

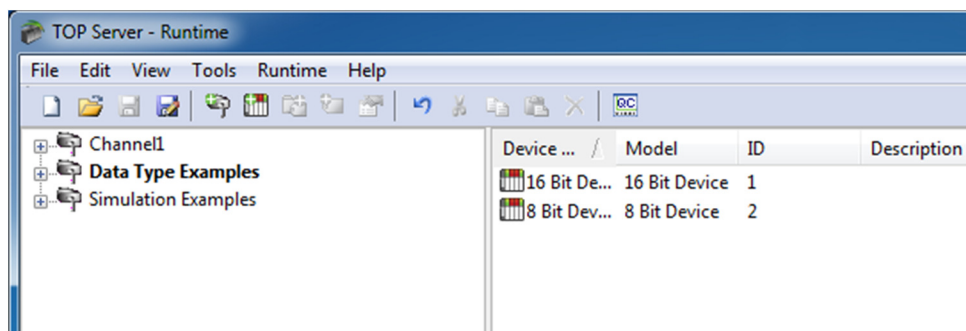
TopServer application note

This document provides information to configure Kepware KEPServerEX HMI to communicate with a DH+ network from a computer with an ANC-120e USB to Data Highway Plus adapter or ANC-100e Ethernet to Data Highway Plus adapter.

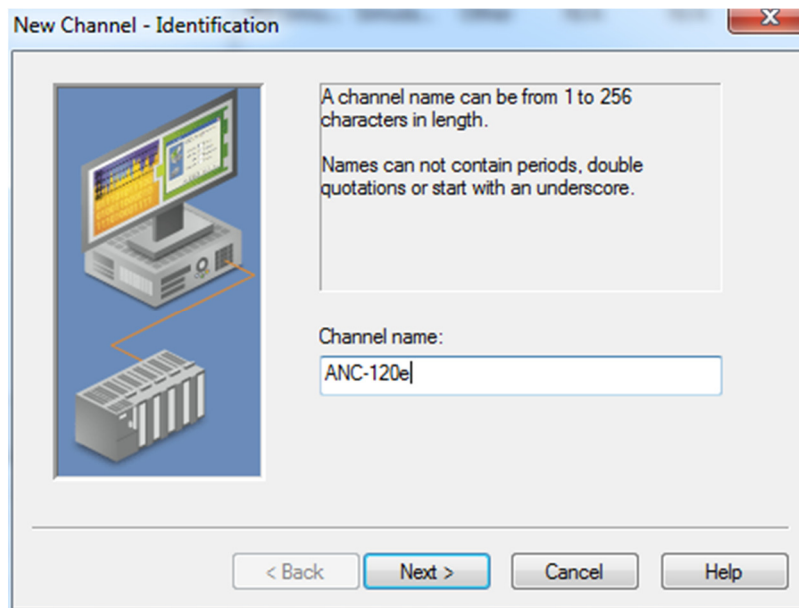
Note: Before proceeding, make sure

- ✓ ANC-120e Driver is installed (*Only if using ANC-120e*)
- ✓ Network adapter is correctly configured to access ANC-120e or ANC-100e
- ✓ ANC-120e is connected to the computer and DH+ network or ANC-100e is connected to the same Ethernet network or directly to your computer, and to the DH+ network.

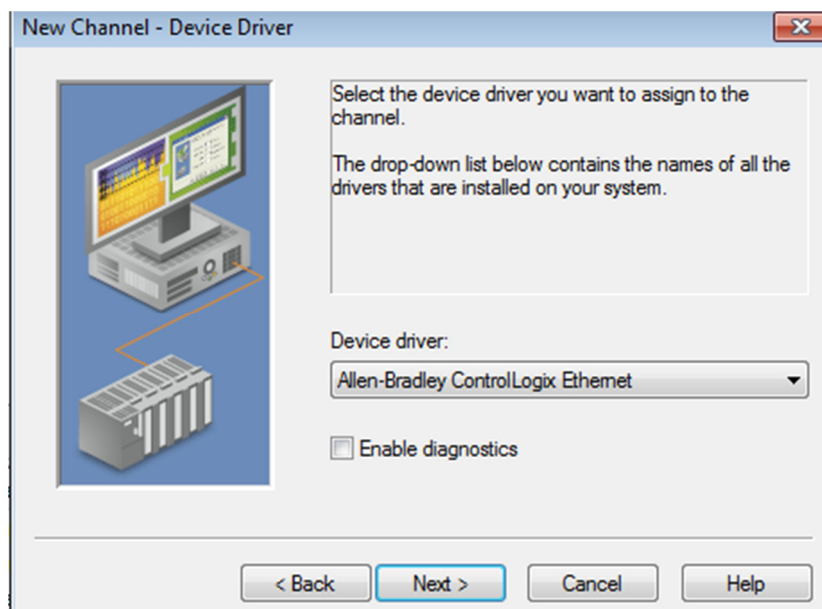
1. Open “TopServer”
2. Right Click on the empty space on the left side of the window to create a new channel



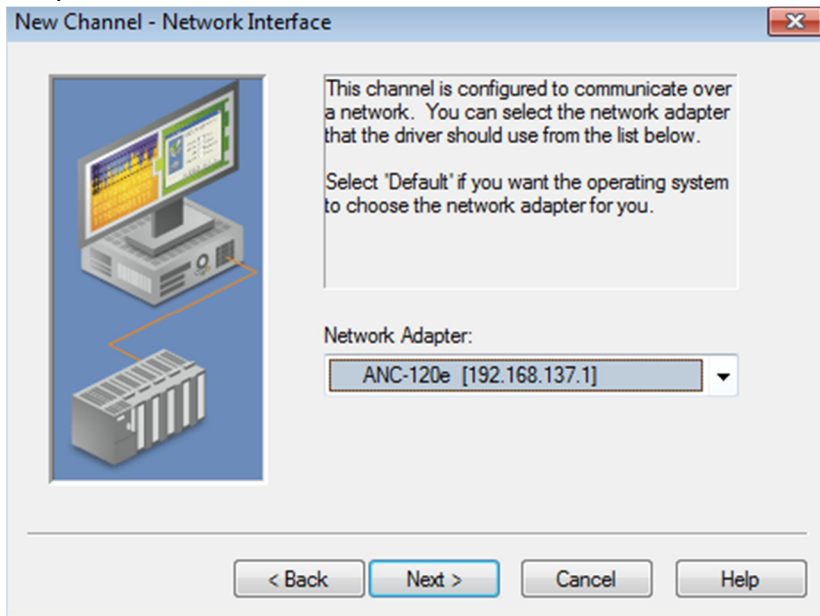
3. Name the new channel as you prefer (ANC-120e in this example) and click “Next”



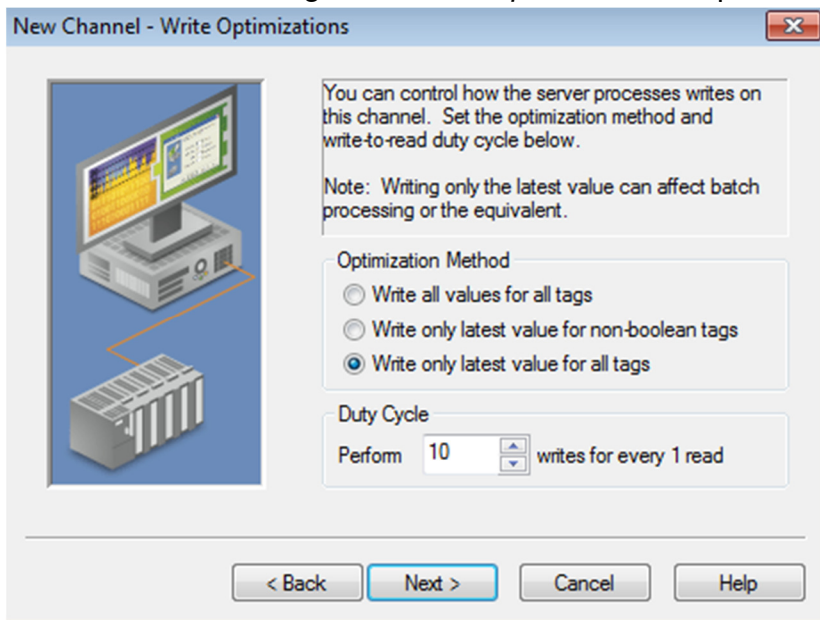
4. From the “Device driver” dropdown list select “Allen-Bradley ControlLogix Ethernet” and click “Next”



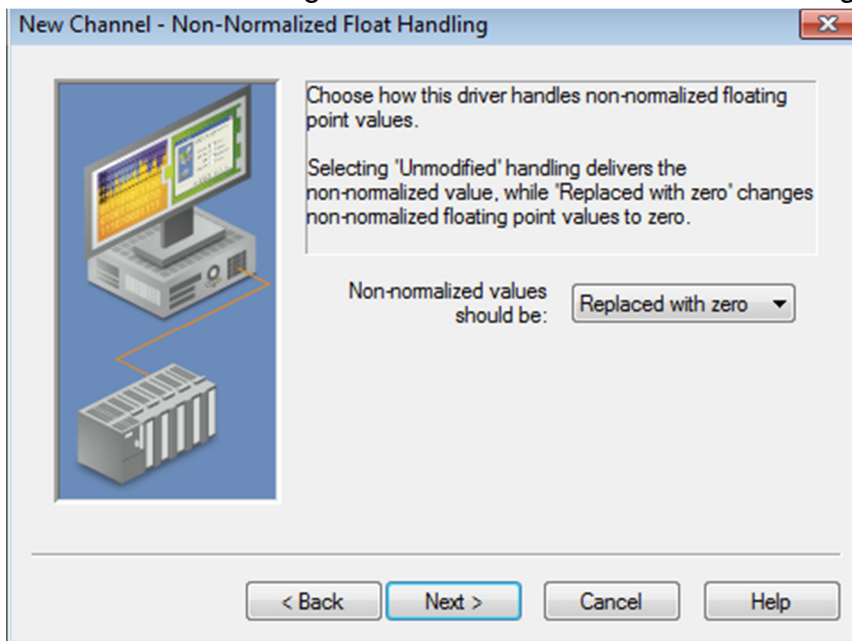
5. From the “*Network Adapter:*” dropdown list select the ANC-120e or the Network adapter connected to the same Ethernet network than ANC-100e and click “*Next*”



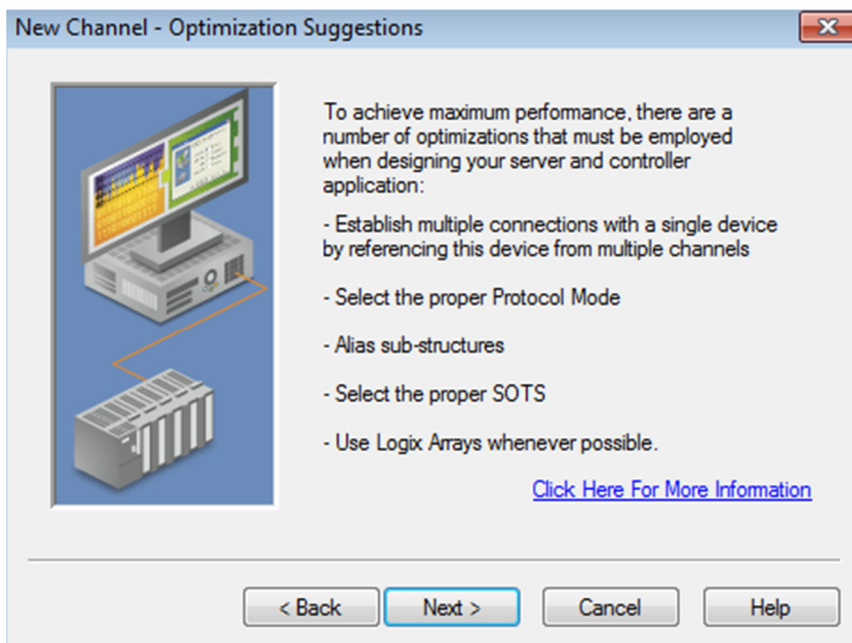
6. Use the default settings for “*Write Optimizations*” options and click “*Next*”



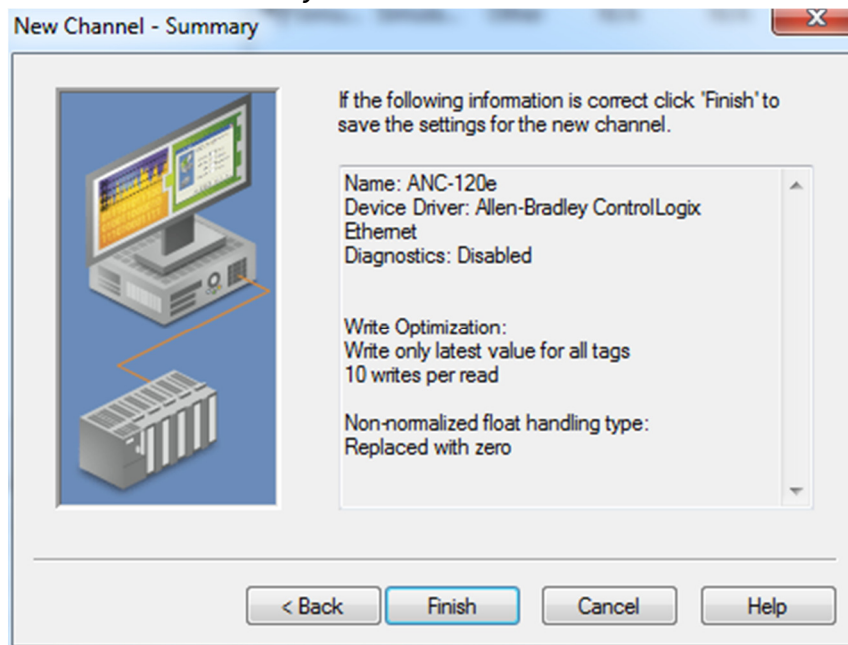
7. Use the default settings for “*Non- Normalized Float Handling*” and click “*Next*”



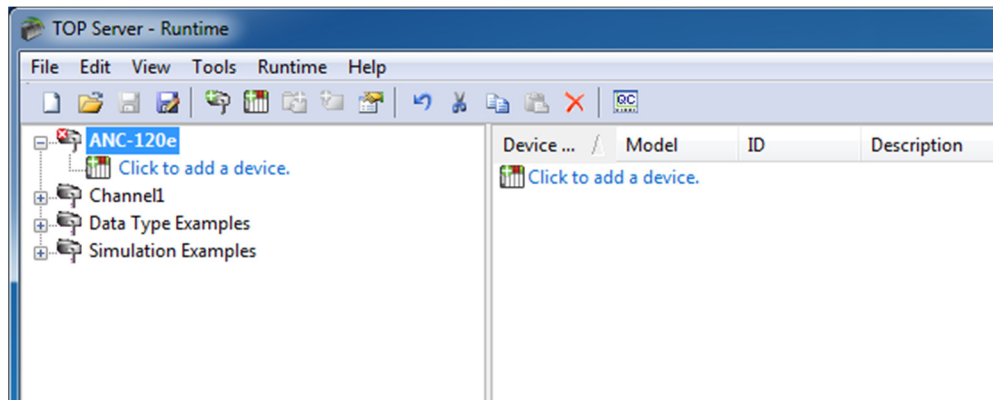
8. Click “*Next*”



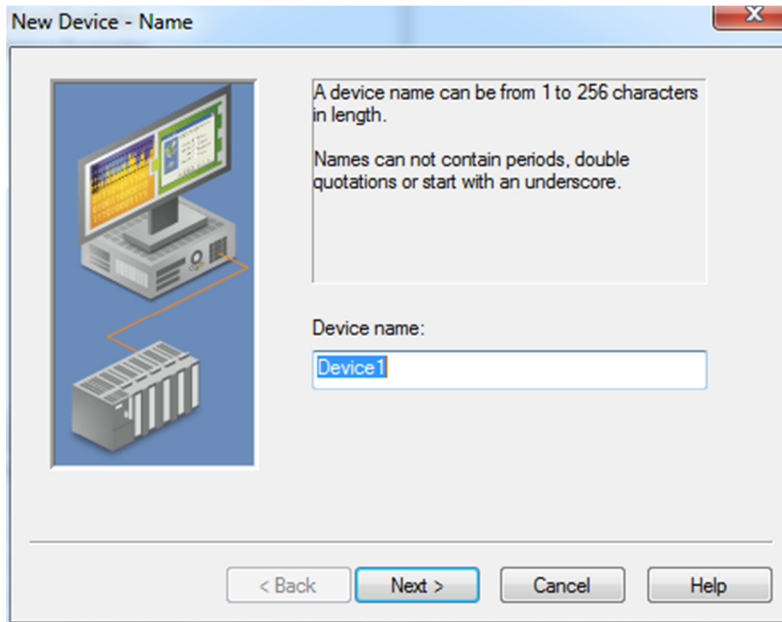
9. Review the “*Summary*” and click “*Finish*”



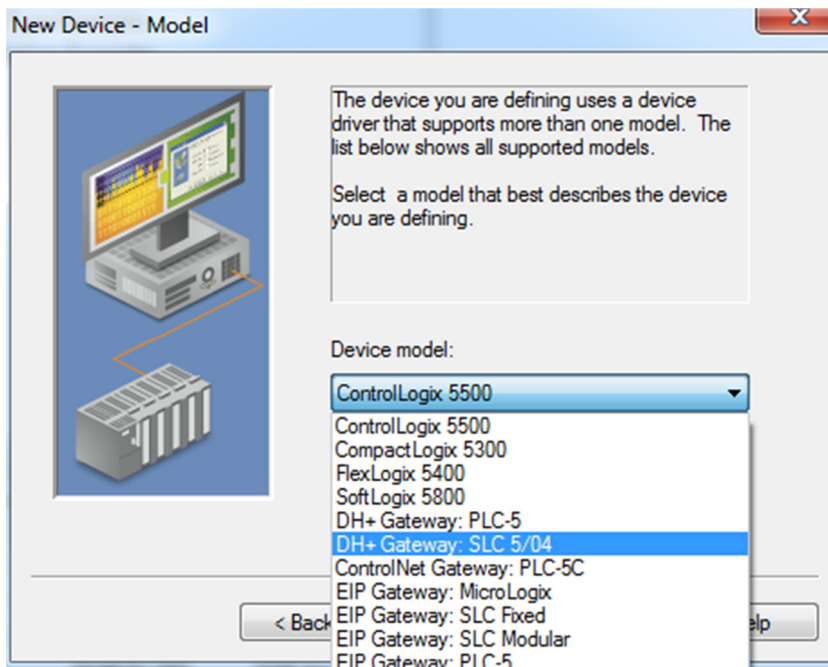
10. Click on the new ANC-120e Channel to select it and then click on “*Click to add a device*”



11. Under “*Device Name*”, enter a name meaningful for you and click “*Next*”

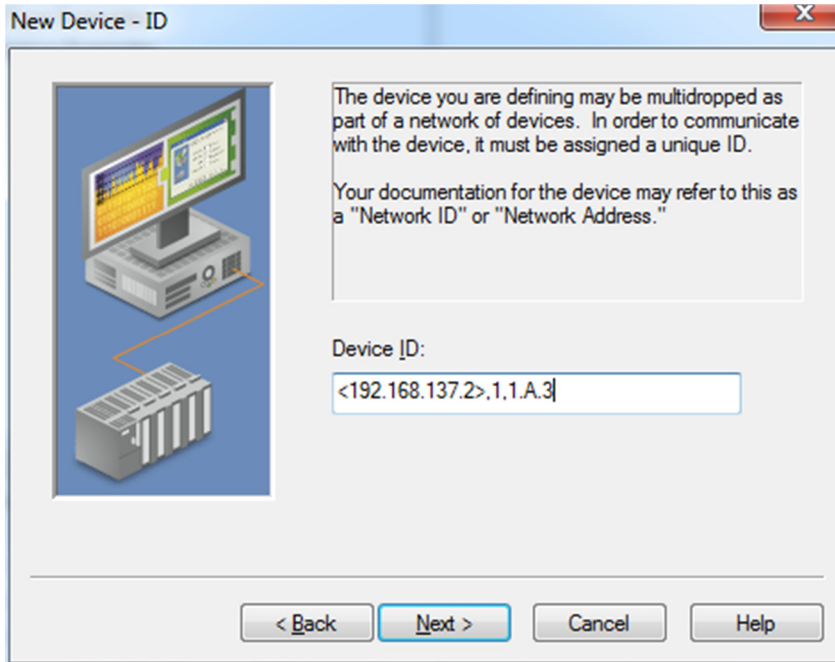


12. From the “*Device Model:*” dropdown list, select “*DH+ Gateway: SLC 5/04*” and click “*Next*”

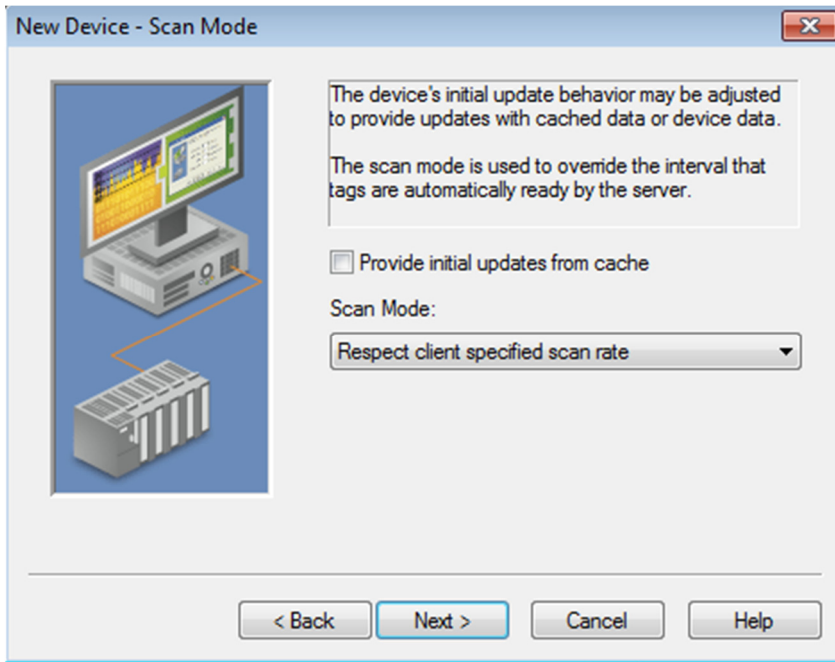


13. Under “*Device ID*”, enter the following path:
<IP of ANC adapter>, 1, 1. A. Target_DH+_Node_number

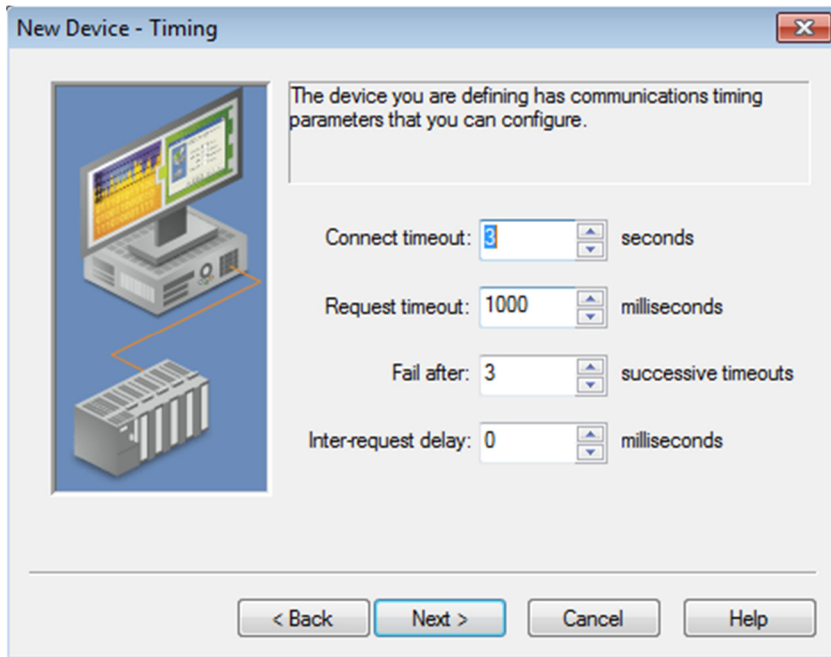
Please notice that there are “,” and “.” in the path
When you are finished with the path, click “*Next*”



14. Use default values for “*Scan Mode*” and click “*Next*”



15. Use defaults values for “*Timing*” and click “*Next*”



The dialog box is titled "New Device - Timing". It features a graphic on the left showing a computer connected to a server rack. The main text area contains the instruction: "The device you are defining has communications timing parameters that you can configure." Below this, there are four settings, each with a numeric input field and a unit label: "Connect timeout:" with a value of 8 and unit "seconds"; "Request timeout:" with a value of 1000 and unit "milliseconds"; "Fail after:" with a value of 3 and unit "successive timeouts"; and "Inter-request delay:" with a value of 0 and unit "milliseconds". At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

Connect timeout: 8 seconds

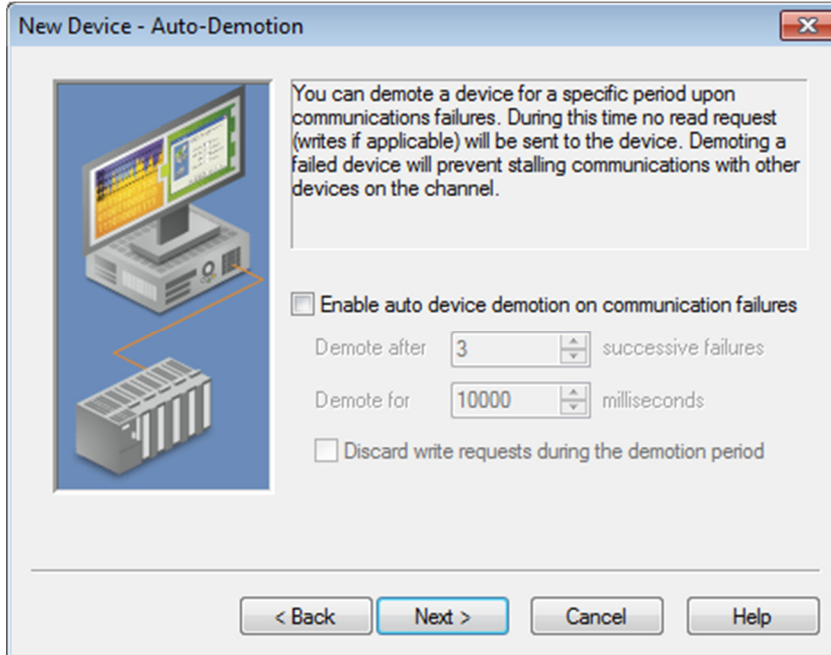
Request timeout: 1000 milliseconds

Fail after: 3 successive timeouts

Inter-request delay: 0 milliseconds

< Back Next > Cancel Help

16. Use defaults values for “*Auto-Demotion*” and click “*Next*”



The dialog box is titled "New Device - Auto-Demotion". It features the same graphic on the left as the previous dialog. The main text area contains the instruction: "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." Below this, there are three settings: a checkbox labeled "Enable auto device demotion on communication failures" which is checked; "Demote after:" with a value of 3 and unit "successive failures"; and "Demote for:" with a value of 10000 and unit "milliseconds". There is also an unchecked checkbox labeled "Discard write requests during the demotion period". At the bottom, there are four buttons: "< Back", "Next >", "Cancel", and "Help".

Enable auto device demotion on communication failures

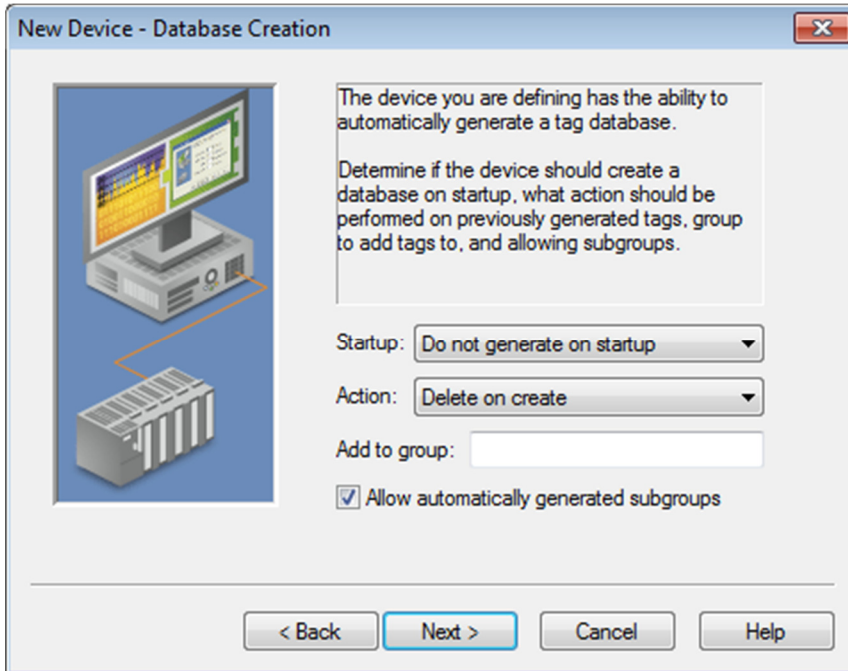
Demote after 3 successive failures

Demote for 10000 milliseconds

Discard write requests during the demotion period

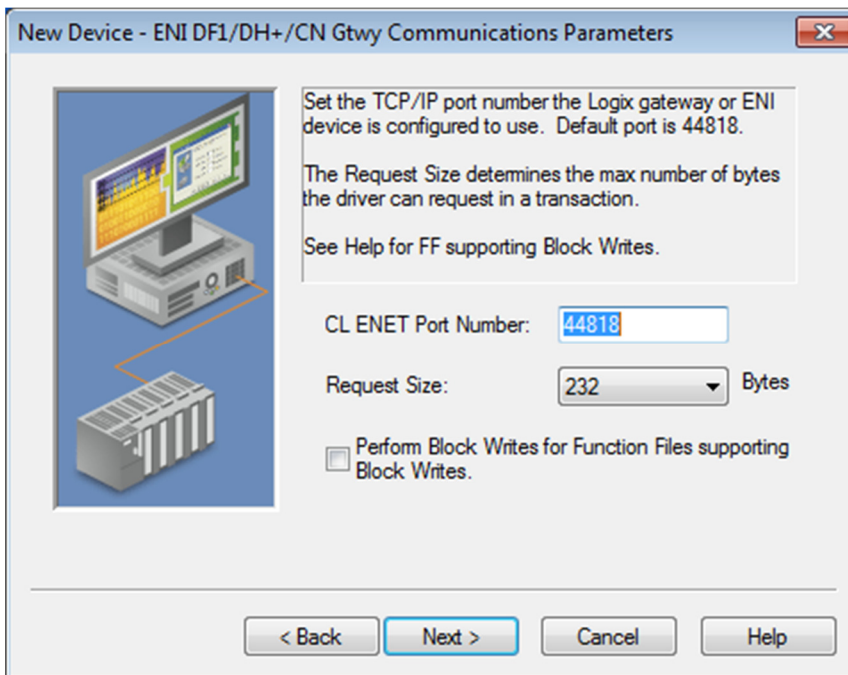
< Back Next > Cancel Help

17. Use default values for “*Database Creation*” and click “*Next*”



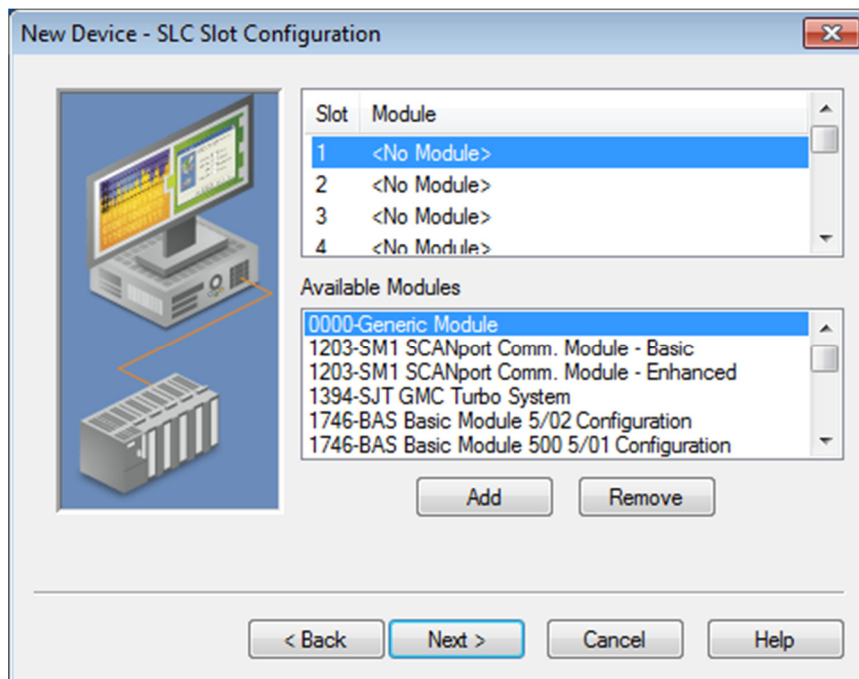
The screenshot shows a dialog box titled "New Device - Database Creation". On the left is an illustration of a computer monitor and a server rack. The main text area contains the following instructions: "The device you are defining has the ability to automatically generate a tag database. Determine if 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." Below this text are three settings: "Startup:" with a dropdown menu set to "Do not generate on startup", "Action:" with a dropdown menu set to "Delete on create", and "Add to group:" with an empty text field. There is also a checked checkbox labeled "Allow automatically generated subgroups". At the bottom are four buttons: "< Back", "Next >", "Cancel", and "Help".

18. Use default values for “*ENI DF1/DH+/CN Gtwy Communications Parameters*” and click “*Next*”

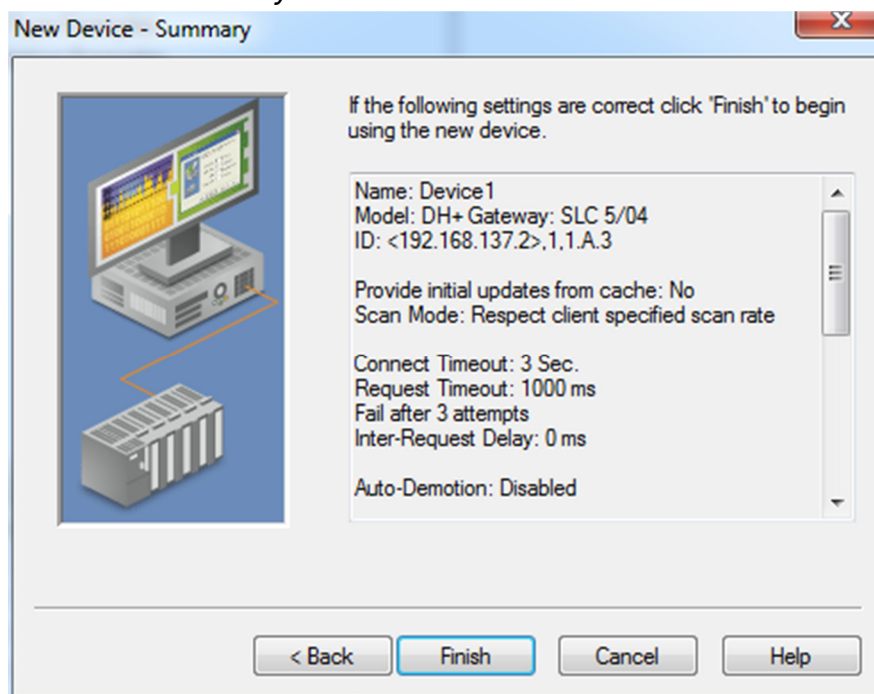


The screenshot shows a dialog box titled "New Device - ENI DF1/DH+/CN Gtwy Communications Parameters". On the left is an illustration of a computer monitor and a server rack. The main text area contains the following instructions: "Set the TCP/IP port number the Logix gateway or ENI device is configured 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." Below this text are three settings: "CL ENET Port Number:" with a text field containing "44818", "Request Size:" with a dropdown menu set to "232" and the unit "Bytes", and an unchecked checkbox labeled "Perform Block Writes for Function Files supporting Block Writes". At the bottom are four buttons: "< Back", "Next >", "Cancel", and "Help".

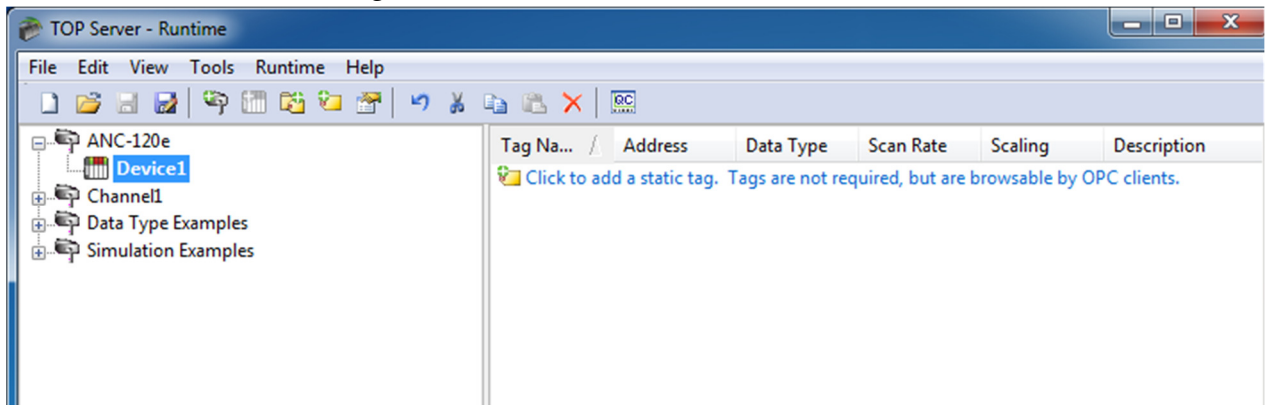
19. Use default values for “*SLC Slot Configuration*” and click “*Next*”



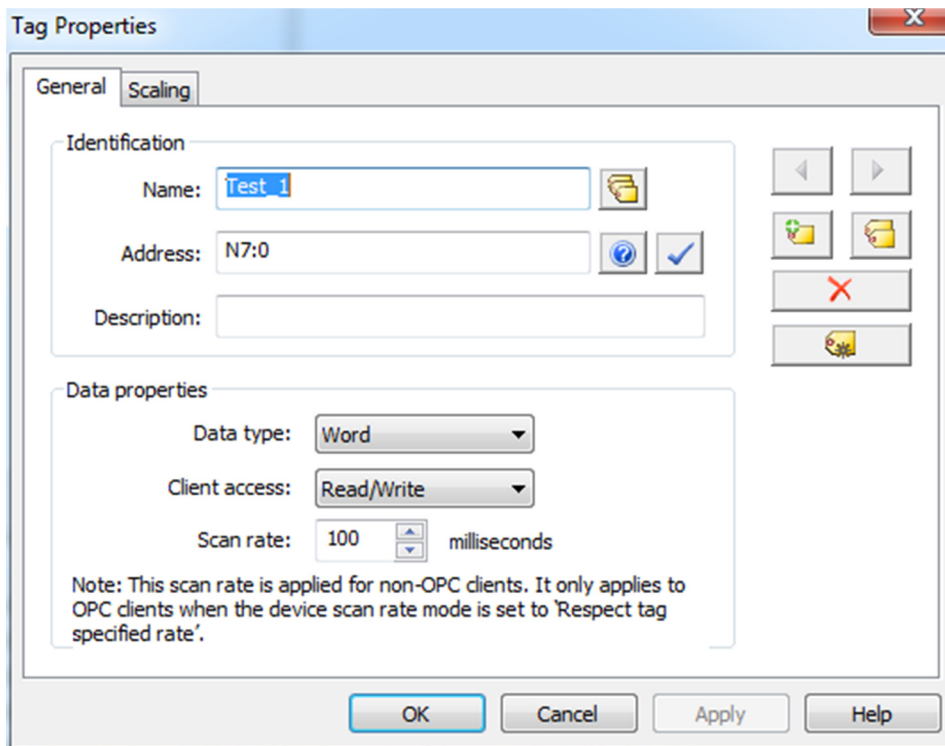
20. Read the “*Summary*” and click “*Finish*”



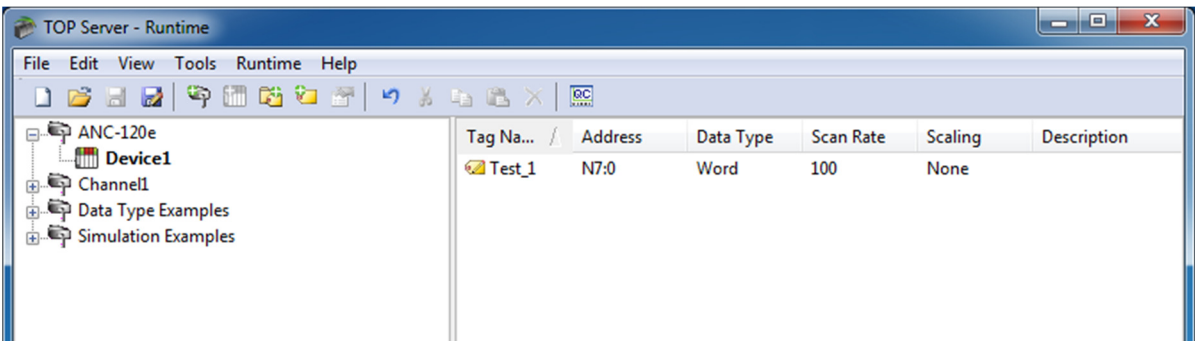
21. Click on the recently created device under our channel to select it and then click on “Click to add a static tag”



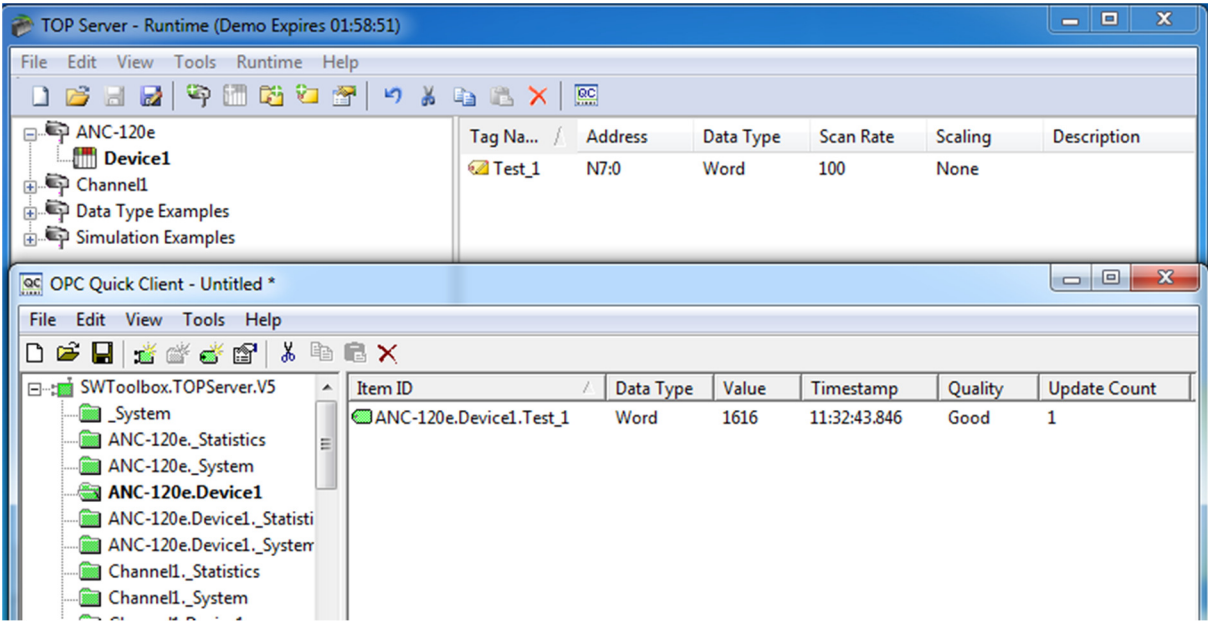
22. Enter a meaningful name for the tag in the “Name.” field
23. Enter a known address of your PLC in the “Address.” field (N7:0 for our example)
24. Select the corresponding “Data type.” from the dropdown list and click “OK”



25. With this, you can test the connection to your PLC on DH+ using the Quick OPC Client



26. In our example, N7:0 is known to hold the value 1616
Use Tools -> OPC Quick Client
Find your tag in the list of items and confirm that you get the correct value.



This concludes this application note.