

Ignition SCADA to PLC5 on Data Highway Plus network

This document provides information to configure Ignition HMI software running in a computer connected via Ethernet Network with an ANC-100e or USB using an ANC-120e to communicate with a PLC5 on a Data Highway Plus network.

Ignition software from Inductive Automation® is a powerful industrial software platform built for SCADA, MES and IIoT applications.

Visit <https://inductiveautomation.com> for more information about Ignition software

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Note: Before proceeding, make sure

- ✓ ANC-120e Driver is installed (**Only if using ANC-120e**)
- ✓ Network Adapter is correctly configured to access ANC-120e or ANC-100e
- ✓ ANC-120e is connected to the computer and DH+ network or ANC-100e is connected to the same Ethernet network or directly to your computer, and to the DH+ network.

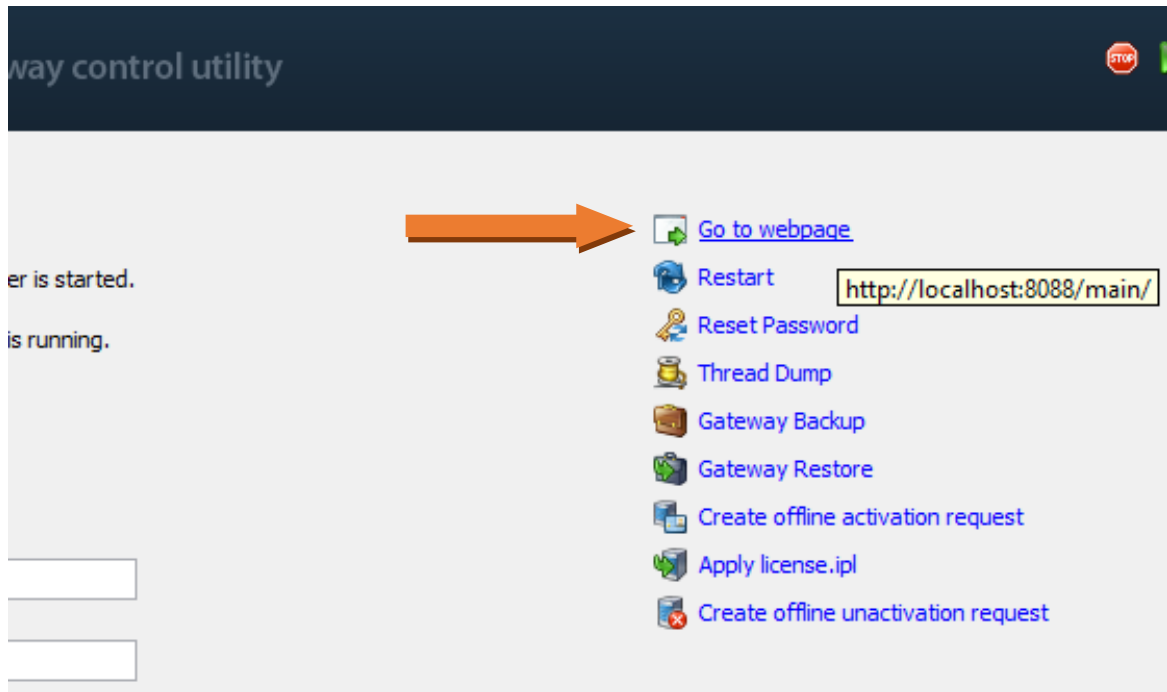
For this example:

ANC-100e IP address = **192.168.0.230**

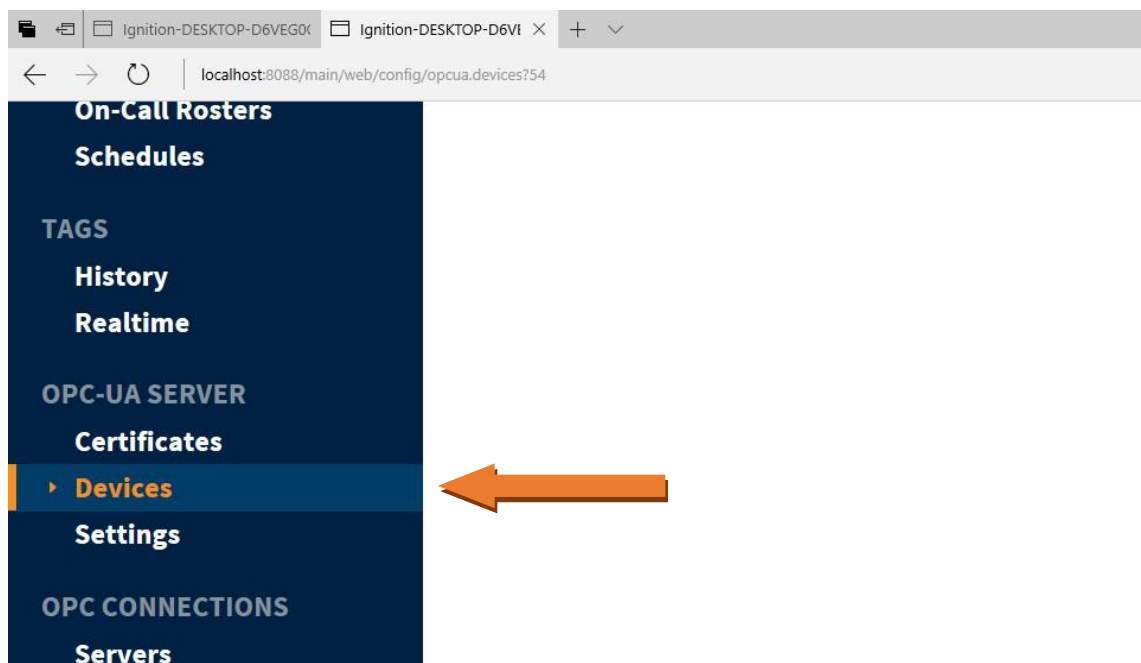
PLC5 DH+ node = **03**

Ignition Version 7.9.3

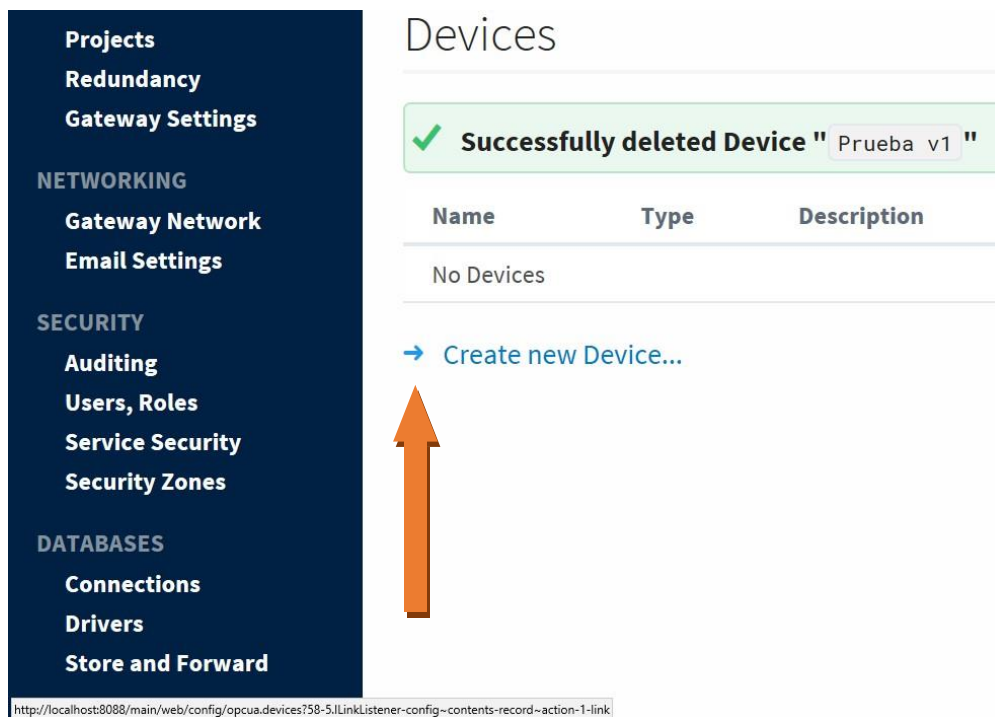
1. Open the “**Ignition Gateway Control Utility**” and click on “**Go to webpage**”



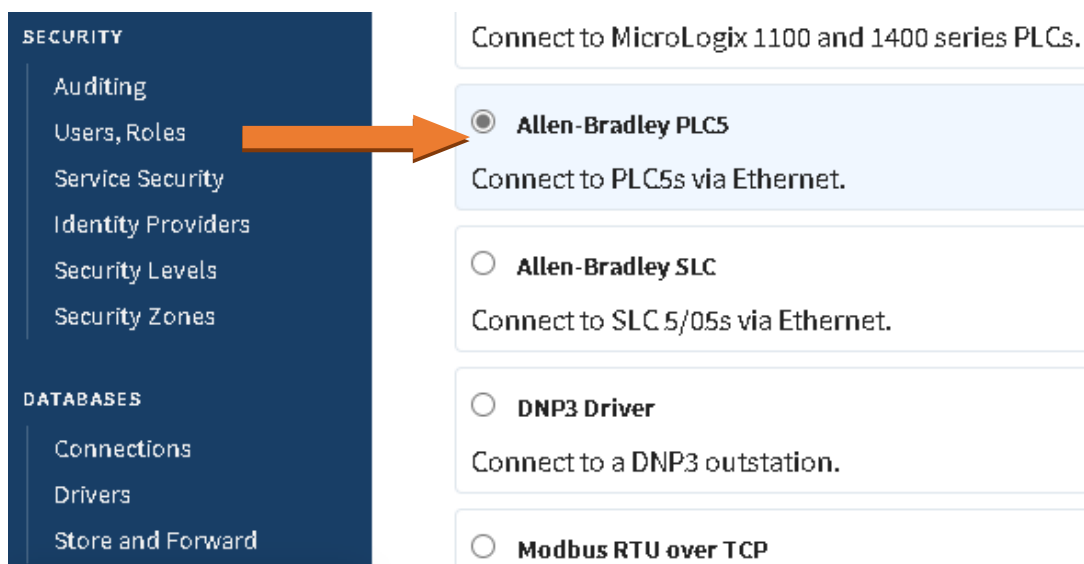
2. Login to the configuration setting and go to the “**OPC-UA SERVER**” section on the left area of the screen and click on “**Devices**”




3. Click on the blue arrow on **“Create New Device...”**





4. On the **“Add Device Step 1: Choose Type”** screen, select **“Allen-Bradley SLC”** or **“Allen-Bradley PLC5”**, depending on your case, and click Next. In our case, we are selecting **“Allen-Bradley SLC”**



- On the New Device page, leave all the default values and type in the following fields:
 - “Name”**: PLC (or the name you would like the device to have)
 - “Hostname”**: type the IP address of the ANC-100e (default is 192.168.0.230)
 - “Connection Path”**: 1,1,2, NN
Where NN is the node address of the target DH+ device
(03 for our example, so the resulting connection path is: 1,1,2,3)
- Click **“Create New Device”**

| General | |
|-------------|--|
| Name | <input type="text" value="PLC"/>  |
| Description | <input type="text"/> |
| Enabled | <input checked="" type="checkbox"/> (default: true) |

| Connectivity | |
|----------------------|---|
| Hostname | <input type="text" value="192.168.0.230"/>  |
| Timeout | <input type="text" value="2000"/> (default: 2,000) |
| Browse Cache Timeout | <input type="text" value="240000"/> (default: 240,000) |
| Connection Path | <input type="text" value="1,1,2,3"/> <input type="button" value="x"/>  |

Show advanced properties



7. The “**Devices**” page is displayed showing the SLC device is added to Ignition. The Status will show as “**Disconnected**” for a brief period and then **Connected**

Devices

✓ Successfully created new Device "SLC"

| Name | Type | Description | Enabled | Status | |
|------|--------------------|-------------|---------|------------------------------------|-------------|
| PLC | Allen-Bradley PLC5 | | true | Disconnected: Determining Protocol | More ▾ edit |

Devices

✓ Successfully updated Device "SLC"














| Name | Type | Description | Enabled | Status | |
|------|--------------------|-------------|---------|----------------------------|-------------|
| PLC | Allen-Bradley PLC5 | | true | Connected: Protocol: DHRIO | More ▾ edit |

8. To test the connection, go to “**OPC Connections**” -> “**Quick Client**”

The image shows a screenshot of the Ignition software interface. On the left is a dark blue navigation menu with the following items: TAGS, History, Realtime, OPC-UA SERVER, Certificates, Devices, Settings, OPC CONNECTIONS, Servers, and Quick Client (highlighted with an orange arrow). On the right is the 'Quick Client' configuration window. It has a table with columns 'Server', 'Address', and 'V'. Below the table is a section for 'Subscription name' with a text input field containing 'Subscription 1'. An orange arrow points from the 'Quick Client' menu item to the configuration window.

- In the “**OPC Quick Client**” screen, browse the “Devices” folder to find your device. You can expand it to see all the filenames and tags

OPC Quick Client

| TYPE | ACTION | TITLE |
|--------|---------------------------|--|
| Server | refresh | [-]  Ignition OPC-UA Server |
| Object | | [-]  Devices |
| Object | | [-]  [PLC] |
| Object | | [+]  B3 |
| Object | | [+]  B9 |
| Object | | [+]  C5 |
| Object | | [+]  F8 |
| Object | | [-]  N7 |
| Tag | [s][r][w] | [+]  N7:0 |
| Tag | [s][r][w] | [+]  N7:1 |
| Tag | [s][r][w] | [+]  N7:2 |
| Tag | [s][r][w] | [+]  N7:3 |
| Tag | [s][r][w] | [+]  N7:4 |

- To read a tag, use the “**[r]**” option to its left
- If you can read the tags in your DH+ device, then you have successfully configured your ANC-100e or ANC-120e and Ignition software to communicate with a PLC5 on Data Highway Plus.