# ProSoft®

# Where Automation Connects.

B RLX			Tag Name	Data Type		
IH			RSSI	Integer		
B RLXU			FiniVersion	Shing		
FF	4-1		SSID	String		
			MACID	String		
			ParentMAC	String		
			Associations	Integer		
			UpTime	Unsigned Inte	iger	
			TotBytTX	Integer		
			TotGoodPacksTX	Integer		
			ToFalPacksTX SofBeset	Integer		
			Someter	Command		
Date	Tine	Type	Source	Category	Details	
						1



# **RLX-OPC-SRV**

ProSoft Software

RadioLinx® OPC Server for Frequency Hopping and Industrial Hotspot<sup>™</sup> Radios

January 22, 2009

# **USER MANUAL**

# **Please Read This Notice**

The use and configuration of this software requires a reasonable working knowledge of the involved protocols and the application in which they are to be used. For this reason, it is important that those responsible for implementation satisfy themselves that the combination will meet the needs of the application without exposing personnel or equipment to unsafe or inappropriate working conditions.

This manual is provided to assist the user. Every attempt has been made to assure that the information provided is accurate and a true reflection of the product's functionality. In order to assure a complete understanding of the operation of the product, the user should read all applicable ProSoft documentation on the operation of the module and protocol driver.

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RLX-OPC-SRV User Manual January 22, 2009

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# 1 Start Here

#### In This Chapter

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For most applications, the following installation and configuration steps will work without additional programming. ProSoft Technology strongly recommends that you complete the steps in this chapter before developing a custom application.

This manual will walk you through the following tasks.

- **1** Setting up your network (page 15)
- 2 Install the server (page 17)
- **3** Configuring the server (page 19)
- **4** Security issues (page 35)
- **5** Setting up OPC client to monitor radios (page 57)

#### 1.1 About the RadioLinx OPC Server

OPC is OLE for Process Control. OPC is open connectivity in industrial automation and the enterprise systems that support industry.

The purpose of the RadioLinx OPC Server is to seamlessly link customer applications to RadioLinx radios.

It will allow any application that can act as an OPC Client, such as an HMI, to interact with most RadioLinx radios to get signal strength, serial number, limited throughput information as well as other useful statistics.



The RadioLinx OPC Server operates in the background on any PC. It independently manages all requests from OPC Clients for information on RadioLinx radios. The clients can be programs running either on the same PC as the OPC Server or on a separate PC connected via a network connection.



# 1.2 Tags That Can Be Read



The RadioLinx OPC Server manages querying the RadioLinx radios over the appropriate connections. It is configured by the user to query RLX-FH, RLX-IH, RLX2-IHx, and RLX2-IFHx radios over the appropriate Ethernet port on the PC running the RLX OPC Server. The user defines a "connection" within the RLX OPC Server for a particular Ethernet port. They then simply associate as many RLX and RLX2 Ethernet radios with that port. The OPC Server then knows to direct any queries of those radios over that connection.

Note: For RLX-FHS radios, the connection will be done through the serial port.

The RadioLinx OPC Server is software provided by ProSoft Technology to assist in using RadioLinx products. The following sections we will guide you in installation of prerequisites, RLX OPC Server software, RLX OPC Configuration Tool, setting up the network, installing Server, configuring Server and connecting to Server, and how to monitor tags. Notes: Only one process can communicate to a radio at the same time. Attempting to communicate with more than one process at a time can cause unpredictable results. In order to prevent multiple processes from communicating to a radio at the same time, switch the RadioLinx OPC Server into pause mode while running ControlScape. In addition, the validation option on the server will be disabled when the server is running.



# 1.2.1 RadioLinx Industrial Hotspot Radios

- RLX-IH
- RLX-IHW
- RLX-IHW-66
- RLX2-IHx
- RLXIB-IHW
- RLXIB-IESC

Tag Name	Contracted name	Data Type
RSSI	RSSI	Integer
Firmware Version	FirmVersion	String
SSID	SSID	String
MAC ID	MACID	String
Up Time	UpTime	Unsigned Integer
Parent MAC	ParentMAC	String
Number of Associations	Associations	Integers
Total Bytes TX	TotBytTX	Integer
Soft Reset*	SoftReset	Integer
Total Good Packs TX	TotGoodPacksTX	Integer
Total Failed Packs TX	TotFailPacksTX	Integer

\* Are also write tags. TX = Transmitted

# 1.2.2 RadioLinx Frequency Hopping Radios

- RLX-FHS
- RLX-FHE
- RLX-FHES
- RLX2-IFHx

Tag Name	Contracted name	Data Type
RSSI	RSSI	Integer
Signal-to-Noise Ration	SignalToNoise	Integer
Associations	Associations	Integer
Bit error Rate	BitErrRate	Floating Point
Reset Statistics*	Reset_stats	Integer
Serial Number	SerialNum	String
Parent Address	ParentAdd	Integer
Total Bytes Forward	TotBytFwd	Integer
Total Bytes Reverse	TotBytRev	Integer
TX Packet Errors	TxPackErrs	Integer
Total Good Packets	TotGoodPacks	Integer
* • • • • • • • • • •	E 100 I	

\* Are also write tags. TX = Transmitted

# 1.2.3 RLX-IFHE

Tag Name	Description			
RSSI	Receive Signal Strength Indicator measurement.			
Unit Description	Radio name			
IP Address	The IP Address	of the current radio.		
Unit Address:	The unit address a network.	s is, and must be, a unique identifier of each modem in		
	VALUES			
	1	Master		
	65535	Broadcast		
Retransmissions	This register determines the maximum amount of times that a packet will be retransmitted (in addition to the initial transmission).			
	0-255			
Destination Address	This register specifies the ultimate destination for the data.			
	VALUES			
	1-65535			
Roaming	This feature allows a Remote unit to synchronize with a specified 'upstream' unit (either Master or Repeater).			
	VALUES:			
	65535	full roaming		
	1-254	specific (fixed) unit address (Master or Repeater) with which to associate		
	Serial number of radio (RF) module.			
Serial Number	Senai number o			

Tag Name	Description		
Temperature	Temperature as measured within the radio module.		
Voltage	Supply voltage as measured on motherboard.		
VSWR	Voltage Standing Wave Ratio. Ideally 1:1 (or 1.00), this value gives an indication of how much power is being reflected back to the radio from the antenna relative to how much is being transmitted.		
SoftwareVersion	Core radio firmware version (.mhx file)		
Operation Mode:	The selected mode of operation: Master, Repeater, or Remote.		
Link Rate:	This is the RF communications Link Rate. A lower link rate offers better receive sensitivity performance; a higher link rate, better throughput. All IFHx radios in a network must use the same Link Rate.		
RF Output Power:	This setting establishes the transmit power level which will be presented to the antenna connector at the rear of a IFHx network. Unless required, the RF Output Power should be set not for maximum, but rather for the minimum value required to maintain. FCC regulations allow for up to 36dBi effective isotropic radiated power (EIRP). The sum (in dBm) of the transmitted power, the cabling loss, and the antenna gain cannot exceed 36dBi.		
Network Type:	Type of RADIO network: Point-to-MultiPoint network (PMP), Point-To- Point network (PTP), Peer-to-Peer (P2P), or Everyone-to-Everyone (E2E) VALUES: Point-to-Multipoint		
	<ul> <li>Point-to-Point</li> </ul>		
	<ul> <li>Peer-to-Peer</li> </ul>		
	<ul> <li>Everyone-to-Everyone</li> </ul>		
	<ul> <li>PMP with ACK</li> </ul>		
Channel Mode	This option applies only to COM 1. Determines which serial interface shall be used to connect to external devices: RS232, RS485, or RS422. When an interface other than RS232 is selected, the DE9 port will be inactive.		
	VALUES		
	■ RS232		
	<ul> <li>RS485</li> </ul>		
	<ul> <li>RS422</li> </ul>		
Data Baud Rate	The serial baud rate is the rate at which the modem is to communicate with the attached local asynchronous device.		
	<b>NOTE:</b> Most PCs do not readily support serial communications greater than 115200bps.		
	VALUES: bits per second (bps)		
	230400, 115200, 57600, 38400, 28800, 19200, 14400, <b>9600,</b> 460800 and 921600 may be selected for RS422 or RS485 Channel Modes.		
Data Format	This setting determines the format of the data on the serial port. The default is 8 data bits, No parity, and 1 Stop bit.		
	VALUES:		
	8N1, 8N2, 8E1, 8O1, 7N1, 7N2, 7E1, 7O1, 7E2, 7O2		

Tag Name	Description			
Flow Control	Used to enhance the reliability of serial data communications, particularly at higher baud rates.			
	VALUES			
	Hardware	If the attached device supports hardware handshaking.		
	None	If the attached device does not support hardware handshaking.		
	CTS Framing	Uses the CTS signal to gate the output data on the serial.		
Ethernet Received Bytes	Specifies the numb	ber of bytes received by the Ethernet port.		
Ethernet Received Packets	Specifies the numb	ber of packets received by the Ethernet port.		
Ethernet Received Multi-Cast	Specifies the numb Ethernet port.	ber of multi-cast packets that are received by the		
Ethernet Transmitted Bytes	Specifies the num	ber of bytes transmitted by the Ethernet port.		
Ethernet Transmitted Packets	Specifies the number of packets transmitted by the Ethernet port.			
Ethernet Collisions	The number of invalid packets caused from multiple devices transmitting Ethernet data at the same time.			
Radio Received Bytes	Number of bytes re	eceived by the Radio (RF).		
Radio Received Packets	Number of packets received by the Radio (RF).			
Radio Received Errors	Number of errors received by the Radio (RF).			
Radio Received Dropped Packets	Number of received dropped packets recorded by the Radio (RF).			
Radio Transmitted Bytes	Number of bytes transmitted by the Radio (RF).			
Radio Transmitted Packets	Number of packets transmitted by the Radio (RF).			
Radio Transmitted Errors	Number of Radio(RF) transmission errors.			
Radio Collisions	The number of invalid packets caused from multiple devices transmitting RF data at the same time.			
COM1 Received Bytes	Number of bytes re	eceived by the Serial port.		
COM1 Received Packets	Number of packets	s received by the Serial port.		
COM1 Transmitted Bytes	Number of bytes tr	ransmitted on the Serial port.		
COM1 Transmitted Packets	Number of packets	s transmitted on the Serial port.		

Tag name	Description
RSSI	This register displays the average signal strength received over the previous 4 hop intervals. Should the downstream unit(s) fail, a Master will maintain the last RSSI reading display.
	VALUES:
	110 to –55dBm (maximum reading)
Temperature	Temperature as measured within the radio module.
Unit Address	The unit address is, and must be, a unique identifier of each IFHS radio in network. The address value is 16-bits in length. The Master has by default and must retain, a unit address of 1; 65535 is the broadcast address.
	VALUES
	2-65534
Destination Address	As the name implies, this register specifies the ultimate destination for a modem's data.
	Different network topologies dictate the configuration of Destination Address:
	PMP: Master Destination Address = 65535, Remote Destination Address =1
	PTP : Master Destination Address = UA of Remote, Remote Destination Address =1
	P2P : Master Destination Address =65535, Destination Address of each (o $2 / pair$ ) Remote radio is the UA of the other
	E2E : Destination Address of all radios=65535 (broadcast)
	VALUES
	1-65535
Retransmissions	This register determines the maximum amount of times that a packet will b retransmitted (in addition to the initial transmission), noting the following specific behaviors in various network topologies:
	PMP: Master will retransmit each data packet the exact number of times specified; Slave will retransmit only if necessary, and then only until a given packet is acknowledged or the value of the Slave's retransmissions is reached (after which it will discard the packet if retransmission not successful).
	PTP: Modem will retransmit to its counterpart only if necessary, and to a maximum number of the value in retransmissions. Packet is discarded if retransmissions are not successful. Recipients of packets will discard any duplicates.
	In a PMP system, set retransmissions to the minimum value required as, effectively, the data throughput from Master to Remote is divided by 1 plus the number stored in retransmissions.
	VALUES
	0-255
Roaming	Roaming dictates which radio (by Unit Address (UA)) a Remote unit will 'look' or 'attach to' for its upstream signal path. This feature allows a Remote unit to synchronize with a specified 'upstream' unit (either Master or Repeater).
	The options are as follows:
	Roaming=65535:
	With this value in its roaming register, a Remote will synchronize with an

# 1.2.4 RLX-IFHS

Tag name	Description			
	upstream unit which has the same network address and static mask as the Remote. Should that upstream unit fail, this Remote will attempt to synchronize with another 'upstream' unit within the same network. This ability is particularly well-suited to mobile applications.			
	Roaming=1-254:			
	In most static (fixed) networks, where there are no Repeaters, the default value of 1 is maintained: All Slaves synchronize to the Master (whose unit address (UA) is 1). In networks where Repeaters are present, the value of a Remote's roaming value corresponds to the particular upstream radio, with which a particular Remote is intended to communicate.			
	( e.g. A Slave with a UA=3 may have Roaming=2, where the radio with a UA=2 is a Repeater between the Slave and the Master; the Repeater will have Roaming=1.)			
	When setting up 3 radios for a Master-Repeater-Slave link, be sure to set the Slave's Roaming to the UA of the Repeater, and the Repeater's Roaming to the UA of the Master(1). This will ensure that data is routed from the Slave through the Repeater to the Master; otherwise, if the Slave's Roaming is left at the default value of 1, the Slave will communicate directly with the Master and bypassing the Repeater altogether.			
	VALUES:			
	65535 Full Roaming			
	1-254 Specific (fixed) UA of Master or Repeater with which to associate			
Voltage	Supply voltage as measured on motherboard.			
VSWR	Voltage Standing Wave Ratio. Ideally 1:1 (or 1.00), this value gives an indication of how much power is being reflected back to the radio from the antenna relative to how much is being transmitted.			
Operation Mode	The operating mode defines the role of a radio. An IHFS radio may be configured for any role required within a radio network. This is convenient for reasons of familiarity with any/all units, as well as for hardware sparing purposes.			
	The default operating mode is dependent on which factory default option is selected.			
	MASTER: Only one per network. In all network types data either originates at, is destined to, or 'passes through' the Master.			
	REPEATER: May act simply as a 'Repeater' to store and forward data to/from an upstream unit to/from a downstream unit (e.g. when there is a long distance between the latter units), or, may act as a Repeater/Slave in which case the above function is performed AND the unit may also exchange data as a Slave within the network.			
	SLAVE: Interfaces with remote devices and communicates with Master either directly or via Repeater(s). Communications between 2 or more Slaves is possible - through the Master.			
	A 'Remote' (non-Master) modem is either a Repeater or a Slave. If a Repeater is not being used as a Repeater/Slave (i.e. there is no device attached to its local data port), leave its handshaking OFF (&K0) and set the serial baud rate (S102) to 115200bps.			
	VALUES:			
	Master			
	Repeater			
	Slave			

Tag name	Description				
Link Rate	This register determines the rate at which RF communications will occur over a given network.				
	All radios within a particular network must be configured with the same wireless link rate.				
	Faster link rates result in greater throughput, however, for each 'step' increase in link rate, there is an approximately 1dB reduction in sensitivity.				
	VALUES				
	bits per second (bps) 19200 115200 172800 230400 270000 340000				
RF Output Power	This setting establishes the transmit power level which will be presented to the antenna connector at the rear of the radio. Unless required Output Power should be set not for maximum, but rather for the minimum value required to maintain an adequate system fade margin.				
	FCC regulations allow for up to 36dBi effective isotropic radiated power (EIRP). The sum (in dBm) of the transmitted power, the cabling loss, and the antenna gain cannot exceed 36dBi.				
	VALUES				
	dBm	(mW equivalent)			
	20	(100)			
	21	(125)			
	22	(160)			
	23	(200)			
	24	(250)			
	25	(320)			
	26	(400)			
	27	(500)			
	28	(630)			
	29	(800)			
	30	(1000)			
Network Type	Defines the type of network: point-to-multipoint, point-to-point, peer-to-peer or everyone-to-everyone				
	In a point-to-multipoint (PMP) network, the Master broadcasts data to all units, and all remote units send their data (ultimately) to the Master.				
	A point-to-point (PTP) network involves a Master and a Slave (with 0 or more Repeaters in-between).				
	Peer-to-Peer involves either communication between 2 (typically remote) units (P2P) or between all units (everyone-to-everyone - E2E).				
	ALL modems in a network VALUES	must have the SAME value for Network Type.			
	Point-to-Multipoint				
	Point-to-Point				
	Peer-to-Peer or Everyone-	to-Everyone			

Tag name	Description
Channel Mode	Defines the physical serial interface which will be used for data communications.
	VALUES
	RS-232
	half-duplex RS-485
	full-duplex RS-485
Data Baud Rate	The serial baud rate is the rate at which the modem is to communicate with the attached local asynchronous device.
	VALUES
	bits per second (bps)
	300, 600, 1200, 2400, 3600, 4800, 7200, 9600, 14400, 19200, 28800, 38400, 57600, 115200, 230400
Data Format	This value determines the format of the data on the serial port. The default is 8 data bits, No parity, and 1 Stop bit.
	VALUES
	8N1
	8N2
	8E1
	801
	7N1
	7N2
	7E1
	701
	7E2
	702
Radio Received Bytes	Number of bytes received by the Radio(RF).
Radio rEceived Packets	Number of packets received by the Radio(RF).
Radio Transmitted Bytes	Number of bytes transmitted by the Radio(RF).
Radio Transmitted Packets	Number of packets transmitted by the Radio(RF).
Repeaters in System	This setting applies to the Master only. The default value is No, stating there are no Repeaters in the network. If there are 1 or more Repeaters in the network, configure this setting as Yes.

## **1.3 System Requirements**

The following system requirements are the recommended minimum specifications to successfully install and run RadioLinx OPC Driver.

- Microsoft Windows compatible PC
- Windows XP Professional with Service Pack 2 or higher, Windows VISTA, or Windows 2003
- Microsoft .NET Framework version 3.0 or higher
- 300 mHz Pentium processor (or equivalent)
- 128 megabytes of RAM
- 300 megabytes of available disk space

#### 1.4 Set Up Network

See the ProSoft Technology documentation on your radio.

#### 2 Installing the Server

#### In This Chapter

- Choosing the Right RadioLinx OPC Server Project for Your Application17
- \*

#### 2.1 Choosing the Right RadioLinx OPC Server Project for Your Application

- 1 Go to www.prosoft-technology.com, or use the ProSoft Technology supplied CD to retrieve RLX OPC software!
- **2** Open setup file and follow the install directions. The install process will copy the RLX OPC Server and OPC Configuration Tool onto your PC.

Note: Before installing, verify that you have the Microsoft .NET Framework (version 3.0 or greater) already installed. If you don't then download this from Microsoft.com and continue installing RadioLinx OPC Server. Select the ServerInstaller.msi file to install.

This is an example of the Tree structure you will see. See descriptions below and select the version for your system.



The Window XP Service RadioLinx OPC Server is the recommended version.

Windows XP Service RadioLinx OPC Server

🖺 Windows XP Service RadioLinx OPC Server.zip 173,464 KB Compressed (zippe...

This is the primary server project. The configuration tool will also be installed.

## 2.2 Installation Process

1 Launch the ServerInstaller.msi file to begin the installation process. You will be asked for a directory to install to. Select a directory that Windows will have access to for all user accounts and you would like to make the project available to.

A registry entry will be placed in the Windows Run folder in order to load some applications at Windows start up. These applications can only be launched by a Windows session if the current user account has access to the directory where the applications reside.

2 During the server installation process, you will be asked to install the OPC Core Components 2.00 Redistributable.

Note: Unless you are 100% sure that you already have these "Core" components installed, it is highly recommended that you complete this install as well.

**3** When the installation is complete, you must restart your computer.

If you choose not to install the OPC Core Components and then later change your mind, you can find the setup file for the core components in the "\Setup" subdirectory of the main RadioLinx OPC Server folder.

# 3 Configuring the Server

#### In This Chapter

*	Opening the Configuration Tool19
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*	Adding a Channel27
*	Channel Settings
*	Adding a Radio
*	Radio Settings
*	Adding Tags
*	Changing the Server's Update Rate
*	Adjusting an Existing Radio or Channel
*	OPC Reset Tags / Commands
*	Description of OPC "Commands"

# 3.1 Opening the Configuration Tool

When you first install the server and configuration tool, the server will not be configured to monitor your wireless radio network. The server is configured using a separate utility. The first step in the configuration process is to open the server and this utility.

#### Start OPC Monitor)

- 1 Click Start / Programs / RadioLinx OPC Server / RadioLinx OPC Monitor -or-
- 2 Double-click on **desktop icon** for server

Start OPC Configuration Tool - to open as a Client

1 Click Start / Programs / RadioLinx OPC Server / RadioLinx OPC Configuration Tool

-or-



Double-click on RadioLinx OPC Monitor system tray icon, —\_\_\_\_\_

Or right click on icon, then select Configure Server.

	About					
	Password Protect Server					
	Configure Server:					
	View <sup>K</sup> Opens the configuration tool. Load Clear					
<b>~</b>	Client Connection: Run Pause Stop					
~	(Connected to Server)					
	Close Monitor [Server Remains Active]					

One of the above processes brings up the RadioLinx OPC Server Configuration screen shown below.

🕀 Rad	ioLinx	OPC Serv	ver Confi	iguratio	n			_ 🗆	×
File	Edit	Control	Server	View	Help				
Date		Time	Туре	Sc	urce	Category	Details		
									F
Configu	ration r	node							.::

## 3.2 Creating a Configuration

There are two methods for configuring the server. You can connect to the server and then configure it directly, or you can save your configuration to disk and then load it into the server manually.

#### 3.2.1 Configure to Server Mode

When you use the Configure to Server mode, you will connect to a server running on the same machine as the Configuration Tool. The Configure to Server will save your work to the server.

The status bar (bottom of box) should now say "Configuring to file." When you connect to local or remote server it will change to "Configuring to server."

Configuring to file	Configuring to server
Status bar showing that	Status bar showing that
utility is configured to	utility is configured to
save to a file mode.	server mode.

Note: If you have not created and saved a file for your radio, please follow the instructions in Configure to File Mode for Adding a Channel (page 27), Radio (page 30) and Tags. (page 31)

#### Local Server Procedure

#### 1 Click File / Configure to Server / Connect to Server / Local Server

The RadioLinx OPC Server Configuration box appears with Channel and Radio (upper left panel), Tags (upper right) and Server Time Log on bottom. If you right click on a date in Time Log, you can view details of that incident.

RadioLinx OPC Server Configuration								
File Edit	Control S	ierver Vie	w Help					
☐ eer1								
Date	Time	Туре	Source		Category			
1/31/2007	09:45:48	Warning	RadioLinx_0	PC_S	Communication	1		
1/31/2007	09:45:05			PC_S	Communication	I		
1/31/2007	09:44:57	View Details C_S			Communication	11		
1/30/2007	15:07:55			PC_S	General	F		
1/30/2007	15:07:50	Refresh		PC_S	Communication	Ш		
1/30/2007	15:07:14	Clear C_S			Communication	1		
1/30/2007	15:07:04			PC_S	Communication			

You can also configure a server that is running on another machine.

#### Remote Server Procedure

#### 1 Click File / Configure to Server / Connect to Server / Remote Server

File     Edit     View     Help       ✓     Configure to File     ►		
Configure to Server	Connect to Server	Local Server
Exit	Disconnect from Server	Remote Server
	Save Current Configuration to File	
	Load Configuration from File	
	Serialize Server	
	Control Server	

Enter the IP address or the name of the computer that the remote server is running on.

You can choose to attempt a secure remote connection, or not.

Note: If the IP address is not valid, you will receive a "Connection Failed" message.

Secure connections require certain Windows security options to be in place before they will work. The unsecured remote connection is a lot more reliable, but it is possible for others to intercept and interpret the messages that are sent.

2 Click **OK** button.

#### 3.2.2 Configure to File Mode

This section details how to create a custom configuration for your server.

Note: Do not connect to a server using the Configuring to Server method.

If you are connected to the server, disconnect before proceeding.

#### 1 Select File / Configure to Server / Disconnect from Server.

The status bar (bottom of screen) should now say "Configuring to file."



2 Add a Channel. Select Edit / Add Channel



**3** Choose a Channel name and Channel type.

4 Click **Next**. FHS is for serial connections.



- **5** A dialog box will appear for connection timeout. Default is 2000 milliseconds, but you can decide your speed. Click **OK**.
- 6 Add a Radio. Select Edit / Add Radio.
  - or -
- 7 Now that you have a Channel, you can right click on your Channel name and select **Add Radio**. This will bring up the dialogue box below.

Add Radio		x
.A.	Enter for the co this radio.	onnection settings for
ProSoft	Name:	RLX
T E C H N O L O G Y	IP address:	
	Port:	4000
	Cancel	ОК

- 8 Choose a Name and give it your specific IP address. Click **OK** to accept.
- 9 Add or Remove Tags. Select Edit / Add/Remove Tags
  - or -
- 10 You can right click on your Radio name and select Add/Remove Tags.

File E	dit Control Server View
⊡ rlxx3	
····	Refresh
	Add Channel
	Add Radio
	Add/Remove Tags
	Properties
	Remove

**11** To Add or Remove tags, click on appropriate button. Then, click **OK**.



12 Click File / Configure to File / Save to File

File	Edit View Help	
<b>~</b>	Configure to File 🛛 🕨	New File
	Configure to Server 🔹 🕨	Load from File
Exit		Save to File

**13** Choose a directory and file name and click **Save**. The Status bar shows utility in "Configuring to file".

uring t	to file	2
	uring l	uring to file

If you want more detailed information on the procedures above please go to Adding a channel, Adding a radio, Adding tags, and adjusting an existing radio or channel in this manual.

### 3.3 Loading Your Configuration

When you are finished creating and saving your configuration in the RLX OPC Configuration Tool, you should Close it.

Note: If you saved your configuration to file, you will now need to load it into the RLX OPC Server.

If you chose the Configure to server method, none of the following steps are necessary. Skip to "Validating Your Configuration."

1 Right click on the **RLX OPC Server** system tray icon and make sure that the server is stopped. If Stop is checked, the server is stopped.

	About
	Password Protect Server
	Configure Server:
	View
	Load
	Clear
	Client Connection:
	Run
	Pause
~	Stop
<b>~</b>	(Conf <mark>Disconnects OPC clients from server.</mark> )
	Close Monitor [Server Remains Active]

- 2 If the server is running, select **Stop** to stop the server.
- 3 Right-click on the **RLX OPC Server** system tray icon and select **Load Configuration.** The "Select Configuration" box opens.
- 4 Navigate to the directory where you saved your file and open it.



When the configuration is finished loading, the Configuration Results dialog will appear.

The Configuration Results dialog describes the configuration that was loaded into the server. Items that are listed green were successfully configured. Red items could not be configured. Select an item in order to see more details about why it could not be loaded.



# 3.4 Validating Your Configuration

Before you attempt to connect to the server with your OPC client, you may want to test your configuration and make sure everything is configured properly.

1 Right-click on the **RLX OPC Server** system tray icon and select **View Configuration.** 

The view pane on the left of the dialog shows you what channels and radios are configured. The view pane on the right shows what tags are configured for each radio.

2 Click Validate to test the configuration.

The server will attempt to communicate to your wireless radios. After a pause, the items in the two view panes will turn green or red. Green items were contacted successfully. Red items could not be contacted.

Radios or channels that remain white have no tags associated with them. No attempt is made to contact these items. Notice that the current values of the tags are also displayed after validating.

Name	Data Type	Value
SoftReset	Command	0
TotFailPac	sksTX Integer	1
TotGoodP	acksTX Integer	375861
TotBytTX	Integer	11474540
UpTime	Unsigned Integ	jer 63538
Associatio	ns Integer	0
ParentMA	C String	00.00.00.00.00.00
MACID	String	00.0D.8D.F0.00.FE
SSID	String	MFG_WA_TEST
FirmVersio	n String	04.21.13.0F
RSSI	Integer	-100

Note: You can re-verify you are connected by pressing validate again. This will update the values.

3 Click **Close** when you are finished.

Notes: Only one process can communicate to a radio at the same time. Attempting to communicate with more than one process at a time can cause unpredictable results. In order to prevent multiple processes from communicating to a radio at the same time, switch the RadioLinx OPC Server into pause mode while running ControlScape. In addition, the validation option on the server will be disabled when the server is running.

# 3.5 Adding a Channel

Wireless radio networks are composed of RadioLinx radios of the same type configured to communicate together. In the server, these networks are represented by channels. A channel is a communications stream for communicating to a specific type or model of radio.

The first step in configuring the server is to add a channel for your wireless network.

#### 1 Click Edit / Add Channel

-or-

Right click on top left pane and select **Add Channel** from the context menu.

A dialog opens.



- 2 Enter a custom name for the channel.
- 3 Select the RadioLinx product that the channel will communicate to from the drop down list.
- 4 Click OK.

Another dialog opens.

5 Enter the settings specific to your radio network into this dialog.

(See also: Channel Settings)

6 Click OK.

A channel with the given name appears in the top left view pane.

# 3.6 Channel Settings

Connection Timeout: The time the server will wait for a response from the radio.

#### 3.6.1 RLX-IH Channel



# 3.6.2 RLX-FHE Channel



## 3.6.3 RLX-FHS Channel

Add Channel	X
	Enter settings for this FHS channel. Name of COM port: COM1 Baud rate: 115200 Parity: None V Data bits: 8 Stop bits: One V
	Handshaking: None
	Timeout (ms): 2000
	Cancel OK

Name of COM port: The label of COM port that you are using to communicate to the radio.

Baud rate: The baud rate of the COM port.

Parity: The parity settings for the COM port.

Data bits: The number of data bits used for communication via the COM port.

Stop bits: The number of stop bits used for communication via the COM port.

Handshaking: The flow control used by the COM port.

Timeout: The number of milliseconds that the server will wait for a response from the radio.

Note: The settings can be copied from the properties window of the COM port that you are using to connect to the radio network.

Note: The settings you enter for your FHS channel must be compatible with your com port.

# 3.6.4 RLX-IFHE Channel



# 3.6.5 RLX-IFHS Channel

Add Channel		×
<b>ProSoft</b>	Enter settings for this IFHS channel. Name of COM port: COM3	
	Baud rate: 115200 Parity: None	
	Data bits: 8 Stop bits: One	•
	Handshaking: None	
	Timeout (ms): 2000	
	<u>Q</u> K <u>C</u> ancel	

## 3.7 Adding a Radio

Purpose: Add radios that are part of your network to server configuration so that OPC clients can monitor radio tags.

- **1** Select appropriate channel.
- 2 Click Edit / Add Radio.

-or-

Right click on appropriate channel / **Add Radio**... "Add Radio" dialog opens.

- 3 Enter a custom name for the radio.
- 4 Enter settings for communicating to radio.

See Radio Settings for more details.

# 3.8 Radio Settings

#### 3.8.1 IH Radios

IP: The IP address of the IH radio to connect to. For more details, browse for radios using the RadioLinx IH Browser.

Port: Defaults to 161. Only change if you have good reason for doing so.

Community: The SNMP community of this radio. Defaults to public. Enter a new value if you have changed the SNMP community of any of your radios.

#### 3.8.2 FHE Radios

IP: The IP address of the FHE radio to connect to. For more details, inspect your ControlScape wireless network settings.

Port: Defaults to 4000. Only change if you have good reason for doing so.

#### 3.8.3 FHS Radios

Radio address: The radio address of the radio to communicate to. For more details, inspect your ControlScape wireless network settings.

#### 3.8.4 IFHE Radios

IP: The IP address of the FHE radio to connect to. For more details, inspect your ControlScape wireless network settings.

Port: Defaults to 4000. Only change if you have good reason for doing so.

#### 3.8.5 IFHS Radios

Radio address: The radio address of the radio to communicate to. For more details, inspect your ControlScape wireless network settings.

#### 3.9 Adding Tags

Purpose: To select specific values to present to OPC clients.

- 1 Select radio.
- 2 Click Edit / Add/Remove Tags.

-or-

Right click on radio or top right pane and select **Add/Remove Tags.** The Add/Remove Tags dialog opens.

- 3 Select the tags you wish to allow clients to monitor and click the ADD button.
- 4 Select the tags you no longer want clients to monitor and click **Remove**.
- 5 Click Add All or Remove All to add or remove all tags.
- 6 Click **OK** for tag changes to be accepted.

## 3.10 Changing the Server's Update Rate

Purpose: To change the update rate of the server.

- 1 Click Edit / Server settings...
- 2 Enter a new refresh rate.
- 3 Click OK.

Warning: It is not advisable to set the refresh rate lower than 3 to 5 seconds.

# 3.11 Adjusting an Existing Radio or Channel

#### 3.11.1 Removing Items

- 1 Select item to remove.
- 2 Click Edit / Remove Item.
- 3 Confirm removal.

-or-

Right-click on item to remove and select **Remove**... from drop down menu.

4 Confirm removal.

-or-

Click File / Clear All to remove all items from the configuration.

#### 3.11.2 Properties

Purpose: To change the settings or rename an existing item.

- 1 Select an item.
- 2 Click View / Properties.
- 3 The Properties dialog opens.
- 4 Make necessary changes.

Click **OK**. -or-Right-click on an item and select **Properties.** 

#### 3.12 OPC Reset Tags / Commands

The following OPC tags behave differently than the rest:

- ResetStats
- SoftReset

These OPC tags are referred to as commands. They are used for sending messages to radios instead of monitoring values.

Commands have 3 possible values: -1, 0, 1.

The default value is 0.

-1 indicates that an error occurred when trying to send a message to a radio.

0 indicates success when trying to send a message to a radio.

1 instructs the server to send the message to the radio.

The value of a command is solely driven by write requests from OPC clients. This value will not be updated except in response to write requests.

To send a specific message to a radio, write a 1 to the respective OPC tag. The server will forward the request to the radio and will then assign the OPC tag a value of 0 or -1. 0 if the request was completed successfully, -1 if it failed.

You can set or clear the status of a command by writing a 0 or -1 value to it. The server will only send the specified message to the radio when the command is set to 1.

## 3.13 Description of OPC "Commands"

#### 3.13.1 ResetStats (RLX-FH radios)

Clears the following radio values to zero:

- TotBytFwd
- TotBytRev
- TotGoodPacks
- TXPackErrs

#### 3.13.2 SoftReset (RLX-IH radios)

SoftReset causes the RLX-IH radio to reboot. The radio will be temporarily unavailable while rebooting. It is normal for other tags from this radio to change to quality "OPC\_QUALITY\_LAST\_KNOWN" while the radio is unavailable. After 5 to 30 seconds this situation should right itself automatically. Any attempt to send a SoftReset command while the radio is rebooting will fail and SoftReset will get a -1 value from the server.

Rebooting RLX-IH radios causes the following tags to be reset to zero:

- TotBytTX
- TotFailPacksTX
- TotGoodPacksTX

# 4 Security and Password Protection

#### In This Chapter

## 4.1 Password Protection for the Server

#### 4.1.1 Password Protecting the Server

You can create a password for the server in order to prevent anyone from modifying your configuration.

- 1 Right-click on the system tray icon for the ProSoft OPC Server.
- 2 On the context menu that appears, select Password Protect Server...

A dialog opens.

- **3** Enter a password for the server and then retype the password in the confirmation box.
- 4 Click OK.

A confirmation dialog pops up.

You will now be required to enter this password whenever you wish to make any changes to the server.

#### 4.1.2 Removing Server Protection Password

After creating a password for the server, you can choose to remove the password to allow easier access to the server, either temporarily or permanently.

- 1 Right-click on the system tray icon for the ProSoft OPC Server.
- 2 On the context menu that appears, select Password Protect Server.

A dialog opens requesting the current server protection password to continue.

- **3** Enter your server protection password. Remember, this value is case sensitive.
- 4 Click OK.

The Password Protection dialog opens.

5 Click Clear Password to remove password protection.

A confirmation dialog will appear.
# 5 **DCOM Configuration**

#### In This Chapter

*	DCOM Configuration
*	My Computer Properties Checks
*	Component Services
*	RadioLinx OPC Server Properties50

### 5.1 DCOM Configuration

The following are instructions that will enable an OPC client in Windows XP and Windows Vista to connect to the Local or Remote RadioLinx OPC Server.

This connection was performed where the user logged into the Local and the Remote PC. Both PCs are in the same domain. Consult with your IT person about DCOM Configuration for RadioLinx OPC Server when the OPC Server is located on a separate domain from the OPC Client.

Caution: In the following examples the "permissions" have been given to all potential users on the domain. You need to configure permissions to the specific users only, to fully take advantage of the DCOM security options.

#### 1 Click Start / Run. Enter dcomcnfg.exe

Run	<u>?</u> ×
-	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:	dcomcnfg.exe
	OK Cancel Browse

2 Click OK.

Follow this branch for going to My Computer in Component Services window.

3 Console Root / Component Services / Computers / My Computer



4 Right click on **My Computer**. Select **Properties**. This will bring up the My Computer Properties screen.

Note: Verify with your network administrator regarding Allow and Deny checks for each of the following steps.

# 5.2 My Computer Properties Checks

- 1 The next tasks will be to click on each tag, General, Options, Default Properties, Default Protocols, MSDTC and COM Security. Each one will have Allow and Deny checks that need to be made.
- 2 Select **COM Security**. Notice the two fields in dialog box. Click **Edit Default** for Access Permissions.

Default Protocols         MSDTC         COM Security           Access Permissions         You may edit who is allowed default access to applications. You may also set limits on applications that determine their own permissions.         Edit Limits         Edit Default           Launch and Activation Permissions         You may edit who is allowed by default to launch applications or activate objects. You may also set limits on applications that determine their own permissions.         Edit Limits         Edit Default	General	Options	Default Properties
You may edit who is allowed default access to applications. You may also set limits on applications that determine their own permissions. Edit Limits Edit Default Launch and Activation Permissions You may edit who is allowed by default to launch applications or activate objects. You may also set limits on applications that determine their own permissions.	Default Protocols	MSDTC	COM Security
Also set limits on applications that determine their own permissions.           Edit Limits         Edit Default           Launch and Activation Permissions         You may edit who is allowed by default to launch applications or activate objects. You may also set limits on applications that determine their own permissions.	Access Permissions -		
aunch and Activation Permissions You may edit who is allowed by default to launch applications or activate objects. You may also set limits on applications that determine their own permissions.			
You may edit who is allowed by default to launch applications or activate objects. You may also set limits on applications that determine their own permissions.		Edit Limits	Edit Default
	You may edit who i activate objects. Yo	is allowed by default to la 'ou may also set limits on	
	You may edit who i activate objects. Yo	is allowed by default to la ou may also set limits on n permissions.	applications that
	You may edit who i activate objects. Yo	is allowed by default to la ou may also set limits on n permissions.	applications that
	You may edit who i activate objects. Yo	is allowed by default to la ou may also set limits on n permissions.	applications that
	You may edit who i activate objects. Yo	is allowed by default to la ou may also set limits on n permissions.	applications that
	You may edit who i activate objects. Yo	is allowed by default to la ou may also set limits on n permissions.	applications that

Select **Allow or Deny** per your installation / application requirements. **Unsure?** Contact your IT or network administrator.

Access Permission	? 🛛	Access Permission	? 🛛
Default Security		Default Security	
<u>G</u> roup or user names:		Group or user names:	
SELF		SELF	
Permissions for SELF	Add <u>B</u> emove	Permissions for SYSTEM	Add <u>B</u> emove
Local Access Remote Access		Local Access Remote Access	
	OK Cancel		OK Cancel

3 Click Edit Default for Launch Permissions. Click on each group and select Allow or Deny.

Launch Permission		?×
Default Security		
Administrators (NGRGAS46 INTERACTIVE INTERACTIVE INTERACTIVE	00TEST\Administr	ators)
	Add	Remove
Permissions for Administrators	Allow	Deny
Local Launch Remote Launch Local Activation Remote Activation	$\mathbf{N}$	
I	OK	Cancel

# 

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Launch Permission		?×	Launch Permission	?
Default Security			Default Security	
Group or user names:			<u>G</u> roup or user names:	
Administrators (NGRGAS460 INTERACTIVE SYSTEM	00TEST\Administrato	ors)	Administrators (NGRGAS4     Administrators (NGRGAS4     MINTERACTIVE     MINTERACTIVE     SYSTEM	IGOOTEST\Administrators)
Permissions for INTERACTIVE	Add	<u>R</u> emove	Permissions for SYSTEM	Add <u>R</u> emove
Local Launch Remote Launch Local Activation Remote Activation	N N N		Local Launch Remote Launch Local Activation Remote Activation	
	ОК	Cancel		OK Cancel

4 Click Security Limits for Access and Launch Permissions. Click on each group to select **Allow or Deny.** 

Access Permission		?×	Access Permission		?×
Security Limits Group or user names: MANONYMOUS LOGON E Everyone			Security Limits Group or user names: ANONYMOUS LOGON		
Permissions for ANONYMOUS LOGON Local Access Remote Access	Add Allow	Remove	Permissions for Everyone Local Access Remote Access	Add Allow	Remove Deny
	ОК	Cancel		OK	Cancel

aunch Permission Security Limits Group or user names:		×?	Launch Permission Security Limits Group or user names:	
Administrators (NGRGAS46	Add	<u>R</u> emove	Administrators (NGRGAS4	Add <u>B</u> emove
Local Launch Remote Launch Local Activation Remote Activation	NUW V V		Local Launch Remote Launch Local Activation Remote Activation	
	OK	Cancel		OK Cancel

5 Click **Default Properties**. Click on your selection. Then, select **Options** and complete menus.

My Computer Properties 🛛 😨 🔀
Default Protocols MSDTC COM Security General Options Default Properties
Enable Distributed COM on this computer     Enable COM Internet Services on this computer     Default Distributed COM Communication Properties
The Authentication Level specifies security at the packet level. Default Authentication Level:
Connect The impersonation level specifies whether applications can determine who is calling them, and whether the application can do operations using the client's identity.
Default Impersonation Level:
Identify
Security for reference tracking can be provided if authentication is used and that the default impersonation level is not anonymous. Provide additional security for reference tracking
OK Cancel époky

Default Protocols MS General Options	DTC COM Security Default Properties
ansaction Timeout Fransaction timeout (seconds):	[EI
port	
Application Proxy <u>B</u> SN:	
Check local store when choosing	partition for user
Check local store when choosing	partition for user
Check local store when choosing	partition for user
Check local store when choosing	partition for user
Check local store when choosing	partition for user

6 Select MSDTC, Default Protocols and General and complete each.

General		ptions	Def	ault Properties
Default Proto	icols	MSDTC		COM Security
lefault Coordin I ∐se local o				
Eenole <u>H</u> ost	<b>_</b>			Select
A DESCRIPTION AND A D	(Currently own	ned by NGRGAS	4600TE	5T)
Location:	C:\WINDO	WS\system32\M	SDtc	Browse
<u>C</u> apacity:	4	МВ		<u>R</u> eset log
lient Network <u>I</u>	Protocol Confi	guration		
CP/IP				
		DTC version 03. 4 - 12/15/2006	01.00.44	14
<u>S</u> lau	Stop			
ransaction Cor	nfiguration ···	Tracing	) Options	
Security Co	onfiguration		Tracing	Options

My Computer Properties
General Options Default Properties Default Protocols MSDTC COM Security
DCOM Protocols
Connection-oriented TCP/IP
The decision of the addression of the second s
Add <u>Remove</u> Nove 100 Move Down Properties
Description
The set of network protocols available to DCOM on this machine. The ordering of the protocols reflects the priority in which they will be used, with the top protocol having first priority.
OK Cancel Apoly

My Computer Properties	5	? 🔀
Default Protocols General	MSDTC Options	COM Security Default Properties
	EST	
Description:		
L		
	ОК	Cancel Apoly

### 5.3 Component Services

1 Go to **DCOM Config** folder and right click on **OpcEnum** and select "**Properties**."

File Action View Window Help		_8
► → 🖻 🗷 🖀 🖉 😫 🟪 🏪		
Console Root	DCOM Config	
🛛 🙆 Component Services	Name	Application ID
🖻 🦲 Computers	MMC Application Class	{49B2791A-B1AE-4C90-9B8E-E860B
🖻 🛄 My Computer	Mobsync	{6295DF2D-35EE-11d1-8707-00C04
COM+ Applications     DCOM Config	MSDAINITIALIZE	{2206CDB0-19C1-11D1-89E0-00C0+
DECM Conrig      Distributed Transaction Coordinator	( MSMQ	DCBCADF5-DB1b-4764-9320-9a50
Running Processes	MSSHED	{5F6C4077-12F5-11D3-8CEE-00500
Event Viewer (Local)	naProductManager	{B07BAB64-7807-4A8F-8829-6FF4F
Services (Local)	(Spinetman	{27AF75ED-20D9-11D1-B1CE-0080
See See Here (county	NetMeeting	{5CE55CD8-5179-11D2-931D-0000
	Network Provisioning Service	{39ce474e-59c1-4b84-9be2-2600c3
	OInfoP11	{8C271700-ADBC-4381-B4A2-2E27
	OpcEnum	{13486D44-4821-11D2-A494-3CB3
	OPCSniffer Class	{0FAAE42A-35AF-49d4-B7E5-D4D1
	😵 otkloadr	{C04E4E5E-89E6-43C0-92BD-D3F20
	Outlook Message Attachment	{00020D09-0000-0000-C000-00000
	Outlook Office Finder	{0006F01F-0000-0000-C000-00000
	Paintbrush	{D3E34B21-9D75-101A-8C3D-00AA
	PDFShellInfo Class	{A5090E95-F1E2-41C8-BDA1-5AEB
	PenIMC2	{63CE6D27-426A-41F9-8E51-549C
	PrintFilterPipelineSvc	{76db1bf3-e820-4765-a1b2-0b16a
	RadioLinx_OPC_Server	{9454e6e0-2aa8-e145-8f66-607cc3
	RDSessMgr	{038ABBA4-4138-4AC4-A492-4A3D
	RDSHost	{5123EB69-F99E-461C-B6C3-CE6E8
	Remote Storage Recall Notification Client	{D68BD5B2-D6AA-11d0-9EDA-00A0
	RemoteProxyFactory32 Class	{53362C32-A296-4F2D-A2F8-FD984
	Removable Storage Manager	{D61A27C1-8F53-11D0-BFA0-00A0
	Removable Storage Sink Layer	{0057B183-85ED-4751-A3C7-0DA29
	Removable Storage UI Layer	{003E771E-DF5E-40C0-94A2-4109F
	RSVIEW Activity Logging Editor	{75C53680-7A32-1018-9ECA-04021

2 Select and complete **General** and **Location** tabs.

General	Location	Security	Endpoints	Identity	
App App App A <u>u</u> t	ral propertie dication Nar dication ID: dication Typ nentication I vice Name:	ne: Op {1: e: Lo Level: <mark>N</mark>	cal Service		4-3CB306C10000}

OpcEnum Prope	ties	?	
General Location	Security Endpoints	ts Identity	
application. If you		icate the correct computer for this selection, then DCDM uses the first overide your selections.	
Run applicati	on on the computer whe	nere the <u>d</u> ata is located.	
🔽 Run applicati	on on this computer.		
🗍 Run applicati	on on the <u>following</u> comp	mputer:	
		Erowse	
	ОК	Cancel Apply	

3 Select **Security** tab. For each of the three areas, select **Customize** and **Edit**. For each, you will check **Allow** or **Deny** according to your needs.

# RLX-OPC-SRV ProSoft Software

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eneral Location Security Endpoints Ident	ity	Security		
Launch and Activation Permissions		Group or user names:		
⊂ <u>U</u> se Default		<b>Everyone</b>		
Customize	Edit	INTERACTIVE Reven Grgas (ngrgas@psf		
		SYSTEM		
Access Permissions				
C Use Default			Add	emove
• Customize	E <u>d</u> it	Permissions for Everyone	Allow [	Deny
		Local Launch		
Configuration Permissions		Remote Launch Local Activation		
Configuration Permissions		Remote Activation	<b>v</b>	
C Use Defa <u>u</u> lt				
	Edjt			
<ul> <li>Customize</li> </ul>				
Customize				

Launch Permission		?×	Launch Permission	_	?×
Security			Security		
Group or user names:			Group or user names:		
😥 Everyone			f Everyone		
			<b>MINTERACTIVE</b>		
Neven Grgas (ngrgas@psft.c	omj		Reven Grgas (ngrgas@psft. SYSTEM	comj	
	A <u>d</u> d	<u>R</u> emove	,	Add	<u>R</u> emove
Permissions for INTERACTIVE	Allow	Deny	Permissions for Neven Grgas	Allow	Deny
Local Launch	<ul> <li>Image: A set of the set of the</li></ul>		Local Launch		
Remote Launch			Remote Launch		
Local Activation Remote Activation			Local Activation Bemote Activation	<b>&gt;</b>	
- Hemole Activation			nemote Activation		
	ОК	Cancel		ОК	Cancel

Launch Permission		?×	Access Permission		?×
Security Group or user names: Everyone INTERACTIVE Neven Grgas (ngrgas@ps SYSTEM	sft.com)		Security Group or user names: Security Secu	.com)	
] Permissions for SYSTEM	A <u>d</u> d	<u>R</u> emove	l <u>P</u> ermissions for Everyone	A <u>d</u> d	<u>R</u> emove
Local Launch Remote Launch Local Activation Remote Activation	N N N N		Local Access Remote Access	N N	
	OK	Cancel		OK	Cancel



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Access Permission		?×	Change Configuration Permis	sion	?×
Security Group or user names: Everyone INTERACTIVE			Security Group or user names: Statisticators (NGRGAS460 CREATOR OWNER	0TEST\Administral	tors)
Neven Grgas (ngrgas@p     SYSTEM	sft.com) Add	Remove	CILCATOR OWNER     Everyone     CILCATOR OWNER     CILCATOR     C		Remove
Permissions for SYSTEM	Allow	Deny	Permissions for Administrators	Allow	Deny
Remote Access			Read Special Permissions		
			For special permissions or for adv click Advanced.	anced settings,	Advanced
	ОК	Cancel		ОК	Cancel



Change Configuration Permission	Change Configuration Pe	ermission 🛛 💽 🔀
Security	Security	
Group or user names:	<u>G</u> roup or user names:	
Administrators (NGRGAS4600TEST\Administrators)	🛆 🚺 🕵 Neven Grgas (ngrgas@	9psft.com) 🔼
S CREATOR OWNER	🗧 🛛 🕵 Power Users (NGRGAS	54600TEST\Power Users)
🕵 Everyone	SYSTEM	=
😰 Neven Grgas (ngrgas@pslt.com)	📰 🚽 🚺 🚮 Users (NGRGAS4600T	EST\Users)
	> <	<u> </u>
AddBe	emove	Add <u>R</u> emove
Permissions for Neven Grgas Allow D	eny <u>P</u> ermissions for Power Users	Allow Deny
Full Control	Full Control	
Read 🗹	Bead	
Special Permissions	Special Permissions	
For special permissions or for advanced settings, Adv click Advanced.	ranced For special permissions or fo click Advanced.	r advanced settings, <u>Advanced</u>
OK	Cancel	OK Cancel

ecurity			Security		
Broup or user names:			Group or user names:		
😥 Neven Grgas (ngrgas@psft 🕵 Power Users (NGRGAS460 🕵 SYSTEM		rs)	Neven Grgas (ngrgas@ps     @ Power Users (NGRGAS46     @ SYSTEM		ers)
🕵 Users (NGRGAS4600TEST	"\Users)	-	💯 Users (NGRGAS4600TES	iT\Users)	
<		<u>&gt;</u>	<		<u>&gt;</u>
	Add	<u>R</u> emove		A <u>d</u> d	Remove
Permissions for SYSTEM	Allow	Deny	Permissions for Users	Allow	Deny
Full Control Read Special Permissions			Full Control Read Special Permissions	<b>&gt;</b>	
or special permissions or for adv lick Advanced.	vanced settings,	Advanced	For special permissions or for a click Advanced.	dvanced settings,	Advanced
	ОК	Cancel		ОК	Cancel

#### 5.4 RadioLinx OPC Server Properties

1 Go to DCOM Config and right click on RadioLinx\_OPC\_Server and select "Properties." Then, select each tab; General, Location, Security, Endpoints and Identity. Complete each dialog box for each.

File Action View Window Help		
	A second s	
►→ ∎■ × ☎ ◙ ☎ № ₽		
Console Root	DCOM Config	
Component Services	Name	Application ID
E Computers	Network Provisioning Service	{39ce474e-59c1-4b84-9be2-2600c3
E 🛃 My Computer	OInfoP11	{8C271700-ADBC-4381-B4A2-2E27C
COM+ Applications	OpcEnum	{13486D44-4821-11D2-A494-3CB30
COM Config      Distributed Transaction Coordinator	OPCSniffer Class	{0FAAE42A-35AF-49d4-B7E5-D4D12
	otkloadr	{C04E4E5E-89E6-43C0-92BD-D3F2C
Event Viewer (Local)	Outlook Message Attachment	{00020D09-0000-0000-C000-00000
Services (Local)	Outlook Office Finder	{0006F01F-0000-0000-C000-000000
Sol Heds (Localy	Paintbrush	D3E34B21-9D75-101A-8C3D-00AA
	PDFShellInfo Class	45090E95-F1E2-41C8-BDA1-5AEB6
	PenIMC2	63CE6D27-426A-41F9-8E51-549C1
	PrintFilterPipelineSvc	{76db1bf3-e820-4765-a1b2-0b16a8
	RadioLinx OPC Server	{9454e6e0-2aa8-e145-8f66-607cc3
	RDSessMgr	038ABBA4-4138-4AC4-A492-4A3D
	RDSHost	5123EB69-F99E-461C-B6C3-CE6E8
	Remote Storage Recall Notification Client	D688D582-D6AA-11d0-9EDA-00A0
	RemoteProxyFactory32 Class	53362C32-A296-4F2D-A2F8-FD984
	Removable Storage Manager	, {D61A27C1-8F53-11D0-BFA0-00A0
	Removable Storage Sink Layer	0057B183-85ED-4751-A3C7-0DA29
	Removable Storage UI Laver	{003E771E-DF5E-40C0-94A2-4109F
	RSVIEW Activity Logging Editor	{75C53680-7A32-101B-9FCA-04021
	RSVIEW Activity Logging Server	{8F8AE740-F32D-101A-B011-04021
	RSVIEW Alarm Database Editor	{7ad63500-a0ae-101b-80de-040210
	RSVIEW Alarm Editor	{F1FFD5E0-7D32-101B-82AF-04021
	RSVIEW Alarm Logging Viewer	{0FC14780-A3ED-101C-BA86-04022
	RSVIEW Alarm Quarterback	{30D41900-EFE6-101A-82AF-04021
	RSVIEW Alarm Summary	{3EA26600-2C94-101B-82AF-04021
	RSVIEW Alarm Suppressed List	{9B2D4140-73EF-101B-82AF-04021
	BSVIEW Channel Editor	{3B2C5861-8062-101B-624-04021
		Show Sharry Sally Filleran Filler

Note: As you walk yourself through each dialog box, verify decisions with your IT person or administrator for your environment.

neral Location Sec	urity Endpoints Identity
General properties of th	his DCOM application
Application Name:	RadioLinx_OPC_Server
Application ID:	{9454e6e0-2aa8-e145-8f66-607cc3c203f9}
Application Type:	Local Service
Authentication Level:	None
Service Name:	RadioLinx_OPC_Server

ieneral Locati	on Security	Endpoints	Identity	
	ou make more	than one se	lection, then	ct computer for this DCOM uses the first elections.
I Run applica ✓ Run applica	tion on the c		re the <u>d</u> ata is	located
	- tion on the <u>f</u> c		outer:	
				Browse

## RLX-OPC-SRV ProSoft Software

RadioLinx® OPC Server for Frequency Hopping and Industrial Hotspot™ Radios

	and the second se		
Access Permissions C Use Default C Customize Edit	I Permissions for Administrators	A <u>d</u> d Allow	<u>R</u> emove Deny
Configuration Permissions C Use Default C Customize Edit	Local Launch Remote Launch Local Activation Remote Activation		



Launch Permission		?×	Access Permission		?×
Security <u>Group or user names:</u> Administrators (NGRGAS4 Everyone INTERACTIVE SYSTEM	600TEST\Administrato	[5]	Security Group or user names: Everyone SELF SYSTEM		
Permissions for SYSTEM Local Launch Remote Launch Local Activation Remote Activation	Add Allow V V	<u>Bemove</u>	Permissions for Everyone Local Access Remote Access	Add Allow V	Bemove
	DK	Cancel		ОК	Cancel



# RLX-OPC-SRV ProSoft Software

RadioLinx® OPC Server for Frequency Hopping and Industrial Hotspot™ Radios

hange Configuration Permissi	ion	?×	Change Configuration Per	mission	?
Security			Security		
Group or user names:			Group or user names:		
Administrators (NGRGAS4600T CREATOR OWNER Everyone Neven Grgas (ngrgas@psft.cor	m)		Administrators (NGRGAS CREATOR OWNER CEVeryone Neven Grgas (ngrgas@p		itors)
Permissions for Administrators	A <u>dd</u>	<u>R</u> emove	Permissions for CREATOR	A <u>d</u> d	<u>R</u> emove
Full Control	Image: A start of the start		Full Control	<b>V</b>	
Read			Read		
Special Permissions			Special Permissions	<b>V</b>	
For special permissions or for advance	ced settings,	Ad <u>v</u> anced	For special permissions or for a click Advanced.	advanced settings,	Ad <u>v</u> anced

Change Configuration Perm	nission	?×	Change Configuration Permis	sion	?×
Security			Security		
Group or user names:			Group or user names:		
Administrators (NGRGAS4	600TEST\Administrator	s)	Administrators (NGRGAS460)	DTEST\Administrati	ors)
Everyone     Neven Grgas (ngrgas@ps)	2017년 2017년		Everyone		× ×
		<u>R</u> emove		Add	<u>R</u> emove
Permissions for Everyone	Allow	Deny	Permissions for Neven Grgas	Allow	Deny
Full Control Read			Full Control Read		
Special Permissions			Special Permissions		
For special permissions or for ac click Advanced.	Ivanced settings,	dyanced	For special permissions or for adva click Advanced.	inced settings,	Advanced
	ОК	Cancel		OK	Cancel

Change Configuration Permission	?×	Change Configuration Permis	sion	?×
Security		Security		
Group or user names:		Group or user names:		
Neven Grgas (ngrgas@psft.com)     Power Users (NGRGAS4600TEST\Power Users)     SYSTEM     Users (NGRGAS4600TEST\Users)		Neven Grgas (ngrgas@psft.     Power Users (NGRGAS4600     SYSTEM     Users (NGRGAS4600TEST <sup>1</sup>	)TEST\PowerUse	rs)
	>	<		>
	emove	Permissions for SYSTEM	Add	<u>R</u> emove
Full Control V Read V Special Permissions V		- Full Control Read Special Permissions		
click Advanced.	anced	For special permissions or for adv click Advanced.	-	Advanced
OK	Cancel		ОК	Cancel

Neven Gigas (ngigas@p     Power Users (NGRGAS4     SYSTEM     Users (NGRGAS4600TE	600TEST\PowerUse	ers)
2		
	A <u>d</u> d	<u>R</u> emove
ermissions for Users	Allow	Deny
Full Control Read Special Permissions	VV	
r special permissions or for a	advanced settings,	Advanced

# 6 Connect to Server and Monitor Tags

#### In This Chapter

This chapter provides a few examples of software programs and using the RLX OPC server. They show typical installation and helpful steps.

### 6.1 Matrikon Example

#### 6.1.1 Connections

#### The following procedure will be for a Local Connection.

For the Remote Connection, the user will expand the Network Neighborhood branch and select the appropriate computer in the Network that contains the RadioLinx OPC Server. Then follow the identical sequence as in creating a Local Connection.

2 Select a local (Localhost\\...) or remote (Network Neighborhood) branch to expand.

Matrikon OPC Explorer - [Untitled]						
<u>File Server Group Item View Help</u>						
		2	6 🕑 🖬	R .		
Localhost "\\NGRGASDELL5150"						
Localhost '\\NGRGASDELL5150'     Network Neighborhood	-					
Network Neighborhood						
Server Info			 		Group Inf	in la
	1					-
	1					
						1.

**3** The expanded branch displays the installed and available OPC Servers in the selected computer.

Matrikon OPC Explorer - [Untitled]				_ D ×
<u>File Server Group Item View H</u> elp				
	🍽 🤹 🖻 📥			
Localhost "\\NGRGASDELL5150"				
Cocalhost "(NGR:GASDELL5150"     Gr ArchestrA.FSGateway     Gr ArchestrA.FSGateway     Gr ArchestrA.FSGateway.1     Gr DataLayers.Simulation.1     Gr Matrikon.OPC.ControlLogix.1     Gr Matrikon.OPC.Simulation.1     Gr Matrikon.OPC.Simulation.1     Gr ROSOFT.FH5_OPCServer     Gr RadioLinx_OPC_Server     Gr RadioLinx_OPC_Server     Gr RSLinx CPC Server     Gr RSLinx Remote OPC Server     Other Network Computers				
Server Info			Group Info	

4 Select RadioLinx\_OPC\_Server. Right-click and select Connect to create a connection between Matrikon OPC Client and the RadioLinx\_OPC\_Server.



5 Right-click and select **Add Group** to create a group that will hold Server Tags.

Matrikon OPC Explorer - [Untitled*]				×
File Server Group Item View Help				
2 🐼 🖀 🖻 💣 🏾 🖉 🖉	ᅖ 🕹 🖄 📥	Ŕ		
RadioLinx_OPC_Server				
Coalhost '\WGRGASDELL5150'     GC ArchestrA.FSGateway     GC ArchestrA.FSGateway     GC ArchestrA.FSGateway.1     GC DataLayers.Simulation.1     GC Matrikon.OPC.ControlLogix.1     GC Matrikon.OPC.Simulation.1     GC Merz.OPC_Aspic.1     GC PROSOFT.FHS_OPCServer     CC RSLinx OPC Server     GC RSLinx OPC Server     GC RSLinx Renote OPC Server     Add Group				
Other Network Computers				
Server Info			Group Info	
Server: RadioLinx_OPC_Server				
Connected: Yes				
State: Running Groups: 0 Current Local Time: 2/1/2007 8:45:47 AM Update Local Time: 2/1/2007 8:45:14 AM Bandwidth Usage: 0				

6 Enter a Group Name. Modify options as desired, and then click OK to accept the Selections.

🚔 Add Group					?×
New Group Settir	ngs:				
Group <u>N</u> ame:	Type Group Name here	e	🔽 Create Active		ОК
Update Rate:	1000	(msec)	Asynchronous I/O	•	Cancel
% <u>D</u> eadband:	0	(Full Scale)			
Time <u>B</u> ias:	(GMT-08:00) Pacific Ti	ime (US & Canada); T	ijuana	·	

The new group is created (Group\_1).

7 Right click on **Group\_1** and select **Add Items**. This will enable specific Tag selection.

RadioLinx® OPC Server for Frequency Hopping and Industrial Hotspot™ Radios



8 Expand the branches in the "Available Items in Server 'RadioLinx\_OPC\_Server':" field to display the available Server Tags.

📩 MatrikonOPC Explorer (Group_1)	?×
<u>File E</u> dit <u>V</u> iew	
メ 🏘 🗙 🔳 🎽 🖻 🥌	
Tag Entry	Tags to be added:
Item ID:	
Data Type: Empty/Default 💌 🔽 Create Active	
Access Path:	
Eilter: Data Type Filter: Empty/Default	
☐ Write Access ☐ Read Access ☐ Branches ☐ Items	
Available Items in Server 'RadioLinx_OPC_Server':	
П П	
🧰 Available Tags	
Associations	
1000 BitErrRate	
1000 ParentAdd 1000 ResetStats	
100 RSSI	
W SerialNum	
SignalToNoise	
100 TotBytFwd	
TotBytRev	
100 TotGoodPacks	
1000 TxPackErrs	
	li.

**9** Right click (Highlight) on Available Tags field empty section to add All tags, or right click over a specific Tag to add specifically it to the list for monitoring.



**10** Tags that will be added to the OPC client.

MatrikonOPC Explorer (Group_1)	? <u>×</u>
le Edit View	
🕻 🍇 🗙 🔳 🎦 🖻 🚽	
Tag Entry	Tags to be added:
· · · ·	1
TAG Item ID:	
Data Type: Empty/Default 🔽 🔽 Create Active	
Access <u>P</u> ath:	
Filter: Data Type Filter: Empty/Default 💌	
□ Write Access □ Read Access □ Branches □ Items	
Available Items in Server 'RadioLinx_OPC_Server':	
🚥 Available Tags	
Messociations	
100 FirmVersion	
100 MACID	
100 ParentMAC	
100 RSSI	
100 SoftReset	
5SID	
TotBytTX Edit Item ID	
TotFailPacksTX Add to Tag List	
TotGoodPacksTX Add All Items to Tag List	
100 UpTime	
d all items to the tag list using the data type, active state, and access pat	-, h settings listed above.

**11** Click on the **Clipboard icon** to Validate the Tags. A *green checkmark* next to the Tag icon in the "Tags to be added:" field indicates that it is a Valid tag.

12 Click the **Red X** icon to Close the Item Browser and add the Selected Items to the Client Monitor.



13 The selected RadioLinx OPC Server tags are being monitored by Matrikon OPC Explorer.

Matrikon OPC Explorer - [Untitled*]							_ 🗆
<u>File Server Group Item View Help</u>							
免 🚳 🖆 🚔 🔗 🗙 📴 💌 比 🖄							
Group_1	Contents of 'Group_1'						
🖃 🗑 Localhost '\\NGRGASDELL5150'	Item ID	Access Path	Value	Quality	Timestamp	Status	
ArchestrA.F5Gateway	11. IH. Associations		0	Good, non-specific	2/1/2007 9:03:15 AM	Active	
	11. IH. FirmVersion		04.13.12.0E	Good, non-specific	2/1/2007 9:03:15 AM	Active	
OR DataLayers.Simulation.1	11.IH.MACID		00.0D.8D.F0.00.06	Good, non-specific	2/1/2007 9:03:15 AM	Active	
HilscherGmbH.CifOpcServer	11. IH. ParentMAC		00.00.00.00.00.00.00	Good, non-specific	2/1/2007 9:03:15 AM	Active	
Matrikon.OPC.ControlLogix.1	1H.IH.RSSI		0	Good, non-specific	2/1/2007 9:03:15 AM	Active	
	10 IH.IH.SoftReset		0	Good, non-specific	2/1/2007 7:43:30 AM	Active	
PROSOFT.FH5_OPCServer	1H.IH.SSID		PAIR_0	Good, non-specific	2/1/2007 9:03:15 AM	Active	
□-X RadioLinx_OPC_Server	1H.IH.TotBytTX		21102267	Good, non-specific	2/1/2007 9:03:15 AM	Active	
	11. IH. TotFailPacksTX		0	Good, non-specific	2/1/2007 9:03:15 AM	Active	
OFC RSLinx OPC Server	11. IH. TotGoodPacksTX		643231	Good, non-specific	2/1/2007 9:03:15 AM	Active	
CTC RSLinx Remote OPC Server	1H.IH.UpTime		1259034	Good, non-specific	2/1/2007 9:03:15 AM	Active	
🗈 🚯 Network Neighborhood							
Other Network Computers							
-	•						
Server Info					Group Info		
Server: RadioLinx OPC Server				Group: Group 1			
Connected: Yes				Connected (Async I/O): Yes (2.0)			
State: Running				Active: Yes			
Groups: 0				Items: 11			
Current Local Time: 2/1/2007 9:03:16 AM Jpdate Local Time: 2/1/2007 9:02:27 AM Bandwidth Usage: 0				Current Update Rate: Percent Deadband: 0.			

There is one Tag that may be controlled from the Matrikon OPC Explorer. That tag is labeled "SoftReset".

This is the example on how to activate the SoftReset tag.

1 Right-Click over the SoftReset Tag. Select the Write Values option.

						_ [	
) 🗐 💥 💁 🛃 🙆							
Contents of 'Group_1'							
Item ID	Access Path	Value		Quality	Timestamp	Status	
11. IH. Associations		0		Good, non-specific	2/1/2007 9:43:55 AM	Active	
11. IH. FirmVersion		04.13.12.0	)E	Good, non-specific	2/1/2007 9:43:55 AM	Active	
11. IH. MACID		00.0D.8D.F	F0.00.06	Good, non-specific	2/1/2007 9:43:55 AM	Active	
11.IH.ParentMAC		00.00.00.0	0.00.00	Good, non-specific	2/1/2007 9:43:55 AM	Active	
1H.IH.RSSI		0		Good, non-specific	2/1/2007 9:43:55 AM	Active	
HIH.IH.SoftReset		0		Good, non-specific	2/1/2007 7:43:30 AM	Active	
11.IH.SSID		PAIR_0	Write Va	lues ic	2/1/2007 9:43:55 AM	Active	
11.IH. TotBytTX		21915205	Deactiva	ite ic	2/1/2007 9:43:55 AM	Active	
11.IH. TotFailPacksTX		0	0.1.1	ic	2/1/2007 9:43:55 AM	Active	
11.IH. TotGoodPacksTX		667380	Delete	ic	2/1/2007 9:43:55 AM	Active	
IH.IH.UpTime		1303462	Propertie	es Alt+Enter ic	2/1/2007 9:43:55 AM	Active	
4							
					Group Info		
				Group: Group_1			
				Connected (Async I,	( <b>0)</b> : Yes (2.0)		
			1	items: 11 Eurrent Update Rate			
	Contents of 'Group_1' Item ID I	Contents of 'Group_1' Item ID Access Path ID Access Path ID H.H. Associations ID H.H. Associations ID H.H. FirmVersion ID H.H. ParentMAC ID ID H.H. ParentMAC ID ID H.H. ParentMAC ID ID H.H. Association ID H.H. SSID ID H.H. TotByetTX ID ID ID H.H. TotByetTX ID I	Contents of 'Group_1'           Item ID         Access Path         Value           IPI-IH-FirmVersion         04 . 13 . 12 . (         0           IPI-IH-FirmVersion         04 . 13 . 12 . (         0           IPI-IH-FirmVersion         04 . 13 . 12 . (         0           IPI-IH-FirmVersion         04 . 13 . 12 . (         0           IPI-IH-FirmVersion         04 . 13 . 12 . (         0           IPI-IH-FirmVersion         04 . 13 . 00 . 00 . 00 . (         0           IPI-IH-IN-FirMVersion         04 . 13 . 00 . 00 . (         0           IPI-IH-FirMVersion         04 . 13 . 12 . (         0           IPI-IH-Stateset         0         0         IPI-IH-Stateset         0           IPI-IH-IN-TotFielPackeTX         21915205         IPI-IH-IN-TotFielPackeTX         0           IPI-IH-IN-TotFielPackeTX         0         IPI-IH-IN-TotFielPackeTX         0           IPI-IH-IN-TotFielPackeTX         667380         IPI-IH-IN-UPTIME         1303462	Contents of 'Group_1'           Item ID         Access Path         Value           Image: Display of the second	Contents of 'Group_1'         Rem ID         Access Path         Value         Quality           IP: II-II: Associations         0         Good, non-specific         Good, non-specific           ID: II-II: FirmVersion         04 . 13 . 12 . 0E         Good, non-specific         Good, non-specific           ID: II-II: FirmVersion         04 . 00 . 00 . 00 . 00 . 00 . 00 . 00 .	Contents of 'Group_1'         Timestamp           Item ID         Access Path         Value         Quality         Timestamp           IP IH-IH-Associations         0         Good, non-specific         2/1/2007 9:43:55 AM           IP IH-IH-Associations         0         0.0 r.F0 .00 .06         Good, non-specific         2/1/2007 9:43:55 AM           IP IH-IH-Associations         0         0.0 r.F0 .00 .06         Good, non-specific         2/1/2007 9:43:55 AM           IP IH-IH-TerrMarcial         0         0.0 r.F0 .00 .06         Good, non-specific         2/1/2007 9:43:55 AM           IP IH-IH-Statest         0         Good, non-specific         2/1/2007 9:43:55 AM           IP IH-IH-Tothkest         0         Good, non-specific         2/1/2007 9:43:55 AM           IP IH-IH-Tothkest         0         Good, non-specific         2/1/2007 9:43:55 AM           IP IH-IH-Tothkest         0         Beactivate         c         2/1/2007 9:43:55 AM           IP IH-IH-Tothkest         0         Deactivate         c         2/1/2007 9:43:55 AM           IP IH-IH-Tothkest         0         Properties         AI+IEnter         c         2/1/2007 9:43:55 AM           IP IH-IH-Tothkest         0         IP Operties         AI+IEnter         c         2/1/2007 9:43:55 AM	Image: Second

2 Enter 1 into the New Value field and Click OK. This action will reset the values of the Following Tags: (TAG1, TAG2...)

/ Wr	ite ¥alues			E	?   ×
Multi	iple Value 💧 Signal	Generator			
	Item ID	Current Value	Data Type	New Value	I
	IH.IH.SoftReset	0	Integer	1	
·					
				el Apply	
					_

## 6.2 **RSView Example**

#### 6.2.1 Connections

The following procedure will be for a Local Connection.

For the **Remote Connection**, refer to **Step 5**. Then follow the identical sequence as in creating a Local Connection.

1 In this example the SE Stand-alone is being demonstrated. Click on **Continue** button.



2 Enter a desired OPC Client name into the "Application Name:" field. Click on Create.

New/Open SE Stand-alo	one Application		×
New Existing			
Application name:	RadioLinx_OPC_Client		
Description:			
Language:	English (United States), e	n-US	Import
RSView Studi	0	<u>C</u> reate	Cancel

**3** After about a minute the following window is generated by RSView Studio program.



4 Right Click over the RadioLinx\_OPC\_Client branch to select the RadioLinx OPC Server.



5 Enter a desired name for the OPC Data Server.

Select **Local** server host, then click on **Browse** button to select RadioLinx OPC Server in installed in the Local Computer. - or -

Select **Remote** server host, then click on **Browse** button to select RadioLinx OPC Server in installed in the Remote Computer.

OPC Data Server Properties	? ×
General Advanced	
Name:	
RLX_OPC_Server	
Description:	
Computer hosting the server	
Computer nosting the server     Server will be hosted on local computer	
C Server will be hosted on remote computer	
localhost Browse.	
OPC Server name (ProgID):	
Brows	)
OK Cancel Apply H	lelp

6 Select the RadioLinx\_OPC\_Server and Click OK.



7 Proper OPC Server has been browsed for and selected. Click OK.

OPC Data Server Properties	? ×
General Advanced	
Name:	
RLX_OPC_Server	
Computer hosting the server	
<ul> <li>Server will be hosted on local computer</li> </ul>	
Server will be hosted on remote computer	
localhost	Browse
OPC Server name (ProgID):	Browse
RadioLinx_OPC_Server	Browse
OK Cancel Apply	Help

The appropriate OPC Server has been added to the project.

RadioLinx® OPC Server for Frequency Hopping and Industrial Hotspot™ Radios



8 Right click over Tags to start creating RSView tags that will be connected to the RadioLinx OPC Server. Select Open.



**9** Enter the desired tag name into "**Name:**" field. Select the RSView Tag **Type**. Click on the **Data Source** Address selection button.

🔏 RSView Studio - SE Stand-alone
Eile Edit Yiew Settings Iools Window Help
Explorer - RadioLinx_DPC_Client X 簡別 A X 音口 ■ A X A X A X A X A X A X A X A X A X A
RLX_OPC_Server         RLX_OPC_Client         RLX_OPC_Client         System         E         Command Line         HMI Tags         Close
Image       Type:       Analog       Security:       Accept         Image       Displays       Description:       Displays       Displays         Image       Images       Maximum:       100       Offset:       0       Data Type:       (Default)       Merry
Images       Maximum:       100       Offset:       0       Data Type:       (Default)       Mew         Parameters       Data Source       Type:       O Device       Memory       Help         Address:       Address:       Images       Images       Images       Images       Help         Trend Snapshots       Address:       Images       Images       Images       Images       Images       Help         Address:       Images       Image
Alam Tag Name Type Suppressed List Logic and Control Derived Tags Events Client Keys Client Keys Logic Alam Tag Name Logic and Control Search For: Alm Tag Name Type I Logic Alam Tag Name Logic Alam Tag Nam Logic Alam Tag Name Logic
Data Log Data Log Models System Policies Networks and Devices Users and Groups Tags - /Radi
OPC_Client (Tag Server) on computer NGRGASDELL5150 is now active.     OPC_Client:RadioLinx_OPC_Client (Tag Server) on computer NGRGASDELL5150 is now active.
**10** Right-click over the selected branch and select Refresh All Folders.

💡 Tag Browser		<u>? ×</u>
Select Tag		
Folders	Contents of '/'	
RadioLinx_OPC_Client	Refresh Folder	Description
i - € - Constanting - Constan	Refresh All Folders	
	Show Server Names	
	New HMI Tag Folder	
Tag filter:		•
Selected Tag		
Home area: /		
	OK Cancel	Help

11 Expand the branches and select **TotBytFwd** RadioLinx OPC Server Tag name. Click **OK** to continue.

🖇 Tag Browser		? ×
Select Tag		
Folders	Contents of V::FH/FH	'
■       RadioLinx_OPC_Client         ■       FH         ■       FH         ■       F5         ●       IH         ●       system	Name Associations BitErrRate ParentAdd ResetStats RSSI SerialNum SignalToNoise TotBytRev TotBytRev TotGoodPacks TxPackErrs	Description
Tag filter:		•
Selected Tag		
FH.FH.TotBytFwd		
Home area: /		
OK	Cancel	Help

**12** The RSView Tag name Total\_Bytes\_Forward has been linked to the RadioLinx OPC Server tag name TotBytFwd. In the Tag group select the (Default) Data Type. Click Accept to Continue.

Total_Bytes_Forwar				
	4			Close
analog 🔄	Security: • •			Accept
				Discard
0 Sca	le: 1	Units:		00000
100 Off	set: 0	Data Type: (befault)	Ð	<u>N</u> ew
				Help
Device C Mem	ory			
FH.FH.TotBytFwd				
				A9m
1	00 Off	Scale: 1 00 Offset: 0 Device C Memory	Scale: 1 Units: 0 00 Offset: 0 Data Type: (Defould) Device C Memory	Scale: I Units: O Offset: D Data Type: (befault) Device C Memory H.PH.Todbythvid

**13** Enter another tag name into Name: field. Select the RSView Tag Type. Click on the Data Source Address selection button.

🔏 RSView Studio - SE Stand-alone	- II X
Elle Edit View Settings Iools Window Help	
<u></u>	
Explorer - RadioLinx_DPC_Client ▲ Main Radio Rest Action Rest Rest Rest Rest Rest Rest Rest Rest	
Cost a function texpose to a function of the function of	
RLX_OPC_Server	
AndioLinx_OPC_Client	
E System	
Cose	
Graphics Accept	
Displays Description:	
Global Objects Minimum: 0 Scale: 1 Units: Discard	
E Libraries E Images Maximum: 100 Offset: 0 Data Type: (Default)	
Parameters	
Trend Spanshots	
Alam Setup	
Logic and Control 1 Total Bytes Forward	
Events	
Macros System	
Client Keys	
Data Log	
System	
🕀 💼 Policies	
표 물 Networks and Devices	
Users and Groups     Tags - /Radi	
📲 🚯 In service. The server RNA://\$Local/RadioLinx_OPC_Client:RadioLinx_OPC_Client (Tag Server) on computer NGRGASDELL5150 is now active. 📰 📃 🖃	Clear <u>A</u> ll
NUM	

Cag Browser		<u>?</u> ×
Folders	Contents of V::FH/	FH'
RadioLinx_OPC_Client	Name Associations BitErrRate ParentAdd ResetStats SerialNum SignalToNoise TotBytFwd TotBytFwd TotBytRev TotGoodPacks TxPackErrs	Description
Tag filter:		•
Selected Tag		1
FH.FH.ResetStats		
Home area: /		
OK	Cance	l <u>H</u> elp

14 Select ResetStats RadioLinx OPC Server Tag name. Click OK.

**15** After clicking on the Accept button, the second sample RSView tag name has been linked with the second RadioLinx OPC Server Tag name (as indicated in this screen capture). Click Close.

		1		ytes_Forward		
earch F	or:	Alm	Tag Na	me	Type	
						■ <u>#</u> #m
Address:	PH.PH.R	isetStats				
	C Device	C Merr	ory			Help
Data Sourc		On	sec: [ 0	Data Type: ((Default)		
Sacimum:	100		set: 0	Data Type: (Default)		New
Vescription: Animum:	0	_	ie: 1	Units:		Next
lype:		E	seconds: 1.	2	_	Brev
	_	_	Security:			
Lame:	Reset_9	altistics				Close

**16** Let's create a display for the two tags link.



Getting ready to create two tag displays.



17 Selecting the RSView tag that has already been linked its RadioLinx OPC Server Tag.

🖇 Tag Browser		? ×
Select Tag Folders	Contents of '/'	
■ General Content         ■ General Content      <	Name Reset_Statistics Total_Bytes_Forward	Description
Tag filter:		<b>•</b>
Selected Tag		
Home area: /		
	ОКС	ancel <u>H</u> elp

**18** Formatting the appearance of the RSView Tag.

Numeric Variable		×
<u>T</u> ag:		
Total_Bytes_Forwa	ď	
<u>N</u> umber of digits:	Decimal places:	<u>Fill left with:</u>
12 🔽	0 💌	None
	ОК	Cancel Help

**19** Formatting of the RSView Text Property.

Text Properties			×
General Common			
Text			
/*N:12 Total_Bytes_	Forward NOFILL	DP:0*/	
		V	
		Insert Variable	
Font:	Size:	B I <u>U</u>	
Back color	Alignment:	Back style:	
Fore color	000	Transparent 🔹	
Size to fit	C C C		
10	Cance	I <u>A</u> pply Help	

20 One Tag's label and RadioLinx OPC Server link has been created.



21 Select the appropriate RSView tag to display the RadioLinx OPC tag's value.

🖗 Tag Browser		<u>? ×</u>
┌ Select Tag		
Folders	Contents of '/'	
RadioLinx_OPC_Client	Name Reset_Statistics	Description
Tag filter: (None)		•
Selected Tag Reset_Statistics Home area: /		
	ОКС	ancel <u>H</u> elp

22 In this example the value must be set to 1.

Command Wizard Step 2 of 2
Syntax: [&]Set [/V] <tag> <value tag></value tag></tag>
Iag: Reset_Statistics
☐ Verify ✓ Asynchronous (Does not wait)
- Set to
Value or Label
C Percentage
C String
© <u>Ω</u> ther tag
Command String: &Set Reset_Statistics 1
Help Cancel < Back Einish

23 Either Press Action or Release Action may be used.

Button Properties	×
General Action Up Appearance Down Appearance Common	
Action:	
Run command	
Press action:	
&Set Reset_Statistics 1	]
Repeat action:	.
<u>R</u> epeat rate (secs): 0.25 Release action:	
	ן נ
OK Cancel Help	

**24** Appearance of the Total Bytes Forward tag's appearance and the Reset Statistics button appearance in the Edit window.



25 Activating the Run Mode. Observe the display of the Total bytes Forward Tag's value as polled by the RSView's OPC Client Run window from the RadioLinx OPC Server communicating to RLX-FHE radio. Click on the **Reset** Statistics button to reset the value of the Total Bytes Forward tag.



**26** The question marks may or may not show up for a few seconds. It will depend on the Ethernet traffic.



27 After a few seconds notice the lower value for the Total Bytes Forward tag. We are not able to observe a value of 0 (zero) because, by the time RLX-FHE radio receives the Command to reset its statistics to the time the Radio receives the pole request from RSView OPC Client to display the reset value, the radio has already incremented it's Total Bytes Forward count.

🔏 RSView Studio - SE Stand-alone	- 🗆 🗵
<u>Eile Edit View Settings Objects Arrange Animation Tools Window H</u> elp	
■ ■ ●   ■ ● ※ ■ 電 縦 田田 句 回 功 됨 및 文 2 박 앱 및	
▶♡4(謎□○○○\▽◇□□○───♥♥♥♥■■■■■■■■■	
╡回♀┇┽⊻┽≍┥┝▼▲¥★ <mark>韓</mark> ╻省┇┇┎ॿ囪⊚∞삨़	
Image: State of the second interview of the sec	
Set Reset_Statistics 1	Clear <u>A</u> ll
For Help, press F1	

# 6.3 WonderWare Example

1 Select or expand the **DAServer Manager**.

🎊 SMC - [ArchestrA System Management Console (NGRGAS)	DELL5150)\DAServer Manager]
File     Action     View     Help       ←     →     €     III     IV     III	
	DAServer Manager Name  DasePC560PCserver

2 Start a new Node Group

💋 SMC - [ArchestrA Sys	stem Management Console (I	NGRGASD	ELL5150)\DAServer Manager]		- 🗆 🗵	
File Action View He	File Action View Help					
← → 🗈 💽 🛃	E. 2					
	gement Console (NGRGASDELL51	50)	DAServer Manager			
DAServer Manager	About DAServer Manager		Name			
E Log Viewer	New 🕨	Node Gr	156OPC server			
	View 🕨					
	Refresh					
	Export List					
	Help		1			
Create a new node group -						

3 Give the **Node Group** a name.



4 Start the selection of a Node (PC in the network) in the Group.

🌈 SMC - [ArchestrA Syst	em Management Conso	le (NGRGASDI	ELL5150)\DAServer Manager\RLX_0	PC_Server]	- 🗆 ×
File Action View Help	)				
← → 🗈 🖬 🗙 🛛	1 🖪 😫				
	ement Console (NGRGASDEI	LL5150)	RLX_OPC_Server		
🖻 🛃 DAServer Manager			Name		
UoePC56OPCserv IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		1	There are no ite	ems to show in this view.	
	New 🔸	Node	1		
	View 🕨				
	Delete				
	Rename				
	Refresh				
	Export List				
	Help				
Create a new node under the	group		-		

**5** Click Browse to see the available Nodes (PCs in the network) that will contain the RadioLinx OPC Server.

New Node		×
Node Name:		Browse
	ОК	Cancel

6 Select the desired Node, and then click **OK** to make the connection to the selected Node.

Browse Nodes	
Domain : 🗊 PSFT	
Node	
S NGRGASDELL5150	
	New Node
	Node Name: NGRGASDELL5150 Browse
OK Cancel	OK Cancel

7 Expand the Node Tree and right-click on the "Add OPC Client."

💋 SMC - [ArchestrA System Management Console (NGRGASD	ELL5150)\DAServer Manager\RLX_DPC_Server\NGRGASDELL5150\ArchestrA.FSGateway.1\Configuration]	_ 🗆 ×
File Action View Help		
Image: The system Management Console (NGRGASDELL5150)         Image: The system Management Console (NGRGASDEL1510)         Image: The system Management Constem (NGRGASDEL1510) <td< th=""><th>Configuration         Image: Star Type: \$ROOT\$       Delimiter:         Global Parameters         Device Group Update Interval (msec):       1000         Slow Poll Interval (msec):       10000         Transaction to Subscription Ratio:       2         Transaction Message Timeout (msec):       50000         Server Protocol Timer (msec):       50         Diagnostic Backlog Size:       0         Poke Mode:       Optimization Mode</th><th></th></td<>	Configuration         Image: Star Type: \$ROOT\$       Delimiter:         Global Parameters         Device Group Update Interval (msec):       1000         Slow Poll Interval (msec):       10000         Transaction to Subscription Ratio:       2         Transaction Message Timeout (msec):       50000         Server Protocol Timer (msec):       50         Diagnostic Backlog Size:       0         Poke Mode:       Optimization Mode	
Adds a OPC Object under this hierarchy level		

8 Name the configuration in the left pane and in the right pane for the 'Server Name:' field select RadioLinx\_OPC\_Server. Then click on the blue floppy icon to save the configuration.

💋 SMC - [ArchestrA System Management Console (NGRGASD	ELL5150)\DAServer Manager\RLX_OPC_Server\NGRGASDELL5150\ArchestrA.FSGateway.1\Configuration\FHE]	
File Action View Help		
Archest A System Management Console (NGRGASDELL5150)  DAServer Manager  Andrest A System Management Console (NGRGASDELL5150)  DAServer Manager  NGRGASDELL5150  Configuration  Configurat	FHE         Image: Server Node:       Locahost         Server Node:       Locahost         Server Name:          Server Name:          Archestel, FSGaleway, 1       Dadu.gers.Smuldton 1         Hitcherglinter LidgpcServer, 1       Matiken, OPC Cornol.ogu 1         Matken, OPC Cornol.ogu 1       Matiken, OPC Server, 1         Matken, OPC Server       Hosting RCL and Restrict PC Server         Filter RPC Server       RSLine Remote OPC Server	

9 Add an OPCGroup Object to the newly created configuration.

💋 SMC - [ArchestrA System Management Console (NGRGASE	DELL5150)\DAServer Manager\RLX_OPC_Server\NGRGASDELL5150\ArchestrA.FSGateway.1\Configuration\FHE]	
File Action View Help		
AchestrA System Management Console (NGRGASDELL5150)      DAServer Manager      DAServer Manager      RX_OPC_Server      RX_OPC_Server      RX_OPC_Server      AchestrA.FSGateway.1      Configuration      Add OPCGroup Object      View      Delete     Rename      Hep	PHE         Yode Type: OPC       Delimiter: .         FHE Parameters         Server Node:       locahost         Server Name:       RadioLino_OPC_Server         Reconnect Attempts:       3         Reconnect Period:       30000         ms       If Activate Server Out of Proc	ſ .
Adds a OPCGroup Object under this hierarchy level		

10 New OPC group has been created. Click on the 'Browse OPC Items' button to select tags from the RadioLinx OPC Server.

🖉 SMC - [ArchestrA System Management Console (NGRGASDE	ELL5150)\DAServer Manager\RLX_OPC_Server\NGRGASDELL5150\ArchestrA.FSGateway.1\Configuration\FHE\ 💶 🗙
File Action View Help	
← → E II × 2	
Archestra System Management Console (WGRGASDELL5150)  Archestra System Management Console (WGRGASDELL5150)  DoBCSGOPCGenver  NoRCASDELL5150  KorcAsDELL5150  KorcAsDELL5150  File  Configuration  File  DoB File  DoB Viewer  Configuration  Configuration  DoB File  DoB Viewer  Configuration  C	FHE         FHE Parameters       Device Group Name:         Device Group Name:       FHE_FHE         Update Rate:       1000 ms         OPC Item ID Prefix

**11** Expand the Selected OPC Server Tree. In the upper right pane, select all Tags and right-click to add the OPC Server Tags to the Basket.

🚟 OPC Item Browser (Server : R	adioLinx_OPC_Serv	er on localhost)	X
Branches	Available Items : 11		Ŧ
छि Root ⊡िछि FHE ⊡िछि FHE	Associations     BitErrRate     ParentAdd     ResetStats     SerialNum     SignalToNoise     TotBytRev     TotBytRev	TxPackErrs Properties Add to Basket	
Basket (Selected Items)			×
	OK	Eilter Cance	I
Add selected items to Basket by drag-	drop, 'Enter' key, right-	click menu or '+' button.	

**12** Click **OK** to add the Tags in the Basket to the Device Items.

🔚 OPC Item Browser (Serv	ver : RadioLinx_OPC_Serve	r on localhost)	×
Branches	Available Items : 11		Ð
Noot GHE I-N FHE FHE	Associations BitErrRate ParentAdd ResetStats RSSI SerialNum SignalToNoise TotBytFwd TotBytRev TotBoodPacks	TxPackErrs	
Basket (Selected Items) : 11			×
<ul> <li>FHE.FHE.Associations</li> <li>FHE.FHE.BitErrRate</li> <li>FHE.FHE.ParentAdd</li> <li>FHE.FHE.ResetStats</li> <li>FHE.FHE.RSSI</li> <li>FHE.FHE.SerialNum</li> </ul>	<ul> <li>FHE.FHE.SignalToNoise</li> <li>FHE.FHE.ToBytFwd</li> <li>FHE.FHE.ToBytRev</li> <li>FHE.FHE.TotGoodPacks</li> <li>FHE.FHE.TxPackErrs</li> </ul>		
	<u>ок</u>	<u>F</u> ilter	Cancel
Browsing items of RadioLinx_OF	C_Server on node localhost		

Tags have been added to the OPC group.

🎊 SMC - [ArchestrA System Management Console (NGRGAS	DELL5150)\DAServer Manager\RLX_OPC	_Server\NGRGASDELL5150\ArchestrA.FSGateway.1	\Configuration\FHE\ 💶 🗖 🗙
File Action View Help			
← → 🗈 🖬 🗙 😫			
ArchestrA System Management Console (NGRGASDELL5150)  DAServer Manager  RLX_OPC_Server  RLX_OPC_Server  RLX_OPC_Server  RLX_OPC_Server  Configuration  Configuration  Configuration	FHE Node Type: OPCGroup FHE Parameters Device Items Name	Delimiter: . Rem Beference	•
B- Log Viewer	FHE FHE Associations FHE FHE BittimRate FHE FHE ParenAdd FHE FHE RSSI FHE FHE ResetState FHE FHE SenialNum FHE FHE SenialNum FHE FHE SenialNum FHE FHE TotByrRev FHE FHE TotByrRev FHE FHE TotByrRev FHE FHE TotByrRev	FHE FHE Associations FHE FHE BaterMale FHE FHE ParenAdd FHE FHE ResetStats FHE FHE ResetStats FHE FHE SignalToNoise FHE FHE SignalToNoise FHE FHE TotBytRev FHE FHE TotBytRev FHE FHE TotBytRev FHE FHE TotBytRev	

**13** Rename the desired OPC Server Tag names with more descriptive names. This completes the RadioLinx OPC Connection to the Wonderware OPC Client that is to be developed next.

F	HE Parameters Device Items
	Name FHE.FHE.Associations FHE.FHE.BitErnRate FHE.FHE.ParentAdd FHE.FHE.RSSI Reset_Statistics FHE.FHE.SignalToNoise TotalBytes_Forward FHE.FHE.TotBytRev FHE.FHE.TotBodPacks
	FHE.FHE.TxPackErrs

**14** Activate the InTouch Application manager.

🚺 InTouch - Application Manager -							_ 🗆 🗙
<u>File View Tools H</u> elp							
							1
Name	Path	Resolution	Version	Applica	Date Modified	Description	
in Demo Application 1024 X 768	c:\documents and settings\all users\application	$1024 \times 768$	9.5	0	1/24/2007 9:	Demo Application of "Now famous" InTouch Reactor. Shows a batch process and product conveyor system.	
in Demo Application 1280 × 1024	c:\documents and settings\all users\application	$1280 \times 1024$	9.5	0	1/24/2007 9:	Demo Application of "Now famous" InTouch Reactor. Shows a batch process and product conveyor system.	
🙀 an other Demo	c:\work files\testing\radiolinx\tsk00761\wonde	$1280 \times 1024$	9.5	115	2/7/2007 2:0		
[•]							F
No application selected!							-
Ready						NUM	1///

15 Select where to develop the new application.



**16** Create a Directory name for the OPC Client application.

Create New Application	X
	Enter the directory where you want the application to be created. Click 'Next' to continue. RLX_OPC_Client
< <u>[</u>	ack Next > Cancel Help

**17** Create the new application name.

Create New Application	×
	Enter a name and description of the InTouch Application. Click 'Finish' to continue. Name: RLX_OPC_Client InTouchView Application Description: New InTouch application
< <u> </u>	Back Finish Cancel Help

**18** The application new name has been created. Start Window Maker application.

File <u>V</u> iew <u>T</u> ools <u>H</u> elp	r-[c:\work files\testing\radiolinx\tsk00761\v		_opc_cner			رمـــ ۱۹۱۷ ۱۹۱۷
Name	Path	Resolution	Version	Applica	Date Modified	Description
to Application 1024 X 768	c:\documents and settings\all users\application	1024 × 768	9.5	0		Demo Application of "Now famous" InTouch Reactor. Shows a batch process and product conveyor system.
🚾 Demo Application 1280 × 1024	c:\documents and settings\all users\application	$1280 \times 1024$	9.5	0	1/24/2007 9:	Demo Application of "Now famous" InTouch Reactor. Shows a batch process and product conveyor system.
🙀 an other Demo	c:\work files\testing\radiolinx\tsk00761\wonde	$1280 \times 1024$	9.5	115	2/7/2007 2:0	
RLX_OPC_Client	c:\work files\testing\radiolinx\tsk00761\wonde	0 × 0	0	0	2/7/2007 3:2	New InTouch application
1						
RLX_OPC_Client - New InTouch appli	cation					2
art WindowMaker application						NUM

**19** In WindowMaker open up the Tagname Dictionary and crate an appropriate InTouch tag name for connecting to the RadioLinx OPC Server tag name.

InTouch - WindowMaker - C:\WO	RK FILES\TESTING\RADIOLINX\TSK00761\WONDERWARE\RLX_OPC_CLIENT	_ 🗆 ×
File View Special Help		Runtime!
🗅 🚅 🎕 🔙 🍠 🐂 🐰 🛍 (	а́ос <b>а</b> <mark>Аз</mark> <u>А</u> т <u>х</u> <u>х</u> <u>к</u> <u>е</u> е <u>22д 2</u>	
Windows  Scripts  Configure  WindowMaker  WindowWewer  WindowWewer  Kistorical Logging  Wizard/ActiveX Installation  Alarms Alarms  Listorical Logging  Cross Reference  Open  Open	Tagname Dictionary            • Main O Details O Alarms O Details & Alarms O Members             • Mew Restore Delete Save << Select >> Cancel Close          Tagname:       Total_Bytes_Forward         Iype:       I/O Integer         Group:       \$\$ystem         O Read only O Read Write         Comment:       AccessLevel         Log Data       Log Events	
TemplateMaker     SQL Access Manager     SPC		
	■■ 副前柴皿 参 電電 … : 営業営業 電電車= ④ ■	
Ready	X, Y W, H	

**20** In the "Topic Name:" field enter the name as shown in "Device Group Name:" in the OPC Group tab.

Access	RLX			ОК
Node Name:				
				Cancel
Application Nam	e:			Failover
FSGateway				
<u>T</u> opic Name:				
FHE_FHE				
Which grotoco		SuiteLink	O Message i	Exchange
⊂ <u>W</u> hen to advis ○ Advise a		• /	Advise only active	items

21 Select the appropriate Access Name.



22 The InTouch Tag name to the RadioLinx OPC Server tag name.

Tagname Dictionary		×
O Main 💿 Details O Alarms O Details & A	larms C Members	
<u>N</u> ew <u>R</u> estore <u>D</u> elete Saye <u></u> ≤<	<u>S</u> elect ≥> Cancel C	ose
Tagname: Total_Bytes_Forward	<u>Ivpe:</u> I/O Integer	
<u>G</u> roup: \$System	• Read only C Read Write	
Comment: AccessLevel		
🗆 Log Data 🗖 Log Events 👘	🛛 Retentįve Value 🗖 Retentive Para <u>r</u>	neters
Initial Value: 0	Min EU: -9999999	Max EU: 9999998
Deadband: 0	Min Raw: -9999999	Max Raw: 99999999
Eng Units:	Log Deadband: 0	Conversion • Linear • Square Root
Access Name: RLX		
Item: Total_Bytes_Forward		🔲 Use Tagname as Item Name

**23** Create a display that links the InTouch tag name to the RLX OPC Server tag name.

InTouch - WindowMaker - C:\WC	DRK FILES\TESTING\RADIOLINX\TSK00761\WONDERWARE\RLX_OPC_CLIENT	_ 🗆 🗵
<u>File Edit View Arrange Text Line</u>	e <u>S</u> pecial <u>W</u> indows <u>H</u> elp	Runtime!
0 🛩 🐀 🖬 🎒 🗮 🐇 🖻	월 \ゔ <   🚭   🏄 😘   🇞   B Z ⊻   👗 Ă   Ē 幸 ☰   🧕 실	
Windows     RLX_OPC_Client     RLX_OPC_Client     Scripts     Gonfigure     WindowMaker     WindowWiewer     Alarms     Alarms     Distributed Name Manager     Wizard/ActiveX Installation     Alarm Groups     Alarm Groups     Tagname Dictionary     Cross Reference     TemplateMaker     SQL Access Manager     SPC     Access Manager     SPC     Applications	RLX_OPE_Client         Total Bytes Forward: 器	
Ready	X, Y 150 12 W, H 8 16 N	

24 Click on the selected Analog button.

Touch Links	Line Color	Fill Color	Text Color
User Inputs	Discrete	Discrete	Discrete
Discrete	☐ Analog	☐ Analog	🗆 Analog
	Discrete Alarm	Discrete Alarm	🔲 Discrete Alarm
	Analog Alarm	🗖 Analog Alarm	Analog Alarm
Sliders	Object Size	Location	Percent Fill
☐ Vertical	E Height	U Vertical	✓ Vertical
Horizontal	└ Width	Horizontal	Horizontal
Touch Pushbuttons	_ Miscellaneous	Value Display	
Discrete Value	🗖 Visibility	Discrete	
C Action	🗖 🛛 Blink	🔽 Analog	
Show Window	Crientation	🗖 String	
Hide Window	🗖 Disable		
			J

**25** Double-click in the **Expression:** field.

Output -> Analog Expression	
E <u>x</u> pression:	OK
	Cancel
	Clear

**26** Select the desired InTouch Tag name. The selected tag enters the expression field.



- InTouch WindowMaker C:\WORK FILES\TESTING\RADIOLINX\T - U X File Edit View Arrange Text Line Special Windows Runtime! 🗅 😂 🖄 🖬 🕼 🐘 🕹 🛍 🖄 🔿 🤄 🎒 👗 🖪 🕹 😘 👗 🛛 🖉 🔺 🖉 💆 🛆 🛄 💆 R 🖃 🗖 Windows RLX\_OPC\_Client Total Bytes Forward: # E Scripts 🖻 🐁 Configure Reset Statistics: 🎚 🍓 WindowMaker  $\bigcirc$ 👆 WindowViewer 🍓 Alarms / 🍓 Historical Logging +🝓 Distributed Name Manager 🝓 Wizard/ActiveX Installation  $\geq$ 👆 Alarm Groups ß 🐁 Access N 📲 Tagname Dict 0K Т Cross Refere
  TemplateMak Object type: Button Next Link Cancel Touch Links Fill Color Line Color -Text Color **8** 🗄 🗂 Applications Discrete Г Discrete User Inputs Г 10 Discrete Г Г Г Analog Analog Analog В Analog Discrete Alarm Discrete Alarm Discrete Alar String 📕 🛛 Analog Alarm Analog Alar 🗖 🛛 Analog Alarm Г Object Size Location Percent Fill Sliders Height Vertical Г Vertical Horizontal Width Horizontal E Horizontal Miscellaneous Value Display **Touch Pushbuttons** Discrete Value Visibility Discrete E Action Blink Г Analog Show Window Orientation String 🖺 🖸 🔀 ■ 📲 | 🌾 -🔲 Hide Window Г Disable E Tooltip ର୍ 🗨 🗖 🗔 [ W, H 60 30 Г NUM Ready X, Y |160 40
- 27 Connecting the button to the Reset\_Statistics tag.

- **28** Create button and the link from InTouch Client tag to RadioLinx OPCServer tag.
- **29** Double-Click in the large empty field. Select the appropriate InTouch tag.

Touch -> Action Script	<u>- 0 ×</u>
Eile Edit Insert Help	
<u>x</u> B C B C A	
Key and the second s	
Key equivalent	OK
	Cancel
Condition Type: On Left Click/Key Down 💌 Scripts used: 0	
×.	<u>C</u> onvert
	⊻alidate
	Functions
	All
	String
	Math
	System
	Add-ons
	Misc
IF         ELSE         AND         <         <=         =>         >	Quick
THEN         ELSE IF         OR         =         +         ·         ×         /         ;	Help

Message Message Message Message Message Integer		·		
Message Message Message				
Message Message				
Message				
Integer				
Discrete				
	1.9	¢C		
				_
eyer R	1	\$0Y5	tem	- É
	Alarm Integer Message Message Integer eger R	Alarm Integer Message Message Integer eger RLX	Alarm Integer Message Message Integer eger RLX \$5ys	Alarm Integer Message Message Integer eger RLX \$5ystem

**30** Set the controlling tag to a value of 1 that will issue the resetting command to the radio.

■ Touch -> Action Script         File       Edt         Jack Park       Bell         Jack Park       Bell </th <th></th>	
Key equivalent       Ctgl       Shift       Key       None   Condition Type: On Left Click/Key Down  Scripts used: 0	OK Cancel
Condition Type: On Left Click/Key Down Scripts used: 0	Convert Validate Functions All String Math System Add-ons Misc
IF         ELSE         AND         <         ==         >>         >         ><	Quick Help

**31** Run-Time view of the two tags. You are finished.

InTouch - WindowViewer - C:\WORK	FILE 💶 🗵
<u>File Logic Special</u>	Development <u>!</u>
RLX_OPC_Client	
Total Bytes Forward: 4418	
Reset Statistics: 0	

# 7 Support, Service & Warranty

#### In This Chapter

- Return Material Authorization (RMA) Policies and Conditions......100
- LIMITED WARRANTY......101

ProSoft Technology, Inc. (ProSoft) is committed to providing the most efficient and effective support possible. Before calling, please gather the following information to assist in expediting this process:

- 1 Product Version Number
- **2** System architecture
- 3 Network details

If the issue is hardware related, we will also need information regarding:

- 1 Module configuration and contents of file
  - Module Operation
  - Configuration/Debug status information
  - LED patterns
- 2 Information about the processor and user data files as viewed through and LED patterns on the processor.
- **3** Details about the serial devices interfaced, if any.

### 7.1 How to Contact Us: Technical Support

#### Internet

Web Site: http://www.prosoft-technology.com/support E-mail address: support@prosoft-technology.com

#### Asia Pacific

+603.7724.2080, support.asia@prosoft-technology.com Languages spoken include: Chinese, English

#### Europe (location in Toulouse, France)

+33 (0) 5.34.36.87.20, support.EMEA@prosoft-technology.com Languages spoken include: French, English

#### North America/Latin America (excluding Brasil) (location in California)

+1.661.716.5100, support@prosoft-technology.com

Languages spoken include: English, Spanish

For technical support calls within the United States, an after-hours answering system allows pager access to one of our qualified technical and/or application support engineers at any time to answer your questions.

#### Brasil (location in Sao Paulo)

+55-11-5084-5178 , eduardo@prosoft-technology.com Languages spoken include: Portuguese, English

# 7.2 Return Material Authorization (RMA) Policies and Conditions

The following RMA Policies and Conditions (collectively, "RMA Policies") apply to any returned Product. These RMA Policies are subject to change by ProSoft without notice. For warranty information, see "Limited Warranty". In the event of any inconsistency between the RMA Policies and the Warranty, the Warranty shall govern.

# 7.2.1 All Product Returns:

- a) In order to return a Product for repair, exchange or otherwise, the Customer must obtain a Returned Material Authorization (RMA) number from ProSoft and comply with ProSoft shipping instructions.
- b) In the event that the Customer experiences a problem with the Product for any reason, Customer should contact ProSoft Technical Support at one of the telephone numbers listed above (page 99). A Technical Support Engineer will request that you perform several tests in an attempt to isolate the problem. If after completing these tests, the Product is found to be the source of the problem, we will issue an RMA.
- c) All returned Products must be shipped freight prepaid, in the original shipping container or equivalent, to the location specified by ProSoft, and be accompanied by proof of purchase and receipt date. The RMA number is to be prominently marked on the outside of the shipping box. Customer agrees to insure the Product or assume the risk of loss or damage in transit. Products shipped to ProSoft using a shipment method other than that specified by ProSoft or shipped without an RMA number will be returned to the Customer, freight collect. Contact ProSoft Technical Support for further information.
- A 10% restocking fee applies to all warranty credit returns whereby a Customer has an application change, ordered too many, does not need, etc.

# 7.2.2 Procedures for Return of Units Under Warranty:

A Technical Support Engineer must approve the return of Product under ProSoft's Warranty:

- a) A replacement module will be shipped and invoiced. A purchase order will be required.
- b) Credit for a product under warranty will be issued upon receipt of authorized product by ProSoft at designated location referenced on the Return Material Authorization.

# 7.2.3 Procedures for Return of Units Out of Warranty:

- a) Customer sends unit in for evaluation
- b) If no defect is found, Customer will be charged the equivalent of \$100 USD, plus freight charges, duties and taxes as applicable. A new purchase order will be required.

c) If unit is repaired, charge to Customer will be 30% of current list price (USD) plus freight charges, duties and taxes as applicable. A new purchase order will be required or authorization to use the purchase order submitted for evaluation fee.

The following is a list of non-repairable units:

- o 3150 All
- o **3750**
- o 3600 All
- o **3700**
- o 3170 All
- o **3250**
- $_{\circ}$   $\,$  1560 Can be repaired, only if defect is the power supply
- 1550 Can be repaired, only if defect is the power supply
- o **3350**
- o **3300**
- o 1500 All

## 7.2.4 Purchasing Warranty Extension:

- a) ProSoft's standard warranty period is three (3) years from the date of shipment as detailed in "Limited Warranty (page 101)". The Warranty Period may be extended at the time of equipment purchase for an additional charge, as follows:
- Additional 1 year = 10% of list price
- Additional 2 years = 20% of list price
- Additional 3 years = 30% of list price

# 7.3 LIMITED WARRANTY

This Limited Warranty ("Warranty") governs all sales of hardware, software and other products (collectively, "Product") manufactured and/or offered for sale by ProSoft, and all related services provided by ProSoft, including maintenance, repair, warranty exchange, and service programs (collectively, "Services"). By purchasing or using the Product or Services, the individual or entity purchasing or using the Product or Services ("Customer") agrees to all of the terms and provisions (collectively, the "Terms") of this Limited Warranty. All sales of software or other intellectual property are, in addition, subject to any license agreement accompanying such software or other intellectual property.

# 7.3.1 What Is Covered By This Warranty

- a) Warranty On New Products: ProSoft warrants, to the original purchaser, that the Product that is the subject of the sale will (1) conform to and perform in accordance with published specifications prepared, approved and issued by ProSoft, and (2) will be free from defects in material or workmanship; provided these warranties only cover Product that is sold as new. This Warranty expires three years from the date of shipment (the "Warranty Period"). If the Customer discovers within the Warranty Period a failure of the Product to conform to specifications, or a defect in material or workmanship of the Product, the Customer must promptly notify ProSoft by fax, email or telephone. In no event may that notification be received by ProSoft later than 39 months. Within a reasonable time after notification, ProSoft will correct any failure of the Product to conform to specifications or any defect in material or workmanship of the Product, with either new or used replacement parts. Such repair, including both parts and labor, will be performed at ProSoft's expense. All warranty service will be performed at service centers designated by ProSoft.
- b) Warranty On Services: Materials and labor performed by ProSoft to repair a verified malfunction or defect are warranteed in the terms specified above for new Product, provided said warranty will be for the period remaining on the original new equipment warranty or, if the original warranty is no longer in effect, for a period of 90 days from the date of repair.

# 7.3.2 What Is Not Covered By This Warranty

- a) ProSoft makes no representation or warranty, expressed or implied, that the operation of software purchased from ProSoft will be uninterrupted or error free or that the functions contained in the software will meet or satisfy the purchaser's intended use or requirements; the Customer assumes complete responsibility for decisions made or actions taken based on information obtained using ProSoft software.
- b) This Warranty does not cover the failure of the Product to perform specified functions, or any other non-conformance, defects, losses or damages caused by or attributable to any of the following: (i) shipping; (ii) improper installation or other failure of Customer to adhere to ProSoft's specifications or instructions; (iii) unauthorized repair or maintenance; (iv) attachments, equipment, options, parts, software, or user-created programming (including, but not limited to, programs developed with any IEC 61131-3, "C" or any variant of "C" programming languages) not furnished by ProSoft; (v) use of the Product for purposes other than those for which it was designed; (vi) any other abuse, misapplication, neglect or misuse by the Customer; (vii) accident, improper testing or causes external to the Product such as, but not limited to, exposure to extremes of temperature or humidity, power failure or power surges; or (viii) disasters such as fire, flood, earthquake, wind and lightning.

c) The information in this Agreement is subject to change without notice. ProSoft shall not be liable for technical or editorial errors or omissions made herein; nor for incidental or consequential damages resulting from the furnishing, performance or use of this material. The user guide included with your original product purchase from ProSoft contains information protected by copyright. No part of the guide may be duplicated or reproduced in any form without prior written consent from ProSoft.

# 7.3.3 Disclaimer Regarding High Risk Activities

Product manufactured or supplied by ProSoft is not fault tolerant and is not designed, manufactured or intended for use in hazardous environments requiring fail-safe performance including and without limitation: the operation of nuclear facilities, aircraft navigation of communication systems, air traffic control, direct life support machines or weapons systems in which the failure of the product could lead directly or indirectly to death, personal injury or severe physical or environmental damage (collectively, "high risk activities"). ProSoft specifically disclaims any express or implied warranty of fitness for high risk activities.

# 7.3.4 Intellectual Property Indemnity

Buyer shall indemnify and hold harmless ProSoft and its employees from and against all liabilities, losses, claims, costs and expenses (including attorney's fees and expenses) related to any claim, investigation, litigation or proceeding (whether or not ProSoft is a party) which arises or is alleged to arise from Buyer's acts or omissions under these Terms or in any way with respect to the Products. Without limiting the foregoing, Buyer (at its own expense) shall indemnify and hold harmless ProSoft and defend or settle any action brought against such Companies to the extent based on a claim that any Product made to Buyer specifications infringed intellectual property rights of another party. ProSoft makes no warranty that the product is or will be delivered free of any person's claiming of patent, trademark, or similar infringement. The Buyer assumes all risks (including the risk of suit) that the product or any use of the product will infringe existing or subsequently issued patents, trademarks, or copyrights.

- a) Any documentation included with Product purchased from ProSoft is protected by copyright and may not be duplicated or reproduced in any form without prior written consent from ProSoft.
- b) ProSoft's technical specifications and documentation that are included with the Product are subject to editing and modification without notice.
- c) Transfer of title shall not operate to convey to Customer any right to make, or have made, any Product supplied by ProSoft.
- d) Customer is granted no right or license to use any software or other intellectual property in any manner or for any purpose not expressly permitted by any license agreement accompanying such software or other intellectual property.

- e) Customer agrees that it shall not, and shall not authorize others to, copy software provided by ProSoft (except as expressly permitted in any license agreement accompanying such software); transfer software to a third party separately from the Product; modify, alter, translate, decode, decompile, disassemble, reverse-engineer or otherwise attempt to derive the source code of the software or create derivative works based on the software; export the software or underlying technology in contravention of applicable US and international export laws and regulations; or use the software other than as authorized in connection with use of Product.
- f) Additional Restrictions Relating To Software And Other Intellectual Property

In addition to compliance with the Terms of this Warranty, Customers purchasing software or other intellectual property shall comply with any license agreement accompanying such software or other intellectual property. Failure to do so may void this Warranty with respect to such software and/or other intellectual property.

## 7.3.5 Disclaimer of all Other Warranties

The Warranty set forth in What Is Covered By This Warranty (page 102) are in lieu of all other warranties, express or implied, including but not limited to the implied warranties of merchantability and fitness for a particular purpose.

# 7.3.6 Limitation of Remedies \*\*

In no event will ProSoft or its Dealer be liable for any special, incidental or consequential damages based on breach of warranty, breach of contract, negligence, strict tort or any other legal theory. Damages that ProSoft or its Dealer will not be responsible for included, but are not limited to: Loss of profits; loss of savings or revenue; loss of use of the product or any associated equipment; loss of data; cost of capital; cost of any substitute equipment, facilities, or services; downtime; the claims of third parties including, customers of the Purchaser; and, injury to property.

\*\* Some areas do not allow time limitations on an implied warranty, or allow the exclusion or limitation of incidental or consequential damages. In such areas, the above limitations may not apply. This Warranty gives you specific legal rights, and you may also have other rights which vary from place to place.

# 7.3.7 Time Limit for Bringing Suit

Any action for breach of warranty must be commenced within 39 months following shipment of the Product.

# 7.3.8 No Other Warranties

Unless modified in writing and signed by both parties, this Warranty is understood to be the complete and exclusive agreement between the parties, suspending all oral or written prior agreements and all other communications between the parties relating to the subject matter of this Warranty, including statements made by salesperson. No employee of ProSoft or any other party is authorized to make any warranty in addition to those made in this Warranty. The Customer is warned, therefore, to check this Warranty carefully to see that it correctly reflects those terms that are important to the Customer.

# 7.3.9 Allocation of Risks

This Warranty allocates the risk of product failure between ProSoft and the Customer. This allocation is recognized by both parties and is reflected in the price of the goods. The Customer acknowledges that it has read this Warranty, understands it, and is bound by its Terms.

# 7.3.10 Controlling Law and Severability

This Warranty shall be governed by and construed in accordance with the laws of the United States and the domestic laws of the State of California, without reference to its conflicts of law provisions. If for any reason a court of competent jurisdiction finds any provisions of this Warranty, or a portion thereof, to be unenforceable, that provision shall be enforced to the maximum extent permissible and the remainder of this Warranty shall remain in full force and effect. Any cause of action with respect to the Product or Services must be instituted in a court of competent jurisdiction in the State of California.

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