515RTAENI-N34

Use Cases

Revision 1

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Contents

Overview

This documentation is for the most common use cases. This will not go through all the configurable parameter within the 515RTAENI, please refer to the 515RTAENI user guide which can be found on the provided CD.

The following use cases are for the 515RTAENI-N34

(E) = Ethernet Connection

(S) = Serial Connection

For Peer to Peer messaging the first protocol is where the message instruction is in the application.

Ex. SLC (S) to CompactLogix (E). The SLC would have the message command.

RSLogix 500:

MicroLogix (S)

1. Verify the serial setting in the Network Tab of the 515RTAENI match the DF1 serial settings for your MicroLogix PLC.
    a. To verify your PLC DF1 Serial setting refer to PLC Serial Setting section of this guide.

2. Make sure using Allen-Bradley 1756-CP3 Cable (DB9 to DB9) or Allen-Bradley 1761-CBL-PM02 Ser. C (Mini din to DB9).

3. Load the Latest EDS file.

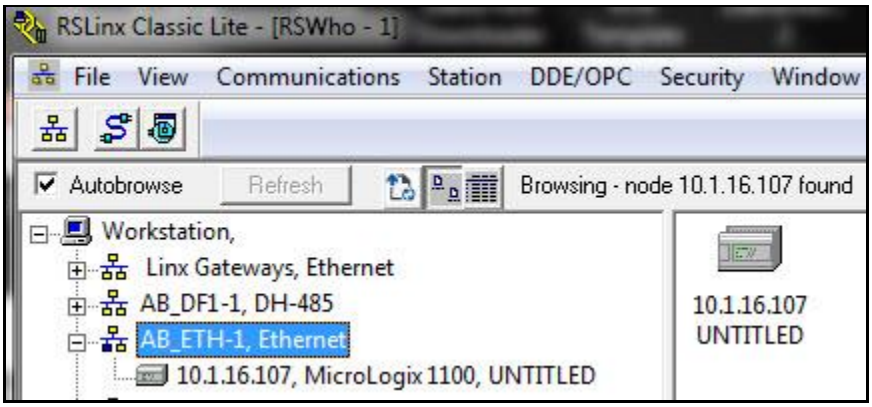
    a. You can load the latest EDS for ether the CD or the Utility's tab on the Web based configuration. (Refer to How to load EDS file section of this guide if you need help.)

4. Create Ethernet Device Driver in RSLinx

    a. Use IP Address of the 515RTAENI

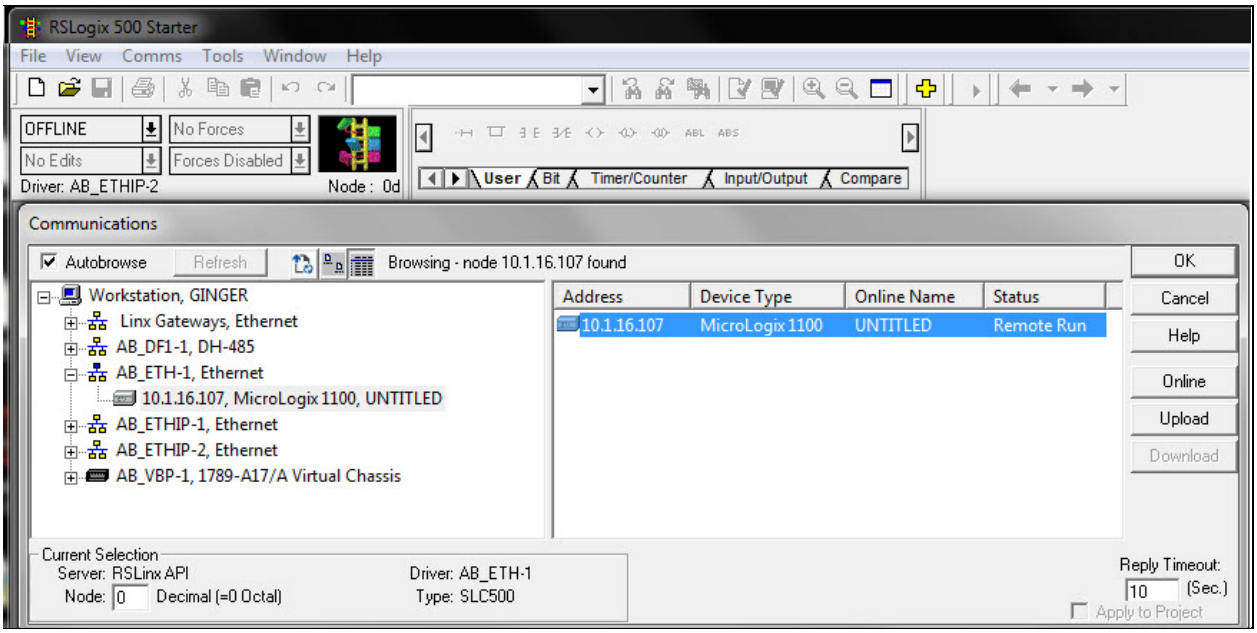
Note: Use Ethernet Devices Drivers in RSLinx.
SLC and MicroLogix don't work with the Ethernet/IP Driver.

    b. Verify your MicroLogix can be found in RS Links:



Open RSLogix 500

Select Comms -> System Comms -> Select your Driver and the 515RTAENI -> Download, Upload or Online



SLC 5/03, 04, 05 (S)

1. Verify the serial setting in the Network Tab of the 515RTAENI match the DF1 serial settings for your SLC PLC.
    a. To verify your PLC DF1 Serial setting refer to PLC Serial Setting section of this guide.

1. Make sure using Allen-Bradley 1756-CP3 Cable (DB9 to DB9)

Note: Don't use an Allen-Bradley 1761-CBL-PM02 Ser. C (Mini din to DB9) with a SLC 5/04. Channel 1 is used for DH+. It sends +- 14 volts on some pins, thus will result in hardware failure.

2. Load the Latest EDS file.

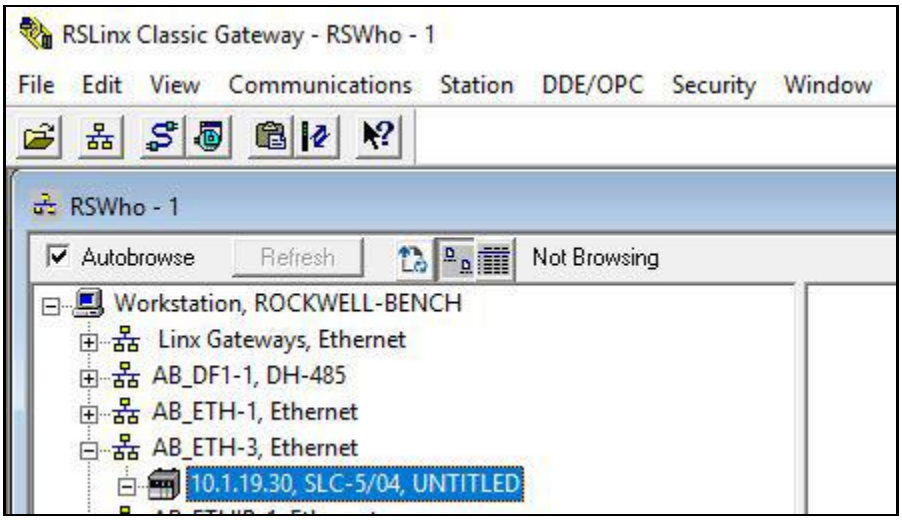
    a. You can load the latest EDS for ether the CD or the Utility's tab on the Web based configuration. (Refer to How to load EDS file section of this guide if you need help.)

3. Create Ethernet Device Driver in links

    a. Use IP Address of the 515RTAENI

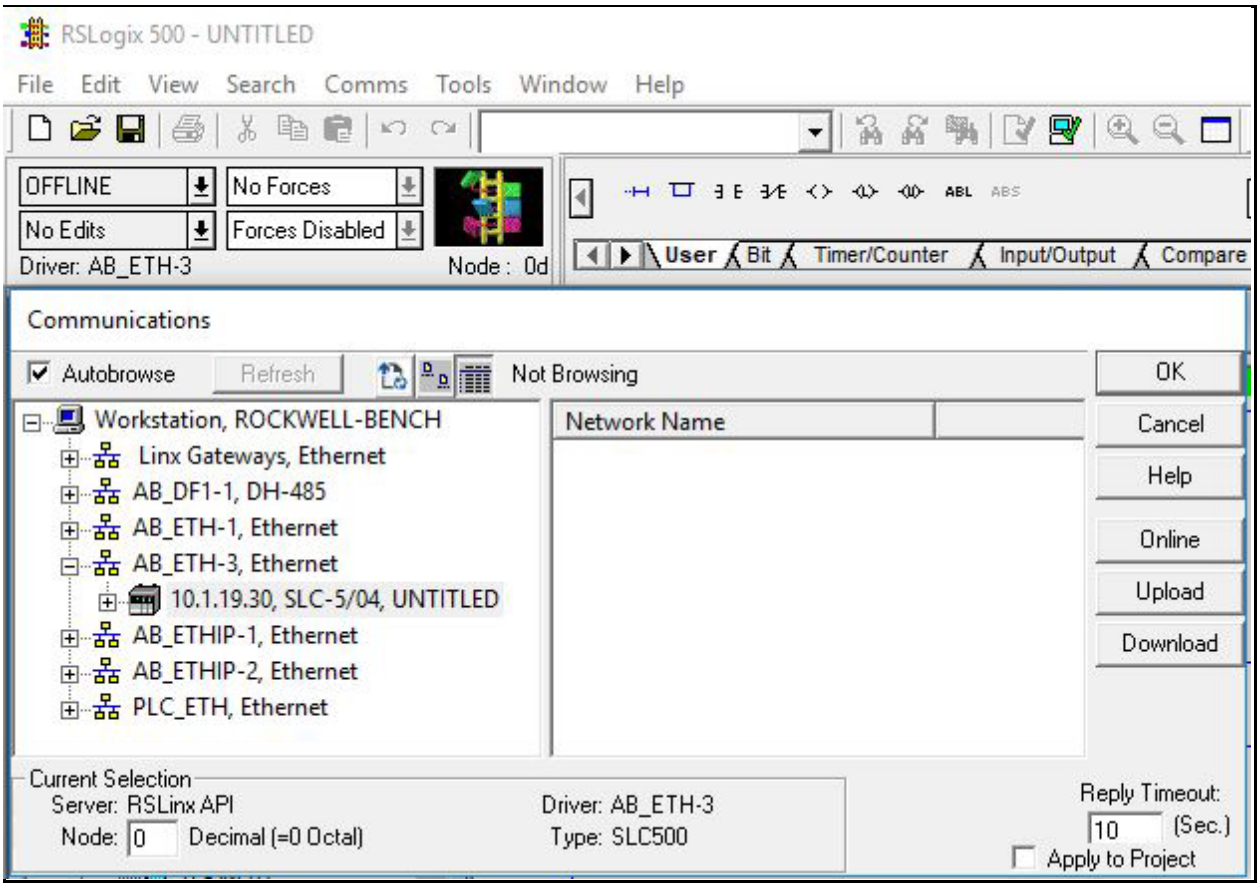
Note: Use Ethernet Device Drivers in RSLinx.

Verify your SLC can be found in RS Links:



Open RSLogix 500

Select Comms -> System Comms -> Select your Driver and the 515RTAENI -> Download, Upload or Online



RSLogix 5000:

CompactLogix (S) (L32E), ControlLogix (S)

1. Verify the serial setting in the Network Tab of the 515RTAENI match the DF1 serial settings for your SLC PLC.
    a. To verify your PLC DF1 Serial setting refer to PLC Serial Setting section of this guide.

Note: By Default, the L32E CompactLogix serial port is set to BCC.

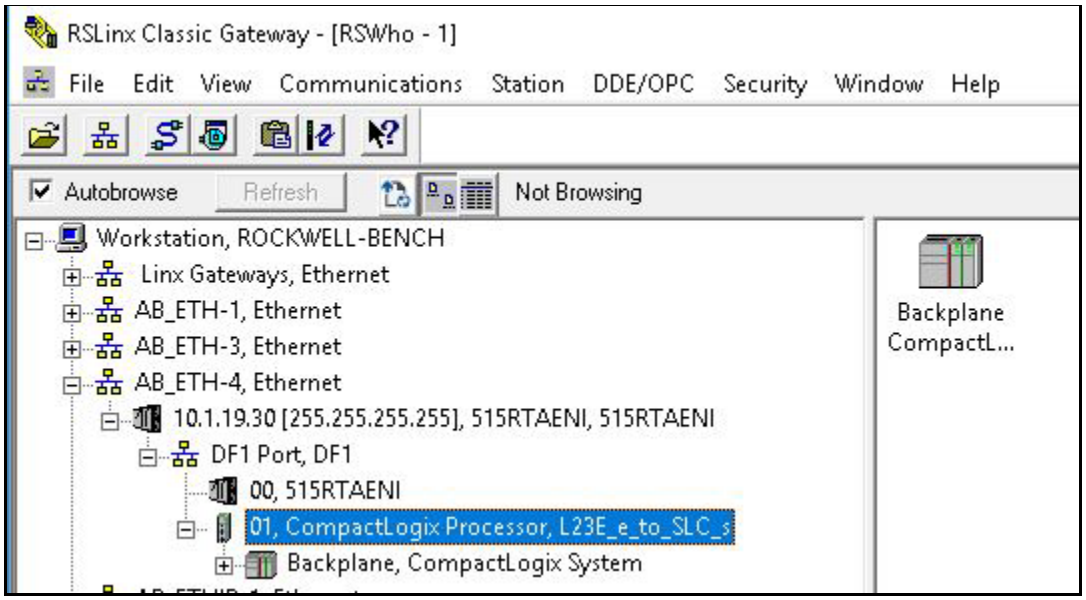
1. Make sure using Allen-Bradley 1756-CP3 Cable (DB9 to DB9)

2. Load the Latest EDS file.

    a. You can load the latest EDS for ether the CD or the Utility's tab on the Web based configuration.

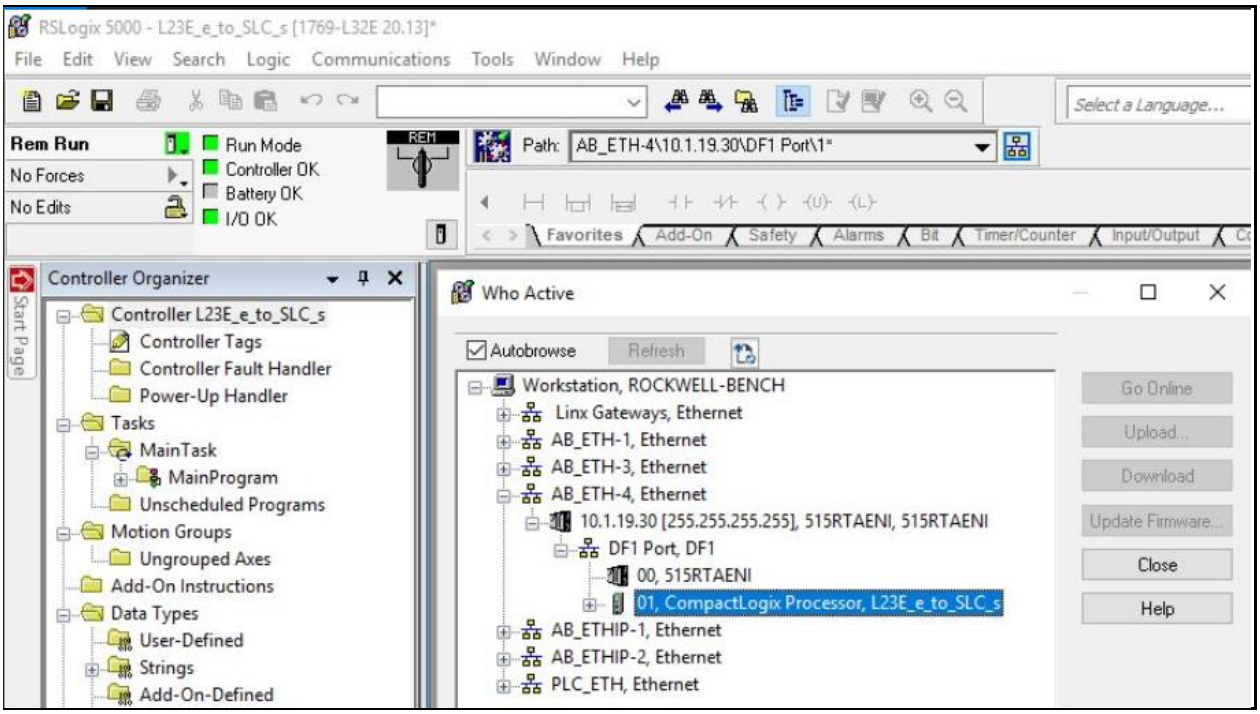
3. Create Ethernet Device Driver in links

    a. Use IP Address of the 515RTAENI



Open RSLogix 5000

Select Communications -> Who Active-> Select your Driver and Drill through the 515RTAENI to the 01, CompactLogix .... -> Download, Upload or Online.



Peer to Peer MSG:

MicroLogix (E) to SLC 5/03, 04, 05, MicroLogix (S)

Load up RSLogix 500 (E),

Create new Program or modify program for MicroLogix (E)

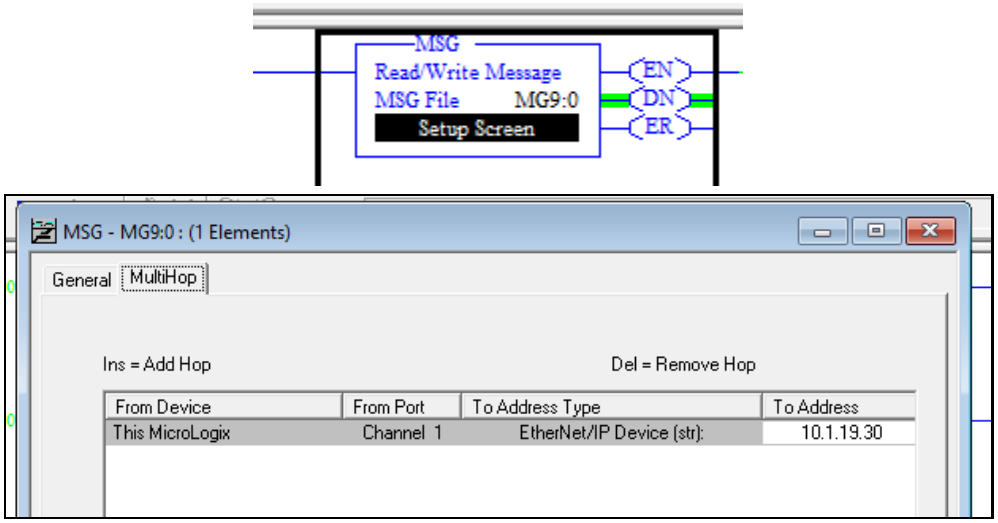
Files to Create

MG9 Elements 1

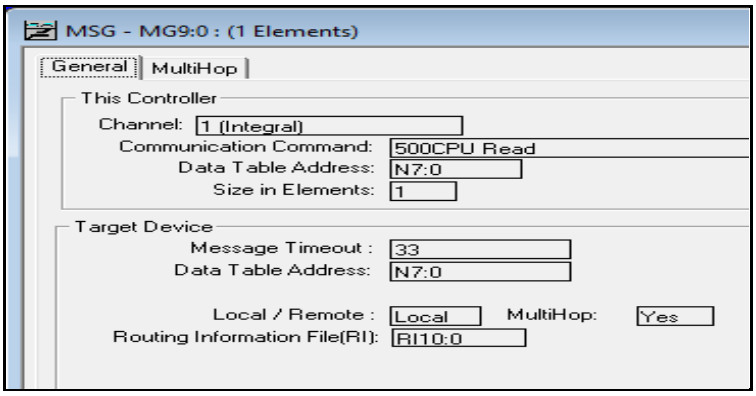
RI10 Elements 1

Note: How to Create Files: While offline Right Click Data Files and Add New.

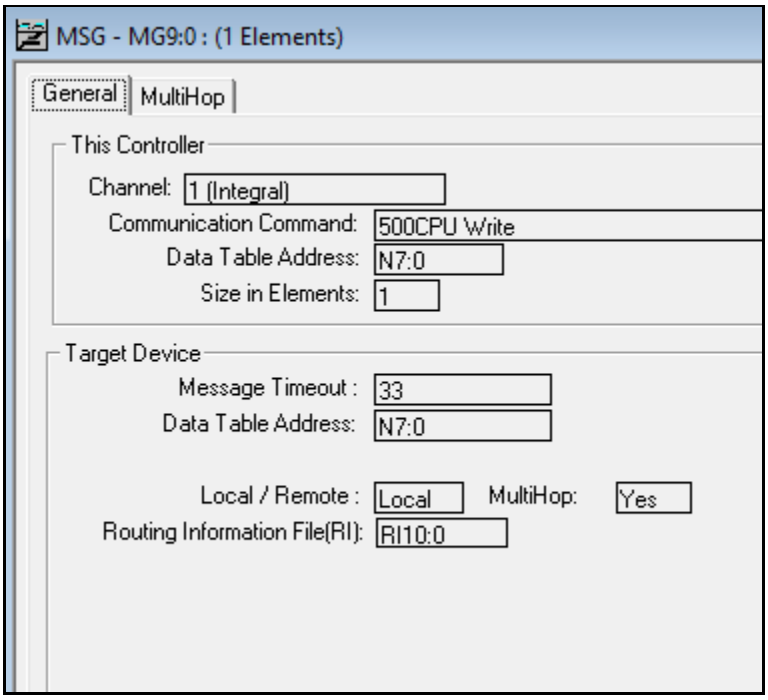
Message Instruction:



Read Setup:



Write Setup:



Select Comms -> System Comms -> Select your Driver and the MicroLogix PLC -> Download

Load up a different RSLogix 500 for the serial PLC (S).

Make sure you have the Target Device Data Table Address in your serial PLC, in the example that is "N7:0"

Select Comms -> System Comms -> Select your Driver and the 515RTAENI -> Download

Note: Make sure all PLC are in Run mode

CompactLogix (E) to SLC 5/03, 04, 05, MicroLogix (S)

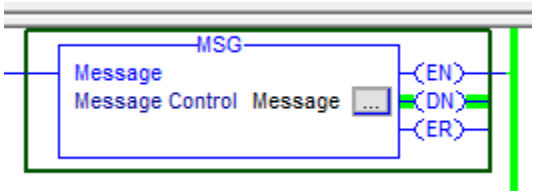
Load up RSLogix 5000 (CompactLogix)

Create new Program or modify existing program for your CompactLogix (E)

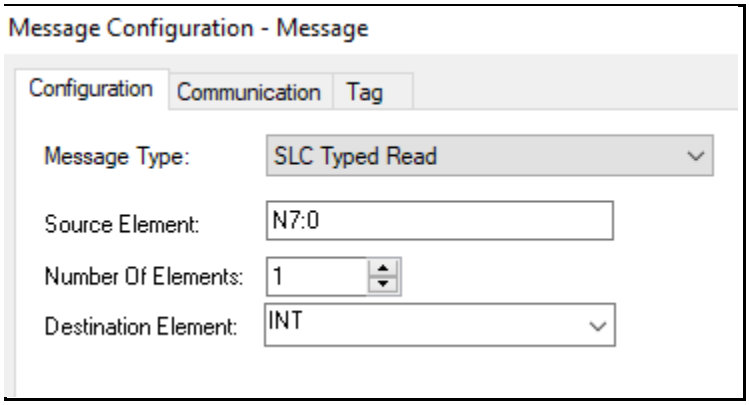
Controller Scope Tags:

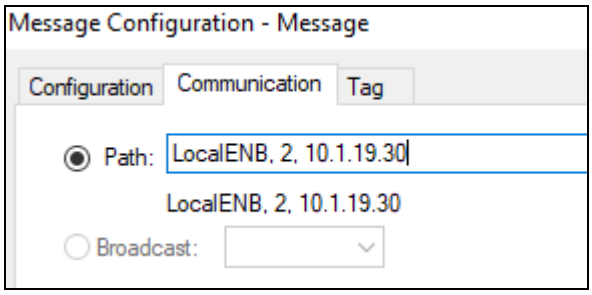
Add a Tag for your Message instruction and a Tag for your Data.

Message Instruction:



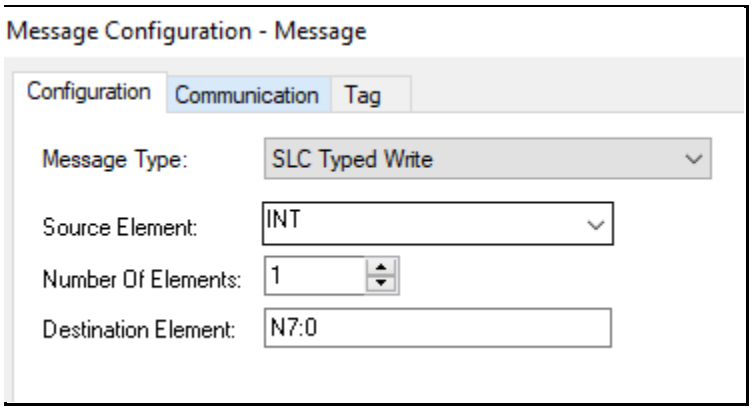
Read setup:

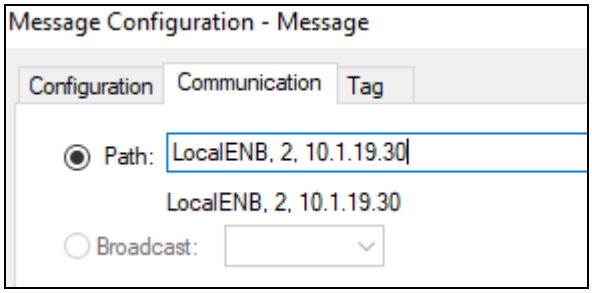




Use "1,1,2,<Ip Address of Gateway>" ex. 1,1,2,192.168.0.100

Write Setup:





Use "1,1,2,<Ip Address of Gateway>" ex. 1,1,2,192.168.0.100

Note: 1,1 will automatically convert into LocalENB in L32E PLC, L24ER will display Discrete IO and just remove the 1,1 portion.

Download to PLC

Select Communications -> Who Active-> Select your Driver and Drill through the CompactLogix till you get to the 01, CompactLogix ... -> Download.

Note: Make sure your SLC 5/03, 04, 05, MicroLogix (S) is in run mode.

SLC (S) to MicroLogix (E)

Load up RSLogix 500 (SLC),

Create new Program or modify existing program

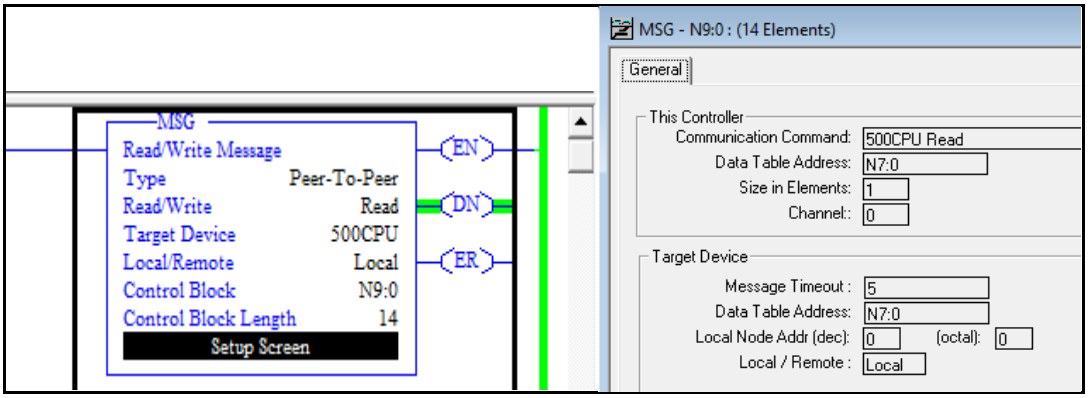
Files to Create / Verify

N9 Elements 10

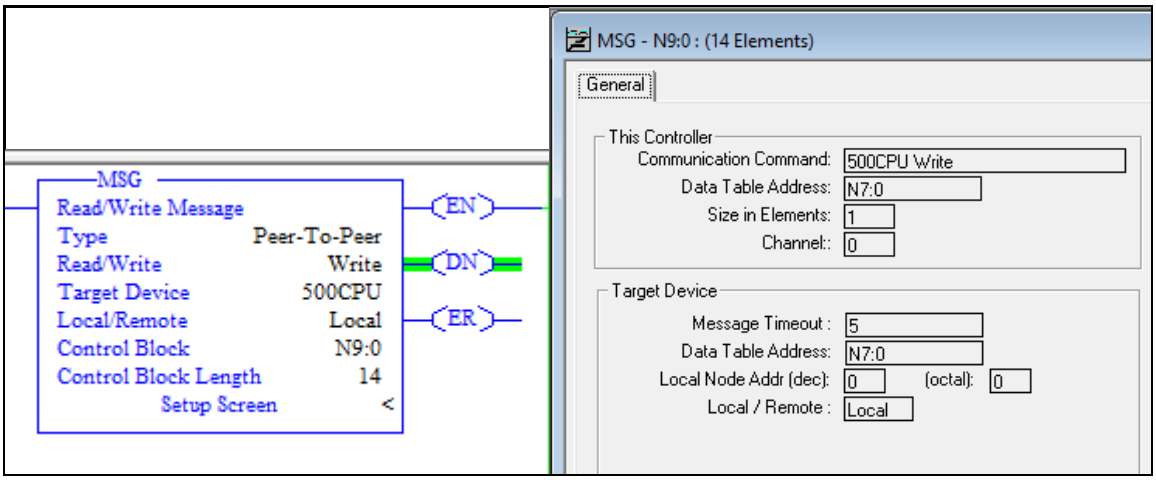
Note: How to Create Files: While offline Right Click Data Files and Add New.

Message Instruction:

Read Setup:



Write Setup:



Note: In Message Instruction, you can use any Node to talk to the MicroLogix

Load up RSLogix 500 (MicroLogix)

Create new Program or modify existing program

Make sure you have the Target Device Data Table Address in your PLC, in the example that is “N7:0”

SLC (S) to CompactLogix (E)

Load up RSLogix 500 (SLC),

Create new Program or modify existing program

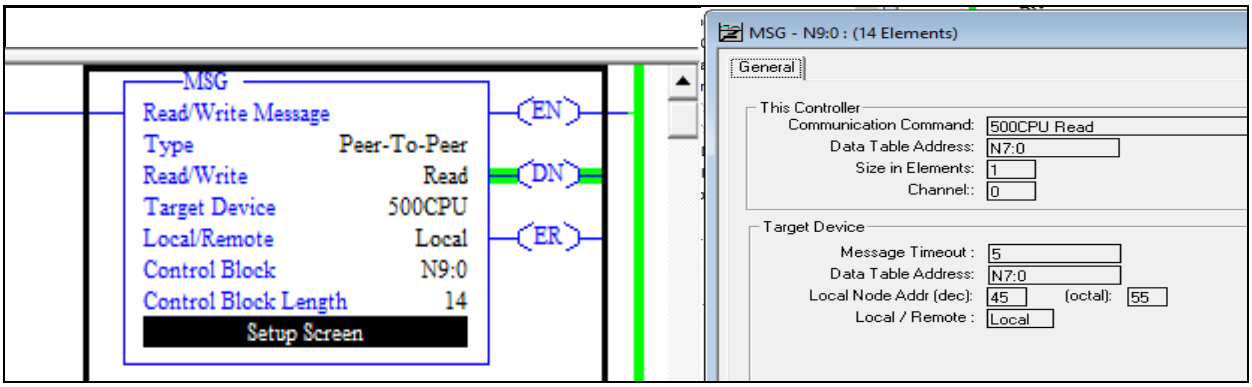
Files to Create / Verify

N9 Elements 10

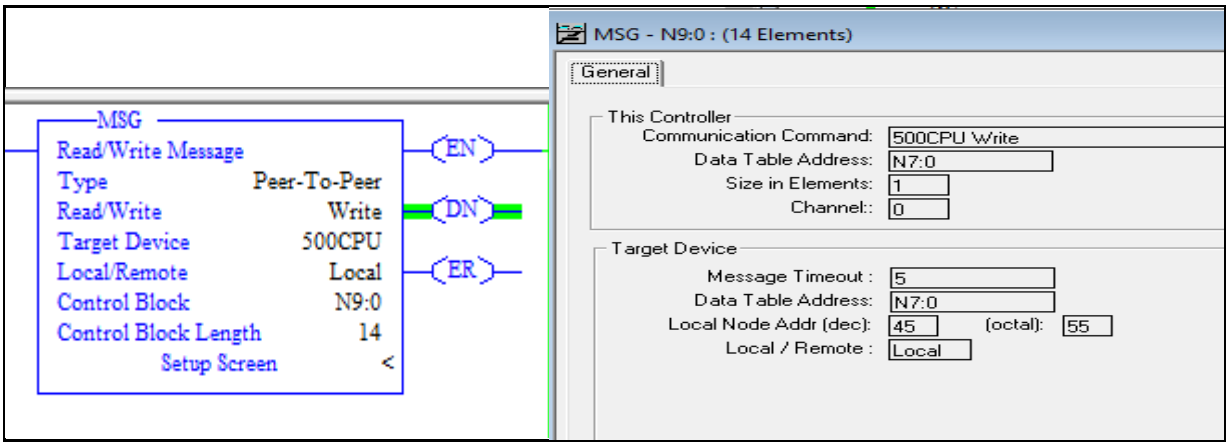
Note: How to Create Files: While offline Right Click Data Files and Add New.

Message Instruction:

Read Setup:



Write Setup:



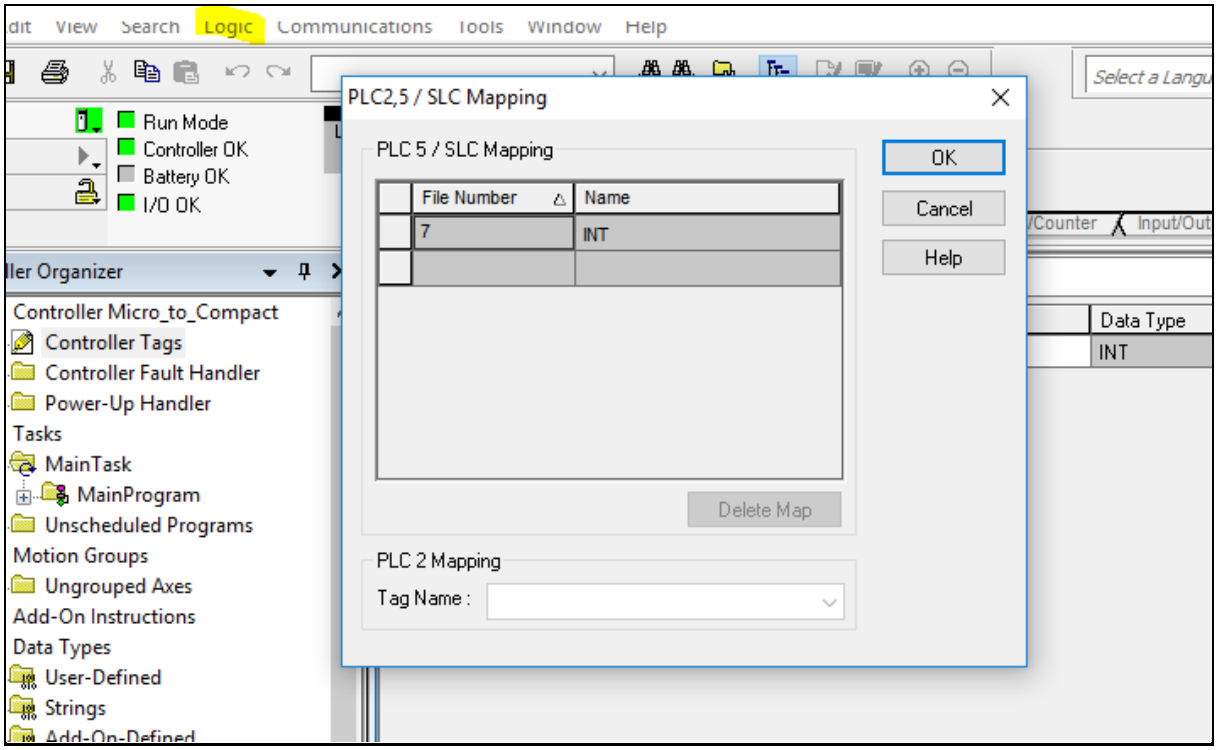
Note: In Message Instruction, you can only use node 45-49 to talk to the CompactLogix

Load up RSLogix 5000 (CompactLogix)

Create new Program or modify existing program

Make sure you have the Target Device Data Table Address in your PLC, in the example that is “N7:0”

Note: To link a File to Tag “Logic -> Map PLC/SLC Messages -> *select File you want to use* and * Tag you made*”



MicroLogix (S) to CompactLogix (E)

Load up RSLogix 500 (MicroLogix),

Create new Program or modify existing program

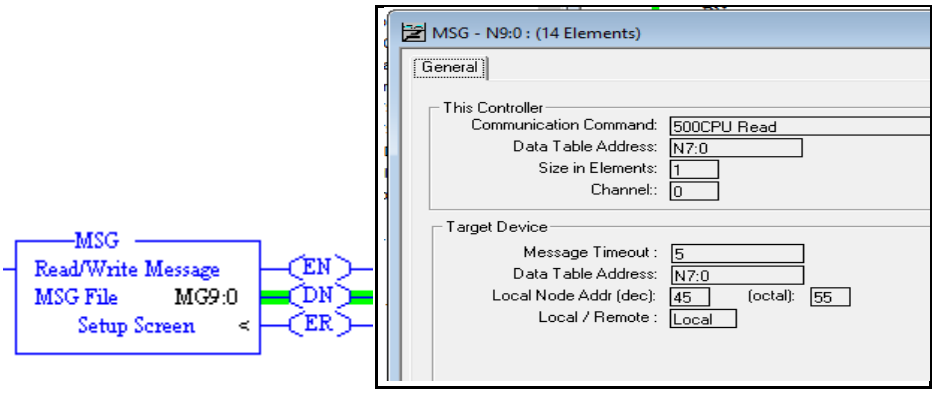
Files to Create / Verify

N9 Elements 10

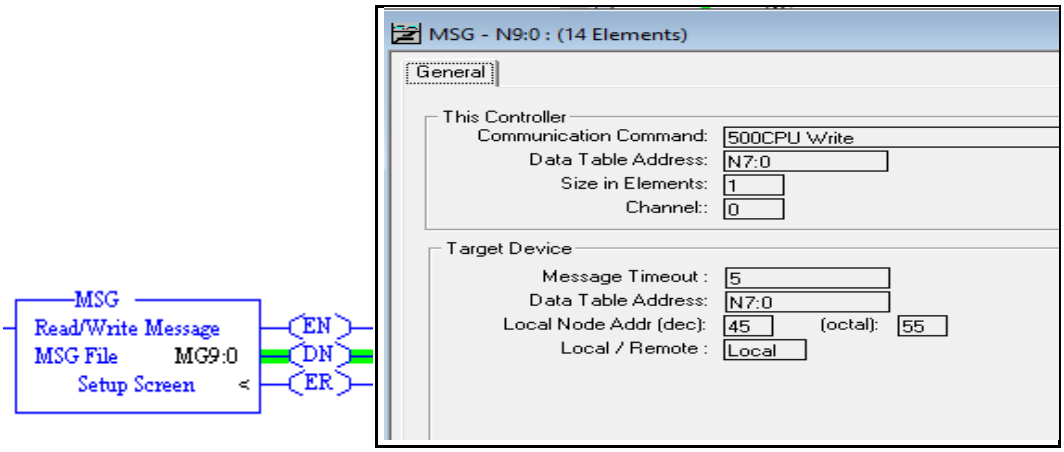
Note: How to Create Files: While offline Right Click Data Files and Add New.

Message Instruction:

Read Setup:



Write Setup:



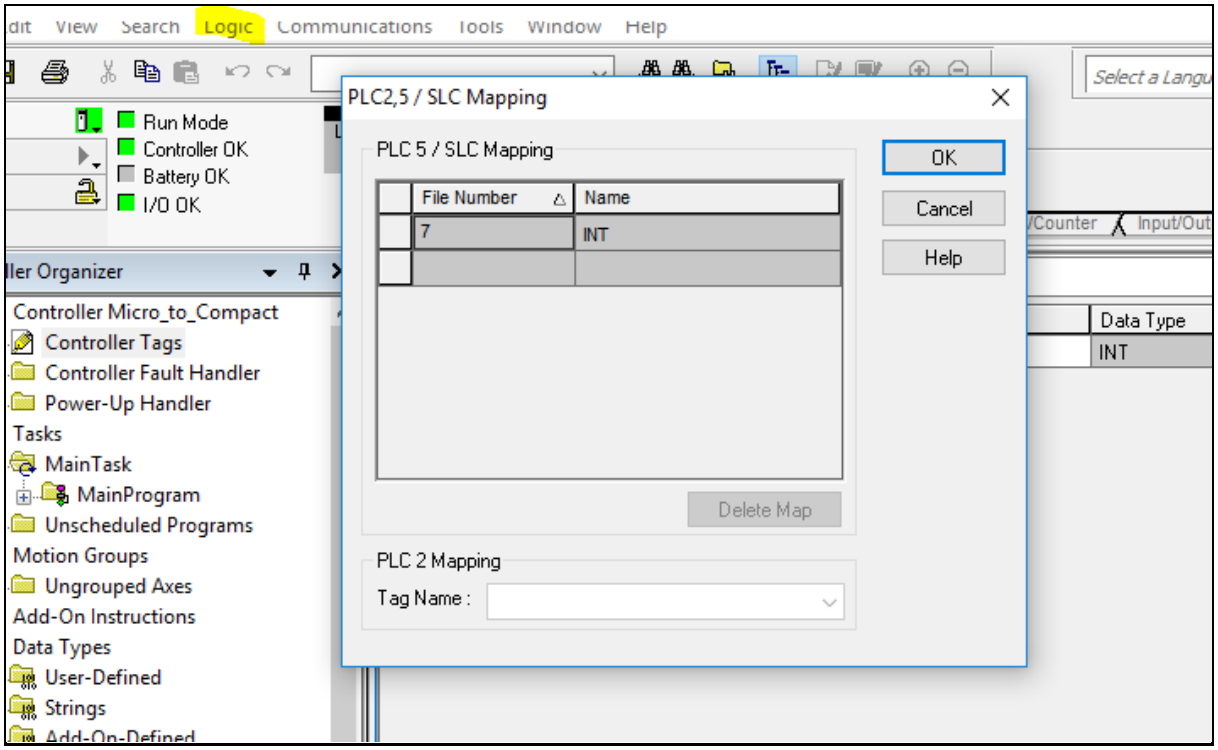
Note: In Message Instruction, you can only use node 45-49 to talk to the CompactLogix

Load up RSLogix 5000 (CompactLogix)

Create new Program or modify existing program

Make sure you have the Target Device Data Table Address in your PLC, in the example that is “N7:0”

Note: To link a File to Tag “Logic -> Map PLC/SLC Messages -> *select File you want to use* and * Tag you made*”



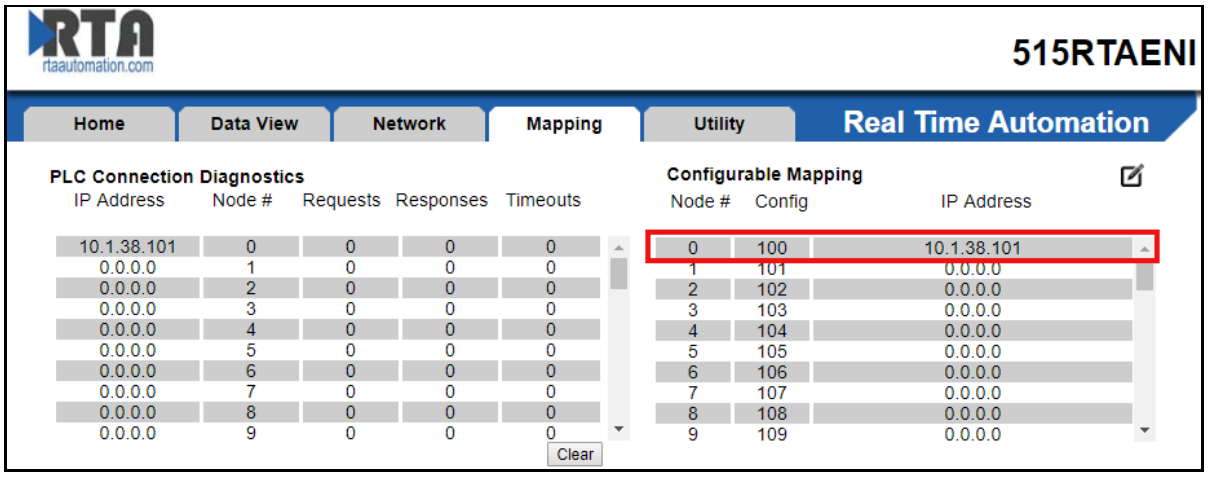
Message Routing

How to set up 515RTAENI Node to IP Address Routing

Load the 515RTAENI's web based configuration.

Navigate to the Routing tab

Select the Edit option on the right side, select the node you want add IP Address of the end device then Save.



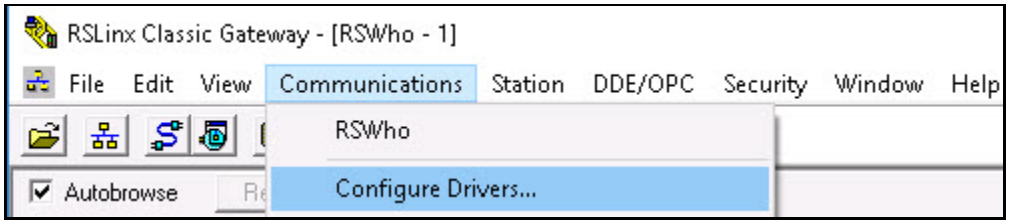
Note: Make sure all PLC are in run mode

PLC Serial setting

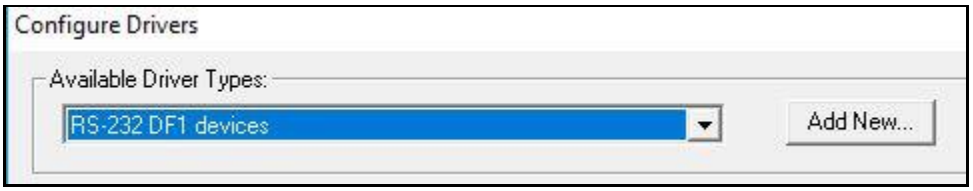
Verify the Serial settings of your Serial PLC.

1. Connect a Null modem cable from your PC to your PLC.

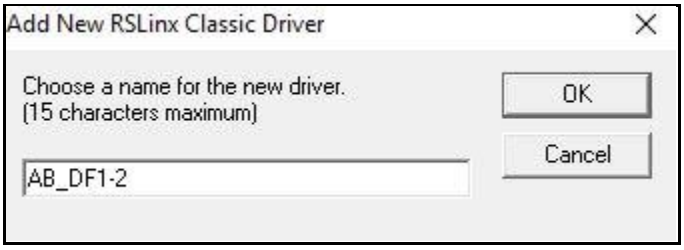
2. Open RSLinx and navigate to Communication -> Configure Drivers.



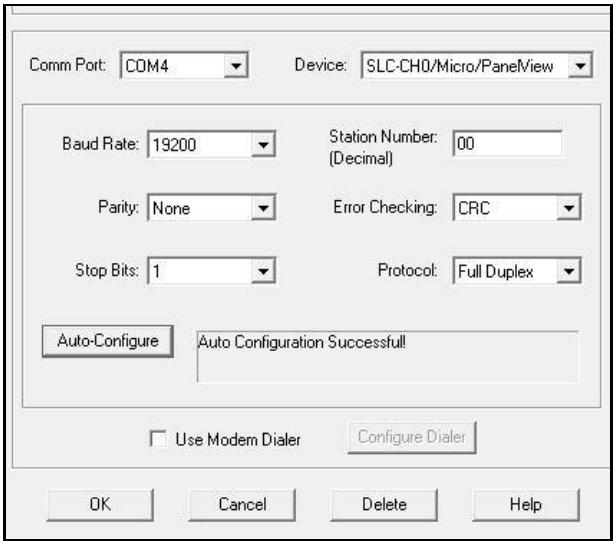
3. In the Dropdown select RS-232 DF1 Devices then “Add New”.



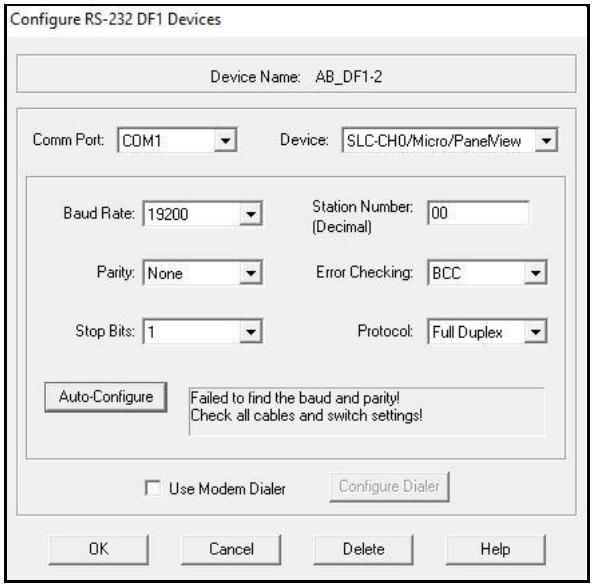
4. Name your Driver and Select “Ok”



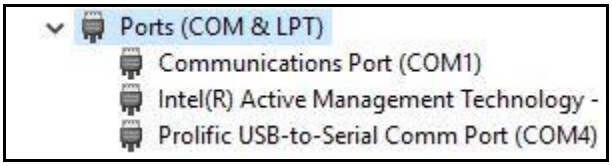
5. Then Select the correct Comm Port of your PC, Click Auto-Configure.



6. If you did not get a successful message verify your Comm Port.



7. PC Device Manager -Ports.

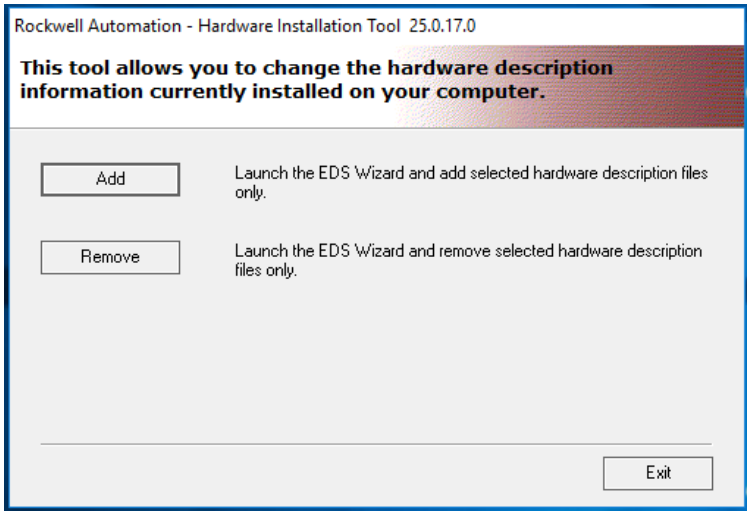


If still having issues verify you are using a Null Modem Cable, if using an adapter verify that it is working or swap it out.

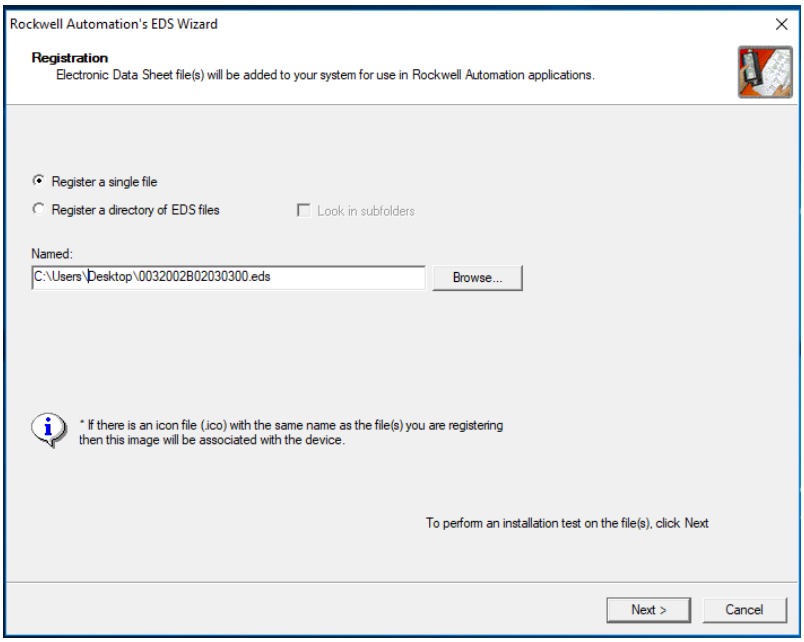
How to Load EDS File:

EDS Hardware Installation Tool

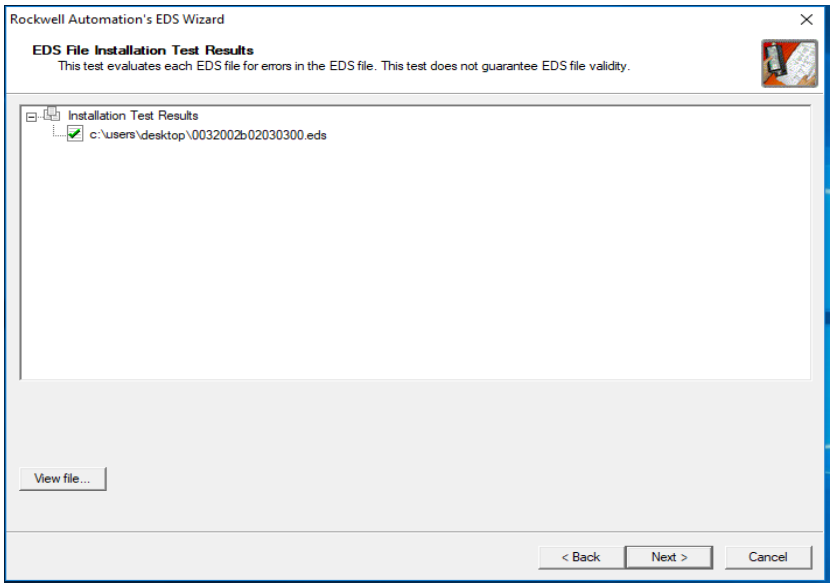
1. Move EDS File to Desktop.
    a. EDS files can be found on provided CD or on the Web based configuration of the Gateway, located on the Utilities tab (Save .eds link as).
2. Launch Allen-Bradley's EDS Hardware Installation Tool. (Might need to run as administrator)



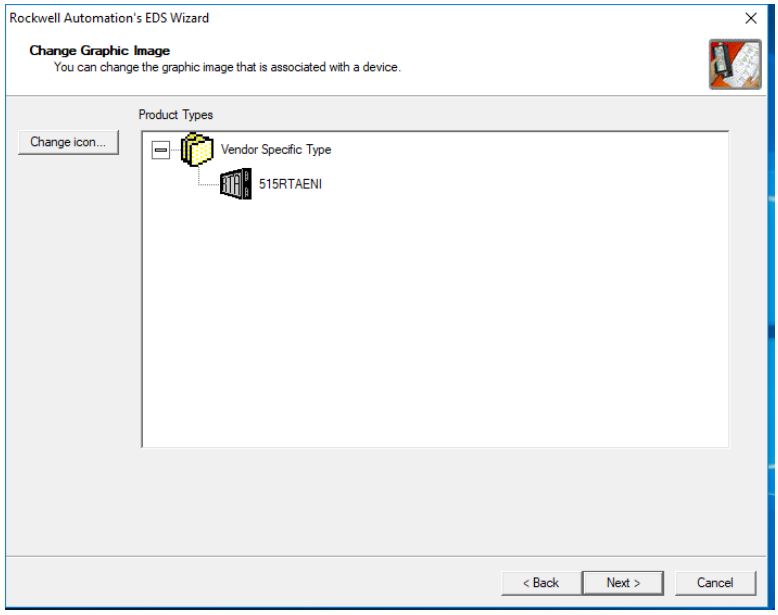
3. Select Add
4. Select Browse a navigate to the Desktop where you saved off the EDS file in step 1. Then select "Next"



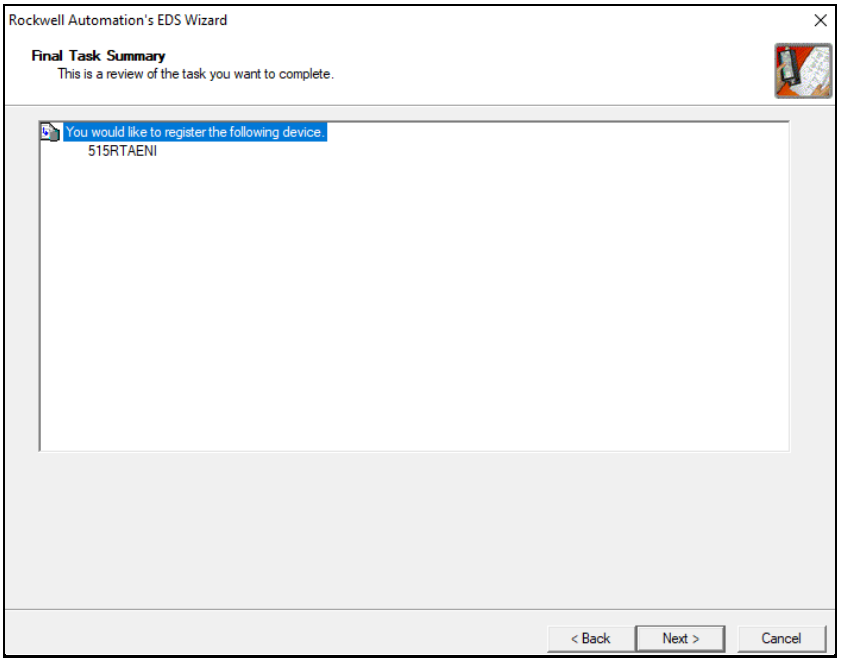
5. Verify that the path is correct. then select “Next”



6. Verify that the Graphic is correct. Select “Next”



7. Verify Task. Select “Next”



8. You have now installed the EDS File successfully. Select “Finish”.