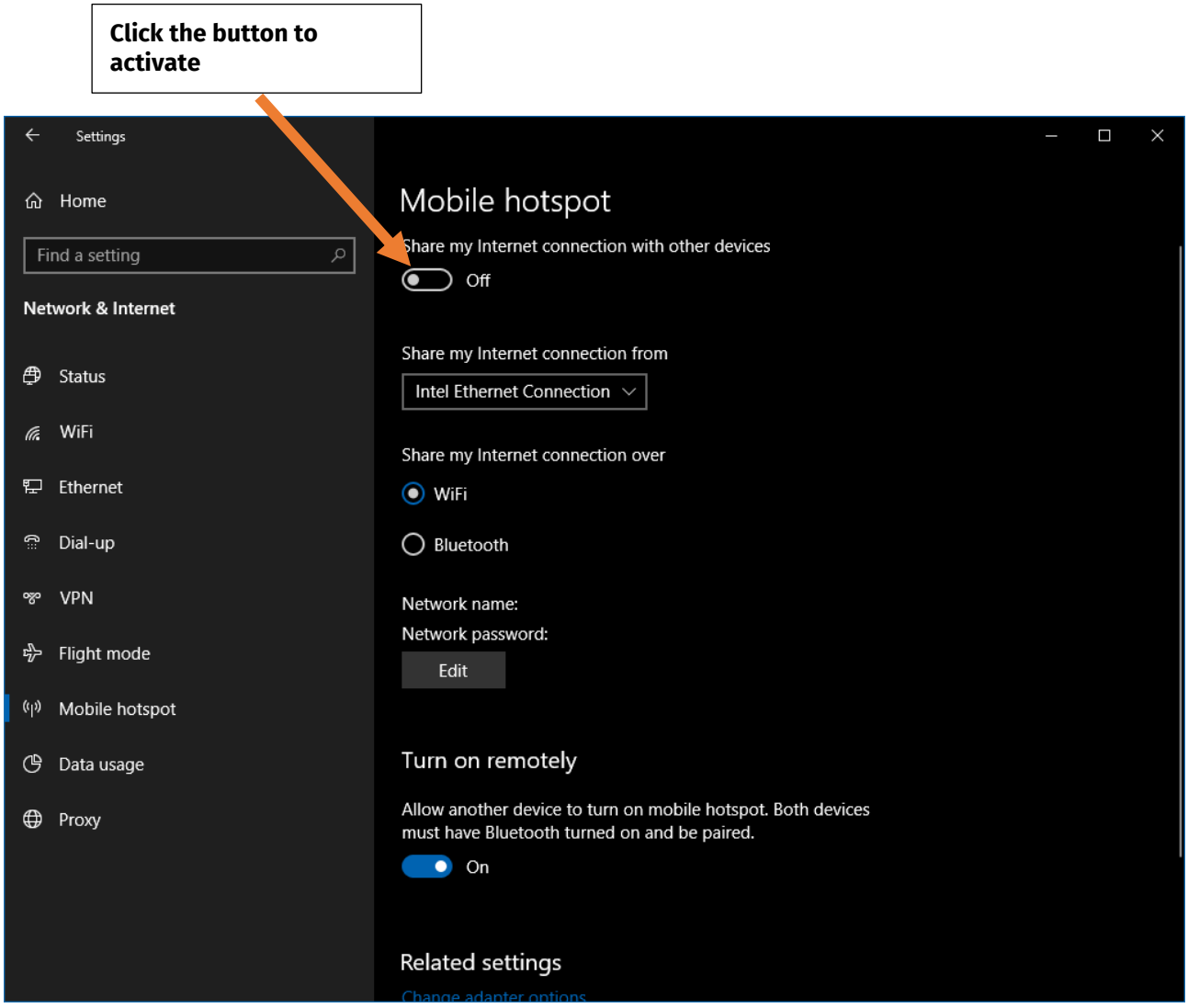


Figure 22: Windows 10 Network and Internet Settings Menu

Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (Estimated Time: 10 mins)

The next step is to click on the option labeled, "**Change adapter options**".

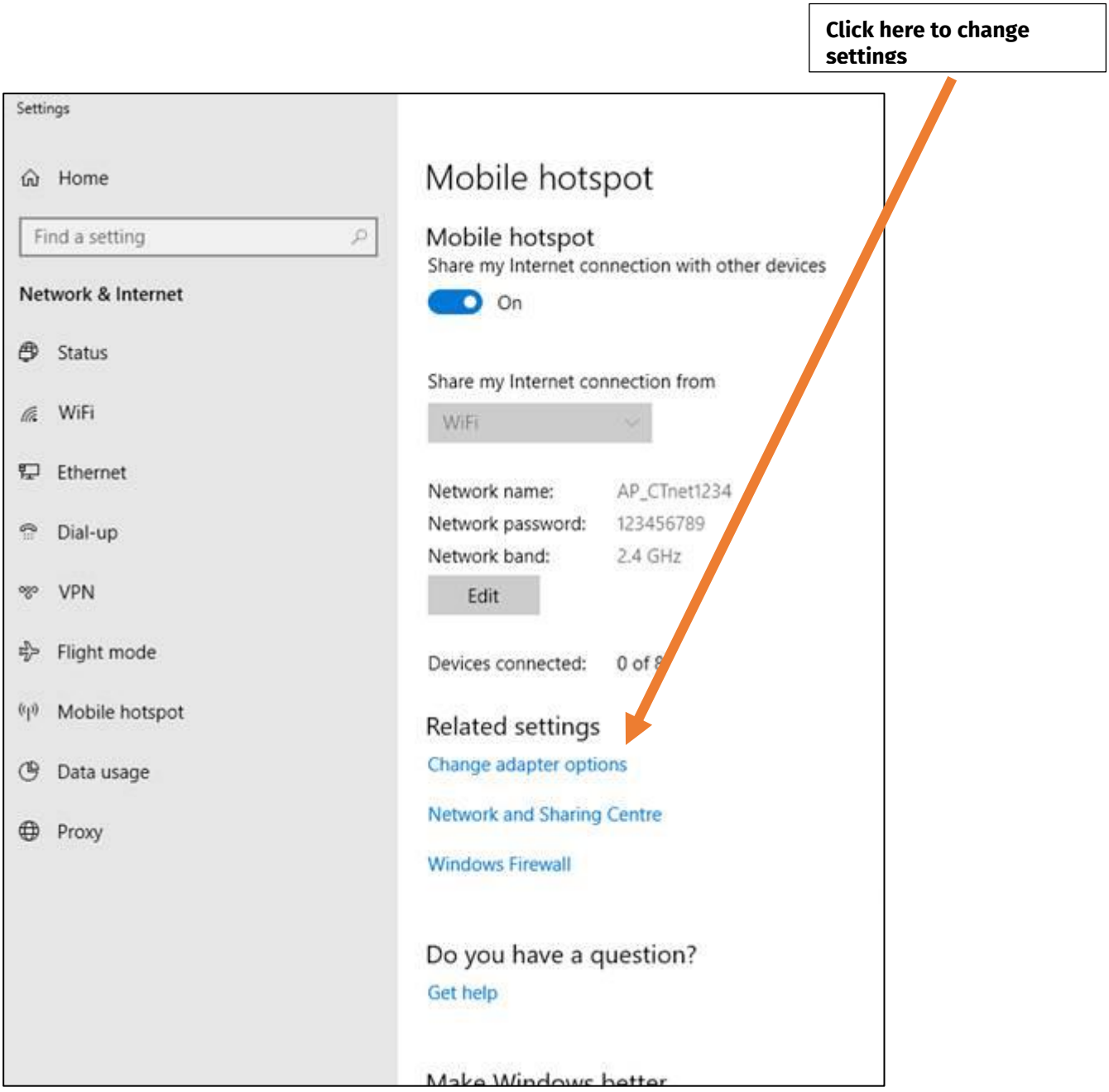


Figure 23: Windows 10 Network and Internet Settings Menu

Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (Estimated Time: 10 mins)

You will be presented with a screen that shows all the network connections on your computer (please note that names and types of network connections may vary from the ones shown in the figure below. Right-click on the network connection named, “**WiFi pdxnet.pdxeng.ch**”.

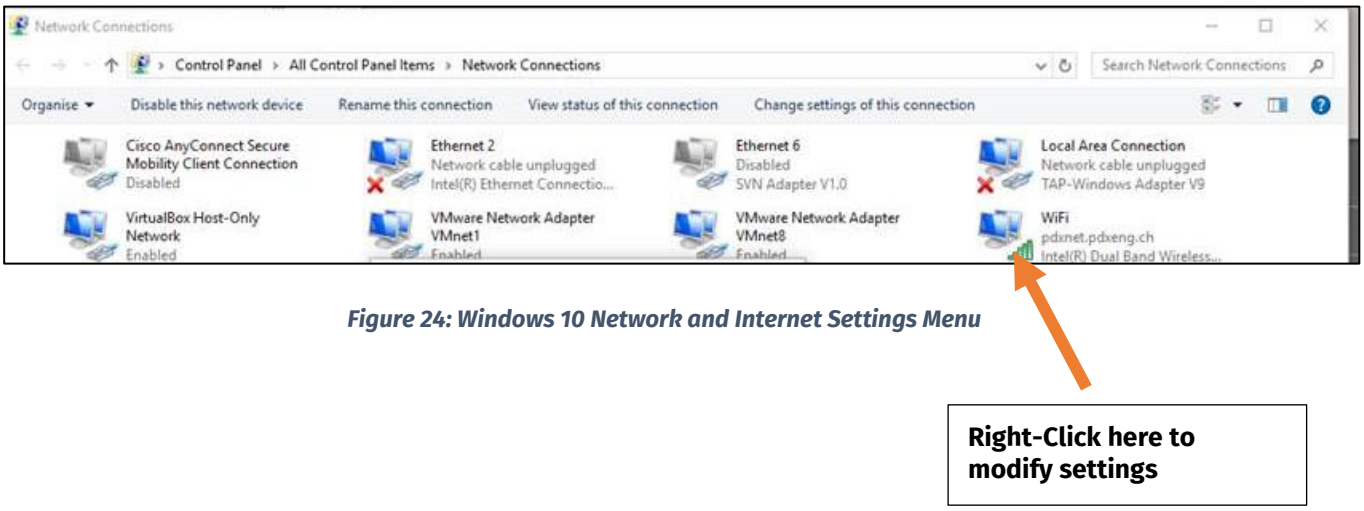


Figure 24: Windows 10 Network and Internet Settings Menu

Right-Click here to modify settings

Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (Estimated Time: 10 mins)

You will see a popup window with your network settings. Click on the option named, "**Internet Protocol Version 4 (TCP/IP)**", and then click on the "**Properties**" button.

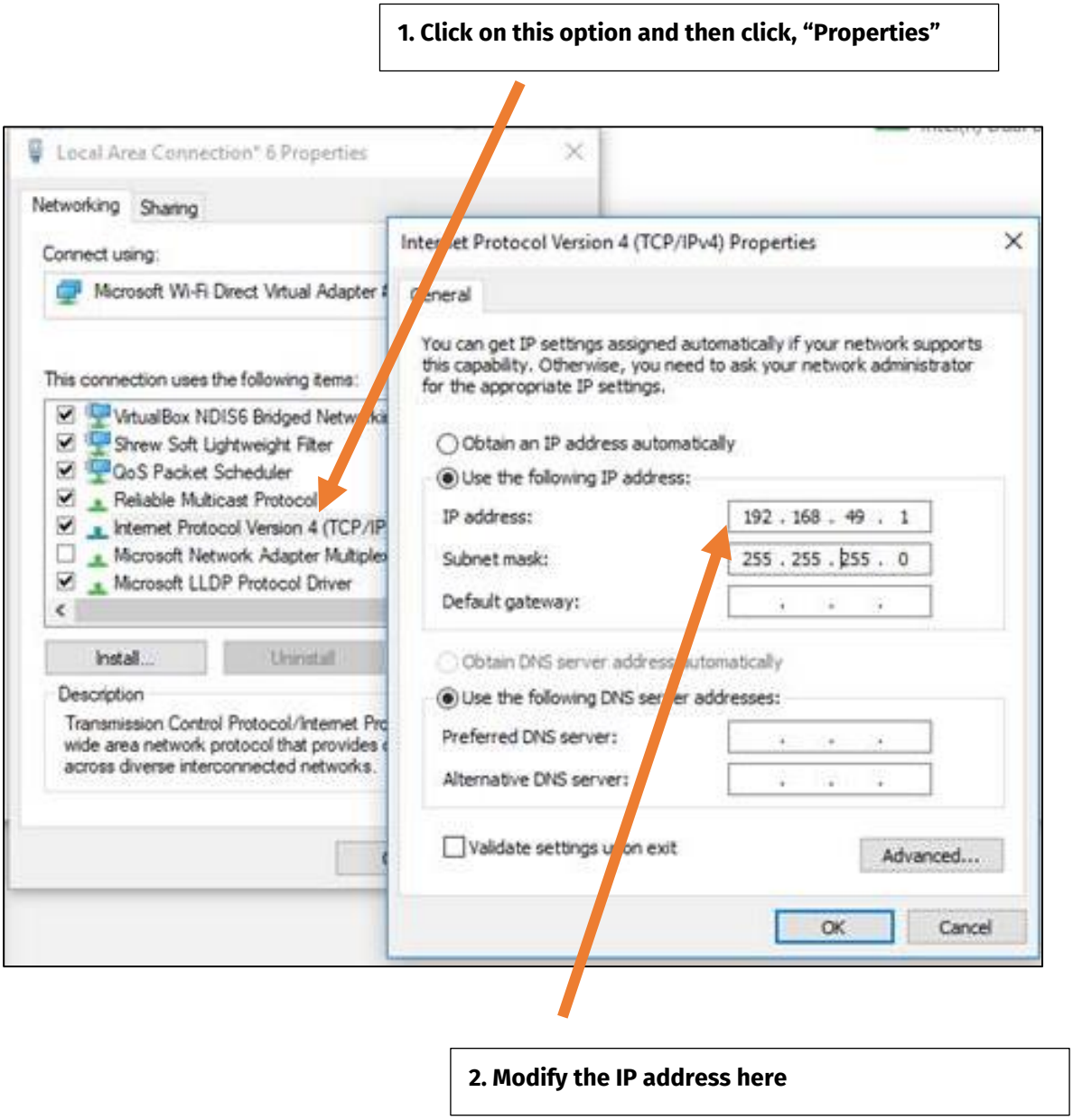


Figure 25: Windows 10 Network and Internet Settings Menu

Modify the IP address to be, "**192.168.49.1**", and then click on the "**OK**" button.

Option 3: Creating a Wi-Fi Hotspot Using a Laptop Computer (Estimated Time: 10 mins)

9.1 Installing the Tridonic Security Certificate

In order to login to Config Tool, the web browser of laptop needs to trust the embedded webserver of the groupCONTROL configTOOL. In order to accomplish this, you need to install the Tridonic security certificate which will be downloaded from the groupCONTROL configTOOL.
In order to download the certificate, connect to the groupCONTROL configTOOL via browser.

NOTE:
The correct address for downloading the certificate starts with http:// and not with https://.
When downloading the certificate, make sure to enter the web address with http:// at the beginning and also make sure that the browser does not automatically change to https://.
Once the certificate is installed, both http:// and https:// will work.

Double-click on the certificate you have downloaded from the groupCONTROL configTOOL to start the **Certificate Import Wizard**, and follow the guidelines in the figure below.

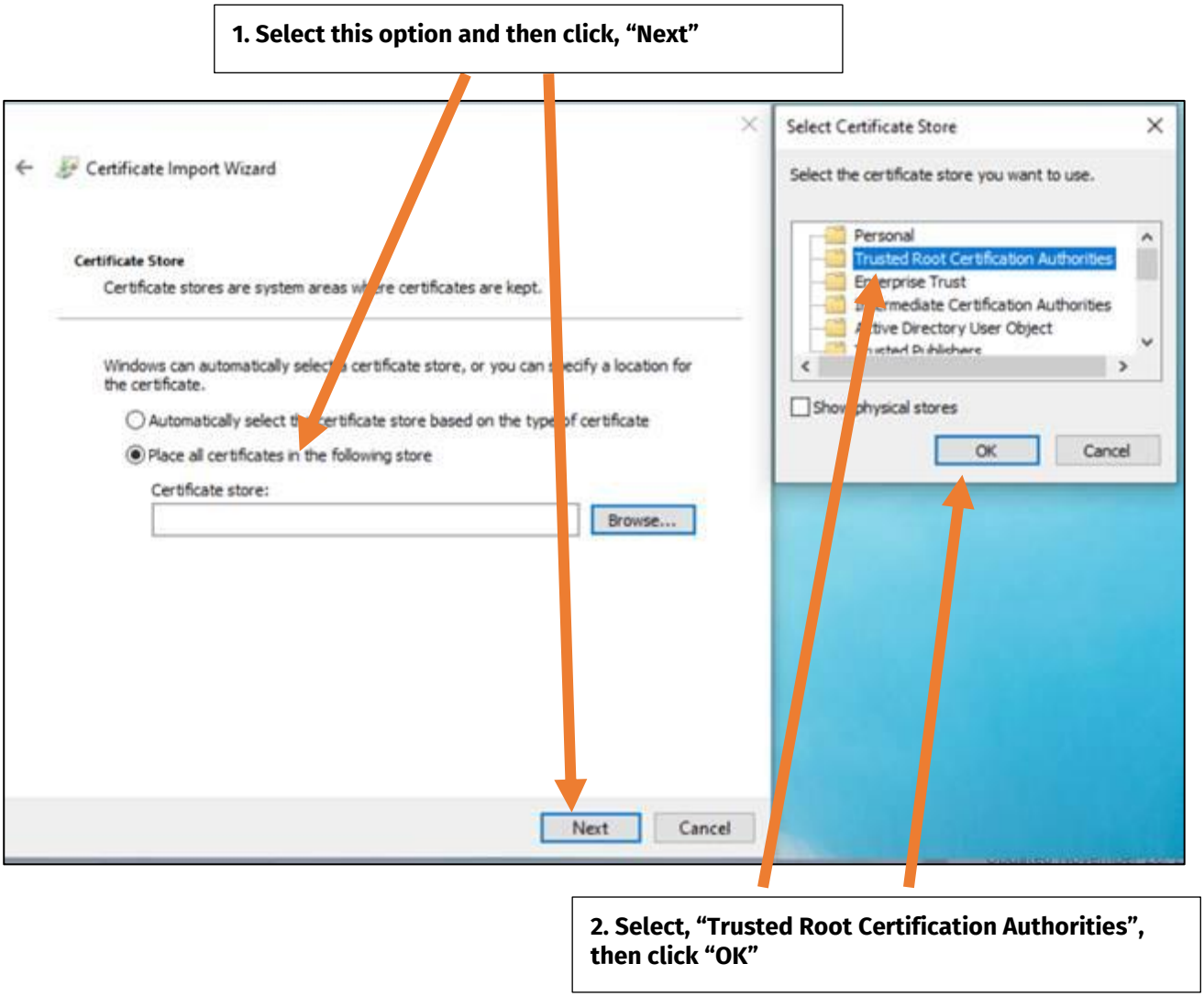


Figure 26: The Installation of the Security Certificate for Windows Laptops

PART 3: Logging in

10.Logging into the Config Tool

After completing all the prerequisite steps, if you are using a mobile device, you should already be presented with the login screen as shown in the figure below. If, however you are using a laptop computer, you need to use your web browser and navigate to the following URL: 192.168.49.2.
Two different user types are implemented, normal users with limited rights and admins with all rights.
You can use the following default user names to login to the application.

Username	Password	User type
user	ctuser_welcome1!	Normal user
admin	ctadmin_welcome1!	Admin

https://192.168.49.2

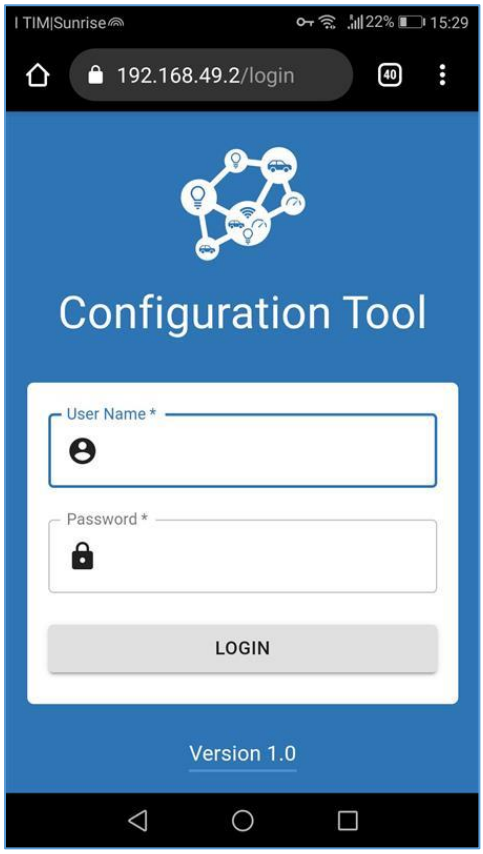


Figure 27: The Login Screen for the groupCONTROL configTOOL (for mobile devices)

11. Two User Levels: User and SuperUser

Users of the Config Tool have two different levels of access rights. By examining the **"..."** options menu, you can see if your access rights are **User Level** (which allows users to perform basic installations) or **SuperUser Level** (which is for advanced users and administrators).

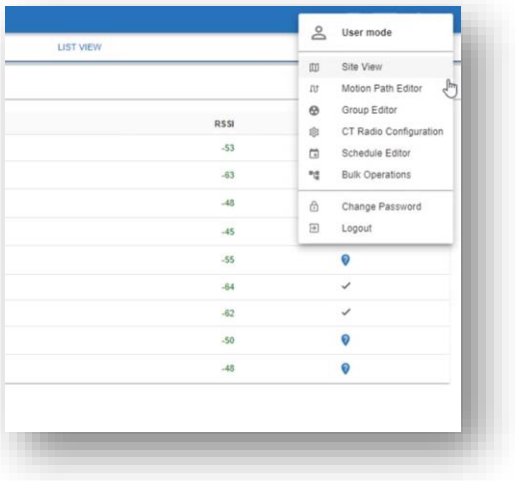


Figure 28: Menu Options for User Mode

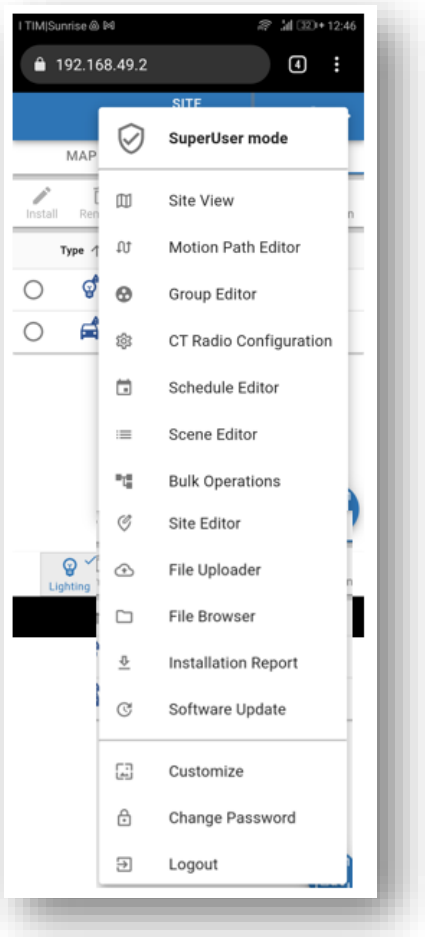


Figure 29: Menu Options for Super User Mode

12. Logging into the Config Tool

After completing all the prerequisite steps, if you are using a mobile device, you should already be presented with the login screen as shown in the figure below. If, however you are using a laptop computer, you need to use your web browser and navigate to the following URL:
Two different user types are implemented, normal users with limited rights and admins with all rights.
You can use the following default user names to login to the application.

Username	Password	User type
user	ctuser_welcome1!	Normal user
admin	ctadmin_welcome1!	Admin

https://192.168.49.2

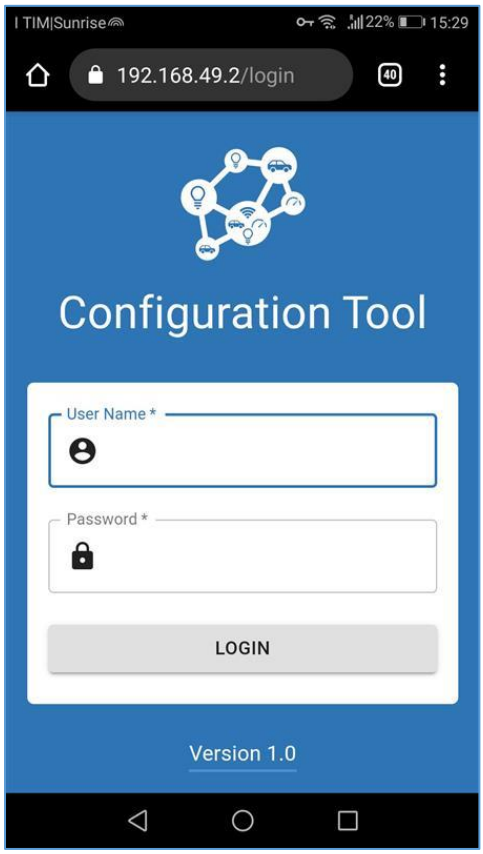


Figure 30: The Login Screen for the groupCONTROL configTOOL (for mobile devices)

PART 4: Basic Functions of the groupCONTROL configTOOL

13. The Default Home Screen

After successfully authenticating to the Login Screen, the user is presented with the **Default Home Screen**.

For users with laptops, this is shown in Figure below, while the same screen for mobile devices is shown underneath.

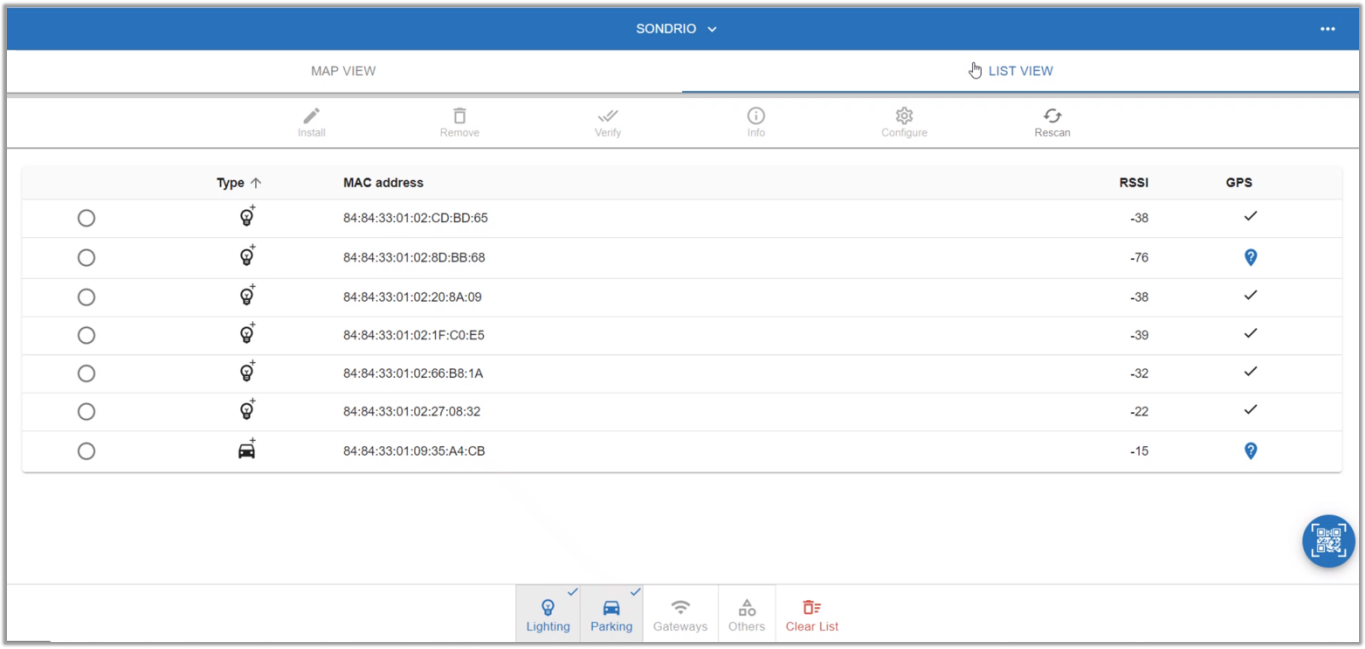


Figure 31: The Default Home Screen (in List View) for Laptops

The Default Home Screen

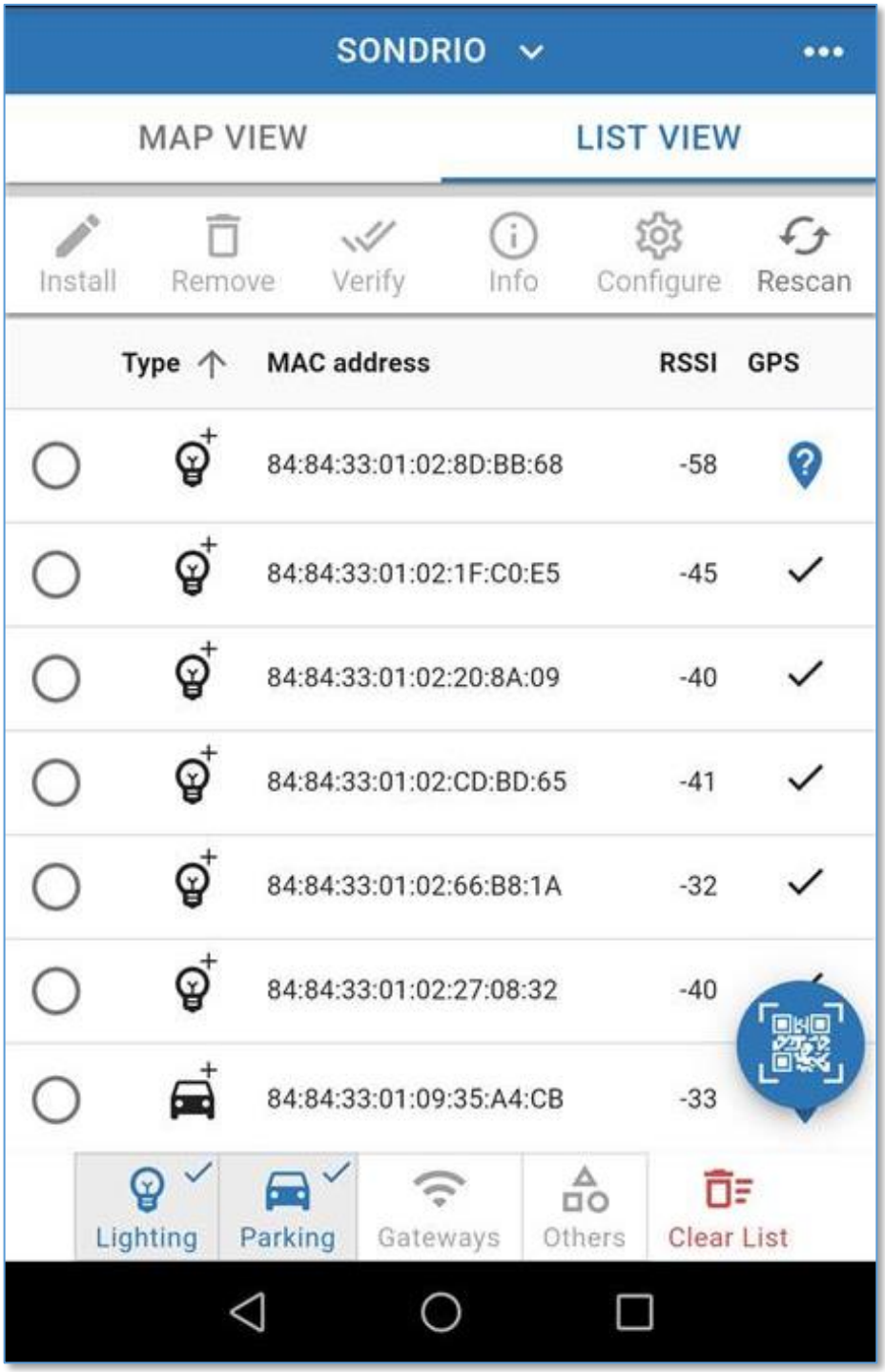


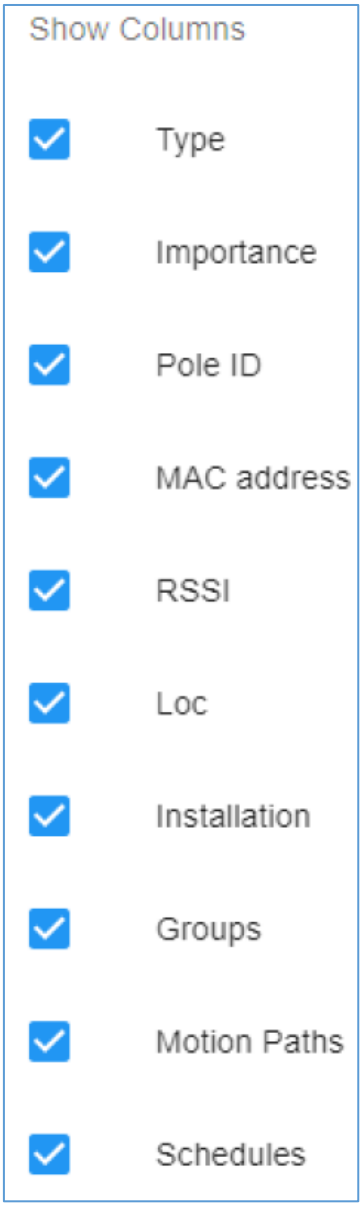
Figure 32: The Default Home Screen (in List View) for Mobile Devices

The Default Home Screen

13.1 Getting Familiar with the Default Home Screen

(*Estimated Time: 1 min*)

In the **Default Home Screen**, the user is presented with a table of 6LoWPAN devices that within the proximity of the user. The information presented in the table are the following:



- Type
- Importance
- Pole ID
- MAC address
- RSSI (the remote signal strength, which indicates proximity)
- Loc
- Installation
- Groups
- Motion Paths
- Schedules

The user is also presented with two tabs on the top of the screen to switch from the default (the List view) to a Map view of the devices that have been discovered. The Map View for laptops and mobile devices is shown in Figure below.

The Default Home Screen

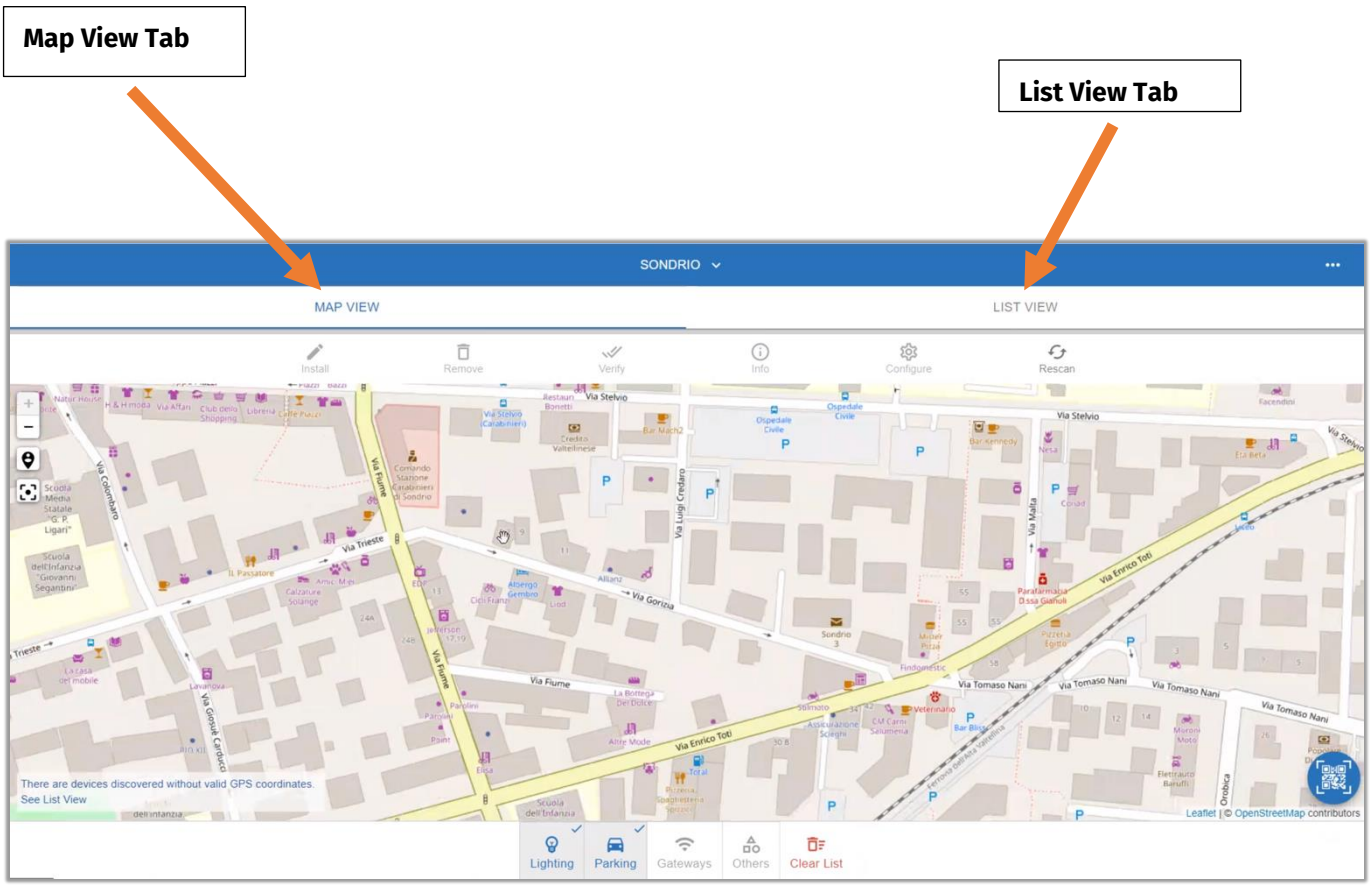


Figure 33: The Default Home Screen (in Map View) for the groupCONTROL configTOOL

The Default Home Screen

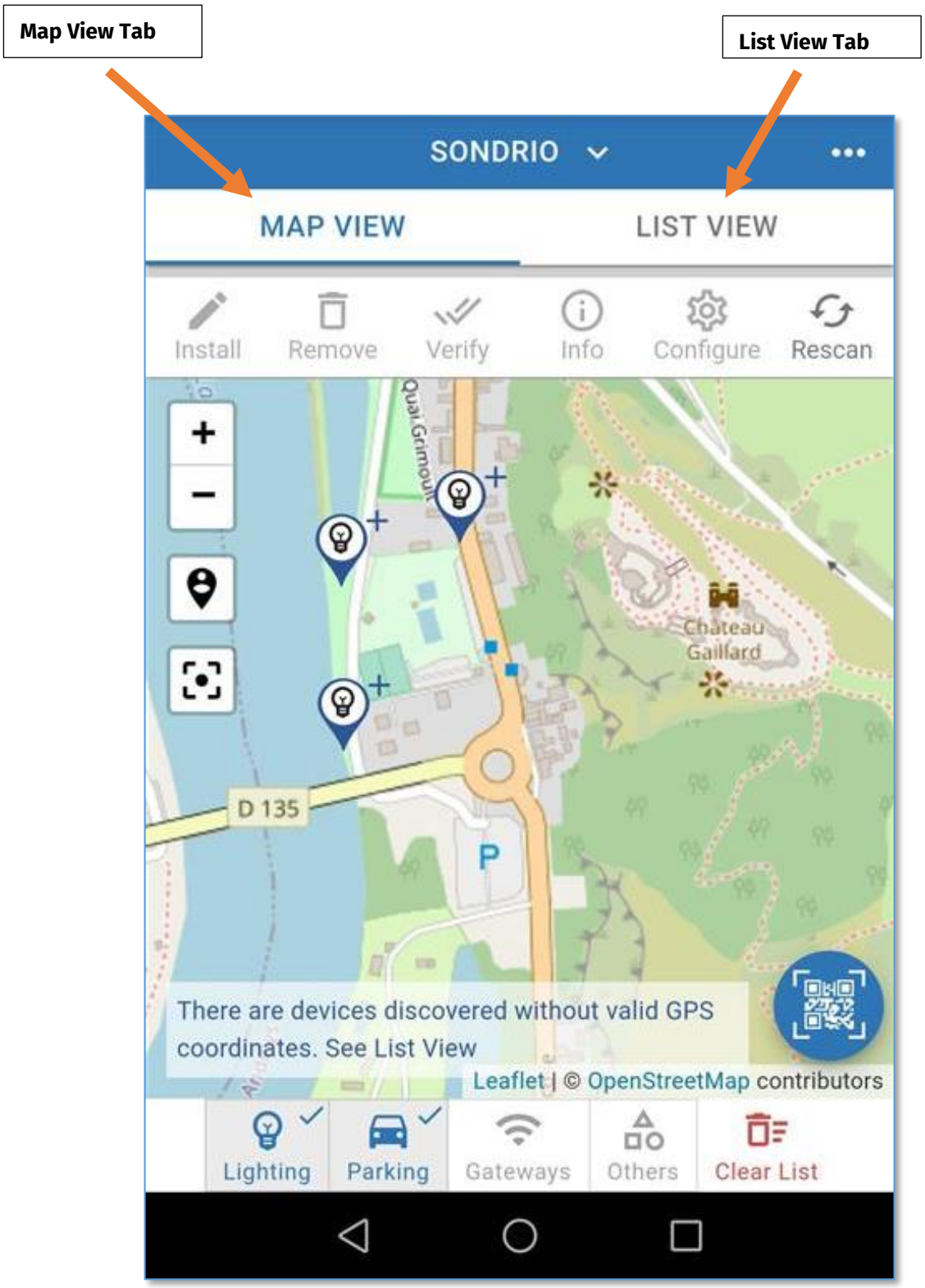
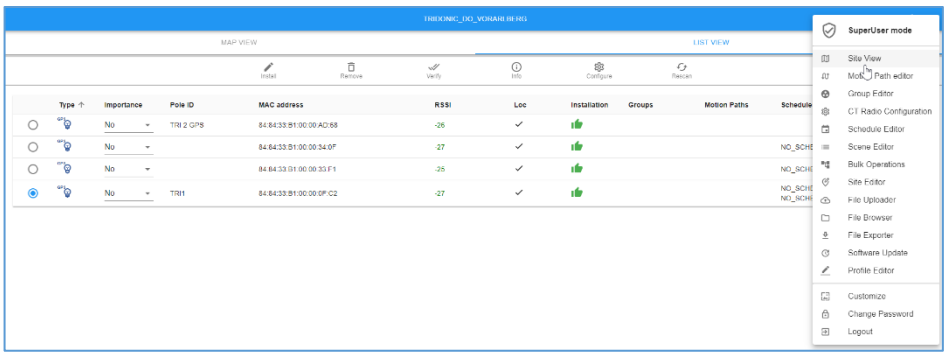


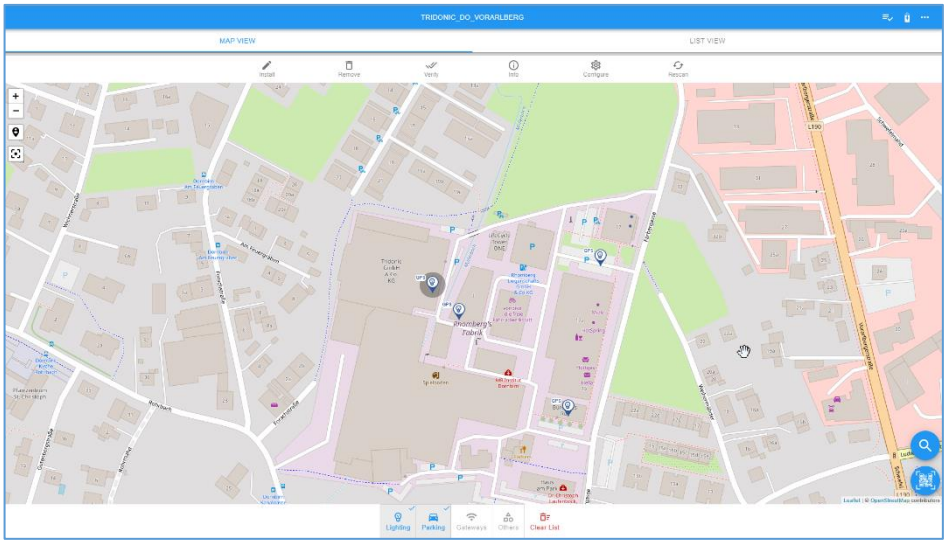
Figure 34: The Default Home Screen (in Map View) for Mobile Devices

14. Map and List Site view

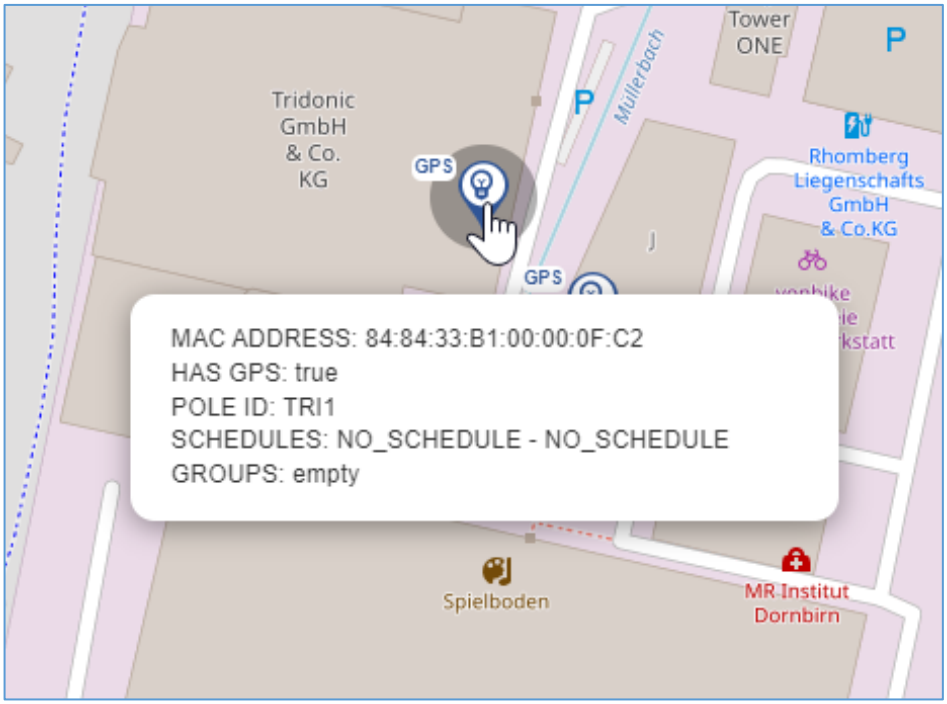
14.1 Site View

Visual	Description
	• Select the 3 dots (the main menu) on the top right side. → The window "SuperUser mode" opens. • Select "Site View"

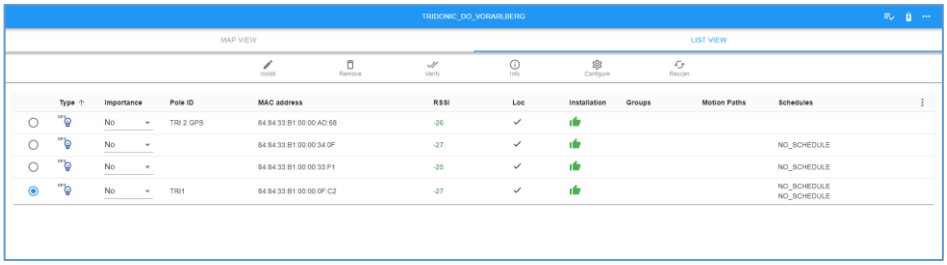
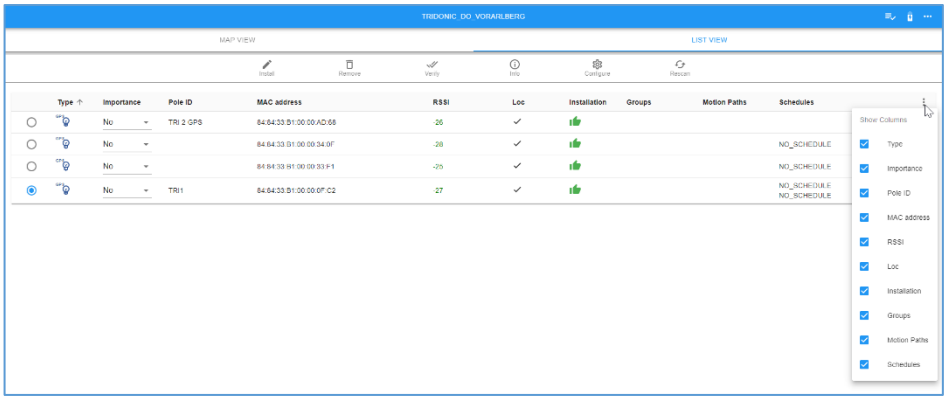
14.2 Map View

Visual	Description
	The map view gives you an geographical overview of your nodes.

Map and List Site view

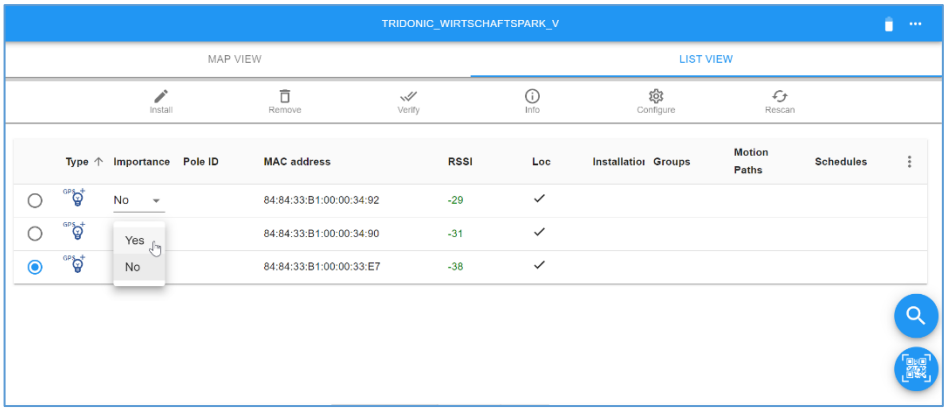
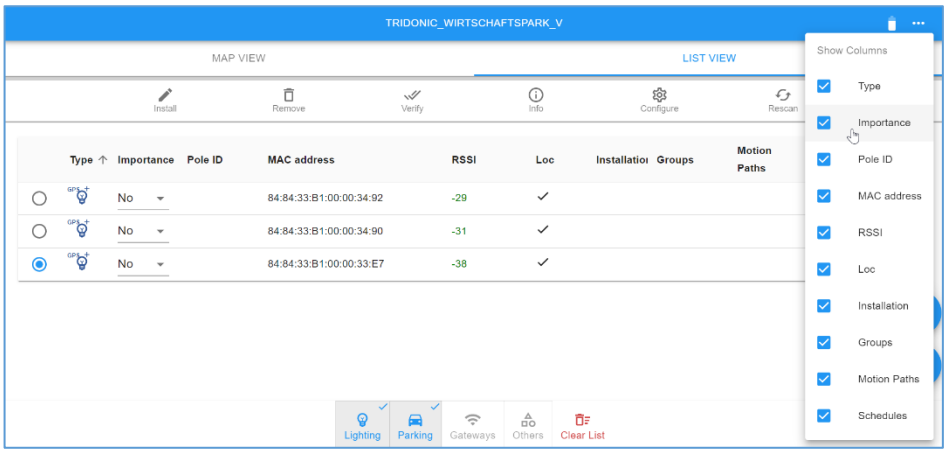
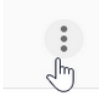
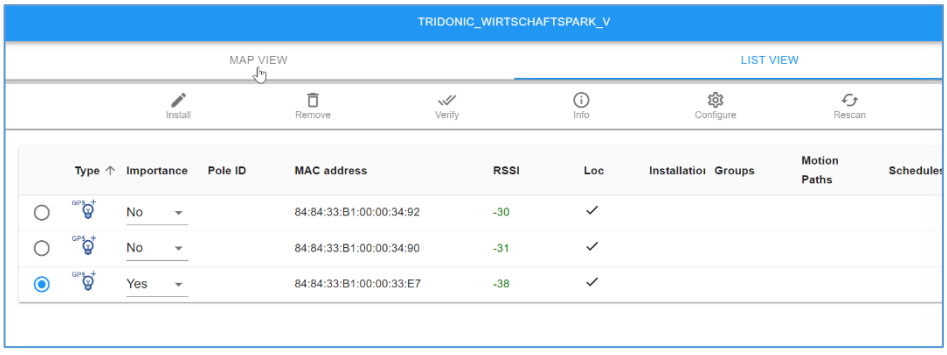
	If you select a node in the map view, additional information will be displayed. GPS nodes can be easy identified by the GPS symbol.

14.3 List View

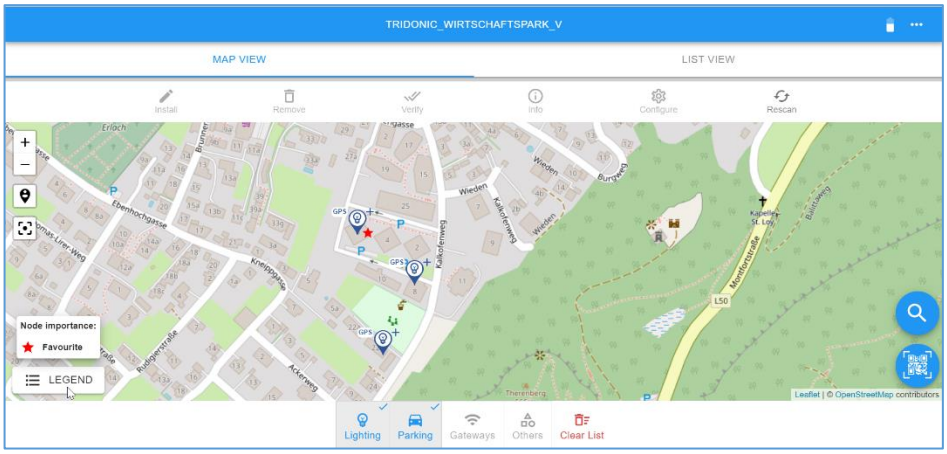
Visual	Description
	The "LIST VIEW" gives you a listed overview of the installed nodes.
	The columns of the "LIST VIEW" table displays different information. To adjust which information is displayed, do the following: • Select the 3 vertical dots on the right side of the table header. → The window "Show Columns" opens. • Activate or deactivate checkboxes to show or hide information columns.

Map and List Site view

14.4 Site View "importance" feature

Visual	Description
	• Select the 3 dots (the main menu) on the top right side. → The "MAP VIEW" opens. • Select "LIST VIEW". • Select "Yes" in "Importance" column to mark a node with importance.
	**NOTE:** If you do not see the importance field, you have to activate it: • Select the 3 vertical dots on the right side of the table header.  • Select "Importance" to activate it.
	• Select "MAP VIEW". → The map view is displayed.

Map and List Site view

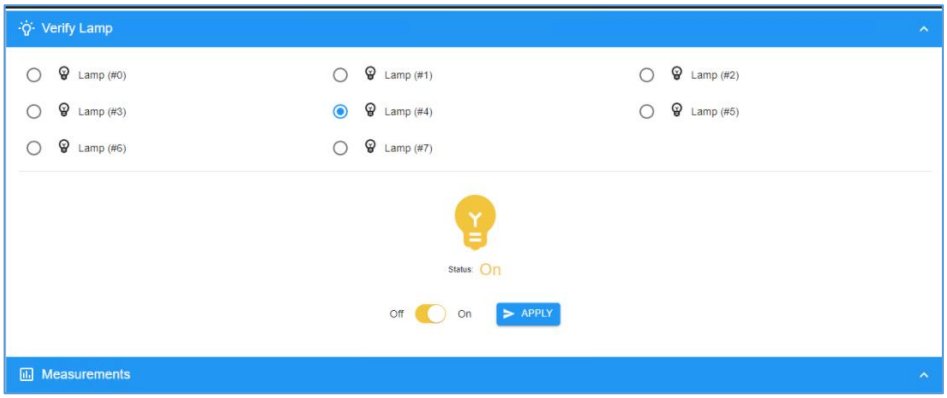
	→ The node that was marked with importance is now easy to localize by the red star next to it.
	If “importance” is active for one or more nodes, the field "LEGEND" will be displayed at the bottom left of the map view.

14.5 Locate a GPS node.

Visual	Description
	A minimum of one GPS node is needed in a groupCONTROL system because GPS nodes distribute the correct time inside the mesh. Now the GPS nodes can be easily localized by the GPS symbol on the top left side. **Warning!** *The correct localisation of GPS nodes only works with firmware version 3.17.3 or higher.* *When using a lower firmware version, the localisation of GPS nodes will work incorrectly: All nodes will be displayed as GPS nodes.*

14.6 DALI Device Type 7 now also visible in the user interface

Devices, specified in Dali Standard Part 208 Device Type 7, switching function, are now visible in the UI.

Visual	Description
	If a DALI Device Type 7 (for example a switching relay) is connected to your node, a slider with Off/On function is displayed.

15. (Optional) Selecting a “Site”

15.1 Selecting Optional Sites from the Default Home Screen

(*Estimated Time: 1 min*)

Before using the Config Tool for installing a new device in the field, the user is able to select from multiple preconfigured profiles, which are called **Sites**.

This enables the installer to carry multiple profiles for installing and provisioning devices at the same time. Site selection can be performed by clicking (or tapping) on the blue bar on the top of the screen as shown in Figure below.

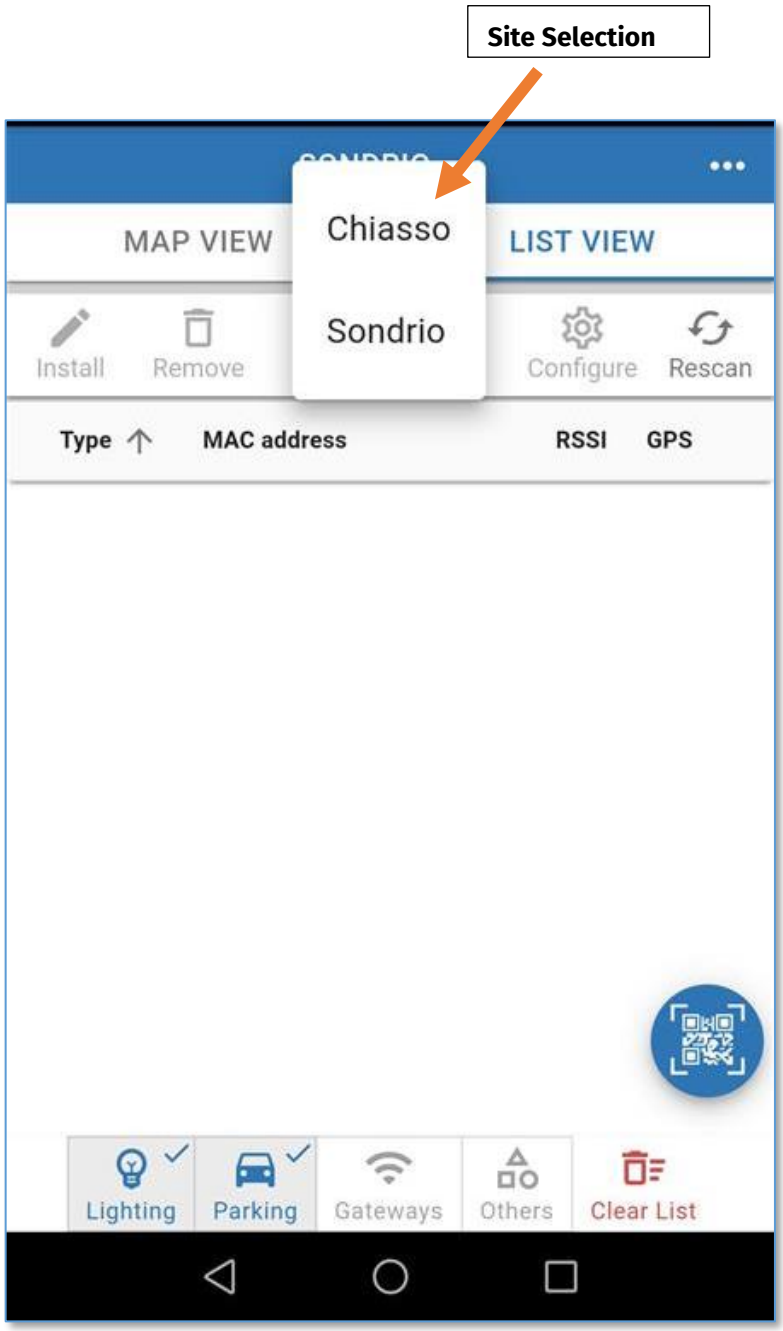
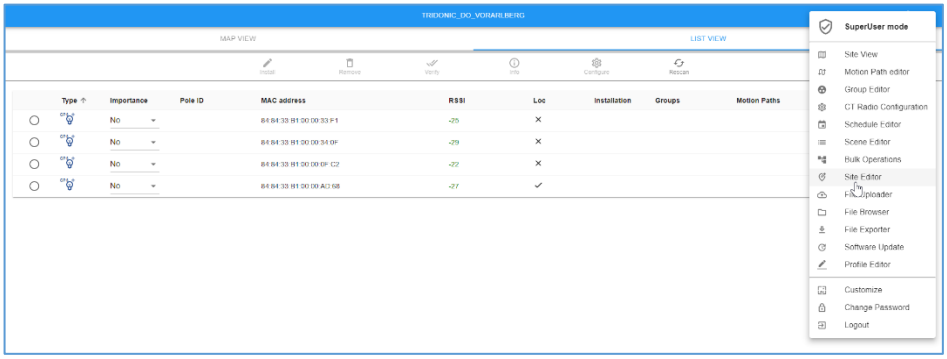
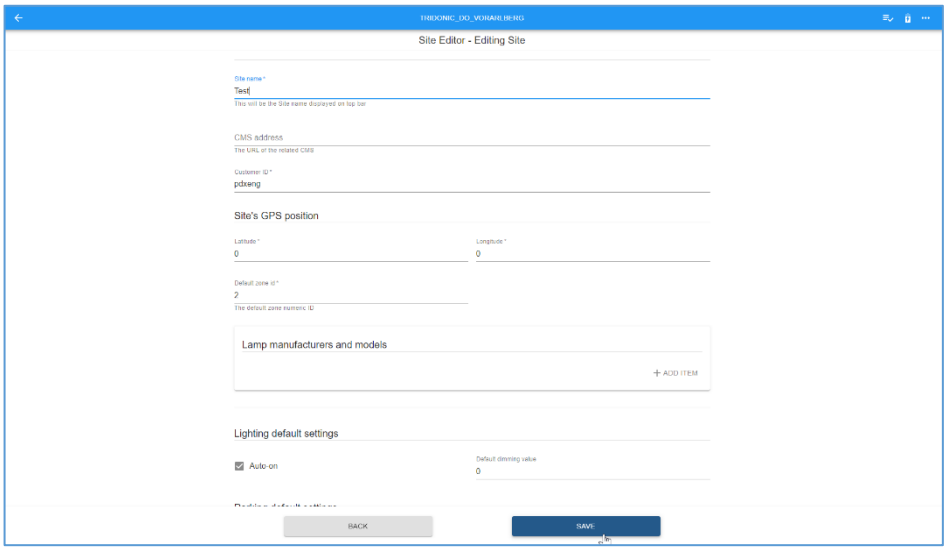
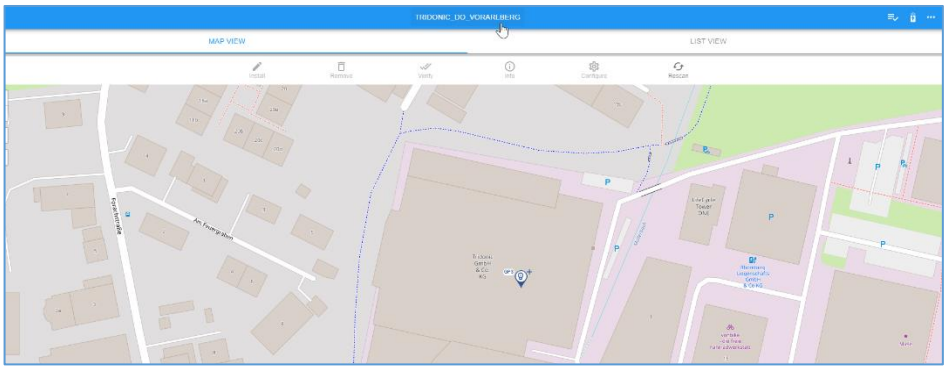
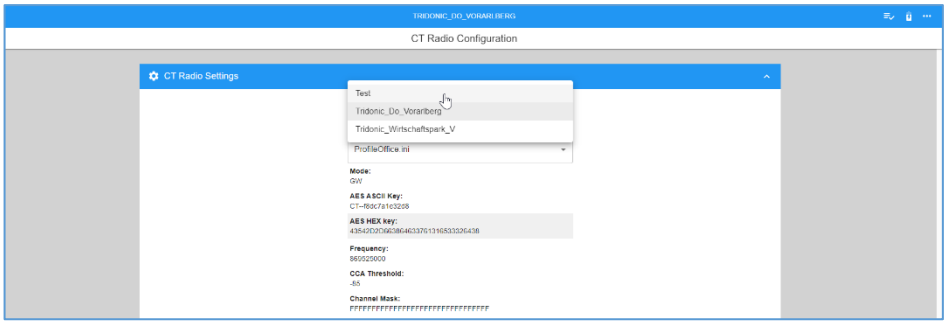
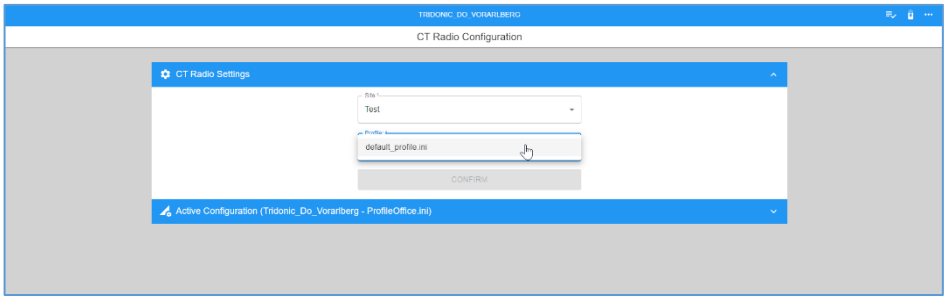
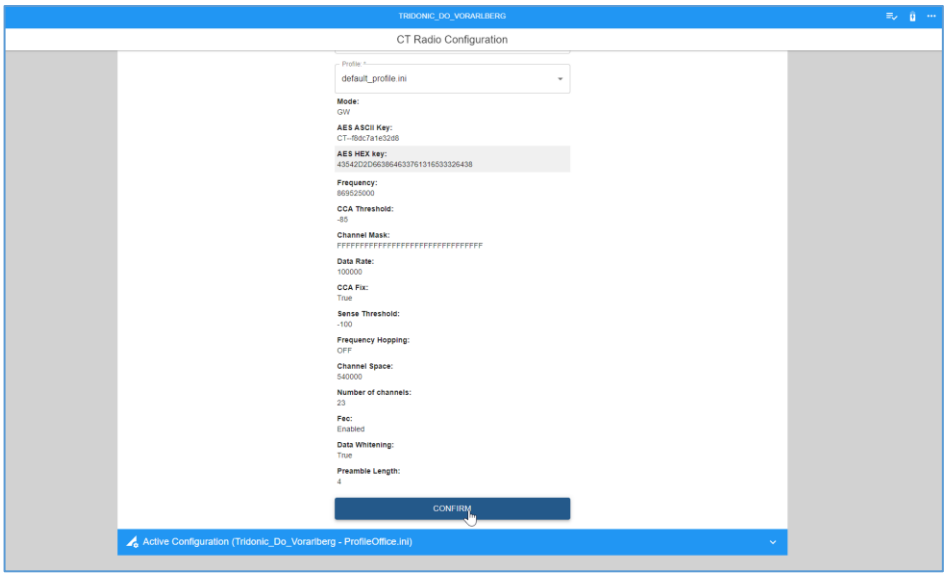
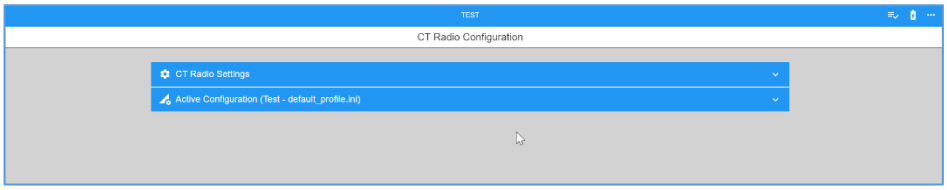
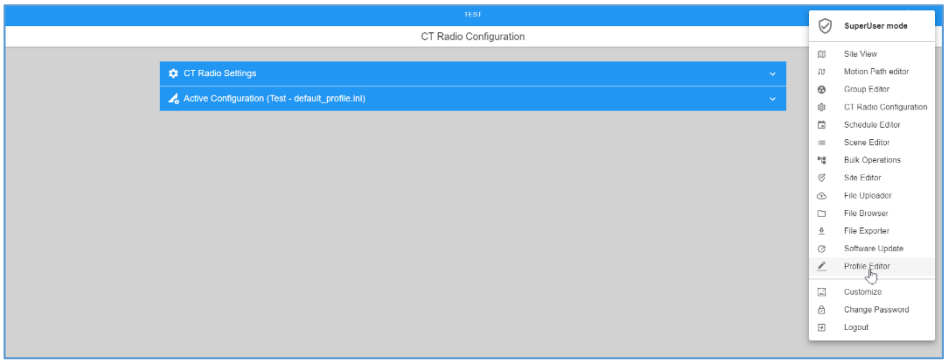


Figure 35: The Selecting a Site

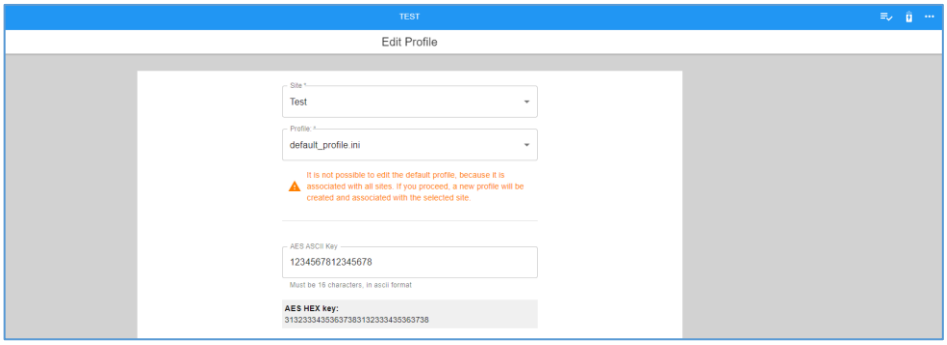
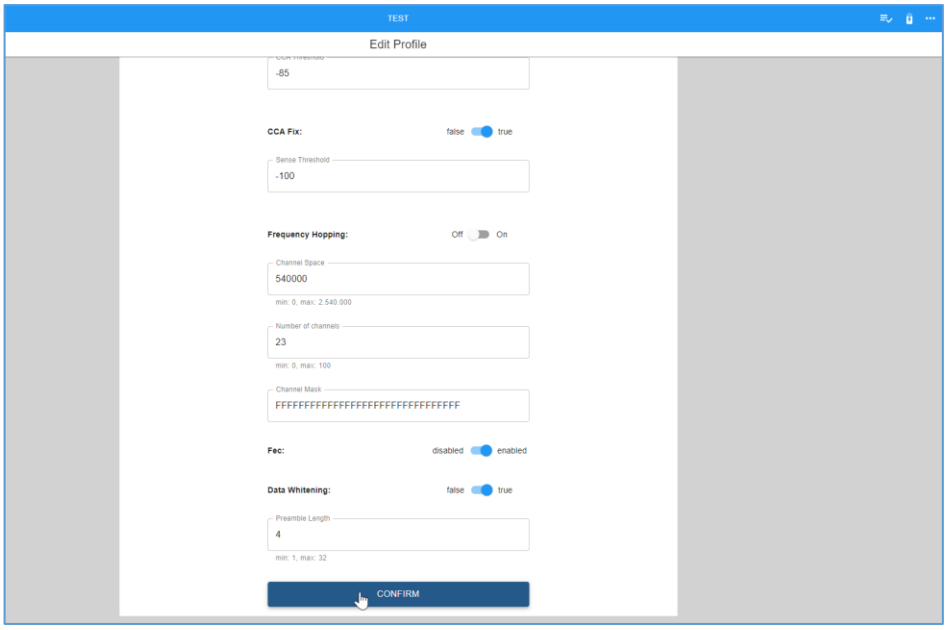
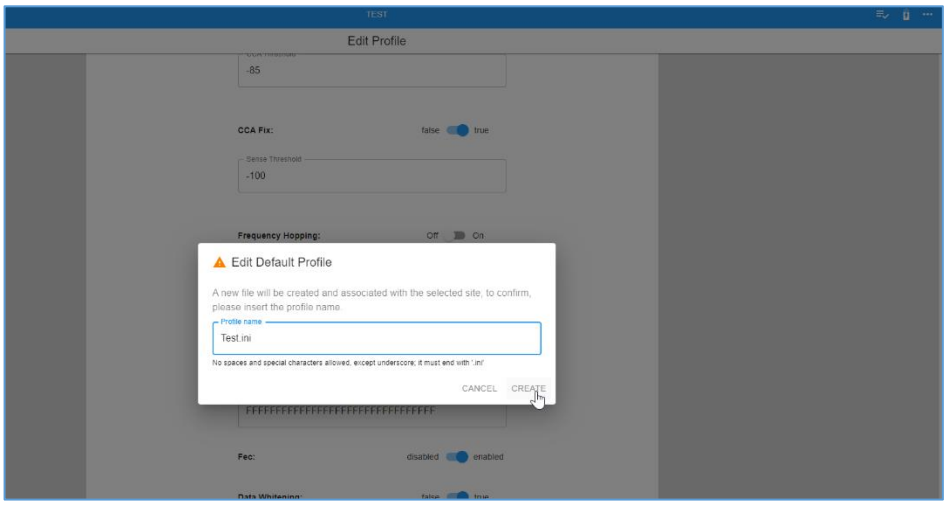
16. Create new site

Visual	Description
	• Select the 3 dots (the main menu) on the top right side. → The window "SuperUser mode" opens. • Select "Site Editor".
	• Enter information for the new site. • Select "SAVE".
	• To switch to the newly created site select the current site at the the top of the page.
	• Select the newly created site (in this case: "Test").

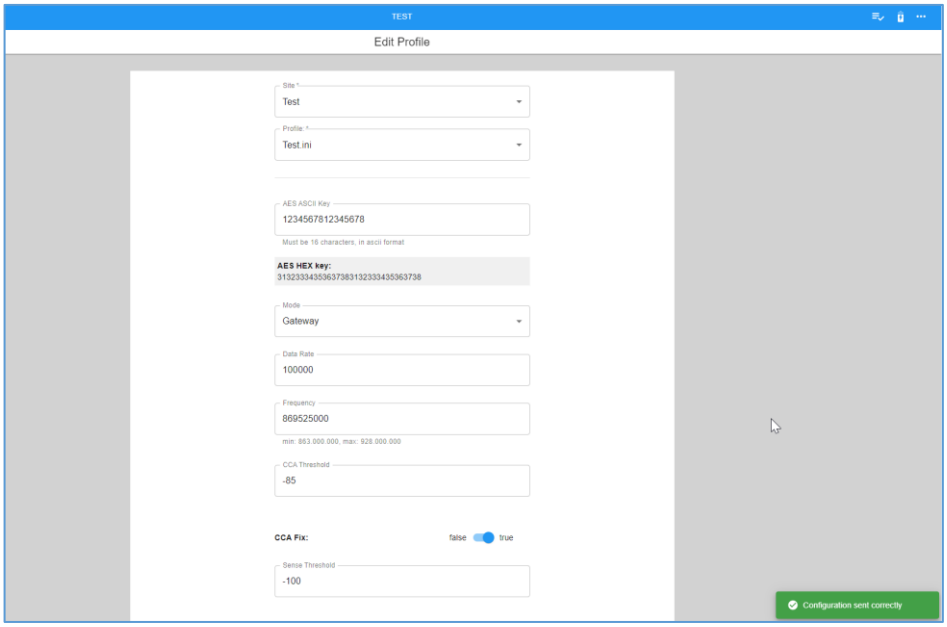
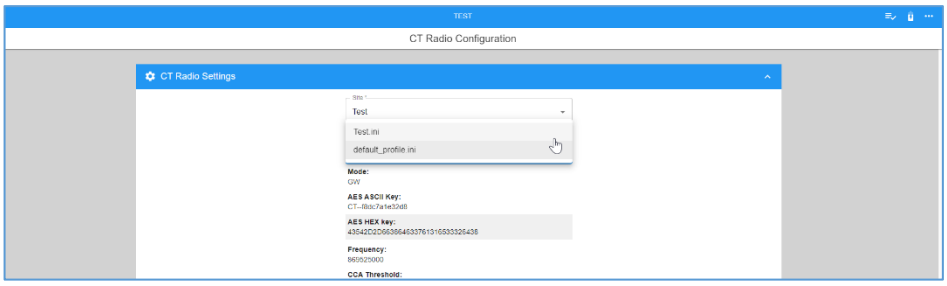
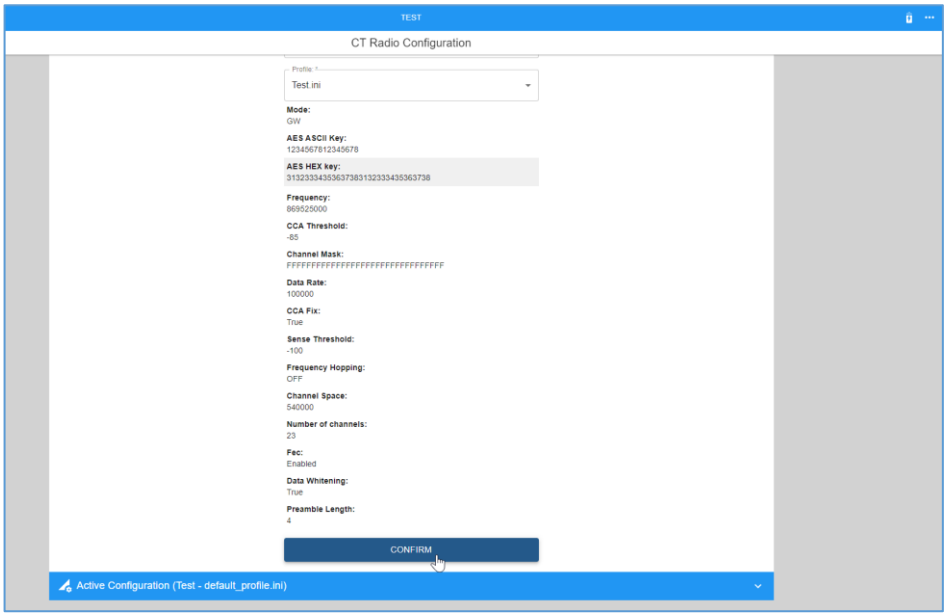
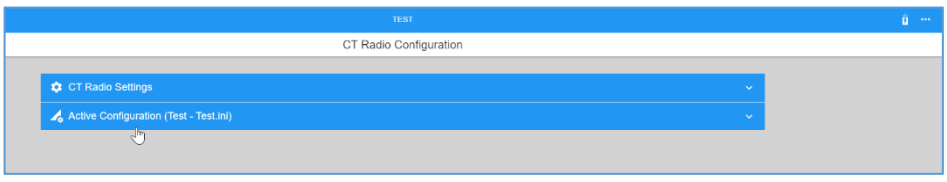
Create new site

	• Select the default_profile.ini for this site.
	• Scroll down to the end of the page and select "CONFIRM".
	→ After some time the new site settings will be displayed.
	If you need a new AES HEX key, do the following: • Select the 3 dots (the main menu) on the top right side. → The window "SuperUser mode" opens. • Select "Profile Editor". → The window "Edit Profile" opens.

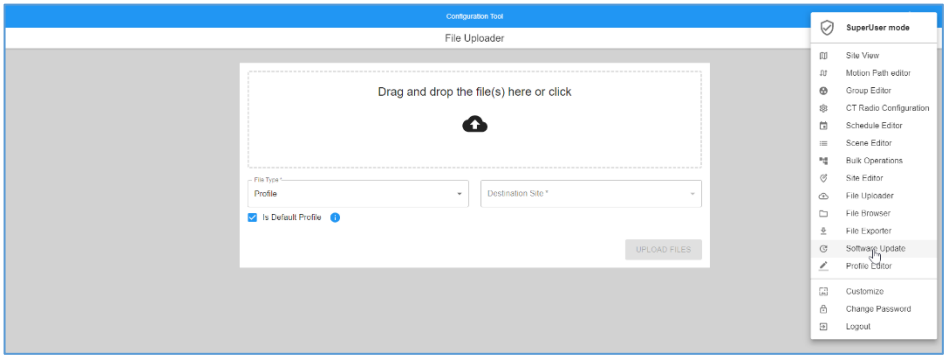
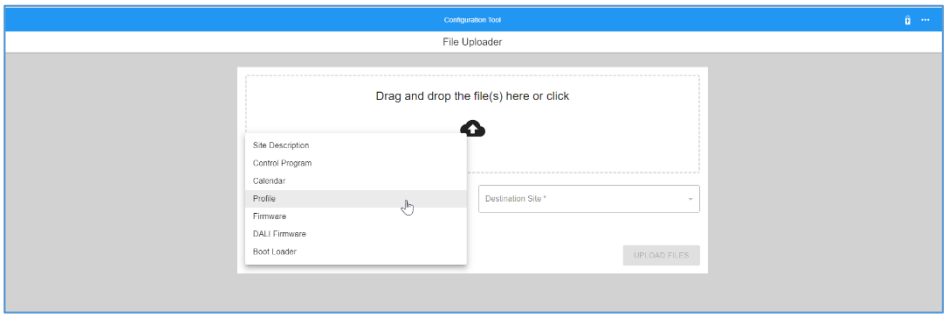
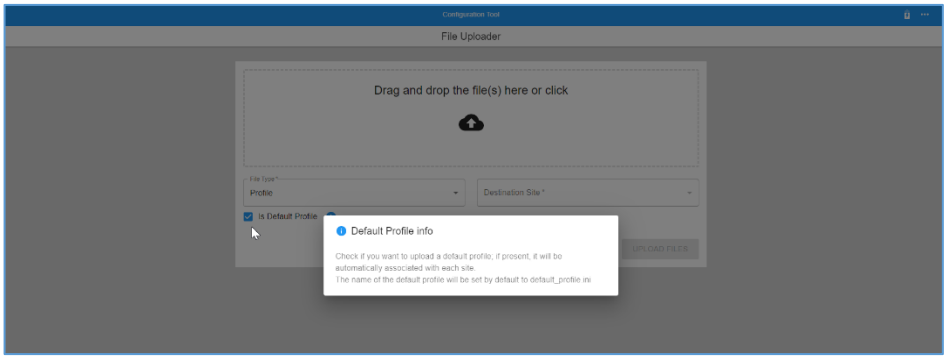
Create new site

	• Type in a new AES ASCII key in the field "AES ASCII Key".
	• Scroll down to the end of the page and select "CONFIRM". → The pop-up window "Edit Profile" opens.
	• Type in a name for the new .ini file. • Select "CREATE".

Create new site

	→ A message "Configuration sent correctly" is displayed at the bottom right of the page.
	• Select your newly created site. • Change the profile from default_profile.ini to your Sites.ini file.
	• Scroll down to the end of the page and select "CONFIRM".
	→ After some time the new active configuration is confirmed.

17. Default Site Profile.ini

Visual	Description
	• Select the 3 dots (the main menu) on the top right side. • → The window "SuperUser mode" opens. • Select "Software Update".
	• Select "Profile".
	To upload the default profile, do the following: • Click the checkbox "Is Default Profile". • Upload the default.ini file by drag and drop or by clicking the drag and drop field. The uploaded file will automatically be assigned to every new site that is created. **NOTE:** *In case you do not have a profile.ini file, you can create one from the backup file.* *To get the default profile.ini file out of a backup, unzip your backup file and open config_files/ Site-Default/profiles.* *In the profiles folder you*

Default Site Profile.ini

	will find the profile.ini file for your device.

18. Installing a New Device in the Field

After selecting the appropriate Radio Configuration, users have 3 options on how to select the IoT device that they want to install:

- Selecting the IoT device from the List View
- Selecting the IoT device from the Map View
- Selecting the IoT device by scanning its QR code

18.1 Option A: Selecting the IoT Device from the List View

(*Estimated Time: 1 min*)

While in the List View, you can install a new device by selecting the device, and then clicking (or tapping) on the Install button as shown in Figure below.

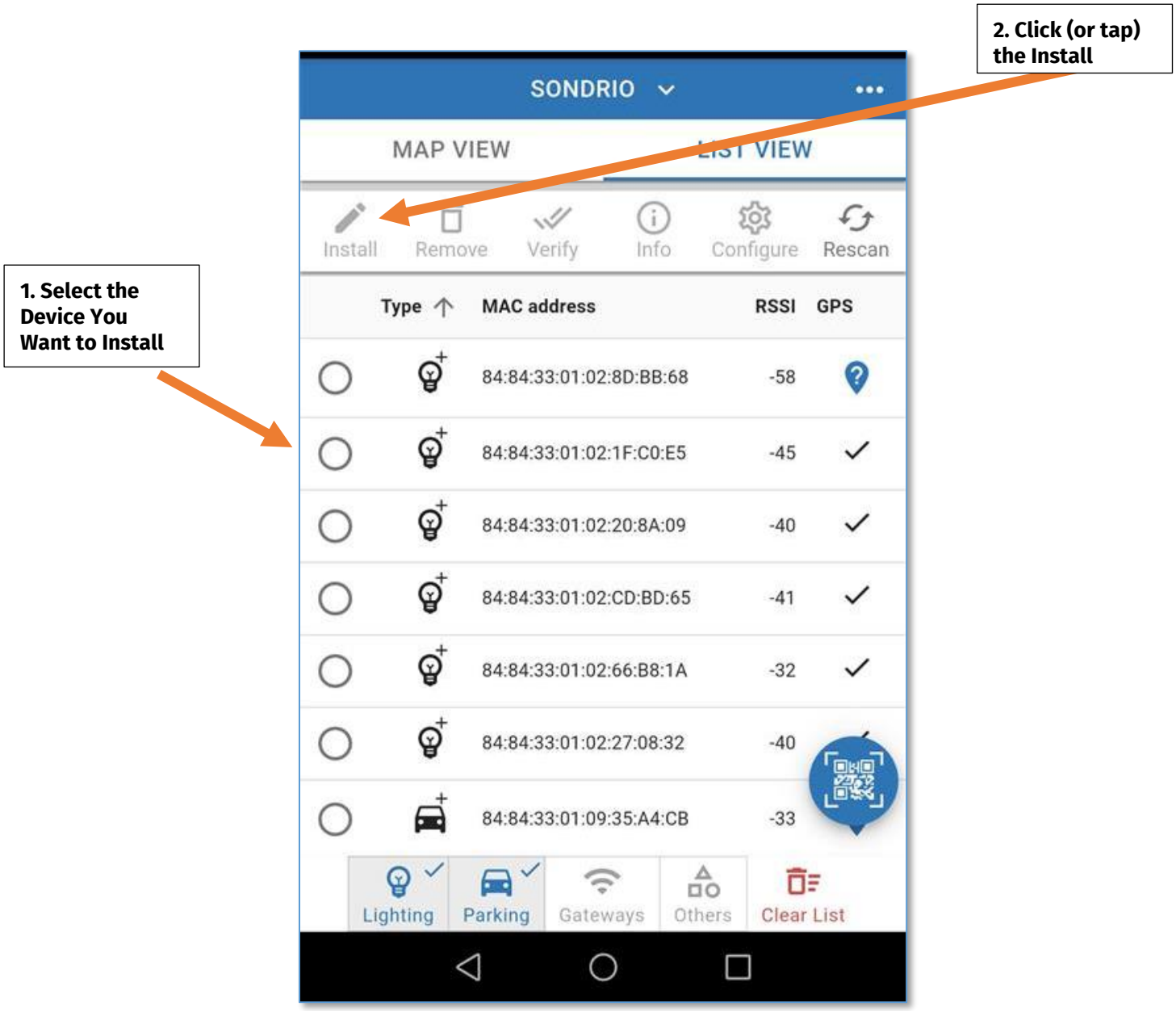


Figure 36: Selecting a Device to Install

18.2 Option B: Selecting the IoT Device from the Map View

(*Estimated Time: 1 min*)

While in the Map View, you can install a new device by selecting the device, and then clicking (or tapping) on the Install button as shown in Figure below.

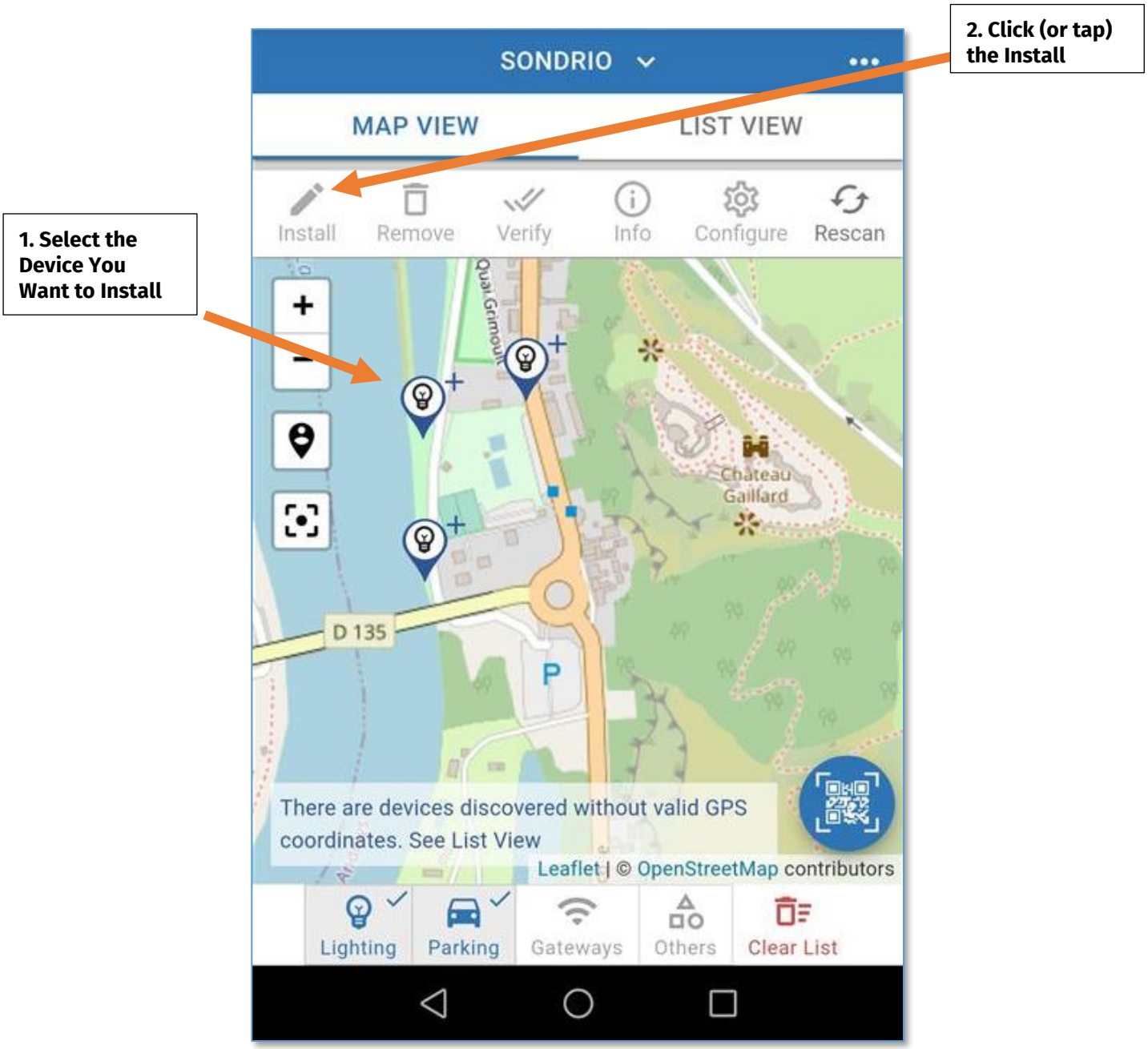


Figure 37: Selecting a Device to Install

18.3 Option C: Selecting the IoT Device by Scanning its QR Code

(*Estimated Time: 1 min*)

While in the List View or Map View, you can also install a new device by clicking the floating button at bottom of the screen and scan the QR code with the camera as shown in Figures below.

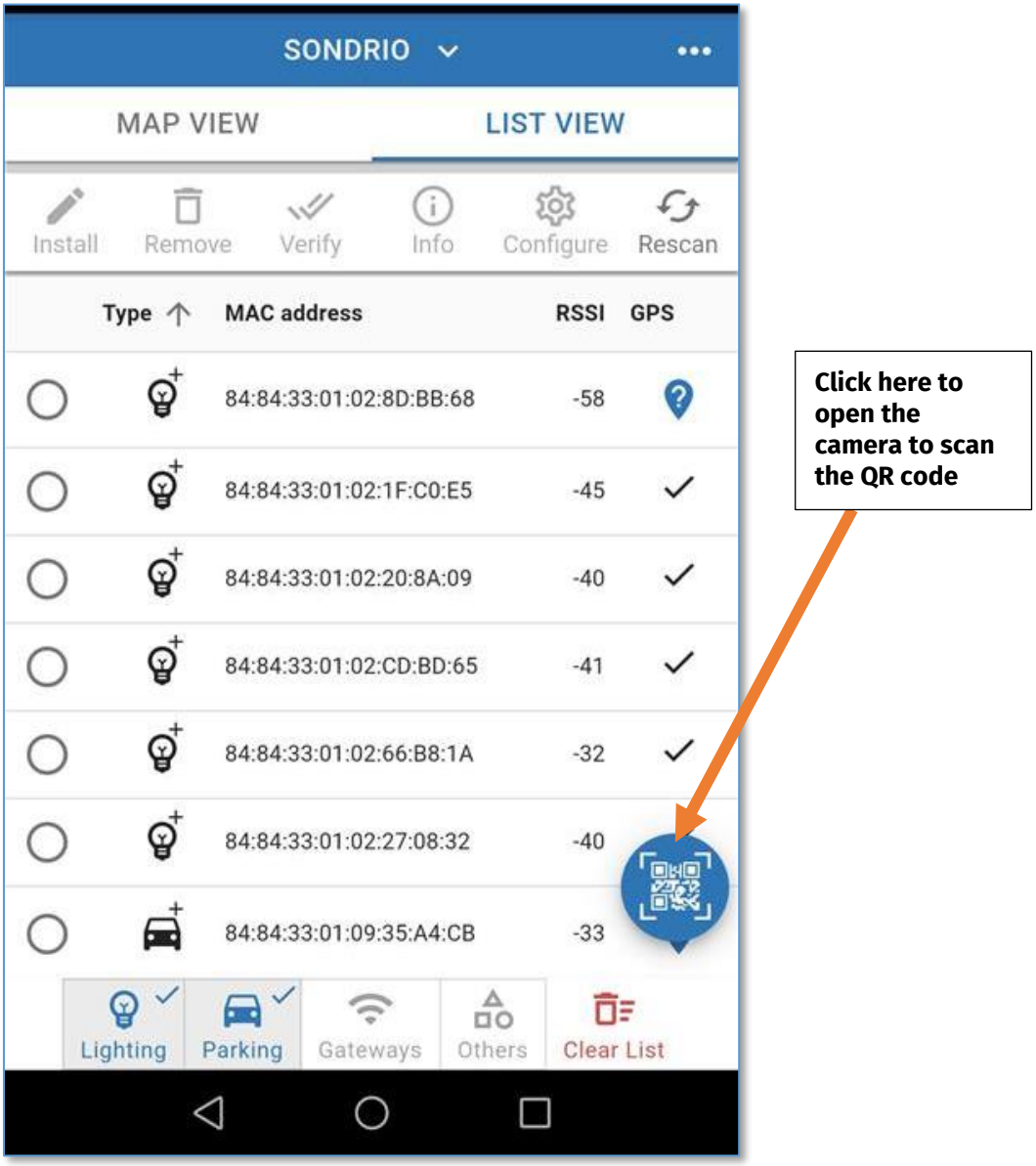


Figure 38: Use the Floating Button to Scan a QR Code to Install an IoT Device

Figure 39: Scanning a QR Code to Install an IoT Device

18.4 (Optional) Positioning the Device

(*Estimated Time: 2 mins*)

After the IoT device has been selected, you have the option to specify the exact location of the node. This is especially helpful if a device does not already have GPS installed. The positioning process is shown in Figure below.

Click the "**CONTINUE**" button.

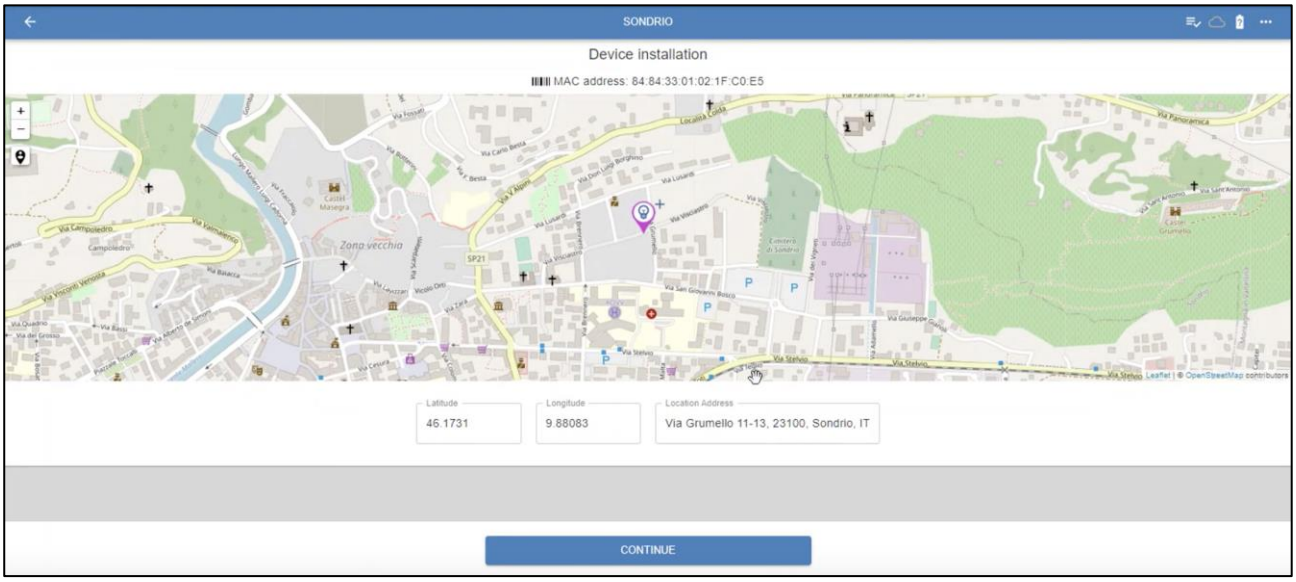


Figure 40: Positioning the Device

18.5 (Optional) Determining the Node's Connected Devices

(*Estimated Time: 2 mins*)

The next step is to discover the details about all the connected devices for the node. **Input** devices can be motion or luminance sensors, while **output** devices are LED drivers for lamps.

Click on the button **DISCOVER CONNECTED DEVICES** to reveal all the input and output devices for the node.

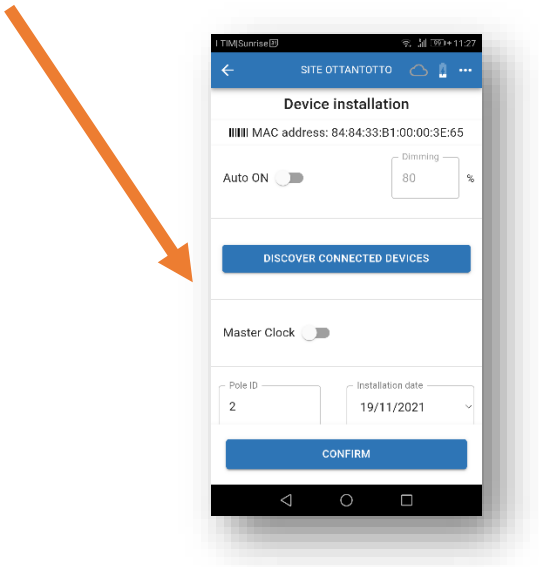


Figure 41: Discovering the connected devices for a node

Installing a New Device in the Field

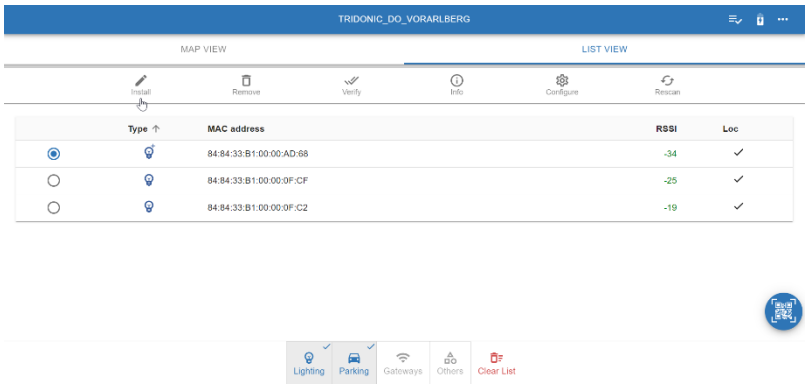
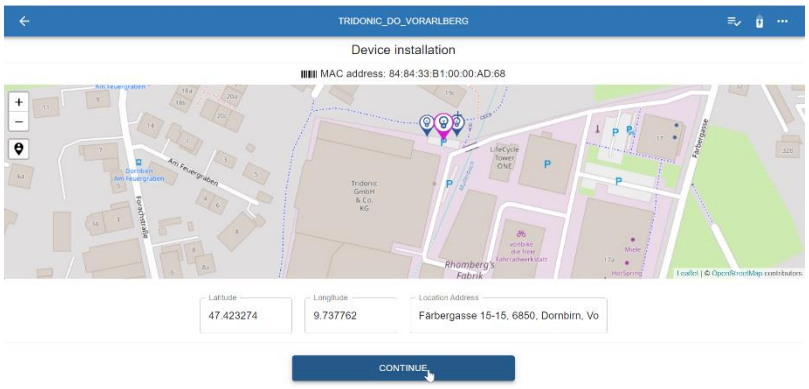
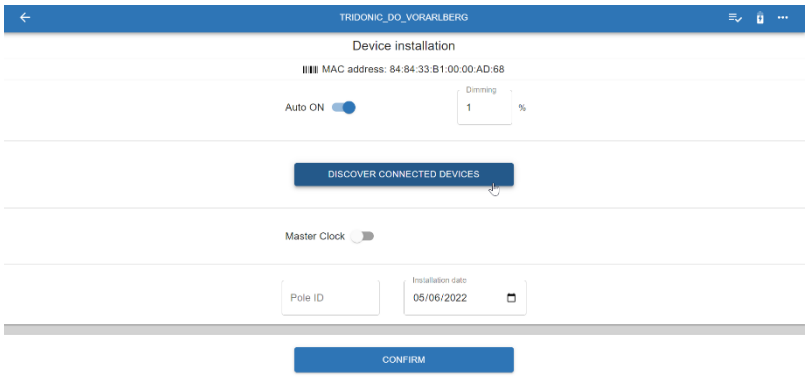
The screen expands to show the input and output devices for the node. The figure below shows how to toggle to see the input and output devices for the node.

The user also has the option to rescan the DALI bus which is needed whenever a lamp needs to be replaced on the streetlight.

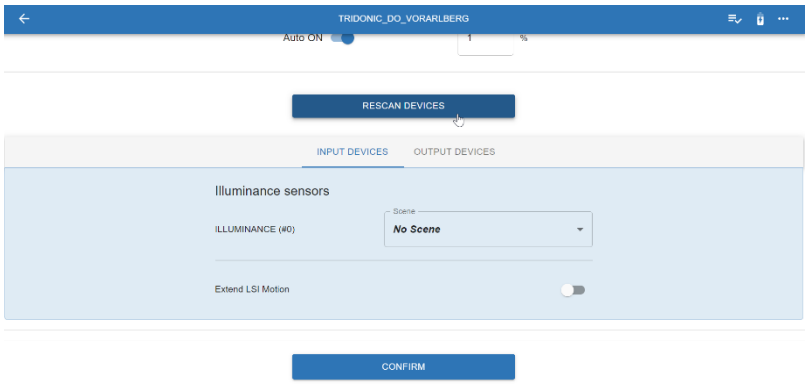
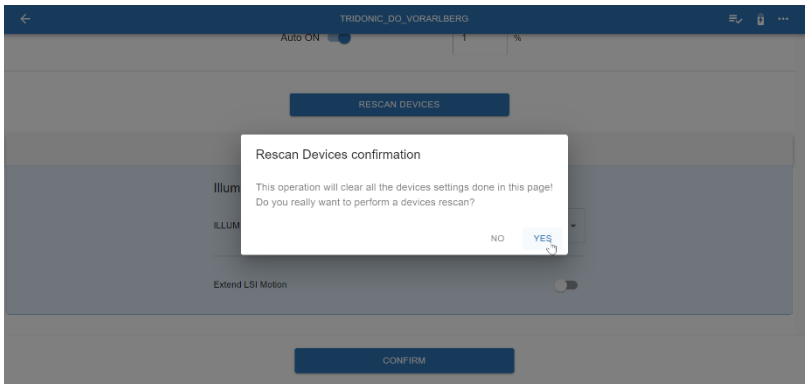
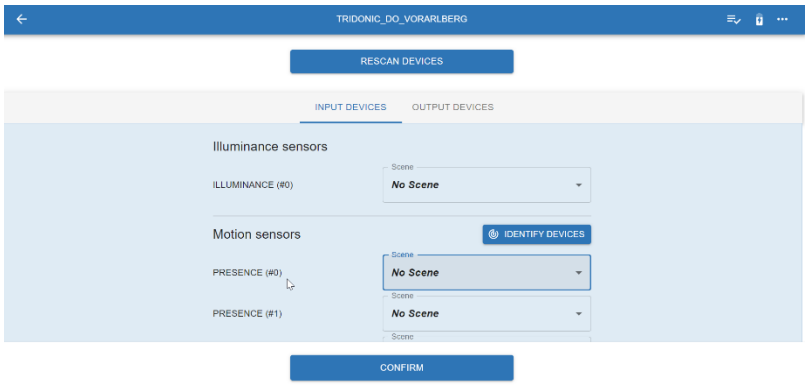
Figure 42: Viewing the Input and Output Devices for a Node.

18.6 How to rescan connected devices

If you commission an already used node, or if in the past additional sensors, drivers or push buttons were added, it can happen that the new devices are not visible when you select DISCOVER CONNECTED DEVICES during the installation process of a node. The following explains how wo you can trigger the node to execute a rescan of the connected devices so that you see which devices are really connected to the node.

Visual	Description
	Start the commissioning as usual: • Selecting the node. • Click "Install".
	• Make sure that the node is placed on the correct position.- • Click CONTINUE.
	• Click DISCOVER CONNECTED DEVICES.

Installing a New Device in the Field

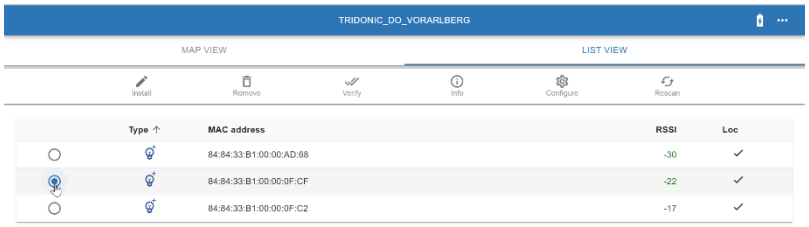
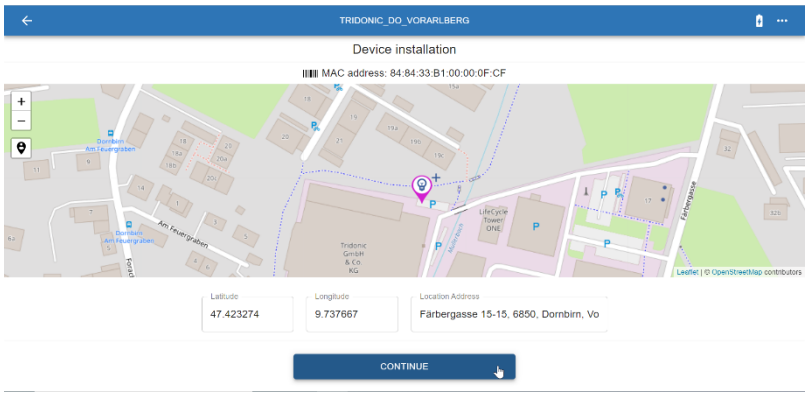
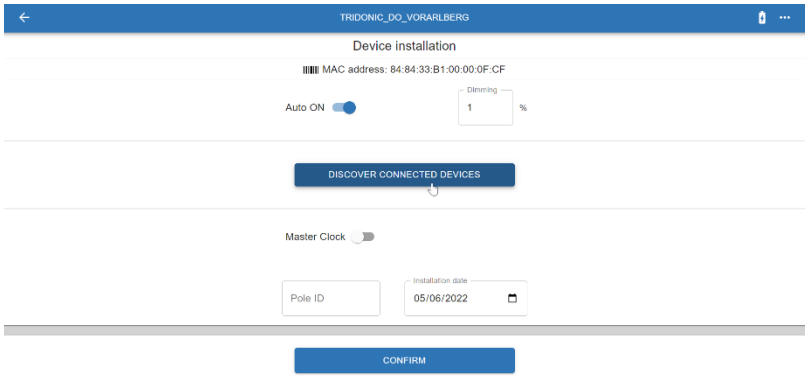
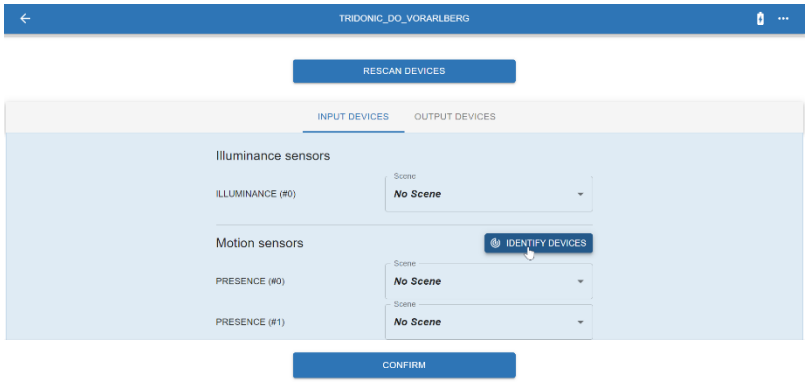
	It can be that you do not see the currently connected input or output devices or that you still see devices that have been disconnected from this node. • If this is the case, click RESCAN DEVICES.
	→ The "Rescan Devices confirmation" window will pop up. • Click YES to confirm.
	Once the rescan is done, you should see the new connected input and output devices, or if there were devices visualized that are no longer connected, they should after the rescan disappear. If even after the rescan you still do not see the new connected devices or still do see the disconnected devices then try to switch off/on the node and wait for couple of minutes after the reboot and repeat the RESCAN DEVICES again.

18.7 How to replace a broken push button

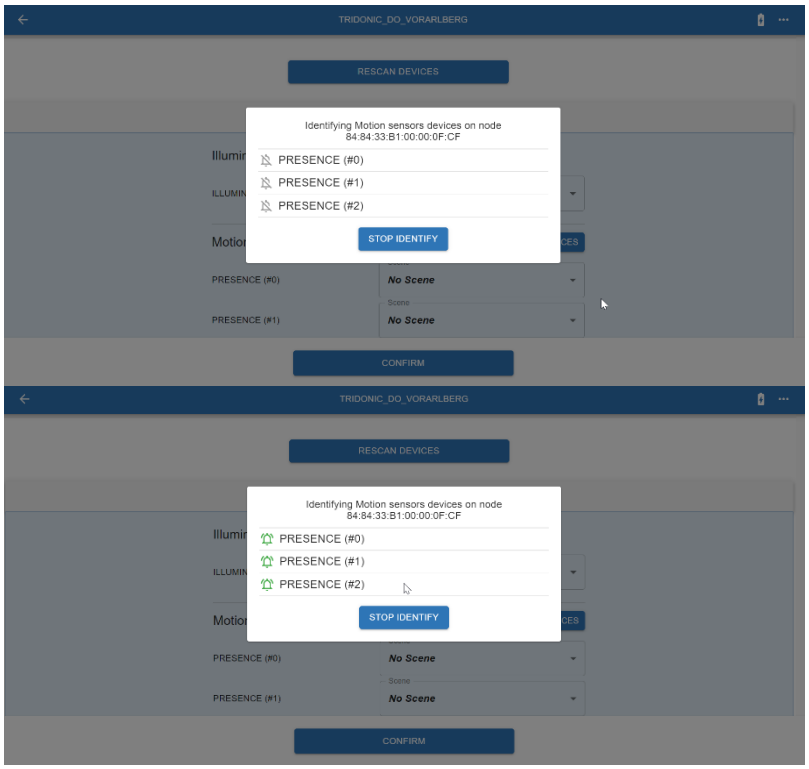
In case your DALI XC G3 needs to be replaced, proceed as follows:

- Connect to the CIS 30 Node via groupCONTROL Programmer.
- Rescan for input devices (see (Optional) Determining the Node's Connected Devices for further information)
- If any of the scenes have been used for the input device instances:
  Reprogram the assigned scenes (see (Optional) Viewing and Specifying a Scene the Node's Input Device for further information).

18.8 How to identify sensor instances

Visual	Description
	• Go to the LIST VIEW. • Select a node. • Select "Install". 
	• Make sure that the position of the node on the map is correct. • Click CONTINUE.
	• Click DISCOVER CONNECTED DEVICES.
	• Select IDENTIFY DEVICES. • In case you do not see the motion sensor instances, click RESCAN DEVICES.

Installing a New Device in the Field



In the next window you see the sensor instances:

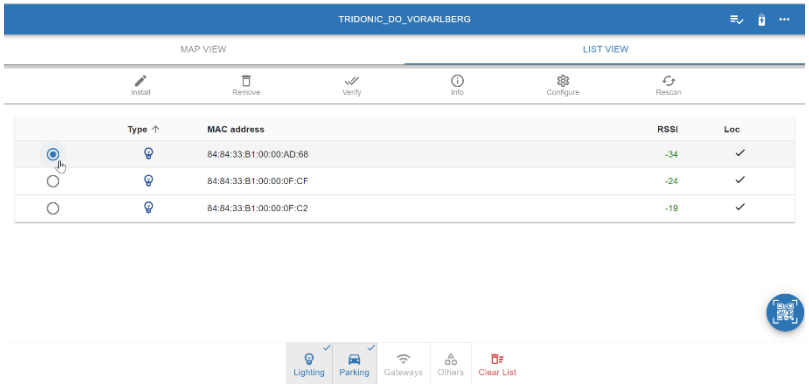
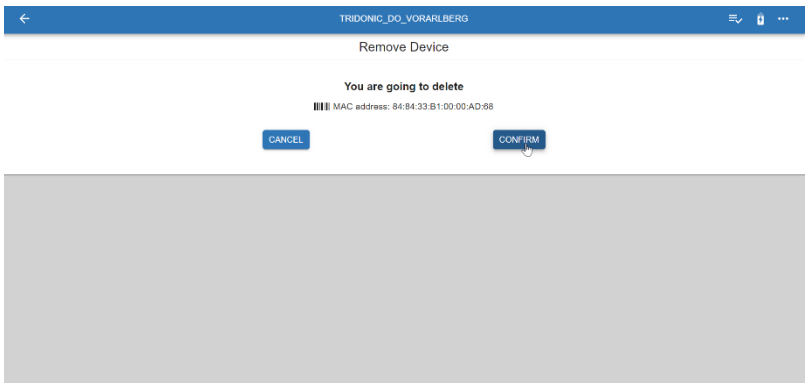
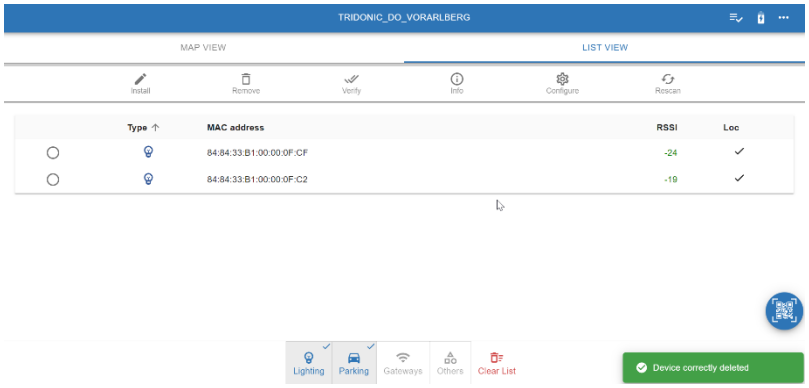
→ If one of the instances detects motion, it will turn green.

PRESENCE (#0)

- Click STOP IDENTIFY to exit the instance identification.

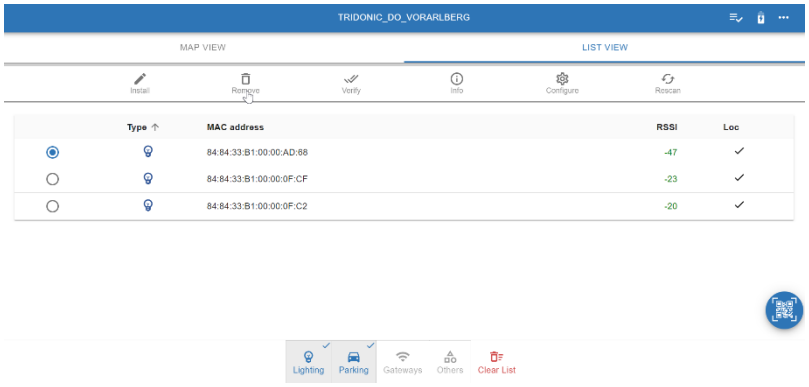
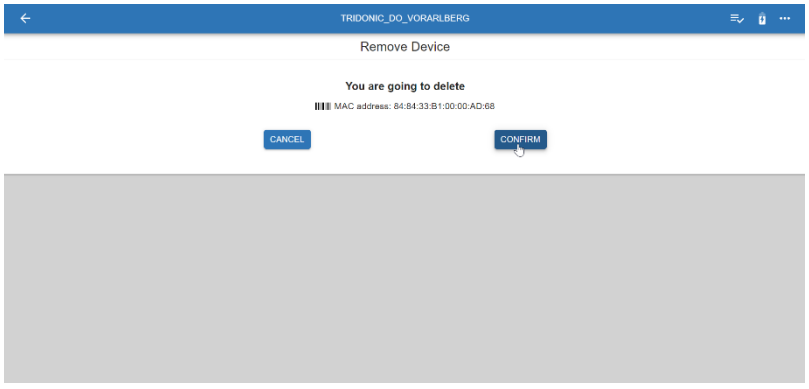
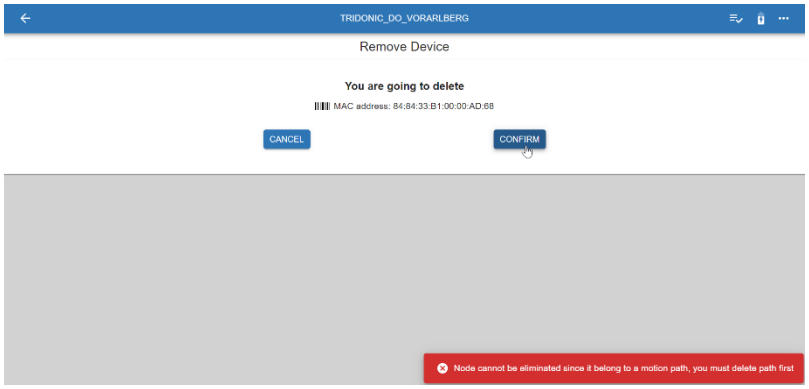
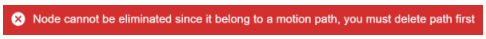
18.9 How to remove a node from an existing site

Sometimes it can be necessary to remove an already commissioned node from a site.

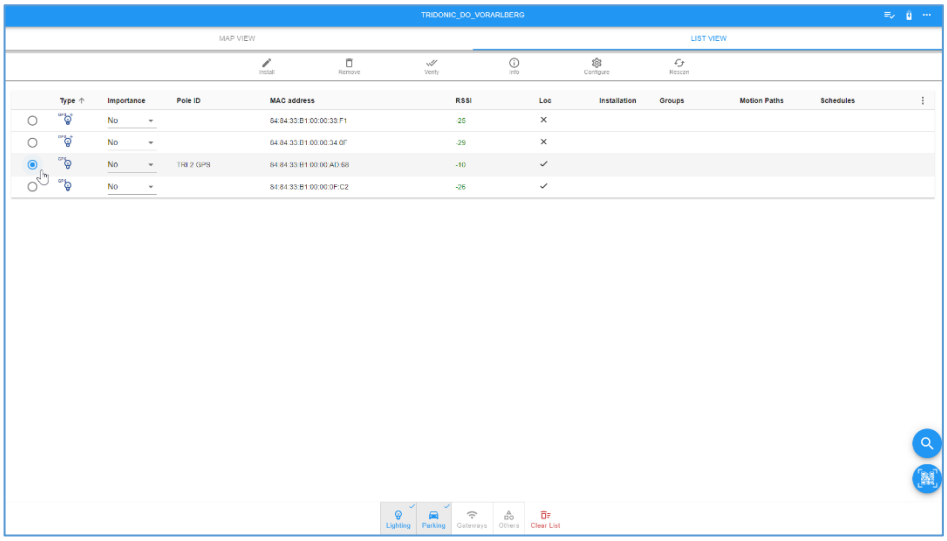
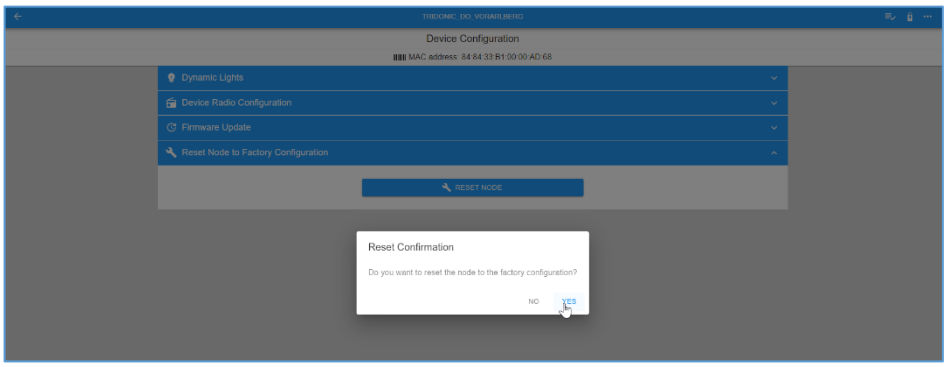
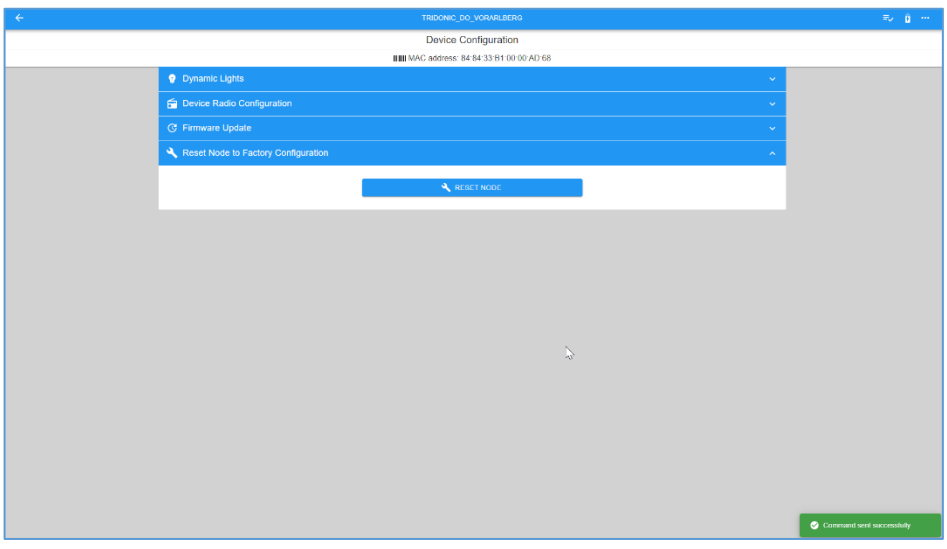
Visual	Description
	• Select the node which should be moved to a new site. • Click "Remove" 
	• Make sure you have selected the right node by checking the MAC Address. • Click CONFIRM.
	→ A confirmation message will be displayed at the right bottom side of the window. **NOTE:** **Keep in mind!** *The now removed node is still bound to the groupCONTROL Programmer "AES HEX key".* *You can change the "AES HEX key" from the node if you know the "AES HEX key" from the new site or you can switch off the groupCONTROL Programmer and keep the node powered for at least 5 hours and then connect the node to the new installation.* *This is important to know because an uncommissioned node connects to a nearby groupCONTROL Programmer and is automatically bound to the "AES HEX key" of the groupCONTROL Programmer. It loses the binding only if the groupCONTROL Programmer is no longer in range of the node and the node gets powered for additional 5*

	hours. After this 5 hours the binding is lost and the node will connect to the next groupCONTROL Programmer with a different "AES HEX key". *If a node is already commissioned to a site, the node is bound to the site "AES HEX key" and it will not lose the binding to the Site "AES HEX key", no matter how long it is not connected to the groupCONTROL Programmer! For this reason it is always necessary to document the "AES HEX key" if you do use different keys for different sites!*

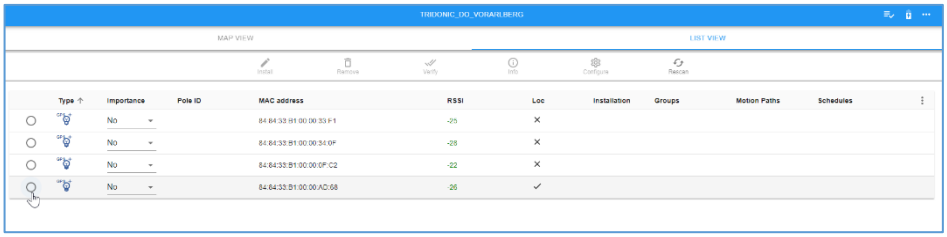
18.10 How to remove a node from an existing site which is member of a motion path or a group

Visual	Description
	• Select the node which should be removed from the site. • Click "remove".
	• Click CONFIRM.
	If the node is a member of a group or motion path, you will get a warning message on the right bottom corner.  If this is the case you, you need to delete the motion path in which the node is a member of and delete the group in which the node is a member of. Once you have removed the node from the motion path and an possibly existing group, you can delete the node from the site.

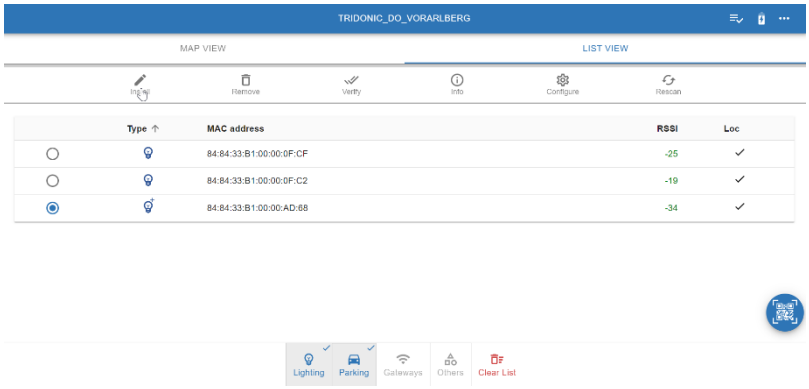
18.11 Reset node to factory configuration

Visual	Description
	• Select the 3 dots (the main menu) on the top right side. → The "MAP VIEW" opens. • Select "LIST VIEW". • Select the node that you would like to reset to factory configuration. • Select "Configure". → The window "Device Configuration" opens.
	• Select "RESET NODE". → The pop-up window "Reset Confirmation" opens.
	• Select "Yes" on the pop-up window. → The node is reset to its factory configuration.
	→ A message "Command sent successfully" is displayed at the bottom right of the page.

Installing a New Device in the Field

	In the "LIST VIEW" you can see that the node is reset to factory configuration and no longer commissioned. Additional information like "Pole ID" or "Schedules" is also reset.

18.12 How to add a used node to an existing site

Visual	Description
	A node that was removed from a site can be added to a new site in the same way as a new node: • Go to the LIST VIEW. • Select the node. • Click "Install".

18.13 How to replace a broken node

If a commissioned node gets damaged, you need to add a new node to the luminaire and recommission the new node in the same way as the broken one was. Groups where the broken node was a member of cannot be deleted in the current version (12.2022)
If you have this case, a broken node was member of a group and is then replaced by a new node, you have two options:

Option 1

- Add the new node to the existing group and leave the "broken, missing" node in the group.

Option 2

- Remove all other nodes from the group in which the broken one was member off and assign them, including the new replacement node, to a new group.

18.14 (Optional) Viewing and Specifying a Scene the Node's Input Device (*Estimated Time: 2 mins*)

If you have already defined a **Scene** (you find explanation about Scenes here) on your Config Tool, you can assign that scene to activate when a push button has been engaged on your node. The image below shows a newly installed node that includes for physical push buttons.

Use the combo boxes to select the Scene that you want to associate with a push button has been activated.

Click the button **CONFIRM** to continue.

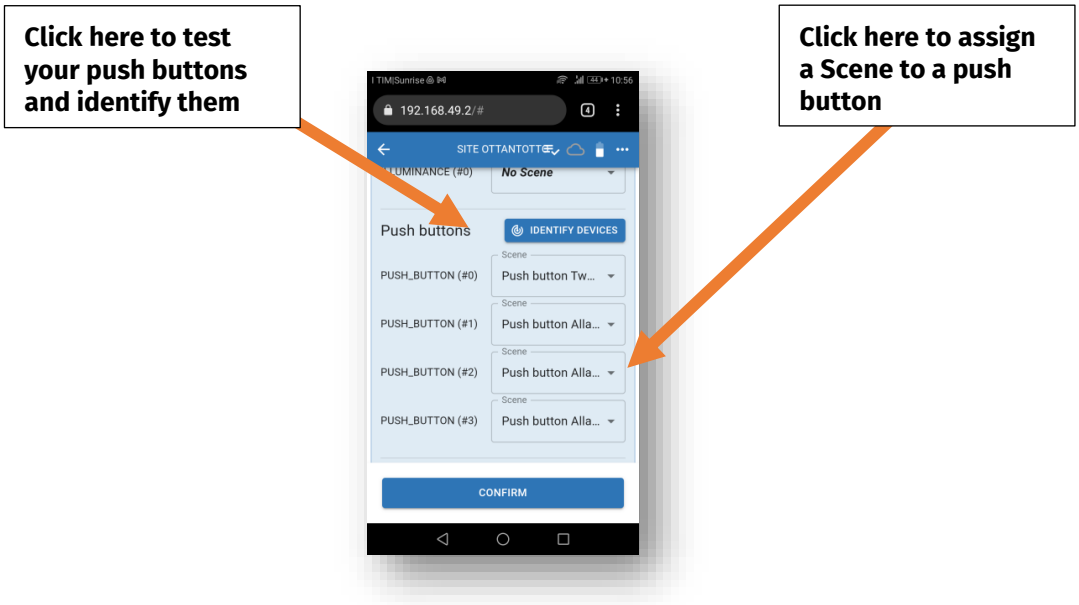
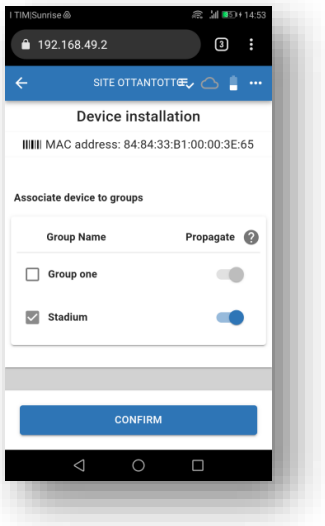


Figure 43: Viewing and Specifying a Scene the Node's Input Device

After confirming the operation, the proper Group should be selected (see Group session)



After pressing the **CONFIRM** button, the installation is complete

18.15 (Optional) Viewing and Specifying a Schedule the Node's *Output Device*

(*Estimated Time: 2 mins*)

If you have already loaded a schedule on your Config Tool, you can assign that schedule to your node.

Select the desired schedule from the dropdown box to assign a schedule (see the figure below).

Click the button **TURN LAMP ON** to turn on the lamp to easily identify it.

Click the button **READ FROM NODE** to read the existing schedule from the lamp.

Click the button **CONFIRM** to continue.

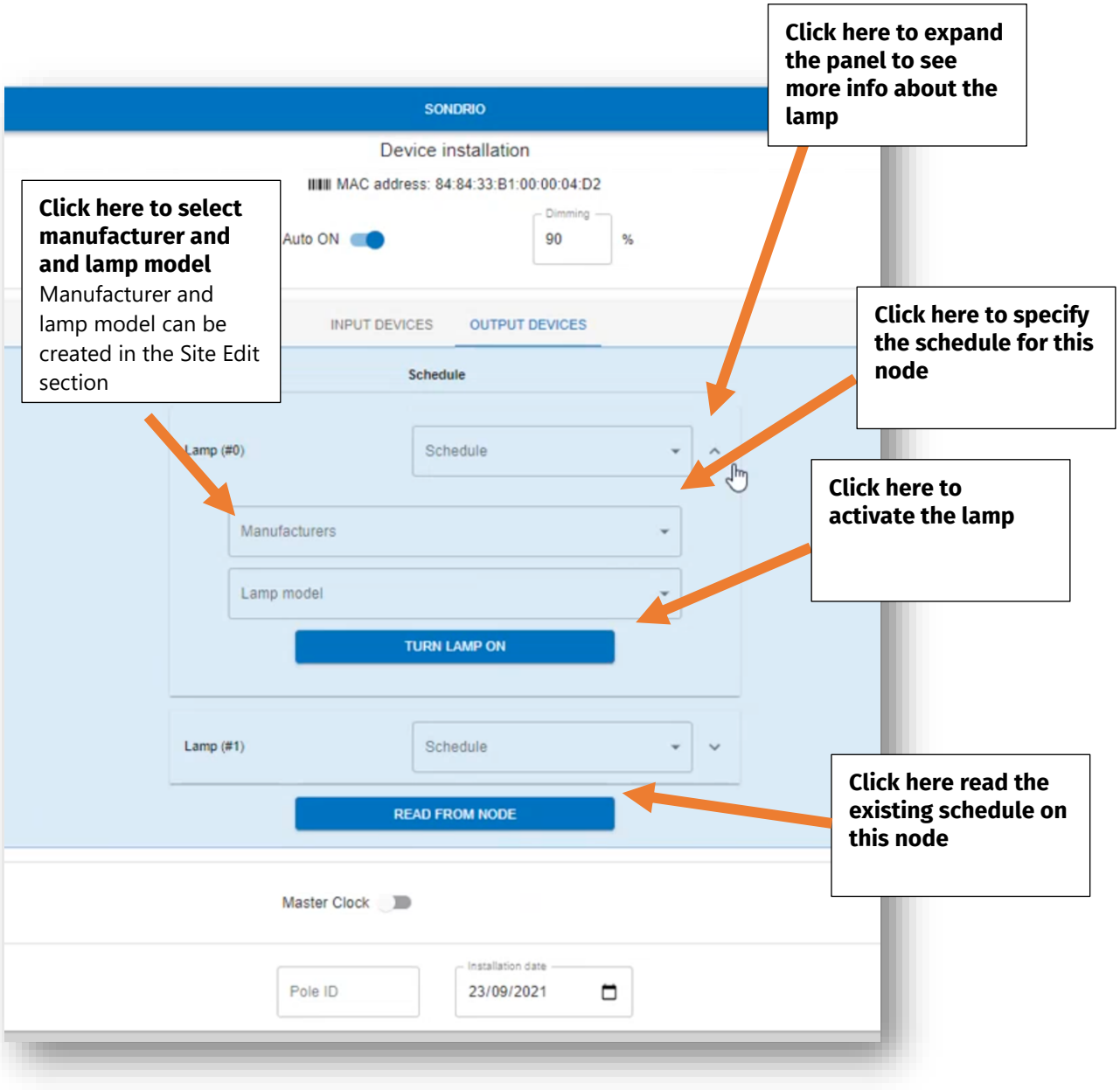


Figure 44: Viewing and Specifying a Schedule the Node's Output Device

18.16 (Optional) Assigning the Device to a Group

(*Estimated Time: 2 mins*)

If you have already created a device **Group**, you can assign this new device to any of the groups that you have created.

Select the group and click the button **CONFIRM** to continue.

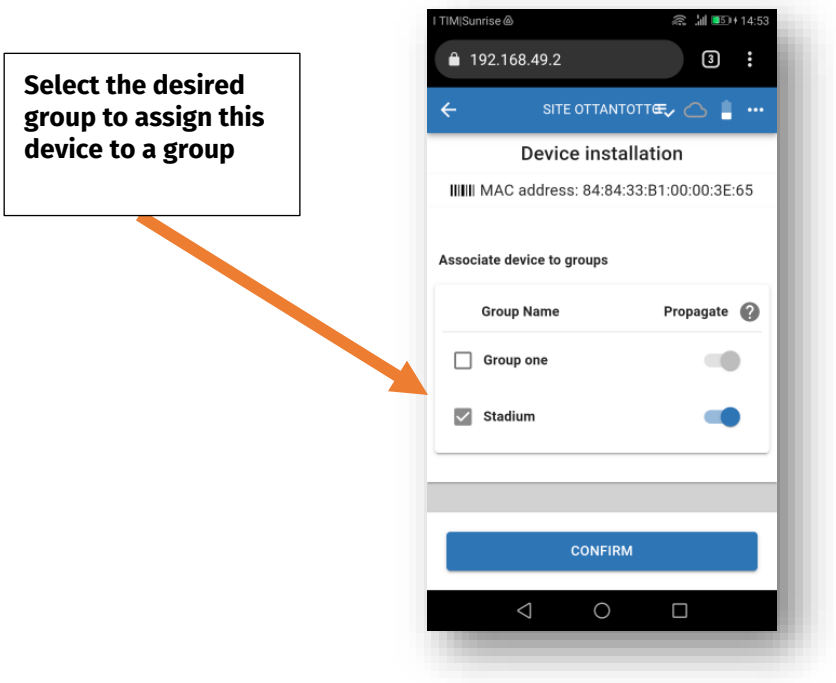
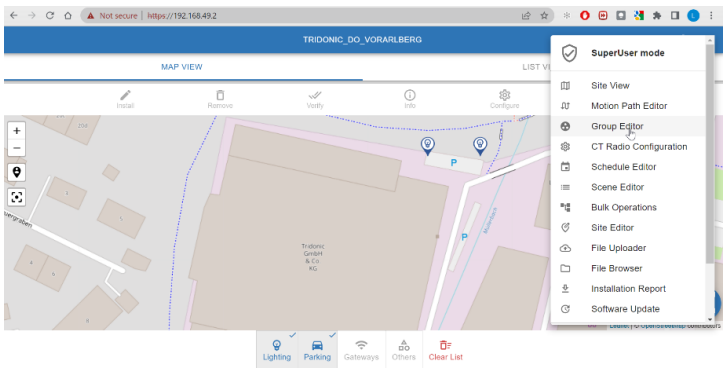
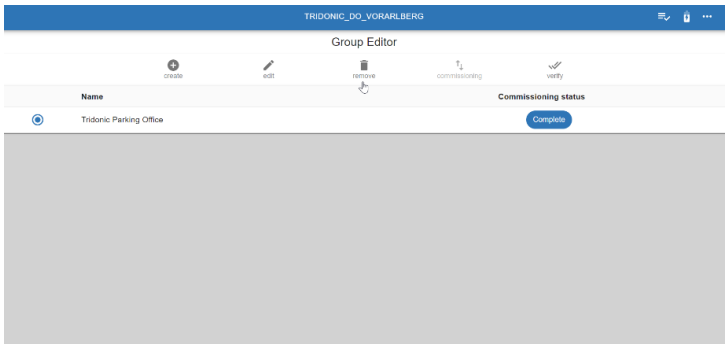
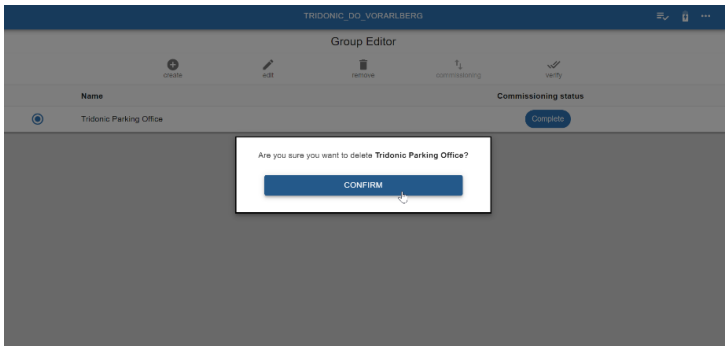
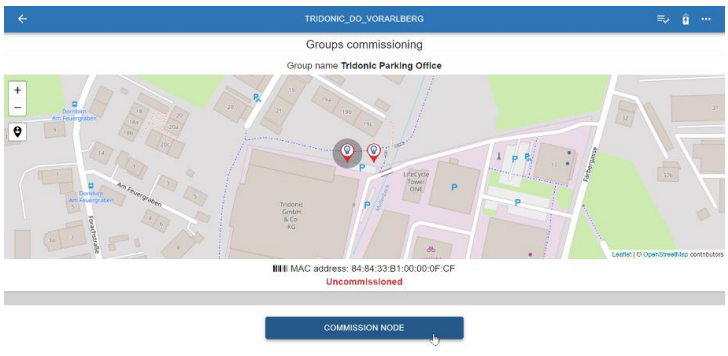
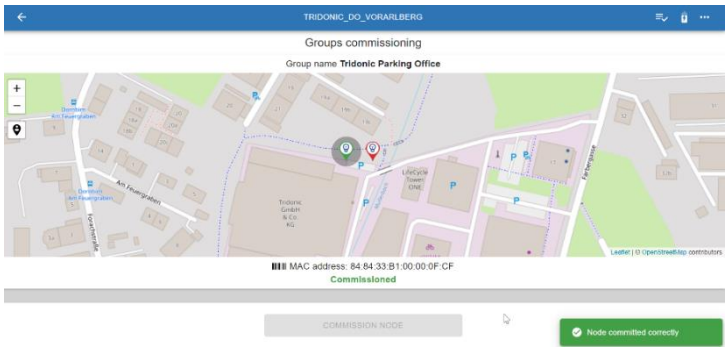


Figure 45: Adding the New Device to a Group

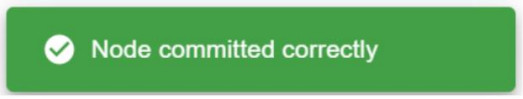
19. How to delete a group

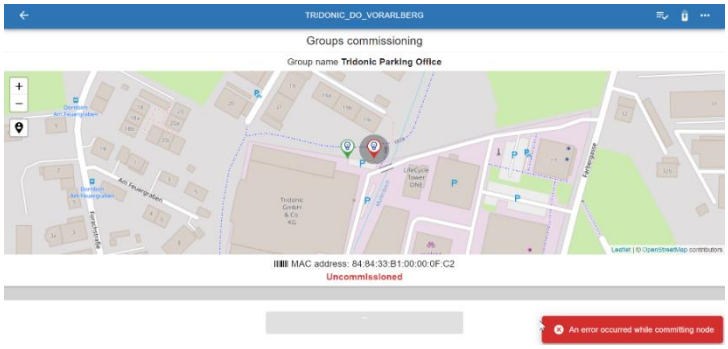
Visual	Description
	• Select "Group Editor" to delete an existing group.
	• Select the group that you want to remove. • Click REMOVE.
	• Click CONFIRM to confirm your selection.
	You must recommission the nodes that were members of the removed group: • Click COMMISSION NODE.

How to delete a group



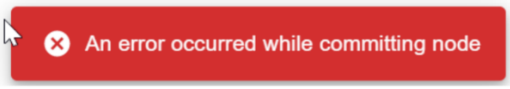
Once a node is successfully commissioned, the message "Node committed correctly" will be displayed.

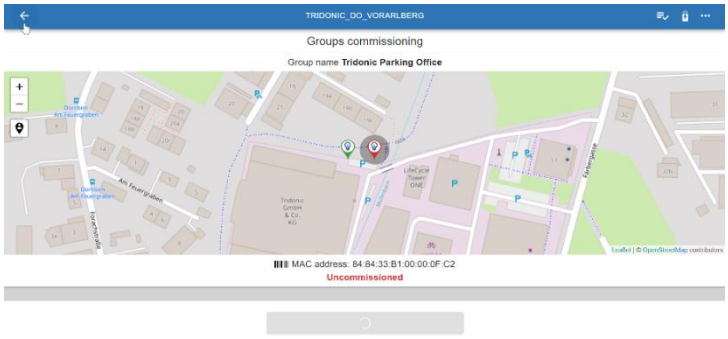




NOTE:
It is not possible to remove a group if one or more nodes that are members of the group are not reachable (reasons for this can be a broken node, node not powered etc.)!

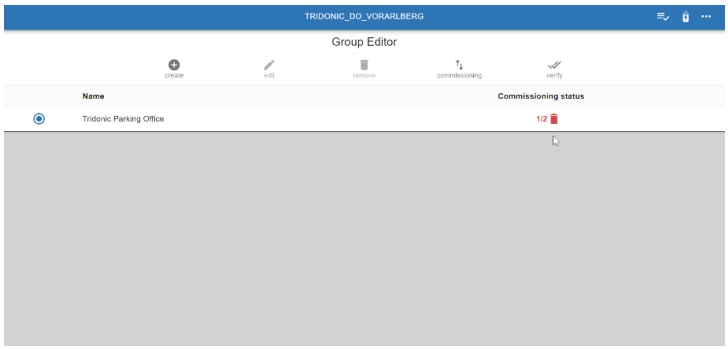
If something is wrong (a node is missing or not communicating to the network), the error message "An error occurred while committing node" will be displayed.





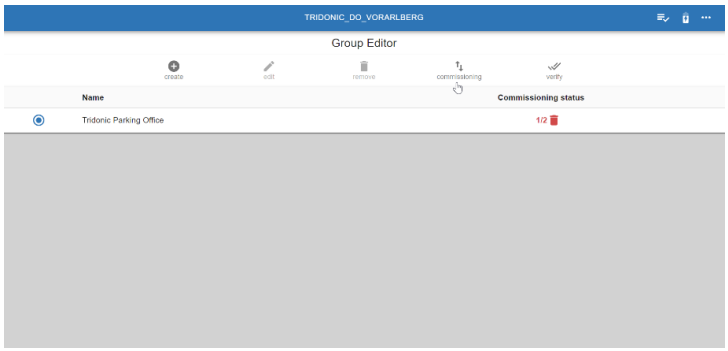
The following steps describe what to do if a node is not communicating to the network because it is not powered or broken:

- Click the arrow on the left top side to exit the group deleting process.



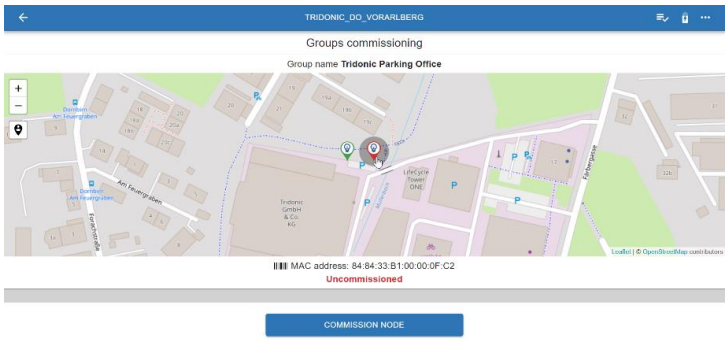
→ Once you have exited the view, you will see that this group needs to be commissioned and that 1 node out of 2 was commissioned.

How to delete a group



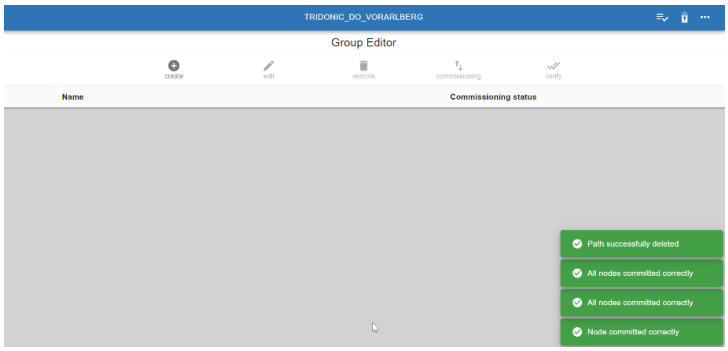
If you manage to get the missing node communicating again with the Network:

- Select the group that you want to delete.
- Select COMMISSIONING.

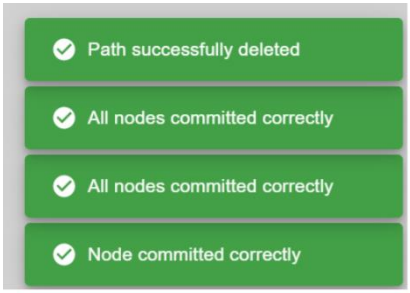


→ One node is already removed.

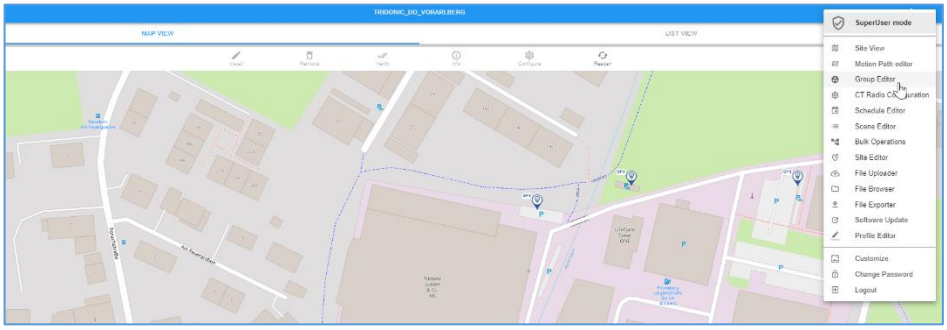
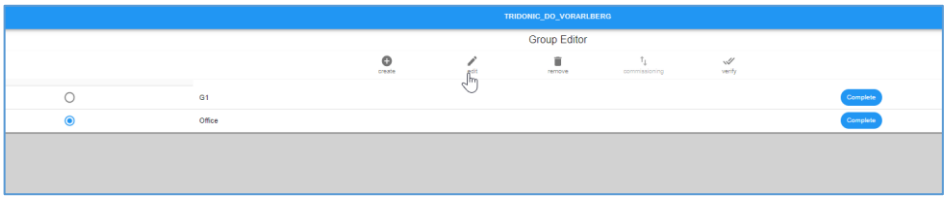
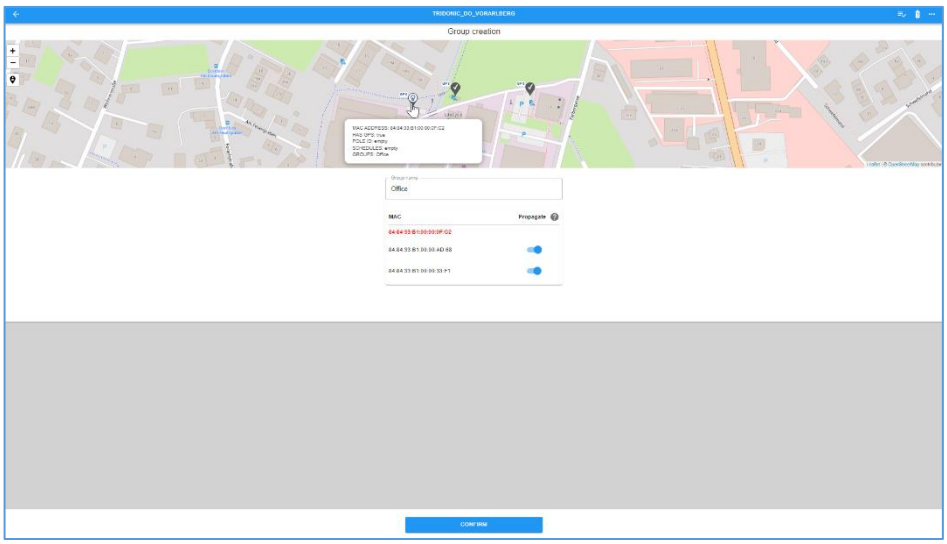
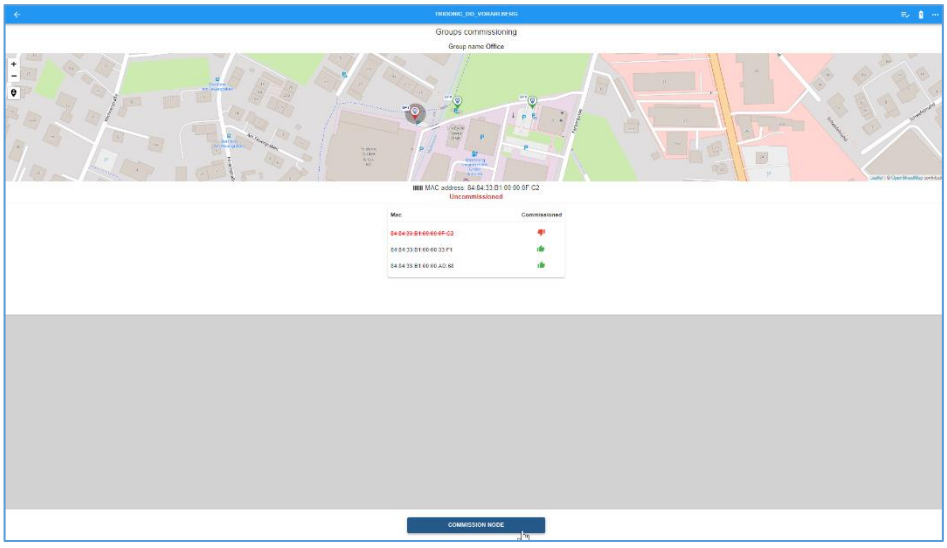
- Select the other node.
- Click COMMISSION NODE.



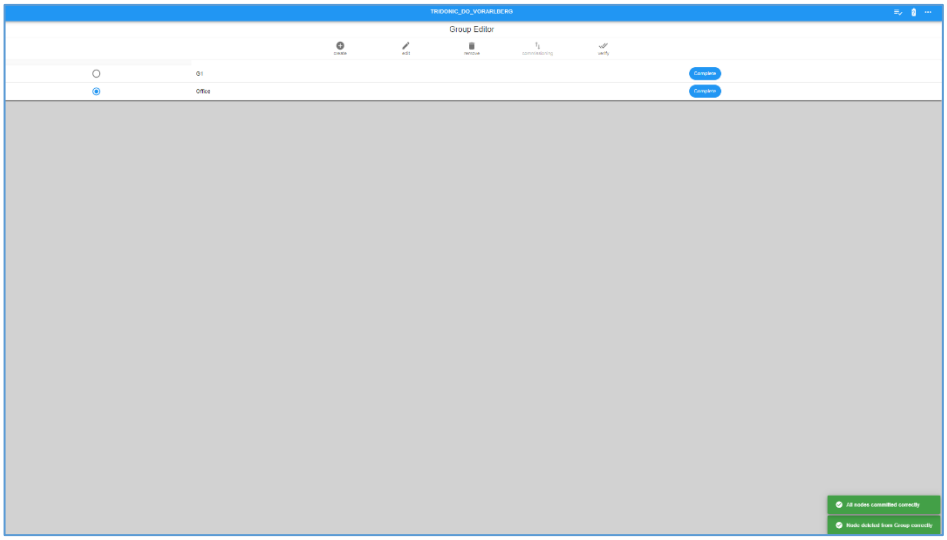
If all the nodes have been commissioned successfully, messages will be displayed on the right bottom.



20. Remove a node from a group

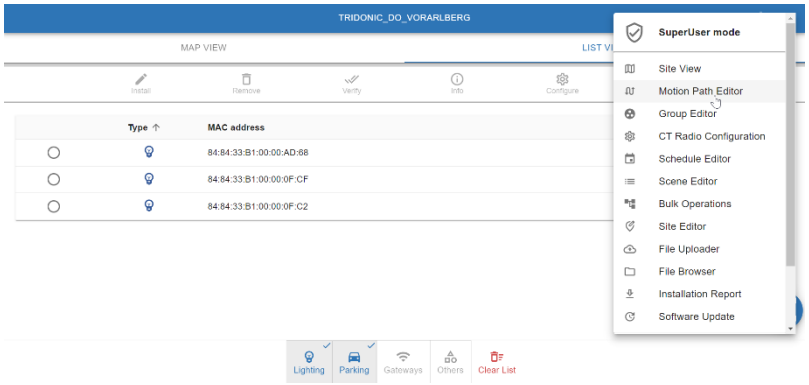
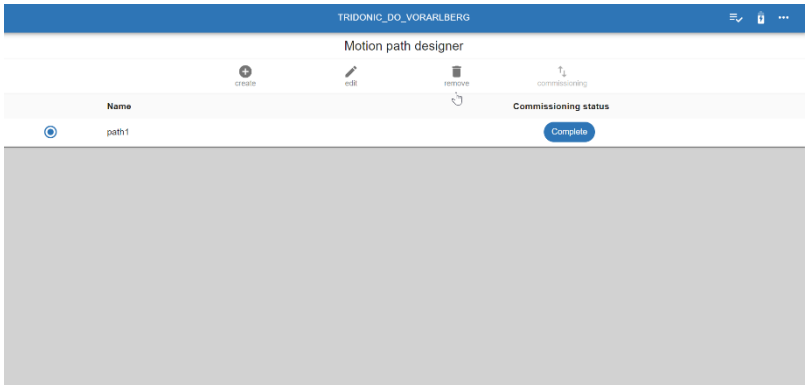
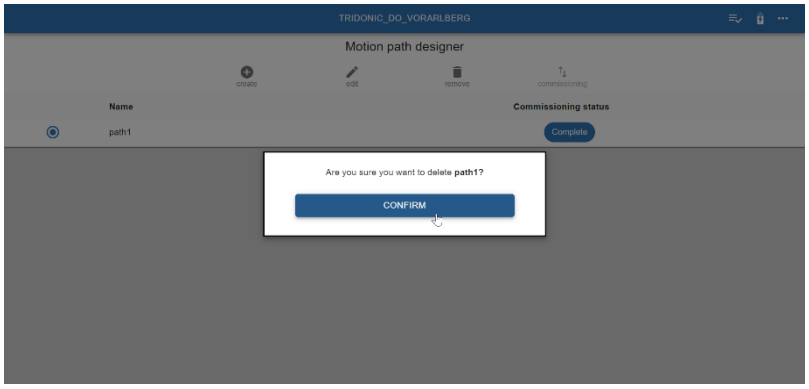
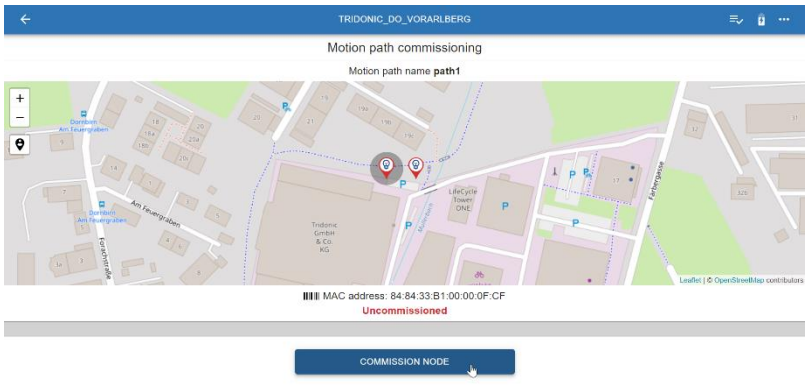
Visual	Explanation
	• Select the 3 dots (the main menu) on the top right side. → The window "SuperUser mode" opens. • Select "Group Editor"
	• Mark the group in which the node you would like to remove is member of. • Select "edit".
	• Select the node that you want to remove from the map view. → The mac address of the selected node will be struck through. • Select "CONFIRM".
	• Select the node again. • Select "COMMISSION NODE".

Remove a node from a group

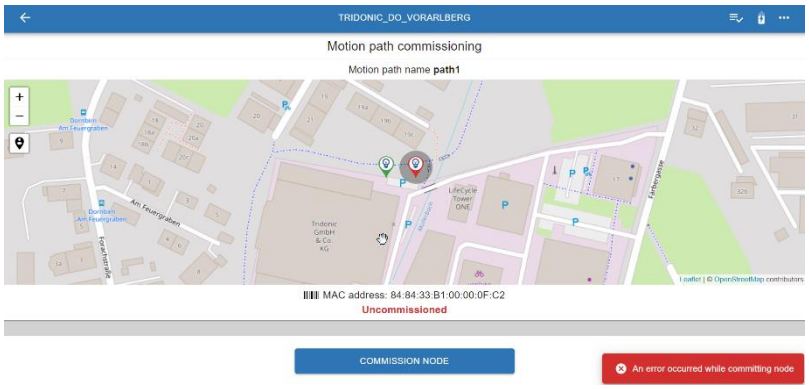
	→ When the commissioning is done, the group editor field will be displayed again. → A message "All nodes commissioned successfully" is displayed at the bottom right of the page.

How to delete a motion path

21. How to delete a motion path

Visual	Description
	• Select "Motion Path Editor".
	• Select the motion path that you want to remove. • Click "remove".  remove
	• Click CONFIRM.
	You must recommission the nodes that were members of the motion path: • Select the node. • Click COMMISSION NODE. This step has to be repeated for every node that is member of the motion path.

How to delete a motion path

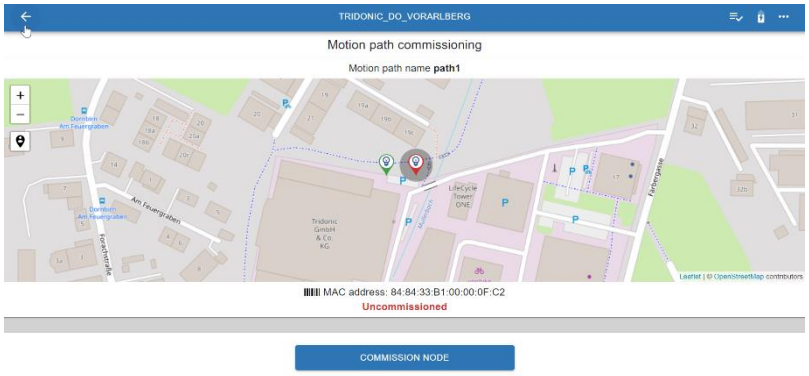


NOTE:

It is not possible to remove a motion path if one or more nodes that are members of the motion path are not reachable (reasons for this can be a broken node, node not powered etc.)!

If something is wrong, the error message "An error occurred while committing node" will be displayed.

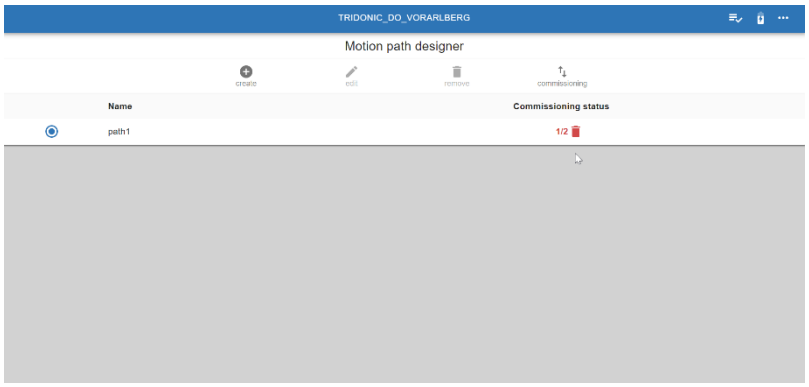
An error occurred while committing node



If you do get this message, you need to make sure that the node is powered and able to communicate with the network.

If it is not possible to get the node back to the network:

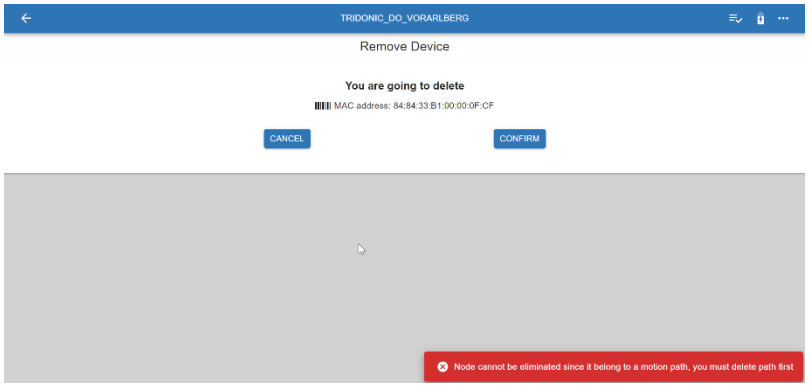
- Click the arrow on the left top side to exit the motion path deleting process and go back to the "Motion path designer"



In the "Motion path designer" window you will see that in this case one node was removed from the motion path but one still is member of the motion path and needs to be commissioned.

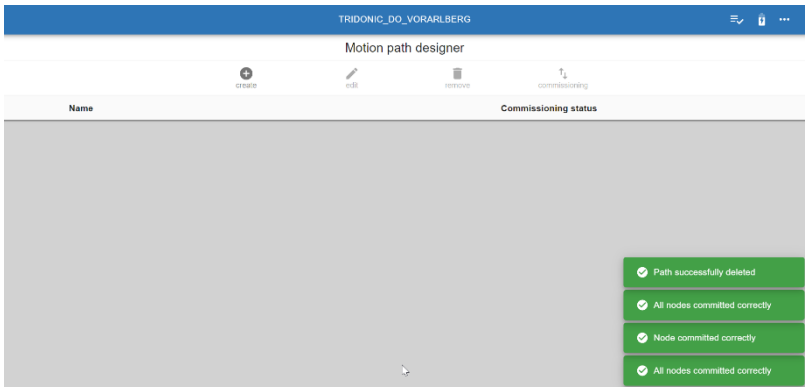
If you manage to get the missing node communicating again with the network, you can delete the motion path by selecting "commissioning" and then finish the commissioning.

If you cannot manage it to get the missing node communicating again with the network then it is not possible to delete the motion path.



If you cannot delete a motion path because e.g. a node is broken, you can also not remove nodes that have already been decommissioned from the motion path from the site. If e.g. you would like to move a node to a new site.

How to delete a motion path



If you can manage that the missing nodes do communicate again with the network, then you can delete the motion path by recommissioning the previously missing node.

If the motion path has been removed successfully, messages will be displayed on the right bottom.

22. Verifying a Device in the Field

The verification process allows users of the groupCONTROL configTOOL to inspect a specific IoT device to see additional information about the device. The verification process also enables the user to perform operations on the device.

This is especially helpful due to the fact that it enables users to activate a streetlight directly from the groupCONTROL configTOOL immediately after installation.

22.1 Verifying a Device

(*Estimated Time: 5 min*)

In order to verify a device, go to the Default Home Screen and select the device that you want to verify, then click on the "**Verify**" button in the menu, as shown in Figure below.

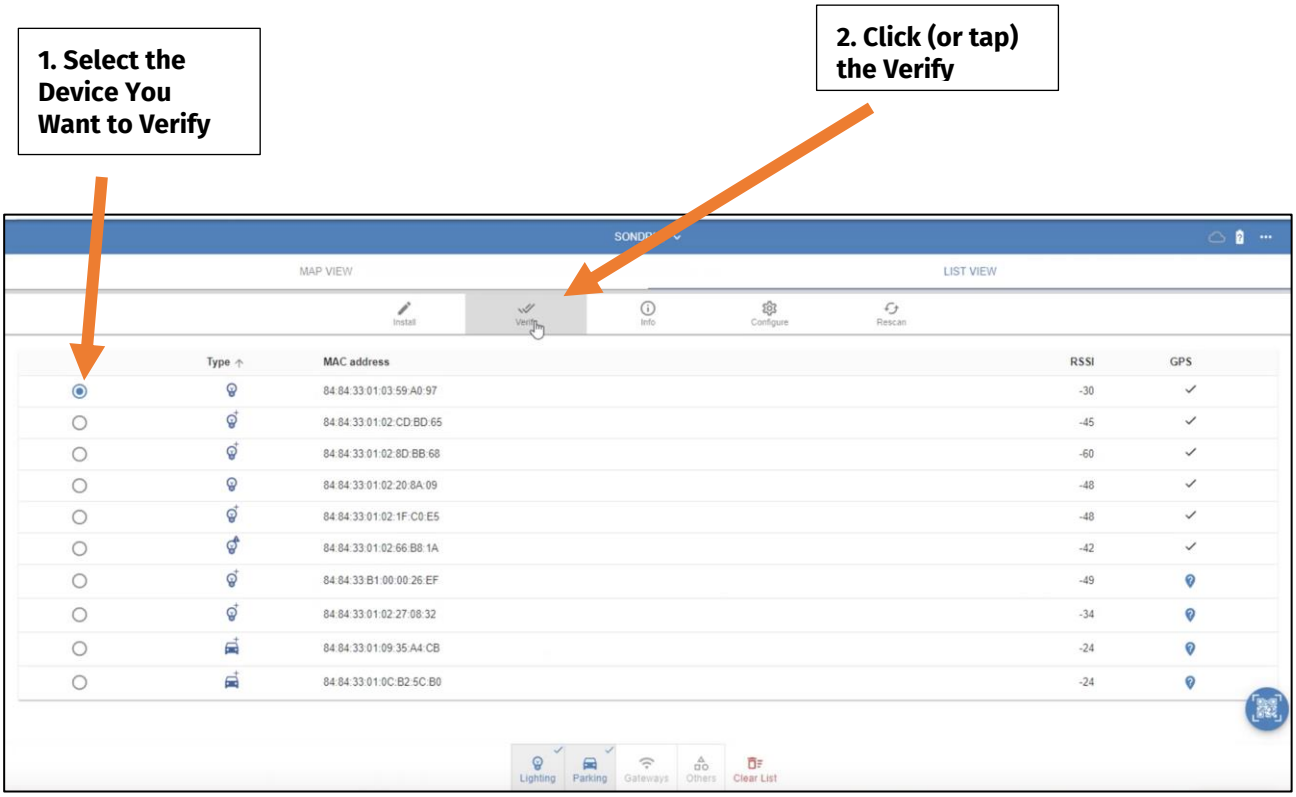


Figure 46: Verifying a Device

Verifying a Device in the Field

The user is then presented with the "**Device verification**" screen as shown in Figure below. Select either of the list items to expand (or collapse) the panel on your selected device.

Figure 47: The Device Verification Screen

Verifying a Device in the Field

The user is then presented with the "**Device Verification**" screen as shown in Figure below. Select either of the list items to expand (or collapse) the window to operate on your selected device.

Figure 48: Using the Device Verification Screen

22.2 (Optional) Generating an Installation Report

(*Estimated Time: 2 mins*)

After a successful installation, installers have the option to generate and Installation Report in order to see a summary of the devices that have been installed.

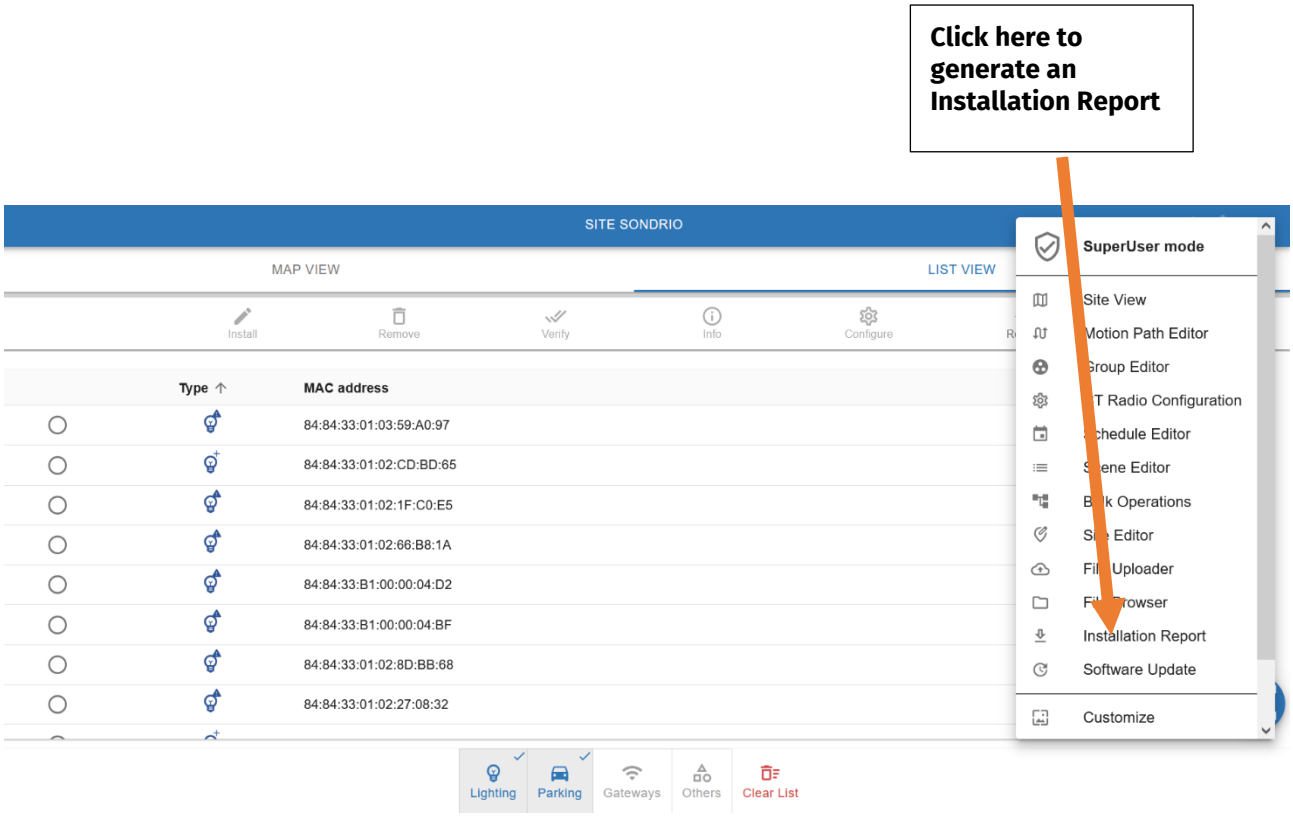


Figure 49: Generating an Installation Report

Verifying a Device in the Field

Users have the option to specify the level of detail in the report as well as the report type as shown in the figure below

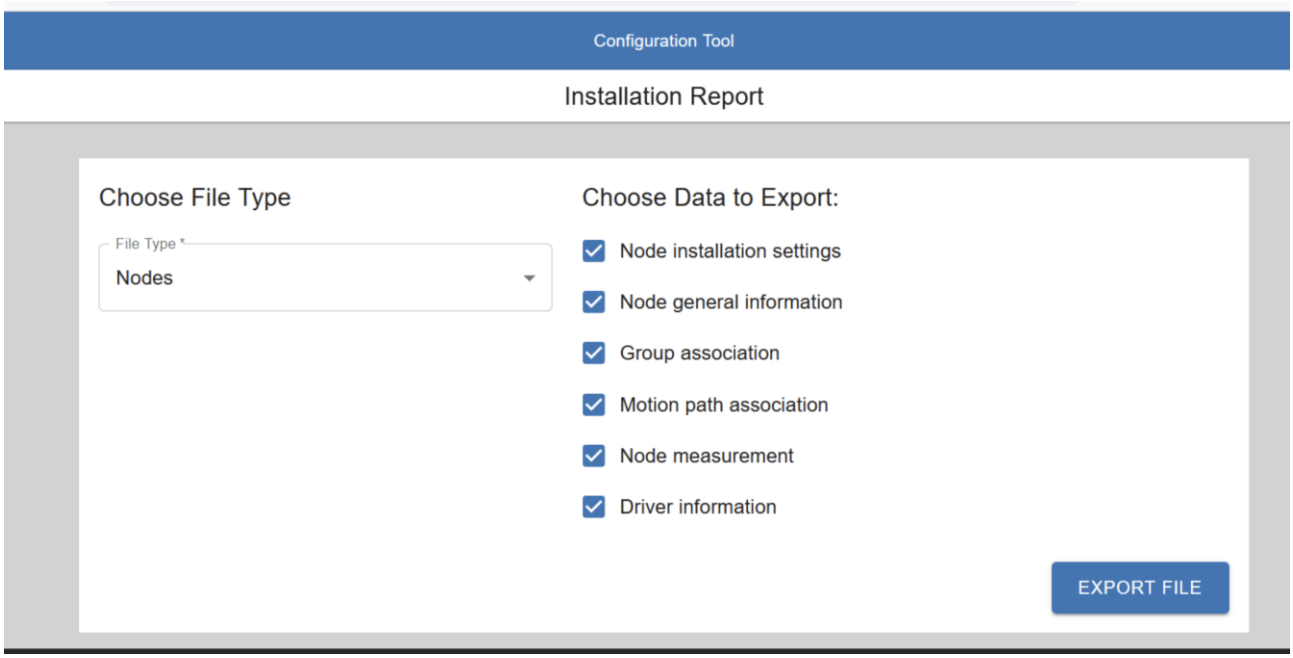
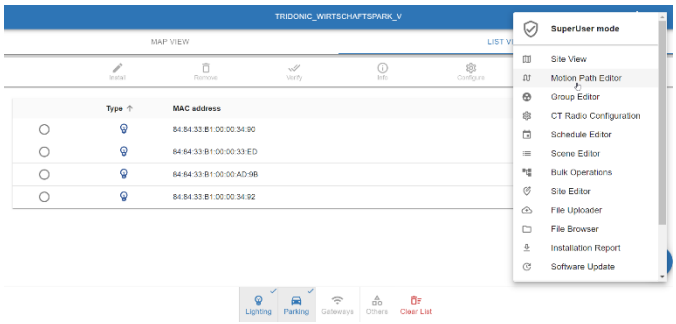
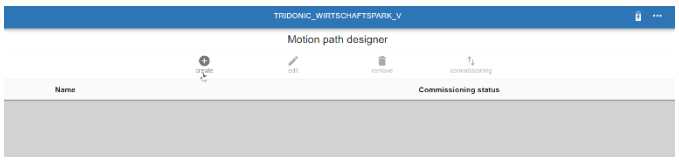
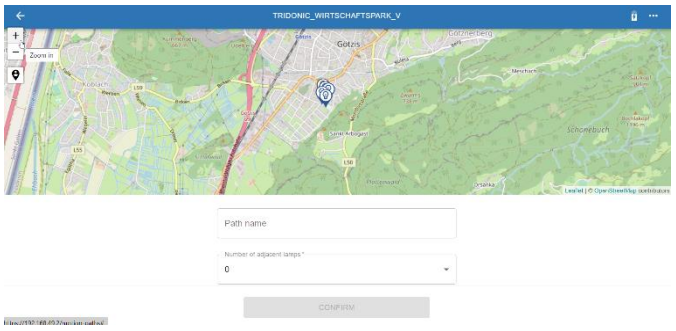
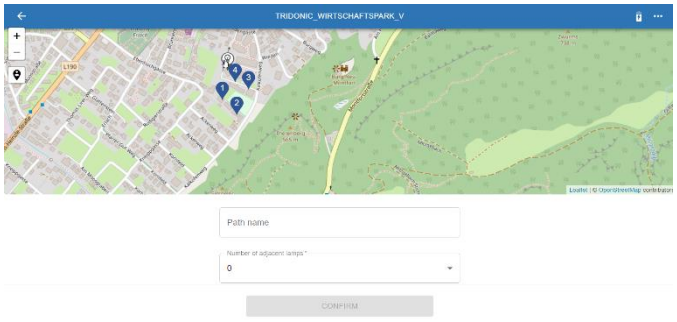


Figure 50: Generating an Installation Report

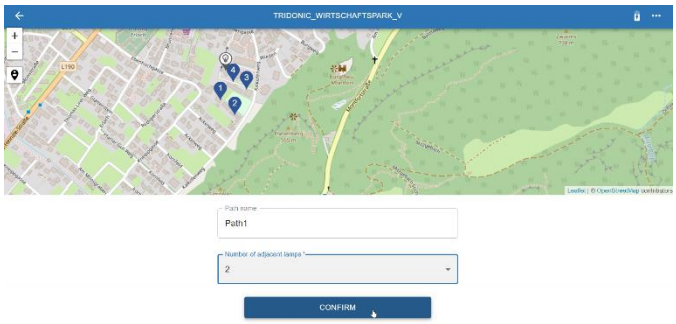
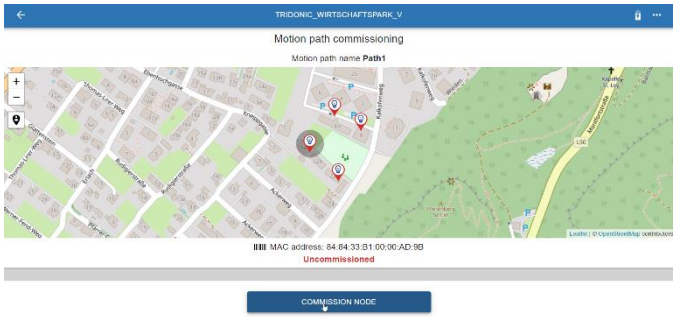
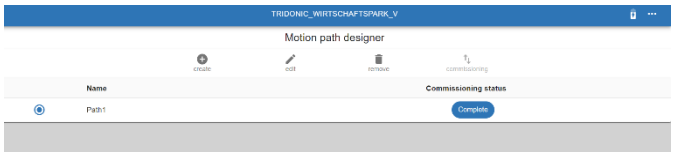
23.Using the Motion Path Editor

The Motion Path Editor enables users of the groupCONTROL configTOOL to create a motion path of streetlights for citizens in Smart Cities. When the presence of a pedestrian (or biker) is detected by the motion detector of a streetlight, adjacent streetlights can be activated in order to temporarily add more luminance to their path. This enables Smart City managers to dim the streetlights of walking paths to save energy until the presence of a pedestrian is detected.

23.1 Create a new motion path

Visual	Description
	• Select the 3 dots on the top right side. • Select "Motion Path Editor".
	• Select "create".
	• Use the + and - buttons on the left side to zoom in to the map.
	• Select the luminaires that will become members of your motion path.

Using the Motion Path Editor

	• Give the path a name. • Select how many adjacent lamps should be associated with this path. The "Number of adjacent lamps" defines how many luminaires in both directions will go to presence level if a motion sensor connected to a luminaire detects motion. **Example:** If there are 5 luminaires, the number of adjacent lamps is defined as 2 and luminaire 3 detects motion, the luminaires 1, 2, 4 and 5 will also go to presence level. If there was a luminaire 6, this luminaire would not react to motion detected by luminaire 3. • Select "CONFIRM".
	In the next window you have to commission the nodes. • Select one node. • Select "COMMISSION NODE". Repeat these steps for all nodes that are a member of the motion path.
	→ When you have commissioned all nodes, your motion path will be created.

23.2 Viewing Existing Motion Paths

(*Estimated Time: 1 min*)

After selecting the Motion Path Editor form the Default Home Screen, you are presented with a view of previously created Motion Paths as shown in Figure below.

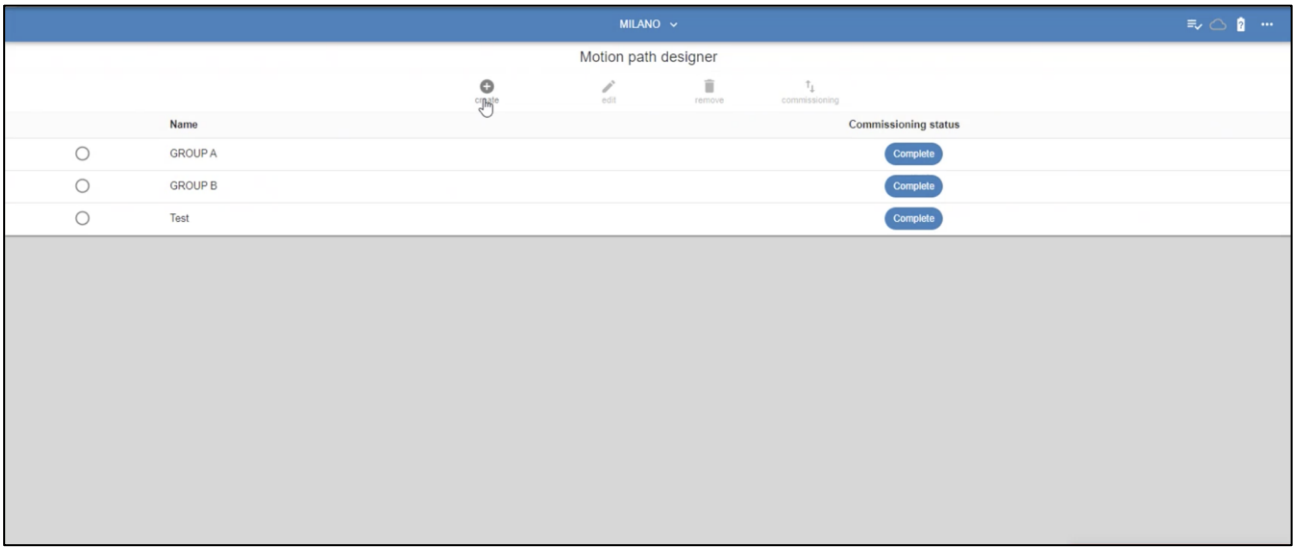


Figure 51: The List of Previously Created Motion Paths

PART 5: Creating Schedules and Groups

24. Creating a Group of Nodes with the Group Editor

The “**Group Editor**” screen enables users to create a logical group of nodes. This capability is especially useful when one (or more) of the nodes has a motion sensor, so that all nodes can respond to the event of detected motion.

In order to create a Motion Group, select “**Group Editor**” from the menu.

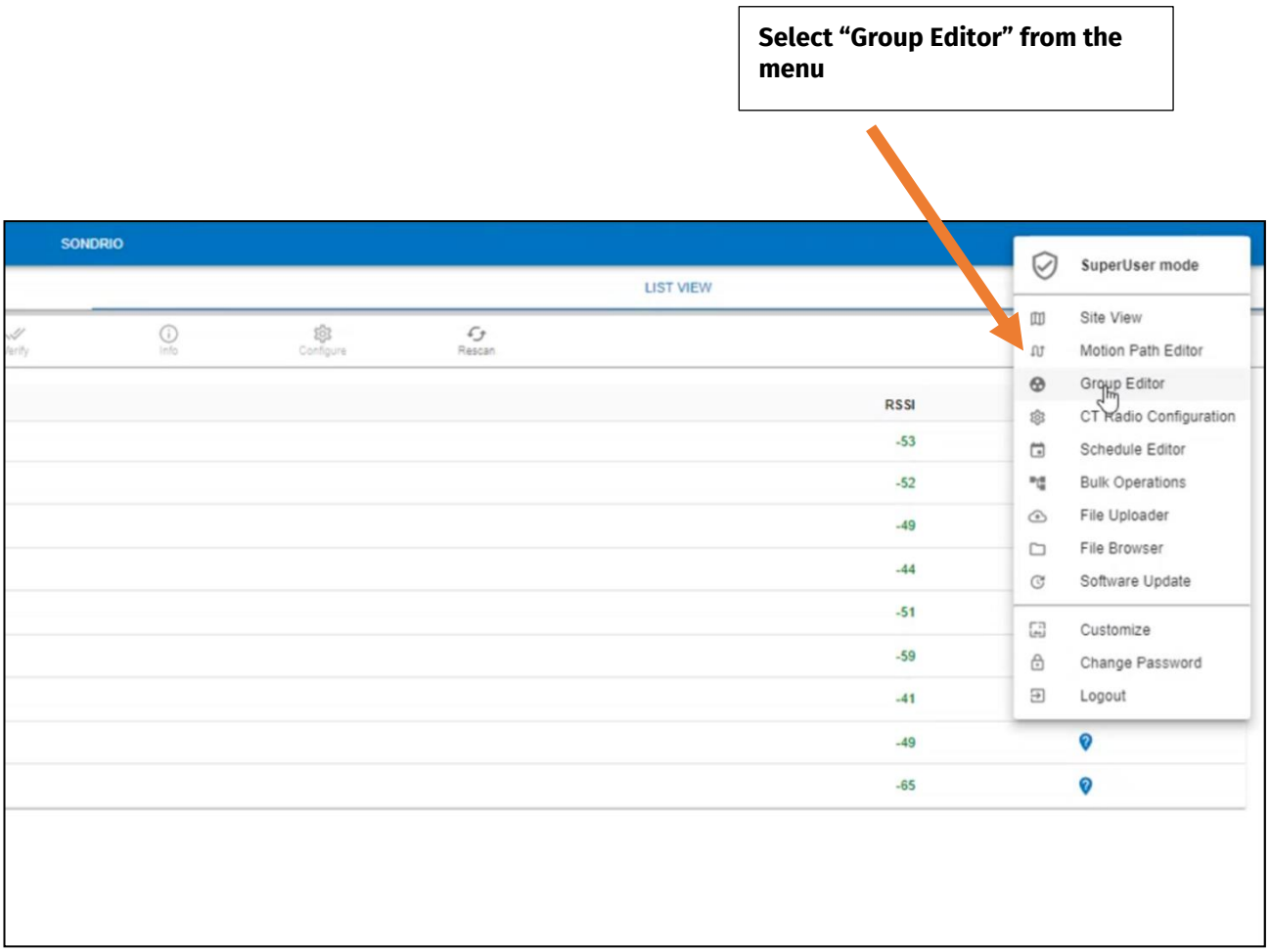


Figure 52: Accessing the Group Editor to Create a Group of Nodes

Creating a Group of Nodes with the Group Editor

In order to create a new Motion Group, select the "**CREATE**" button.

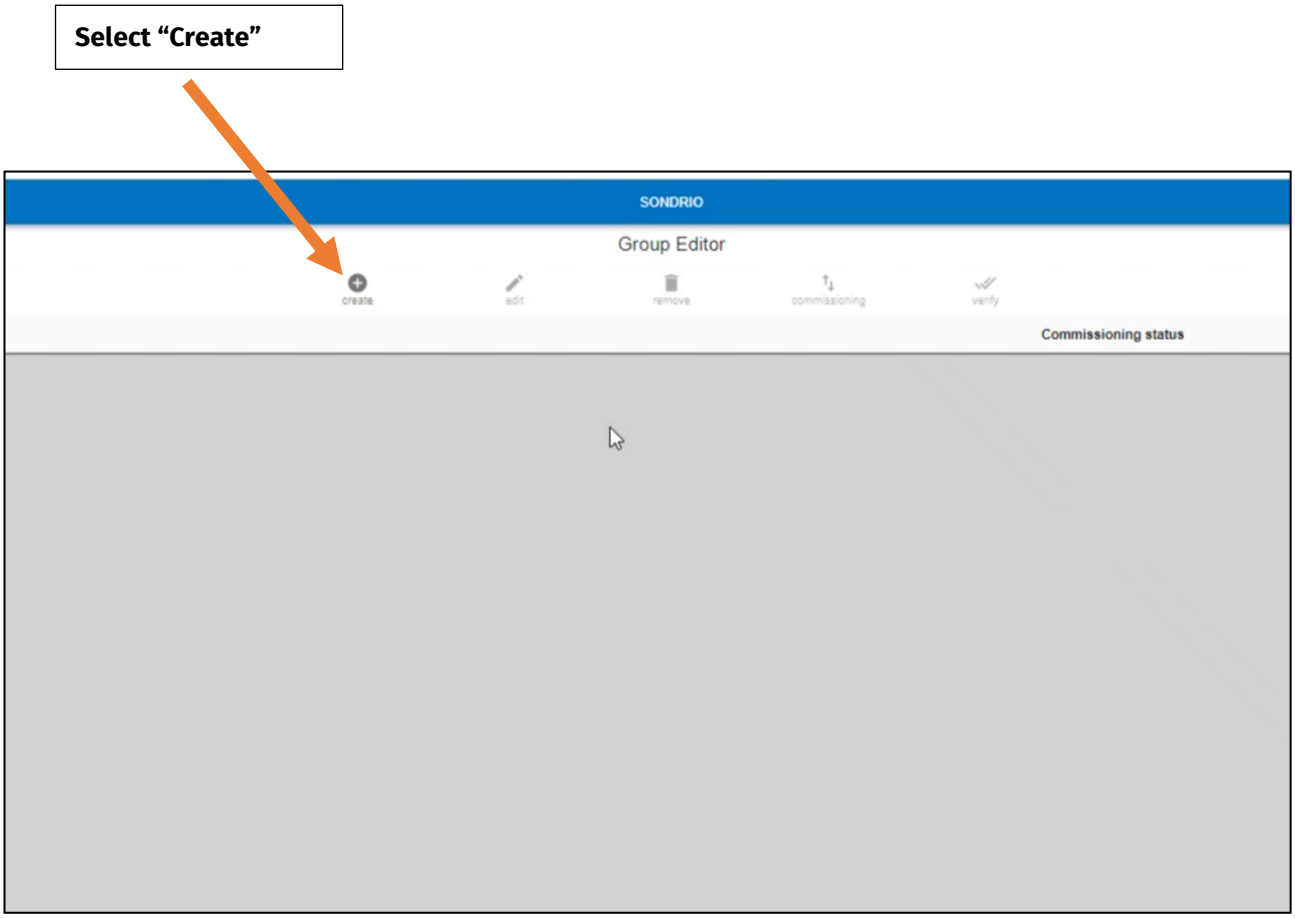


Figure 53: Click "Create" to Create a New Motion Group

Creating a Group of Nodes with the Group Editor

Specify a name for your Motion Group, and select on the map the nodes within range that you want to participate in the group.

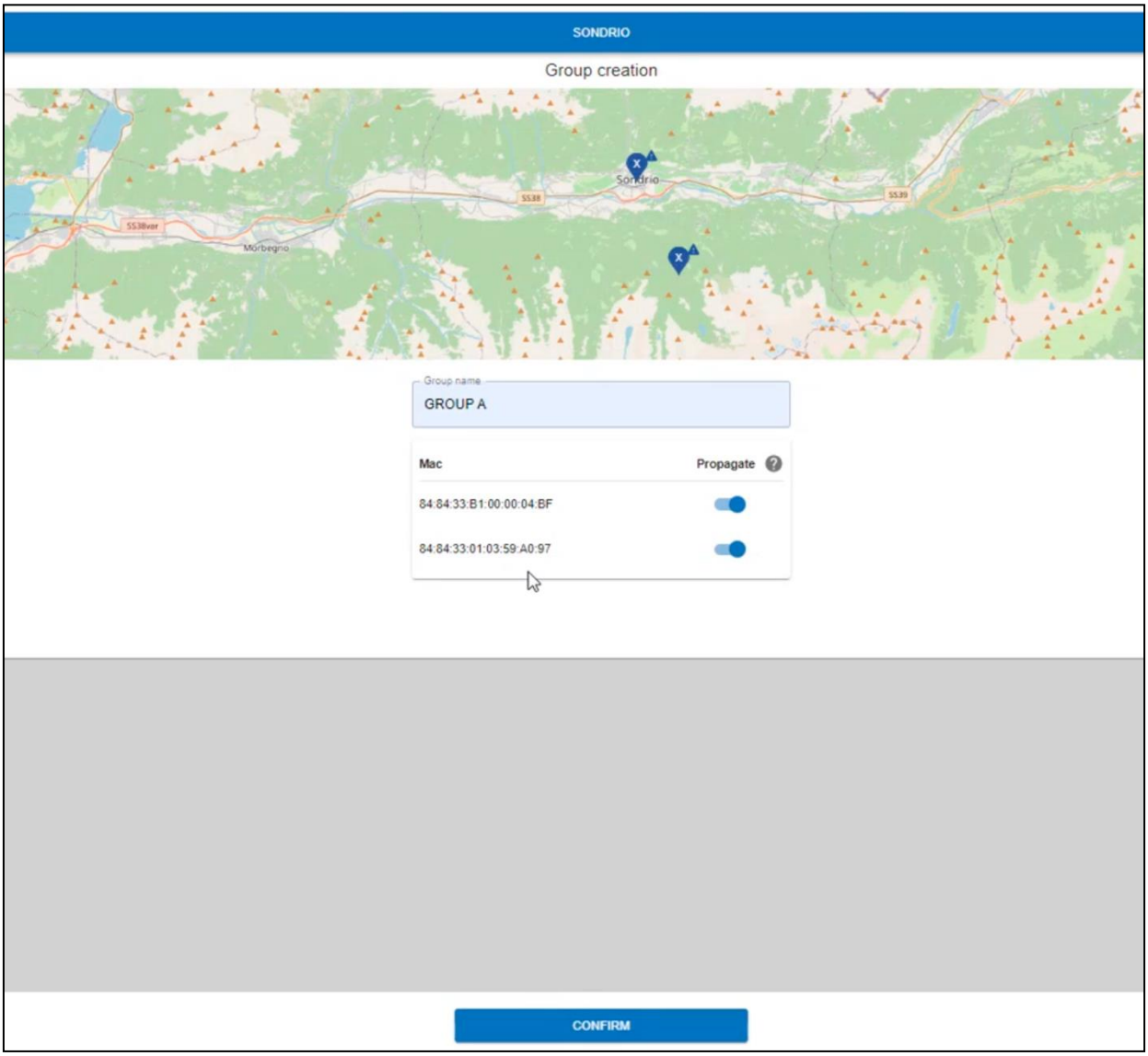


Figure 54: Select the Nodes in the Map to Add to the Group

The propagate button for a node should be enabled if you want the node's input trigger (such as motion detection) to be sent to the other nodes in the group.

Click the **"CONFIRM"** button to continue.

Commissioning the Group Information to Your Group of Nodes (Estimated Time: 1 min)

25. Commissioning the Group Information to Your Group of Nodes (*Estimated Time: 1 min*)

After creating a group of nodes with the "**Group Editor**", you will be automatically switched to the "**Groups Commissioning**" screen, as shown in the figure below.

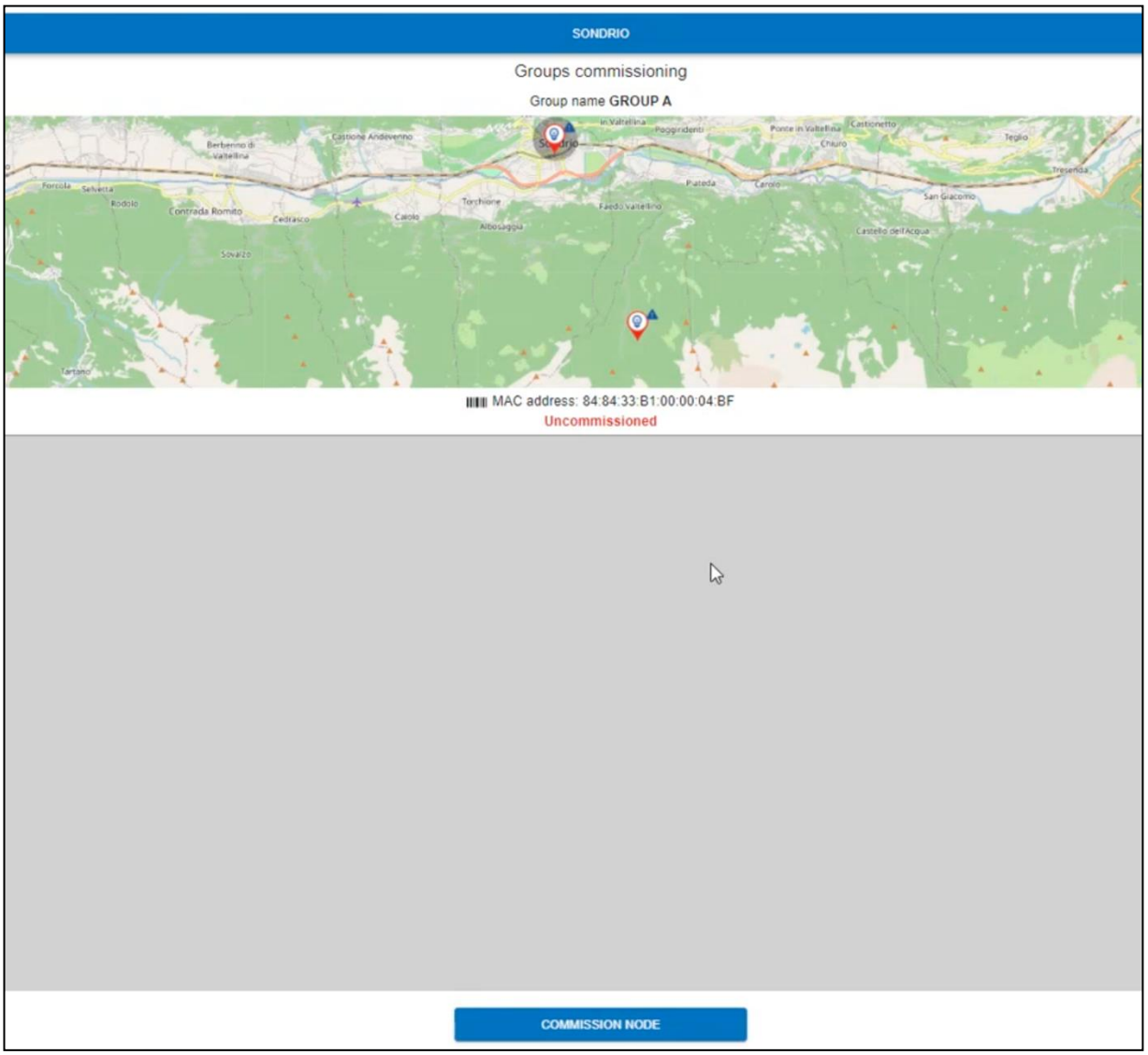
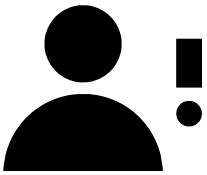


Figure 55: Accessing the Group Editor to Create a Group of Nodes

Commissioning the Group Information to Your Group of Nodes (Estimated Time: 1 min)



NOTE: *In order to commission Group information to a group of nodes, you **MUST** commission the Group information **to each individual node**.*

This includes adding or removing nodes from a group.

Select an individual node in the Map view and click the "**COMMISSION NODE**" button to commission the Group information to that node.

(Optional) Verifying Your Commissioned Group of Nodes (Estimated Time: 1 min)

26.(Optional) Verifying Your Commissioned Group of Nodes (*Estimated Time: 1 min*)

After your Node Groups have been created and commissioned, select the "**VERIFY**" button to test and verify the configuration of your group.

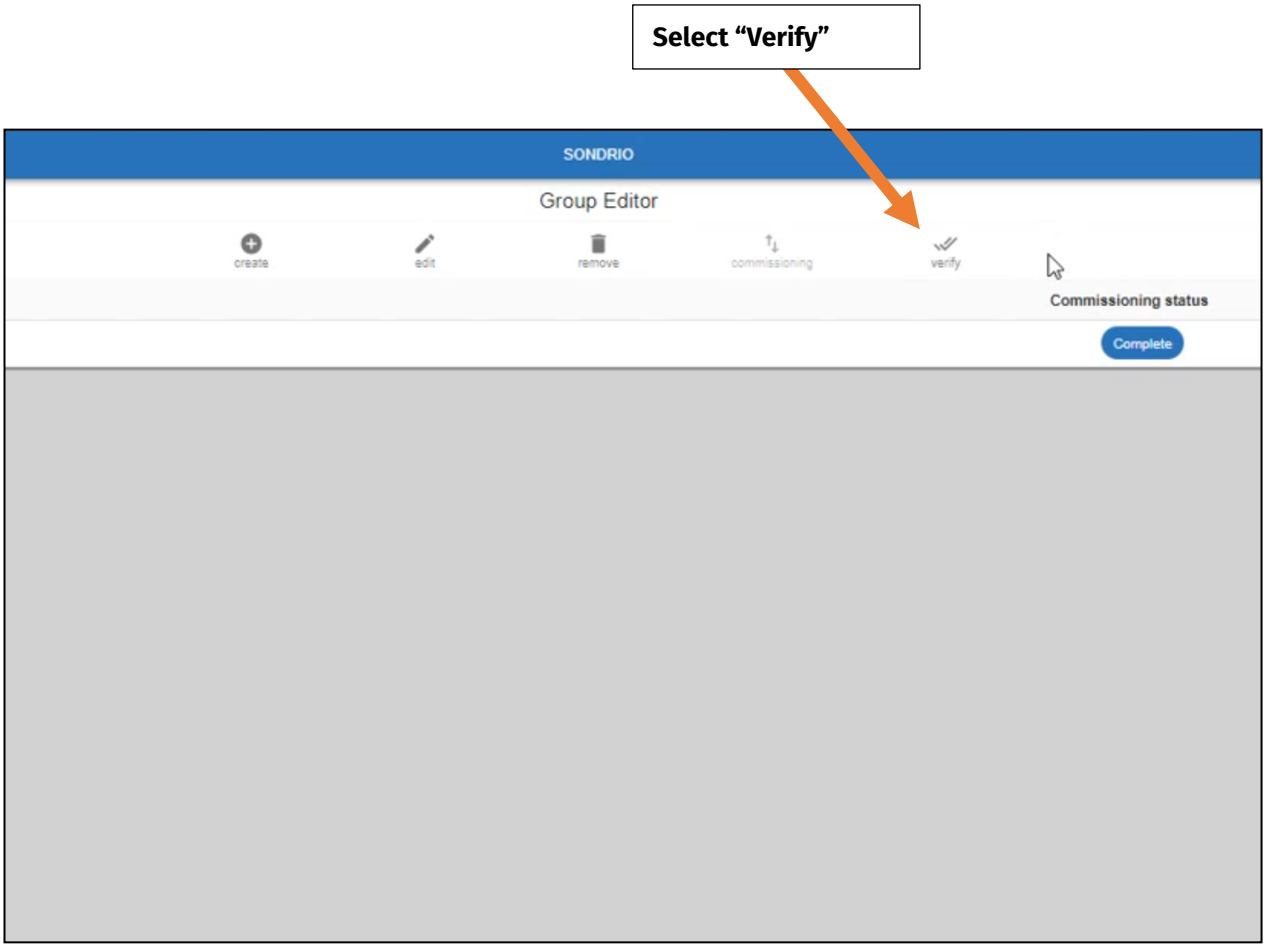


Figure 56: Accessing the Group Editor to Create a Group of Nodes

(Optional) Verifying Your Commissioned Group of Nodes (Estimated Time: 1 min)

Select the individual lamp *or all lamps) and click the appropriate button to specify the desired dimming percentage.

Click the "**APPLY**" button to proceed. This will enable you to see the selected lights to be activated.

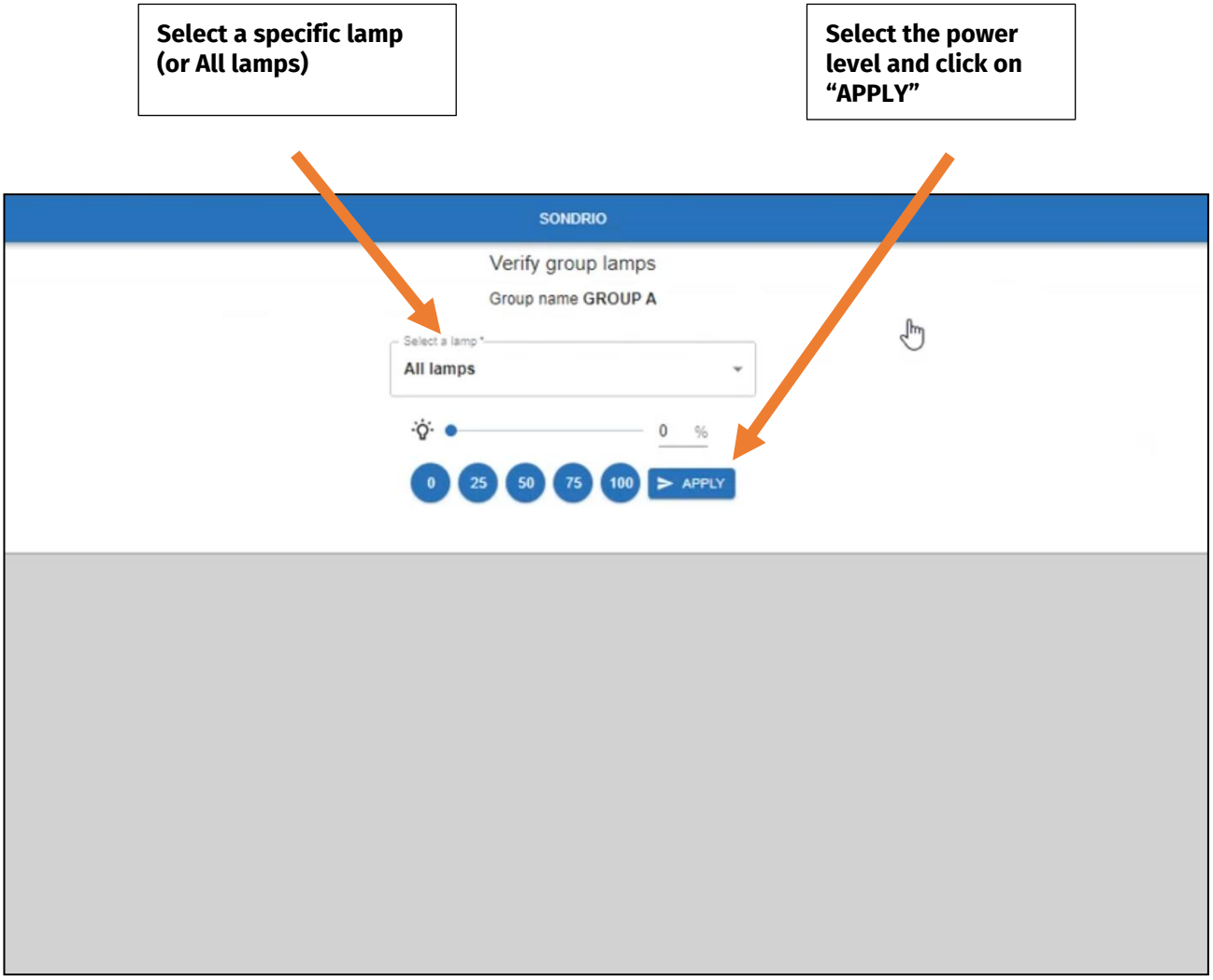


Figure 57: Verifying the Lamps in a Group

27. Using the Schedule Editor to Create a Custom Schedule for Your Streetlights

The Schedule Editor enables users to create a custom ON/OFF schedule for their streetlights. The figure below displays how to access the Schedule Editor.

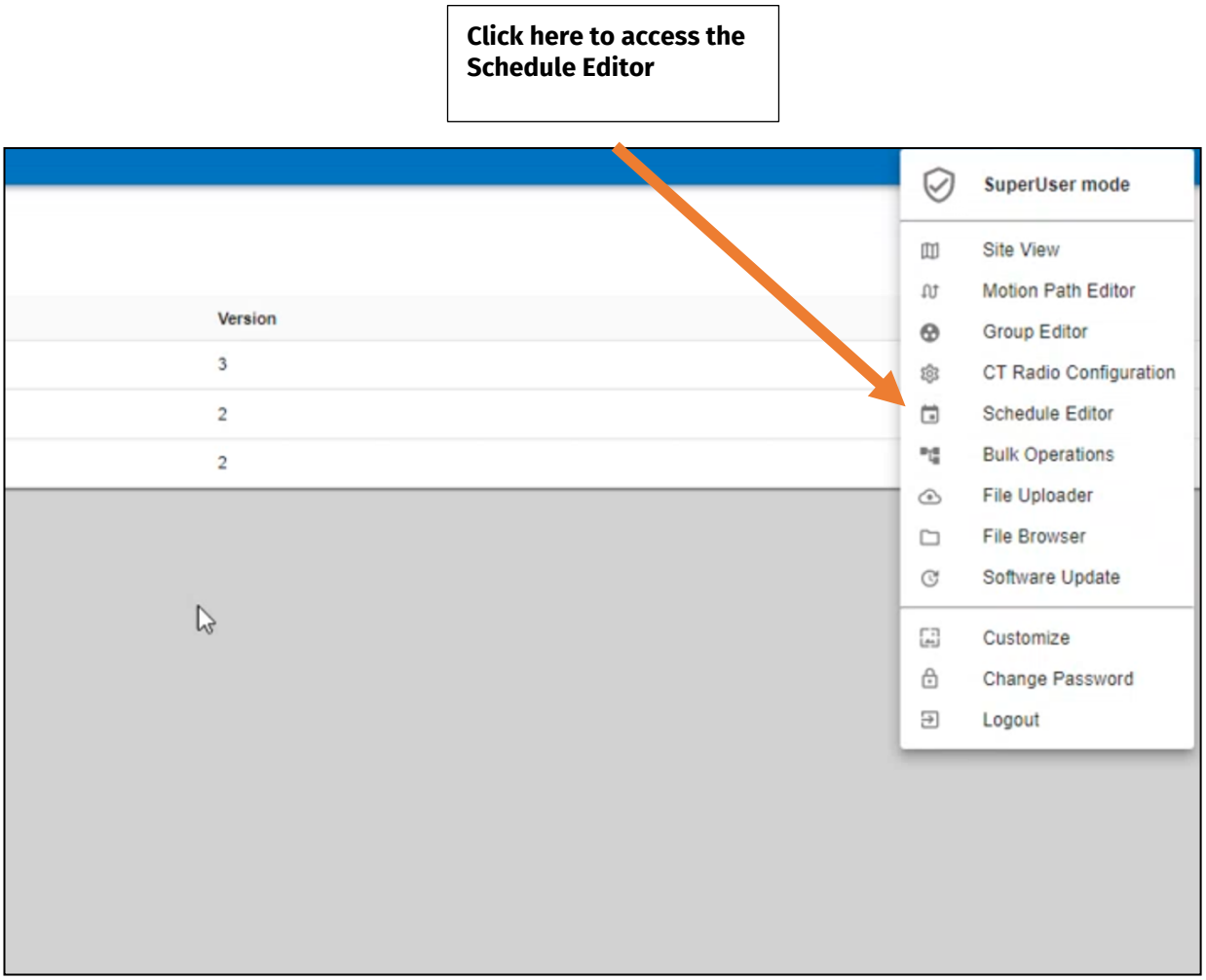


Figure 58: Accessing the Schedule Editor

28. Creating a New Schedule with the Schedule Editor

The Schedule Editor screen, as shown in the figure below, shows a list of previously created schedules.

- Click the **"CREATE"** button to create a new schedule.

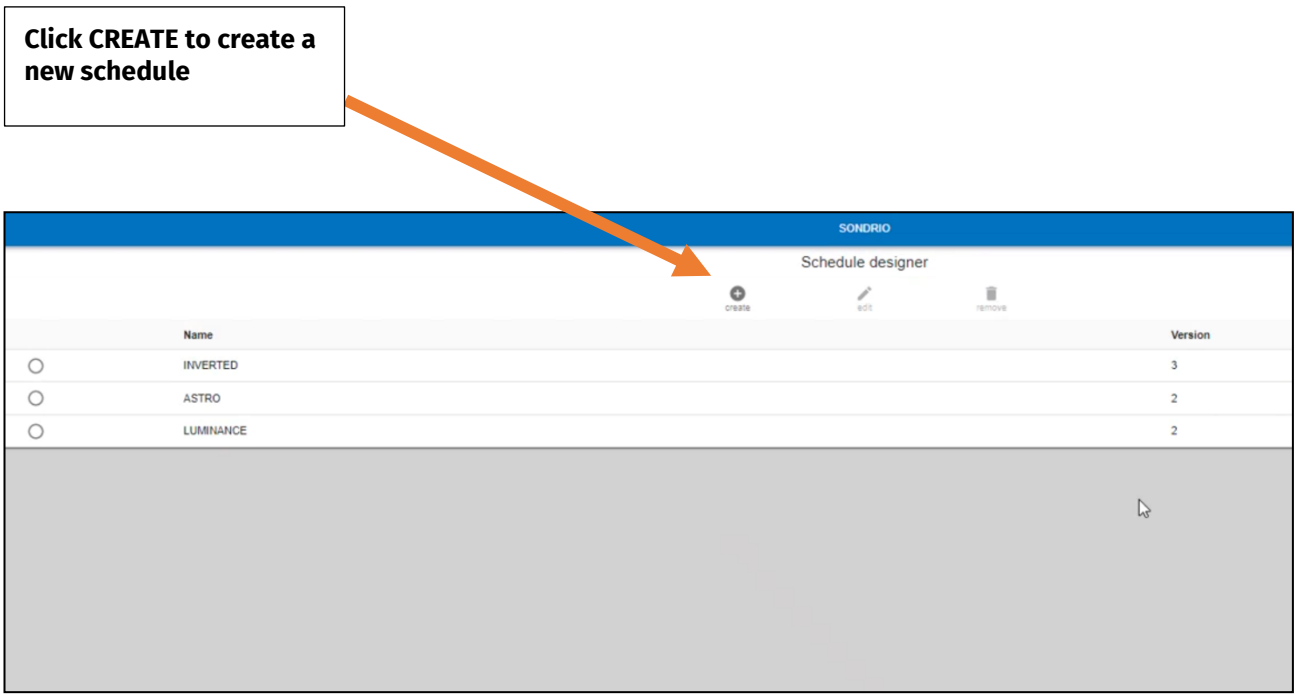


Figure 59: Click CREATE to Create a New Schedule

29. Creating a New Weekly Schedule with the Schedule Designer

The Schedule Designer allows users of the Config Tool to create a weekly lighting schedule for a lighting node.

The figure below shows the default user interface for the Schedule Designer.

Figure 60: The User Interface for the Schedule Designer

Now let's go step-by-step through the process to create a weekly schedule that adheres to the following lighting rules:

- The light **ABSOLUTELY MUST** be OFF between sunrise and sunset (see **BLUE** area in the figure below)
    - It doesn't make sense for the light to be ON while the sun is up, since that is a waste of energy
    - We will use an **ASTRONOMICAL** command for this behavior since that command deals with the position of the sun
    - We will add a delta that the inactive period is 5 mins after sunrise and 5 mins before sunset

- At 5 AM the light must be increased to 100% and remain at 100% also when the astronomical period starts, until a subsequent fixed time event is scheduled.
- Between 11pm and 5am, the light should remain ON, but the power level should be decreased from 100% to 50% (see **VIOLET** area in the figure below)
    - The light will already be ON at sunset, however since there will be fewer people on the street at from 11pm to 5am, we can save power
    - We will use a **FIXED TIME** command for this behavior
- If motion is detected during the active period, then increase to brightness to 100% (see **GREEN** area in the figure below)
    - If no movement is detected, then reduce the brightness back to 50% to save power
    - We will use a **MOTION SENSOR** command for this behavior

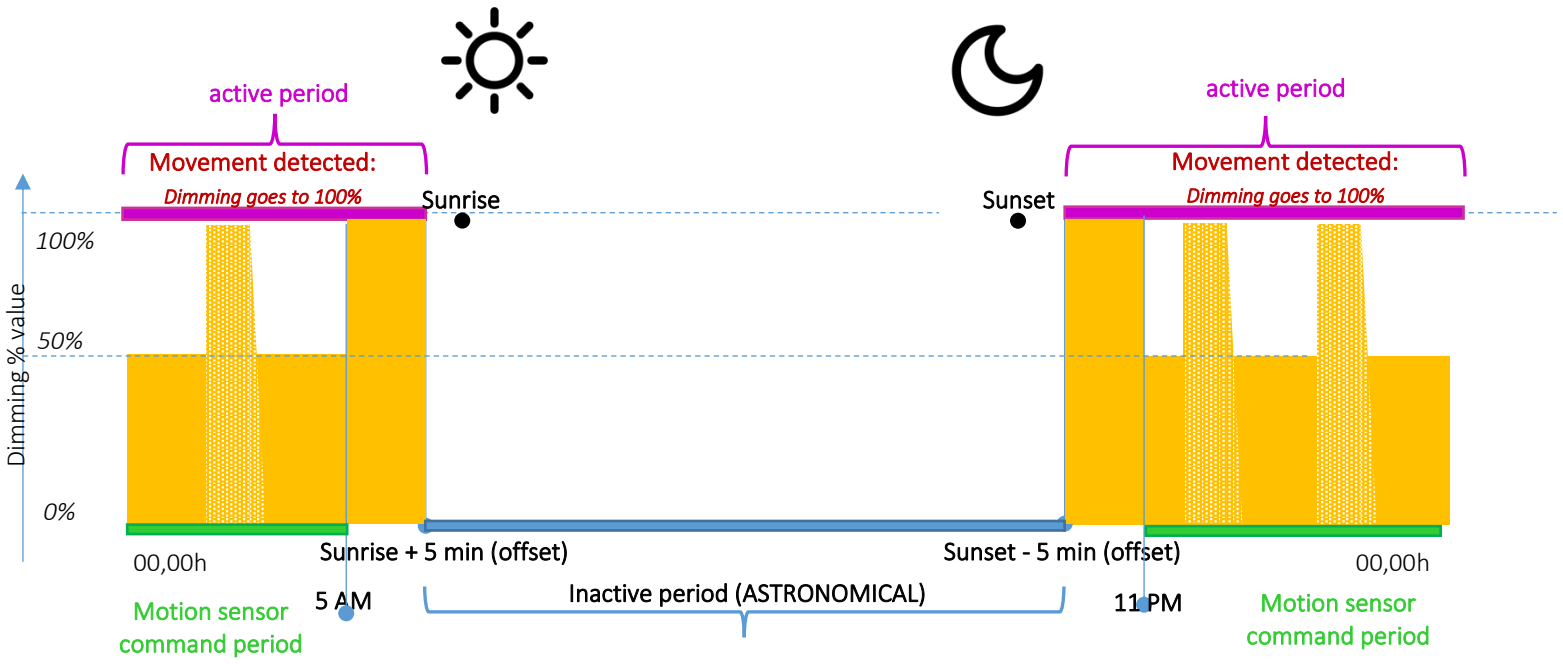


Figure 61: Example Lighting Schedule

29.1 Type the Name of the Schedule

The first step to create a weekly lighting schedule is to specify a unique name for the lighting schedule. Let's call this schedule, "**Pedestrian**", as shown in the figure below.

Click the **ADD RULE** button to continue.

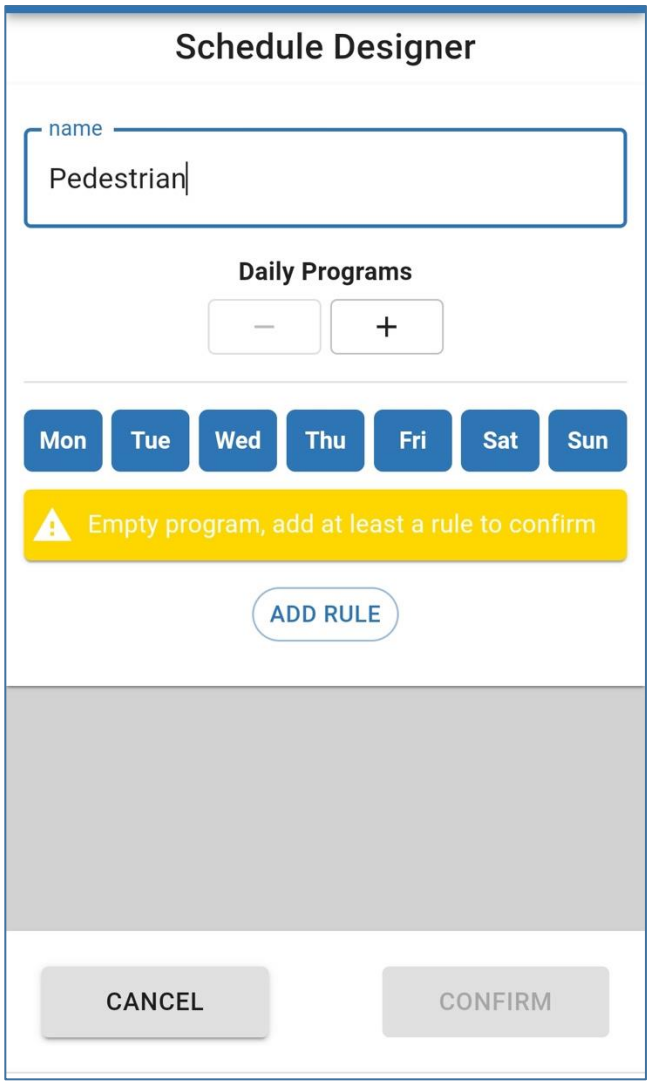


Figure 62: Specify a Name for the New Weekly Schedule

29.2 Add an Astronomical Command to Respond to the Natural Daylight

Let's select the command to "**Astronomical**", and specify the desired delay from sunrise and sunset to activate.

The Astronomical command is used to define the period of time where all the other command rules are inactive. Inside the Astronomical period of time the luminaire is turned OFF and any command eventually scheduled is not executed.

Click the **ADD** button to continue.

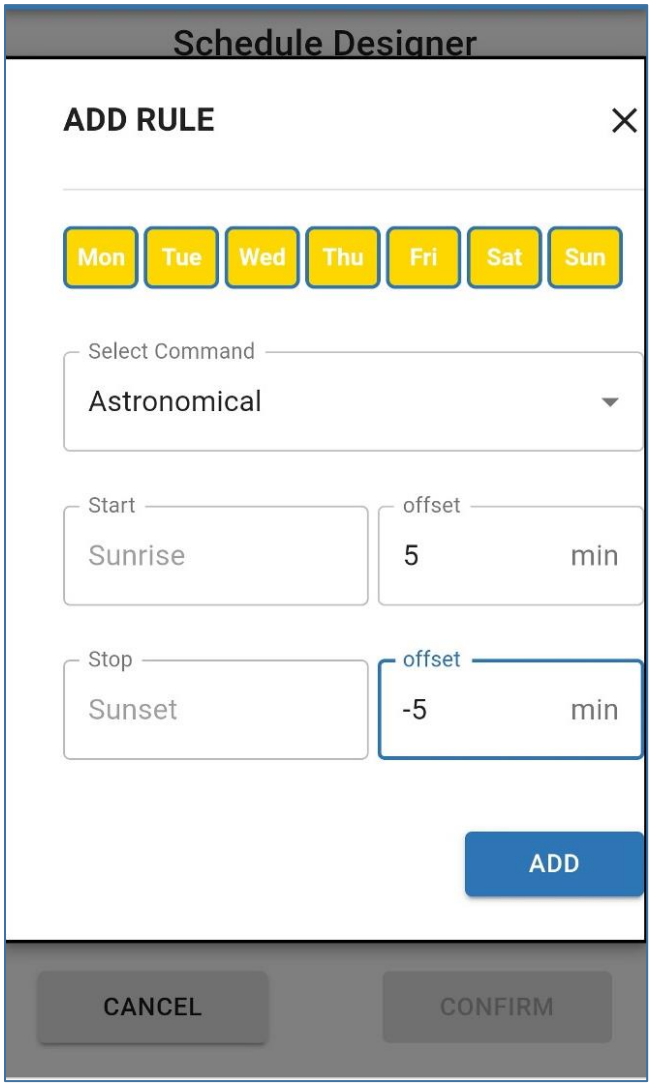


Figure 63: Adding an Astronomical Command

29.3 Create a Fixed Time Command to Activate the Light at Night

Now that we have an astronomical rule (see the figure below), the next step is to create a fixed time command.

Click the **ADD RULE** button, and then select **FIXED TIME** as the command.

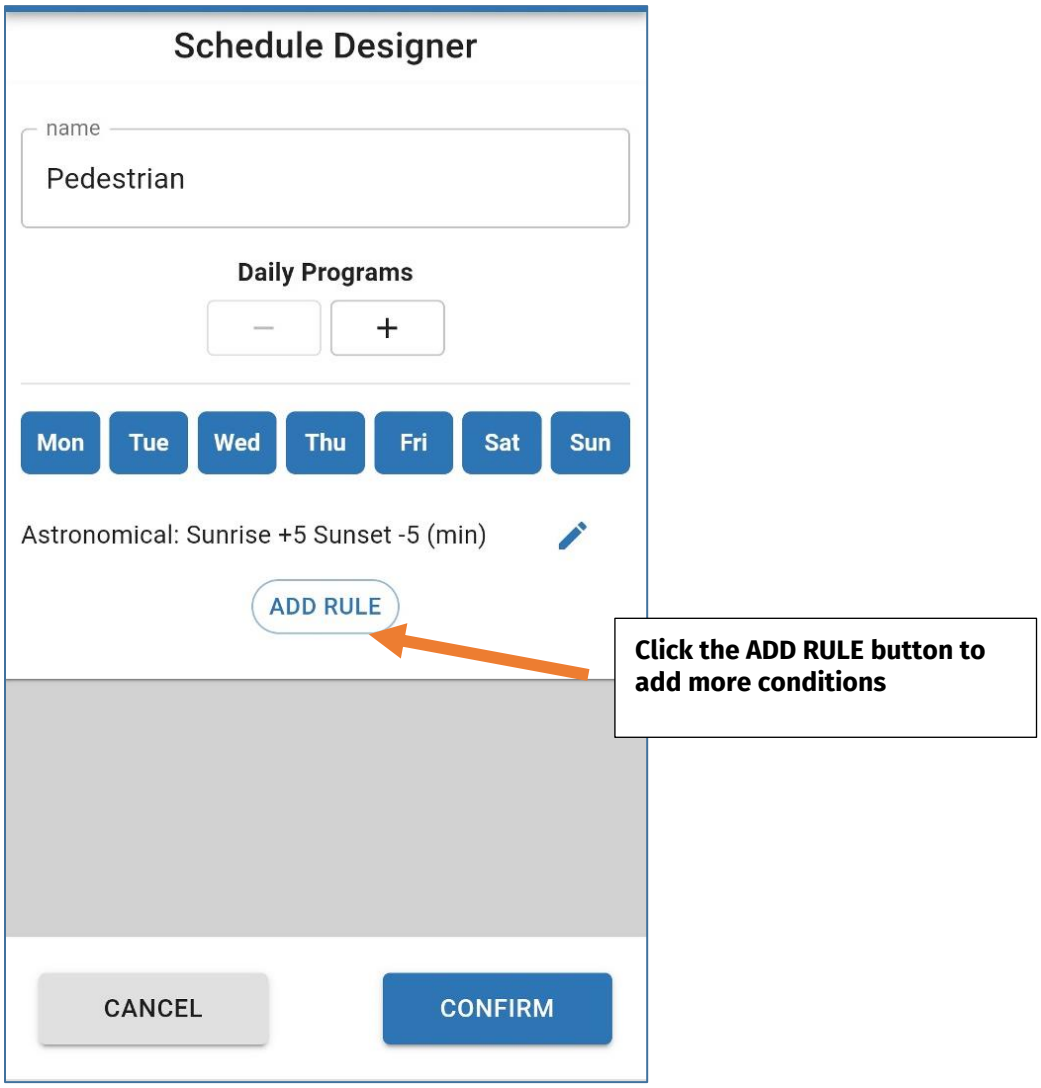


Figure 64: Adding Another Rule for the New Weekly Schedule

29.4 Specify the Brightness for the Light at 11pm

Let's specify that the light should be ON at 50% brightness at 11pm.

Click the **ADD** button to continue, and then click the **ADD RULE** button (not shown).

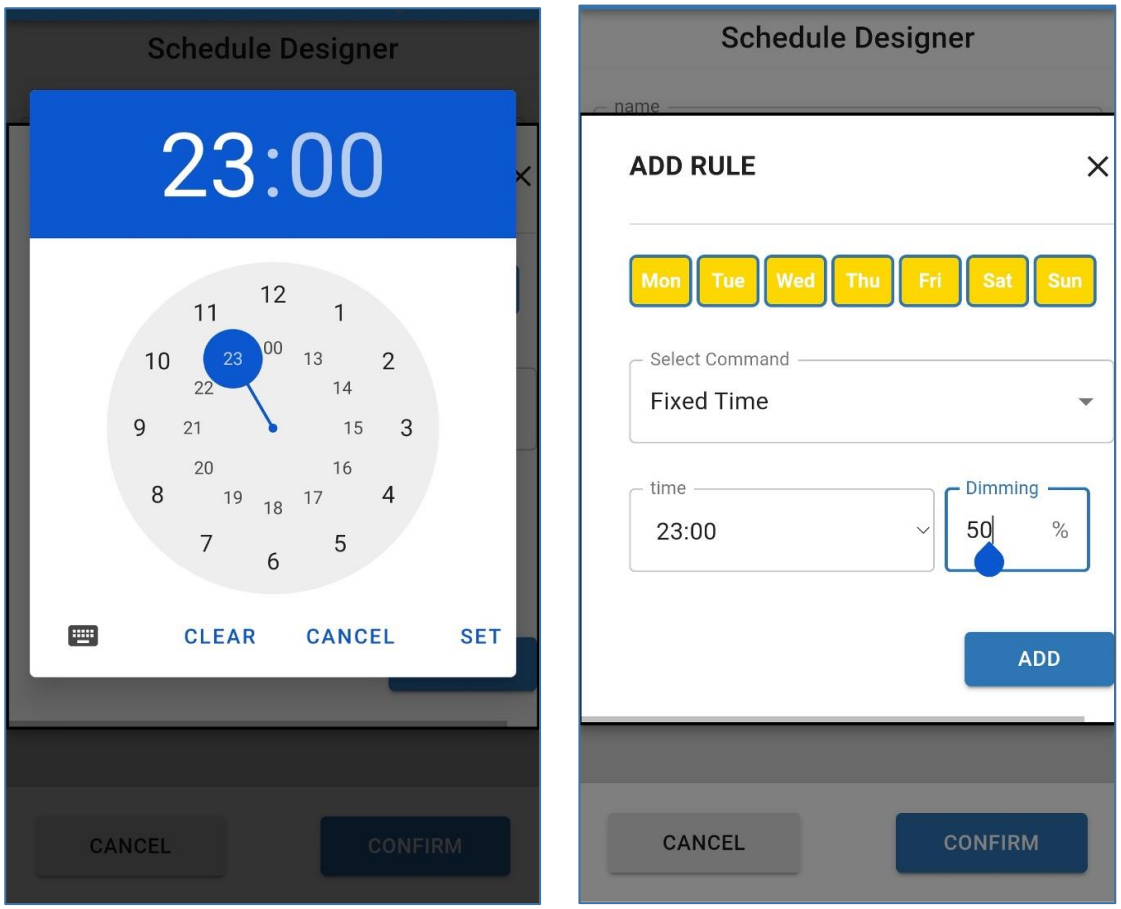


Figure 65: Specify the ON Time and the Brightness %

29.5 Specify the Brightness for the Light at 5am

Let's specify that the light should be ON at 100% at 5am.

Click the **ADD** button to continue, and then click the **ADD RULE** button (not shown).

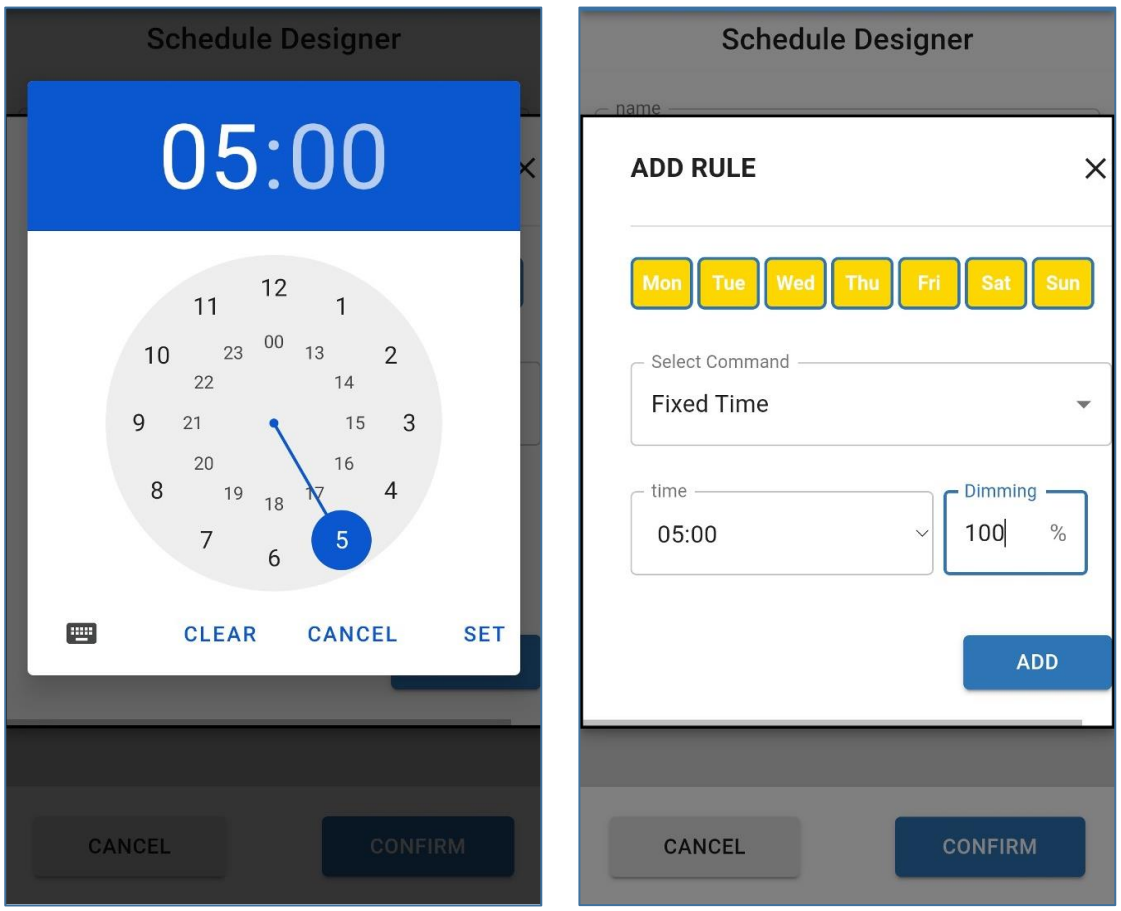


Figure 66: Specify the ON Time and the Brightness %

*

29.6 Examine What We Have So Far

Let's pause and examine what we have so far. Please make sure that your screen is similar to what is shown in the figure below.

We have the rules for **Astronomical** and **Fixed Time** in our schedule. Let's continue by adding a rule for **Motion Sensor**.

Click the **ADD RULE** button.

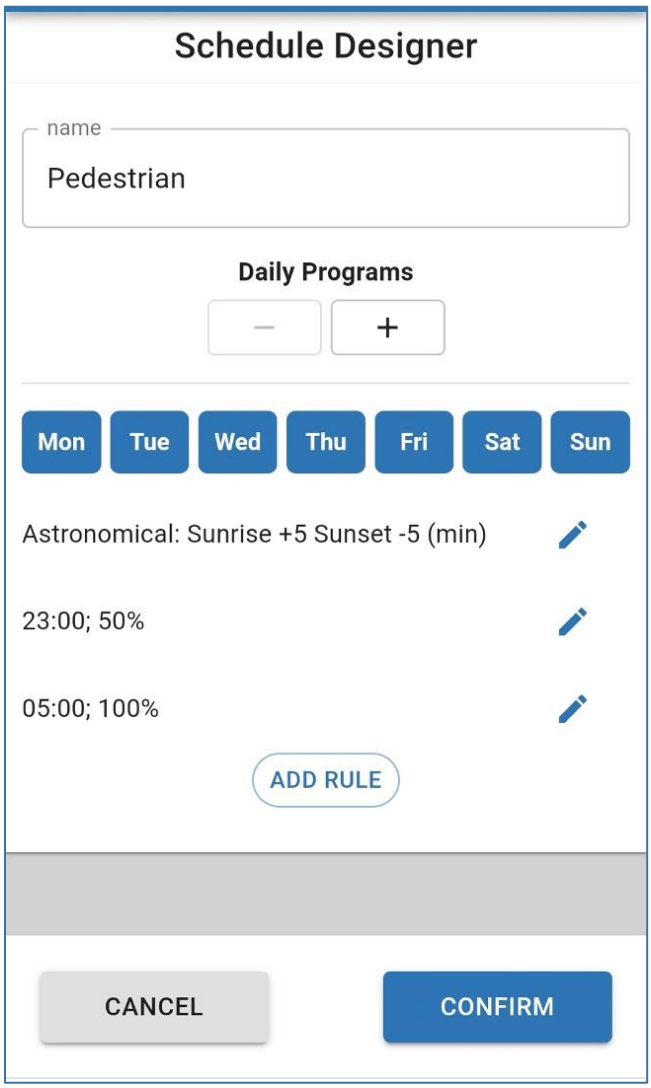


Figure 67: New Weekly Schedule

29.7 Create a Motion Sensor Command to Activate the Light

Specify that the light should be set to 100% brightness from 11pm to 5am (with a fade out time of 5 secs) if motion is detected, as shown in the figure below.

Click the **ADD** button to continue.

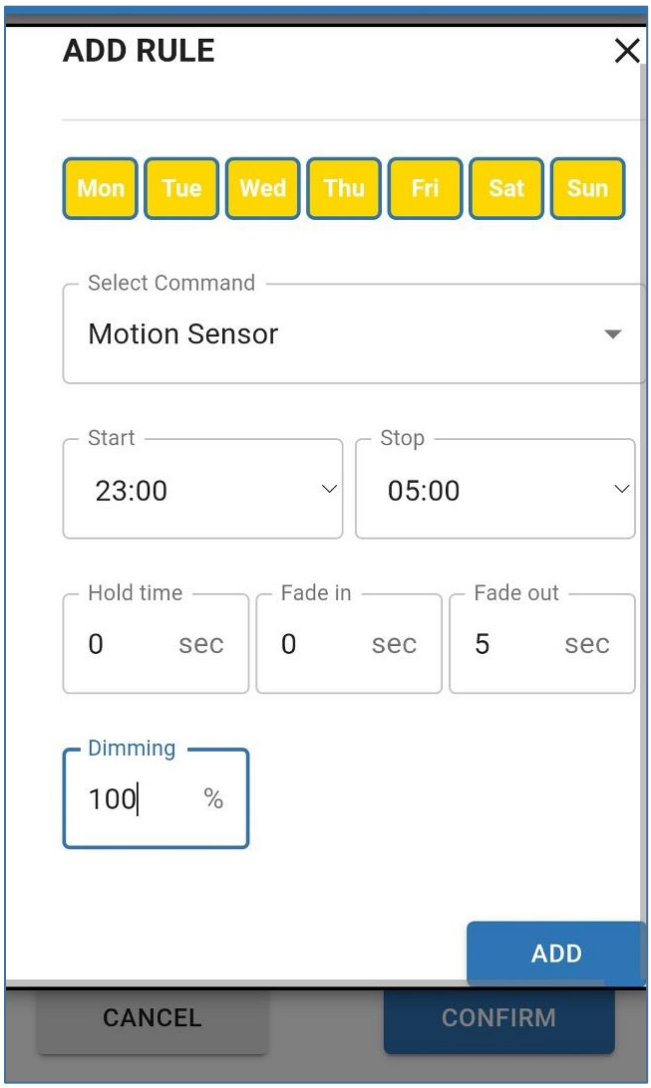


Figure 68: Add Motion Detection for the New Weekly Schedule

29.8 Specify the Days of the Week for the Rules to Run

We have now created a “Control Program”, which is a group of rules for our lighting schedule.

For the purpose of this tutorial, let’s have one Control Program to run Sun – Thu, and a different Control Program for Fri and Sat.

As shown in the figure below:

- Add a new Control Program
- De-select Friday and Saturday for the original Control Program
- Select Friday and Saturday for the new Control Program

Click the **ADD RULE** button to proceed.

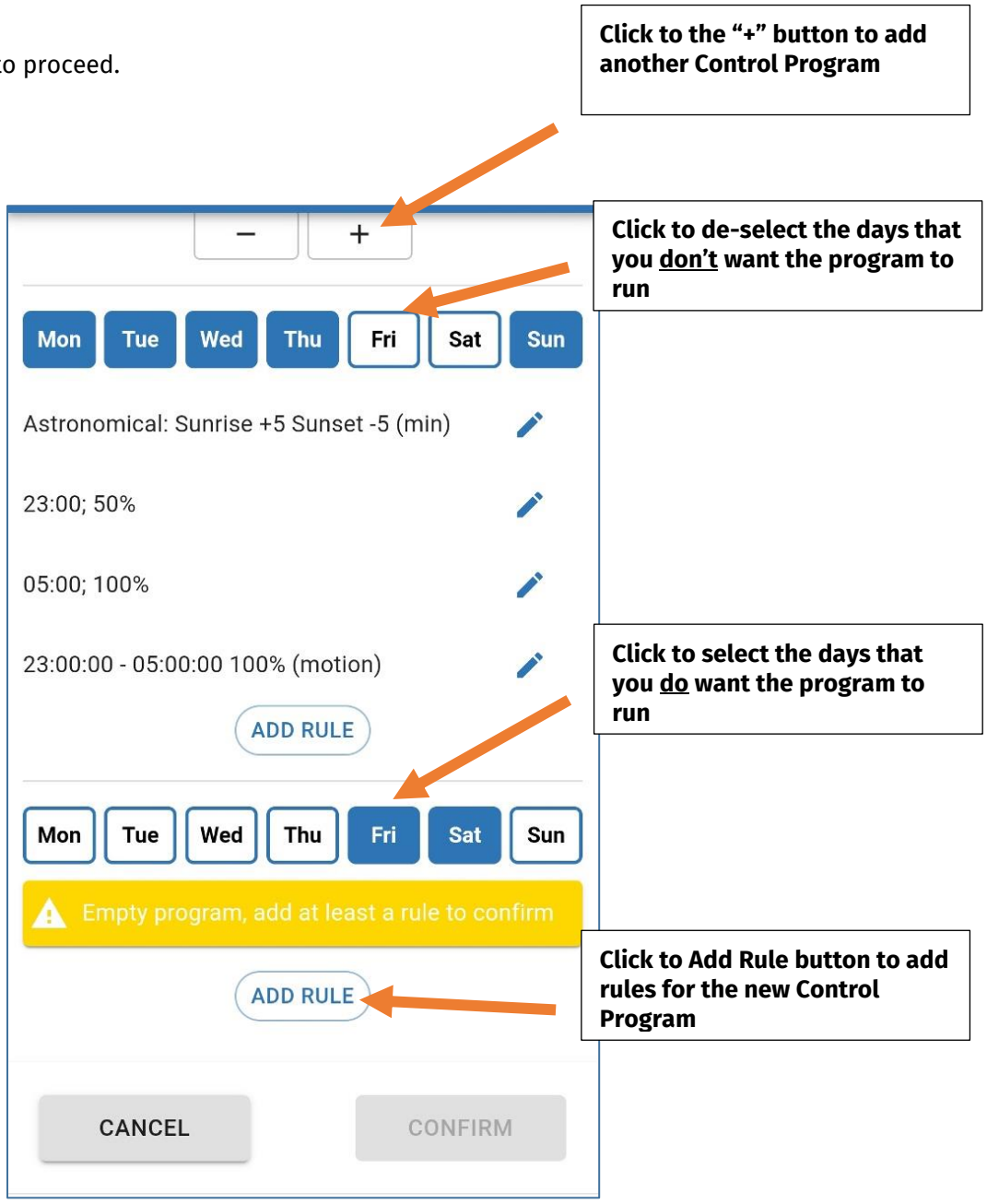


Figure 69: Specifying the Days for the Weekly Schedule

29.9 Add an Astronomical Command

Let's select the command to "**Astronomical**", and specify the desired delay from sunrise and sunset to activate.

Click the **ADD** button to continue.

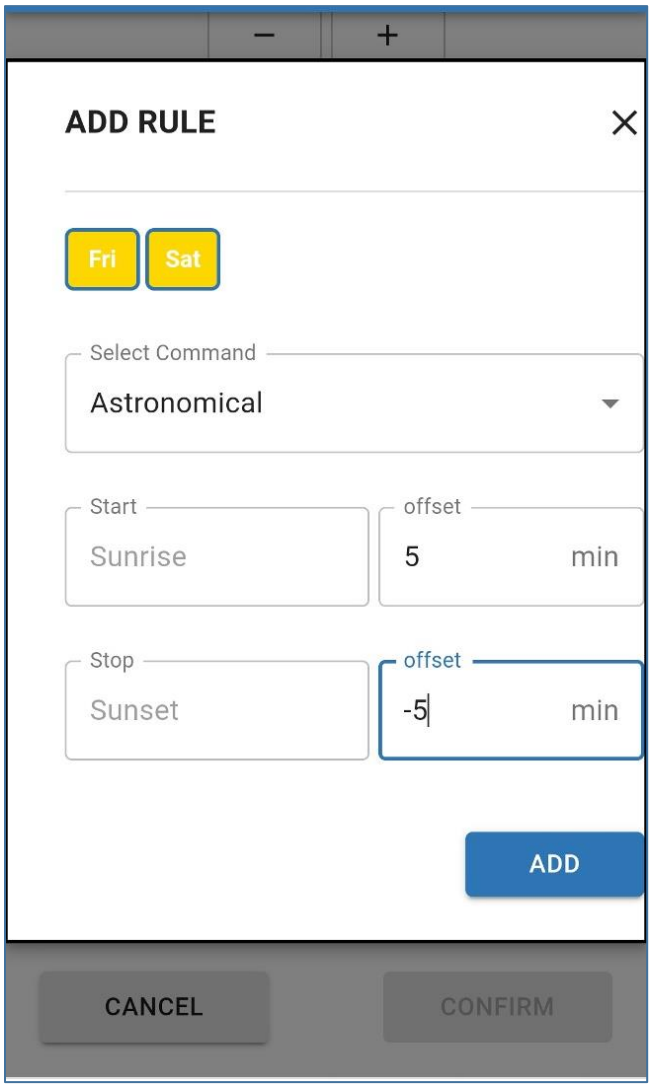


Figure 70: Adding An Astronomical Command for the New Weekly Schedule

29.10 Add a Fixed Time Command - 2am at 50% Brightness

Select Fixed Time, and set the light at 50% brightness at 2am.

Click the **ADD** button to continue.

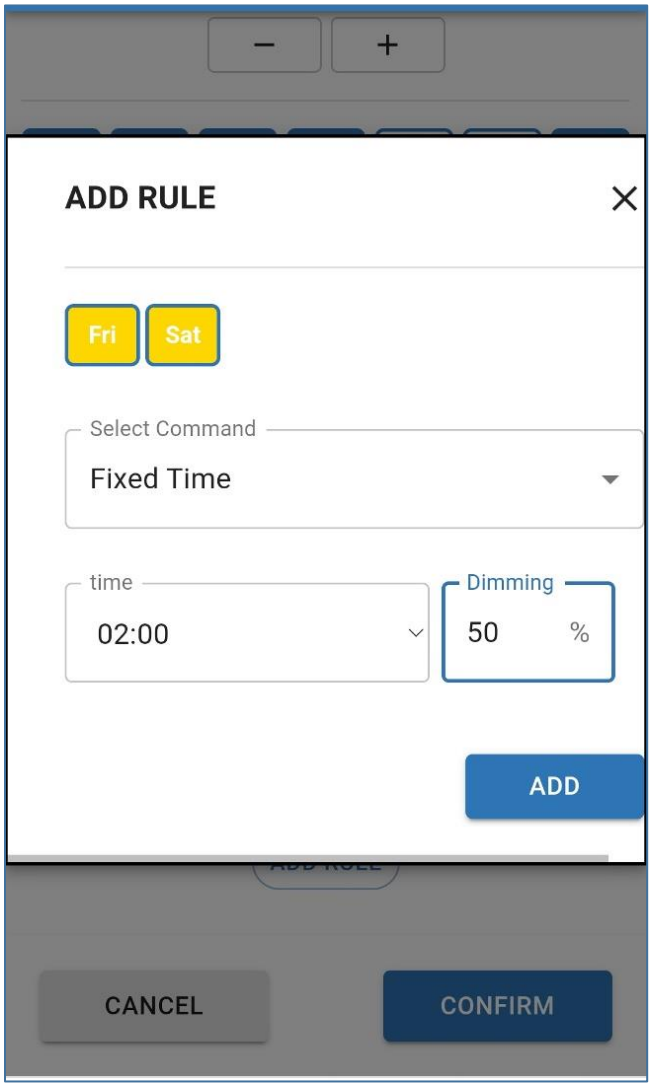


Figure 71: Adding a Fixed Time Rule for the New Weekly Schedule

29.11 Add Another Fixed Time Command - 5am at 100% Brightness

Ok, now let's add another rule. Select Fixed Time, and set the light at 100% brightness at 5am.

Click the **ADD** button to continue.

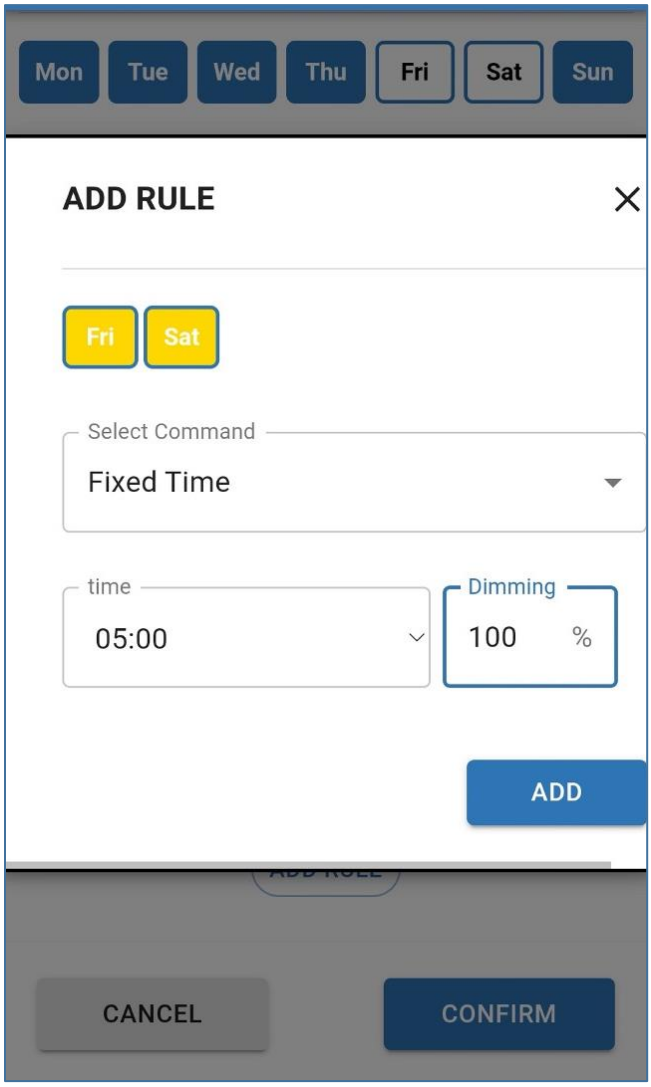


Figure 72: Adding a Fixed Time Rule for the New Weekly Schedule

29.12 Add a Motion Sensor Command

Ok, now let's add a Motion Sensor command. The Motion Sensor will set the light at 100% brightness if motion is detected from 2 - 5am.

Click the **ADD** button to continue.

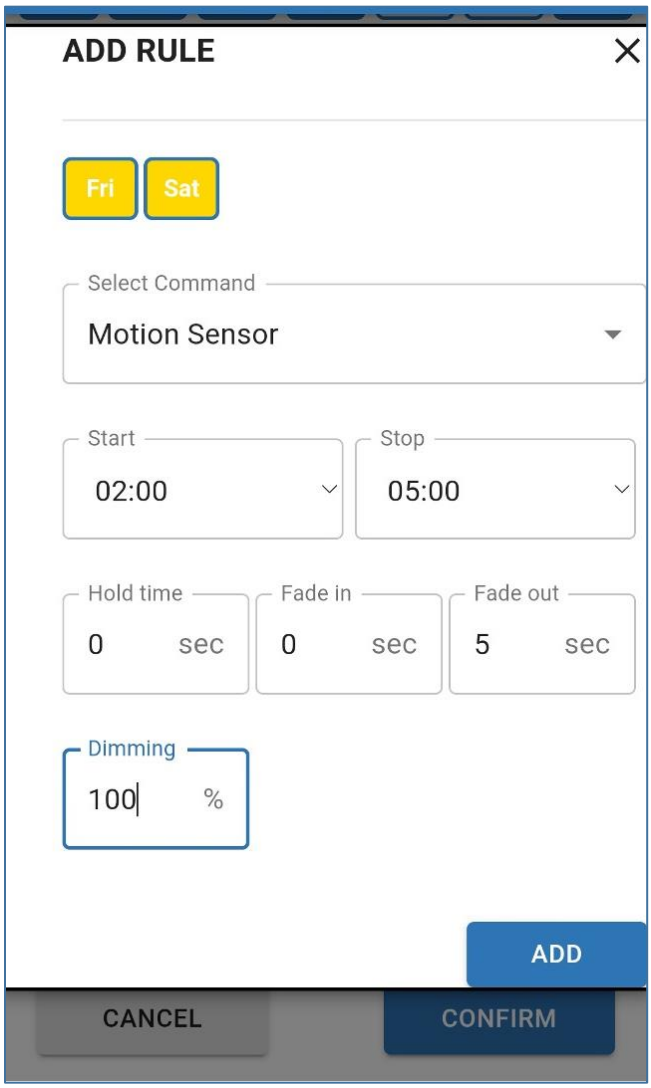


Figure 73: Adding a Fixed Time Rule for the New Weekly Schedule

29.13 Final Step! Let's Review the New Schedule

If you have been following the steps of this tutorial, please review the figure below to ensure that you have two Control Program to run on different days of the week, each with different fixed time rules.

Click the **CONFIRM** button to create the new schedule.

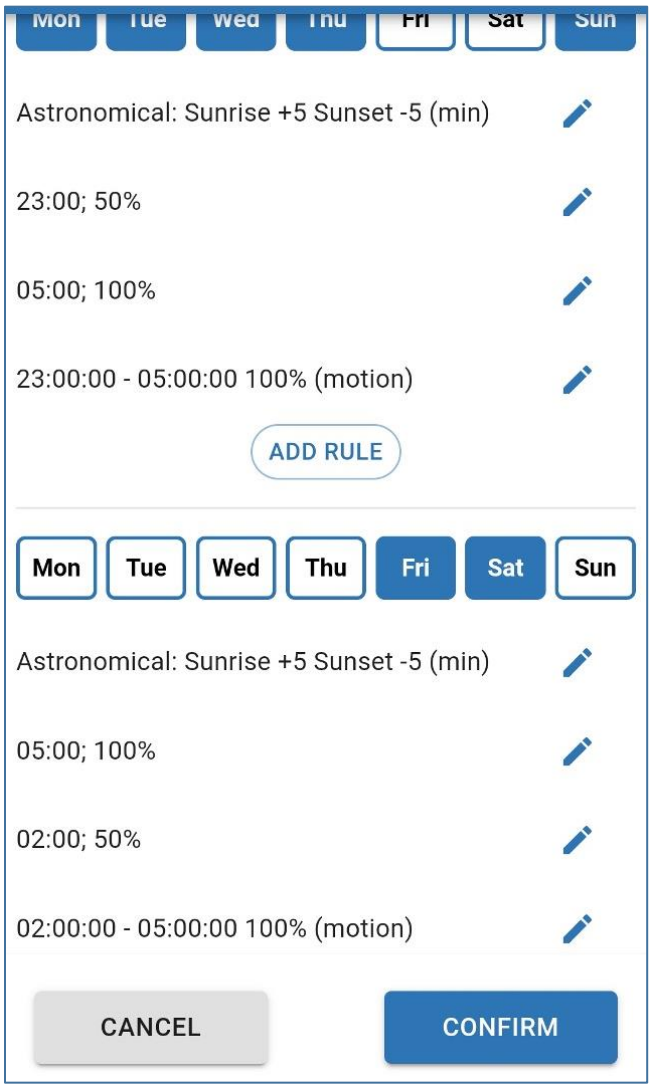


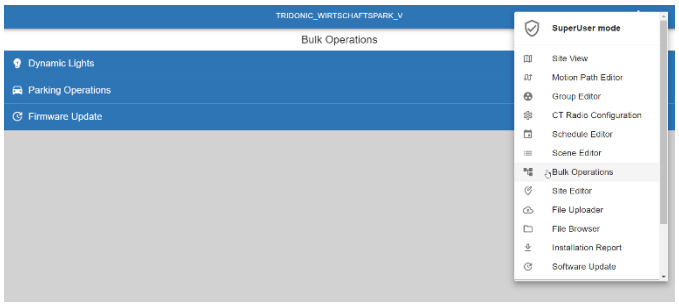
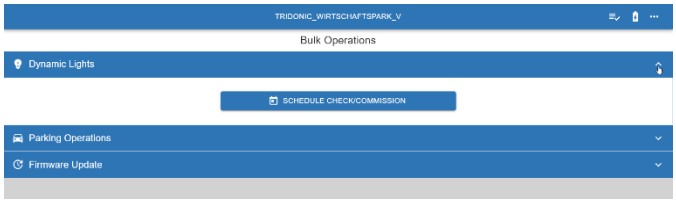
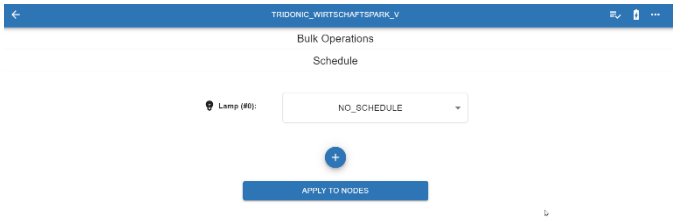
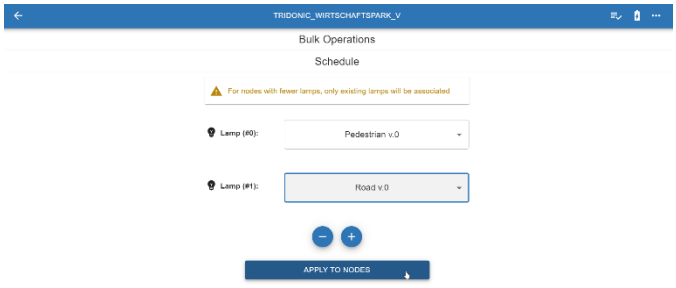
Figure 74: Reviewing and Finalizing the New Weekly Schedule

29.14 How to upload a schedule to a luminaire

Schedules can be programmed to a node and their lamps in three different ways:

- upload a schedule via bulk operations
- upload a schedule to a single node
- upload a schedule to a single node during installation

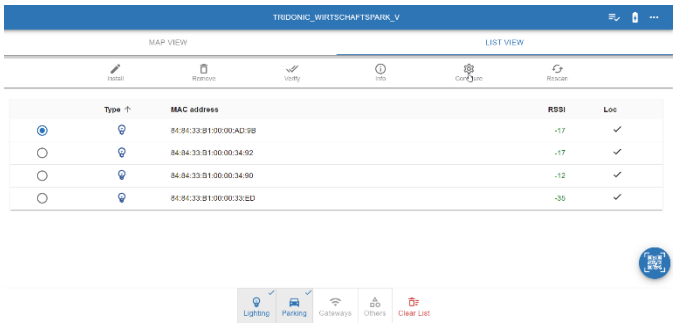
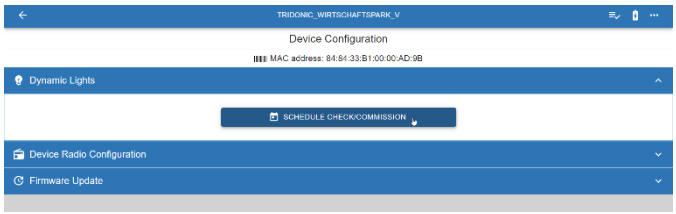
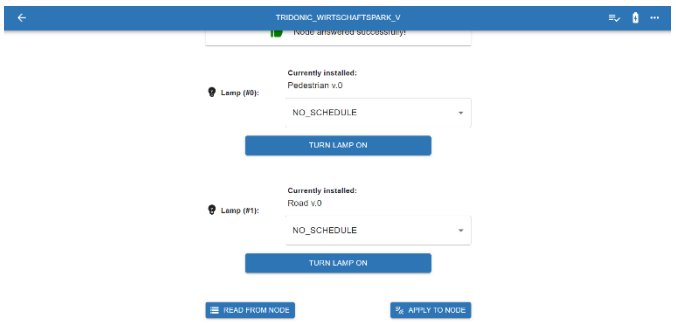
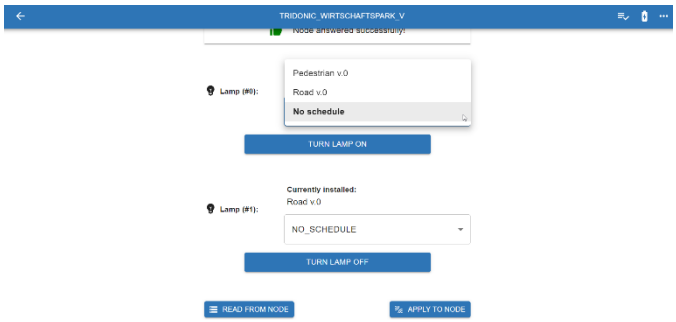
29.14.1 How to upload a schedule via bulk operations

Visual	Description
	• Select the 3 dots on the top right side. • Select "Bulk Operation".
	• Select the arrow on the right side and expand the section "Dynamic Lights". • Select "Schedule Check/Commission".
	→ In the next window you see Lamp 0 and the schedule. → You can select which schedule you like to program to all Lamps 0 in your Installation. • Select the + sign if you like to program additional lamps.
	• Selected the lamps and schedules. • Select "Apply to nodes". → The schedules will be programmed to your Installation.

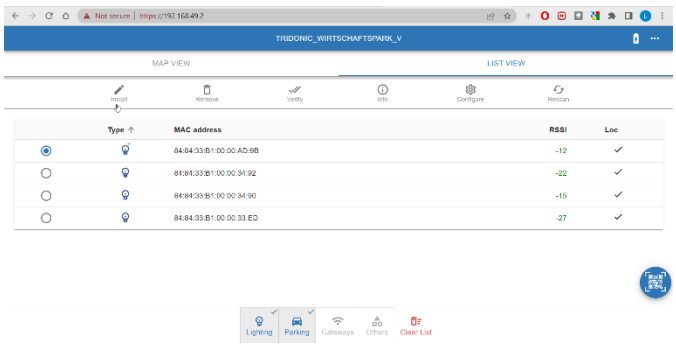
29.14.2 How to upload a schedule to a single node

Visual	Description

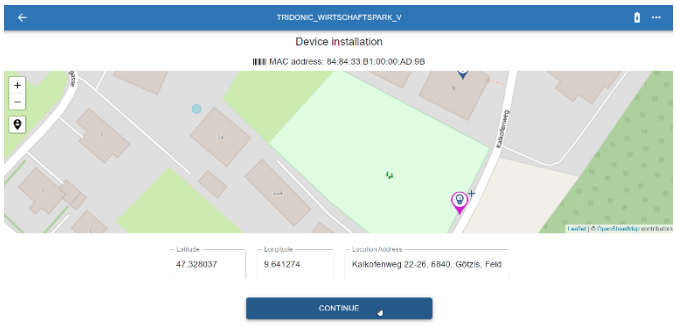
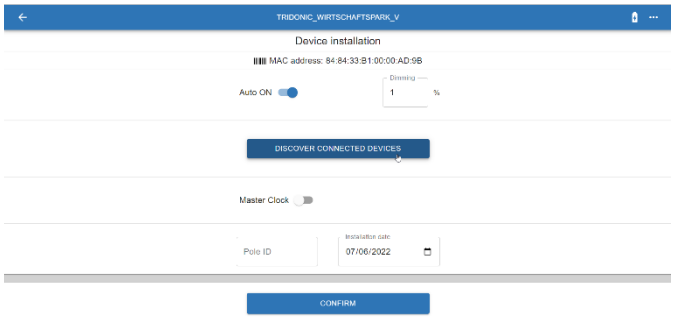
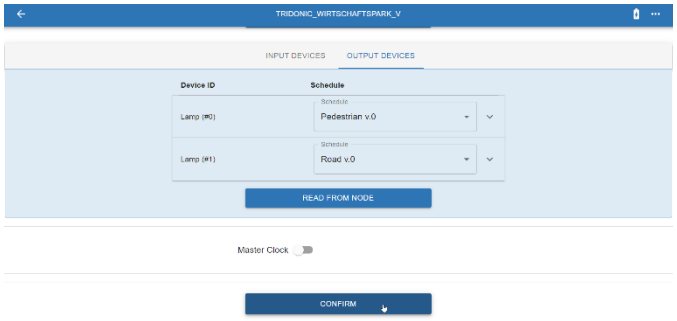
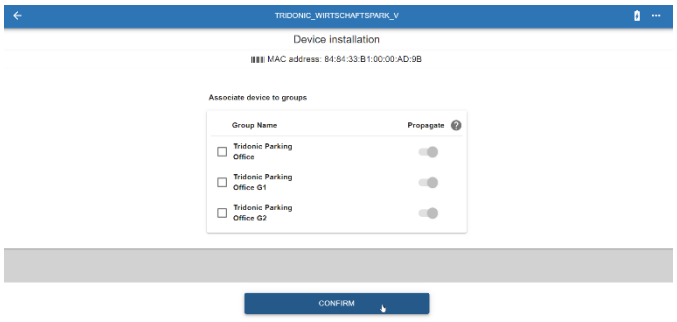
Creating a New Weekly Schedule with the Schedule Designer

	• Go to Site view. • Select the node to which you want to upload a schedule. • Select "Configure".
	• Expand the "Dynamic Lights" field. • Select "Schedule Check/Commission".
	→ You can see the lamps connected to that node and the currently installed schedules.
	• Select "Turn lamp on/off" to identify the lamp. • Use the new schedule filed to select the schedule you would like to upload to the lamp. • Selection "READ FROM NODE" to read out the values form the node. • Select "APPLY TO NODE" to apply the new schedules to the node.

29.14.3 How to upload a schedule to a single node during installation

Visual	Description
	• Go to Site view. • Select the node you wish to install.

Creating a New Weekly Schedule with the Schedule Designer

	• Make sure the node is on the correct position. • Select "CONTINUE".
	• Select "DISCOVER CONNECTED DEVICES".
	• Select output devices. → In this case you see there are two lamps. • Select the schedules you would like to install to the lamps. • Select "CONFIRM".
	• Add your luminaire to a group. • Select "CONFIRM". → Your node will be installed to your site and the schedules will be uploaded.

29.15 Editing an Existing Schedule

From the schedule designer page it's also possible to modify an existing schedule.

Simply select the schedule to be changed and click the **EDIT** button.

Once you have finished applying the changes, the schedule version is incremented automatically. The Schedule version is used to keep track of the fact that a schedule already deployed on a device might be changed later and the new version is different from the previous one.

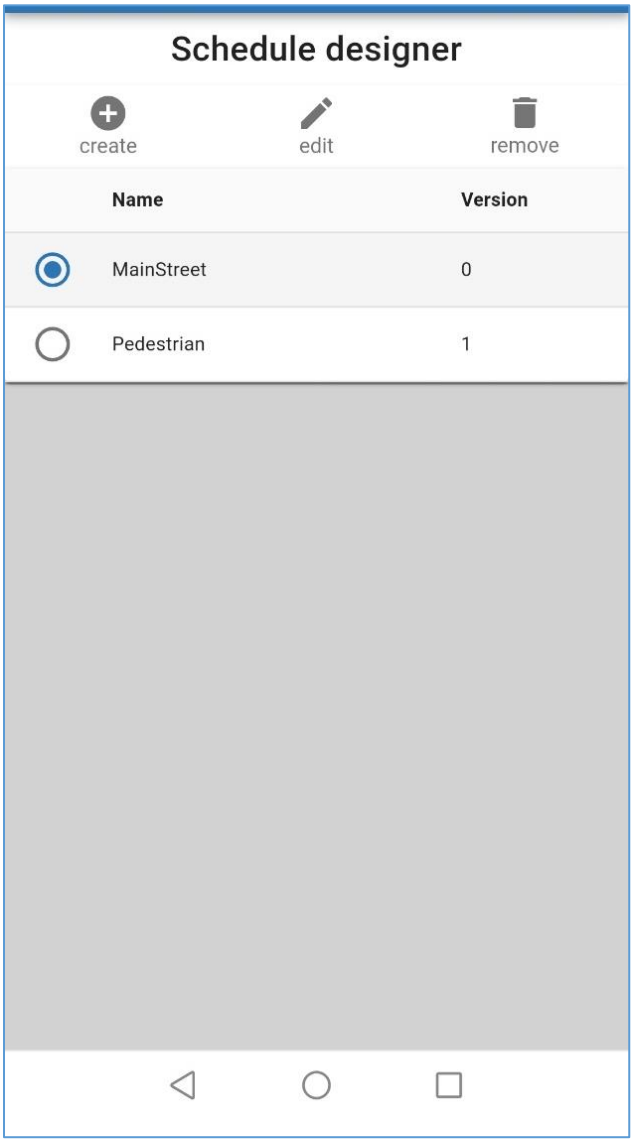


Figure 75: Editing a Weekly Schedule

30. Using the Scene Editor

A ***Scene*** is situation when a defined number of lighting lamps are set to a desired level.

For **example**, in a Smart City there is a dedicated area for generic events that is covered by five lighting lamps and the User wants to configure four scenes:

- Scene1: two lamps of out five should be ON at 50% of their level
- Scene2: all five lamps should be ON at 50%
- Scene3: all five drivers should go to 100%
- Scene4: all lamps are turned OFF

NOTE: *Using scene, i.e changing dimming to a group of lights by simply pressing a button, could be performed **only** if you use the TRIDONIC push button DALI XC G3 CWM 30 DA2*

30.1 How to configure a Scene

The Scene Editor enables users to view and rename existing scenes that have been associated with your input devices (such as push buttons and motion sensors).

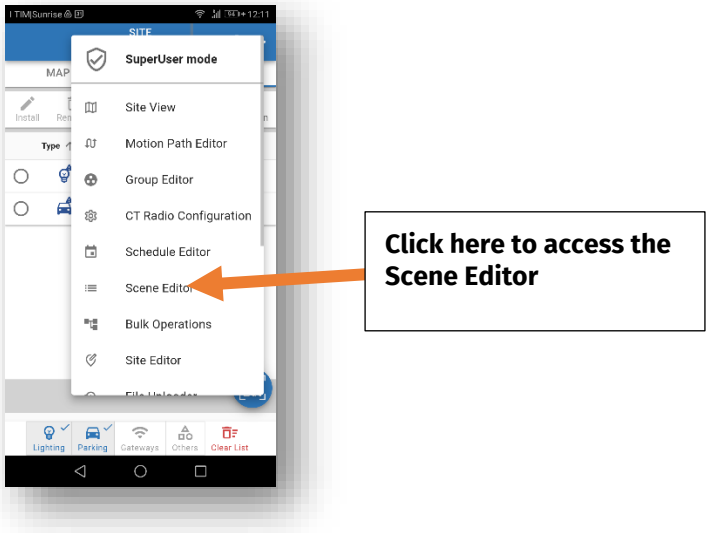


Figure 76: Accessing the Scene Editor

Using the Scene Editor

30.2 Creating a New Scene with the Scene Editor

The Scene Editor screen, as shown in the figure below, shows a list of previously created scenes.

Click the icon to rename the scene.
Actually, the label should be the same label you could physically place to the button.

Please note that Scene with ID from 0 to 79 are related to ***Motion sensor*** while ID from 80 to 160 are related to ***Push button***

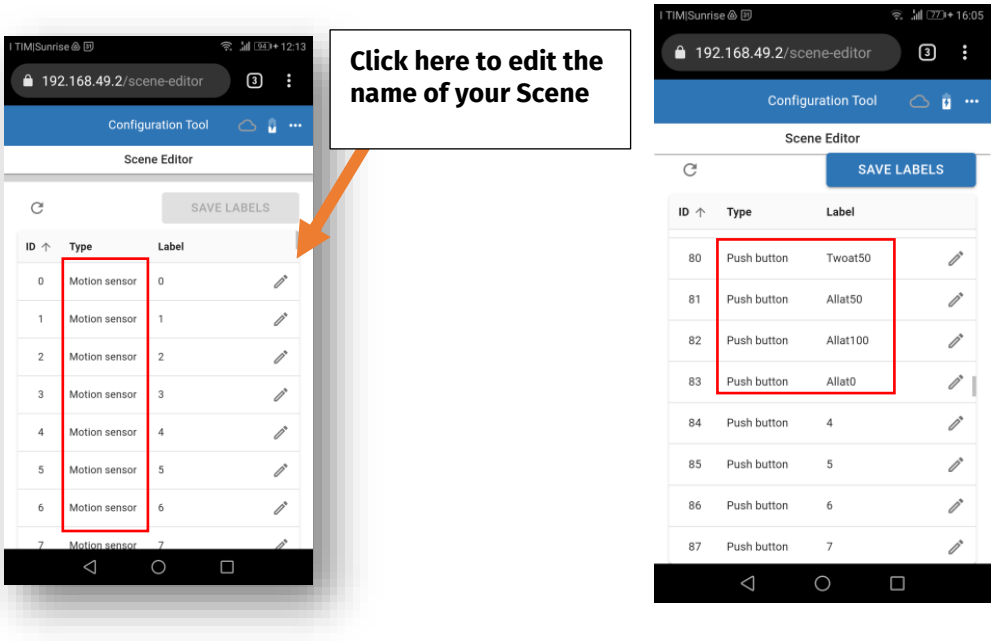


Figure 77: Click Icon to Rename a Scene

After labelling the scene, please press the **SAVE LABELS** button.

30.3 How to create a proper Schedule for a Scene

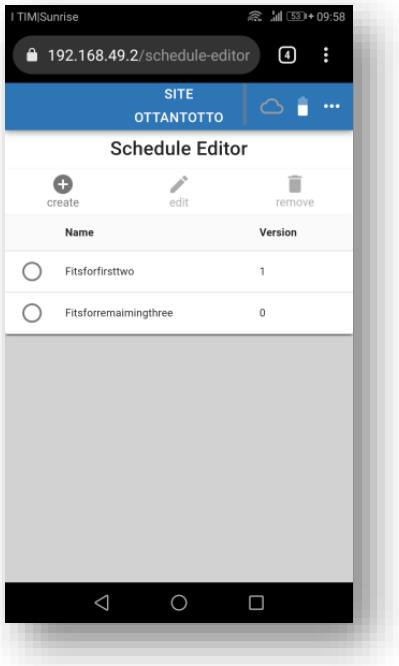
Following the example above, the logic behind its implementation is that 2 nodes have a different behavior from the remaining three: if fact Scene1 foresees only 2 lamps dimming at 50%, while Scene2 to 4 are common to all nodes.

For this reason, we should create two Schedules: one dedicated to two nodes and one that will be applied for the other three nodes.

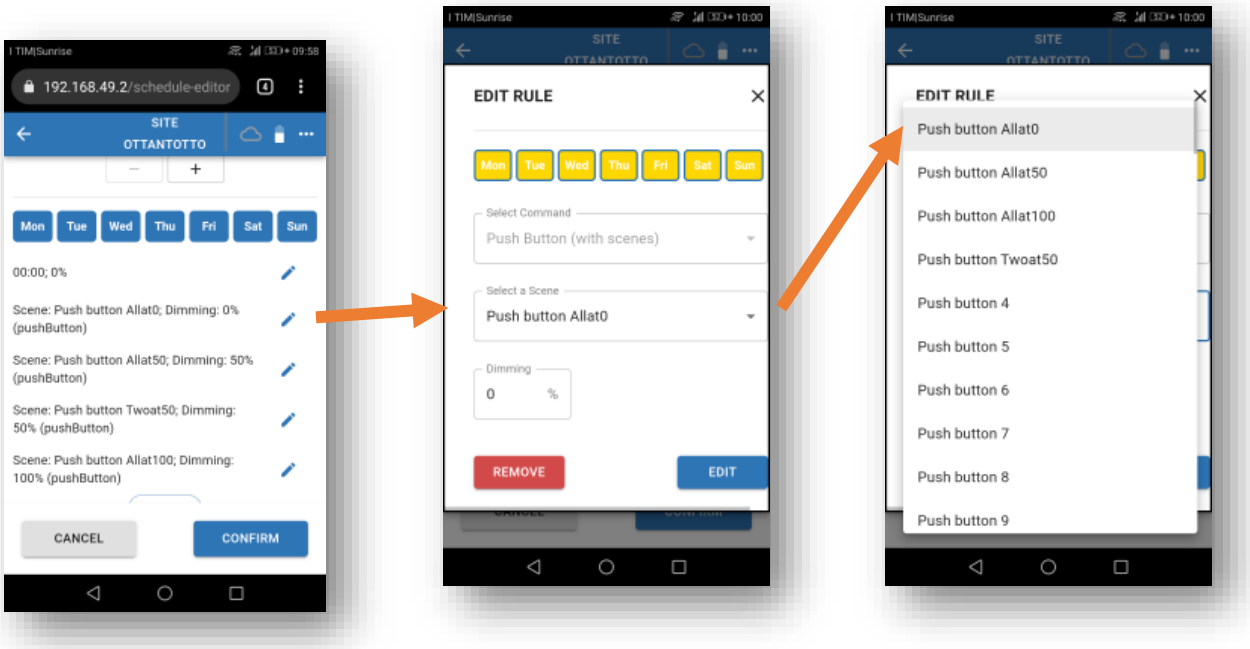
The first Schedule (to be applied only to the first two nodes), will define actions (called *Rules* into the Schedule editor) for all the four Scenes while the second Schedule (to be applied to remaining three nodes) will define actions only for Scenes 2 to 4.

Here below the example of the two Schedules created into the Schedule Editor:

Using the Scene Editor

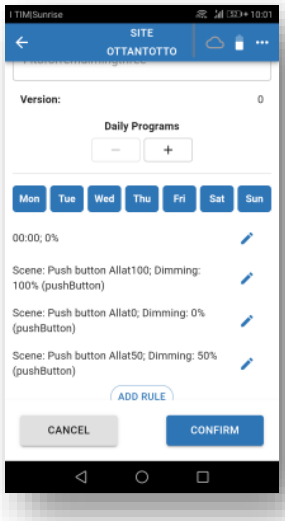


Let's check in detail the first one called *Fitsforfirsttwo*:



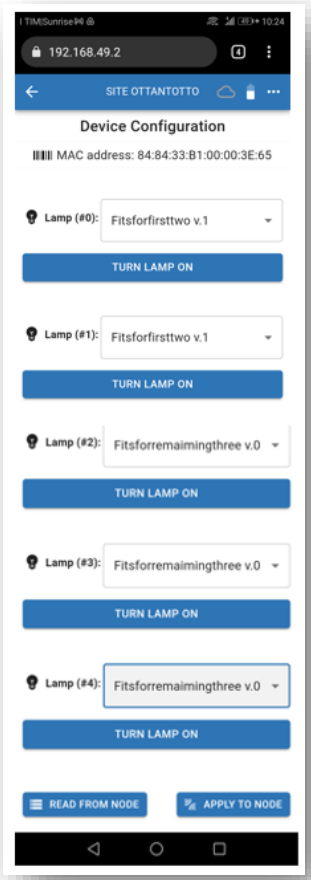
While the second Schedule, called *Fitsfortheremaining* three looks like:

Using the Scene Editor



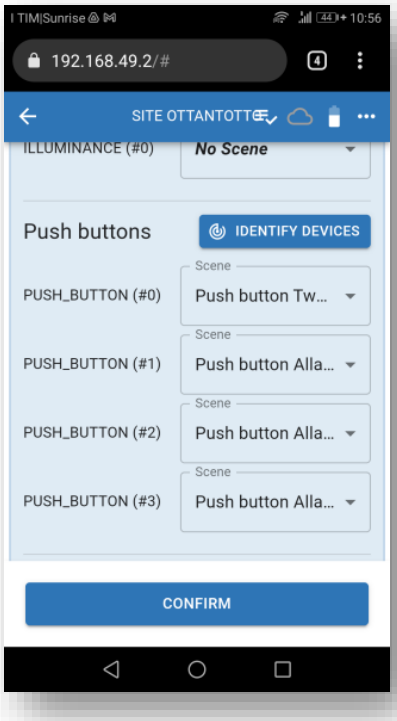
Now, first Schedule should be applied to first two nodes, while the second one to the remaining three nodes by using *SiteView/Configure/Dynamic Lights*

IMPORTANT NOTE: the approach described above could be used also in case a **single node controls multiple drivers or lamps**. In this case Schedules should be applied to different “lamps”



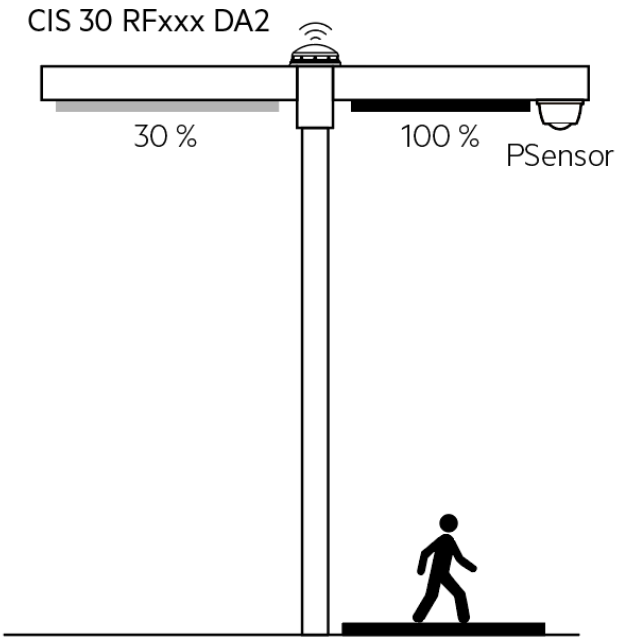
As last step, you should now commission the correct Scene to the node equipped with the button as described into the configuration paragraph.

Using the Scene Editor

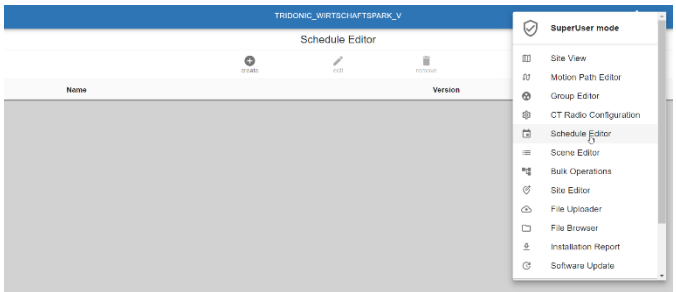
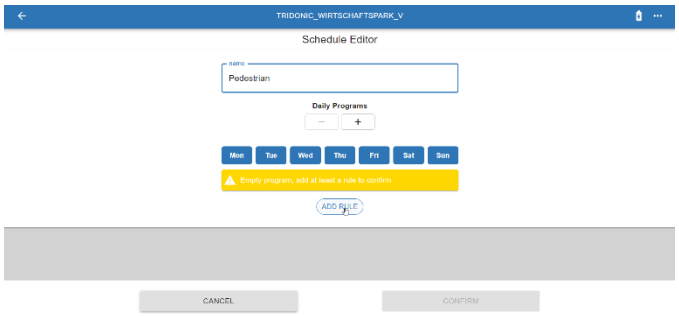


NOTE: *It is recommended to rename your Scenes so that they can be easily identified and understood.*

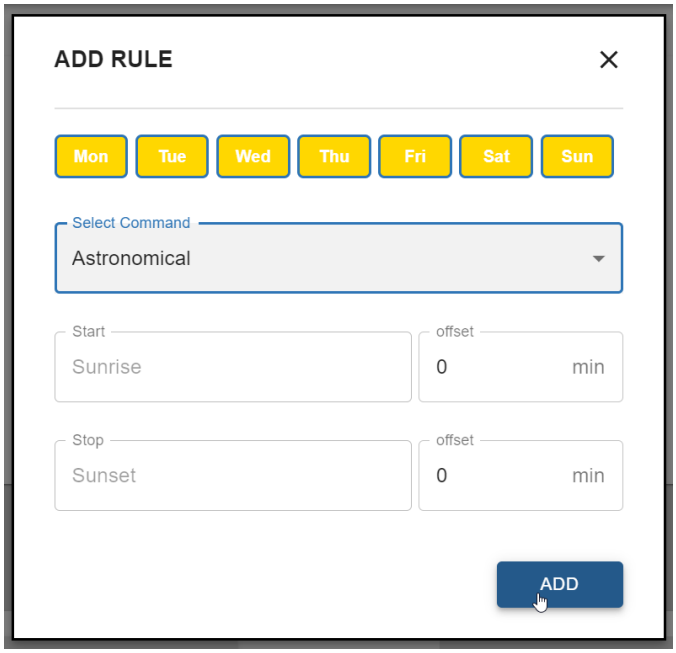
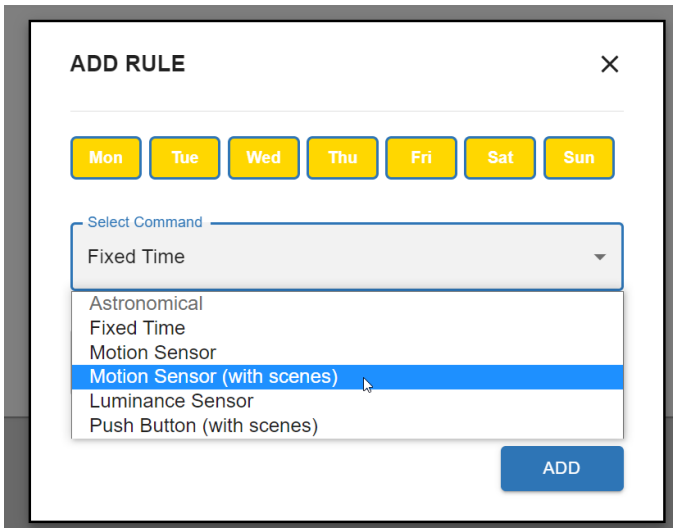
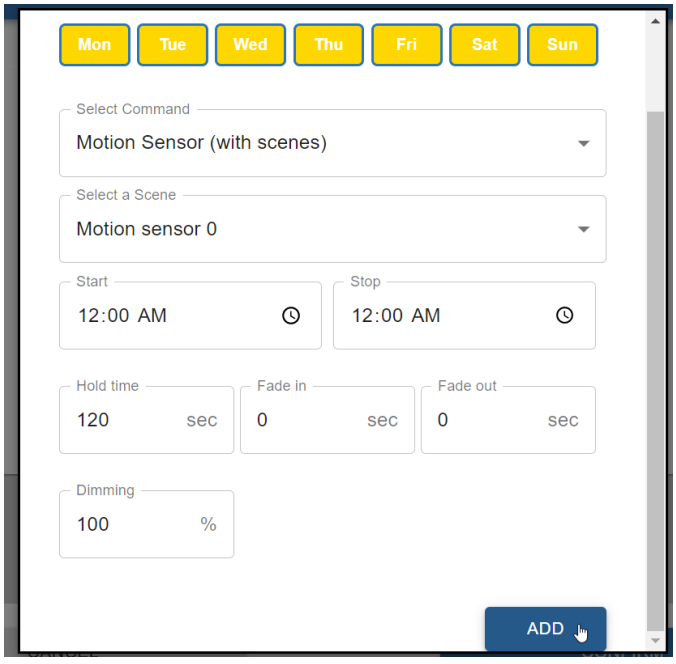
30.4 How to configure a luminaire with multiple heads in a way that the heads react differently to motion detected?



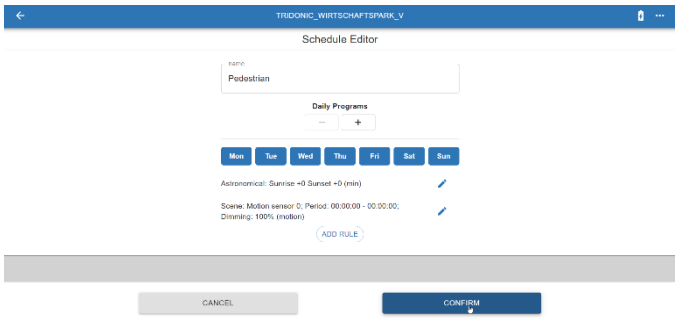
In some cases you may like to have different behaviours to motion with different heads of a luminaire.
In this case, we assume that we have a two head luminaire with one head illuminating the driveway and the other head illuminating the pedestrian area. On the pedestrian area we have a PSensor that detects motion from pedestrians. The goal is that this luminaire illuminates the pedestrian area to 100 % when motion of pedestrians is detected, and the driveway should be illuminated to 30 %.
In order to achieve this, we will use scenes and schedules in a combination.

Visual	Description
	First, you need to create two different schedules, one for the luminaire head above the driveway, one for the luminaire head above the pedestrian area. • Select the 3 dots on the right side to open the Schedule editor. • Select schedule editor. • Select create to create the first scheduler.
	First, we create the schedule for the pedestrian area. The name we use is "Pedestrian". Then, add the rules you would like to have.

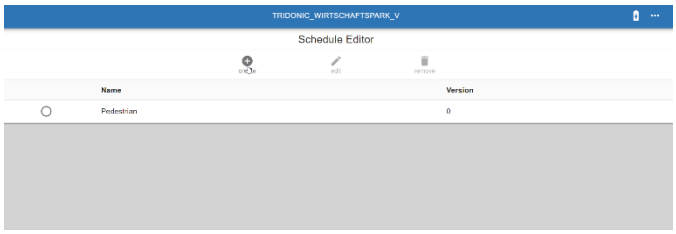
Using the Scene Editor

	The first rule to add is the "Astronomical" feature. With this, the light will stay off between sunrise and sunset.
	The next rule to add is "Motion Sensor (with scenes)".
	This rule is set up as follows: • Select the scene "Motion sensor 0". • Set the start time to 12:00 AM and the stop time to 12:00 AM => The Sensor scene will be active from sunset until sunrise. • Set the hold time to 120 seconds => The light will stay on for 120 seconds. • Set the "Dimming" to 100 %. • Select "ADD".

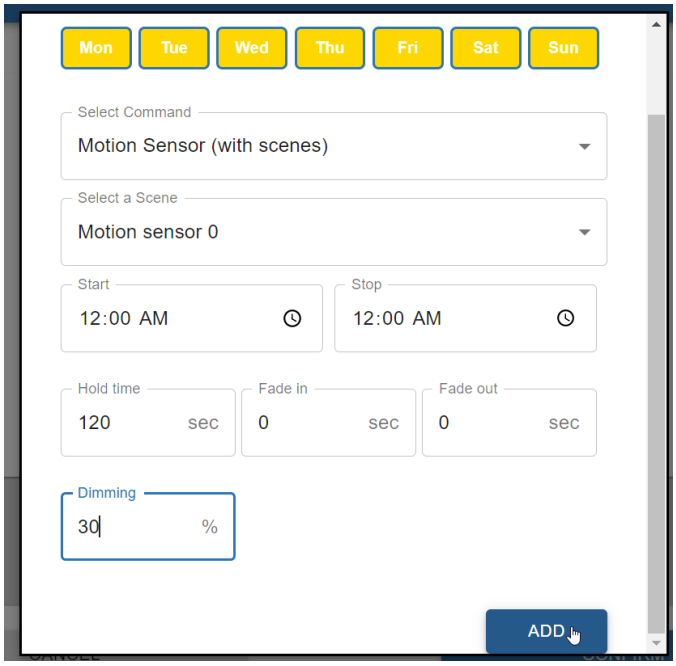
Using the Scene Editor



- Select "CONFIRM" to save the settings for the pedestrian area.

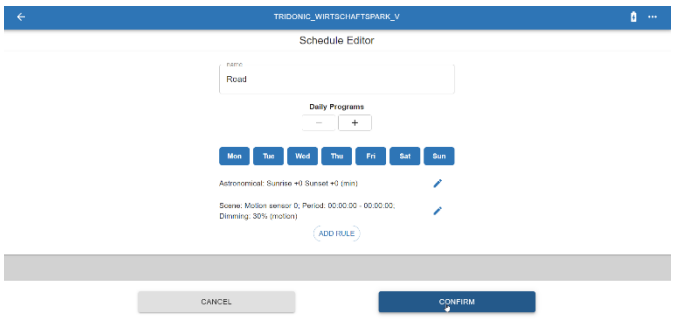


Then, we create the schedule for the driveway. The name we use is "Road". Then, add the rules you would like to have.



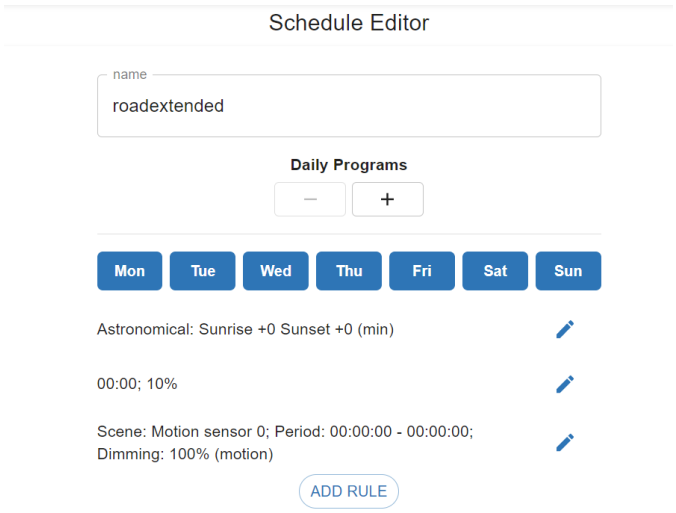
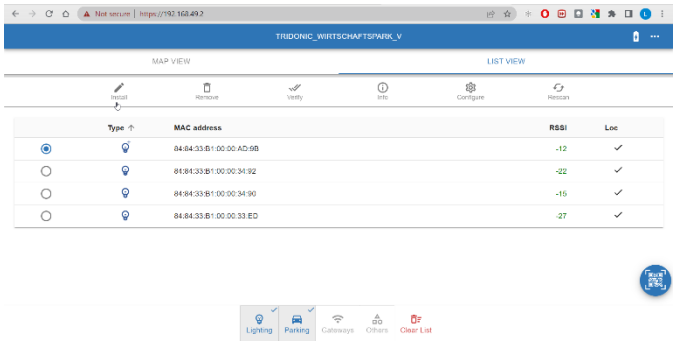
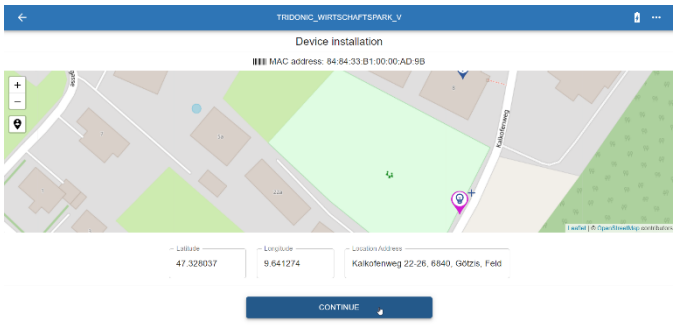
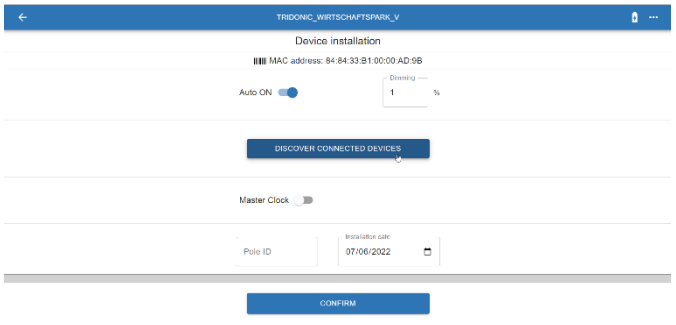
The first rule to add is the "Astronomical" feature (same settings as for pedestrian area).
The second rule to add is also "Motion Sensor (with scenes)".
This rule is set up as follows:

- Select the scene "Motion sensor 0".
- Set the hold time to 120 seconds
  → The light will stay on for 120 seconds.
- Set the "Dimming" to 30 %.
- Select "ADD".

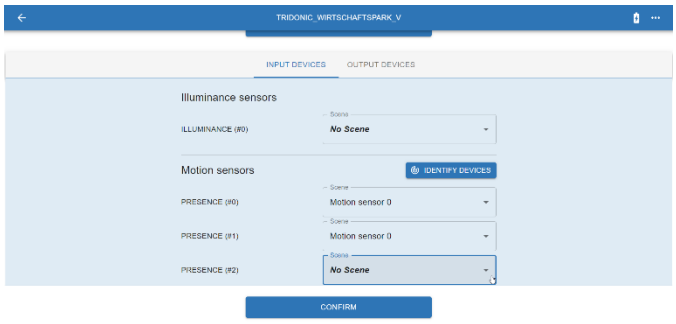
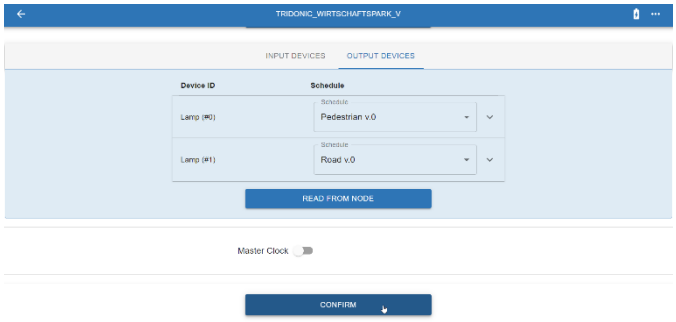
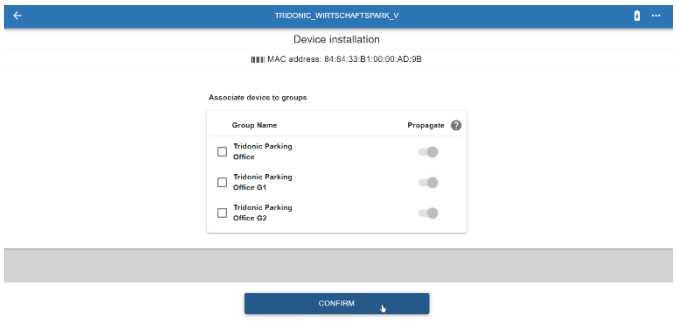
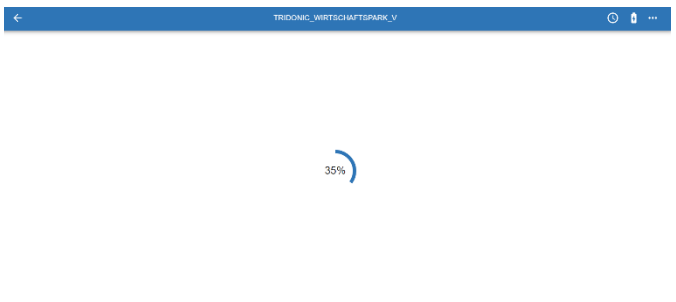
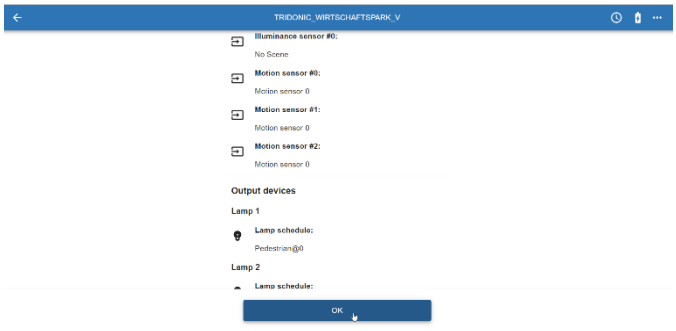


- Select "CONFIRM" to save the settings for the driveway / the "Road" schedule.

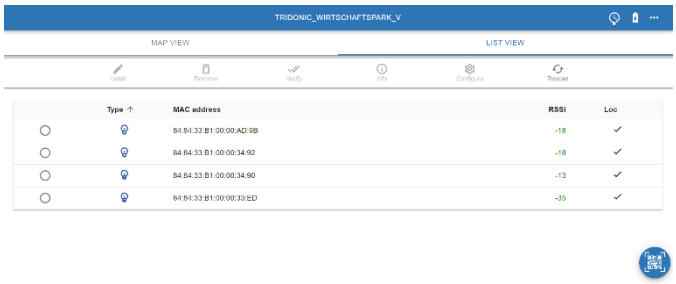
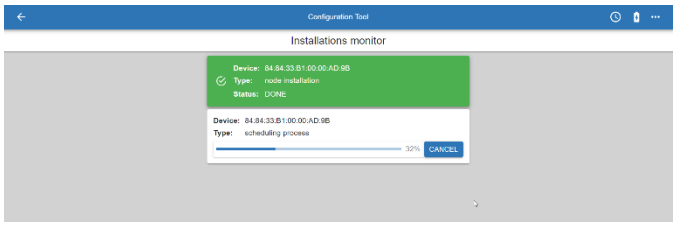
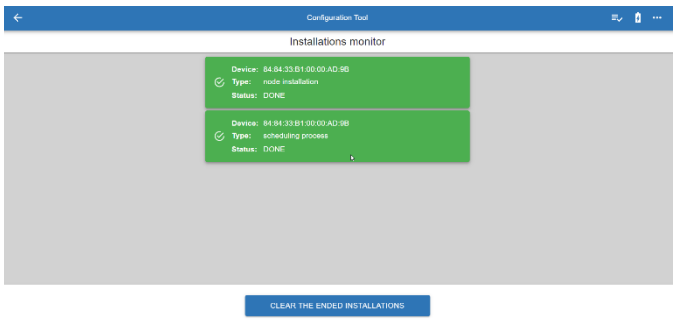
Using the Scene Editor

	Optional schedule: If you would like to have a specific dim level during the sunset and sunrise if no motion is detected, you could e.g. add one more rule with e.g. 10 % from 0:00. Depending on your needs, you can add additional rules.
	• Go back to Site view. • Select the node of your luminaire where the PSensor and the two heads are installed. • Select "Install".
	• Make sure the node is on the correct position. • Select "CONTINUE".
	• Select "DISCOVER CONNECTED DEVICES".

Using the Scene Editor

	Select the instances of the motion sensor and assign a scene to them. In this case the PSensor has 3 presence instances. Because of this, we select the same scene for all 3 instances (in this case: the scene "Motion sensor 0"), because we use this scene for our schedules. • When you have assigned the motion sensor scene to the presence instances, select "OUTPUT DEVICES".
	In the output devices we do see our two luminaire heads. In each head there is one driver installed. Lamp 0 is the luminaire head for the pedestrian area, and Lamp 1 is the head for the driveway. So, we select the schedule "Pedestrian" for Lamp 0 and the schedule "Road" for Lamp 1. • Select "CONFIRM".
	• Add your luminaire to a group. • Select "CONFIRM".
	→ The node will be commissioned.
	In the next step you can check if all settings are correct: Are the correct sensor scenes assigned to the correct instances? Are the correct schedules assigned to the correct lamps? a.s.o. • Select OK if everything is correct.

Using the Scene Editor

	Now your node including the whole luminaire with the two heads is installed in your site. But the schedules are still not programmed to the nodes. You can check the progress if you select the clock on the top right side.
	• Select the clock to see the installation monitor.
	If the node installation and the schedules are installed correctly to the node you will see the status in the installation monitor. Now, your node and your luminaire heads are commissioned correctly. => If now the sensor detects motion after sunset, the luminaire head of the pedestrian area will go to a dimm level of 100 % for 120 seconds and the head of the driveway / "Road" schedule side will go to a dimm level of 30 % for 120 seconds.

If you have additional luminaires that e.g. do not have a sensor installed, you can use the same schedules and program them to these additional luminaries. That way you could illuminate a whole street with these schedules and one sensor.

If your additional luminaires also have a PSensor installed, you can assign the same motion sensor scene to the instances. If you do so, you can use the same schedules for all luminaires and e.g. the whole road will be illuminated as soon as one of the sensors detects motion.

If you like to have different behaviours depending on which sensor detects motion, you can create additional schedules and also assign different motion scenes to different motion instances.

PART 6: Additional Features

31. Viewing the “Device Information” Screen

In order to know more about any particular device shown, select the device and then click on the “**info**” button, as shown in Figure below.

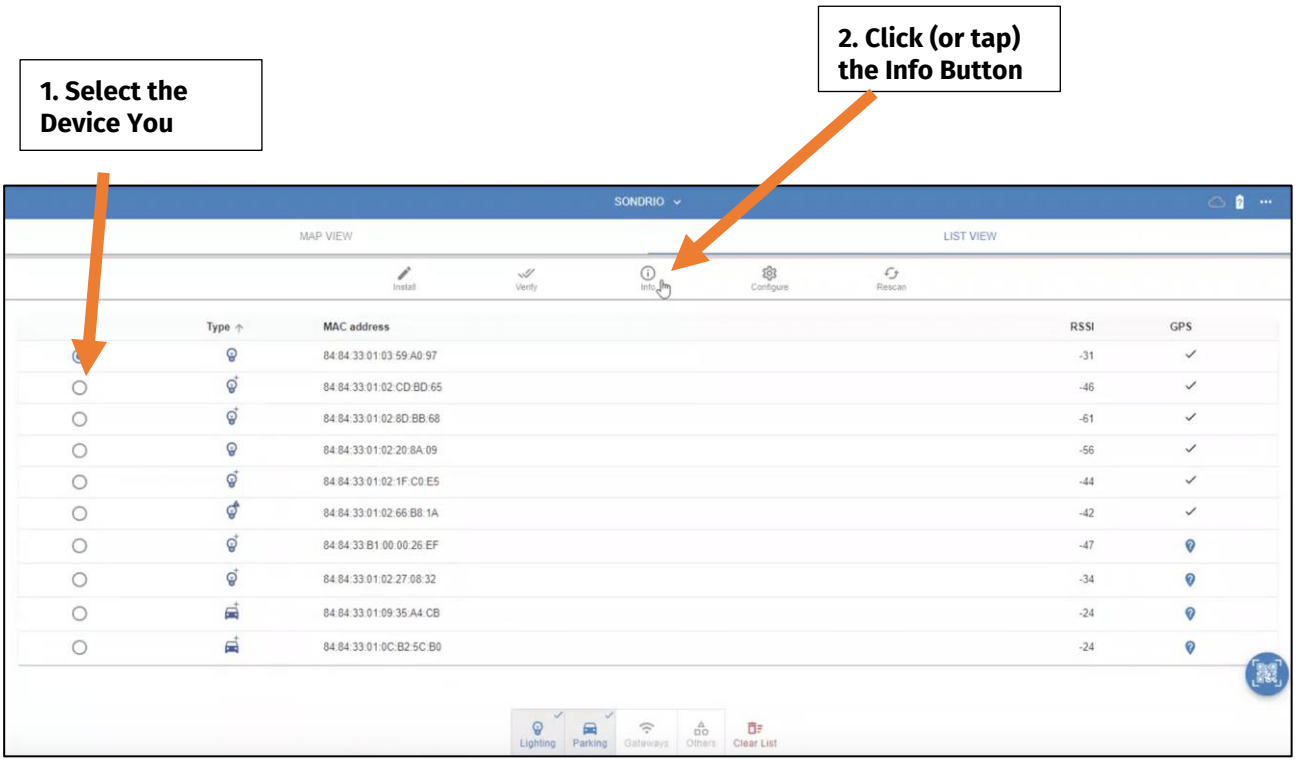


Figure 78: Click the “Info” Button to See Additional Details About the Device

Viewing the “Device Information” Screen

Afterwards, you are presented with the **Device Information** screen, as shown in Figure below. The **Device Information** screen enables you to see several details about the device under inspection, including the MAC address, the IPv6 address, and other details.

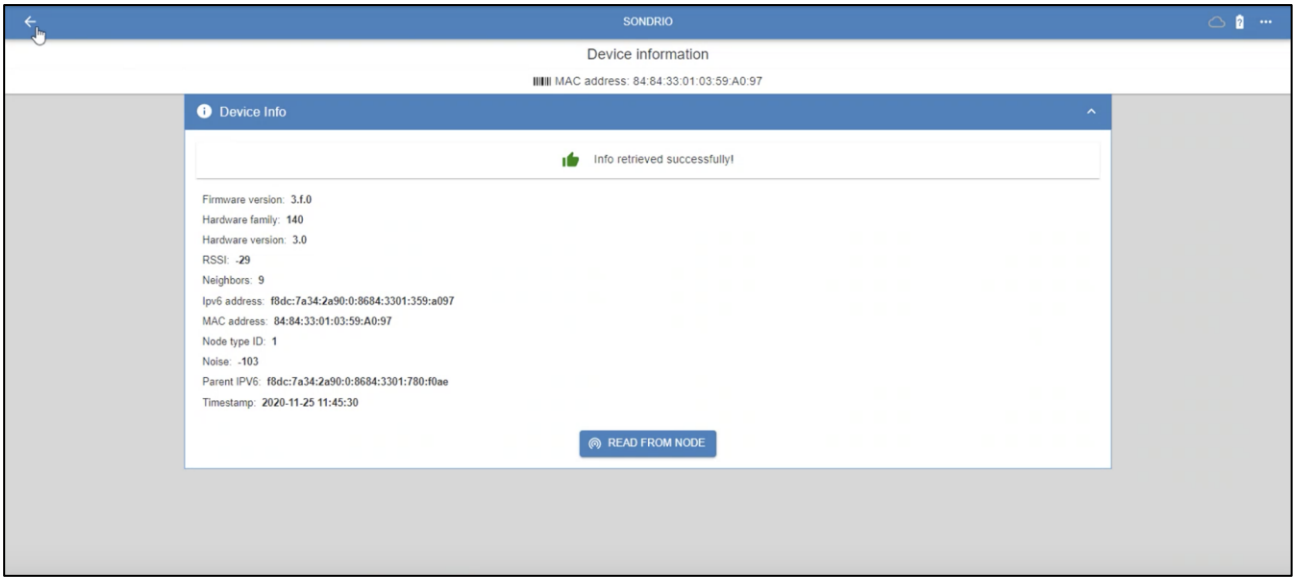


Figure 79: The Device Information Screen

32.Viewing the “Device Configuration” Screen

The “**Device Configuration”** screen enables users to check the status of the commissioning process for an IoT device. In order to check the configuration of any particular device shown, select the device and then click on the “**Configure**” button, as shown in Figure below.

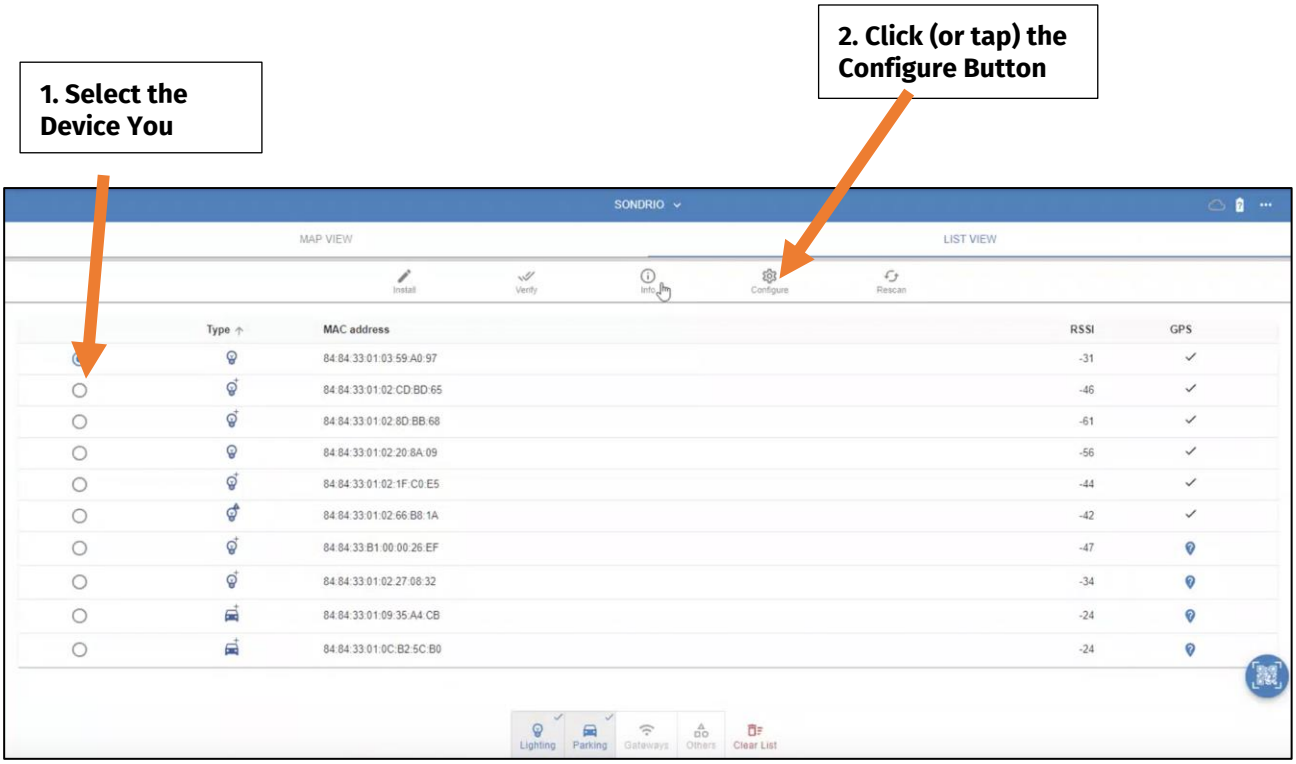


Figure 80: Click the “Configure” Button to See the Device Configuration

Viewing the “Device Configuration” Screen

In the resulting screen, click on the “**SCHEDULE CHECK COMMISSION**“ button to proceed.

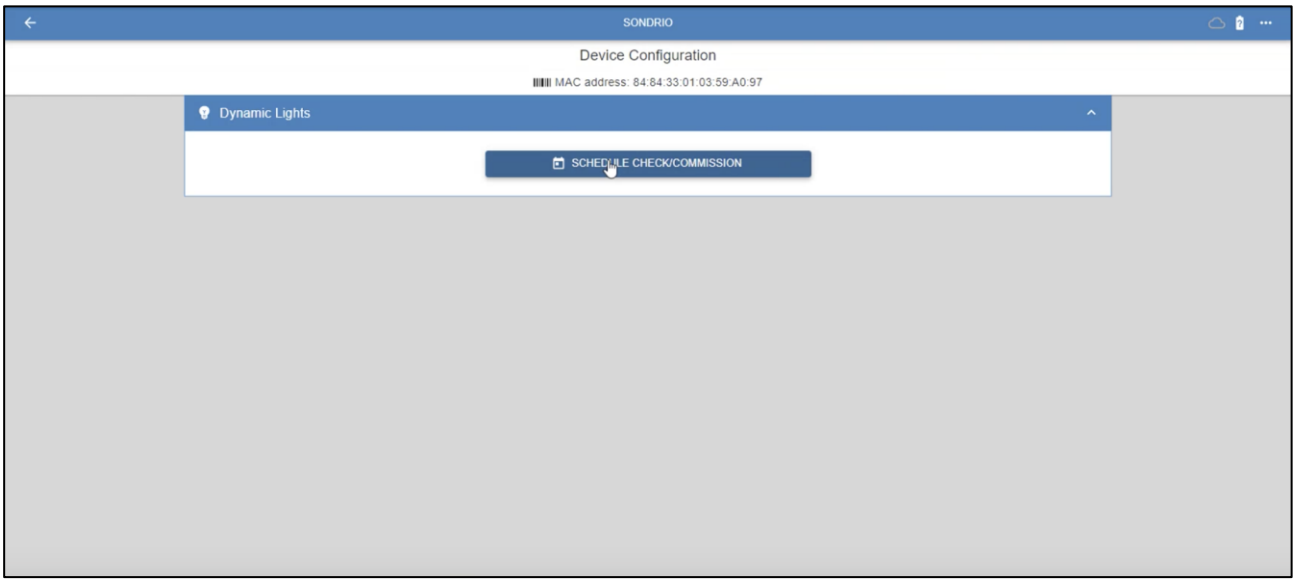


Figure 81: Click the “SCHEDULE CHECK COMMISSION” Button

The Figure below shows the options available in the “**Device Configuration”** screen.

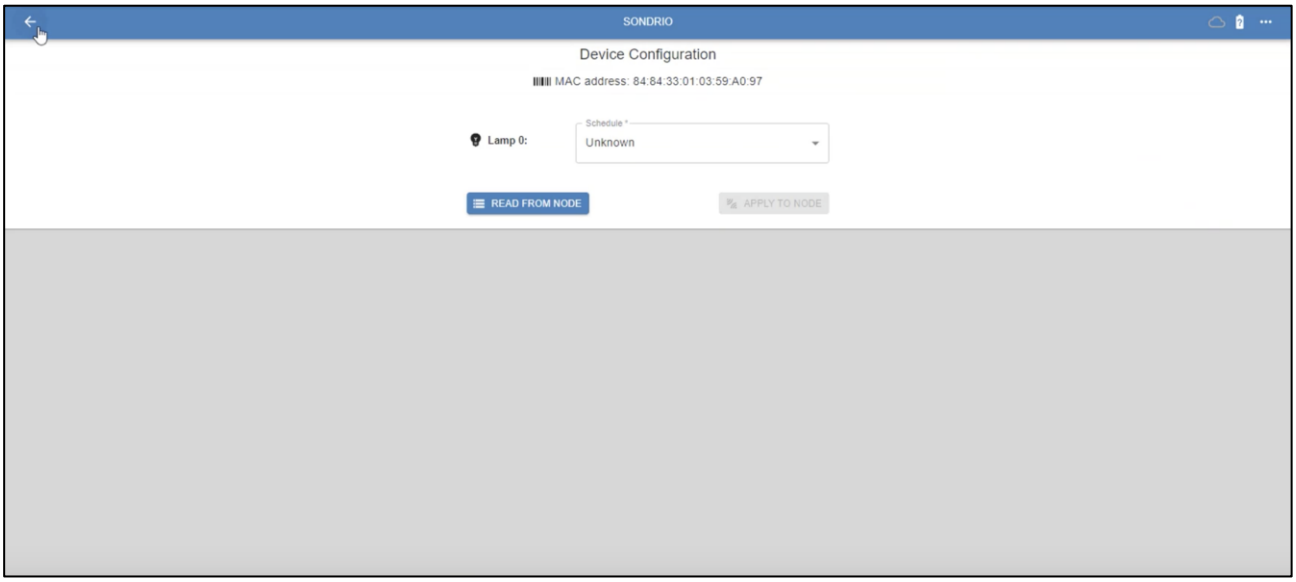


Figure 82: The Device Configuration Screen

33.Rescanning for New Devices

While using the groupCONTROL configTOOL in the field, you may need to occasionally rescan the area to see if any new devices are available. In order to accomplish this, just click on the "**Rescan**" button in the Default Home Screen.

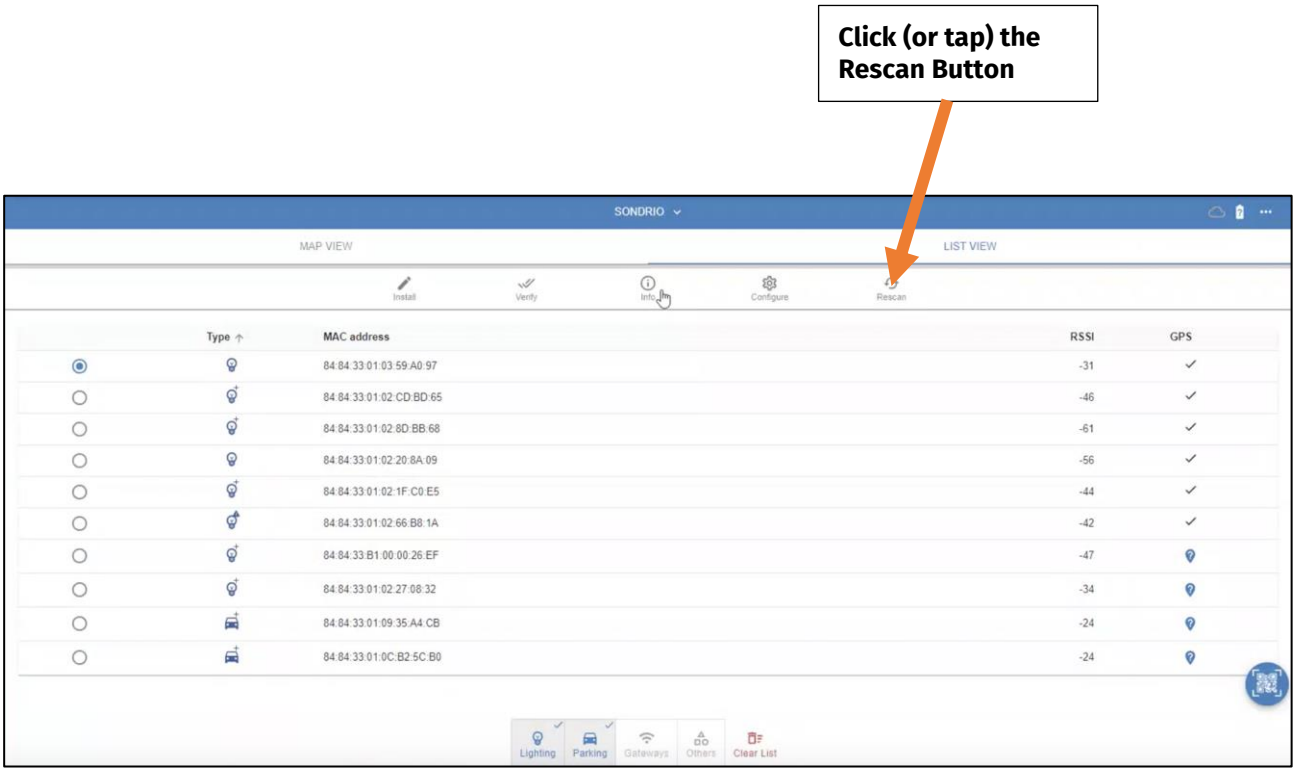
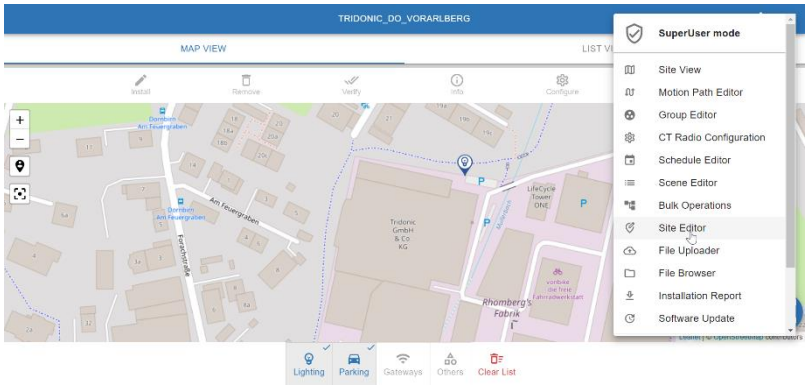
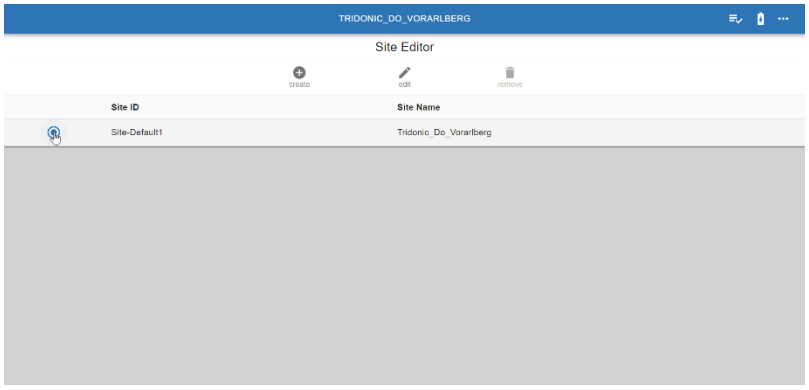
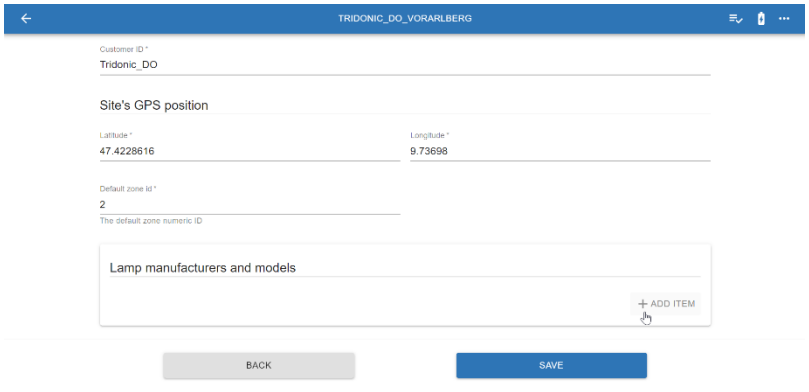


Figure 83: Click the "Rescan" Button to Rescan for New Devices

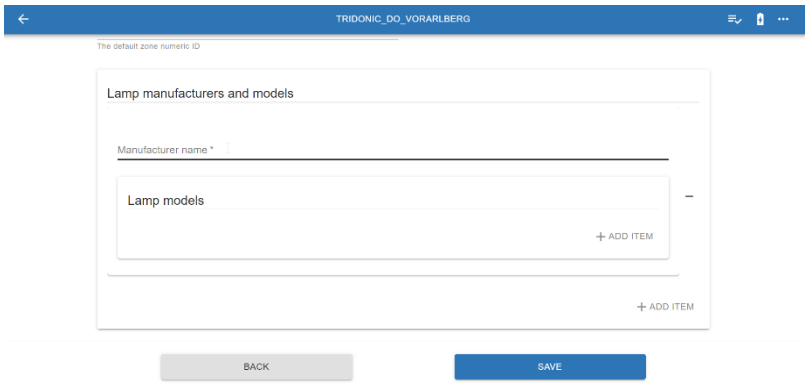
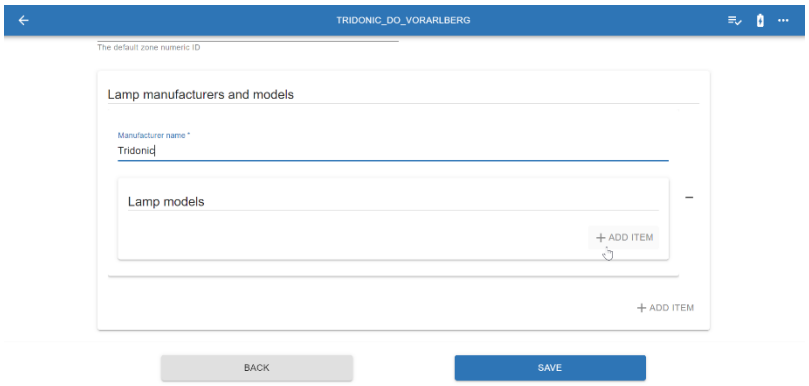
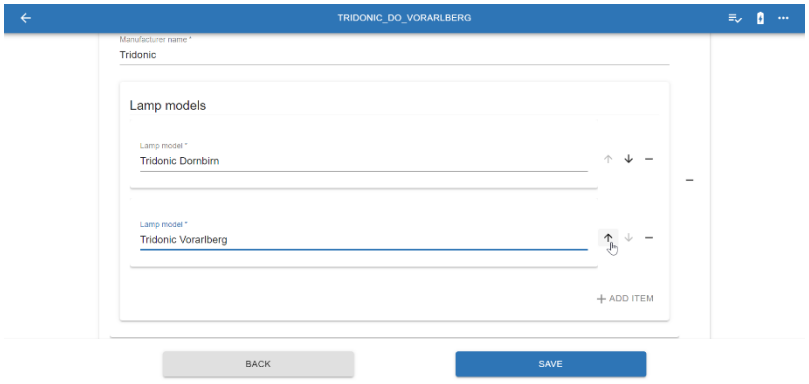
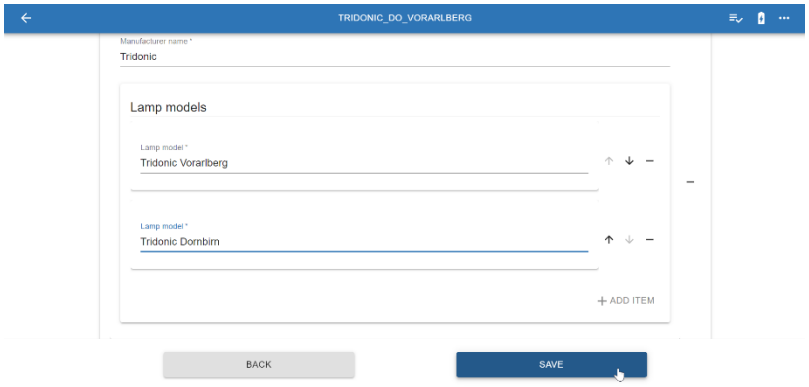
PART 7: Advanced Features for Administrators

34. How to add lamp manufacturer and lamp model

It is possible to add different lamp manufacturers and lamp models to your site.
The lamp manufacturer and the lamp model can then be assigned to the lamps connected to your node.
This information is useful if you download an installation report because it allows you to easily identify the different lamp manufacturers and lamp models.

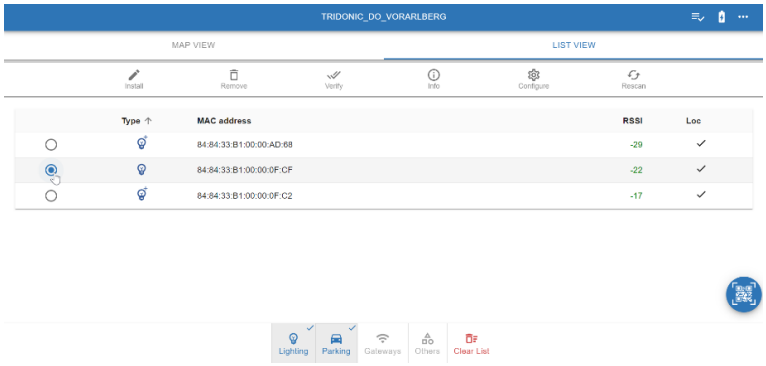
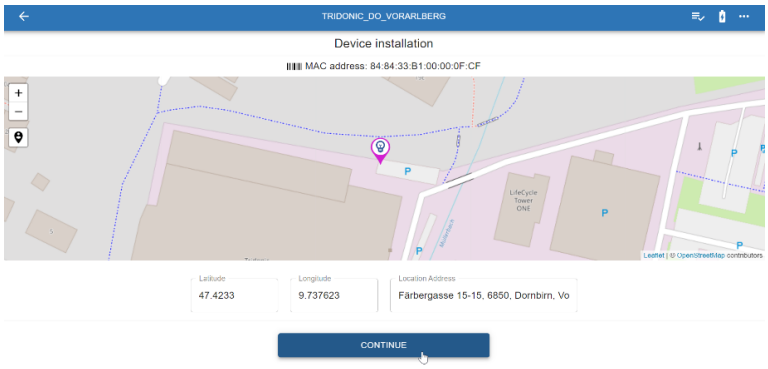
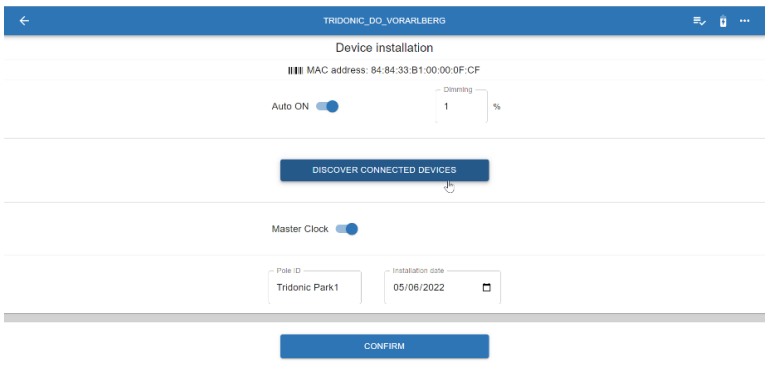
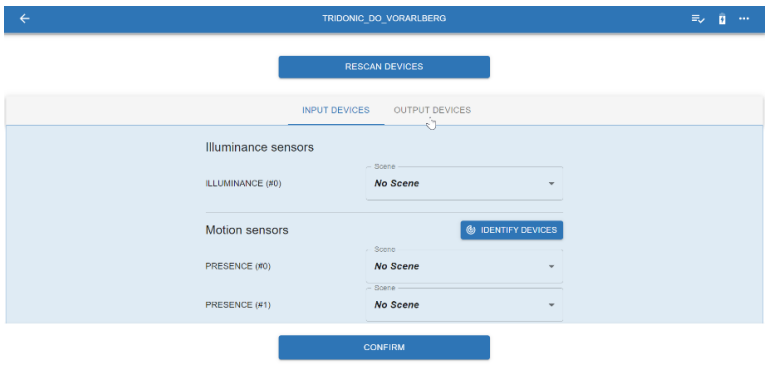
Visual	Description
	• Select "Site Editor" to add a lamp manufacturer and lamp model.
	• Select the site you want to edit and then select "edit". 
	• Select "ADD ITEM" in the section "Lamp manufacturers and models".

How to add lamp manufacturer and lamp model

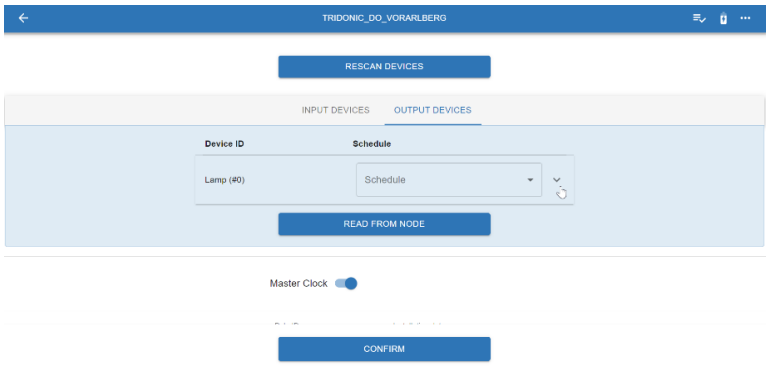
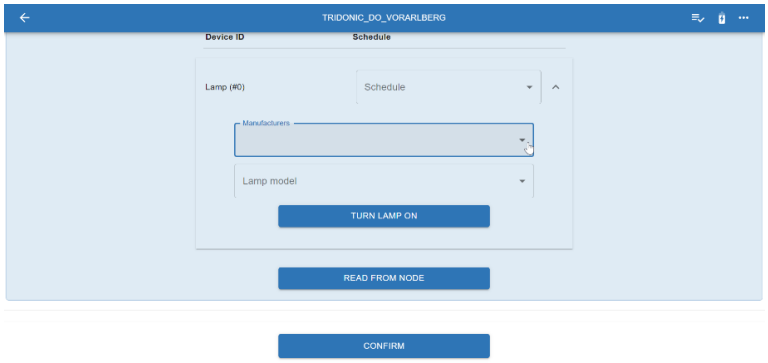
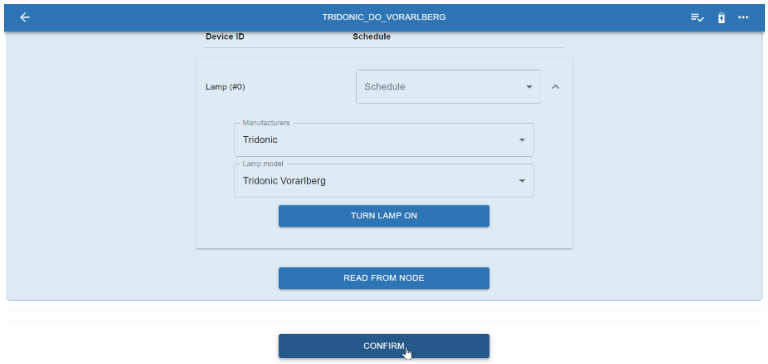
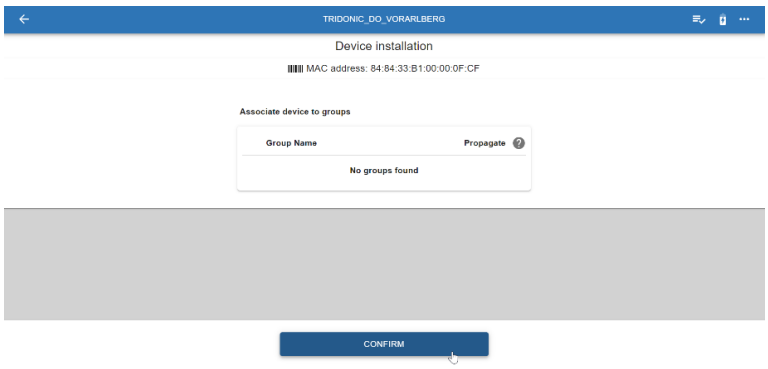
	• Insert the name of the manufacturer in the Filed "Manufacturer name".
	• Select "ADD ITEM" in the section "Lamp models" to add lamp models from the previously created manufacturer.
	• Move the lamp models up or down with the up or down arrows. • You can remove lamp models with a click on the minus (-) symbol.
	• Select "SAVE" to save your selection.

How to add lamp manufacturer and lamp model

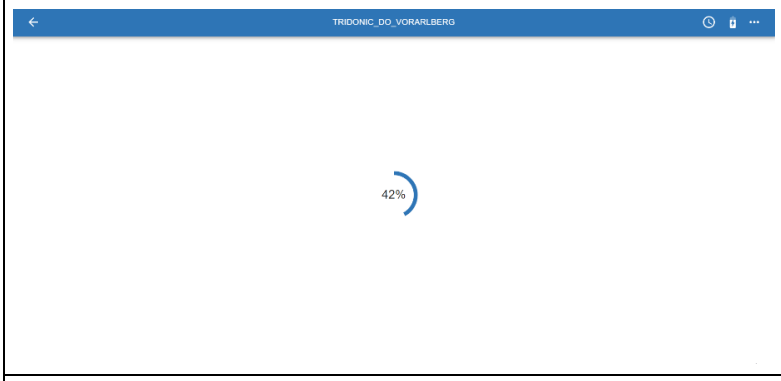
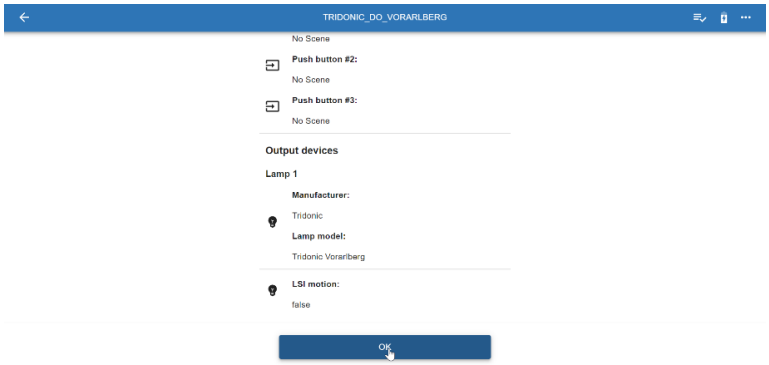
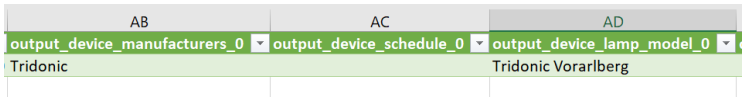
34.1 How to assign a lamp manufacturer and lamp model to a lamp

Visual	Description
	• Go to the LIST VIEW. • Select the node to whose lamps you want to add lamp manufacturer and model. • Select "Install". 
	• Enter the correct data for latitude, longitude and location address if you commission the node for the first time -or- • Check the data if the node has already been commissioned in the past. • Click CONTINUE.
	• Click DISCOVER CONNECTED DEVICES.
	• Select OUTPUT DEVICES.

How to add lamp manufacturer and lamp model

	• Click the down arrow next to the lamp that you want to assign a manufacturer and lamp model to.
	• Click the down arrow in the manufacturer and lamp model field to select manufacturer and lamp mode. • Repeat this for all lamps connected to your node.
	• Select CONFIRM when information has been entered for all the lamps connected to your node.
	If groups have been defined for your site, you can assign the node to a group: • Select a group. • Click CONFIRM.

How to add lamp manufacturer and lamp model

	→ The entered information will be transferred to the node.
	• Click OK all the information was transferred correctly.  • Click the back arrow if you need to change something. 
	When downloading a new installation report, the lamp manufacturer and model will be listed in the report.

35.Upgrading the Functionality of the groupCONTROL configTOOL

The functionality of groupCONTROL configTOOL is split between a software application and a firmware application. In order to upgrade the capabilities of the groupCONTROL configTOOL in the field, Administrators will need to upgrade the software, firmware, or both.

NOTE: *Do **NOT** perform a software update unless you have been instructed by the Technical Support team at Tridonic.*

In order to update the software or firmware, click on "**Software Update**" from the "**...**" option menu

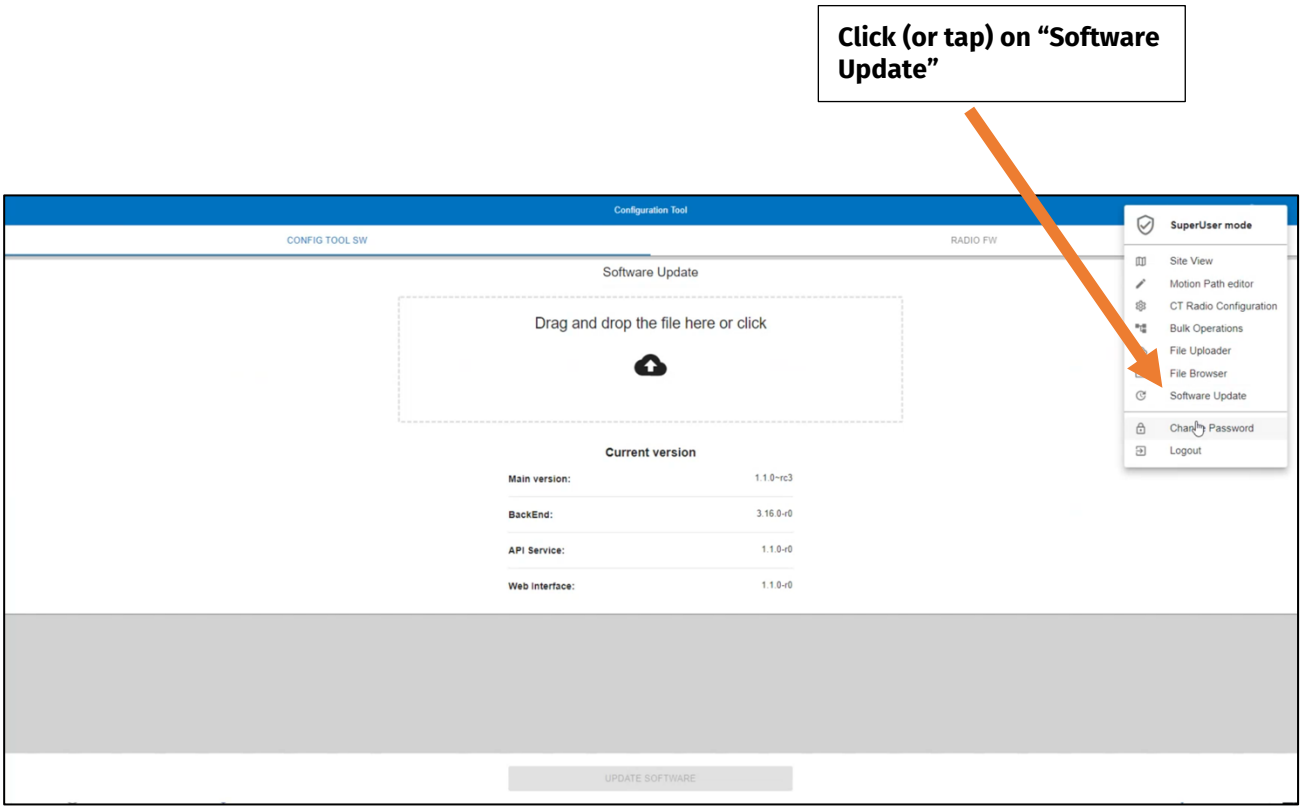


Figure 84: Updating the Software or Firmware of the groupCONTROL configTOOL

Updating the Software
(Estimated Time: 10 mins)

36. Updating the Software
(Estimated Time: 10 mins)

By default, the screen loads to allow Administrators to update the software, however, you are presented with tabs at the top to enable you to update the software or firmware, as shown in the figure below. The screen also displays the current version numbers of the components of the groupCONTROL configTOOL software.

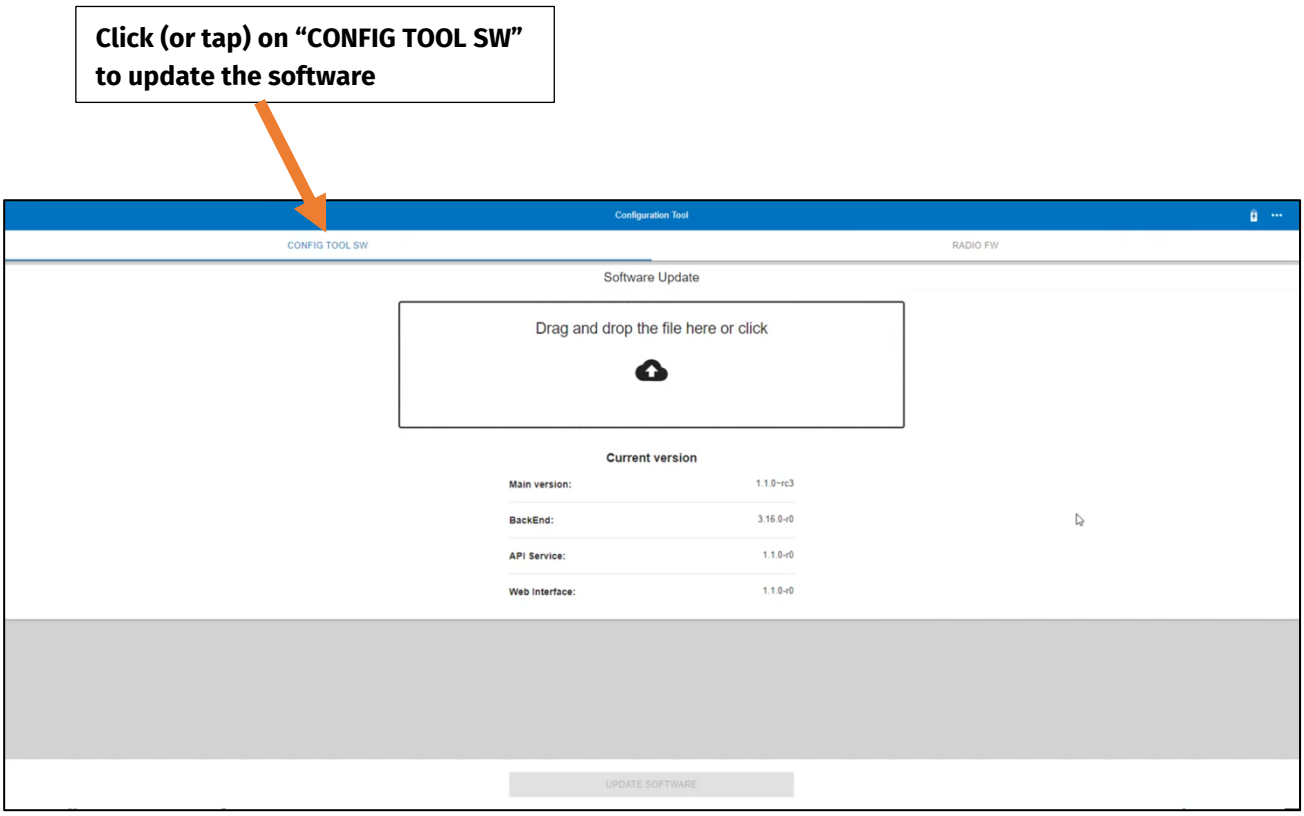
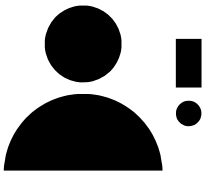


Figure 85: Updating the Software of the groupCONTROL configTOOL

In order to start the update process, simply drag and drop the update file (provided by Tridonic) into the rectangular area, as shown in the figure above. You will then be guided through the steps to update the software.



NOTE: *After updating the software of the groupCONTROL configTOOL, you will need to re-login to the application.*

Updating the Firmware
(Estimated Time: 1-2 hours)

37.Updating the Firmware
(Estimated Time: 1-2 hours)

Updating the firmware is a similar process to updating the software. Simply click on the "**Radio FW**" tab (as shown below). You will be presented with a screen that shows the current version of the firmware.

Drag and drop the firmware file provided to you by Tridonic Technical Support on the rectangular box, and you will then be guided through the steps to update the radio firmware of the groupCONTROL configTOOL.

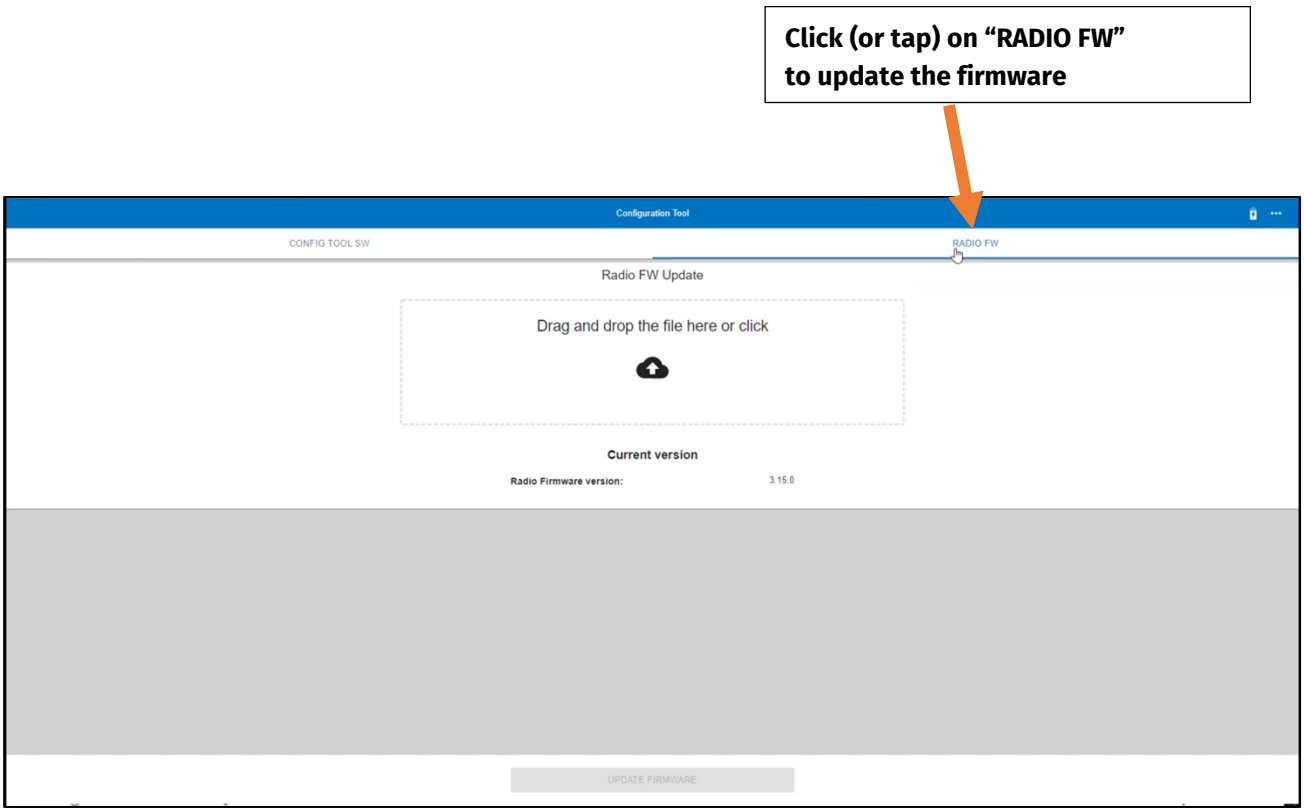


Figure 86: Updating the Firmware of the groupCONTROL configTOOL

NOTE: *Updating the radio firmware is a lengthy process, and may take from 1-2 hours depending upon the size of update.*

38. Using the File Uploader Before Managing Devices in the Field

The File Uploader enables Administrators to modify the various types of configuration files for the groupCONTROL configTOOL.

NOTE: *File Uploader is different from the Software Update capability (see section above).*

While the Software Update function enables Administrators to change (upgrade) the behavior of the groupCONTROL configTOOL itself, the File Uploader enables Administrators to quickly upload configuraton files to allow users to configure their sites while in the field.

In order to access the File Uploader, click on "**File Uploader**" from the "**...**" option menu

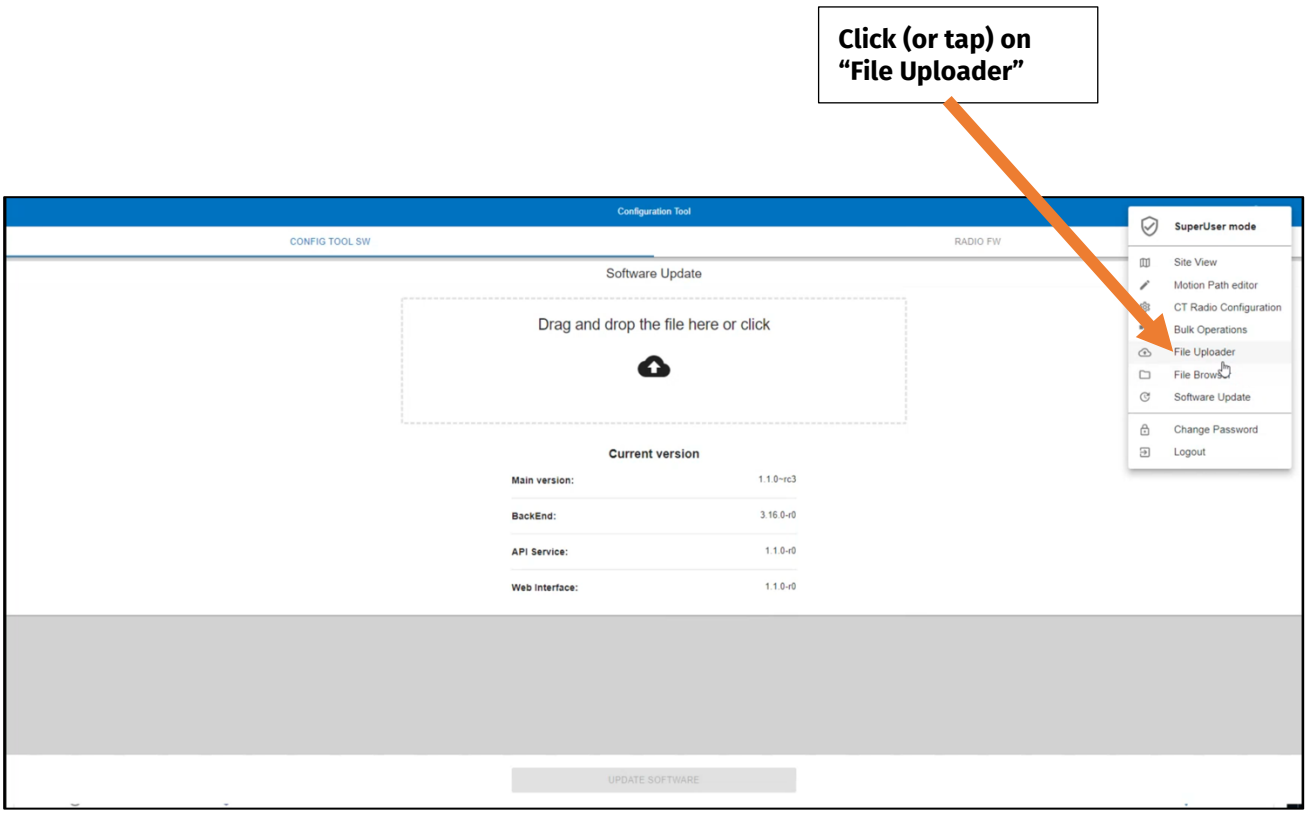


Figure 87: Using the File Uploader

Using the File Uploader Before Managing Devices in the Field

As shown in Figure below, the File Uploader enables Administrators to upload to the Config Tool the following types of files:

- Site Descriptions
- Control Programs
- Calendars
- Profiles
- Firmware (SIDEREA products)

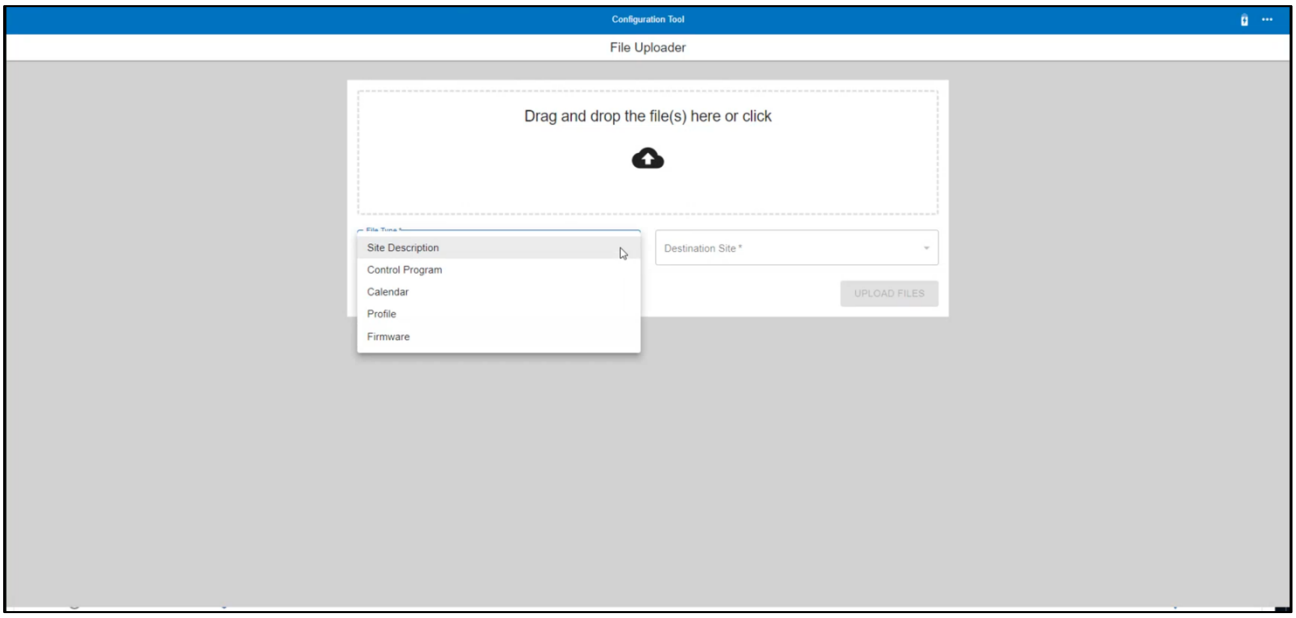


Figure 88: Using the File Uploader

NOTE: *Only use the File Uploader to upload configuration files provided by the Tridonic Technical Support Team.*

As in previous steps, drag and drop the Configuration Files on the rectangular area to start the upload process.

Using the File Uploader Before Managing Devices in the Field

As shown in Figure below, you have the flexibility to specify a Destination Site for the files that you upload to the Config Tool. This enables the user (while in the field) to select a site and only have the Control Programs and Calendars for that particular site to be available for use.

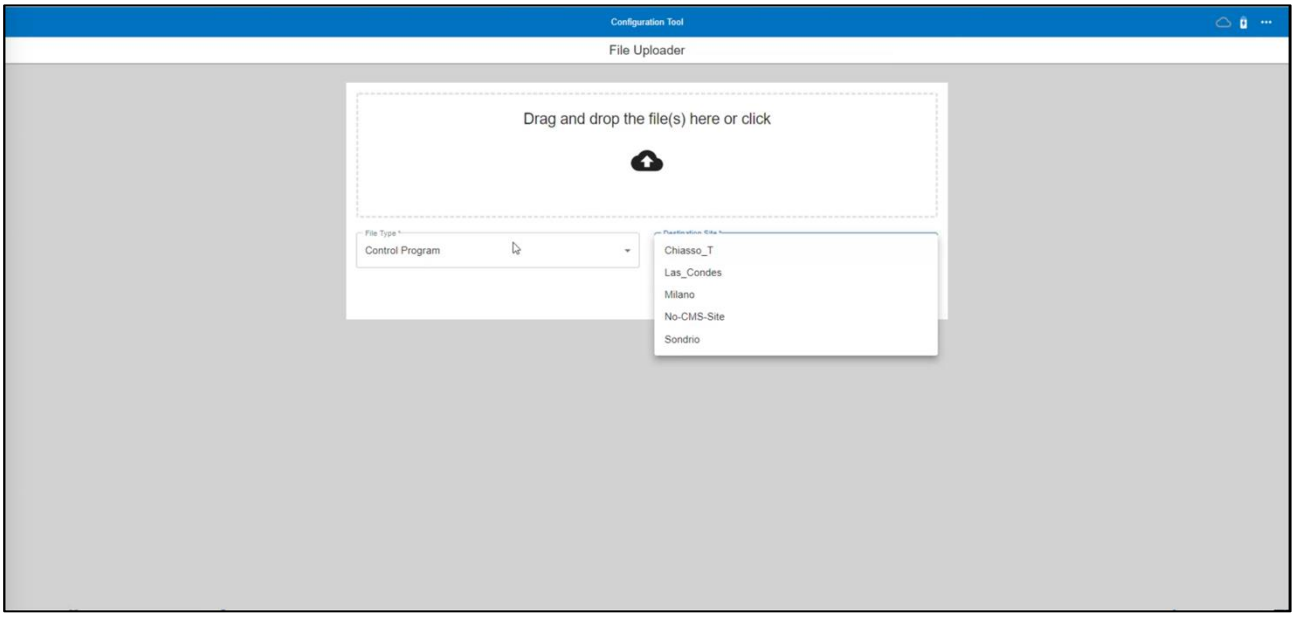


Figure 89: Using the File Uploader

39. Using the File Browser to Manage Files

The File Browser enables Administrators to view and manage the configuration files uploaded to the groupCONTROL configTOOL. This enables Administrators to remove files on the groupCONTROL configTOOL that are no longer needed.

In order to access the File Browser, click on "**File Browser**" from the "**...**" option menu

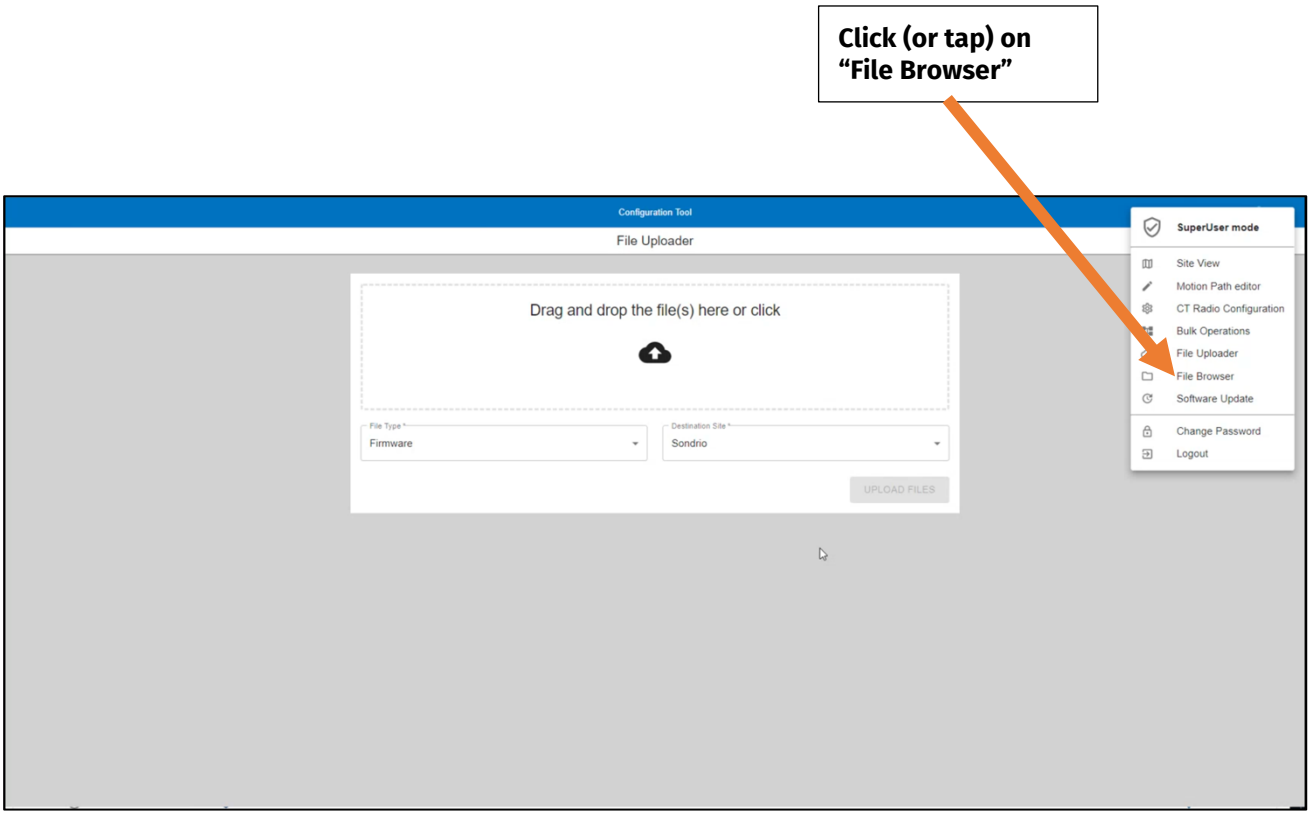


Figure 90: Using the File Browser

Using the File Browser to Manage Files

As shown in Figures located below, Administrators are able to navigtate by Site name, and then select to view the Calendars, Control Programs, Profiles, and Firmware files from the selected Site.

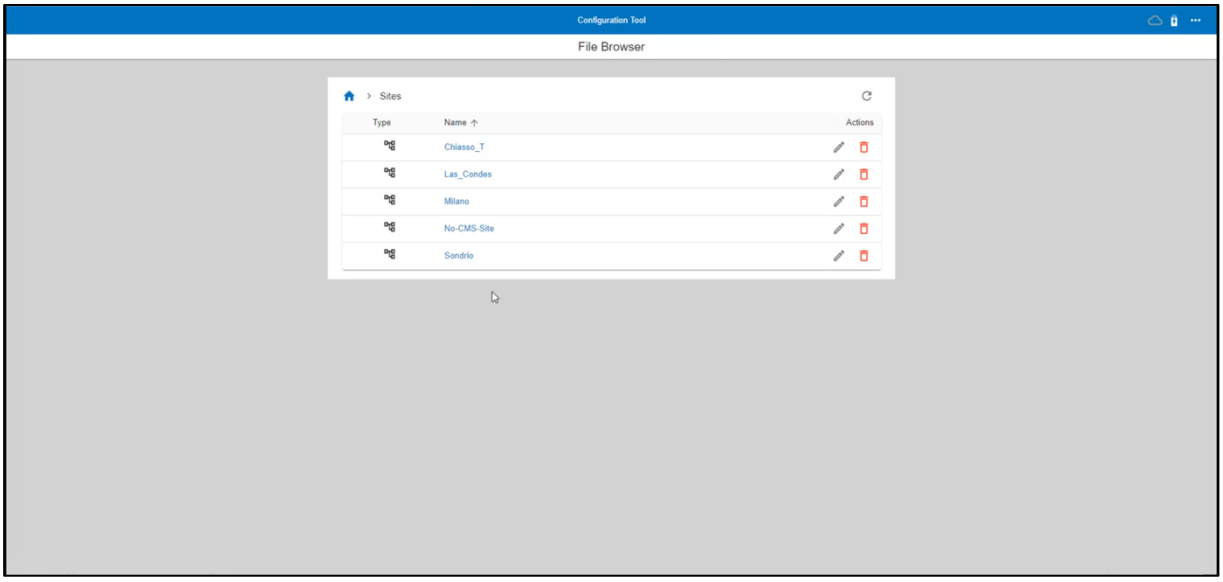


Figure 91: Using the File Browser

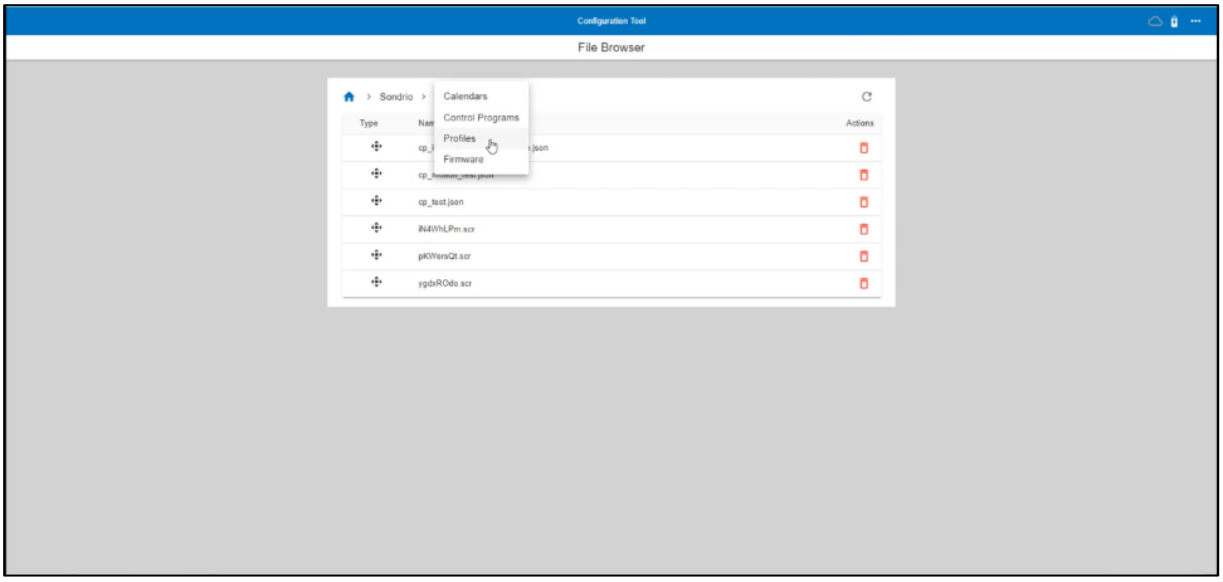


Figure 92: Using the File Browser

40. Viewing Advanced Device Information

In the Default Home screen, Administrators are able to see detailed information about the IoT devices that are within range of the groupCONTROL configTOOL.

In order to access the Advanced Device Information panel, first select a device, and then click on "**Info**" button as shown in the figure below.

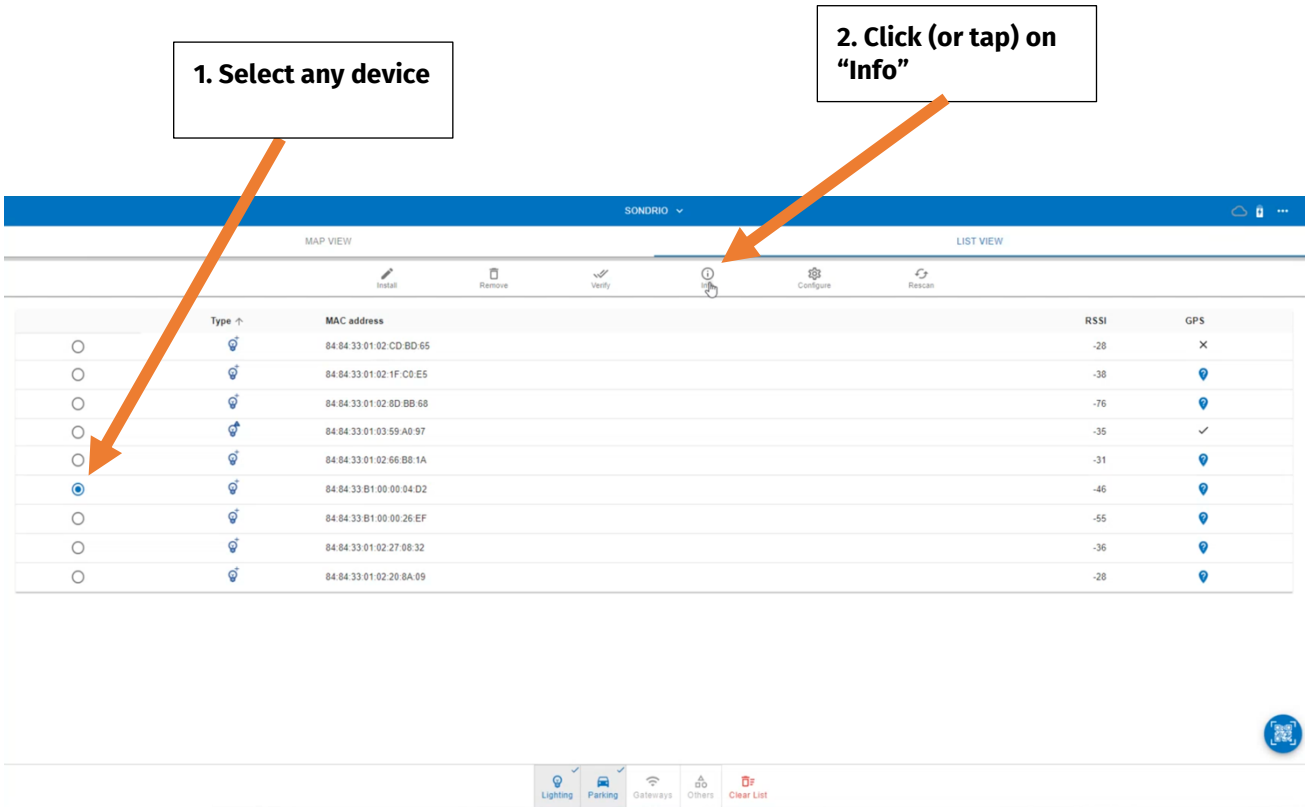


Figure 93: Accessing Advance Device Information

Viewing Advanced Device Information

As shown in Figures located below, Administrators are presented with a panel labeled, “**Advanced Info**”.

Clicking on the panel enables Administrators the ability to see detailed information about the selected device including the serial number and the current firmware version loaded on the device itself.

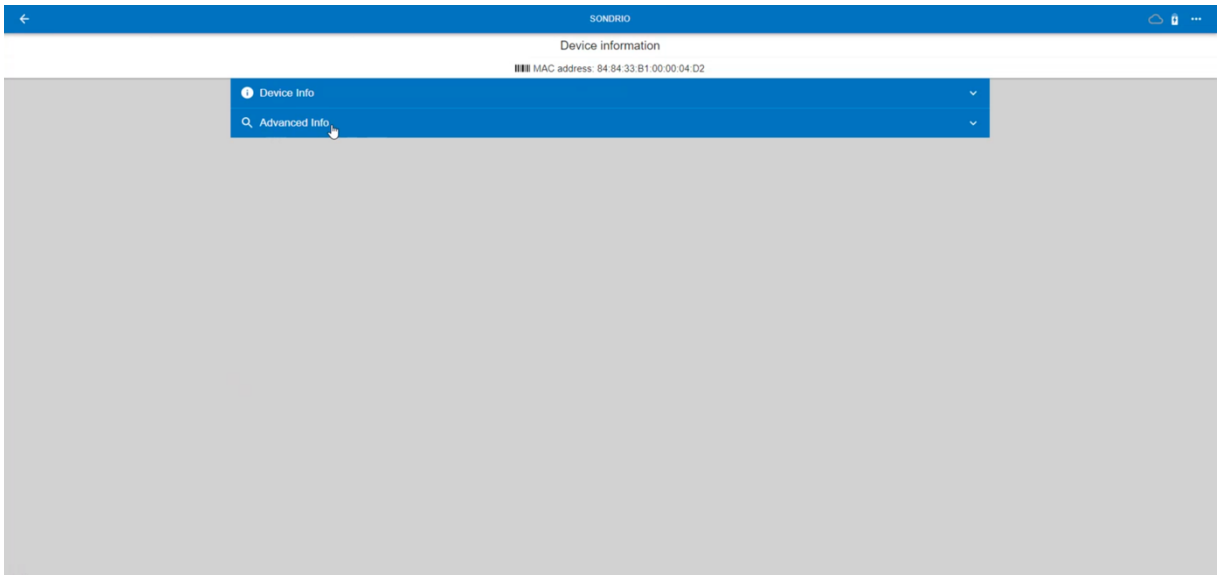


Figure 94: Accessing Advance Device Information

Viewing Advanced Device Information

The Administrator has the option to request data directly (using the radio link) to the node.

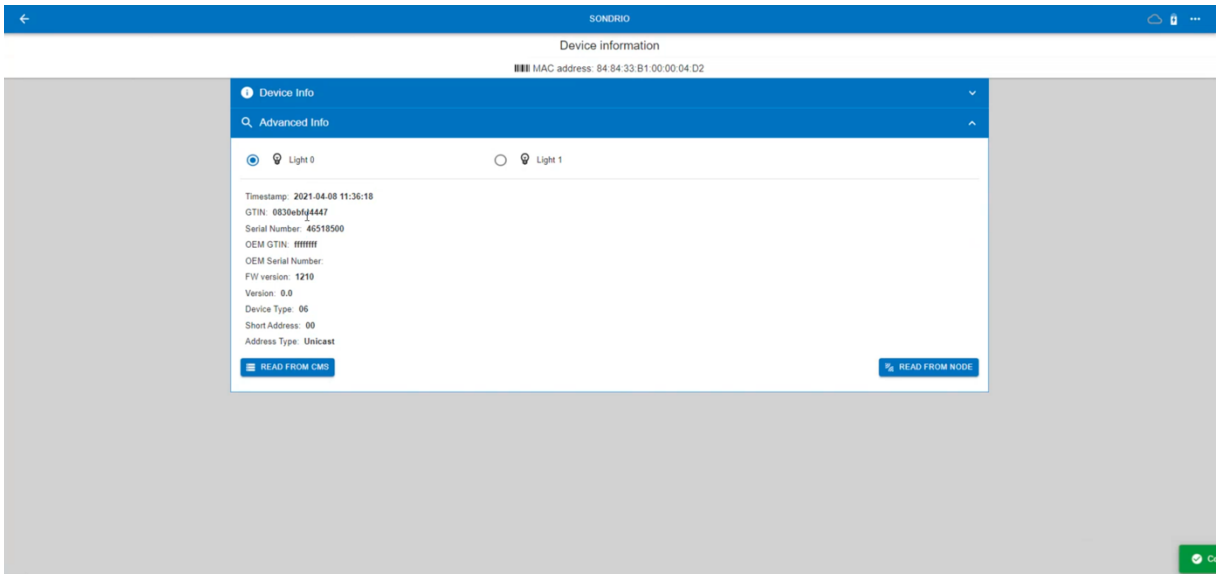


Figure 95: Accessing Advance Device Information

NOTE: *Not all IoT devices/nodes support the option to display "Advanced Info".*

Updating the Firmware of a Single IoT Device/Node (Estimated time: 5 minutes)

41. Updating the Firmware of a Single IoT Device/Node (*Estimated time: 5 minutes*)

NOTE: *In order to update the firmware of an IoT devices/node in the field, you must first use the **File Uploader** (see section 38) to upload the necessary firmware files to the groupCONTROL configTOOL.*

The groupCONTROL configTOOL enables Administrators to update the firmware of the IoT devices that are within range of the groupCONTROL configTOOL itself.

In order to update the firmware of an IoT device/node, first select a device from the Default Home Screen, and then click on the "**Device Configuration**" button. Afterwards, click on the panel named, "**Firmware Update**", as shown in the figure below.

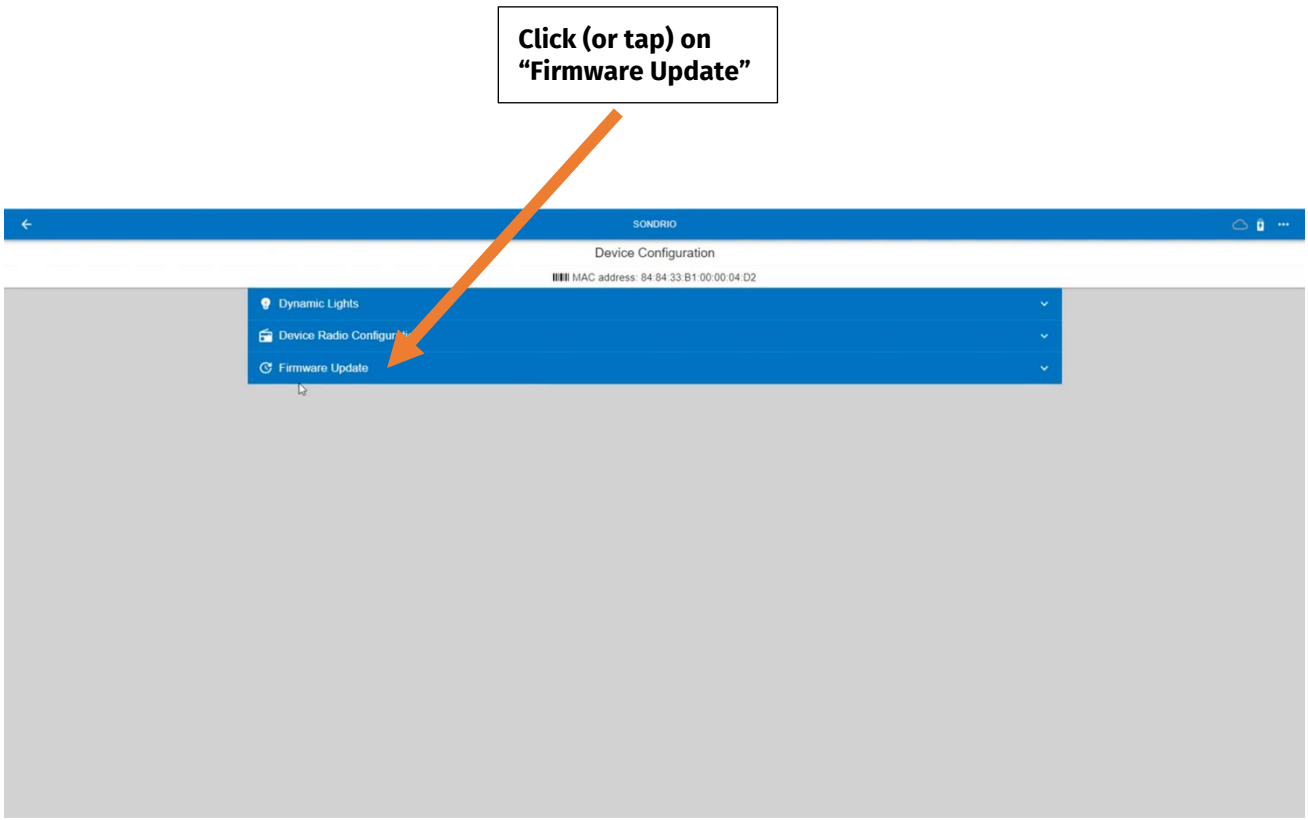


Figure 96: Updating the Firmware of an IoT Device/Node

Updating the Firmware of a Single IoT Device/Node (Estimated time: 5 minutes)

After clicking on “**Firmware Update**”, the panel will expand to display all the options available to update the firmware of the selected IoT device/node.

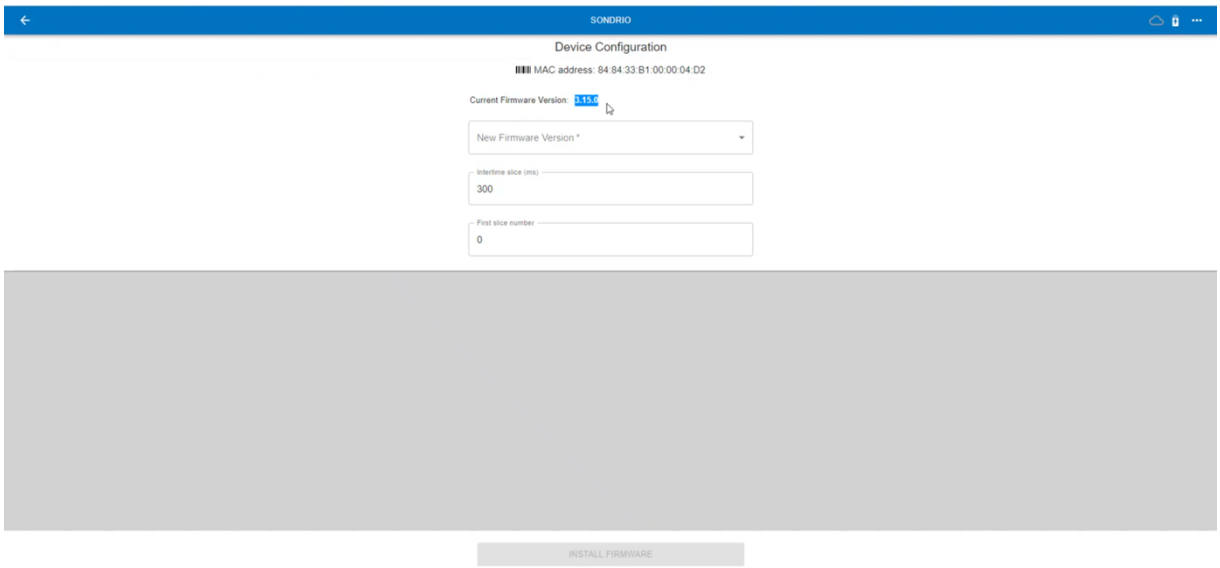


Figure 97: Updating the Firmware of an IoT device/node

Click on the **“New Firmware Version”** dropdown box to see a list of compatible firmware files that have already been loaded to the Config Tool using the File Manager.

Click the “**INSTALL FIRMWARE**” button to start the firmware installation process.

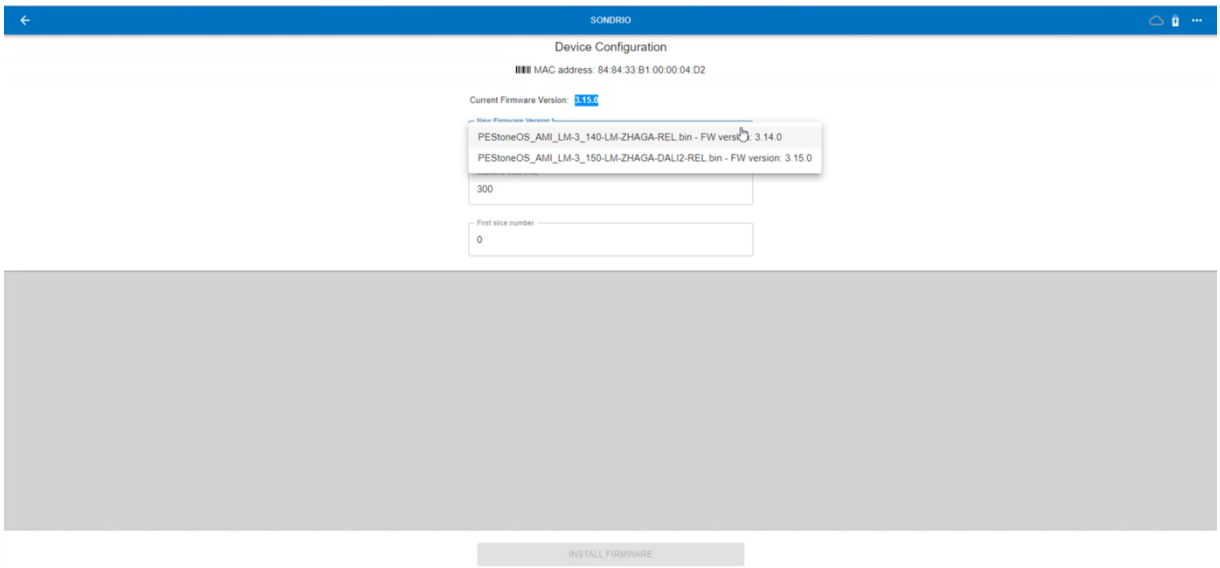


Figure 98: Updating the Firmware of an IoT device/node

42. Viewing the Status of an Ongoing Firmware Update (*Estimated time: 1-2 hours*)

Due to the fact that a firmware update for an IoT device/node is a lengthy process, users of the groupCONTROL configTOOL can perform operations on other devices after the firmware update process has been started on a device.

In order to check on the status of an ongoing firmware update, click on the "**long process icon**" to see the status of any process that can operate for an indefinite amount of time.

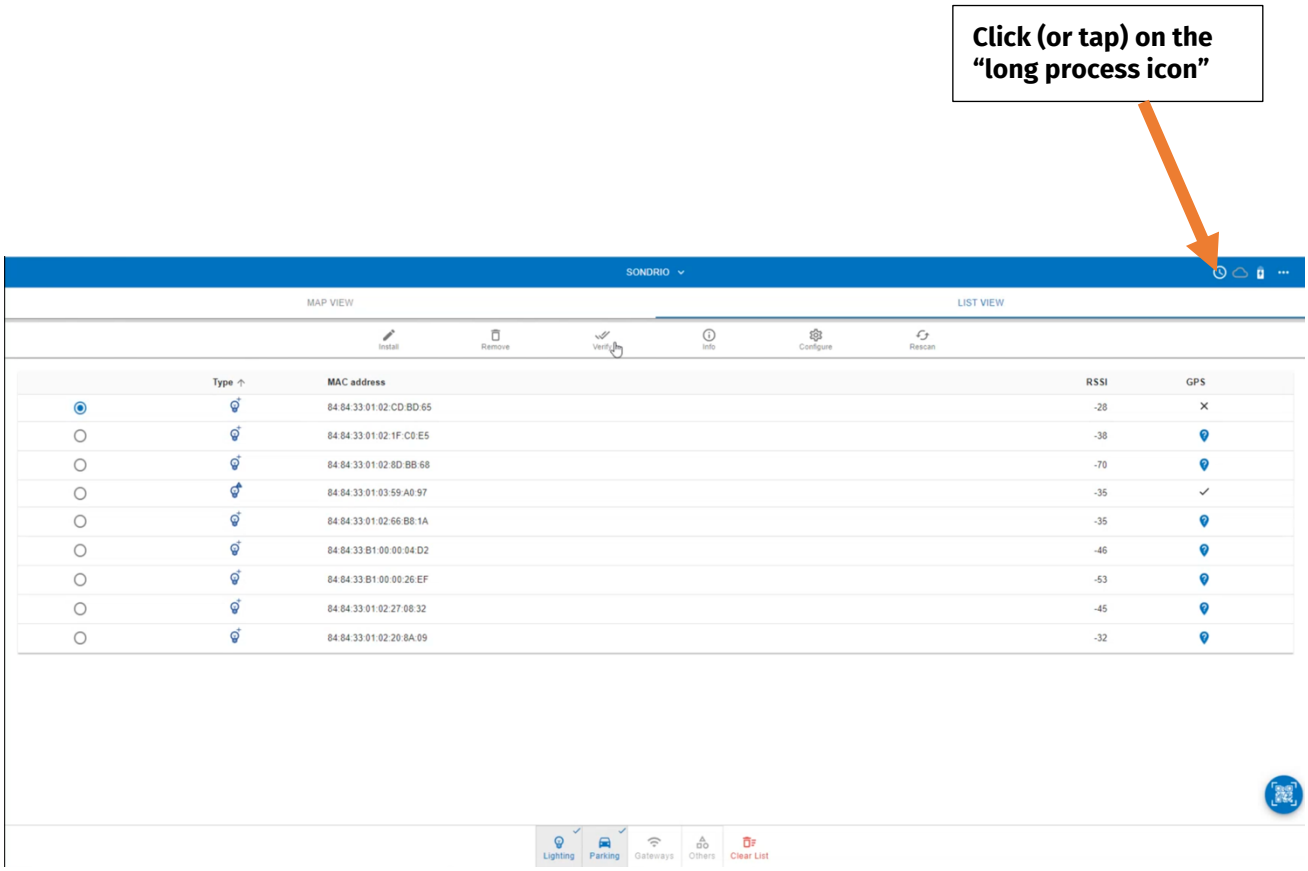


Figure 99: Checking on the Status of an Ongoing Firmware Update

NOTE: *The groupCONTROL configTOOL must stay in radio range of a device during the firmware update process, otherwise the process will pause until the groupCONTROL configTOOL returns back in range.*

Viewing the Status of an Ongoing Firmware Update (Estimated time: 1-2 hours)

After clicking on “**Firmware Update**”, the panel will expand to display all the options available to update the firmware of the selected IoT device/node.

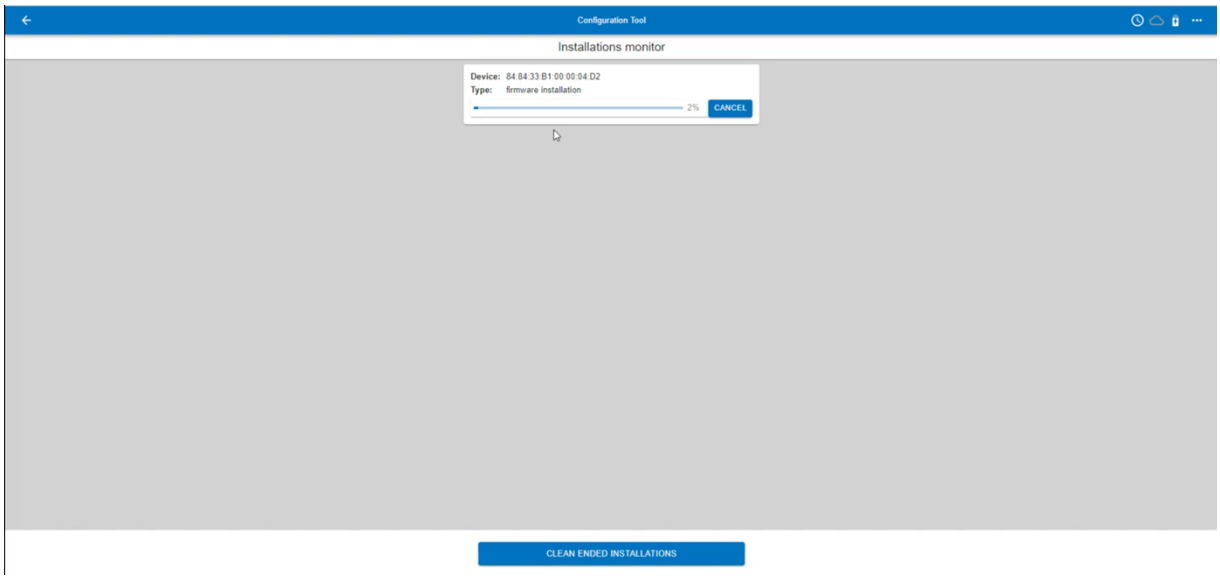


Figure 100: Updating the Firmware of an IoT device/node

Updating the Firmware for Multiple Devices Simultaneously with Bulk Operations

(Estimated time: 5 mins)

43. Updating the Firmware for Multiple Devices Simultaneously with Bulk Operations

(*Estimated time: 5 mins*)

In order to update the firmware for multiple devices within range of the groupCONTROL configTOOL, use the "**Bulk Operations**" option from the "**...**" options menu, as shown in the figure below.

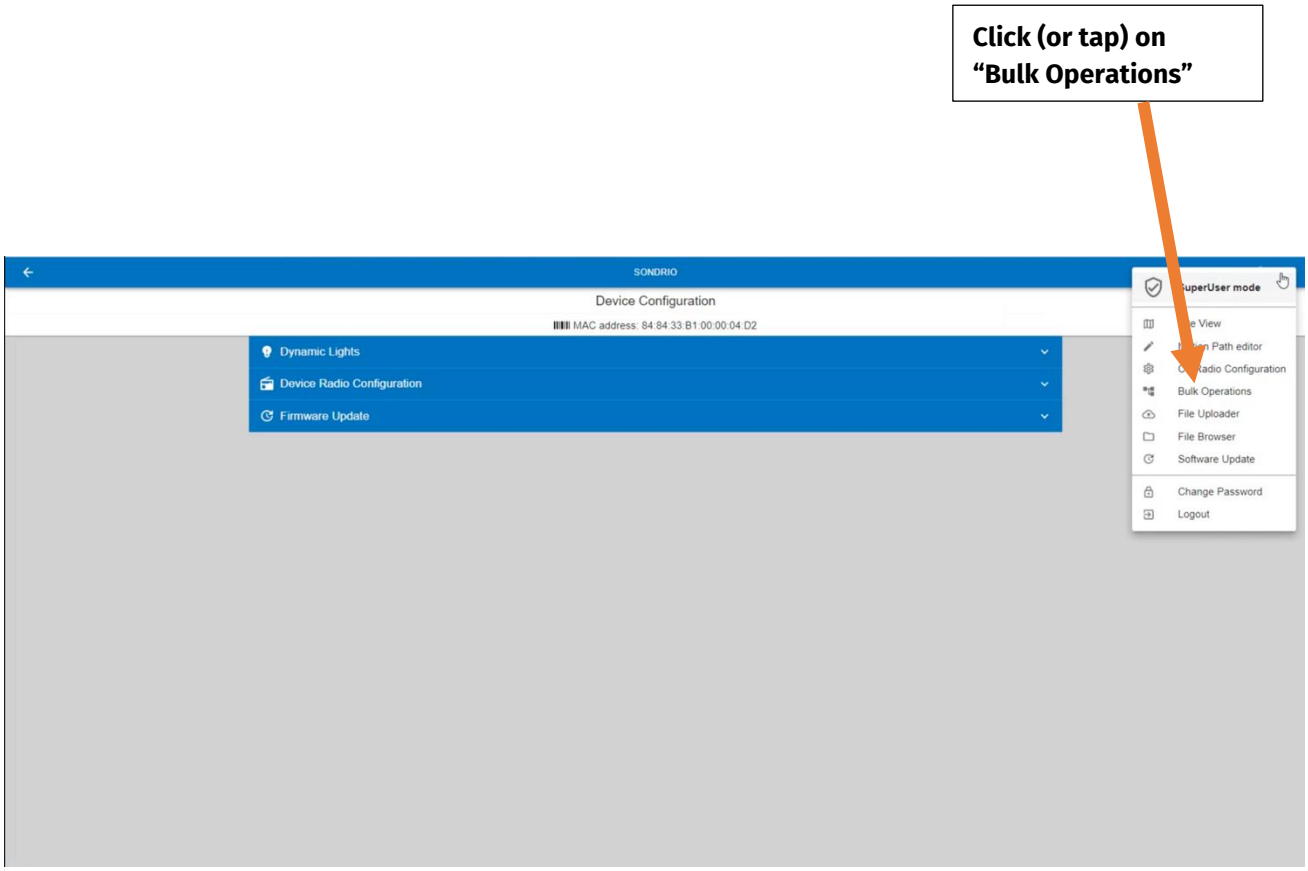


Figure 101: Accessing the Bulk Operations Screen

Updating the Firmware for Multiple Devices Simultaneously with Bulk Operations

(Estimated time: 5 mins)

Click on the “**Firmware Update**” panel to expand it to show the “**FIRMWARE UPDATE**” button as shown in the figure below.

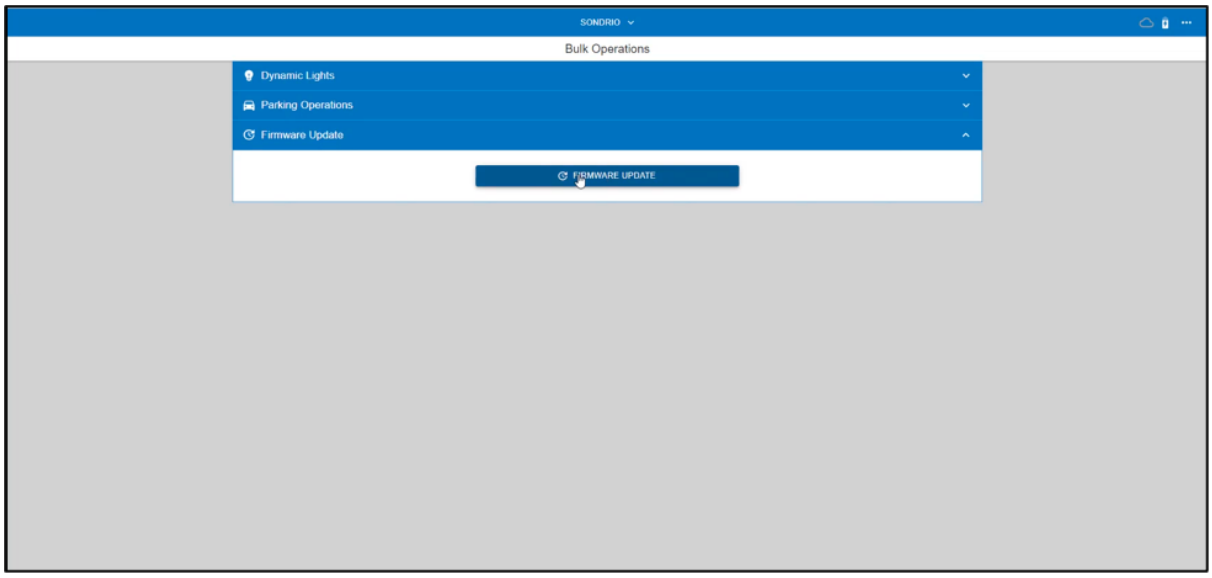


Figure 102: Updating the Firmware of Multiple IoT devices/nodes

You will then be presented with a dropdown box with compatible firmware files for the devices that are within radio range of the groupCONTROL configTOOL.

Select the desired firmware file and click on the “**INSTALL FIRMWARE**” button to start the firmware installation process.

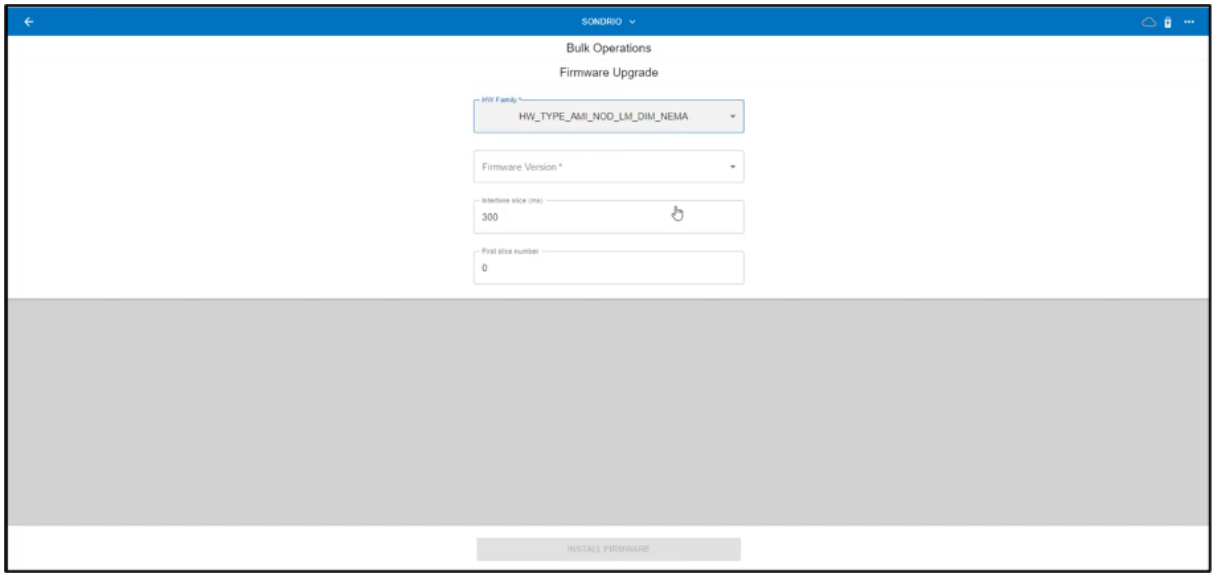


Figure 103: Updating the Firmware of Multiple IoT devices/nodes

Modifying the Radio Configuration of an IoT Device/Node (Estimated time: 5 mins)

44. Modifying the Radio Configuration of an IoT Device/Node (*Estimated time: 5 mins*)

In some cases, you may want to change the radio configuration of a device, such as adjusting the device to connect to a different gateway.

In order to start the process to change the radio configuration of a device, first select the device from the Default Home Screen and then click on the "**Configure**" icon as shown in the figure below.

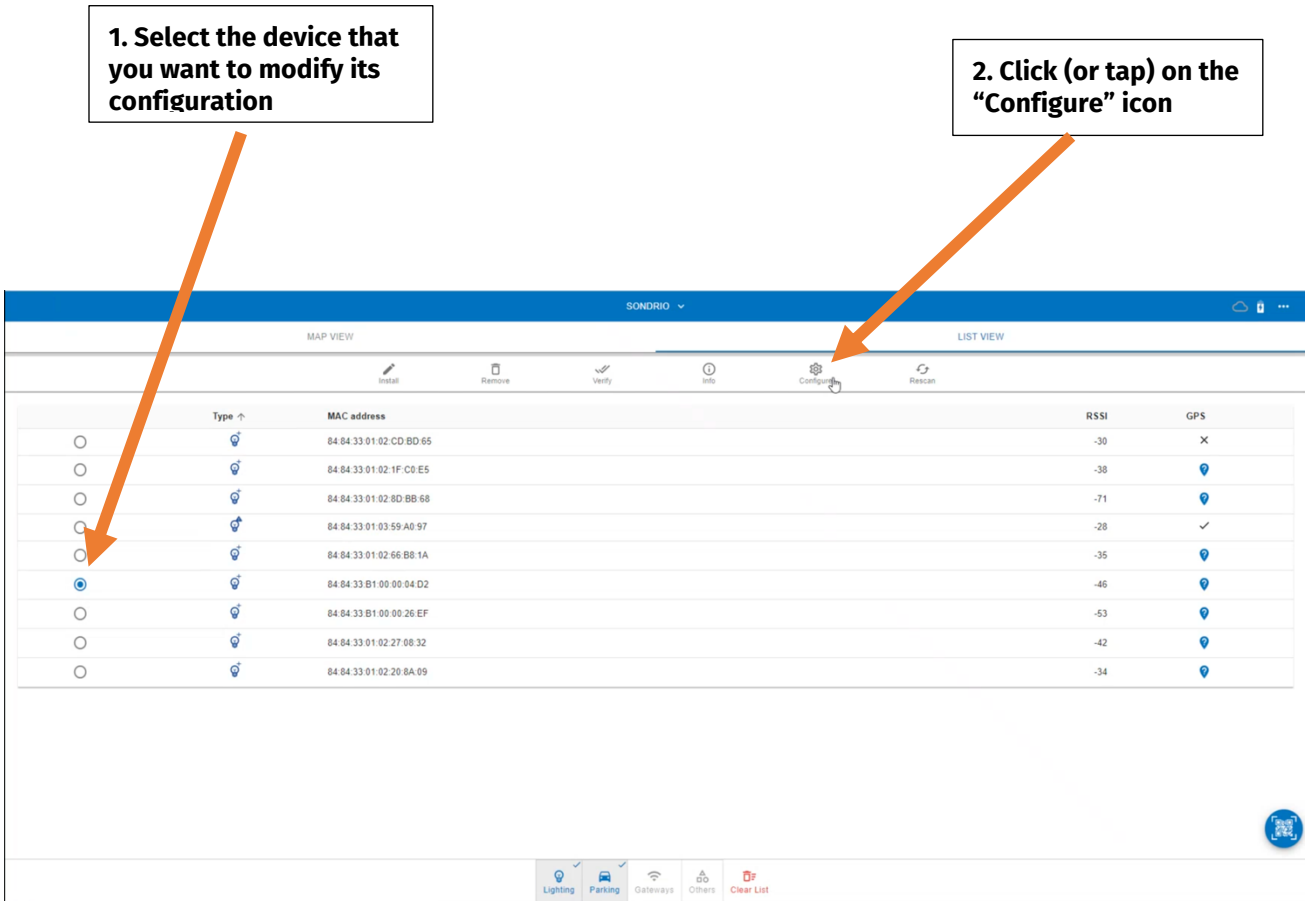


Figure 104: Modifying the Radio Configuration of a Device

Modifying the Radio Configuration of an IoT Device/Node (Estimated time: 5 mins)

You will then be presented with a screen with multiple panels. Click on the “Device Radio Configuration” panel to expand it, and select the desired profile from the dropdown box as shown in the figure below.

In order to change the AES ASCII key, you need to contact Tridonic and Tridonic will provide you with the .ini file with a different AES ASCII key

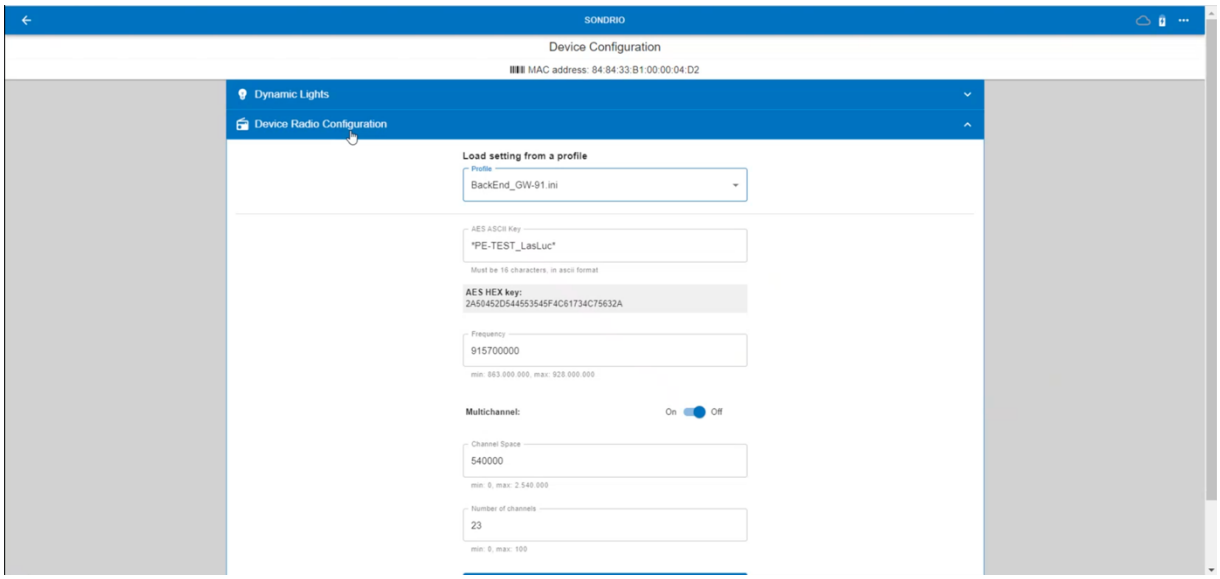
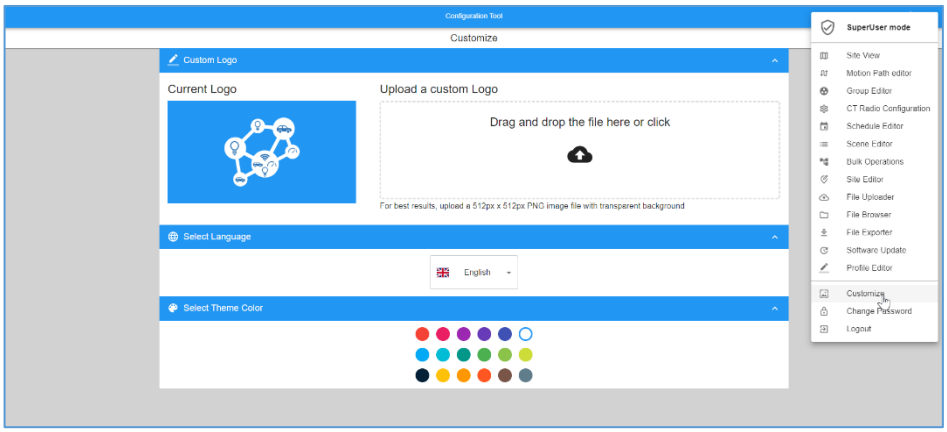
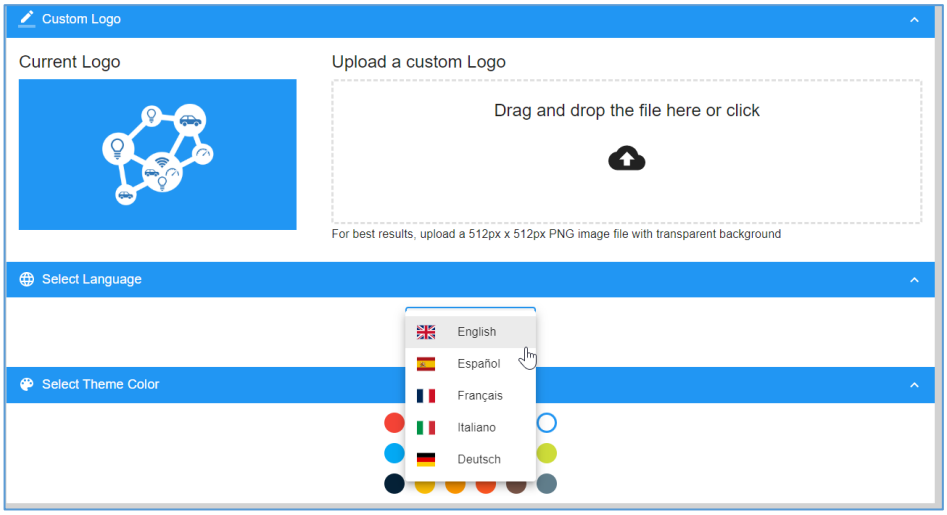


Figure 105: Modifying the Radio Configuration of an IoT device/node

45. Customize

NOTE: Customize is still in BETA status.

Visual	Description
	• Select the 3 dots (the main menu) on the top right side. → The window "SuperUser mode" opens. • Select "Customize".
	In the new Window you have the following options: • Upload a custom logo. • Select a language (English, Spanish, French, Italian and German are available). • Select a theme color.

Customize

In order to change the logo, simply drag and drop a 512px x 512px .PNG file to the Customize screen, as shown in the figure below. Alternatively, you can click the cloud icon to browse your computer to upload the image.

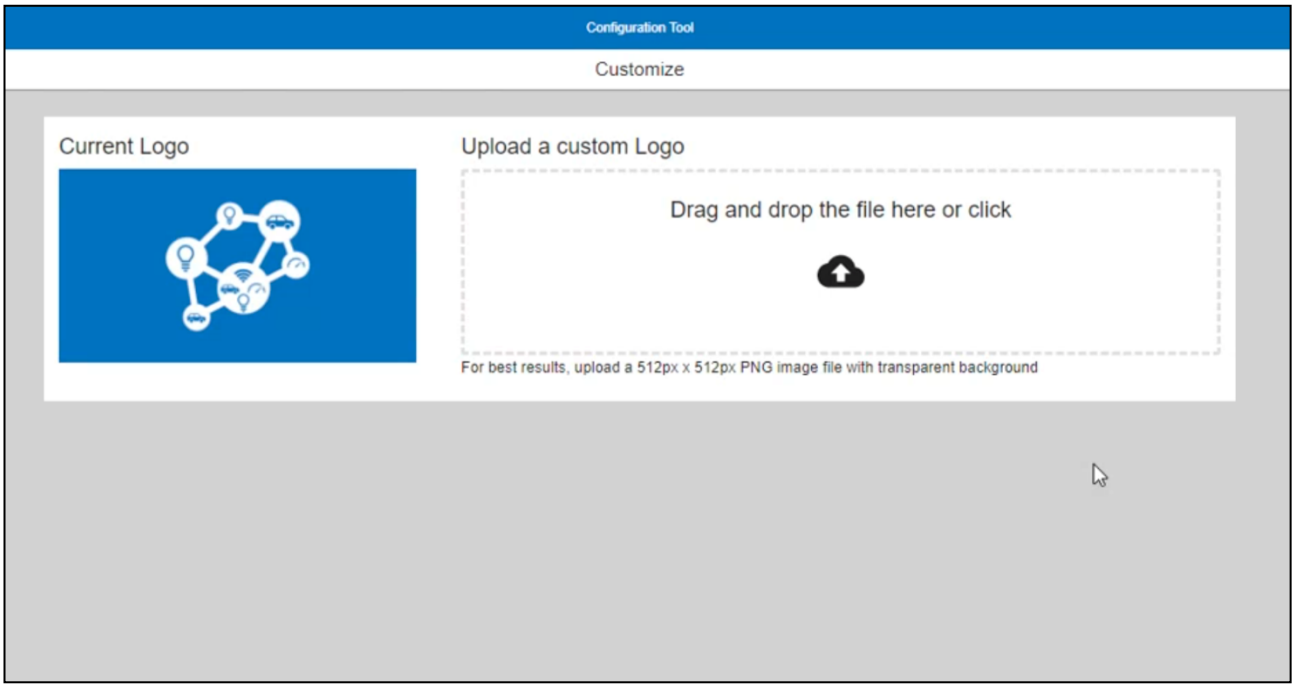
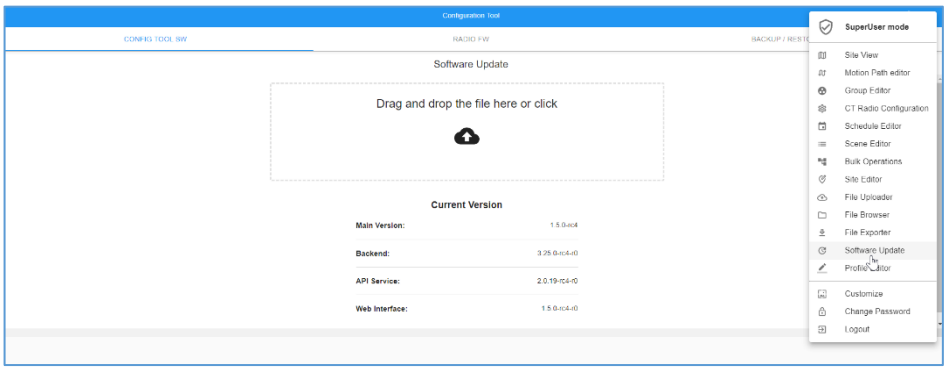
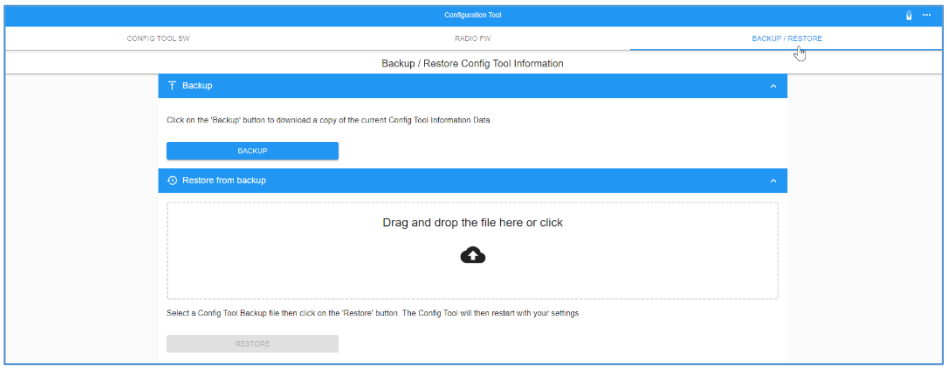


Figure 106: Adding a Custom Logo for the Config Tool

46. Backup / restore

With this feature you can create a backup of your device. In case the device is lost or broken you can install this backup to a new device.

Visual	Explanation
	• Select the 3 dots (the main menu) on the top right side. → The window "SuperUser mode" opens. • Select "Software Update".
	• Select "BACKUP / RESTORE" on the top right side. In this window you can create a backup or restore the config tool information from a backup file via drag and drop.

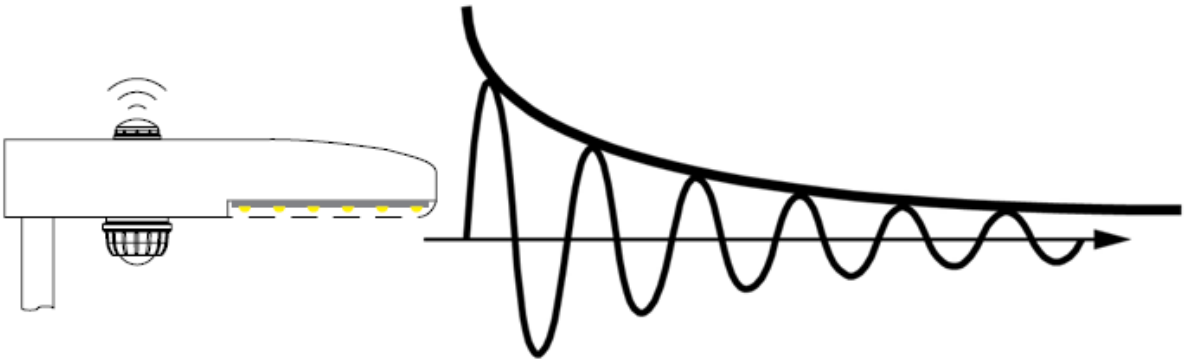
47. Planning guideline

47.1 Radio waves and their propagation

Radio waves are electromagnetic waves that move in the low frequency range. They are used to transfer information.

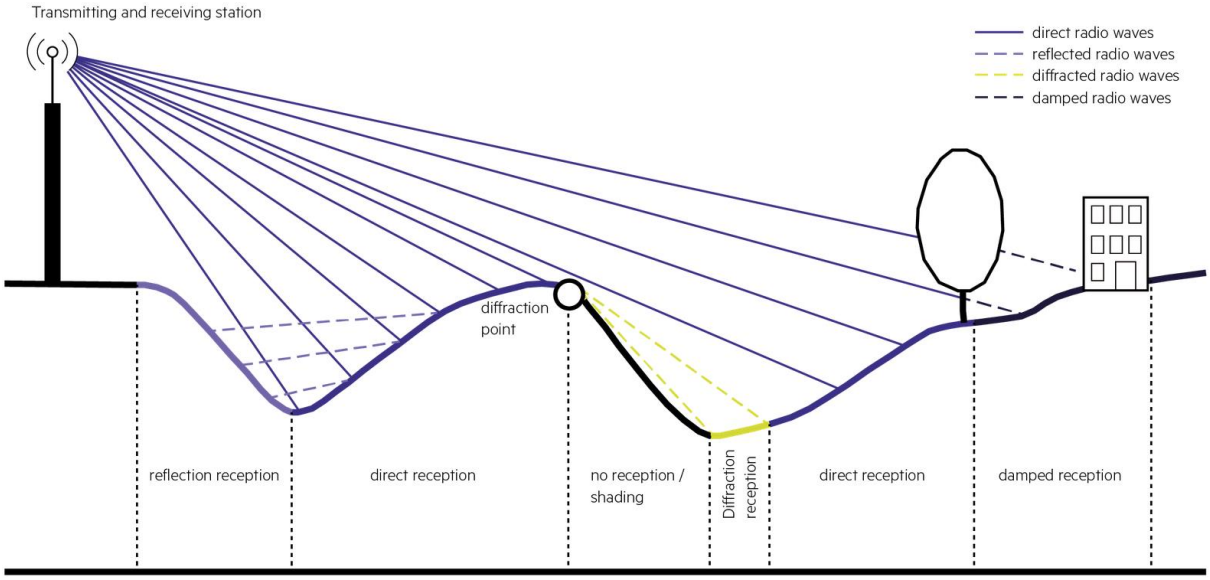
In free space, radio waves propagate spherically. The signal strength decreases quadratically with distance. From a certain distance on, the signal is so weak that it can no longer be received without errors or is masked by the surrounding noise.

The following graphic shows how the signal strength decreases with distance.



47.2 Factors influencing radio waves

The following graphic illustrates the different possible influencing factors on radio waves in an open field. In closed rooms, possible interferences even occur in a superimposed form and are not able to be descriptively illustrated in a graphic any more.



The graphic shows the sending and receiving station of the signal (top left) and various influencing factors that can occur depending on the location of the receiving station:

- Reflection
- Interference
- Diffraction
- Shadowing
- Damping

Other examples of influencing factors are weather conditions like rain and snow, impurities on the luminaire like dirt, dust, foliage and generally all objects located between the RFNodes.

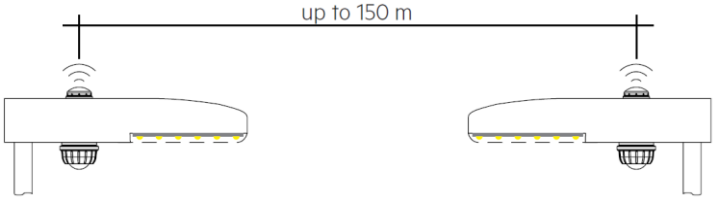
NOTE: *All factors influencing radio waves must be checked and accepted on site.*

NOTE: *To ensure a good radio connection, do not cover the transmitter with any materials!*

47.3 Maximum radio range

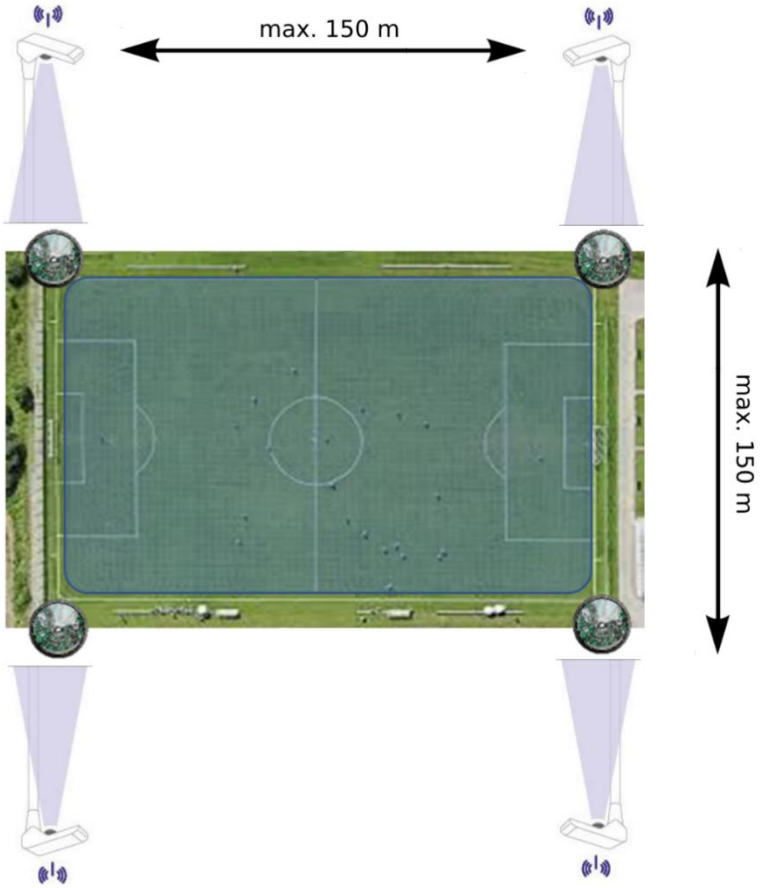
Under ideal circumstances (direct line of sight, same height, clear weather conditions, no obstacles between nodes) the maximum radio range is up to 150 m but might be reduced by the mentioned influencing factor.

Max. radio range:



In a Multi-Use Games Area (MUGA), the maximum radio range of 150 m is sufficient for the distance between the stadium lights.

Planning guideline



48. Frequently asked questions (FAQ)

How to create a motion path with only some lights of nodes.
This is not possible, you can only create groups on node level. But via scheduler you can program that every light point reacts differently inside this group.

How to create groups with only some outputs of a node?
This is not possible, you can only create groups on node level. But via scheduler you can program that every light point reacts differently inside this group.

Motion paths: What are hold and dim downtimes?
How long a light is on (hold time) and on which dim level is defined in the scheduler.

What are dynamic lights?
The section where you can program your schedules is called dynamic lights. You can reach this section if you select SiteView/Configure/Dynamics Lights. Then you can program a scheduler to a node and the light points.

Why do you have 180 predefined scenes?
Because of the wide application requirements of our customers we provide scenes with IDs from 0 to 79 that can be used in relation to motion sensor instances and IDs from 80 to 160 and can be used related to push button instances.

49. Trouble shooting guide

I am not able to connect to the groupCONTROL Programmer
Go through the following steps and make sure everything is set up correctly: • Make sure you are not connected to a VPN connection, this my cause issues. • Make sure you do use the correct device. I has to be Android ≥6.0, iOS ≥11 or Windows ≥10. If e.g. you do have issues with an Windows device try to connect with an Android or iOS device. • If any DirectConnect Devices (e.g. printer) are located nearby, then try to eliminate those sources: o Switch the groupCONTROL Programmer off for at least 1 minute and try again. o Check if you do see the Wi-Fi signal broadcast by the groupCONTROL Programmer. The connection can take up to 5 minutes sometimes depending on the environment.

The CIS 30 node is not visible or missing in the groupCONTROL Programmer
In case you do not see the CIS 30 node, do the following: Zoom out the map view and check if • the AUX Power supply is not active • the CIS 30 node is wrongly wired or wiring has bad contact • the CIS 30 node is covered with mud or other pollution and the signal strength is not good enough • the CIS 30 node is out of reach because you are too far away from the CIS 30 node • you connected to the groupCONTROL Programmer? If all of that does not help, one of the following could be the case: If your CIS 30 nodes were in the past connected to a different groupCONTROL (but not commissioned), they are "temporarilly bounded" to this groupCONTROL. Because of that you do not see them with your current groupCONTROL Programmer. • Connect the CIS 30 nodes to power for at least 5 hours. After 5 Hours the CIS 30 nodes will "delete the temporary bound" to the other groupCONTROL Programmer and will then connect to your groupCONTROL Programmer. If your CIS 30 nodes were connected to a different groupCONTROL and commissioned, the CIS 30 nodes are bound to the other groupCONTROL and Site key. • You need to know the Site key in order to connect to those CIS 30 nodes! If you do not know the Site key you need to return the CIS 30 nodes to Tridonic.

I had two drivers connected to the CIS 30 node and disconnected one, but the CIS 30 node still tells me there are two drivers! Is there a way to trigger the CIS 30 node to read everything out again, so that I only see the currently connected devices?
The CIS 30 nodes have an internal database and at the moment the CIS 30 node remembers all the devices that were ever connected. If you e.g. connect the CIS 30 node to 7 different luminaries and each luminaire has 1 driver inside, will see 7 drivers connected to the CIS 30 node, even if there is only 1 driver physically connected. If you had drivers connected in the past connected that are no longer connected, you can now rescan the CIS 30 node by selecting Install CIS 30 Node > Rescan in the Site View.

Trouble shooting guide

Lamp dimming does not match measurements. Reading from the CIS 30 node only brings back dimming percentage (sometimes wrong)!
Dynamic values like intensity or power consumption are updated approximately 10s, which most probably is the reason for the feedback above.

Drivers are not visible / missing in the groupCONTROL Programmer
In case you do not see a driver it is possible that • The Dali power supply is not active • The driver is not powered • The driver is wrongly wired or wiring has bad contact • The driver is broken • CIS 30 node DA+ is not connected correctly

Sensors are not visible or missing in the groupCONTROL Programmer
In case you do not see a sensor, it is possible that • the Dali power supply is not active • the wiring of the sensor is wrong or wiring has bad contacts • the CIS 30 node DA+ is not connected correctly • the sensor is broken

Schedulers are executed at a wrong time in the groupCONTROL system?
In case your schedulers are executed at the wrong time, the chance is high that your system time is wrong. • Make sure that you have the correct system time • Check if the master clock is active for at least one GPS CIS 30 node • Check if the scheduler is programmed correctly (maybe the times in the scheduler do not fit you expectations) • Make sure you do see all CIS 30 nodes in your local network

50. References / related documents

Product	Information on Tridonic webpage
Siderea	https://www.tridonic.com/com/en/products/siderea.asp
groupCONTROL	https://www.tridonic.com/com/en/products/siderea-groupcontrol.asp
CIS 30	https://www.tridonic.com/com/en/products/rf-node-cis-30-da2.asp
PSensor	https://www.tridonic.com/com/en/products/psensor-ssi-31-2xpir-8dp-dg.asp
MSensor 10DP OTD	https://www.tridonic.com/com/en/products/siderea-msensor-otd-sfi-30-pir-10dp-da-wh.asp
DALI XC G3	https://www.tridonic.com/com/en/products/dali-xc-g3.asp

51. Revision History

Revision	Date	Description
02	12.2022	Update to firmware version 1.5
01	02.2022	Update release
00	09.2021	First document release.