# MultiNode LAN 4TE


User Manual

Firmware 7.16.8.40 · 2026-05-12

**Trademarks**



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# Introduction

MultiNode LAN 4TE is a compact DIN-rail device that sends data over existing power lines. It is built to handle demanding environments and can scale easily, making it a strong fit for large sites such as EV charging networks.

This manual helps you plan, install, configure, and maintain a MultiNode LAN network. It covers the MultiNode device, the MultiNode network setup, the electrical installation, and the built-in web interface.

## Getting started

### Who should read this manual

- Qualified electricians: mounting and wiring
- Network technicians and admins: network design and web interface configuration

### What you need

- Data sheet (technical specifications)
- Laptop with a LAN port to connect to a MultiNode LAN 4TE
- LAN cable of sufficient length

### Overview

The user manual is structured as follows:

- This chapter lists the supplied documents, intended use, safety information, symbols, CE and UKCA information, and a glossary of MultiNode terms.
- Chapter MultiNode LAN provides a specification of MultiNode LAN 4TE.
- Chapter Architecture shows common network setups in EV charging and how MultiNode LAN 4TE products fit into them.
- Chapter Electrical installation explains the mounting and physical installation steps.
- Chapter Web Interface gives an overview of the built-in web-interface of MultiNode LAN 4TE, with instructions for setting up the MultiNode network.
- In Chapter Support, Warranty & Legal Notice, you'll find contact details, warranty terms, and legal notices.

# Product overview

## How MultiNode network works

- One device is the master; all others are regular nodes (leaf or repeater).
- Regular nodes communicate with the master over PLC.
- Peer-to-peer communication between regular nodes is isolated, i.e., regular nodes can only communicate with the master.
- The web interface of the master node can be used to setup and configure the network.

## Product documentation

MultiNode LAN 4TE includes the following supporting documents:

- Safety & service flyer: General safety and service information
- Data sheet: Technical specifications
- User manual (this document)

## Migrating older firmware versions

**Update to the latest firmware**

**This user manual assumes your MultiNode LAN 4TEs are on the latest firmware (7.16.8.40 • 2026-05-12).** To identify the firmware version of your device, connect a laptop to the device via Ethernet cable and check the firmware version on the device's web interface.

If your MultiNode LAN 4TEs run a firmware version older than 7.16.5.31, we offer three ways to update them to the latest firmware:

1. **Update individually** by using the built-in web interface of each device; see instructions .
2. **Update all devices** at once via the Firmware Migrator tool available on the product website .
3. **Let us update the devices** for you: If your devices have internet access, send their serial numbers to support@devolo.de . Our support team will initiate the update remotely.

# Key MultiNode terms

**PLC (Powerline Communication):** A technology that transmits data signals over existing electrical power lines by modulating high-frequency carrier waves onto the low-frequency AC power signal.

**MultiNode LAN network:** A network built with MultiNode devices.

**Node:** A device that's part of the MultiNode network.

**Master node:** The main controller of the MultiNode network. Only one node in the network can be the master.

**Regular node:** Any node that can be managed by the master node. By default, nodes are configured as regular nodes.

**Seed:** A number (0–59) that identifies and separates PLC networks.

# Safety and compliance

## Intended use

MultiNode LAN 4TE is a fixed-installation device of overvoltage category 3. It communicates via powerline communication (PLC) over low-voltage mains. The unit is designed for water-protected environments and must be mounted on a DIN-rail within touch-protected or access-controlled areas.

Use the MultiNode LAN 4TE as instructed to prevent damage and injury.

## Safety

Read and understand all safety and operating instructions before first use.

**About the safety & service flyer**

The safety & service flyer provides general product, conformity, and disposal information.

> **Documentation & downloads**
>
> A printed safety & service flyer is included with each product; this manual is provided digitally. All product descriptions are available at www.devolo.global/support/download/download/multinode-lan .

**Callouts**

This manual uses four standard callouts with icons. These examples show how they look and what they mean.

**Electrical hazard**

Hazardous electrical voltage which if not avoided can result in serious injury or death.

**Qualified electrician required**

Installation steps that must be performed by a qualified electrician.

**Warning**

An important notice to prevent potential injury or equipment damage.

**Info**

Helpful background information and configuration tips.

**Success**

Indicates that an action completed successfully.

## CE Conformity

The MultiNode LAN is CE compliant. Download the complete CE declaration .

## UKCA Conformity

The MultiNode LAN is UKCA compliant. Download the complete UKCA declaration .

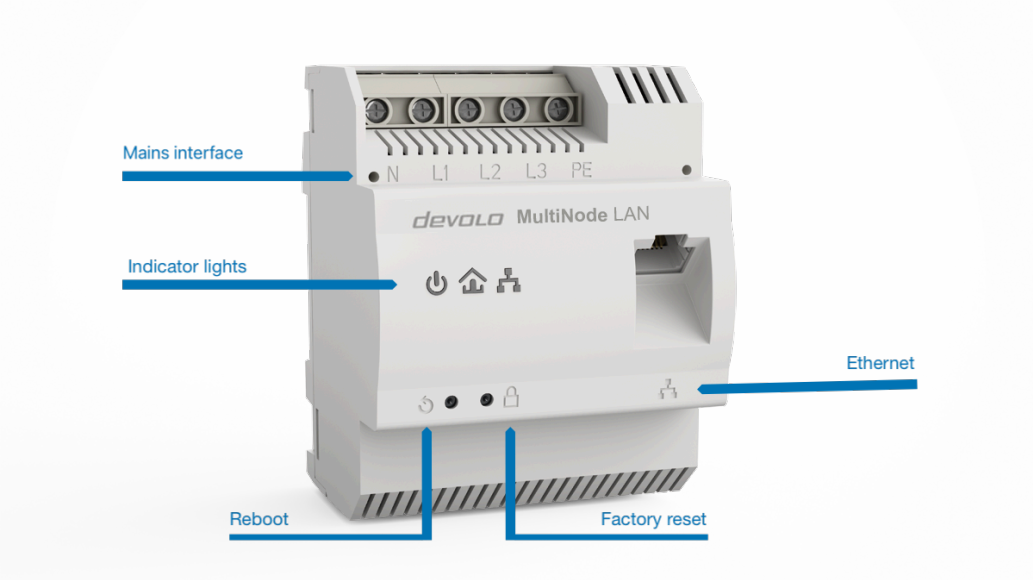
# Device specification

MultiNode LAN 4TE uses PLC to transport data over low-voltage mains cables. Its repeater function makes it well suited for large networks with up to 250 nodes.

## Specification

MultiNode LAN 4TE includes:

- Five line connections (mains interface)
- One Gigabit Ethernet network interface
- Three indicator lights
  - Power
  - Network
  - Ethernet
- One reboot button
- One factory reset button




Front view of MultiNode LAN 4TE

## Mains interface

The screw terminals for the primary voltage power line accept wires from 1.5 mm $^2$ to 6 mm $^2$ .

**Single-phase operation using L1:** For single-phase operation, use the L1 terminal. L2 and L3 can remain open. The device is powered from L1/N, so using L1/N is mandatory.

**Three-phase connection:** Connect neutral and three external conductors to terminals N, L1, L2,

and L3. The device is powered via N and L1.

**Operation with or without protective earth (PE):** The device can operate without connecting PE to protective earth. However, the PE terminal can enhance signal transmission over powerline.

# Ethernet interface

You can use the Ethernet interface to connect:

- the master node to the local network or to an Internet gateway, or
- regular nodes to their application devices, e.g., EV charging stations.

# LEDs

The integrated LEDs show the status of the MultiNode LAN 4TE by illuminating and /or flashing in two different colours:

| LED | Behaviour | Status |
|---|---|---|
| Power | Off | No power supply or node is defective. |
| | On | Node is powered. |
| Network | Red for **5 s** | Node booting after restart or power cycle. |
| | Steady red | Node not connected to a MultiNode network; ready for configuration. |
| | Steady white | Node connected to a MultiNode network. |
| | White: **1.8 s** on / **0.2 s** off | Node connected but configuration incomplete. |
| | White/red alternating, **0.3 s** each | Firmware update in progress. |
| | Red flashing, **0.5 s** on/ off | Factory reset completed successfully. |
| Ethernet | Steady white | Ethernet uplink active. |
| | Flashing white | Ethernet uplink active with data transfer. |

# Factory reset button

## Resetting MultiNode LAN 4TE to factory defaults

To restore the device to factory default settings, press and hold the factory reset button for more than 10 seconds.

Wait until the network LED flashes red, then add the MultiNode LAN 4TE to a network again. Note that all settings will be lost. If the node was part of a MultiNode network, it will be removed from that network.

# Reboot button

## Rebooting MultiNode LAN 4TE

To reboot the device, press the reboot button. The device will restart.

When the network LED lights up red for 5 seconds or longer, the device is operational again.

# Network Architecture

This chapter helps you plan and implement MultiNode network(s) in EV charging installations. Read this chapter carefully to understand how various aspects affect network performance and installation efforts so you can select an appropriate MultiNode installation for your use case.

## Before installation

- Plan your power supply and circuit breaker locations.
- Consider distances between devices; keep under 50 m per hop when possible. See Distance guidelines below.
- Decide if you need one network or multiple networks.
- Plan your load management approach.

## Power supply considerations

**Circuit breakers:** When using power rails, you need circuit breakers at each connection point. This lets you use thinner cables. You can use the same circuit breaker for both the charging station and MultiNode device, or give each one its own circuit breaker (see Single circuit setup ).

**Built-in power supply:** MultiNode devices have integrated power supplies using L1/N terminals. Additional network components like switches and gateways need their own power supply. You can power them from the same electrical circuit or a different one (see Single circuit setup ).

**Independence from mains electrical power:** PLC communication operates in the 2-50 MHz frequency range, which is separate from the mains electrical power.

## Distance guidelines

MultiNode networks can span several hundred meters using built-in repeater functionality. Every MultiNode device automatically functions as a repeater when necessary, based on an underlying topology algorithm.

### Per-hop distance recommendations

- Up to 50 m: Good performance
- 50-100 m: Potentially acceptable performance
- Over 100 m: Not recommended

**Important:** Line conditions may deteriorate over time, so plan conservatively.

# Network architecture decisions

## Single vs. multiple mains circuits

**Single mains circuit** *(recommended)* **:** A mains circuit is any cable or power rail connected to one circuit breaker. Best performance can be expectedwhen all devices operate on one three-phase circuit.

**Multiple mains circuits:** Possible but requires careful planning. The PLC signal must pass through distribution units, which can cause:

- Signal loss from multiple connection points
- Additional noise from various sources
- Impedance changes

Consider installing a repeater in the distribution unit on a separate, protected circuit (see Multiple circuit setup).

## Network topology options

**Option 1: Single large network:**

- Spans multiple circuits through distribution unit
- May require longer signal paths
- Consider repeater placement (see Multiple MultiNode networks)

**Option 2: Multiple smaller networks**

- One network per circuit or floor
- Requires Ethernet connections between networks
- Avoids distribution unit signal issues (see Multiple MultiNode networks)

# Master node placement

Both your electrical wiring and MultiNode network are arranged like a tree, branching out from one main point to all locations.

Your electrical system branches out from the main distribution unit. Your MultiNode network branches out from one master node to several regular nodes.

**Important:** The master node of the MultiNode network doesn't need to be in the distribution unit. If you can reach your network with Ethernet from another location, this is often better and avoids complications with the distribution unit.

# Adding repeaters

As mentioned earlier, MultiNode devices automatically act as repeaters when needed. Supplement an existing MultiNode network with additional devices when:

- Per-hop distance is above 50 m
- Signal quality is poor
- You have long underground cables without tap-off options

Install additional tap-off boxes with circuit breakers for dedicated repeaters (see Multiple circuit setup ).

# Planning load management

MultiNode networks isolate regular nodes from each other — they can only communicate with the master node, not with each other. This affects how you plan load management.

## Options for load management

**Centralized management**

Use a separate load management system in the building or cloud (see Centralized load management ).

**Master/Slave configuration**

Use one charging station as the load management master (see Master/slave charging stations ). Because of the network isolation, you need additional Ethernet cables so slave stations can communicate with both the master station and the gateway.

**Alternative connectivity**

If you use a mobile radio gateway instead of fiber, Mobile radio gateway setup shows solutions for both centralized management and Master/Slave setups. The setup may be simpler if your master charging station has built-in mobile radio or your gateway has a built-in Ethernet switch.

# Common installation scenarios

## Outdoor car parks

For outdoor installations with power rails:

1. Install distribution cabinet near power rail

2. Run fiber cable in conduit alongside mains supply cable
3. This avoids long-distance PLC connections (see Centralized load management and Master/slave charging stations )

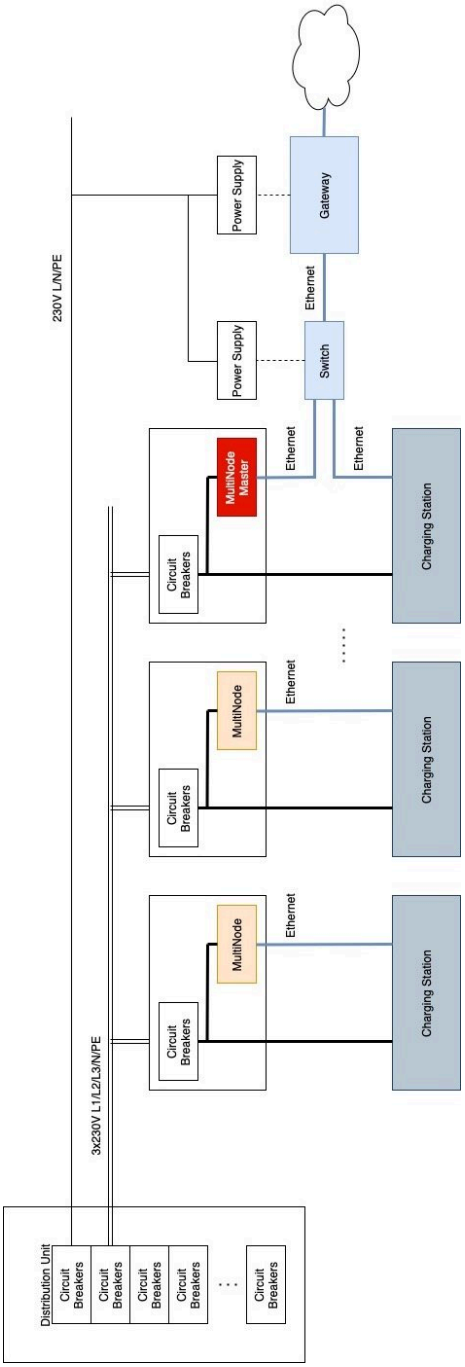
**Alternative:** Use mobile radio gateway to eliminate fiber requirement (see Mobile radio gateway ).

## Multi-floor car parks

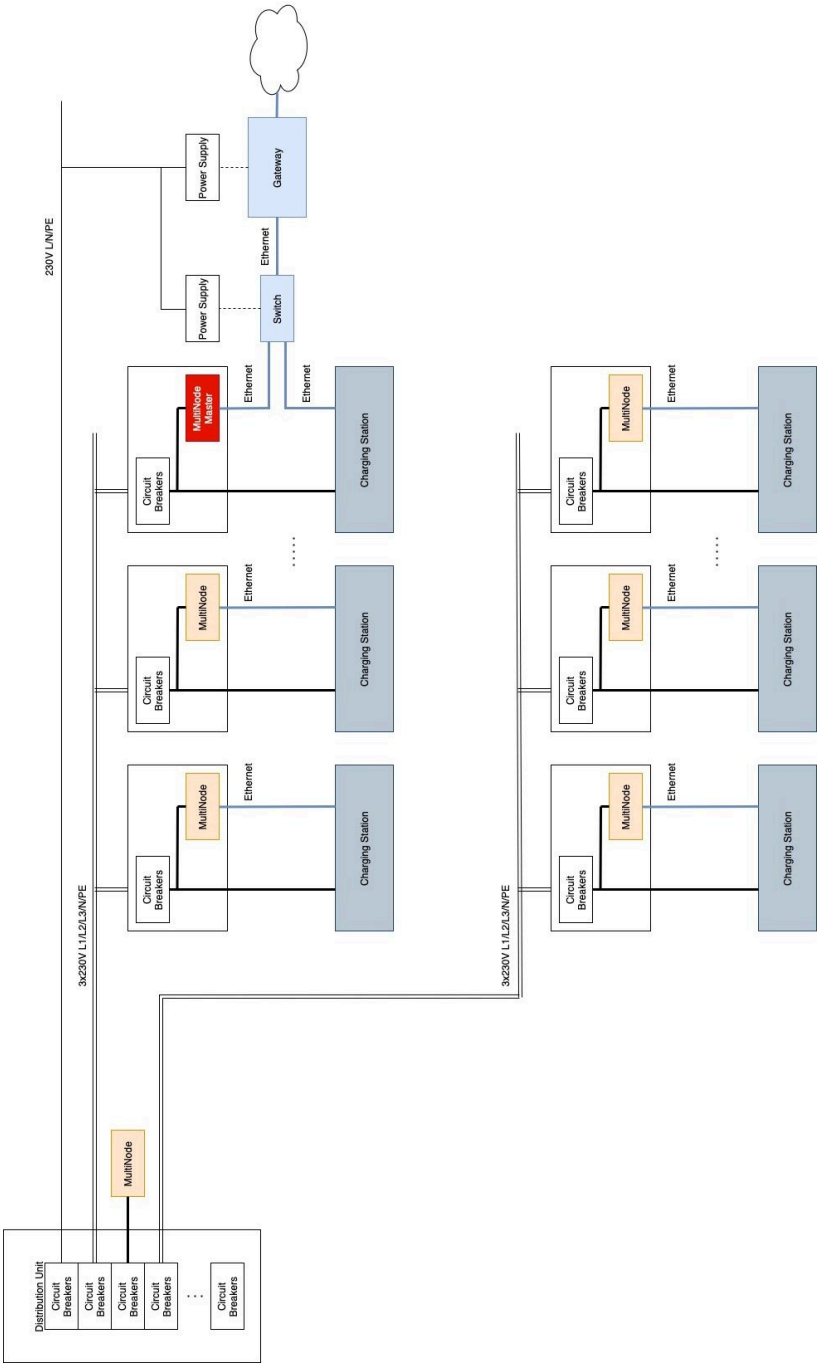
Use separate networks per floor with vertical Ethernet connections between floors to avoid long PLC signal paths through distribution systems (see Multiple MultiNode networks ).

# Reference installations

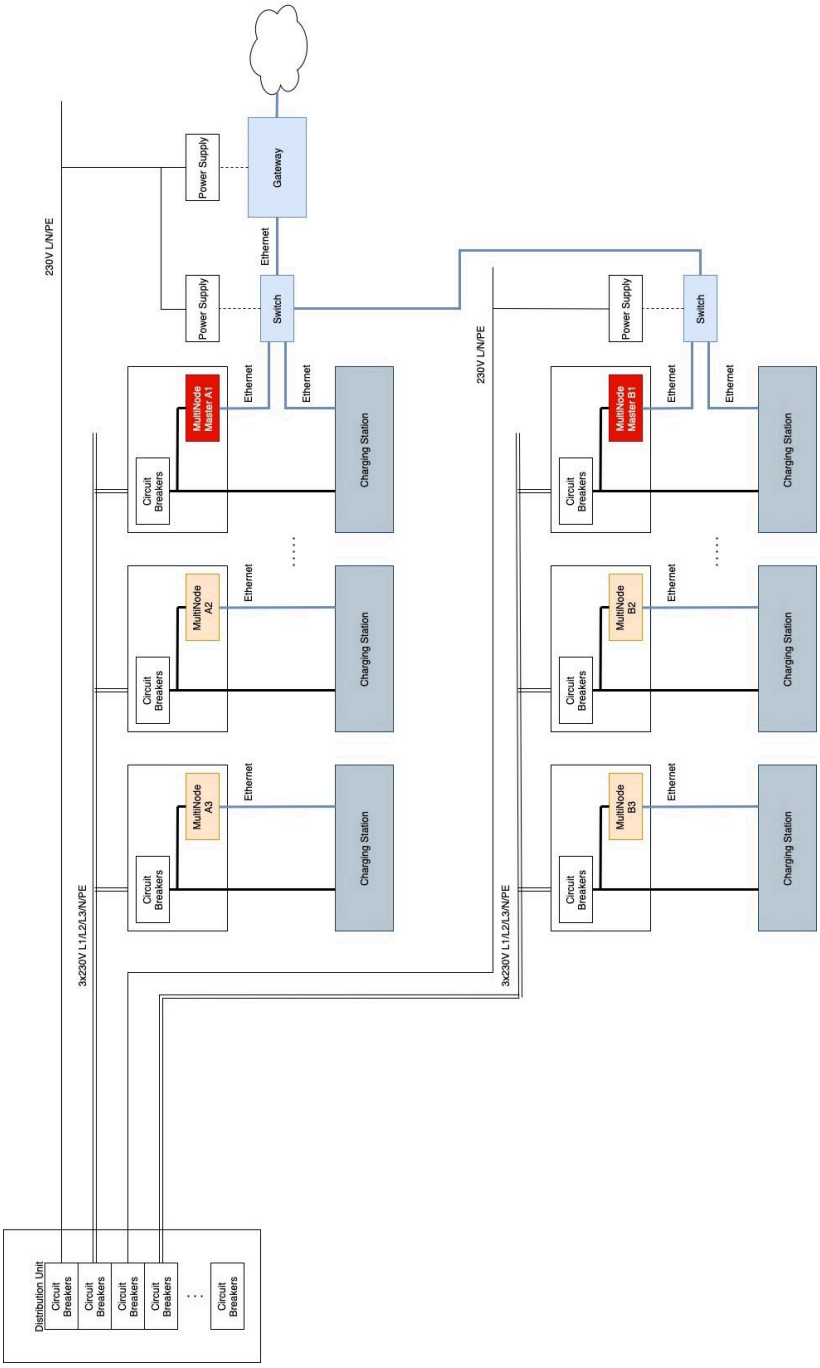
## 1: Single-circuit setup



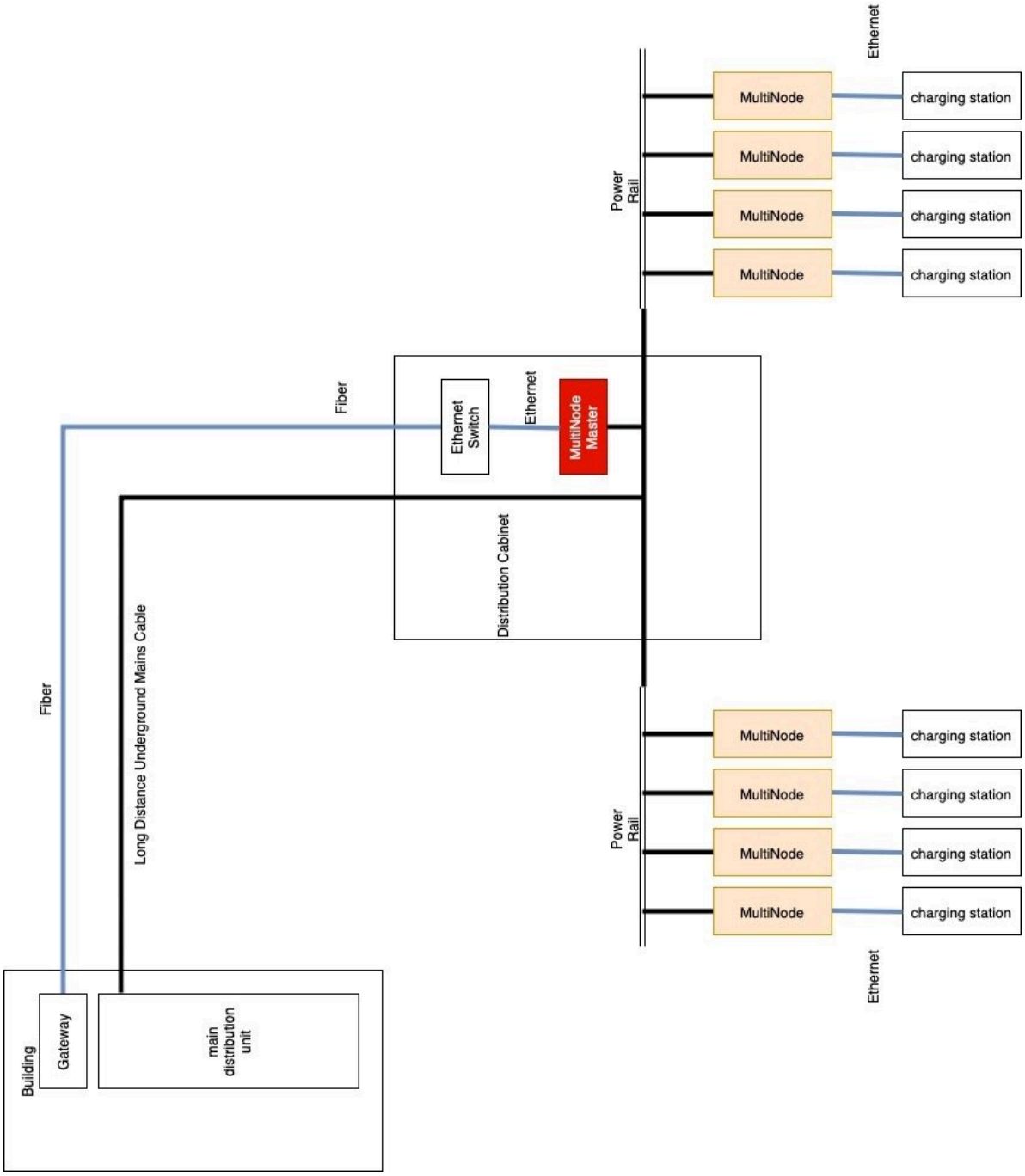
# 2: Multiple-circuit setup



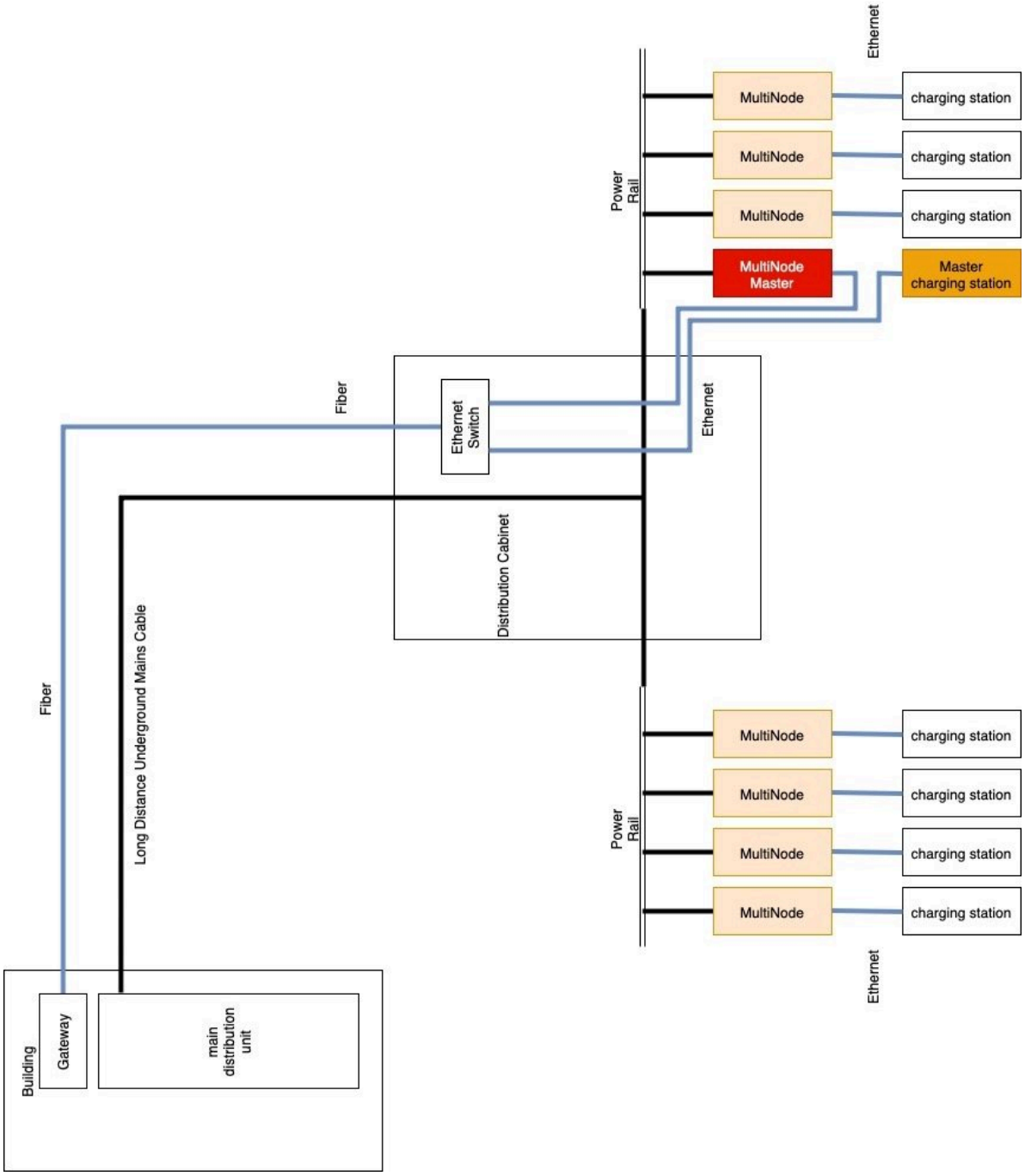
# 3: Multiple MultiNode networks



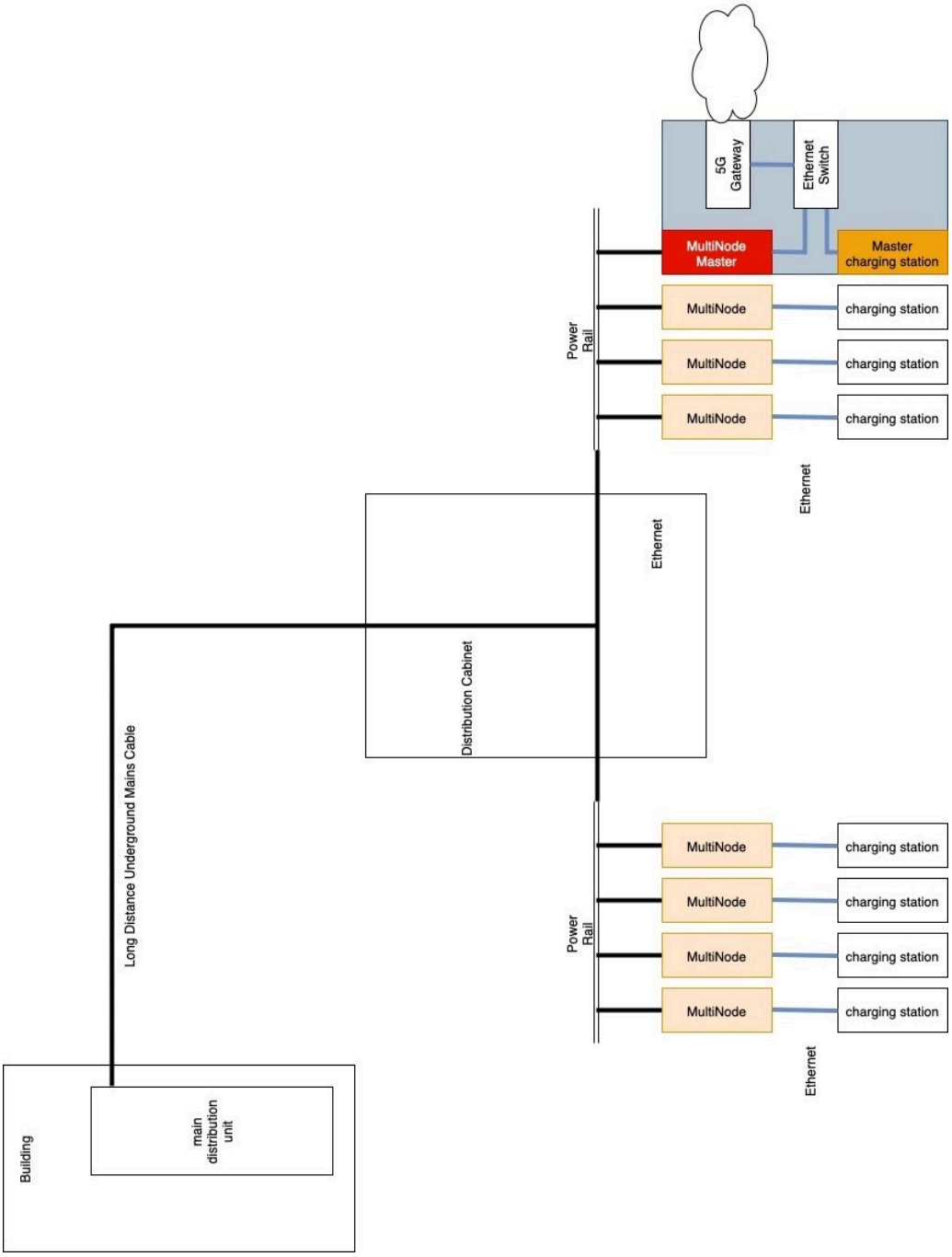
# 4: Centralized load management



# 5: Master/slave charging stations



# 6: Mobile radio gateway



# Electrical installation

## Safety instructions

It is important to read and understand all safety and operating instructions before use. During installation, comply with all relevant national standards and directives.

**Qualified electricians only**

MultiNode LAN 4TE is an overvoltage category 3 device for fixed DIN-rail installation in a touch-protected or access-controlled environment. Operate only with a neutral conductor.

Installation must be carried out by a qualified electrician. Observe MOCoPA and applicable standards, e.g., German Energy Act § 49 and DIN VDE 0105-100 in Germany.

Protect the mains circuit with a circuit breaker in accordance with DIN VDE 100.

**Electrical shock or fire**

- Disconnect the mains supply before mounting and secure it against reconnection.
- Follow all safety regulations to prevent electric shock or arcing.
- Use an appropriate measuring instrument to verify the absence of hazardous voltage before starting work.

**Electrical shock or fire from incorrect conductor cross-section or installation**

Match the conductor cross-section to the circuit breaker. Ensure correct wiring of the power connection.

- Do not open the device; no user-serviceable parts inside.
- Operate only in dry environments.
- Do not insert objects into device openings.
- Keep ventilation slots clear.
- Protect from direct sunlight.
- Prevent overheating.

Replace the device if damaged, for example:

- liquid ingress or foreign objects inside,
- exposure to rain or water,
- failure to operate despite correct installation,
- visible housing damage.

# Instructions for electrical installation

1. Switch off the mains supply.
2. Open the junction box or charging station intended for installation.

**Electrical shock**

Ensure absence of hazardous voltage.

3. Mount the MultiNode LAN 4TE on the DIN-rail with mains terminal clamps facing upward. The housing label must remain legible.
4. Connect conductors as marked on the terminals. Use 1.5 $mm^2$ – 6 $mm^2$ cross-section depending on circuit breaker rating.
   - **Single-phase:** Connect neutral and L1 to N and L1.
   - **Three-phase:** Connect neutral and L1, L2, L3 to N, L1, L2, L3. The device is powered via N and L1.
   - **PE (optional):** Connect protective earth to the PE terminal.

**Link quality**

For best link quality, connect all three phases, neutral, and PE.

5. Connect the Ethernet port of MultiNode LAN 4TE to the Ethernet interface of the application device, e.g., gateway, switch, or charging station.

**Device documentation**

Record the MAC address, serial number, and installation location, e.g., floor number or parking lot number, of each node. Both MAC address and serial number are on the housing label. Provide this documentation to the network administrator for provisioning and tracing issues.

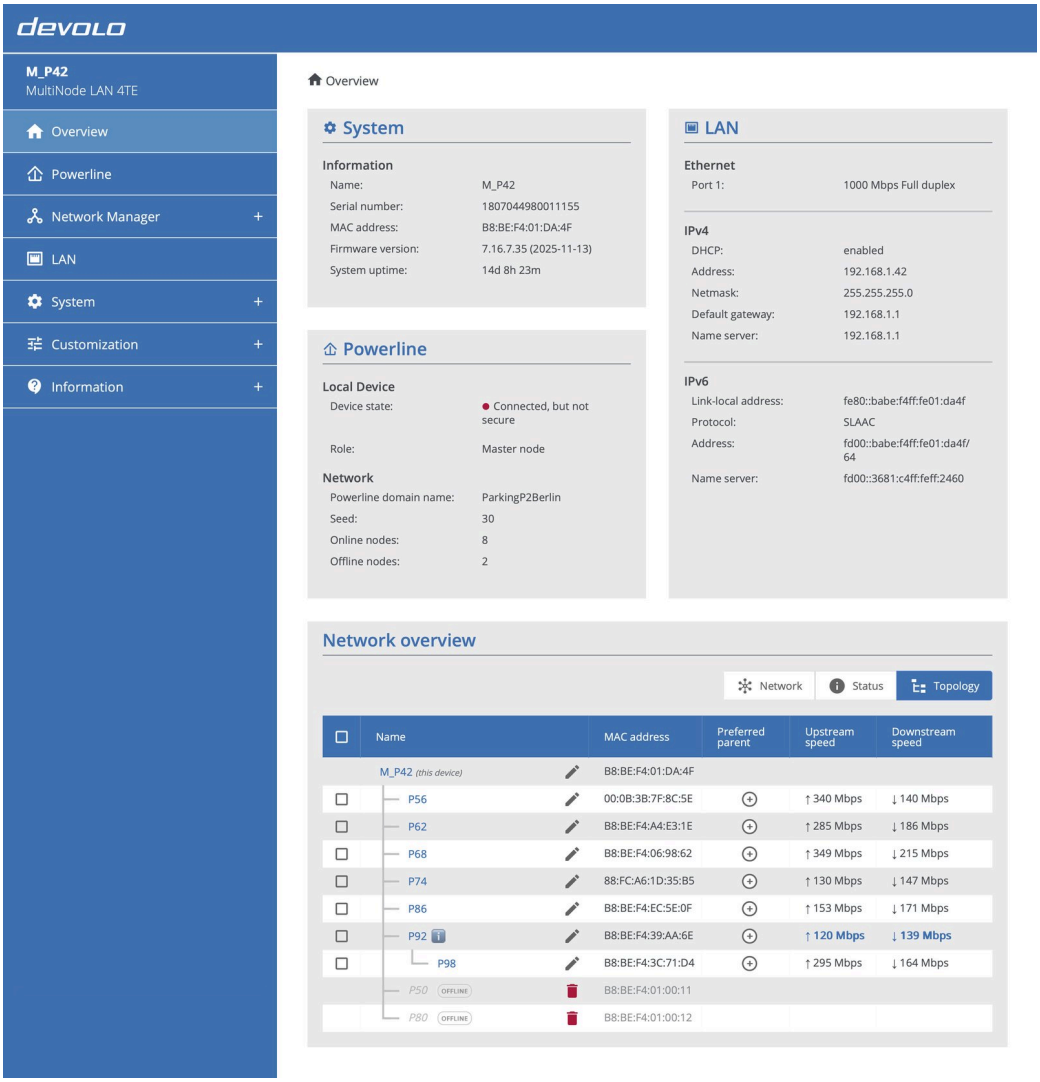
6. A MultiNode network requires at least two nodes. Repeat steps 2–5 for each additional node.
7. After all devices are installed, restore mains power and close all junction boxes or charging stations.

**Installation complete**

Electrical installation is finished. If nodes are not yet provisioned, continue with configuration in chapter 6 *MultiNode LAN web interface* .

# Web interface

MultiNode LAN 4TE has a built-in web server with an easy-to-use interface for network setup and management.




This chapter describes the web interface and is organized into the following sections:

- Accessing the web interface of MultiNode LAN 4TE
- Creating a new MultiNode network
- Using the Overview page
- Viewing and changing Powerline settings
- Using the Network Manager for managing network-wide settings and performing network-wide firmware updates
- Changing LAN settings
- Other configuration options of the product (see System )

# Accessing the web interface

**Setting up a new network**

To set up a new network, first connect your laptop to the node you want to configure as the master node via Ethernet cable.

Access to the web interface is possible via device name or IPv4 address.

## Initial access to the web interface

**Serial number**

In factory-default settings, the device name is **devolo-xxxxx** , where **xxxxx** are the last 5 digits of the device's serial number. Find the serial number on the label on the front of the housing or in the installation documentation (see step 5 in Instructions for electrical installation ).

To access the web interface, open a browser and enter devolo-xxxxx.local or http://devolo-xxxxx.local

**Device name**

If you rename a device, the old device name **devolo-xxxxx.local** will no longer work. You must use the new name followed by **.local** to access the device's web interface.

**IPv4 address**

There are several ways to get the IPv4 address of a node:

- The IPv4 address is assigned by your DHCP server (e.g., a router). You can find the address in the DHCP server’s interface, which maps MAC addresses to IPv4 addresses. (The device MAC address is printed on the front label.)
- On the master node's web interface, the Overview page shows the IPv4 and MAC addresses of all regular nodes.

**No web interface password set**

If no web interface password has been configured, accessing the web interface redirects you to Network Manager automatically. Set a web interface password there to enable normal access.

# Check your firmware version

The firmware version of the device is shown at the bottom-left corner of the web interface. If the device firmware is older than version 7.16.5, see Migrating older firmware versions for next steps.

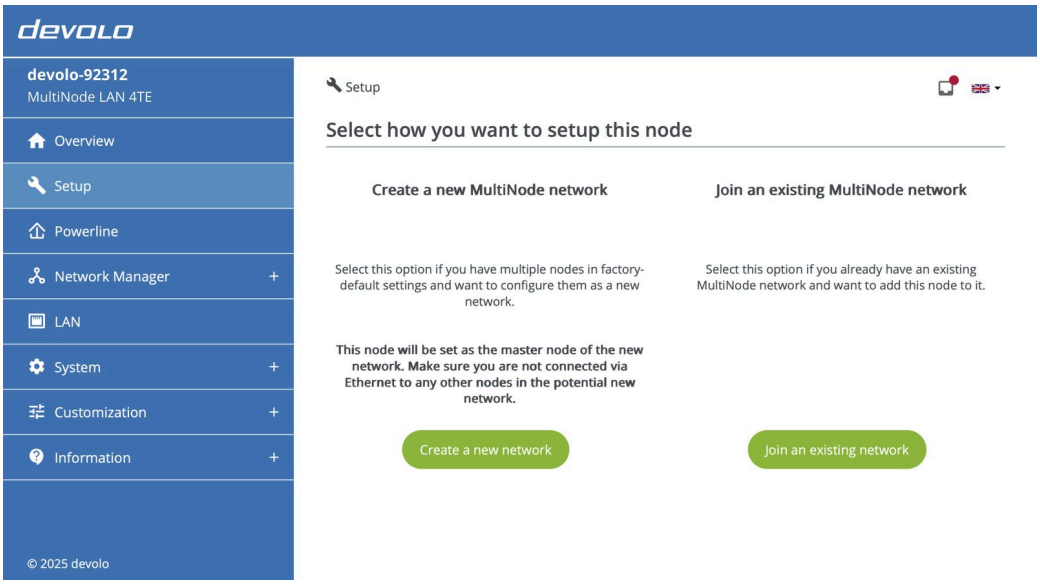
# Setting up a new MultiNode network

A MultiNode network consists of exactly one master node and several regular nodes. Regular nodes automatically switch to repeater nodes.

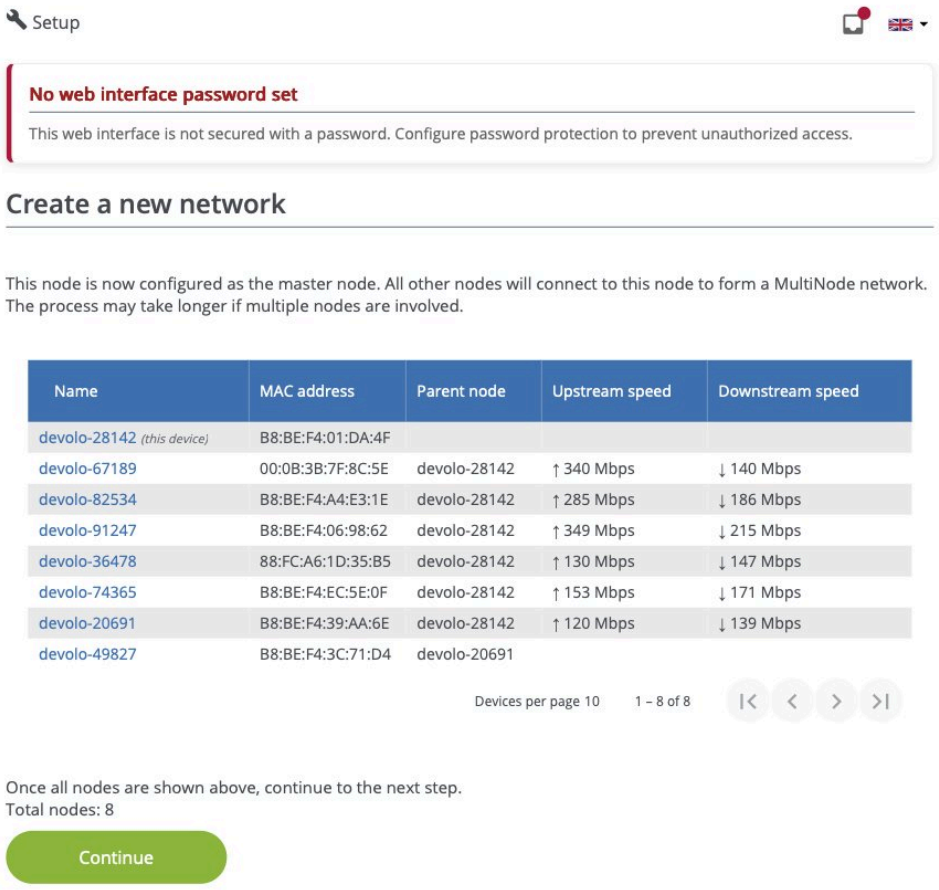
In factory-default state, each MultiNode LAN 4TE is a regular node. You can establish the network by accessing that node you intend to set up as the master node.

After first accessing the web interface, the setup wizard starts automatically. It lets you set up this node as the master of a new network or join an existing network as a regular node.

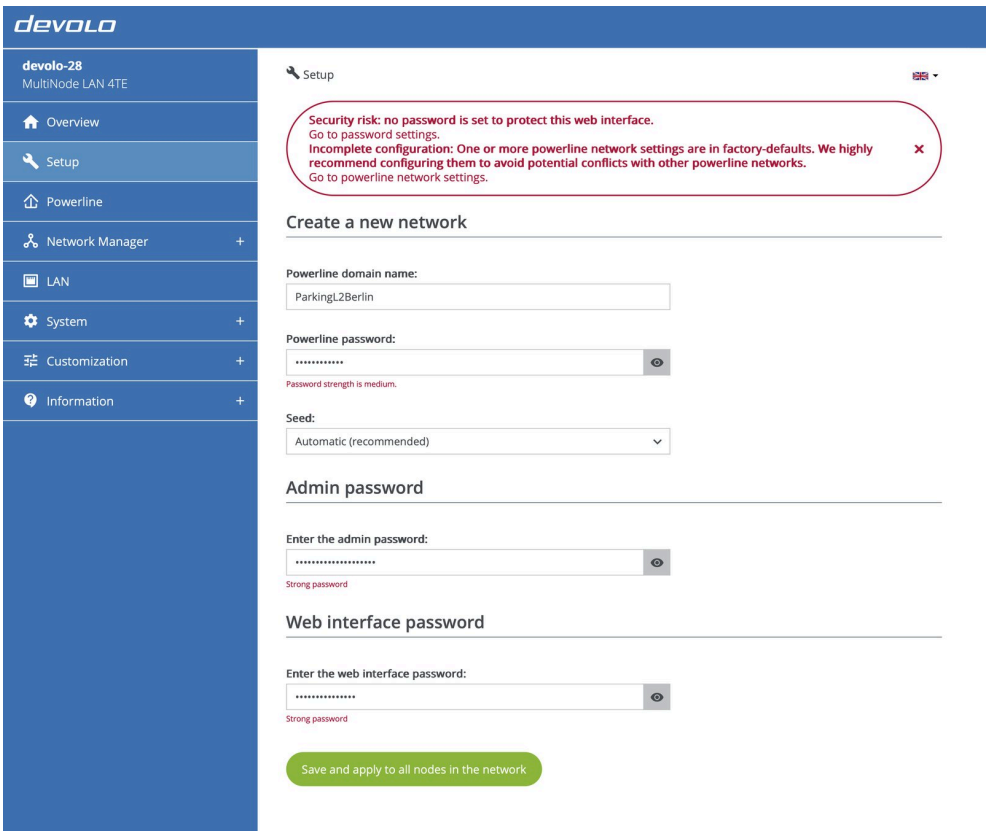
Follow the instructions below to create a new MultiNode network. If you already have an existing network that you would like to extend with additional devices, see instructions to do so here .



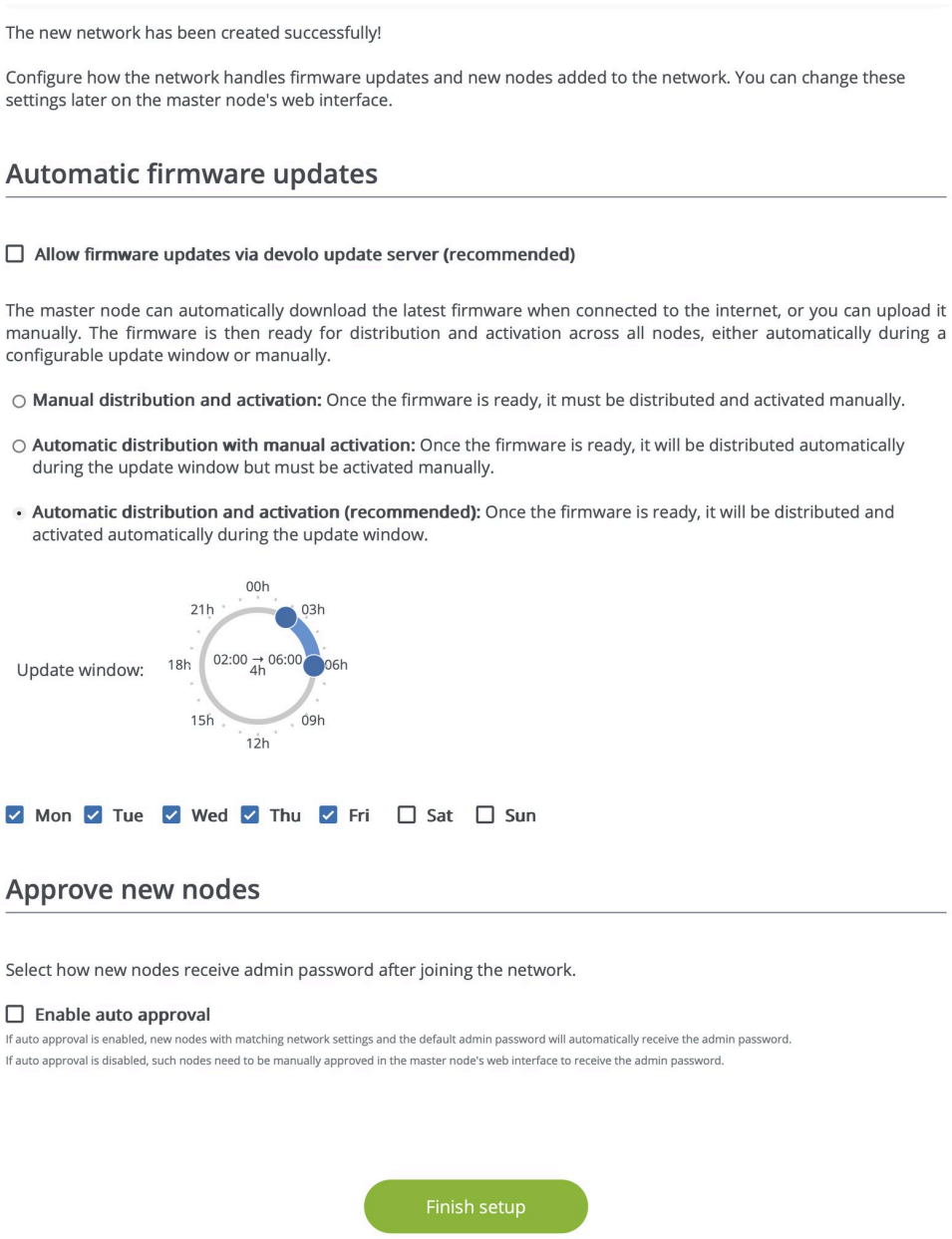

1. Click **'Create a new network'** button. This will set the current node as the master node; since other nodes are regular nodes by default, they will begin connecting to this node to form a MultiNode network.
2. On the next screen shown below, wait until all nodes have connected to the master node and then click **'Continue'** .




3. On the next screen shown below, configure the network by entering the following details and click **'Save and apply to all nodes in the network'** .




4. Finish the setup by configuring how the network handles firmware updates and new nodes added to the network.




### Powerline domain name

Enter a network name with a maximum length of 32 characters. The default network name is "HomeGrid".

> **Network name**
>
> Note that the network name must be unique to each Powerline network. It is highly recommended to set a meaningful network name to simplify management in the long term.

### Powerline password

**Password manager**

It is recommended to use a password manager to store passwords.

Enter a network password with a length of 3 to 12 characters. By default, the password is empty.

**Network password**

Use a unique network password for each Powerline network at the site. Consider using a password manager to store passwords and other secure information for your MultiNode networks.

**Seed**

The default value is `0` (zero). It is recommend to use an automatic seed so that a seed from `1` to `59` that is not already used by another MultiNode network at the same site is chosen for your network.

**Avoid seed 0**

Do not use seed `0` in a live network, as it can affect neighboring Powerline networks.

**Admin password**

The admin password is 8-20 characters long and protects the management channel from unauthorized access.

**Web interface password**

The web interface password is 8-128 characters long and protects the web interface from unauthorized access.

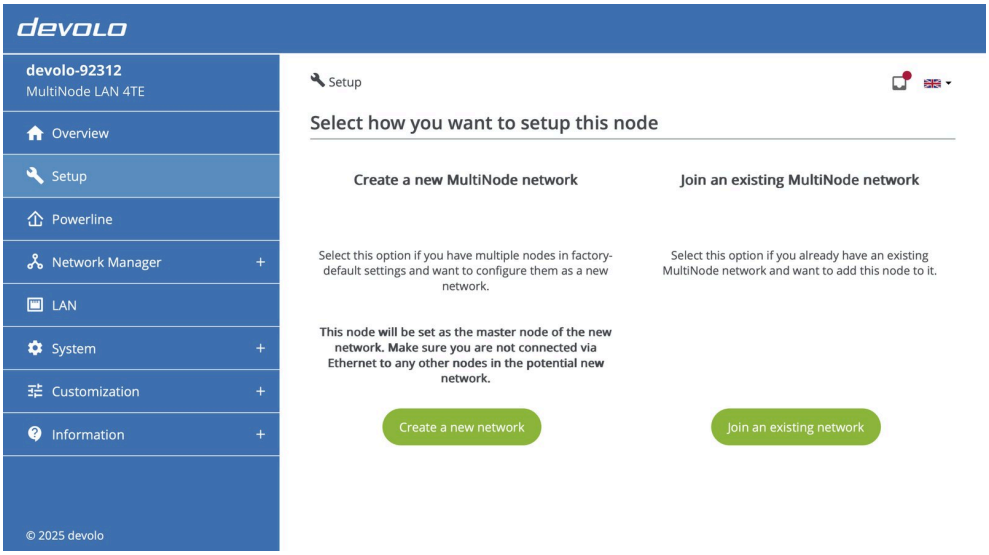
# Extending an existing MultiNode network

Extend an existing MultiNode network by adding one or more new devices. Factory-default devices can join the network through the setup wizard or automatic detection.

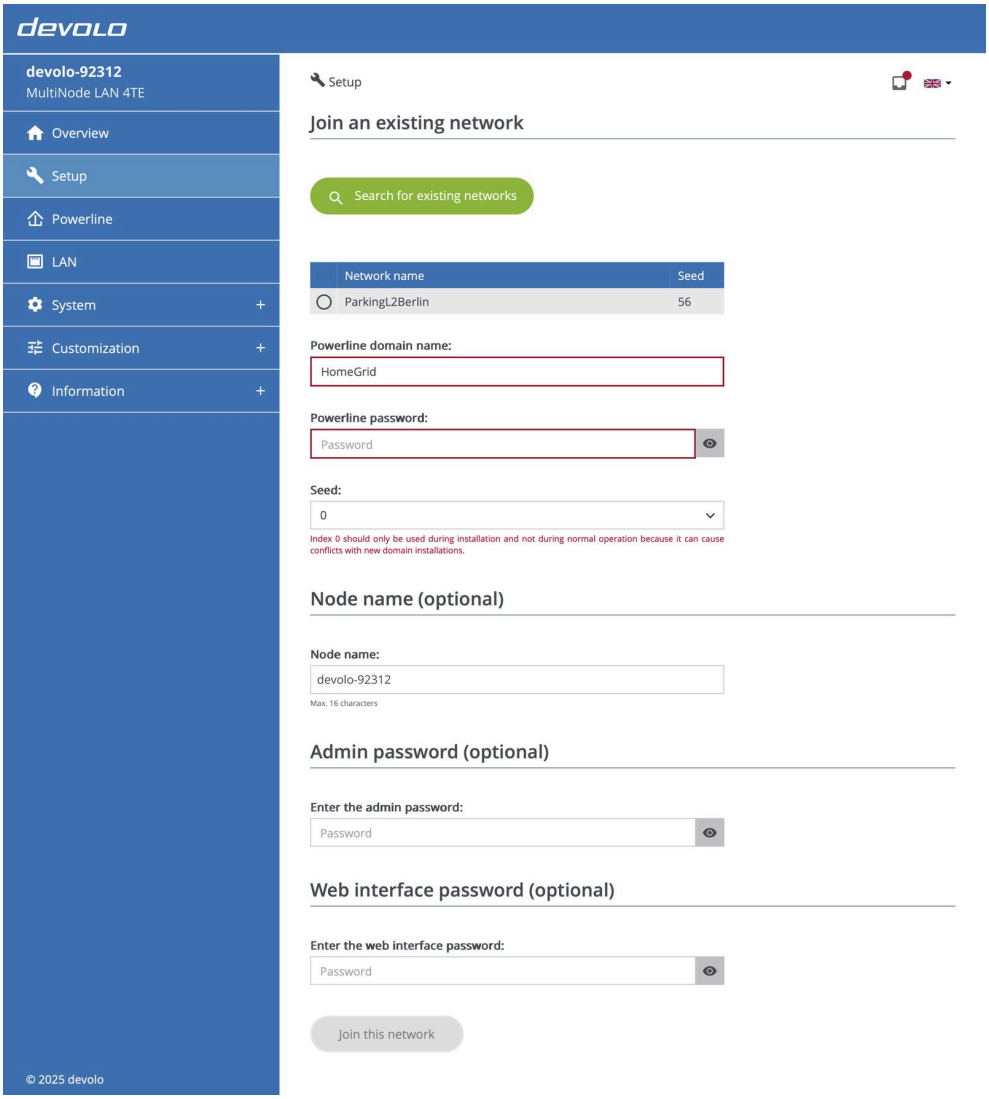
## Adding one or few devices

Use the setup wizard to add one or a few devices to an existing MultiNode network.

1. Prepare a factory-default MultiNode LAN 4TE device for the existing network. Mount the device at its final location or position it temporarily for configuration.
2. Connect an Ethernet cable from the device's LAN port to your laptop.
3. Open a web browser and navigate to `devolo-xxxxx.local` (where `xxxxx` refers to the last five digits of the device's serial number).
4. The setup wizard starts automatically when accessing a factory-default device.




5. Click **'Join an existing network'** button.
6. The device scans for available networks and displays them on the next screen.




7. Select the network you want to join and enter the required credentials. The powerline domain name and seed are set automatically.
   - **Powerline password** : Required for joining the network
   - **Admin password** : Optional, depending on auto-approval settings
   - **Web interface password** : Optional, for accessing the device's web interface

> **Auto approval**
>
> If auto approval is enabled on the master node's web interface, the admin password is not required. If auto approval is disabled, you can open the master node's web interface and manually approve the new node instead of entering the admin password.

8. Click **'Join this network'** to complete the process. The device connects to the selected network as a regular node.

**Network discovery**

The device automatically scans for available MultiNode networks on the same electrical circuit. Ensure the new device is connected to the same power grid as the existing network.

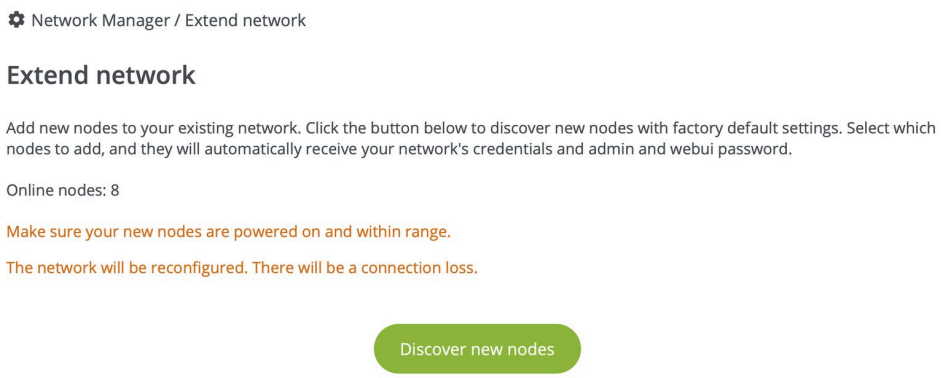
# Adding several devices

Use the extension wizard in the master node's web interface to add multiple devices at once to an existing MultiNode network.

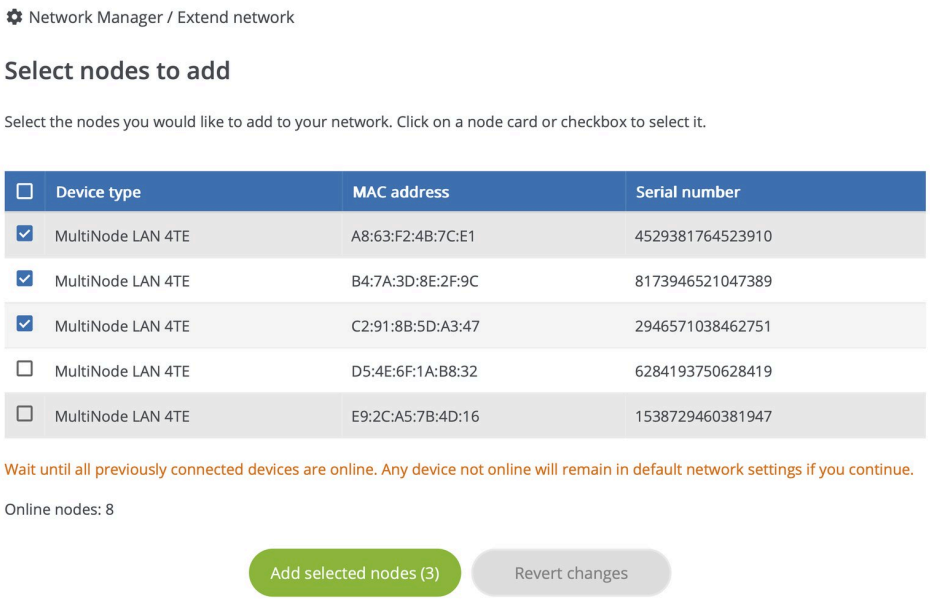
**Downtime**

Network extension temporarily resets the existing MultiNode network's powerline settings to factory defaults. This causes downtime for application devices connected to MultiNode devices.

1. Mount and connect all new devices to the same electrical circuit as the existing network.
2. Power on all new devices without connecting via Ethernet.
3. Open the master node's web interface and navigate to **Network Manager > Extend network** . Click **'Discover new nodes'** to temporarily place the current network in factory-default state, allowing new nodes to connect and form a larger network.




4. Select the nodes to join the existing network and click **'Add selected nodes'** . The new devices receive the network credentials, admin password, and web interface password from the master node.




### Electrical circuit

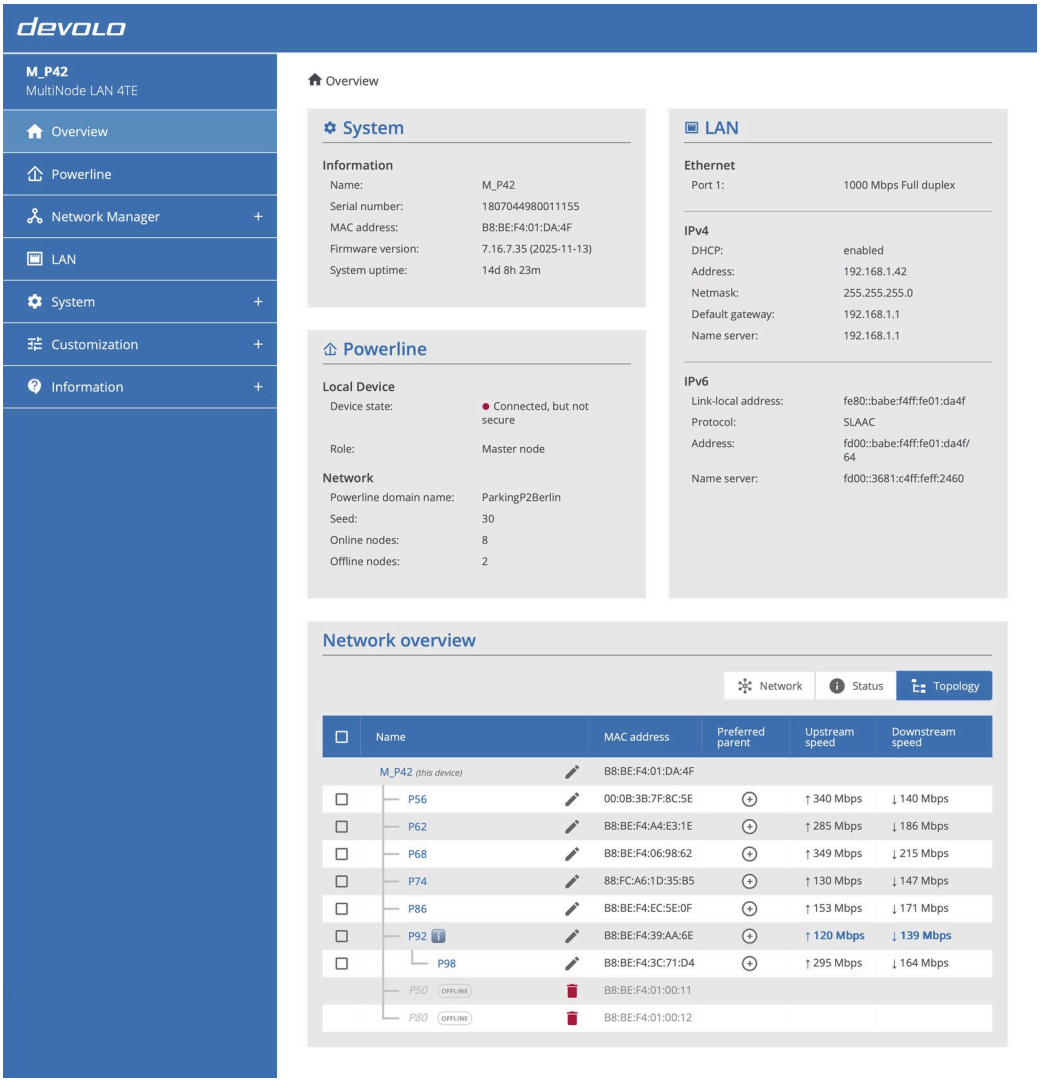
All extension devices must be connected to the same mains circuit as the existing network for automatic discovery.

# Verification

After adding new devices:

- Open the master node's web interface and navigate to the Overview page to confirm all new devices are listed
- Verify each device shows an active connection status
- Optionally, rename the new devices for easier identification in the network overview

# Overview




The Overview page displays information about the current node and, on the master node, the entire MultiNode network. On a regular node's web interface, details are limited due to peer-to-peer isolation .

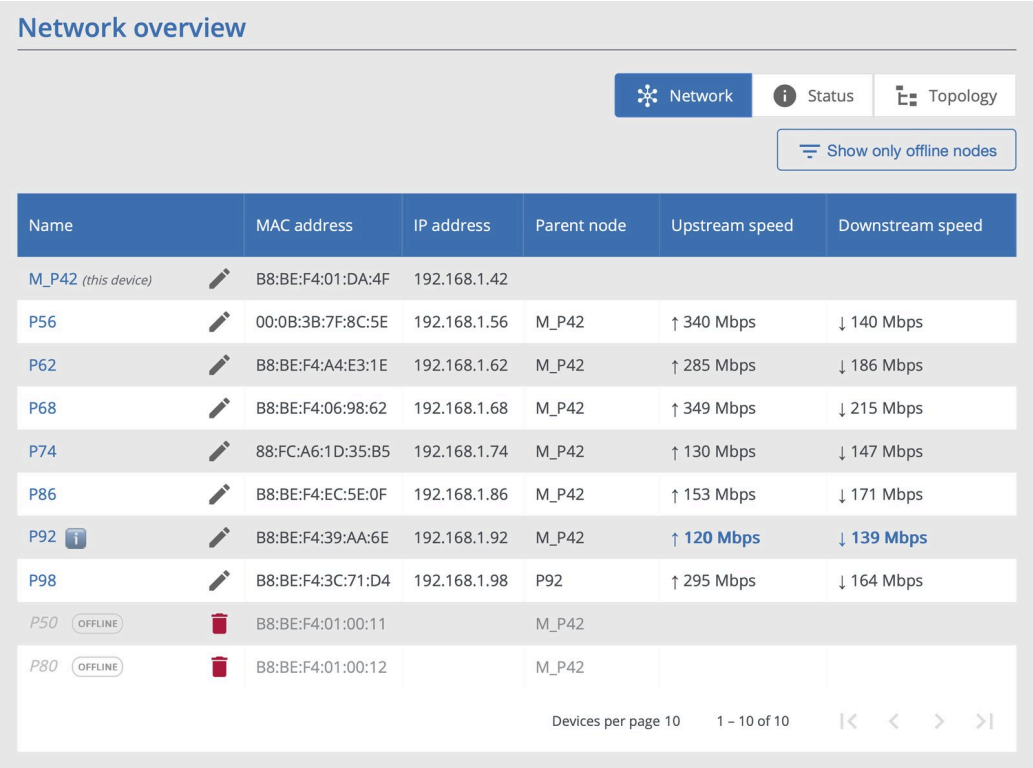
The Overview page offers three views to monitor and manage the network: **network view** , **status view** , and **topology view** . All views display all nodes in the network, including offline nodes, and allow you to rename nodes.

### Master vs. regular node web interfaces

The master node's web interface displays all nodes in the network. A regular node's web interface displays only a sub-network overview due to peer-to-peer isolation. Click a node name in any view to open that node's web interface.

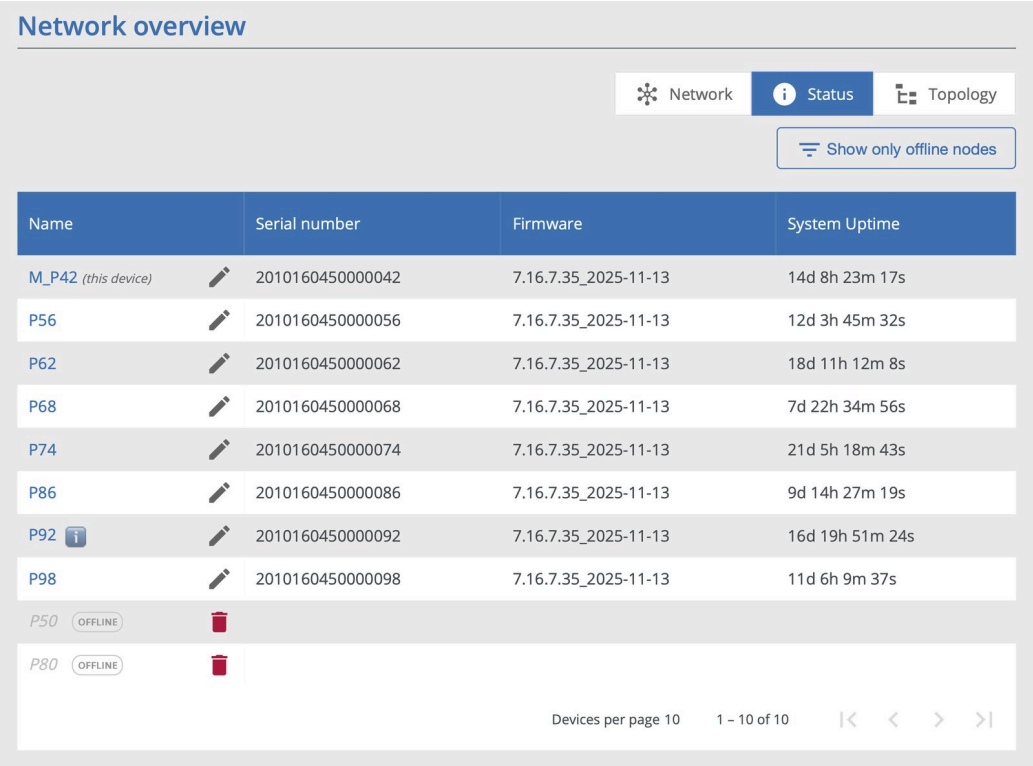
# Network view

This view displays network information for each node: MAC address, IP address, upstream and downstream speeds, and parent node name.




# Status view

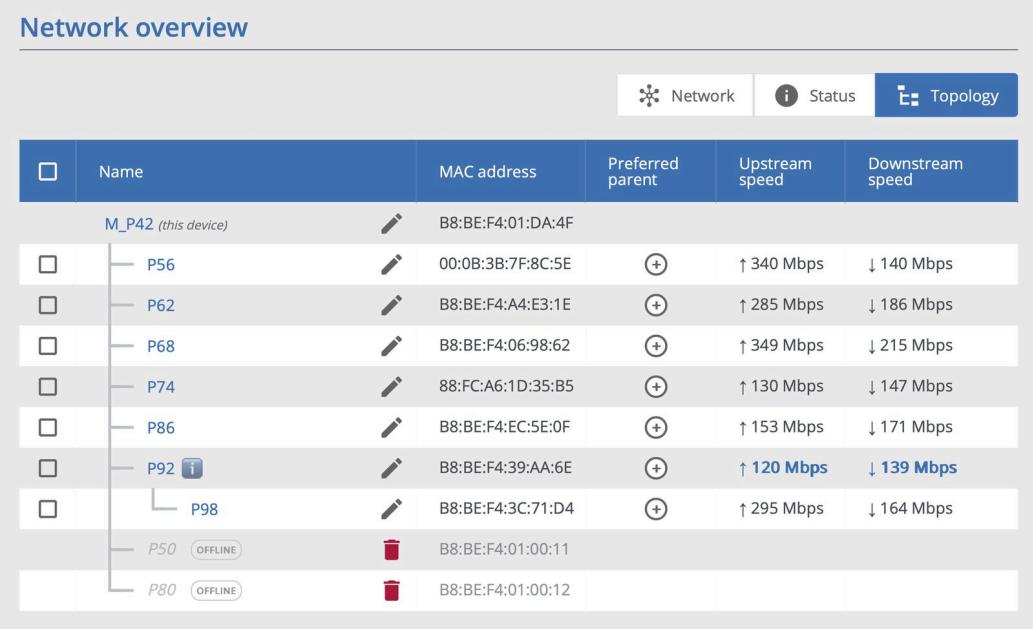
This view displays status information for each node: firmware version with release date, uptime, and serial number.




Columns in the network and status views can be sorted. Pagination reduces visual clutter when many nodes are present.

# Topology view and setting preferred parent

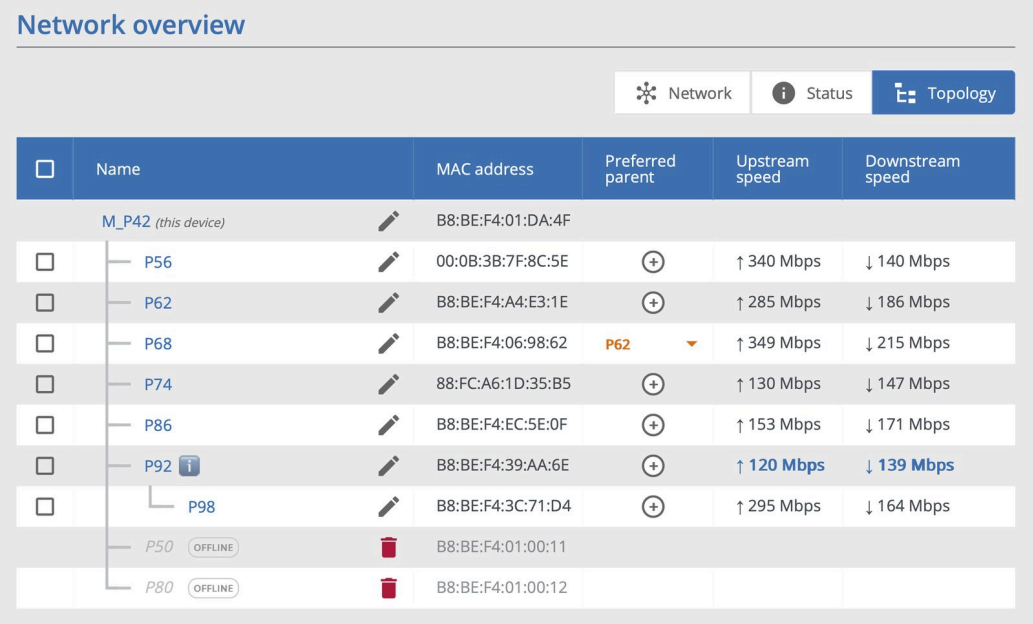
This view uses indentation to represent the hierarchical network structure.




Use this view to set a preferred parent for each regular node. This can be useful in noisy environments where all regular nodes connect directly to the master node, forming a flat topology. To set a preferred parent, click the plus button in the 'Parent node' column and select the desired parent from the dropdown.

### Preferred parent

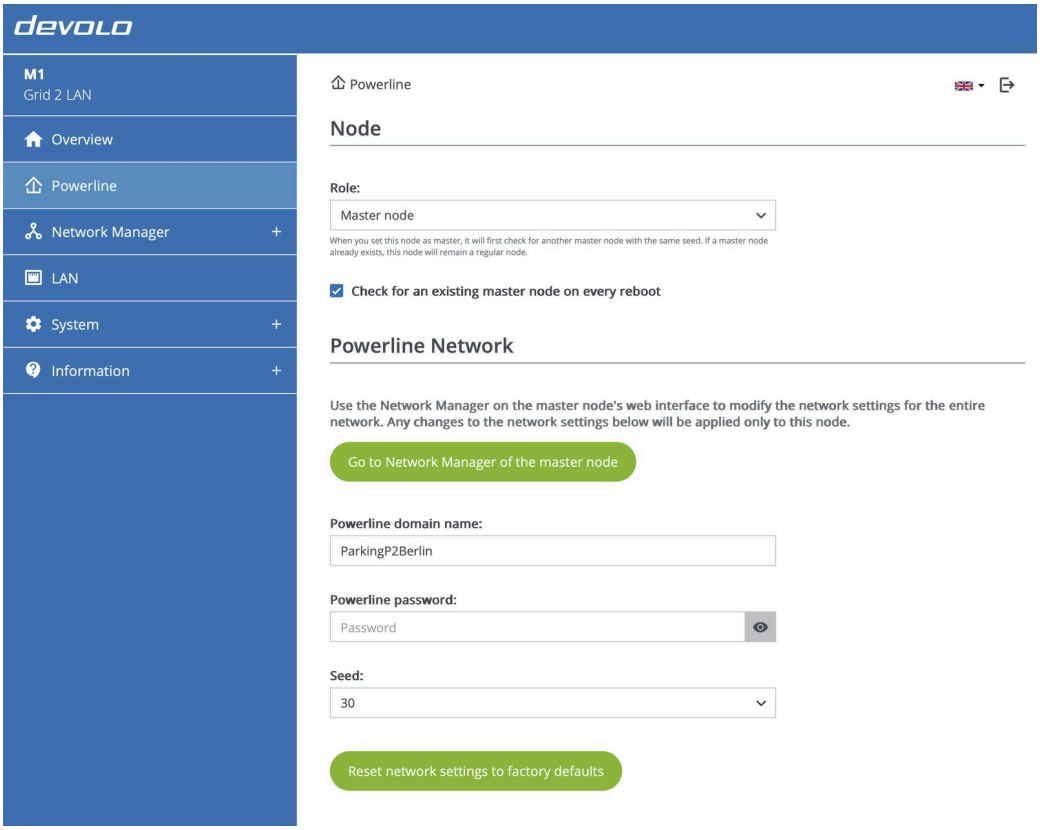
Setting a preferred parent does not guarantee the node will select it as the actual parent. If environmental conditions indicate the preferred parent is not optimal, the node selects a different parent. When this occurs, the parent node column displays the preferred parent name in orange to indicate the deviation.




*Preferred parent shown in orange when the current parent differs from the selected preferred parent (during transition or when the node selects a different parent)*

# Powerline

Use the Powerline page to view and edit these properties of the current node:




### Node

Use the dropdown to set the node's role. All nodes are regular nodes by default, and each network has exactly one master node.

- When a regular node is set as the master node, the node first checks if another master with the same seed exists. If one is found, the node **stays a regular node** .
- When a master node is set as the regular node, the existing MultiNode network is dissolved. To form a network again, one of the regular nodes needs to be set as the master.

### Powerline network

- To change Powerline parameters (domain name, password, and seed) for all nodes, click **Go to Network Manager of the master node** to open the Network Manager .
- To change Powerline parameters only for this local node, enter the target network's settings (domain name, password, and seed). This is useful if you have an existing network and want to have current node join that network.

### Network might take a while to be formed

Depending on network size, it may take time for nodes to connect together to form a network. The network LED shows the connection status.

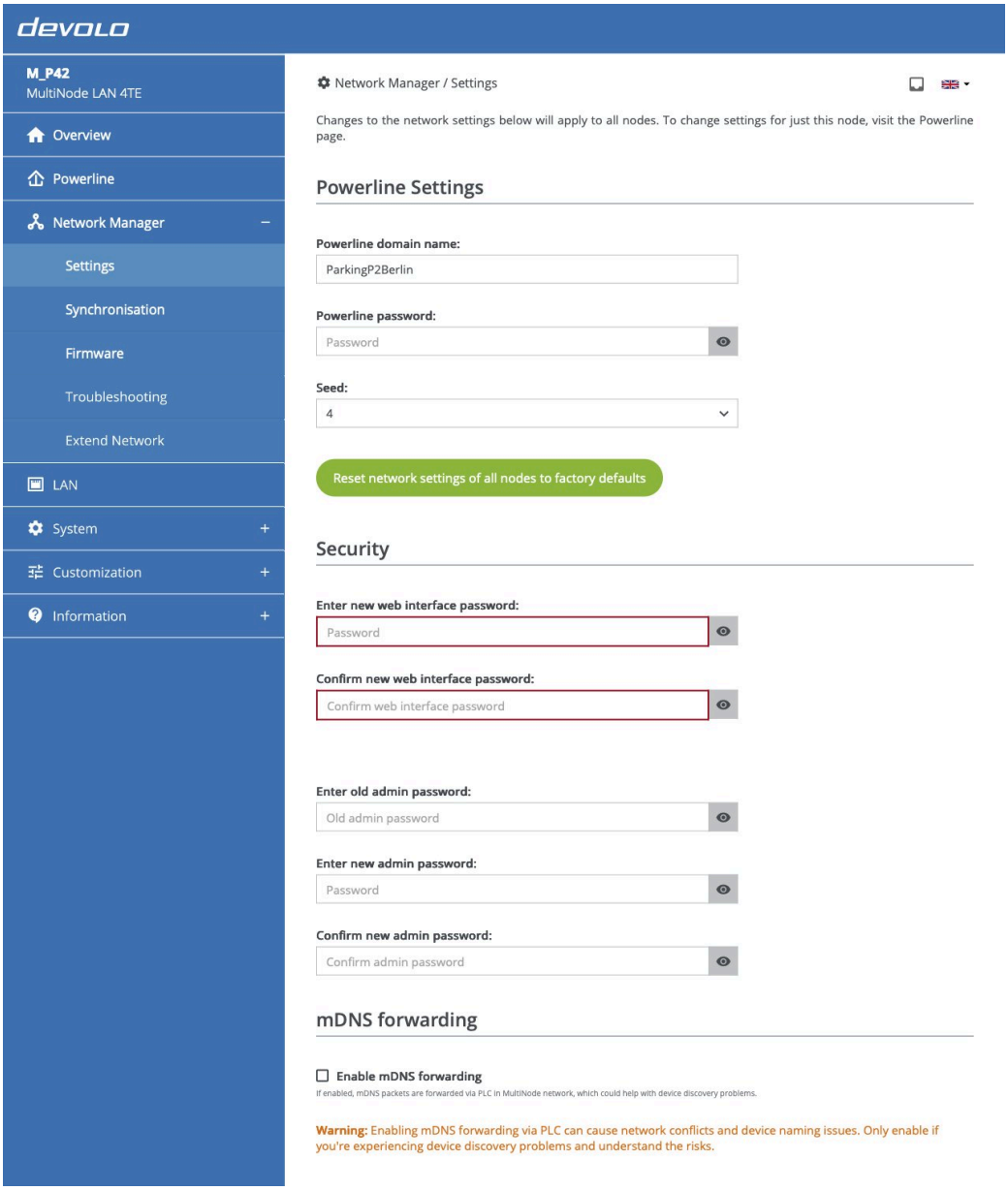
**Reset network settings to factory default**

- To remove a MultiNode LAN 4TE from your network and restore to factory defaults, click **Reset network settings to factory default** . All configured settings will be lost.
- Wait until the network LED flashes red.
- To set up a new MultiNode LAN 4TE, see Setting up a new MultiNode network .

# Network Manager

The Network Manager is available only on the master node's web interface. Use it to configure network-wide settings and updates for every node in the MultiNode network. The page is organised into three subpages: Security, Synchronisation, and Firmware.

## Network Manager → Settings



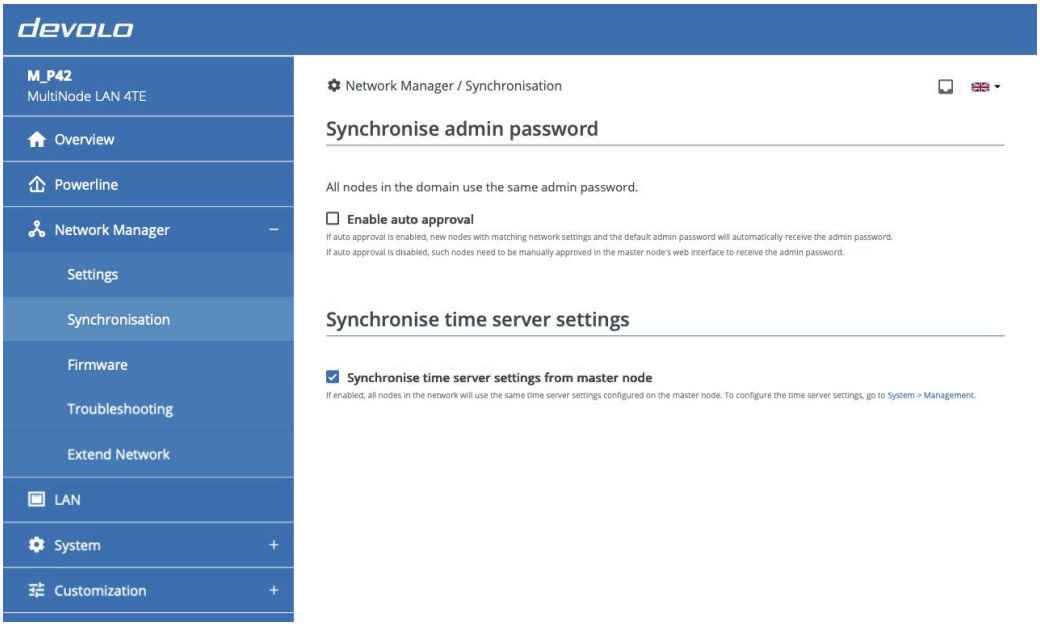

Use the Settings subpage to view and manage network-wide settings. You can configure:

- Powerline settings : domain name , domain password , and seed
- Web interface password
- Admin password

- **mDNS forwarding:** Enabling mDNS forwarding could help with device discovery issues in certain networks. As this can cause device naming issues, it is recommended to enable mDNS forwarding only if you are experiencing device discovery problems.

Save your changes to apply them across the network immediately.

# Network Manager → Synchronisation




### Synchronise admin password

When you introduce a new node to an existing MultiNode network, it needs the correct powerline settings and the current admin password. Configure **Auto approval** to let the master node provide the admin password to any node that joins with matching powerline settings.

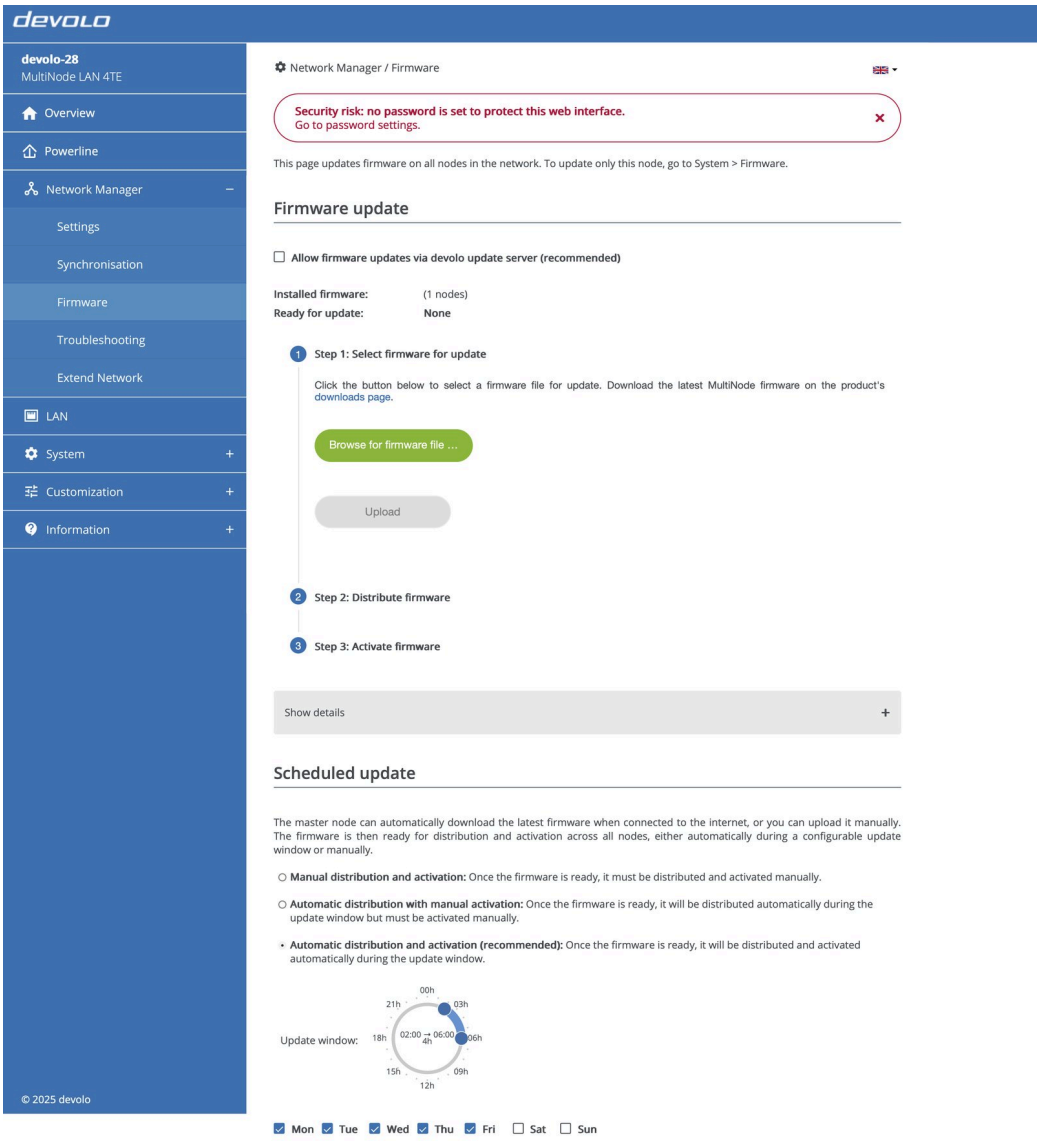
**Auto approval**

Auto approval works only when the new node still uses the default admin password. If you have already changed the password on that node, the admin credentials will not sync from the master node.

### Synchronise time server settings

When synchronisation is enabled, the time server settings from the master node are applied to all nodes in the network. Keeping this enabled is recommended.

# Network Manager → Firmware




Use the Firmware subpage to distribute and activate firmware across the network. The update workflow consists of three steps:

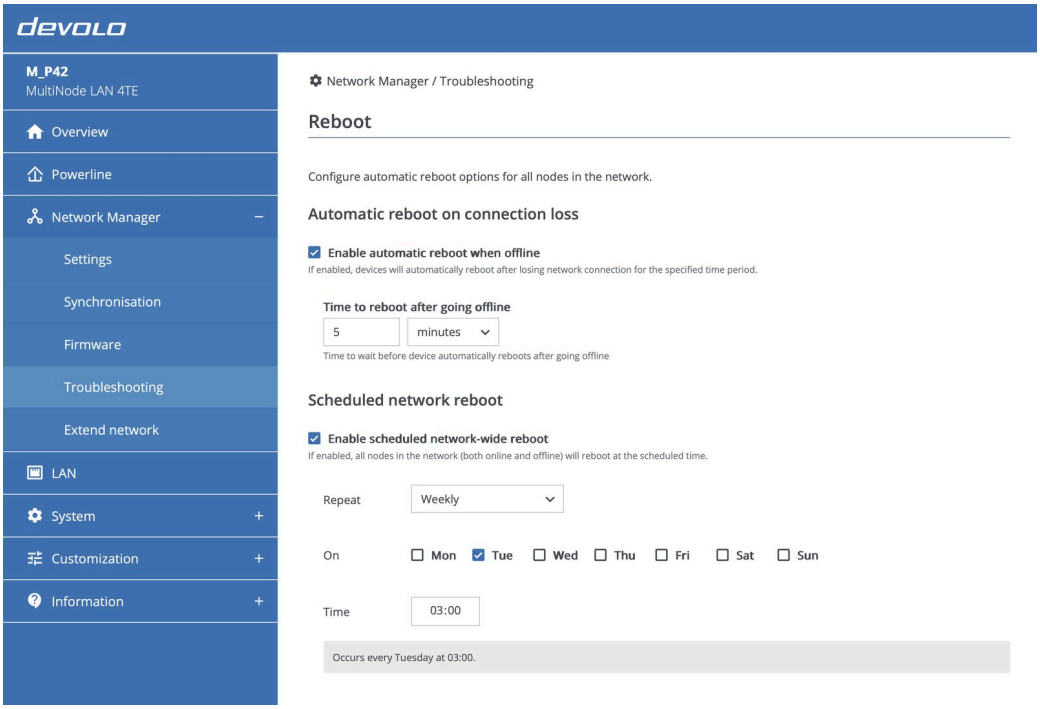
1. **Select firmware** : Upload a file from your computer or let MultiNode LAN 4TE download the latest version from the devolo update server. This step stores the firmware on the master node without changing the running version.
2. **Distribute** : Copy the firmware from the master node to every regular node. Distribution does not trigger a reboot.
3. **Activate** : Reboot all nodes to activate the new firmware.

You can also automate firmware management. MultiNode LAN 4TE can automatic download updates from the devolo update server and, together with a defined update window, run distribution and activation without manual intervention.

**Firmware update duration**

Large networks with more than 50 nodes can take over one hour to update.

# Troubleshooting




The Troubleshooting page provides automatic reboot configuration options for all nodes in the network. Use this page to configure devices to recover automatically from network issues or to maintain network stability through scheduled reboots.

### Master node only

The Troubleshooting page is available only on the master node's web interface. Regular nodes display a message explaining that Network Manager is not available, with a button to navigate to the domain master's web interface.

## Automatic reboot on connection loss

Configure devices to automatically reboot after losing network connectivity. This feature helps recover from network issues that may require a device restart.

**Enable automatic reboot when offline**

Toggle this setting to enable or disable automatic reboots when a device loses network connectivity.

**Delay configuration**

Set the time to wait before the device reboots after going offline:

- **Configurable range** : 5 minutes to 999 hours
- **Default behavior** : The device waits for the specified duration after being disconnected from the master node before automatically rebooting

> **Connection loss detection**
>
> The timer starts when a device detects it has lost network connectivity. If the device reconnects before the timer expires, the automatic reboot is cancelled.

# Scheduled network reboot

Schedule automatic reboots for all nodes in the network. This feature applies to both online and offline nodes, helping maintain network stability through periodic restarts.

**Enable scheduled network-wide reboot**

Toggle this setting to enable or disable scheduled network-wide reboots. When enabled, all nodes in the network will reboot at the scheduled time.

## Frequency options

Choose how often the scheduled reboot occurs:

**Daily**

Reboots occur every day at the specified time.

**Weekly**

Select specific days of the week when reboots should occur. You can select multiple days for weekly reboots.

**Monthly**

Choose between two scheduling methods:

- **By date** : Select a specific day of the month (1-31)
  - Example: "Day 15 of every month"
- **By ordinal** : Select an ordinal position and day
  - Ordinal options: First, Second, Third, Fourth, Last
  - Day options: Day, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday
  - Example: "First Monday of every month" or "Last day of every month"

**Monthly schedule on invalid dates**

If you schedule a reboot for a day that does not exist in a given month (e.g., day 31 in February), the reboot will be skipped for that month.

## Time selection

Specify the exact time for the scheduled reboot using 24-hour format (HH:MM). The default time is 02:00.

## Schedule summary

A dynamic summary displays the configured schedule based on your selections:

- **Daily example** : "Occurs every day at 02:00"
- **Weekly example** : "Occurs every Friday at 02:00"
- **Monthly (by date) example** : "Occurs day 15 of every month at 03:00"
- **Monthly (by ordinal) example** : "Occurs first Monday of every month at 02:00"

# Applying changes

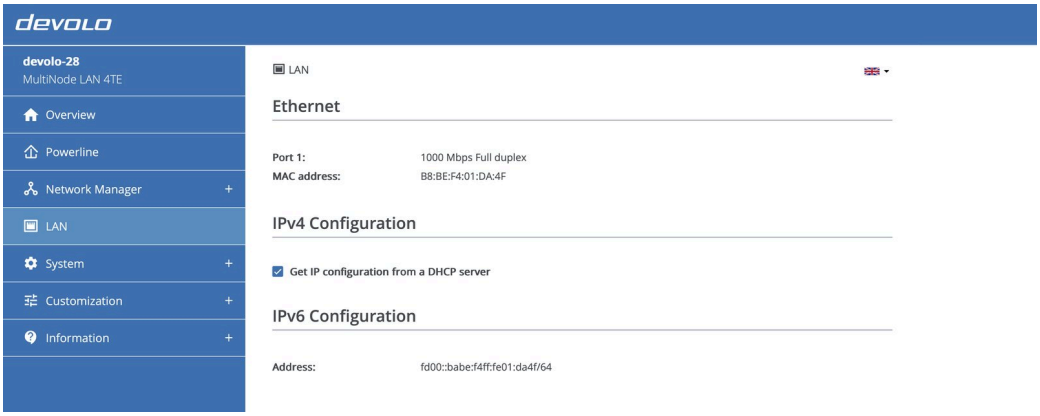
After configuring the troubleshooting settings, click the **Save** icon button to save and apply settings network-wide The status display shows Network Manager sync status and progress during configuration distribution. An **Abort** button appears during the operation, allowing you to cancel if needed.

**Network-wide application**

Reboot configuration is applied to every node in the network. The master node distributes the configuration to all regular nodes automatically.

# LAN

Use the LAN page to check link status and manage IP settings for MultiNode LAN 4TE.




## Ethernet

The Ethernet section shows whether the port is connected, the negotiated speed and duplex mode (for example, "1000 Mbps full duplex"), and the device MAC address.

## IPv4 configuration

By default, the device requests an address from a DHCP server. Leave **Get IP configuration from a DHCP server** enabled when a DHCP server is available so the device always receives its settings automatically.

To use a static configuration, disable the DHCP option and enter the IPv4 address, subnet mask, default gateway, and name server. Click the disk icon to save, then restart the device to apply the new settings.

## IPv6 configuration

This section lists the global IPv6 address that the device uses for Internet connectivity.

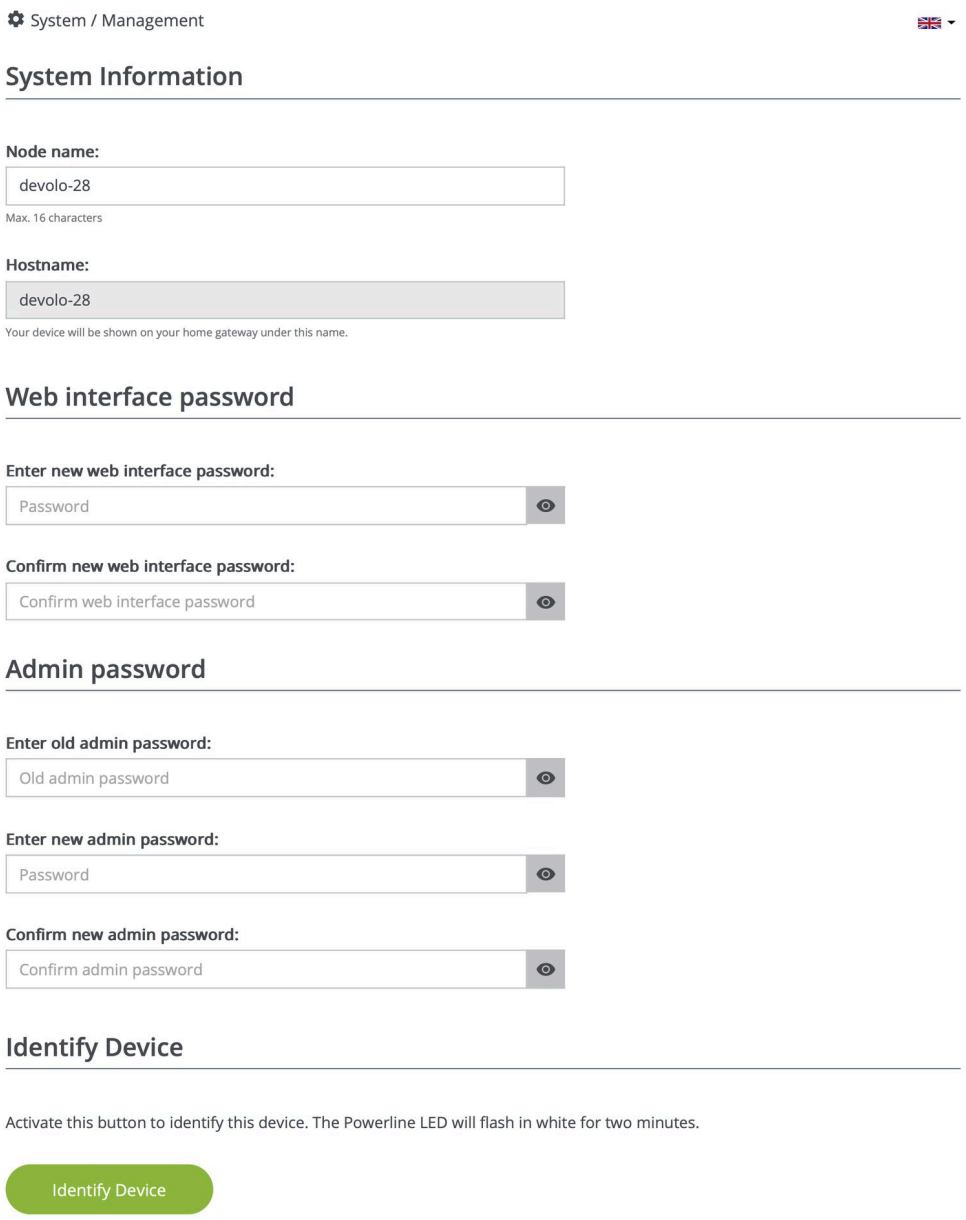
# System

Use the System page to manage settings that apply to the local MultiNode LAN 4TE.

## System → Status


The Status subpage shows the current date and time, the configured NTP servers, and the device MAC address.

# System → Management




## Node name

Rename the device to make it easier to identify. Use a descriptive name that reflects the installation location, such as "P42".

## Web interface and admin passwords

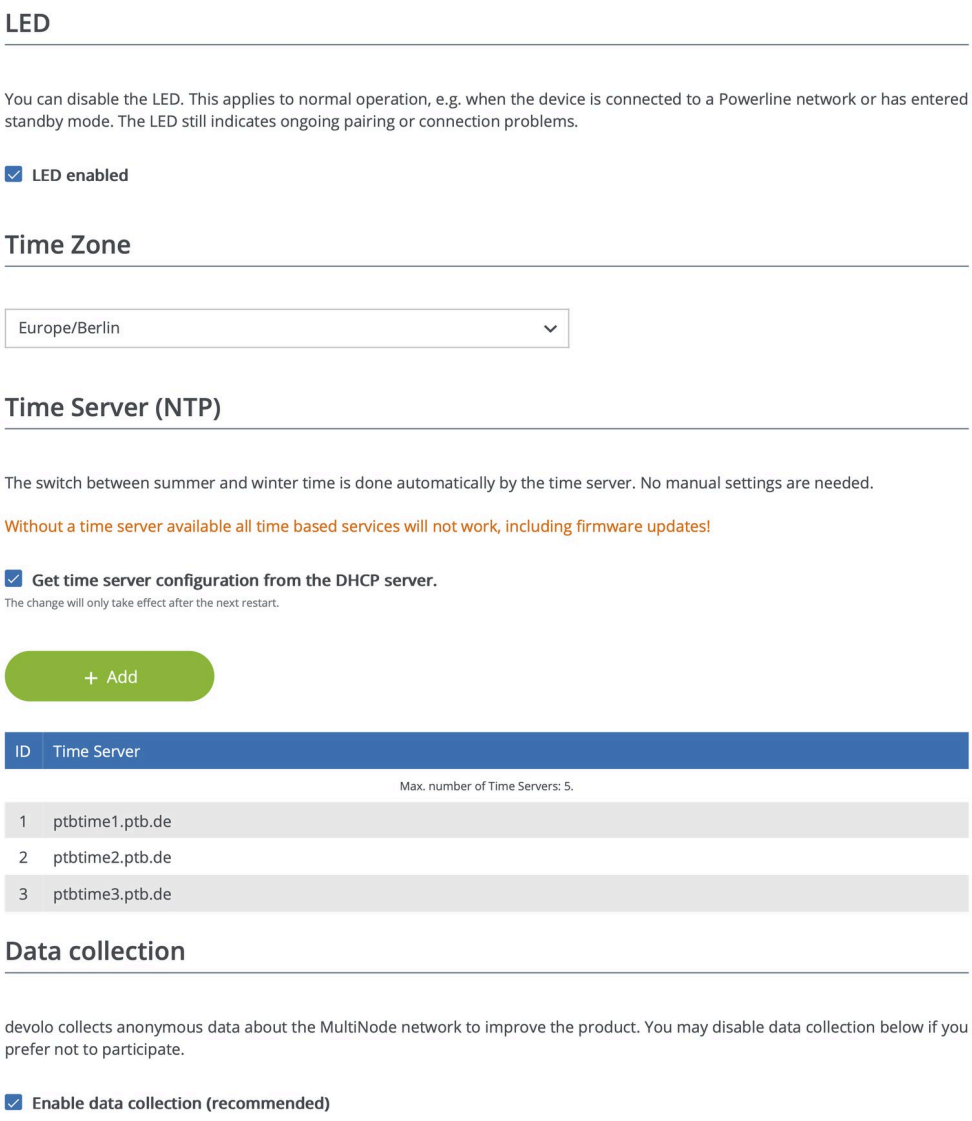
Set the local web interface and admin passwords for this device.

**Network-wide passwords**

To use the same credentials across the network, update them from Network Manager → Security on the master node.

# Identify device

Click **Identify** to flash the white PLC LED for two minutes. This can help locate the device in the field.




# LED

Disable the LEDs during normal operation if needed. Error conditions still trigger flashing LEDs, even when the **LED enabled** option is off.

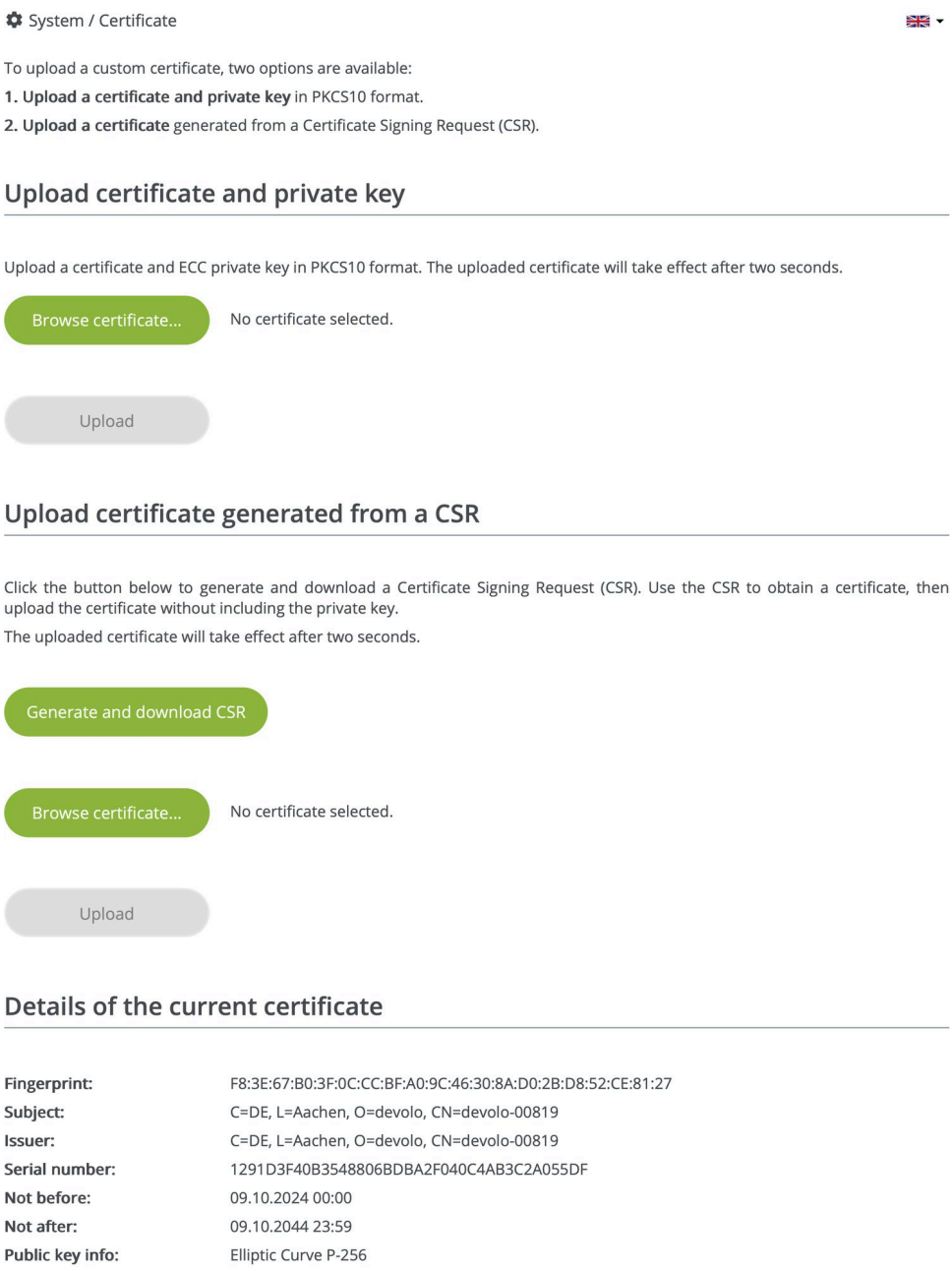
## Time zone

Select the appropriate time zone (for example, Europe/Berlin).

## Time server (NTP)

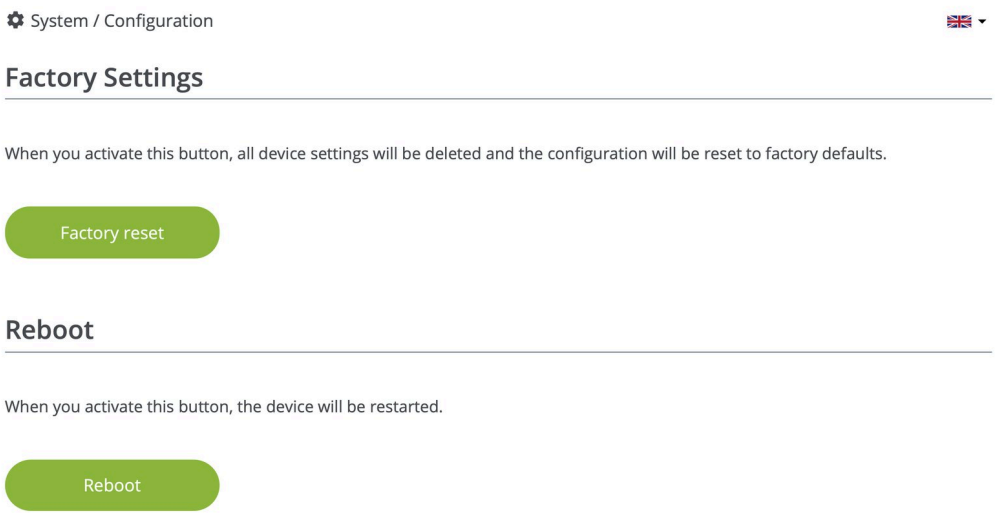
Review or edit the list of NTP servers used to synchronise the clock. Without a valid time set, scheduled tasks such as firmware updates may fail.

# System → Certificate




Upload a custom certificate bundle in PEM format containing both the private key (RSA or ECC) and certificate. The change takes effect within a few seconds.

# System → Configuration



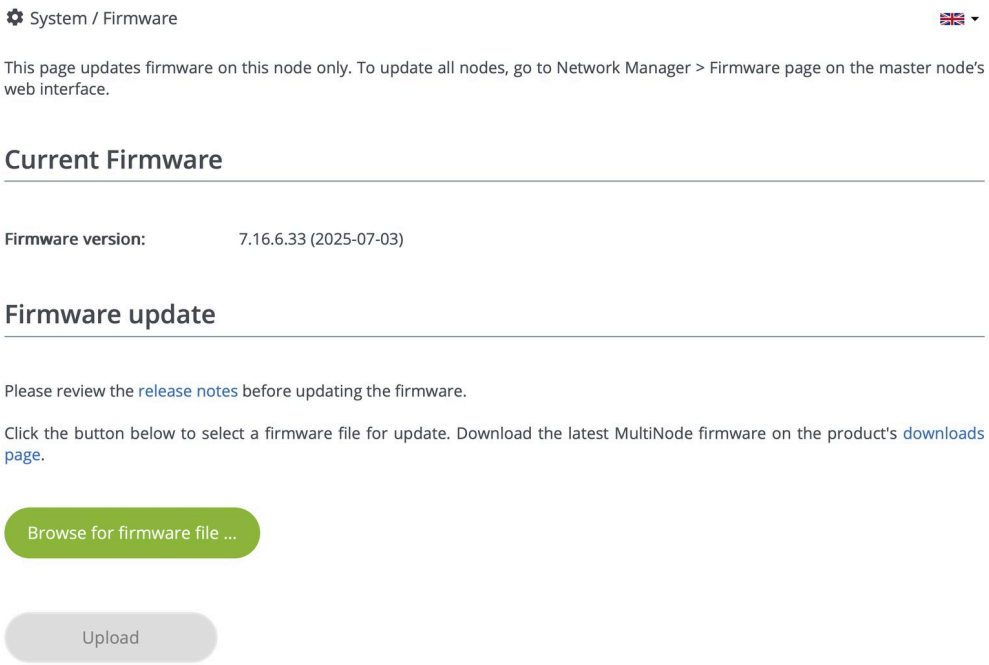

## Factory settings

Click **Factory reset** to restore default settings. The device leaves the existing network; if it is the master node, the network dissolves.

## Reboot

Click **Reboot** to restart the device without changing the configuration. After the reboot, the browser redirects to the Overview page .

# System → Firmware




Use this subpage to update the firmware on the current device. Automatic downloads are not available here, so download the newest firmware from the product downloads page before starting.

To update the firmware:

1. Download the latest firmware file from the product downloads page.
2. Click **Browse for firmware file...** and select the file.
3. Click **Upload** to install it. The device restarts automatically and returns to the Overview page.

Avoid interrupting the update. A progress bar shows the status.

# Support & Warranty

## Contact us

Find more information about devolo MultiNode LAN on our website . For questions or technical issues, contact support:

- **E-mail:** support@devolo.com or
- **Phone:** Our hotline numbers can be found on our website .

## Warranty

If your device is defective during installation or within the warranty period, contact us. We will handle the repair or warranty claim. See the complete warranty conditions on our website .