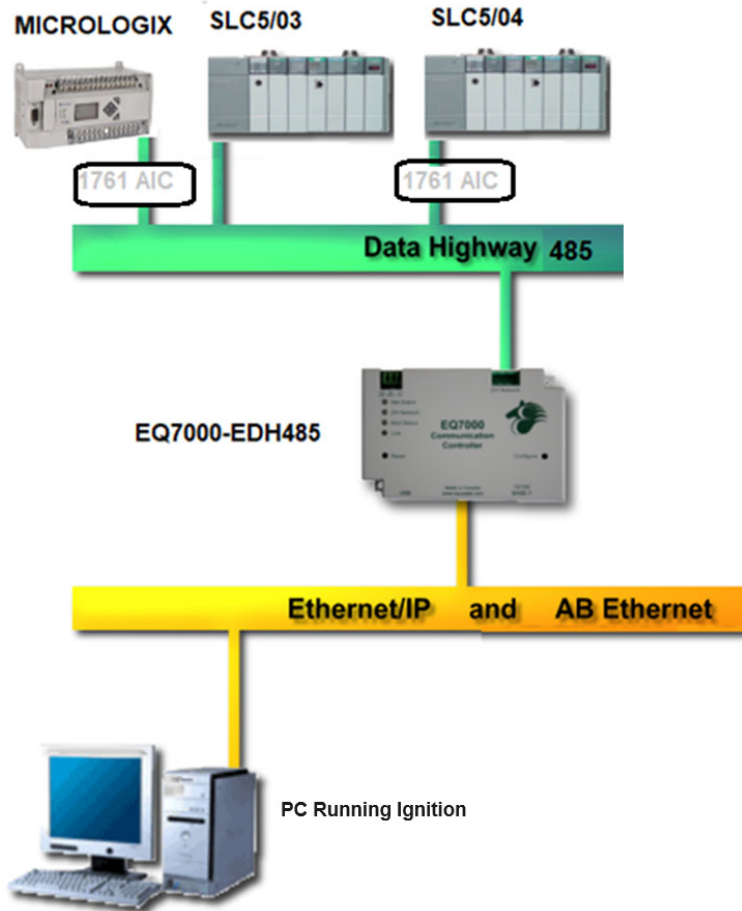# Ignition Ethernet IP Driver Getting Data from SLC503 & SLC504 On AB DH485 network with EQ7000-DH485
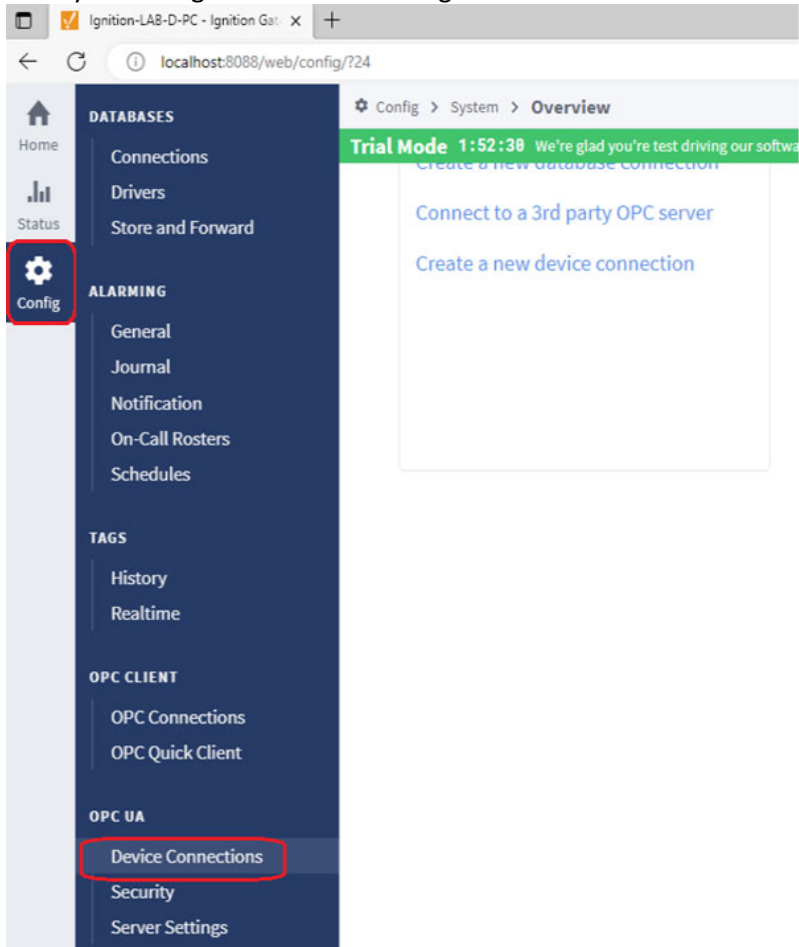
Network Setup:
Allen Braddley Ethernet DH485 Network, PC running Ignition, Equustek EQ7000-EDH485, with SLC5/03, SLC5/04 and Micrologix with 1761 AIC which give them DH485 capability.
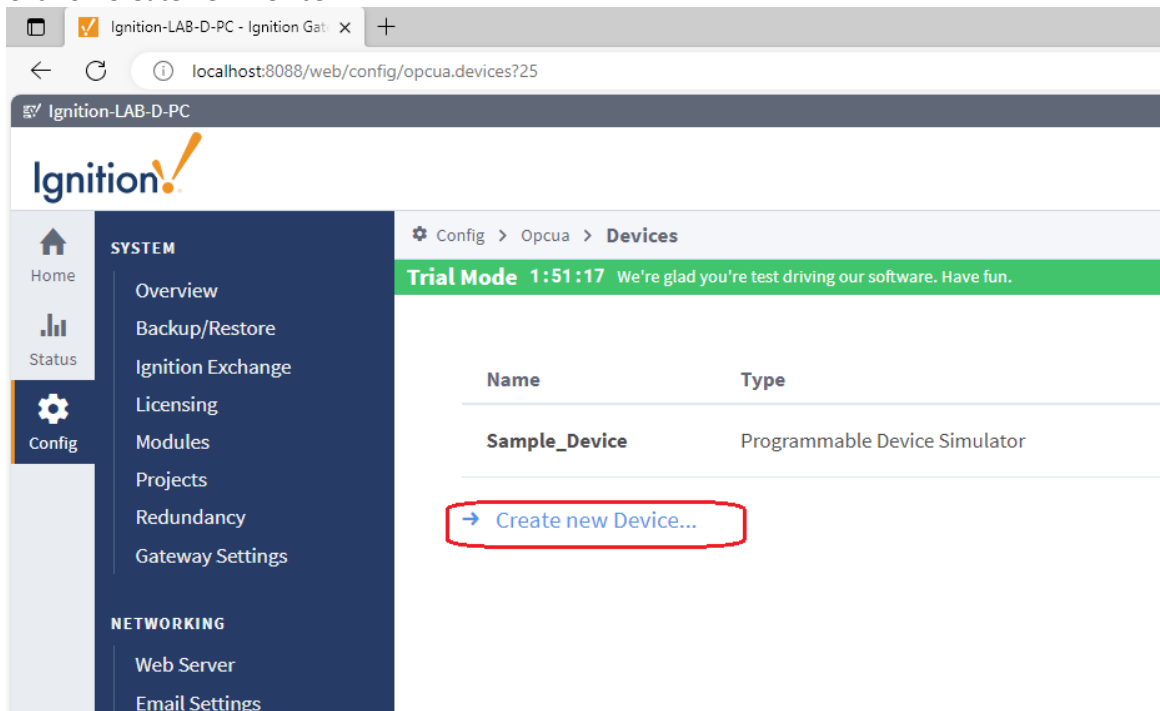

Start Ignition

After you start Ignition click on Config and scroll down and click on Device Connections under OPC UA.

Click on Create new Device.

Select Allen Bradley SLC Connect to SLC5/05 via Ethernet

Scroll Down and Click Next.

Under General:

Type a Name for the PLC, then type the Description.

Under Connectivity:

Hostname: is the IP address of our EQ7000-EDH485

Connection Path: Since here EQ7000 is emulating a Control Logix 1756 DHRIO, Details of the path according to **Ignition Inductive Automation manual**

The Connection Path format contains 4 numbers separated by commas. The first number is always 1 and tells the 1756-ENET module to route through the backplane. The second number is the slot number of the 1756-DHRIO module of the DH+ network the PLC-5 processor is connected to. The third number is the channel of the 1756-DHRIO module that the PLC-5 processor is connected to. Use 2 for channel A and 3 for channel B. The final and fourth number is the DH+ node number. This number is in octal and is the same as configured in the PLC-5 processor. See the **ControlLogix Ethernet Communication interface Module** User Manual for more information.

Connection Path Format: 1,<1756-DHRIO slot number>,<1756-DHRIO channel>,<DH+ node number>

The valid range for the 1756-DHRIO slot number is between 0 and 16 but depends on the chassis size. The 1756-DHRIO channel is either 2 for channel A or 3 for channel B. The DH+ node number range is from 00 to 77 octal. **Reference Inductive Automation manual https://docs.inductiveautomation.com/display/DOC80/Connecting+to+PLC5**

Path details explained above are for DH+ but are similar for DH485, so type the path as 1,0,2,5, and click on Create New Device.

1 for Backplane, 0 for the slot number, 2 is for Channel A, 5 is for our SLC5/03 node address number

Ignition trying to detect the protocol and get connected.

Wait until the protocol is detected DHRIO, and the device connected.

Repeat the process to add the SLC504 node 3

Type the name, Description, Hostname and the path 1,0,2,3 then click on Create New Device

Here we have both the SLC503 and SLC504 connected.

To confirm we read some tags form both the SLC5/03 and the SLC 5/04
Under OPC CLIENT Click on OPC Quick client.

Click on the plus sign beside the Ignition OPC UA Server.

Click on the plus sign of Devices.

To read from SLC5/03 click on the plus sign of the SLC503.

To read integer word 0 from integer file 7 click on the plus sign of N7 then click on r of the N7:0 to read it's value here we read value of 1978

Repeating the same process to read the value of the word 0 in integer file 7 of the SLC504.
Which read value of 1998

We also used RSLINX to read the data files of integer file 7 of both SLC5/03 and SLC5/04, here is Allen Bradley Ethernet driver that was created for the EQ7000-EDH485 where we can see in RSWHO all three PLCs that we have on the DH485 network as shown on next page.
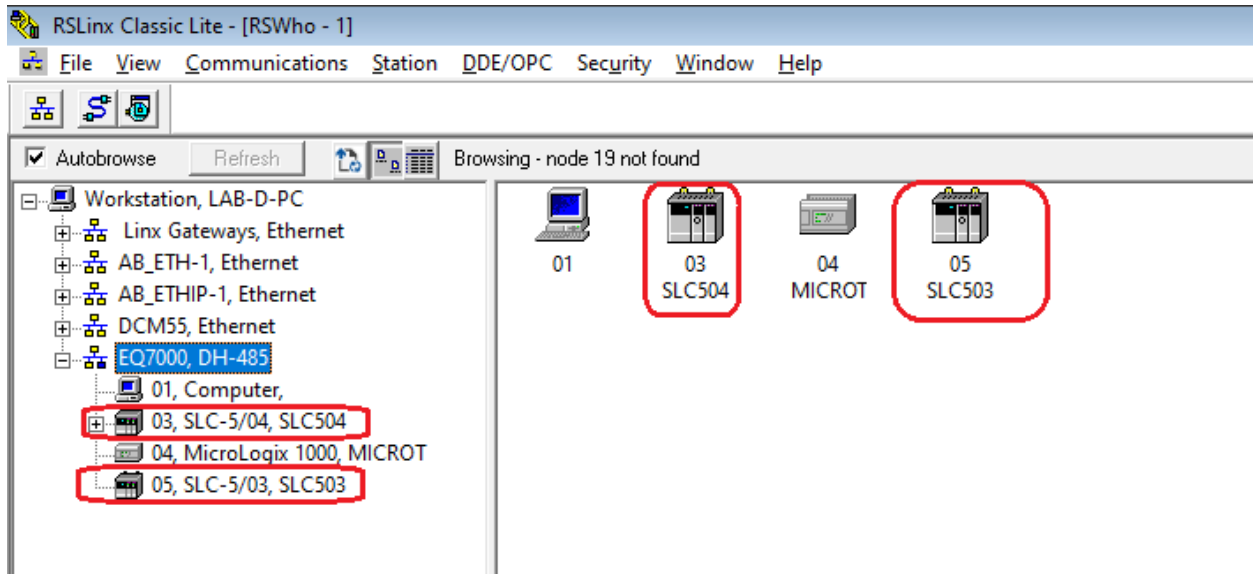
The two values were read in RSLINX data files of SLC503 and SLC504.

SLC-5/03 (12): Data File N7

	0	1	2	3	4	5	6	7
N7:0	1978	5917	14	40	137	1	22	33
N7:8	5	0	2323	2000	0	0	0	0
N7:16	0	0	0	0	0	0	0	0
N7:24	0	0	0	0	0	0	0	0
N7:32								

Status: Active

SLC-5/04 (22): Data File N7

	0	1	2	3	4	5	6	7
N7:0	1998	3996	5994	0	0	0	0	0
N7:8	0	0	1060	2120	3180	0	0	0
N7:16	0	0	0	0	0	0	0	0
N7:24	0	0	0	0	0	0	0	0

Status: Active