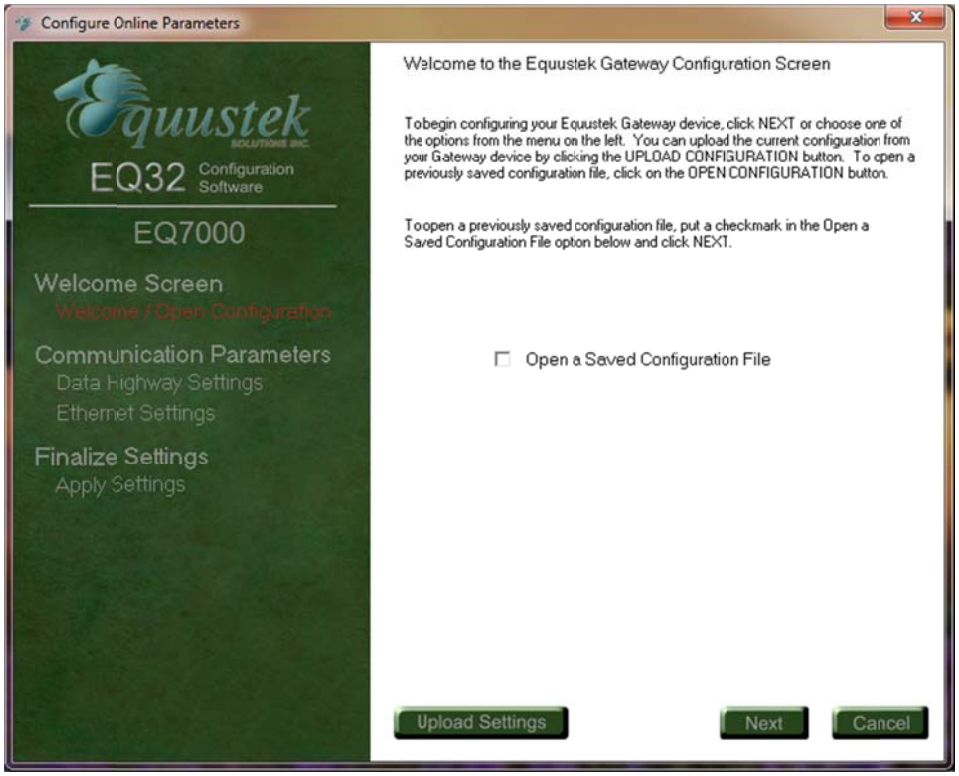
Accessing Allen Bradley DH+ PLC 5 and SLC 504 with EQ7000 using Ethernet IP Driver from Kepware KEPServerEX

To configure EQ7000 first start the EQ32 configuration software, and select EQ7000.

Select the serial port that the USB occupies under your Device Manager.

After selecting the right serial port click on Configure.

Click on Next



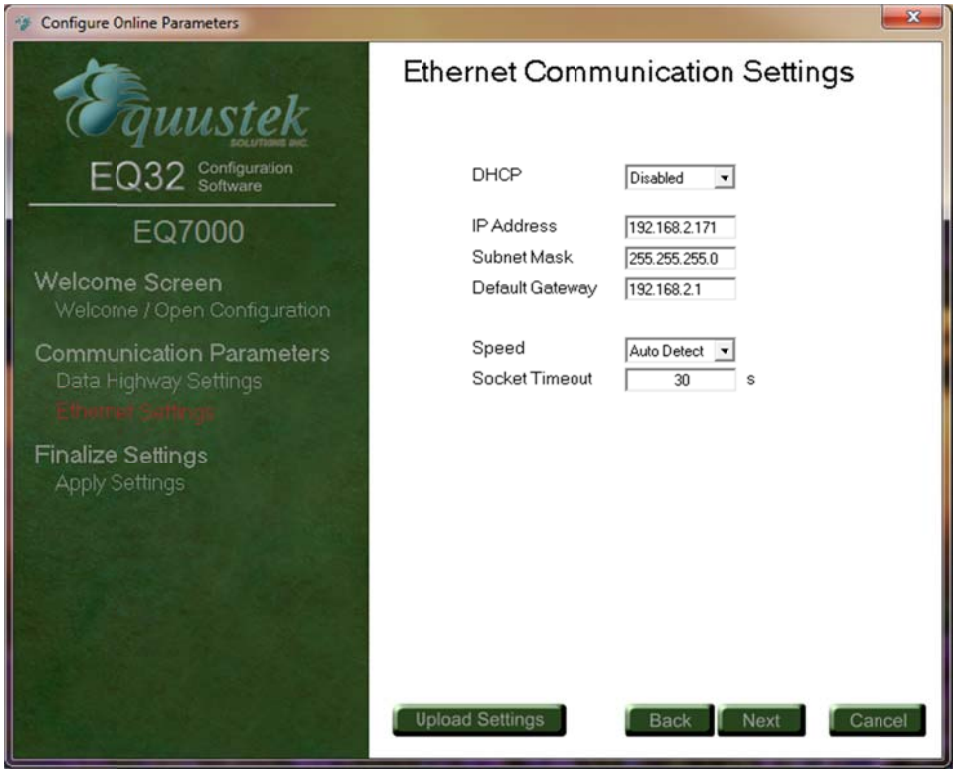
Select your network Mode DH+ or DH485.

Select a unique node address for the EQ7000.

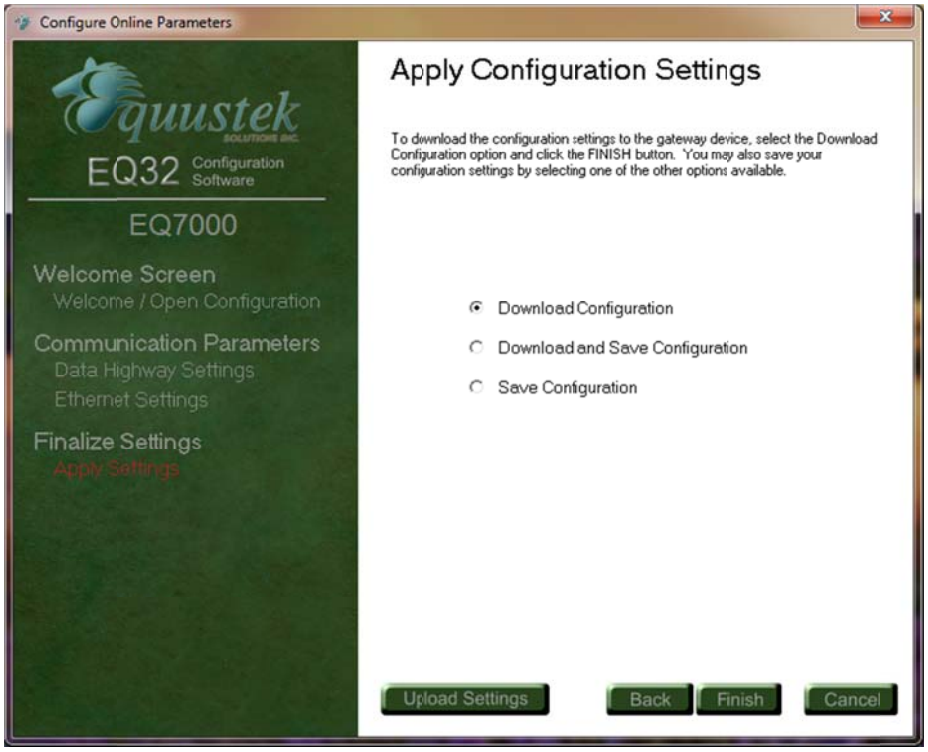
Select the network speed.

Click on Next.

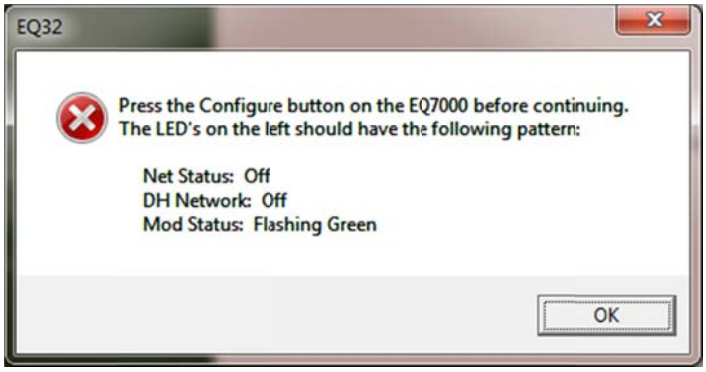
Enter an IP address for the EQ7000, and the Net mask as well as the Gateway.



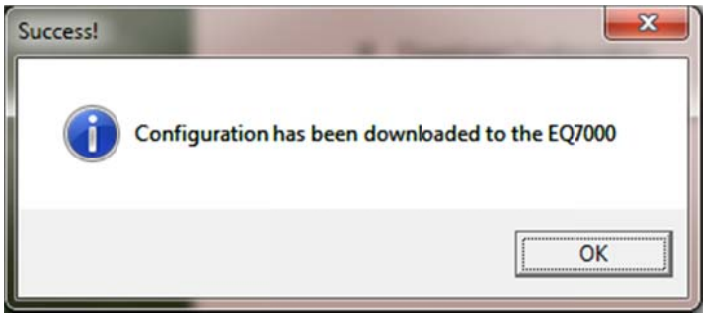
Click on finish.



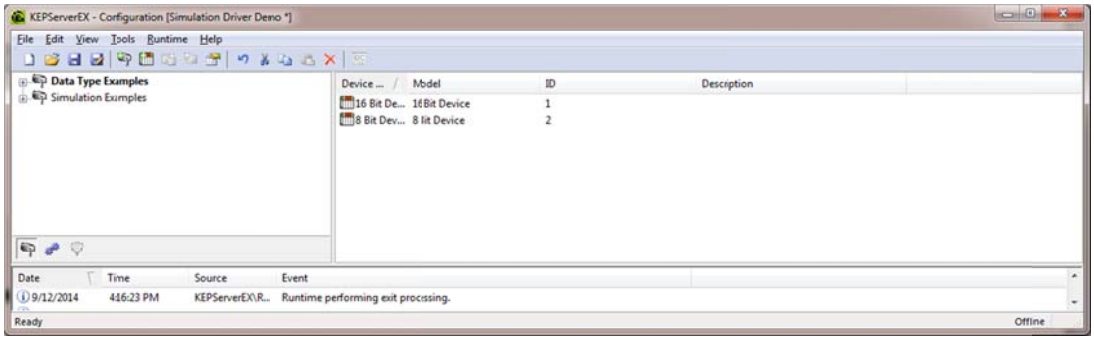
Press on the Configure push button switch on the right hand side of the unit and click OK.



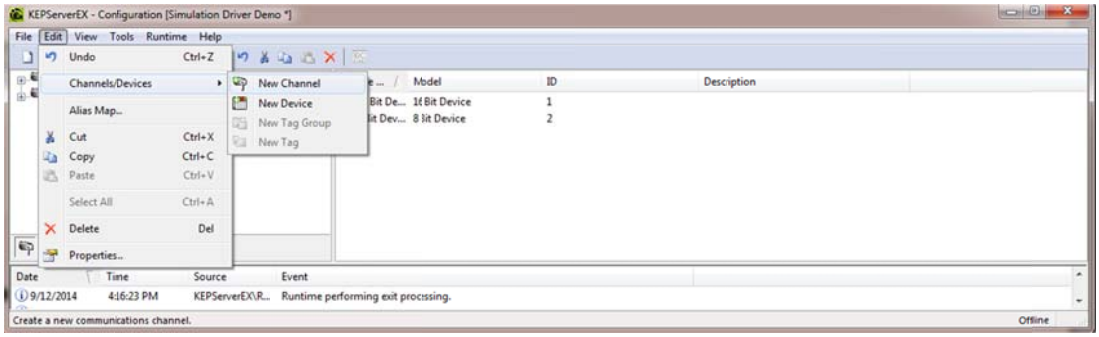
Once you have downloaded OK to the EQ7000 you should get the Success message shown below click on OK



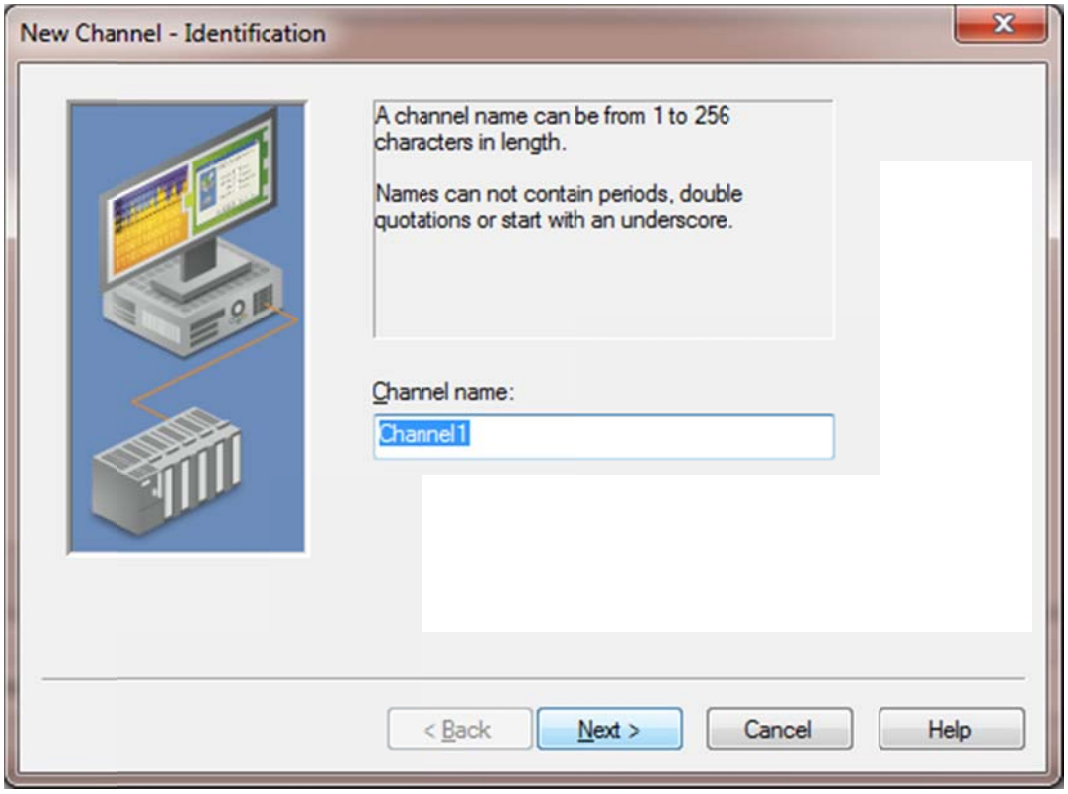
Start KEPServer.



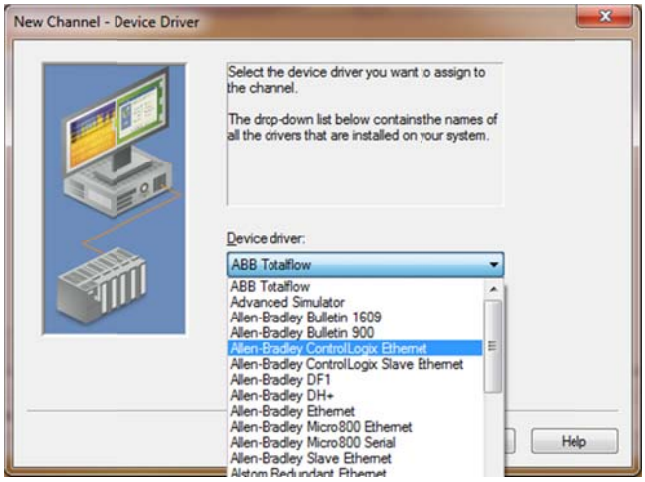
Add New Channel.



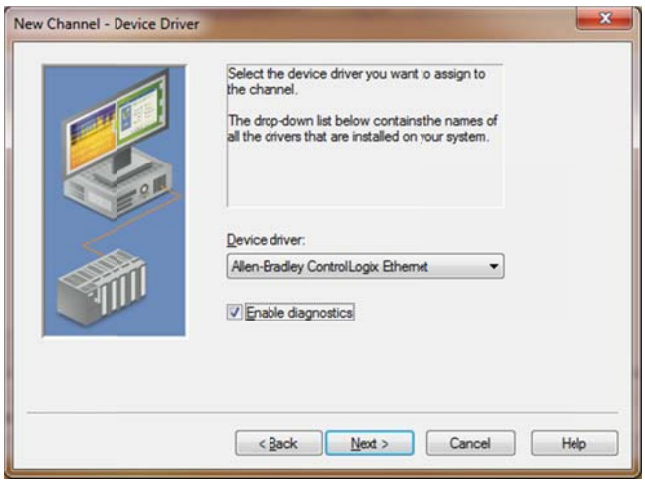
Name the Channel.



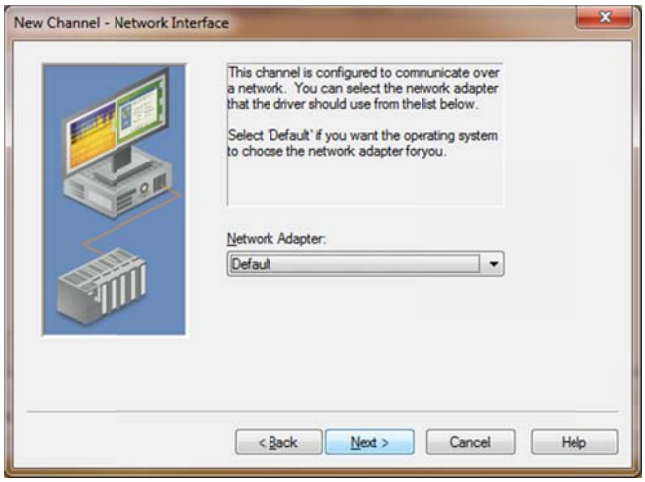
From Device Driver select Allen Bradley ControlLogix Ethernet.



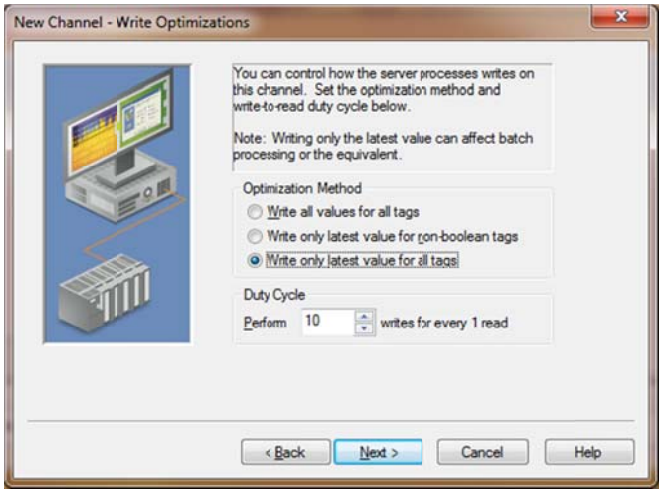
Click on Next



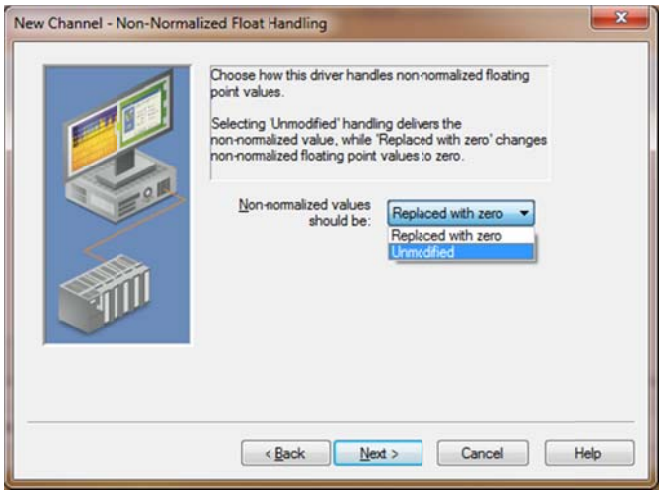
Select Network adapter and click Next.



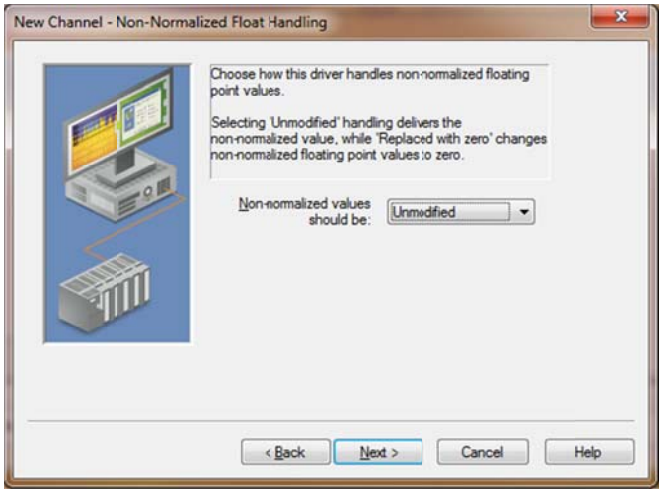
Select optimization method, Duty Cycle and click on Next.



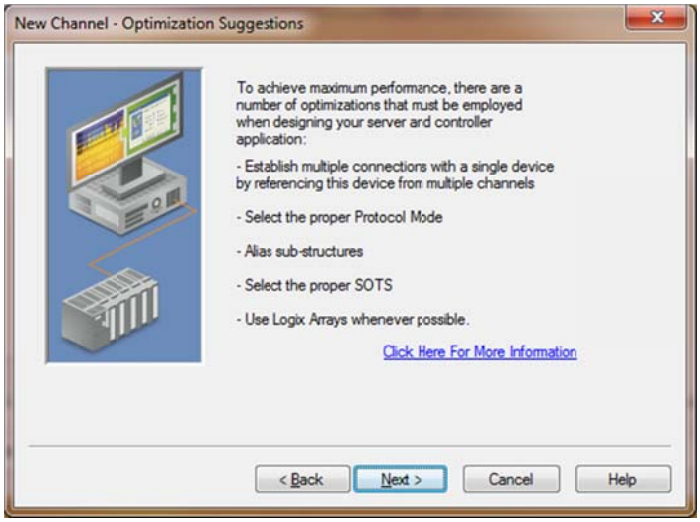
Choose how to handle non-normalized floating point values.



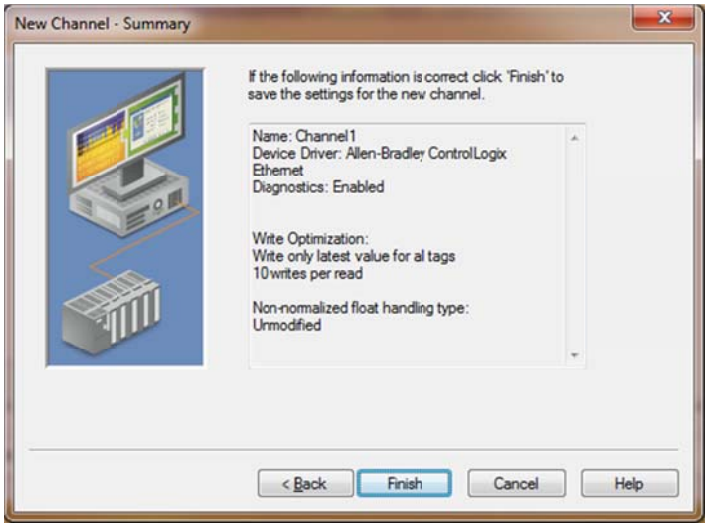
Click on Next.



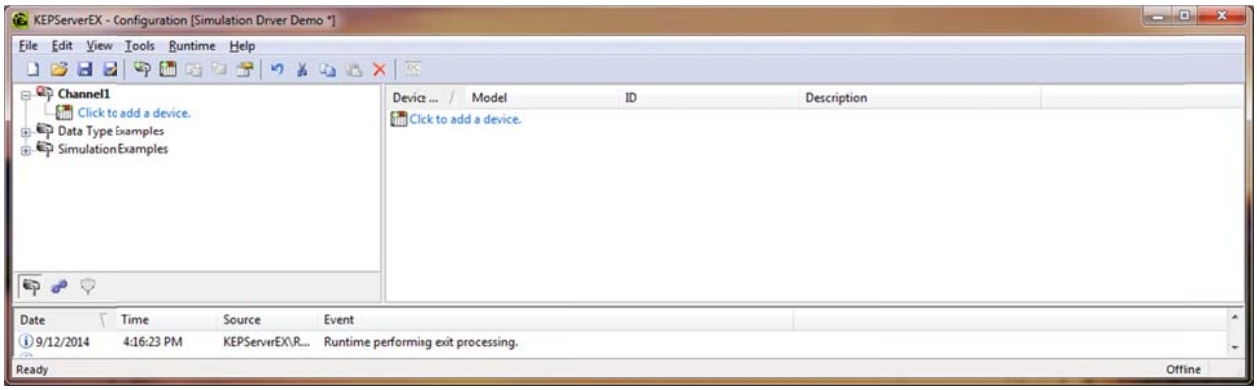
Click on Next.



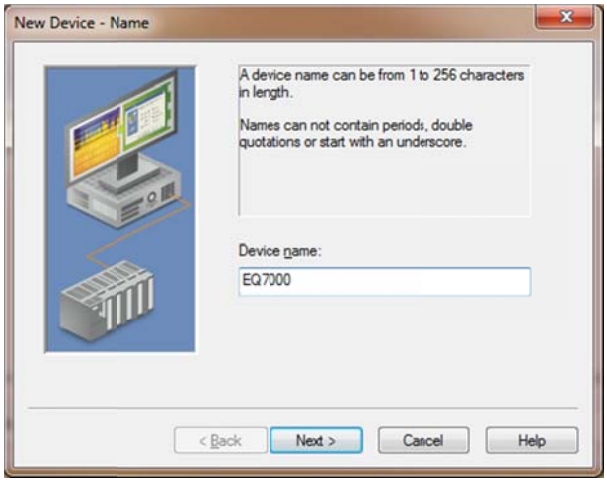
Click On Finish.



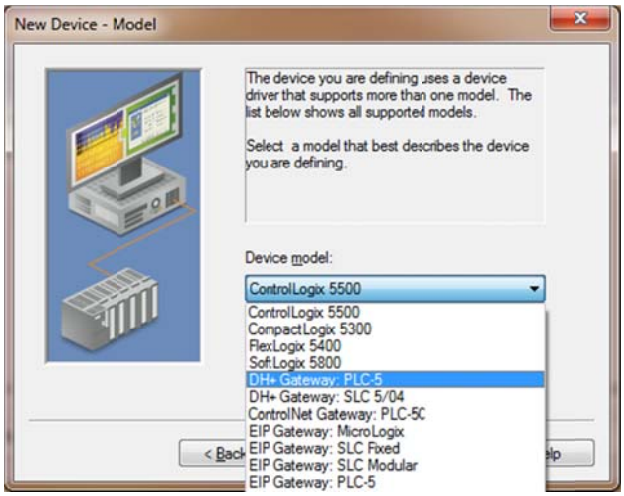
Click on where it says Click to add a device.



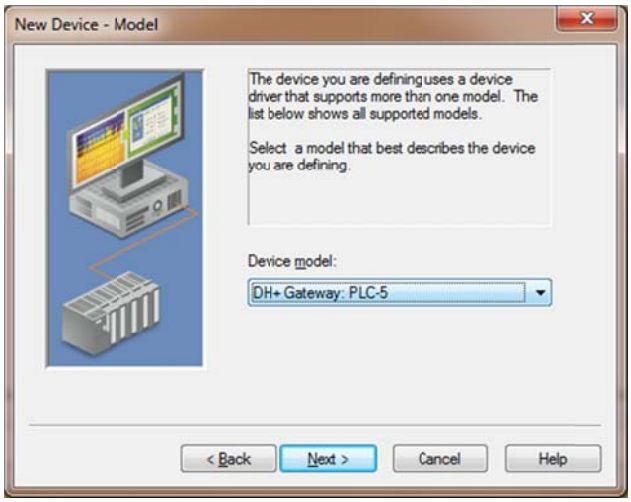
Name the Device and click Next.



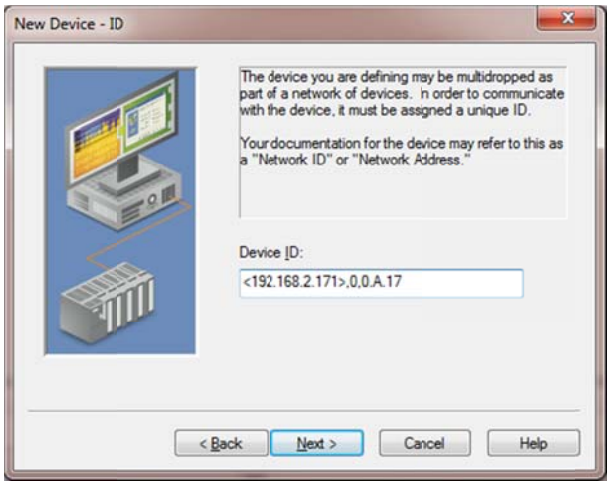
To access PLC5 under Device model select DH+ Gateway : PLC-5



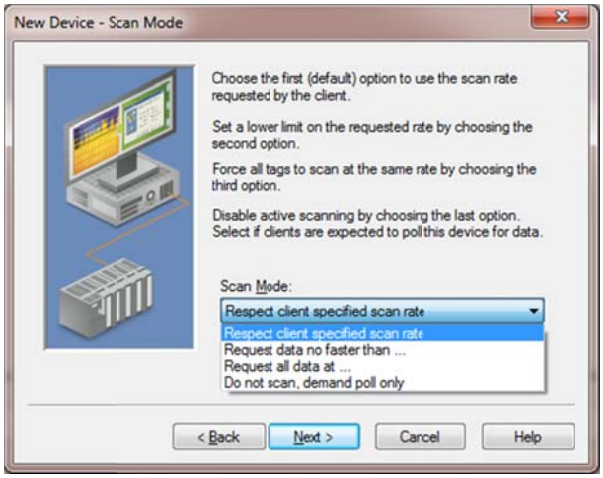
Click on Next.



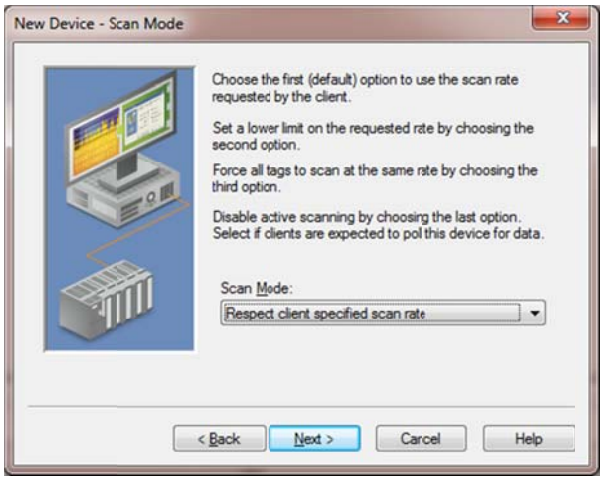
Enter <IP or Hostname>,1,[<Optional Routing Path>],<DHRIO Slot>.<DHRIO Channel>.<DH+ Node ID (dec)> as shown <IP address of the EQ7000>,0,0.A.PLC5 node address in decimal



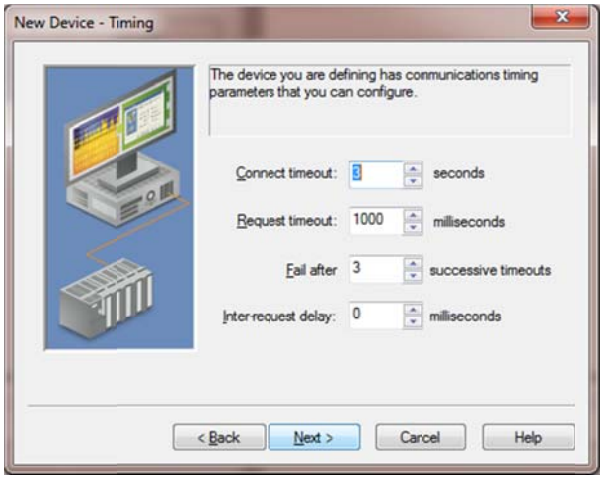
Select Scan Mode.



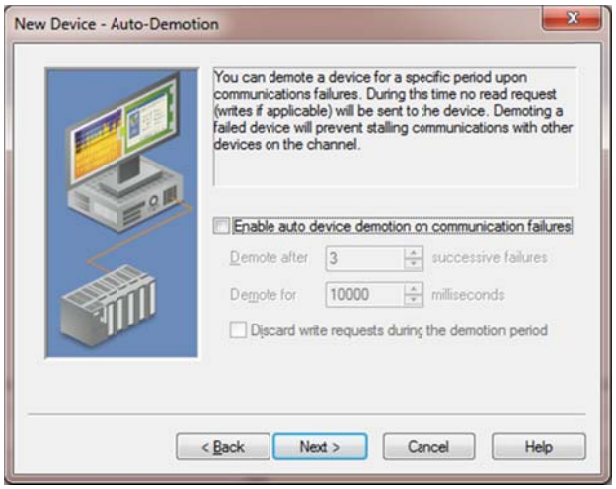
Click Next



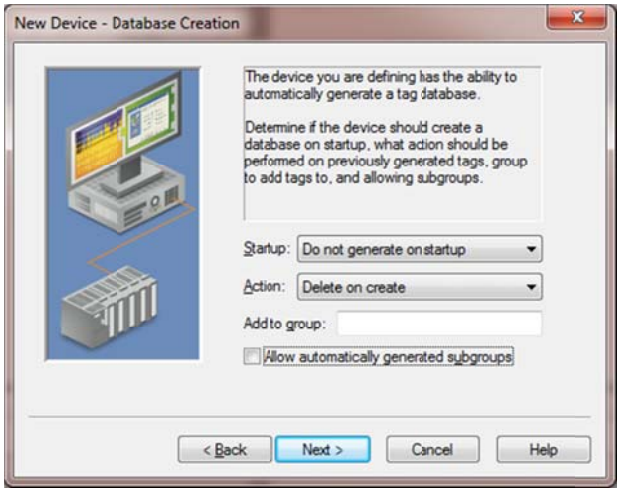
Enter Communication timing parameters.



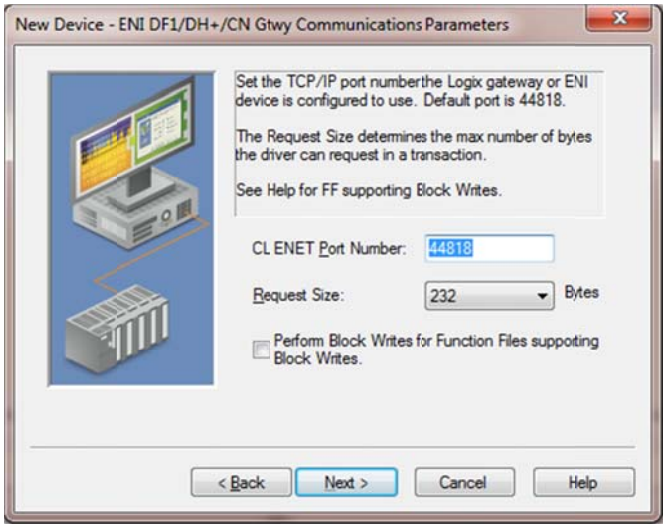
Click Next.



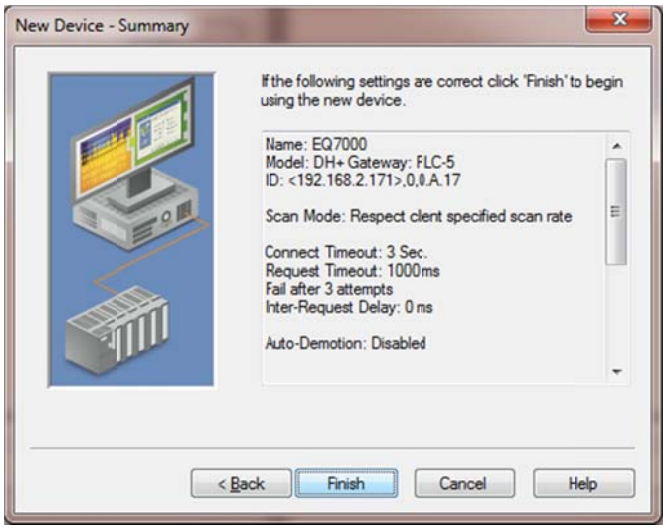
Select Database and action required.



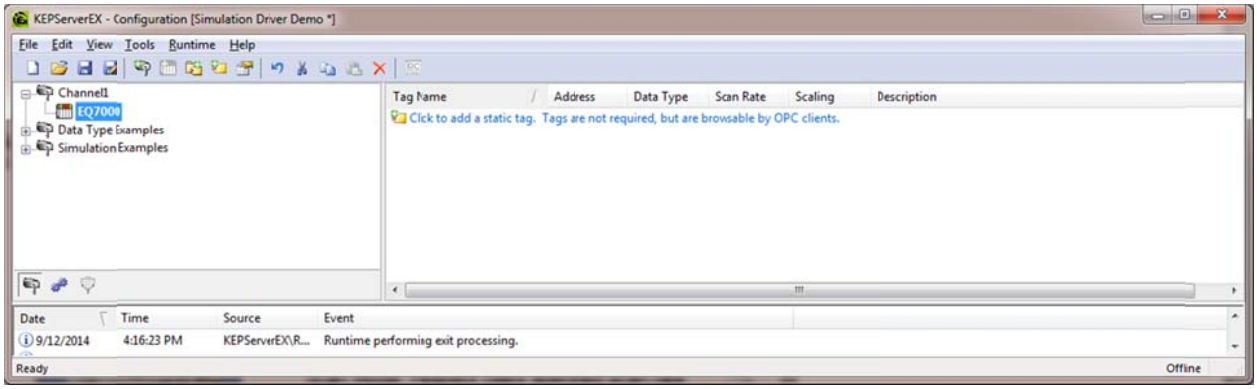
Make sure port is set to 44818, and select maximum number of bytes per request, and click Next.



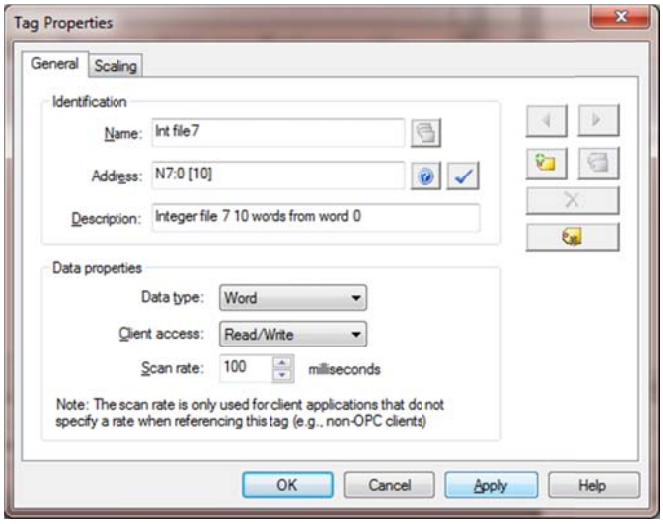
Make sure your settings are right and click on finish.



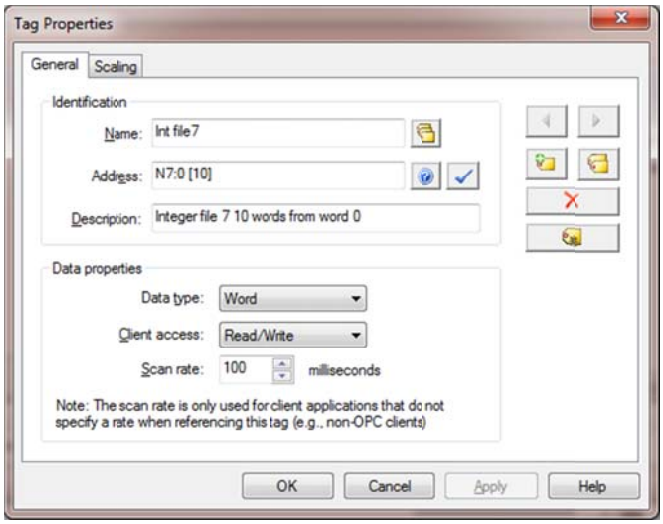
Click to add tags.



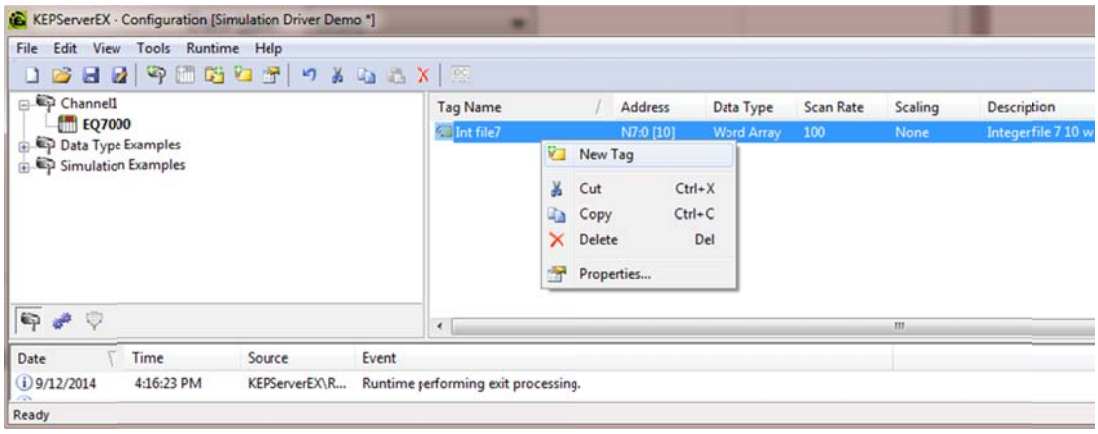
In this example we added Integer file N7 to read 10 words starting from word 0.



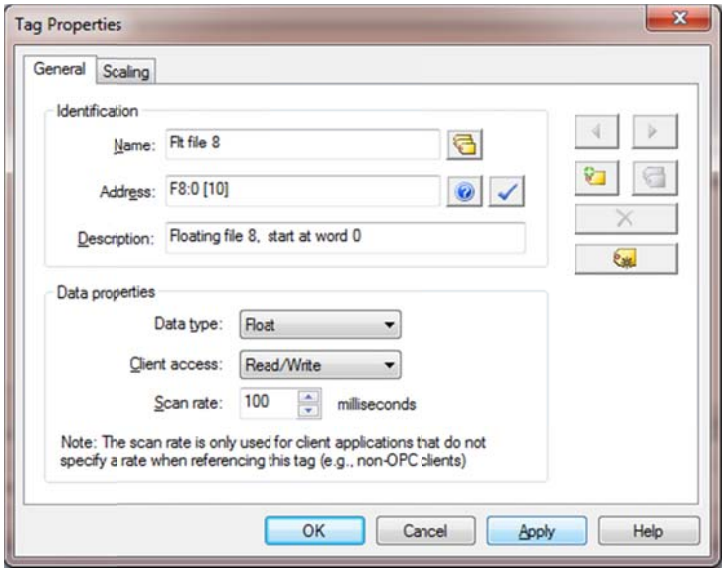
Click on Apply



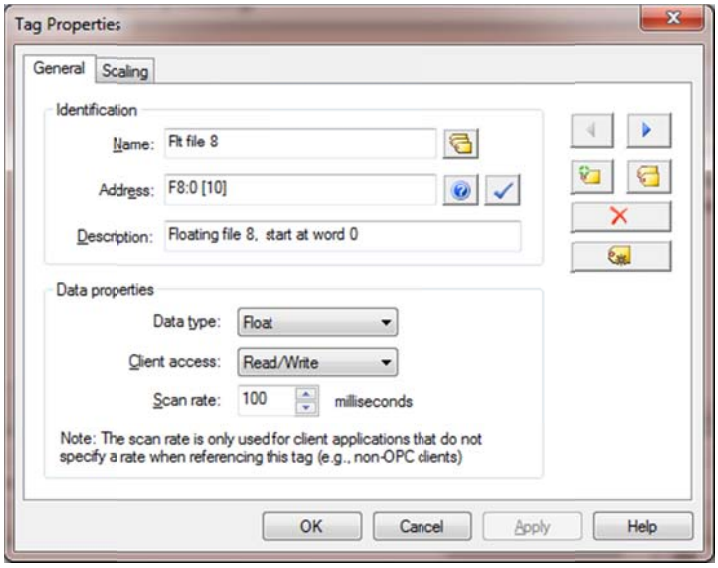
Click to add new Tag.



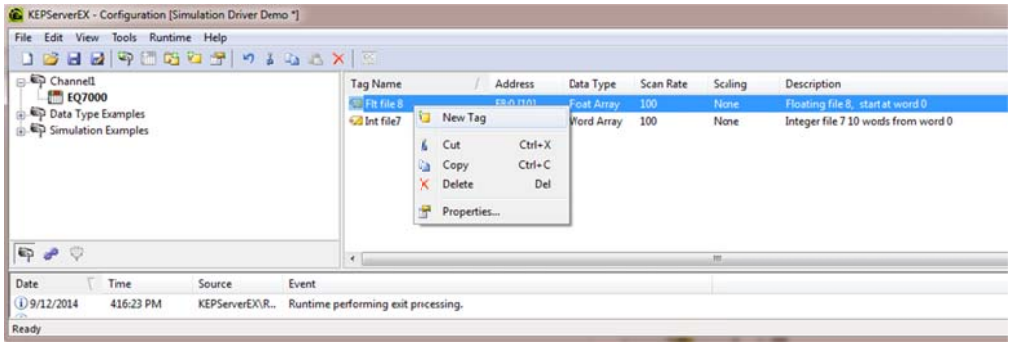
Repeating the procedure for Floating point file F8.

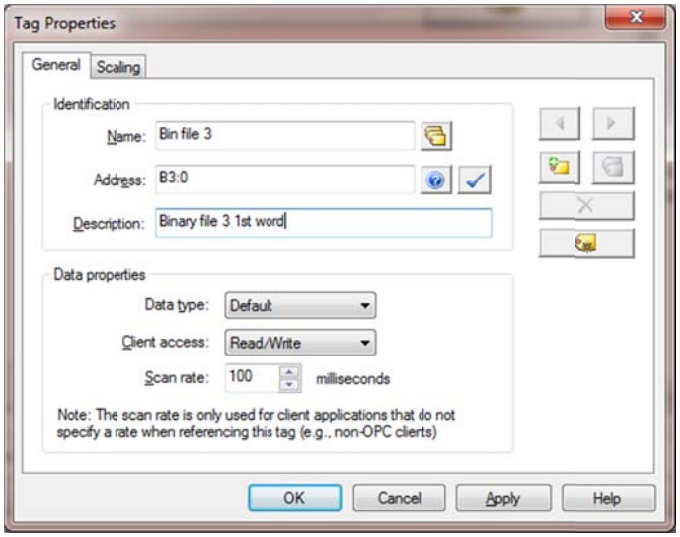


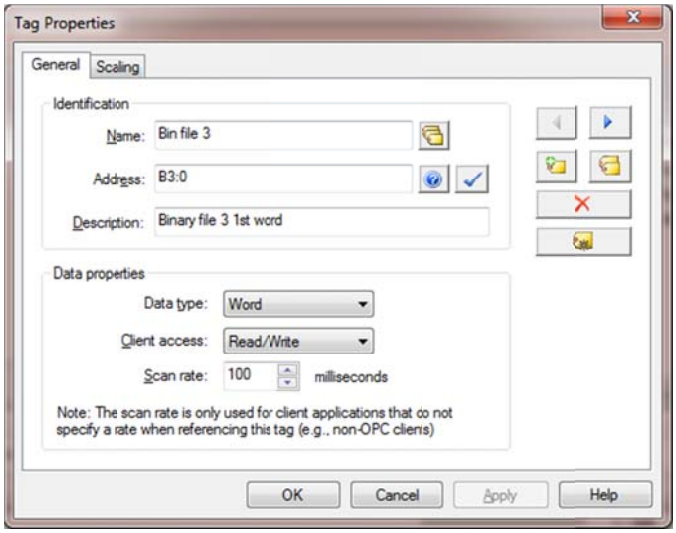
Click on Apply



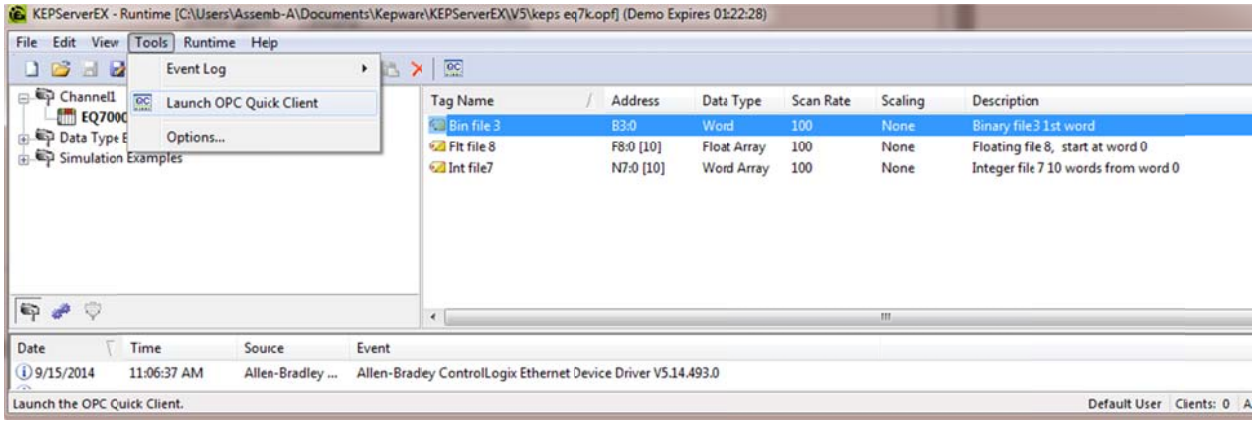
Repeat the procedure for Binary file B3.

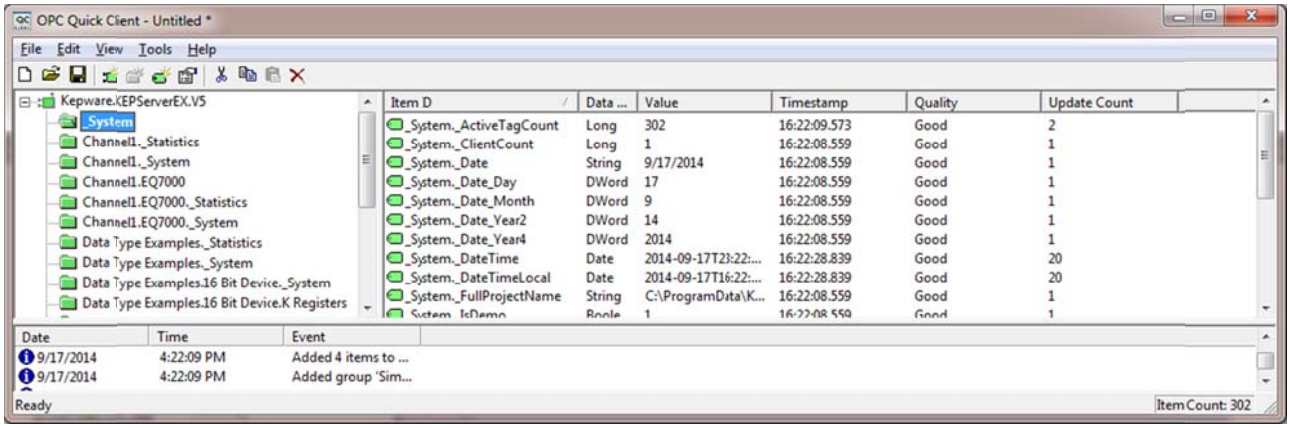




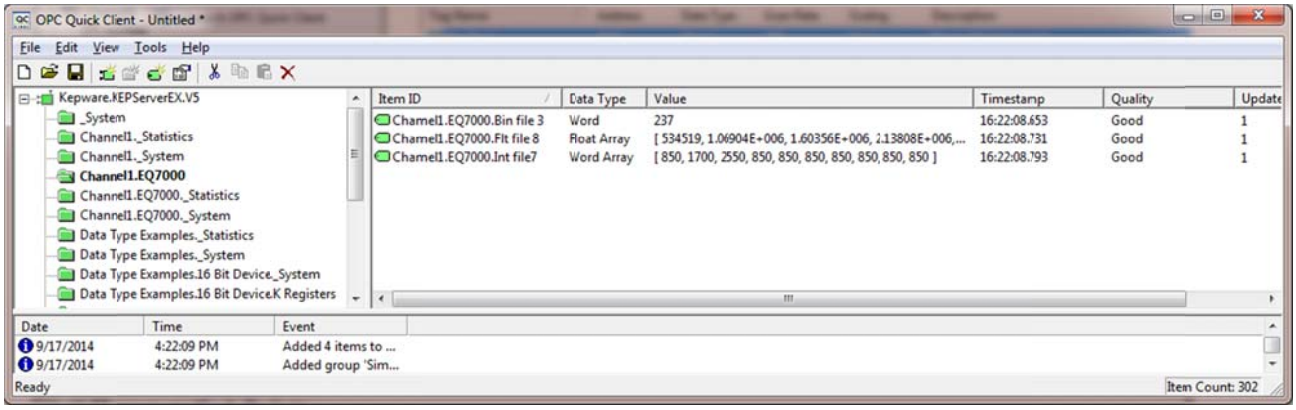


Click on Lunch OPC Quick Client

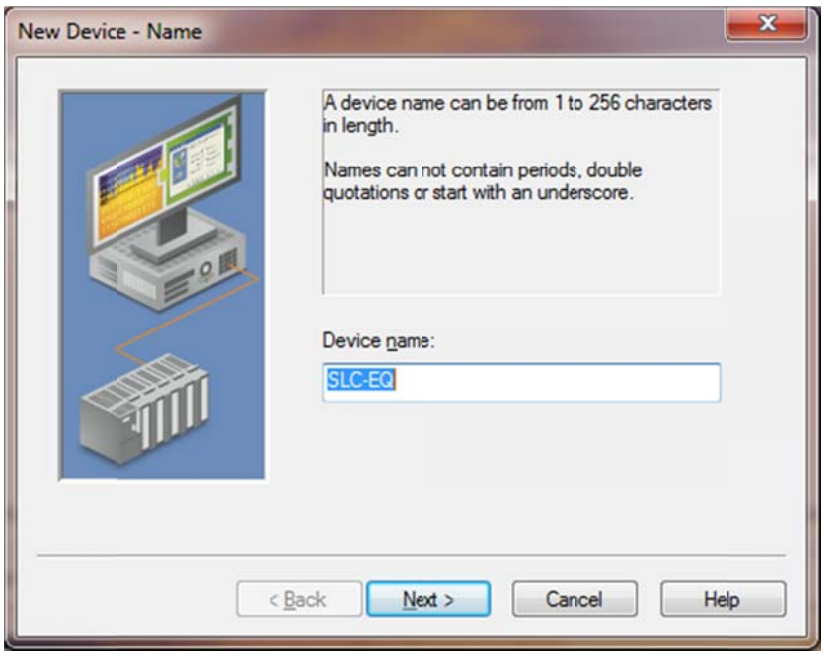




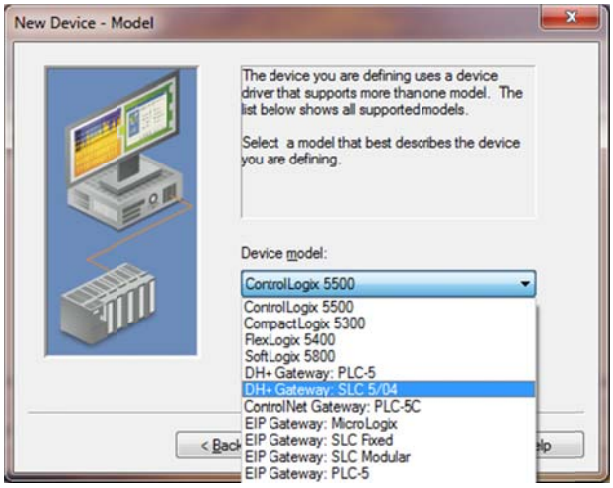
Click on the device to read the tag values as shown below.



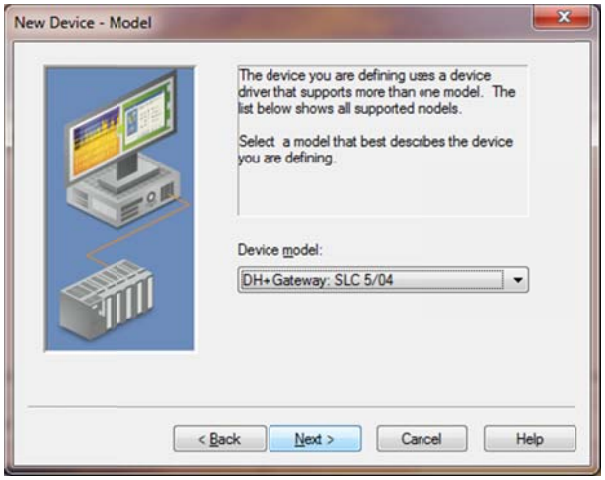
Below we will repeat the procedure for the SLC 504, add a new device and name it.



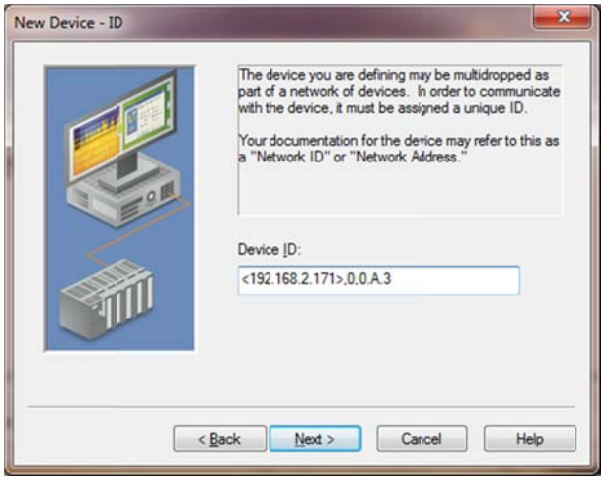
From Device Model, select DH+ Gateway : SLC 5/04

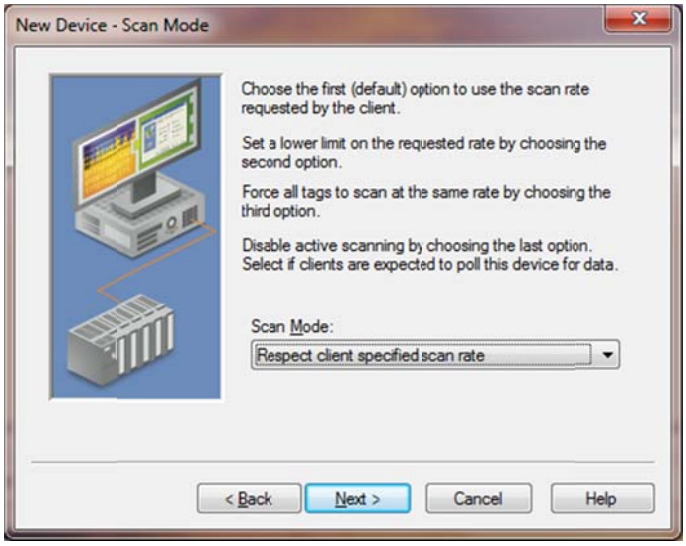


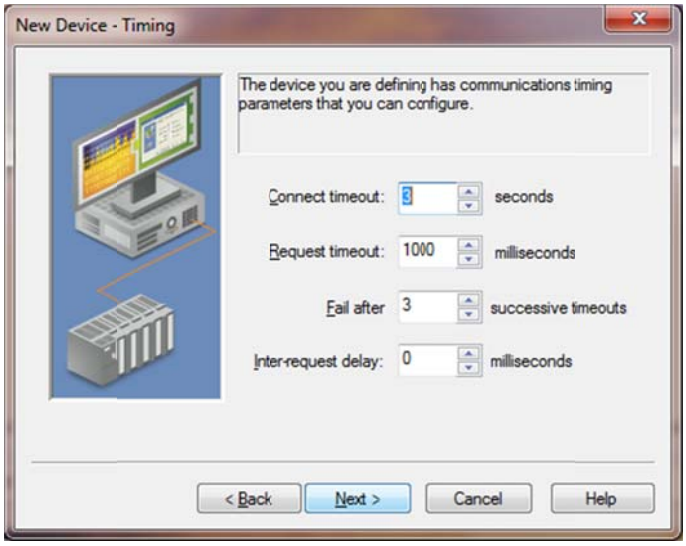
Click Next.

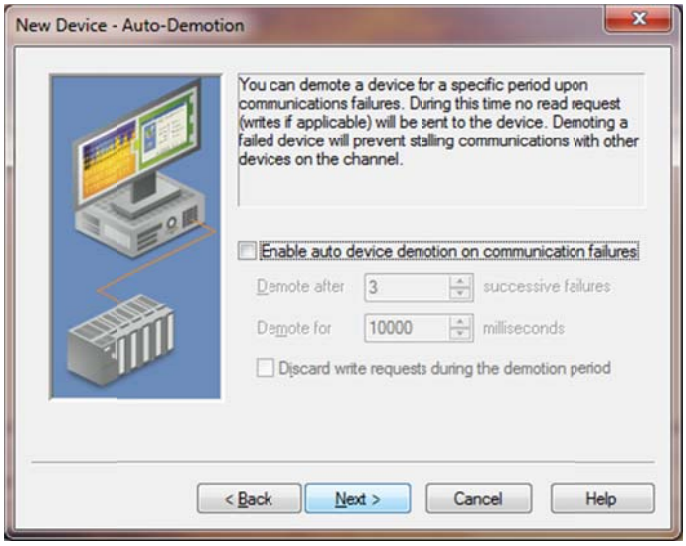


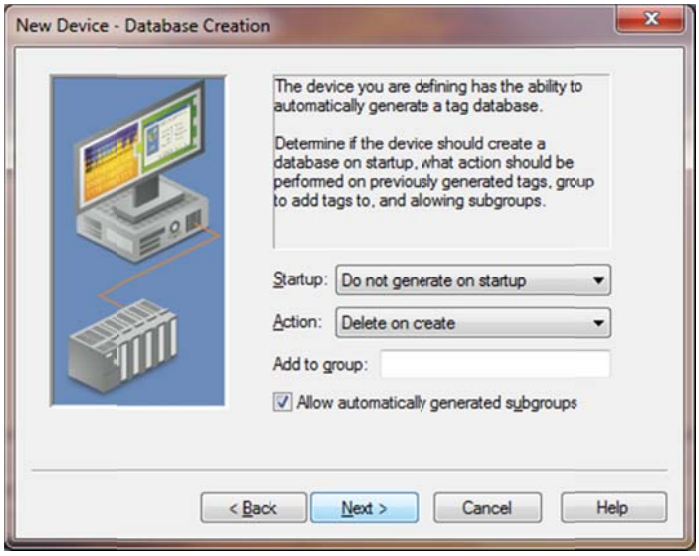
Enter Device ID similar to previously done for PLC5 except here the node address for our SLC5/04 is 3.

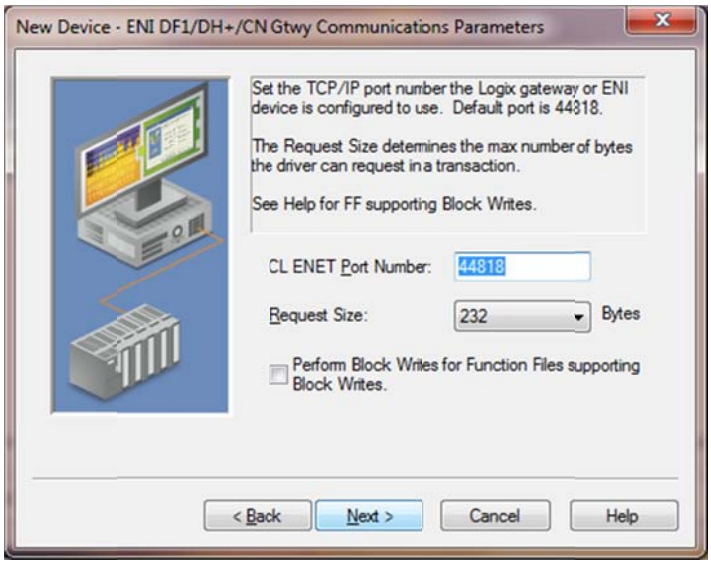


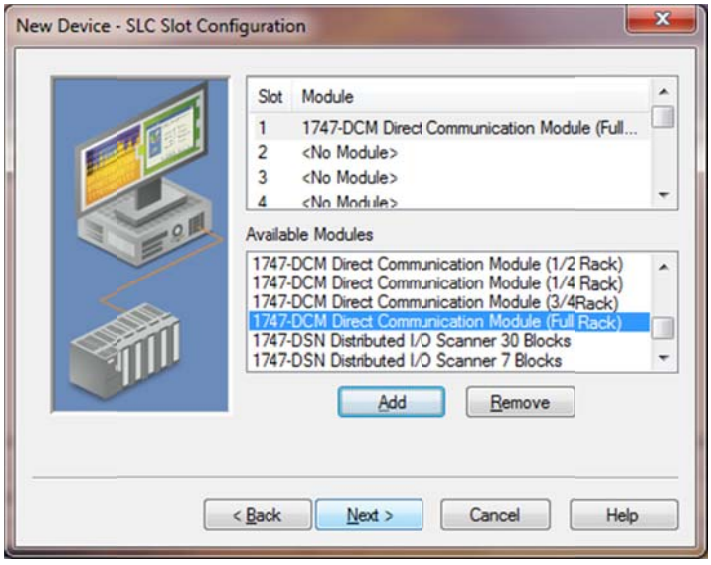

New Device - Scan Mode
Choose the first (default) option to use the scan rate requested by the client.
Set a lower limit on the requested rate by choosing the second option.
Force all tags to scan at the same rate by choosing the third option.
Disable active scanning by choosing the last option. Select if clients are expected to poll this device for data.
Scan Mode:
Respect client specified scan rate
< Back
Next >
Cancel
Help

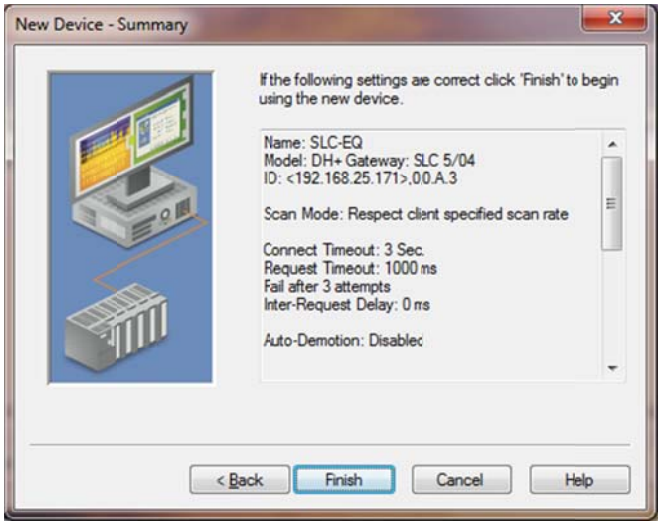

New Device - Timing
The device you are defining has communications timing parameters that you can configure.
Connect timeout: 3 seconds
Request timeout: 1000 milliseconds
Fail after 3 successive timeouts
Inter-request delay: 0 milliseconds
< Back
Next >
Cancel
Help


New Device - Auto-Demotion
You can demote a device for a specific period upon communications failures. During this time no read request (writes if applicable) will be sent to the device. Demoting a failed device will prevent stalling communications with other devices on the channel.
Enable auto device demotion on communication failures
Demote after 3 successive failures
Demote for 10000 milliseconds
Discard write requests during the demotion period
< Back
Next >
Cancel
Help

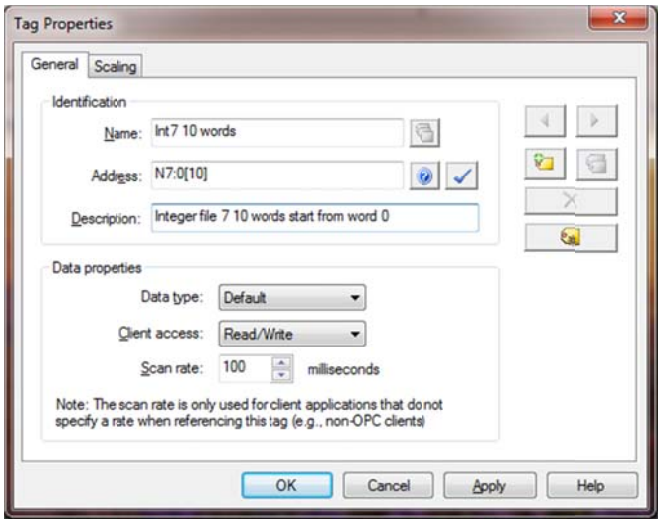

New Device - Database Creation
The device you are defining has the ability to automatically generate a tag database.
Determine if the device should create a database on startup, what action should be performed on previously generated tags, group to add tags to, and alowing subgroups.
Startup:
Do not generate on startup
Action:
Delete on create
Add to group:
Allow automatically generated subgroups
< Back
Next >
Cancel
Help

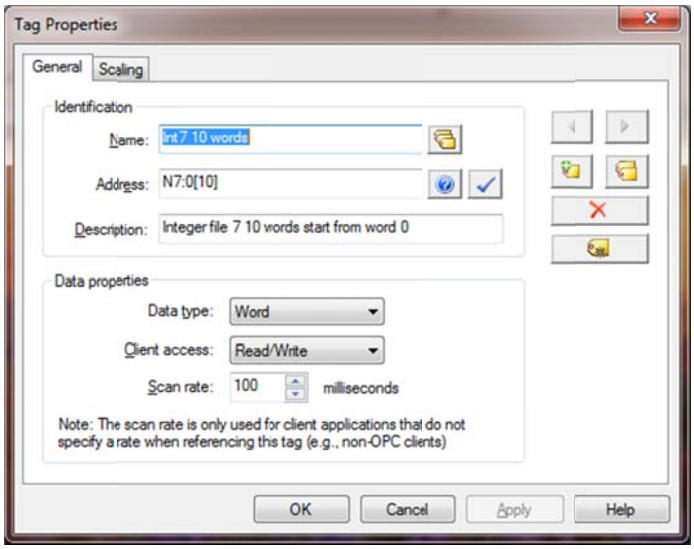

New Device - ENI DF1/DH+/CN Gtwy Communications Parameters
Set the TCP/IP port number the Logix gateway or ENI device is configured to use. Default port is 44318.
The Request Size determines the max number of bytes the driver can request in a transaction.
See Help for FF supporting Block Writes.
CL ENET Port Number:
44818
Request Size:
232
Bytes
Perform Block Writes for Function Files supporting Block Writes.
< Back
Next >
Cancel
Help

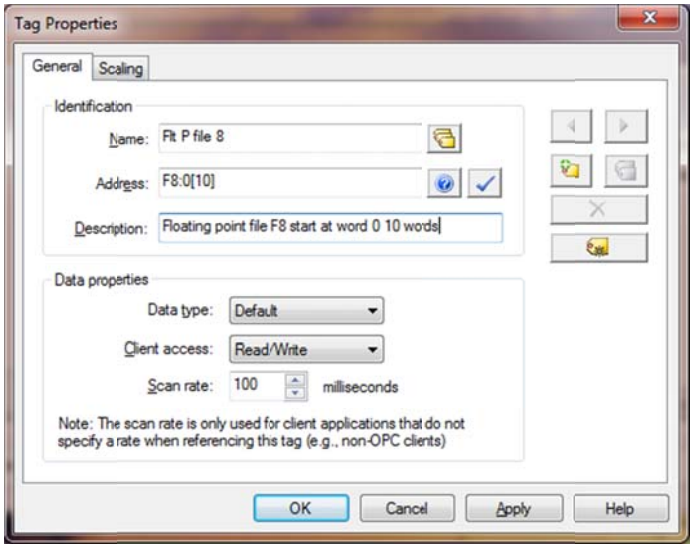

New Device - SLC Slot Configuration
Slot
Module
1
1747-DCM Direct Communication Module (Full...
2
<No Module>
3
<No Module>
4
<No Module>
Available Modules
1747-DCM Direct Communication Module (1/2 Rack)
1747-DCM Direct Communication Module (1/4 Rack)
1747-DCM Direct Communication Module (3/4Rack)
1747-DCM Direct Communication Module (Full Rack)
1747-DSN Distributed I/O Scanner 30 Blocks
1747-DSN Distributed I/O Scanner 7 Blocks
Add
Remove
< Back
Next >
Cancel
Help

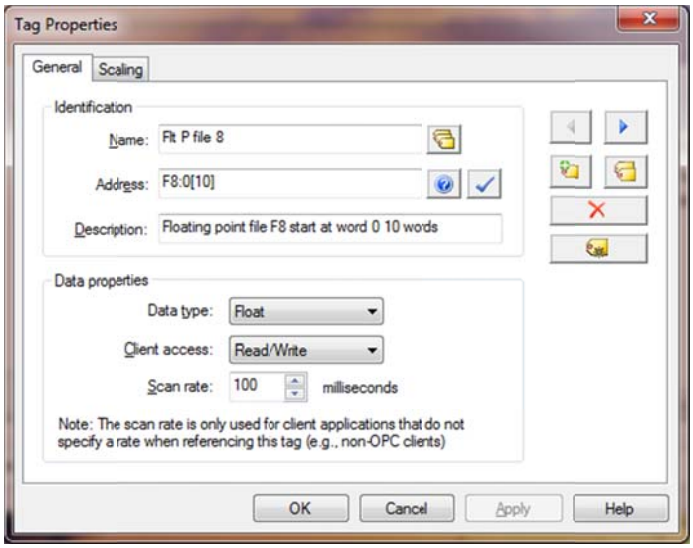


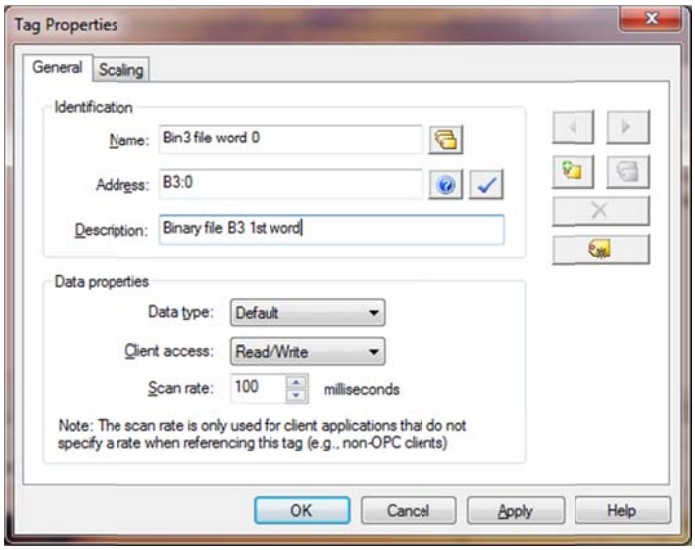
Here we added same tags for the SLC 5/04, N7, F8, and B3.

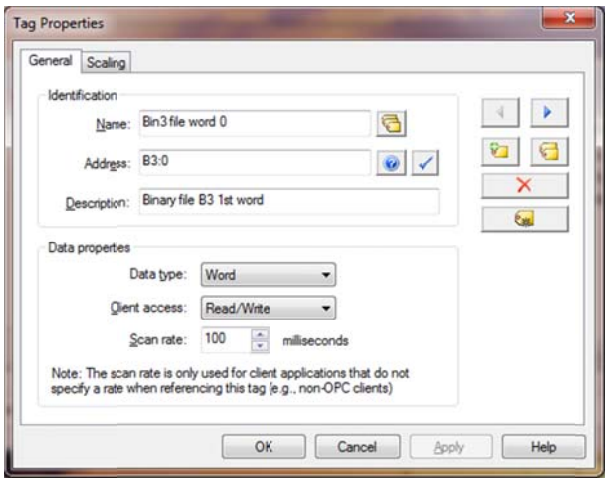





Tag Properties
General
Scaling
Identification
Name: Flt P file 8
Address: F8:0[10]
Description: Floating point file F8 start at word 0 10 words
Data properties
Data type: Default
Client access: Read/Write
Scan rate: 100 milliseconds
Note: The scan rate is only used for client applications that do not specify a rate when referencing this tag (e.g., non-OPC clients)
OK
Cancel
Apply
Help


Tag Properties
General
Scaling
Identification
Name: Flt P file 8
Address: F8:0[10]
Description: Floating point file F8 start at word 0 10 words
Data properties
Data type: Float
Client access: Read/Write
Scan rate: 100 milliseconds
Note: The scan rate is only used for client applications that do not specify a rate when referencing this tag (e.g., non-OPC clients)
OK
Cancel
Apply
Help


Tag Properties
General
Scaling
Identification
Name: Bin3 file word 0
Address: B3:0
Description: Binary file B3 1st word
Data properties
Data type: Default
Client access: Read/Write
Scan rate: 100 milliseconds
Note: The scan rate is only used for client applications that do not specify a rate when referencing this tag (e.g., non-OPC clients)
OK
Cancel
Apply
Help



Lunch OPC Quick Client.