

HOW TO REPLACE ARENA 3 WITH ARENA NX

User Guide



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USER GUIDE

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Overview

This document is a step-by-step description of how to replace an ARENA 3.00 supervisor with an ARENA NX supervisor.

Replacing ARENA Classic with ARENA NX with the interfaces CLIF-CBUSLC + IF-LON2 + LIP

ARENA Classic site commissioned with Coach or CARE

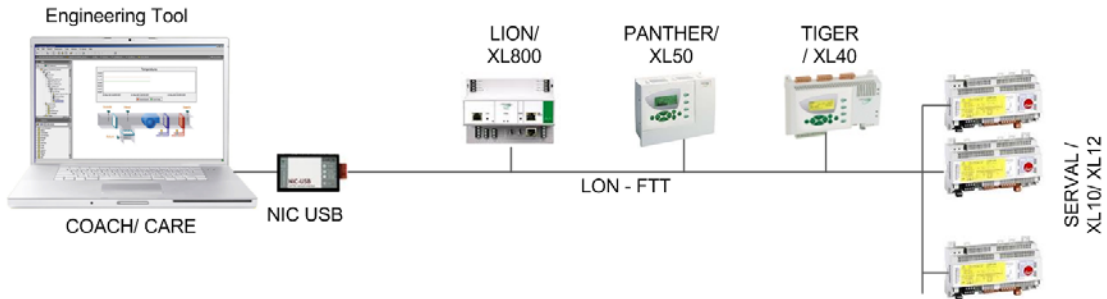


Fig. 1. Typical ARENA Classic Configuration with XL5000 controllers communicating via virtual C-Bus and SERVAL controller on LON

Review of the existing installation

1. Check the Domain, Subnet and Node addresses in COACH:

Domain is always CE, Subdomain is always 1, Node addresses start with 1, so the Node address for CLIF and L-IP should be 127 and 126. Also you can see the subnet/Node ID in Coach when you click the device in the tree, and check the *Summary* tab.

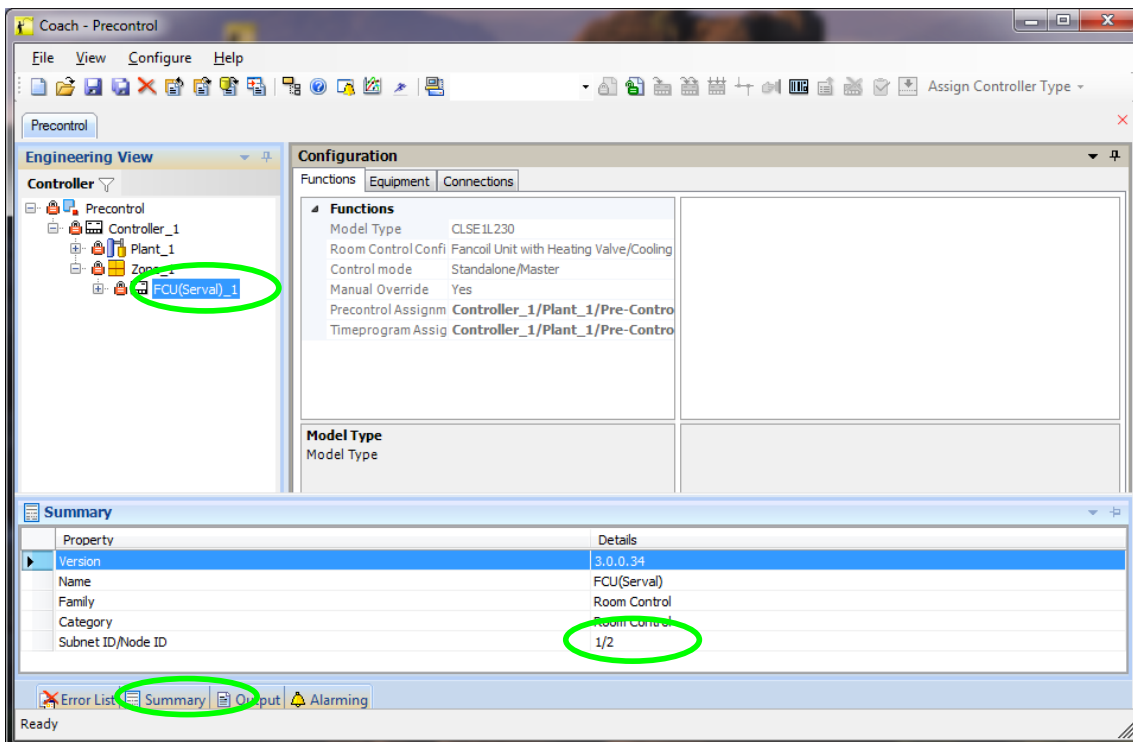


Fig. 2. Subnet/ Node ID in COACH, Domain is always CE

- In CARE, the Domain (see Figure 3) and subnet/ node (see Figure 4) can be viewed as shown in following figures. Node addresses for CLIF and L-IP should be adjusted to unused addresses.

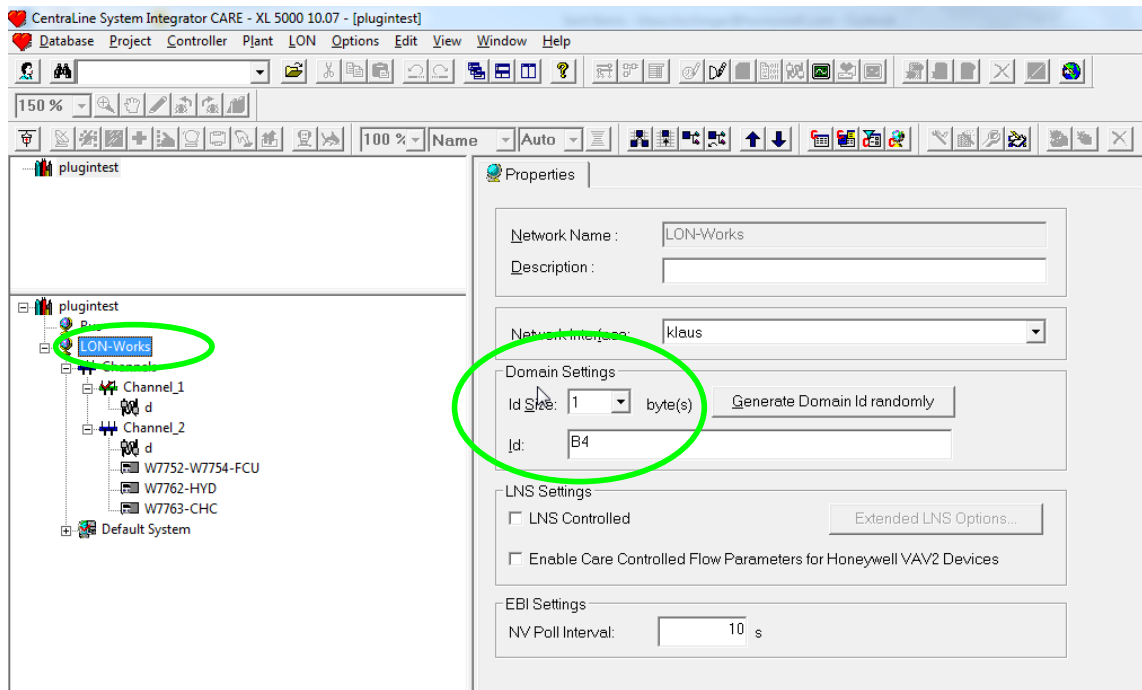


Fig. 3. Domain Settings in CARE

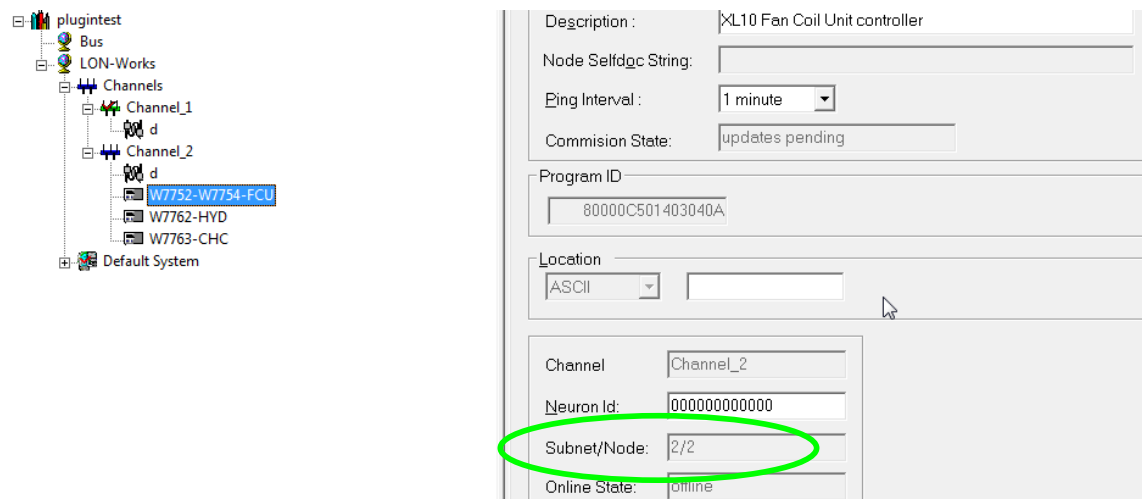


Fig. 4. Subnet/ Node in CARE

ARENA NX System Configuration

1. Configure the CLIF-CBUSLC
2. Connect ARENA NX instead of COACH/CARE with
 - a. the CLIF-CBUSLC and the IF-LON and
 - b. the L-IP
3. Commission the L-IP
4. Connect the existing system

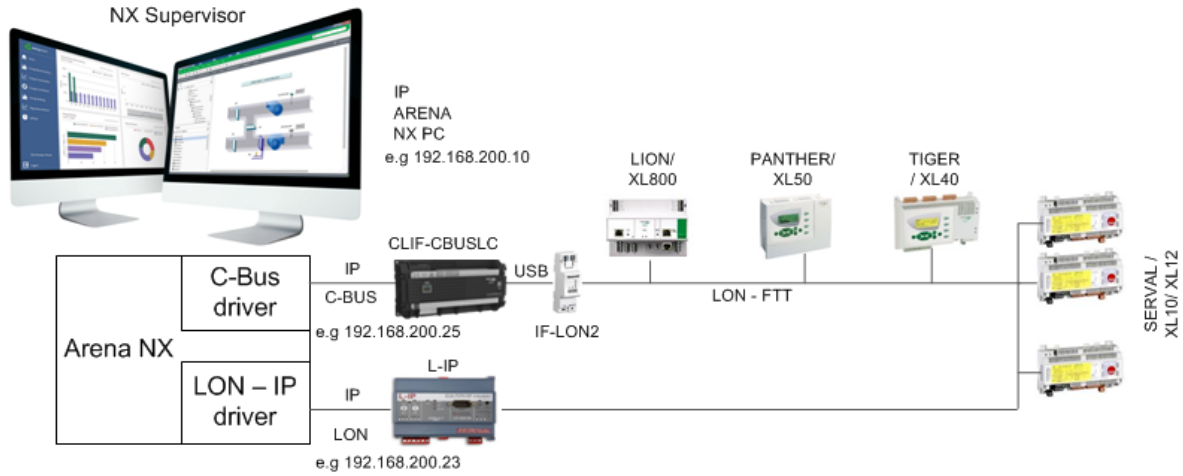


Fig. 5. New ARENA NX system

Configure the L-IP for SERVAL / XL10/ XL12

1. The needed Firmware Version must be 5.0.4 or newer. If you use a newer firmware version the single menus may look different.
2. Open the L-IP configuration by entering the following IP Address: 192.168.1.254 (factory default). If you have already changed the IP address , enter your address. Default user: admin, default password: admin
3. Under **Device Info**: keep settings

Logged in as Guest

LOYTEC Device Info

networks under control

Device Info
Config
Statistics
Reset
Contact
Logout

General Info	
Product name	L-IP
Product code	LIP-33ECTB
Firmware	L-Switch/L-IP Primary Image
Version	5.0.4
Build date	Fri Feb 27 11:40:38 2009
Serial number	006810-80000075406
Free memory	12439K, 855K
System temp	42.2C
Supply volt	35.6V

EIA709 Port 1 Info	
External unique node ID	80 00 00 07 54 06
Internal unique node ID	80 00 00 07 54 09
Status	Online
<input type="button" value="Send Service Pin Message"/>	

EIA709 Port 2 Info	
External unique node ID	80 00 00 07 54 07
Internal unique node ID	80 00 00 07 54 0A
Status	Online
<input type="button" value="Send Service Pin Message"/>	

EIA852 Port Info	
External unique node ID	80 00 00 07 54 08
Internal unique node ID	80 00 00 07 54 0B
Status	Online
<input type="button" value="Send Service Pin Message"/>	

goahead
WEB SERVER

Fig. 6. L-IP Device Info settings

- 4. Under **Config/System**:
Set **Router Mode** to „Configured Router Mode“ and press the button “Save Settings” (see next page)

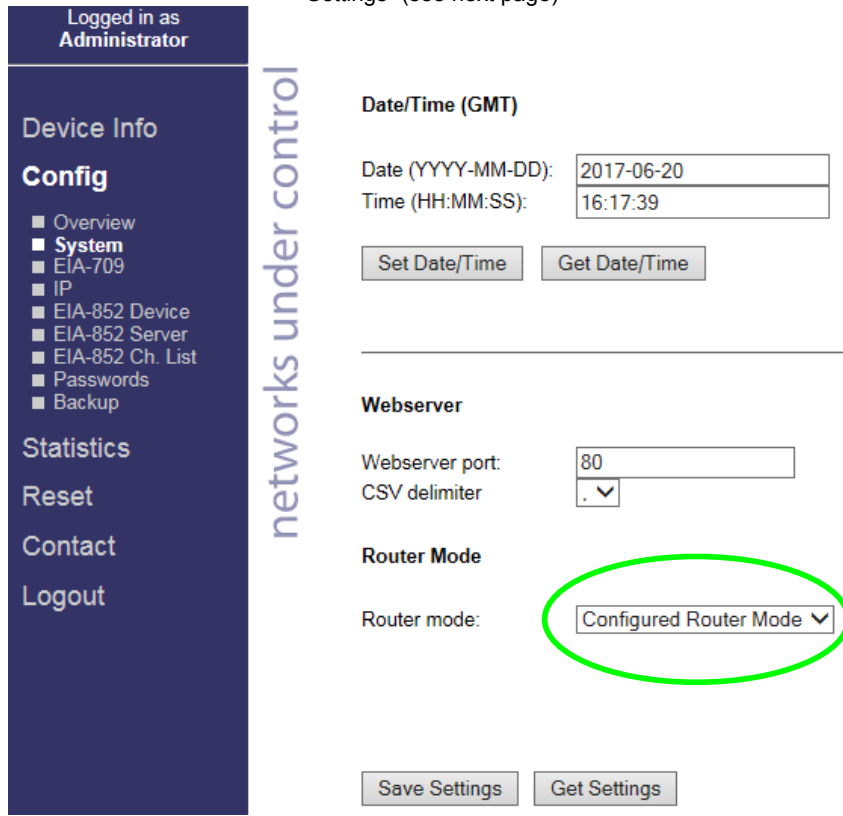


Fig. 7. L-IP Config System settings

- 5. Under **Config/EIA-709** Ports: keep settings

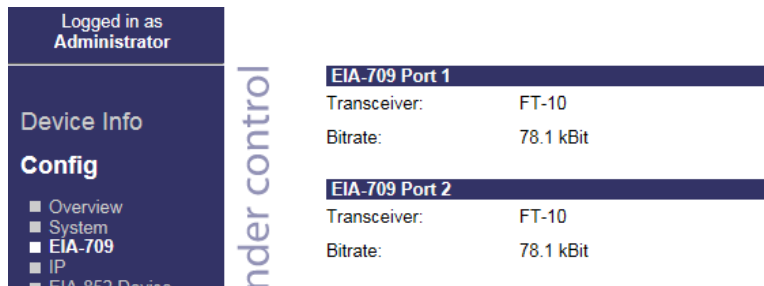


Fig. 8. L-IP Config EIA-709 settings

6. Config **Config/IP**, set IP Address and Hostname:
 e.g. L-IP 192.168.200.23 for XL10 / Serval communication with NX-PC
 IP address previously set to e.g. 192.168.200.10 " and press the button
 "Save Settings" (see next page, and also figure 5 New ARENA NX
 system)

Fig. 9. L-IP Config IP settings

7. Under **Config/EIA-852 Device**: keep settings

Fig. 10. L-IP Config EIA-852 Device settings

8. Set **Config/EIA-852 Server** as follows:
 Set "Config server status": = enabled; Set Auto members: = on " and press the button "Save Settings" (see next page)

Device Info
Config
 ■ Overview
 ■ System
 ■ EIA-709
 ■ IP
 ■ EIA-852 Device
 ■ **EIA-852 Server**
 ■ EIA-852 Ch. List
 ■ Passwords
 ■ Backup

Statistics
 Reset
 Contact
 Logout

networks under control

Config server status: **enabled** ▼
 Config server port: 1029
 Channel name:
 Channel members: 2
 Channel mode: Standard
 Pri.SNTP server: 123
 (leave empty to disable)
 Sec.SNTP server: 123
 (leave empty to disable)
 Channel timeout [ms]:
 (leave empty to disable)

Auto members: on ▼
 Roaming members: on ▼
 MD5 authentication: off ▼

Warning: This internet connection is insecure. All data will be transmitted in clear text. Use the console interface to change the MD5 secret in a secure way.

MD5 secret (16 bytes, hex)

Save Settings Get Settings

Fig. 11. L-IP Config EIA-852 Server settings

9. Set **Config/EIA-852 Channel List** as follows:
 - a. Click button „Add Device“; enter the name e.g. „niagara“; set the IP address of the PC. The port will be found automatically " and press the button "Save Settings".

ATTENTION: Please make sure that you have first installed and configured the LonIPNetworkdriver in ARENA NX. The green check mark will appear only if all the PC driver settings are correct. Otherwise the icon "!" = not responding will appear.

Administrator

Device Info
Config
 ■ Overview
 ■ System
 ■ EIA-709
 ■ IP
 ■ EIA-852 Device
 ■ EIA-852 Server
 ■ **EIA-852 Ch. List**
 ■ Passwords
 ■ Backup

Statistics

networks under control

Add Device Reload Recontact Action on Selected Execute

No	Name	IP Address	Stat	Flags
0	local	192.168.200.23:1628	✓	Edit
1	niagara	192.168.200.10:1628	✓	Edit Stats

x unregistered ? not contacted ✓ registered ! not responding no ext. NAT disabled

Fig. 12. L-IP Config EIA-852 CH. List settings

LonIpNetwork for L-IP

1. Add the "LonIpNetwork" driver as follows:
2. In the *Nav* side bar, right-click on **LonIpNetwork** and select **Views / AX-Property View** in the context menu.
3. On the *Property Sheet*, expand **Lon Netmgmt** and set the Domain ID as follows: Length 1; d: ce (In case the engineering is done with CARE, use the domain configured in CARE).

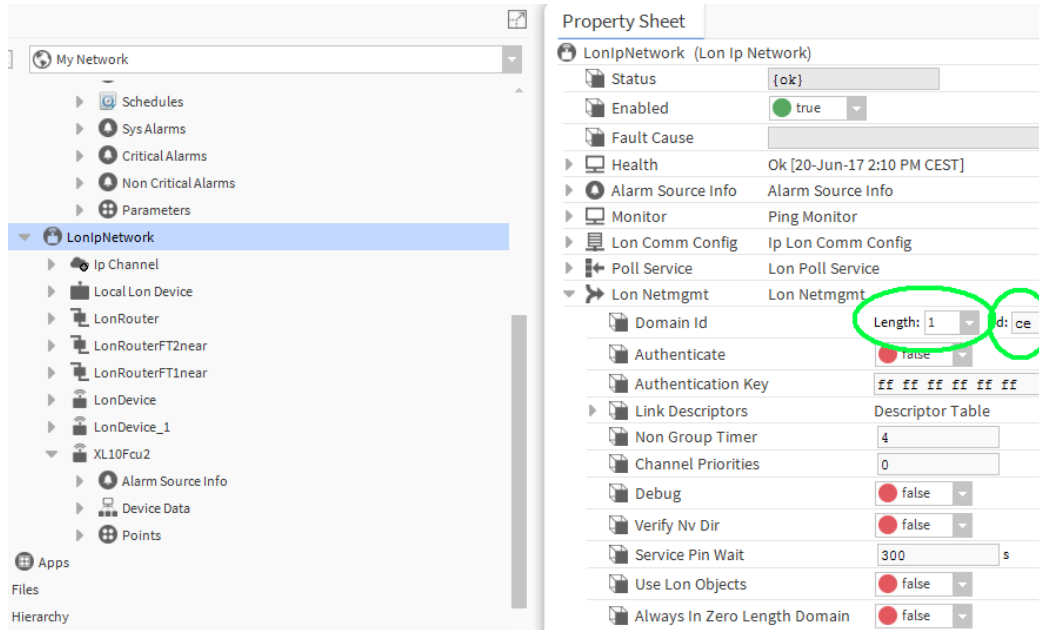


Fig. 13. LONIpNetwork Domain ID settings

4. *Property Sheet*, expand **IP Channel**, then expand **Network Config**, It is important to set "Is Config Server" to false and click afterwards the Refresh Button. Only after this will be done the "Config Server IP" will be shown and can be configured. Set **Config Server Ip** as in **L-IP Config IP** (in this case "192.168.200.23"). Set **Net Name** as in **L-IP Config EIA-852 Ch. List** (in this case "niagara"). In **Adapter**, select the network adapter of your PC (this case an USB to Ethernet Adapter). The IP address will be shown in **My Ip Address**.

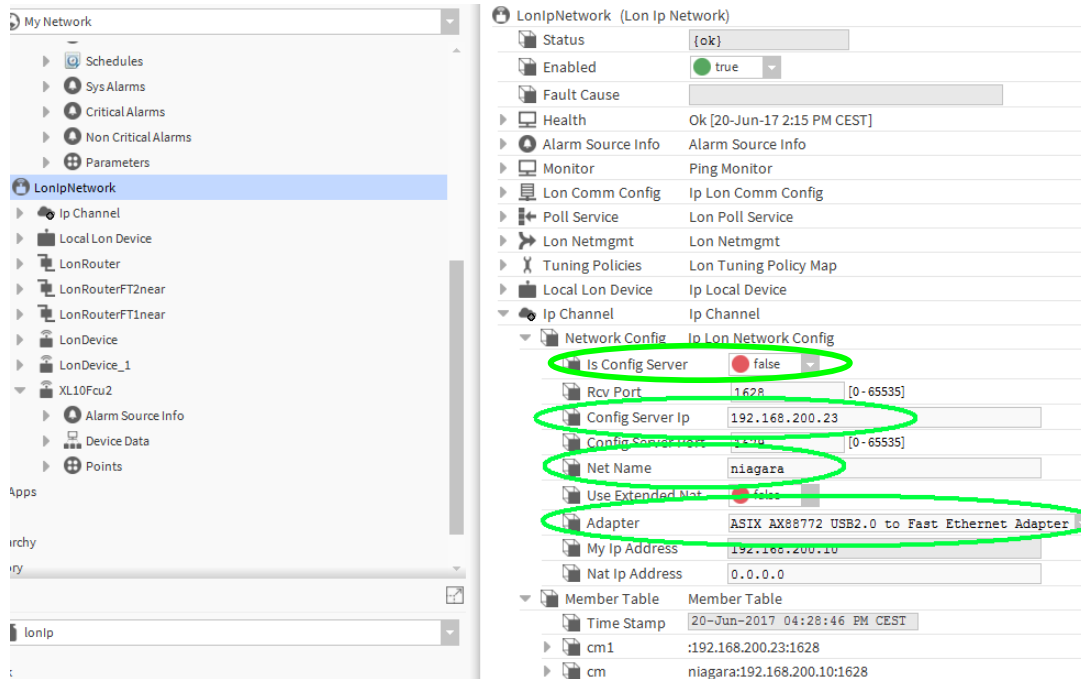


Fig. 14. LONipNetwork Network Config settings

5. After these settings are entered, NX can communicate with the L-IP adapter. Check the proper communication under **L-IP Config EIA-852 Ch. List**: The "Reload" button must be clicked to get the Stat Flags updated. A green checkmark must be behind the IP address of your PC for proper communication.



Fig. 15. Config EIA-852 Ch. List check

- Right click on **LonIpNetwork** and select **Views / Lon Device Manager** in the context menu. In the Database pane, double-click the "Local Lon Device" and set the **Node** address to 126, because the node address 127 is used the CLIF-CBUSLC. Changing the Local LonDevice Node address is only needed if the Clif-CBUSLC will be used with the same address number.

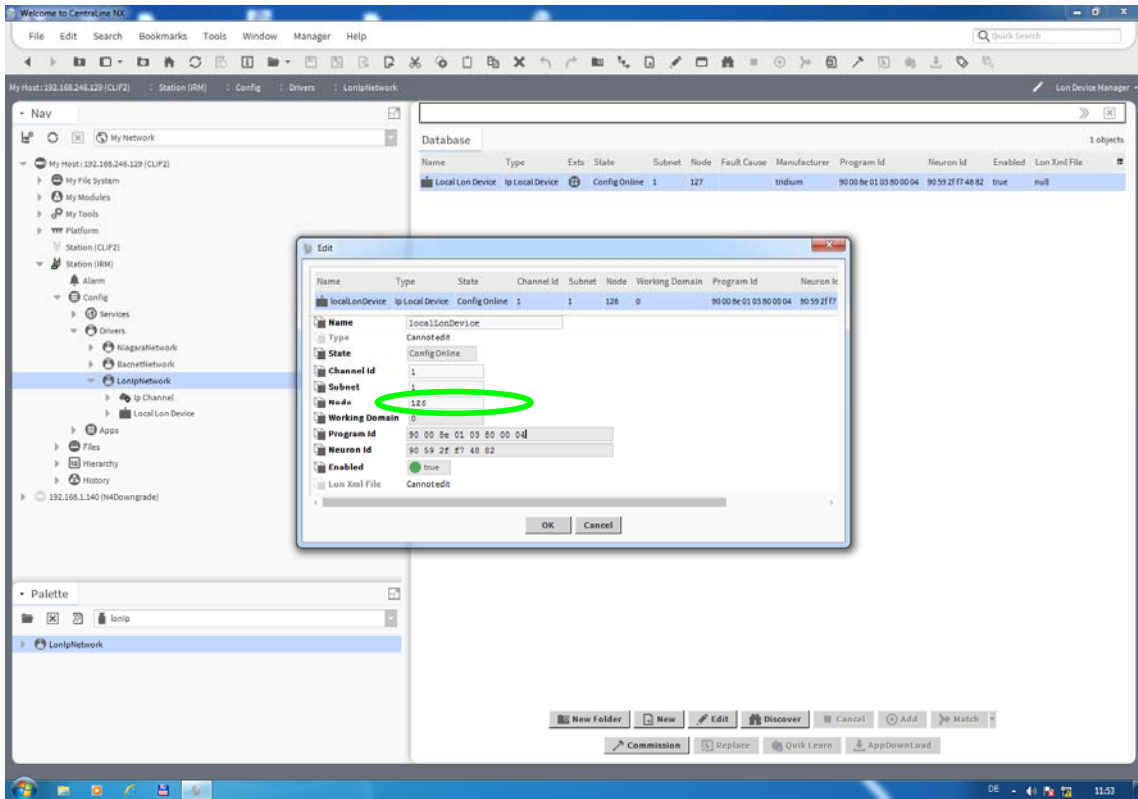


Fig. 16. LonIpNetwork Node Address setting

7. Check this setting in the **AX-Property View** of the *LonIpNetwork*.

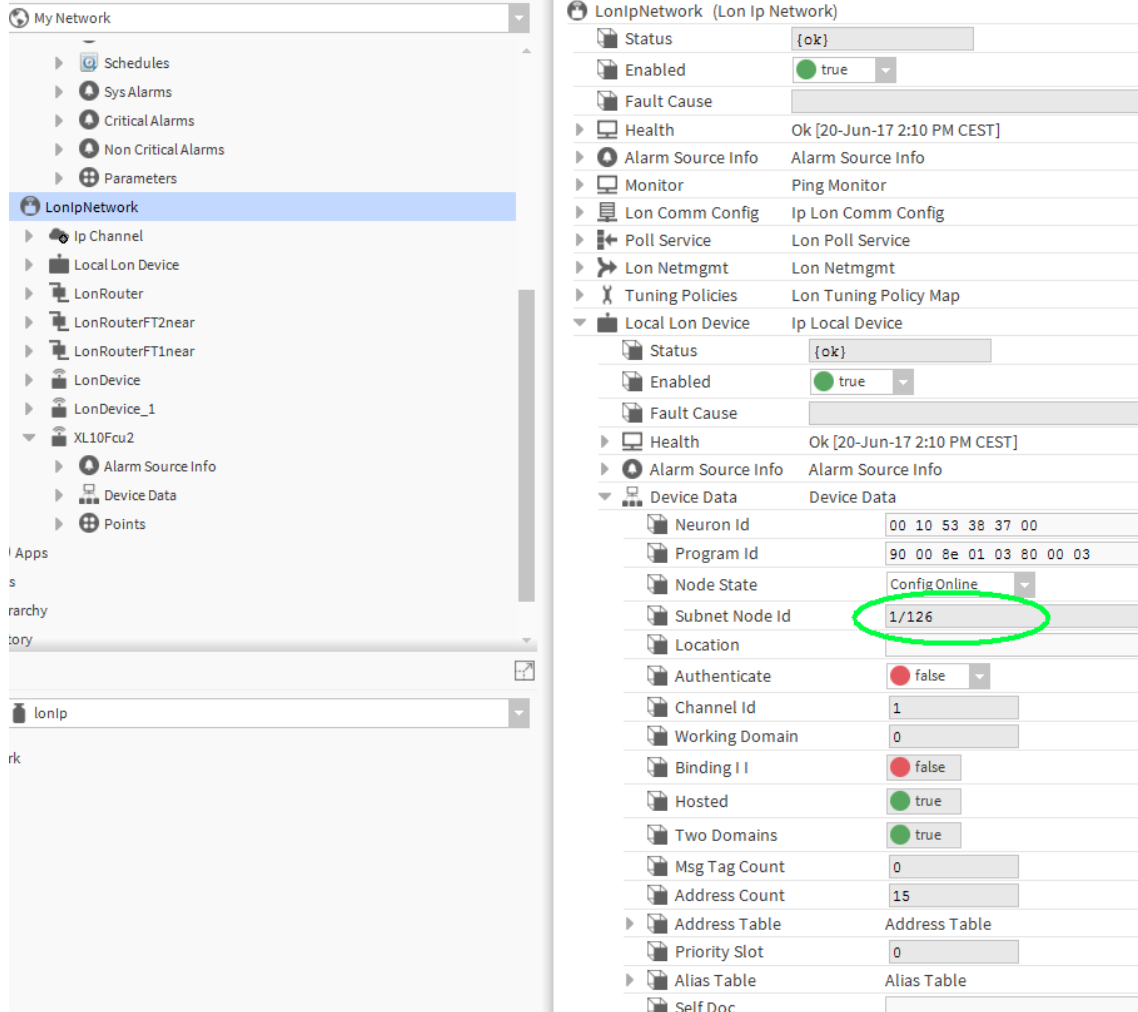


Fig. 17. LonIpNetwork Subnet Node Id check

8. In the Nav side bar, right-click on **LonIpNetwork** and select **Views/Lon Router Manager** to discover the devices. The devices of the L-IP will be discovered. Add the discovered devices into the Database. Depending on the used L-IP, 1 LonRouter and 1, 2, 3 or 4 LonRouterFTxnear are found. In this example, an L-IP with 2 FT10 ports is used. Therefore 2 LonRouterFTxnear devices are found.

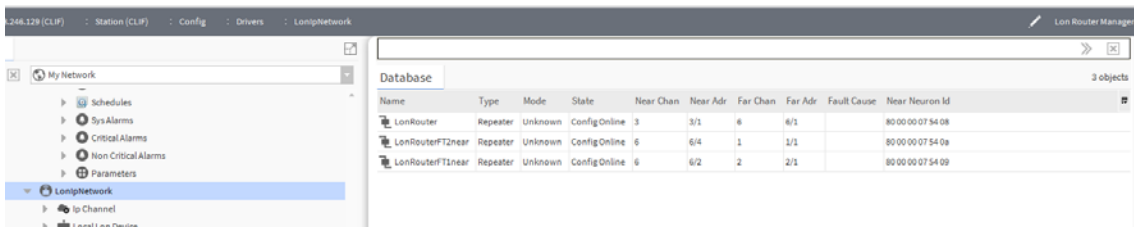


Fig. 18. LonIpNetwork Subnet Node Id check

- Double-click the "LonRouter". This is the incoming bus of the L-IP. Set **Type** to "Repeater", **Mode** to "Unknown", and the channel addresses **Near Chan**, **Near Adr**, **Far Chan** and **Far Adr**. For details of the router settings, please refer to the L-IP documentation.

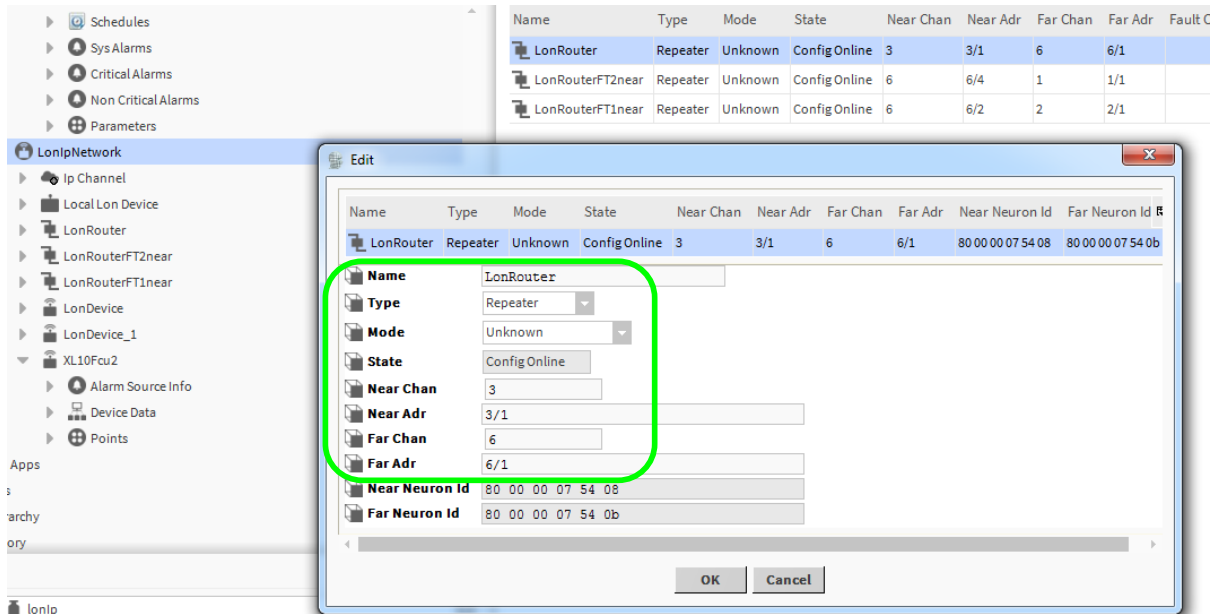


Fig. 19. LonRouter/ Repeater settings

- Double click to the "LonRouterFT2near". This is the outgoing bus (FT10) of the L-IP port 2. Here the LON is connected. Change the **Name** for better visibility. Set **Type** to "Repeater", **Mode** to "Unknown", and the channel addresses **Nar Chan**, **Near Adr**, **Far Chan** and **Far Adr**. Near Address 4 should not conflict with LON addresses available on the LON bus, the subnet is 1 so the Far Channel should be = 1 and Far Address = 1/1.

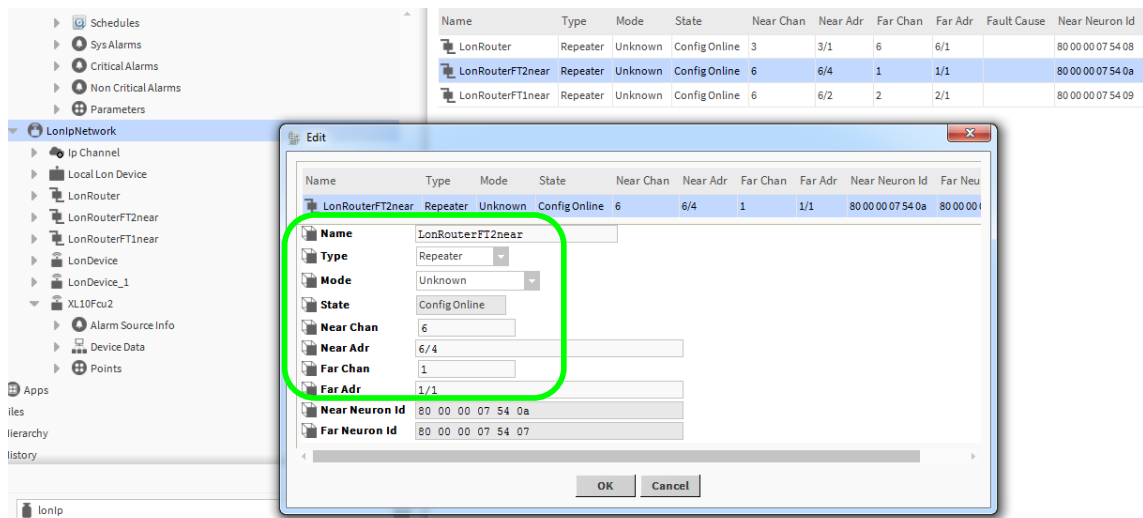


Fig. 20. LonRouter2/ Repeater settings

11. Double click the "LonRouter1". This is the outgoing bus (FT10) of the L-IP port 1. Since nothing is connected here, there should be no conflict with the subnet 1 and the settings are "don't care". Rename the **Name** for better visibility. Set **Type** = "Repeater", **Mode** = "Unknown", and the channel addresses **Nar Chan**, **Near Adr**, **Far Chan** and **Far Adr**.
12. Commission the router

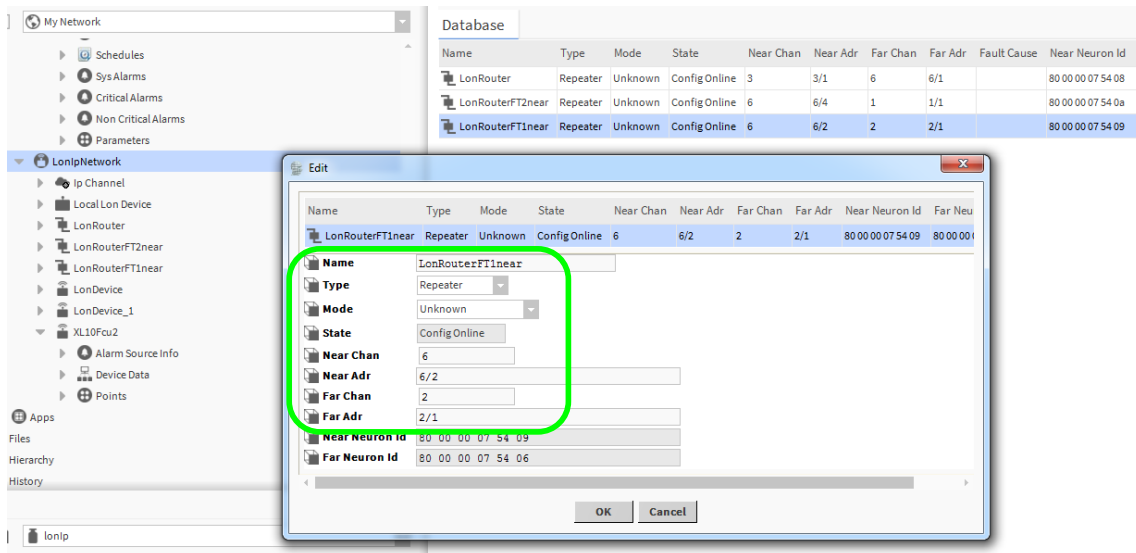


Fig. 21. LonRouter1/ Repeater Name, Type, Mode, Chan and Adr settings

13. In case a L-IP with more than 2 ports is used, please configure the additional ports in the same way as ports 1 and 2. Always check the needed subnet/ node addresses of ports 1 and 2.
14. Now you can discover again the devices and add the controllers to the database. The local Lon devices from top to down are as follows: the first one is the CLIF with node 127, the second one is the XL40 controller with node 1, the third one is the Local Lon device with node 126, the fourth one is the XL10fcu2 / Serval with node 2

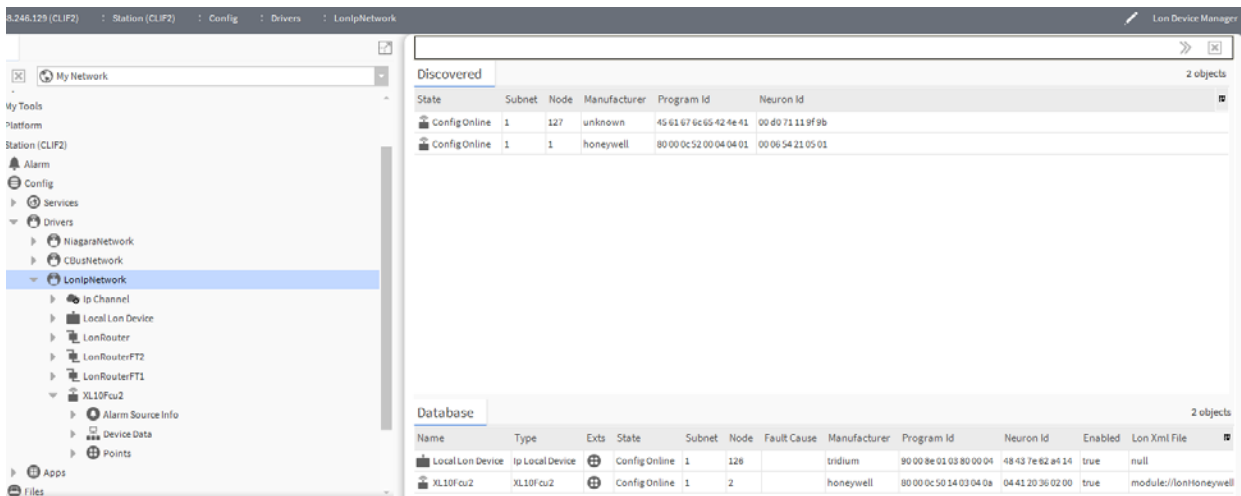


Fig. 22. LonIPNetwork Discover SERVAL/ XL10 / XL12 devices

Following steps are only needed if you have to use this Cbus Network, if not the Lon-IP communication setup is finished.

CBusNetwork in NX for 192.168.200.25

1. Configure the CLIF-CBUSLC as follows:
 - b. Set the IP address to 192. 168.200.25, the mask to 255.255.255.0, and the default gateway to 192.168.200.1. The IF-LON2 is connected to port

- 2 via USB. Therefore for bus #2, the bus ID must be set to 1, subnet to 1, node to 127 and domain to CE.
2. Refer to the installation instructions, form no. EN1Z-1026GE51. Here is a section of it:

C-Bus Set-Up

After removing the CLIF-CBUSLC from its shipping box, attach power and wait approx. 1 minute while it powers up. During power-up, the red warning LED will be lit. As soon as this warning LED goes dark, you may commence with the set-up, as follows:

1. Connect one end of the A-male to B-male USB cable to your PC and the other end to the USB 2.0 Device Interface located on the front of your CLIF-CBUSLC.
2. Enter URL <http://192.168.255.241> in your web browser. An initial mask will then appear on the screen of your PC.
3. When setting up your CLIF-CBUSLC for the first time, you will have to enter an administrator password. This administrator password must contain:
 - 8 or more (but not more than 31) characters
 - uppercase letters
 - lowercase letters
 - numerals
 - no whitespace characters
4. A login mask will appear. You may now login using the administrator password.
5. Press the CONFIGURATION button.
6. The configuration mask (see) will then appear. Enter the IP address, subnet mask, and default gateway address.
Do not select "block SUSInet port" (this is needed only if you want to tunnel SUSInet communication over ssh)
7. In case you are using the virtual C-Bus over LONWORKS option, enter the LONWORKS communication parameters (subnet, node, domain). You can retrieve this information from the engineering tool. Use the same subnet and domain and a node address which is not used by another device).
8. If you want your interface to hourly synchronize the time of your bus devices, select "work as time master".
9. Press "SAVE CONFIGURATION". When you are done, you may log out or go back to the status display.

3. From the *c/Bus* palette, add the **CBusNetwork** driver to the *Drivers* of the station (*Drivers* icon in the *Nav* tree). In **BNA IP-Address**, set the **Ip Address** as it is configured in the CLIF-CBUSLC. Disable **Cbus Channel 1** and enable **Cbus Channel 2**.

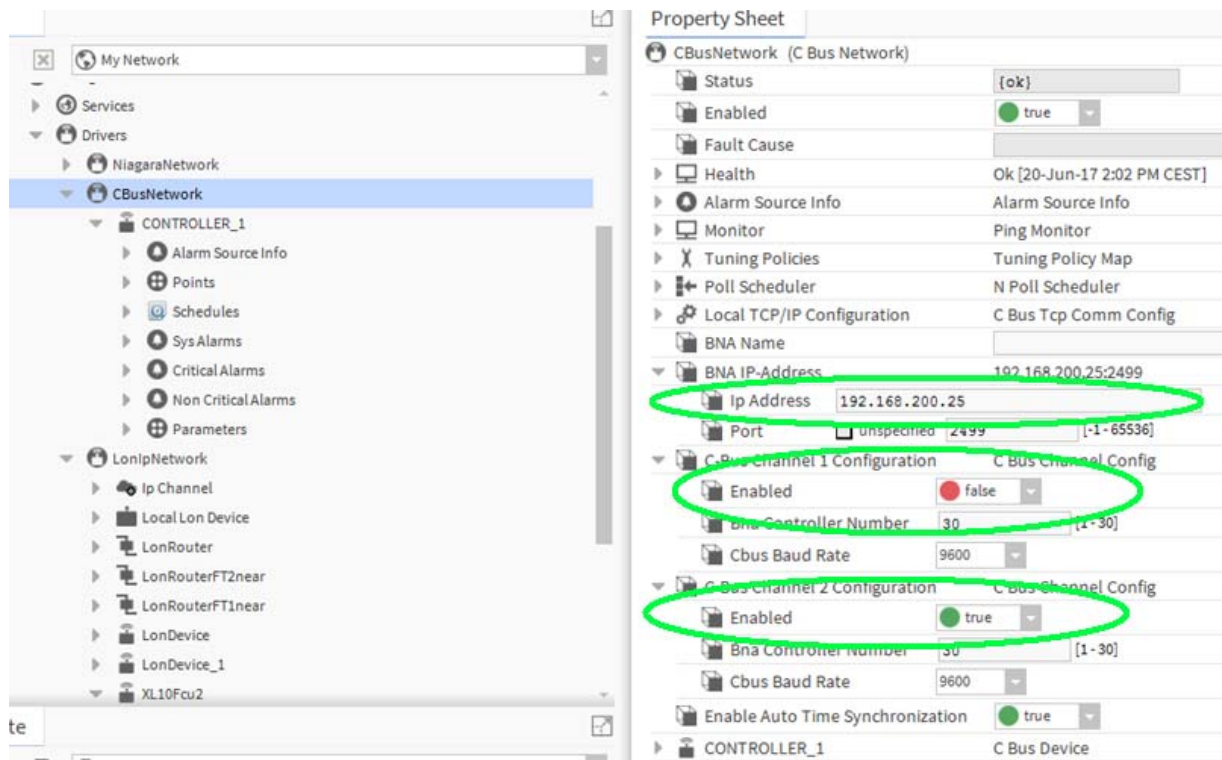


Fig. 23. CBUS Network settings

4. In the Nav side bar, right-click *CBusNetwork* and select **Views / C Bus Device Manager** in the context menu. Discover the devices. In this case, a controller with name "CONTROLLER_1". is received. Continue by discovering the points.

Property Sheet

CONTROLLER_1 (C Bus Device)

Status	{unackedAlarm}
Enabled	<input checked="" type="checkbox"/> true
Fault Cause	
Health	Ok [20-Jun-17 2:04 PM CEST]
Alarm Source Info	Alarm Source Info
Controller Name	CONTROLLER_1
Controller Number	1
Channel Number	2
Controller Type	XL40 / TIGER
Program Name	CONTROLLER_1
Controller Status	OK
Communication Status	Idle
File Loading	Completed
Firmware Version	2.7.5
Download Time	30-May-17 11:24 AM CEST
Controller Time	20-Jun-2017 02:04 PM CEST
Points	C Bus Point Device Ext
Discovery Preferences	C Bus Point Discovery Preferences
PR1_CoolVlvPosL_01	100 {ok} @ def
PR1_HeatVlvPosL_01	0 {ok} @ def
PR1_ApplicModeL_01	6 {ok} @ def
PR1_CoolTemp___01	12.4 °C {overridden} @ 8
PR1_FlowTemp___01	14.5 °C {ok} @ def
PR1_ChillerCmd__01	Off {ok} @ def
PR1_DispHtgSp___01	0.0 °C {ok} @ def
PR1_DispCoolSp__01	12.0 °C {ok} @ def
Schedules	C Bus Schedule Device Ext
Sys Alarms	C Bus Sys Alarm Device Ext
Critical Alarms	C Bus Critical Alarm Device Ext
Non Critical Alarms	C Bus Non Critical Alarm Device Ext
Parameters	C Bus Parameter Device Ext

Fig. 24. CBusNetwork Device Manager Discover Devices and Points

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