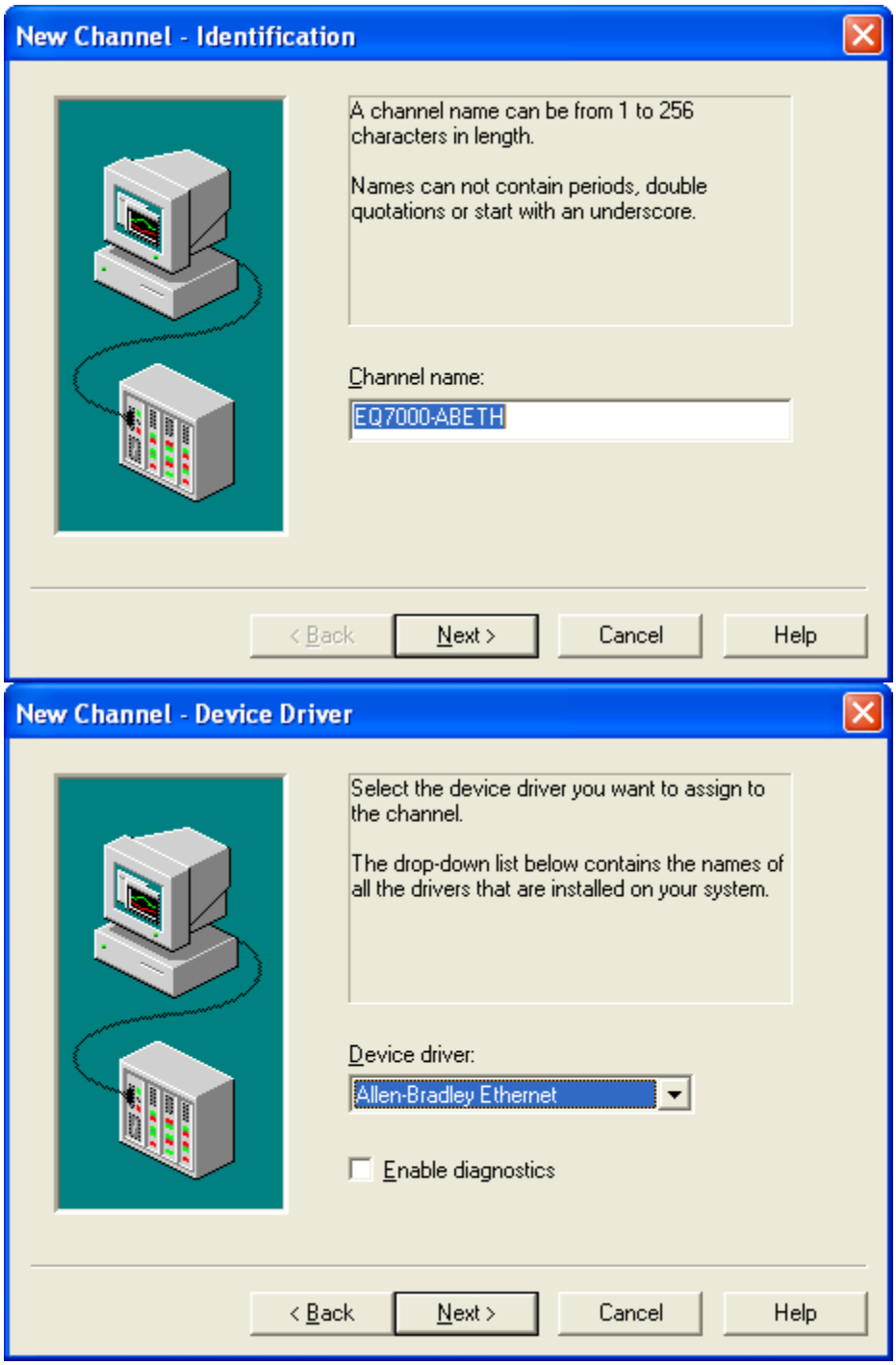
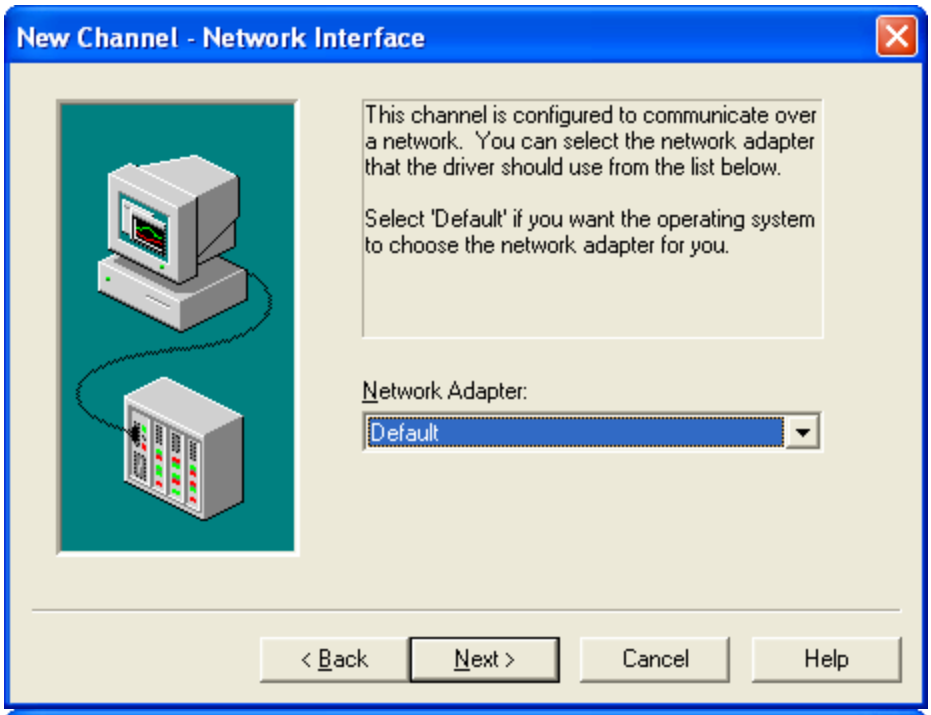
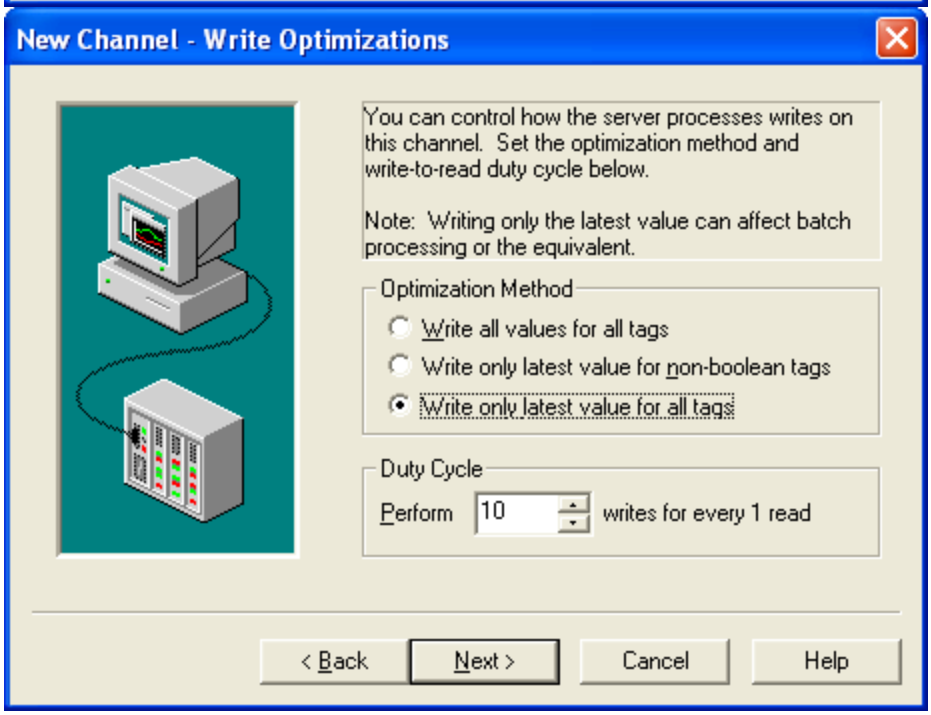
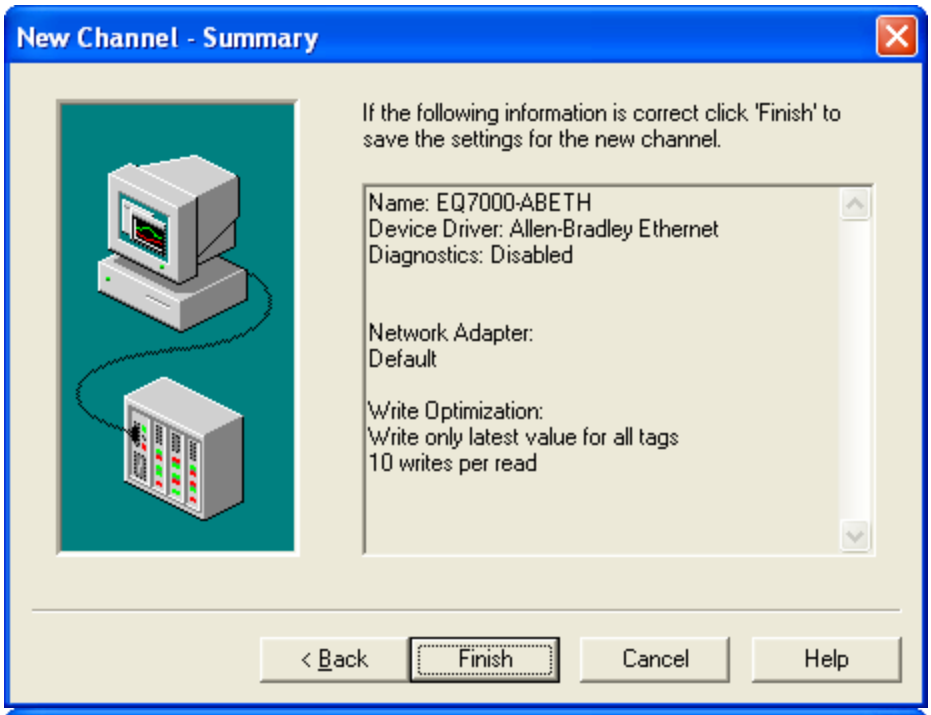
In This application we have an EQ7000 EDH+ with IP address 192.168.2.180

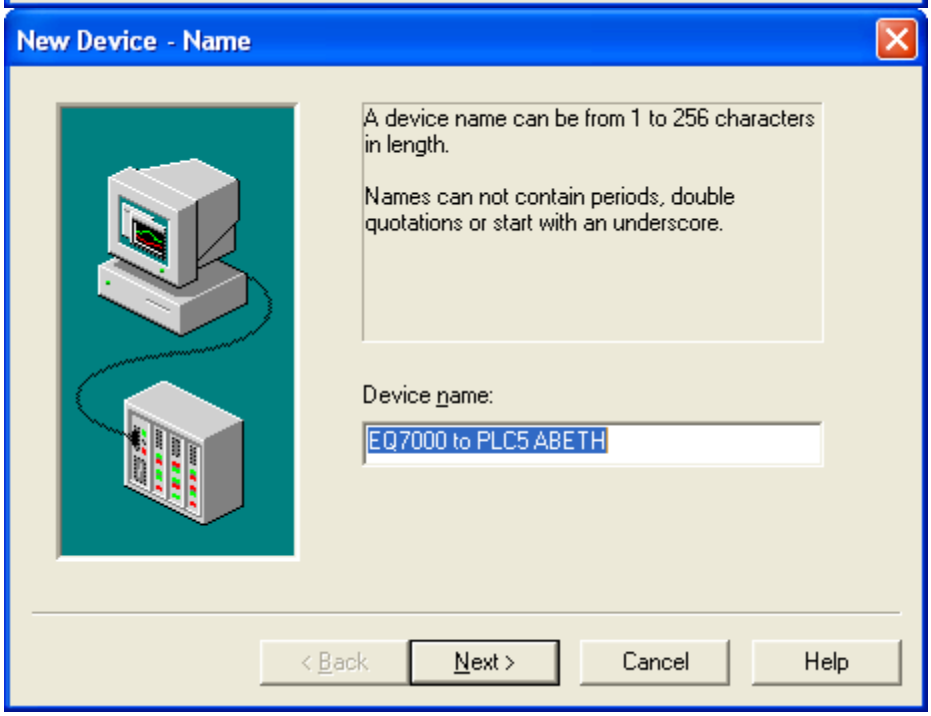
1st using the AB Ethernet driver to read from Integer file7 in PLC5 node address 7.

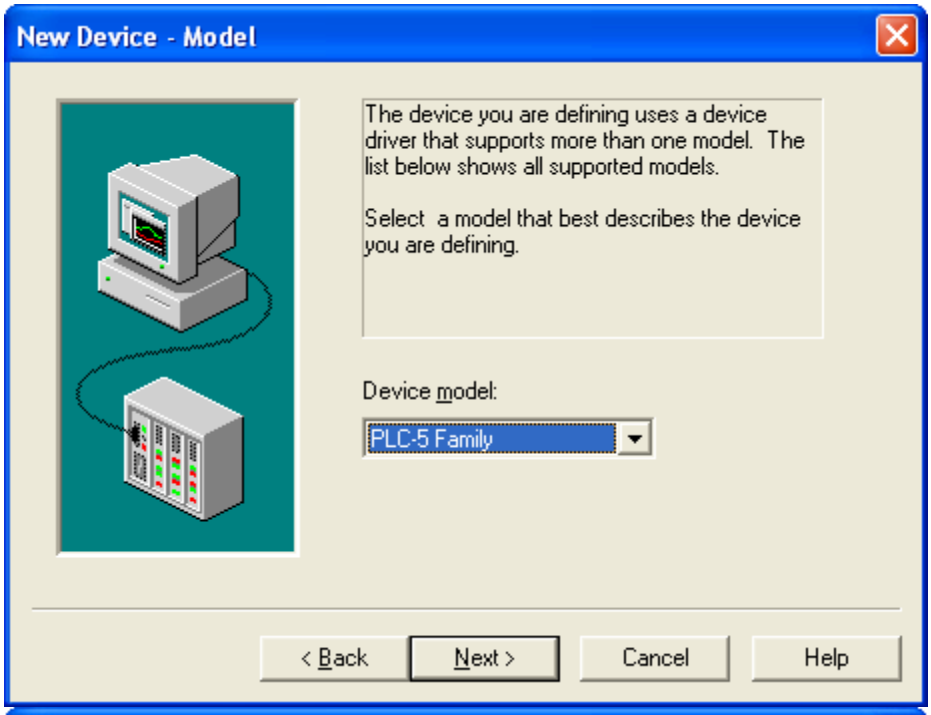


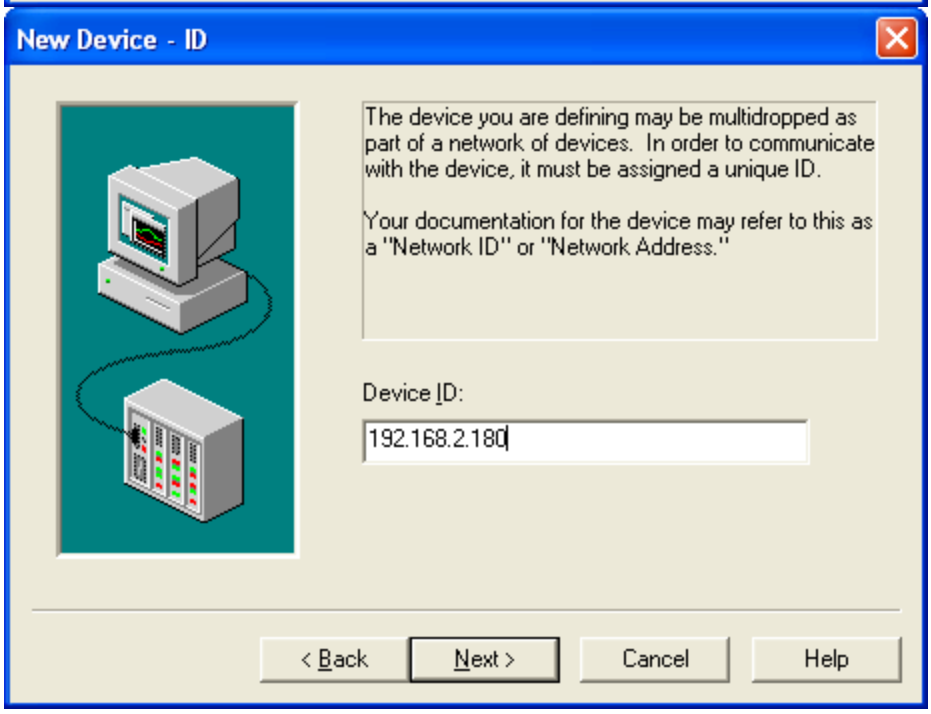

New Channel - Network Interface
This channel is configured to communicate over a network. You can select the network adapter that the driver should use from the list below.
Select 'Default' if you want the operating system to choose the network adapter for you.
Network Adapter:
Default
< Back
Next >
Cancel
Help

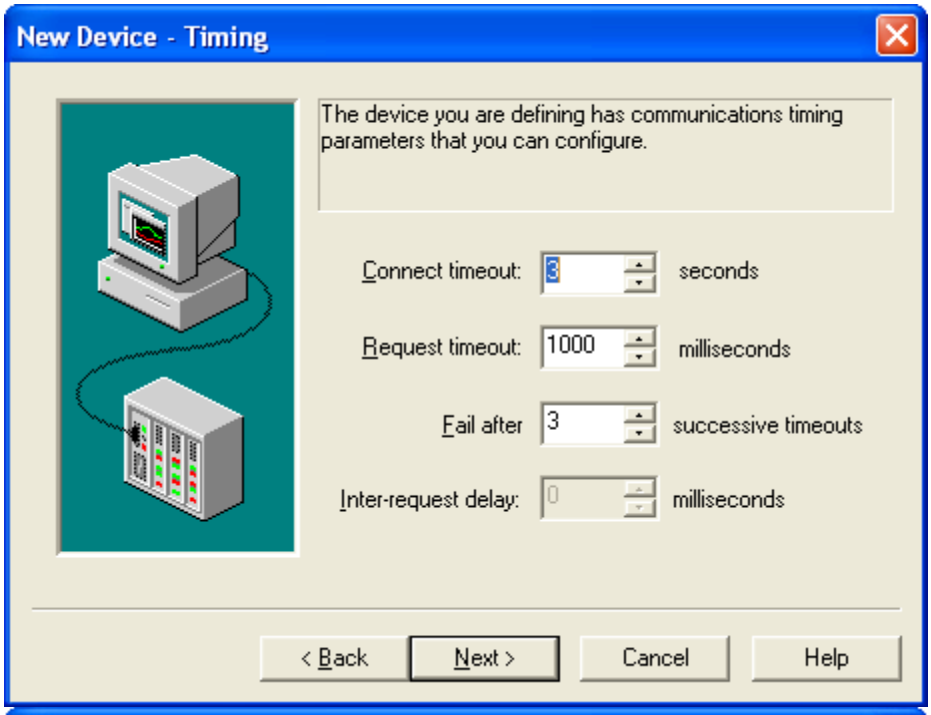

New Channel - Write Optimizations
You can control how the server processes writes on this channel. Set the optimization method and write-to-read duty cycle below.
Note: Writing only the latest value can affect batch processing or the equivalent.
Optimization Method
Write all values for all tags
Write only latest value for non-boolean tags
Write only latest value for all tags
Duty Cycle
Perform 10 writes for every 1 read
< Back
Next >
Cancel
Help

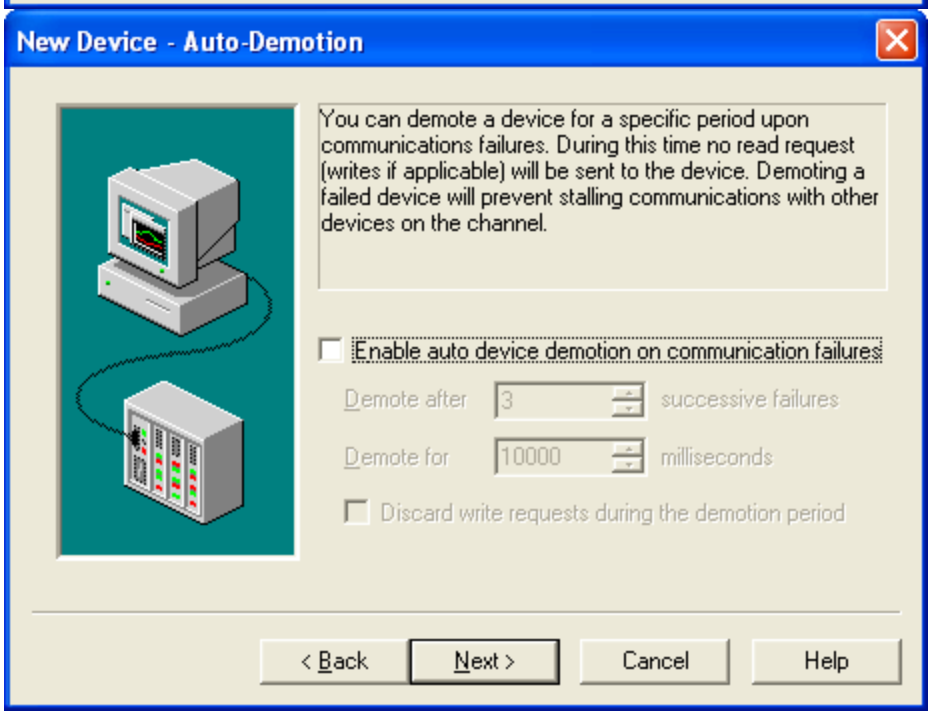

New Channel - Summary
If the following information is correct click 'Finish' to save the settings for the new channel.
Name: EQ7000-ABETH
Device Driver: Allen-Bradley Ethernet
Diagnostics: Disabled
Network Adapter:
Default
Write Optimization:
Write only latest value for all tags
10 writes per read
< Back
Finish
Cancel
Help

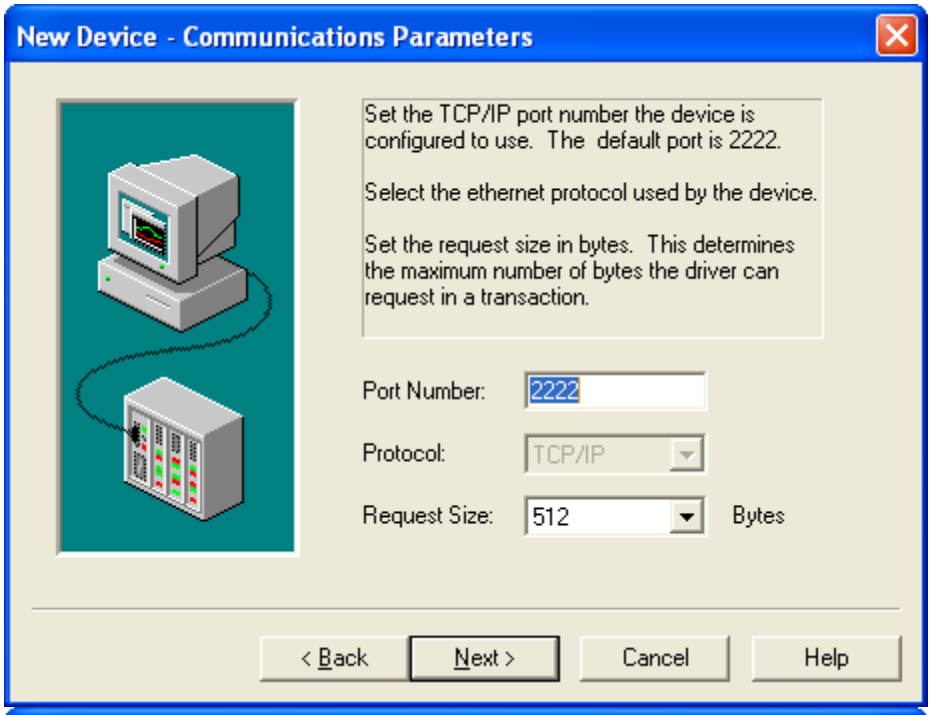

New Device - Name
A device name can be from 1 to 256 characters in length.
Names can not contain periods, double quotations or start with an underscore.
Device name:
EQ7000 to PLC5 ABETH
< Back
Next >
Cancel
Help

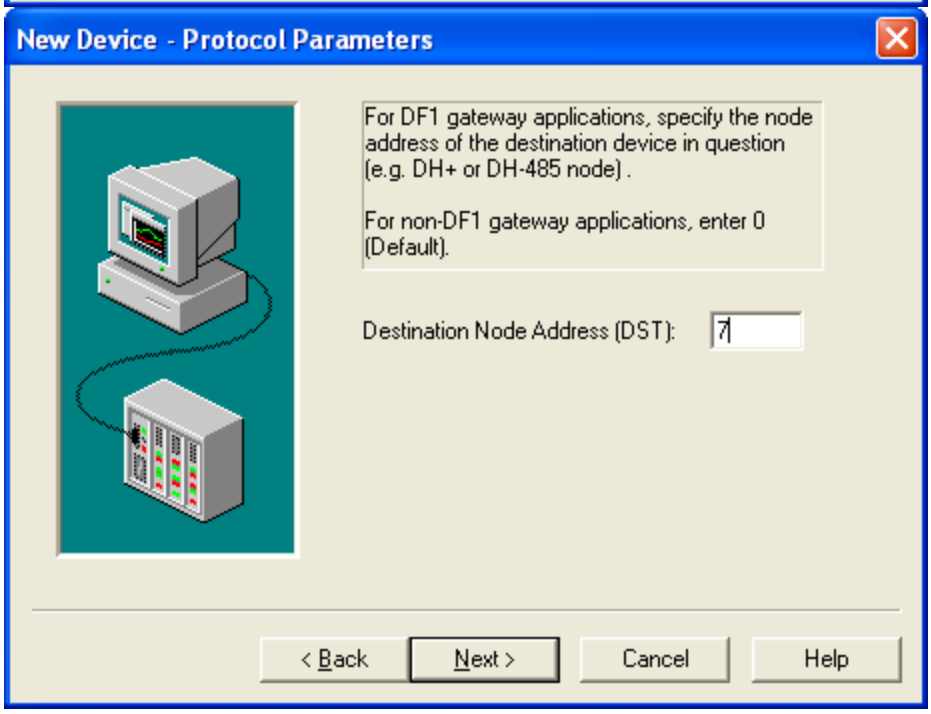

New Device - Model
The device you are defining uses a device driver that supports more than one model. The list below shows all supported models.
Select a model that best describes the device you are defining.
Device model:
PLC-5 Family
< Back
Next >
Cancel
Help

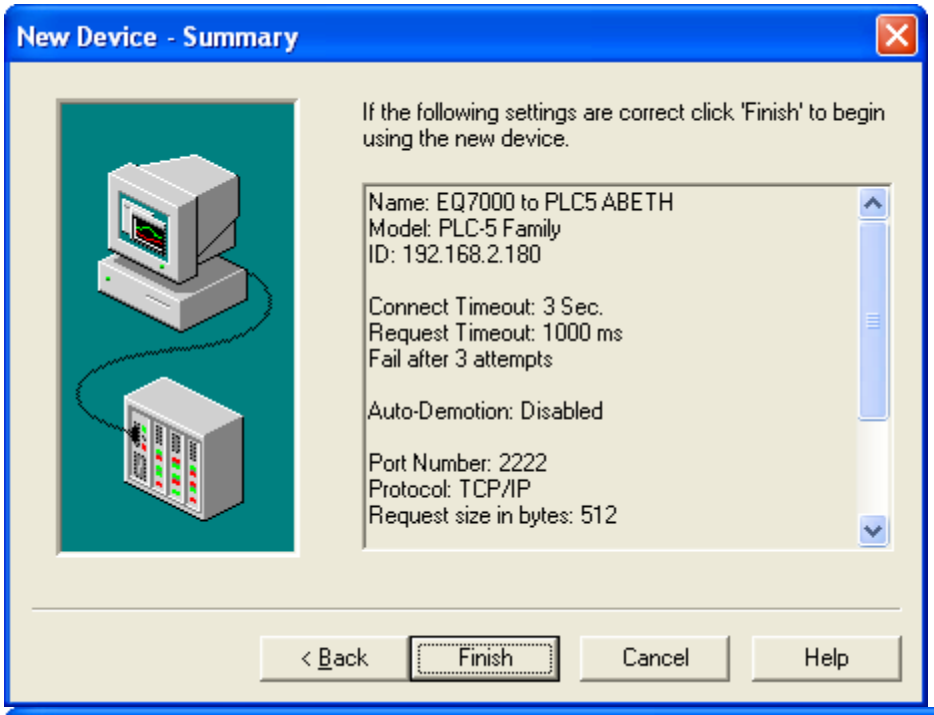

New Device - ID
The device you are defining may be multidropped as part of a network of devices. In order to communicate with the device, it must be assigned a unique ID.
Your documentation for the device may refer to this as a "Network ID" or "Network Address."
Device ID:
192.168.2.180
< Back
Next >
Cancel
Help

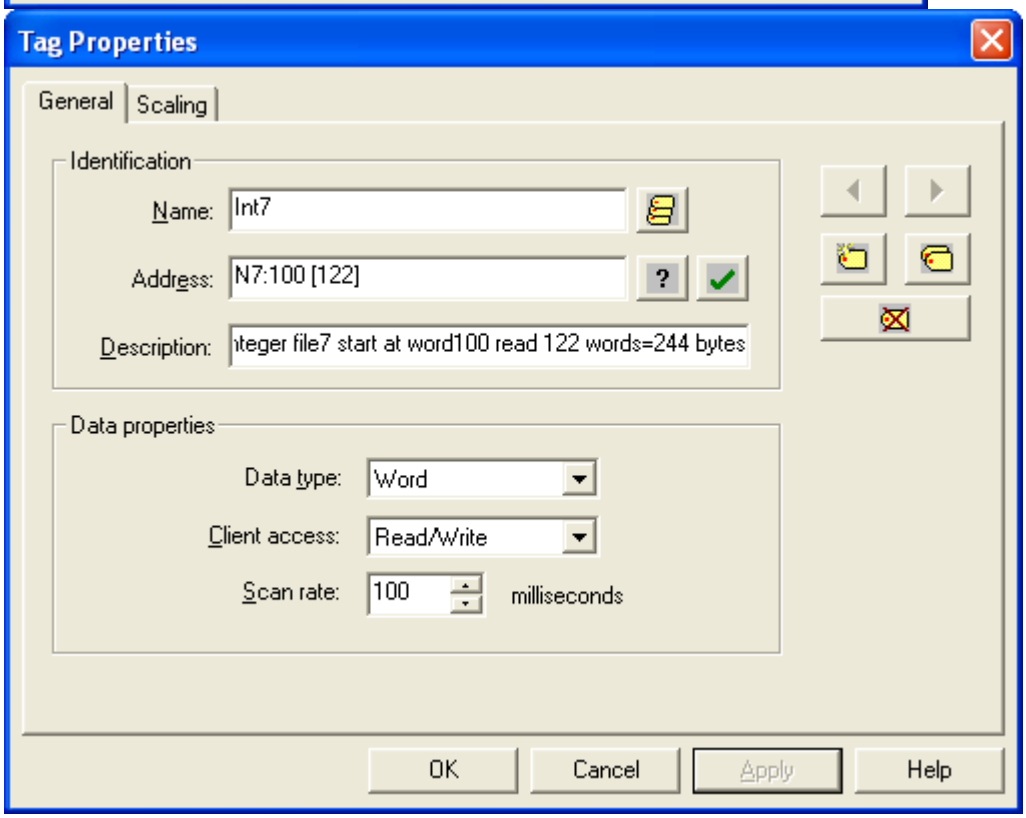

New Device - Timing
The device you are defining has communications timing parameters that you can configure.
Connect timeout:
3
seconds
Request timeout:
1000
milliseconds
Fail after
3
successive timeouts
Inter-request delay:
0
milliseconds
< Back
Next >
Cancel
Help

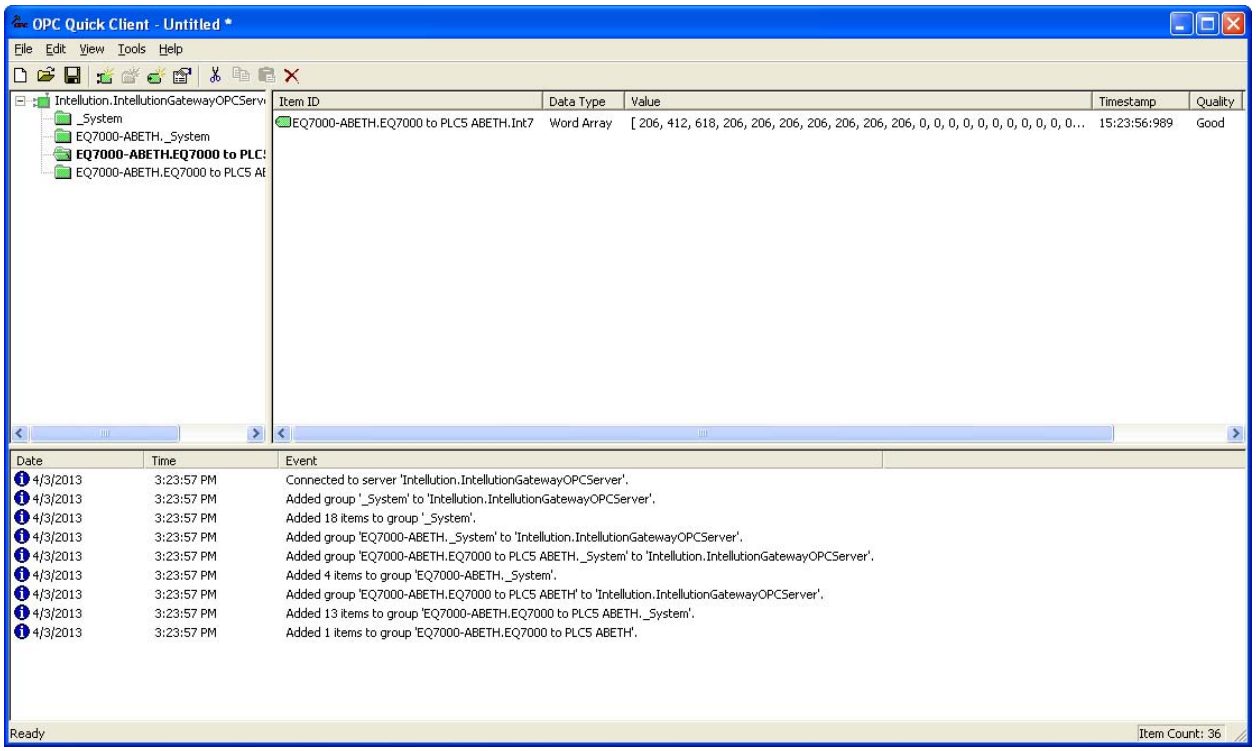

New Device - Auto-Demotion
You can demote a device for a specific period upon communications failures. During this time no read request (writes if applicable) will be sent to the device. Demoting a failed device will prevent stalling communications with other devices on the channel.
Enable auto device 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 - Communications Parameters
Set the TCP/IP port number the device is configured to use. The default port is 2222.
Select the ethernet protocol used by the device.
Set the request size in bytes. This determines the maximum number of bytes the driver can request in a transaction.
Port Number:
2222
Protocol:
TCP/IP
Request Size:
512
Bytes
< Back
Next >
Cancel
Help


New Device - Protocol Parameters
For DF1 gateway applications, specify the node address of the destination device in question (e.g. DH+ or DH-485 node).
For non-DF1 gateway applications, enter 0 (Default).
Destination Node Address (DST):
7
< Back
Next >
Cancel
Help

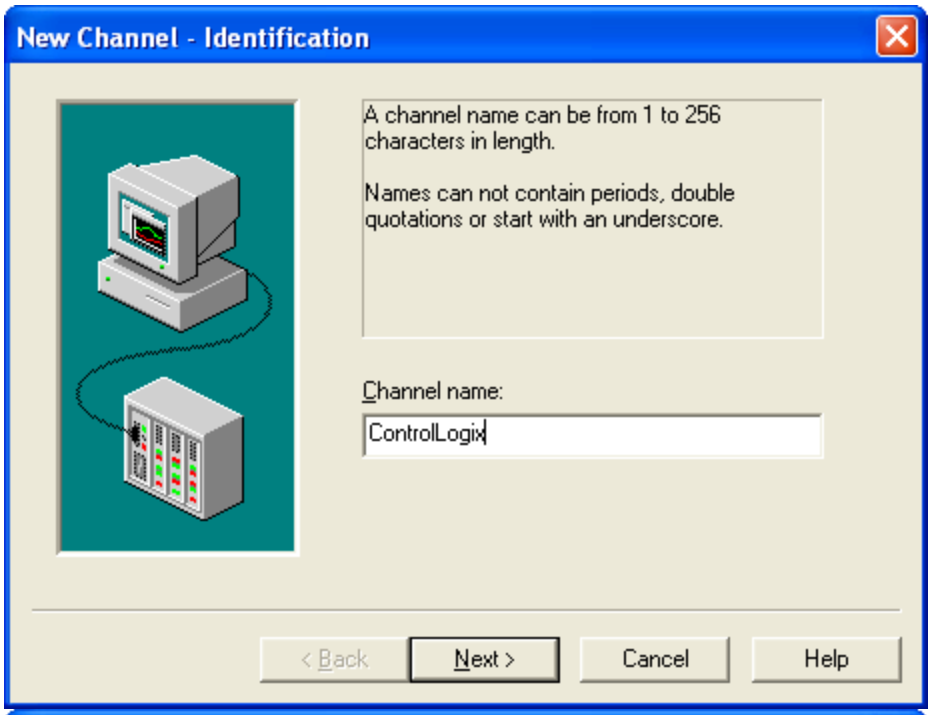

New Device - Summary
If the following settings are correct click 'Finish' to begin using the new device.
Name: EQ7000 to PLC5 ABETH
Model: PLC-5 Family
ID: 192.168.2.180
Connect Timeout: 3 Sec.
Request Timeout: 1000 ms
Fail after 3 attempts
Auto-Demotion: Disabled
Port Number: 2222
Protocol: TCP/IP
Request size in bytes: 512
< Back
Finish
Cancel
Help

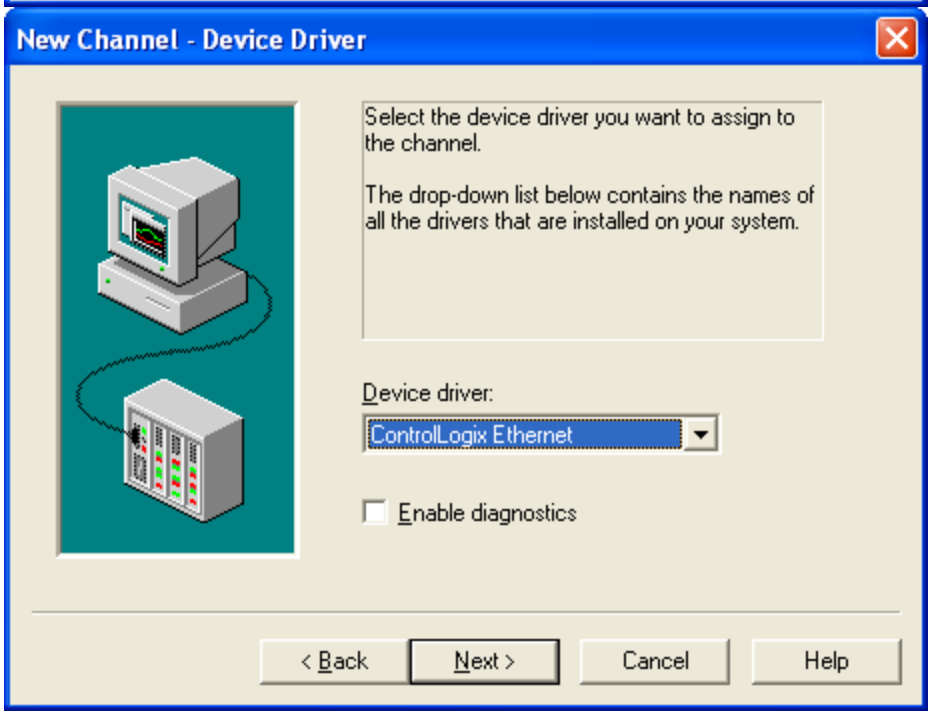

Tag Properties
General
Scaling
Identification
Name: Int7
Address: N7:100 [122]
Description: nteger file7 start at word100 read 122 words=244 bytes
Data properties
Data type: Word
Client access: Read/Write
Scan rate: 100
milliseconds
OK
Cancel
Apply
Help

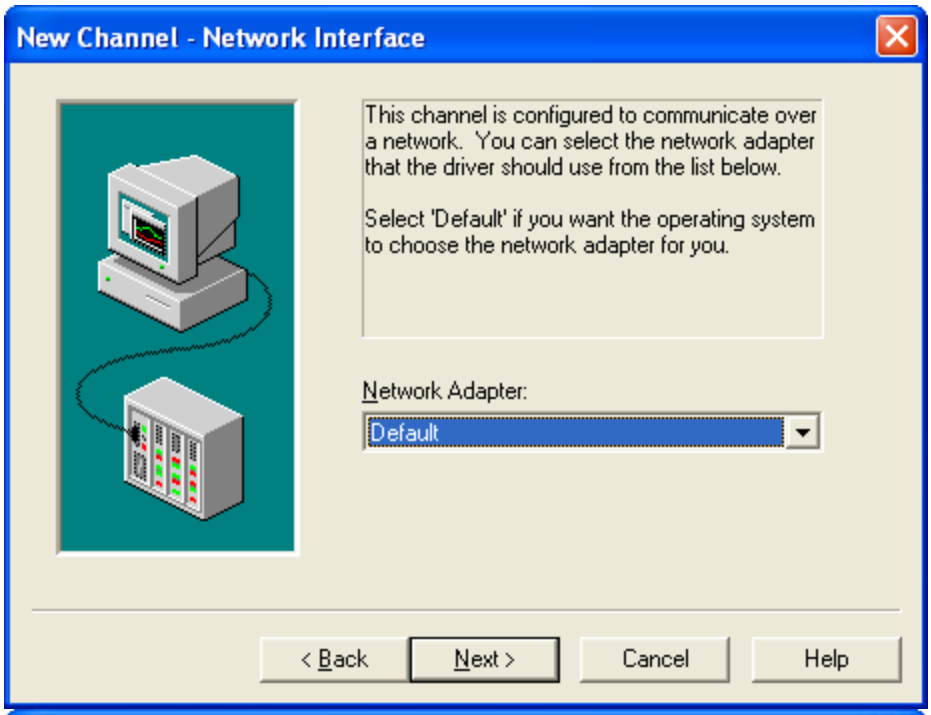


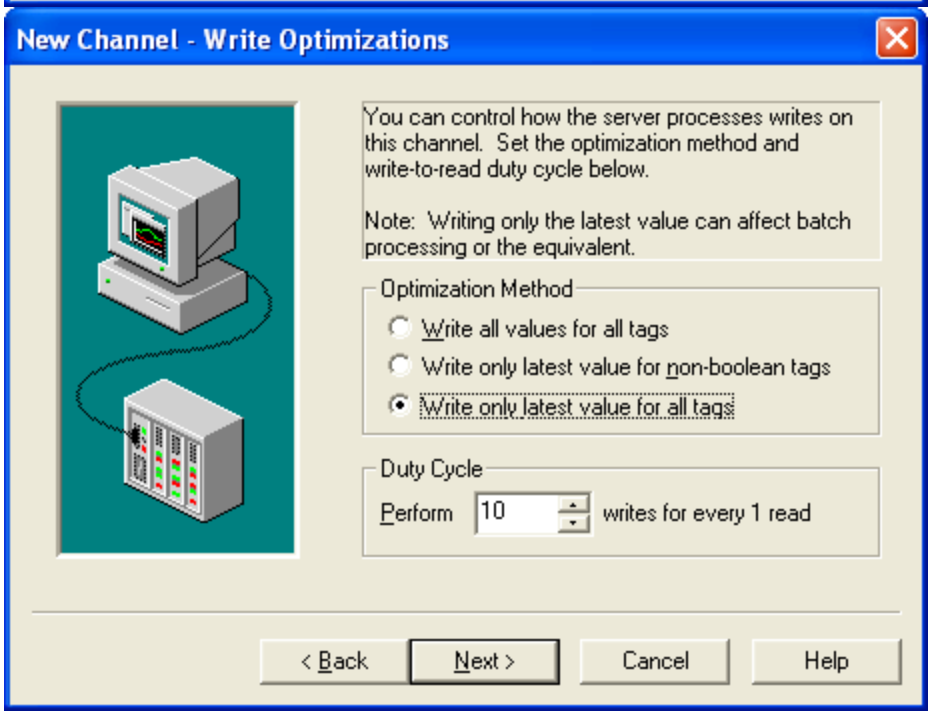
As shown above we are able to read 122 words = 244 bytes from integer file 7 starting at word100.

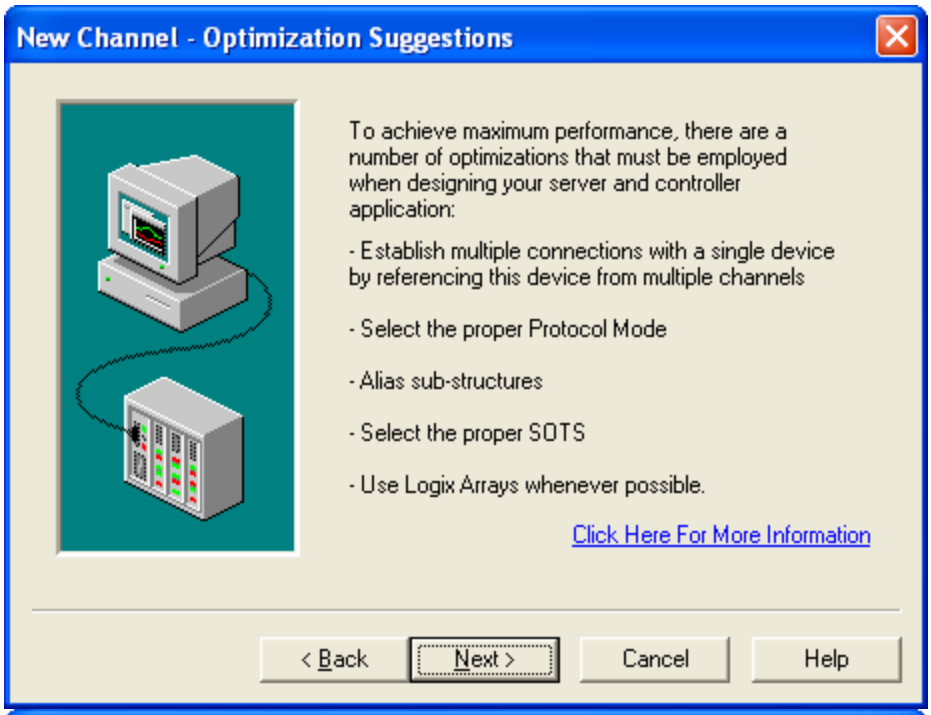
Below we will be setting the Control Logix IP address 192.168.2.80 to read the same file in the same PLC5, but in Ethernet IP driver it is limited to 232 bytes therefore we will be reading only 116 bytes as you can see below. Please note in our setting we have the Ethernet Module in slot1 and the DHPRIO module in slot2 in the Control Logix unit.

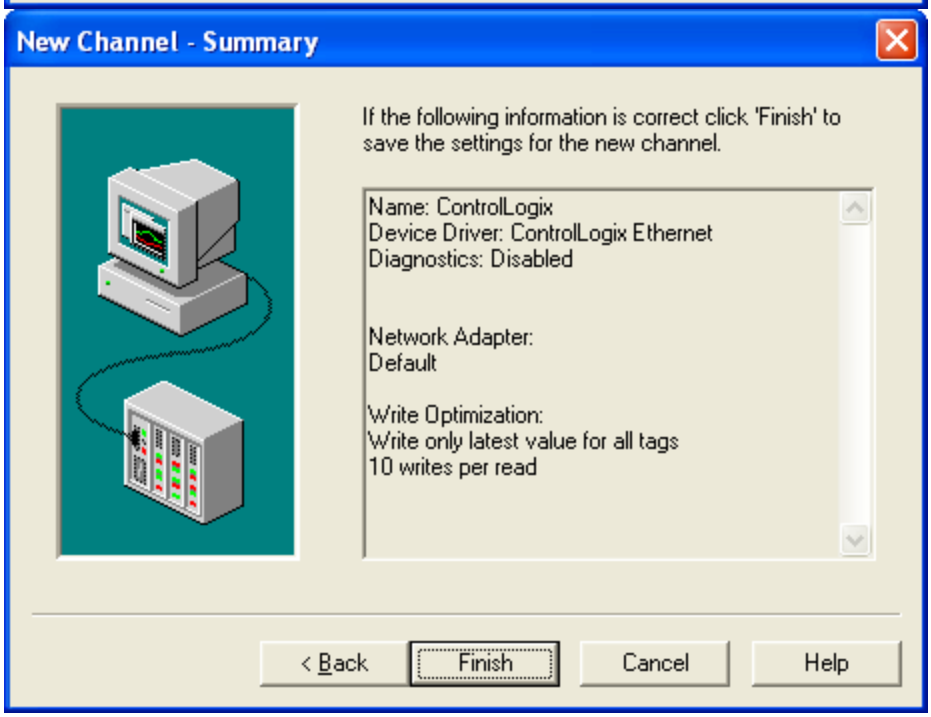

New Channel - Identification
A channel name can be from 1 to 256 characters in length.
Names can not contain periods, double quotations or start with an underscore.
Channel name:
ControlLogix
< Back
Next >
Cancel
Help

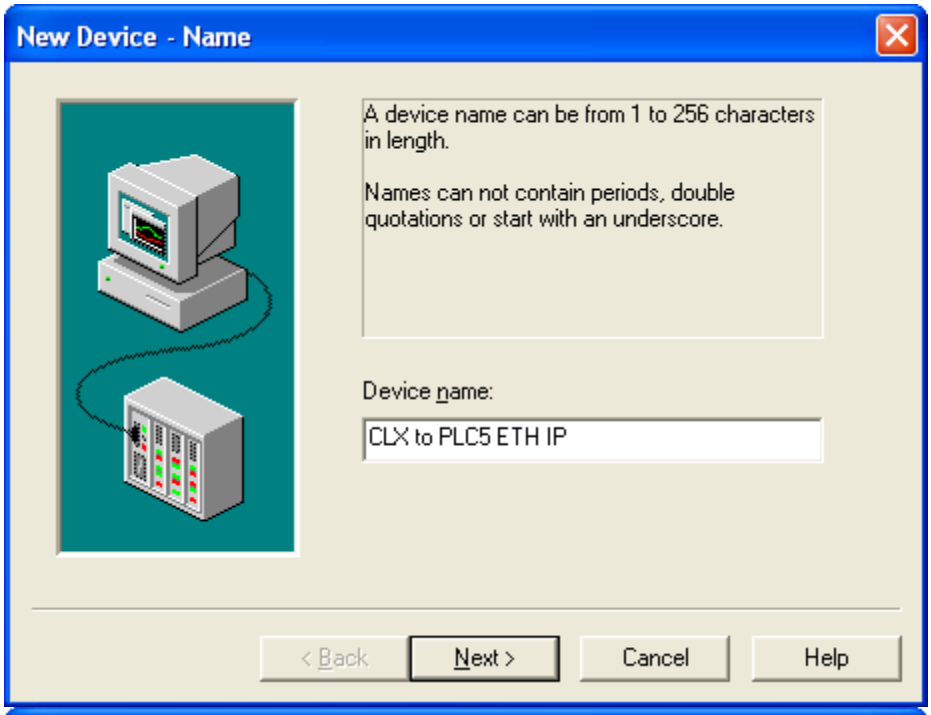

New Channel - Device Driver
Select the device driver you want to assign to the channel.
The drop-down list below contains the names of all the drivers that are installed on your system.
Device driver:
ControlLogix Ethernet
Enable diagnostics
< Back
Next >
Cancel
Help

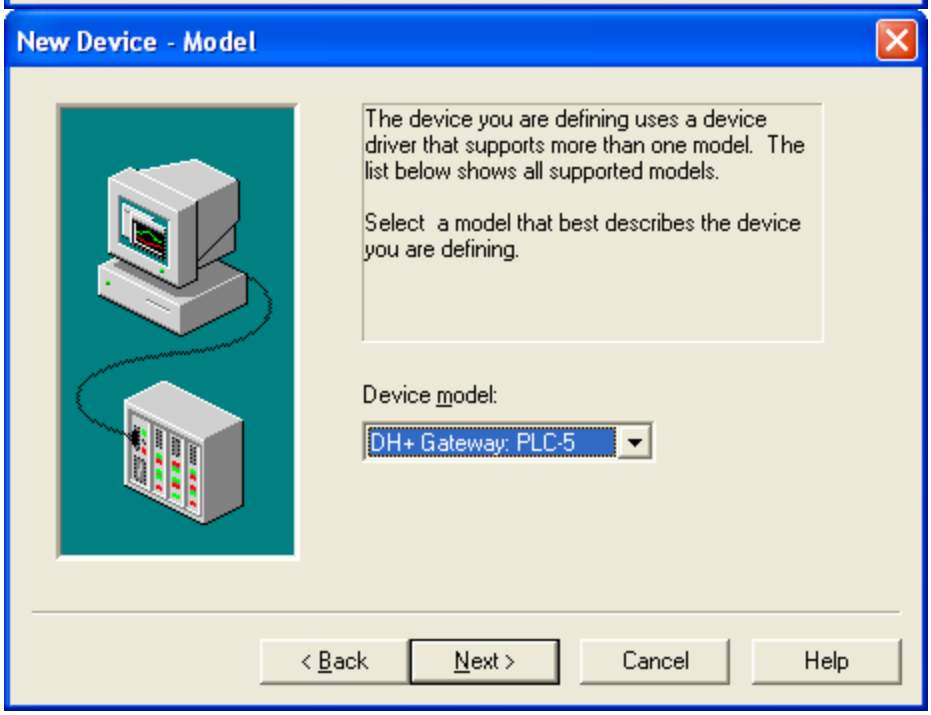

New Channel - Network Interface
This channel is configured to communicate over a network. You can select the network adapter that the driver should use from the list below.
Select 'Default' if you want the operating system to choose the network adapter for you.
Network Adapter:
Default
< Back
Next >
Cancel
Help

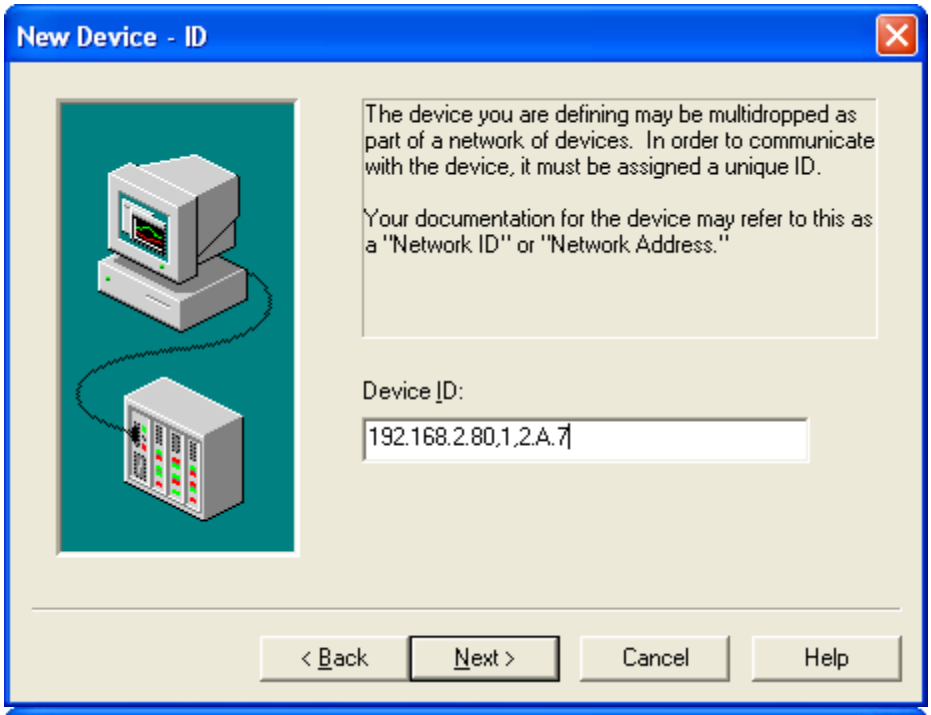

New Channel - Write Optimizations
You can control how the server processes writes on this channel. Set the optimization method and write-to-read duty cycle below.
Note: Writing only the latest value can affect batch processing or the equivalent.
Optimization Method
Write all values for all tags
Write only latest value for non-boolean tags
Write only latest value for all tags
Duty Cycle
Perform 10 writes for every 1 read
< Back
Next >
Cancel
Help

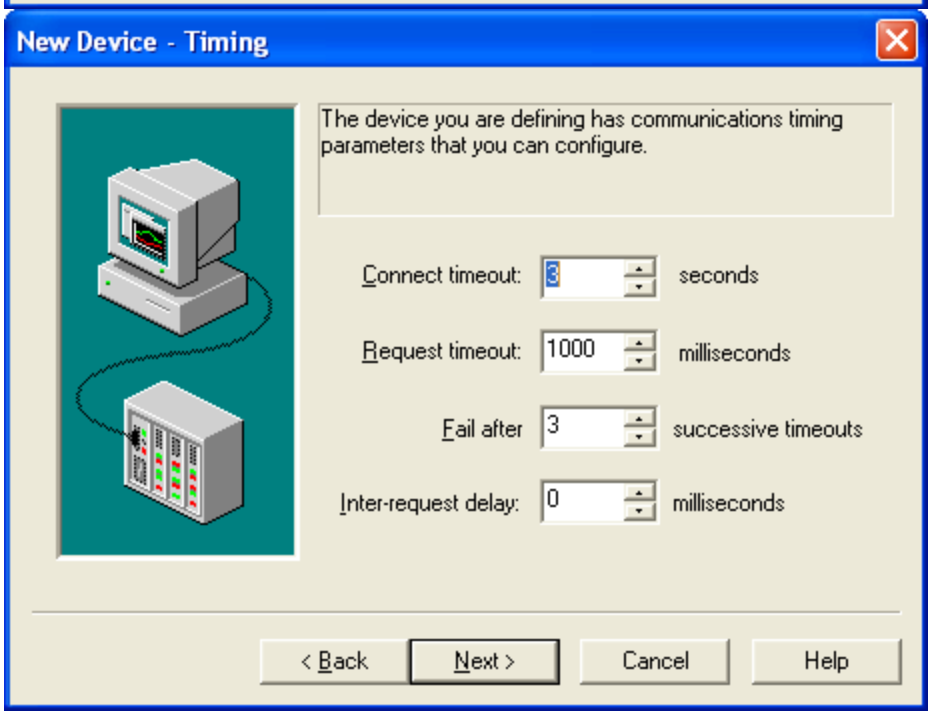

New Channel - Optimization Suggestions
To achieve maximum performance, there are a number of optimizations that must be employed when designing your server and controller application:
- Establish multiple connections with a single device by referencing this device from multiple channels
- Select the proper Protocol Mode
- Alias sub-structures
- Select the proper SOTS
- Use Logix Arrays whenever possible.
Click Here For More Information
< Back
Next >
Cancel
Help

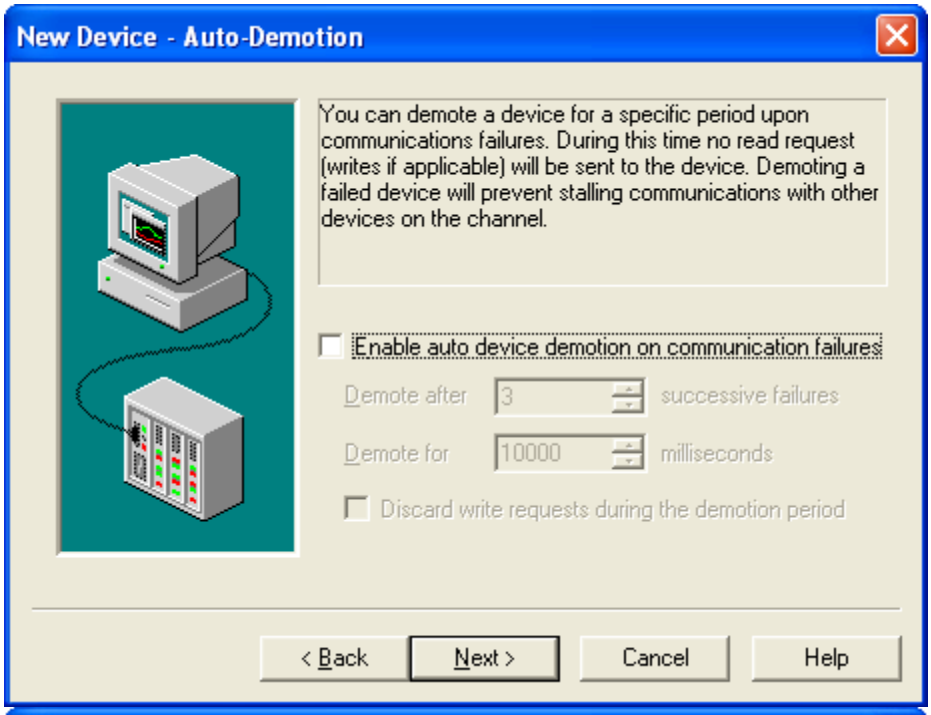

New Channel - Summary
If the following information is correct click 'Finish' to save the settings for the new channel.
Name: ControlLogix
Device Driver: ControlLogix Ethernet
Diagnostics: Disabled
Network Adapter:
Default
Write Optimization:
Write only latest value for all tags
10 writes per read
< Back
Finish
Cancel
Help

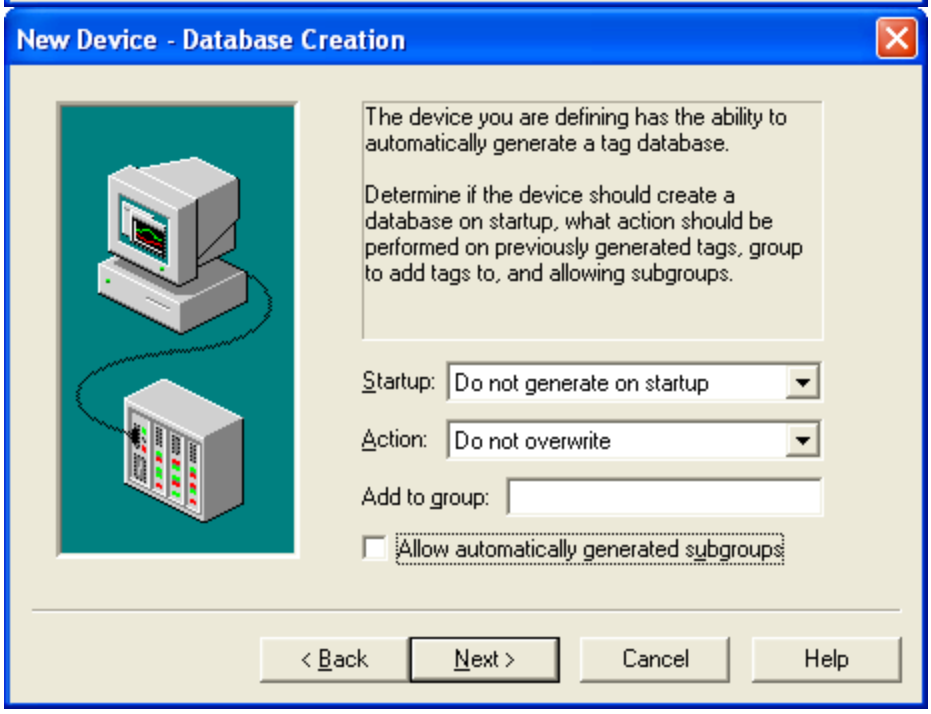

New Device - Name
A device name can be from 1 to 256 characters in length.
Names can not contain periods, double quotations or start with an underscore.
Device name:
CLX to PLC5 ETH IP
< Back
Next >
Cancel
Help

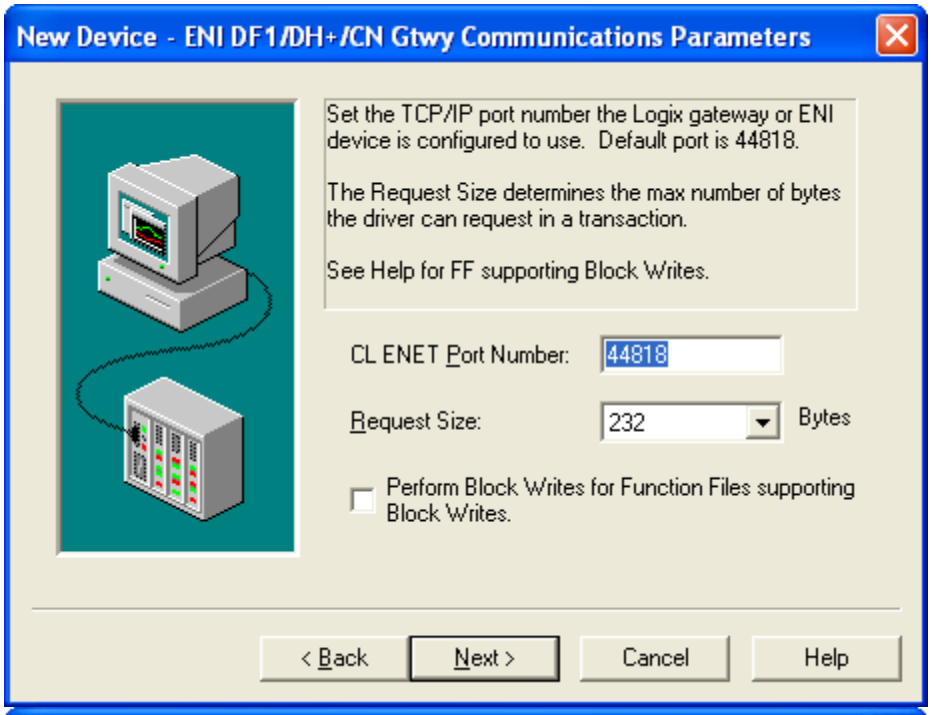

New Device - Model
The device you are defining uses a device driver that supports more than one model. The list below shows all supported models.
Select a model that best describes the device you are defining.
Device model:
DH+ Gateway: PLC-5
< Back
Next >
Cancel
Help

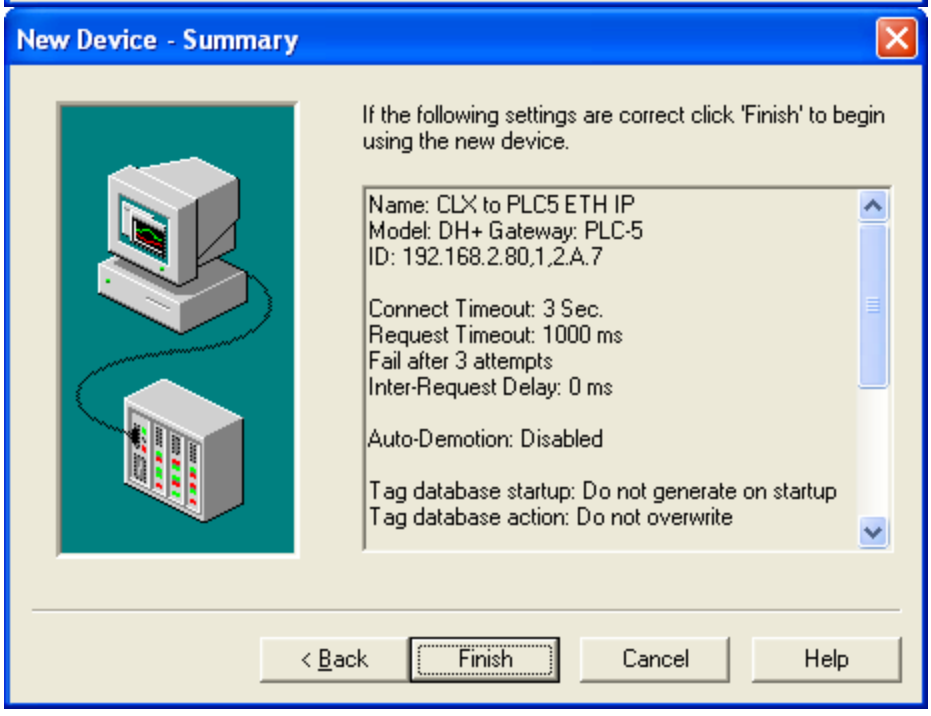

New Device - ID
The device you are defining may be multidropped as part of a network of devices. In order to communicate with the device, it must be assigned a unique ID.
Your documentation for the device may refer to this as a "Network ID" or "Network Address."
Device ID:
192.168.2.80,1,2.A.7
< Back
Next >
Cancel
Help

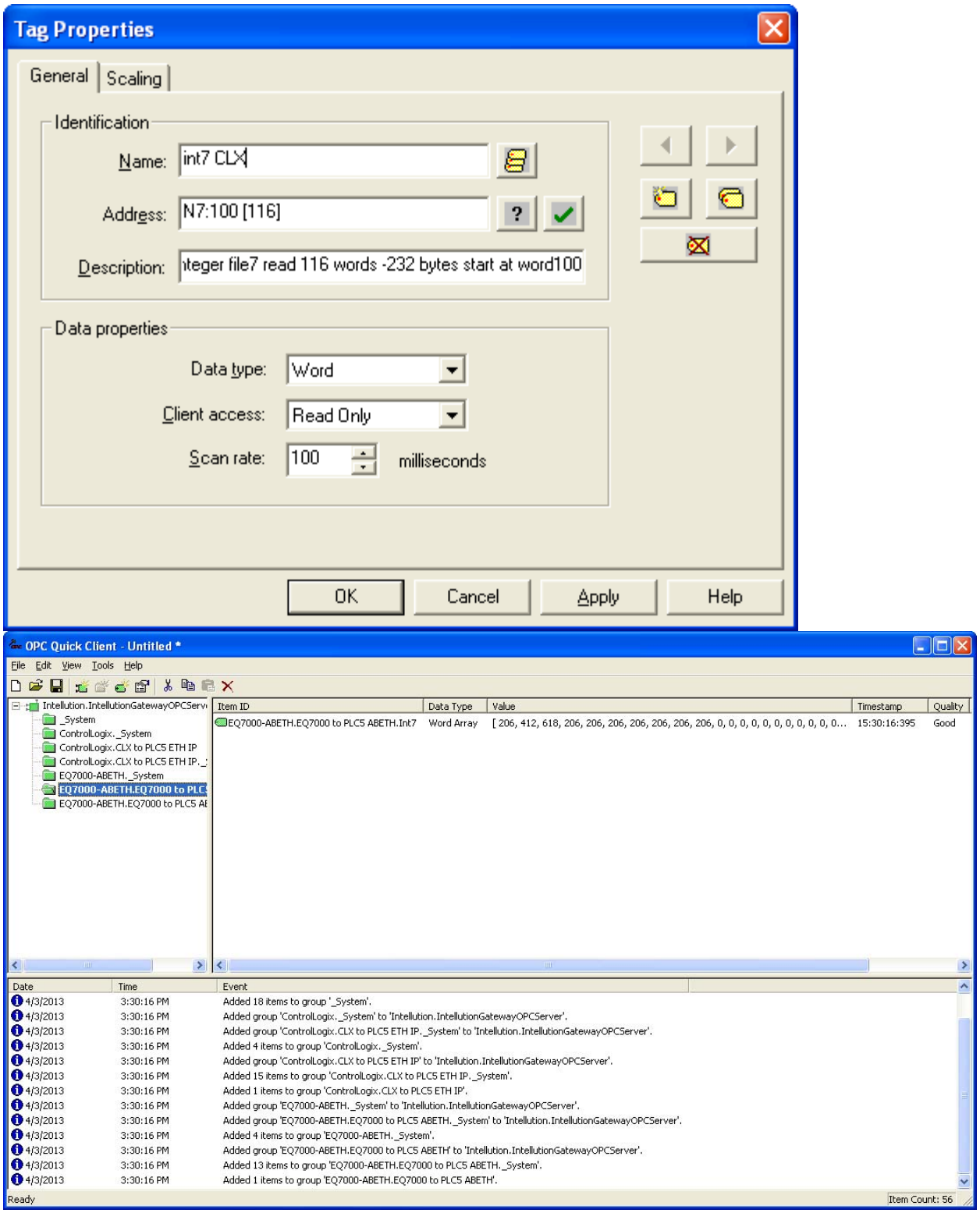

New Device - Timing
The device you are defining has communications timing parameters that you can configure.
Connect timeout:
3
seconds
Request timeout:
1000
milliseconds
Fail after
3
successive timeouts
Inter-request delay:
0
milliseconds
< Back
Next >
Cancel
Help


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

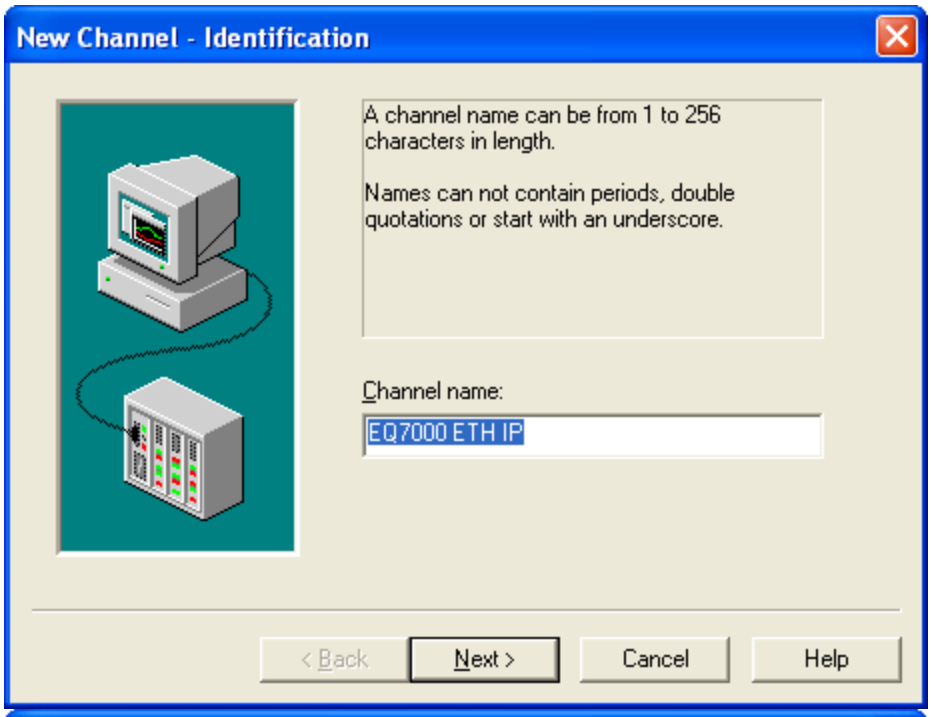

New Device - Database Creation
The device you are defining has the ability to automatically generate a tag database.
Determine if the device should create a database on startup, what action should be performed on previously generated tags, group to add tags to, and allowing subgroups.
Startup:
Do not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

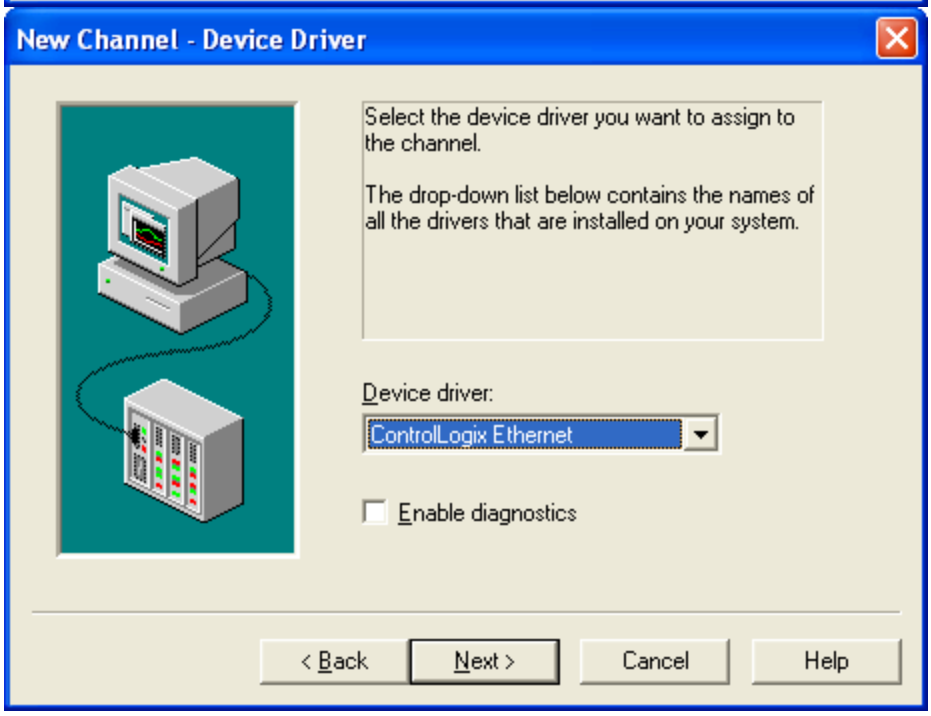

New Device - ENI DF1/DH+/CN Gtwy Communications Parameters
Set the TCP/IP port number the Logix gateway or ENI device is configured to use. Default port is 44818.
The Request Size determines the max number of bytes the driver can request in a transaction.
See Help for FF supporting Block Writes.
CL ENET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

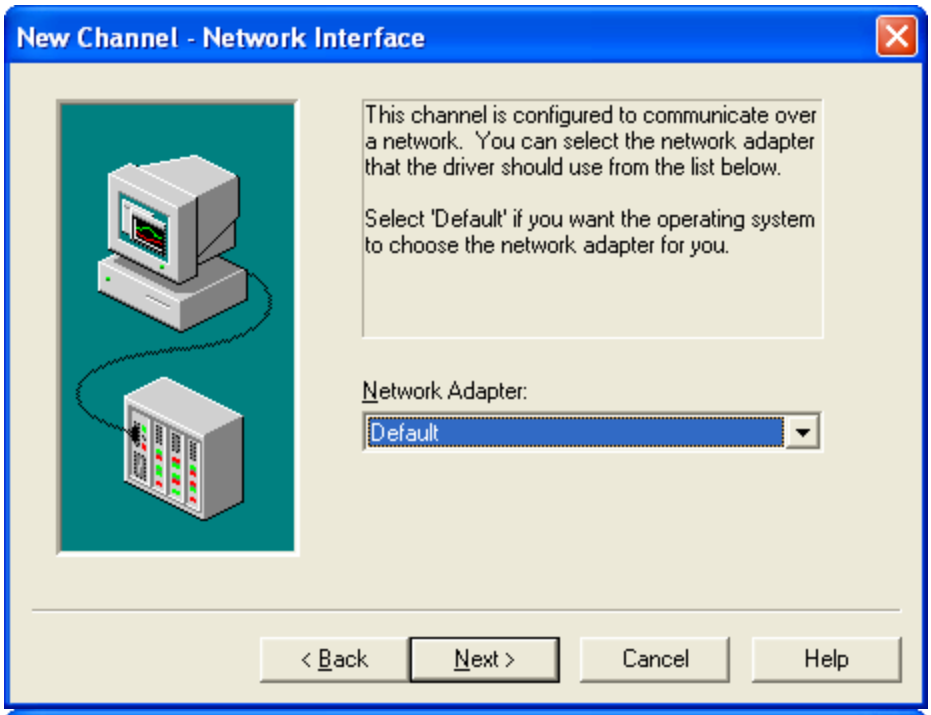

New Device - Summary
If the following settings are correct click 'Finish' to begin using the new device.
Name: CLX to PLC5 ETH IP
Model: DH+ Gateway: PLC-5
ID: 192.168.2.80,1,2.A.7
Connect Timeout: 3 Sec.
Request Timeout: 1000 ms
Fail after 3 attempts
Inter-Request Delay: 0 ms
Auto-Demotion: Disabled
Tag database startup: Do not generate on startup
Tag database action: Do not overwrite
< Back
Finish
Cancel
Help

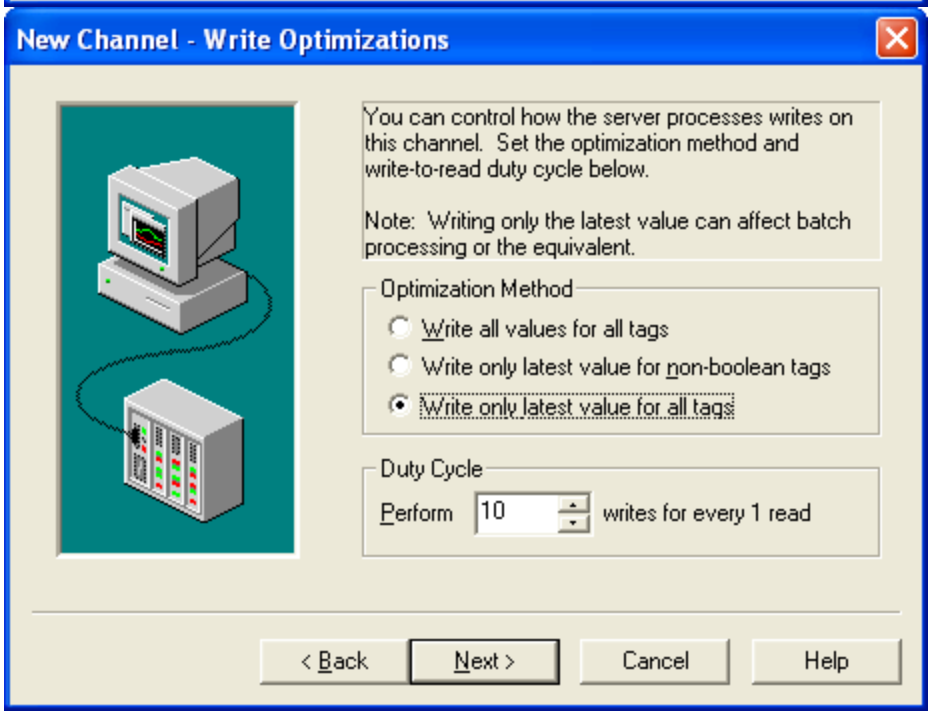


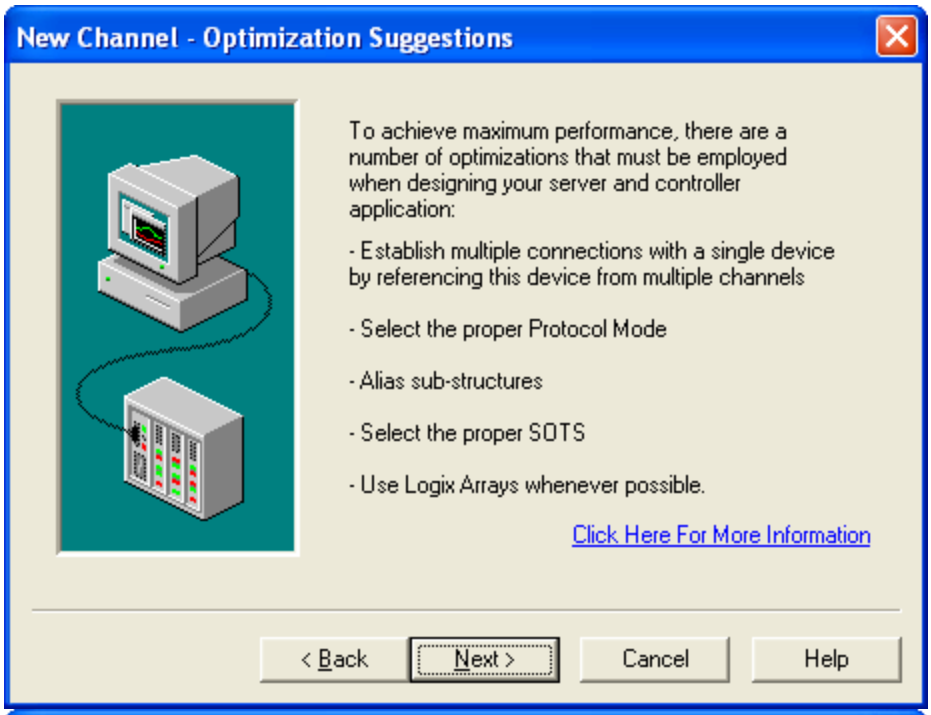
Now we will perform exactly same but using the EQ7000 instead of the control Logix, here using the Ethernet IP driver.

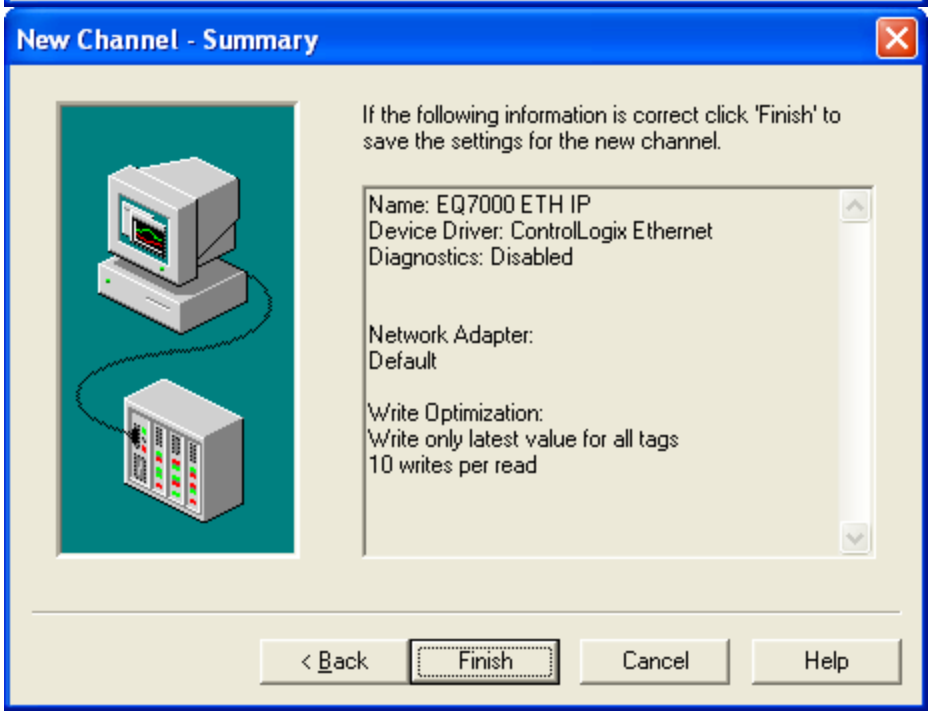

New Channel - Identification
A channel name can be from 1 to 256 characters in length.
Names can not contain periods, double quotations or start with an underscore.
Channel name:
EQ7000 ETH IP
< Back
Next >
Cancel
Help

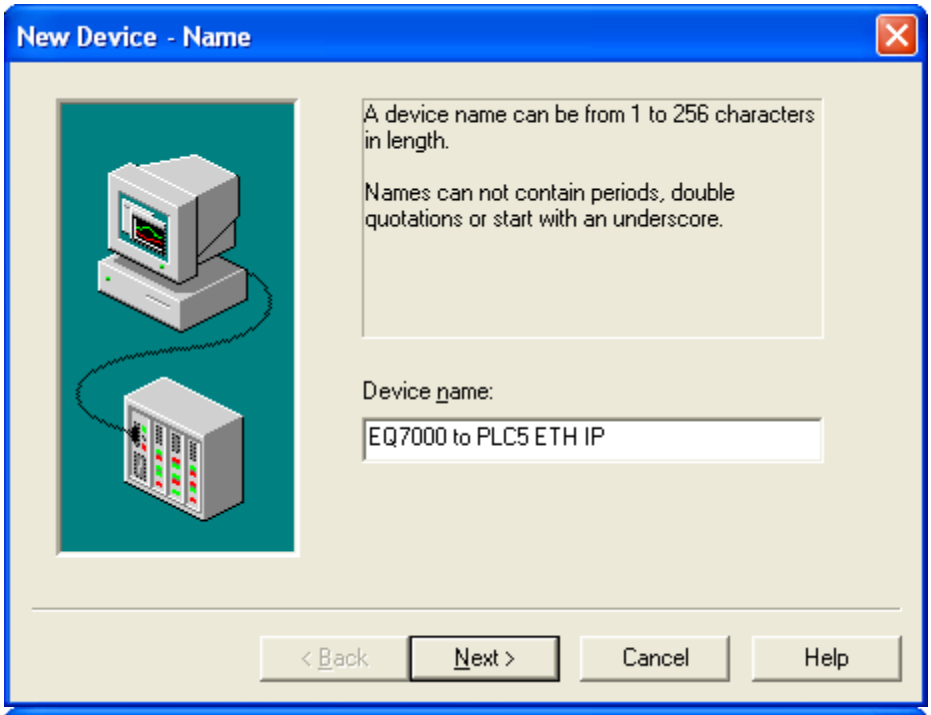

New Channel - Device Driver
Select the device driver you want to assign to the channel.
The drop-down list below contains the names of all the drivers that are installed on your system.
Device driver:
ControlLogix Ethernet
Enable diagnostics
< Back
Next >
Cancel
Help

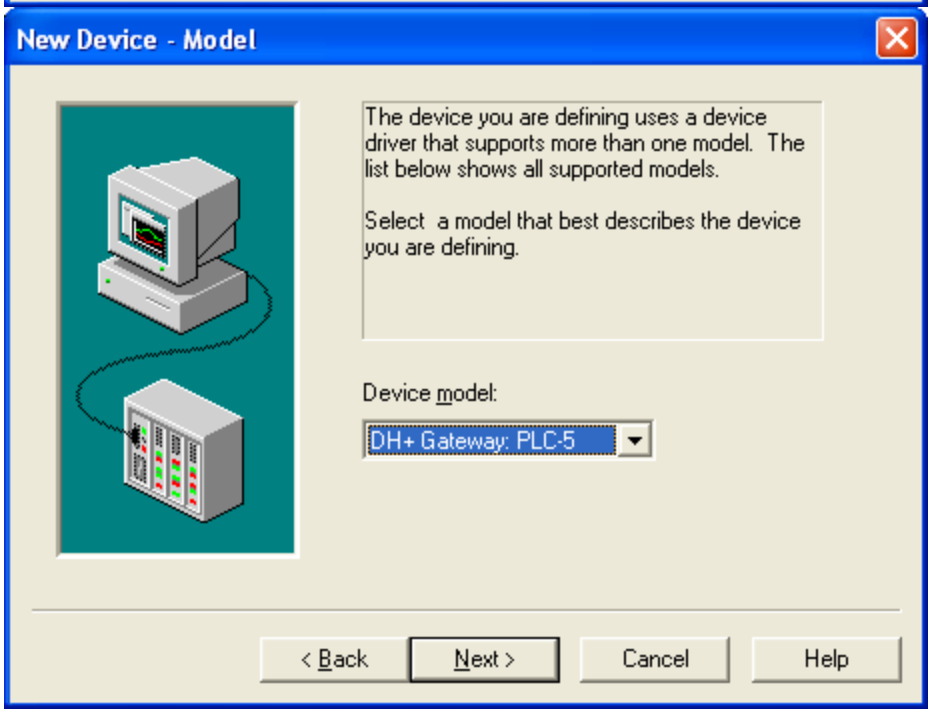

New Channel - Network Interface
This channel is configured to communicate over a network. You can select the network adapter that the driver should use from the list below.
Select 'Default' if you want the operating system to choose the network adapter for you.
Network Adapter:
Default
< Back
Next >
Cancel
Help

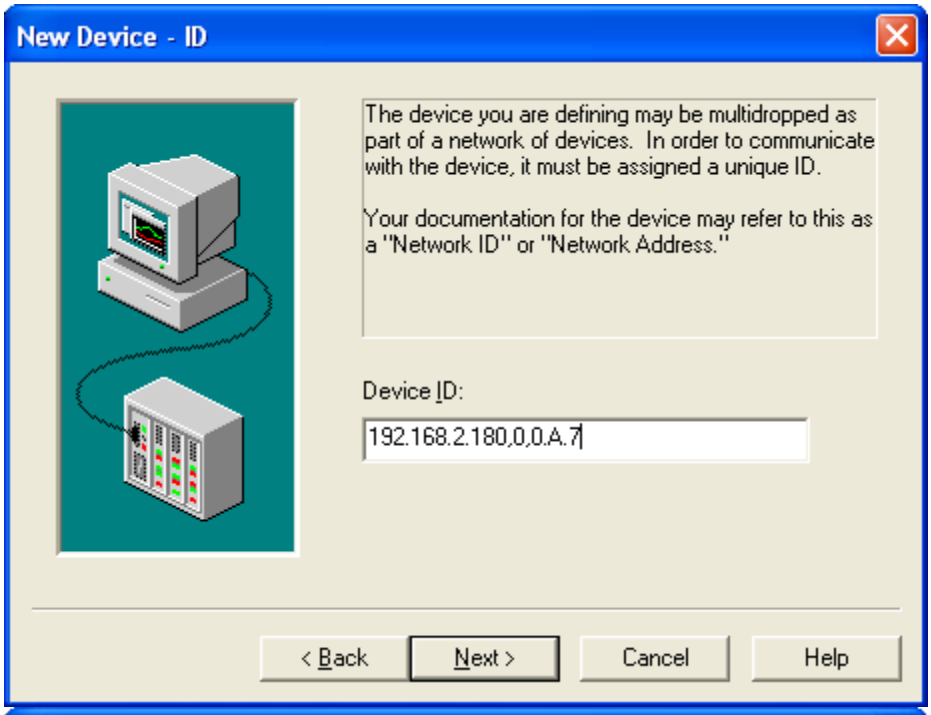

New Channel - Write Optimizations
You can control how the server processes writes on this channel. Set the optimization method and write-to-read duty cycle below.
Note: Writing only the latest value can affect batch processing or the equivalent.
Optimization Method
Write all values for all tags
Write only latest value for non-boolean tags
Write only latest value for all tags
Duty Cycle
Perform 10 writes for every 1 read
< Back
Next >
Cancel
Help

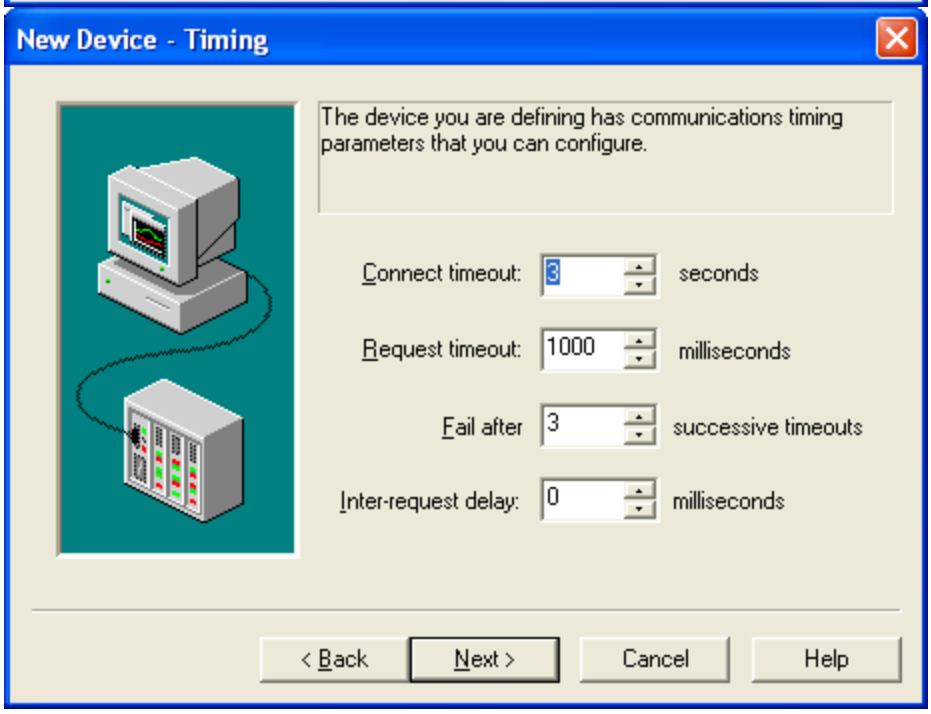

New Channel - Optimization Suggestions
To achieve maximum performance, there are a number of optimizations that must be employed when designing your server and controller application:
- Establish multiple connections with a single device by referencing this device from multiple channels
- Select the proper Protocol Mode
- Alias sub-structures
- Select the proper SOTS
- Use Logix Arrays whenever possible.
Click Here For More Information
< Back
Next >
Cancel
Help

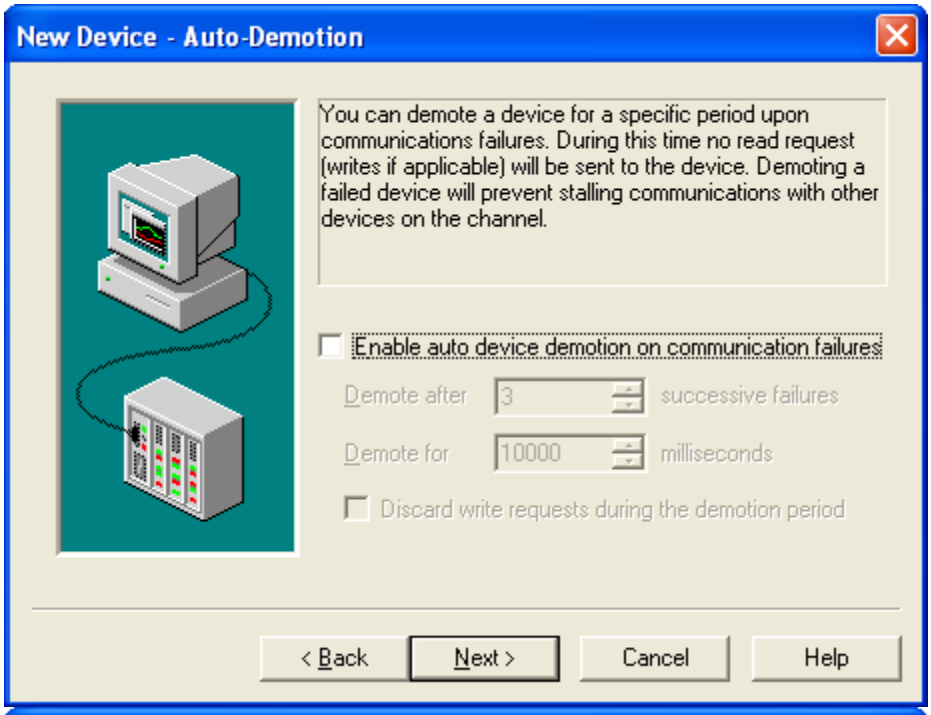

New Channel - Summary
If the following information is correct click 'Finish' to save the settings for the new channel.
Name: EQ7000 ETH IP
Device Driver: ControlLogix Ethernet
Diagnostics: Disabled
Network Adapter:
Default
Write Optimization:
Write only latest value for all tags
10 writes per read
< Back
Finish
Cancel
Help

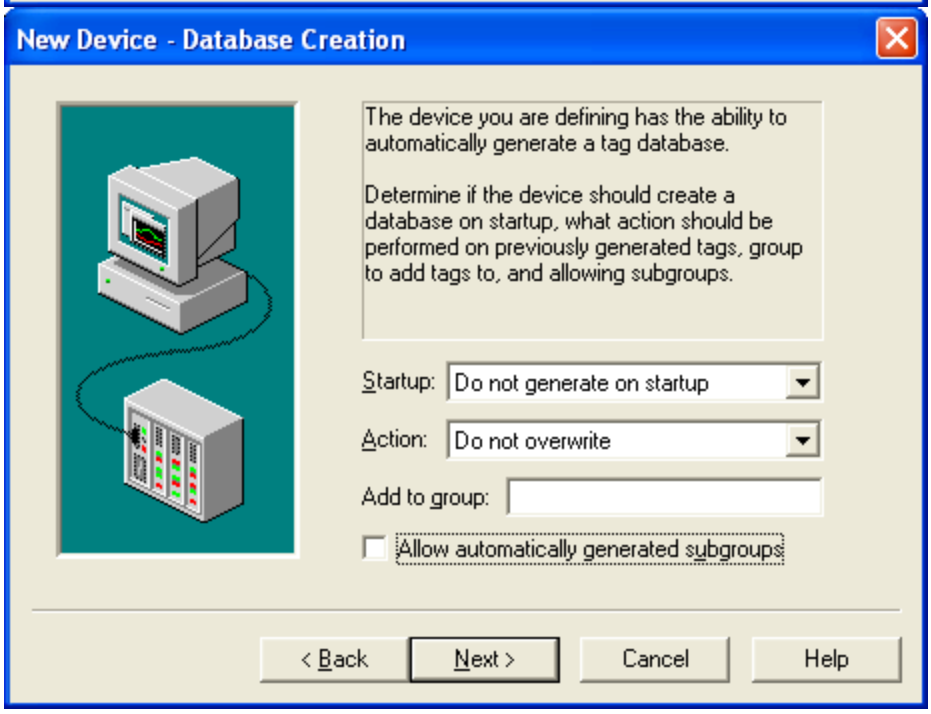

New Device - Name
A device name can be from 1 to 256 characters in length.
Names can not contain periods, double quotations or start with an underscore.
Device name:
EQ7000 to PLC5 ETH IP
< Back
Next >
Cancel
Help

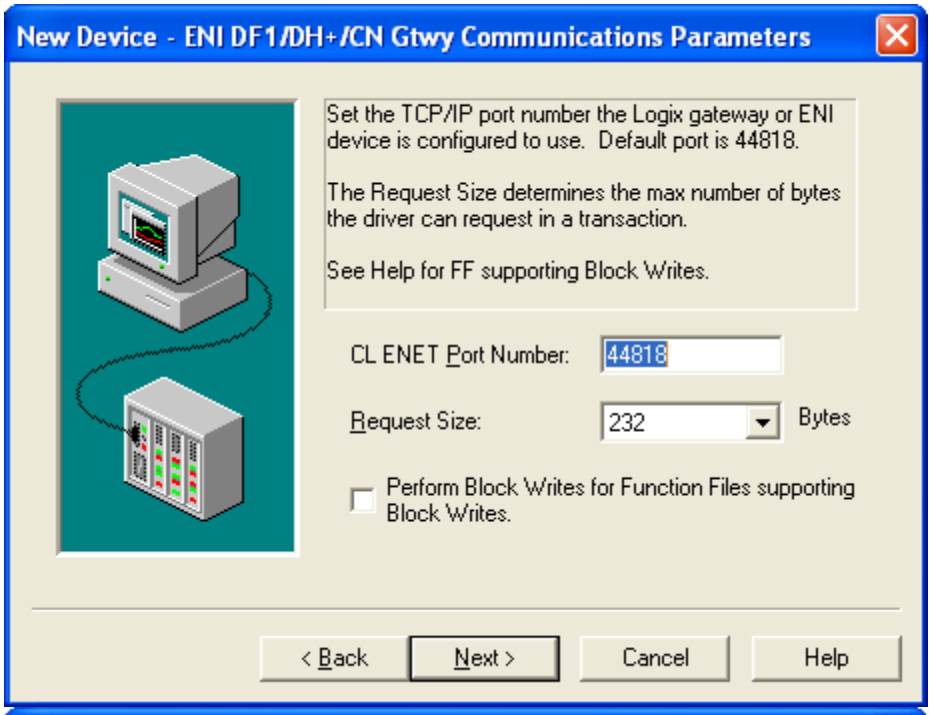

New Device - Model
The device you are defining uses a device driver that supports more than one model. The list below shows all supported models.
Select a model that best describes the device you are defining.
Device model:
DH+ Gateway: PLC-5
< Back
Next >
Cancel
Help

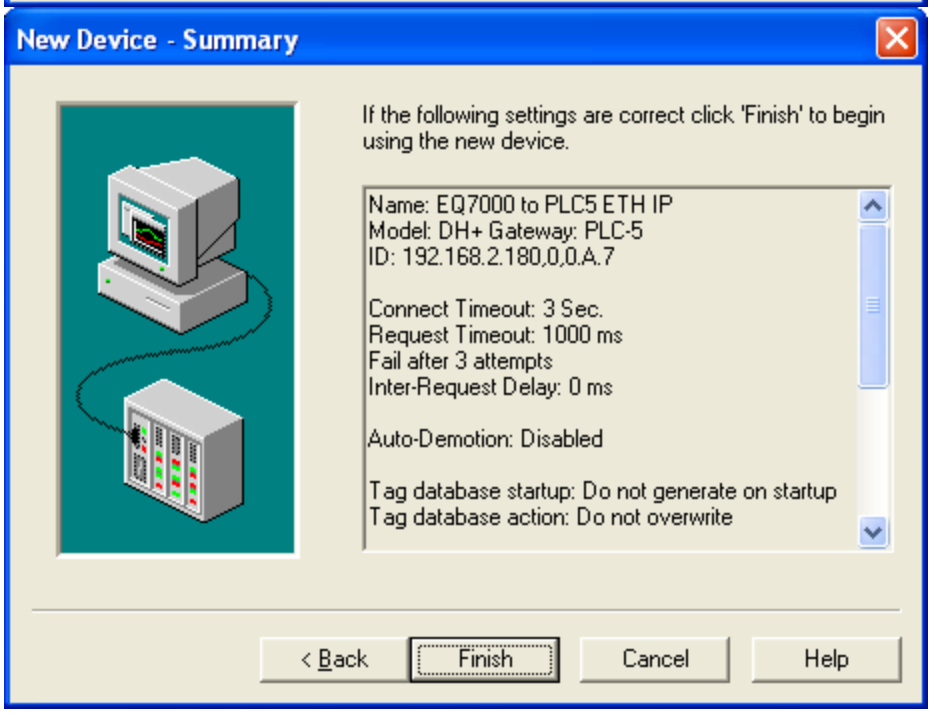

New Device - ID
The device you are defining may be multidropped as part of a network of devices. In order to communicate with the device, it must be assigned a unique ID.
Your documentation for the device may refer to this as a "Network ID" or "Network Address."
Device ID:
192.168.2.180,0,0.A.7
< Back
Next >
Cancel
Help

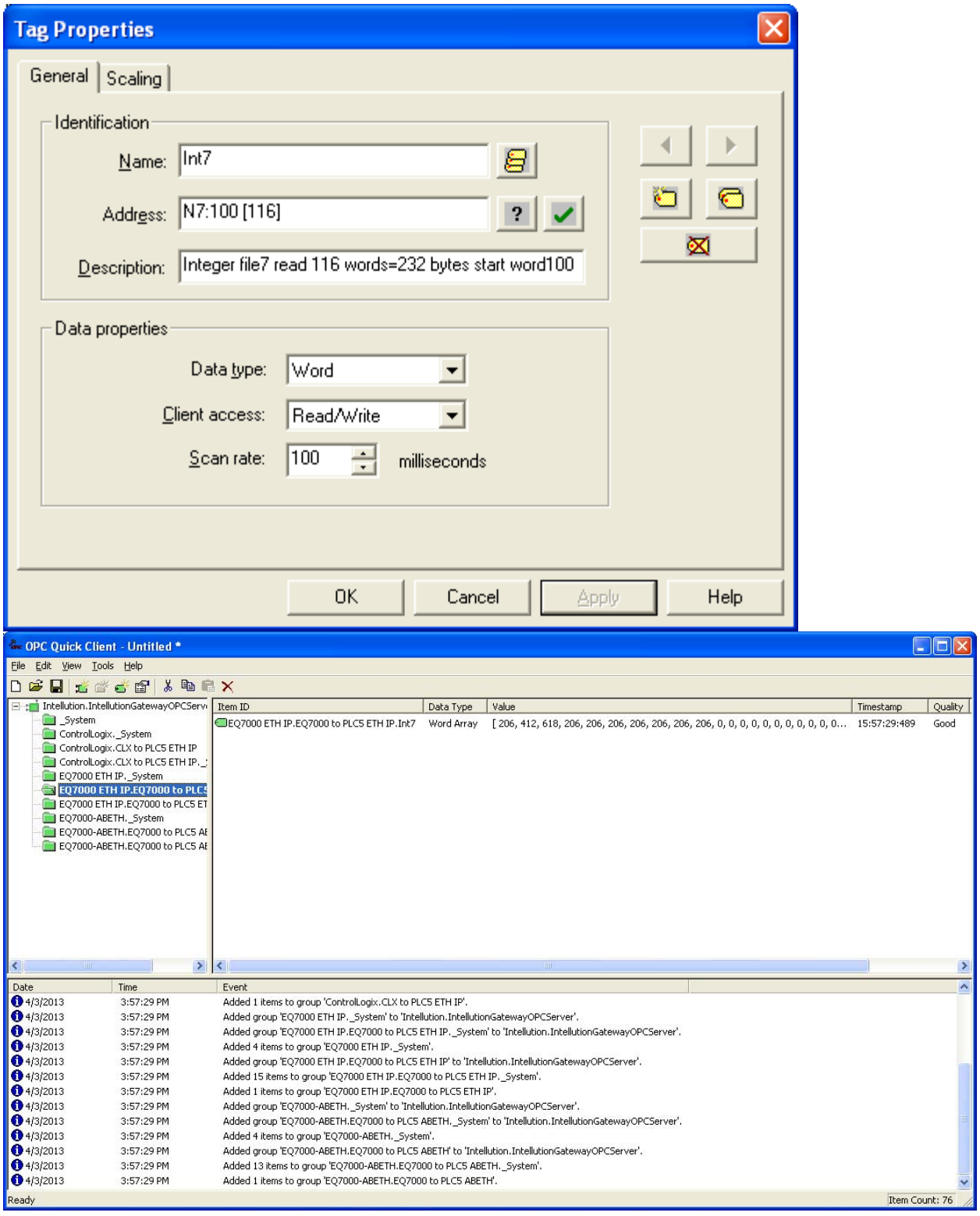

New Device - Timing
The device you are defining has communications timing parameters that you can configure.
Connect timeout:
3
seconds
Request timeout:
1000
milliseconds
Fail after
3
successive timeouts
Inter-request delay:
0
milliseconds
< Back
Next >
Cancel
Help


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 allowing subgroups.
Startup:
Do not generate on startup
Action:
Do not overwrite
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 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:
44818
Request Size:
232
Bytes
Perform Block Writes for Function Files supporting Block Writes.
< Back
Next >
Cancel
Help


New Device - Summary
If the following settings are correct click 'Finish' to begin using the new device.
Name: EQ7000 to PLC5 ETH IP
Model: DH+ Gateway: PLC-5
ID: 192.168.2.180,0,0.A.7
Connect Timeout: 3 Sec.
Request Timeout: 1000 ms
Fail after 3 attempts
Inter-Request Delay: 0 ms
Auto-Demotion: Disabled
Tag database startup: Do not generate on startup
Tag database action: Do not overwrite
< Back
Finish
Cancel
Help



As seen above no issue reading all 232 bytes =166 words as requested.