

Getting Results with
RSLinx™

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The instructions in this manual do not claim to cover all the details or variations in the equipment, procedure, or process described, nor to provide directions for meeting every possible contingency during installation, operation, or maintenance.

Preface

Purpose of this document

The *Getting Results with RSLinx™* guide provides you with information on how to install and navigate the RSLinx software. It explains how access and navigate the online help, and how to effectively use the RSLinx software.

Intended audience

We assume that you are familiar with:

- IBM-compliant personal computers
- Microsoft® Windows® operating systems
- OLE for Process Control® (OPC) communication
- Microsoft dynamic data exchange (DDE) messaging
- Allen-Bradley programmable logic controllers (PLC™)
- Rockwell Software's PLC programming tools

How does the getting results guide fit in with other Rockwell Software product documentation?

This getting results guide can be considered the entry point into Rockwell Software's documentation set for this product. The documentation set contains pertinent, easily accessible product information and ships with the software product. This set ships with the software product, and is designed to free you from tedious paper shuffling and reduce information overload.

Other components of the documentation set include electronic release notes and online help.

Online help

The online help includes all overview, procedural, screen, and reference information for the product. The help contains these basic components: overview topics, quick start topics, step-by-step procedures, and screen element descriptions (for example, text boxes, drop-down lists, and option buttons). All of the help is context-sensitive with the application and provides you with immediate access to application tasks and screen element descriptions. Refer to the “Finding the information you need” chapter in this guide for a more detailed description of the online help.

Tip

This getting results guide, as well as any reference guides, are included in a portable document format (PDF) on your RSLinx CD. These files must be viewed using the Adobe Acrobat Reader software, which you can download for free from the Adobe website (www.adobe.com).

Document conventions

The conventions used throughout this document for the user interface comply with those recommended by Microsoft. If you are not familiar with the Microsoft Windows user interface, we recommend that you read the documentation supplied with the operating system you are using before attempting to use this software.

Feedback

Please use the feedback form packaged with your software to report errors or let us know what information you would like to see added in future editions of this document. You can also send an email message to info@software.rockwell.com with any comments about Rockwell’s products and services.

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Welcome to RSLinx

This chapter includes the following information:

- Welcome to RSLinx
- Differences between RSLinx types
- Quick start
- Exploring RSLinx

Welcome to RSLinx

RSLinx for Rockwell Automation Networks and Devices is a comprehensive factory communications solution for the Microsoft Windows XP™, Windows 2000™, Windows Me™, Windows 98™, and Windows NT™ operating systems. It provides Allen-Bradley programmable controller access to a wide variety of Rockwell Software and Allen-Bradley applications. These range from device programming and configuration applications such as RSLogix and RSNetWorx, to HMI (Human-Machine Interface) applications such as RSView32, to your own data acquisition applications using Microsoft Office, web pages, or Visual Basic®. RSLinx also incorporates advanced data optimization techniques and contains a set of diagnostics. Its Application Programming Interface (API) supports custom applications developed with the RSLinx SDK. RSLinx is an OPC Data Access Compliant Server and a DDE server.

Differences between RSLinx types

RSLinx is available in six versions to meet the demand for a variety of cost and functionality requirements. Depending on the version you are running, some functionality may or may not be operational. Refer to the following sections for specific version functionality.

The RSLinx version you are running appears in the title bar at the top of the main window. If a version of RSLinx is installed without the proper activation files, your installation reverts to RSLinx Lite.

RSLinx Lite

RSLinx Lite provides the minimum functionality required to support RSLogix and RSNetWorx. This version is not commercially available, but is bundled with products that require only direct access to the RSLinx network drivers. This version does not support OPC, DDE, or the published RSLinx C Application Programming Interface (API).

RSLinx Lite is used for the following:

- Ladder logic programming using RSLogix products.
- Network and device configuration and diagnostics using RSNetWorx.
- Configuring 1756-ENET, 1756-DHRIO, and 1757-SRM modules.
- Upgrading firmware using ControlFlash.
- Browsing networks and getting device information such as firmware revision.

RSLinx Single Node

RSLinx Single Node includes the required functionality to supply communications services for all Rockwell Software products. OPC and DDE interfaces are supported, but to only one device. It does not support applications developed for the RSLinx C Application Programming Interface (API) or direct drivers in HMI applications. RSLinx OEM or higher is required for these application types.

RSLinx Single Node is used for the following:

- Data acquisition using OPC or DDE to only one device. This includes clients such as RSVIEW32, Microsoft Office, Visual Basic, and web pages.
- Ladder logic programming using RSLogix products.
- Network and device configuration and diagnostics using RSNetWorx.
- Configuring 1756-ENET, 1756-DHRIO, and 1757-SRM modules.

- Upgrading firmware using ControlFlash.
- Browsing networks and getting device information such as firmware revision.

RSLinx OEM

RSLinx OEM includes the required functionality to supply communications services for all Rockwell Software products. OPC and DDE clients are supported for any number of devices. It also supports applications developed for the RSLinx C Application Programming Interface (API).

RSLinx OEM Versions 2.2 and previous versions only supported AdvanceDDE. RSLinx Version 2.3 and subsequent versions support all DDE types except FastDDE.

RSLinx OEM is used for the following:

- Data acquisition using OPC or DDE to any number of devices. This includes clients such as RSView32, Microsoft Office, Visual Basic, and web pages.
- Ladder logic programming using RSLogix products.
- Network and device configuration and diagnostics using RSNetWorx.
- Configuring 1756-ENET, 1756-DHRIO, and 1757-SRM modules.
- Upgrading firmware using ControlFlash.
- Browsing networks and getting device information such as firmware revision.

RSLinx Professional

RSLinx Professional includes the required functionality to supply communications services for all Rockwell Software products. OPC and DDE clients are supported for any number of devices. It also supports applications developed for the RSLinx C Application Programming Interface (API). Additionally, RSLinx Professional contains a data monitor for PLC, SLC, and ControlLogix-based controllers and a ladder logic viewer for PLC and SLC based controllers. RSLinx Professional is great for maintenance and diagnostics. Access your data and ladder logic within RSLinx!

RSLinx Professional is used for the following:

- Monitoring PLC, SLC, or ControlLogix data directly in RSLinx.
- Monitoring ladder logic of PLC or SLC family processors directly in RSLinx.
- Data acquisition using local OPC or DDE to any number of devices. This includes clients such as RSView32, Microsoft Office, Visual Basic, and Web pages.

- Communicating with applications via RSLinx's C-API.
- Ladder logic programming using RSLogix products.
- Network and device configuration and diagnostics using RSNetWorx.
- Configuring 1756-ENET, 1756-DHRIO, and 1757-SRM modules.
- Upgrading firmware using ControlFlash.

RSLinx Gateway

RSLinx Gateway extends RSLinx-based communications throughout the enterprise by connecting clients over TCP/IP networks. Programming and configuration products such as RSLogix and RSNetWorx use a local RSLinx Lite or better with a Remote Devices via Linx Gateway driver configured to communicate to the RSLinx Gateway. Remote HMIs and VB/VBA applications including Microsoft Office can use remote OPC to communicate to RSLinx Gateway for data collection. This allows you to have multiple distributed computers performing data collection without having RSLinx installed on each machine!

In addition to the capabilities provided in the RSLinx Professional version, RSLinx Gateway offers remote connectivity to:

- Multiple RSView32 clients accessing data through one RSLinx Gateway (remote OPC).
- Remote PC running RSLogix connecting to a plant network over a modem for online program changes.
- Remote Microsoft Office applications displaying plant floor data such as Excel.
- A web page displaying plant floor data when the web server and RSLinx are on separate computers.

RSLinx SDK

RSLinx Software Development Kit (SDK) includes documentation and technical support for developing OPC or C-API clients to RSLinx. OPC clients are developed for data acquisition, while C-API clients are typically used for device configuration. A copy of RSLinx OEM is also supplied with RSLinx SDK.

When developing OPC clients to RSLinx, you can use the automation interface or the custom interface supplied with the SDK. The OPC Automation Interface is used for creating OPC clients out of Microsoft Office, Visual Basic, and web pages. The OPC Custom Interface is for use with developing C++ applications.

RSLinx SDK is used to:

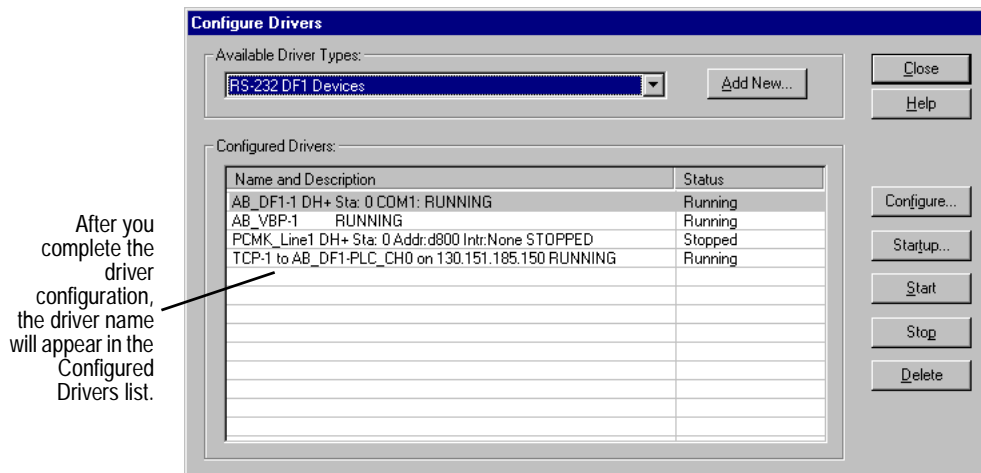
- Develop a VB/VBA client using the OPC Automation Interface. With the SDK, you receive documentation on how to use Automation Interface, development support, and samples.
- Develop a C/C++ client using the OPC Custom Interface.
- Develop a client using RSLinx's C-API by providing access to libraries and documentation.
- Build solutions using RSLinx, which makes it a great resource for OEMs.

Quick start

This section outlines the main tasks you will need to perform to use the RSLinx software. The quick start information included in this guide is intended to be a high-level, conceptual overview. When you are ready to use RSLinx software, follow the detailed procedures found in the Quick Start, which is located in the RSLinx online help. To access the online Quick Start, select Help > Quick Start from within RSLinx. For information about specific controls on RSLinx windows and dialog boxes, right-click on any control.

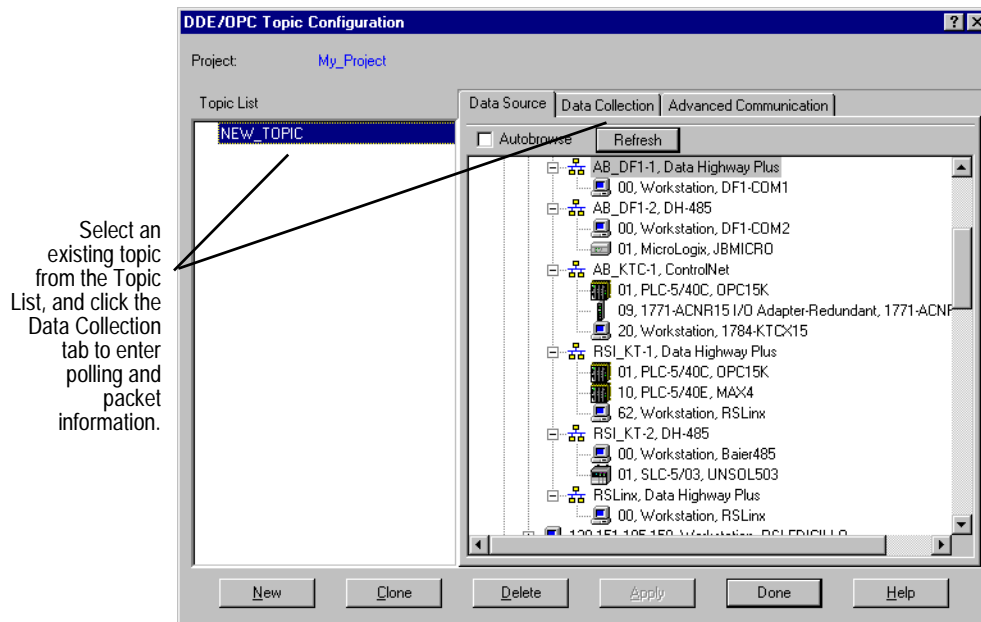
Step 1 – Configure a driver

A driver is the software interface to the hardware device that will be used to communicate between RSLinx and your processor. To configure a driver in RSLinx, select Communications > Configure Drivers. The Configure Drivers dialog box, which is used for adding, editing, or deleting drivers, displays. Select a driver to configure from the Available Driver Types list, click Add New, and complete the information required in the driver configuration dialog box that displays. The driver configuration dialog box varies depending on which driver you select.



Step 2 – Configure a topic

In RSLinx, a project is a storage container for one or more topics, and a topic represents a specific path to a processor. By grouping topics together in a project, you can make multiple topics available at the same time. Projects are created and edited in RSLinx via the Open Project window, and topics are created and edited via the DDE/OPC Topic Configuration window. If you attempt to create a topic without having created a project, a default project is created for you.

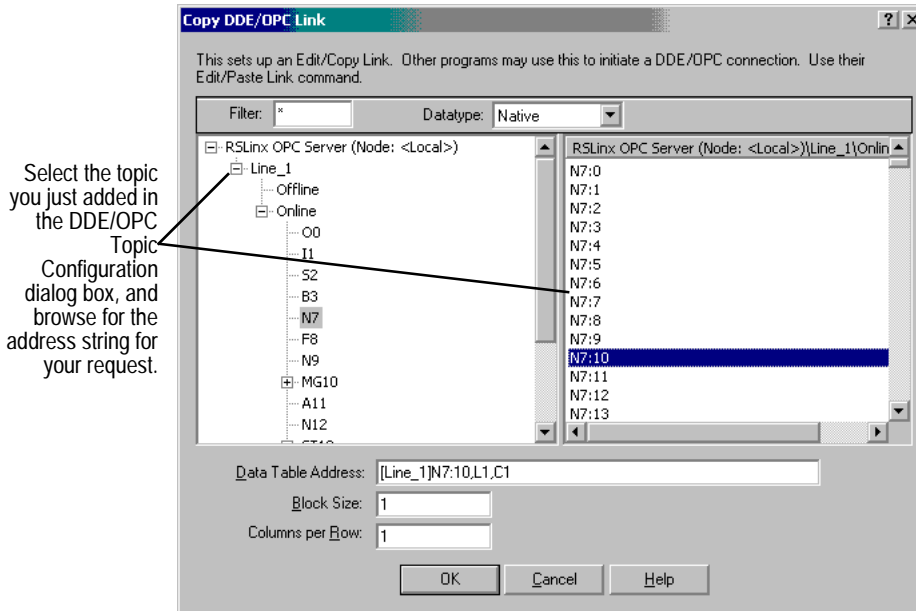


If you selected Configure New DDE/OPC Topic by right-clicking on a station in RSWho, the Topic Name field is pre-filled for you. RSLinx starts with the name of the program running in the processor, and if this topic exists, it adds a number to the end until it finds one that does not exist. If there are any spaces, it converts them to _'s. You can change the topic name RSLinx selected for you.

From the Data Source tab, select the device with which you wish to set up communication. To add a new topic to a project that already has at least one topic configured, click New. To edit an existing topic, select the topic from the list. Use the Data Collection tab to include more detailed information about specific topics.

Step 3 – Copy a link to the clipboard

RSLinx provides a mechanism for easily establishing a link from RSLinx to a compatible program by taking the information needed to create a link and placing it on the Windows clipboard. Some packages support the ability to paste links from the clipboard. The Copy to Clipboard function can be used with these applications only.



The Copy to Clipboard function only establishes hot links from RSLinx, the DDE server, to a Windows DDE client application. The Data Table Address, Block Size, Columns per Row, and selected topic are maintained from the last time that you used this function. Changing these values will have no effect on the last established link.

To use the Copy to Clipboard function, you must choose an RSLinx project, and the selected project must contain topics.

Step 4 – Paste a link from the clipboard

Most Windows applications support a Paste Link operation, and this feature is generally located in the Edit menu.

Go to your application program that supports the Paste Link function. For example, in Microsoft Excel, click on an open cell in a spreadsheet where you would like to place the data, select Edit > Paste Special, select Paste Link, and click OK. The hot link is pasted into the spreadsheet at the location you selected and begins to update. If you do not wish to establish a hot link and only want to place one copy of the data, simply select Paste instead of Paste Link.

Exploring RSLinx

When you start RSLinx, the Rockwell Software RSLinx application window appears. The application window contains a title bar, a menu bar, a tool bar, the application workspace where opened child windows (RSWho, diagnostics, etc.) are displayed, and a status bar.

Title bar

The title bar shows the RSLinx icon, the name of the software product, i.e., Rockwell Software RSLinx Gateway, the RSWho instance number (RSWho - 1 opens by default when you open RSLinx), and the Minimize, Maximize, and Close button.



To view the Control Menu, click the RSLinx icon on the title bar. The following items appear on the Control Menu.

Item	Description
Restore	Restores the window to its former size after you enlarged it by using the Maximize command or shrunk it by using the Minimize command.
Move	Allows you to reposition the window on the desktop using the arrow keys on the keyboard.
Size	Allows you to resize the window by using the arrow keys on the keyboard.
Minimize	Shrinks the window to an icon, which is located on the task bar. This performs the same function as if you clicked the Minimize button on the title bar.
Maximize	Enlarges the window to occupy the entire screen. This performs the same function as if you clicked the Maximize button on the title bar.
Close	Exits the RSLinx application. This performs the same function as if you clicked the Close button on the title bar.

Menu bar

The RSLinx menu bar contains the following menus:

File Edit View Communications Station DDE/OPC Security Window Help








Each menu contains options for performing the following tasks:

Menu	Description
File	Create and open RSLinx projects.
Edit	Copy DDE and OPC links to the clipboard.
View	Set and change RSLinx interface displays, open the Event Viewer, and select the RSWho view.
Communications	Configure drivers, topics, and other RSLinx options, and view driver, DDE, other client application diagnostics.
Station	Perform actions on diagnostic counters and view the Data Monitor.
DDE/OPC	Configure DDE/OPC topics and view event and diagnostic information.
Security	Set security user and access rights.
Window	Arrange RSLinx windows.
Help	View help options for RSLinx and other Rockwell Software products and services.

Toolbar

The toolbar contains shortcuts to several commonly used RSLinx functions. Each toolbar button is a graphical representation of a command that is also available from the RSLinx menu bar. The following items appear on the RSLinx toolbar.



Icon	Menu Selection	Description
	File > Open Project	Displays the currently defined projects and allows you to open a DDE/OPC project.
	Communications > RSWho	Opens an additional instance of RSWho (one instance is opened by default each time you open RSLinx).
	Communications > Configure Drivers	Displays the currently configured RSLinx software drivers and allows you to add additional drivers for use with your hardware devices.
	Communications > Driver Diagnostics	Displays a list of currently configured drivers and provides the option to view diagnostic information for each driver.
	Edit > Copy DDE/OPC Link	Provides the ability to create a DDE/OPC link between RSLinx and a client application such as Microsoft Excel.
	DDE/OPC > Topic Configuration	Allows you to create and modify a DDE/OPC topic, which is a specific path to a processor.
	Help > What's This?	Changes the cursor to an arrow and a question mark to indicate you are in What's This? help mode. Click any screen item to display help text for that item and to exit What's This? help mode.

Application workspace

The application workspace displays open child windows, such as the RSWho and RSLinx dialog boxes.

Status bar

The status bar at the bottom of the RSLinx screen provides information about the current status of your system.



The left area of the status bar is used to pass messages to the user. For example, when you scroll through the items on the menus, a brief description of the function of that menu item appears in this area of the status bar.

The right area of the status bar displays:

- CAP, which is highlighted if the Caps Lock key on your keyboard is toggled for all caps.
- NUM, which is highlighted if the Num Lock key on your keyboard is set to enable the numeric keypad on your keyboard.
- SCRL, which is highlighted if the Scroll Lock key on your keyboard is set.
- The current date from your computer's system clock/calendar.
- The current time from your computer's system clock/calendar.

Installing and starting RSLinx

This chapter explains how to install and start RSLinx software. This chapter includes information on the following:

- system requirements
- installation procedure
- updating an existing installation
- starting procedure
- troubleshooting installation

After installing the software, we recommend that you read the release notes located in the online help. The release notes may contain more up-to-date information than was available when this document was published. To view the release notes, start RSLinx, and then choose **Help > Release Notes** from the main menu.

Tip



If you are running the Windows NT operating system and performing tasks that you will read about in this chapter, you must have Windows NT system administrator privileges and your user account must be a member of the local administrator user group. For more information, contact your system administrator.

Before you begin

Rockwell Software uses a software key to implement copy protection for Windows-based software products. Every software product has a unique key. The key is located in an activation file, which is on a Master disk that was shipped with your software.

You can install the software on any number of computers; however, you are only licensed to run the software on one computer at a time. After you install the RSLinx software, the Setup program will prompt you to insert the RSLinx Master disk into your disk drive. Then, the Move Activation utility will move a unique key from the RSLinx Master disk to your hard disk. If, at a later date, you want to move the activation to another computer, or just remove it altogether, you will have to move the key back onto the Master disk. For more information about moving software keys, copy protection, and software activation, refer to Appendix A in this guide.

System requirements

To effectively use RSLinx, your personal computer must meet the following minimum hardware and software requirements:

Hardware requirements

To install RSLinx software, you will need the following hardware:

- a Pentium 100MHz processor with at least 32 Megabytes (MB) of RAM. This version of RSLinx will not run on Alpha, MIPS, or Power PC processors. The versions of Windows NT for different processors are not binary-compatible.
- at least 35 MB of available hard drive space; more hard disk space may be required for specific application features.
- a 16-color, SVGA display with 800 by 600 or greater resolution.
- a mouse or other Windows-compatible pointing device.
- an Ethernet card and/or Allen-Bradley communications device or cable.

Software requirements

RSLinx is only supported on the following environments:

- Microsoft Windows XP
- Microsoft Windows 2000.
- Microsoft Windows Me (Millennium Edition).
- Microsoft Windows 98.
- Microsoft Windows NT Version 4.0 (Service Pack 3 or later recommended).
Because RSLinx takes advantage of features not available in Windows NT prior to Version 4.0, RSLinx is only supported on Windows NT Version 4.0 or later.

Installing RSLinx software

You can install one or more Rockwell Software products to a single personal computer.

Tip

While installing RSLinx software, you will have the opportunity to specify a directory. The suggested default directory is

`x:\Program Files\Rockwell Software\RSLinx`

where *x* is the letter of the drive to which you are installing RSLinx.

We recommend that you use the default directory whenever possible.

In procedures that appear throughout this document, it is assumed that you used the default name. If you did not use the default name, substitute the actual name you specified for the default name shown.

To install RSLinx software, perform the following steps:

1. Start your Windows operating system if it does not start automatically.
2. Insert the RSLinx CD-ROM into the CD-ROM drive.

If autorun is:	Then:
enabled	The Setup program starts automatically and the RSLinx opening screen appears. Proceed to step 3.

disabled	Perform the following steps: <ol style="list-style-type: none"> a. Click Start, and then click Run. The Run dialog box appears. b. In the Open control, type x:\setup, where <i>x</i> is the letter of the drive containing the RSLinx CD-ROM, and click OK. The RSLinx opening screen appears.
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3. Follow the instructions that appear on the screen.
 - **On the RSLinx installation dialog box** Click **Release Notes** to ensure your system meets the minimum requirements and to learn about new features included with this version of RSLinx. After you have read the Release Notes, click **Install RSLinx**.
 - **On the Welcome dialog box** Read the RSLinx introductory information, and then click **Next**.
 - **On the Software License Agreement dialog box** Read the entire Software License Agreement. Enable **I accept the terms in the license agreement** and click **Next** to accept and continue installation, or enable **I do not accept the terms in the license agreement** and click **Next** to decline and exit the installation.
 - **On the Customer Registration Information dialog box** Type your user name, the name of your organization, and the serial number of your RSLinx software, and then click **Next**.

Tip



You can find the serial number on the product box label or the CD-ROM case.

- **On the Standard Setup dialog box** Select the RSLinx options you wish to install. You have options such as selecting a destination directory other than the default location, and selecting specific EDS files. Click **Next**.
- **On the Ready to Install the Program dialog box** Click **Install** to start the RSLinx installation process.
- **On the InstallShield Wizard Complete dialog box** Specify if you wish to install activation and click **Finish**. RSLinx reverts to the Lite version if the proper activation is not installed. You must restart your computer before using RSLinx. The RSLinx installation is complete.

- **On the EVMOVE dialog box** If you choose to install activation, insert the Master disk into the 3.5-inch disk drive. Follow the instructions that appear on the screen to activate the RSLinx software. For more information on activation, refer to Appendix A in this guide.
4. When you are finished installing the software, remove the RSLinx CD-ROM from the CD-ROM drive and the Master disk from the disk drive. Store them in a safe place.

Updating an existing installation

Perform the following steps to update an existing RSLinx installation:

1. Insert the RSLinx CD-ROM into the CD-ROM drive and click **Next** on the Welcome dialog box.
2. On the Program Maintenance dialog box, enable **Remove** to remove RSLinx from your computer.
3. Click **Yes**, and then **Backup** to backup your drivers and topics. Click **Close** to close the Backup/Restore dialog box.
4. Click **Yes** to remove EDS files from your computer.
5. At the Remove the Program dialog box, click **Remove** to confirm the uninstall procedure.
6. After the uninstall procedure is complete, click **Finish**.
7. Refer to the “Installing RSLinx Software” section to install the updated version of RSLinx. To restore the drivers and topics you backed up in step 3, click Start, and then select **Programs > Rockwell Software > RSLinx > Backup Restore Utility**.

Tip

If activation was previously installed, it is not necessary to move the activation. If activation was not previously installed, insert the Master disk into the 3.5-inch disk drive and follow the instructions that appear on the screen. For more information on activation, refer to Appendix A in this guide.

Starting RSLinx software

To start RSLinx software, click Start, and then select **Programs > Rockwell Software > RSLinx > RSLinx**.

Tip

We assume that you used the default names for the directory and program group. If you did not use the default names, substitute the actual names that you specified for the default names shown.

Troubleshooting installation

If RSLinx does not start or run properly, consider the following:

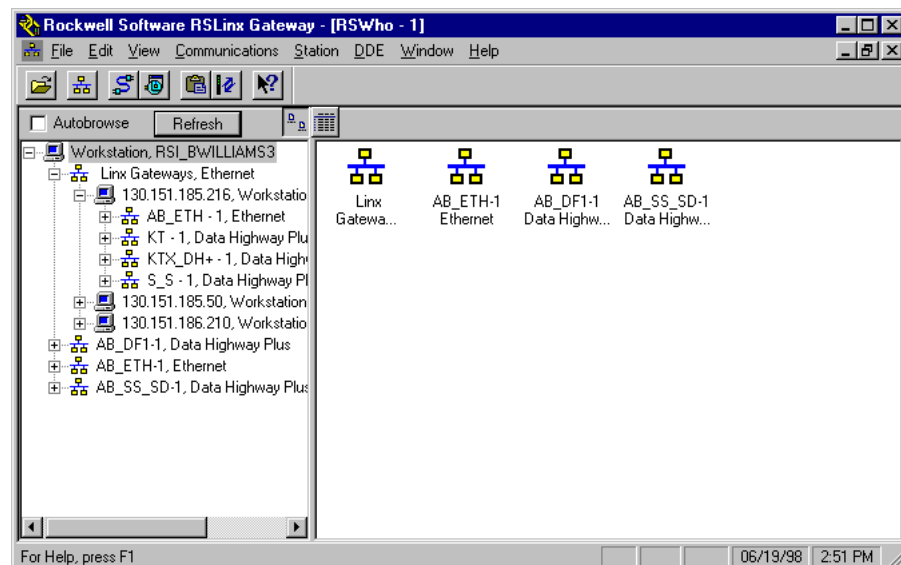
- Does your computer have enough memory? Running RSLinx requires a minimum of 32 MB of RAM.
- Does your computer have enough disk space? Running RSLinx requires a minimum of 35 MB of available hard disk space.
- Do you have the correct version of RSLinx installed? If your RSLinx installation displays as RSLinx Lite, RSLinx Single Node, or RSLinx OEM, the proper activation files were not installed. From within RSLinx, select **Help > Copy Protection** to view information about activation files.
- Have you reinstalled an earlier Service Pack or removed a component, such as DCOM, that RSLinx requires?

RSWho

This chapter describes features of the RSWho network browser interface. RSWho allows you to view all the active network connections from a single screen.

Using RSWho

RSWho is RSLinx's main window that displays networks and devices in a style similar to Windows Explorer. A variety of integrated configuration and monitoring tools are accessible from the right mouse button in RSWho. Some of the available tools are the ControlLogix Gateway Configuration Tool for 1756-DHRIO, 1756-ENET, and 1756-CNB modules, a Ladder Viewer for PLC-5, SLC, or MicroLogix family processors, and a Data Monitor for monitoring live data out of any ControlLogix, PLC-5, SLC, or MicroLogix family controllers.



The left pane of RSWho is the tree control, which shows networks and devices. The right pane is the list control, which shows all members of a collection. A collection is a network, or a device that is a bridge. Right-click in the list control and choose a view option of Large Icons or Details.

Tip

A device that appears with a red X indicates that RSWho previously recognized this device, but now it can not. The red X indicates a communication status error, such as unplugging a recognized device. These devices can be removed from the RSWho display by right-clicking on the device and selecting Remove.

RSWho browsing



The RSWho icon indicates a network. If this icon is animated, the network is being browsed. Click a network or device to start browsing.

When the network or device is collapsed (indicated by the + sign), click + or double-click the network or device icon next to the + to expand the view and begin browsing. When the network or device is expanded (indicated by the – sign), click – or double-click the network or device icon next to the – to collapse the view.

If the Autobrowse checkbox is enabled, RSWho continuously browses the selected device or network (regardless of whether or not the selection is expanded or collapsed). If Autobrowse is cleared, the Refresh button is active. Clicking Refresh instructs RSWho to perform one browse cycle of the selected device or network. Since Refresh only performs one browse cycle, clicking Refresh multiple times may be necessary to discover everything on the network.

Right-click on a supported device to select Station Diagnostics, Configure DDE Topic, or other supported services for that device.

DDE and OPC connectivity

This chapter describes the features of:

- Dynamic Data Exchange (DDE)
- OLE for Process Control (OPC)

Dynamic Data Exchange (DDE)

Dynamic Data Exchange (DDE) is a standard inter-application communication protocol built into Microsoft Windows operating systems and supported by many applications that run under Windows. DDE takes data from one application and gives it to another application. It allows Windows programs that support DDE to exchange data between themselves.

- A DDE server is a program that has access to data and can provide that data to other Windows programs.
- A DDE client is a program that can obtain data from a server.

By specifying an application, topic, and item, a client application can exchange data with a server application.

DDE works like a conversation between two people. The people represent the different applications running under Windows, and the data they share is what they are talking about. RSLinx does not know the type of data it is receiving, it only knows that a DDE link is providing the data.

For example, if you have a DDE link from RSLinx to an Excel spreadsheet, Excel does not know that you are sending a counter value into a spreadsheet. All Excel sees is data.

For example, RSLINX is the application name, PLC5TOPIC1 is an example topic name, and C5:0.ACC is an example item, in this case a counter accumulator in an Allen-Bradley PLC-5.

Tip

Not all applications that run under Microsoft Windows support DDE. Check with an application's manufacturer before purchasing an application for use with RSLinx.

For more information about DDE, refer to the DDE (Dynamic Data Exchange) topic in the RSLinx help file.

OLE for Process Control (OPC)

OPC, or OLE for Process Control, is a communication standard based on OLE technology provided by Microsoft and developed and maintained by the OPC Foundation, a coalition of industrial/manufacturing companies of which Rockwell Software is a member. The charter of this group is to provide an industrial standard exchange mechanism between plant floor devices and client applications. RSLinx is an OPC-compliant server exposing the required interfaces for an OPC client application to access data consistent with other OPC-compliant servers. The added benefit provided from RSLinx is its ability to provide several DDE formats in addition to OPC.

OLE for Process Control (OPC) is designed to allow client applications access to plant floor data in a consistent manner. OPC provides many benefits:

- Hardware manufacturers only have to make one set of software components for customers to utilize in their applications.
- Software developers do not have to rewrite drivers because of feature changes or additions in a new hardware release.
- Customers have more choices with which to develop world class integrated manufacturing systems.

With OPC, system integration in a heterogeneous computing environment is simple. Leveraging the OLE/COM environment is possible.

RSLinx is an OPC compliant server. For more information about OPC, visit the OPC Foundation web site at www.opcfoundation.org. For more information on using OPC with Rockwell Software products, visit our web site at www.software.rockwell.com/support.

DDE/OPC client connectivity

RSLinx provides connectivity for client applications using OPC or multiple DDE data formats. The OPC and AdvanceDDE interfaces provide optimized read operations by packing multiple requests from multiple clients in a single transaction. In configuring a DDE Topic, you can specify whether or not you want DDE poke operations optimized. Optimized pokes only work with PLC-5 and SLC processors.

The benefit of optimizing DDE poke operations is packing multiple updates in a single write operation, thus reducing the overall number of packets required. Operations such as downloading a recipe can take advantage of this feature.

Other DDE formats supported include FastDDE (for Wonderware clients), XL_Table and CF_Text to support Microsoft Office products, and other generic DDE client applications.

Finding the information you need

Use this chapter to review the sources of additional information about RSLinx software. This chapter helps you to find what you need efficiently by describing how to:


- Use the online help
- Access online guides
- Use RSLinx Assistance Central
- Participate in Rockwell Software training courses
- Contact Technical Support

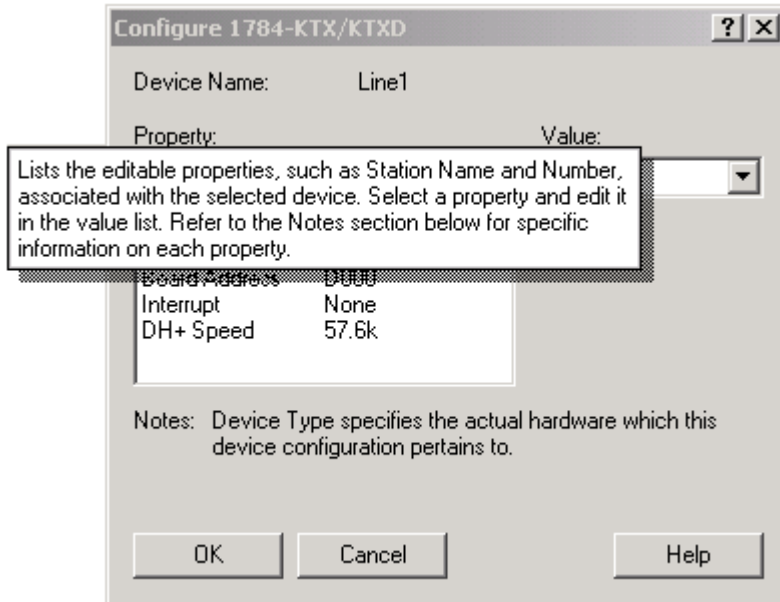
Using the online help

RSLinx online help provides general overview information, comprehensive step-by-step procedures, and context-sensitive, dialog box control definitions for working with all of the features in the software. To view online help while running RSLinx:

- choose RSLinx Help from the Help menu on the RSLinx main window,
- click **Help** on any RSLinx dialog box or property page,
- position the cursor over a control with which you want help and right-click,
or
- press F1.

Accessing help for a control or field

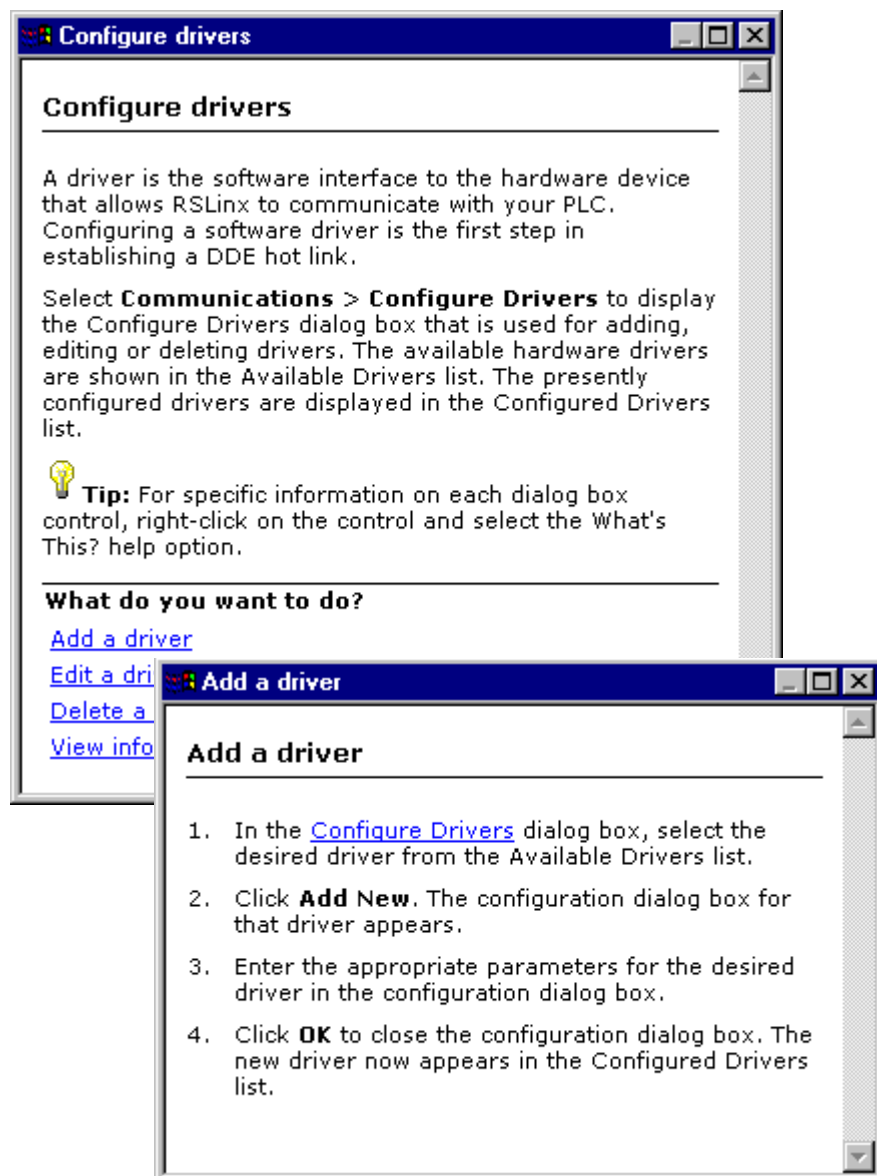
-  To display a definition for a control or a field, click the What's This? icon in the upper right corner of the dialog box, drag the cursor to the selected area, and then click to display the definition. In this example, the Property control was selected.



Finding step-by-step procedures

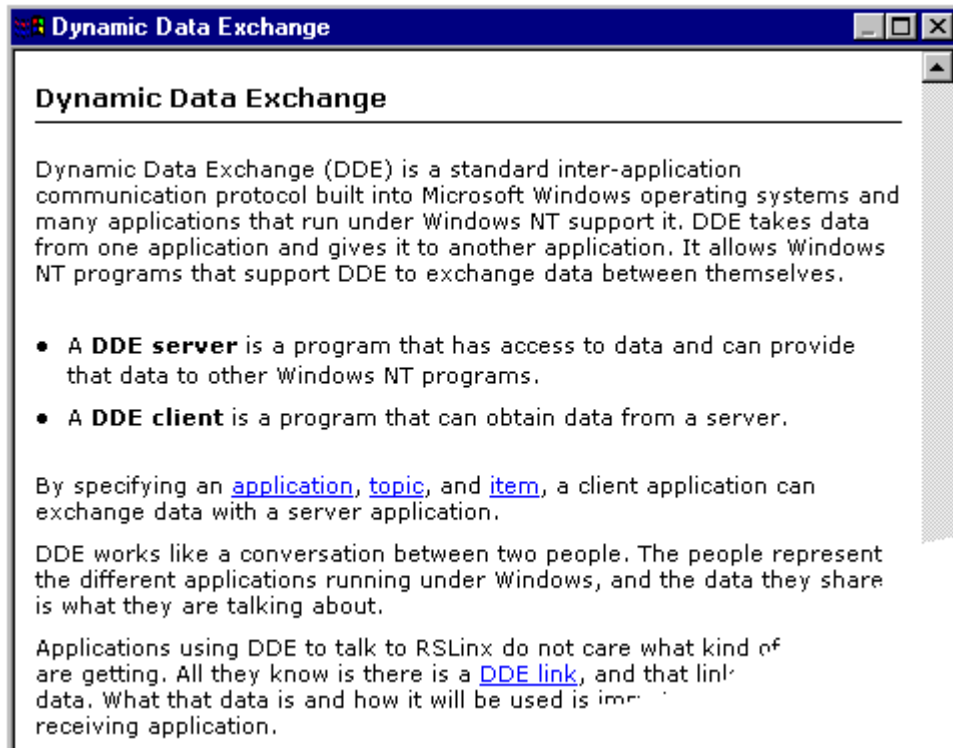
To view a list of tasks related to the current topic, move to the What do you want to do? section at the bottom of the help window and select one of the listed tasks. The current topic is replaced with a step-by-step procedure for completing the task.

For example, from the Configure drivers help topic, if you select Add a driver under the What do you want to do? section, the procedure that describes how to add RSLinx drivers displays.



Finding definitions

Within the RSLinx help, blue text highlighted with an underline indicates a link to a pop-up definition or a link to a related topic. For example, in the Dynamic Data Exchange help topic, [application](#), [topic](#), and [item](#) are pop-up definitions, and [DDE link](#) is a link to a related topic.



Using RSLinx Assistance Central

From the RSLinx Help menu, select **RSLinx Assistance Central** to obtain the latest information about your Rockwell Software products. Use this site to learn about training sessions offered for RSLinx, see what's new in the latest version, sign up for MySupport e-mails, and read what other customers have to say about RSLinx.

Accessing online guides

You can gain immediate access to product documentation through the online guides included with RSLinx. The online guides include this Getting Results Guide, as well as any reference guides, in an electronic book format. The online guides are included in a portable document format (PDF) on your RSLinx CD. These files must be viewed using the Adobe Acrobat Reader software, which you can download for free from the Adobe website (www.adobe.com).

Training

One of the best ways to increase your proficiency at using Rockwell Software products is to attend a Rockwell Software training program. Our training programs can help you master the basics and show you how to unleash the full potential of our software.

We offer a wide range of training programs, from regularly scheduled classes conducted at Rockwell Software facilities, to custom-tailored classes conducted at your enterprise. The size of each class is kept small intentionally to maximize student engagement.

If you would like more information about our training programs, visit the Rockwell Software site on the World Wide Web or contact the Rockwell Software Training Coordinator. Our World Wide Web address and telephone numbers appear on the inside front cover of this document.

Tip

For more information on Rockwell Software training, select **Help > Support and Training** from within RSLinx.

Technical support

If you cannot find answers to your questions in the *Getting Results with RSLinx* guide, the online help, or the online guides, you can call Rockwell Software Technical Support at the numbers listed on the inside front cover of this guide. The technical support staff is available Monday through Friday from 8 A.M. to 5 P.M. Eastern Time, except holidays. You can also access the Rockwell Software Online Support Library from the web site listed on the inside front cover of this guide.

When you call

When you call, you should be at your computer and prepared to give the following information:

- product serial numbers
- product version number

The product serial numbers and version number can be found in the software by selecting **Help > About RSLinx**.

- hardware you are using
- exact wording of any errors or messages that appeared on your screen
- description of what happened and what you were doing when the problem occurred
- description of how you attempted to solve the problem

Tip

For more information on Rockwell Software technical support, select **Help > Support and Training** from within RSLinx.

A

Activation

Rockwell Software's products are copy-protected. Only a computer with access to the activation key can run the software. The key is located in an activation file, which is originally located on the Master disk supplied with the RSLinx product. The activation file contains one activation key per product. Each key contains one or more licenses depending on how many copies of the product you have purchased.

Tip



Store your Master disk in a safe place. If your activation becomes damaged, the Master disk may be the only means to run your software in an emergency.

During the setup process, the setup program gives you the opportunity to move the activation file from the Master disk to the root directory of the drive on which you're installing the software.

When you launch RSLinx, the software first checks your local hard drives, then network hard drives, and finally local floppy drives for activation. If the system fails to detect either the activation file or the Master disk, your software reverts to the RSLinx Lite version.

Tip



Systems attached to extensive networks can take quite a while to search for activation files on all available drives. You can use the CHECKDRIVES environment variable to specify and/or limit the drives your software checks for activation files and to specify the order in which they are checked. Refer to the activation utilities online help file by selecting **Help > Copy Protection**.

Protecting your activation files

Caution

Certain anti-virus software packages, such as Norton Anti-virus, can corrupt the activation files. Configure your anti-virus software to avoid checking the files EVRSI.SYS and 386SWAP.PAR.

To avoid damaging your activation files, do not perform the following operations with activation files on the hard drive.

- Restore from backup
- Upgrade the operating system
- Reinstall the same version of DOS
- Uninstall DOS
- Compress or uncompress the hard drive
- Turn off Windows for Workgroups 32-bit file access. If activation files were moved to a hard drive with 32-bit file access on, turning off 32-bit file access results in activation files being lost. (You can turn on 32-bit disk access and 32-bit file access in Windows for Workgroups without harming the activation file.)

Defragmentation utilities will not harm activation files.

Before running any type of utility that may modify the structure or organization of the hard drive, remove activation from the hard drive:

1. Use the Move Activation utility (EvMove) to move activation files from the hard drive to an activation disk.

Caution

Do not use the the Move Activation utility if Rockwell Software products are currently running. Ensure all software programs are closed before initiating the EvMove utility.

Run EVMOVE.EXE from your hard drive (located in C:\Program Files\Rockwell Software\RSUtil if you accepted the default directory location during installation).

2. Perform the hard disk operation.

3. Move the activation files back to the hard drive.

Caution

You must use the move utility, EvMove, to move activation files. Attempts to copy, move or e-mail an activation file by other means will damage the file.

Activating RSLinx

Depending on your needs, you can activate RSLinx from any of the following:

Hard drive. The activation key resides on your computer's hard disk. Use this method if you will typically use RSLinx on only one computer. This is the default method if you activate RSLinx during installation. To run RSLinx on a different computer, move the activation key back to the Master disk, and then to the hard drive of the new computer.

Diskette drive. The activation key resides on a floppy disk (activation disk). Use this method if you will typically use RSLinx on more than one computer, for example, if you want to run RSLinx on a desktop computer at some times and a portable computer at others.

Network drive. The activation keys reside on a network drive. Use this method if you have purchased multiple licenses of the software and want several users to be able to activate the software over a network. Refer to the online help for instructions on moving activation to a network drive (refer to the "Finding more information about activation" section in this chapter to access online help).

Running the activation utilities

The utilities for moving and resetting activation are called EvMove and Reset respectively. Reset is used when an activation file has been damaged. The EVMOVE.EXE and RESET.EXE files are located on your hard drive (located in C:\Program Files\Rockwell Software\RSUtil if you accepted the default directory location during installation). To run these programs, select **Start > Programs > Rockwell Software > Utilities > Move Activation** or **Reset Activation**.

Finding more information about activation

The online help (COPYPROT.HLP) provides more extensive information on activation including subjects such as:

KEYDISK. Set this environment variable to tell your computer to look for activation on floppy drives

CHECKDRIVES. Specify which drives to search for activation

network activation. Move activation to a network server to allow multiple users access to the activation

moving activation. See detailed instructions for moving activation

resetting activation. See detailed instructions for using the Reset utility to repair a damaged activation file

troubleshooting. Look up error messages, get problem-solving suggestions

You can access online help:

- from the **Help** button on one of the EvMove or Reset dialog boxes.
- from RSLinx by selecting **Help > Copy Protection** from the main menu.
- without running either RSLinx or the activation utilities. From the Windows Start menu, select **Programs > Rockwell Software > Utilities > Activation Help** (if you accepted the default directory location during installation).

Some common questions

Following are some common problems that people encounter with activation and their solutions.

My activation files were damaged. What should I do?

If you have lost the activation because the activation file is damaged, you need to reset activation. Follow the Reset Codes instructions on the Rockwell Software Technical Support web page, or call the technical support telephone number. The web page and telephone number are both listed on the inside front cover of this guide.

If you cannot obtain a reset code immediately, follow these instructions to use the Master disk to activate the software as a temporary solution.

To use the Master disk to activate software:

1. Set the KEYDISK environment variable to TRUE. (Please refer to the online help.)
2. Insert your Master disk in the floppy drive.

3. Run your software as usual. Your software will find the activation on the Master disk.

I accidentally deleted the software directory on my hard drive. Do I need to call Rockwell Software for replacement activation files?

No. Deleting the program files does not delete your activation. The activation files are not stored in the program directory; they are located in the root directory. Your activation files will not be lost unless you format the hard drive, tamper with hidden files in the root directory, or perform certain other hard drive operations (refer to the “Protecting your activation files” section in this chapter for more information).

To get the software running again, simply reinstall the software, but do not move the activation when given the opportunity.

Why can't I move activation to a new floppy disk on a Windows NT system?

It has to do with a disk modification that NT does not allow. If you have access to a machine with a different Windows operating system, you can create a disk that will work under NT. Format a floppy and move any activation file to it under Windows XP, 2000, Me, or 98. (You can move the activation back off the disk if you want to keep it where it was.) Then take that disk to your Windows NT machine and move the activation to it.

Glossary

Activation disk — Any disk (floppy or hard) containing an activation file. An activation disk can be used to activate the software. This is different from a key disk (Master Disk) in that at least one license of the software must be available on the activation disk to activate the software.

Activation file — A hidden, read-only, system file that “activates” a Rockwell Software product. The software will run only if your system can find the correct activation file.

Activation key — Activation files contain a database of activation keys. Each key is particular to a certain product and must be accessible on a local or remote drive for that product to run.

Driver — The software interface to the hardware device that will be used to communicate between RSLinx and your processor.

Dynamic Data Exchange (DDE) — A form of inter-process communication. When two or more programs that support DDE are running simultaneously, they can exchange information and commands.

Key disk — A floppy disk that can be used to activate the software even if that disk contains zero licenses. The Master Disk is the only key disk. This differs from an activation disk in that an activation disk must contain at least one license.

License — Authorization to use a specified number of instances of software. A product’s activation key contains a license for each copy of the software you have purchased. For example, if you bought seven copies of RSLinx, then the RSLinx key on the Master Disk contains seven “licenses” of RSLinx. You can move the activation file for RSLinx to seven different computers.

Links — The data path established for one or more channels between two or more stations. DDE links can be hot, warm, or cold.

Master disk — This disk is supplied with the software. It contains a database of keys in an “activation file” that enables the software to run. Be sure to store your Master Disk in a safe place. If your activation file becomes damaged, the only way you can run your software (until the activation is reset) is with your Master Disk.

OPC — Provides an industry-standard mechanism to communicate and exchange data between clients and servers using OLE technology.

Packet — The transmission unit exchanged at the network layer.

Poke — DDE's version of a write.

Read — To acquire data from somewhere (memory, an output, another station).

Topic — Represents a specific path to a processor.

Write — To load data into somewhere (memory, an output, another station).

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