

Accessing Allen Bradley DH+ PLC with EQ7000 using Ethernet IP Driver from Kepware KEPServerEX.



Start the EQ32 configuration Software.

Click on EQ7000.

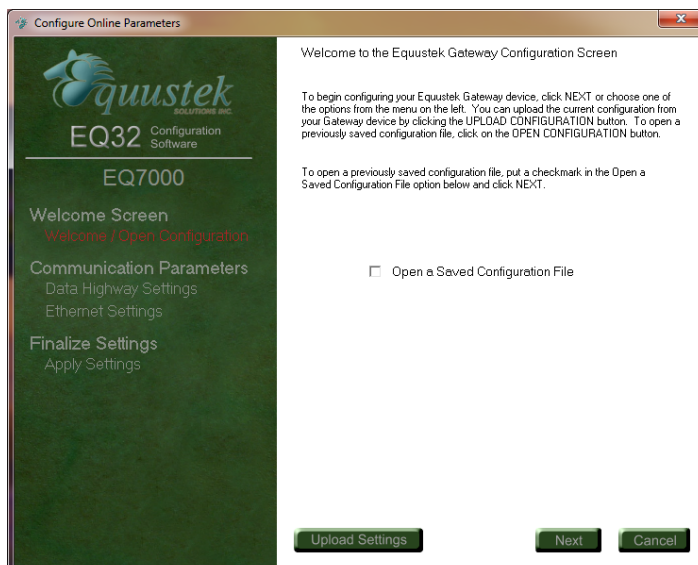


From The COM Port Selection drop menu.

Select the COM port assigned to your USB

Connection to the EQ7000.

(Can be found under device manager)



Click on Next.

**Configure Online Parameters**

**quustek**  
SOLUTIONS INC.  
EQ32 Configuration Software  
EQ7000

Welcome Screen  
Welcome / Open Configuration

Communication Parameters  
**Data Highway Settings**  
Ethernet Settings

Finalize Settings  
Apply Settings

**Data Highway Communication Settings**

Network Type: **DH+**  
Node Address: 1 Octal  
Network Speed: 57.6 kBaud

Upload Settings Back Next Cancel

Select the Network Type DH+ or DH485.

**Configure Online Parameters**

**quustek**  
SOLUTIONS INC.  
EQ32 Configuration Software  
EQ7000

Welcome Screen  
Welcome / Open Configuration

Communication Parameters  
**Data Highway Settings**  
Ethernet Settings

Finalize Settings  
Apply Settings

**Data Highway Communication Settings**

Network Type: DH+  
Node Address: 13 Octal  
Network Speed: 57.6 kBaud

Upload Settings Back Next Cancel

Select a node address number for the EQ7000 (please make sure this node does not exist on your DH+ Network).

This will be the node address number for the EQ7000 on the DH+ network in Octal.

**Configure Online Parameters**

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SOLUTIONS INC.  
EQ32 Configuration Software  
EQ7000

Welcome Screen  
Welcome / Open Configuration

Communication Parameters  
**Data Highway Settings**  
Ethernet Settings

Finalize Settings  
Apply Settings

**Data Highway Communication Settings**

Network Type: DH+  
Node Address: 13 Octal  
Network Speed: 57.6 kBaud

Upload Settings Back Next Cancel

Select the DH+ Network Speed.

This is the DH+ Network Baud Rate.

**Configure Online Parameters**

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EQ32 Configuration Software  
EQ7000

Welcome Screen  
Welcome / Open Configuration

Communication Parameters  
Data Highway Settings  
Ethernet Settings

Finalize Settings  
Apply Settings

**Data Highway Communication Settings**

Network Type:

Node Address:  Octal

Network Speed:  kBaud

Click Next

**Configure Online Parameters**

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EQ32 Configuration Software  
EQ7000

Welcome Screen  
Welcome / Open Configuration

Communication Parameters  
Data Highway Settings  
Ethernet Settings

Finalize Settings  
Apply Settings

**Ethernet Communication Settings**

DHCP:

IP Address:

Subnet Mask:

Default Gateway:

Speed:

Socket Timeout:  s

Enter EQ7000 IP address, Subnet Mask and Default Gateway if you have one, then click Next.

**Configure Online Parameters**

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SOLUTIONS INC.  
EQ32 Configuration Software  
EQ7000

Welcome Screen  
Welcome / Open Configuration

Communication Parameters  
Data Highway Settings  
Ethernet Settings

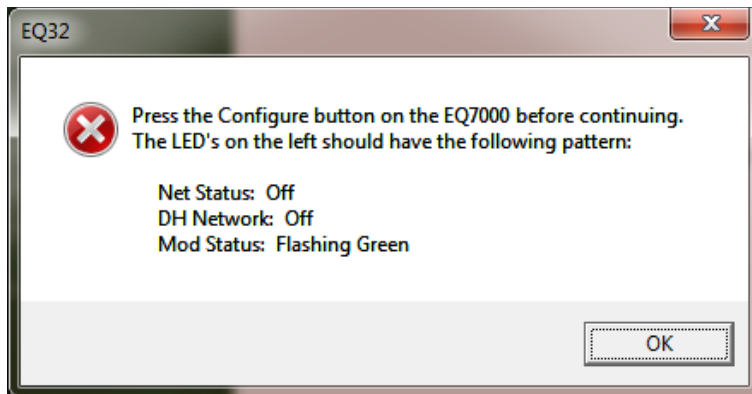
Finalize Settings  
Apply Settings

**Apply Configuration Settings**

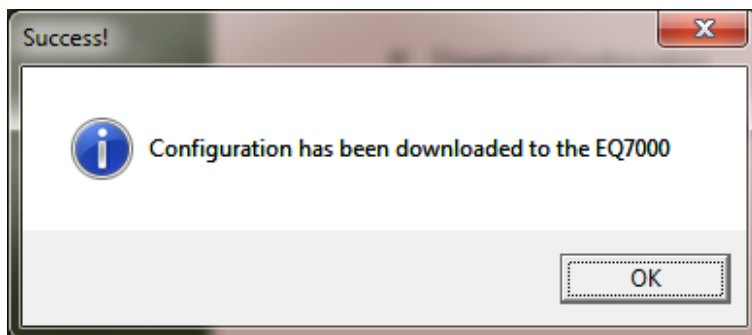
To download the configuration settings to the gateway device, select the Download Configuration option and click the FINISH button. You may also save your configuration settings by selecting one of the other options available.

☒ Download Configuration  
☐ Download and Save Configuration  
☐ Save Configuration

Select download configuration option then click Finish to download configuration to the EQ7000.

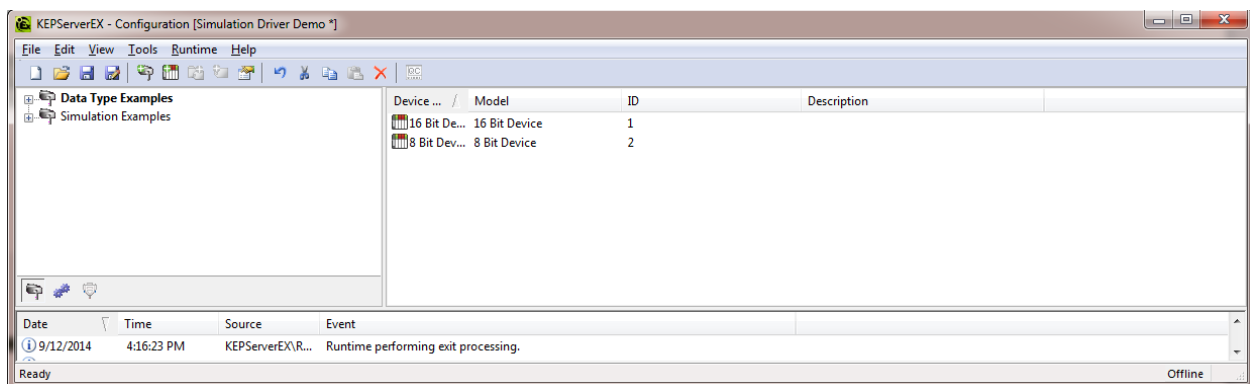


Press the configure pushbutton on the right hand side of the EQ7000 and then click Ok.

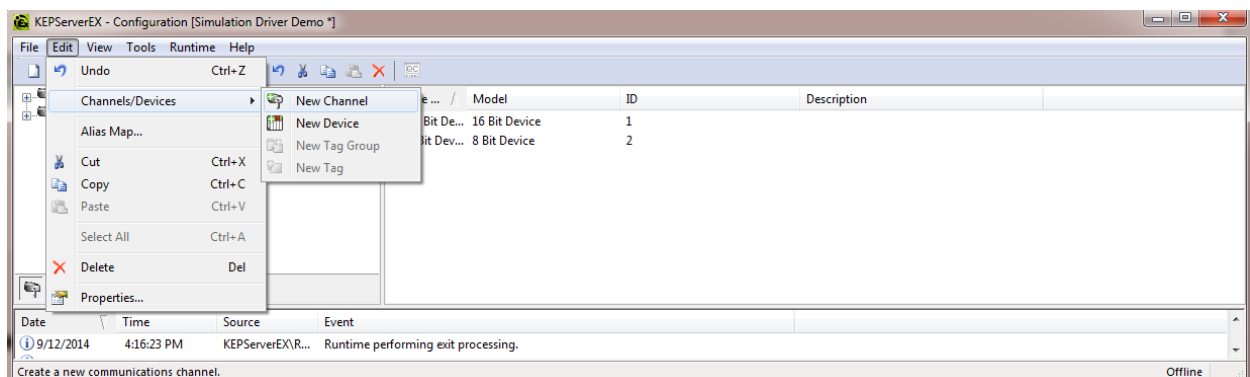


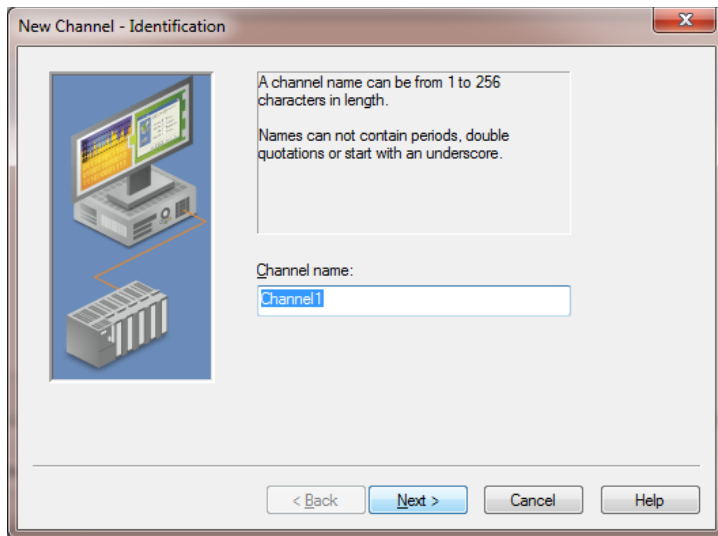
Now that configuration is complete, close the EQ32 configuration program, and press the Reset Pushbutton on the left hand side of the EQ7000.

Start Kepware KEPServerEX.

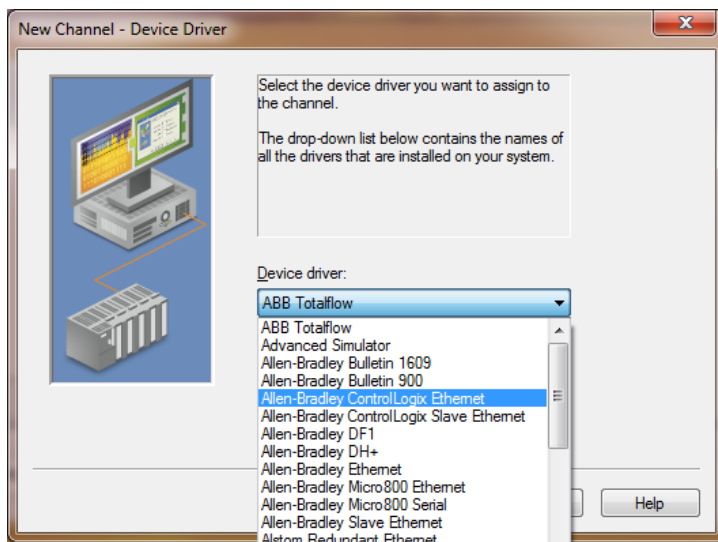


Under Edit Channels/Devices click on New Channel as shown.

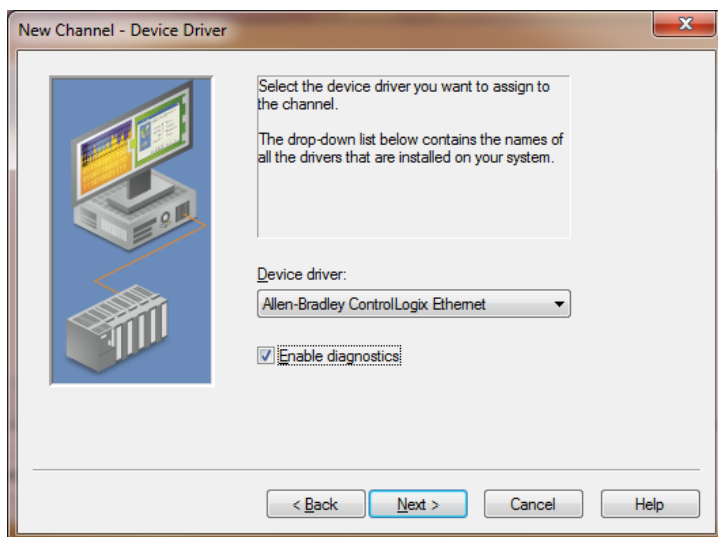




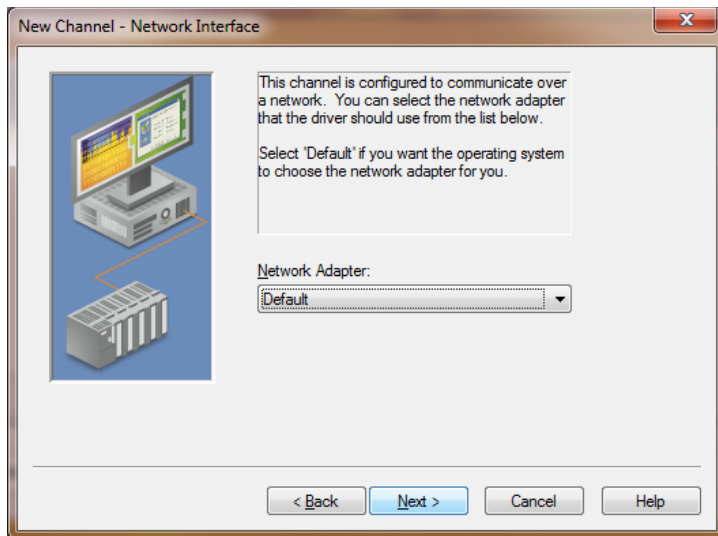
Type a name for the Channel and click on Next.



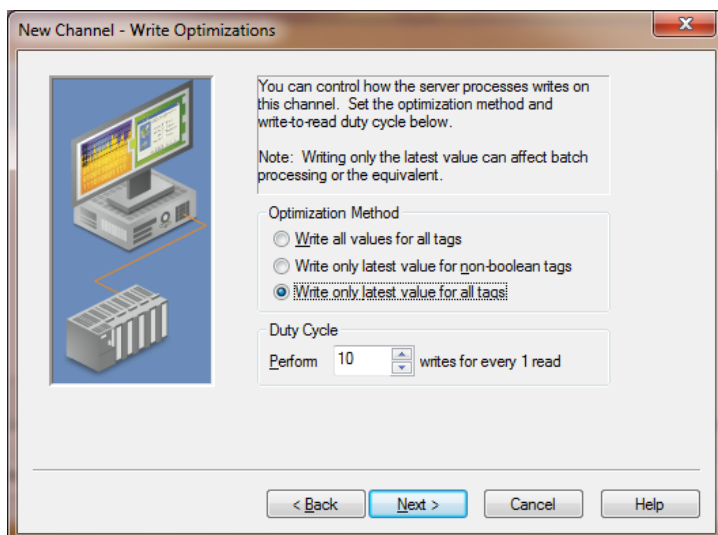
Click on the arrow to bring the Device driver selections, for Ethernet IP driver, select Allen Bradley Control Logix Ethernet as shown.



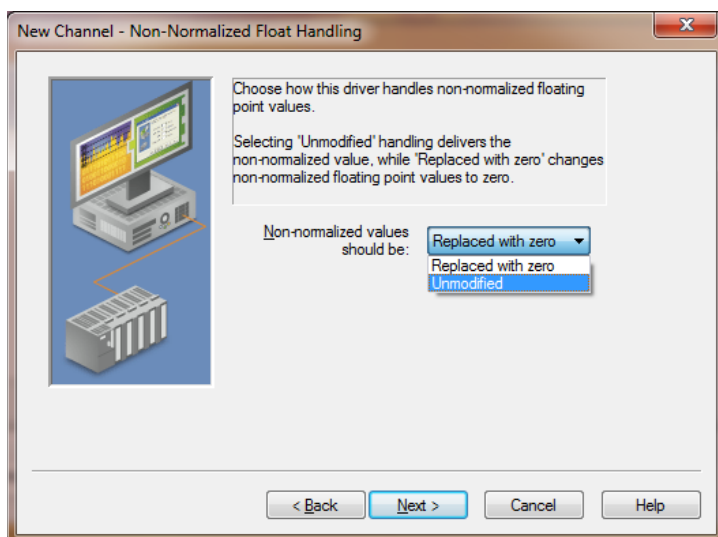
Click Next



Select your network adapter, then click Next.

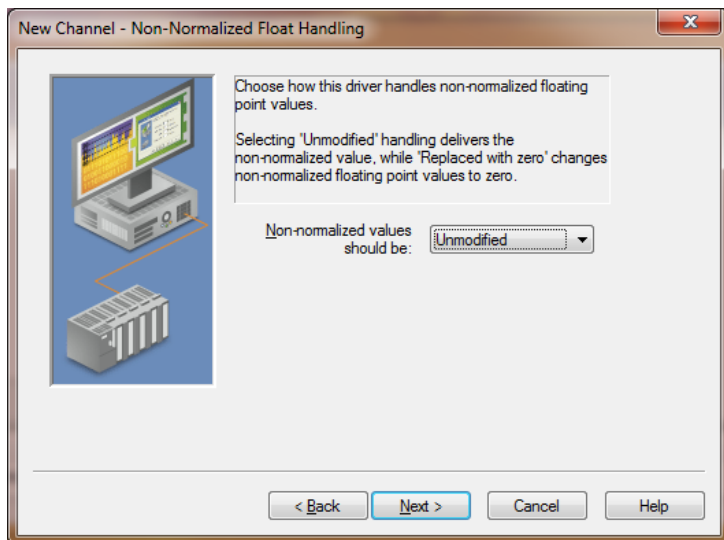


Select your optimization method, and click Next.

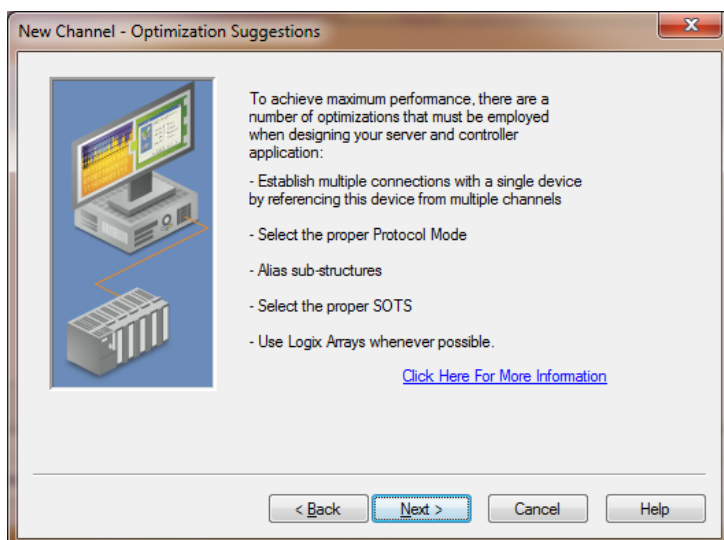


Select the way driver handles non-normalized floating point values.

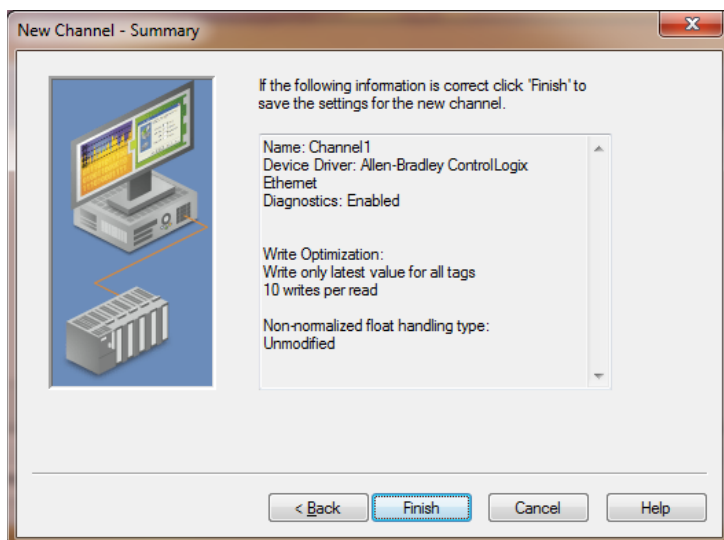




Click Next.

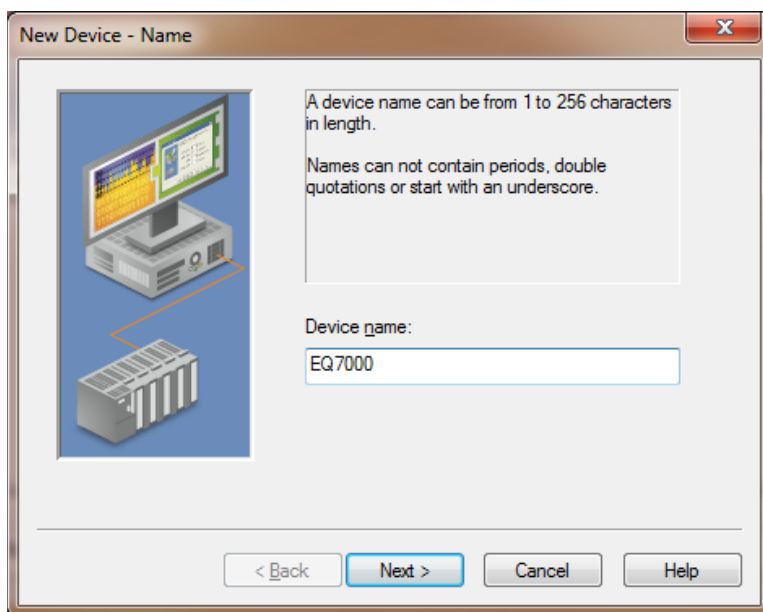
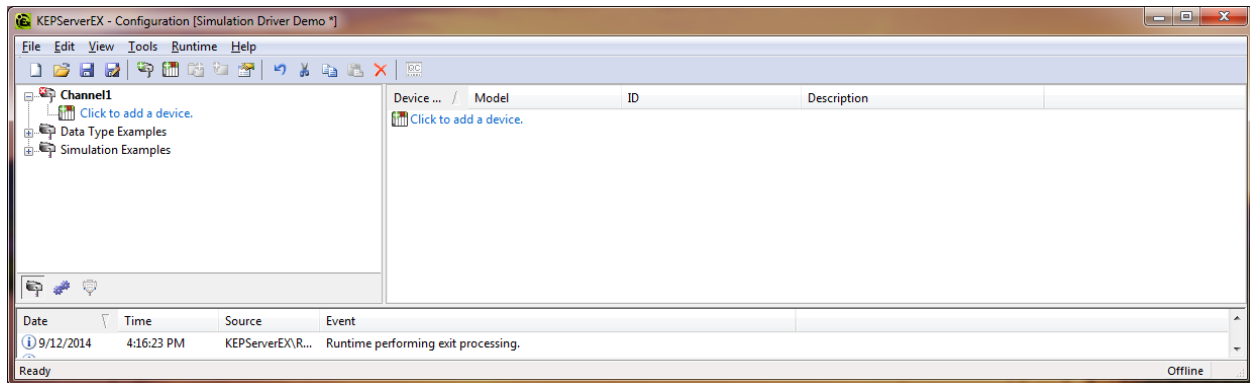


Click Next.

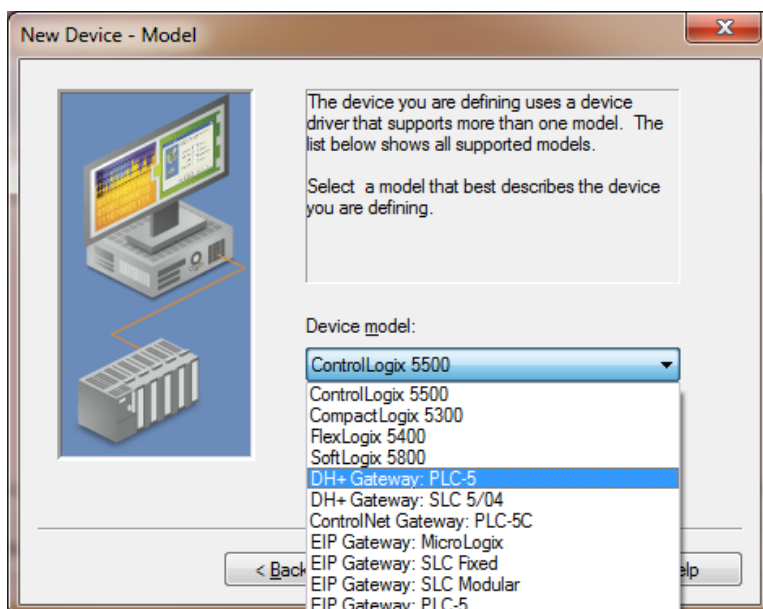


Once you see the setting as you set them up click on Finish.

Back to the KEPServerEX windows click on (Click to add a device).

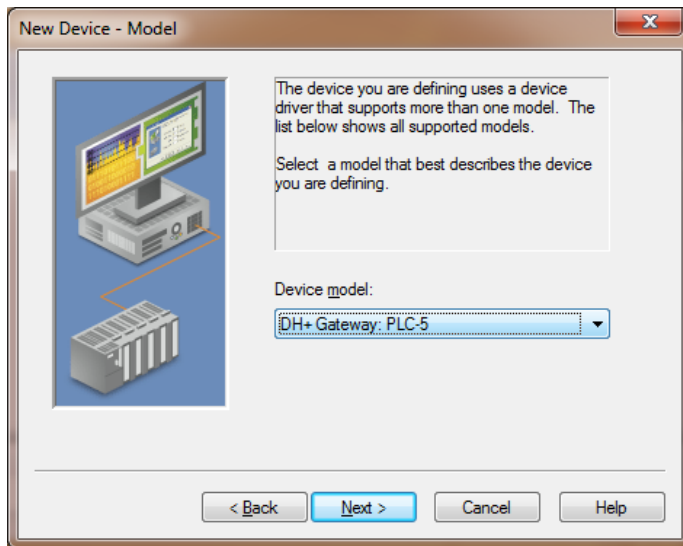


Type in a Device Name and click Next.

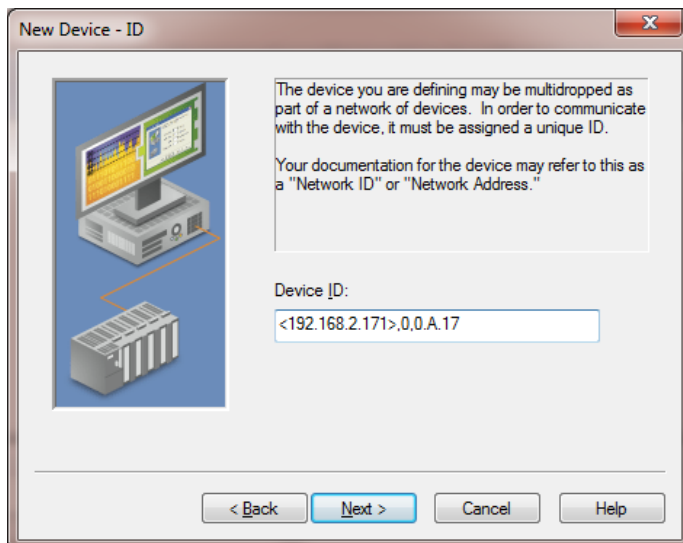


From the Device model drop menu, select the Device Model.





Click Next.



Enter the Device ID

IP or Hostname, would be IP address of the EQ7000

1, Always Replace with 0

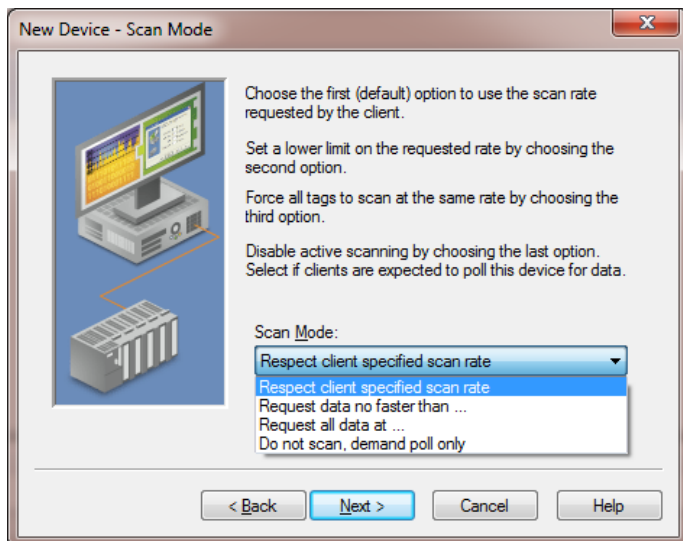
Optional Routing Path, don't enter anything.

DHRIO slot, would be always 0

DHRIO Channel, Always A


DH+ Node ID, would be the PLC5 or SLC 504 DH+ node address in Decimal, in this app note PLC5 node address is 21 Octal which is 17 Decimal

<192.168.2.171>,0,0.A.17



Select the Scan Mode.

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

Click Next

New Device - Timing



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

Connect timeout: 5 seconds

Request timeout: 1000 milliseconds

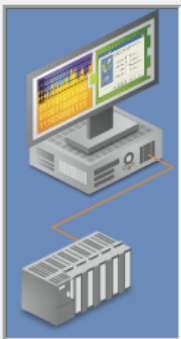
Fail after 3 successive timeouts

Inter-request delay: 0 milliseconds

< Back Next > Cancel Help

Enter timing parameters and click Next

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

Enable Auto Device demotion upon communication failures, if not just click Next

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 allowing subgroups.

Startup:

Action:


Add to group:

☐ Allow automatically generated subgroups

< Back Next > Cancel Help

Choose database creation options then click Next.

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 44818.

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:


Request Size:  Bytes

☐ Perform Block Writes for Function Files supporting Block Writes.

< Back Next > Cancel Help

Enter Ethernet port 44818 for Ethernet IP, and the size of requested number of bytes and click Next.

New Device - Summary



If the following settings are correct click 'Finish' to begin using the new device.

Name: EQ7000  
Model: DH+ Gateway: PLC-5  
ID: <192.168.2.171>,0,0.A.17

Scan Mode: Respect client specified scan rate

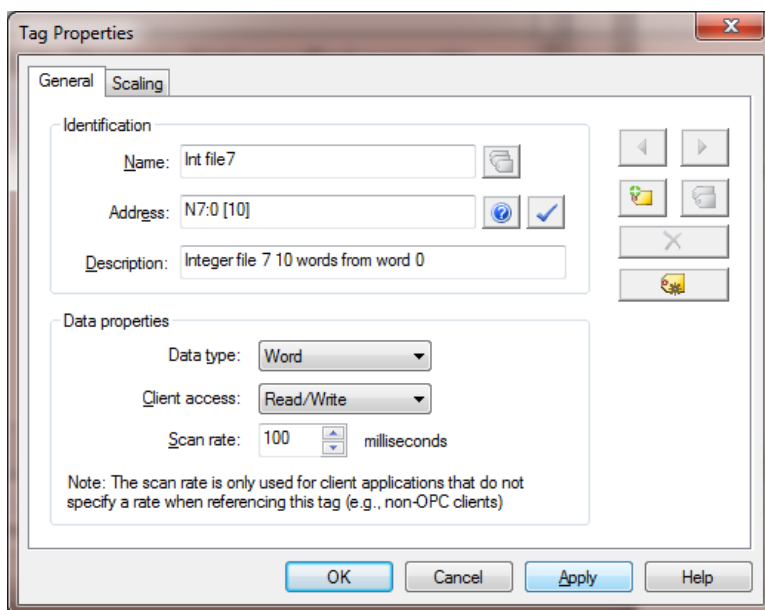
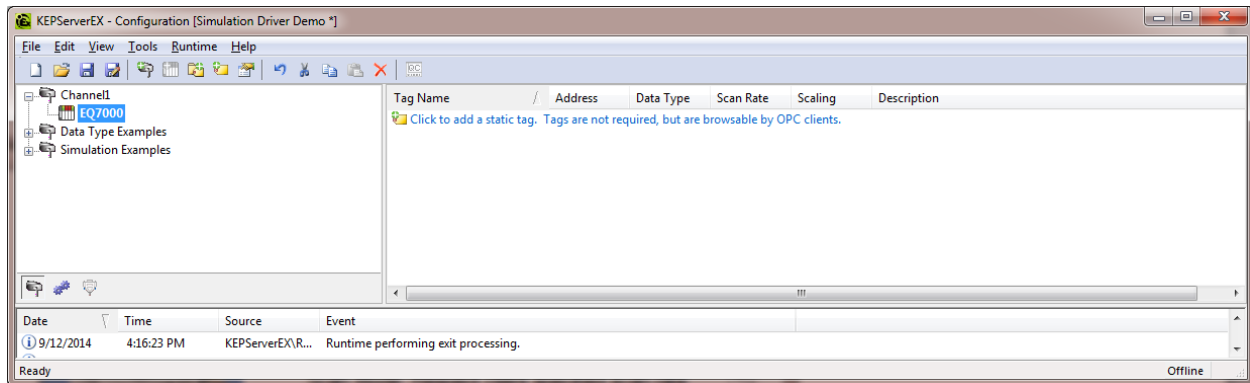
Connect Timeout: 3 Sec.  
Request Timeout: 1000 ms  
Fail after 3 attempts  
Inter-Request Delay: 0 ms

Auto-Demotion: Disabled

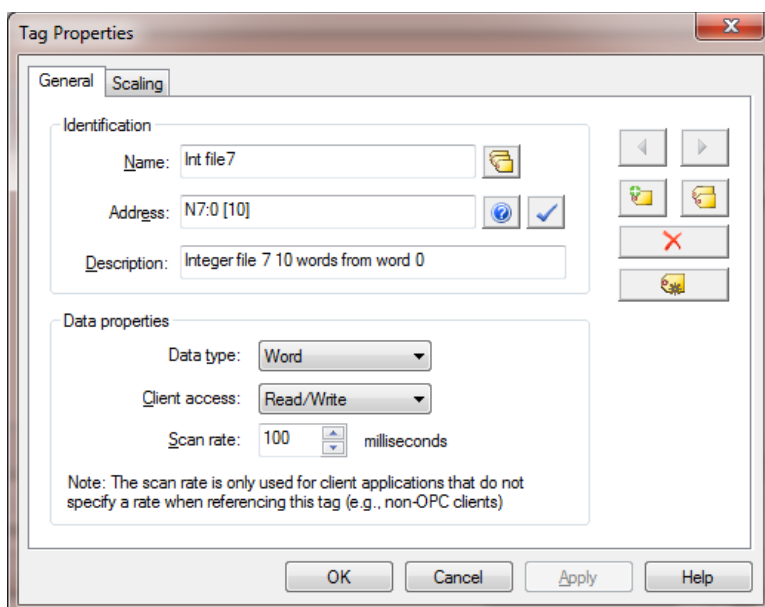
< Back Finish Cancel Help

Make sure all settings match what you entered and click Finish.

Click on ( Click to add static tag).

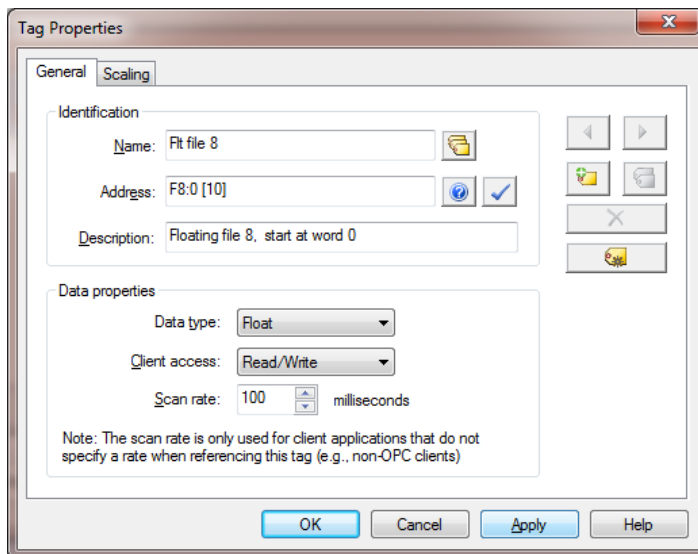
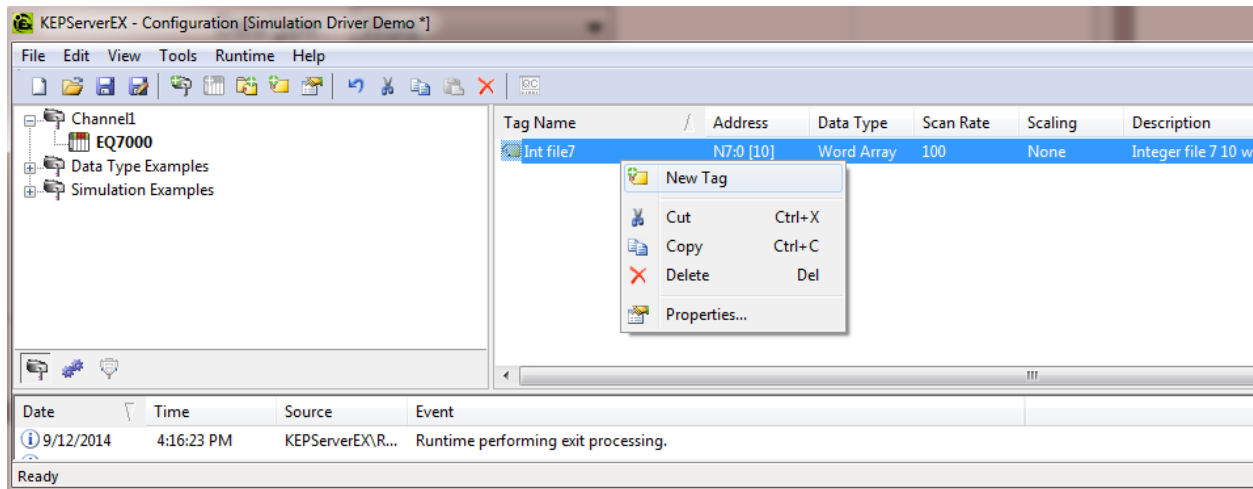


Enter tag ID, in this tag example we are requesting integer file 7, 10 words starting at word 0. Then click Apply.

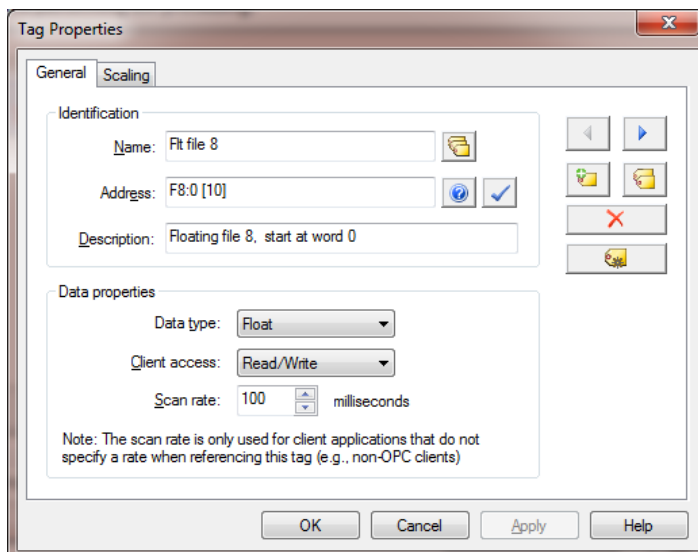


Click Ok

Right click on the previous tag to add a new tag as shown.

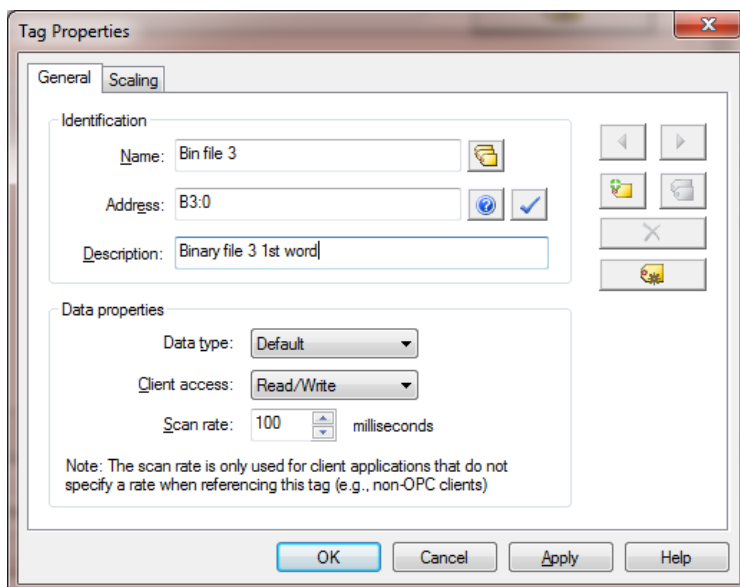
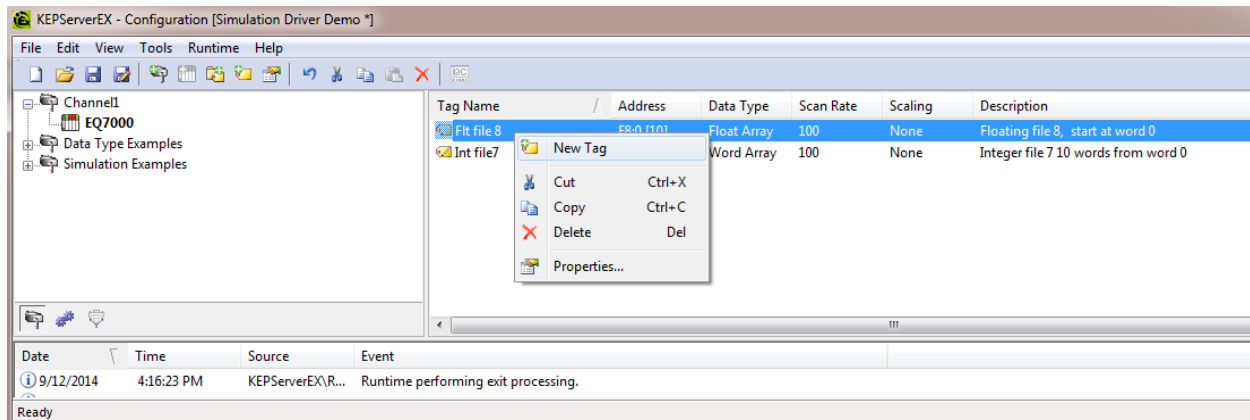


Enter tag ID in this tag example we are requesting Floating point file 8, 10 words starting at word 0. Then click Apply.

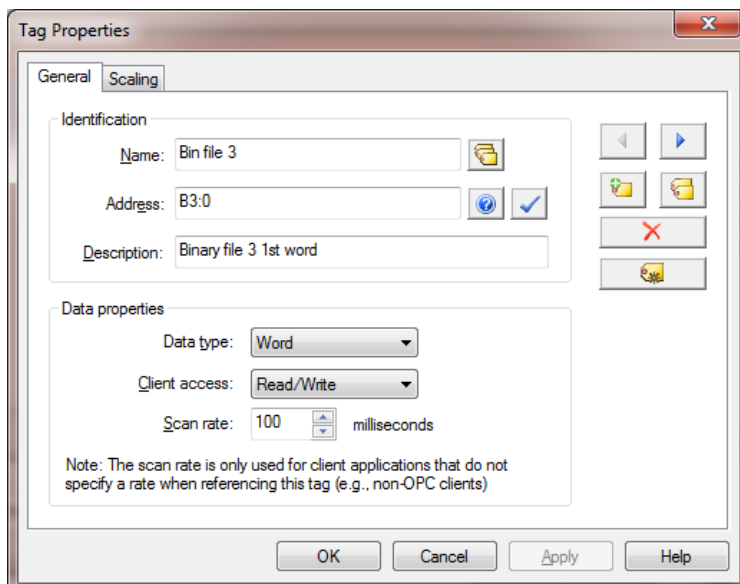


Click Ok

Repeat for another tag



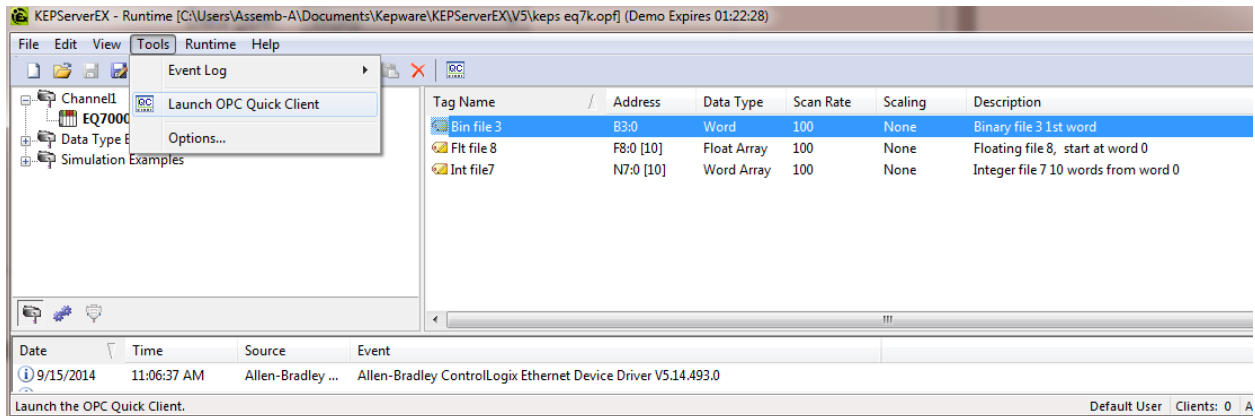
In this tag example we are requesting Binary file 3, 1 words starting at word 0. Then click Apply.



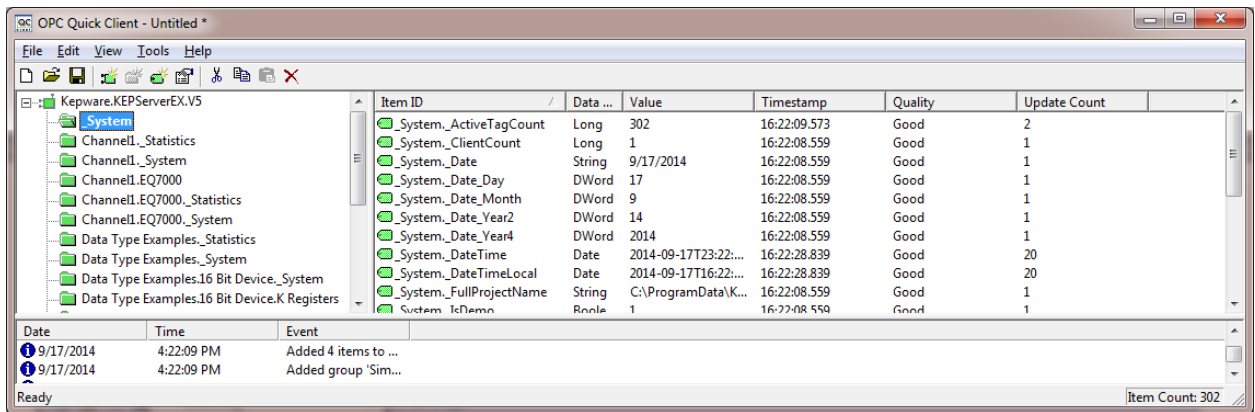
Click Ok



Under tools click on Lunch OPC Quick Client



Click on the Channel and device you created.



In this application note Channel1.EQ7000 then you can see all tags requested earlier as shown below.

