June 3, 2004

Connects Can't Locate any HART Modules or Field Devices Over the Ethernet Network

Problem:

When using Connects and RSlinx over an Ethernet network, issues can arise with RSlinx not associating the host IP address with the proper physical IP address (Node). The problem is related to how RSlinx handles host IP addresses containing padded zeros. The padded zeros are inserted into the IP address when they are added to the search list within Connects. Figure 2 shows how the IP search list is created by Connects. Figure 1, shown below, was taken from the driver diagnostics screen of an "Ethernet Devices Driver" configured in RSlinx.

Note: The node address listed below doesn't exist.

Note: See Rockwell Automation Knowledgebase note **A6696** for more details regarding how RSLinx handles padded zeroes.
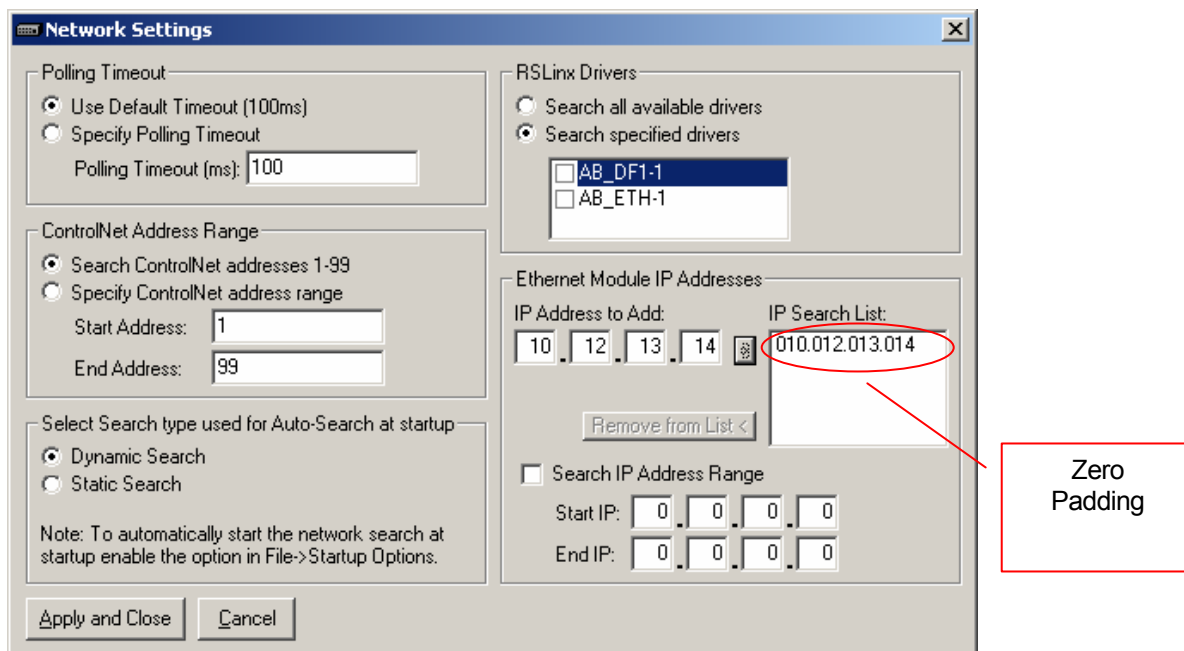
Figure1

Driver Diagnostics for AB_ETH-1

General | Performance | Active Connections | Event Log

Node	Station	Host Name	Type	Opened	L...	Refused	Timed Out
192.168.5.2	0	192.168.5.2	CSPv4	1	0	0	0
10.12.13.14	1	10.12.13.14	CSPv4	1	0	0	0
8.10.11.12	2	010.012.013.014	CSPv4	1	0	0	0

IP Address Doesn't exist

Host IP Address with zero padding

Figure 2

Solution:

There are two choices:

1.) Remove the padded zeros from the IP address by assigning new IP addresses to the network nodes. For example, change the IP address 010.012.013.014 to 100.120.130.140.

2.) Add the Octal equivalent of the IP address you wish to enter, into the Connects IP search list. For example, if you want to enter IP address 10.12.13.14 then you will need to enter the octal address 12.14.15.16, into Connects. See figures 3 and 4 below.
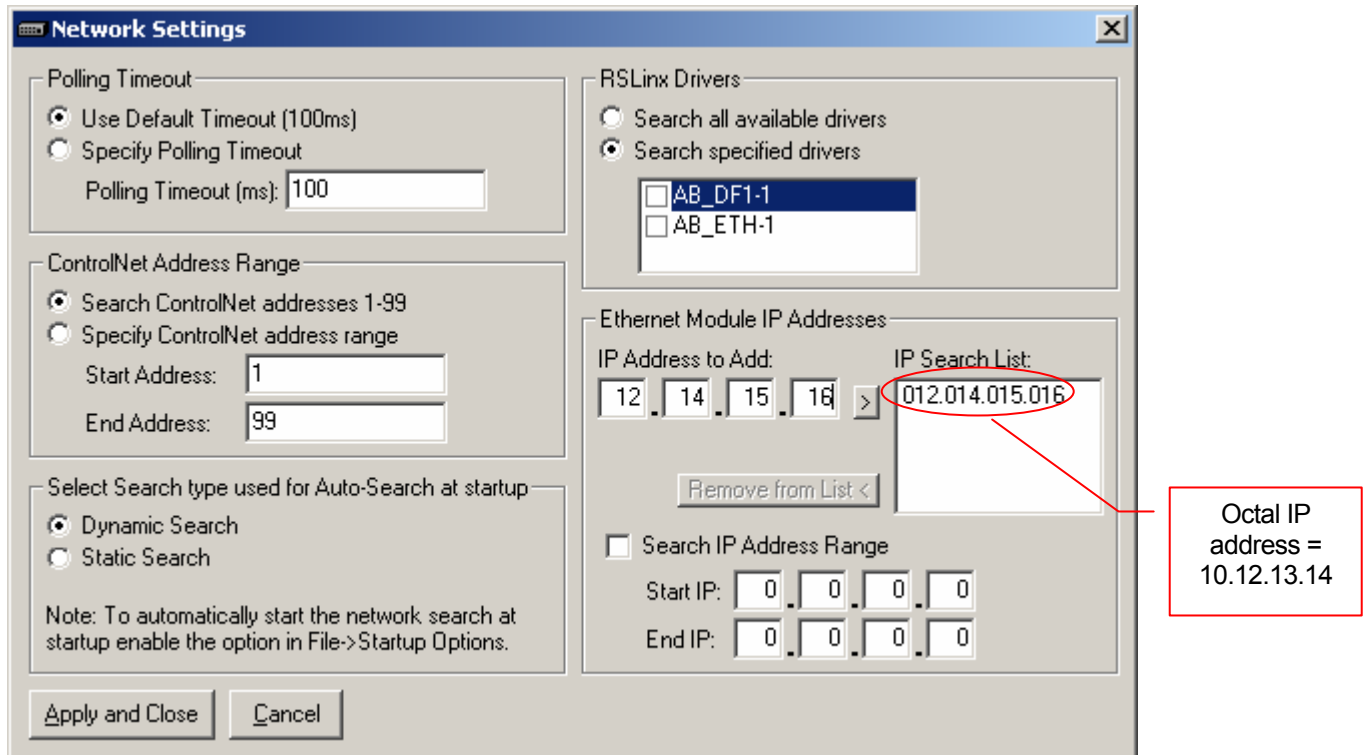
Figure 3 (Entering an Octal Address)

Figure 4 (RSLinx Showing Correct IP Address Association)

Date: June 1, 2004

       Jeff Robel

       Applications Engineer

       Spectrum Controls, Inc.

       Tel: 1 (425) 746-9481