

**Application Note** 

## Using TopServer's AllenBradley Ethernet driver from Software toolbox with EQ7000



## **Configuring ALLEN BRADLEY ETHERNET driver in Top** Server

Below are the steps to configure the ALLEN BRADLEY ETHERNET driver.

Start your Top server you will see a window as shown below.

Click on where it says add channel or add a channel if you already have other channels.



Then you will get the window shown below name the channel & click on next.



From the window shown below to select Device Driver, select Allen-Bradley Ethernet.



1. Here select your Ethernet adapter in case you have more than one in your PC then click next.



2. In the window shown below please follow the instruction in the screen shots & click next.

	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 Outrization Method Write all values for all tags Write only latest value for non-boolean tags Write only latest value for all tags Write only latest value for all tags Duty Cycle Perform 10 Immediates for every 1 read	
-	< <u>B</u> ack <u>N</u> ext > Cancel I	Help

New Channel - Summary		
	If the following information is correct click 'Finish' to save the settings for the new channel.	
	< Back Finish Cancel H	1elp

Now we are done with the Channel settings, we need to add our DH+ or DH485 device, click on add device shown in the window below.

ntime - Runtime		
<u>File E</u> dit <u>V</u> iew <u>T</u> ools <u>R</u> untime <u>H</u> elp		
🗋 💕 🗟 🛃 Channels/Devices 🗾 🌳 🛅 🞼	🖄 🚰 😕 👗 🛍 🛣 🗙 🔛	
E Channel1	Device / Model ID Description	
Click to add a device.	Click to add a device.	
Date ∇ Time Source	Event	
1:03:41 PM TOP Server\Runtim	e Allen-Bradley Ethernet device driver loaded successfully.	
Ready		Default User Clients: 0 Active tags: 0 of 0

In the window shown below, name your device under device name & click next.

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 <u>n</u> ame: PLC5	
	Back Next > Cancel Help	

In this screen shot select your device model in our example here PLC5.

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 <u>m</u> odel: SLC 5/05 Open SLC 5/05 Open PLC-5 Family	
1	< <u>B</u> ack <u>N</u> ext > Cancel Help	

Here under Device ID please enter the IP address of the EQ7000and click next.

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 <u>I</u> D: 192.168.2.195
<	Back Next > Cancel Help

In the screen shots shown below please follow the instruction in the screen shots and click next.



New Device - Timing	
	The device you are defining has communications timing parameters that you can configure.
	Connect timeout: 🚦 🛨 seconds
	<u>R</u> equest timeout: 1000 📩 milliseconds
	Eail after 3 🛨 successive timeouts
	Inter-request delay: 0 📑 milliseconds
	< <u>B</u> ack <u>N</u> ext > Cancel Help

You can demote a device for a specific period upon communications failures. During this time no read requ (writes if applicable) will be sent to the device. Demotir failed device will prevent stalling communications with devices on the channel.				
Enable auto device demotion on communication failures       Demote after     3       Demote for     10000       milliseconds				
Discard write requests during the demotion period				

Set t confi Seleo Set t the n requi	he TCP/IF igured to u ct the ethe he request naximum n est in a trai	' port number se. The defa rnet protocol ( size in bytes. umber of byte: nsaction.	the device is ult port is 2222. used by the device. This determines s the driver can
Port I	Number:	2222	
Proto	uest Size:	1024	✓ Bytes
		64 128 256	

Here please enter the DH+ or DH485 node address number of the device, in decimal not octal.

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): 6	
( <u>B</u> ack <u>N</u> ext > Cancel Help	

New Device - Summary		×
	If the following settings are correct click 'Finish' to b using the new device.	begin
	Name: PLC5 Model: PLC-5 Family ID: 192.168.2.195	^
0	Scan Mode: Respect client specified scan rate	
	Request Timeout: 3 Sec. Request Timeout: 1000 ms Fail after 3 attempts	
	Auto-Demotion: Disabled Port Number: 2222	
		×
< <u> </u>	ack Finish Cancel Hel	

After you click finish you will see the window shown below and now you can add the tags you want.

🌮 TOP Server - Runtime							
<u>File E</u> dit <u>V</u> iew <u>T</u> ools <u>R</u> untime <u>H</u> elp							
🗋 📂 🗟 🛃 Channels/Devices 🗾 🐃 🛅 🏹	2 🕾 🤊 🔏 🗈	🗈 🗙 🔝					
E- P Channel1	Tag Name 🕗 Address	Data Type	Scan Rate	Scaling	Description		
	€ <sup>™</sup> Click to add a static tag	g. Tags are not requir	ed, but are brows	able by OPC clien	ts.		
	in the second seco						
	<		JIII				2
Date V Time Source	Event						
3/22/2012 1:03:41 PM TOP Server\Runtim	e Allen-Bradley Ethe	rnet device driver load	led successfully.				
3/22/2012 1:14:55 PM TOP Server\Runtim     3/22/2012 1:14:55 PM Alles Puedlau Shaw	e Starting Allen-Brac	iley Ethernet device di	river.				
U 3/22/2012 1:14:55 PM Alien-Bradley Ether	net Allen-bradley Ethe	rnet Device Driver V5.	0.109.0				
Ready				De	fault User	Clients: 0 A	ctive tags: 0 of 0

1					
Identification					
<u>N</u> ame: In	teger File 7			6	A N
Addr <u>e</u> ss: N	7:0			0 🗸	2
Description:	terger File 7 Pl	.C5			
Data properties					
Data	type: Defa	ult	•		
<u>C</u> lient ad	cess: Read	d Only	•		
<u>S</u> car	n rate: 100	📑 milli	seconds		
Note: The scan rat specify a rate when	e is only used n referencing t	for client app his tag (e.g., i	lications that d non-OPC client	o not s)	

An example here is showing a tag to read from integer file 7 word 0.

Top server window after we added the tag.

🌮 TOP Server - Runtime						
<u>File E</u> dit <u>V</u> iew <u>T</u> ools <u>R</u> untir	ne <u>H</u> elp					
🗋 📂 🗟 🛃 Channels	s/Devices 💌 🐃 🚮 🔁	🕾 🤊 🔏 🖻	n 🗈 🗙   I	20		
🖃 🖣 Channel1	Tag Name 🛛 🕹 Address	Data Type	Scan Rate	Scaling	Description	
PLC5	Integer File 7 N7:0	Word	100	None	Interger File 7 PLC5	
	<					>
Date 🗸 Time	Source	Event				
<b>1</b> :03:41 PN 3/22/2012	1 TOP Server\Runtime	Allen-Bradley Ethernet device driver loaded successfully.				
<b>0</b> 3/22/2012 1:14:55 PN	1 TOP Server\Runtime	Starting Allen-Bradley Ethernet device driver.				
♥ 3/22/2012 1:14:55 PM	1 Allen-Bradley Ethernet	Allen-Bradley Eth	ernet Device Dr	iver V5.8.109.1	0	
<		\ IIII				>
Ready				Default Use	er   Clients: 0   Active ta	gs: 0 of 0 🔄

	and consider the						
TOP Server	- Runtime						
File Edit View	Tools Runtime H	telp					
	Event Log	• 🛅 🖾 👛	🚰 🔊 🔏 🛛	6 🖻 🗙	RC		
🖃 🗣 Channeli	Launch OPC Qui	ck Client 💦 💧 Address	Data Type	Scan Rate	Scaling	Description	
PLC5	Options	N7:0	Word	100	None	Interger File 7 PLC5	
	<						>
Date 5	Time	Source	Event				
<ul> <li>3/22/2012</li> <li>3/22/2012</li> <li>3/22/2012</li> <li>3/22/2012</li> </ul>	1:03:41 PM 1:14:55 PM 1:14:55 PM	TOP Server\Runtime TOP Server\Runtime Allen-Bradley Ethernet	Allen-Bradley Ethernet device driver loaded successfully. Starting Allen-Bradley Ethernet device driver. Allen-Bradley Ethernet Device Driver V5.8.109.0				
<							>
New York Concerning of the second sec							

Open your OPC client, or here in our example under tool we lunched the OPC quick client.

From the window shown below we can see that it reads the value of word 0 in integer file 7 form the PLC5

Second Client - Untitled *						
<u> Eile E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp						
D 🚅 🖬 🛫 💣 😭 👗 🖻 🕄 🗙						
🖃 📹 SWToolbox.TOPServer.V5	Item ID	🖉 Data Type	Value	Timestamp	Quality	Update Count
	Channel1.PLC5.Integer File 7	Word	391	13:22:00.015	Good	59
	<					
Ready						Item Count: 45