

Ewon PRI – Profinet DCP Assignment

[Preliminary Reference Information]

Table of Contents

1	About this document	3
2	What for?	3
3	How does it work?	3
4	Profinet device DCP Assignment protection	6
5	Troubleshooting section	7
5.1	Error: IP Settings	7
5.2	Error: Device Name	7

1 About this document

This document explains how to assign a name or IP address of a Profinet device using the embedded Profinet DCP assignment feature from the Ewon web interface.

2 What for?

Out of the box, many Profinet devices have neither a name nor an IP address. As long as this assignment has not been carried out, it is not possible to reach the Profinet device remotely via the Talk2M solution and the Ewon router.

This can lead to commissioning problems, for example when replacing a Profinet device in a functioning installation.

With the new Profinet DCP assignment function on the Ewon Flexy and Cosy131, assigning a name or an IP address becomes possible, regardless of whether you are connected locally to the Ewon or remotely via Talk2M.

3 How does it work?

- 1) Make sure the Profinet device is connected to one of the LAN ports of the Ewon device.
- 2) Connect to the Ewon configuration web interface and open the Profinet Explorer :

Home > Setup > System > Main > Net services > Profinet Explorer

Cosy131 Home > Setup > System > Main > Net services > Profinet Explorer Logged in as adm Wizards

FOR TESTING

Filter tree

Home
Summary

Diagnostic
Logs
Status
Support Files

Setup
Wizards
System

Main

General
Language
Date & Time

Net services
NTP Server

Accessories
BOLT/AWB

Profinet Explorer

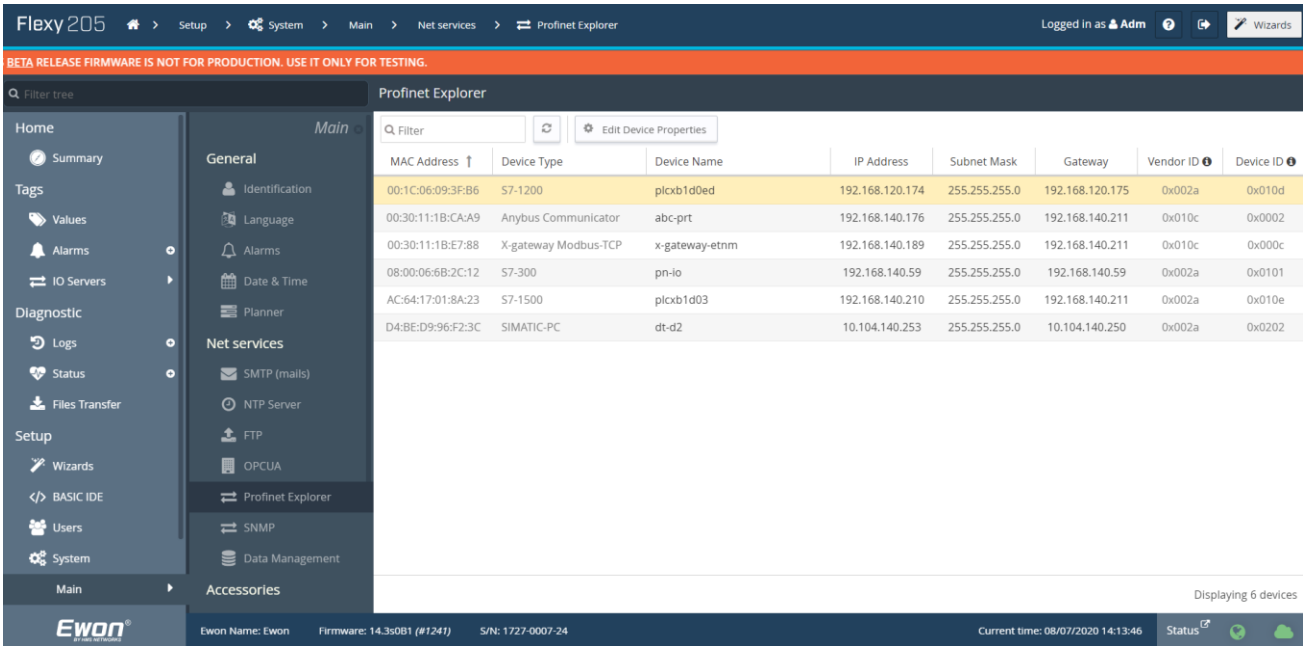
Q Filter Edit Device Properties

MAC Address	Device Type	Device Name	IP Address	Subnet Mask	Gateway	Vendor ID	Device ID
No device found							

Ewon Name: Ewon Firmware: 14.3s0B1 (#1241) S/N: 1602-0152-22 Current time: 10/07/2020 17:29:51 Status

Each Profinet devices detected by the Ewon will be displayed inside the list.

As for example:



Each line represents a recognized Profinet device and provides information about Mac address, Device Type, etc.

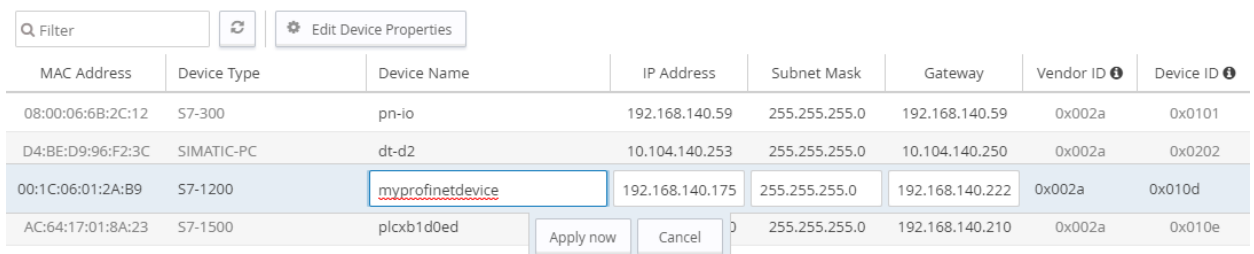
3) Select the Profinet device you want to assign.

You can use the Filter option on the top left corner of the window to search for the device you want to assign. Here for example we want to assign an out of the box Siemens S7-1200 PLC.



4) Click on the Edit Device Properties button, or double click on the selected line.

The columns “Device Name”, “IP Address”, “Subnet Mask” and “Gateway” become editable.



Encode the Name and the IP address settings you want to apply to the Profibus device and click on “Apply now”.

This will send the change request to the Profinet device.

If the Profinet device accepts the changes, you'll see a success messages at the top of the window and the changes will be displayed inside the list.

Profinet Explorer							
✔ SUCCESS: New Settings correctly applied							
MAC Address	Device Type	Device Name	IP Address	Subnet Mask	Gateway	Vendor ID ⓘ	Device ID ⓘ
08:00:06:6B:2C:12	S7-300	pn-io	192.168.140.59	255.255.255.0	192.168.140.59	0x002a	0x0101
D4:BE:D9:96:F2:3C	SIMATIC-PC	dt-d2	10.104.140.253	255.255.255.0	10.104.140.250	0x002a	0x0202
00:1C:06:01:2A:B9	S7-1200	myprofinetdevice	192.168.140.175	255.255.255.0	192.168.140.222	0x002a	0x010d
AC:64:17:01:8A:23	S7-1500	plcxb1d0ed	192.168.140.210	255.255.255.0	192.168.140.210	0x002a	0x010e

If the Profinet device does not accept the changes, then an error message will be displayed on top of the window. Refer to the troubleshooting section here under for some error message examples.

Note: The applied assignment will also be logged inside the Eventlog of the Ewon.

1594817427	15/07/2020 12:50:27	profinet-A Profinet device config has changed (device mac: 00:1c:06:01:2a:b9, device type: S7-1200, updated by: adm)	http	79307	1073781924
1594817427	15/07/2020 12:50:27	profinet-Changes details for [00:1c:06:01:2a:b9] (Name=myprofinetdevice, IP=192.168.140.175, Mask=255.255.255.0, Gtw=192.168.140.222)	http	79307	1073781924

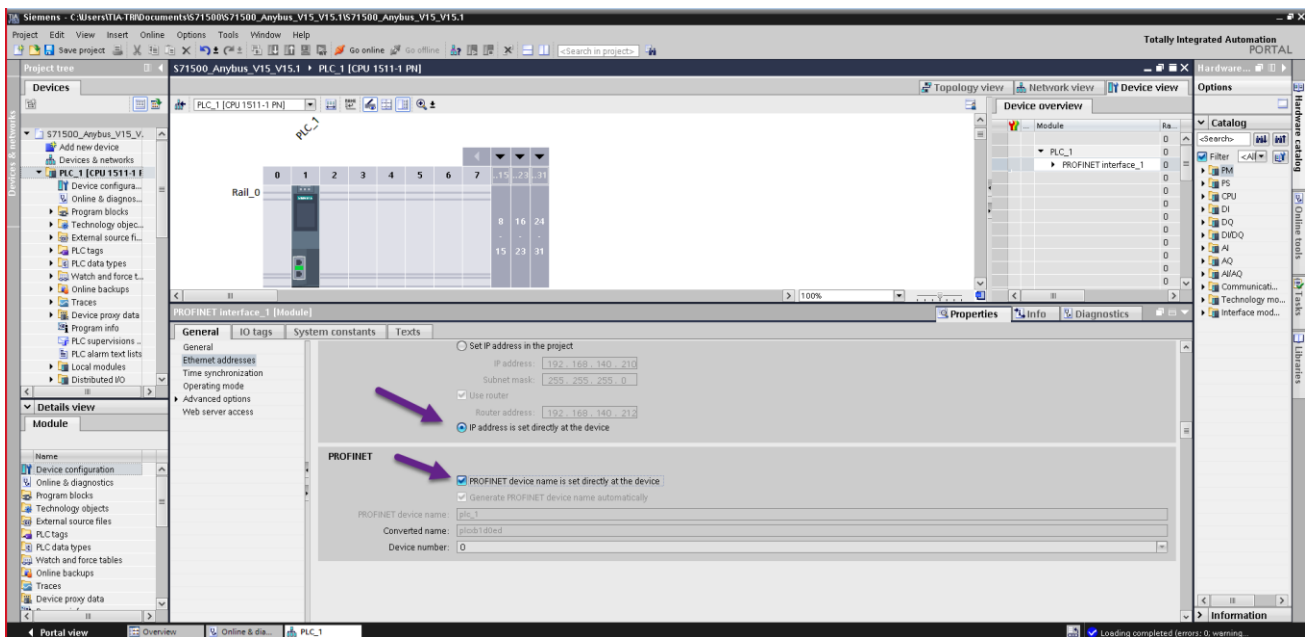
4 Profinet device DCP Assignment protection

For an unconfigured Profinet device, the Device Name and IP address are generally empty. In this configuration the Profinet device normally accepts the DCP assignment.

Once the Name or IP address assigned, the Profinet device will probably not anymore accept changes using the DCP assignment.

For some devices, you can enable the DCP assignment even if the name or IP address has already been set. Check the documentation of your Profinet device for further details.

On Siemens PLC for example, you must enable following settings:



Warning: Be careful by enabling these settings on a Profinet device in production. Once the IP address has been attributed in a working installation, you generally don't want to allow any more IP changes, as this could lead to communication issues with other linked Profinet devices.

5 Troubleshooting section

5.1 Error: IP Settings

Profinet Explorer ✖ ERROR: IP Settings: Applying these settings is not possible by local reasons

Q Filter

MAC Address ↑	Device Type	Device Name	IP Address	Subnet Mask	Gateway	Vendor ID ⓘ	Device ID ⓘ
00:1C:06:09:3F:B6	S7-1200	plcxb1d0ed	192.168.120.174	255.255.255.0	192.168.120.175	0x002a	0x010d
00:30:11:1B:CA:A9	Anybus Communicator	abc-pru	192.168.140.176	255.255.255.0	192.168.140.212	0x010c	0x0002
00:30:11:1B:E7:88	X-gateway Modbus-TCP	x-gateway-etnm	192.168.140.189	255.255.255.0	192.168.140.212	0x010c	0x000c
08:00:06:6B:2C:12	S7-300	pn-io	192.168.140.59	255.255.255.0	192.168.140.59	0x002a	0x0101
AC:64:17:01:8A:23	S7-1500	plcxb1d0ed	192.168.140.211	255.255.255.0	192.168.140.212	0x002a	0x010e
D4:BE:D9:96:F2:3C	SIMATIC-PC	dt-d2	10.104.140.253	255.255.255.0	10.104.140.250	0x002a	0x0202

Apply now Cancel

⇒ The Profinet device does not allow changing the IP address settings using the DCP protocol.

Check the settings of your Profinet device. Also refer to chapter 4.

5.2 Error: Device Name

Profinet Explorer ✖ ERROR: Device Name: Applying these settings is not possible by local reasons

Q Filter

MAC Address ↑	Device Type	Device Name	IP Address	Subnet Mask	Gateway	Vendor ID ⓘ	Device ID ⓘ
00:1C:06:09:3F:B6	S7-1200	plcxb1d0ed	192.168.120.174	255.255.255.0	192.168.120.175	0x002a	0x010d
00:30:11:1B:CA:A9	Anybus Communicator	abc-pru	192.168.140.176	255.255.255.0	192.168.140.212	0x010c	0x0002
00:30:11:1B:E7:88	X-gateway Modbus-TCP	x-gateway-etnm	192.168.140.189	255.255.255.0	192.168.140.212	0x010c	0x000c
08:00:06:6B:2C:12	S7-300	pn-io	192.168.140.59	255.255.255.0	192.168.140.59	0x002a	0x0101
AC:64:17:01:8A:23	S7-1500	plcxb1d0e	192.168.140.210	255.255.255.0	192.168.140.213	0x002a	0x010e
D4:BE:D9:96:F2:3C	SIMATIC-PC	dt-d2	10.104.140.253	255.255.255.0	10.104.140.250	0x002a	0x0202

Apply now Cancel

⇒ The Profinet device does not allow changing the Device Name using the DCP protocol.

Check the settings of your Profinet device. Also refer to chapter 4.

Version history

Version	History	Author	Date
01	Beta release	JPCO	15/07/2020
02	Pre release	JPCO	09/09/2020