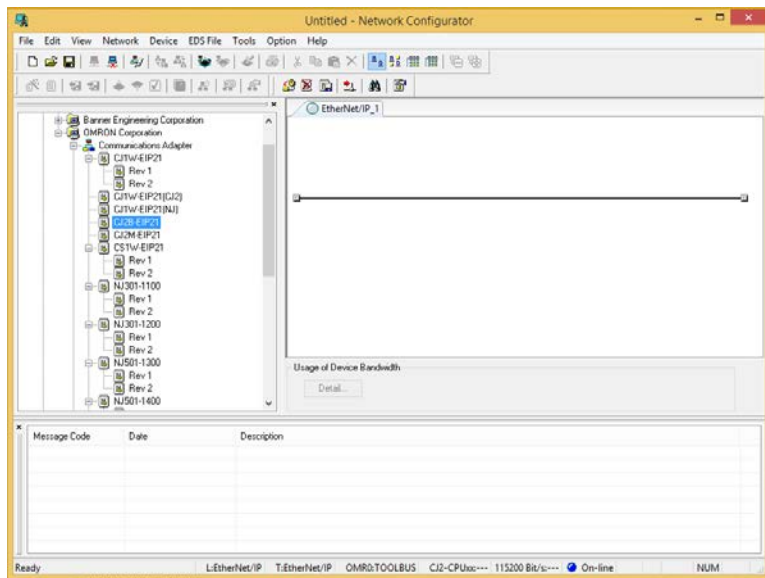
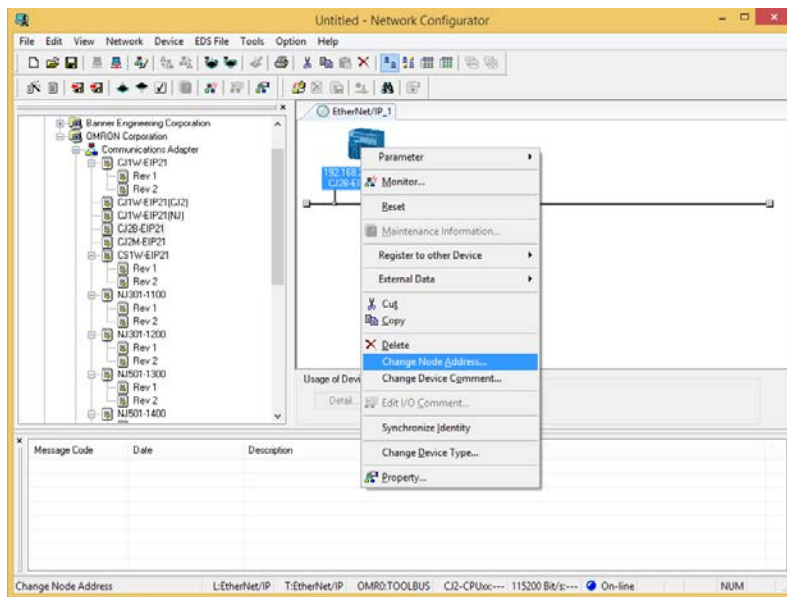


Establishing an EtherNet/IP Connection between a Performance GatewayPro and Omron CJ2H PLC

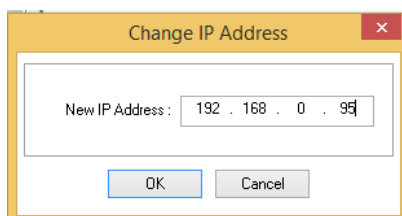
1. Open the Omron Network Configurator software.



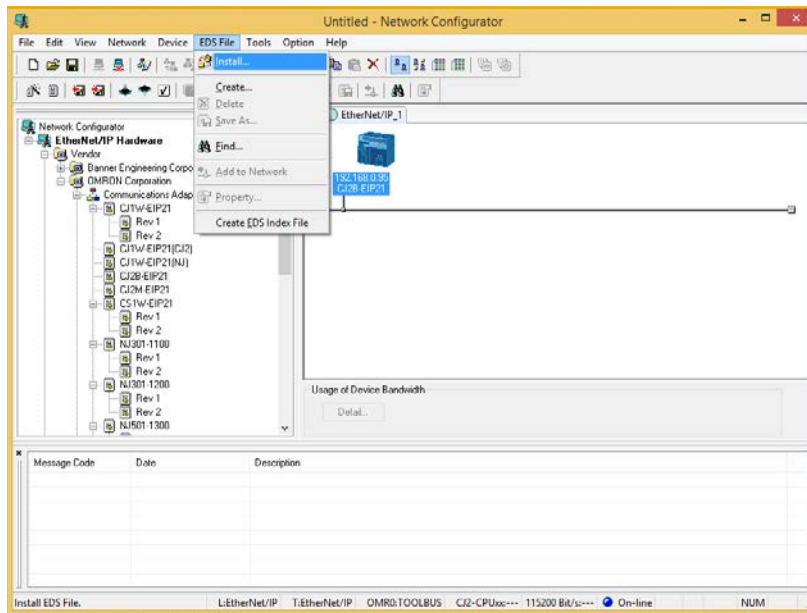
2. Add the correct PLC to the network. Then right click on the PLC to change its IP address.



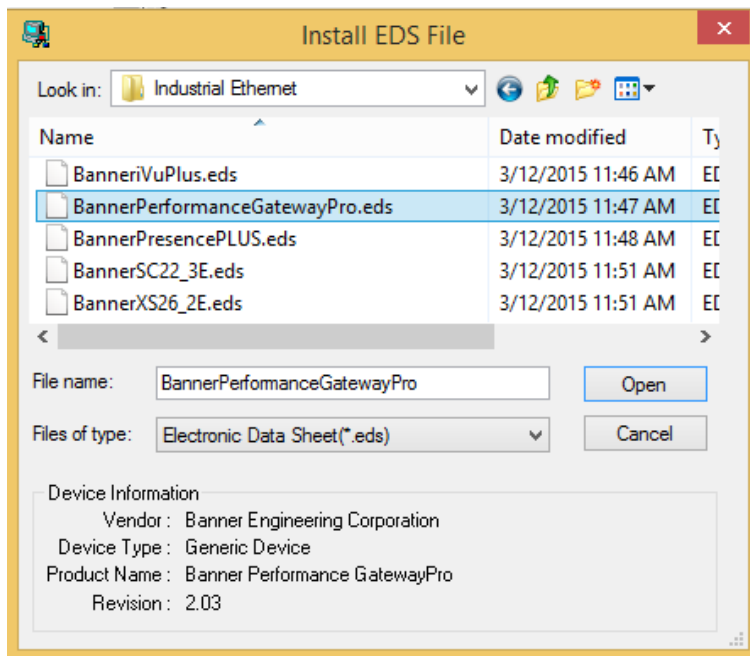
3. Here is the PLC's IP address



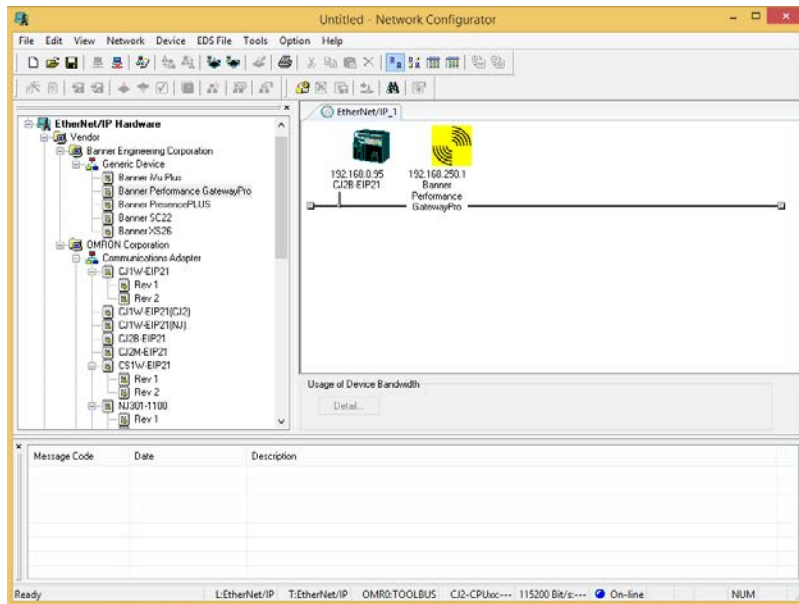
4. Install the GatewayPro EDS file. Choose EDS_File, then Install.



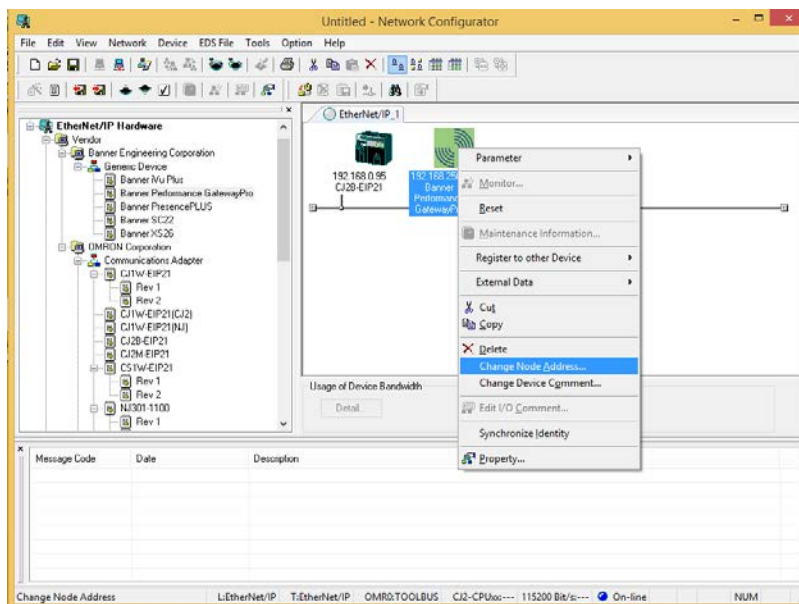
5. Choose the EDS file.



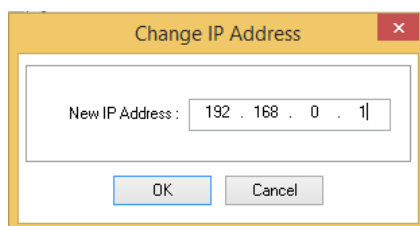
6. Double click the new item from the list at left to add it to the network.



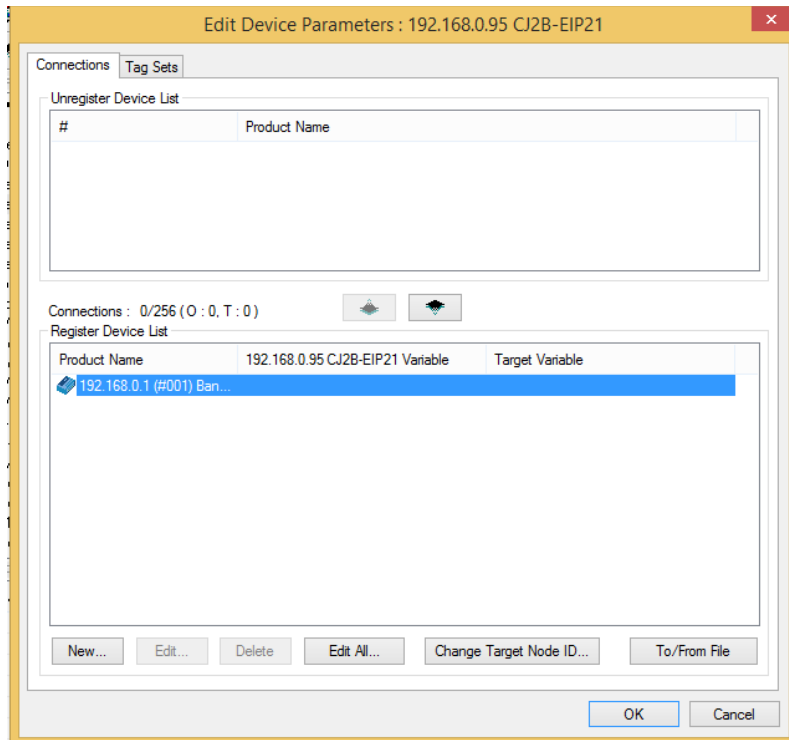
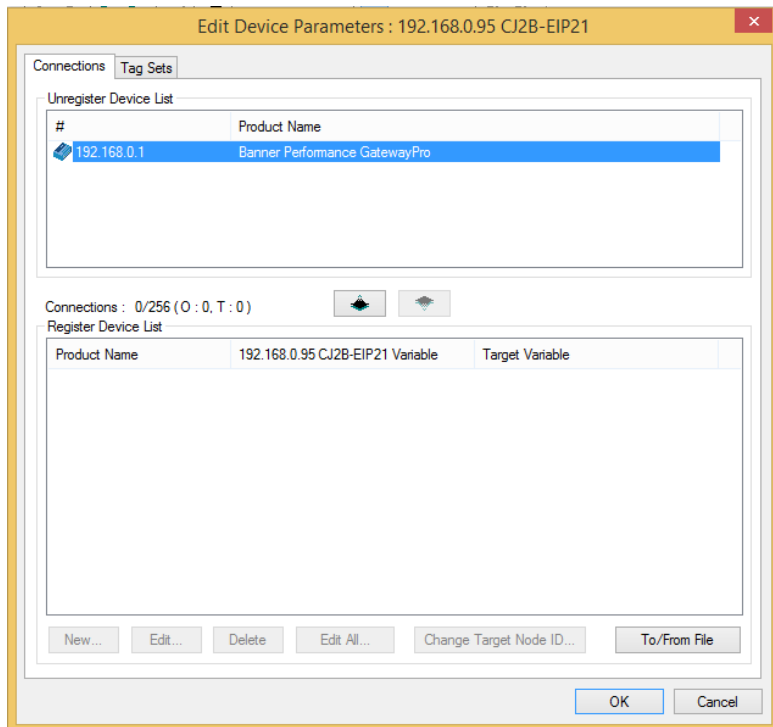
7. Right click on the GatewayPro to change the IP address.



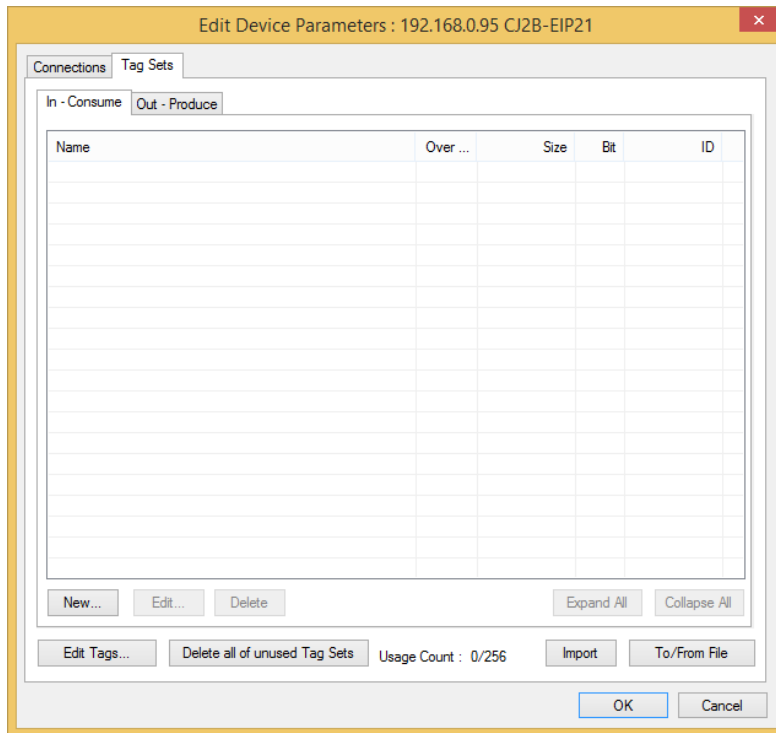
8. Enter the GatewayPro's IP address.



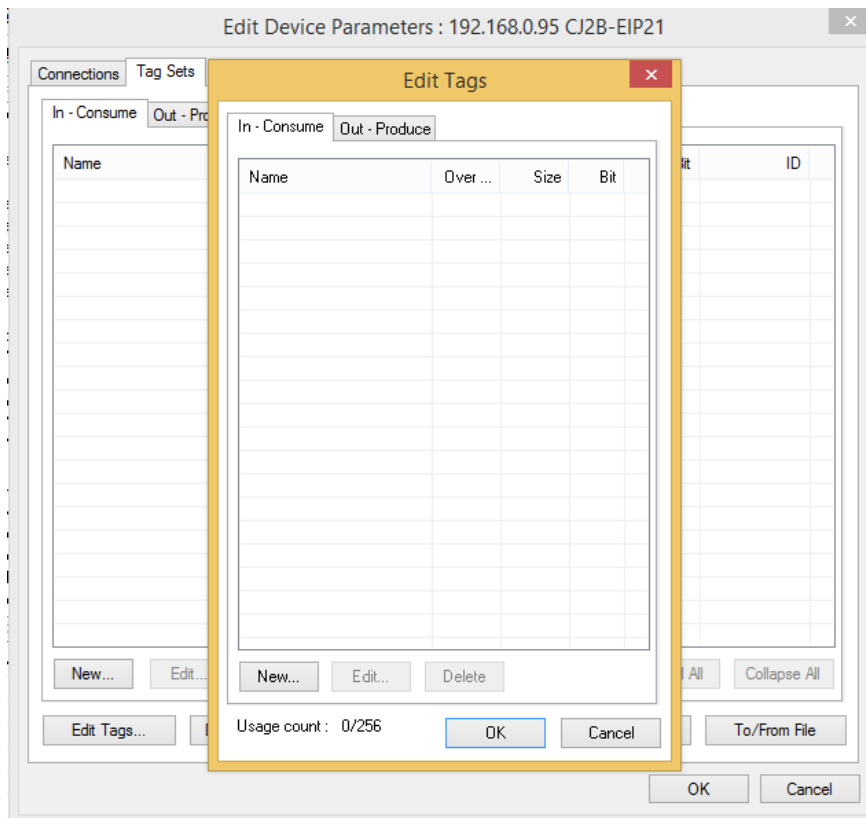
9. Double click on the PLC icon to edit the device parameters. Choose the GatewayPro from the “Unregister Device List”, then click the down arrow to send it to the “Register Device List”.



10. Click on the “Tag Sets” tab (to see the window below), then click the “Edit Tags...” button.

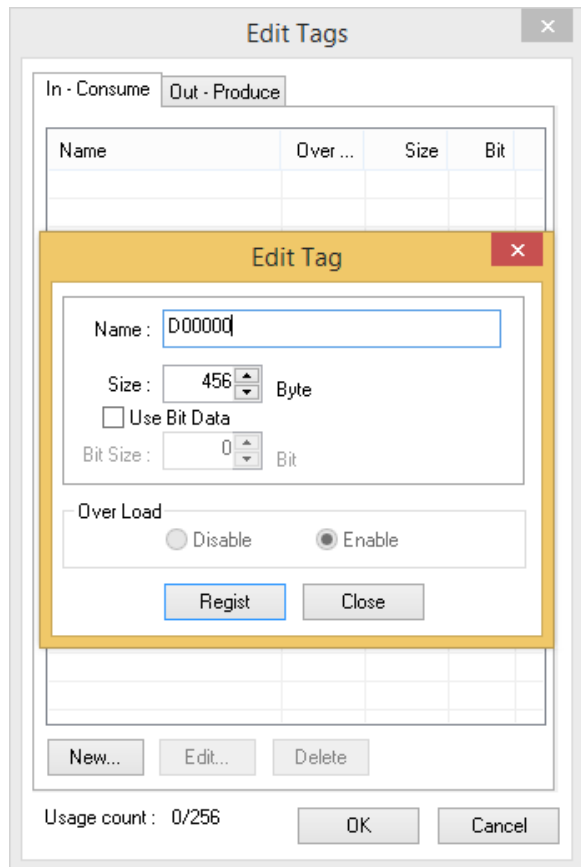


11. Choose the “In- Consume” tab, then click “New”.



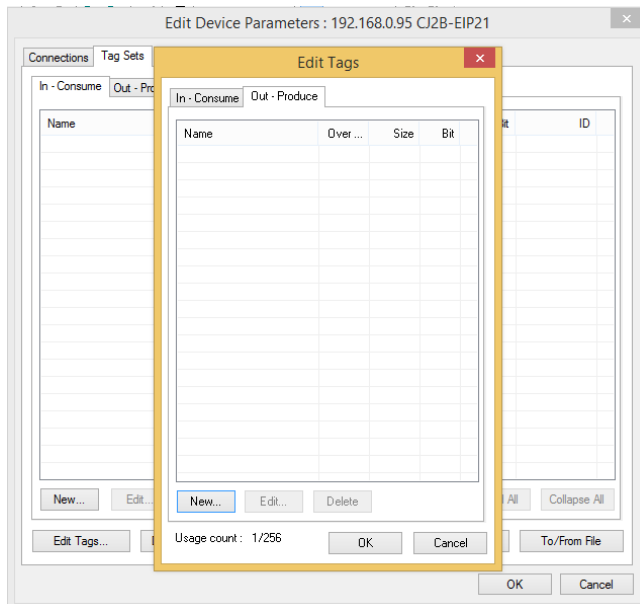
12. Choose an appropriate type and size CPU Data Area. In our case, the GatewayPro will be sending out 16-bit words, so the DM area works. Choose a number of bytes equal to the size of the EIP assembly instance. Here we are looking at “In- Consume” (from the PLC’s point of view), which is the T→O assemblies. The GatewayPro has only one choice:

- a. 100 (0x64), size 456 bytes



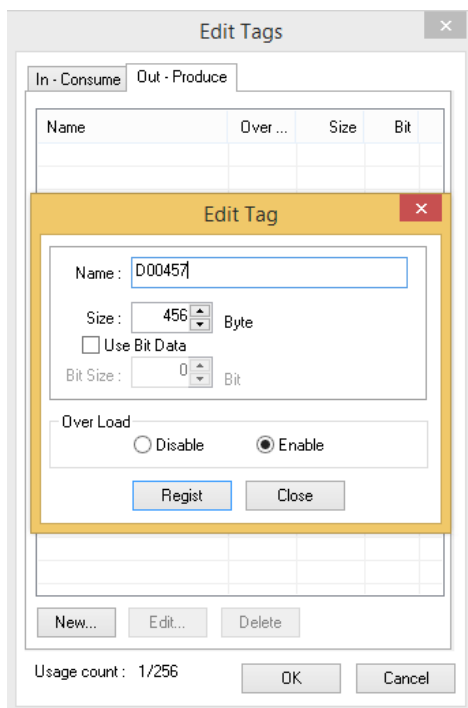
13. After filling in the Name (remember that this refers to a CPU Data Area on the PLC) and size in bytes, click the “Regist” button, then click “Close”.

14. Click on the Out- Produce tab, then click “New”.



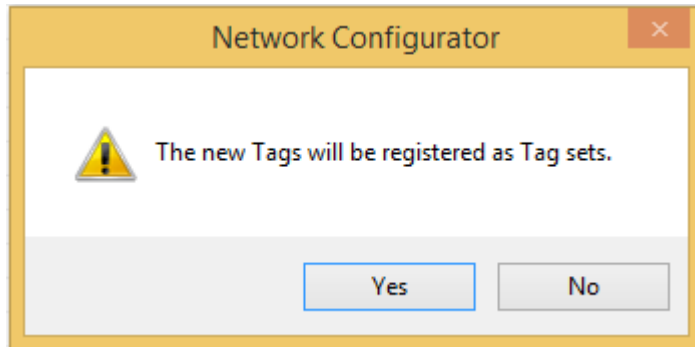
15. Choose an appropriate type and size CPU Data Area. In our case, the single GatewayPro O→T assembly instance is the same size as the T→O, so the DM area works.

a. 112 (0x70), size 456 bytes

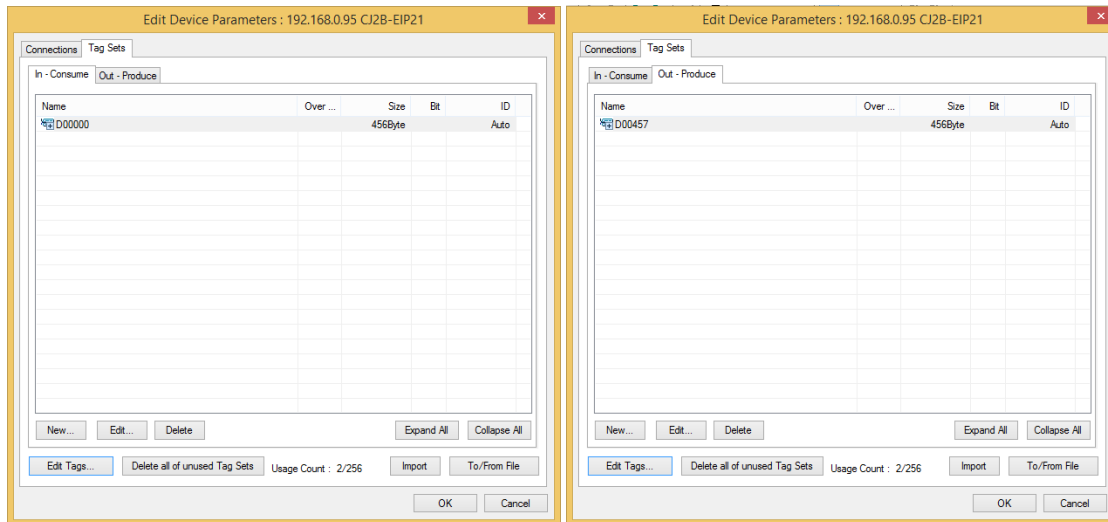


16. After filling in the Name (remember that this refers to a CPU Data Area on the PLC) and size in bytes, click the “Register” button, then click “Close”.

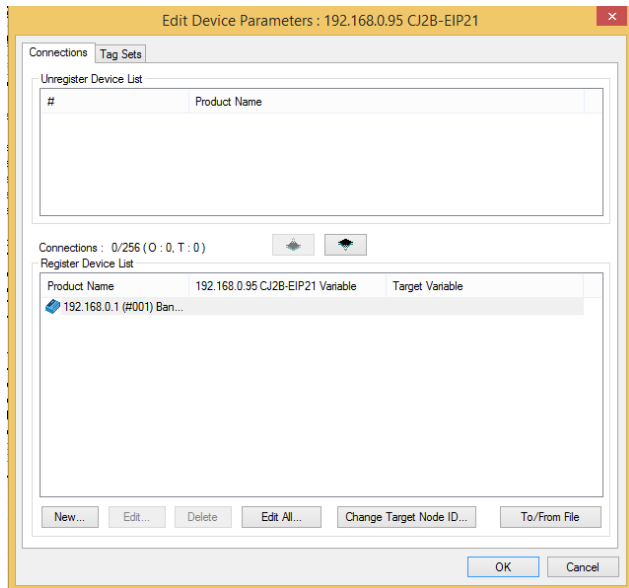
17. Click OK on the Edit Tags window, then click Yes when the software tells you “The new Tags will be registered as Tag sets.”



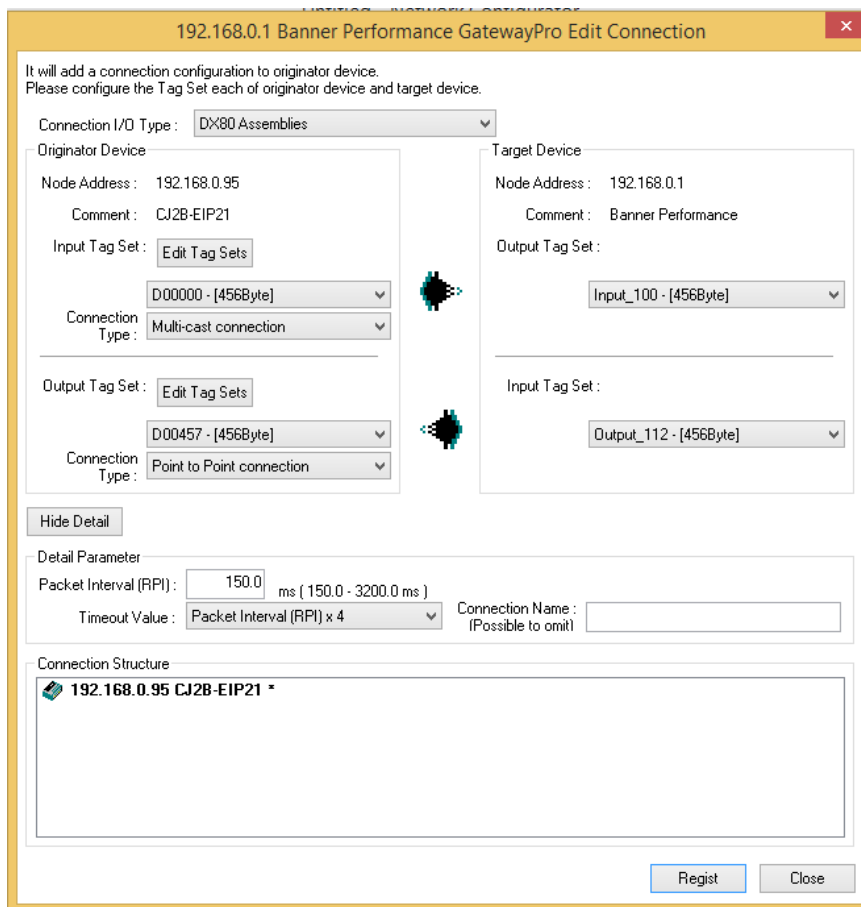
18. Double check the tags by clicking on both the In- Consume and Out- Produce tabs.



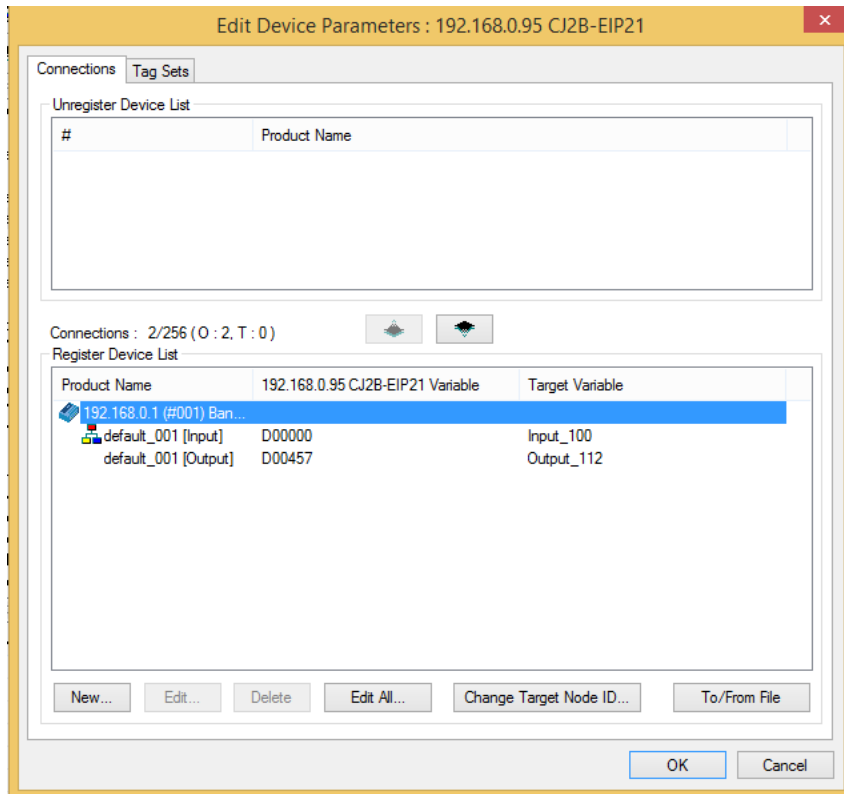
19. Go back to the “Connections” tab (to see the window below) then double click on the GatewayPro seen in the “Register Device List” to bring up the Edit Connection window.



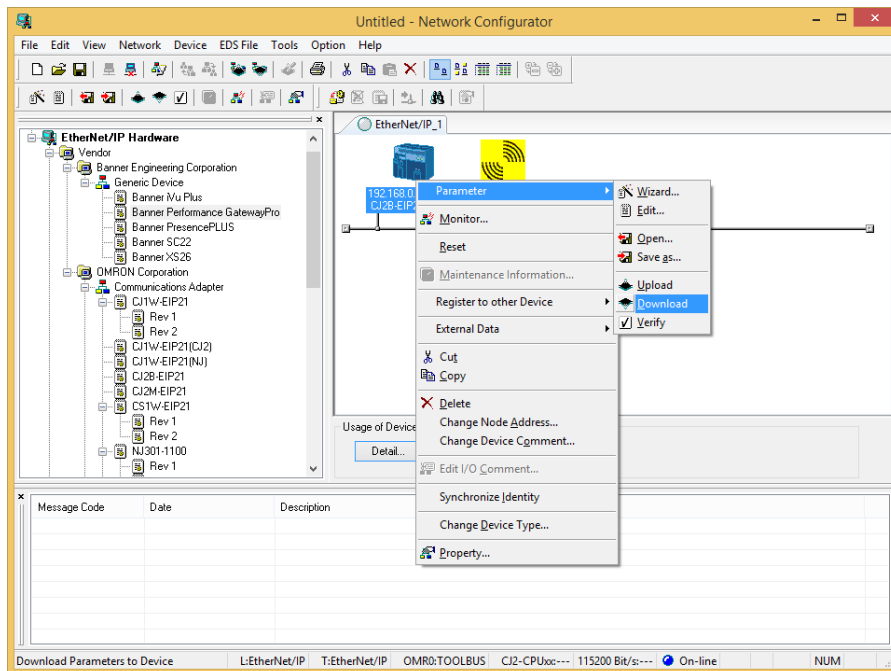
20. Fill in the connections and RPI, then click “Register”, then “Close”.



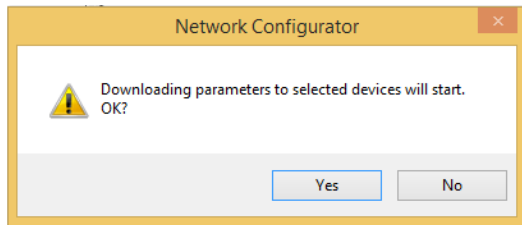
21. Now click "OK".



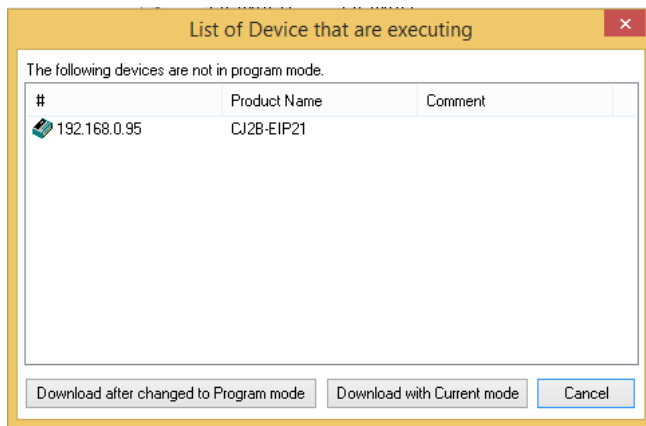
22. Go online and download the configuration to the PLC.



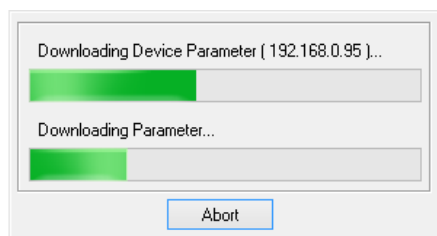
23. Click Yes.



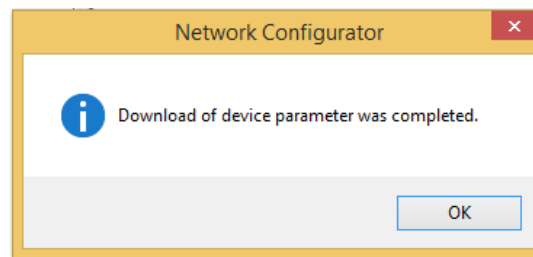
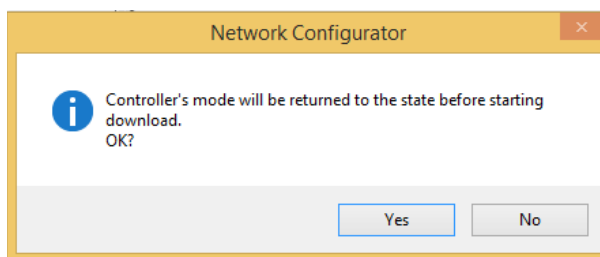
24. Choose a Download option.



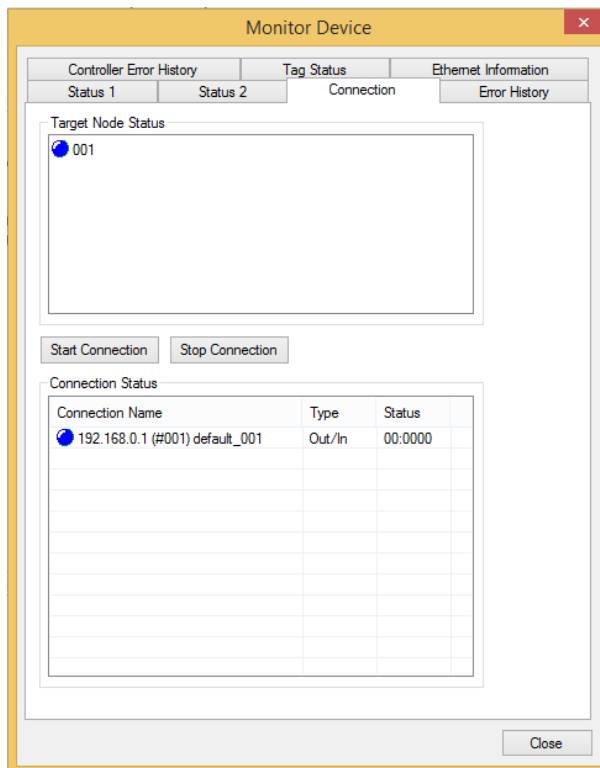
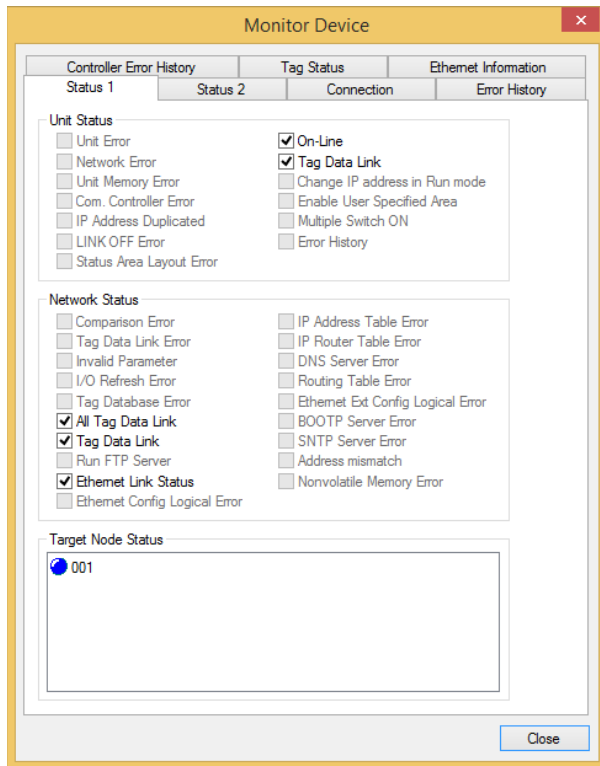
25. Downloading...



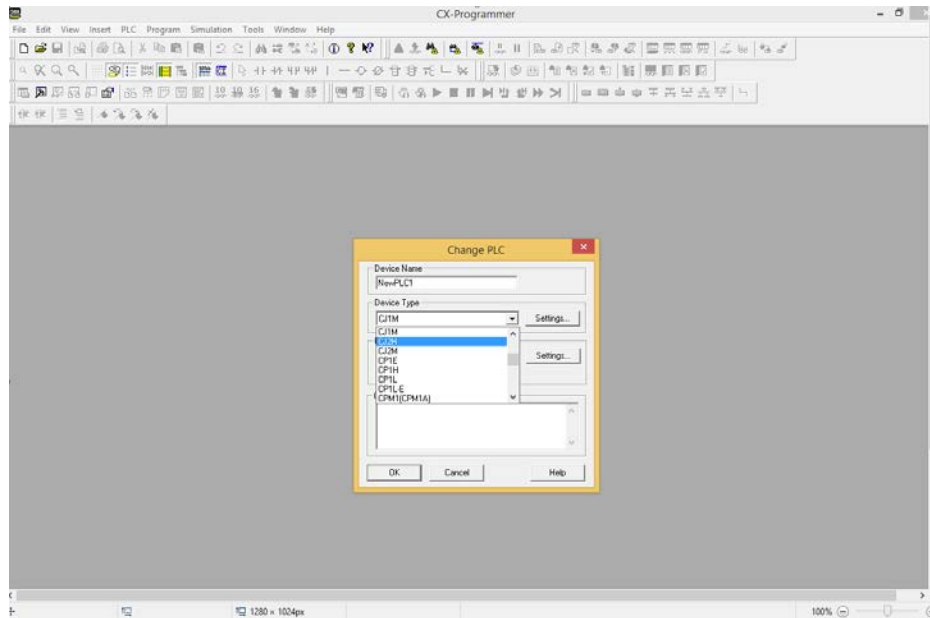
26. Click Yes, then click OK.



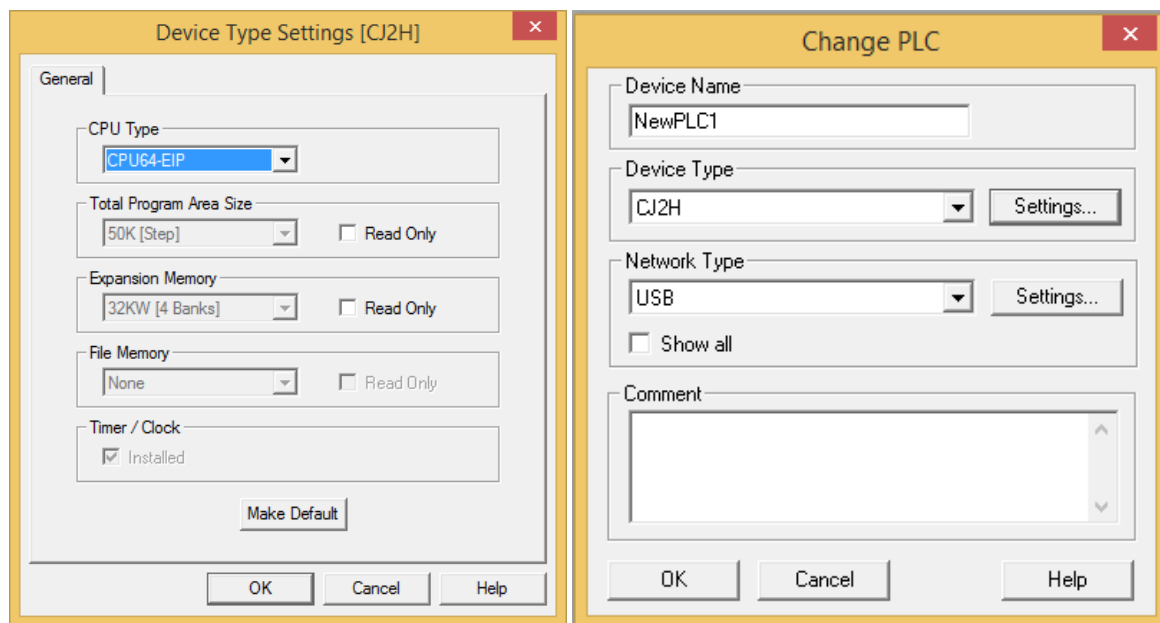
27. Now we can right click on the PLC icon and choose “Monitor”. This window can tell us if the connection looks good. Blue icons indicate a connection running fine, without errors.



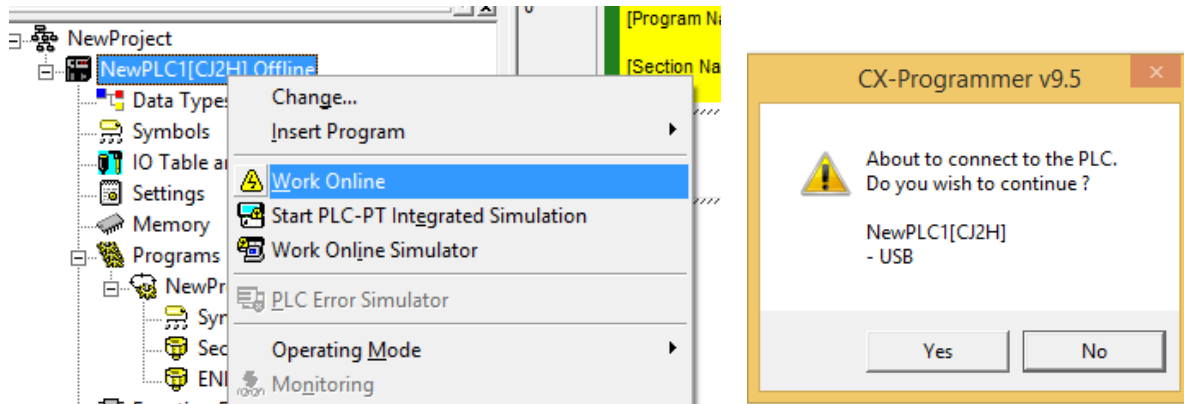
28. Now we can open the CX Programmer software. Click on File → New, then choose a PLC model and click “Settings”.



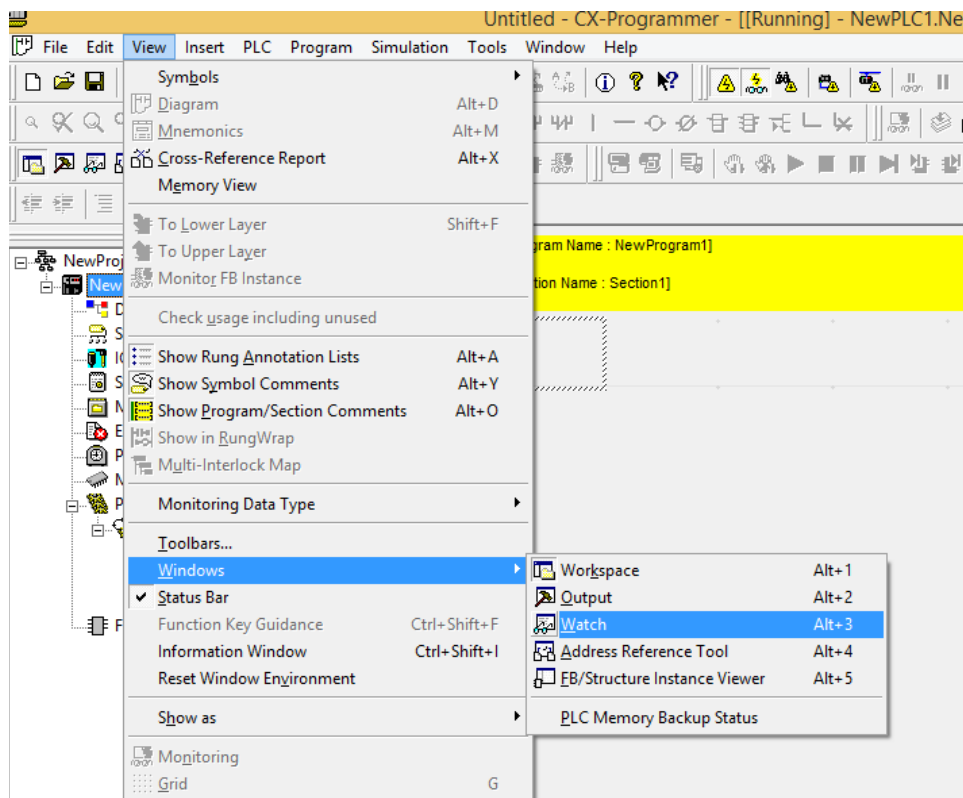
29. Choose a Type and click OK, then choose a Network Type and click OK.



30. Go Online with the PLC. Click Yes.



31. Go to View→Windows→Watch



32. Click on the top line in the Watch window.

PLC Na...	Name	Address	Data Type / Format	FB Usage	Value	Value(...	Comment

33. Add some registers to the watch window.

Edit dialog

PLC:

Name or address:

Data Type / Format:

PLC Na...	Name	Address	Data Type / Format	FB Usage	Value	Value(Binary)
NewPLC1		D0	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D1	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D2	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D3	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D4	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D5	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D6	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D7	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D8	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D9	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D10	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D11	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D12	INT (Signed Decimal,Channel)		+168	0000 0000 1010 1000
NewPLC1		D13	INT (Signed Decimal,Channel)		+172	0000 0000 1010 1100
NewPLC1		D14	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D15	INT (Signed Decimal,Channel)		+128	0000 0000 1000 0000
NewPLC1		D457	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D458	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D459	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D460	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D461	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D462	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D463	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D464	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000
NewPLC1		D465	INT (Signed Decimal,Channel)		+1	0000 0000 0000 0001
NewPLC1		D466	INT (Signed Decimal,Channel)		0	0000 0000 0000 0000

In the watch window above, we see a block of PLC Inputs (registers D0 through D15) and a block of PLC Outputs (registers D457 through D466). Notice how the GatewayPro health register shows up as D15, and how two analog values (from a device connected via radio to the GatewayPro) show up in registers D12 and D13. Finally, we see evidence of a discrete output leaving the PLC, headed for the wireless network, as register D465 is set to "1".