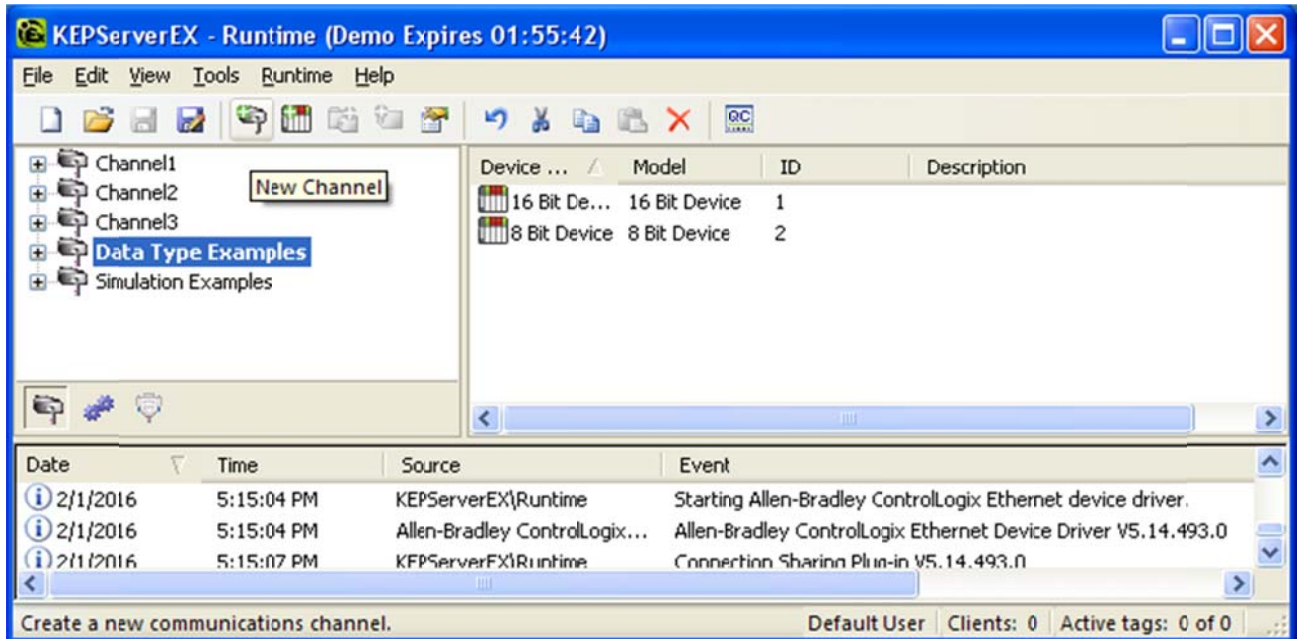


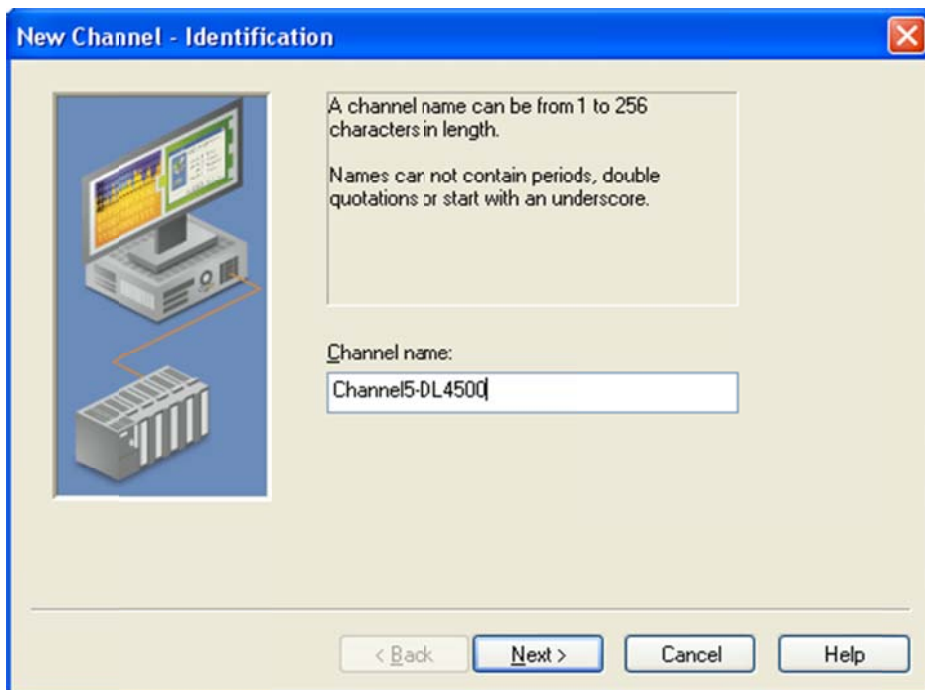
## Accessing Allen Bradley DH+ PLC5 & SLC504 with Equustek DL4500EDH+ using Kepware kepserver Encapsulated DF1 Ethernet driver.

In this application note we are using DL4500EDH+ with IP address 192.168.2.52 which means it's DH+ node is 52 decimal or 64 Octal , PLC5-80E node address 21 Octal and SLC504 node address 23 Octal.

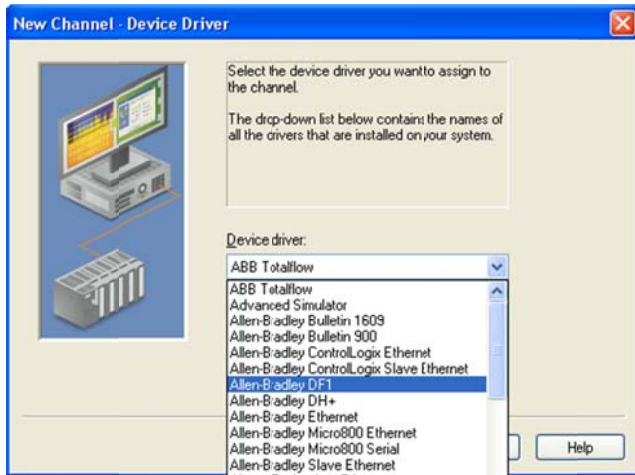
Start the server and click on New Channel Icon to add new channel.



Name the new channel and click on Next.



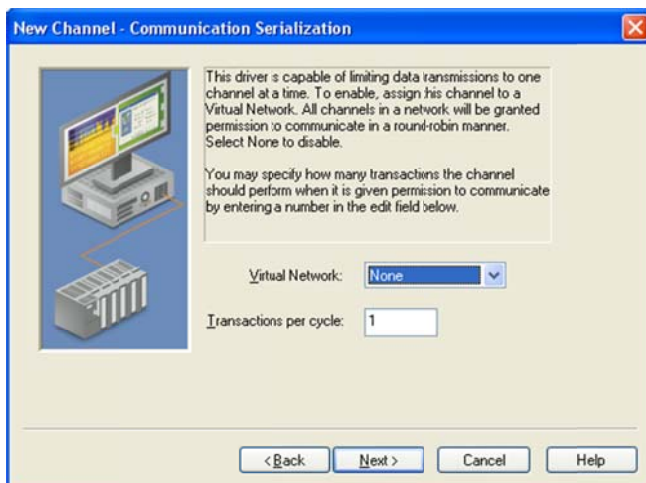
From the drop menu select Device driver as Allen Bradley DF1.



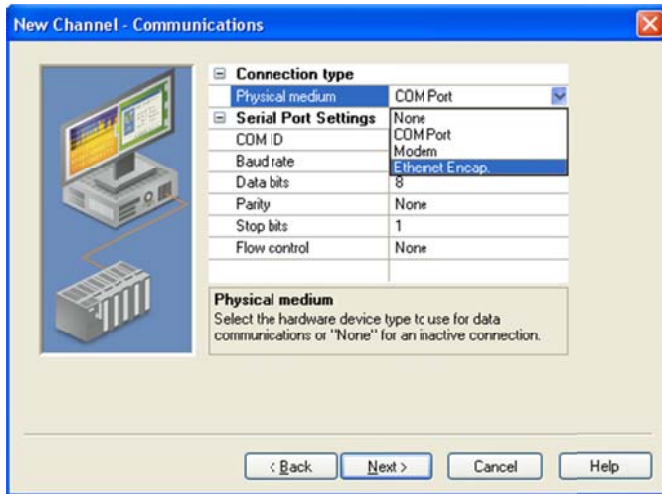
Click on Next.



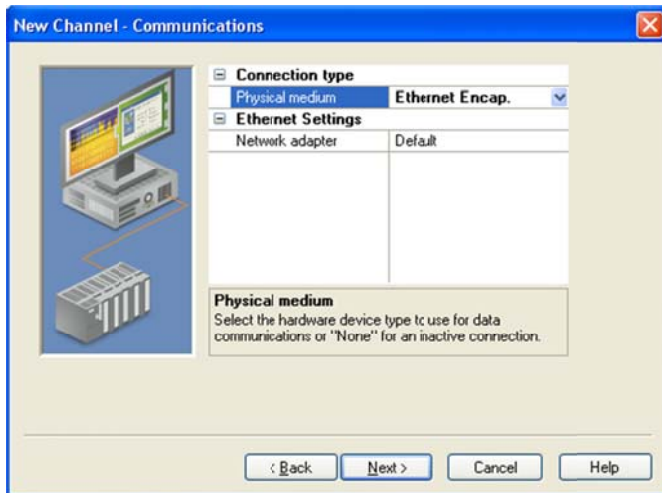
Click on Next



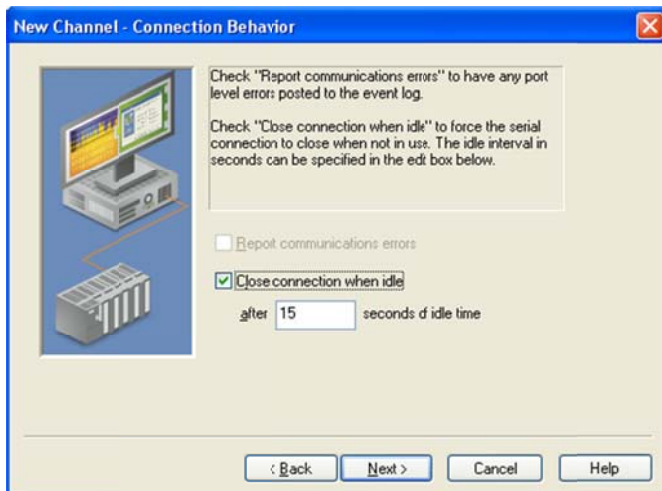
From the Drop menu select Ethernet Encap.



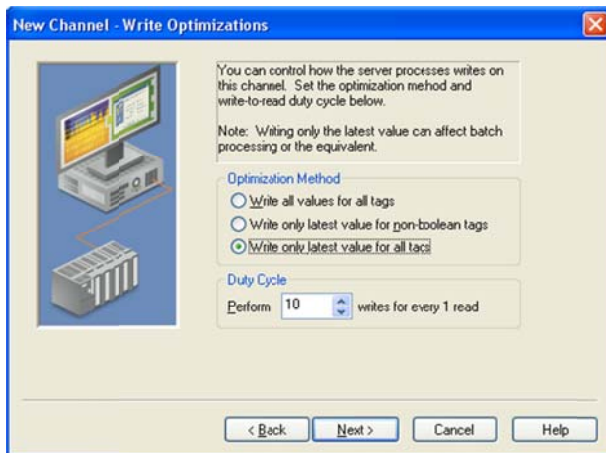
Click On Next.



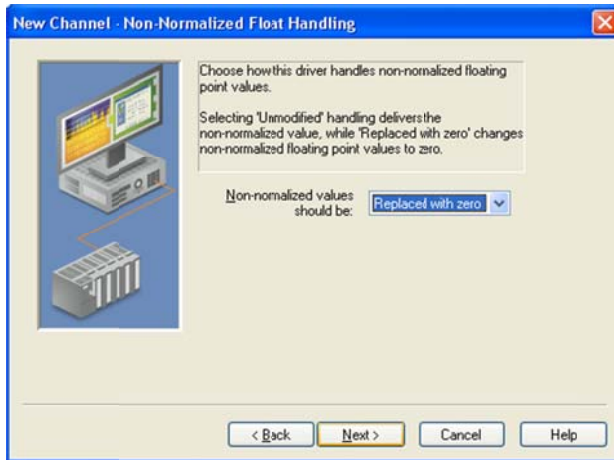
Click on Next.



Click On Next

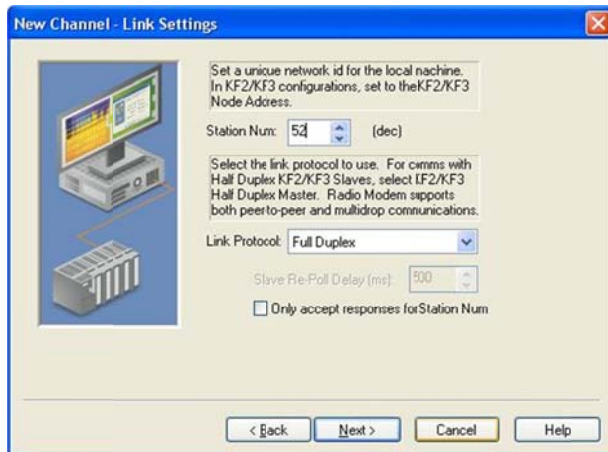


Click On Next

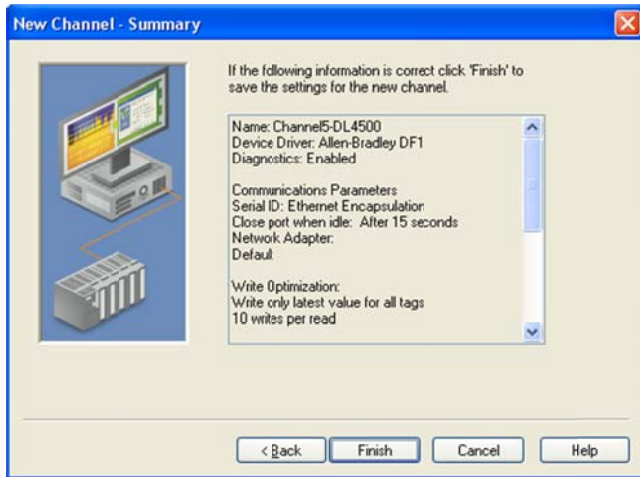


Enter node address number of the DL4500 as a station number (last octet of the IP address).

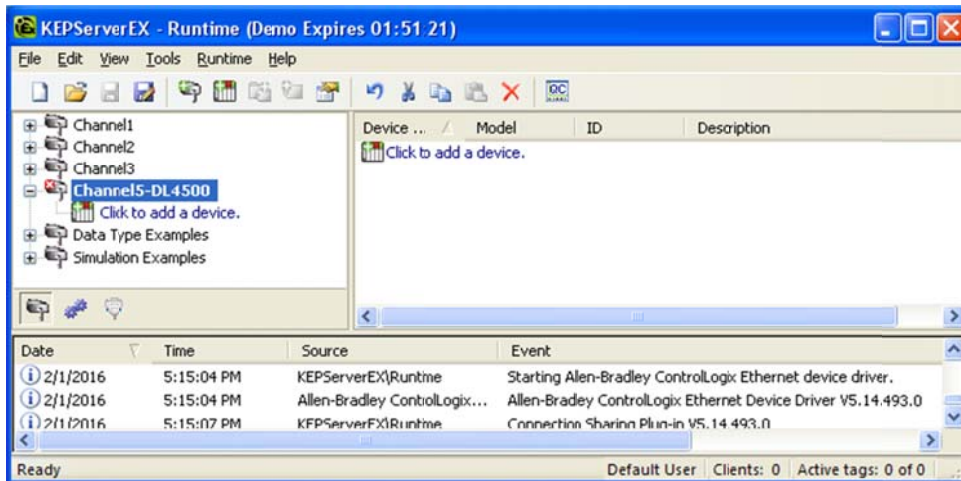
Note if the last Octet is greater than 63 then keep subtracting 64 from it until you get a number between 0-63.



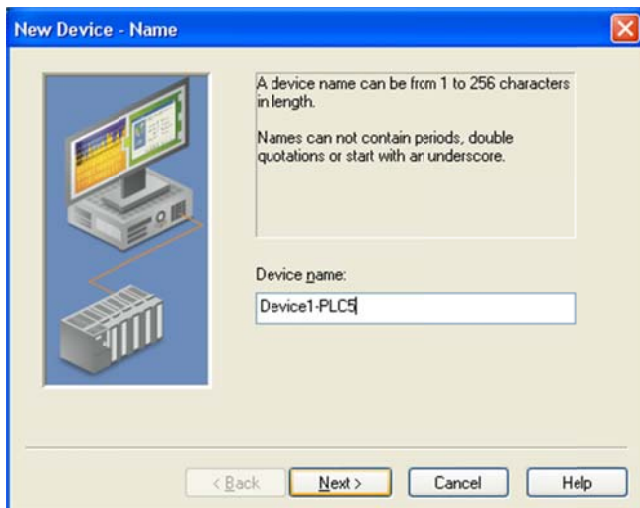
Click on Finish



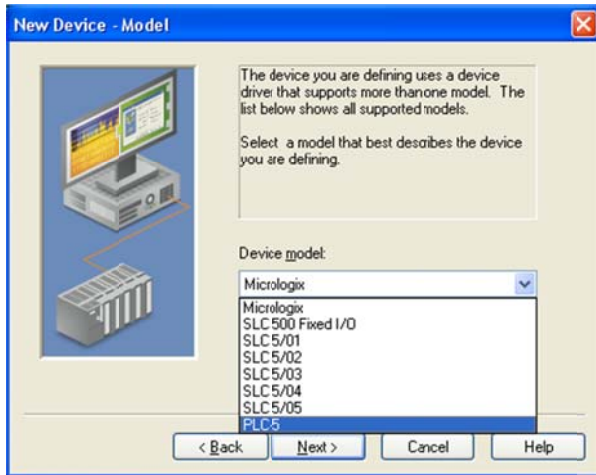
Click to add a device



Type a name for your device in our example we have the PLC5.



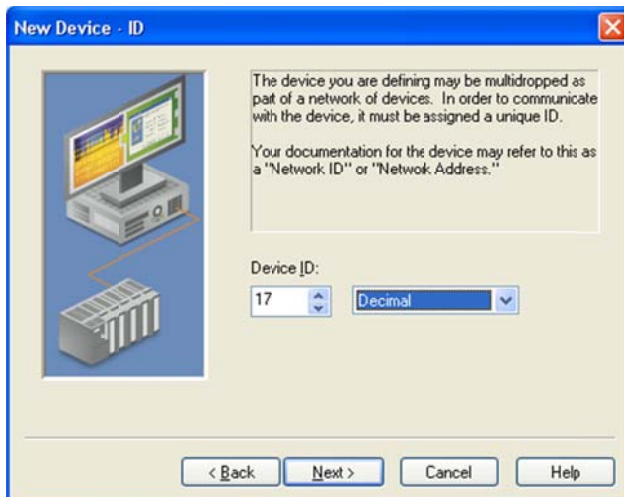
From the drop menu select PLC-5



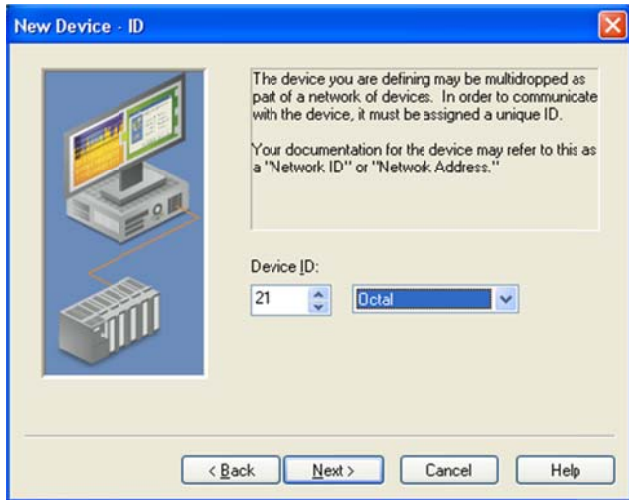
Click on Next.



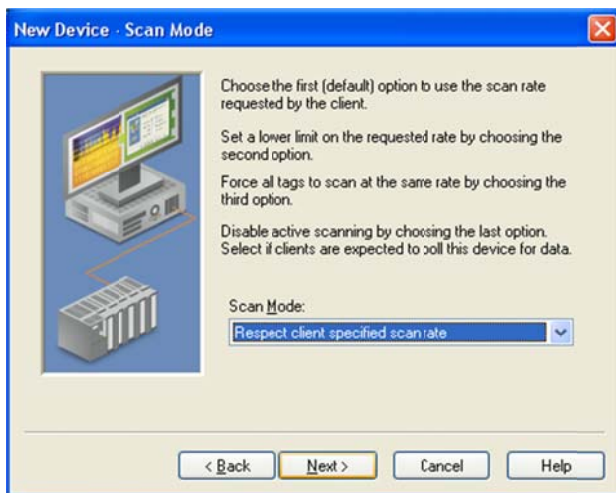
Enter the PLC node address number and double check that the decimal is the equivalent of the DH+ octal address.



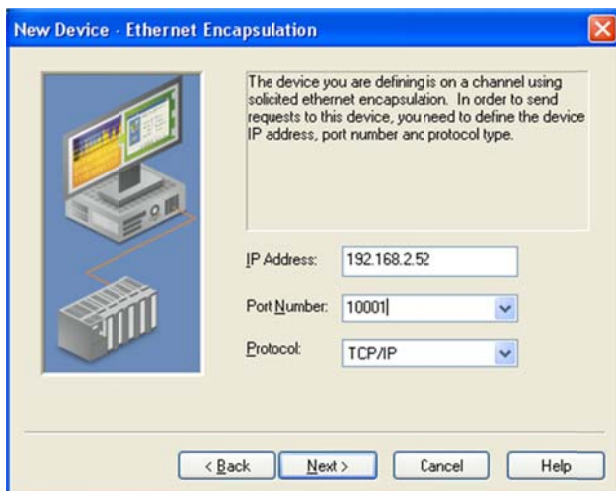
After making sure that the DH+ octal node address of the PLC-5 is right in octal as well click on next.



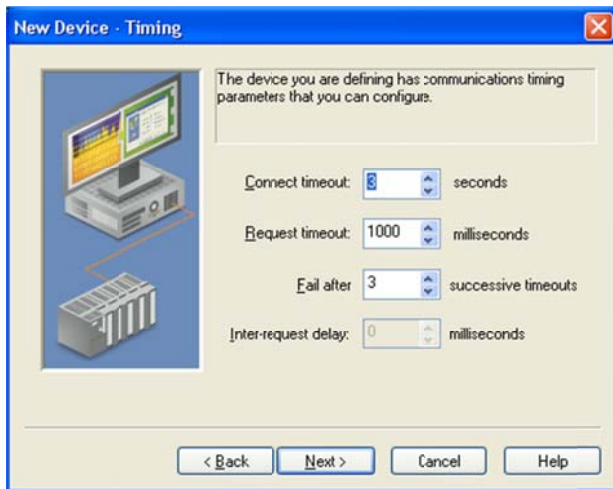
Click on Next



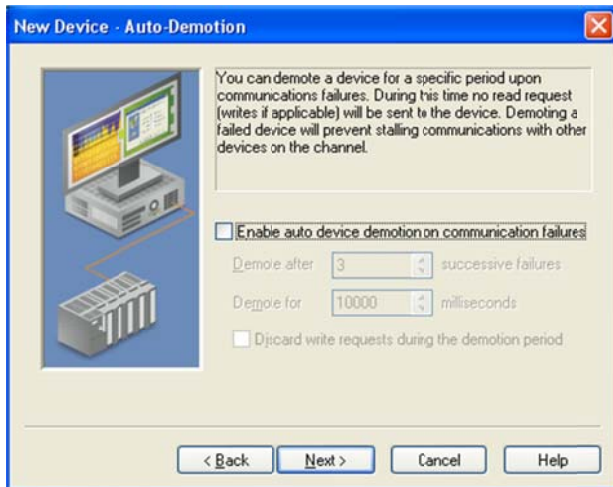
Enter the IP address of the DL4500 and the port 10001 and protocol as TCP/IP and click on Next.



Set the timing parameters and click on Next.



Click on Next

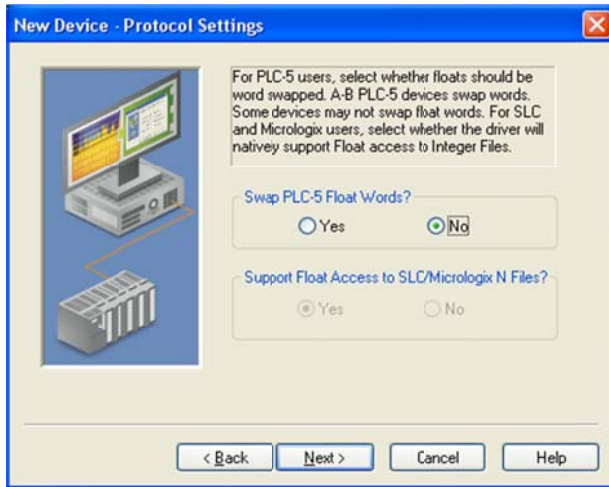


Make sure Error checking is on BCC and click on Next.

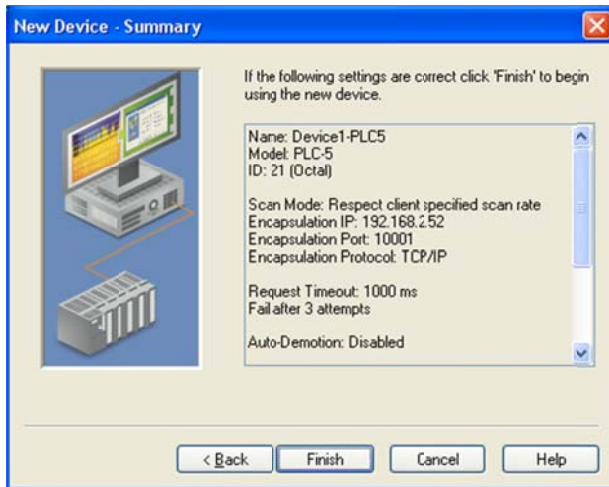




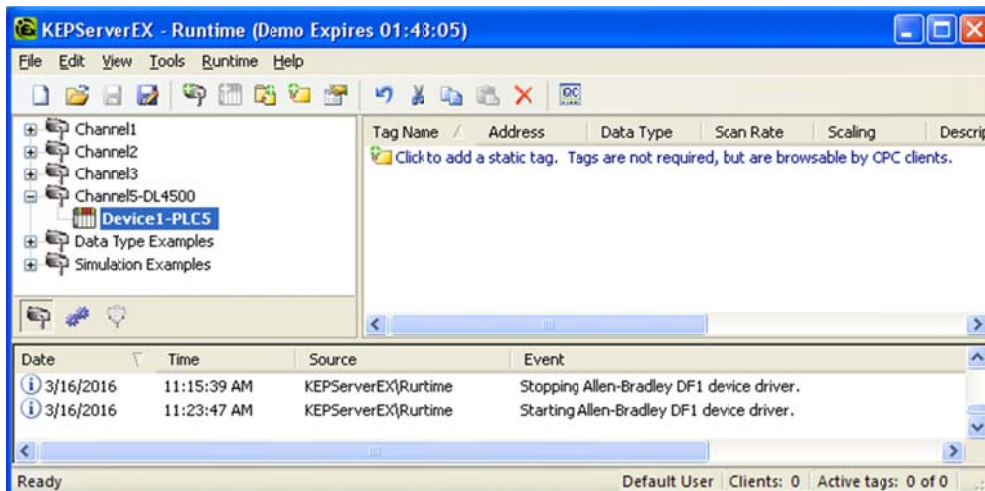
Click on Next



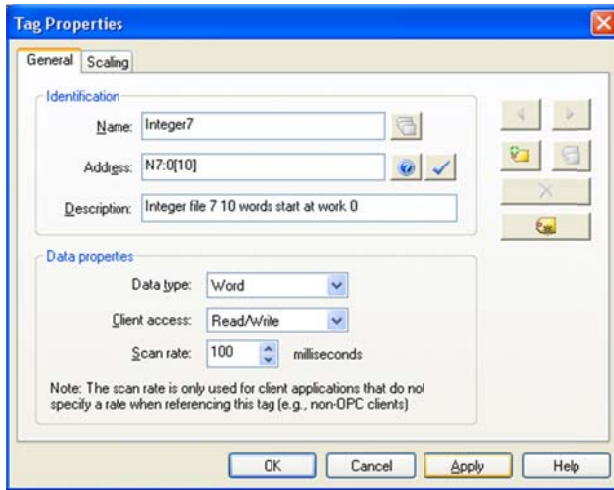
Make sure that your settings are correct then click on Finish.



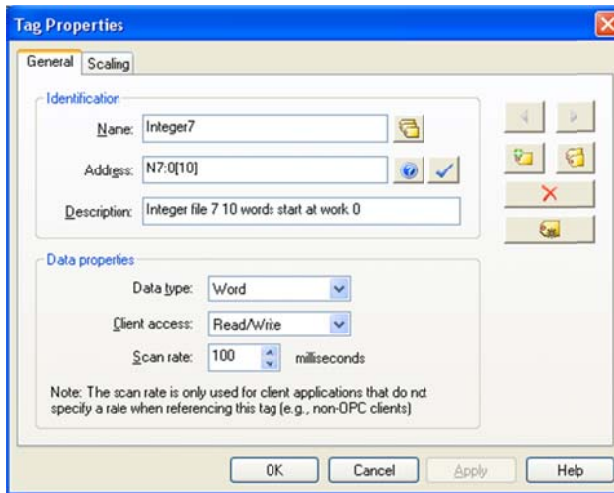
Click on add a static tag.



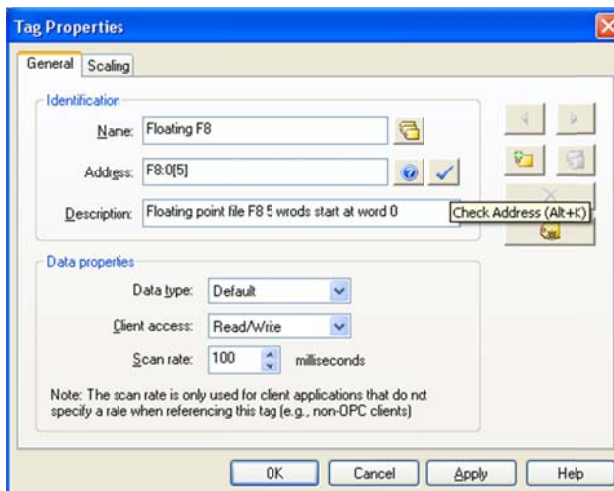
Enter tag name and address ( here we entered, integer file N7) then click Apply



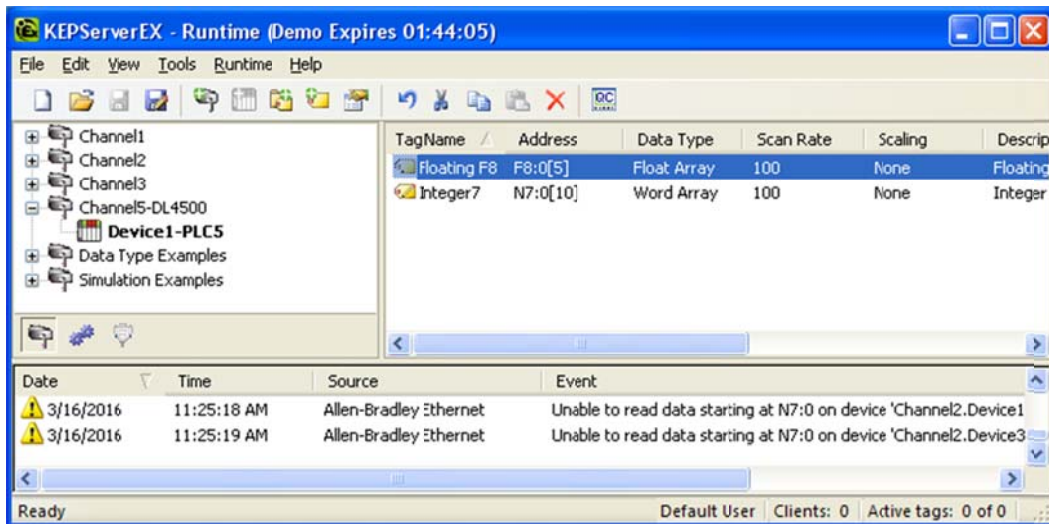
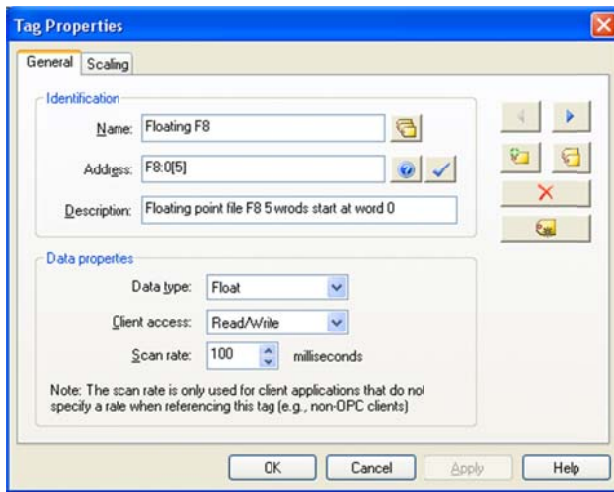
Click on Ok



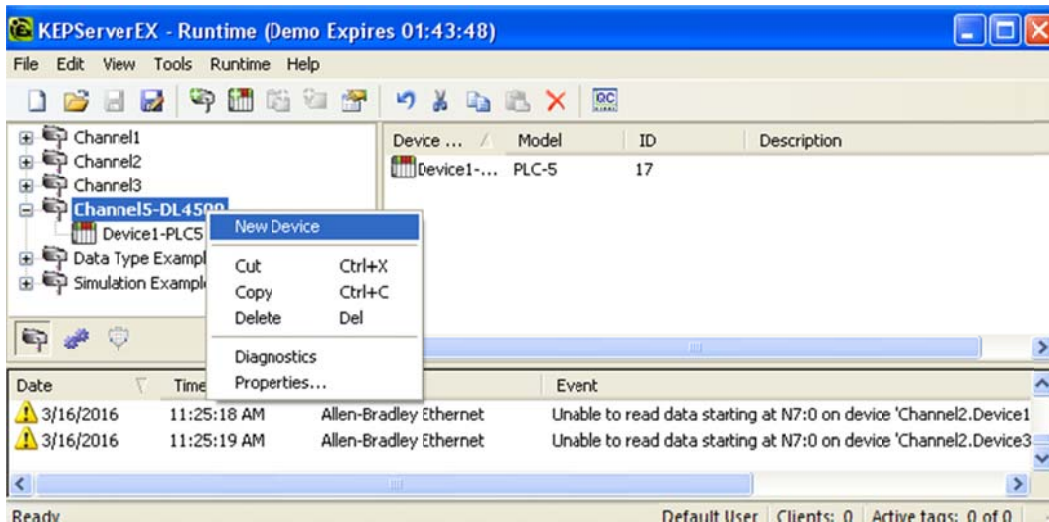
Add another tag here we added Floating point file8 click on Apply.



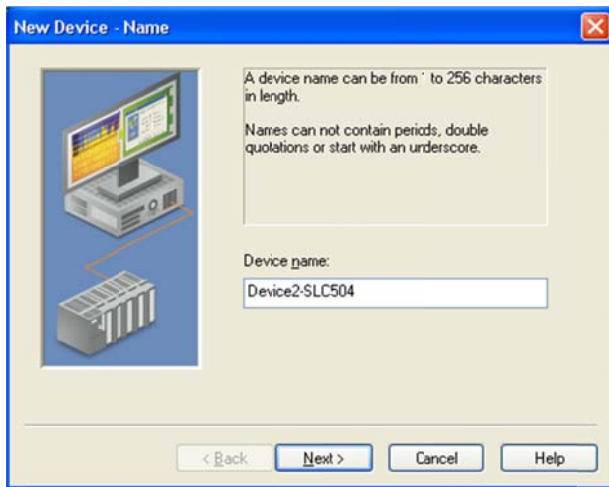
Click on OK.



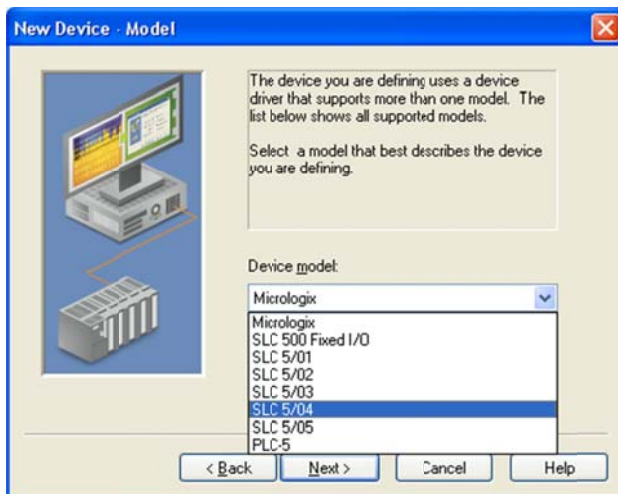
Now to add another device click on New Device, in our case we added a SLC504.



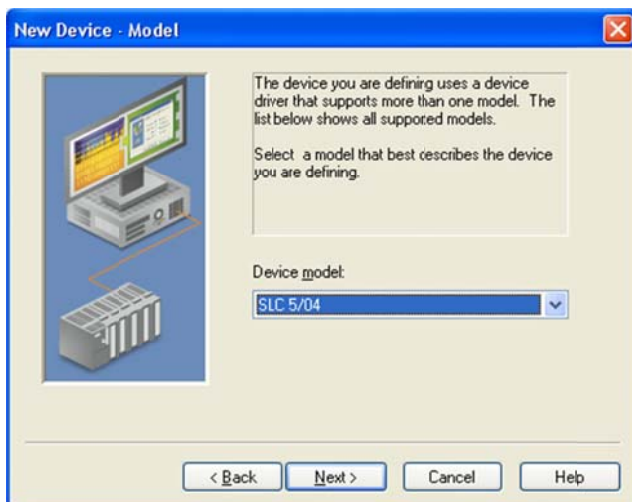
Name the device



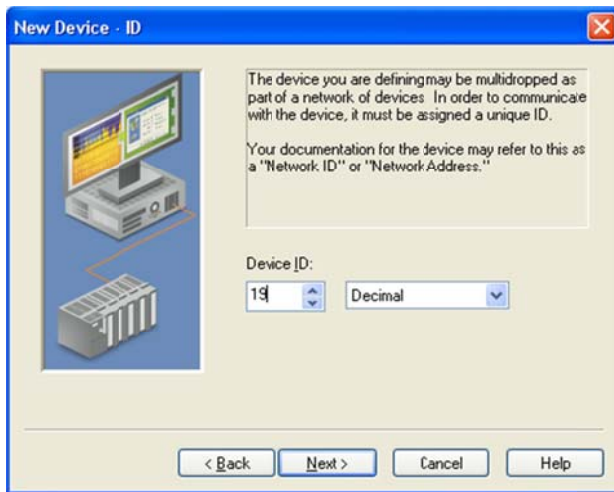
Under Device Model select SLC5/04



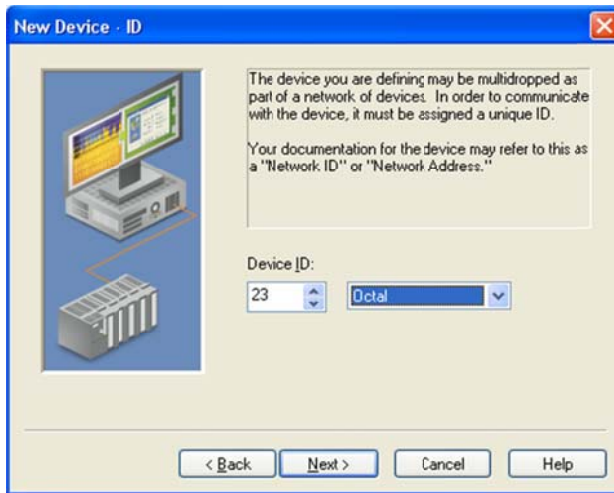
Click on Next



Select the Device ID



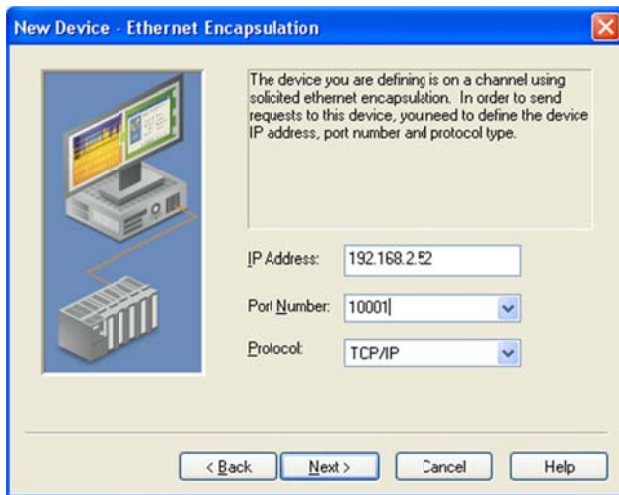
Make sure it is the right equivalent of the Octal value.



Click on Next.



Enter the IP address of the DL4500 and the port 10001 and protocol as TCP/IP and click on Next.



The device you are defining is on a channel using solicited ethernet encapsulation. In order to send requests to this device, you need to define the device IP address, port number and protocol type.

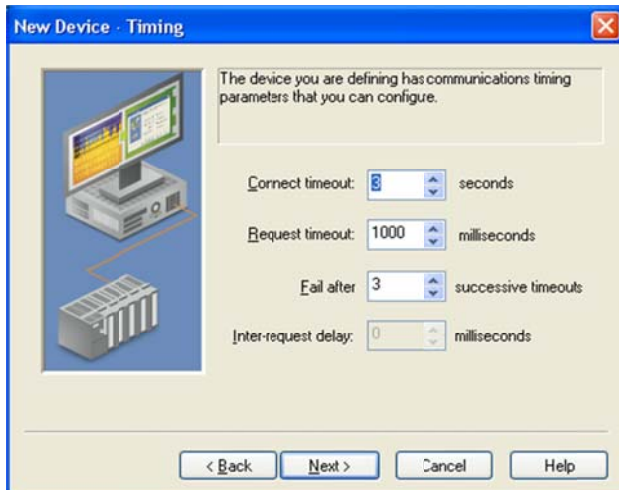
IP Address: 192.168.2.52

Port Number: 10001

Protocol: TCP/IP

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Enter timing parameters.



The device you are defining has communications timing parameters that you can configure.

Connect timeout: 8 seconds

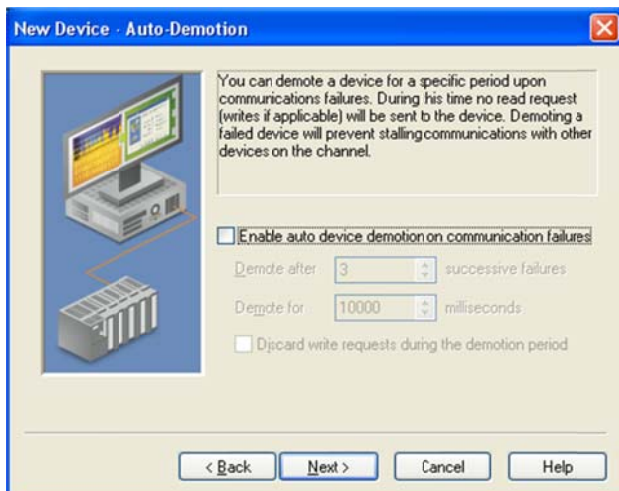
Request timeout: 1000 milliseconds

Fail after: 3 successive timeouts

Inter-request delay: 0 milliseconds

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Click on Next.



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

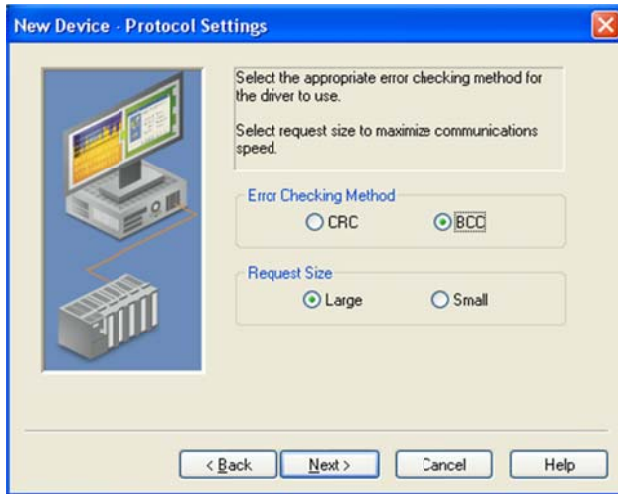
Demote after: 3 successive failures

Demote for: 10000 milliseconds

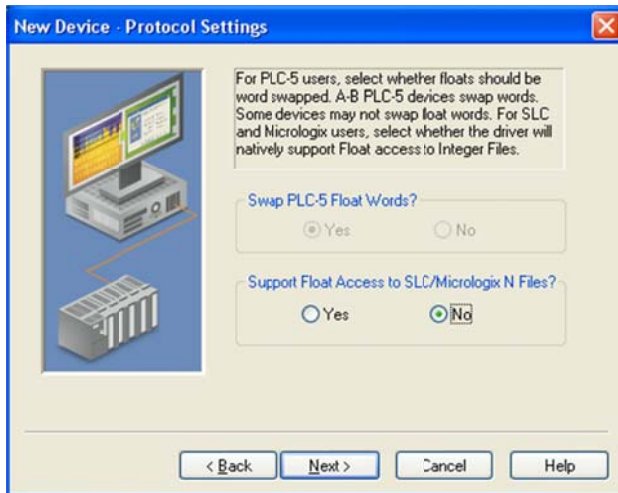
Discard write requests during the demotion period

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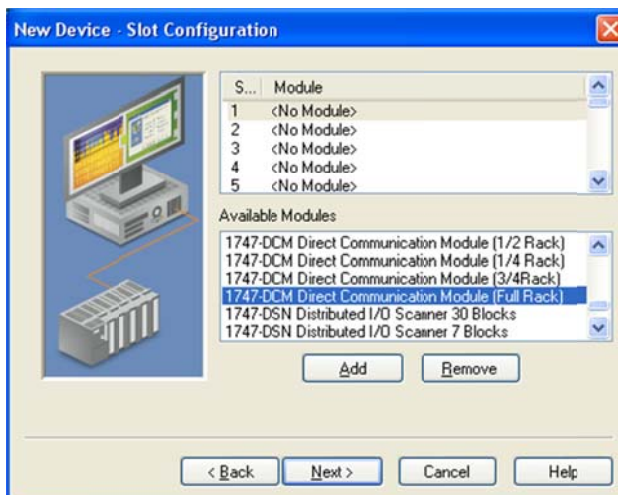
Make sure Error Checking Method is BCC.



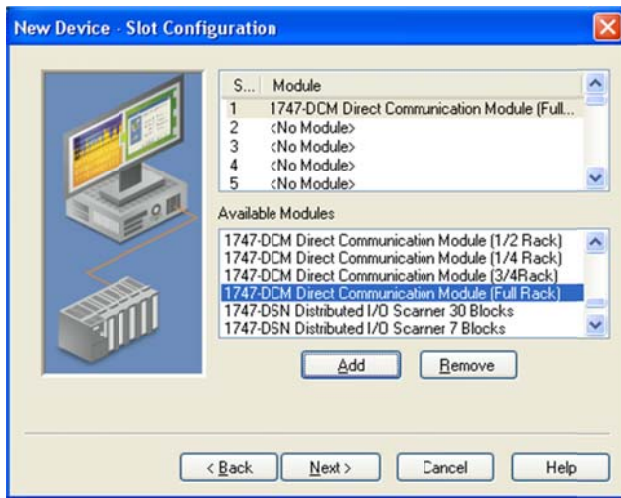
Select Float support yes or No then click on Next.



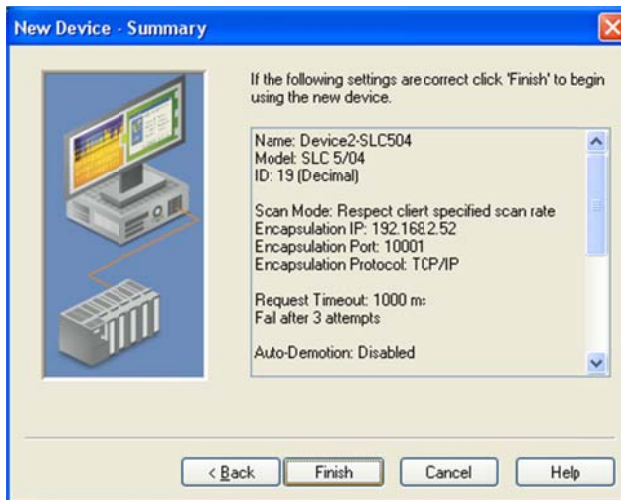
Select the SLC module and click on Add.



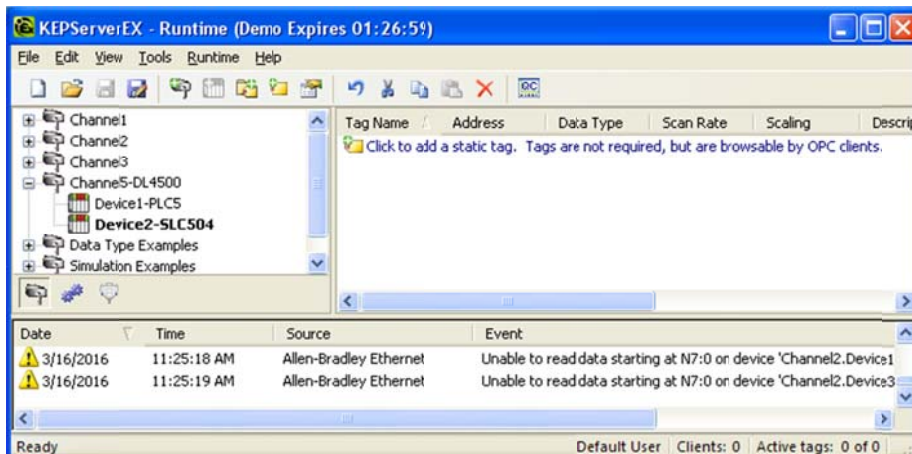
Click on Next



Make sure that the settings are correct and click on Finish.

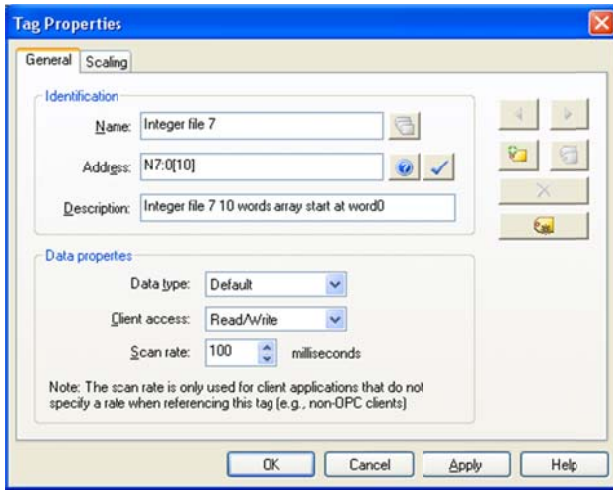


Click on add Static tag.

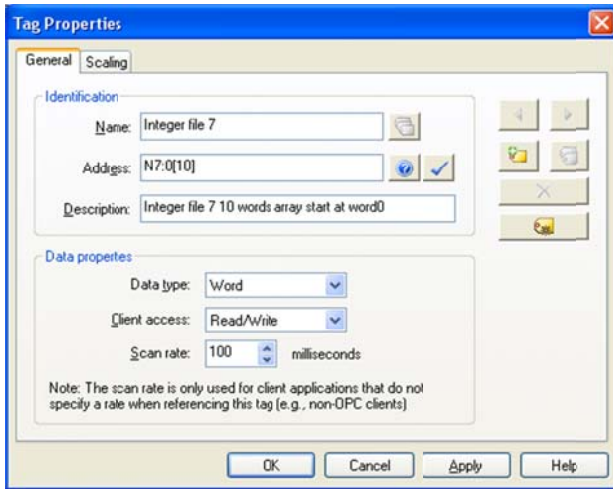




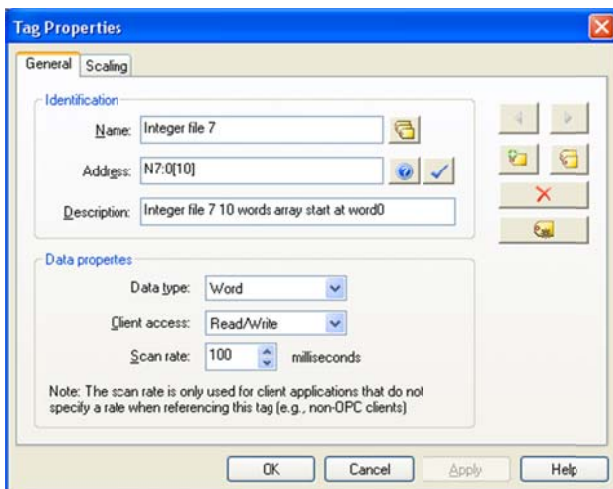
Enter Tag properties here we selected Integer file N7.



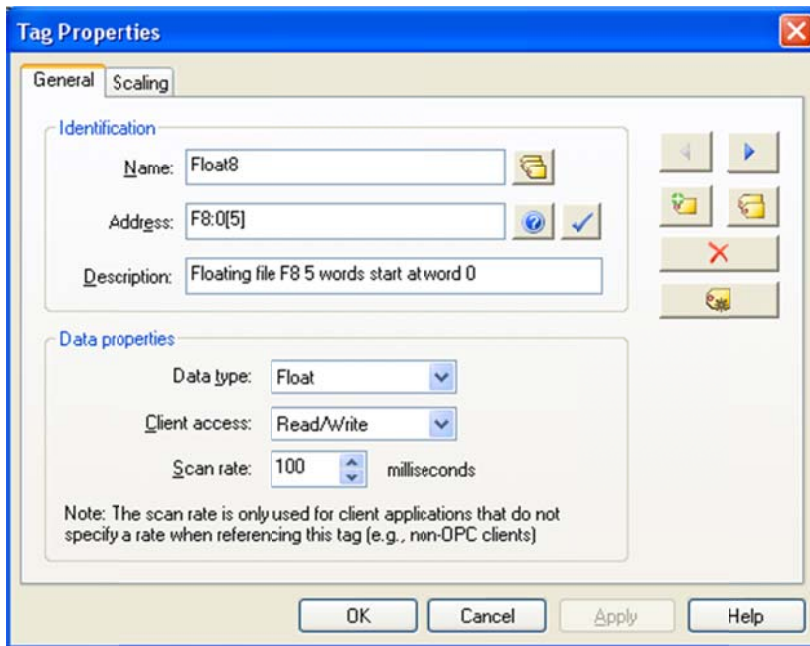
Click on Apply.



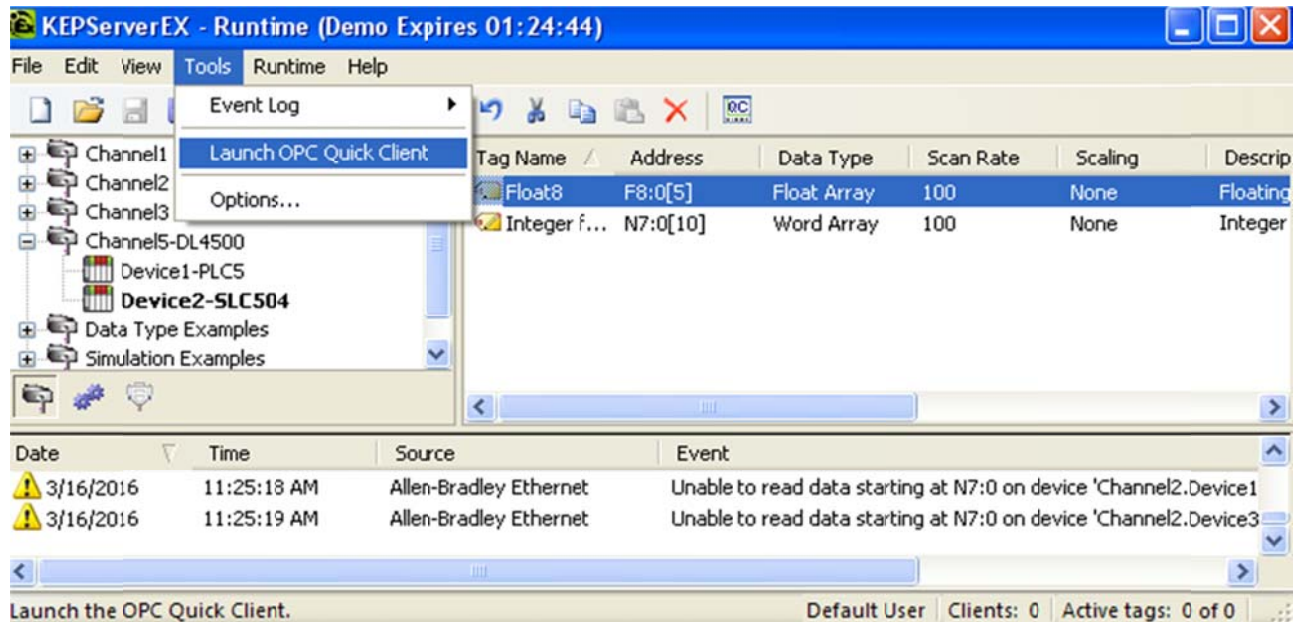
Click On Ok.



Repeat for another tag, here we added Floating file F8 the click on Ok.



To test, under tool select Launch OPC Quick Client.



Click on the channel Device as shown to see the values of the tags for the PLC5

The screenshot shows the OPC Quick Client interface with the following data in the main table:

Item ID	Data Type	Value	Timestamp	Quality
Channel5-DL4500.Device1-PLC5.F...	Float Array	[ 0, 0, -1.07694E-019, 0, -4.64365E-010 ]	11:47:46.699	Good
Channel5-DL4500.Device1-PLC5.I...	Word Array	[ 387, 774, 1161, 387, 387, 387, 387, 387, 387 ]	11:47:46.824	Good

The event log at the bottom shows:

Date	Time	Event
3/16/2016	11:47:47 AM	Added group 'Data Type Examples. 16 Bit Device.S Registers' to 'Kepware.KEPServerEX.V5'.
3/16/2016	11:47:47 AM	Added 34 items to group 'Data Type Examples. 16 Bit Device.R Registers'.

Item Count: 520

Repeat for the SLC504

The screenshot shows the OPC Quick Client interface with the following data in the main table:

Item ID	Data Type	Value	Timestamp	Quality
Channel5-DL4500.Device2-SLC50...	Float Array	[ 2.09715E+006, 0, 0, 0, 0 ]	11:47:47.996	Good
Channel5-DL4500.Device2-SLC50...	Word Array	[ 1990, 3980, 5970, 0, 0, 0, 0, 0, 0 ]	11:47:48.231	Good

The event log at the bottom shows:

Date	Time	Event
3/16/2016	11:47:47 AM	Added group 'Data Type Examples. 16 Bit Device.S Registers' to 'Kepware.KEPServerEX.V5'.
3/16/2016	11:47:47 AM	Added 34 items to group 'Data Type Examples. 16 Bit Device.R Registers'.

Item Count: 520