KEPServer accessing data from Allen Bradley SLC503 and Micrologix on DH485 network with Equustek DLPCI/104 DH485 card ____

Start KEPServer, right click on Connectivity and click on New Channel.

IConnected to Runtime] - KEPServer	EX 6 Configuration				
File Edit View Tools Runtime H	lelp				
🗋 📸 📓 👹 👘 🔏	6 🛍 🗙 🔛				
Project ^	Channel Name /	Driver	Connection	Sharing	Virtual Network
亩…(説) Connect ⊕-□□ EQ7(\$ New Channel	27000EIP	Allen-Bradley ControlLo	Ethernet	N/A	N/A
Aliases					
🖃 🌋 Alarms & Events					
Add Area					
Data Logger					
EFM Exporter					
Add Poll Group					
DF for Splunk					
	<				
Ready					Default User

From Channel type drop menu, select Allen-Bradley DF1, click on Next, then specify the identity of the object and click on Next

· · · · · · · · ·	×			×
Add Channel Wizard		÷	Add Channel Wizard	
Select the type of channel to be created:			Specify the identity of this object.	
ABB Totalflow ABB Totalflow ABB Totalflow Advanced Simulator Alen-Bradley Bulletin 1609 Allen-Bradley Control Logix Ethernet Allen-Bradley Control Logix Stave Ethernet Allen-Bradley Dentrol Allen-Bradley Dentrol Allen-Bradley Micro 800 Ethernet Allen-Bradley Micro 800 Ethernet			Name: DLPCT-104DH465	
Allen-Bradley Micro800 Serial Allen-Bradley Slave Ethemet Alstom Redundant Ethemet Analog Devices Aromat Serial AutomationDirect DirectNet AutomationDirect EBC AutomationDirect ECOM AutomationDirect K.Sequence	v			
	<u>N</u> ext Cancel			<u>N</u> ext Cancel
Add Channel Wizard	×			
Limit data transmissions to one channel at a time by assigni network.	ng this channel to a virtual			
Virtual Network:				
Specify the number of transactions to perform when a char communicate.	nel is given permission to			
Transactions per Cycle:				
	<u>N</u> ext Cancel			

Set comport occupied by the DLPCI/104 found in Device Manager as COM ID, also set the DF1 serial setting similar to those that the DLPCI/104 was configured for, then click on Next.

 \times

4	Add Channel Wizard
	Select the hardware device type for data communications (or None).
	Physical Medium:
	COM Port v 📀
	Specify the physical port number.
ſ	COM ID: 3 (2)
L	
	Select the communications speed of the hardware in bits per second.
	Baud Rate:
ા	19200 🗸 😰
1	Select the number of data bits per word. Data Bits:
	8 ~ @
	Indicate if the data parity for this communication is Odd, Even, or None.
	Parity: None V
	Specify the number of stop bits that indicate the end of a data transmission.
	Stop Bits:
	Select the Flow Control required by the target device (for control line utilization).
ſ	Flow Control:
	None v

Cancel

<u>N</u>ext

Continue with the rest of the channel setting

		\times			×
\leftarrow	Add Channel Wizard		←	Add Channel Wizard	
	Choose whether or not low-level communication errors are posted to the event log.			Choose how write data is passed to the underlying communications driver when more than	
	Report Communication Errors:			one write exists in the write queue.	
	Enable v 🙆			Updmizadon Method:	
				write Only Latest value for All Tags	
	Choose whether or not COM port connections are terminated when inactive.			Specify the ratio of write operations to read operations, based on one read per configurable number of writes	
	Close Idle Connection:			Duty Cyde:	
	Enable V			10	
	Define the time, in seconds, a connection can be inactive before being terminated.				
	Idle Time to Close (s):				
	15				
	<u>N</u> ext Cance	el		Next Canc	el
		×			
\leftarrow	Add Channel Wizard				
	Choose how to send invalid floating-point numbers to the client.				
- (Floating-Point Values:				
	Replace with Zero V				
	Unmodified				
`					
		_			
	<u>N</u> ext Cancel				
Sot	the Station ID same to the node address n	սահ	JOr	of the DI PCI/10/ & click on Next	
SCI	the Station ID same to the node address in	umu		of the DLI CI/104 & click off Next.	
		>	×		
←	Add Channel Wizard				
	Set a unique network ID for the local machine or converter. In KF2/KF3 configurations, s	et			
	to the KF2/KF3 node address. The Station ID must not conflict with any Device ID within	the			
1	Station ID (decimal):				
0					
	Select the standard for communication on this connection. Device model can dictate				
	source behavior, and attempt limits.				
1	Link Protocol:				
	Full Duplex 🗸 🕜				
L					
-					
	Enable to only accept responses for the station indicated in the Station ID field.				
	Ignore Responses for other Stations:				
	Disable V				
		ancel			
		ancer			

Click on Finish to complete the Channel settings

← Add Channel Wizard

Ξ	Identification		~
	Name	DLPCI-104DH485	
	Description		
	Driver	Allen-Bradley DF1	
-	Diagnostics		
	Diagnostics Capture	Disable	
	Tag Counts		
	Static Tags	0	
	Connection Type		
	Physical Medium	COM Port	
	Shared	No	
	Serial Port Settings		
	COM ID	3	
	Baud Rate	19200	
	Data Bits	8	
	Parity	None	
	Stop Bits	1	
	Flow Control	None	
	Operational Behavior		
	Report Communication Errors	Enable	
	Close Idle Connection	Enable	
	Idle Time to Close (s)	15	
	Write Optimizations		
	Optimization Method	Write Only Latest Value for All Tags	
	Duty Cycle	10	
	Non-Normalized Float Handling		
	Floating-Point Values	Unmodified	
	Channel-Level Settings		
	Virtual Network	None	
	Transactions per Cycle	1	
	Global Settings		
	Network Mode	Load Balanced	
	Link Settings		
	Station ID (decimal)	1	
	Link Protocol	Full Duplex	
	Ignore Responses for other Stations	Disable	
			~

In DLPCI-104DH485 channel click on Click to add a device.

[Connected to Runtime] - KEPServerEX 6 Configuration			_		×
<u>File Edit View Tools Runtime H</u> elp					
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Project / Model I Project / Model I Device Name / Model I Device Name / Model I Click to add a device. Add a device.	D	Description			
Ready	Defa	ult User Clients: 0	Active ta	igs: 0 of	0

Type a name of the device, here we have the SLC5/03, then click on Next.

	~	×	
Add Device Wizard		×	
		← Add Device Wizard	
Specify the identity of this object. Name: SLC503] @	Select the specific type of device associated with this ID. Options depend on the type of communications in use. Model: Micrologix SLC 500 Fixed I/O SLC 5/04 SLC 5/04 SLC 5/04 SLC 5/04	
		<u>rt0-5</u>	

					(<u>N</u> ext	Canc	el						<u>N</u> ext	Cancel	
-	. 1	- 1	1 1	1	0	. 4	CT	~ ~ ~ ~	1	•		•		1 4	-		

Enter the node address number of the SLC503 here is in our setup is set to node 5.



Next Cancel	Next Cancel

Continue with the rest of the settings.

		×	
÷	Add Device Wizard	÷	Add Device Wizard
	Specify an interval, in milliseconds, to determine how long the driver waits for a response from the target device to indicate completion. Request Timeout (ms):	:	Automatically remove the device from the scan due to communication failures. Demote on Failure: Disable v @
(Indicate how many times the driver sends a communications request before considering the request to have failed and the device to be in error. Attempts Before Timeout:	he	
	Next	ancel	Next
Ma	ake sure Error Checking is same as the DI	LPCI/10	94 is set for when it was configured.
÷	Add Device Wizard	×	
(Select the checksum validation supported by the target device. Error Checking Method: BCC CRC BCC Indicate whether data requests should be small or large to optimize performance and PLC memory use. Request Size: Large \checkmark		
6	Add Davice Witard	×	
	Enable to support float access to integer files for SLC and MicroLogix. N File Float Access: Enable v ©		



Once done with SLC503 settings click on Finish.

Add Device Wizard

	Identification		~
	Name	SLC503	
	Description		
	Driver	Allen-Bradley DF1	
	Model	SLC 5/03	
	Channel Assignment	DLPCI-104DH485	
	ID Format	Decimal	
	ID	5	
-	Operating Mode		
	Data Collection	Enable	
	Simulated	No	
-	Tag Counts		
	Static Tags	0	
-	Scan Mode		
	Scan Mode	Respect Client-Specified Scan Rate	
	Initial Updates from Cache	Disable	
-	Communication Timeouts		
	Request Timeout (ms)	1000	
	Attempts Before Timeout	3	
-	Auto-Demotion		
	Demote on Failure	Disable	
-	Protocol Settings		
	Error Checking Method	BCC	
	Request Size	Large	
	N File Float Access	Enable	~



Click to add tags as shown.



Here we added first 10	words from integ	ger file N7 IF7	of the SL	.C/503.				×				
Property Groups		tion										
General	Name		10	for a later								
Scaling	Description	Description 10 words from Integer file N7										
	Data Prop	perties	N/7 0/1 01									
	Address			N/:0[10]								
	Data Type			Word Arra	ау							
	Client Acce	Client Access Read/Write										
	Scan Rate	(ms)		100								
	Name Specify the ide	ntity of this obje	ect.	1								
	Defaults	OK	(Cancel	Apply	1	Help					
Connected to Puntimel - KEDSenv	erEV.6 Configuration							>				
ile Edit View Tools Puntime	Help											
n 🖻 💷 斗 🍱 🕅 🕅 🖓		50 🗙 🙉 🖌										
Carles Ca	Tra Nama		to Tana Ca	D-t C-	-E			_				
الله المعالية	lag Name	Address D	ata lype Sc	an Kate Sc	aling Desc	ription	61- NIZ	h				
GUPCI-IOD/H453 SIC503 GUPCI-IOD/H453 GUPCI-IOD/H453 GUPCI-IOD/H453 GUPCI-IOD/H453 GUPCI-IOD/	,											
eady					Default User	Clients: 0 Activ	ve tags: 0 of (0				
ow to read these tags	click on Lunch (OPC Client	from une	der Tools.								
[Connected to Runtime] - KEPSe ile Edit View Tools Runtime	rverEX 6 Configuration Help						_					
🗋 📄 📄 🛃 🛛 Event Log	> 🕌	🗈 🛍 🗙	QC.									
Project	C Quick Client	/ Address	Data Type	Scan Rate	Scaling	Description		-				
Image: Connect of the second seco	ense Utility	N7:0[10]	Word Array	100	None	10 words fron	n Integer file					
⊡	*				Default	User Clients:	0 Active ta	as				



Those values can be seen here same when read from the same SLC503 using Rslinx.

🗞 RSLinx Classic Lite - [RSWho - 1]												
💤 File View Communications Station DD	E/OPC Secu	urity Wi	ndow H	Help								
* \$												
Autobrowse Refresh	wsing - node 3 f	ound										
E Workstation, LAB-D-PC			÷1		Contract of the second	a (1				
🕀 🚠 Linx Gateways, Ethernet		0		•	1 5.0		•					
🗄 🚠 AB_ETH-1, Ethernet	01	02	2	03	0	4	05					
由 品 ETHIP-1. Ethernet	DLPCI104-D	F SLC	505	SLC504	MIC	ROT	SLC503					
🗄 📲 DLPCI-104, DH-485		1 (12) D	- F1 - N17					·				2
	SLC-5/0	s (13): Da	ta File N/									
🕀 🛲 02, SLC-5/05, SLC505		0	1	2	3	4	5	6	7	8	9	^
🖶 🛲 03, SLC-5/04, SLC504	N7:0	1978	5917	14	40	137	1	22	33	5	0	
04 MicroLogix 1000 MICROT	N7:10	2323	2000	0	0	0	0	0	0	0	0	
05 SI C-5/03 SI C503	N7:20	0	0	0	0	0	0	0	0	0	0	
03, 520 3, 63, 520303	N7:30	0	0	0	3333	0	0	6654	0	0	0	
	N7:40	0	0	0	0	0	0	0	0	0	0	

In similar steps we can add an other device here we added AB Micrologix 1000 which is on the same DH485 network. Г

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[Connected to Runtime]	 KEPServerE 	K 6 Configuration			
File Edit View Tools R	untime He	lp			
🗋 📂 🗟 🛃 🍀 🛅) 🚰 🔁 🛔	「りょうぬ)	×		
⊡ 🙀 Project	^	Device Name	Ĺ	Model	ID
⊡ () Connectivity		SLC503		SLC 5/03	5
	📕 New De	vice			
	👗 Cut	Ctrl+X			
Advanced Tags	🗎 Сору	Ctrl+C			
Alarms & Events	× Delete	Del			
Data Logger	Diagnos	tics			
<	Properti	es			
Create a new device on the sel	ected channe	l.			Default User CI

 \times \leftarrow Add Device Wizard \leftarrow Add Device Wizard Select the specific type of device associated with this ID. Options depend on the type of communications in use. Specify the identity of this object. Name: Model: MLX1000 0 Micrologix 🗸 🥑

	÷	Add Device Wizard		
		Identification		,
	-	Name	MLX1000	
	-	Description		
	-	Driver	Allen-Bradley DF1	
		Model	Micrologix	
		Channel Assignment	DLPCI-104DH485	
		ID Format	Decimal	
		ID	4	
		Operating Mode		
		Data Collection	Enable	
	×	Simulated	No	
	^	Tag Counts		
Add Device Wizard	_	Static Tags	0	_
	_	Scan Mode		_
	_	Scan Mode	Respect Client-Specified Scan Rate	_
Indicate the format of the device ID (set by the driver by default).	_	Initial Updates from Cache	Disable	_
ID Family	_	Communication Timeouts		_
ID Format:	_	Request Timeout (ms)	1000	_
Decimal V	-	Attempts Before Timeout	3	_
	-	Auto-Demotion	-	
Specify the device's driver-specific station or node	-	Demote on Failure	Disable	_
	-	Protocol Settings	200	_
D:	-	Error Checking Method	BCC	_
04	-	Request Size	Large	-
	-	N File Float Access	Enable	
	-	Function File Options	Dr L.L.	_
	-	Allow Function File Block Writes	Disable	_
	-			

 \times

	adding also 10) words	from	integer	file N7	of the	Micro	Logix	1000.
--	----------------	---------	------	---------	---------	--------	-------	-------	-------

- Hoperty Editor DE										
Property Groups	Identificatio	n								
General	Name		IntFile7							
Casling	Description		Integer file	e N7 first 10 words						
Scaing	Data Proper	Data Properties								
	Address		N7:0[10]	N7:0[10]						
	Data Type		Word Arra	Word Array						
	Client Access		Read/Wr	Read/Write						
	Scan Rate (m	s)	100	100						
	Address	Address								
	Defaults	ОК	Cancel	Apply	Help					

To read those we open OPC client as shown below

OPC Quick Client - Untitled *		_		×				
<u>F</u> ile <u>E</u> dit <u>V</u> iew <u>T</u> ools <u>H</u> elp								
🗅 📽 🖬 🛫 📽 📽 🛍 🗮 🗙								
🛅 _ThingWorx	∧ Item ID / Data Type Value Timestamp Qu	ality Update	Count					
DLPCI-104DH485CommunicationSer	DLPCI-104DH485.MLX1000.IntFile7 Word Array 44.056, 0, 11, 22, 33, 44, 55, 66, 77, 88 12:07:44.054 Go	od 1						
DLPCI-104DH485Statistics								
DLPCI-104DH485System								
DLPCI-104DH485.MLX1000_Statistics								
Characteristics and the state of the state o								
DLPCI-104DH485.SLC503								
DLPCI-104DH485.SLC503Statistics								
DLPCI-104DH485.SLC503System	·							
< >>								
Date Time Ev	ent			^				
12:07:44 PM Ad	ded group 'DLPCI-104DH485.SLC503' to 'Kepware.KEPServerEX.V6'.							
12:07:44 PM Ad	24-03-20 12:07:44 PM Added 22 items to group 'DLPCI-104DH485.MLX1000_System'.							
12:07:44 PM Ad	ded group 'DLPCI-104DH485.SLC503_Statistics' to 'Kepware.KEPServerEX.V6'.							
12:07:44 PM Ad	ded 1 items to group 'DLPCI-104DH485.SLC503'.							
12:07:44 PM Ac	ded group 'DLPCI-104DH485.SLC503. System' to 'Kepware.KEPServerEX.V6'.			~				
Ready		Iter	m Count:	189 🏿 🍂				

Here can be shown that they are same values read in Allen Bradley Rslinx from Micrologix1000.

RSLinx Classic Lite - [RSWho - 1]												
🛃 File View Communications Station DD	E/OPC Sec	urity W	indow	Help								
* \$												
Autobrowse Refresh 🗈 🖭 Brow	vsing - node 1	found										
□		A										
	And the second second											
i AB_ETH-1, Ethernet	01	0	2	03	0	4	05					
표··· 묾 AB_ETHIP-1, Ethernet	DLPCI104-D	F SLC	505	SLC504	MIC	ROT	SLC503					
	MicroLogix 1000 (9): Data File N7											x
		-		2	2		E	c	7	• 1	0	
🕀 🛲 02, SLC-5/05, SLC505		Ű									_	
03 SI C-5/04 SI C504	N7:0	4456	0	11	22	33	44	55	66	77	88	
	N7:10	U	0	0	U	U	0	0	0	U	0	
	N7:20	0	0	0	0	0	0	0	0	0	0	
	N7:30	0	0	0	0	0	0	0	0	0	0	
	N7:40	0	0	0	0	0	0	0	0	0	0	
	N7:50	0	0	0	0	0	0	0	0	0	0	