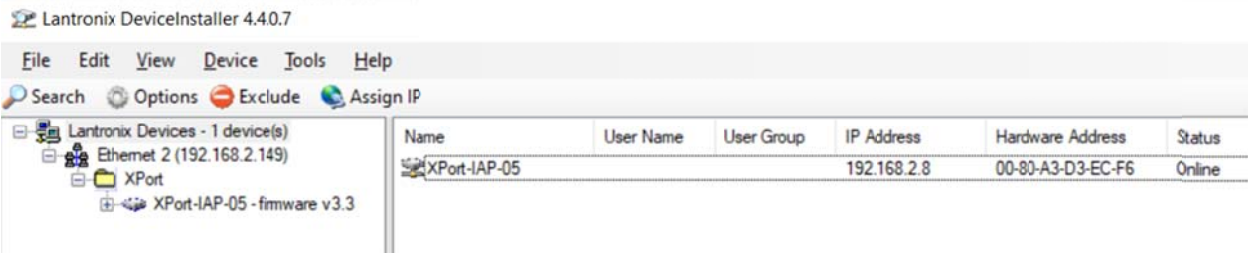


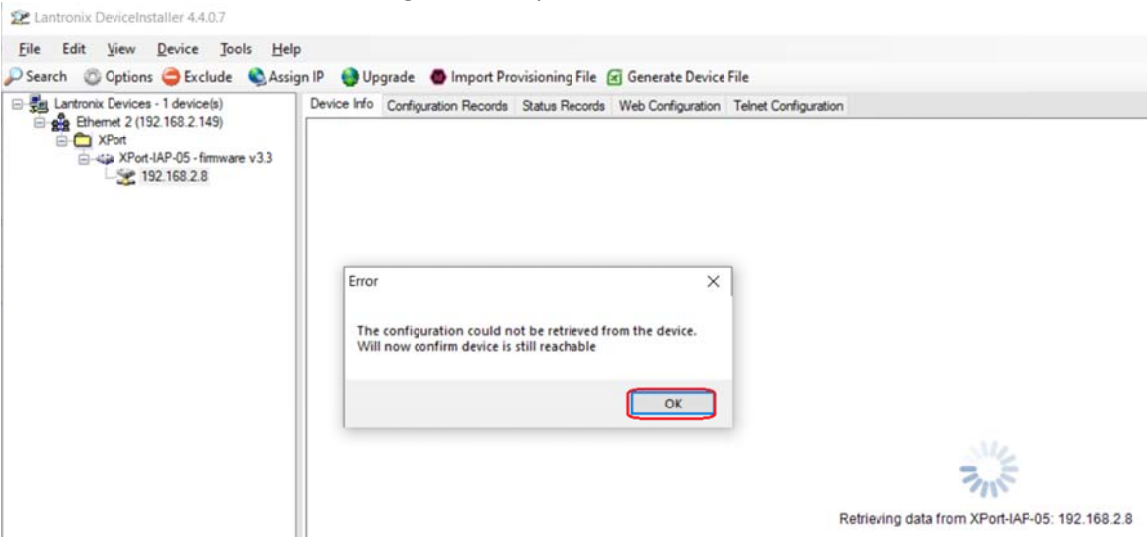
DL6000-MEDH485 As a Master allowing SLC500 on DH485 Network to write and access Registers on MODBUS TCP/IP

In this application we used the DL6000-MEDH485 on DH485 with SLC500s allowing the SLC5/03 to write to MODBUS registers on MODBUS TCP/IP.

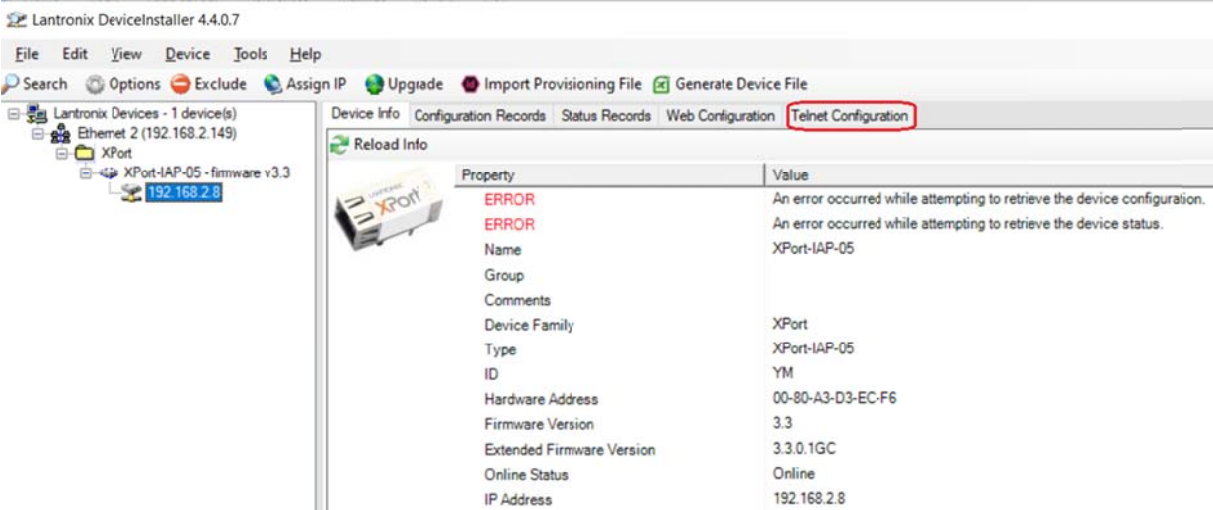
Power up and connect the DL6000-MEDH485 to your Ethernet network, start the Lantronix Device installer and double click on the Xport-IAP-05



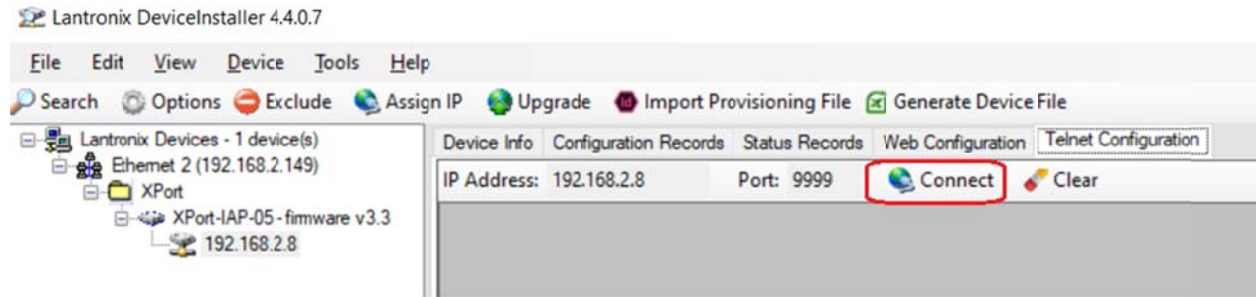
Click on Ok when the Error message comes up.



Click on Telnet Configuration tab

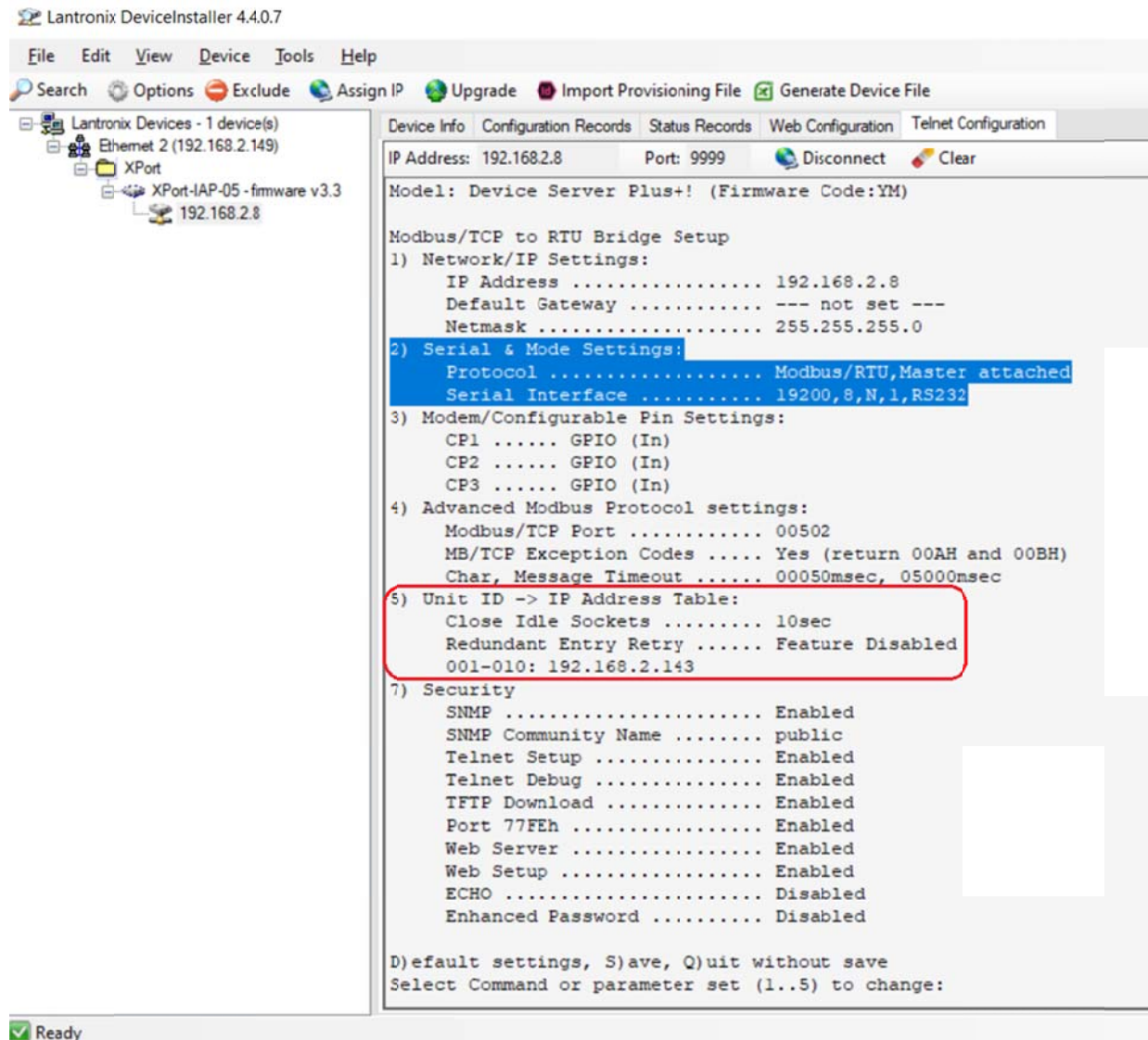


Click on Connect and hit the Enter key right after that.



Set Network IP settings and make sure that option 2 is exactly as those highlighted in blue, Also using option 5 Set the Units IDs to IP address Table here we mapped Slave IDs 1-10 to the IP address 192.168.2.149 of our PC running the MODBUS Simulator, Then type S for save and exit, and close the Lantronix Device Installer.

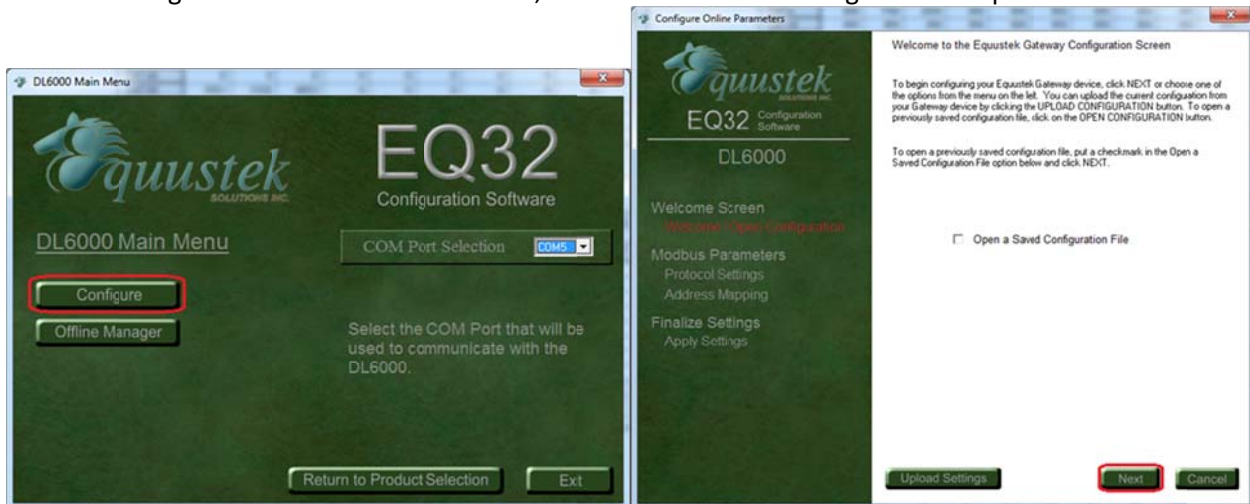
Please note that from the last octet of the DL6000 IP address is it's node address number on the DH485, here our DL6000 DH485 node address is 8 please refer to manual for details.



Start the EQ32 Equustek configuration software and click on DL6000, then to select the way you are connected serially to configure the DL6000 click on the drop menu of the (COM Port Selection) to select the RS232 comport or the USB comport you found under device manager if you are using USB.



Click on Configure in the DL6000 main menu, click on Next in the Configure Online parameters window.



From (MODBUS Device Type) drop menu select Master, and for Destination data Address Decoding depending on your PLC and the devices connected choose one of the three options.

PLC's and SLC's - (NXY:Z)

Use this format if the SLC, PLC, or other device allows up to 999:9999 to be entered for the file:word.

- X – Registers or Coils → 0 = 0X, 1 = 1X, 3 = 3X, 4 = 4X
- YY – Slave address → 1 to 99
- Z – Register address → 1 to 9999

Example: N41:3036 will access register 43036 from Modbus Slave address 1.

SLC's - (NXYZ:Z)

Use this format if the SLC, PLC, or other device allows up to 999:999 to be entered for the file:word.

- X – Registers or Coils → 0 = 0X, 1 = 1X, 3 = 3X, 4 = 4X
- Y – Slave address → 1 to 9
- Z:Z – Register address → Z before the colon ':' – Thousands digit → 0 to 9
- Z after the colon ':' – Ones to Hundreds digits → 0 to 999

Example: N413:36 will access register 43036 from Modbus Slave address 1.

NOTE: Z:Z cannot equal 0:0. The minimum value for Z:Z is 0:1.

MicroLogix's and SLC's - (NYXZ:Z)

Use this format **if the SLC, PLC, or other device allows up to 255:255 to be entered for the file:word.**

- Y – Slave address → 0 = slave address 1, 1 = slave address 2, 2 = slave address 3
- X – Registers or Coils → 0 = 0X, 1 = 1X, 3 = 3X, 4 = 4X
- Z:Z – Register address → Z before the colon ':' – Thousands digit → 0 to 9
- Z after the colon ':' – Ones to Hundreds digits → 0 to 255

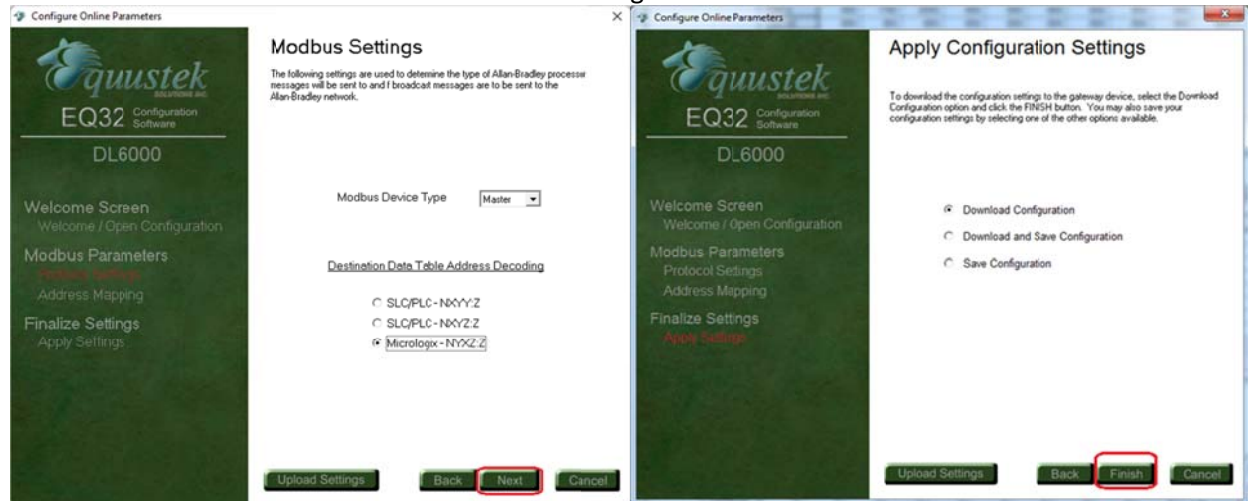
Example: N43:36 will access register 43036 from Modbus Slave address 1.

NOTES: 1. Z:Z cannot equal 0:0. The minimum value for Z:Z is 0:1.

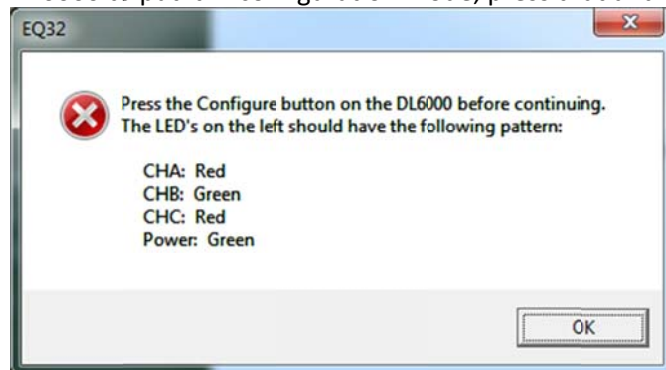
2. Slave address 3 cannot access registers or coils above 5255.

In our case here we selected NYXZ:z since our device allow up to 255:255 to be entered for the file:word.

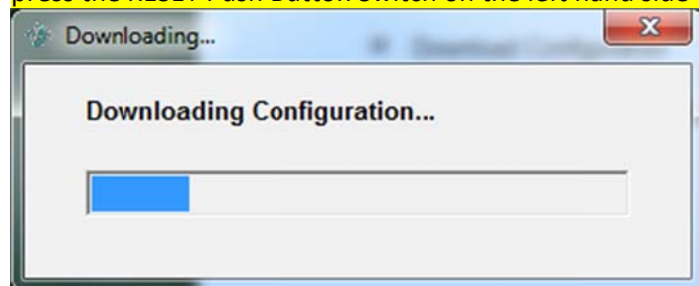
Click on Next then click Finish to download the configuration to the DL6000.



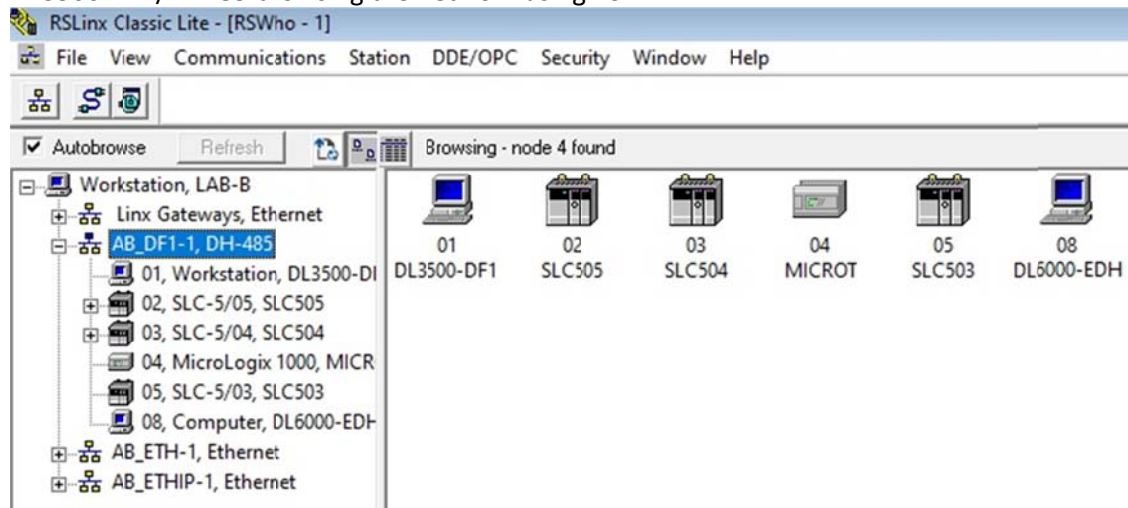
A message will come asking to press the Configure push button switch on the right hand side of the DL6000 to put it in configuration mode, press that and then click on OK



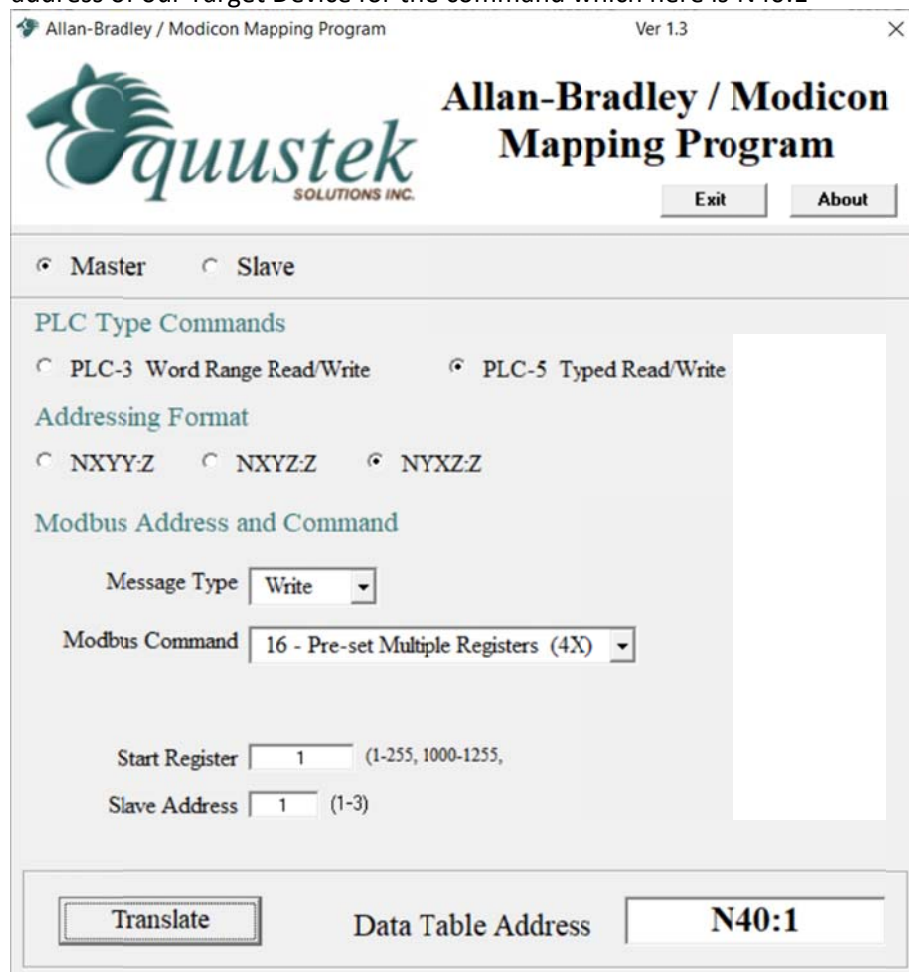
Wait until downloading is completed and a successful message appears, **close the EQ32 software and press the RESET Push Button Switch on the left hand side of the DL6000 to put the unit online.**



To verify that our setting, we had the DL6000-MEDH485 connected to a DH485 network shown with our DL3500-DF1/DH485 browsing the network using RSLINX.



Then created a command to write from 14 words from Integer file N7:0 in our SLC503 to registers 40001-40014, using our Allan-Bradley to Modbus Mapping Program we found out the Data Table address of our Target Device for the command which here is N40:1



MSG - N9:0 : (14 Elements)

General

This Controller

Communication Command:

Data Table Address:

Size in Elements:

Channel:

Target Device

Message Timeout :

Data Table Address:

Local Node Addr (dec): (octal):

Local / Remote :

Control Bits

Ignore if timed out (TO):

To be retried (NR):

Awaiting Execution (EW):

Continuous Run (CO):

Error (ER):

Message done (DN):

Message Transmitting (ST):

Message Enabled (EN):

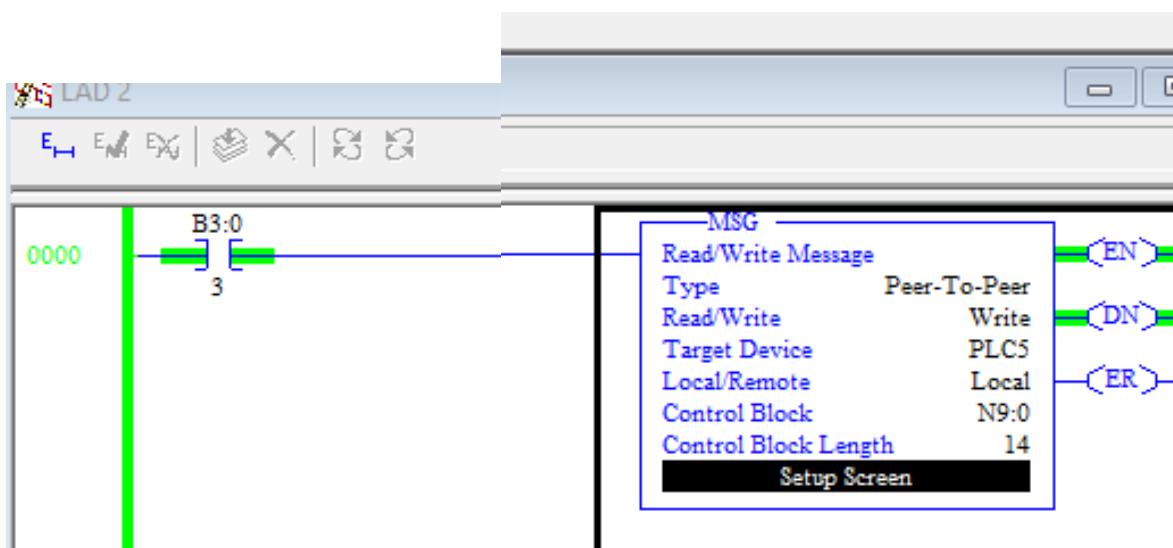
Waiting for Queue Space :

Error

Error Code(Hex):

Error Description

No errors



Then used the MODBUS Simulator MODSIM running on our PC shown below to see that values from N7:0 to N7:13 were written to Registers 40001-40014

The screenshot shows the ModSim32 - ModSim1 application window. The main configuration area includes:

- Device Id: 1
- Address: 0001
- Length: 14
- MODBUS Point Type: 03: HOLDING REGISTER

Below the configuration, a list of registers is displayed:

```
40001: <00899>
40002: <00008>
40003: <00014>
40004: <00040>
40005: <00137>
40006: <00001>
40007: <03322>
40008: <00224>
40009: <00005>
40010: <00000>
40011: <00000>
40012: <00028>
40013: <03072>
40014: <00000>
```

At the bottom, the 'Data File N7 (dec) -- INTEGER' window is open, showing a table of data:

Offset	0	1	2	3	4	5	6	7	8	9
N7:0	899	8	14	40	137	1	3322	224	5	0
N7:10	0	28	3072	0						

The Data File window also includes a search field for 'N7:0', a 'Radix' dropdown set to 'Decimal', a 'Columns' dropdown set to '10', and buttons for 'Properties', 'Usage', and 'Help'.