

PC56-OPC/PC56-SLS Connection to OPC Client

How to create an OPC connection between PC56-OPC/PC56-SLS and an OPC client. (In this document we will be using Matrikon OPC Explorer as an OPC client and OPC test client. See page 11 for download instructions.)

Document Code: TN2009_PC56_OPCClient Author: KS Date: AUG 2009



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Equipment Required

You will need:

- ProSoft's PC56-OPC or PC56-SLS
- OPC Client (In this example Matrikon OPC Explorer and OPC Test Client were used)
- ControlLogix Processor with a ControlLogix program downloaded to it.
- ControlLogix Chassis
- Computer Screen for PC56-OPC/PC56-SLS
- Keyboard
- Mouse

Description

Download a ControlLogix program in ControlLogix processor.





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Put ControlLogix into remote run after downloading a program.

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On PC56-OPC/PC56-SLS click the Start button and choose System Management Console. (It may also be under Start -> All Program -> ArchestrA -> System Management Console.)

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Create/Modify/Add Logix5000_PC56 Object to meet your application.

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You should see the controller tags in the ControlLogix processor (see screenshot below).

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Copy column A then paste it in Column B. Delete Column C, D, E and F.

Save the Excel file back onto the USB memory stick.

Copy the Excel file on the C drive of the PC56-OPC/PC56-SLS.



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Right click on the Device Items tab on PC56-OPC/PC56-SLS then click import.

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Go to C: drive and choose the PC56-0-5000.csv file then click Open. Click on the disk icon at the right corner to save on the Device Items tab.

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<	strikonOPC Explorer 😂 PC56-OPC_PC56-SLS 🍽 Local Disk (C.) 🦉 PC56-OPC9 - Paint 📓 Microsoft Excel - PC5 🎼 🐉	10:00 PM



Right click on ArchestrA.PC56SLSOPC.1 and choose deactivate server.

🌈 SMC - [ArchestrA System Mana	igement Console	(PC56-D37846339	3)\DAServer Manager\Defa	ult Group\Local\ArchestrA	.PC56SLSOPC.1]		
File Action View Help				an or dia karana aki			
🗢 🔿 🗈 📧 🗟 😰 🛛							
ArchestrA System Management Conso DAServer Manager DAServer Manager Dosenut Group Dos	le (PC56-D3784633 Deactivate Server Configure As Serv View Export List	Component Cossilsopc Cossilsopc [shell] Original DAS Toolkit Engine ice InOPC InODESL		Version 0001.0001.0001.0010 0669.0039.0038.0020 0669.0000.0038.0000 0609.0458.0000.0000 0609.0458.0000.0000 0609.0216.0000.0000		Build Date January 23, 2007 November 3, 2006 March 28, 2005 February 21, 2008 February 21, 2008 February 21, 2008	
<	trA Sys 🥸 M	atrikonOPC Explorer	► PC56-OPC_PC56-SL5	Control Panel	🍟 untibled - Paint		🖲 🕵 9:39 PM

In this example Matrikon OPC Explorer is downloaded on the PC56-OPC/PC56-SLS module. This was done to simplify the connection configuration between Matrikon OPC Explorer and PC56-OPC/PC56-SLS. You will need additional configuration if you were connecting to PC56-OPC/PC56-SLS from a remote device.

Matrikon OPC Explorer can be downloaded at:

http://www.matrikonopc.com/products/opc-desktop-tools/opc-explorer.aspx

This link may be updated periodically, so if the link does not work please check http://www.matrikon.com for additional information.

Open I	Matrikon	OPC	Expl	lorer.	

SMC - [ArchestrA System Management Const Management Const	ole (PC56-D378463393)\DAServer Manager\De	fault Group\Local\ArchestrA.PC56SLSOPC.1\Configuration	in\New_BACKPLANE_PC56_000\]
File Action View Help			
ArchestrA System Management Console (PC56-D37846) BAServer Manager	³³ J Node Type: LOGIX5000_PC56	Delimiter: .	🚽 🖬 🛛
E Default Group		1	
ArchestrA.PC565LSOPC.1	PC56_000 Parameters Device Groups Device I	iems	
Configuration	Name	Update Interval (ms)	
PC56_000	Topic_0	1000	
Log viewer Default Group			
Sat Brown Arcors of	nd Defaults		
Windows Catalog			
Windows Update			
Accessories	•		
Internet Explorer m ArchestrA	,		
E-mail Games	• *		
MatrikonOPC	Analyzer		
System Management Microsoft Office	Explorer Help Grudeling		
Files and Settings Train Startun		xpiorer	
Wizard Wonderware	,		
MatrikonOPC Explore 📙 Adobe Reader 9			
🧭 Internet Explorer			
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Windows Messenger			
All Programs 🜔 🚳 Windows Movie Maker			
Kog Off	Shut Down		
Start SMC - [ArchestrA Sys			🌉 🖏 🦁 3:05 PM

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Right click on the Add/Connect Server.



Click OK.



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Click Add Tags.





Expand New_BACKPLANE_PC56_000 by clicking the plus sign at the New_BACKPLANE_PC56_000 branch, which will then show PC56_000.

💋 SMC - [ArchestrA System Management Console	(PC56-D378463393)\DAServer Manager\Default (Group\Local\ArchestrA.PC56SLSOPC.1\Configuration\New_BACKPL	ANE_PC56_000\]
File Action View Help			
← → 🗈 📧 🗙 😰			
ArchestrA System Management Console (PC56-D3784633 DAServer Manager Default Group Def	Node Type: LOGIX5000_PC56 Device Transition PC56_000 Parameters Device Groups Device Items Name Up Topic 0 10	elimiter: . date Interval (ms)	
PCS6_000 POGRES Cod Pogrests Cod Pie Edit Cod Pie Edit Cod Pie Edit Cod Pie Cod Pie Cod Pie Cod Pie Cod Pie Cod Pie Cod	I topic_0 10 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Tags to be added:	
	L		
😽 start 👔 🌈 SMC - [Archestra Sys 🦉 F	C56-OPC15 - Paint 🔗 MatrikonOPC Explorer		🔩 🗞 🧐 3:13 PM



From the Available Tags list, choose a tag for Matrikon OPC Explorer to interrogate from the PC56-OPC/PC56-SLS. (In this example the WarmBoot tag was double-clicked.)





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Right click on the Tag you have created in the Tags to be added: area. Click Validate Tag, and then click OK.



You have created a tag on Matrikon OPC Explorer.

🠼 MatrikonOPC Explorer - [Untitled*]			
File Server Group Item View Help			
£ ☆ ☞ ◙ @ @ ≥ 6 0 ♥ ♠ @ ≥ 2			
Topic_0	Contents of 'Topic_0'		
E-3 Localhost '\\PC56-D378463393'	Item ID Access Path Value Quality	Timestamp Status	
E 4 ArchestrA.PC565L5OPC.1	New_BACKPLANE False Good, no	non-specific 12/12/200 Active	
Topic_0			
Matrixon. OPC. Simulation. 1			
Other Network Computers			
Server Info	WORKSHOPS & CERTIFICATIO	DNI -	Group Info
Frances Andrews PCE/CLCOPC 1	workshors & GERIFICATIO		
Server: Artilestra.PC300L30PC.1	gets you certified	Group: ropic_o	
Connected: Yes	Boto Jon continue	Connected (Async I/O): Yes (2.0)	
State: Running Groups: 1	CLICK FOR DETAILS	Active: Yes	
Total Items: 1	Sustainers INTRODUCE	Items: 1	
Current Local Time: 12/12/2007 3:15:23.316 PM	MatrikonOPC	Current Update Rate: 1000 ms	
Bandwidth Usage: 42	S MUIIKOIOPC	Percenc Deauband. 0.00 %	
🛃 Start 🛛 🖉 SMC - [ArchestrA Sys 🦉 PC56-OPC18 - Paint 📀 N	latrikonOPC Explorer		🍕 😵 🤨 3:15 PM



Testing Using OPC Test Client (Remotely)

Click on Start menu -> All Programs -> Rockwell Software -> RSLinx -> Tools -> OPC Test Client.



Go to the menu bar and click File -> New. Click Browse....

Select an OPC Server	
OPC Server Prog ID:	ОК
HilscherGmbH.CifOpcServer	Cancel
HilscherGmbH.CifOpcServer Matrikon.OPC.Simulation Matrikon.OPC.Simulation.* RSLink OPC Server RSLink Remote OPC Server	Browse
Node Name (Optional):	



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At Node type the IP address of the PC56-OPC, then click Connect.

	O. I. I
	Belea
Connect	Cancel
C 2.0 OPC Servers	
	Connect C 2.0 OPC Servers

Choose the 2.0 OPC Servers. Highlight ArchestrA.PC56SLSOPC.1 then click Select.

umerate OPC Servers		
Node: 10.1.2.75	Connect	Seled Cancel
C 1.0a OPC Servers ArchestrA.PC565LSOPC.1 35Linx OPC Server		
RSLinx Remote OPC Server		

Click OK.

Select an OPC Server	X
OPC Server Prog ID:	ОК
ArchestrA.PC56SLSOPC.1	Cancel
HilscherGmbH.CifOpcServer Matrikon.OPC.Simulation Matrikon.OPC.Simulation. RSLinx OPC Server RSLinx Remote OPC Server	Browse
Node Name (Optional): 10.1.2.75	

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Go to the menu bar and click Group -> Add Group.

🛃 RSI - OPC Test Client - [10. 1. 2.75ArchestrA	PC56SLSOPC. 1]					- 7 X
🛒 File Server Group Item Log View Window	Нер						- 8 ×
	ItemID 9	Sub Value	Sub Quality	Sub Updates	Update Rate	Run. Avg	
Ready							 NUM

Type in the appropriate Group Name, then click OK.

Add New Group		
Group Name:	Topic_0	OK Cancel
Update Rate (mSec):	1000	Active
Time Bias: % Deadband:	0	Update Rate
Advise:	IConnectionPoint	(Rev 2.0)



Document Code: TN2009_PC56_OPCClient

Items to be Added	Attributes		ОК
	Access Path:		Cancel
	Item Name:		
	Active:		Add Item
	Datatype: VT EMP	TY V	Validate
	Array:		Itom Dronortion
Datatype: Native	Array Filter:	Access: A	ll Items 💽
Datatype: Native ArchestrA.PC56SLSOPC.1 (Node: 10)	Array Filter: * .1.2.75) ArchestrA.PCS	Access: A	Il Items 🔹
Datatype: Native 💽	Array Filter: * .1.2.75) Archest*A.PCS \$SYS\$ActiveIt	Access: A	ll Items
Datatype: Native 💽	Array Filter: * .1.2.75) ArchestrA.PCS \$SYS\$ActiveIt \$SYS\$EnableS \$SYS\$ErrorCo	Access: A 66SLSOPC.1 (Node emCount tate de	ll Items
Datatype: Native ArchestrA.PC56SLSOPC.1 (Node: 10	Array Filter: * .1.2.75) ArchestrA.PCS \$SYS\$ActiveIt \$SYS\$EnableS \$SYS\$ErrorCc \$SYS\$ErrorCc \$SYS\$ErrorCc	Access: A 665LSOPC.1 (Node emCount tate de unt	ll Items
Datatype: Native	Array Filter: * .1.2.75) ArchestrA.PCS \$SYS\$ActiveIt \$SYS\$EnableS \$SYS\$ErrorCo \$SYS\$ErrorCo \$SYS\$ErrorCo \$SYS\$ErrorTe	Access: A 565LSOPC.1 (Node emCount tate de unt xt	ll Items
Datatype: Native	Array Filter: * .1.2.75) ArchestrA.PCS \$SYS\$ActiveIt \$SYS\$EnableS \$SYS\$ErrorCo \$SYS\$	Access: A 65LSOPC.1 (Node emCount tate de unt xt unt xt	ul Items 💽
Datatype: Native 💽	Array Filter: * .1.2.75) ArchestrA.PCS \$SYS\$ActiveIt \$SYS\$EnableS \$SYS\$ErrorCo \$SYS\$ErrorCo \$SYS\$ErrorTe \$SYS\$	Access: A 66SLSOPC.1 (Node emCount tate de unt xt unt t unt t	II Items
Datatype: Native ArchestrA.PC56SLSOPC.1 (Node: 10	Array Filter: * 1.2.75) ArchestrA.PCS \$SYS\$ActiveIt \$SYS\$EnableS \$SYS\$ErrorCo \$SYS\$E	Access: A 66SLSOPC.1 (Node emCount tate de unt xt unt 1 rrval	II Items



Open the ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) branch, then open the New_BACKPLANE_PC56_000 branch. Highlight New_LOGIX5000_PC56_000.

Items to be Added Attributes Access Path: Add Item	Add New OPC Item				
Item Name: Agtive: Patatype: VT_EMPTY Velidate Item Properties Datatype: Native Array Filter: * Access: All Items Item Properties ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) New_BACKPLANE_PC56_000 Item 28 Item 2.3 Item 3.1	Items to be Added	Attributes -	2ath:		OK Cancel
Datatype: VT_EMPTY Array: Datatype: Native Array Filter: Access: All Items ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) Image: ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) Image: Arch		Item <u>N</u> ame:			<u>A</u> dd Item
Array: Item Properties Datatype: Native Array Filter: Access: All Items ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) New_BACKPLANE_PC56_000 Imer_28 Imer_29 Imer_30 Imer_31 Imer_31 Imer_32 Imer_31 Imer_32 Imer_32 Wodarray1 WarmBoot Imer_31 Imer_31		Datatype: VT_EMPTY			
Datatype: Native Array Filter: * Access: All Items ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) New_BACKPLANE_PC56_000 Imer_28 Imer_29 Imer_30 Imer_31 Imer_32 Imer_32 Imer_32 Imer_32 Imer_31 Imer_32 Imer_32 Imer_31 Imer_32 Imer_31 Imer_32 Imer_32 Imer_32 Imer_32 Imer_32 Imer_31 Imer_32 Imer_33 Imer_34 Imer_32 Imer_34 Imer_34 Imer_34 Imer_33 Imer_34 Imer_34 Imer_34 Imer_34 Imer_34 Imer_34 Imer_34 <tr< td=""><th></th><td>A<u>r</u></td><td>ray:</td><td></td><th>Item Properties</th></tr<>		A <u>r</u>	ray:		Item Properties
ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75) ArchestrA.PC56SLSOPC.1 (Node: 10.1.2.75)\New_i New_BACKPLANE_PC56_000 Imer_28 Imer_29 Imer_30 Imer_31 Imer_32 Ivodarray Ivodarray1 WarmBoot	Datatype: Native	Fi Array	lter:	Access: All I	tems 💌
	ArchestrA.PC56SLSOPC.1 (Node: 10 ArchestrA.PC56SLSOPC.1 (Node: 10 ArchestrA.PC56_000 ArchestrA.P).1.2.75)	Archest*A.PC56SL timer_28 timer_30 timer_31 timer_32 twodarray twodarray1 WarmBoot	SOPC.1 (Node: 1	.0.1.2.75)\New_[<



You'll need to type in the path and the item name in the Item Name: parameter, e.g. New_BACKPLANE_PC56_000.New_LOGIX5000_PC56_000.WarmBoot.

Click on Validate to check for the validity of the tag.

Add New OPC Item		X
Items to be Added New_BACKPLANE_PC56_000.New_	Attributes Access Path: Item Name:)00_PC56_000.WarmBoo'; Active: Datatype: VT_EMPTY Array:	OK Canc∋l Àdd Item ⊻alidate
Datatype: Native ArchestrA.PC56SLSOPC.1 (Node: 10.1.2 New_BACKPLANE_PC56_000 New_LOGIX5000_PC56_000	Array Filter: * Access: All Iter 2.75) Archest A.PC56SLSOPC.1 (Node: 10. timer_28 timer_29 timer_30 timer_31 timer_32 twodarray twodarray1 WarmBoot	ns
You can add items using this dialog. Click on adding them. Results will be displayed from t	validate items if you wish to check your items against the nis action.	e server before

Click OK when you see the tag is valid.

				×
Server Handle	Data Type	Access Rights	Blob Size	
0000000	Boolean	Read / Write	0	
				ОК
	Server Handle 0000000	Server Handle Data Type 00000000 Boolean	Server Handle Data Type Access Rights 00000000 Boolean Read / Write	Server Handle Data Type Access Rights Blob Size 00000000 Boolean Read / Write 0



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Then Click OK on this window.

dd New OPC Item		
Items to be Added New_BACKPLANE_PC56_000.New_	Attributes Access Path: Item Name: p00_PC56_000.WarmBoot Agtive: Datatype: VT_EMPTY Array:	OK Canc∋l Add Item ✓alidate
Datatype: Native	Array Filter: * Access: All Ite 	ms ▼ .1.2.75)\N∈w_[▲

You have created a tag with OPC Test Client. Repeat this procedure for all other tags you want to test using OPC Test Client.

🛃 RSI - OPC Test Client - [10. 1. 2. 75- Archestr.	A. PC56SLSOPC. 1]					ΞX
🛒 File Server Group Item Log View Window	и Нер					- @ ×
Topic_0 (Actual Rate: 1000)	ItemID	Sub Value	Sub Quality	Sub Updates	Update Rate	Run. Avç
	New_BACKPLANE_PC56_000.New_LOGIX5000_PC56_000.WarmBoot	Off	Good	1	0	0.40749
						-
	 Image: A set of the set of the					>
Ready						NUM

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Conclusion

In this document you learned how to interrogate a tag from a ControlLogix processor to ProSoft's PC56-OPC/PC56-SLS modules to Matrikon OPC Explorer to OPC Test Client. If you need additional information, please contact us.

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