

Getting Results with RSNNetWorx for EtherNet/IP



Important user information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice. If this equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.



WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.



ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence

Important:

Identifies information that is critical for successful application and understanding of the product.

Labels may also be on or inside the equipment to provide specific precautions.



SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.



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Preface

Purpose of this document..... 7
Intended audience 7
How does the guide fit in with other Rockwell Software product documentation?..... 7
 Online help 7
 Product manuals 7
Contact Rockwell Automation Technical Support 7
Legal Notices 8

Chapter 1

Welcome to RSNetWorx for EtherNet/IP

Features and benefits 11
Understanding EtherNet/IP concepts..... 13
Exploring RSNetWorx for EtherNet/IP 14
 Title bar 14
 Menu bar 14
 Online icon 15
 Toolbars..... 15
 Edits enabled 17
 Hardware and Favorites views 17
 Graph or Spreadsheet view 17
 Diagnostics view 18
 Message view 19
 Status bar 19
Exploring the Scanlist Configuration Tool..... 20
 Title bar 20
 Menu bar 20
 Online icon 21
 Toolbar 21
 Resource usage..... 22
 Scanlist entries 22
 Status bar 23
Quick Start steps 23
 Online mode 24
 Offline mode 25

Chapter 2

Installing and starting RSNetWorx for EtherNet/IP

System requirements..... 27
 Hardware requirements 27
 Software requirements..... 27
Software compatibility..... 28
Installing RSNetWorx for EtherNet/IP software 28
 Step 1: Launch the installation wizard and select what to install..... 29
 Step 2: Set up security in RSNetWorx 31
 Step 3: Read and accept license agreements 32
 Step 4: Start the installation 33

| | | |
|---|--|----|
| | Step 5: Finish the installation | 35 |
| | Installing a client copy from a dedicated server..... | 38 |
| | Starting RSNetWorx for EtherNet/IP | 39 |
| | Troubleshooting installation | 39 |
| | Chapter 3 | |
| Advanced concepts | EDS-based devices | 41 |
| | EDS library..... | 41 |
| | Class Instance Editor | 42 |
| | Chapter 4 | |
| Finding the information you need | Using the online help | 43 |
| | Accessing help for a control or field | 43 |
| | Accessing help for messages | 44 |
| | Finding step-by-step procedures | 45 |
| | Finding definitions | 46 |
| | Accessing the Product Manuals | 47 |
| | Training..... | 47 |
| | Technical support..... | 48 |
| | When you call | 48 |
| | Appendix A | |
| Activation | Activate RSNetWorx with FactoryTalk Activation..... | 49 |
| | How to activate RSNetWorx..... | 49 |
| | Finding more information about FactoryTalk Activation | 50 |
| | Grace period | 50 |
| | Some common questions..... | 50 |
| | My activation files were damaged. What should I do?..... | 50 |
| | I accidentally deleted the software directory on my hard drive. Do I need to call Rockwell Software for replacement activation files?... | 51 |
| | Appendix B | |
| Security | How do I set up security in RSNetWorx?..... | 53 |
| | What can I secure in RSNetWorx? | 54 |
| | Appendix C | |
| Use unattended installation | Perform unattended installation | 57 |
| | Parameters..... | 58 |
| | Examples..... | 59 |

Glossary

Index

| | |
|--|---|
| Purpose of this document | This getting results guide provides you with information on how to install and navigate the RSNetWorx™ for EtherNet/IP™ software. It explains how to effectively use the RSNetWorx for EtherNet/IP software and how to access and navigate the online help. |
| Intended audience | We assume that you are familiar with: <ul style="list-style-type: none">• Microsoft® Windows® operating systems• RSLinx® Classic™ communications software |
| How does the guide fit in with other Rockwell Software product documentation? | <p>The <i>Getting Results with RSNetWorx for EtherNet/IP</i> guide can be considered the entry point into Rockwell Software's documentation set for this product. Other components of the documentation set include online help, Online Books, and electronic release notes.</p> <p>The documentation set contains pertinent, easily accessible product information. This set ships with the software product, and is designed to free you from tedious paper shuffling and reduce information overload.</p> |
| 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, troubleshooting topics, 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. |
| Product manuals | <p>Within RSNetWorx for EtherNet/IP, we provide a Product Manuals feature that allows you to immediately access and search your product documentation from the Help menu. This feature includes the <i>Getting Results with RSNetWorx for EtherNet/IP</i> guide, as well as several hardware product reference guides, in an electronic book format. As a part of the product installation, you have the option of installing these electronic books to your local hard drive during installation, or access them directly from the installation files.</p> <p>Tip: The product manuals included with RSNetWorx for EtherNet/IP are in portable document format (PDF), and can be viewed using the Adobe® Acrobat® Reader.</p> |
| Contact Rockwell Automation Technical Support | <p>If you cannot find the answer to your question in the documentation or on the Internet, contact Rockwell Automation Technical Support, using any of these methods:</p> <ul style="list-style-type: none">• Telephone: 1-440-646-3434 |

- Online:
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Support staff are available Monday to Friday from 8:00 a.m. to 5:00 p.m. local time (North America only), except on statutory holidays.

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Please include "Open Source" as part of the request text.

A full list of all open source software used in this product and their corresponding licenses can be found [in the OPENSOURCE folder](#) included with this product's Release Notes respectively. The default installed location of these licenses is:

- For RSNetWorx for ControlNet, C:\Program Files (x86)\Common Files\Rockwell\Help\RSNetWorx for ControlNet Release Notes\OPENSOURCE\index.htm.
- For RSNetWorx for DeviceNet, C:\Program Files (x86)\Common Files\Rockwell\Help\RSNetWorx for DeviceNet Release Notes\OPENSOURCE\index.htm.
- For RSNetWorx for EtherNet/IP, C:\Program Files (x86)\Common Files\Rockwell\Help\RSNetWorx for EtherNetIP Release Notes\OPENSOURCE\index.htm.

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Welcome to RSNetWorx for EtherNet/IP

RSNetWorx for EtherNet/IP is a 32-bit Windows application program that allows you to configure devices and lay out a network topology. From the graphical representation of your network, you can:

- view I/O data and configuration data for those devices that have EDS files that support this functionality (online only)
- display all connection information for all connections to/from a given device including all connections in scanners that are in the configuration
- configure scanners that adhere to the open EtherNet/IP specification for scanners, define scanlist entries for certain scanners, and map scanner memory onto the network and network data into the scanner memory (via the Scanlist Configuration Tool (SCT) that is bundled with RSNetWorx for EtherNet/IP)
- leverage the connection information to diagnose the health of the connections, and thus the health of the devices that originate and receive those connections

This chapter contains the following sections:

- Features and benefits
- Understanding EtherNet/IP concepts
- Exploring RSNetWorx for EtherNet/IP
- Quick Start steps

Features and benefits

RSNetWorx for EtherNet/IP has the following features:

- Support for Reduced Heartbeat feature of RSLogix 5000 V16. The numbers on the Device Usage Properties dialog box in EtherNet/IP 8.0 will reflect the effect that Reduced Heartbeat calculations, from RSLogix 5000 V16, will have on your device's usage.

Tip: The Reduced Heartbeat feature helps in preserving bandwidth in large network installations by reducing the rate at which heartbeat is sent from the Consumer to the Producer device. Heartbeat is the name given to the way a Consumer device informs a Producer device of its presence.

- Support for Unicast feature of RSLogix 5000 V16. The numbers on the Device Usage Properties dialog box in EtherNet/IP will reflect the

effect that Unicast calculations, from RSLogix 5000 V16, will have on your device's usage.

Tip: In Unicast the Producer device sends individual packets to each Consumer device.

- Support for FactoryTalk® Activation.
- RSNetWorx supports FactoryTalk Security. FactoryTalk Security is intended to improve the security of your automation system by limiting access to only those with a legitimate need. FactoryTalk Security authenticates user identities and authorizes user requests to access a FactoryTalk-enabled system. These security services are fully integrated into the FactoryTalk Directory and are included as part of the FactoryTalk Services Platform that installs with many products.
- Device usages view displays usage percentages for factors such as minimum and maximum CPU and connection usage (when your device's EDS file contains capacity information) or raw transmission data information (when your device's EDS file does not contain capacity information). When edits are enabled, you will get to see both current and pending device usage information.
- Embedded EDS is supported. With this functionality, you can now change the state of your device from unknown to known by uploading and registering its EDS, instead of obtaining the EDS file from an external website or a DVD.
- A Windows-based point and click interface that allows you to easily configure EtherNet/IP networks.
- Use of RSLinx Classic communication services, which allows you to browse online through various networks, devices, bridges, etc., to choose the network you want to view or edit.
- The ability to edit configurations either online or offline.
- Simple and complete network upload/download. You can upload a configuration directly from the network or download a configuration to the online network. When you upload or download a configuration, the scanlist for the open scanners is transferred.
- The Scanlist Configuration Tool configures both I/O and peer-to-peer data addresses. It also supports target devices for Rockwell Automation and third-party devices via EtherNet/IP standard Electronic Data Sheet (EDS) files.
- Reports generated in HTML format.
- Comprehensive context-sensitive online help, including additional information and troubleshooting hints on any message that appears in the Message View.
- The ability to interconnect several network configurations for navigation.
- Quickly detect and resolve conditions that arise when initially commissioning a system, minimizing initial start-up times and costs.

- Debug and correct network/device problems, thereby reducing network downtimes and related costs.
- Detect preventive maintenance needs within the devices on your network, thereby preventing system downtimes.

Understanding EtherNet/IP concepts

You begin configuring your EtherNet/IP network by determining how many devices will be connected to your network, what EtherNet topology will be used, and what addressing method will be used (IP addressing, Host name addressing, or a combination of both). Each device must be assigned a unique IP address/host name. You may allow the addresses to be automatically assigned, or choose to assign a unique address manually.

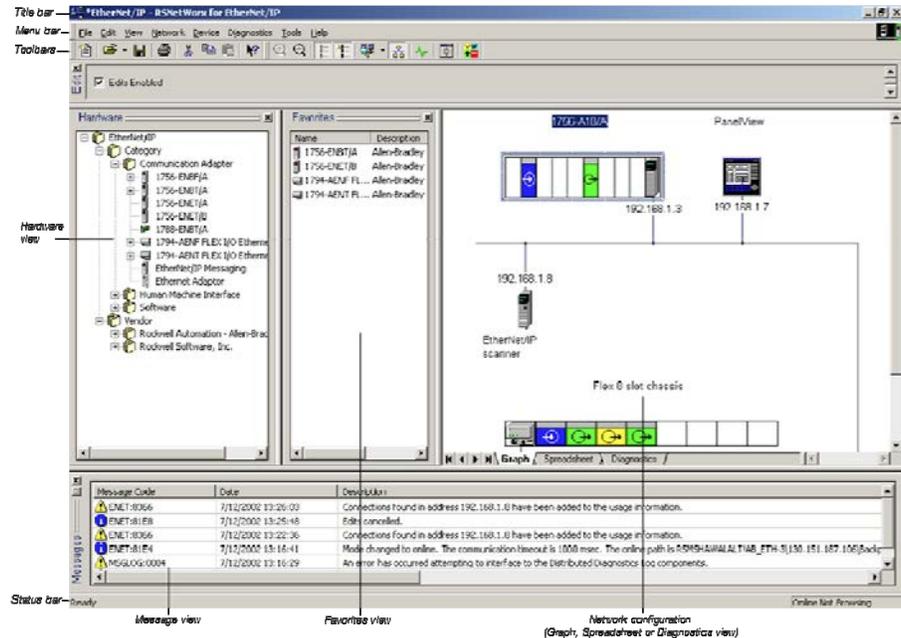
Finally, you finish creating the configuration by defining connections between the devices at IP addresses/host names on the network. To do this, you determine which data is to be consumed by each scanner, and you determine where in each scanner's data table this data is placed. You may also choose to determine which scanner will maintain the configuration for each adapter device. After you have defined these parameters, you use the Scanlist Configuration Tool (for integrated scanners) or RSLogix 5000 (for Rockwell Automation's Logix processors) to enter the connection into your configuration for each of your EtherNet/IP scanners.

For many devices, you can also use the Scanlist Configuration Tool to configure how outputs are set in the event of a fault, such as loss of communication to the controlling scanner. Depending on the information contained in a device's EDS file, you may be able to configure other device parameters. These parameters may be found on the connection's property page from the Configuration Settings tab and/or the Advanced Settings tab depending on the device or module for which you are setting the parameters.

Tip: When you are online, enable edits, and save your configuration in RSNetWorx for EtherNet/IP version 4.0 or later, the software displays connections that are created in Studio 5000 Logix Designer.

Exploring RSNetWorx for EtherNet/IP

When you start RSNetWorx for EtherNet/IP software, the RSNetWorx for EtherNet/IP window appears. It shows the current network (EtherNet is the default filename) in its view. The following illustration shows the RSNetWorx for EtherNet/IP window and the design elements associated with it. (The Message view and Favorites view will not be automatically shown in the default view, but may be chosen by selecting **View > Messages > Show** or **View > Favorites**.) Each of the design elements are described in the sections following this illustration.



Title bar

The title bar shows the RSNetWorx icon, the name of the current RSNetWorx configuration, the name of the software product and so on.

Menu bar

The RSNetWorx for EtherNet/IP menu bar contains the following menus:

File Edit View Network Device Diagnostics Tools Help

Each menu contains options for performing the following tasks:

| Menu | Description |
|-------------|--|
| File | New, print, open, and save a network configuration, generate reports, or exit RSNetWorx for EtherNet/IP. |
| Edit | Invoke actions such as cut, copy, and paste on selected items in the network configuration. |
| View | Set and change RSNetWorx for EtherNet/IP interface displays. |
| Network | Browse the network, toggle between online and offline mode, enable and cancel edits, and upload and download data to and from the network. |
| Device | Edit the properties of the selected device, chassis, or module. |
| Diagnostics | Start and stop the diagnostic scan, add or remove devices from the diagnostic scan, troubleshoot a diagnostic fault, and generate a network health report. |
| Tools | Launch the EDS Wizard and other optional tools. |

| Menu | Description |
|------|---|
| Help | Access help options for RSNetWorx for EtherNet/IP, EtherNet/IP related hardware, and other Rockwell Software products and services. |

Online icon

The online icon displays in the right side of the RSNetWorx for EtherNet/IP window at the same level as the menu bar.



This icon indicates whether or not RSNetWorx for EtherNet/IP is in the online mode. If you toggle the Online toolbar button to online, the Online icon becomes animated. If the icon is not animated, RSNetWorx for EtherNet/IP is in offline mode. When online, RSNetWorx for EtherNet/IP writes information to the devices and to the offline file when you save. When offline, RSNetWorx for EtherNet/IP only updates the offline file when you save.

Toolbars

The toolbars contain shortcuts to several commonly used functions. Each toolbar button is a graphical representation of a command (except Symbol Legend) that is also available from the RSNetWorx for EtherNet/IP menu bar. RSNetWorx for EtherNet/IP contains the standard toolbar and the tools toolbar.

The following items appear on the RSNetWorx for EtherNet/IP standard toolbar.



| Icon | Menu Selection | Description |
|---|------------------------|---|
|  | File > New | Creates a new network configuration. |
|  | File > Open | Opens an existing network configuration. The arrow to the right of the Open icon provides quick access to recently used files. |
|  | File > Save | Saves the current network configuration. |
|  | File > Print | Prints the current network configuration. |
|  | Edit > Cut | Cuts the selected device from the network configuration and places it on the clipboard. If you cut a device, only the device, not its configuration, is retained. |

| Icon | Menu Selection | Description |
|---|-------------------------------|--|
|  | Edit > Copy | Copies the selected device to the clipboard. If you copy a device, only the device type, not its configuration, is retained. |
|  | Edit > Paste | Pastes the device from the clipboard to the current network configuration. |
|  | Help > What's This? | Places the cursor in What's This? help mode. Place the cursor on the control you want help with and right-click to see the context-sensitive help. |

The following items appear on the RSNetWorx for EtherNet/IP tools toolbar.



| Icon | Menu Selection | Description |
|---|--|--|
|  | View > Zoom-In | Increases the size of images located in the current network configuration. The choices available are high, medium, and low. Zoom-In only applies to the graph view. |
|  | View > Zoom-Out | Decreases the size of the images located in the current network configuration. The choices available are high, medium, and low. Zoom-Out only applies to the graph view. |
|  | View > Hardware | Displays a list of all available hardware devices. |
|  | View > Favorites | Displays a list of hardware devices that you have added to your favorites list. |
|  | Network > Single Pass Browse or Network > Continuous Browse | Locates all currently available devices based on the drivers configured in RSLinx Classic. Allows you to browse once and stop (single pass) or browse continuously (continuous browse). |
|  | Network > Online | Places RSNetWorx for EtherNet/IP in online mode. To go offline, click the button or choose Network > Online again. |
|  | View > Diagnostics | Displays the Diagnostic view, allowing you to view the diagnostic parameters for all of the devices on your network, and indicates the current diagnostic status of your network. |
|  | View > Refresh | Refreshes the window. This will reorder the graphic display by device address. |
|  | No menu selection | Displays the Symbol Legend, which contains descriptions of the device comparison states. The Symbol Legend can also be accessed from the online help system by selecting Help > Contents and selecting symbol legend from the index tab. |

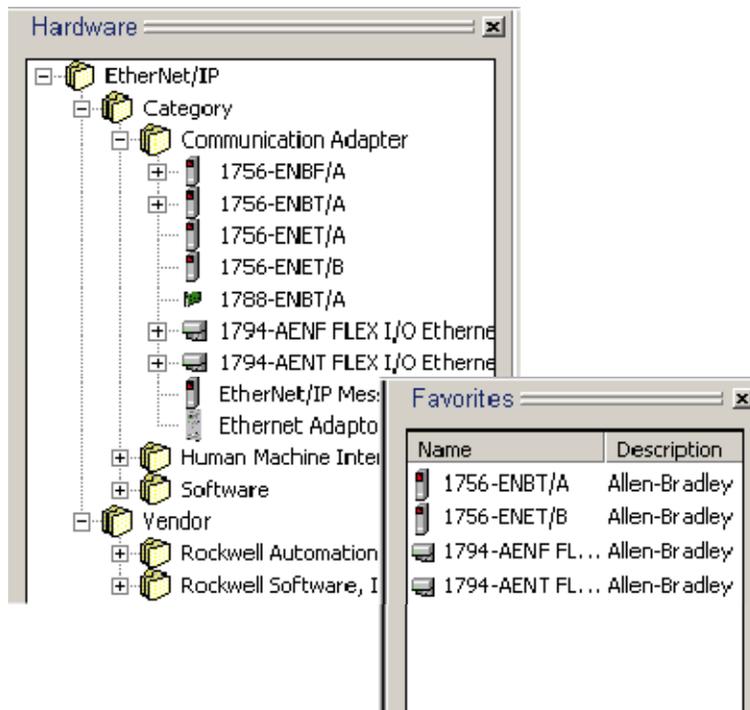
Edits enabled

The edits enabled area allows you to obtain the edit resource, enabling and disabling edits to the current EtherNet/IP offline configuration file (*.enet).



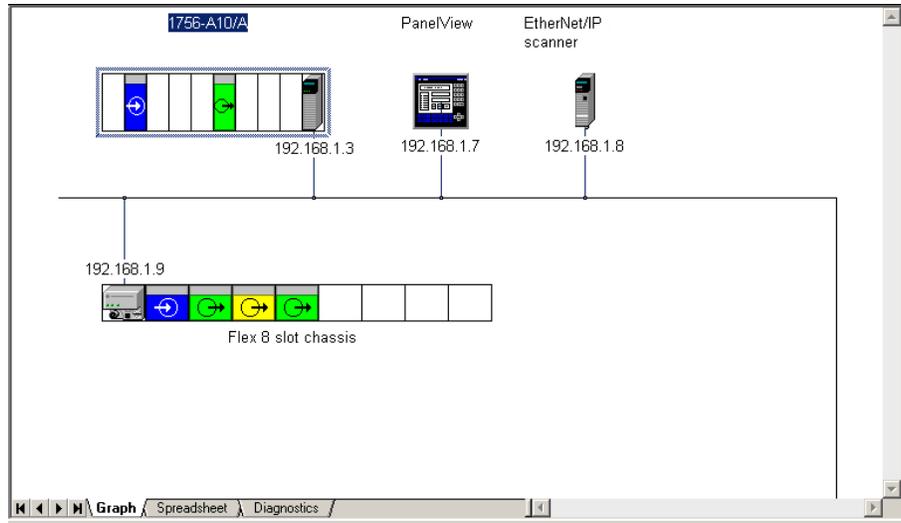
Hardware and Favorites views

A device can be added to the network configuration by selecting it from Hardware view and dragging it to the configuration (graph or spreadsheet view). Once a device is added, it will display in the appropriate configuration. The Favorites view displays all hardware devices that you have defined as favorites by selection from the Hardware list. To add an item from the Hardware list to the Favorites list, select the item, right-click and choose Add to Favorites.



Graph or Spreadsheet view

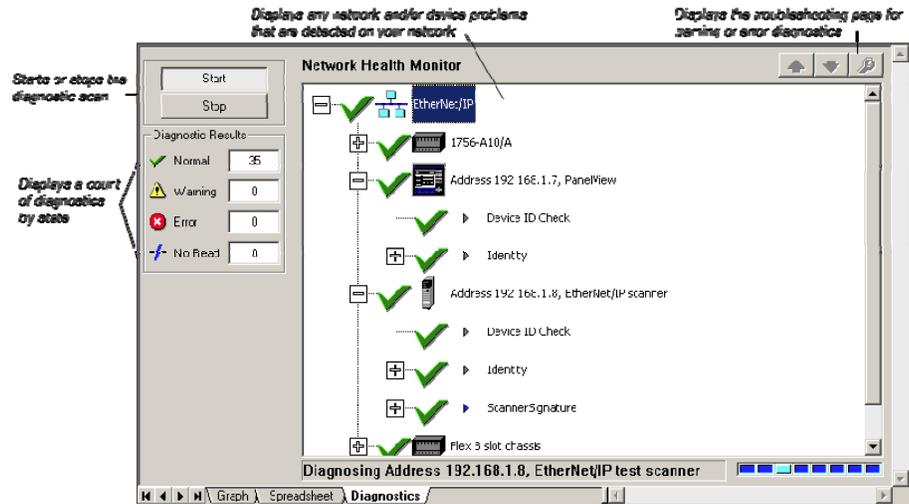
The application workspace displays network information in either a graphic or a spreadsheet view. Click the appropriate tab in the network configuration to display the desired view.



| Name | State | Address | Slot | Description |
|---------------------------------|-------|-----------|------|-------------|
| 1756-ENBT/A | Ok | 192.16... | 09 | |
| PanelView | Ok | 192.16... | | |
| EtherNet/IP scanner | Ok | 192.16... | | |
| 1794-AENT FLEX I/O Ethernet ... | Ok | 192.16... | n/a | |

Diagnostics view

RSNetWorx Diagnostics provides a hierarchical view of the real-time status (or health) of a network. At a glance, you can quickly and easily determine the overall status of your network, or any device on your network, by viewing a single status indicator. Click the Diagnostics tab in the network configuration to display this view.



Message view

The message view, which appears in the bottom portion of the workspace displays a log of messages. Each message consists of four parts:

- an icon that indicates error, warning, or information
- an error message code (including a distinguishing software component designator and a 16-bit numeric designator)
- a timestamp that displays the date and time the message is generated
- a description of the message:

Tip: If you want more information on any particular message, you can select the message and press the F1 key to access the online help. You can Show, Clear, Copy, or Clear and Hide messages by making the appropriate selection from the **View > Messages** command on the main menu, or by right-clicking and selecting the Message option while in the Message view.

Status bar

The status bar, which is located at the bottom of the RSNetWorx for EtherNet/IP main window, provides information about the status of the software.

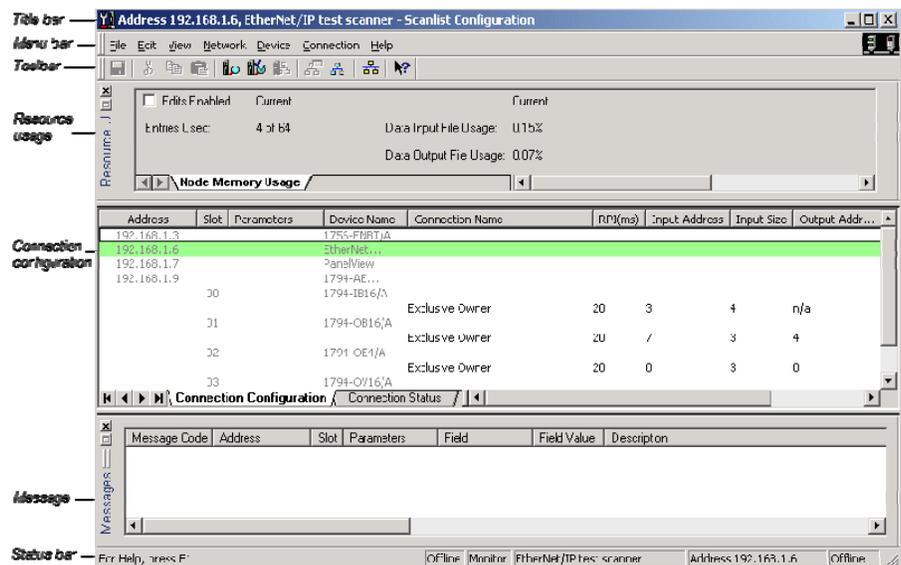
The left portion of the status bar displays informational messages about the operation of RSNetWorx for EtherNet/IP software. For example, when you highlight a device in the application workspace, a brief description of that device appears on the status bar.

The right portion of the status bar displays the current state of the browsing operation.



Exploring the Scanlist Configuration Tool

The Scanlist Configuration Tool is an extension of the RSNetWorx software that allows you to create, modify, and delete connection entries within a scanlist (an EtherNet/IP scanner). Using the Scanlist Configuration Tool, you can establish connections among devices and their respective I/O components (identifying connection types, sizes, and timing intervals) and then map that information to the data table. The following illustration shows the Scanlist Configuration Tool window and the design elements associated with it. (The Message view will not be automatically shown in the default view, but may be chosen by selecting **View > Messages > Show**.) Each of the design elements are described in the sections following this illustration.



Title bar

The title bar shows the Scanlist Configuration Tool icon, the name of the selected scanner, the name of the software product and so on.

Menu bar

The Scanlist Configuration Tool menu bar contains the following menus:



Each menu contains options for performing the following tasks:

| Menu | Description |
|---------|--|
| File | Save a configuration, generate a report for this scanner, or exit the Scanlist Configuration Tool. |
| Edit | Invoke actions such as cut, copy, and paste on selected items in the configuration. |
| View | Set and change the Scanlist Configuration Tool interface displays. |
| Network | Toggle between online and offline mode, and enable or cancel edits. |

| Menu | Description |
|------------|--|
| Device | Change mode of the scanner from, for example, run to program mode or download to device. |
| Connection | Insert connections or change connection parameters. |
| Help | View help options for the Scanlist Configuration Tool and other Rockwell Software products and services. |

Online icon

The online icon displays in the right side of the Scanlist Configuration Tool at the same level as the menu bar.



This icon indicates whether or not RSNetWorx for EtherNet/IP is in the online mode. If you toggle the Online toolbar button to online, the Online icon becomes animated. If the icon is not animated, RSNetWorx for EtherNet/IP is in offline mode. When online, RSNetWorx for EtherNet/IP writes information to the devices and to the offline file when you save. When offline, RSNetWorx for EtherNet/IP only updates the offline file when you save.

Toolbar

The toolbars contain shortcuts to several commonly used functions. Each button on the toolbars is a graphical representation of a command that is also available from the Scanlist Configuration Tool menu bar.

The following items appear on the Scanlist Configuration Tool toolbar:

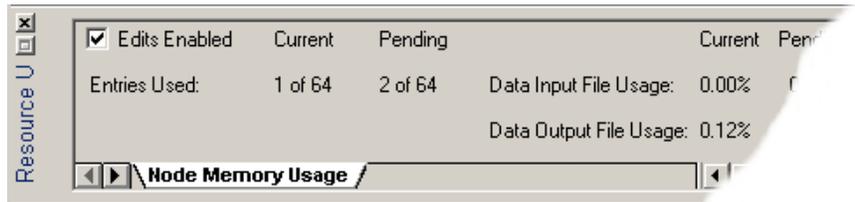


| Icon | Menu Selection | Description |
|---|---|---|
|  | File > Save | Saves the current network configuration. |
|  | Edit > Cut | Cuts the selected field value and places it on the clipboard. |
|  | Edit > Copy | Copies the selected field value to the clipboard. |
|  | Edit > Paste | Pastes the field value from the clipboard to the current network configuration. |
|  | Scanlist > Auto Insert > All Devices | Interrogates all devices that can have connections in the EtherNet/IP configuration and adds connections to the scanlist. |

| Icon | Menu Selection | Description |
|---|--|--|
|  | Scanlist > Auto Insert > Selected Devices | Interrogates selected devices that can have connections in the EtherNet/IP configuration and adds connections to the scanlist. |
|  | Scanlist > Auto Address > All Entries | Auto maps all unmapped addresses in all entries. |
|  | View > Connection Configuration | Displays information respective to the selected connection. |
|  | View > Connection Status | Switches the view to a display of the status of each connection. |
|  | Network > Online | Places the Scanlist Configuration Tool in online mode. To go offline, click the button or choose Network > Online again. This button is unpressed when in online mode. |
|  | Help > What's This? | Places the cursor in What's This? help mode. Place the cursor on the control you want help with and right-click to see the context-sensitive help. |

Resource usage

Within the Scanlist Configuration Tool, you can also view the memory usage.



Scanlist entries

The scanlist entries enable you to perform tasks such as defining the connection targets and inserting connections for the selected devices.

| Address | Slot | Parameters | Device Name | Connection Name |
|-------------|------|------------|-------------|-----------------|
| 192.168.1.3 | | | 1756-ENBT/A | |
| 192.168.1.6 | | | EtherNet... | |
| 192.168.1.7 | | | PanelView | |
| 192.168.1.9 | | | 1794-AE... | |
| | 00 | | 1794-IB16/A | |
| | 01 | | 1794-OB16/A | |
| | 02 | | 1794-OE4/A | |
| | | | | Exclusive Owner |
| | 03 | | 1794-OV16/A | |

Navigation icons: Home, Back, Forward, Stop

Connection Configuration

Status bar

The status bar, which is located at the bottom of the Scanlist Configuration Tool window, provides information about the status of the software and the scanner.

The left portion of the status bar displays informational messages about the operation of the configuration software. For example, when you mouse over a toolbar icon, a brief description of that icon appears on the status bar.

The right portion of the status bar displays the following information:

- Online mode - Offline or Online
- Edit mode - Monitor or Edit
- Scanner type
- IP address/host name
- Scanner mode - Remote Idle, Idle, Remote Run, Run, or Offline

Quick Start steps

The fastest way to configure your EtherNet/IP network is to specify an EtherNet/IP driver in RSLinx Classic and let the RSNetWorx for EtherNet/IP software browse your online network for EtherNet/IP devices and automatically add them into your configuration; and then, let the Scanlist Configuration Tool automatically configure connections to your target devices. You can follow this same procedure for configuring your network in the offline mode by manually dragging and dropping devices from your Hardware tab into your network configuration.

For some devices, you need additional RSLogix software to complete your network configuration (for example, if you have ControlLogix processors on your network, then you must use Studio 5000 Logix Designer to complete your configuration).

Tip: There is no offline mode when working with ControlLogix processors. Also, for more information on using Studio 5000 Logix Designer and ControlLogix processors, refer to the online help for the Scanlist Configuration Tool.

This section walks you through the tasks you will need to perform to use RSNetWorx for EtherNet/IP software in both the online and offline modes. To remain focused on the high-level nature of each task and on the flow of these tasks, the following steps do not include the step-by-step procedure for accomplishing each task. When you are ready to use RSNetWorx for EtherNet/IP software, you should follow the detailed procedures found in the Quick Start, which is located in the RSNetWorx for EtherNet/IP online help.

To access the software's quick start, select **Help > Quick Start** from the RSNetWorx for EtherNet/IP window. To see information about any control on the RSNetWorx for EtherNet/IP or Scanlist Configuration Tool windows, remember to use the What's This? help.

Online mode

Step 1 - Create a new configuration and browse for an online network

The first step in using RSNetWorx for EtherNet/IP in the online mode is to create a new EtherNet/IP configuration (**File > New**). Once you create the configuration, an empty network displays in the network configuration.

Tip: These steps assume that you have configured a communication driver in RSLinx Classic for communication to the EtherNet/IP network.

Next, go online and select an EtherNet/IP network using the RSWho Browse utility. A graphical representation of the selected network appears in the network configuration. If you would like to see a tabular view of the information instead of the graphical view, click the Spreadsheet tab.

Step 2 - Start the Scanlist Configuration Tool and insert a connection

The Scanlist Configuration Tool is a software tool used to create, modify, and delete scanlist entries in a scanner. This tool also allows you to define how particular devices communicate on the network. To configure devices that contain an internal scanlist, use the Scanlist Configuration Tool. Once you open the Scanlist Configuration Tool, you can either insert connections to other devices on the network manually, or you can use the auto insert feature within the Scanlist Configuration Tool to automatically insert the scanlist entries.

Step 3 - Define a connection target and save your network configuration

To provide data from the scanner to other devices on the network, you must define a connection target. You can define the connection target for the

scanner IP address/host name on your network manually. After defining your connection targets, the final step is to save your network configuration and exit the Scanlist Configuration Tool.

Step 4 - Diagnose and troubleshoot your online network

Once you save your configuration, you can diagnose the network and determine the status of all of the devices on that network. If any of the devices are exhibiting diagnostics problems, you can troubleshoot those devices and return your network to proper operating condition.

Offline mode

Step 1 - Create a new configuration and describe your network topology

The first step in using RSNetWorx for EtherNet/IP in the offline mode is to create a new EtherNet/IP configuration (**File > New**). Once you create the configuration, an empty network displays in the network configuration.

Next, you can describe your network topology by double-clicking on an available device or by dragging it from the Hardware tab and dropping it into the network configuration. When you are finished, a graphical representation of the selected network appears in the network configuration. If you would like to see a tabular view of the information instead of the graphical view, click the Spreadsheet tab.

Step 2 - Start the Scanlist Configuration Tool and insert a connection

The Scanlist Configuration Tool is a software tool used to create, modify, and delete scanlist entries in a scanner. This tool also allows you to define how particular devices communicate on the network. To configure devices that support the open standard for EtherNet/IP scanners, use the Scanlist Configuration Tool. Once you open the Scanlist Configuration Tool, you can either insert connections for the scanner IP addresses/host names on your network manually, or you can use the auto insert feature within the Scanlist Configuration Tool to automatically insert the scanlist entries.

Step 3 - Define a connection target and save your schedule

To provide data from the scanner to other devices on the network, you must define a connection target. You can define the connection target device for the scanner IP address/host name on your network manually. After defining your connection targets, the final step is to save your configuration and exit the Scanlist Configuration Tool.

Installing and starting RSNetWorx for EtherNet/IP

This chapter explains how to install and start RSNetWorx for EtherNet/IP software. This chapter includes information on the following:

- system requirements
- software compatibility
- installation methods
- installation procedure
- starting procedure
- troubleshooting

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 RSNetWorx for EtherNet/IP, and then choose **Help > Release Notes** from the main menu.

System requirements

To run RSNetWorx for EtherNet/IP, your system must meet the following hardware and software requirements:

Hardware requirements

To run RSNetWorx for EtherNet/IP, your system must meet the following hardware requirements:

- An Intel® Core™ 2 Duo processor running at 2.8 GHz or faster or another processor with equivalent specifications
- 4 GB or more memory RAM
- At least 16GB of available hard drive space

Software requirements

To run RSNetWorx for EtherNet/IP, you require one of the following operating systems:

- Windows 10 Enterprise v1803
- Windows 10 Professional v1803
- Windows 10 Enterprise v1709

- Windows 10 Professional v1709
- Windows 10 Enterprise v1703
- Windows 10 Professional v1703
- Windows 7 Ultimate with Service Pack 1
- Windows 7 Enterprise with Service Pack 1
- Windows 7 Professional with Service Pack 1
- Windows Server 2016 Standard
- Windows Server 2016 Datacenter
- Windows Server 2012 Standard
- Windows Server 2012 Datacenter
- Windows Server 2012 R2 Standard
- Windows Server 2012 R2 Datacenter
- Windows Server 2008 R2 Standard with Service Pack 1
- Windows Server 2008 R2 Enterprise with Service Pack 1

Software compatibility

RSNetWorx for EtherNet/IP version 28.00 is a component aligned to Studio 5000 Logix Designer™ version 32.00. This version of RSNetWorx for EtherNet/IP has been tested with, and is compatible with the following products:

- FactoryTalk® Activation Manager version 4.03
- FactoryTalk® Services Platform version 6.10
- RSLinx® Classic version 4.10
- RSLogix™ 5 version 9.00
- RSLogix 500® version 12.00
- Studio 5000 Logix Designer® version 32.00

It is recommended that you use all products from the same CPR release.

Installing RSNetWorx for EtherNet/IP software

RSNetWorx supports two installation methods: Setup wizard installation and unattended installation.

The unattended installation reduces user interaction and provides command line parameters to install RSNetWorx. For more information, see [Use unattended installation](#) on [page 57](#).

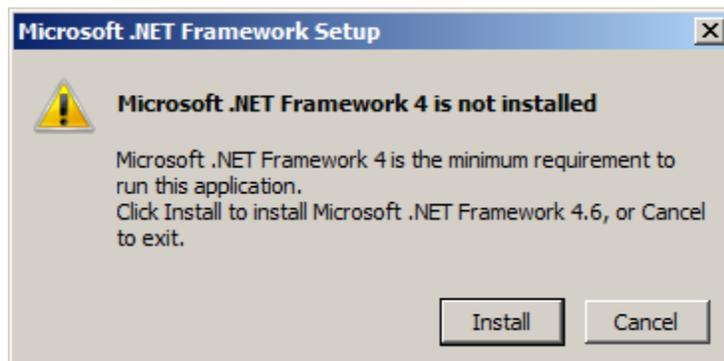
This chapter uses the Setup wizard installation method to illustrate the steps.

Tip: While installing RSNetWorx for EtherNet/IP software, you will have the opportunity to specify a directory. The default directory is:
x:\Program Files\Rockwell Software\RSNetWorx\I
where *x* is the drive where the operating system is installed.
We recommend that you use the default directory whenever possible. This subdirectory contains all of the application files required to run the product.
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.

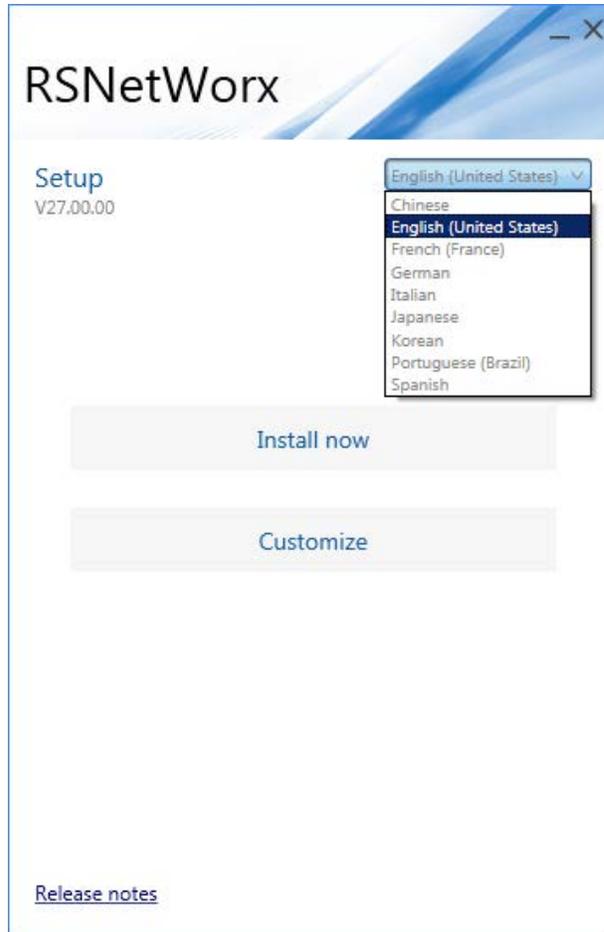
To install RSNetWorx for EtherNet/IP software, perform the following steps:

1. Launch the installation wizard and select what to install.
2. Set up security in RSNetWorx.
3. Read and accept license agreements.
4. Start the installation.
5. Finish the installation.
 1. Close all open programs.
 2. In the RSNetWorx installation package, double-click **Setup.exe**.
 3. If Microsoft .NET Framework 4 is not installed on your computer, the **Microsoft .NET Framework Setup** dialog box shows. Click **Install**.

Step 1: Launch the installation wizard and select what to install

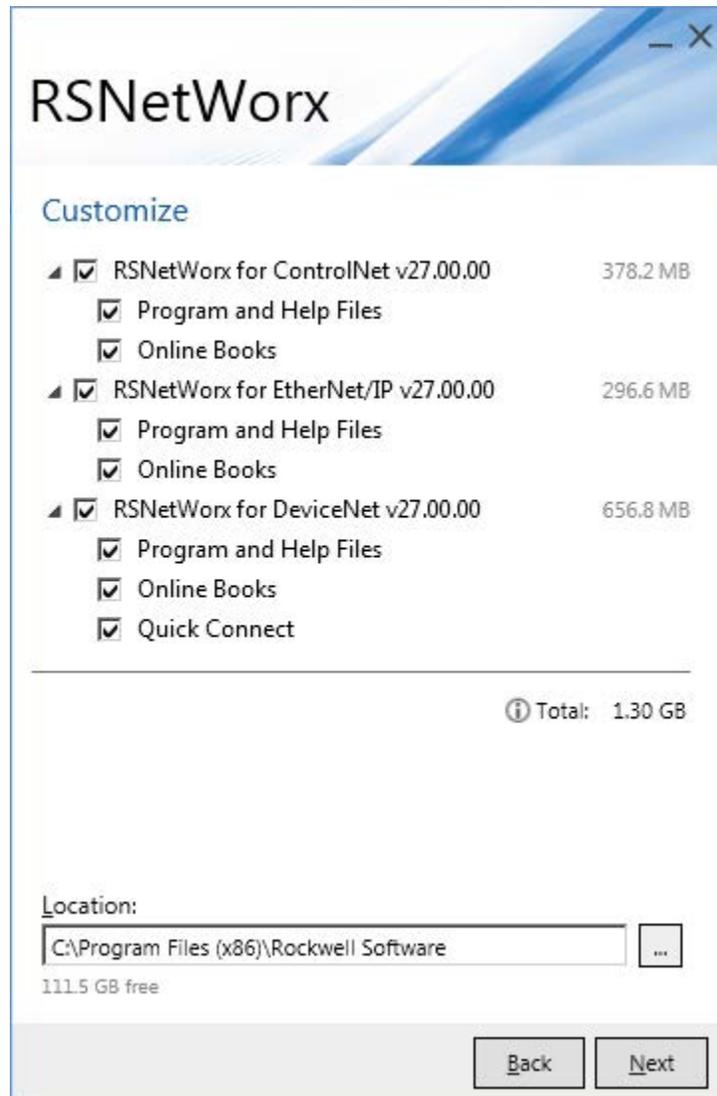


4. On the **RSNetWorx Setup** page, select a language to be shown during the installation process if needed. By default, your system language is selected.



5. To install RSNetWorx for ControlNet, RSNetWorx for EtherNet/IP, and RSNetWorx for DeviceNet, click **Install now** and skip to [Step 2: Read and accept license agreements](#) on [page 32](#).
6. To select a particular software product, click **Customize**.

7. On the **Customize** page, select **RSNetWorx for EtherNet/IP v27.00.00** and its components.



8. Select the location for Rockwell Automation software. The default location is **C:\Program Files (x86)\Rockwell Software**.
9. Click **Install**.

Step 2: Set up security in RSNetWorx

On this page, you can set up FactoryTalk Security in RSNetWorx to improve the security of your automation system by limiting access to those with a legitimate need.

1. Select the **Enable FactoryTalk® Security** option. And then select the FactoryTalk directory (Network or Local) that will be used to authenticate and authorize user access.



2. Click **Install**.

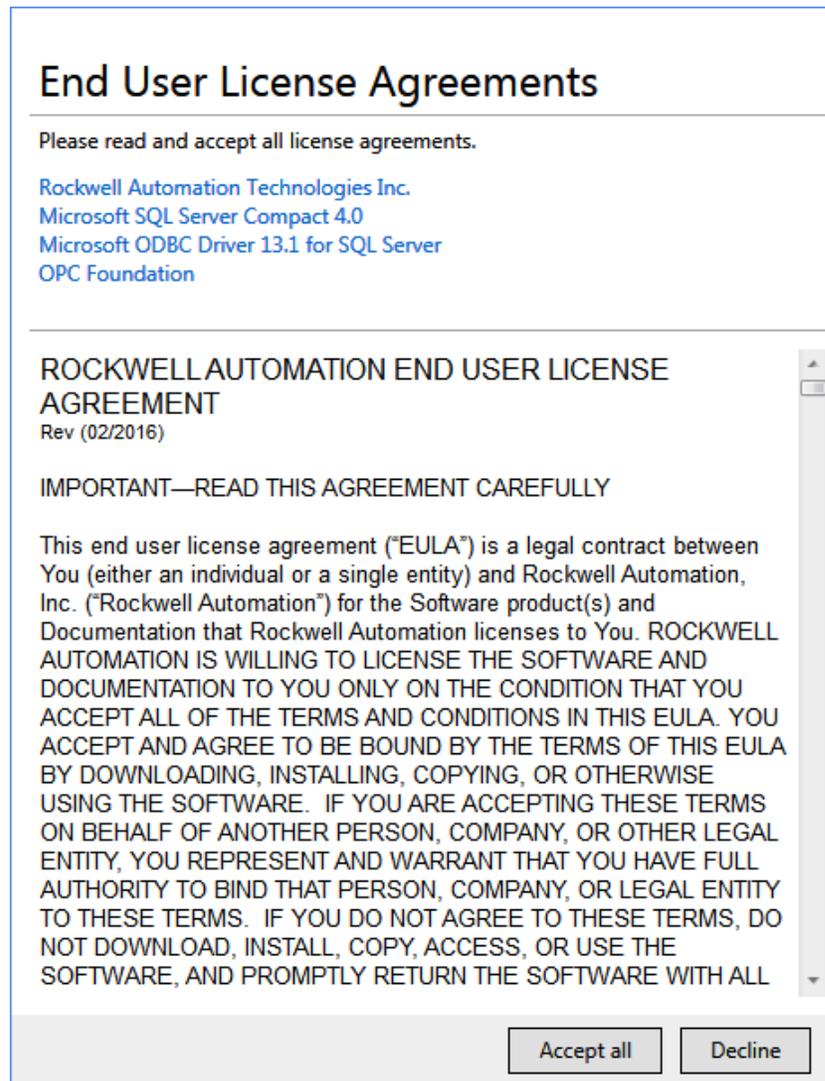
Step 3: Read and accept license agreements

End-user license agreements (EULA) spell out your rights and responsibilities. Depending on the components being installed, there may be more than one license agreement on this page. The individual license agreements are listed above the text box.

Tip: You can also view the license agreements from the **License** folder of RSNetWorx installation package.

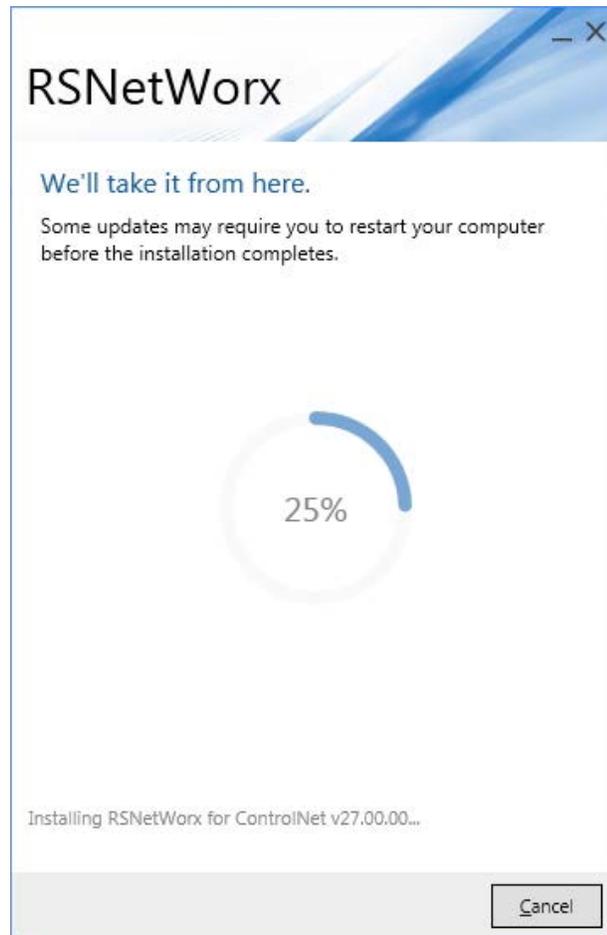
Some software products may be delivered or made available only after you agree to the terms and conditions of each of the license agreements.

1. On the **End User License Agreements** page, select each agreement and read the agreement carefully.
2. When all license agreements have been read, click **Accept All**.

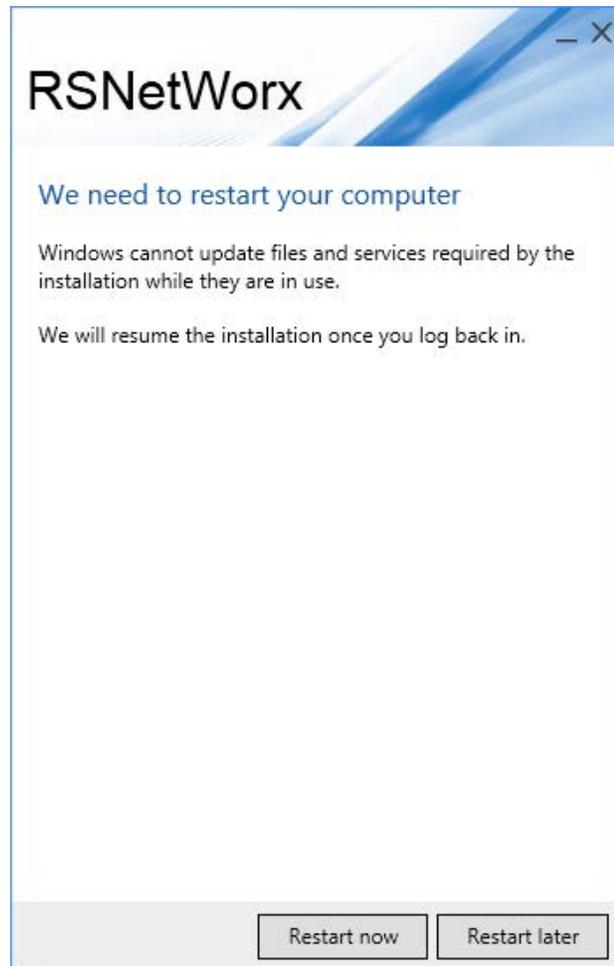


Step 4: Start the installation

After accepting the license agreements, the Setup Wizard automatically installs all the Rockwell Software applications selected previously.

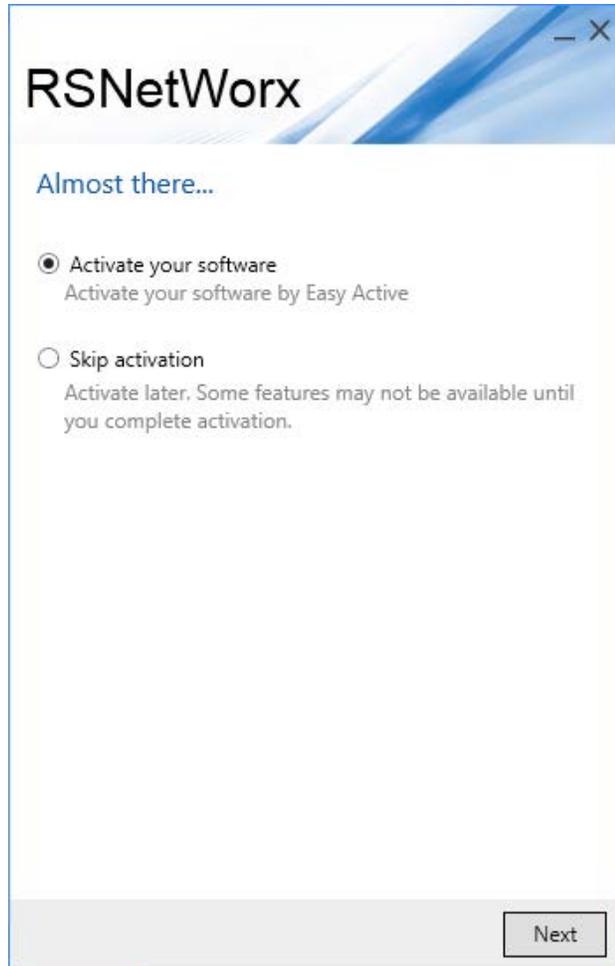


During the installation, if prompted to restart your computer, click **Restart now**.



Step 5: Finish the installation

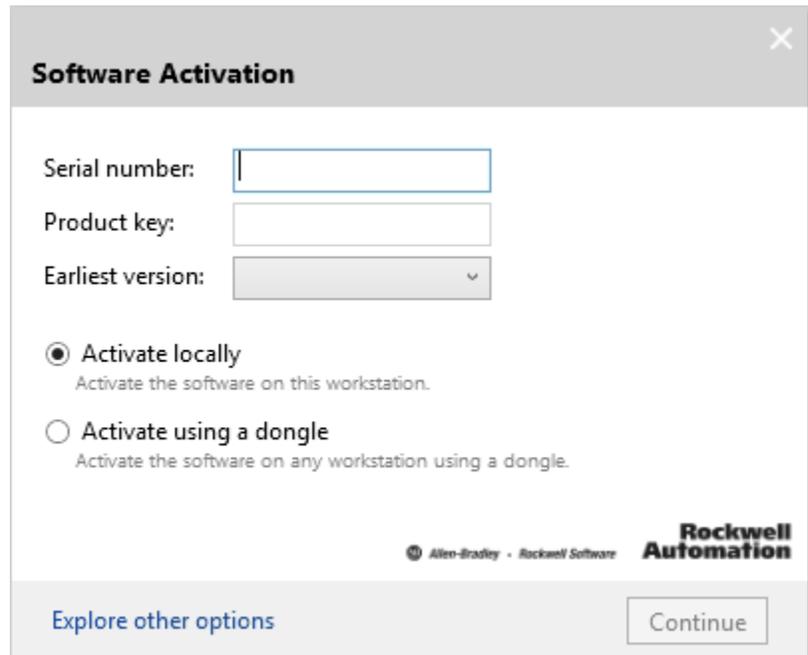
After the installation completes, you need to activate the software for its full feature capabilities. You can activate the software now or later. For more information about activation, see [Activation](#) on [page 49](#).



- To activate the software, select **Activate your software** and click **Next**. Make sure your computer is connected to the Internet.

In the **Software Activation** dialog box, enter the required information and click **Continue**.

You will be prompted to restart the computer after the activation.



The image shows a 'Software Activation' dialog box with a close button (X) in the top right corner. The dialog contains the following fields and options:

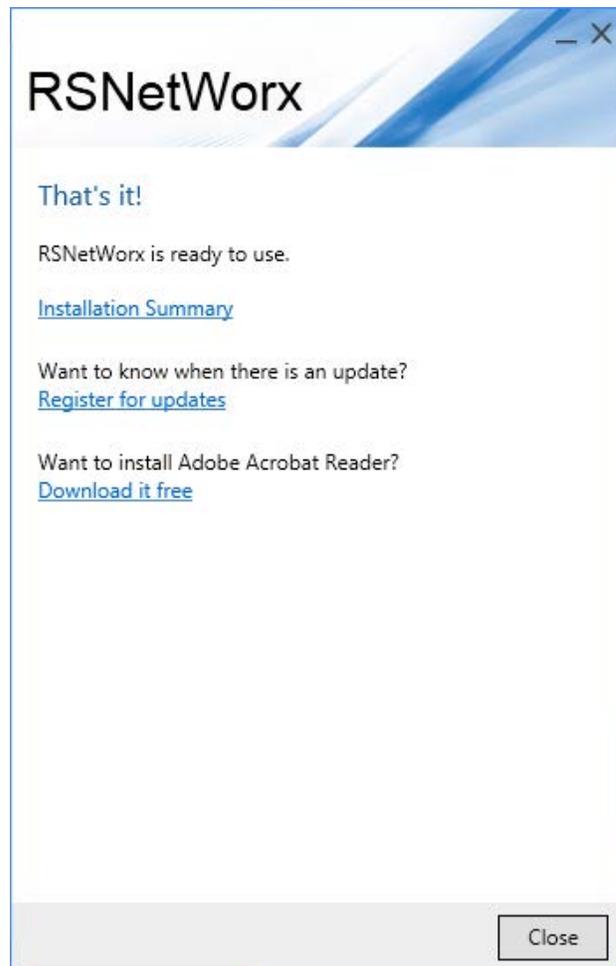
- Serial number:
- Product key:
- Earliest version:
- Activate locally**
Activate the software on this workstation.
- Activate using a dongle**
Activate the software on any workstation using a dongle.

At the bottom right, there is the Allen-Bradley - Rockwell Software logo and the Rockwell Automation logo. At the bottom left, there is a link 'Explore other options' and at the bottom right, there is a 'Continue' button.

- To finish the installation without activation, Select **Skip activation** and click **Next**.

- To view the installation details, click Installation Summary.
- To receive latest product updates and patch notification, click **Register for updates**.
- To install the latest version of Adobe Acrobat Reader, click **Download it free** and follow the on-screen instructions.

Restart the computer to complete the installation.



Installing a client copy from a dedicated server

As a client to a client-server installation, you can install one or more Rockwell Software products from the dedicated server location to an end-user destination. To install the RSNNetWorx for EtherNet/IP software from the server, perform the following steps:

1. Map a network drive to the dedicated server location provided by your system administrator. The system administrator must have copied the entire installation contents and provided only Read and Execute permissions of the files. Users installing the software cannot have write access to the files.
2. Double-click Setup.exe in the client installation directory.

Starting RSNetWorx for EtherNet/IP Troubleshooting installation

3. See the [Installing RSNetWorx for EtherNet/IP software](#) on [page 28](#) section in this chapter.

To start RSNetWorx for EtherNet/IP software, click **Start > All Programs > Rockwell Software > RSNetWorx > RSNetWorx for EtherNet-IP**.

If RSNetWorx for EtherNet/IP does not start up or run properly, consider the following:

- Do you have the correct version of RSLinx Classic installed? RSNetWorx for EtherNet/IP requires RSLinx Classic version 4.00.
- Does your computer have enough memory? Running RSNetWorx for EtherNet/IP requires a minimum of 4GB of RAM.
- Have you reinstalled an earlier Service Pack, or removed a component, such as DCOM, that RSNetWorx for EtherNet/IP requires?
- Have you checked the RSNetWorx support on the web for troubleshooting information? Go to <http://www.rockwellautomation.com/support>, click Knowledgebase, and search for Tech Notes on RSNetWorx for EtherNet/IP.
- Do you have the up-to-date compatibility information for the software? Go to Product Compatibility and Download Center at <https://compatibility.rockwellautomation.com/Pages/home.aspx>.

Advanced concepts

This chapter contains the following sections:

- EDS-based devices
- EDS library
- Class Instance Editor

EDS-based devices

RSNetworx for EtherNet/IP™ relies on an electronic data sheet (EDS) for configuring devices. An electronic data sheet is an ASCII file that is created by the manufacturer and supplied with the device.

As long as the EDS file for the device you want to configure is registered with the RSNetWorx for EtherNet/IP software, you can configure its target connection configuration (attributes) and how it will communicate with other devices on the EtherNet/IP network. Although the procedure for configuring a device is basically the same for all devices, each device has a unique set of properties.

EDS library

The electronic data sheet (EDS) library is a collection of EDS files that have been registered with RSNetWorx for EtherNet/IP. The EDS files, which are provided by the device manufacturers, contain configuration and identification information for the devices.

RSNetWorx for EtherNet/IP software can access only those devices that have been registered. You must use the EDS Registry Wizard for registering EDS files for unknown devices, or if you have updated EDS files to install. To access the EDS Wizard, select **Tools > EDS Wizard**.

Although you get a large number of electronic data sheet (EDS) files with the RSNetWorx for EtherNet/IP software, there may be a time when you need to acquire/create additional EDS files. The most common ways to get these files are to:

- obtain them on distribution media that accompany the devices.
- download them from EtherNet/IP sites on the world wide web. You can either select the device in the network configuration, right-click the mouse and select **Re-register Device**, and click **Download EDS File** in the EDS Wizard or access one of the following world wide web sites from which EDS files are available:

- <https://www.rockwellautomation.com/global/support/networks/eds.page?> (Allen-Bradley technical support site)
- download them from a different manufacturer's site.

Class Instance Editor

The Class Instance Editor is a tool that allows you to send data to, and read data from, an EtherNet/IP device that is not otherwise configurable with RSNetWorx for EtherNet/IP. Using the Class Instance Editor, you can either enter raw data and download it to the device, or read the data from the device.

Important: We do not recommend configuring devices with the Class Instance Editor unless you are instructed to do so by technical support personnel for the hardware product.

To use the editor, you will need to know the service code, class, instance, and attribute by their appropriate hexadecimal codes within the device. This information may be on the printed data sheet accompanying the device.

Tip: For further information about configuring a device with the Class Instance Editor, contact the manufacturer of the device. For more information on how to enter data into the Class Instance Editor, contact Rockwell Automation technical support.

Finding the information you need

This chapter describes how to:

- Use the online help
- Access product manuals
- Participate in Rockwell Software training courses
- Contact technical support

Using the online help

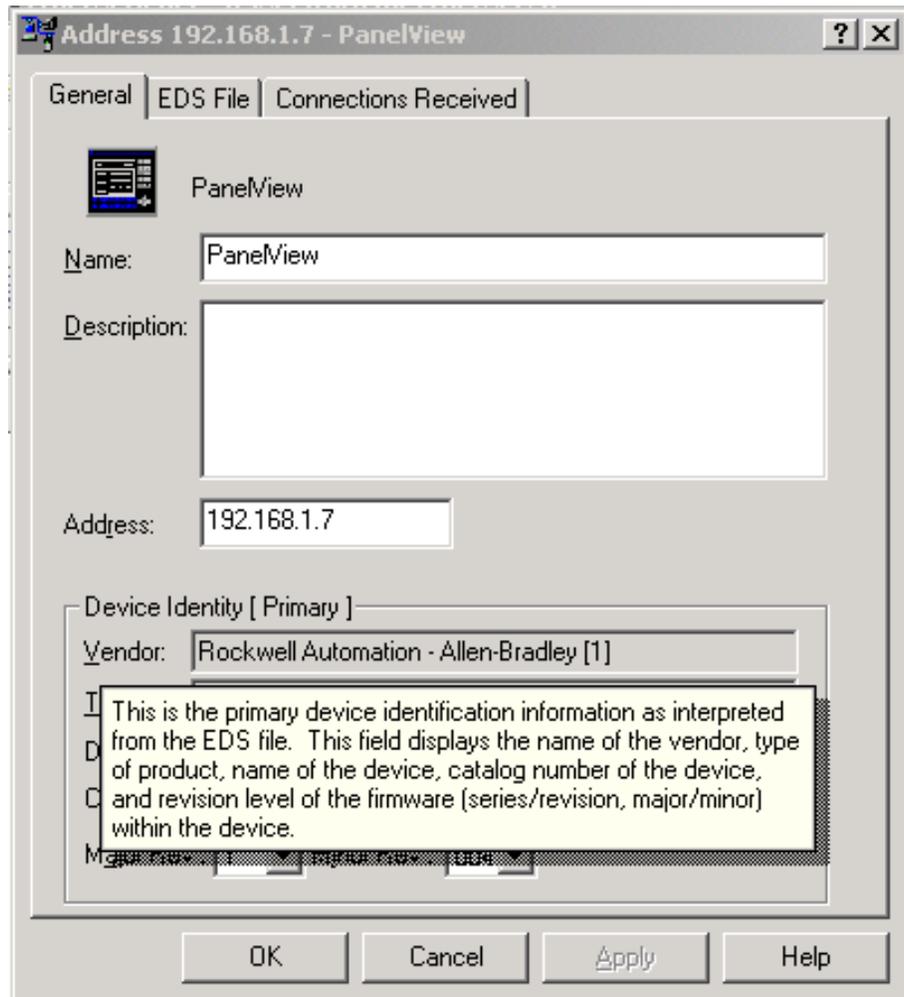
RSNetWorx for EtherNet/IP™ online help provides general overview information, comprehensive step-by-step procedures, and context-sensitive, dialog box control definitions for working with all of the features in the software. To view online help while running RSNetWorx for EtherNet/IP:

- choose Contents from the Help menu on the RSNetWorx for EtherNet/IP main window
- click Help on any RSNetWorx for EtherNet/IP dialog box or property page
- position the cursor over a control with which you want help and right-click
- press F1
- click the What's This? icon located in the toolbar or in the upper right corner of dialog boxes, then click any control

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. You can also right-click on a control to display the definition. In this example, the PanelView properties page was selected.



Accessing help for messages

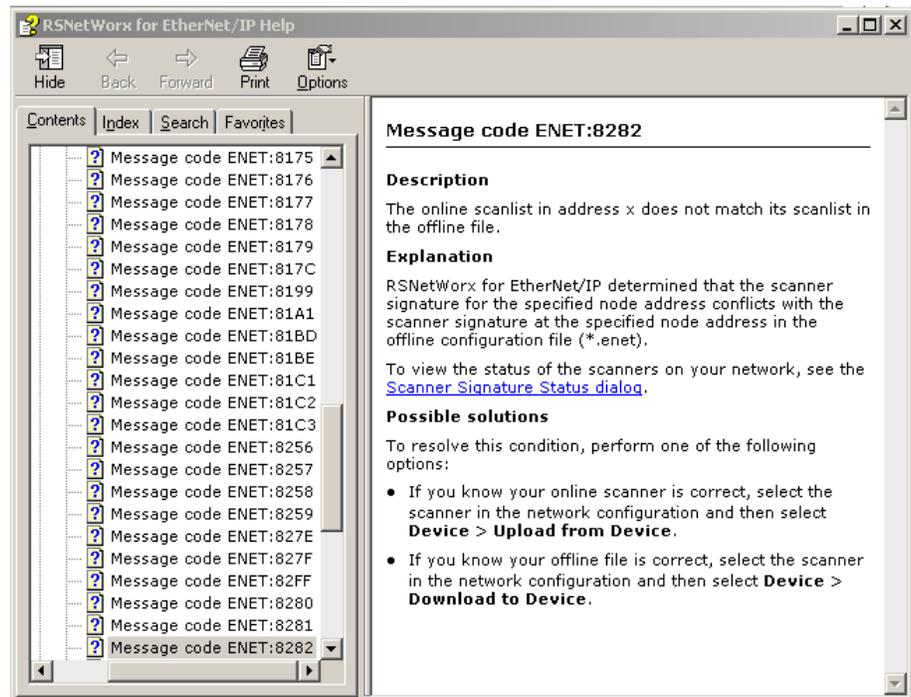
The Message view, which appears in the bottom portion of the workspace, displays a log of messages. This view may contain informational, warning, and/or error messages.

The screenshot shows a "Messages" window with a table of message logs. The table has three columns: "Message Code", "Date", and "Description". There are three rows of messages, each with an icon indicating its severity: an information icon (i) for informational, a warning icon (triangle) for warnings, and an error icon (X) for errors.

| Message Code | Date | Description |
|--------------|--------------------|------------------------------|
| i ENET:81E6 | 7/15/2002 10:24:30 | Save completed. |
| w ENET:8366 | 7/15/2002 10:17:34 | Connections found in address |
| i ENET:81E4 | 7/15/2002 10:15:19 | Mode changed to online. Th |

To troubleshoot a particular message, you can select the message and press the F1 key or right-click on the message and select **Troubleshoot** to access

the online help. For example, if you select the ENET:8282 message code shown here and press F1, the "The online scanlist in address 192.168.1.6 does not match its scanlist in the offline file" troubleshooting help topic displays.

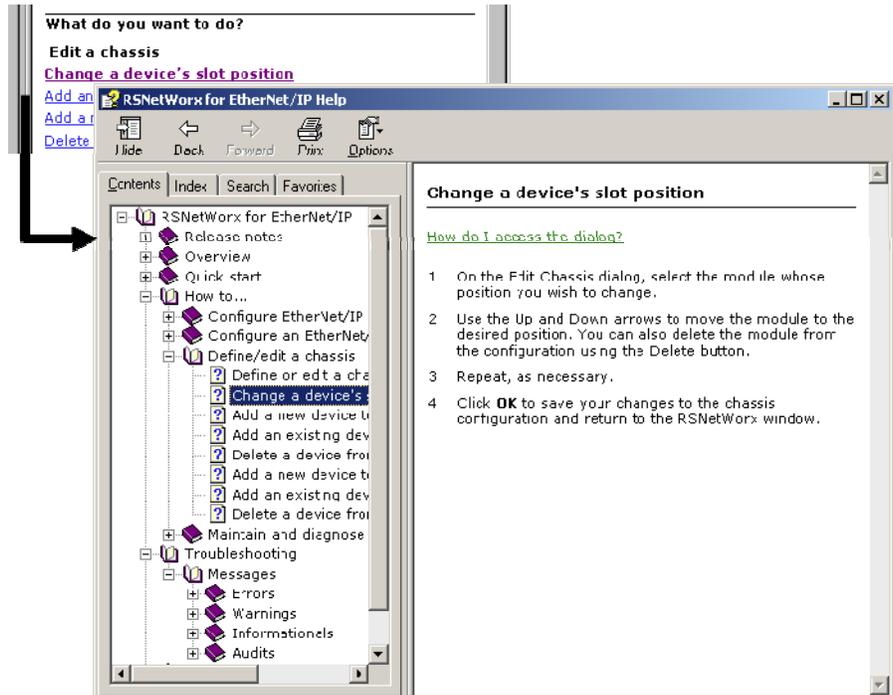


From the message view, you can also select a message and choose **View > Messages > Troubleshoot** to display online help for the message. You can also show, clear, and/or clear and hide messages by making the appropriate selection from the **View > Messages** command on the main menu. The copy menu item copies the selected message to the Windows clipboard so it can be pasted into other applications (for example, an e-mail message).

Finding step-by-step procedures

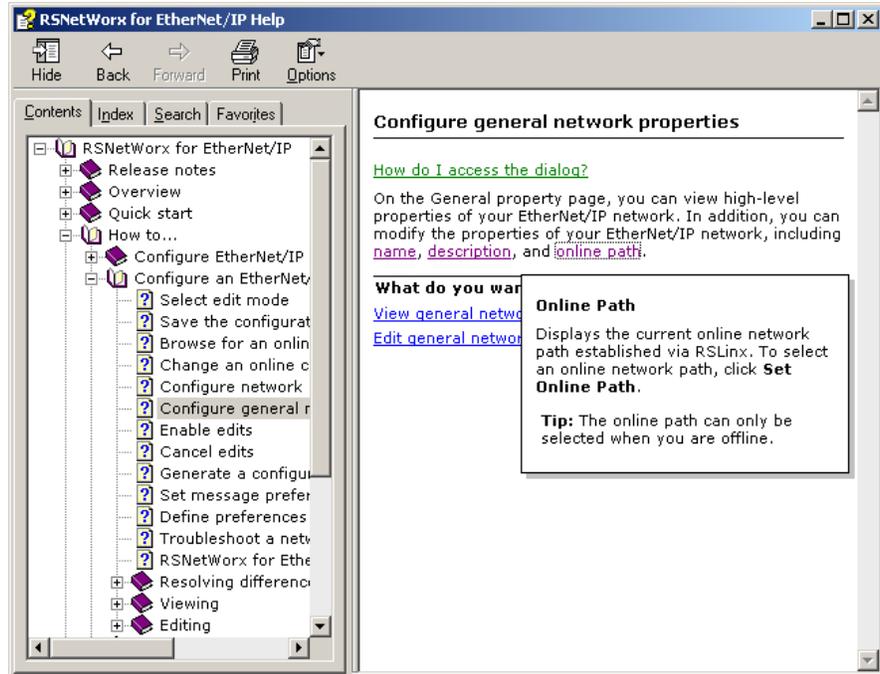
To view a list of tasks related to the task-based topic, move to the What do you want to do? section at the bottom of the help window and select one of the listed tasks. The contents pane of the help window is updated, displaying a step by step procedure for completing the selected task.

For example, from the Define or Edit a chassis help topic, if you select Change a device's slot position under the What do you want to do? section, the help topic that describes how to change a device's slot position replaces the original help topic. Also, in the Change a device's slot position help topic, How do I access the dialog? is a drop down navigational tip.



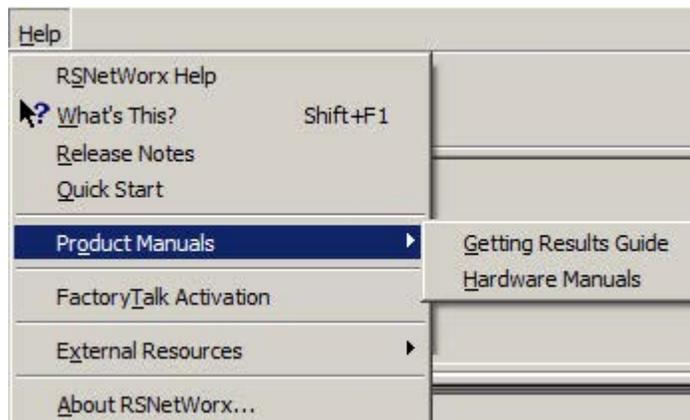
Finding definitions

Within the RSNetWorx for EtherNet/IP help, blue highlighted text with an underline indicates a pop-up definition or a link to a related topic. For example:



Accessing the Product Manuals

You can gain immediate access to product documentation through the Online Books feature in RSNetWorx for EtherNet/IP. Product Manuals includes this Getting Results Guide, as well as many reference guides, in an electronic book format. Select **Help > Product Manuals** to access this documentation.



Training

One of the best ways to increase your proficiency at using Rockwell Software products is to attend a Rockwell Automation 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 website or contact the Rockwell Automation Training Coordinator. Our website address and telephone numbers appear on the inside front cover of this document.

Tip: For more information on Rockwell Automation training, go to the Training Services website:
<http://www.rockwellautomation.com/global/products/training/overview.page?>

Technical support

If you cannot find answers to your questions in the *Getting Results with RSNetWorx for EtherNet/IP* guide, the online help, or the Online Books documentation, you can call Rockwell Software Technical Support at the numbers listed on the inside front cover of this guide. You can also access the Rockwell Software Online Support Library and receive information about Autofax Product Information System from the website 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 number and product version number
- The product serial numbers and version number can be found in the software by selecting **Help > About RSNetWorx**
- hardware you are using
- operating system plus service packs, and version of Internet Explorer (if any) installed
- 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 training, go to the Training Services website:
<http://www.rockwellautomation.com/global/products/training/overview.page?>

Activation

RSNetWorx for EtherNet/IP supports only FactoryTalk activation. If you are a new user, you will need to activate your software using FactoryTalk Activation.

Activate RSNetWorx with FactoryTalk Activation

RSNetWorx for EtherNet/IP supports the following types of activation:

Node-locked activation

This type of activation can be either locked to a particular piece of hardware, such as an EtherNet card or a hard disk of a stand-alone computer, or to a hardware dongle. Depending upon the kind of device (stand-alone computer or hardware dongle) you want to activate, you can purchase either

- Local "node-locked" activation: This kind of activation activates software only on a single computer. If the activation file is copied to another computer, the software will not run on that other computer, or
- Mobile "node-locked" activation: This kind of activation is locked to hardware dongle. A dongle is a security or copy protection device that must be connected to the computer while the program runs. The activation files can be copied to multiple computers, but the software activates only on the computer where the dongle is connected.

Concurrent activation

This type of activation allows multiple computers across a network to use Rockwell Software products at the same time. There are two kinds of concurrent activations:

- Floating activations: activations that "float" from an activation server to any computer that needs them.
- Borrowed activations: activations that are retrieved from a server for a specific period of time before expiring and returning automatically to the pool of available activations on the server.

For more information about FactoryTalk Activation, refer to the FactoryTalk Activation Manager help.

How to activate RSNetWorx

You can activate your copy of RSNetWorx on the **Software Activation** dialog box towards the end of installation. If you skipped the activation during installation, activate RSNetWorx using the FactoryTalk Activation Manager installed during the installation process.

Finding more information about FactoryTalk Activation

For help with FactoryTalk Activation at any point, you can click:

- the Help button in FactoryTalk Activation Manager
- the Help link on the Rockwell Software Activation website: <https://activate.rockwellautomation.com/>
- View How to Activate Rockwell Software Products on the Required Steps of the Install program

If you cannot connect to the Internet, call Technical Support for help creating an activation file from an e-mail or a fax.

Phone: 440-646-3434 in North America. Outside of North America, call your local support organization.

Grace period

In RSNetWorx for EtherNet/IP v9.00.00 (CPR 9 Service Release 1) and later, the software supports a seven day activation grace period when a valid activation is not found. During grace period:

- If RSNetWorx is started and an activation key is not present, the software shall enter grace period and run with full functionality.
- Once RSNetWorx has entered grace period, the software shall check for an activation key every four hours. If the activation is not found, a message will be generated to FactoryTalk Diagnostics.
- RSNetWorx can be started an unlimited number of times while in grace period and be able to run with full functionality. If the grace period ends and a valid activation has not been found, RSNetWorx shall run in Demo mode.
- While RSNetWorx is running, the software cannot change modes. RSNetWorx can only change to Demo mode when the software is restarted and/or grace period has already expired.

Tip: If RSNetWorx is unable to successfully obtain valid activations (for example, a network failure occurs), the software will attempt run in grace period for up to seven days.

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.

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.

Security

FactoryTalk Security™ is intended to improve the security of your automation system by limiting access to those with a legitimate need. FactoryTalk Security authenticates user identities and authorizes user requests to access a FactoryTalk-enabled system. These security services are fully integrated into the FactoryTalk Directory and are included as part of the FactoryTalk Services Platform that installs with many products.

For more information on how to use security services, refer to FactoryTalk Security's Online help.

How do I set up security in RSNetWorx?

RSNetWorx supports FactoryTalk Security. FactoryTalk Security™ is intended to improve the security of your automation system by limiting access to those with a legitimate need. FactoryTalk Security authenticates the identities of users and authorizes user requests to access a FactoryTalk-enabled system against a set of defined user accounts and access privileges held in the FactoryTalk Directory. For more information on FactoryTalk Security, refer to the 'About FactoryTalk Security' topic in RSNetWorx for EtherNet/IP Online Help.

Follow the steps below to set up security in RSNetWorx:

1. During RSNetWorx's installation, you will see the **RSNetworx Security Configuration Selection** page. On this page, select the **Enable FactoryTalk® Security** option. And then select the FactoryTalk Directory (Network or Local) that will be used to authenticate and authorize user access.



2. Click **Install** to continue the RSNetWorx installation.
3. Follow the screen instructions to complete the installation.

What can I secure in RSNetWorx?

RSNetWorx implements FactoryTalk Security through three securable actions: Access, Modify, and Go Online. These securable actions let you restrict user access to actions, such as opening a project file, creating a new project file, making changes to a project file, uploading or downloading to a device, browsing to a device from the network, viewing the properties of a device, etc., in RSNetWorx.

| Securable action | Description |
|------------------|--|
| Access | The Access securable action allows you to perform actions such as opening an offline project file for viewing, viewing the properties of a device, etc. |
| Modify | The Modify securable action allows you to perform actions such as creating a project file, making changes to a project file, saving any pending edits, etc. Note: To modify a project file, you need both Access (to open the file) and Modify (to make changes) securable actions. |
| Go Online | The Go Online securable action allows you to download information saved in a project file or upload information into a project file, as well as browse to a device on the network. Tip: To download information saved in an existing project file, you need Access (to open the file), Go Online (to go online to prepare to download), and Modify (to download) securable actions. To upload information into an existing project file, you need Access (to open the file), Go Online (to go online to prepare to upload), and Modify (to upload) securable actions. To upload information into a new project file, you need Go Online (to go online to upload) securable action. |

To allow or deny user access to one or more of the above securable actions, you will need to:

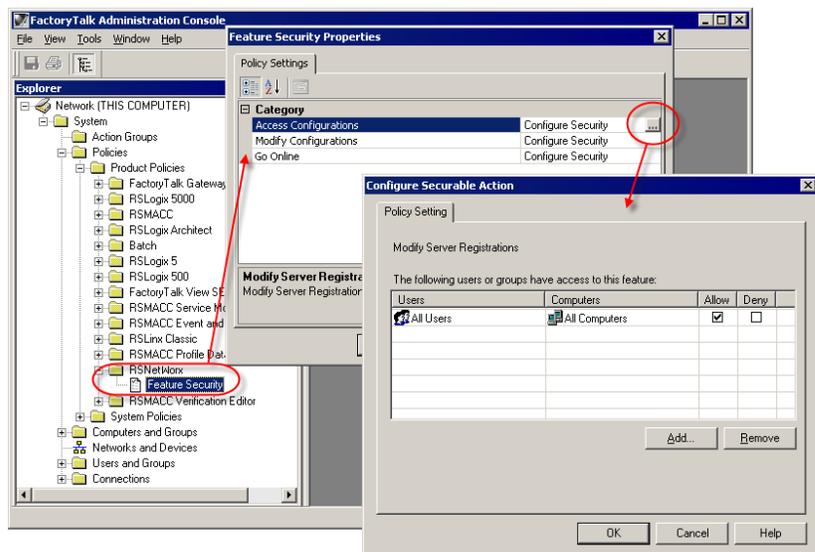
1. Start FactoryTalk Administration Console from **Start > Programs > Rockwell Software > FactoryTalk Administration Console**. You will see the Log On to FactoryTalk screen, as shown below.



2. Enter your username and password, and select the directory you want to log on to. (The username and password were set when you set up an account during FactoryTalk Directory configuration.)

Tips for choosing a directory:

- Click **Network** to access Network (also called Distributed) applications on the Network Directory Server.
 - Click **Local** to access Local (also called Stand-alone) applications on the Local Directory. Local applications are always located on your local computer. You cannot access local applications remotely.
 - If you cannot log on to a particular directory on your computer, it may be because it has not yet been configured. For more information, refer to the Right FactoryTalk Directory is not configured on this computer topic in FactoryTalk help. You can launch FactoryTalk Help from FactoryTalk Administration Console.
3. In FactoryTalk Administration Console, click on the **RSNetWorx** folder (located under **System > Policies > Product Policies**), to expand it. You will see the Feature Security file.
 4. Double-click the Feature Security file to launch the Feature Security Properties dialog box.



5. In the Feature Security Properties dialog box, click the securable action you want to grant the user access to.
6. In the Configure Securable Action dialog box, from the list of users, select the user you want to grant access to, and click **Add**.

Tip: For more information on FactoryTalk and FactoryTalk Security, refer to RSNetWorx for EtherNet/IP Online Help.

Use unattended installation

The unattended installation is an automated installation method that you can use to install RSNetWorx. You can typically use the unattended installation during large-scale rollouts when it might be too slow and costly to have administrators or technicians interactively install the RSNetWorx software on individual computers.

In the unattended installation, you enter a specified command line with multiple parameters. During the installation process, instead of prompting you for installation and configuration information interactively, the process follows the parameters you specified in the command lines.

For detailed description about each parameter, see Parameters. You can also type **Setup /?** in the **Command Prompt** window, and press **Enter** to view the help information of all parameters and examples.

To install RSNetWorx in the unattended mode, follow the steps below. The steps may vary slightly. Follow the on-screen instructions that apply to your operating system.

1. Close all open Windows programs.
2. Open the **Command Prompt** window.
3. In the **Command Prompt** window, navigate to *D:*, where *D:* is the drive containing the RSNetWorx installation DVD or installation package, and press **Enter**.

Tip: The **User Account Control** dialog box may show after you press **Enter**, click **Yes** to continue. The unattended installation requires the administrator permission.

4. Type a command line with the following syntax:

```
Setup {/Q | /QS}  
/IAcceptAllLicenseTerms  
[/AutoRestart]  
[/SetupLanguage=language]  
[/ProductLanguage=product_language]  
[/InstallLocation=location]  
[/SerialNumber=serial_number]
```

Perform unattended installation

```
[ /ProductKey=product_key ]
```

```
[ /Version=product_version ]
```

5. Press **Enter**. The installation process starts with the parameters you specified.

Parameters

The parameters and values are not case sensitive. If the value includes spaces, you need to enclose it in quotation marks (" ").

If your installation package is Personalized Edition, the following parameters will be ignored during installation:

- /SerialNumber
- /ProductKey

/Q

Required if **/QS** or **/Record** is not specified.

Installs the product in the silent mode without any user interface.

/QS

Required if **/Q** or **/Record** is not specified.

Installs the product in the unattended mode without user interaction during installation, and shows the progress, errors, or complete messages on the user interface.

/IAcceptAllLicenseTerms

Required. Specified that you read and acknowledge all license agreements, and agree to continue the installation.

/AutoRestart

Optional. If specified, the computer will be restarted automatically after the installation if a restart is required to complete the installation.

The parameter is ignored if a restart is not required.

/SetupLanguage=setup_language

Optional. Specifies which language will be displayed during the installation process. The value must be the one of **ENU**, **CHS**, **DEU**, **ESP**, **FRA**, **ITA**, **JPN**, **KOR**, or **PTB**.

If it is omitted or if the specified language is not available, the default language is the user or system user interface language.

/Record

Optional. Records the installation options chosen to a recording file.

/Playback

Optional. Plays back a recording file to specify the installation options.

/ProductLanguage=product_language

Optional. Specifies which language of components will be installed. The value must be the one of **ENU**, **CHS**, **DEU**, **ESP**, **FRA**, **ITA**, **JPN**, **KOR**, or **PTB**.

If it is omitted or if the specified language is not available, the default language is the same as **SetupLanguage**.

/InstallLocation=location

Optional. Specifies the installation location.

If omitted, the default location is "C:\Program Files (x86)\Rockwell Software" (64-bit) or "C:\Program Files\Rockwell Software" (32-bit).

/SerialNumber=serial_number

Optional. Specifies the serial number that is required if you want to get activation keys during installation.

/ProductKey=product_key

Optional. Specifies the product key that is required if you want to get activation keys during installation.

/Version=product_version

Optional. Specifies the version corresponding to the product version that the **SerialNumber** and **ProductKey** are able to activate if you want to get activation keys during the installation.

If omitted, the installer uses a default version which is the most recent product version available when retrieving the activation.

Examples

The following examples show how to use the commands during the unattended installation.

Example 1:

```
Setup.exe /Q /IAcceptAllLicenseTerms
```

means:

- The installation uses the default settings during the installation process.

Example 2:

```
Setup.exe /QS /IAcceptAllLicenseTerms /AutoRestart  
/SetupLanguage=CHS /SerialNumber=0123456789  
/ProductKey=ABCDE-FGHIJ /Version=27.00.00
```

means:

- During the installation, the displayed language is Chinese.
- The setup will get activation keys for RSNetWorx version 27.00.00 during installation if the serial number *0123456789* and product key *ABCDE-FGHIJ* are valid.
- After the installation, if a restart is required, the computer will be restarted automatically.

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.

Bridge — A multi-port device that connects network segments that use different physical media. Bridges also monitor network traffic, building and maintaining internal tables that list the port on which each Ethernet address resides. When a bridge receives a packet destined for a particular address, the bridge transmits the packet again only on the port at which the device resides. Each port on a bridge represents a separate collision domain.

Connection — An open, logically binding communication path between two devices on a EtherNet/IP network. Connections can be either point to point or multicast connection.

Connection ID — An identifier assigned to a particular connection between producers and consumers that specifies select application information.

Connection type — The connection type indicates the data ownership of a node. It defines the rule for how the connection entry controls outputs to the rack, module, or device. The following are standard connection types:

- **Exclusive Owner** - specifies an independent connection where a single device controls the output states in the target device. If you have an existing Exclusive Owner connection to a target device, you cannot specify another Exclusive Owner or Redundant connection to that same target device.
- **Input Only** - specifies an independent connection where a device receives inputs from the target device and sends configuration data to the network. An Input Only connection does not send outputs; it only receives inputs. You can specify multiple Input Only connections to the target device from different originators.
- **Listen Only** - specifies a dependent connection where a device receives inputs from the target device, but does not send configuration data with the network. A Listen Only connection only functions properly when another non-Listen Only connection exists to the same target device. A Listen Only connection does not send outputs; it only receives inputs. You can specify multiple Listen Only connections to the target device from different originators.

Tip: All Listen Only connections will be terminated when all non-Listen Only connections are terminated.

Consumer — A node that receives data from a producer on a EtherNet/IP link.

Cut-through switching — Cut-through switching starts sending packets as soon as they enter a switch and their destination address is read. The entire frame is not received before a switch begins forwarding it to the destination port. This reduces transmission latency between ports, but it can propagate bad packets and broadcast storms to the destination port.

EtherNet/IP network — An industrial automation network standard that is sponsored by EtherNet/IP International.

FactoryTalk is a manufacturing information platform that integrates plant-wide control systems and connects the enterprise with the production facility.

- The FactoryTalk Automation Platform:
- provides common services (such as diagnostic messages and access to real-time data) and shares plant resources (such as tags and graphic displays) throughout a production facility
- allows defining plant-floor resources once, and then allows simultaneous access to those resources across product boundaries
- supports centralized security services

FactoryTalk Administration Console — Part of the FactoryTalk Automation Platform, FactoryTalk Administration Console is an optional, stand-alone tool that allows you to:

- Create and configure application, area, and data server elements in the FactoryTalk Directory.
- Back up and restore an entire directory or an individual application.
- Set up redundancy for OPC data servers.
- Configure client computers to recognize the location of a FactoryTalk Directory Server computer.
- Configure options for routing and logging diagnostic messages.
- View system-wide diagnostic messages.
- Configure system-wide policy settings.
- Secure your FactoryTalk-enabled system with FactoryTalk Security™ services.

Run FactoryTalk Administration Console from the Windows Start menu:
Start > Programs > Rockwell Software > FactoryTalk Administration Console.

FactoryTalk Directory — FactoryTalk Directory provides a central lookup service for software products participating in a FactoryTalk-enabled automation system.

The FactoryTalk Automation Platform includes two separate directories: a Local Directory and a Network Directory. Either directory, or both directories, can be configured on the same computer. Project information, including security settings, cannot be shared between a Local Directory and Network Directory, even if both directories are configured on the same computer. Create and configure application, area, and data server elements in the FactoryTalk Directory.

- **Local Directory** — all project information and participating software products are located on a single computer, and the FactoryTalk-enabled system cannot be shared across a network or accessed remotely.
- **Network Directory** — organizes project information from multiple software products across multiple computers on a network.

Some FactoryTalk-enabled products require a Network directory, others require only a Local directory, and some require that both directories be configured.

Gateway — The term gateway has many different meanings. For example: a device that performs protocol conversion between different types of networks or applications. Such gateway function at the transport layer and above. They perform complete conversions from one protocol to another rather than simply supporting one protocol from within another. Sometimes router can implement such gateway functions; and a device that acts as a go-between connecting two or more networks that use the same protocols. In this case, the gateway functions as an entry/exit point to the network. Transport protocol conversion may not be required, but some form of processing is typically performed.

Hub — A hub is a common wiring point for star-topology networks. Hubs have multiple ports to attach the different cable runs. Some hubs include electronics to generate and time the signal between each hub port. Others act as signal splitters, similar to the multi-tap cable-TV splitters you might use on your antenna coax. Some route the network signals to each active device in series, while other hubs distribute received signals out all ports simultaneously.

Internet Group Management Protocol (IGMP) snooping — This protocol constrains the flooding of IP multicast traffic by dynamically configuring the switch interfaces so that multicast traffic is forwarded only to those interfaces associated with IP multicast devices.

Multicast connection — A connection made from one node to many nodes. Multi-cast connections allow multiple consumer nodes the ability to receive data from a single producer node.

Node — A node is a EtherNet/IP address. When a device is added to the network, it is assigned a node address..

Offline Configuration File — In RSNetWorx for EtherNet/IP, the offline configuration file (*.enet) contains network configuration information (including scanlist data, device and chassis definitions, rack size and density, etc.). When online, the download operation applies all of the offline configuration information to the online network and the upload operation applies all of the network configuration information obtained from the online network to the offline configuration file.

Point-to-point connection — A connection made between two nodes only.

Producer — A node that is responsible for transmitting data on a EtherNet/IP link.

Requested Packet Interval — The requested packet interval (RPI) value is determined by how often you want a particular piece of I/O or scheduled peer-to-peer data to be transmitted within the scheduled bandwidth of the NUI.

Router — A router is a device that forwards traffic between networks based on the network layer information in the data and on the routing tables that it maintains. The router builds up a logical picture of the overall network in its routing tables, and then uses this information to choose the best path for forwarding network traffic.

Scanlist Configuration Tool (SCT) — A program that maps processor memory onto the network and network data into processor memory. SCTs are scanner-specific; therefore, a unique SCT is required for each type of scanner.

Scanner — A EtherNet/IP device that is a connection originator.

Scanner class device — A device that initiates connections and contains a scanlist. Refer to the RSNetWorx for EtherNet/IP online tutorial for more information.

Scanner signature — Indicates a hexadecimal value, unique to the open scanner, that is assigned to scanner devices that originate scheduled connections. This value is stored in the open scanner and in the offline configuration, and is used to determine if the offline configuration is synchronized.

Segment — A section of a local area network (LAN) that is used by a particular workgroup or department and separated from the rest of the LAN by a bridge, router, or switch. Networks are divided into multiple segments for security and to improve traffic flow by filtering out packets that are not destined for the segment.

Switch — A switch evolved from the bridge. Like traditional bridges, switches build and maintain internal tables that map Ethernet addresses to a

port. A packet received on one port is rapidly switched to the appropriate output port (typically within microseconds). Each port on the switch is its own collision domain, so collisions between devices attached to the switch do not occur.

A switch segments a network into many parallel dedicated lines to produce a contention-less, scalable architecture. The switch establishes a direct line of communication between two ports and maintains multiple simultaneous links between various ports. The switch uses addressing information in each Ethernet frame to forward data only to the port connected to the destination device. The switch manages network traffic by reducing media sharing since the traffic is directed only to the segment for which it is destined.

There are two basic methods of switching: cut-through and store-and-forward.

Store and forward switch — Store-and-forward switching buffers incoming packets in memory until they are fully received and a cyclic redundancy check (CRC) is performed. This reduces bad packets and collisions that can adversely effect the overall performance of the segment. However, the buffering adds latency to the processing time. The latency increases in proportion to the frame size.

Cut-through switch — Cut-through switching starts sending packets as soon as they enter a switch and their destination address is read. The entire frame is not received before a switch begins forwarding it to the destination port. This reduces transmission latency between ports, but it can propagate bad packets and broadcast storms to the destination port.

A

- activation 49
 - file 61
 - key 61
- adding a device 17
- auto insert devices 21
- auto map entries 21

C

- Class Instance Editor 42
- clearing messages 44
- communication service 11
- configuring
 - devices 41
- connection 61
- connection configuration 21
- connection ID 61
- connection settings 22
- connection status 21
- connection type 61
- consumer 61
- context-sensitive help 43
- control definitions 43
- ControlNet concepts 13
- copy protection 53
- copying
 - messages 44
- creating a network configuration 15
- cut-through switching 61

D

- DCOM 39
- definitions 46
- design elements 14
- device
 - adding 17
 - comparison states 15
 - configuring 41
- diagnostics 15
- documentation set 7
- download 11

E

- edits enabled 17
- EDS
 - devices 41
 - library 41
 - Registry Wizard 41
- electronic book format 47
- exploring RSNetWorx for ControlNet 14

F

- FactoryTalk 61
- FactoryTalk Activation 49
- FactoryTalk Administration Console 61
- FactoryTalk Automation Platform 61
- FactoryTalk Directory 61
- FactoryTalk Security 53
- FactoryTalk Services Platform 53
- features and benefits 11
- feedback 7
- finding available networks 15

G

- grace period 50
- graph view 17

H

- hardware devices
 - available 15
 - diagnostics 15
 - favorite 15
- hardware requirements 27
- hiding messages 44
- HTML reports 11

I

- I/O data 11
- installation 28
 - existing 39
- intended audience 7

L

- listing hardware devices
 - available 15
 - favorites 15
- Local Directory 61

M

- menu bar 20
- message codes 19
- messages 44
 - clearing 44
 - copying 44
 - hiding 44
 - information 23
 - view 19
- multicast connection 61

N

- network
 - opening a configuration 15
- Network Directory 61
- network update interval 61
- node 61

O

- offline 11
- online 11
- online help 43
- opening a network configuration 15

P

- PCSC 61
- PDF files 7
- peer-to-peer data 11
- point-to-point connection 61
- printing a network configuration 15
- producer 61
- product manuals 47

Q

- quick start 23

R

- redundant 61
- refresh tree and diagram 15
- release notes 7
- resource usage 22
- RSLinux 7
- RSNetWorx icon 20

S

- scanner 61
- scanner class device 61
- scanner signature 61
- scheduled bandwidth 61
- scheduled node 61
- SCT 61
- Securable action 54
- software compatibility 28
- software requirements 27
- spreadsheet view 17
- status bar 23
- step-by-step procedures 43
- Store and forward switch 61
- symbol legend 15
- system compatibility 28
- system requirements 27

T

- tasks 45
- technical support 48
- troubleshooting 44
 - installation 39

U

- unscheduled node 61
- upload 11

W

- What's This? help 43

Z

- zoom selection

zoom in 15
zoom out 15

Rockwell Automation support

Rockwell Automation provides technical information on the web to assist you in using its products. At <http://www.rockwellautomation.com/support> you can find technical and application notes, sample code, and links to software service packs. You can also visit our Support Center at <https://rockwellautomation.custhelp.com> for software updates, support chats and forums, technical information, FAQs, and to sign up for product notification updates.

In addition, we offer multiple support programs for installation, configuration, and troubleshooting. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://www.rockwellautomation.com/services/online-phone>.

Installation assistance

If you experience a problem within the first 24 hours of installation, review the information that is contained in this manual. You can contact Customer Support for initial help in getting your product up and running.

| | |
|---------------------------------|--|
| United States or Canada | 1.440.646.3434 |
| Outside United States or Canada | Use the Worldwide Locator available at http://www.rockwellautomation.com/locations , or contact your local Rockwell Automation representative. |

New product satisfaction return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

| | |
|-----------------------|---|
| United States | Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor to complete the return process. |
| Outside United States | Please contact your local Rockwell Automation representative for the return procedure. |

Documentation feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the feedback form, publication [RA-DU002](#)

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