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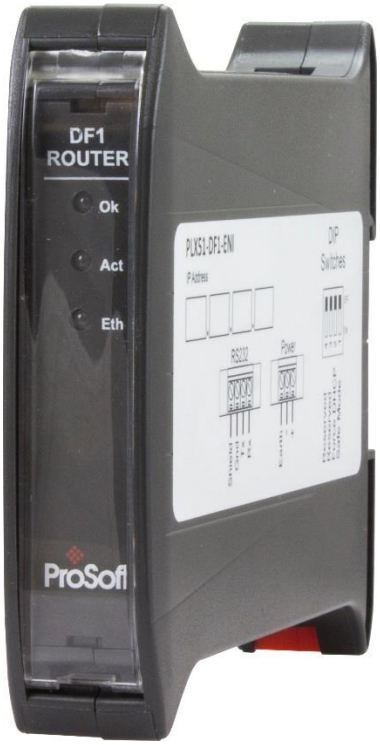

PLX51-DF1-ENI

DF1 Router

FTView to SLC500 Setup

December, 2017

TECHNICAL NOTE

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1. PREFACE

1.1. PURPOSE OF THIS DOCUMENT

This document assists you in the setup of the PLX51-DF1-ENI to allow an FTView / PanelView Plus application to communicate to an SLC device's DF1 port via EtherNet/IP.

1.2. ADDITIONAL INFORMATION

The following resources contain additional information that can assist you with installation and operation.

Resource	Link
PLX50 Configuration Utility Software	www.prosoft-technology.com
PLX51-DF1-ENI User Manual PLX51-DF1-ENI Datasheet Example Code & UDTs	www.prosoft-technology.com
Ethernet wiring standard	www.cisco.com/c/en/us/td/docs/video/cds/cde/cde205_220_420/installation/guide/cde205_220_420_hig/Connectors.html
CIP Routing	The CIP Networks Library, Volume 1, Appendix C:Data Management
Map PLC/SLC messages	SLC to CompactLogix Migration Guide: Chapter 3 – Map PLC/SLC Messages (1769-ap001_-en-p.pdf) EtherNet/IP Network Configuration: Chapter 5 – Mapping Tags (enet-um001_-en-p.pdf)

TABLE 1 - ADDITIONAL INFORMATION

2. APPLICATION DESCRIPTION

The ProSoft PLX51-DF1-ENI can be used to enable multiple modern Ethernet devices to communicate to legacy SLC500, PLC5 and MicroLogix devices via their DF1 serial ports. In the example below, an FTView SE application and two PanelView Plus terminals can read and write data to an SLC500.

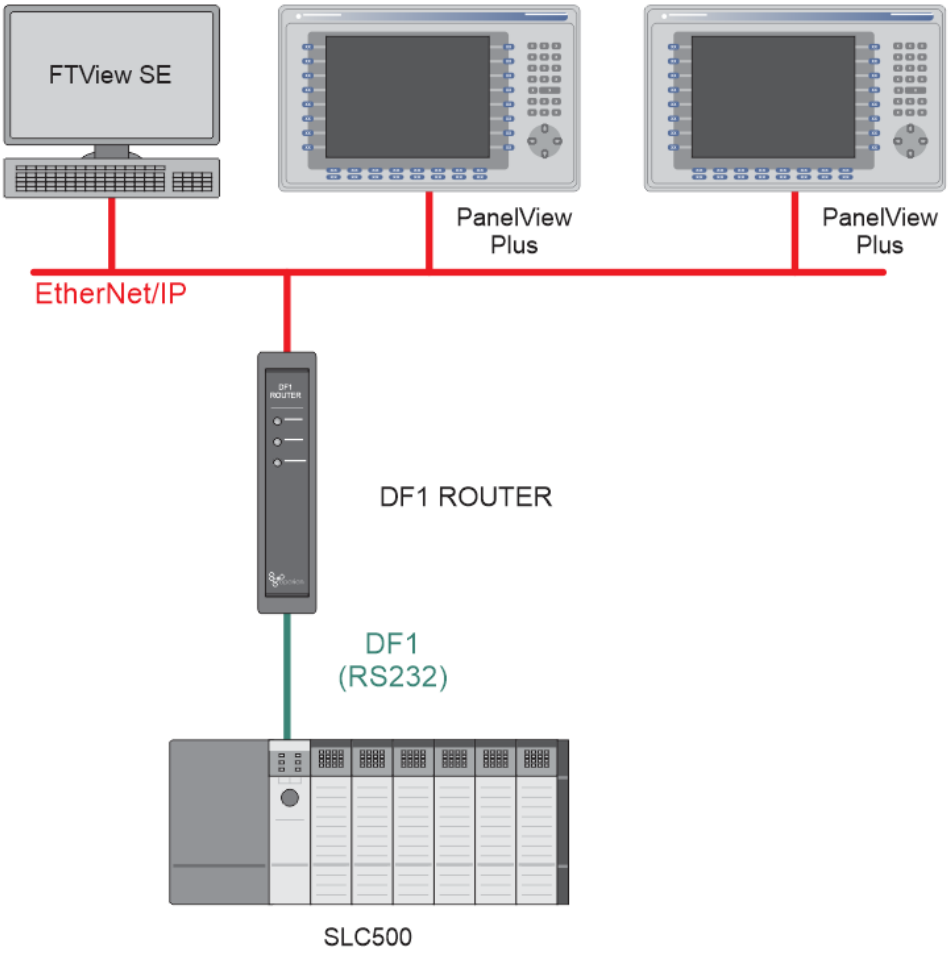

FIGURE 1 - EXAMPLE OF A TYPICAL NETWORK SETUP

3. SETUP

The following sections describe the installation and configuration of the required devices in the network.

3.1. SERIAL CABLE WIRING

The serial cable pinout is shown in the figure below:

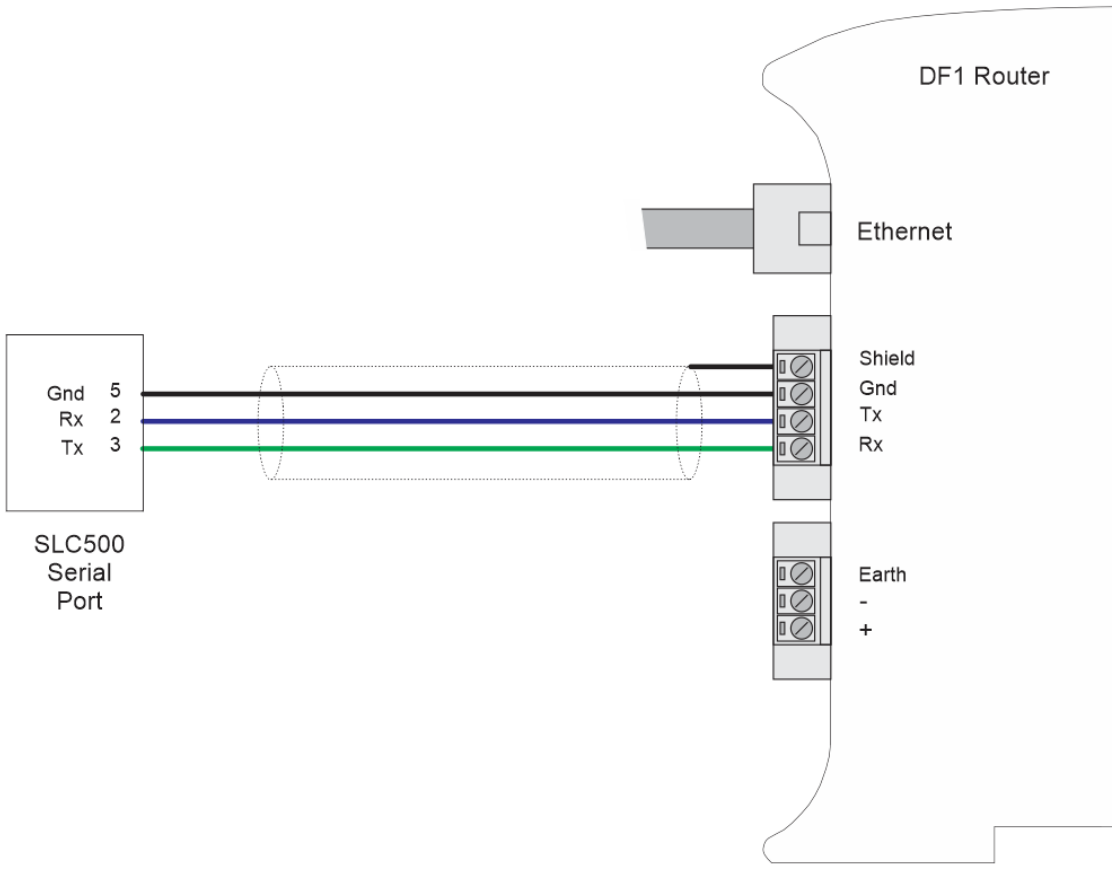

FIGURE 2 – SERIAL CABLE PINOUT

3.2. PLX51-DF1-ENI SETUP

The PLX51-DF1-ENI must be configured in Bridge mode, as shown below.

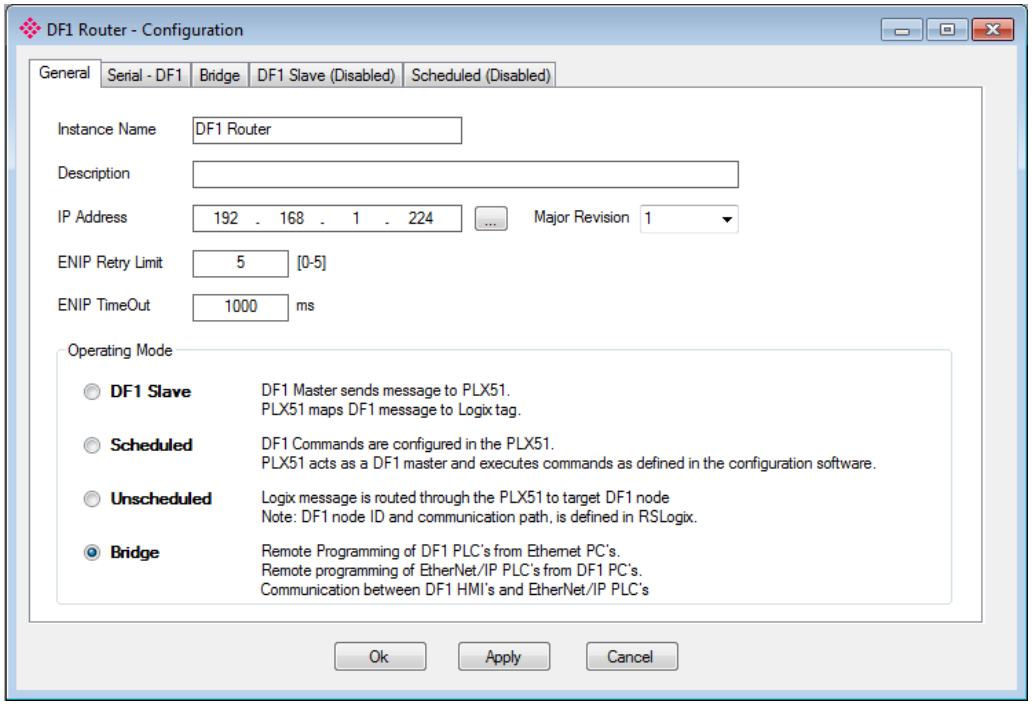

FIGURE 3 – DF1 GENERAL CONFIGURATION

In the Serial-DF1 settings, the protocol must be set to Full Duplex. The BAUD Rate, Parity and Error Detection must match that of the SLC device (as configured using RSLogix 500).

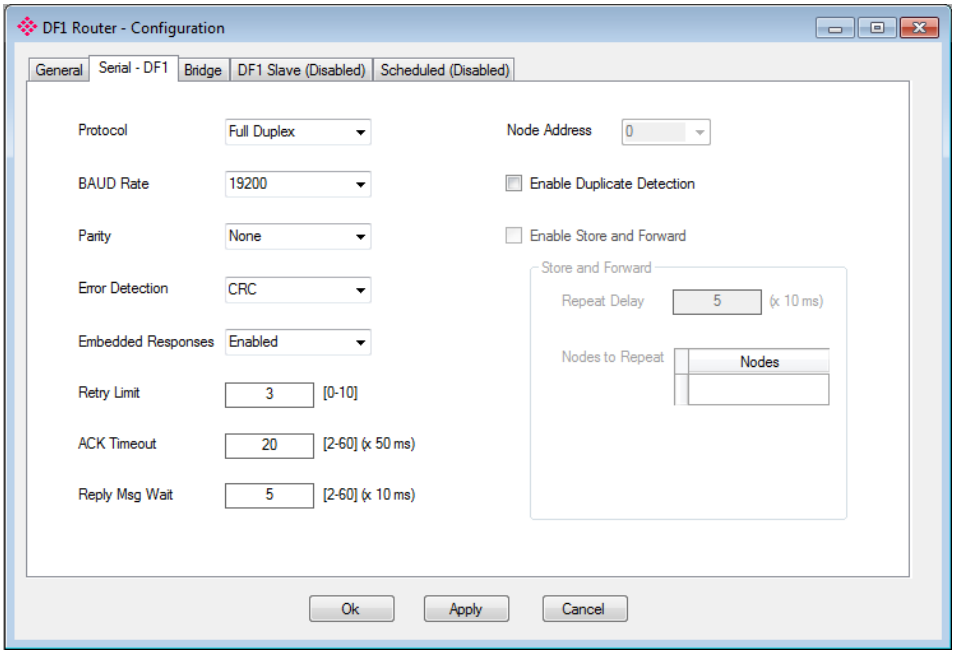

FIGURE 4 – DF1 SERIAL CONFIGURATION

No Bridge mapping items are required to be configured.

3.3. RSLOGIX 500 SETUP

Using RSLogix500, the DF1 serial port must be configured to match that of the PLX51-DF1-ENI's serial port settings with respect to BAUD rate, Parity and Error Detection.

NOTE: The DF1 Full Duplex must be selected, and the Duplicate Packet Detect option must be removed.

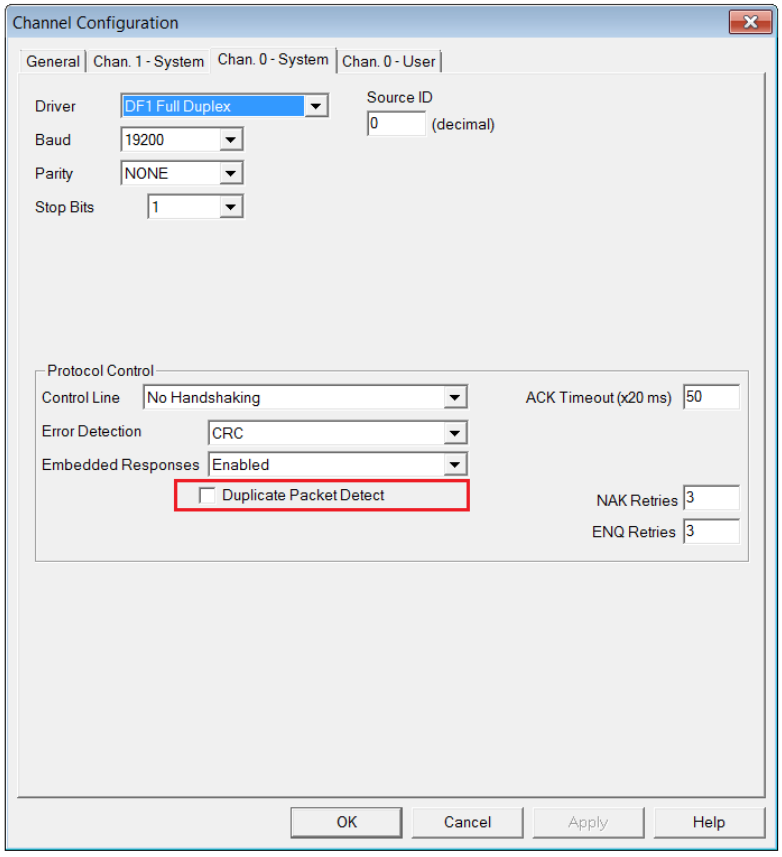

FIGURE 6 – SLC SERIAL CHANNEL CONFIGURATION

3.4. FTVIEW SETUP

Open FTView Studio and create a new FTView project. The project explorer tree appears on the left-hand side.
Right-click on the newly created project and select the ***Add New Server*** option, then click the *Rockwell Automation Device Server (RSLinx Enterprise)* option.

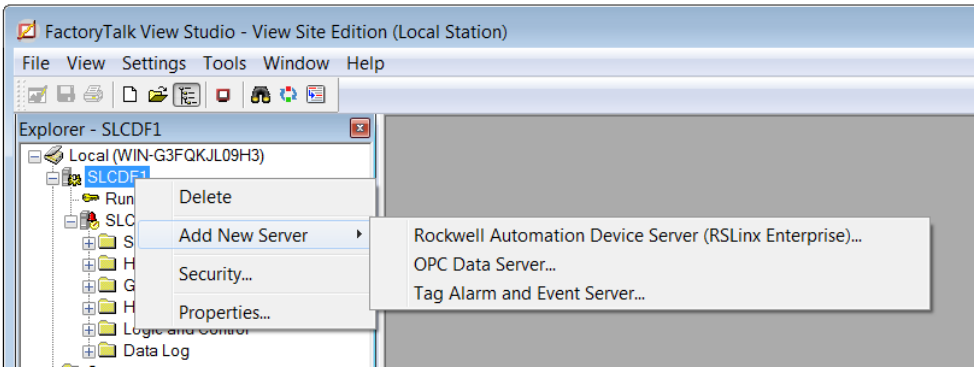

FIGURE 7 – FACTORY TALK SERVER ADD

The RSLinx Enterprise Server properties window opens. Click Ok.

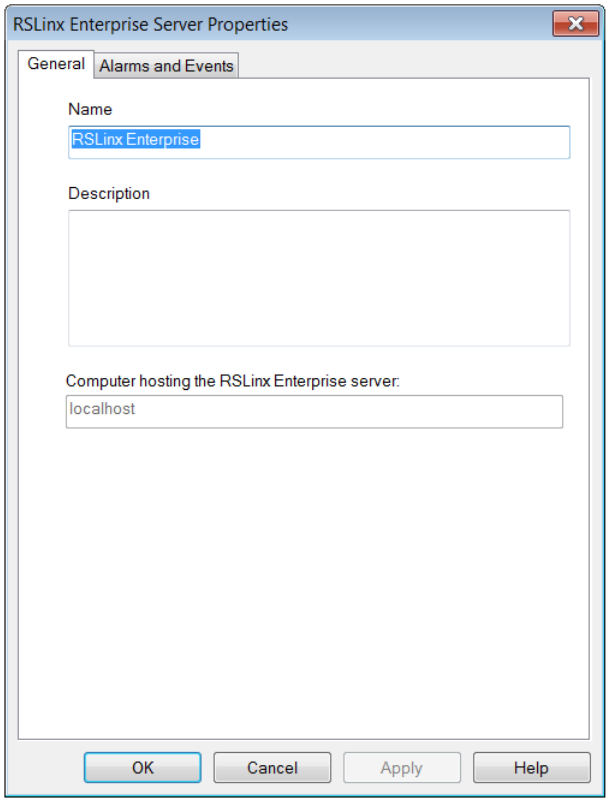

FIGURE 8 – FACTORY TALK SERVER GENERAL

The RSLinx Enterprise server now appears in the project explorer tree. Double-click on the Communication Setup option.

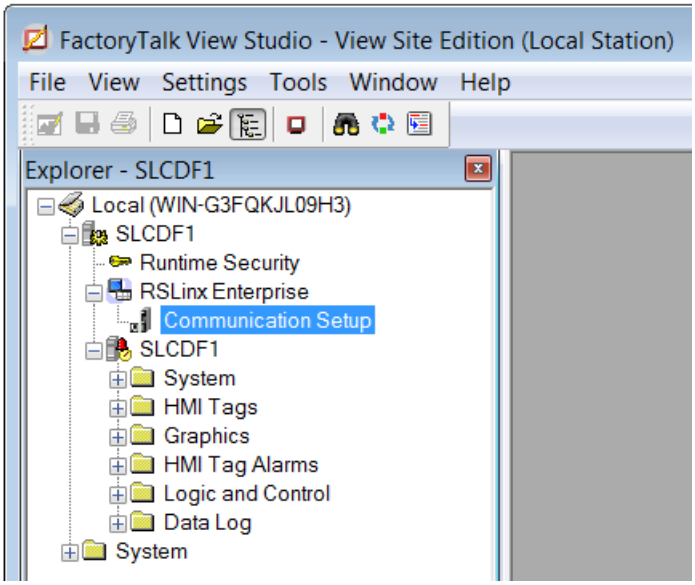

FIGURE 9 – FACTORY TALK COMMUNICATION SETUP

The PLX51-DF1-ENI will now be added using the NET ENI driver.

NOTE: It is recommended that the Ethernet cable be disconnected from your PC at this point. Otherwise, the Ethernet driver will automatically detect and add the PLX51-DF1-ENI as an EtherNet/IP device.

In the Communication Setup window, right-click on the Ethernet driver and select ***Add Device***.

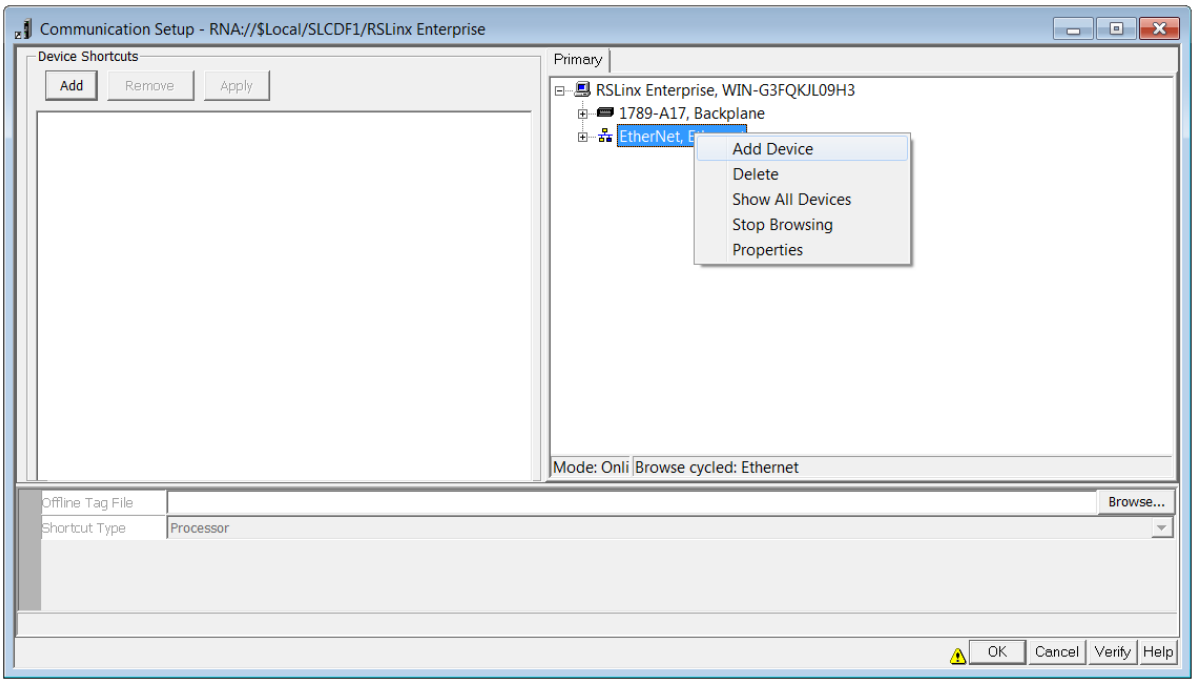

FIGURE 10 – FACTORY TALK RSLINX COMMUNICATION SETUP

In the Add Device Selection window, expand the NetENI-connected PCCC devices. Below that, expand the SLC and MicroLogix Processors. Select the 1747-L541 SLC 5/04 or similar.

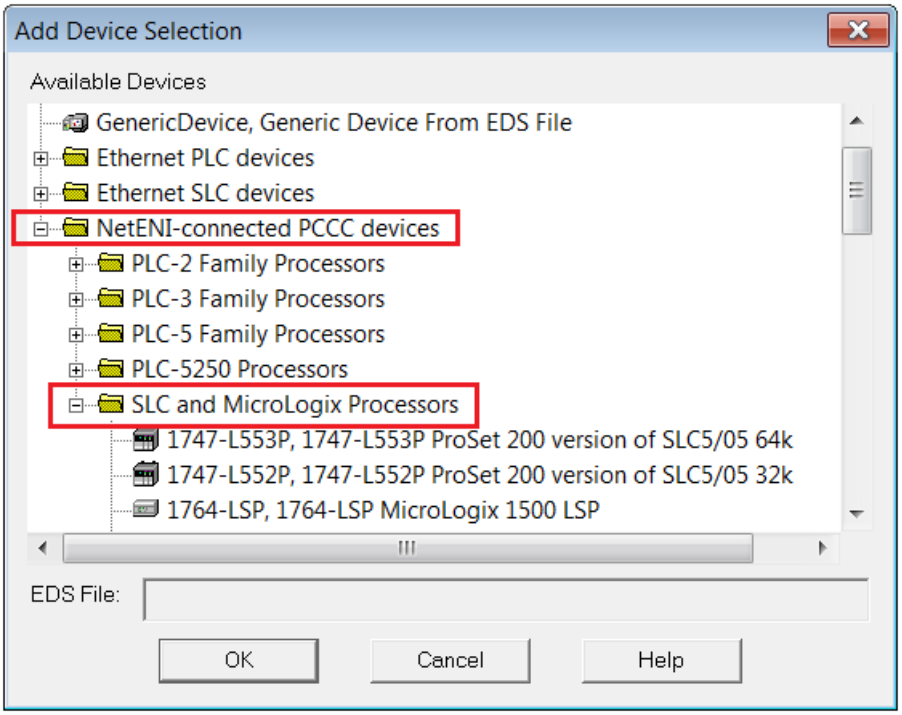

FIGURE 11 – FACTORY TALK DEVICE SELECTION

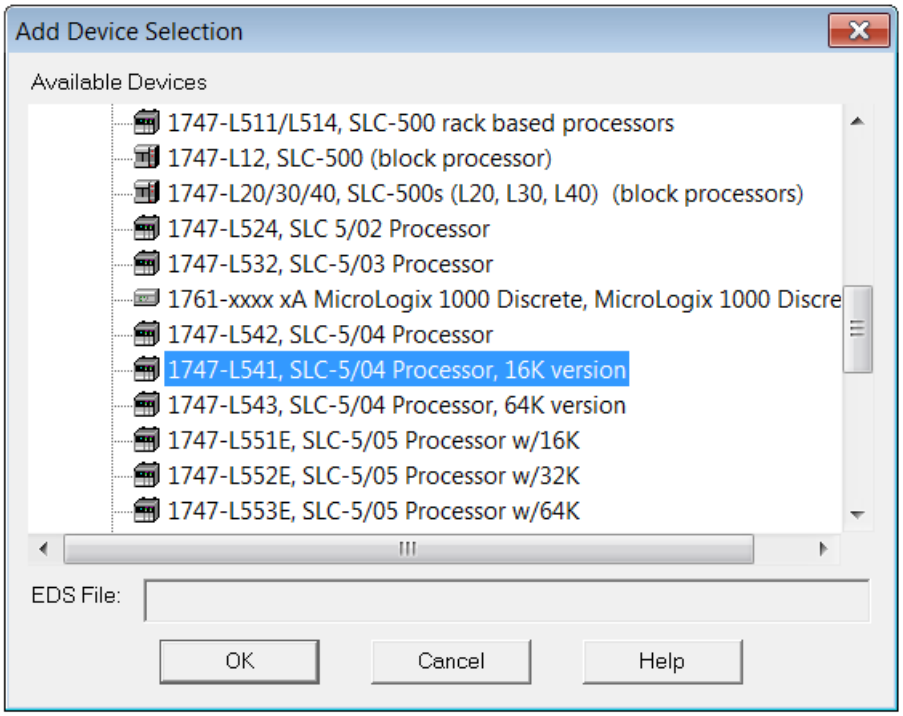

FIGURE 12 – FACTORY TALK DEVICE SELECTION

In the Device Properties window, enter the IP Address of the PLX51-DF1-ENI module and select Ok.

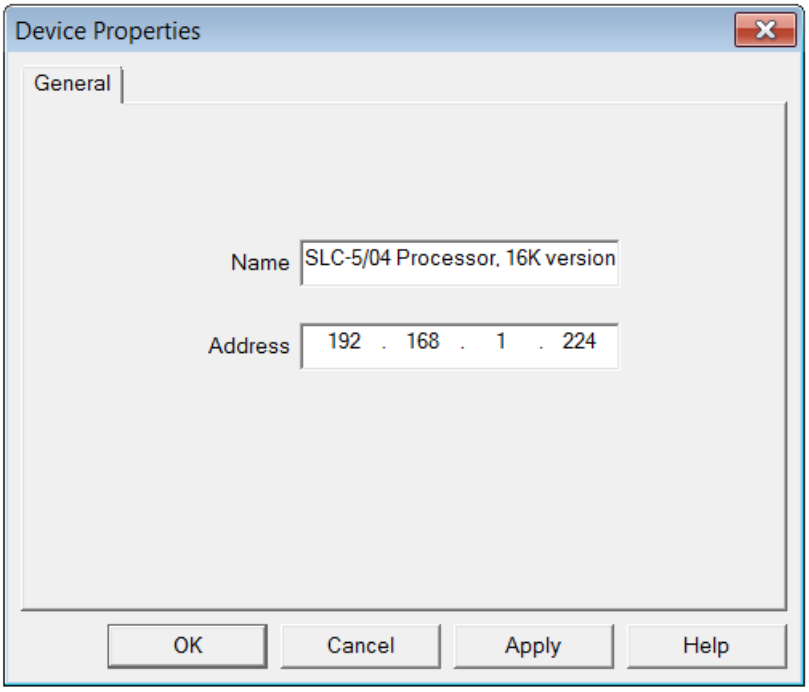

FIGURE 13 – FACTORY TALK DEVICE PROPERTIES

The newly added device now appears in the Communication Setup tree under Ethernet devices. On the left side of the window, under Device Shortcuts, select the Add button and create a shortcut. Give it a suitable name.
Select the SLC device on the right-hand side and select the Apply button (near the top under Device Shortcuts) to associate the shortcut to the device.

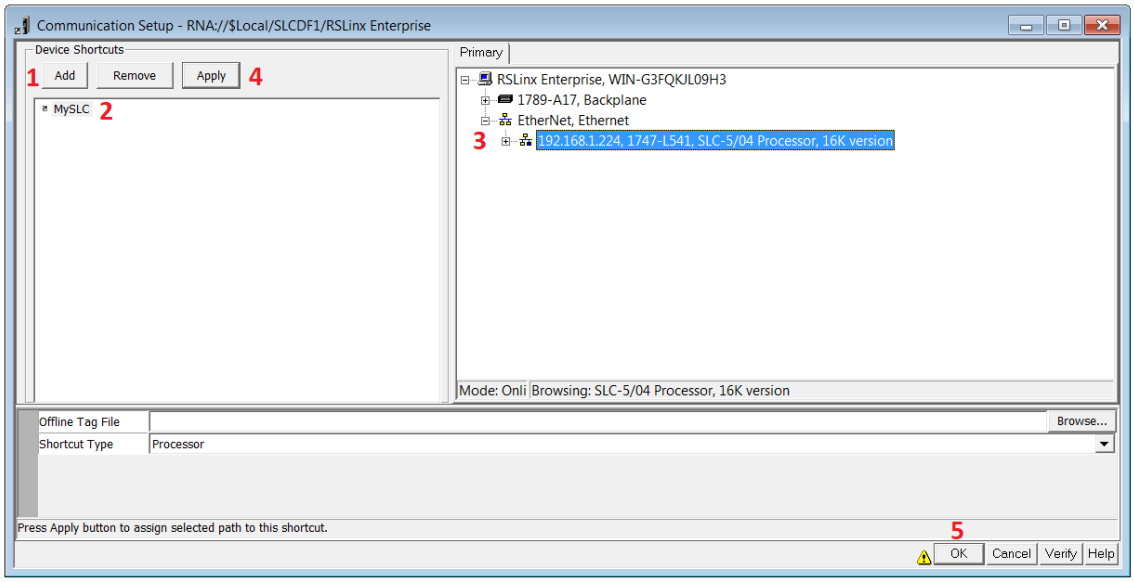

FIGURE 14 – FACTORY TALK RSLINX SETUP

The association needs to be confirmed by selecting Yes in the dialog window.

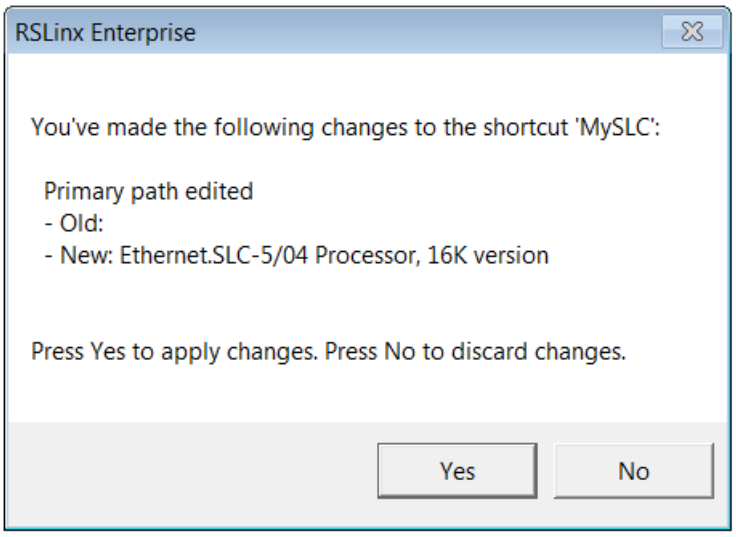

FIGURE 15 – FACTORY TALK RSLINX SETUP

The Communication Setup changes can then be accepted by selecting the Ok button at the bottom of the window.

NOTE: If the Ethernet cable was disconnected in the previous step, you can now reconnect it.

To test the communication, a new display can be created. Using the project explorer tree, under the Graphics section, right-click on the Display option and select New.

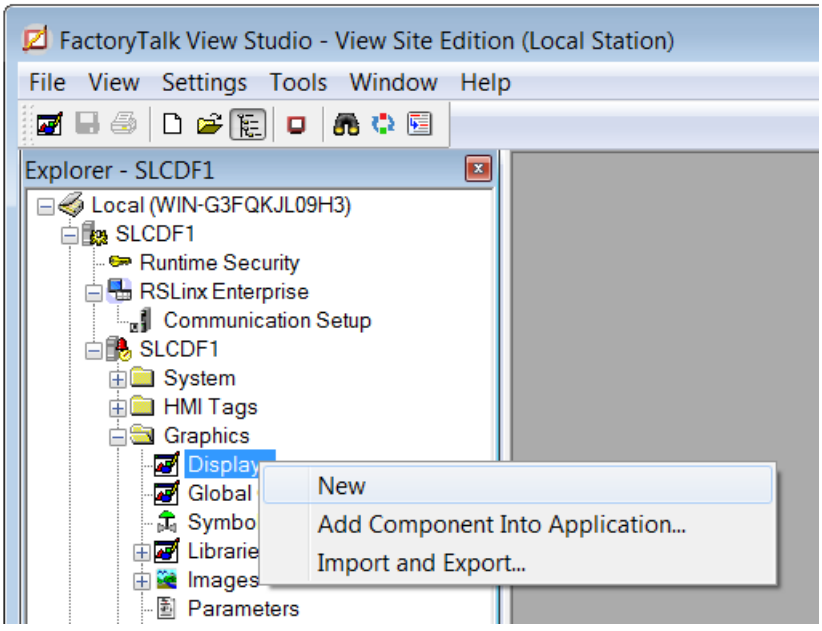

FIGURE 16 – FACTORY TALK NEW DISPLAY

Using the toolbar, add a Numeric Display object to the window.

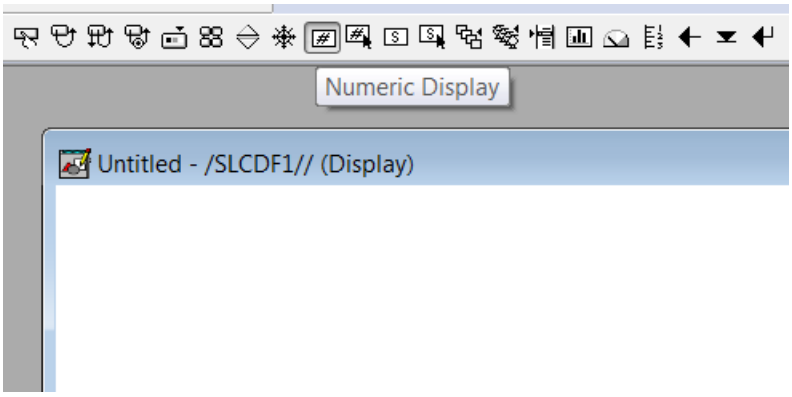

FIGURE 17 – FACTORY TALK NUMERIC DISPLAY

In the Numeric Display Properties window, select the Tags option.

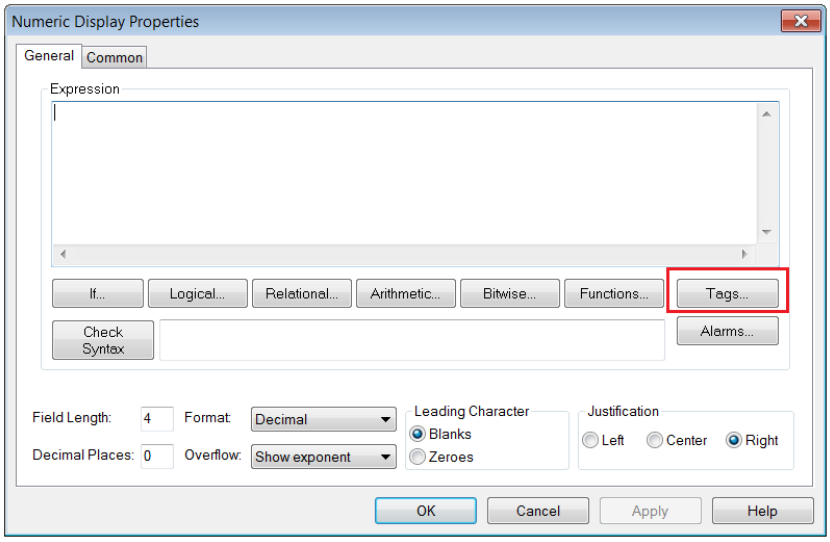

FIGURE 18 – FACTORY TALK DISPLAY PROPERTIES

The Tag Browser window opens. Since this is the first time the Tag Browser has been opened, the SLC device the tags must be refreshed. This is done by right-clicking at the folder tree and selecting the Refresh All Folders option.

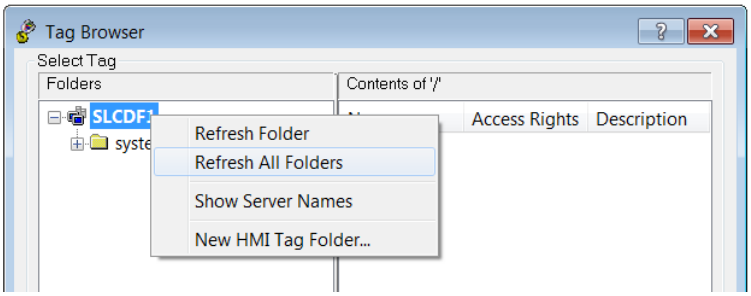

FIGURE 19 – FACTORY TALK TAG BROWSER

All SLC data files are now listed and can be selected for animation.

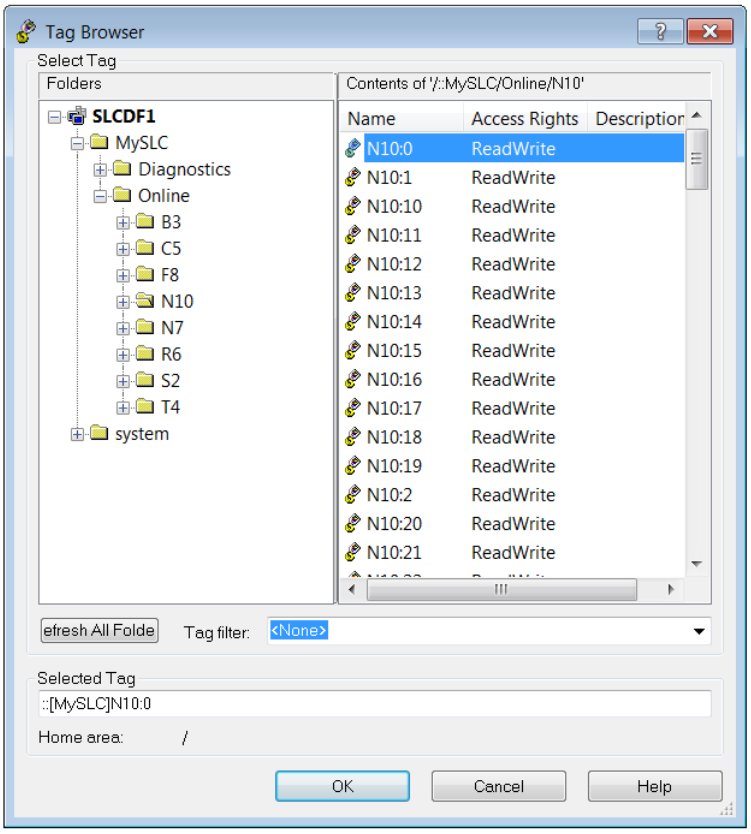

FIGURE 20 – FACTORY TALK FILE SELECTION

4. SUPPORT, SERVICE & WARRANTY

4.1. CONTACTING TECHNICAL SUPPORT

ProSoft Technology, Inc. is committed to providing the most efficient and effective support possible. Before calling, please gather the following information to assist in expediting this process:

1. Product Version Number
2. System architecture
3. Network details

If the issue is hardware related, we will also need information regarding:

1. Module configuration and associated ladder files, if any.
2. Module operation and any unusual behavior
3. Configuration/Debug status information
4. LED patterns
5. Details about the serial, Ethernet or Fieldbus devices interfaced to the module, if any.

Note: *For technical support calls within the United States, ProSoft's 24/7 after-hours phone support is available for urgent plant-down issues. Detailed contact information for all our worldwide locations is available on the following page.*

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