

Technical Note

Migration Application Sample for the AN-X2-AB-DHRIO RIO Scanner

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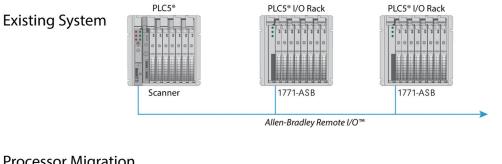
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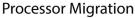


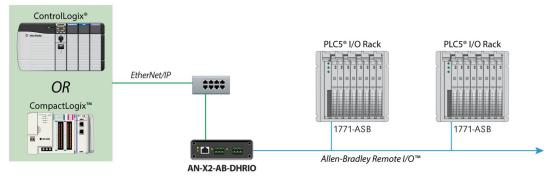
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This Technical Note will illustrate how to migrate a simple PLC5 Remote I/O Application to a CompactLogix or ControlLogix application using the AN-X2-AB-DHRIO gateway with the Remote I/O Scanner firmware loaded.











Step 1: Connect the Gateway to the Ethernet and the Remote I/O networks, and then launch AnxAbRioCfgScan.exe.

Step 2: Specify the IP Address of the Gateway

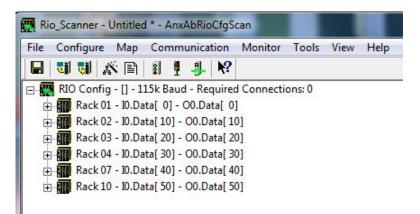
ĺ	NoName - Untitled - AnxAbRioCfgScan									
	File	Configure	Map	Communication	Monitor	Tools	View	Help		
		J .	s 🖹	Select AN-XI	IP Address					

Step 3: Auto-configure the gateway

🔣 AnxAb	- Untitled * - AnxAbRioCfgScan
File Con	figure Map Communication Monitor Tools View Help
	AutoConfigure
	Upload Configuration ired Connections: 0 Download Configuration

NOTE: The gateway will automatically detect the baud rate of the Remote I/O network in addition to detecting any remote racks of I/O that are present on the network.

Step 4: Review the Racks and modules discovered to ensure that all are present



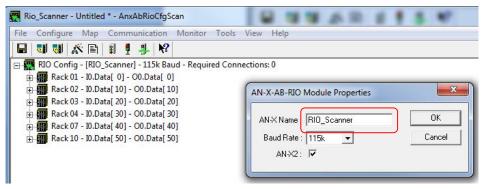


Step 5: Specify the Name of the gateway

Right click on the top line and select properties

File Configure Map Communication Monitor	Tools View Help		
🖬 🚺 🐝 🖹 🗿 📲 🦊 🕅			
📲 👯 RIO Config - [] - 115k Baud - Required Connecti	iops: 0		
🗄 📶 Rack 01 - 10.Data[0] - O0.Data[0]	AN-X-AB-RIO Properties		
🗄 📶 Rack 02 - I0.Data[10] - O0.Data[10]	Add Rack		
🗄 📶 Rack 03 - 10.Data[20] - O0.Data[20]	Download to Module		
🕀 📶 Rack 04 - I0.Data[30] - O0.Data[30]	Monitor Diagnostics		
🗄 📶 Rack 07 - 10.Data[40] - O0.Data[40]			
H Rack 10 - I0.Data[50] - O0.Data[50]			

Enter the name

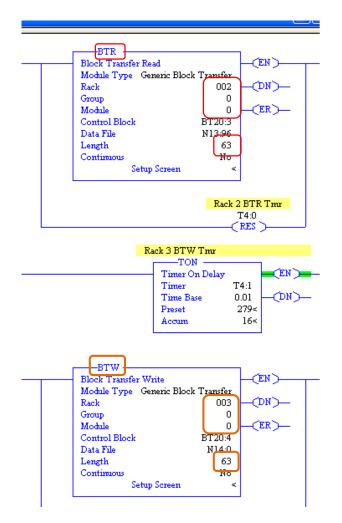




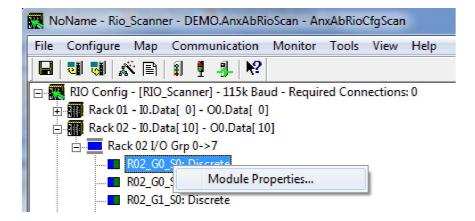
Step 6: Configuring Block Transfers (Not all devices or applications require these)

It is important to note that Block Transfers must be manually configured, and are most easily configured by referencing the existing BTR and BTW instructions that exist in the legacy PLC.

Step 6A: Examine old ladder and then navigate to the Rack / Group / Slot where a BTR or BTW is needed Right Click and select properties





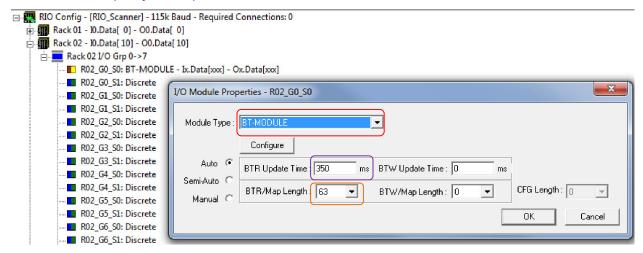


Step 6B: Configure a BTR

Select BT-Module in the Module Type drop down list

Enter correct Length in the BTR Length drop down list

Specify BTR Update Time





Step 6C: Configure a BTW

Select BT-Module in the Module Type drop down list

Enter correct Length in the BTW Length drop down list

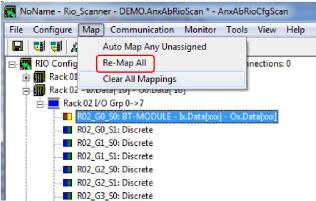
Specify BTW Update Time

🖃 🎆 RIO Config - [RIO_Scanner] - 115	Baud - Required Connections: 0									
🕀 📶 Rack 01 - I0.Data[0] - O0.Dat	a[0]									
🖶 🎆 Rack 02 - 10.Data[10] - O0.Data[10]										
🗄 🎆 Rack 03 - 10.Data[20] - O0.Data[20]										
🖻 💻 Rack 03 I/O Grp 0->7	I/O Module Properties - R03 G0 S0									
R03_G0_S0: Discrete	I/O Module Properties - R03_G0_S0									
R03_G0_S1: Discrete										
R03_G1_S0: Discrete	Module Type : BT-MODULE 🔹									
R03_G1_S1: Discrete										
R03_G2_S0: Discrete	Configure									
R03_G2_S1: Discrete										
R03_G3_S0: Discrete	Auto C BTR Update Time: 0 ms BTW Update Time: 279 ms									
R03_G3_S1: Discrete	Semi-Auto C BTR/Map Length : 0 V BTW/Map Length : 63 V CFG Length : 0 V									
R03_G4_S0: Discrete	Manual C Manual C									
R03_G4_S1: Discrete	OK Cancel									
R03_G5_S0: Discrete										
R03_G5_S1: Discrete										

NOTE: If a specific Rack, Group, and Slot has both a BTR and a BTW you can enter them at the same time since this is done in the same I/O Module Properties window.

Step 7: Reconfigure Mappings to include All BTRs and BTWs

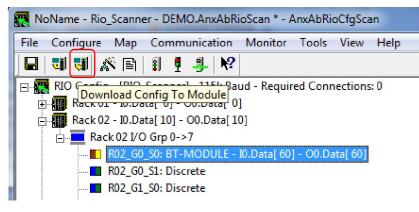
Select Re-Map All



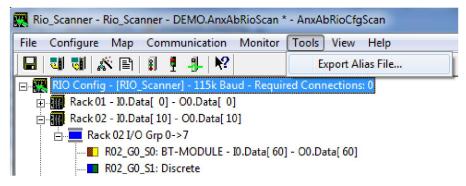


Step 8: Download Configuration to the Gateway

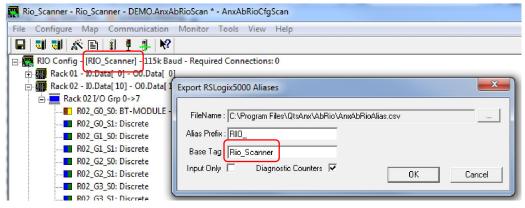
Click the download icon



Step 9: Export Alias tags



Step 9A: Validate Base Tag Name = AN-X2 Name and click OK



Step 10: RSLogix 5000 Configuration

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Step 10A: Adding the remote rack of I/O into the application

In the I/O tree in the Ethernet segment right click and add a 1756-ENBT Set the IP Address to that of the AN-X2 Gateway Name the Module the same name of the AN-X2 Gateway

Set the Module Definition and Slot Number to match the settings below:

Module Properties: Local:16 (1756-ENBT 5.1) General* Connection Module Info Internet Protocol Port Configuration 1756-ENBT 1756 10/100 Mbps Ethernet Bridge, Twisted-Pair Media Type: Change Type... + Vendor: Allen-Bradley Ethernet Address Parent: Local RIO_Scanner O Private Network: Name: 192.168.1. Description: ~ IP Address: 10 . 1 . 2 . 134 Y O Host Name: Module Definition Slot: 16 v Change ... Revision: 5.1 Electronic Keying: Disable Keying Rack Connection: None Time Sync Connection: None 17 Chassis Size:



Step 10B: Adding in the Remote I/O Data

Add a 1756-MODULE module into slot 0 of the I/O Rack Set RPI no faster than 5 mSec (Recommended > 20mSec)

New Module					(
Type: Parent:	1756-MODULE Generic 1756 Module RIO_Scanner	- Connection Pa	rameters Assembly Instance:	Size:				
Name:	RemIOData	Input:	1	250 🤤	(16-bit)			
Description:		Output:	2	248 🛟	(16-bit)			
	~	Configuration:	4	0	(8-bit)			
Comm Format:	Data - INT 🛛 👻	Status Input:						
Slot:	0	Status Output:						
General Conne	perties Report: RIO_Scanner:0 (17 ection Module Info Backplane	56-MODULE 1.	1)					
Requested Pac	cket Interval (RPI): 27.0 📚 ms (0.2	- 750.0 ms)						
🔄 Inhibit Modu		n Mada						
 Major Fault On Controller If Connection Fails While in Run Mode Use Unicast Connection over EtherNet/IP 								
Module Fault								
status: Offline	ОК	Cancel	Apply	Help]			

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AN-X2-AB-DHRIO Remote I/O Scanner Sample



Step 10C: Adding in Remote I/O Diagnostic Data

Add another 1756-Module into slot 15 of the I/O Rack Configure slower RPI since it is only diagnostic data

New Module								
Type: Parent:	1756-MODULE Generic 1756 Module RIO_Scanner	- Connection Pa	rameters Assembly Instance:	Size:				
Name:	RemIODiag	Input:	1	250 🤤	(16-bit)			
Description:		Output:	2	248 🍨	(16-bit)			
	×	Configuration:	4	0	(8-bit)			
Comm Format:	Data - INT 🛛 👻	Status Input:						
Slot:	15 🗘	Status Output:						
Open Module Properties OK Cancel Help								

Module Properties Report: RIO_Scanner:15 (1756-MODULE 1.1)								
General Connection* Module Info Backplane								
Requested Packet Interval (RPI): 73.0 Image (0.2 - 750.0 ms)								
Major Fault On Controller If Connection Fails While in Run Mode Ise Unicast Connection over EtherNet/IP								
Module Fault								
Status: Offline OK Cancel Apply Help								



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Step 10D: Importing Alias tags that the AN-X2 gateway generated

Select Import Tags and Logic Comments and then browse to where the Alias file was saved (default location: c:\Program Files\QtsAnx\AbRio\AnxAbRioAlias.csv)

🕷 RSLogix 5000 - CompactLogix_RemI0_Scanner [1769-L33ER 20.13]									
File Edit View Search Logic Communications	Tool	s Window Help							
Image: Constraint of the second se		Options Security Documentation Languages	۱,	🏝 强 📴 🖹 📑 🔍 🤤					
		Import D		Tags and Logic Comments					
		Export •		Component					

Imported Tag Samples

S	Scope: DepartLogix_F 😪 Show: All Tags								
	Name 28 A	Value 🔷 🗲	Styl	Style Data Type		Desc	Description		
		0	Dec	cimal II	NT	Rack	Rack-01 Grp-1 Discrete Input		
	±-RI0_I012	0	Dec	cimal II	INT		Rack-01 Grp-2 Discrete Input		
	H•RI0_1013	0	Dec	cimal II	NT	Rack	-01 Grp-3 Discrete Input		
	± RIO_1014	135	Dec	simal II	NT	Rack	-01 Grp-4 Discrete Input		
	±-RI0_1015	0	Dec	cimal II	NT	Rack	Rack-01 Grp-5 Discrete Input		
	± RI0_1016	0	Decimal		NT	Rack	Rack-01 Grp-6 Discrete Input		
	±-RI0_1017	0) Decimal		INT		Rack-01 Grp-7 Discrete Input		
		•	ln	sies al 🛛 🔲	hi T	Deale	02 Cro 0 Diserste lacut		
	Name ==	∆ Value	+	Style	Data Type		Description		
	⊞-RI0_R02_CTL		0	Decimal	INT		Rack-02 Control		
	H-RIO_R02_STS			Decimal	INT		Rack-02 Status		
	RIO_r02g0s0_BT_INH			Decimal	BOOL		BT Inhibit		
	⊞-RIO_r02g0s0_BTR_00		1 Decimal		INT		Generic BTR Data 00		
	+-RI0_r02g0s0_BTR_01		0	0 Decimal INT			Generic BTR Data 01		
	H-RI0_r02g0s0_BTR_02		3	Decimal	INT	INT			
	E RIO_r02g0s0_BTR_03		0	Decimal	INT		Generic BTR Data 03		

Step 11: Write your control program using the Alias Tags to make future I/O and control Program migration activities simpler.

More information is available in the products user manual and/or in training videos which can be found at:

http://www.prosoft-technology.com/SERVICES-SUPPORT/Training



Conclusion

This document shows a sample on how to develop the Remote I/O configuration using the AnxAbRioCfgScan configuration tool and RSLogix 5000. If you have any additional questions please contact us.

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