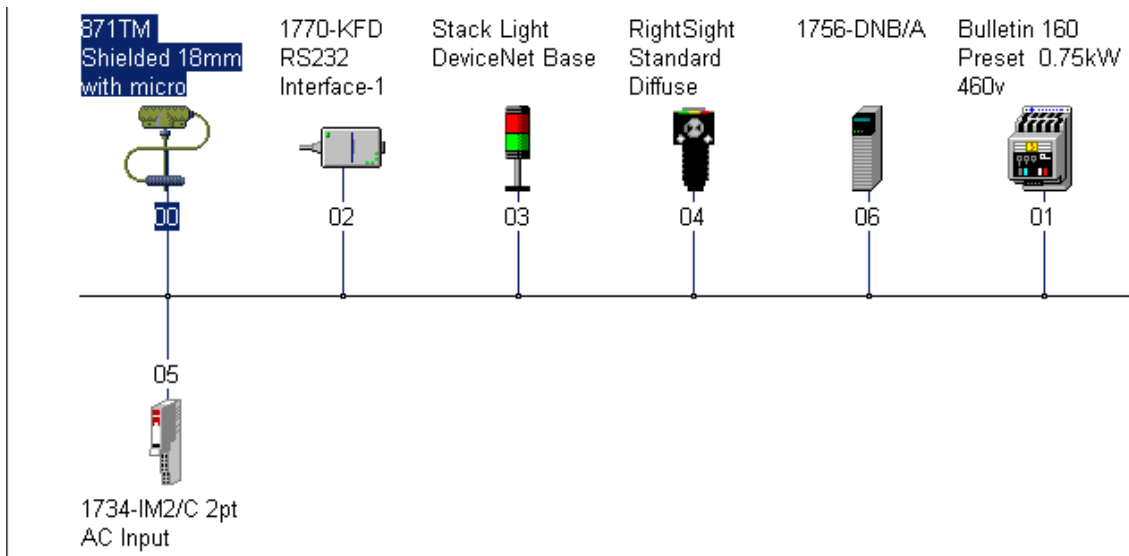


Module 4



DeviceNet Computer Interface Setup

RSLinx

Student Materials

Computer Interface Setup: RSLinx

Lesson Objective

By the end of this session, students should be able to:

1. Configure RSLinx drivers to interface with a DeviceNet network.

	<u>Page</u>
Introduction	3
RSLinx Interface Commuiction Driver Set-up	3
Review Questions.....	11

Introduction:

RSLinx is used as the communication driver between RSNetWorx and the DeviceNet network.

This similar to using RSLinx as a communication driver between a PLC processor and the programming and monitoring software for a processor (i.e. a 1756-L55 ControlLogix 5550 processor and RSLogix 5000 software or 1756 L-71 processor and Studio 5000 software).

A computer communication interface connection from a computer to a DeviceNet network allows RSNetWorx to configure and monitor devices on the network.

Common interfaces for DeviceNet are:

- 1770-KFD using computer COM port
- 1784 –PCD using a laptop's PC Card (PCMCIA) communication slot.

In this lesson, DeviceNet drivers will be setup in RSLinx so that a computer will be a Node on a DeviceNet Network

Note: Valid Node addresses for DeviceNet are 0 – 63

Node addresses are also referred to as MAC (Media Access Control) addresses

Note: Ethernet uses the term MAC address for Ethernet / Hardware Addresses

Note: Computer Interfaces are optional. Connections to a DeviceNet network can be made thru Communication modules / Communication ports on PLC system, i.e. 1756-EN2TR module.

RSLink Setup:

1. From the computer open RSLink.

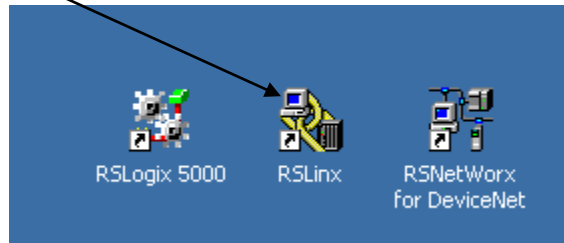


Figure 1-A

2. The RSWho will open.

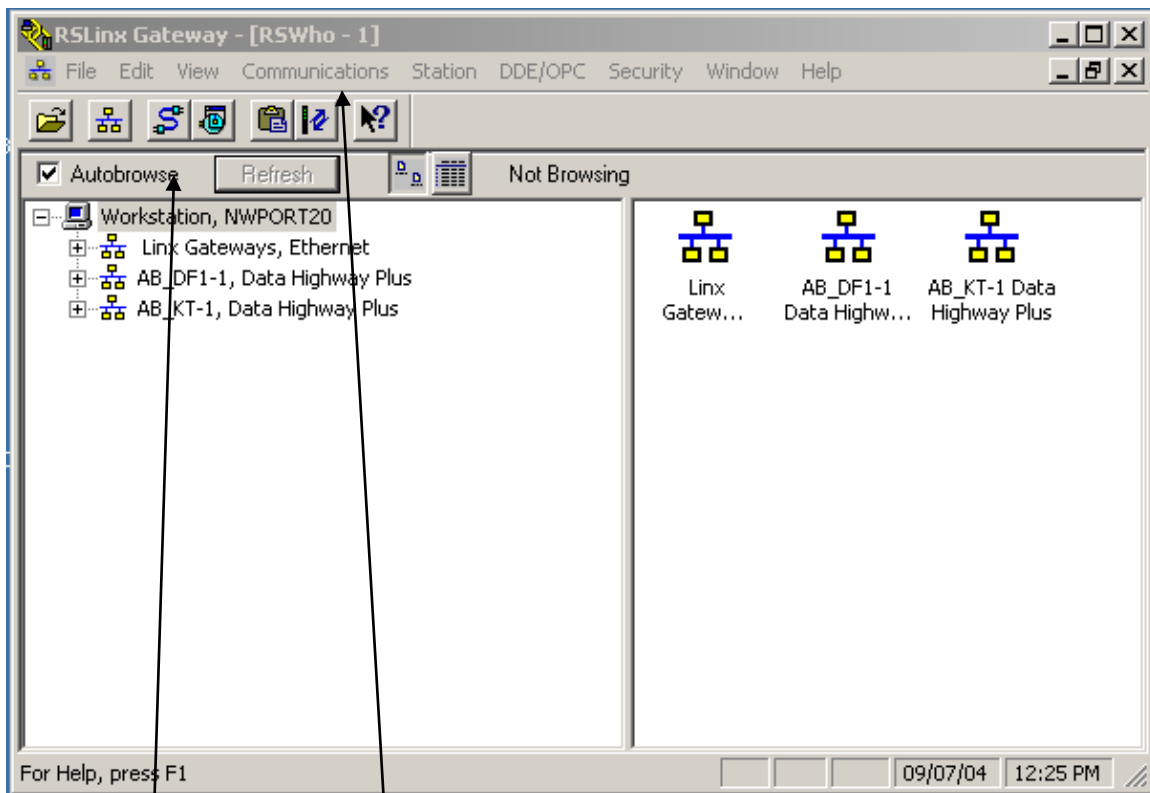


Figure 2-A

RSWho Window - RSLink

Go to the Configure Driver Screen.

Note: use icon or Communication → Configure Drivers from Menu Bar.

3. Configure Drive screen will open.

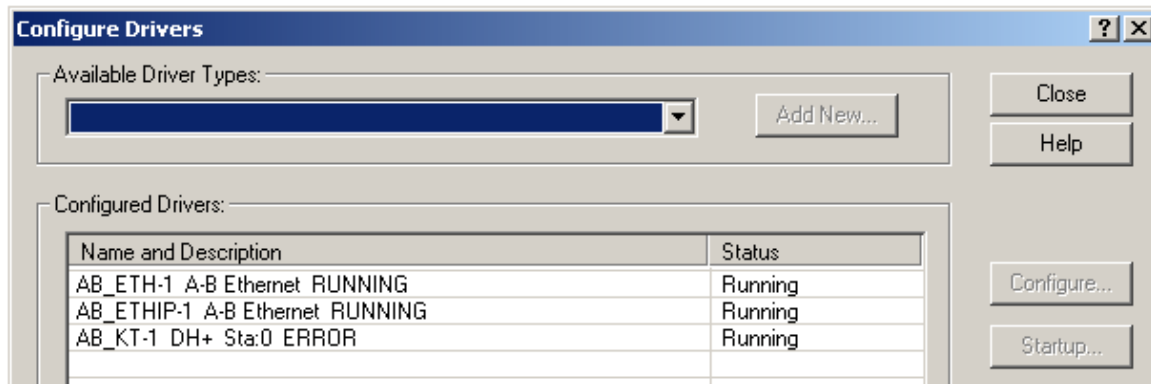


Figure 3-A
RSLinx Configure Driver Types

4. Use down arrow on Available Driver Types to open available driver screen.

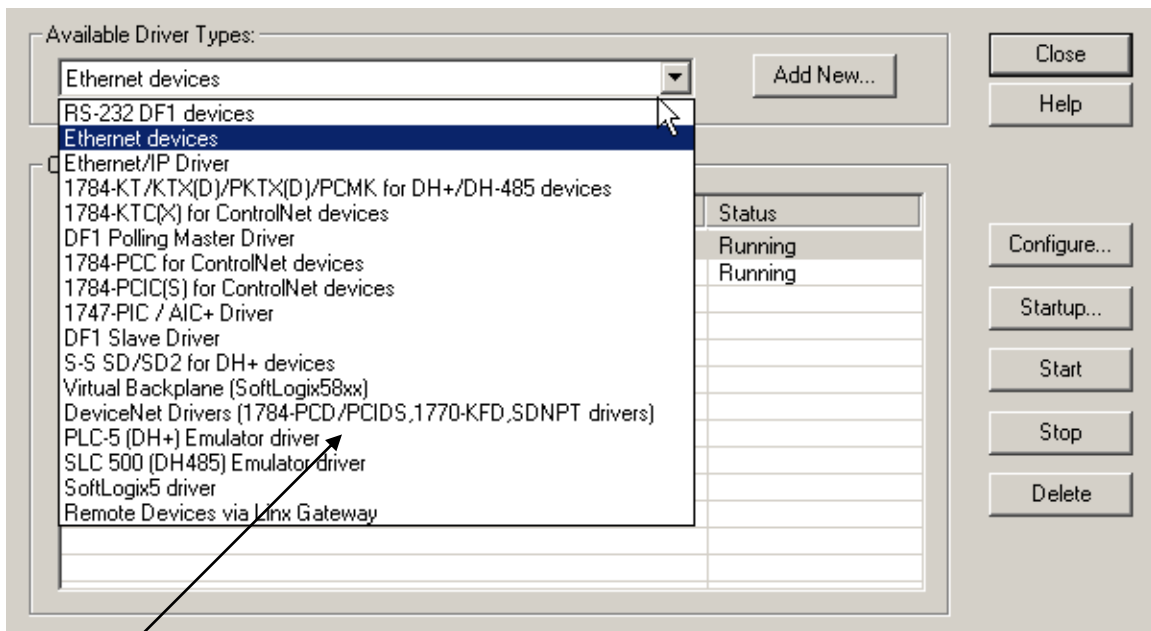


Figure 4-A
Choose DeviceNet Drivers to put DeviceNet Drivers in Available Driver window.

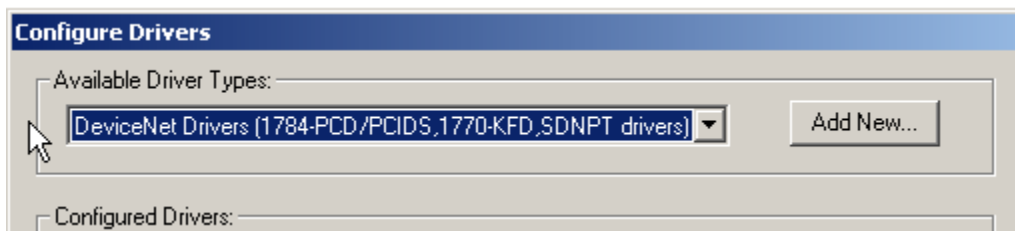


Figure 5-A

5. Click Add New... Button.

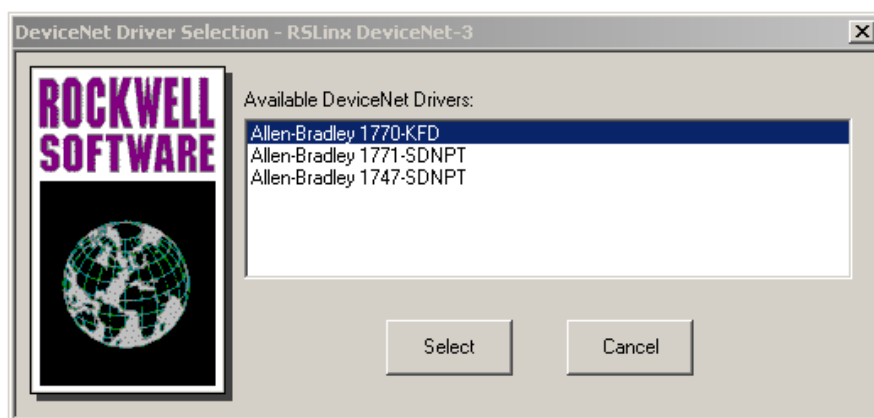


Figure 6-A

DeviceNet Driver Selection window appears.

Note: Configure the 1770-KFD interface.

To use the 1784-PDC interface, the drivers must first be install on the computer.

If the 1784-PDC is available the following screen will appear.

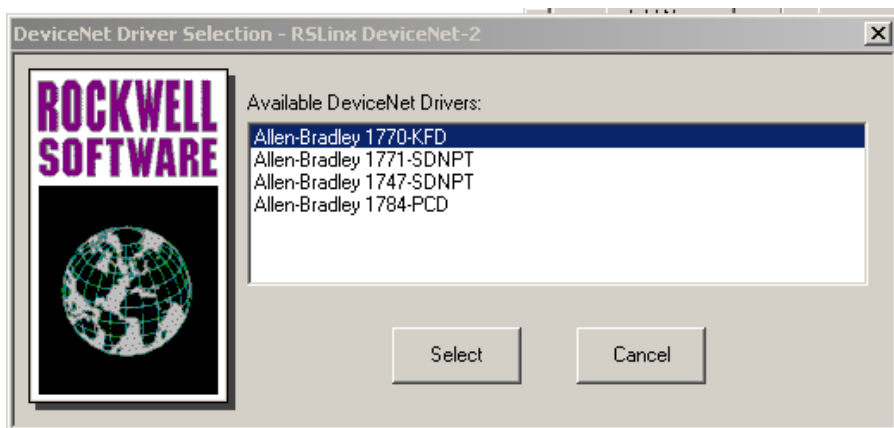


Figure 7-A

- 6a. 1770-KFD, click the select button. The configuration screen will appear.

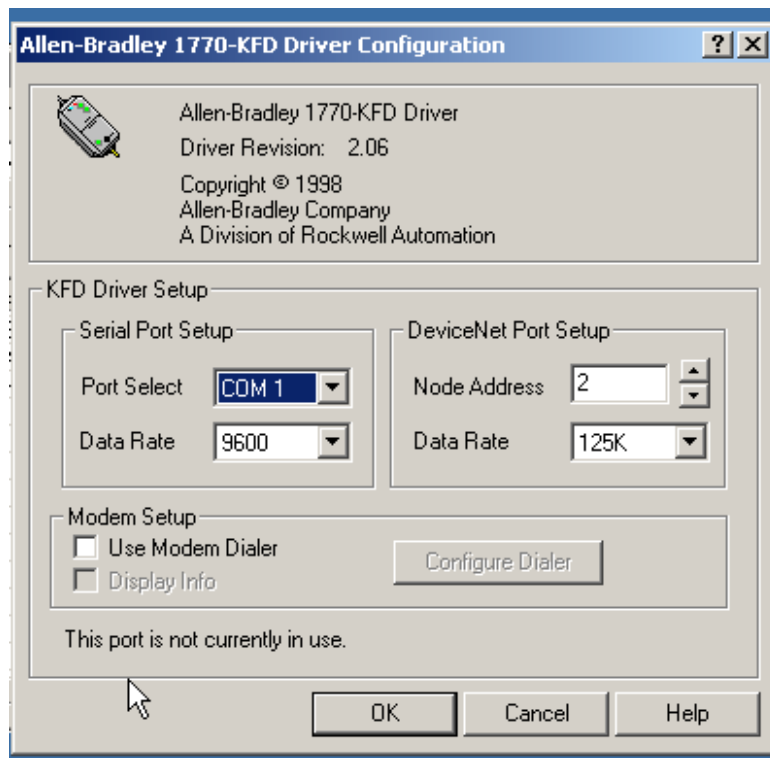


Figure 8-A

Similar to the set-up screen for AB-DF1, the Com Port and Port Speed (Data Rate) needs to be configured. Also Node Address (DeviceNet address) DeviceNet Speed (Data Rate) must match with the network configuration.

DeviceNet Node Address range 00-63

DeviceNet Data Rate 125K, 250K, 500K / Speed also depends on network length.

Note 1: To reconfigure the drive it must first be deleted then reinstalled with correct data.

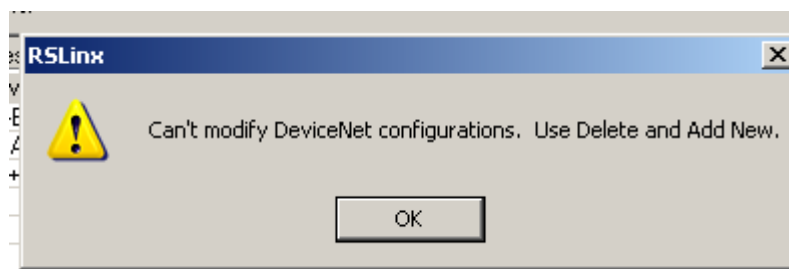


Figure 9-A

Note 2: Node address 63 is used for adding devices to a working network using ADR
This address should not be used on a working device on the network using ADR.

The default of new (never used) DeviceNet components is set to Node 63

Note 3: The demo version of RSNetWorx only allows addresses 00-06.

6b. If a 1784-PCD interface is used the following configuration screen will appear.

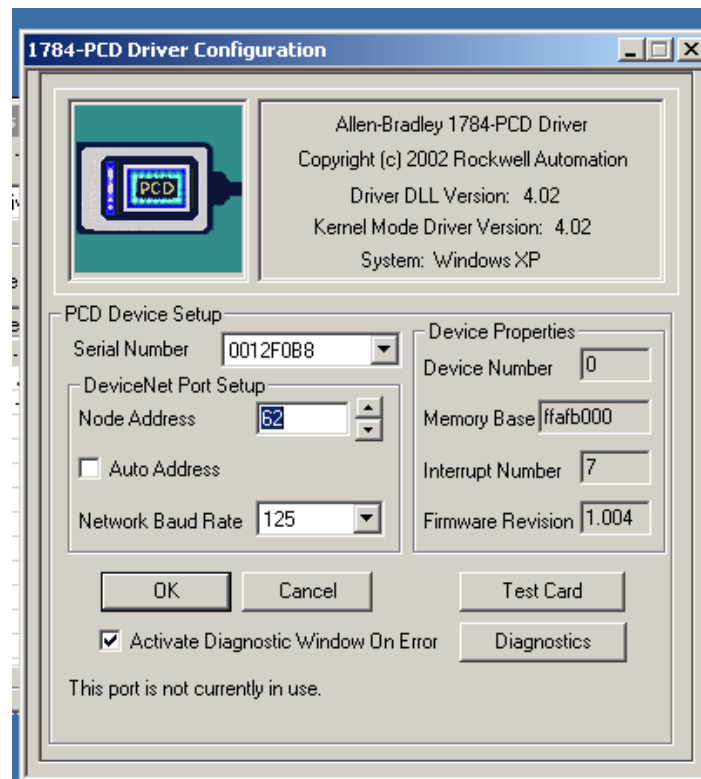


Figure 10-A

Node Address and Network Baud Rate must match with network parameters.

Note: To reconfigure parameters, the driver must be uninstalled, then reinstalled.

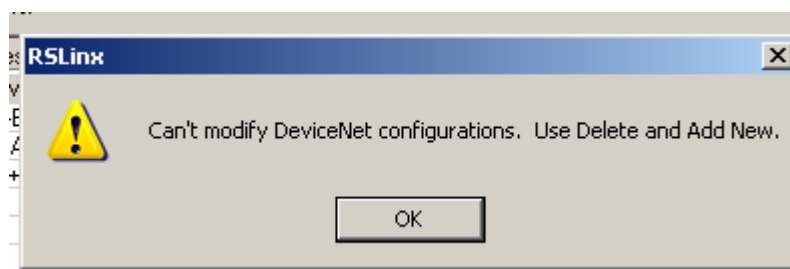


Figure 11-A

7. Once the OK button is click on the driver set-up screen, the following screens appears:
 - Initializing driver screen

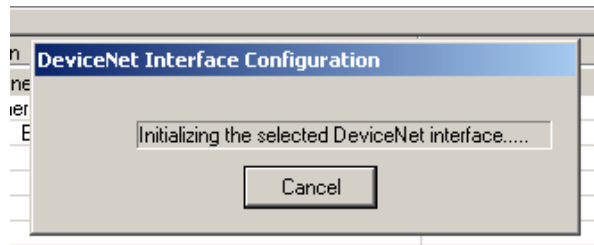


Figure 12-A

- Screen to name the driver

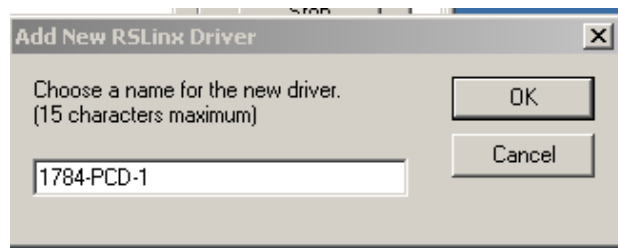


Figure 13-A

8. Error screens may appear if RSLinx can not find the interface.

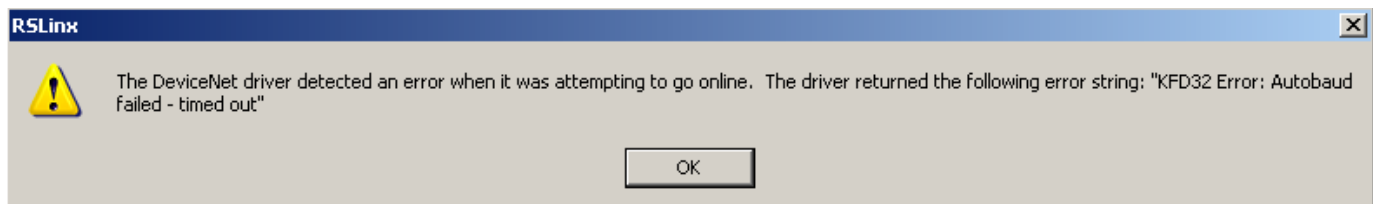
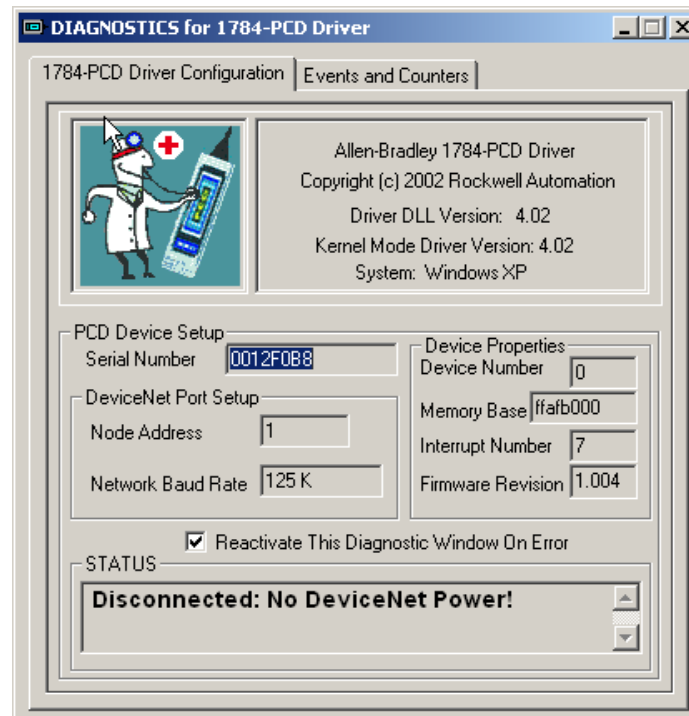


Figure 14-A

Or the interface is not powered-up.



. Figure 15-A

9. Once the driver is installed in RSLinx, the driver will be listed under Configured Drivers on the configuration screen.

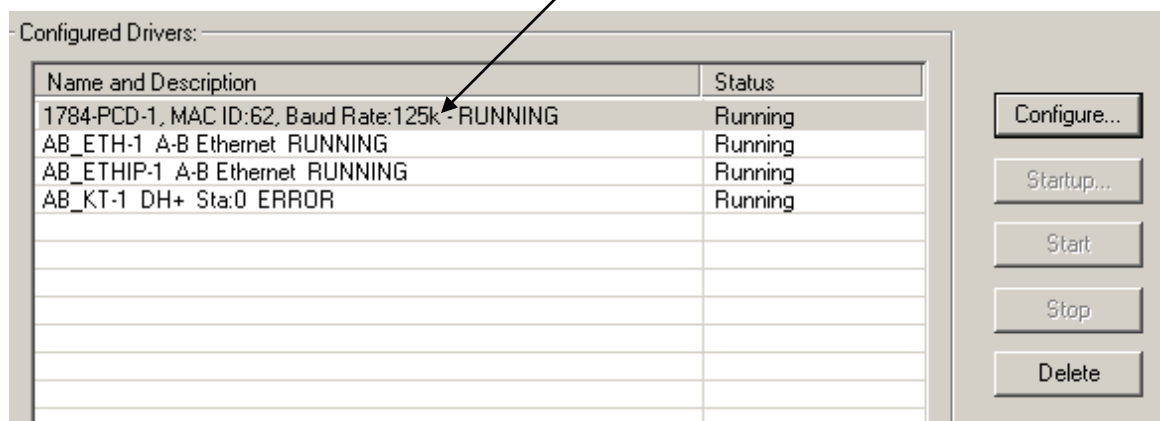


Figure 16-A

Driver appears on the RSWho screen.

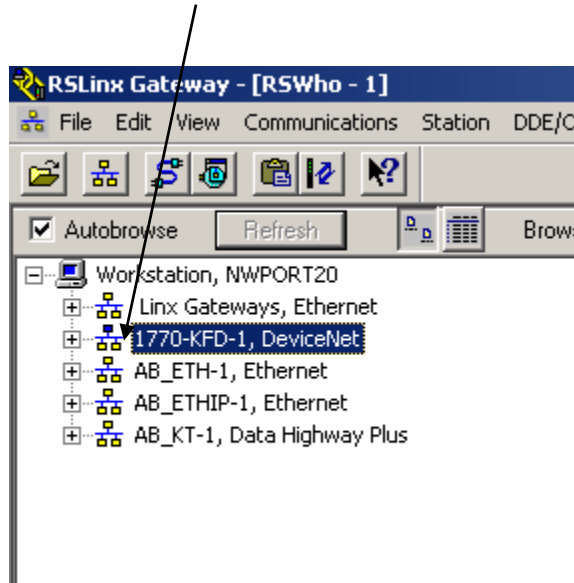


Figure 17-A

10. With devices connected to the network and powered up, you can browse the DeviceNet network with a connection to the ControlLogix processor.

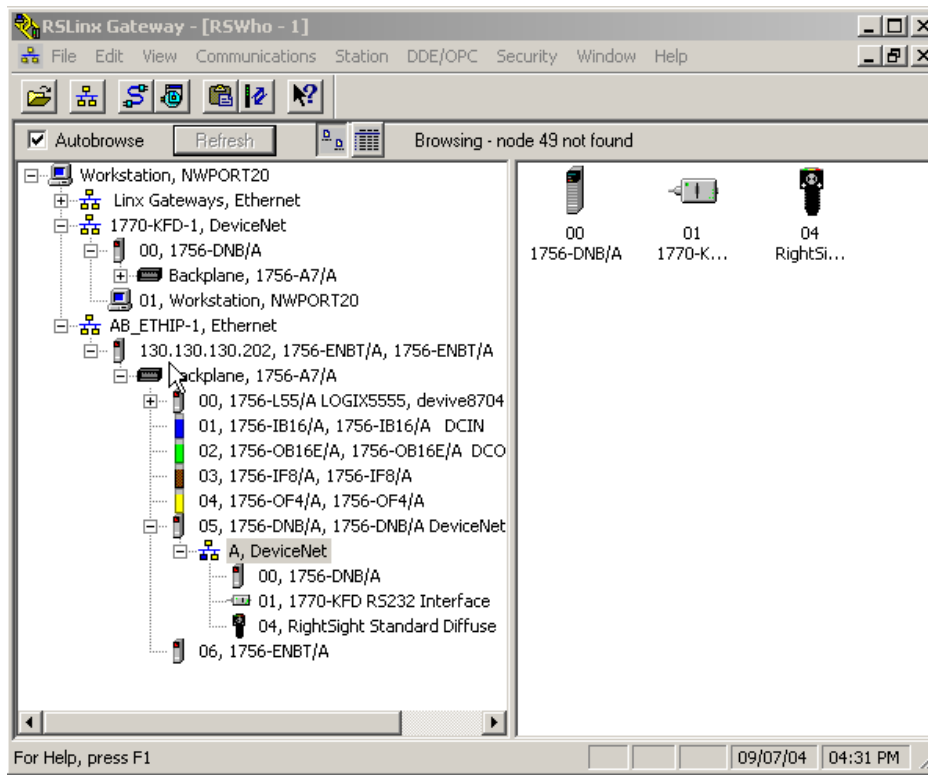


Figure 18-A

Review Questions

1. T F Power must be connected and ON to install drivers and commission network devices.
2. The software component that allows users to install / replace network devices:
 - a) RSLogix 5000
 - b) RSLinx Professional
 - c) RSLinx Gateway
 - d) RSNetWorx
3. Valid DeviceNet speeds are:

- a) 56.7K
 - b) 125K.
 - c) 250K
 - d) 230K.
4. T F RSNetWorx does not require using RSLinx.
5. The serial device used as a network interface is:
- a) 1784-PDC
 - b) 1756-DNB
 - c) 1784- PCMK
 - d) 1770-KFD
 - e) 1747-PIC
6. T F You must uninstall a 1784-PCD communication driver to reconfigure.
7. T F Node address 63 should be left unoccupied on a network.
8. T F RSLinx allows you to configure node devices.
9. T F A computer must have an DeviceNet Interface to connect to a DeviceNet network
10. Which interface scanner are used for a ControlLogix system :
- a) 1770-KFD
 - b) 1756-DNB

- c) 1784-PCD
- d) 1746-SDN

Review Questions Answers

- 1) T
- 2) d
- 3) b, c
- 4) F
- 5) d
- 6) T

- 7) T
- 8) F
- 9) F
- 10) b



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