eMobility Infrastructure

Commissioning Guide

EVSOLCG001EN-00
06/2025

www.se.com

Legal Information

The information provided in this document contains general descriptions, technical characteristics and/or recommendations related to products/solutions.

This document is not intended as a substitute for a detailed study or operational and site-specific development or schematic plan. It is not to be used for determining suitability or reliability of the products/solutions for specific user applications. It is the duty of any such user to perform or have any professional expert of its choice (integrator, specifier or the like) perform the appropriate and comprehensive risk analysis, evaluation and testing of the products/solutions with respect to the relevant specific application or use thereof.

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Safety Information

What's in This Part

Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result** in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

Before You Begin

Electrical monitoring and control equipment, and related software are used in a variety of buildings. The type or model of electrical monitoring and control equipment suitable for each application varies, depending on factors such as the system dependability level, unusual conditions and government regulations.

Only the user can be aware of all the conditions and factors present during setup, operation, and maintenance of the solution. Therefore, only the user can determine the electrical monitoring and control equipment and the related safeties and interlocks which can be appropriately used. When selecting electrical monitoring and control equipment, and related software for a particular application, the user should refer to the applicable local and national standards and regulations. The National Safety Council's Accident Prevention Manual (nationally recognized in the United States of America) also provides much useful information.

Ensure that appropriate safeties and mechanical/electrical interlocks protection have been installed and are operational before placing the equipment into service. All mechanical/electrical interlocks and safeties must be coordinated with the related automation equipment and software programming.

Start-up and Test

Before using electrical control and automation equipment for regular operation after installation, the system should be given a start-up test by qualified personnel to verify correct operation of the equipment. It is important that arrangements for such a check are made and that enough time is allowed to perform complete and satisfactory testing.

Follow all start-up tests recommended in the equipment documentation. Store all equipment documentation for future reference.

Test the software in both simulated and real environments.

Verify that the completed system is free from all short circuits and temporary grounds that are not installed according to local regulations (according to the National Electrical Code in the U.S.A, for example). If high-potential voltage testing is necessary, follow recommendations in equipment documentation to prevent accidental equipment damage.

About the Document

Document Scope

The purpose of this guide is to provide installers, maintenance personnel and users with the technical information necessary to commission EV infrastructure systems.

Validity Note

This document is applicable to the following charging stations:

- Pro AC charging stations
- Pro AC Metal charging stations
- Schneider Charge Pro charging stations

The characteristics of the products described in this document are intended to match the characteristics that are available on www.se.com. As part of our corporate strategy for constant improvement, we may revise the content over time to enhance clarity and accuracy. If you see a difference between the characteristics in this document and the characteristics on www.se.com, consider www.se.com to contain the latest information.

Online Information

The information contained in this guide is likely to be updated at any time. Schneider Electric strongly recommends that you have the most recent and up-to-date version available on www.se.com/ww/en/download.

The technical characteristics of the devices described in this guide also appear online. To access the information online, go to the Schneider Electric home page at www.se.com.

Product Related Information

⚠WARNING

UNGUARDED EQUIPMENT

- Do not use this product on equipment lacking effective point-of-operation guarding. Lack of effective point-of-operation guarding on a machine can result in serious injury to the operator of that machine.
- Do not use this software and related automation equipment on equipment which does not have point-of-operation protection.
- Do not reach into machinery during operation.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠WARNING

EQUIPMENT OPERATION HAZARD

- Remove tools, meters, and debris from equipment.
- Close the equipment enclosure door.
- Perform all start-up tests recommended by the manufacturer.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

NOTICE

HAZARD OF LOSS OF DATA AND CYBERSECURITY WARNING

- Activate product and component licenses prior to the expiry of the trial license.
- Activate sufficient licenses for the servers and devices in your system.
- Back up or archive any SQL Server database data before adjusting any database memory options.
- Only personnel with advanced knowledge of SQL Server databases must make database parameter changes.
- Change default passwords at first use to help prevent unauthorized access to device settings, controls, and information.
- Disable unused ports/services and default accounts to help minimize pathways for malicious attackers.
- Place networked devices behind multiple layers of cyber defenses (such as firewall, network segmentation, and network intrusion detection and protection).
- Use cybersecurity best practices (for example, least privilege, separation of duties) to help prevent unauthorized exposure loss, modification of data and logs or interruption of services.

Failure to follow these instructions can result in equipment damage.

NOTICE

HAZARD OF NETWORK INOPERABILITY

Do not make unauthorized changes in the network configuration.

Failure to follow these instructions can result in equipment damage.

See in this guide:

- Before You Begin, page 6
- Start-up and Test, page 7

General Cybersecurity Information

In recent years, the growing number of networked machines and production plants has seen a corresponding increase in the potential for cyber threats, such as unauthorized access, data breaches, and operational disruptions. You must, therefore, consider all possible cybersecurity measures to help protect assets and systems against such threats.

To help keep your Schneider Electric products secure and protected, it is in your best interest to implement the cybersecurity best practices as described in the Cybersecurity Best Practices document.

Schneider Electric provides additional information and assistance:

- Subscribe to the Schneider Electric security newsletter.
- Visit the Cybersecurity Support Portal web page to:
  - Find Security Notifications.
  - Report vulnerabilities and incidents.
- Visit the Schneider Electric Cybersecurity and Data Protection Posture web page to:
  - Access the cybersecurity posture.
  - Learn more about cybersecurity in the cybersecurity academy.
  - Explore the cybersecurity services from Schneider Electric.

Related Documents

Title of documentation	Reference number
Cybersecurity Best Practices	Refer to *General Cybersecurity Information*, page 10.
EcoStruxure™ EV Charging Expert User Guide	DOCA0358EN
eMobility Solutions - Catalog	E-MOBILITY-EVL-CAT04_EN
eMobility Infrastructure Design Guide for Building Applications	EVSOL1DG001EN
EVlink Pro AC Troubleshooting Guide	NNZ1940301 (EN/FR)
Schneider Charge Pro Installation and Operation Guide	TME42383
Modicon Networking Catalog 2024	DIA6ED2140903EN
eSetup EVlink Pro AC Charging Stations - a playlist of videos to help you install and commission EVlink Pro AC	https://youtube.com/playlist?list=PLa7UGrWOTyjlFktxGiia8yNkYOQaMJuzX
Video showing how to configure load management parameters	https://youtu.be/c3FBqzF1Avw

Title of documentation	Reference number
Video showing how to configure Schneider Charge Pro with eSetup	https://youtu.be/BGCuxbVv9AU
Video showing how to configure Ethernet communication parameters	https://www.youtube.com/watch?v=Sg7sAeqko_w&t=89s

To find documents online, visit the Schneider Electric download center (www.se.com/ww/en/download/).

Information on Non-Inclusive or Insensitive Terminology

As a responsible, inclusive company, Schneider Electric is constantly updating its communications and products that contain non-inclusive or insensitive terminology. However, despite these efforts, our content may still contain terms that are deemed inappropriate by some customers.

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Presentation of EV Infrastructure

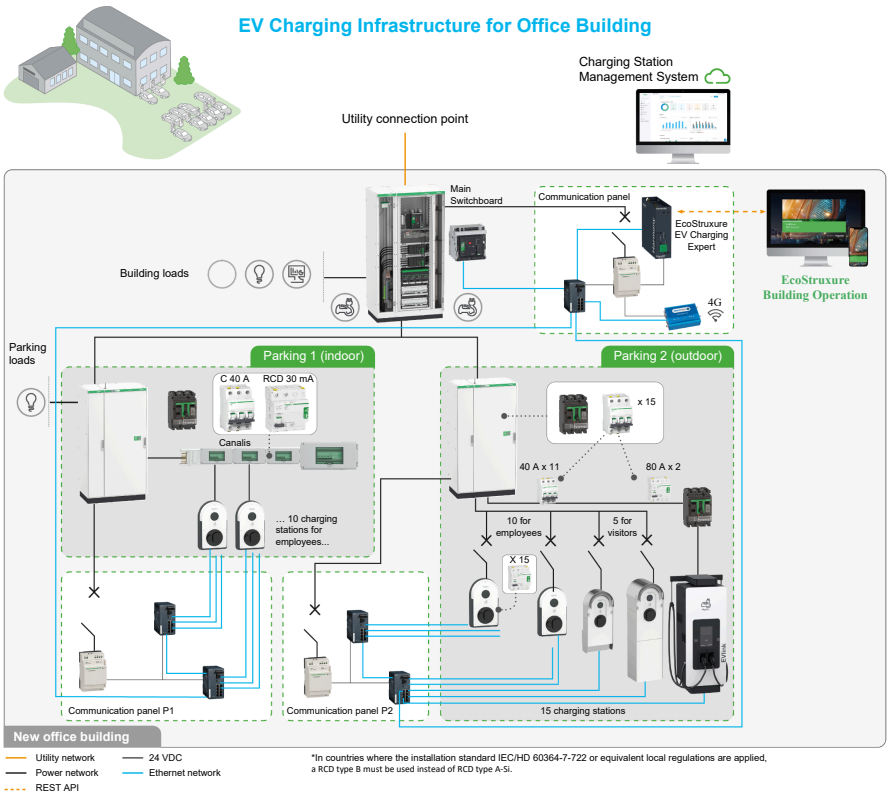
What’s in This Part

Applications for Buildings

The EV infrastructure supports the following applications for buildings:

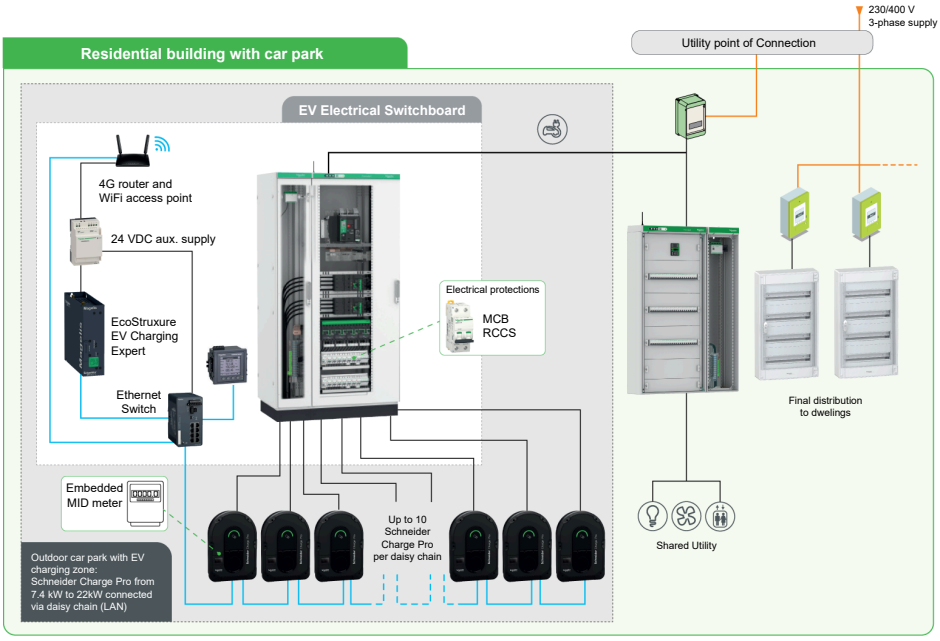
- New office building with local load management system (EcoStruxure EV Charging Expert), page 13
- Ethernet architecture for multi-unit residential buildings with local load management system (EcoStruxure EV Charging Expert), page 14
- Depot for electric LCV (light commercial vehicle) fleet managed by a charging point operator, page 14

New Office Building with Local Load Management System (EcoStruxure EV Charging Expert)

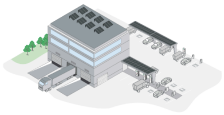


NOTE: For EVlinkPro DC charging station and for Schneider Electric legacy ranges of charging stations, contact your local front office.

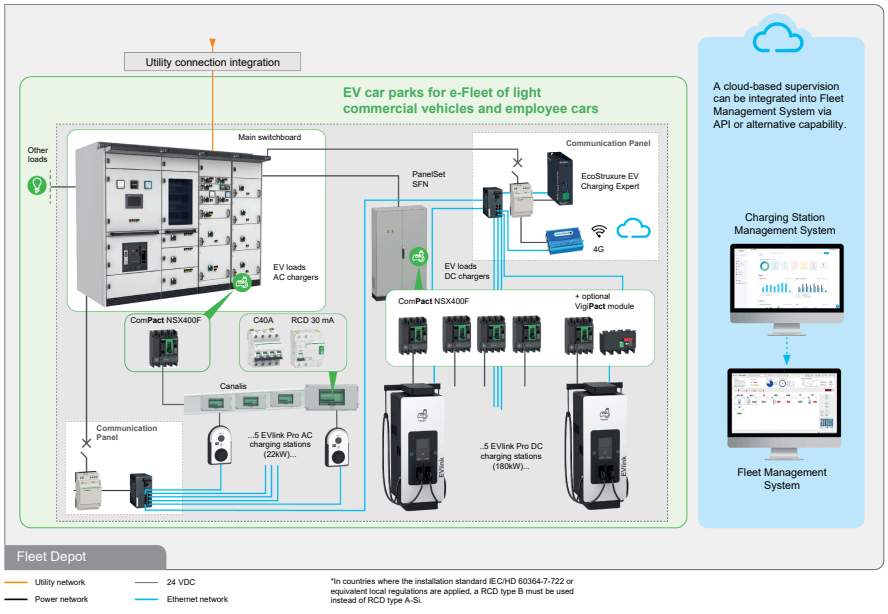
Ethernet Architecture for Multi-Unit Residential Buildings with Local Load Management System (EcoStruxure EV Charging Expert)



Depot for Electric LCV Fleet Managed by a Charging Point Operator



Charging Infrastructure for a Depot with AC and Fast DC Chargers



NOTE: For EVlinkPro DC charging station and for Schneider Electric legacy ranges of charging stations, contact your local front office.

Key Variables

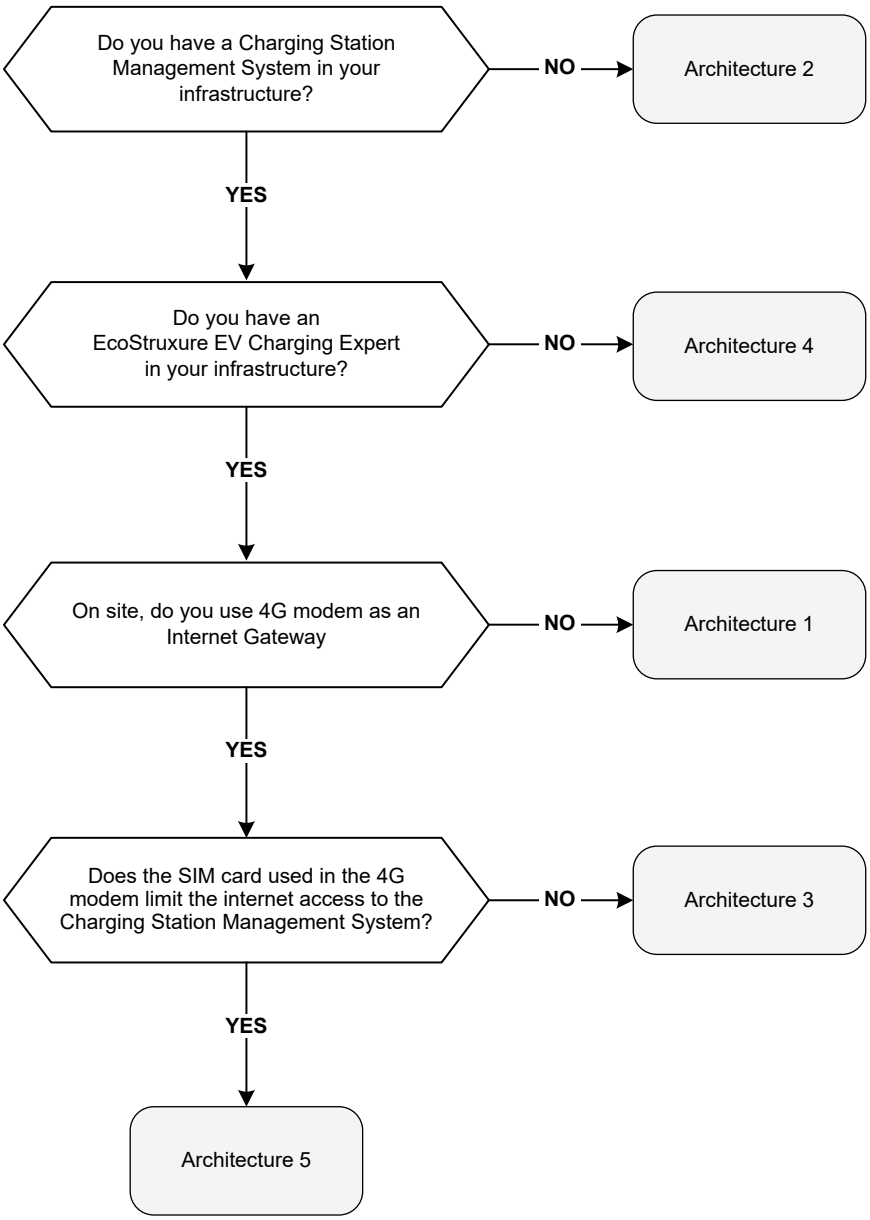
The commissioning of the EV infrastructure depends on the following key variables:

- Ranges and models of charging station: AC and/or DC charging stations
- EV load management system:
  - Installation of EcoStruxure™ EV Charging Expert
  - Definition of the load management mode (static or dynamic)
- Operational requirements:
  - Local operation only
  - Connection to a remote charging station management system (Schneider Electric or third party)
- IT/Network configuration
  - With or without DHCP server from customer site
  - Internet connectivity and network topologies (star, daisy chain, or ring)

Supported Architectures

This guide explains the commissioning procedure for the following system architectures:

- System Architecture 1, page 33: Full architecture: supervision - edge load management - charging stations. IT including DHCP server is managed by the customer.
- System Architecture 2, page 36: No supervision. Edge load management and charging stations operated locally by the customer.
- System Architecture 3, page 39: With supervision - charging stations. No edge load management. A 4G cellular modem as an internet gateway and DHCP server.
- System Architecture 4, page 42: Full architecture: supervision - edge load management - charging stations. A 4G cellular modem as an internet gateway and DHCP server .
- System Architecture 5, page 45: Full architecture: supervision - edge load management - charging stations. A 4G cellular modem as an internet gateway limited to the connection to the supervision, and without DHCP server.



Specific Functions and Configurations

This guide additionally describes how to:

Offers and Products

What's in This Chapter

For detailed information about Schneider Electric eMobility offers and products, refer to *eMobility Solutions - Catalog*, page 10.

EV Charging Station Ranges Compatible with EcoStruxure EV Charging Expert

The following sections indicate how to find support for commissioning each EV charging station range.

EV Charging Station Ranges Covered in this Guide

The following table indicates the characteristics of each EV charging station range covered in this guide.

Charging station range	Power rate and phases availability	Minimum firmware version for compatibility with EV Charging Expert	Charging station commissioning
EVlink Pro AC 	From 7.1 kW to 22 kW 1P or 3P	1.3.8	See General Procedure to Update EVlink Pro AC Charging Station Firmware, page 71. Refer to the video showing how to commission EVlink Pro AC charging station with eSetup: https://youtube.com/playlist?list=PLa7UGrWOTyjlFktx-Giia8yNkYOQaMJuzX
Schneider Charge Pro (AC) 	From 7.4 kW to 22 kW 1P or 3P	1.18.1	See Updating EVlink Schneider Charge Pro Charging Station Firmware, page 78.

Other EV Charging Station Ranges not Covered in this Guide

- EVlink Smart Wallbox (legacy range)
- EVlink Parking (legacy range)
- EVlink Pro DC 60 kW
- EVlink Pro DC 60 kW V2
- Schneider StarCharge Fast 60 kW
- EVlink Pro DC 180 kW
- EVlink Pro DC 180 kW V2
- Schneider StarCharge Fast 180 kW
- EVlink Pro DC 320 kW
- Schneider StarCharge Fast 320 kW

For EV charging station ranges not covered in this guide, contact your local Schneider Electric front office.

Offers and Commissioning Tools

Schneider Electric offers and commissioning tools are as follows:

- EcoStruxure EV Charging Expert charging load management system, page 20
- Schneider Electric energy and building management systems, page 21
- eSetup commissioning application for electricians, page 22

EcoStruxure EV Charging Expert

EcoStruxure EV Charging Expert 6.0 is a load management system that helps control EV infrastructure and distribute available power to the charging stations.

It allows EV charging to be monitored, controlled, and maximized based on the real-time available power in the building.

It helps to ensure the respect of cost and energy efficiency constraints of a set of charging stations by controlling their operation. The controller runs its management program according to the selected parameters and data received from the charging stations.

The main functions performed by EcoStruxure EV Charging Expert charging load management system are the following:

Access management	Commissioning	Operation	Connectivity
Add, modify,delete, and supervise badges	Commission all charging stations directly	Supervision through real-time dashboard and remote actions on charging stations	Connection with charge point operators supervision (OCPP1.6Json)
	Save and restore commissioned configuration	Charge data report export	Connection with EcoStruxure supervision (web services). This function may require specific development.
		Maintenance report export	3G/4G modem (optional)
			Commissioning by Ethernet cable

For more information, refer to:

- www.se.com

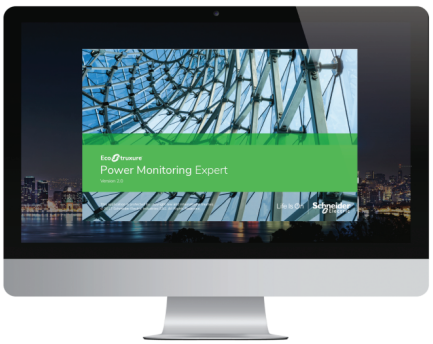
- the video explaining the benefits of load management in EV Infrastructure with EcoStruxure EV Charging Expert:

https://youtu.be/aYEEmJeRaYc

Schneider Electric Energy and Building Management Systems

EV load is integrated into a facility management system, with the following features:

- All-in-one monitoring of the electrical distribution:
  - A single interface to supervise and monitor the EV charging infrastructure integrated into the building electrical distribution network
  - Detailed alarms to make quick and informed decisions if something happens
  - Detailed view of circuit capacity to optimize the electrical distribution and to forecast EV infrastructure evolution
- Power demand and power quality monitoring:
  - EV charging station status and usage continuous monitoring
  - Monitoring and EV charging stations power output to control the peak demand
  - Power quality view to analyze the impact of DC charging on the electrical distribution network and anticipate adverse effects
- Energy consumption trends and KPIs:
  - Identification of the charging stations with the highest consumption
  - Consumption comparison per zone, time period, or parking usage



EcoStruxure Power Monitoring Expert

EcoStruxure Power Monitoring Expert (PME) is designed to help energy-intensive facilities maximize uptime and operational efficiency.

It leverages IoT connectivity and distributed intelligence to provide the flexibility and adaptability needed for today and for the IoT-enabled future.

For more information, refer to www.se.com.

EcoStruxure Building Operation software

EcoStruxure Building Operation is a building management software that delivers the right information when, where and how you want it. Operations are simplified with drag-and-drop trending, calendar-like schedules and one-click reporting. Native open protocols provide the freedom to choose the right equipment for your application. EcoStruxure Building Operation software provides up to 30 % energy savings. It helps create a healthy and sustainable environment.

For more information, refer to www.se.com.

eSetup Commissioning Application for Electricians

eSetup is a dedicated application to configure and commission Schneider Electric products. It can be used to commission EVlink Pro AC and Schneider Charge Pro charging stations manually.

Download eSetup:

- From Apple Store:
- From Google Play:
- Via your mySchneider account

Other Products

For information about other products compatibility, recommendations and limitations, refer to:

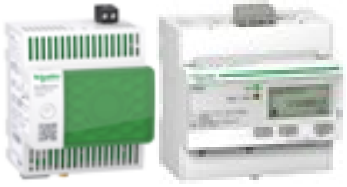
- DOCA0358E *EcoStruxure EV Charging Expert User Guide*, page 10
- EVSOL1DG001EN *eMobility Infrastructure Design Guide for Building Applications*, page 10
- Schneider Electric Customer Care Center

Schneider Electric Power Meters

NOTE: Power metering is only required when EcoStruxure EV Charging Expert is used in dynamic mode.

The following table lists the power meters from Schneider Electric that are compatible with EcoStruxure EV Charging Expert.

Refer to DOCA0358E *EcoStruxure EV Charging Expert User Guide*, page 10.

Name	Pole description	Input type	Comment
A9MEM3250 (PAS600 + Acti 9 iEM3000) 	1P + N / 3P / 3P + N	External current transformer (CT): 1 A or 5 A	–
METSEPM5320 (PowerLogic™ PM5000) 	1P + N / 3P / 3P + N	–	–
A9XMWD20 (PowerTag Link + PowerTag sensors) 	1P + N / 3P / 3P + N	PowerTag wireless energy sensor up to 630 A	–

Name	Pole description	Input type	Comment
ComPact NSX circuit breaker with embedded metering (with Enerlin'X IFE gateway) 	3P / 4P	Modbus TCP	For 3P, if you want to have power per phase with NSX 3-poles, you must add external neutral voltage tap.
MasterPacT™MTZ circuit breaker with embedded metering (with embedded Enerlin'X EIFE module) 	3P / 4P	Modbus TCP	For 3P, if you want to have power per phase with MTZ 3-poles, you must add external neutral voltage tap.

The following table shows the Modbus registers to get data, according to the type of power meter or circuit breaker.

	PM5320, IEM3x5x, PowerTag A	ComPact NSX legacy	ComPacT NSX	MasterPacT MTZ
Register for current Ph1	3000	12016	32028	32028
Register for current Ph2	3002	12017	32030	32030
Register for current Ph3	3004	12018	32032	32032
Register for power Ph1	3054	12038	32077	32077
Register for power Ph2	3056	12039	32074	32074
Register for power Ph3	3058	12040	32076	32076
Register for total active power	3060	12041	32078	32078
Register for total active energy delivered	3204	12050	32096	32096

Other power meters that are not part of this selection are compatible with EcoStruxure EV Charging Expert as well.

When commissioning the power meter, select from the drop-down list on **Model** field, the corresponding model of power meter matching the appropriate registers list.

Modems

Use a 4G cellular modem (EVP3MM) with EcoStruxure EV Charging Expert. It is connected on the same network as EcoStruxure EV Charging Expert.

NOTE: Other modems with router function can be used.

Recommended Switches

Use Modicon Networking switch to integrate Ethernet solutions into your operation.

Unmanaged switch for star topology	
 Four ports for copper MCSESU053FN0	 Eight ports for copper MCSESU083FN0
Managed switch for ring and daisy chain topologies	
 Four ports for copper MCSESM043F23F0	 Eight ports for copper MCSESM083F23F0

For more information about communication network definition, refer to EVSOL1DG001EN *eMobility Infrastructure Design Guide for Building Applications*, page 10.

Prerequisites

Before starting the commissioning procedure, gather the following information:

Project information	
Before scheduling the commissioning of the EV infrastructure, evaluate with the facility manager of the building the impact of the commissioning regarding the building activities:	• Consider whether the building is occupied or not by residents, employees, or customers during the operation. • Consider whether there is any specific safety plan to consider. • Check that the power is on, tested, and running on site. • Check that the access to electrical switchboards of the site and to the EV infrastructure is approved. • Check that the IT manager and/or technical team are available. • Check that there is 4G connectivity available in the technical room or from the EV switchboard where EcoStruxure EV Charging Expert is installed.
Electrical environment information	
Before going on site, get the electrical distribution plan and wiring diagram of the site with all information regarding:	• Power supply • Earthing system • Electrical protections • Number, location and details of main and subsidiary switchboards dedicated to the EV Supply Equipment (EVSE) • Overall power allocated to the EVSE • Installed or to be installed power meters (number, monitoring zone, model, location, IP address)
IT plan and network information	
Check the following information with the IT manager:	• IP address range • DHCP server available on site or not • 4G modem available on site with remote access allowed • Outcome: local IT is specified • Detailed wiring diagrams and typology of the EV infrastructure network • IP address, mask, gateway • Domain Name System (DNS) • 4G modem settings and SIM card ready
EV charging infrastructure information	
Establish the composition of the infrastructure:	• Power range and model of charging stations • For each charging station: name, location, serial number, phase wiring, derating, OCPP box ID • Definition of the EV zones • Supervision system (local or remote)
Usage and user information	
Gather all relevant specifications you need to commission and configure EcoStruxure EV Charging Expert:	• Device location • Load management system (LMS) mode (static or dynamic) • Power meter models with ID and configuration settings if needed • Maximum current • Degraded mode (load shedding duration and priority: IEC or EV/ZE ready) • Time of use • Digital inputs • Authentication patterns: free, via RFID (list of badges available, RFID tags known and ready), VIP and offline strategy

Other useful information	
Before scheduling the commissioning of the EV infrastructure:	• Create a list of stakeholder contacts. • Prepare all relevant product documentation (user manual, installation guide, commissioning guide). • Check that all products are updated to their latest firmware version (charging stations, load management system, modem, switch). • For EVlink Pro AC and Schneider Charge Pro charging stations, check that you have the latest version of eSetup application installed on your mobile phone. • The SIM card is needed for wireless installation. Not all charging stations have embedded modem where you can insert a SIM card. Depending on the network architecture, the 4G modem can refer to an external modem or router (4G cellular modem). Before going on site, install all embedded or external SIM cards.

EcoStruxure EV Charging Expert User Interface

EcoStruxure EV Charging Expert monitoring dashboard displays the following information:

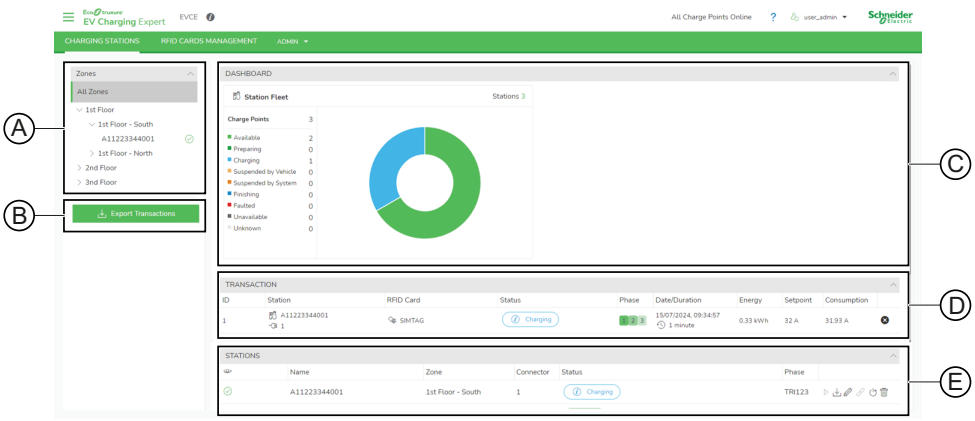
- Ongoing status of the charging stations
- Load transaction
- Zone configuration

Monitoring dashboard also allows you to manage charging stations:

- Reboot the charging stations
- Start and stop remotely a charging station
- Publish a diagnostic report

Monitoring dashboard is the following screen.

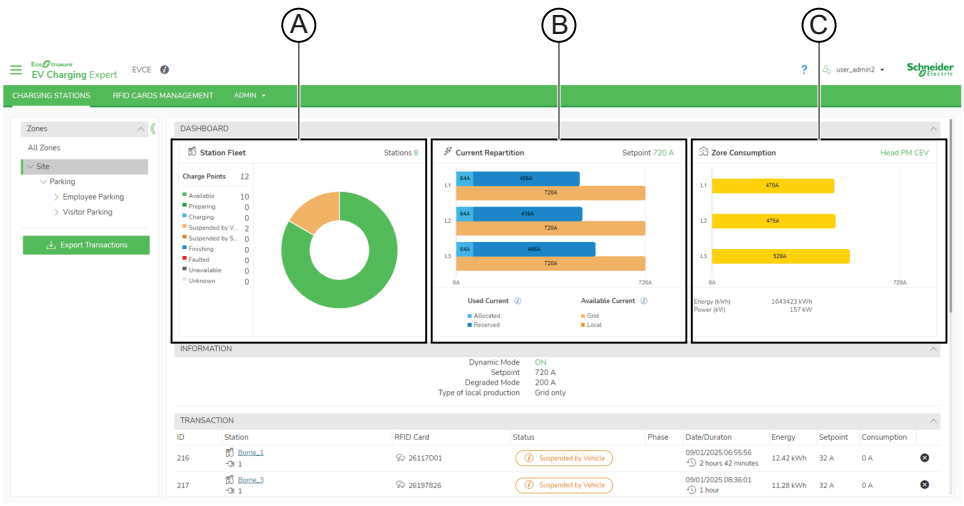
Monitoring dashboard



A. Zone panel
B. **Export Transactions** button
C. Dashboard giving information about zones and charging stations
D. Transaction information and management
E. Charging stations assignment and management

Zone Screen

When you select a zone in the zone panel, the following zone screen is displayed.



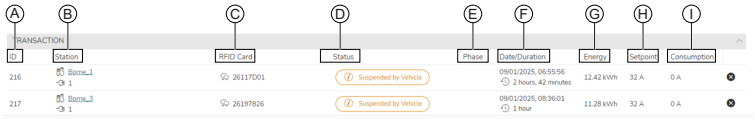
A. **Station Fleet**: status of the charging stations assigned to the selected zone

B. **Current Repartition**: charging setpoint available according to the selected zone maximum current, zone consumption and transactions

C. **Zone Consumption** (only for dynamic zones): zone consumption reported by the assigned power meter

Transaction Information and Management

The following transaction information is displayed.



A. **ID**: unique identifier of the transaction

B. **Station**: station name and connector used for the charging session

C. **RFID Card**: RFID card which launches the transaction

D. **Status**: status of the transaction according to OCPP standard:
   - **Charging**
   - **SuspendedEV**
   - **SuspendedEVSE**
   - **Finishing**

E. **Phase**: phases selected by EV (mono-phase or tri-phased)

F. **Date/Duration**: transaction start date and effective charging duration (time spent in charging state)

G. **Energy**: energy consumed by the ongoing transaction

H. **Setpoint**: current setpoint (intensity or power allocated to the charging station)

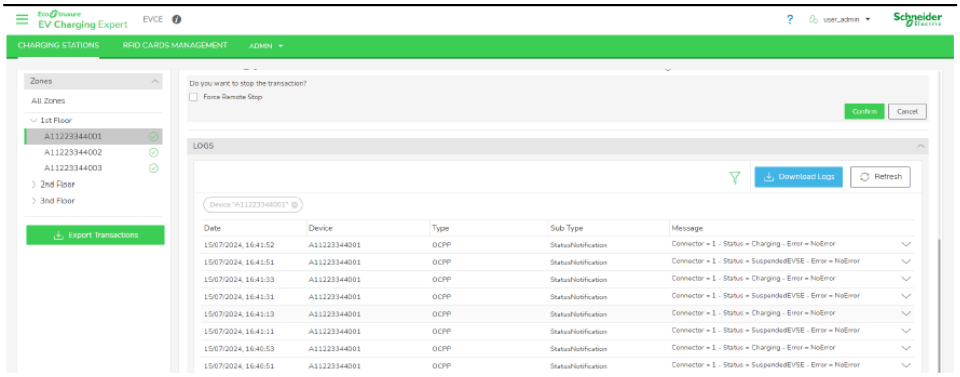
I. **Consumption**: consumption of the charging station

Station Screen

When you select a charging station in the zone panel, the station screen provides the following information.

- Name
- Charge box identity: used for remote supervision
- VIP status: option to enable VIP access to the charging station
- Electrical phase configuration of the charging station
- Vendor of the charging station
- Firmware version and management
- Current allocated to the charging station in degraded mode

In the station screen, the following log section displays all OCPP commands received by EcoStruxure EV Charging Expert from the selected charging station.


EV Charging Expert
EVCE
user_admin
Schneider Electric
CHARGING STATIONS
RFID CARDS MANAGEMENT
ADMIN
Zones
All Zones
1st Floor
A11223344001
A11223344002
A11223344003
2nd Floor
3nd Floor
Export Transactions
Do you want to stop the transaction?
Force Remote Stop
Confirm
Cancel
LOGS
Download Logs
Refresh
Date
Device
Type
Sub Type
Message

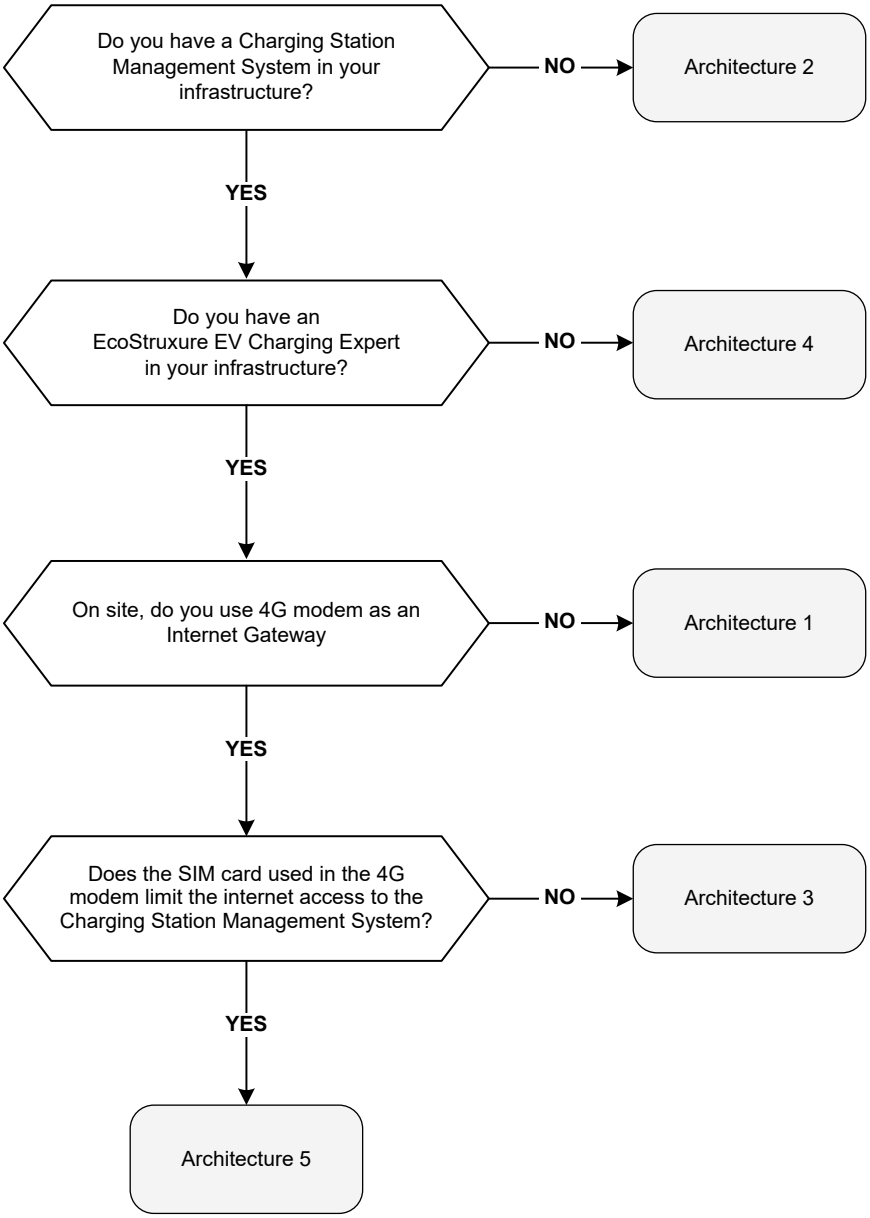
Commissioning EV Infrastructure Systems

What's in This Part

Description of System Architectures

The five system architectures are the following:

- System Architecture 1, page 33: Full architecture: supervision - edge load management - charging stations. IT including DHCP server is managed by the customer.
- System Architecture 2, page 36: No supervision. Edge load management and charging stations operated locally by the customer.
- System Architecture 3, page 39: With supervision - charging stations. No edge load management. A 4G cellular modem as an internet gateway and DHCP server.
- System Architecture 4, page 42: Full architecture: supervision - edge load management - charging stations. A 4G cellular modem as an internet gateway and DHCP server .
- System Architecture 5, page 45: Full architecture: supervision - edge load management - charging stations. A 4G cellular modem as an internet gateway limited to the connection to the supervision, and without DHCP server.



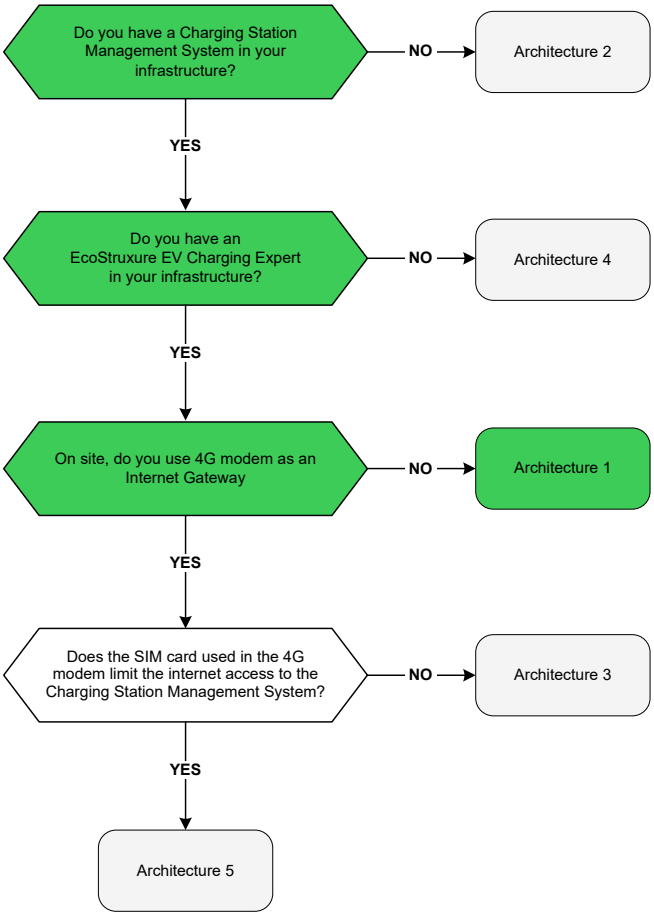
System Architecture 1

What's in This Chapter

System Architecture 1: Presentation

The main characteristics of system architecture 1 are the following:

- Compatible with EcoStruxure EV Charging Expert 6
- Load management system mode: dynamic
- DHCP server and gateway managed by the customer
- Digital network: star or daisy chain using managed switches
- EV infrastructure operated by an external charging point operator, no need for authentication or badges
- Greenfield architecture



System architecture 1 can be implemented for the following models of charging stations:

Charging station	Minimum version
Schneider Charge Pro	1.18.1
EVlink Pro AC	1.3.8

IMPORTANT: If there is a common EcoStruxure EV Charging Expert supervising the stations, it is not possible to install Schneider Charge Pro charging stations and EVlink Pro AC charging stations in the same EV infrastructure.

NOTE: For EVlink Pro DC charging station and for Schneider Electric legacy ranges of charging stations, contact your local front office.

System Architecture 1: Commissioning Procedure

Follow these steps to commission an EV infrastructure using architecture 1.

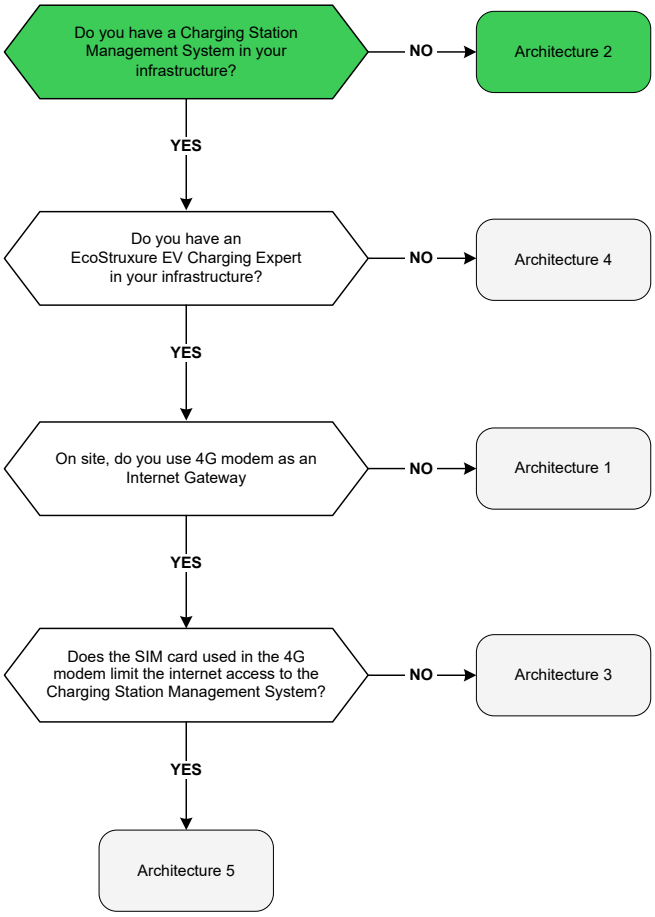
System Architecture 2

What's in This Chapter

System Architecture 2: Presentation

The main characteristics of system architecture 2 are the following:

- Compatible with EcoStruxure EV Charging Expert 6
- Load management system mode: dynamic
- DHCP server hosted by EcoStruxure EV Charging Expert
- Digital network: star or daisy chain using managed switches
- No supervision: EV infrastructure operated locally by the customer via EcoStruxure EV Charging Expert, including authentication and RFID badges
- Greenfield architecture



System architecture 2 can be implemented for the following model of charging stations:

Charging station	Minimum version
EVlink Pro AC	1.3.8

NOTE: For EVlink Pro DC charging station and for Schneider Electric legacy ranges of charging stations, contact your local front office.

System Architecture 2: Commissioning Procedure

Follow these steps to commission an EV infrastructure using architecture 2.

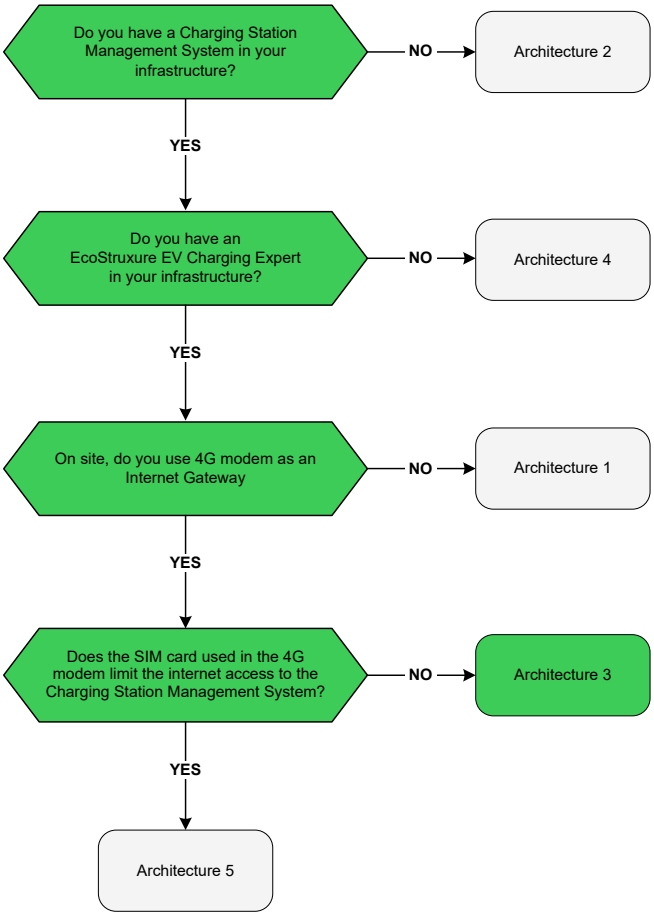
System Architecture 3

What's in This Chapter

System Architecture 3: Presentation

The main characteristics of system architecture 3 are the following:

- Compatible with EcoStruxure EV Charging Expert 6
- Load management system mode: dynamic
- DHCP server hosted by 4G cellular modem, internet connectivity provided via the SIM card supplied by the charge point operator
- Digital network: star or daisy chain using managed switches
- EV infrastructure operated by an external charging point operator
- Greenfield architecture



System architecture 3 can be implemented for the following models of charging stations:

Charging station	Minimum version
Schneider Charge Pro	1.18.1
EVlink Pro AC	1.3.8

IMPORTANT: If there is a common EcoStruxure EV Charging Expert supervising the stations, it is not possible to install Schneider Charge Pro charging stations and EVlinkPro AC charging stations in the same EV infrastructure.

NOTE: For EVlink Pro DC charging station and for Schneider Electric legacy ranges of charging stations, contact your local front office.

System Architecture 3: Commissioning Procedure

Follow these steps to commission an EV infrastructure using architecture 3.

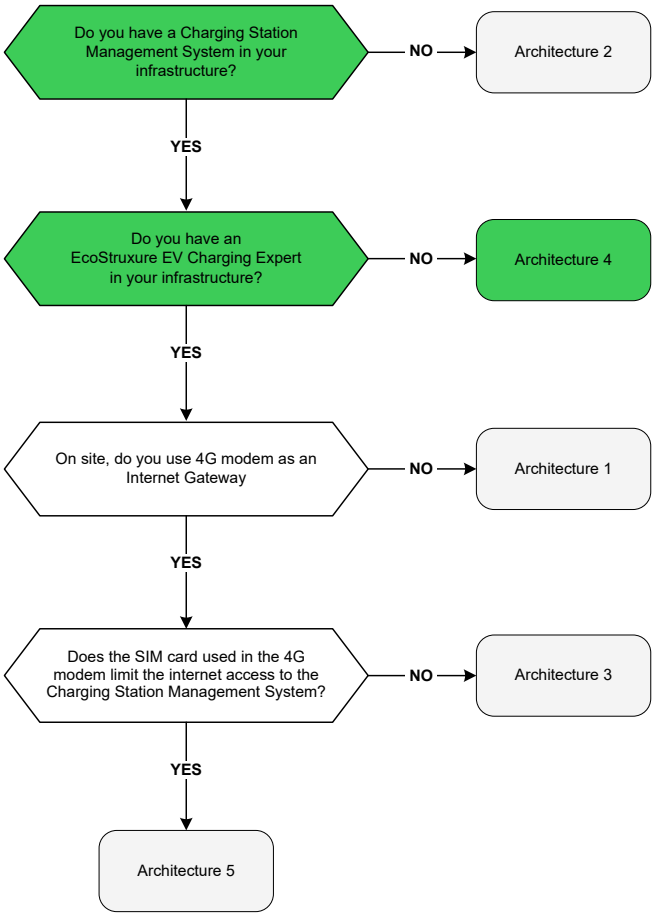
System Architecture 4

What's in This Chapter

System Architecture 4: Presentation

The main characteristics of system architecture 4 are the following:

- EcoStruxure EV Charging Expert is not used
- DHCP server hosted by 4G cellular modem, internet connectivity provided via the SIM card supplied by the charge point operator
- Digital network: star or daisy chain using managed switches
- EV infrastructure operated by an external charging point operator
- Greenfield architecture



System architecture 4 can be implemented for the following models of charging stations:

Charging station	Minimum version
Schneider Charge Pro	1.18.1
EVlink Pro AC	1.3.8

NOTE: If there is a common EcoStruxure EV Charging Expert supervising the stations, it is not possible to install Schneider Charge Pro charging stations and EVlink Pro AC charging stations in the same EV infrastructure.

NOTE: For EVlink Pro DC charging station and for Schneider Electric legacy ranges of charging stations, contact your local front office.

System Architecture 4: Commissioning Procedure

Follow these steps to commission an EV infrastructure using architecture 4.

1. Configuring the 4G cellular modem with DHCP, page 50
2. Commissioning EVlink Pro AC Charging Stations One by One by Using eSetup Application, page 96
3. Commissioning Schneider Charge Pro Charging Stations One by One by Using eSetup Application, page 97

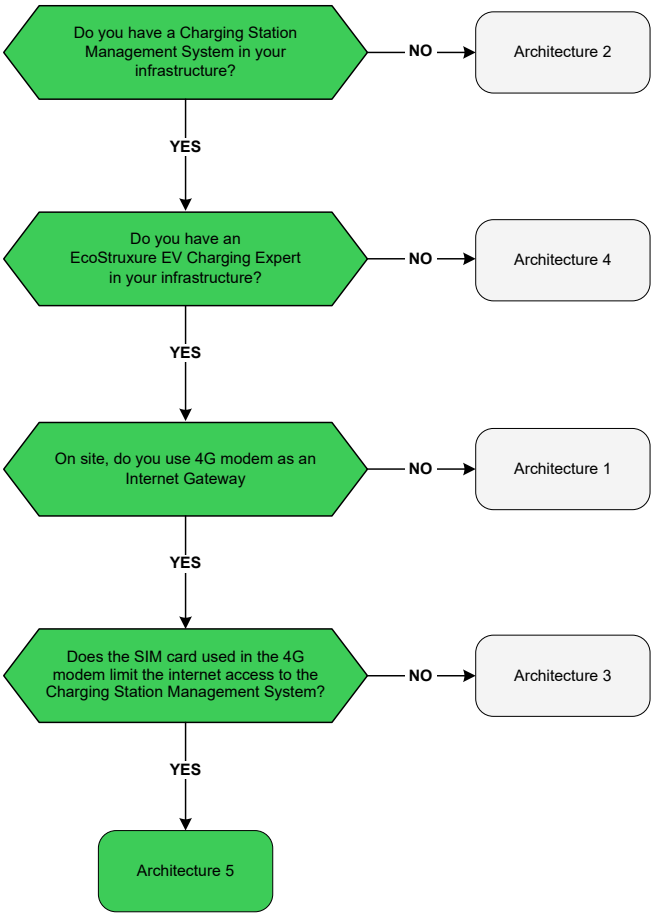
System Architecture 5

What's in This Chapter

System Architecture 5: Presentation

The main characteristics of system architecture 5 are the following:

- Compatible with EcoStruxure EV Charging Expert 6
- Load management system mode: dynamic
- No DHCP server
- Internet connectivity limited to the local charging station management system
- Digital network: star or daisy chain using managed switches and 4G cellular modem
- EV infrastructure operated by a charging point operator
- Greenfield architecture



System architecture 5 can be implemented for the following models of charging stations:

Charging station	Minimum version
Schneider Charge Pro	1.18.1
EVlink Pro AC	1.3.8

IMPORTANT: If there is a common EcoStruxure EV Charging Expert supervising the stations, it is not possible to install Schneider Charge Pro charging stations and EVlink Pro AC charging stations in the same EV infrastructure.

NOTE: For EVlink Pro DC charging station and for Schneider Electric legacy ranges of charging stations, contact your local front office.

System Architecture 5: Commissioning Procedure

Follow these steps to commission an EV infrastructure using architecture 5.

Procedures

What's in This Chapter

Introduction

This part explains all the individual commissioning steps for the five system architectures.

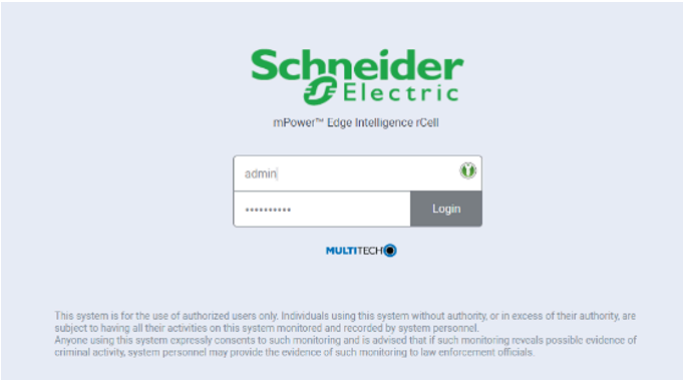
Configuring the 4G Cellular Modem with DHCP

Prerequisites

Before starting the configuration of the EVP3MM 4G cellular modem:

1. Locate the SIM card slot marked SIM on the side of the 4G cellular modem.

2. Push the SIM card into the slot until it snaps into place.
3. Connect to the network according to the IT connectivity map.
4. Open a web browser.
5. Type https://192.168.0.254/ in the URL field.
6. Select the **Advanced** button to authorize the non-secure connection.
7. Select **Proceed to 192.168.0.254**.
8. On the login page, enter the following:
   - Username: **admin**
   - Password: **EVlink4EV!**



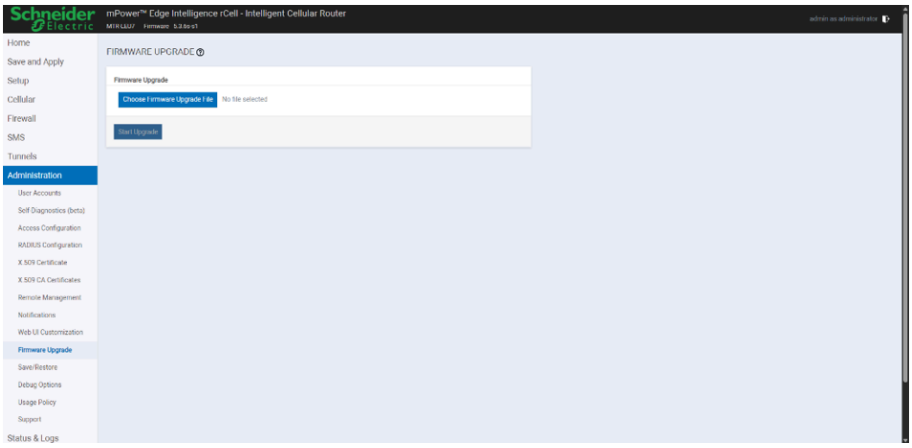
Configuration Procedure

Download the latest firmware of your device from the factory website.

To configure the 4G cellular modem:

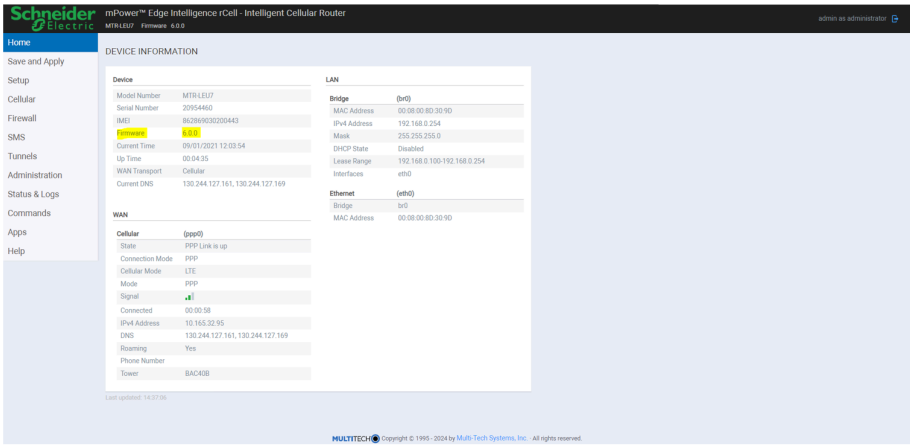
1. In the left panel, select **Administration > Firmware Upgrade**.

2. Browse the downloaded binary and select it.
3. Select **Start Upgrade**.

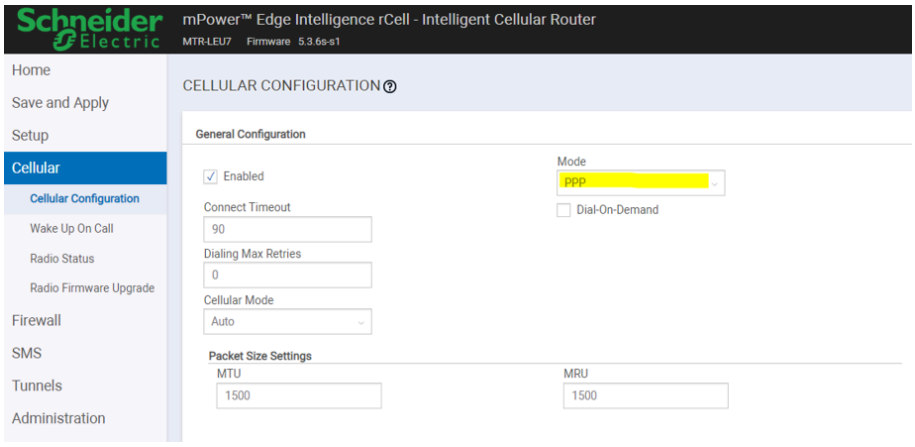


Upgrade can take up to 10 minutes. When upgrade is complete, the modem reboots automatically.

4. Check on the following screen that the cellular radio firmware is updated.

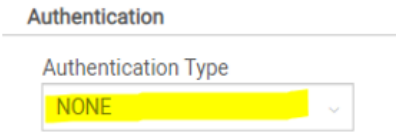


5. In the left panel, select **Cellular > Cellular Configuration**.
6. In **General Configuration**, set the **Mode** to **PPP**.

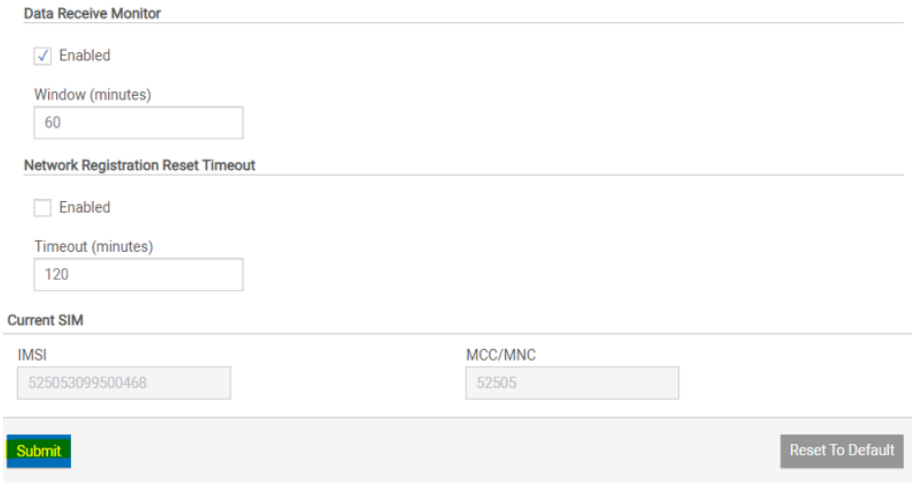


7. In **Modem Configuration**, from **Cellular > Cellular Configuration > Modem Configuration**, set the **APN** to **mbb.mobi-data.com**.

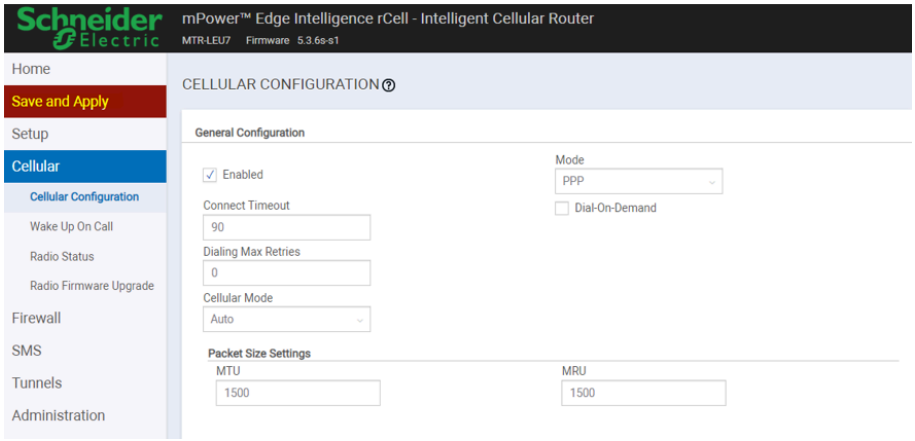
8. In **Authentication**, from **Cellular > Cellular Configuration > Authentication**, set the **Authentication Type** to **NONE**.



9. Select the **Submit** button at the bottom left of the screen.



10. In the left panel, select **Save and Apply**.

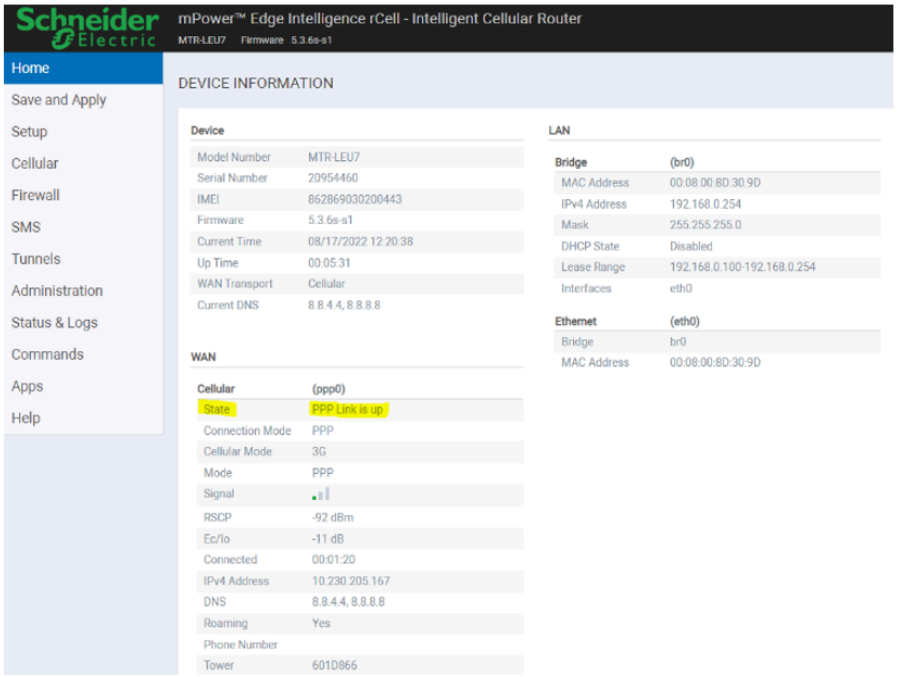


11. Select **OK** to apply the changes. The 4G cellular modem reboots.

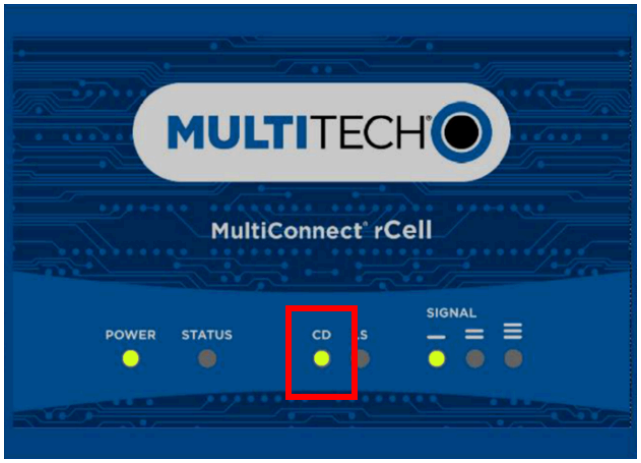
Checking the Configuration

To check the configuration of the 4G cellular modem:

1. On the **Home** page, in the **WAN** section, check that the **State** is the following: **PPP Link is up**.



2. Check that the **CD** green LED on the 4G cellular modem is on.



3. Check that DHCP server is set up according to the customer IT inputs (in the correct address ranges) in EcoStruxure EV Charging Expert.
4. Check the internet connectivity.

Architecture	Next step
Architecture 3, page 41	Configuring PC to connect to EcoStruxure EV Charging Expert, page 56
Architecture 4, page 44	Commissioning EVlink Pro AC charging stations one by one by using eSetup application, page 96
Refer to Description of System Architectures, page 32.	

Configuring the 4G Cellular Modem without DHCP

If you do not need the DHCP server, you can disable the 4G cellular modem as a DHCP server.

Prerequisites

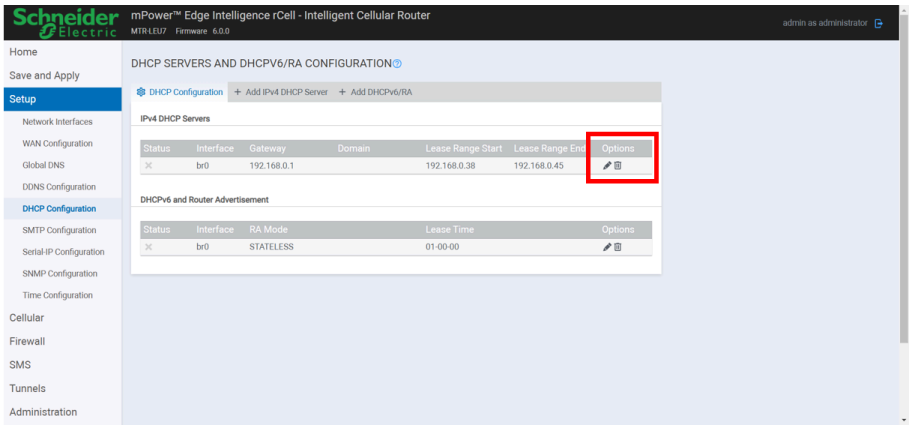
Before starting the configuration of the EVP3MM 4G cellular modem:

1. Locate the SIM card slot marked SIM on the side of the 4G cellular modem.
2. Push the SIM card into the slot until it snaps into place.
3. Connect to the network according to the IT connectivity map.
4. Open a web browser.
5. Type https://192.168.0.254/ in the URL field.
6. Select the **Advanced** button.
7. Select **Proceed to 192.168.0.254**.
8. On the login page, enter the following:
   - Username: **admin**
   - Password: **EVlink4EV!**

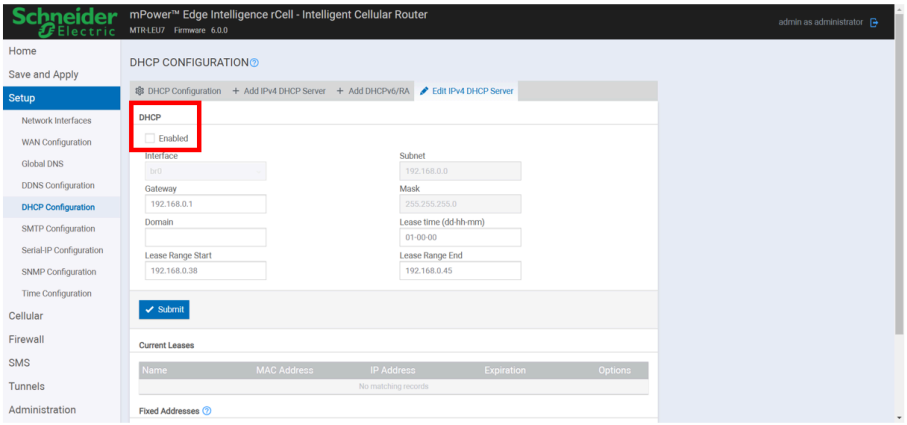
Configuration Procedure

To configure the 4G cellular modem:

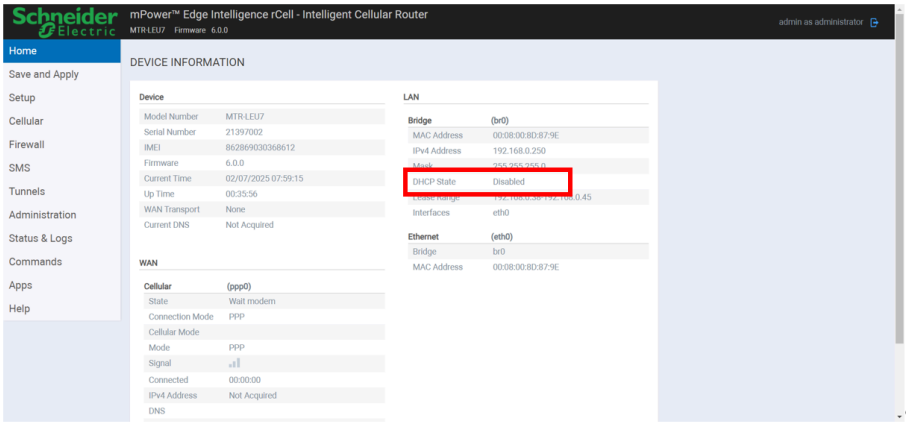
1. In the left panel, select **Setup**.
2. Select the **DHCP Configuration** tab.
3. In the displayed list, identify the DHCP server used.
4. In the **Options** column, select the pen to edit the parameters.



5. Deselect the **Enabled** check box.



On the **Home** screen, the **DHCP State** indicates **Disabled**.



Architecture	Next step
Architecture 5, page 47	Configuring PC to connect to EcoStruxure EV Charging Expert, page 56
Refer to Description of System Architectures, page 32.	

Configuring the PC to connect to EcoStruxure EV Charging Expert

1. Connect your PC to the EcoStruxure EV Charging Expert Ethernet network.
2. Open the local network properties menu on your PC.
3. Open the Internet protocol TCP/IP v4 properties.
4. Set the static IP address properties as follows:
   - IP address: 192.168.0.x (where x is a number between 50 and 100)
   - Subnet mask: 255.255.255.0
   - No default gateway
   - No DNS server
   - No proxy

Architecture	Next step
Architecture 1, page 35	Connecting to EcoStruxure EV Charging Expert, page 57
Architecture 2, page 38	Connecting to EcoStruxure EV Charging Expert, page 57
Architecture 3, page 41	Connecting to EcoStruxure EV Charging Expert, page 57
Architecture 4, page 44	Connecting to EcoStruxure EV Charging Expert, page 57
Architecture 5, page 47	Connecting to EcoStruxure EV Charging Expert, page 57
Refer to Description of System Architectures, page 32.	

Connecting to EcoStruxure EV Charging Expert

1. Open a web browser.
2. Type **192.168.0.128** in the URL field.

   NOTE: A message may be displayed. If this occurs:

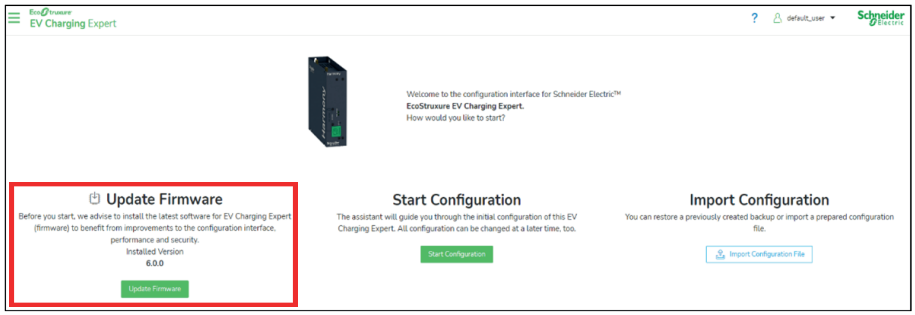
   1. Select the **Advanced** button to authorize the non-secure connection.
   2. Select **Proceed to 192.168.0.128 (unsafe)**.

Architecture	Next step
Architecture 1, page 35	Checking the installed firmware version, page 57
Architecture 2, page 38	Checking the installed firmware version, page 57
Architecture 3, page 41	Checking the installed firmware version, page 57
Architecture 4, page 44	Checking the installed firmware version, page 57
Architecture 5, page 47	Checking the installed firmware version, page 57
Refer to Description of System Architectures, page 32.	

Checking the Installed Firmware Version

1. Check the installed firmware version for:
   - EcoStruxure EV Charging Expert
   - the charging stations (supported baseline)

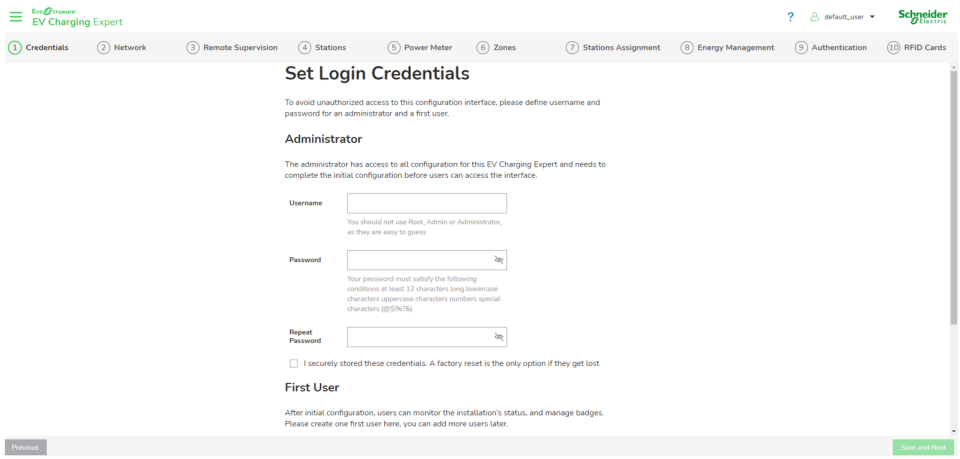
   Use the latest release note of EcoStruxure EV Charging Expert and of the charging station that are available on se.com.
2. If necessary, select **Update Firmware** to download the latest EcoStruxure EV Charging Expert firmware available from www.se.com.



Architecture	Next step
Architecture 1, page 35	Creating an installer account, page 58
Architecture 2, page 38	Creating an installer account, page 58
Architecture 3, page 41	Creating an installer account, page 58
Architecture 4, page 44	Creating an installer account, page 58
Architecture 5, page 47	Creating an installer account, page 58
Refer to Description of System Architectures, page 32.	

Creating an Installer Account

The **Credential**s screen is the following.



Create an administrator profile and a user profile:

- Administrator: has access to all configuration for EcoStruxure EV Charging Expert and needs to complete the initial configuration before users can access the interface.
- Users: after initial configuration, users can monitor the installation status, and manage badges.

Fill in the following fields:

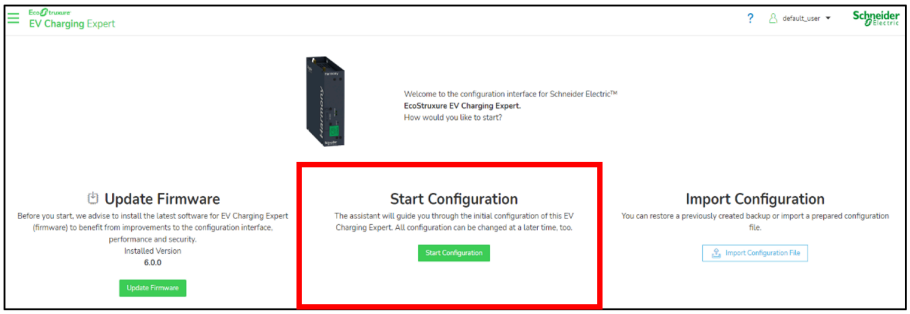
- **Username**: do not use Root, Admin or Administrator, as they are easy to guess.
- **Password**: the password must satisfy the required conditions.
- Check box to indicate that you securely stored these credentials. A factory reset is the only option if they get lost.

Architecture	Next step
Architecture 1, page 35	Starting a new configuration, page 59
Architecture 2, page 38	Starting a new configuration, page 59
Architecture 3, page 41	Starting a new configuration, page 59
Architecture 4, page 44	Starting a new configuration, page 59
Architecture 5, page 47	Starting a new configuration, page 59
Refer to Description of System Architectures, page 32.	

Starting a New Configuration

To configure EV Charging Expert:

1. Select the wizard **Start Configuration**.

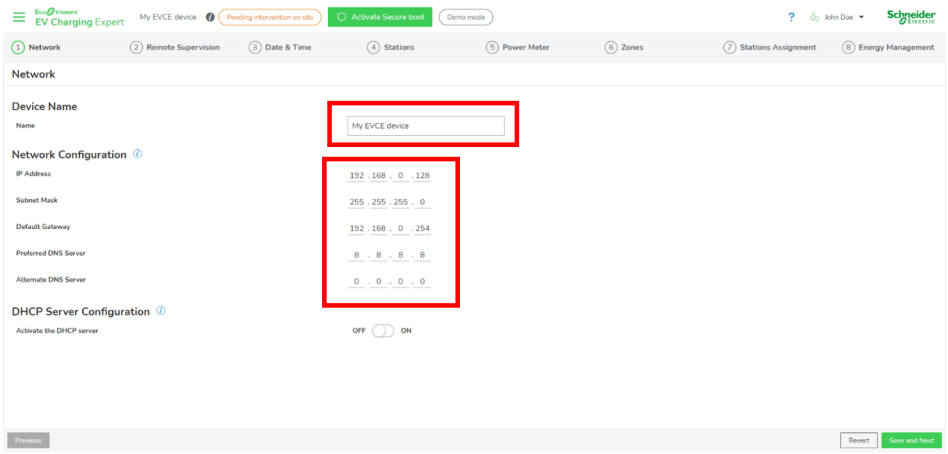


2. Follow the indicated procedure.

Architecture	Next step
Architecture 1, page 35	Updating network settings, page 60
Architecture 2, page 38	Updating network settings, page 60
Architecture 3, page 41	Updating network settings, page 60
Architecture 4, page 44	Updating network settings, page 60
Architecture 5, page 47	Updating network settings, page 60
Refer to Description of System Architectures, page 32.	

Updating Network Settings

The **Network** screen is the following.



Update network settings (for example, IP, DNS) according to the information given by the IT manager of the customer site:

- **Device Name**
- **Network Configuration**:
  - **IP Address**
  - **Subnet Mask**
  - **Default Gateway**
  - **Preferred DNS Server**
  - **Alternate DNS Server**

See *IT plan and network information*, page 26.

Factory settings are the following:

Fields	Factory setting	Description
Device Name	My EVCE device	Your EcoStruxure EV Charging Expert device
IP Address	192.168.0.128	Network IP address
Subnet Mask	255.255.255.0	Network sub-network mask
Default Gateway(1)	192.168.0.254	Gateway IP address. Mandatory to connect two networks so that devices on one network can communicate with the devices of another network.
Preferred DNS Server(2)	8.8.8.8	Preferred DNS server IP address(2)
Alternate DNS Server	–	Other DNS server IP address(2)
DHCP Server Configuration	**OFF**	ON/OFF When DHCP server is managed by customer, DHCP server remains **OFF**.
(1) Address of the modem used for the connection to the supervision, if any. All charging stations are on the same sub-network as EcoStruxure EV Charging Expert and must be configured with the same gateway IP address. (2) DNS server is used to convert URL to IP address. May be provided by the remote supervision (for example, through a dedicated SIM card). Google is the DNS server by default.		

When you have finished updating network settings, select **Save and Next**.

Architecture	Next step
Architecture 1, page 35	Rebooting EcoStruxure EV Charging Expert, page 62
Architecture 2, page 38	Rebooting EcoStruxure EV Charging Expert, page 62

Architecture	Next step
Architecture 3, page 41	Rebooting EcoStruxure EV Charging Expert, page 62
Architecture 4, page 44	Rebooting EcoStruxure EV Charging Expert, page 62
Architecture 5, page 47	Rebooting EcoStruxure EV Charging Expert, page 62
Refer to Description of System Architectures, page 32.	

Rebooting EcoStruxure EV Charging Expert

If you have changed the network mask, configure the PC again. See *Switching on the Device and Configuring the PC*, page 56.

If you have not changed the network mask, you can proceed with the next step.

Architecture	Next step
Architecture 1, page 35	Reconnecting to EcoStruxure EV Charging Expert web page, page 63
Architecture 2, page 38	Reconnecting to EcoStruxure EV Charging Expert web page, page 63
Architecture 3, page 41	Reconnecting to EcoStruxure EV Charging Expert web page, page 63
Architecture 4, page 44	Reconnecting to EcoStruxure EV Charging Expert web page, page 63
Architecture 5, page 47	Reconnecting to EcoStruxure EV Charging Expert web page, page 63
Refer to Description of System Architectures, page 32.	

Reconnecting to EcoStruxure EV Charging Expert Web Page

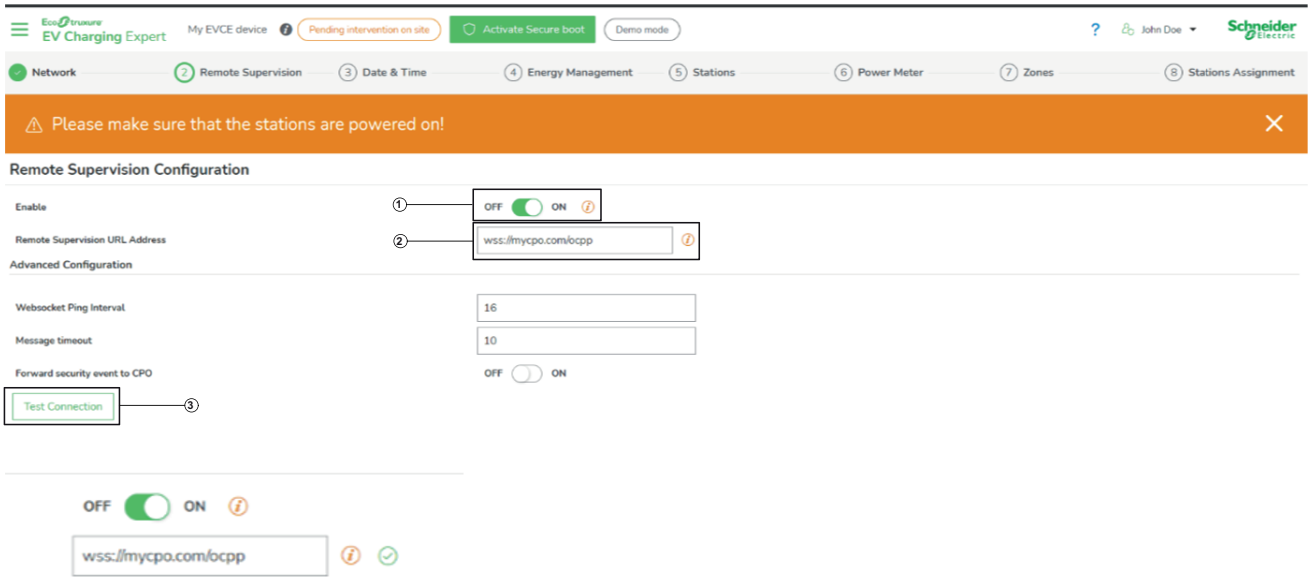
Reconnect to EcoStruxure EV Charging Expert web page using the new IP address.

Architecture	Next step
Architecture 1, page 35	Configuring charge point operator supervision, page 64
Architecture 2, page 38	Setting the date and time, page 67
Architecture 3, page 41	Configuring charge point operator supervision, page 64
Architecture 4, page 44	Setting the date and time, page 67
Architecture 5, page 47	Configuring charge point operator supervision, page 64
Refer to Description of System Architectures, page 32.	

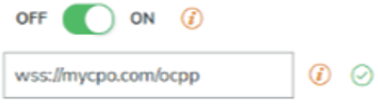
Configuring Charge Point Operator Supervision

To configure charge point operator supervision:

1. Enable the supervision.
2. Enter the supervision URL.
3. Test the connection.



When the connection status is confirmed, a green tick is displayed next to the **Remote Supervision URL Address**.



4. Click **Save and Next**.

IMPORTANT: When remote supervision option is enabled:

- It is the responsibility of the remote supervision system to handle EV driver authentication and to consider charging station specific keys for authentication management.
- The date and time are provided by remote supervision, but it is necessary to configure time zone.

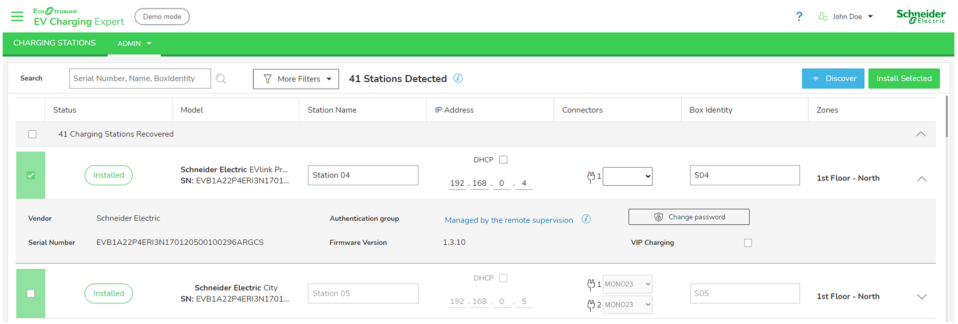
Architecture	Next step
Architecture 1, page 35	Managing basic authentication and charge point operator certificates, page 65
Architecture 3, page 41	Managing basic authentication and charge point operator certificates, page 65
Architecture 4, page 44	Managing basic authentication and charge point operator certificates, page 65
Architecture 5, page 47	Managing basic authentication and charge point operator certificates, page 65
Refer to Description of System Architectures, page 32.	

Managing Basic Authentication and Charge Point Operator Certificates

Managing Basic Authentication

To help secure communication between EcoStruxure EV Charging Expert and supervision, add a basic authentication password for all charging stations. There are two options:

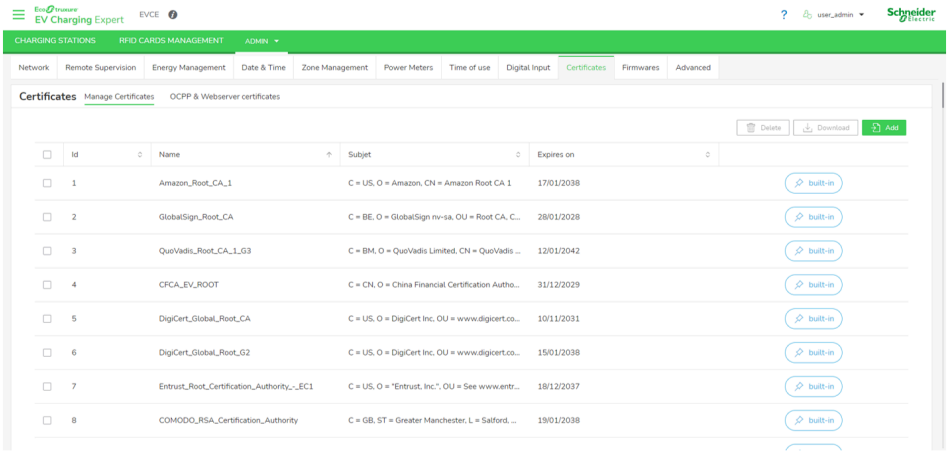
- One unique password for each charging station:
  1. Select each charging station on the installation page.
  2. Select **Change password**.
- Same password for all charging stations: when this option is selected, a popup appears to add a basic authentication key according to two formats (ASCII or HEXA format). The password is used for all charging stations. It can be changed later by supervision through OCPP commands.



Managing Charge Point Operator Supervision Certificates

To manage charge point operator supervision certificates:

1. Select **ADMIN > Certificates**.
2. To add or delete certificates, select **Manage Certificates**. For example, you can upload in this bank of certificates a new remote supervision certificate to perform a WebSocket secure connection.

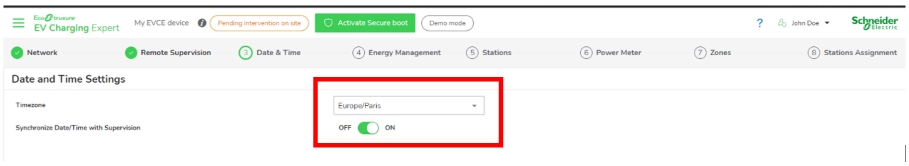


Architecture	Next step
Architecture 1, page 35	Setting the date and time, page 67
Architecture 3, page 41	Setting the date and time, page 67
Architecture 4, page 44	Setting the date and time, page 67

Architecture	Next step
Architecture 5, page 47	Setting the date and time, page 67
Refer to Description of System Architectures, page 32.	

Setting the Date and Time

1. Select your time zone.
2. Synchronize date and time of your installation.

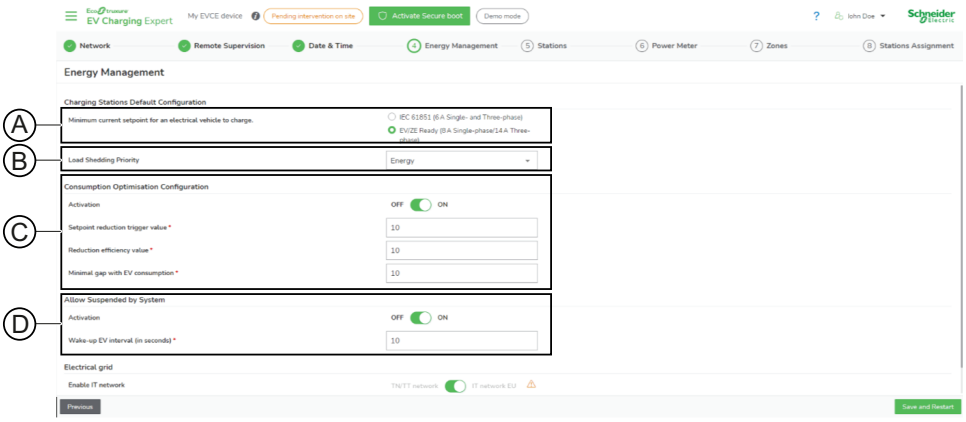


3. Select **Save and Next**.
4. To enable the wizard that guides you through the settings, click **Next**.

Architecture	Next step
Architecture 1, page 35	Setting energy management, page 68
Architecture 2, page 38	Setting energy management, page 68
Architecture 3, page 41	Setting energy management, page 68
Architecture 4, page 44	Setting energy management, page 68
Architecture 5, page 47	Setting energy management, page 68
Refer to Description of System Architectures, page 32.	

Setting Energy Management

The following screen is displayed.



A. **Minimum current setpoint for an electrical vehicle to charge**
B. **Load Shedding Priority**
C. **Consumption Optimisation Configuration**
D. **Allow Suspended by System**

Setting	Value	Description
Minimum current setpoint for an electrical vehicle to charge	IEC 61851	6 A in both single and 3-phases connection
	EV/ZE ready	8 A in single-phase, 14 A in 3-phase connection
Load Shedding Priority	**Energy** (default value)	Proportional to the consumed energy (kWh). This option favors transaction that delivers the lowest amount of energy.
	Duration	Proportional to the charging time. This option favors transaction that has been charging for the least time.
Consumption Optimisation Configuration	**Setpoint reduction trigger value**	Difference between decreasing EV consumption and setpoint before triggering the optimization. Default value: 5 seconds Range: 0.1 s – 10 s There is a warning before changing this parameter.
	Reduction efficiency value	Gap between the consumption and the new setpoint calculated by the optimization. Default value: 3 seconds Range: 0.1 s – 10 s There is a warning before changing this parameter.
	Minimal gap with EV consumption	Gap between the increasing EV consumption and the setpoint triggering more power allocation to the charging station. Default value: 1 second Range: 0.1 s – 10 s There is a warning before changing this parameter.
Allow Suspended by System	**Wake-up EV interval defined (in seconds)**	When the **Allow Suspended by System** option is enabled, if a transaction stops consuming energy (current lower than 1 A), EcoStruxure EV Charging Expert stops the transaction and restarts the transaction after a **Wake-up EV interval defined (in seconds)**.

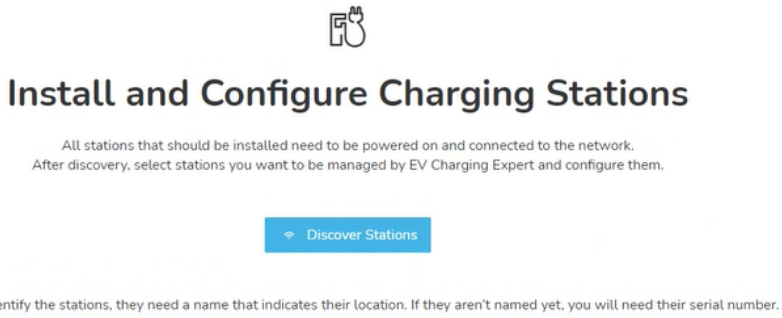
Energy Management Setting Procedure

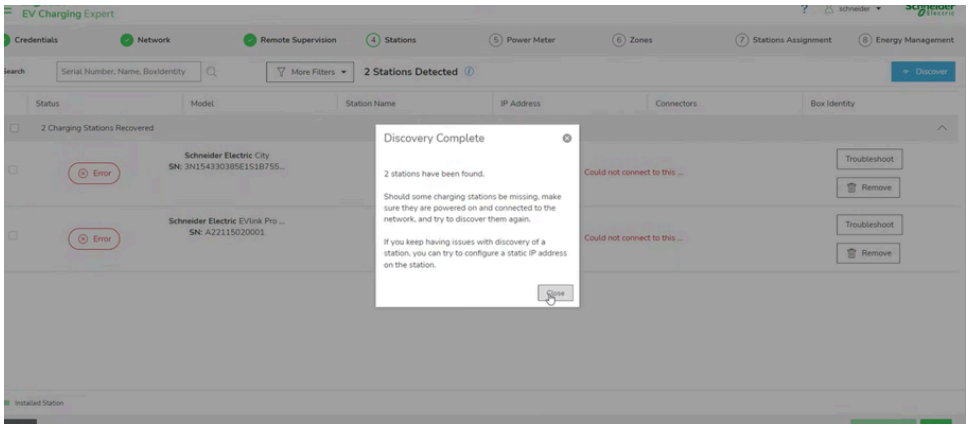
1. Set the following parameters for EV infrastructure energy management:
   - **Minimum Current Setpoint for an Electrical Vehicle to Charge**: **IEC 61851**
   - **Load Shedding Priority**: **Energy**
   - **Consumption Optimisation Configuration**: **ON**
   - **Allow Suspended by System**: **ON**
2. Select **Save and Restart**.

Architecture	Next step
Architecture 1, page 35	Installing and configuring the charging stations, page 70
Architecture 2, page 38	Installing and configuring the charging stations, page 70
Architecture 3, page 41	Installing and configuring the charging stations , page 70
Architecture 4, page 44	Installing and configuring the charging stations, page 70
Architecture 5, page 47	If installing EVlink Pro AC or Schneider Charge Pro, page 79
Refer to Description of System Architectures, page 32.	

Installing and Configuring the Charging Stations

To install and configure AC charging stations, it is recommended to switch on the charging stations in groups of ten.





If some charging stations are not discovered, you may need to update the charging station firmware. If so, follow the procedure that applies to the charging station range:

Procedures to update EVlink Pro AC charging station firmware, page 71
Procedure to update Schneider Charge Pro charging station firmware, page 78

Procedures to Update EVlink Pro AC Charging Station Firmware

Follow one of these methods to update the EVlink Pro AC charging station firmware:

Connecting Schneider Electric cloud with eSetup application, page 71
Manually upgrading the firmware of the charging station with USB key and eSetup application, page 71
Using EcoStruxure EV Charging Expert as temporary HTTP server and eSetup application, page 72

Updating the EVlink Pro AC Firmware by Connecting Schneider Electric Cloud with eSetup Application

Prerequisite: EVlink Pro AC must be connected to the Internet.

To update EVlink Pro AC charging station firmware by connecting Schneider Electric cloud with eSetup application:

1. Get authorization from the IT manager and activate 4G connectivity on your mobile phone.

   NOTICE

   HAZARD OF OUT OF DATE FIRMWARE

   - EVlink Pro AC charging station firmware version must be 1.1.6 or above.
   - 4G connectivity must be available during all the firmware upgrade process.

   Failure to follow these instructions can result in service interruption.

2. Start eSetup application on your smartphone.
3. Connect to one EVlink Pro AC charging station with eSetup application.
4. Select **Schneider Electric**.
5. Select the last firmware version.
6. Select **upgrade**.
7. Reboot the EVlink Pro AC charging station.
8. Repeat steps 1 to 7 for each EVlink Pro AC charging station.

   NOTE: This procedure is data consuming and may generate extra operational costs.

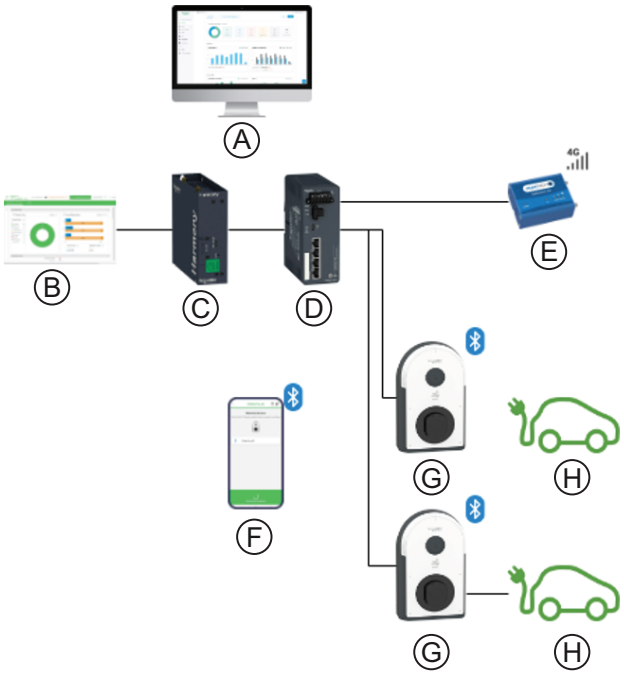
Manually Updating the EVlink Pro AC Firmware by Using USB Key and eSetup Application

To update manually the firmware of the EVlink Pro AC charging station with USB key and eSetup application, refer to the video showing how to update EVlink Pro AC firmware:

https://youtu.be/tBzjU5-Kxs8

Updating the EVlink Pro AC Firmware by Using EcoStruxure EV Charging Expert as Temporary HTTP Server and eSetup Application

NOTE: Be aware that this procedure is faster but may generate risk of errors in the URL entries.



A. Charging Station Management System
B. Web pages
C. EcoStruxure EV Charging Expert
D. Switch
E. 4G cellular modem
F. eSetup application
G. Pro AC charging station
H. EV

EcoStruxure EV Charging Expert hosts EVlink Pro AC firmware. The eSetup application allows the charging stations to retrieve the firmware through EcoStruxure EV Charging Expert.

EVlink Pro AC firmware is downloaded directly using the LAN network. This prevents data overages if any cellular modem is used. Using this digital process avoids any electrical intervention on the EVlink Pro AC charging station.

Pairing between EVlink Pro AC and eSetup uses **Bluetooth®**.

When facing a large EV infrastructure with an EcoStruxure EV Charging Expert, it is recommended to rely on EV Charging Expert HTTP server:

- It saves time because there are less steps to upgrade the firmware.
- It saves data because no internet access is required.

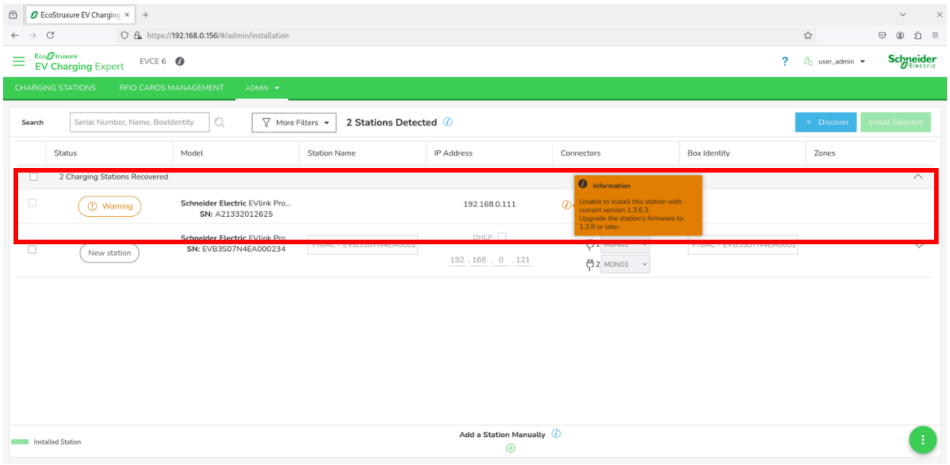
For this method, follow the steps to be carried out:

- On EcoStruxure EV Charging Expert, page 73
- On each EVlink Pro AC Charging Station, page 75

On EcoStruxure EV Charging Expert

EcoStruxure EV Charging Expert displays the following message when the firmware needs to be upgraded on a charging station:

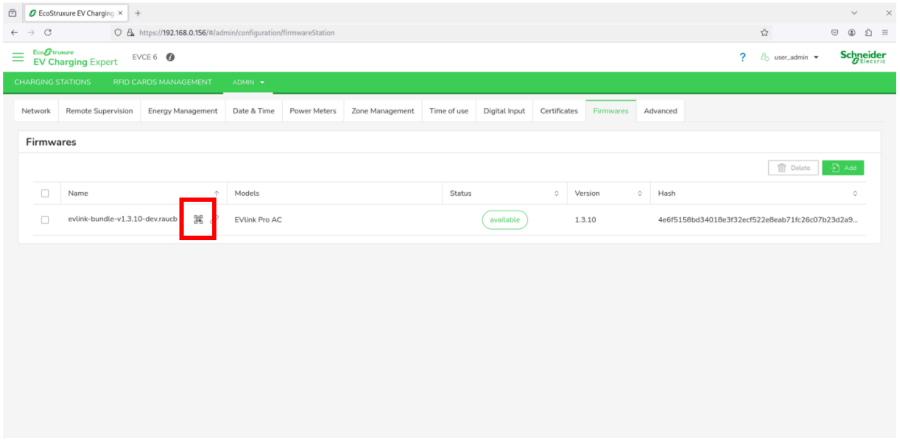
Unable to install this station with current version.
Upgrade the station's firmware.



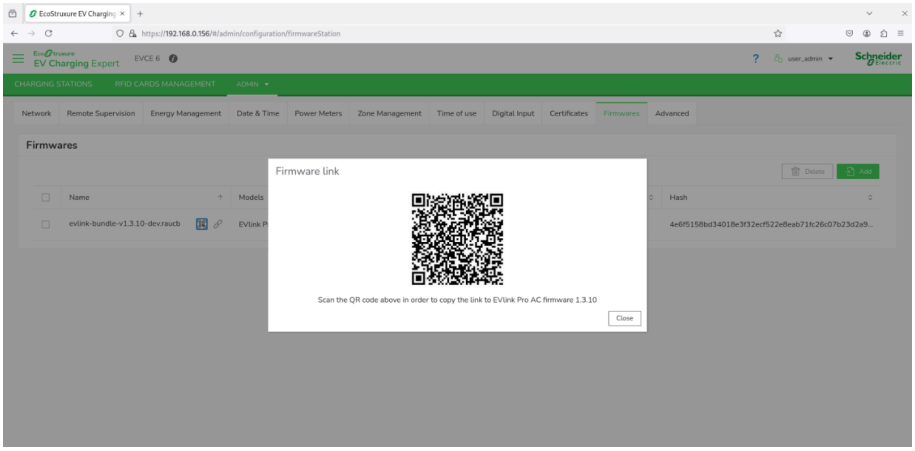
To update EVlink Pro AC charging station firmware by using EcoStruxure EV Charging Expert as temporary HTTP server and eSetup application, follow this procedure:

1. Download the EVlink Pro AC firmware from www.se.com.
2. Enable EV Charging Expert HTTP server in the **Advanced configuration** tab.
3. In **ADMIN > Firmwares**, select **Add**.
4. Set the required fields.
5. Upload the EVlink Pro AC firmware file from here: EVlink Pro AC - Software and firmware.
6. On the pop-up window, select **Continue**.

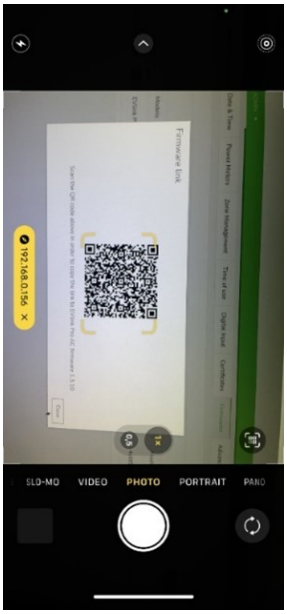
7. When the firmware is downloaded, click the QR code symbol to display the URL link.



The firmware URL link is displayed as a QR code in a pop up window.



8. Scan the QR code using a mobile camera application.



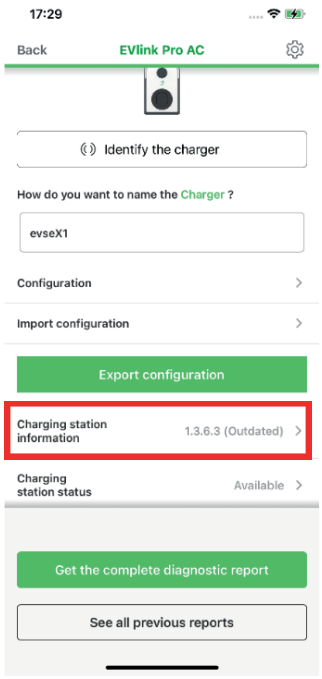
NOTE: When scanning the QR code, you may be asked to confirm the connection to the http URL.

9. Copy the embedded link to paste it later when using eSetup application.

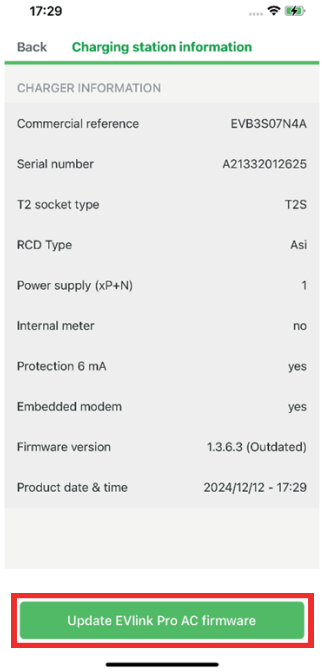
On Each EVlink Pro AC Charging Station

To update EVlink Pro AC charging station firmware by using EcoStruxure EV Charging Expert as temporary HTTP server and eSetup application, follow this procedure:

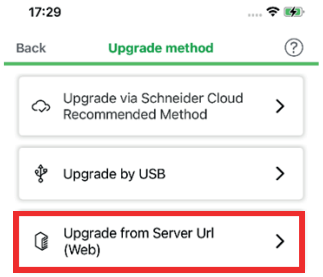
1. Open eSetup commissioning mobile application.
2. Pair eSetup with EVlink Pro AC charging station using the Bluetooth channel.
3. Select **Charging station information**.



4. Scroll down to the end of the screen to select **Update EVlink Pro AC firmware**.

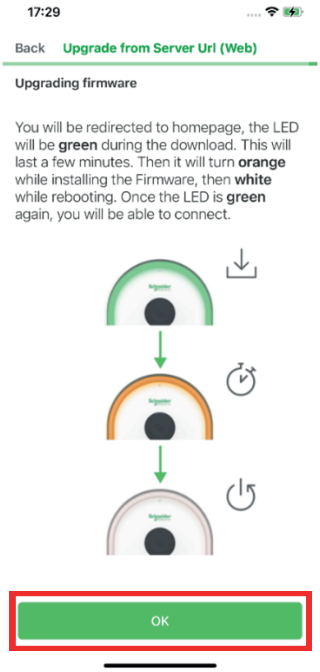


5. Select the following upgrade method: **Upgrade from Server Url (Web)**.



6. Paste in the URL.
7. Select **Upgrade Firmware**.

8. Click **OK** to confirm.



The EVlink Pro AC charging station automatically reboots.

9. Repeat steps 1 to 8 of this procedure with the next EVlink Pro AC charging station.

Architecture	Next step
Architecture 1, page 35	Relaunching the discovery process, page 80
Architecture 2, page 38	Relaunching the discovery process, page 80
Architecture 3, page 41	Relaunching the discovery process, page 80
Architecture 4, page 44	Relaunching the discovery process, page 80
Architecture 5, page 47	Relaunching the discovery process, page 80
Refer to Description of System Architectures, page 32.	

Procedure to Update Schneider Charge Pro Charging Station Firmware

To update Schneider Charge Pro charging station firmware, follow this procedure:

1. Open eSetup application on your smartphone.
2. Download on your smartphone the latest firmware version available for Schneider Charge Pro charging station.

   NOTE: In eSetup firmware settings, activate the **Automatic download** feature to be alerted when a new firmware has been released and is available for your charging stations.
3. Connect to the Schneider Charge Pro with eSetup using Wi-Fi.

   Firmware upgrade is forced.
4. Restart the Schneider Charge Pro charging station.

For more information, refer to the video showing how to commission Schneider Charge Pro with eSetup:

https://youtu.be/BGCuxbVv9AU

Architecture	Next step
Architecture 1, page 35	Relaunching the discovery process, page 80
Architecture 2, page 38	Relaunching the discovery process, page 80
Architecture 3, page 41	Relaunching the discovery process, page 80
Architecture 4, page 44	Relaunching the discovery process, page 80
Architecture 5, page 47	Relaunching the discovery process, page 80
Refer to Description of System Architectures, page 32.	

If installing EVlink Pro AC or Schneider Charge Pro, One by One

When internet connectivity is limited, install and configure AC charging stations one by one following the procedure that applies to the charging station range.

Procedures to Update EVlink Pro AC Charging Station Firmware

Follow one of these methods to update the EVlink Pro AC charging station firmware:

- Manually upgrading the firmware of the charging station with USB key and eSetup application, page 71
- Using EcoStruxure EV Charging Expert as temporary HTTP server and eSetup application, page 72

Procedure to Update Schneider Charge Pro Charging Station Firmware

To update Schneider Charge Pro charging station firmware, see the procedure, page 78.

For more information, refer to the video showing how to commission Schneider Charge Pro with eSetup:

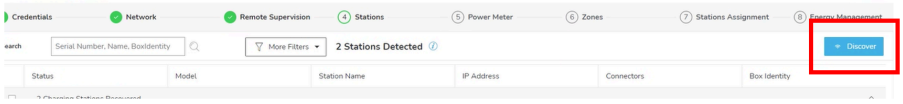
https://youtu.be/BGCuxbVv9AU

Architecture	Next step
Architecture 1, page 35	Relaunching the discovery process, page 80
Architecture 3, page 41	Relaunching the discovery process, page 80
Architecture 4, page 44	Relaunching the discovery process, page 80
Architecture 5, page 47	Relaunching the discovery process, page 80
Refer to Description of System Architectures, page 32.	

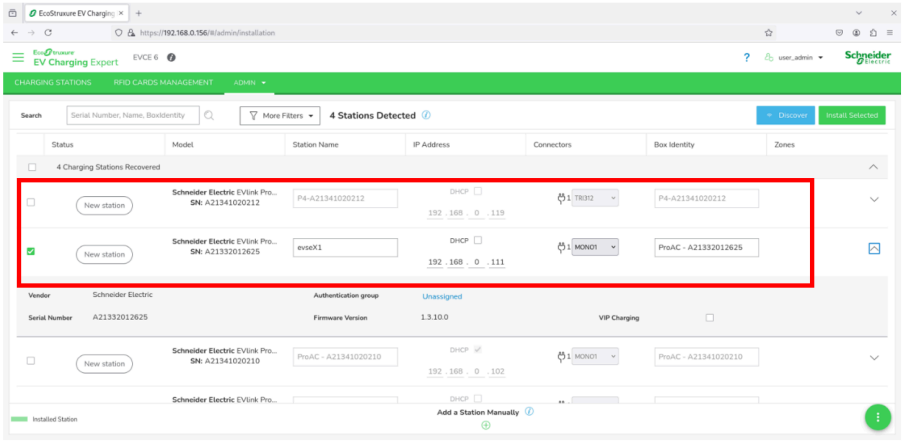
Relaunching the Discovery Process

When all the charging station firmware are updated to the latest version:

1. Restart EcoStruxure EV Charging Expert wizard.
2. Re-launch the discovery process.



The firmware versions are up to date and all charging stations are discovered.



Architecture	Next step
Architecture 1, page 35	Updating the charging station settings, page 81
Architecture 2, page 38	Updating the charging station settings, page 81
Architecture 3, page 41	Updating the charging station settings, page 81
Architecture 4, page 44	Updating the charging station settings, page 81
Architecture 5, page 47	Updating the charging station settings, page 81
Refer to Description of System Architectures, page 32.	

Updating the Charging Station Settings

For the group of charging stations discovered (up to 10), update the following fields.

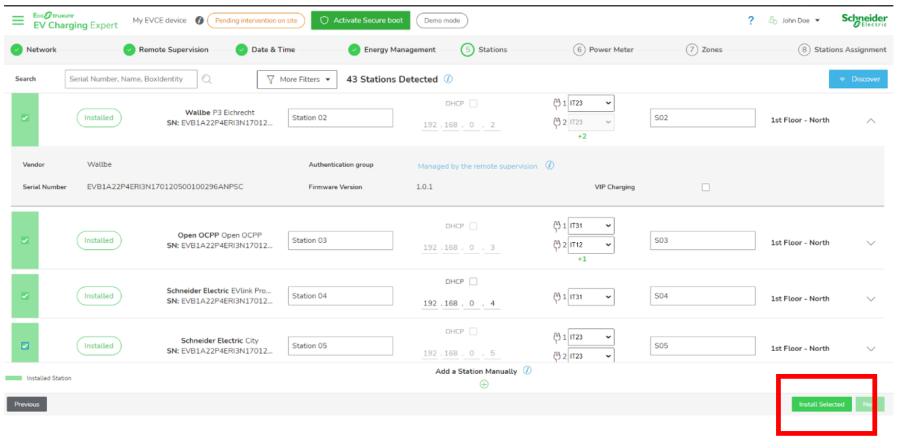
Fields to be updated
Charging station name
Selection of DHCP versus fixed IP address (for EVlink Pro AC only)
Phase rotation per connector (for all AC charging stations)
Box ID
VIP charging mode

Architecture	Next step
Architecture 1, page 35	Finishing the installation of the selected charging stations, page 82
Architecture 2, page 38	Finishing the installation of the selected charging stations, page 82
Architecture 3, page 41	Finishing the installation of the selected charging stations, page 82
Architecture 4, page 44	Finishing the installation of the selected charging stations, page 82
Architecture 5, page 47	Finishing the installation of the selected charging stations, page 82
Refer to Description of System Architectures, page 32.	

Finishing the Installation of the Selected Charging Stations

To finish the installation of the selected charging stations:

1. Select the charging station(s) for which you want to finish the installation.
2. Select **Install Selected**.



3. On the pop-up window; select **Close**.

   EcoStruxure EV Charging Expert installs the charging stations in the system.

   All the charging stations reboot to finalize their installation in EcoStruxure EV Charging Expert.

4. Repeat step 14 to step 17 for Architecture 1 for each group of 10 charging stations.

Architecture	Next step
Architecture 1, page 35	Configuring power meters, page 83
Architecture 2, page 38	Configuring power meters, page 83
Architecture 3, page 41	Configuring power meters, page 83
Architecture 4, page 44	Configuring power meters, page 83
Architecture 5, page 47	Configuring power meters, page 83
Refer to Description of System Architectures, page 32.	

Configuring Power Meters

Configure power meters only if you have dynamic zones on the EV infrastructure.

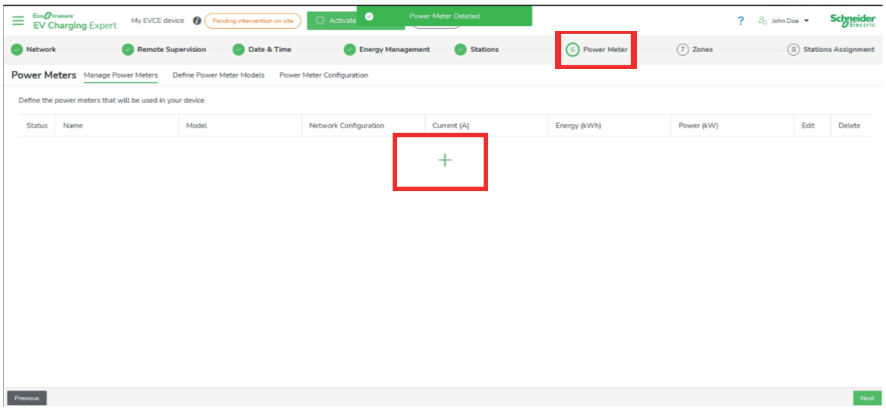
For more information about static and dynamic zones, refer to the video showing how to configure load management parameters:

https://youtu.be/c3FBqzF1Avw

For more information about power meter configuration (reconfiguration or customization), refer to *Charging Stations Commissioning* in DOCA0358EN *EcoStruxure EV Charging Expert User Guide*, page 10.

Link one power meter to each dynamic zone as follows:

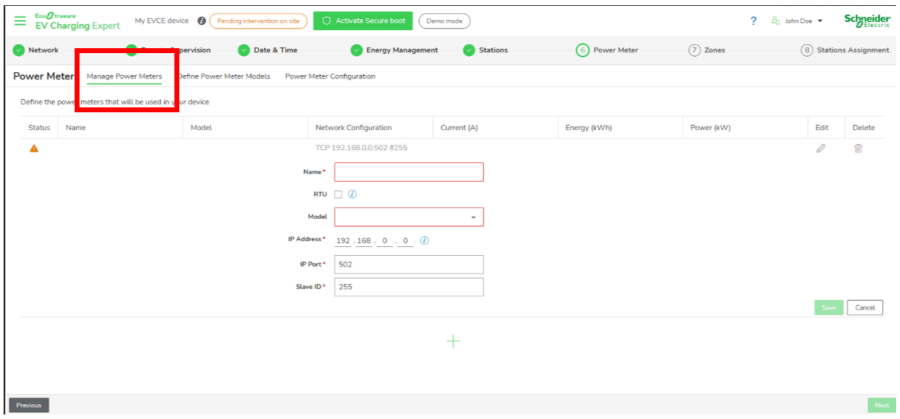
1. From the **Power Meter** menu, select the + sign.



2. To define a pre-configured power meter, select **Define Power Meter Models**.

   NOTE: If you already have pre-configured power meters, go directly to the following step.

3. Select **Manage Power Meters**.



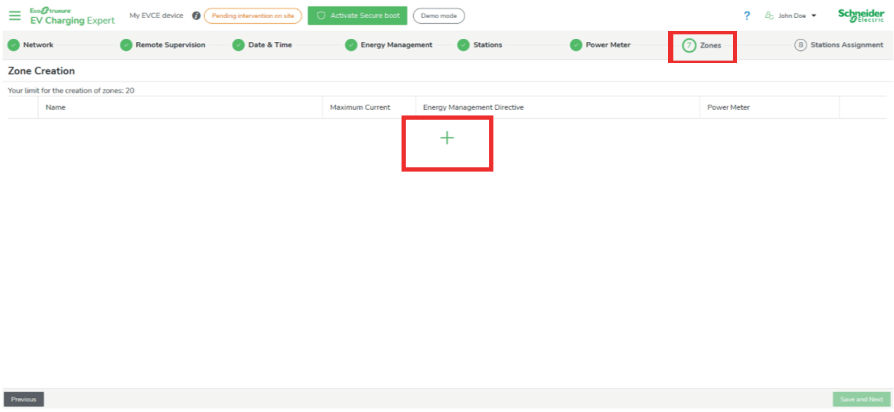
4. Select a power meter from the list of proposed models.
5. To configure the power meter, fill in the following fields:
   - **Name**
   - **Model**
   - **IP Address**
   - **ID Port**
   - **Slave ID** or **Name model RTU slaveID** if RTU device.
6. Select **Save**.
7. Select **Next**.

Architecture	Next step
Architecture 1, page 35	Creating zones and sub-zones, page 85
Architecture 2, page 38	Creating zones and sub-zones, page 85
Architecture 3, page 41	Creating zones and sub-zones, page 85
Architecture 4, page 44	Creating zones and sub-zones, page 85
Architecture 5, page 47	Creating zones and sub-zones, page 85
Refer to Description of System Architectures, page 32.	

Creating Zones and Sub-Zones

You can create a maximum of 20 zones and four sub-zones in each zone.

1. To create a zone from **Zones** menu, select the + sign.

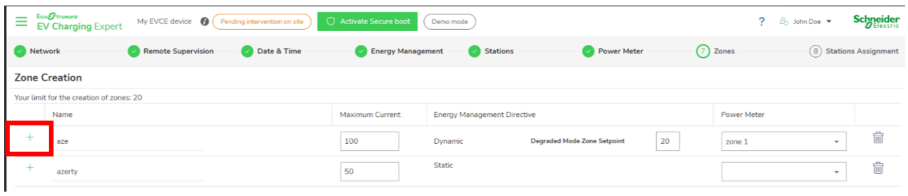


2. For each created zone, fill in the following fields depending on your **Energy Management Directive** (**Dynamic** / **Static**):
   - **Name**
   - **Maximum Current**
   - **Degraded Mode Zone Setpoint**
   - Associated **Power Meter**, if any

   Degraded mode allows charging stations to continue charging, even in case of communication interruption with EcoStruxure EV Charging Expert. For each charging station connector, an offline maximum current is calculated according to:
   - **Maximum Current** of a static zone
   - **Degraded Mode Zone Setpoint** of a dynamic zone

   For a dynamic zone, a **Degraded Mode Zone Setpoint** defines the maximum current always available for EV charging, irrespective of other load in the same electrical zone. Enter a value for **Degraded Mode Zone Setpoint** that allows you to manage charging stations even if EcoStruxure EV Charging Expert loses building consumption information.

   For a dynamic zone, offline management is active when communication is lost with the charging station or with the power meter dedicated to this zone.
3. To create a sub-zone in a zone, select the + sign corresponding to this zone.



4. For each created sub-zone, fill in the following fields:
   - **Name**
   - **Maximum Current**
   - Associated **Power Meter**, if any
5. Select **Save and Next**.

For more information about the creation of zones and sub-zones, refer to the video showing how to configure loads' parameters with EcoStruxure EV Charging Expert & assign chargers to a zone:

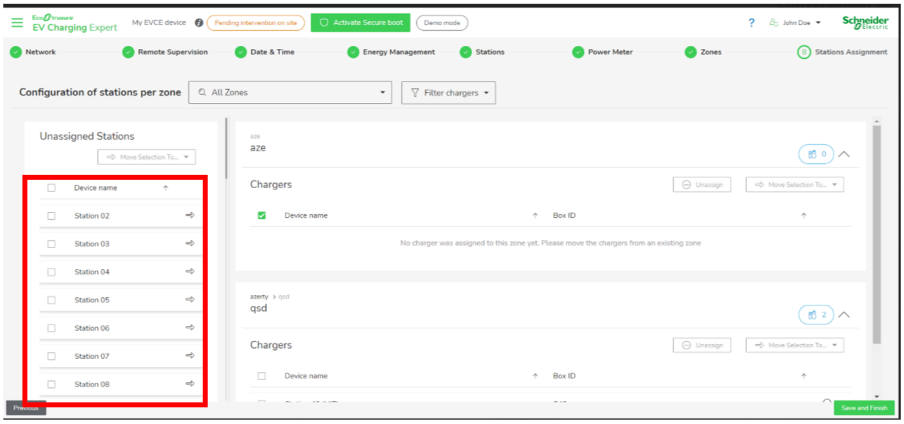
https://youtu.be/c3FBqzF1Avw

Architecture	Next step
Architecture 1, page 35	Assigning charging stations, page 87
Architecture 2, page 38	Assigning charging stations, page 87
Architecture 3, page 41	Assigning charging stations, page 87
Architecture 4, page 44	Assigning charging stations, page 87
Architecture 5, page 47	Assigning charging stations, page 87
Refer to Description of System Architectures, page 32.	

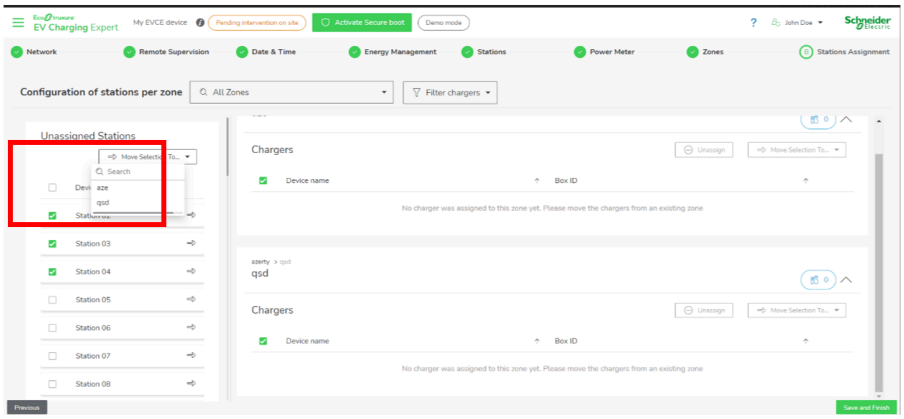
Assigning Charging Stations

To assign charging stations to a zone according to the electrical distribution plan and to the defined EVSE architecture:

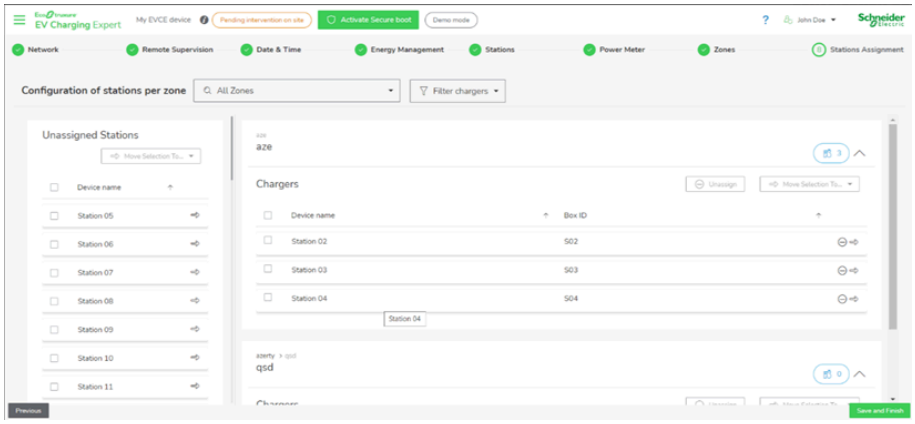
1. Select the installation wizard.
2. In the **Stations Assignment** menu, in the **Unassigned Stations** list, select the charging station you want to assign to a zone.



3. **Move Selection To** a created zone.



The **Unassigned Stations** list is automatically updated.



4. When you have assigned all charging stations to a zone, select **Save and Finish**.

For more information about the assignment of charging stations to a zone, refer to the video showing how to configure loads' parameters with EcoStruxure EV Charging Expert & assign chargers to a zone:

https://youtu.be/c3FBqzF1Avw

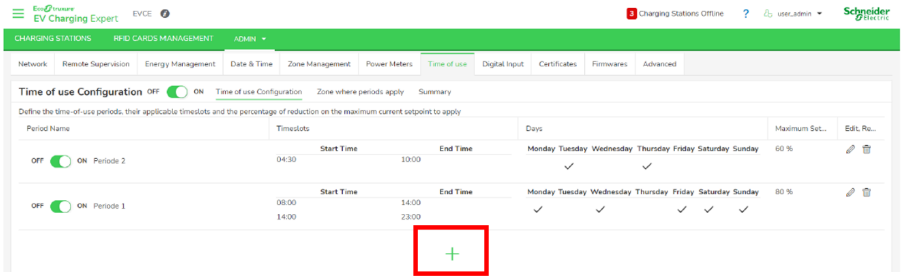
Architecture	Next step
Architecture 1, page 35	Configuring time of use and digital inputs, page 89
Architecture 2, page 38	Configuring time of use and digital inputs, page 89
Architecture 3, page 41	Configuring time of use and digital inputs, page 89
Architecture 4, page 44	Configuring time of use and digital inputs, page 89
Architecture 5, page 47	Configuring time of use and digital inputs, page 89
Refer to Description of System Architectures, page 32.	

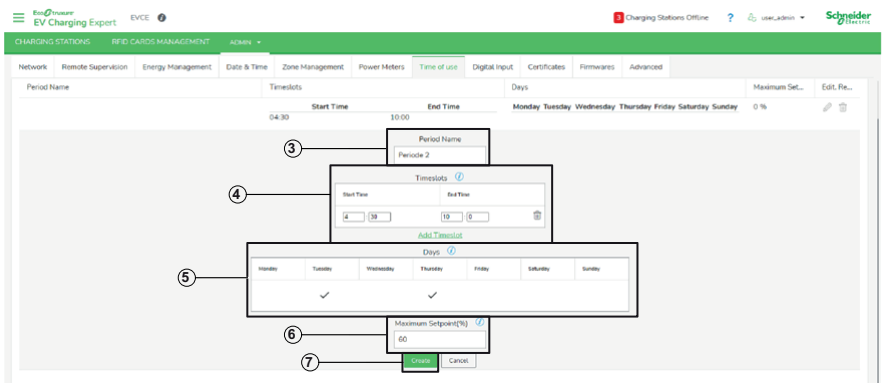
Configuring Time of Use and Digital Inputs

If needed, the configuration of time of use allows you to reduce the power capacity per zone at set periods of time to fit in with tariff policies.

To assign one or more periods to a zone:

1. Select **ADMIN > Time of use**.
2. Select the + sign to create a time-of-use period.



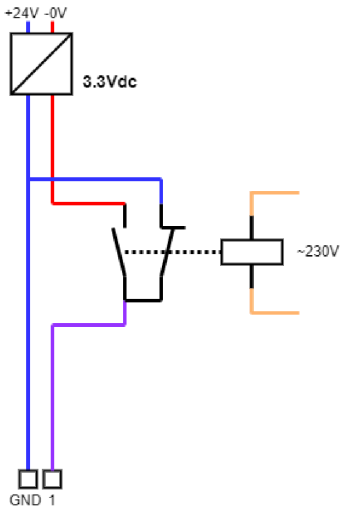


3. Enter a **Period Name**.
4. Define **Timeslots**:
   - Enter a **Start Time**.
   - Enter an **End Time**.
   - Select **Add Timeslot** to add another timeslot for this reduction.
5. Select the days when the timeslots apply.
6. Define a percentage for **Maximum Setpoint**.
7. Select **Create**.

8. Select **ADMIN > Digital Input**.

   NOTE: EcoStruxure EV Charging Expert digital inputs are accessible through GPIO connections located on the rear side of the EcoStruxure EV Charging Expert device. Activation of a digital input reduces maximum zone current according to its configuration.

   Electrical connection: only digital inputs 1, 2 and 3 are driven by GPIO channels 1, 2 and 3. To activate a digital input, it must be powered to 3.3 Vdc TTL.

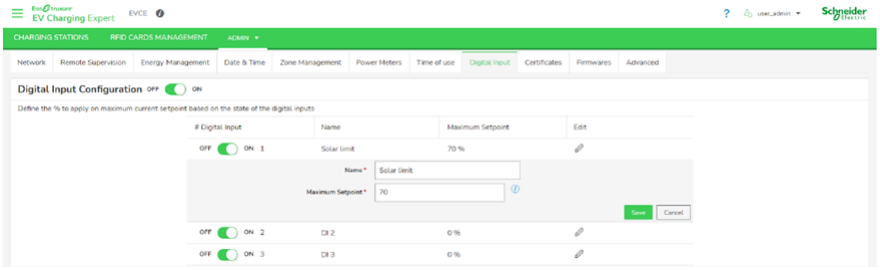


> **⚠WARNING**
>
> **HAZARD OF EQUIPMENT DAMAGE**
>
> Follow the wiring indications and the voltage of a maximum of 3.3 Vdc.
>
> **Failure to follow these instructions can result in death, serious injury, or equipment damage.**

9. Enable or disable digital inputs.

   NOTE: Each digital input can be enabled or disabled separately.

10. For each digital input, fill in the following fields:
    - **Name**
    - **Maximum Setpoint**: reduction in percentage applied to EcoStruxure EV Charging Expert zones



For example, if you select 70, and if your actual setpoint for the charger is 32 A, the resulting setpoint applied to the charger is 32 A*70% = 22,4 A.

Architecture	Next step
Architecture 1, page 35	Managing authentication, page 92
Architecture 2, page 38	Managing authentication, page 92
Architecture 3, page 41	Managing authentication, page 92
Architecture 4, page 44	Managing authentication, page 92
Architecture 5, page 47	Managing authentication, page 92
Refer to Description of System Architectures, page 32.	

Managing Authentication

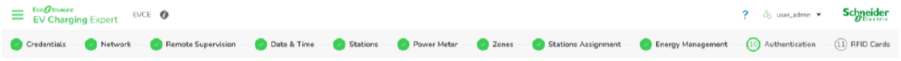
When there is no charging station management system to manage authentication and grant access to the charging stations, EcoStruxure EV Charging Expert can handle access through the creation of groups and the use of RFID cards.

An authentication group is a selection of charging stations associated with a list of RFID cards. Each authentication group has its own online and offline authentication strategies.

Each charging station can only be associated with one authentication group. RFID cards can be assigned to several authentication groups.

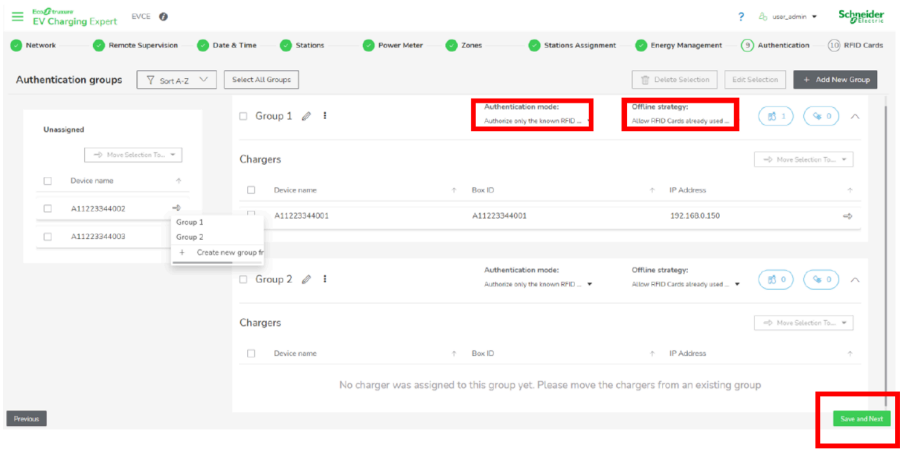
To manage authentication strategy:

1. Select the **Authentication** menu.

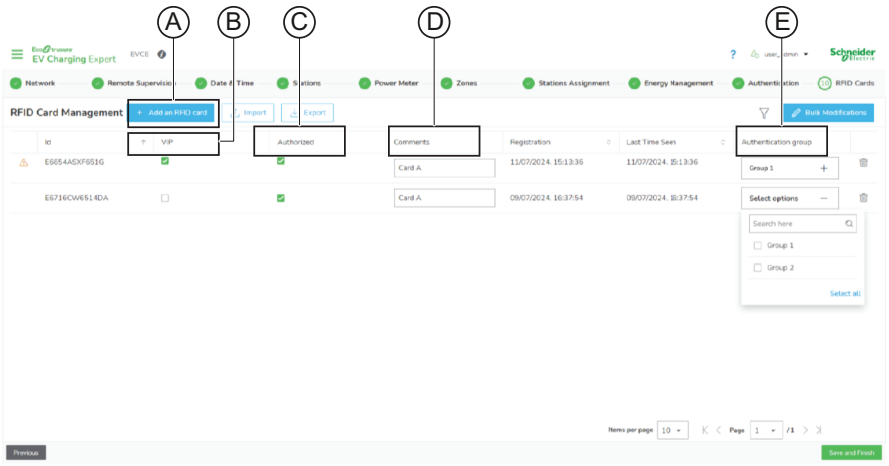


2. Select one of the three following options for **Authentication groups**:
   - **One global group**: all installed charging stations are assigned to one authentication group.
   - **One group per charger**: one authentication group is created for each charging station (recommended solution to manage one RFID badge for one charging station).
   - **Custom installation**: create one or multiple authentication groups according to installation needs.

     NOTE: After configuration, you can change the authentication configuration from the **ADMIN** menu.
3. Define online and offline authentication strategies. The **Offline strategy** manages the authentication process when the charging stations are disconnected from EcoStruxure EV Charging Expert.



4. When selecting **Save and Next**, the following screen is displayed:



A. **Add an RFID card**: to add or import RFID badges.

B. **VIP**: tick this box to give the EV driver priority in load management system. This option is disabled by default.

C. **Authorized**: tick this box to authorize the EV driver to start a transaction with this RFID card. This option is only used for assigned authentication group with **Authorize only the known RFID cards** authentication strategy. This option is disabled by default.

D. **Comments**: to add a comment on an RFID card.

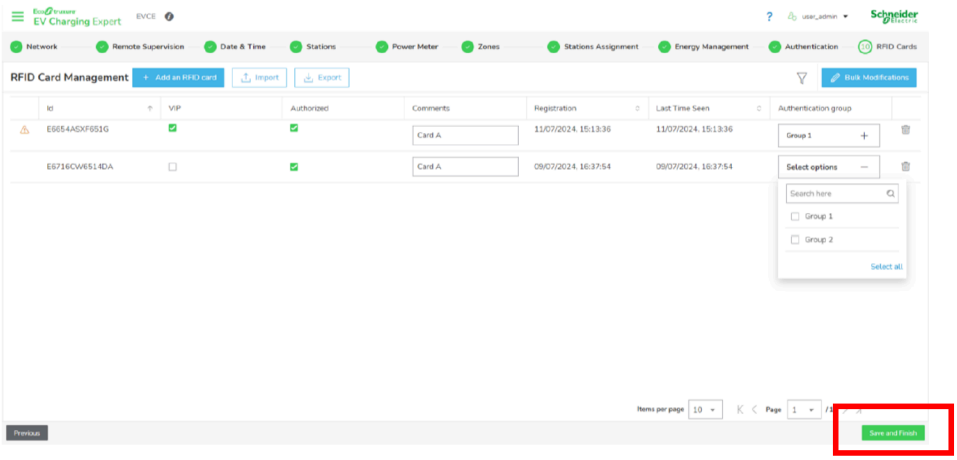
E. **Authentication group**: to assign an RFID card to one or more authentication groups.

The list of RFID cards can be exported to a web interface or imported from a web interface. For information about csv format, see DOCA0358EN *EcoStruxure EV Charging Expert User Guide*, page 10.

Architecture	Next step
Architecture 1, page 35	Finalizing the commissioning, page 94
Architecture 2, page 38	Finalizing the commissioning, page 94
Architecture 3, page 41	Finalizing the commissioning, page 94
Architecture 4, page 44	Finalizing the commissioning, page 94
Architecture 5, page 47	Finalizing the commissioning, page 94
Refer to Description of System Architectures, page 32.	

Finalizing the Commissioning

To confirm your settings and finalize the commissioning, select **Save and Finish**.



Architecture	Next step
Architecture 1, page 35	Saving and exporting configuration, page 95
Architecture 2, page 38	Saving and exporting configuration, page 95
Architecture 3, page 41	Saving and exporting configuration, page 95
Architecture 4, page 44	Saving and exporting configuration, page 95
Architecture 5, page 47	Saving and exporting configuration, page 95
Refer to Description of System Architectures, page 32.	

Saving and Exporting Configuration

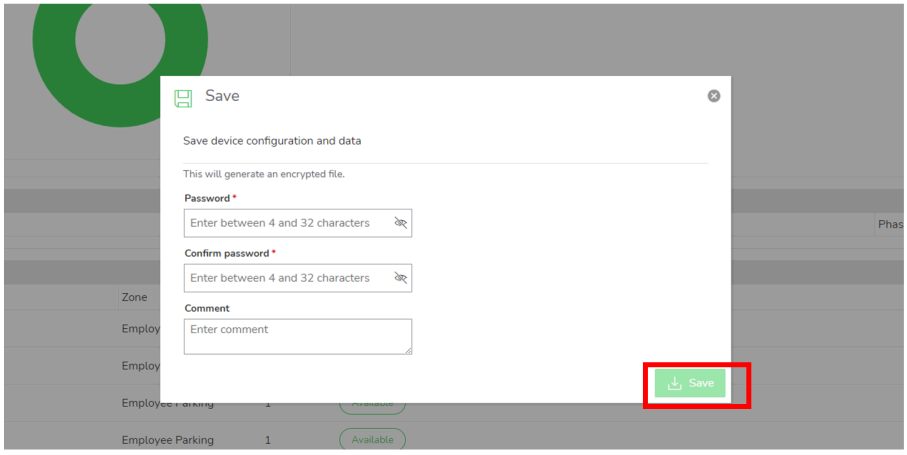
It is recommended to save a backup of the current system configuration and import it later to restore a lost configuration.

The configuration export contains the following information:

- Administrator and user profiles credentials
- Charging stations configuration
- Zones configuration
- Power meters configuration
- Network configuration
- Authentication strategies
- List of RFID cards
- Authentication groups

To save a backup of the current system configuration:

1. Select **ADMIN > Save**.
2. To generate the backup file, enter a password and confirm the password.



3. Save the exported file in a relevant repository.

   NOTE: To help ensure the security of your information, the exported file is encrypted and signed.

4. To check that your EV infrastructure is commissioned and operational, check the following:
   - All charging stations are connected and connectors are available.
   - Use an EV charging simulator to check that the charge works well.
   - Digital inputs are operational by testing them manually.
   - Time of use is confirmed during operation.
   - Data flow is available on your EcoStruxure EV Charging Expert monitoring dashboard.

Commissioning EVlink Pro AC Charging Stations One by One by Using eSetup Application

To commission EVlink Pro AC charging stations one by one by using eSetup application, refer to:

- NNZ1940301 *EVlink Pro AC Troubleshooting Guide*
- the video explaining how to commission EVlink Pro AC charging stations by using eSetup application:

https://youtube.com/playlist?list=PLa7UGrWOTyjlFktxGiia8yNkYOQaMJuzX

Architecture	Next step
Architecture 4, page 44	Commissioning Schneider Charge Pro charging stations one by one by using eSetup application, page 97
Refer to Description of System Architectures, page 32.	

Commissioning Schneider Charge Pro Charging Stations One by One by Using eSetup Application

To commission Schneider Charge Pro charging stations one by one by using eSetup application, refer to:

- TME42383 *Schneider Charge Pro Installation and Operation Guide*, page 10
- the video explaining how to commission Schneider Charge Pro charging stations by using eSetup application:

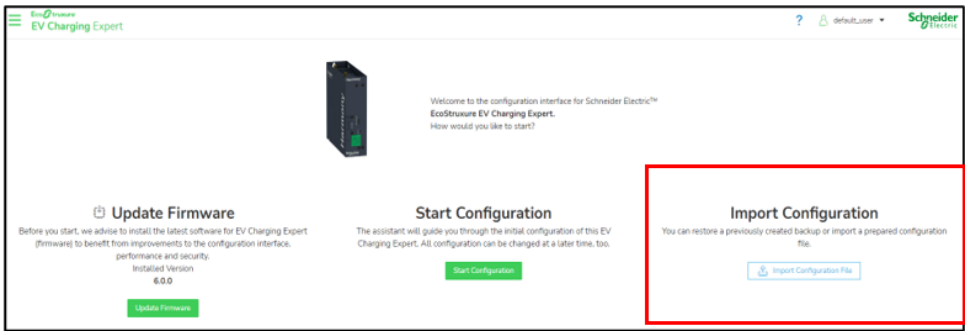
https://youtu.be/BGCuxbVv9AU

Specific Functions and Configurations

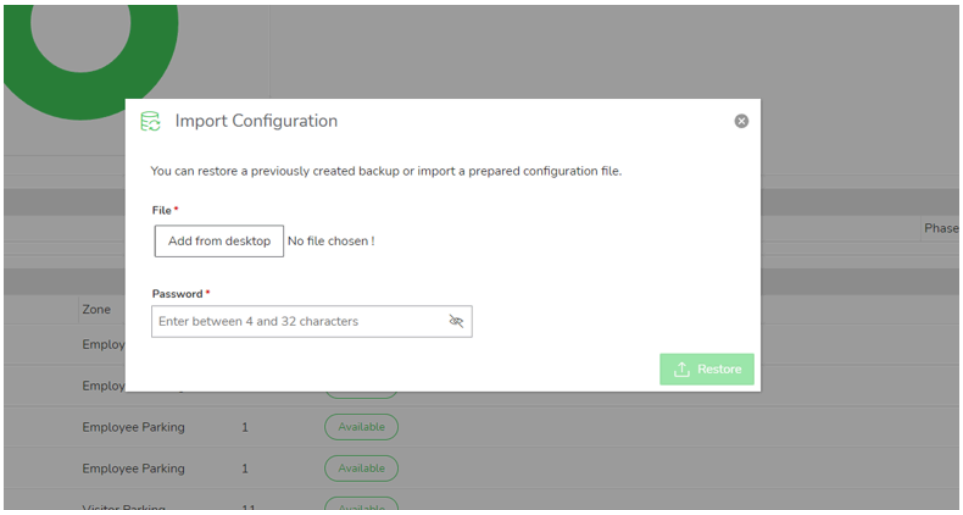
What’s in This Part

Importing EcoStruxure EV Charging Expert Configuration

If you want to restore or re-use a saved configuration, you can select **Import Configuration** when opening EcoStruxure EV Charging Expert.



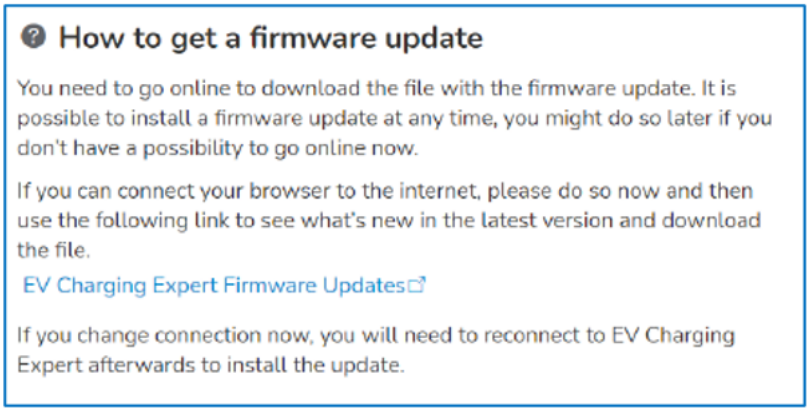
A pop-up window allows you to recover a configuration from a previous configuration export.



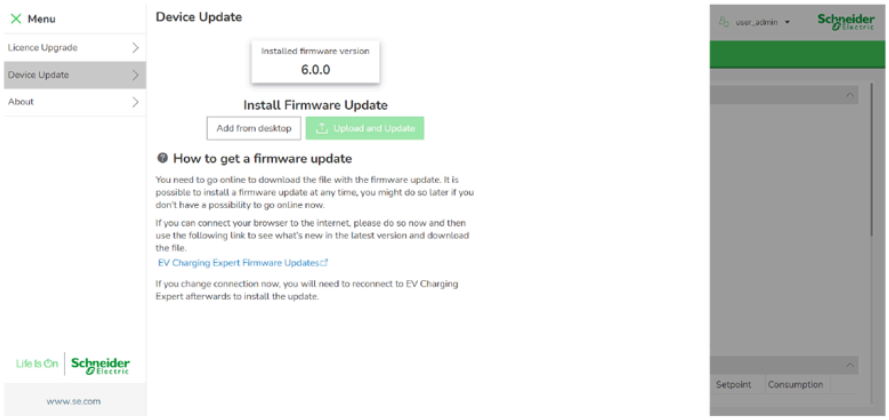
NOTE: The configuration file with version 6.0.0 or higher is compatible. It requires configuration file password to be installed.

Updating EcoStruxure EV Charging Expert Firmware

Select the hamburger menu and **Device Update**.



The following screen is displayed while the new version is being installed.



It takes about one minute to run the firmware installation. After one minute, EcoStruxure EV Charging Expert reboots, with the up-to-date firmware version.

Setting Up a Ring Topology for EVlink Pro AC Range

What's in This Chapter

This chapter provides you with information about the commissioning of a ring topology cable network for EVlink Pro AC charging stations. It contains generic information for configuring the switch in your installation, as well as examples based on a Modicon switch.

This chapter explains how to:

- Update the EVlink Pro AC charging station and activate the RSTP protocol using eSetup.
- Install the switch configuration software on your PC.
- Configure the Modicon switch used to form a ring topology. For more information refer to Configuring the Switch, page 104.

For more information, refer to:

- The video showing how to configure Ethernet communication parameters:

  https://www.youtube.com/watch?v=Sg7sAeqko_w&t=89s
- DIA6ED2140903EN *Modicon Networking Catalog 2022*, page 10
- ConneXium switch configurator software

Prerequisites

Before installing a ring topology network, check the following:

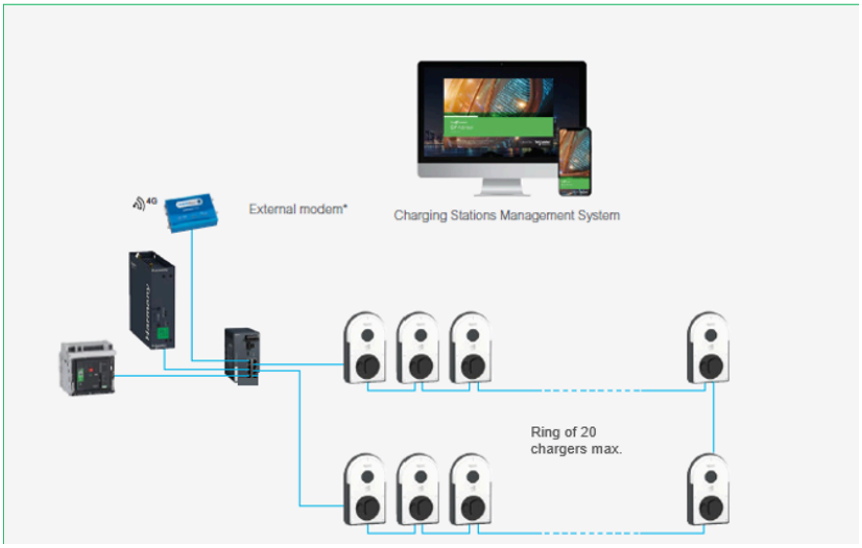
1. EVlink Pro AC charging stations:
   - EVlink Pro AC charging stations are wired for power.
   - The eSetup application version is at least 13.1.3.
   - The firmware version of the EVlink Pro AC charging stations is at least 1.3.8 for all ring charging stations.

     Updating the firmware and entering parameters in eSetup determines whether the charging stations are integrated into a ring topology.
2. Network cabling

   The network of charging stations is daisy chained with a maximum of 20 charging stations per daisy chain. The loop is open at switch level.
3. Managed switches

   The managed switch is compatible with the RSTP protocol.The STP protocol is not supported.
   - The RSTP configuration of the managed switch can be modified.
   - The managed switch authorizes BPDU frames on ports connected to the loop. Anti-loop protection such as Cisco BPDU Guard / BPDU Filter are disabled.

     Configuring the managed switch determines the proper operation of the ring topology.



A maximum of 20 charging stations can be in the ring.

Configuring EVlink Pro AC Charging Stations with eSetup

The firmware version installed on EVlink Pro AC charging stations is at least 1.3.8.

The eSetup application version is at least 13.1.3.

Otherwise, when configuring a ring topology, a pop-up window appears on the application and asks you to update the Pro AC firmware to proceed with its configuration.

Refer to the documentation for updating the EVlink Pro AC charging stations: EVlink Pro AC – Professionals.

For more information about how to configure Ethernet communication parameters with eSetup, refer to the video showing RSTP activation for a ring topology.

https://www.youtube.com/watch?v=Sg7sAeqko_w&t=89s

To configure charging stations with eSetup:

1. Check the installation.

2. Enable RSTP.

To activate the RSTP protocol, click **Activate RSTP > ON**.

Configuring the Switch

The following configuration is suitable for transforming an existing network into a ring topology.

1. On a computer that is connected to the managed switch or LAN network, open a web browser and enter the IP address of the managed switch.

   Enter the user ID and password that are known or provided in the switch user guide (default identifiers).

2. Enable protocol support for the Rapid Spanning Tree Protocol (RSTP). The Spanning Tree Protocol (RSTP) is not supported for the creation of a ring topology on EVlink Pro AC charging stations.

   Configure the following RSTP parameters according to the values indicated.

Parameter	Value
Bridge Priority	< 32768
Max age	≥ Number of chargers in the ring + 1

   For example, the following RSTP configurations meet the expected values for a ring topology of 20 charging stations.

Parameter	Value
Bridge Priority	4096
Max age	21

   Disable anti-loop protection features (such as Cisco BPDU Guard / BPDU Filter or equivalent) on the switch ports connected to the ring.

3. Save the new managed switch configuration. If necessary, restart to apply the changes.

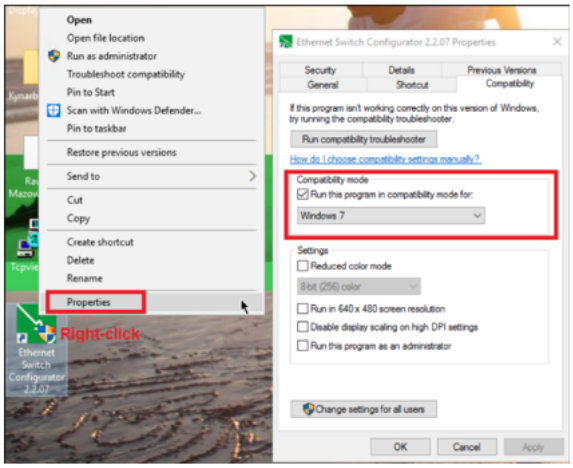
Example of a Configuration Using a Schneider Electric Modicon Managed Switch

The following configuration is recommended for any new installation. The Schneider Electric Modicon managed switch has been tested and validated for optimum use of a ring topology of EVlink Pro AC charging stations.

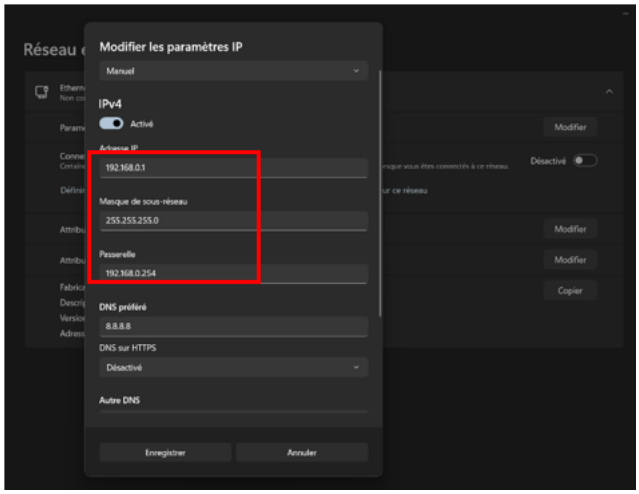
The following table shows recommendations for configuring IP addresses.

Device	IP address
EV Charging Expert	192.168.0.128
Gateway	192.168.0.254
Remote access	192.168.0.253
Modicon switch	192.168.0.100

1. PC configuration recommendations for installing the Modicon Switch configuration software: to install the **Ethernet Switch Configurator 2.2.07** software:
   a. Check that you are the administrator of your PC.
   b. Check that the software is launched in Windows 7 compatibility mode.



   c. Check that firewalls are disabled or configured to allow communication on the LAN.
   d. Check that the Ethernet network parameters of the PC are modified as follows if a DHCP server is missing:
      - IP address: 192.168.0.1
      - Subnet mask: 255.255.255.0
      - Gateway: 192.168.0.254

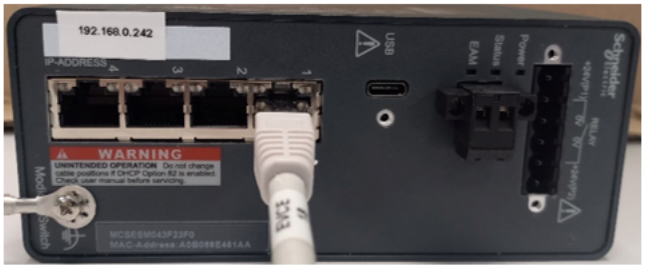


e. Check that the network configuration is taken into account.

```
Carte Ethernet Ethernet :

   Suffixe DNS propre à la connexion. . . :
   Adresse IPv6 de liaison locale. . . . .: fe80::5f7f:211b:80b6:4f41%22
   Adresse IPv4. . . . . . . . . . . . . .: 192.168.0.1
   Masque de sous-réseau. . . . . . . . . : 255.255.255.0
   Passerelle par défaut. . . . . . . . . :
```

2. Install the Modicon switch and connect it to the LAN.



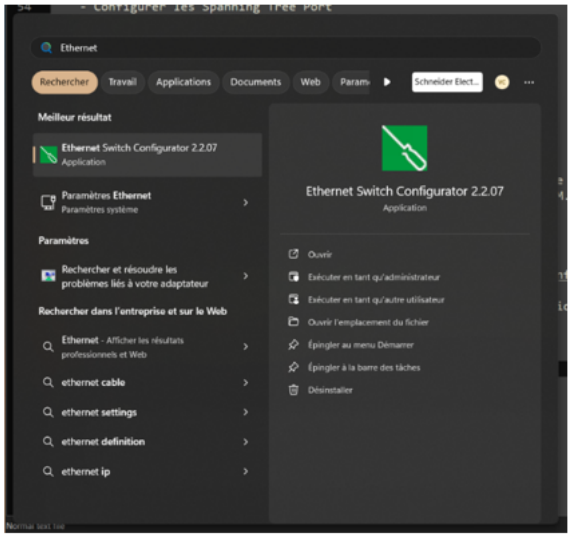
NOTICE
HAZARD OF NETWORK INOPERABILITY • Leave the network loop open in switch. • It is closed once the configuration is completed. **Failure to follow these instructions can result in equipment damage.**

a. Power on the equipment.

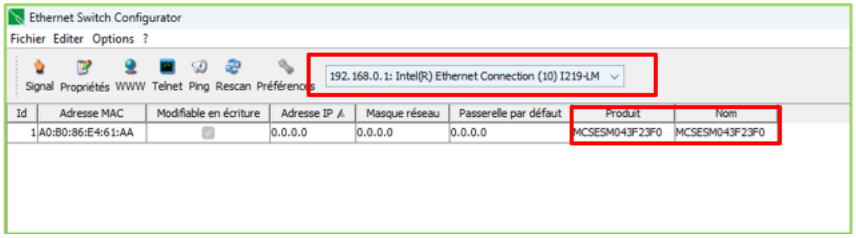
b. Connect the device with an RJ45 cable.

3. Switch detection

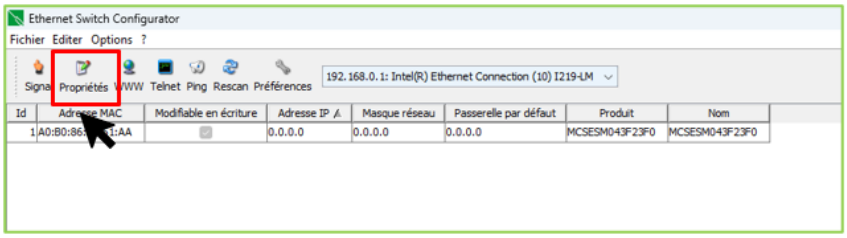
a. On the PC, launch the **Ethernet Switch Configurator 2.2.0 7** software.



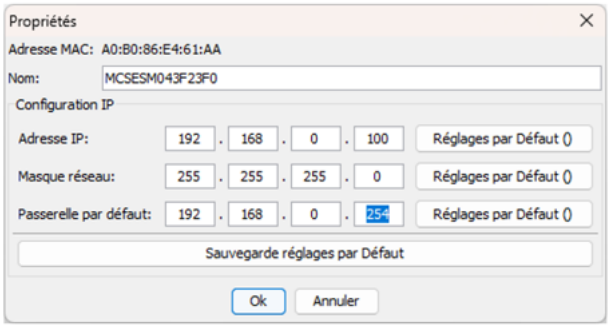
The software automatically runs a network scan that identifies the switch to be configured.



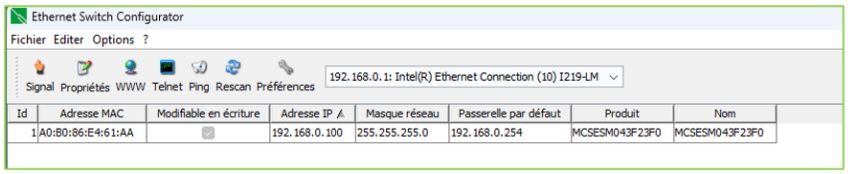
b. Edit the properties by clicking the **Properties** menu.



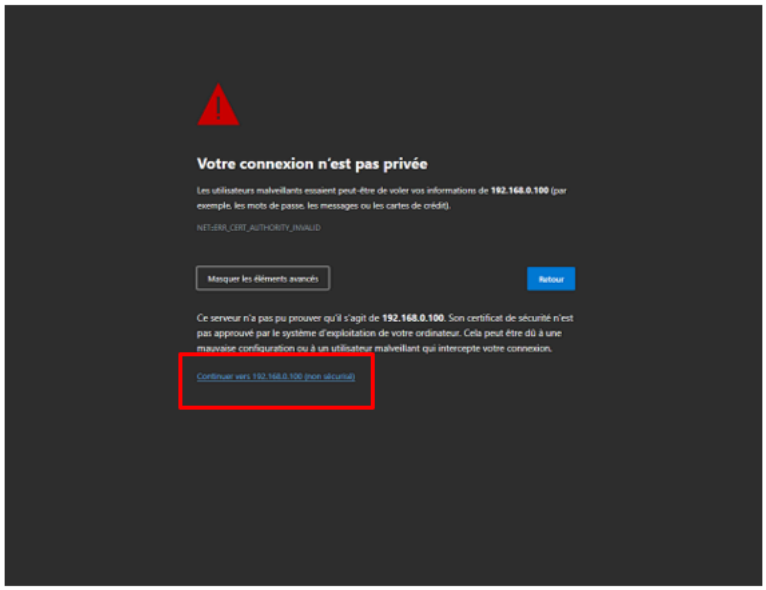
c. Configure the switch network parameters (according to initial recommendations).



d. Check that the switch network configuration is properly applied.



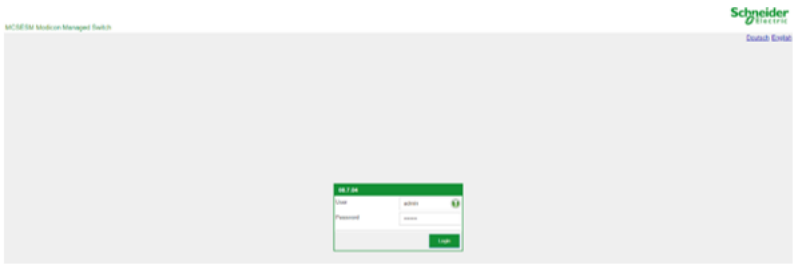
4. Connection to Modicon Switch web pages:
   a. On the PC, launch a web browser and enter the switch IP address.
   b. Confirm the connection to the server by clicking **Continue to 192.168.0.100 (unsecured)**.



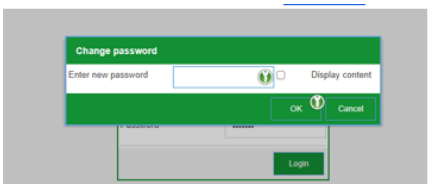
c. Enter the user ID and password that are known or provided in the switch user guide (default identifiers).

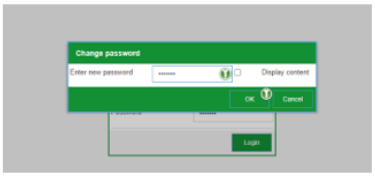
User ID: admin

Password: private

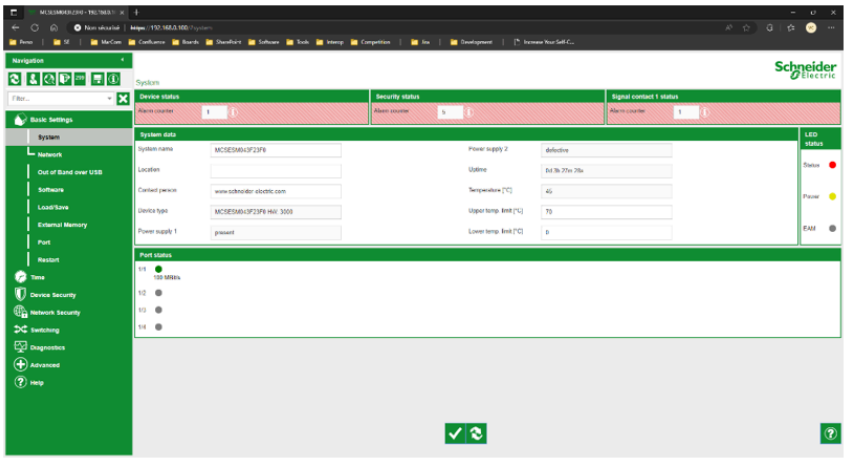


d. Change the password and confirm.



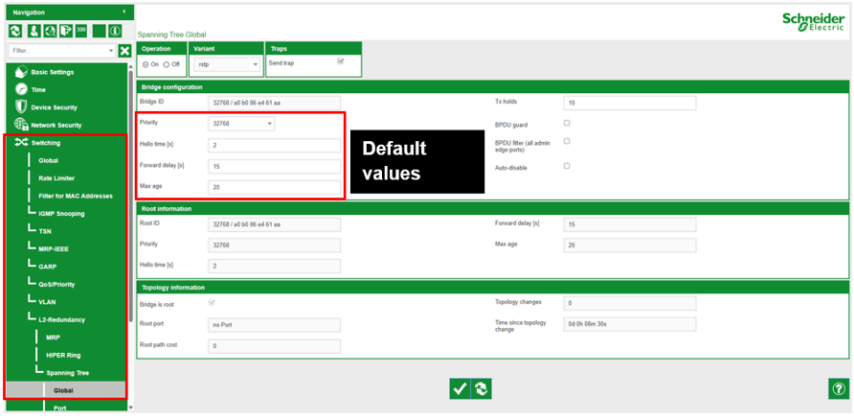


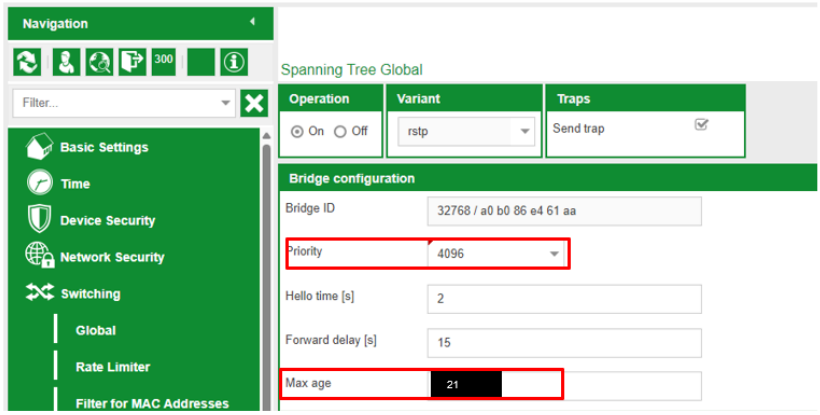
The main screen displayed is as follows.



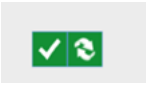
5. Configuration of the switch for a ring topology: RSTP Priority and Max age.
   a. In the **Switching** menu check the default values indicated by the configuration tool for configuring the **Bridge**, and modify the value **Priority** and the value **Max Age** as follows:

Fields	**Value**
Priority	4096
Hello time	2 s
Forward delay	15 s
Max age	21

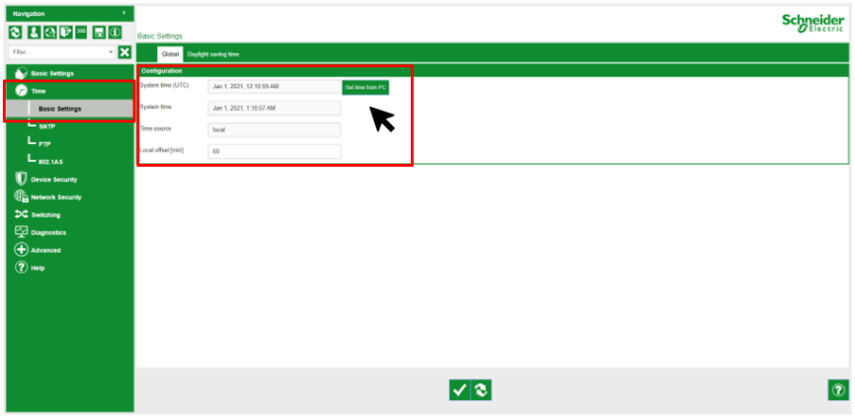




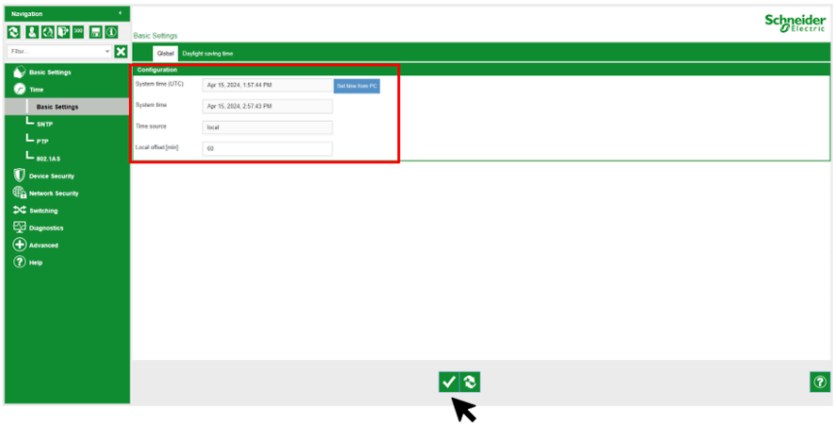
b. Save the new parameters.



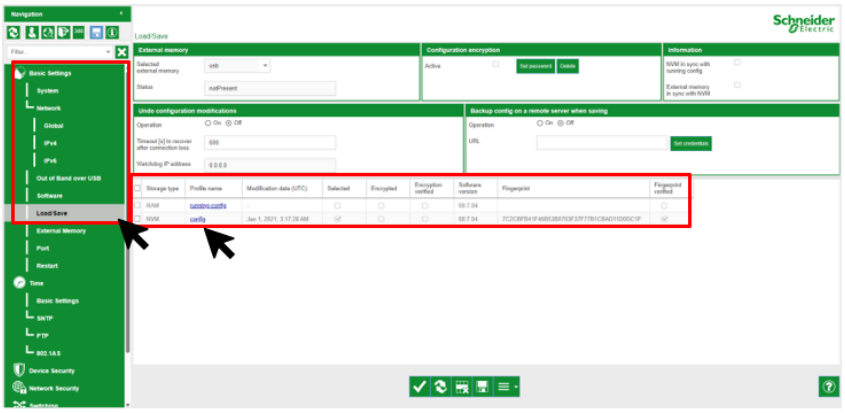
6. To update date and time:
   a. In the **Time**/**Basic settings** menu, update the indicated values using the PC clock.



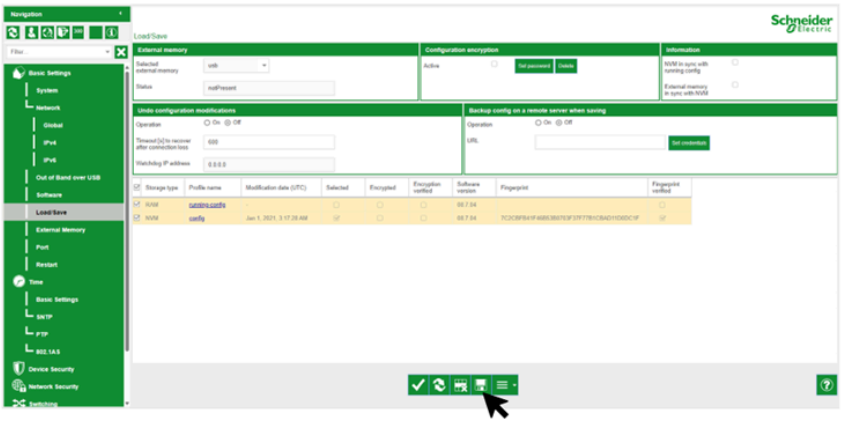
   b. Save the date and time settings.

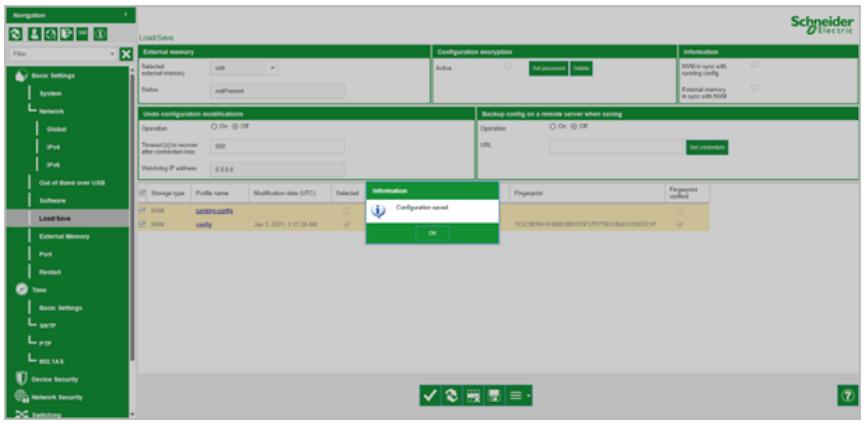


7. To save the new configuration:
   a. In the **Basic Settings->Load** menu, select the configuration information.

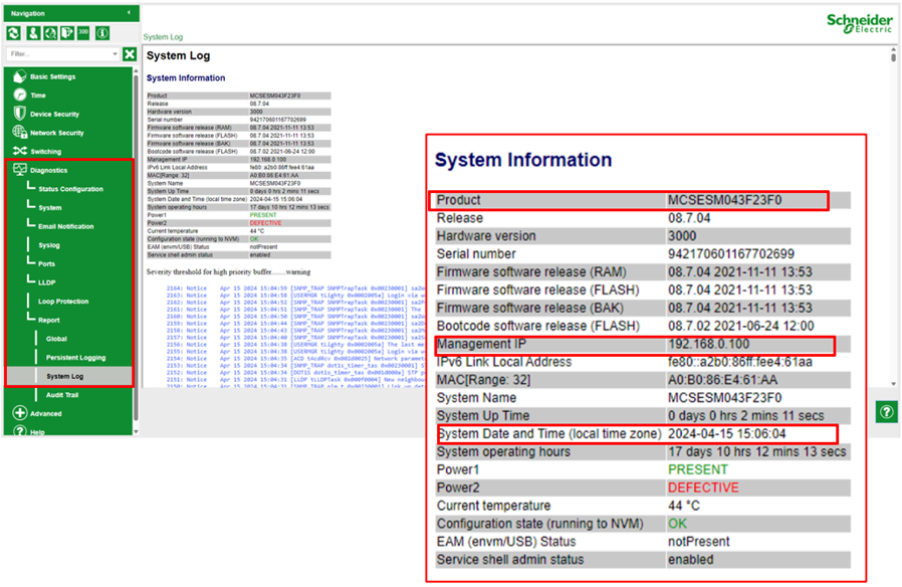


   b. Save the new configuration.





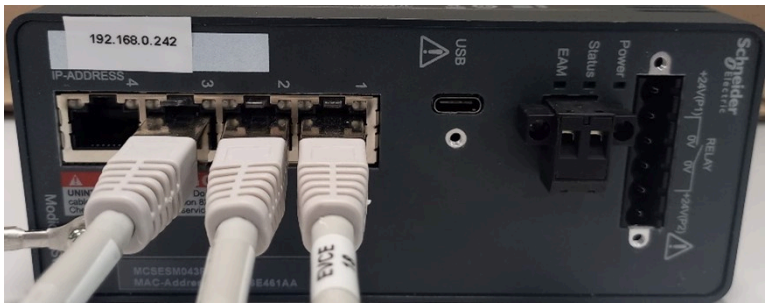
8. Open the **Diagnostics/Report/System Log** menu to check that the changes appear in the **System Log** report.


Navigation
Basic Settings
Time
Device Security
Network Security
Switching
Diagnostics
Status Configuration
System
Email Notification
Syslog
Ports
LLDP
Loop Protection
Report
Global
Persistent Logging
System Log
Audit Trail
Advanced
Help
System Log
System Information
Severity threshold for high priority buffer.....warning
System Information
Product MCSESM043F23F0
Release 08.7.04
Hardware version 3000
Serial number 942170601167702699
Firmware software release (RAM) 08.7.04 2021-11-11 13:53
Firmware software release (FLASH) 08.7.04 2021-11-11 13:53
Firmware software release (BAK) 08.7.04 2021-11-11 13:53
Bootcode software release (FLASH) 08.7.02 2021-06-24 12:00
Management IP 192.168.0.100
IPv6 Link Local Address fe80::a2b0:86ff:fee4:61aa
MAC[Range: 32] A0:B0:86:E4:61:AA
System Name MCSESM043F23F0
System Up Time 0 days 0 hrs 2 mins 11 secs
System Date and Time (local time zone) 2024-04-15 15:06:04
System operating hours 17 days 10 hrs 12 mins 13 secs
Power1 PRESENT
Power2 DEFECTIVE
Current temperature 44 °C
Configuration state (running to NVM) OK
EAM (envm/USB) Status notPresent
Service shell admin status enabled

Setting up the Ring Network

1. Closing the loop
   a. Close the network loop by connecting both ends of the existing daisy chain to two ports on the managed switch.
   b. Check that the managed switch is still connected to the LAN network and/or the EV Charging Expert.

      For example, on a Schneider Electric Modicon managed switch, the connection should look like on the following picture.



2. Check that the ring topology is working correctly:
   - All EVlink Pro AC charging stations are operational (green LED).
   - All EVlink Pro AC charging stations are connected to EV Charging Expert and/or the charging operator (CPO) and are available in the remote management interface.

Schneider Electric
35 rue Joseph Monier
92500 Rueil Malmaison
France

+ 33 (0) 1 41 29 70 00

www.se.com

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