



Studio 5000 Architect Getting Results Guide



**Rockwell
Automation**

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.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

No patent liability is assumed by Rockwell Automation, Inc. with respect to use of information, circuits, equipment, or software described in this manual.

Reproduction of the contents of this manual, in whole or in part, without written permission of Rockwell Automation, Inc., is prohibited.

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.



BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.



ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

Summary of changes

This manual includes new and updated information. Use these reference tables to locate changed information. Grammatical and editorial style changes are not included in this summary.

New or enhanced features

This table contains a list of topics changed in this version, the reason for the change, and a link to the topic that contains the changed information.

Topic Name	Reason
New Controller Graphic on page 35	Added rule changes of 1768/1769 CompactLogix controller multiple bank slots.
Common module configuration errors on page 88	Added error message and solution for module configuration failure.
Errors during commit and update on page 106	Added error message and solution for commit operation failure.

About Studio 5000 Architect software	Chapter 1	
	Hardware Diagram.....	12
	Project Explorer	12
	Toolbox	13
	Add, import, and remove components	15
Install and activate Studio 5000 Architect software	Chapter 2	
	System requirements	17
	Install Studio 5000 Architect software.....	18
	Activate Studio 5000 Architect software.....	19
Create, open, save, and close projects	Chapter 3	
	Studio 5000 Architect projects.....	21
	Create a project	22
	Open a project	23
	Save a project	24
	Close a project.....	24
	Project Update	24
Add hardware diagrams	Chapter 4	
	Optimize Network Layout.....	27
	Add a hardware diagram.....	28
	Open a hardware diagram	28
	Navigate a hardware diagram	28
	Show or hide the grid	29
	Enable or disable snap to grid	29
	Close a hardware diagram	29
	Remove a hardware diagram.....	30
	Diagram Overview	30
	Hardware Diagram	30
Add new components	Chapter 5	
	Add 1756 ControlLogix hardware.....	33
	Add a 1756 ControlLogix chassis	33
	Add a 1756-L6x or L7x ControlLogix controller	34
	Add a 1756-L8x ControlLogix controller	35
	New Controller Graphic.....	35
	Add 176x/5069 CompactLogix hardware.....	37
	Add a 1768-L4x CompactLogix controller	37
	Add a 1769-L1x CompactLogix controller.....	38

Add a 1769-L23x CompactLogix controller	38
Add a 1769-L24x or L27x CompactLogix controller	39
Add a 1769-L3x CompactLogix controller	40
Add a 5069-L3x CompactLogix controller	41
Add a 5069-AEN2TR communication module	41
Add an expansion slot	42
New Controller Graphic.....	42
New 5069-AEN2TR Graphic	43
Add modules	44
Add a module.....	44
About unsupported modules.....	45
Add Kinetix servo drives	45
Add a Kinetix servo drive.....	46
New Servo Drive Graphic	46
Add PowerFlex drives.....	47
Add a PowerFlex drive	47
New PowerFlex Graphic	48
Add PanelView Plus and MobileView graphic terminals	48
Add a PanelView Plus graphic terminal	48
Add a MobileView graphic terminal	49
New PanelView Plus Graphic	50
New PanelView Plus Project.....	50
New MobileView Graphic.....	51
New MobileView Project	51
PanelView Plus Properties settings	51
MobileView Properties settings	52
Add computers.....	52
Add a computer	52
New Computer Graphic.....	53
Add visualization stations and servers	53
Add a FactoryTalk View Site Edition Station	53
Add a FactoryTalk View Machine Edition Station.....	54
Add a FactoryTalk View Site Edition Server Project.....	55
Add a FactoryTalk Linx Server Project.....	56
Add a Tag Alarm and Event Server project	57
New Site Edition Project	58
New Machine Edition Station Project.....	59
New Tag Alarm and Event Server Project	59
New FactoryTalk Linx Server Project	59
FactoryTalk View Site Edition Project settings	60
FactoryTalk View Machine Edition Project settings	61
Tag Alarm and Event Server General settings	61

Tag Alarm and Event Server Priorities settings	62
FactoryTalk Linx Server General settings	62
FactoryTalk Linx Server Alarms and Events settings	63

Chapter 6

Import existing components

Import a controller project from a file	65
Import a controller project from an online controller	66
Import a FactoryTalk View application from a file	67
Select Online Controller to Import	67
Choose Matching Controller Configuration File	68
Confirm Update Changes	68
Add Existing FactoryTalk View Project	69

Chapter 7

Add networks

Add a managed Ethernet switch.....	71
Add an unmanaged Ethernet switch.....	72
Add a Generic switch.....	72
Add a network trunk	73
Connect Ethernet components	73
Connect components to a network trunk	74
Add an Ethernet Tap	74
New Generic Switch Graphic	74
Switch Configuration.....	75

Chapter 8

Add relationships and tags

About ownership relationships.....	77
About producer/consumer relationships	79
About shortcuts	81
Add an ownership relationship	83
Add a producer/consumer relationship.....	83
Add a shortcut.....	84
Add a produced and consumed tag.....	85
Add a point tag.....	86
Add an axis tag.....	86
Edit a produced and consumed tag	87
Edit a shortcut	87
Common module configuration errors	88
Ethernet node limitations	88
Configure Module	89
Produce/Consume Tags.....	90
Consumer Tag	91
Producer Tag.....	91

I/O Aliases	92
Communications.....	93
Add New or Modify Existing Shortcut.....	93

Chapter 9

Customize a hardware diagram

Add a graphic.....	95
Add a file	95
Add a text box	96
Add a shape	96
Add a link	97
Text Box Properties	97
Supported graphic formats	97
Element Properties.....	98

Chapter 10

Commit and update hardware diagrams

Commit a hardware diagram.....	99
Update a hardware diagram	100
Update a hardware diagram with an online controller	101
Commit a single project.....	102
Update a single project	103
Output	103
Select Online Controller to Update	104
Auto Find Matching Controller	105
Choose Matching Controller Configuration File	105
Errors during commit and update.....	106
FactoryTalk View commit validation rules.....	107
Shortcut commit validation rules	107

Chapter 11

Create and use libraries

Create a new library.....	109
Rename a library	110
Import a library	110
Delete a library.....	111
Export a library	111
Export part of a library.....	112
Create a new folder	112
Rename a folder.....	113
Delete a folder	113
Add a component to a library	114
Import a component to a library	115
Copy library components from Studio 5000 Architect software to Logix Designer software	115

	Copy library components from Studio 5000 Architect software to FactoryTalk View Studio software	116
	Rename a component	116
	Delete a component	117
	View component properties	117
	Replace an AOI in the current project	117
	Show references to AOIs and UDTs	118
	Toolbox.....	119
	Create New Library	120
	Chapter 12	
Search and print project information	View relationships	121
	Print a hardware diagram	122
	Search a project.....	122
	Print search results.....	122
	Filter the Toolbox.....	123
	Find.....	123
	Find Results	123
	Print Preview	124
	Chapter 13	
Set Studio 5000 Architect options	Project Settings	127
	Hardware Diagram.....	128
	User Prompts.....	129
	Libraries	130
	Appendix A	
Log on, log off, and set security policies	Studio 5000 Architect software and FactoryTalk Security Single Sign- On.....	131
	Log on to FactoryTalk	132
	Change the logged on user account	132
	Change a password	133
	Log off Studio 5000 Architect software	133
	Set FactoryTalk Directory permissions	134
	Set Studio 5000 Architect permissions	134
	Set Logix Designer permissions.....	135
	Set FactoryTalk View SE permissions.....	136
	Set FactoryTalk View ME permissions	136
	Studio 5000 Architect Feature Security policies	137
	Required Studio 5000 Architect permissions	137
	Required Logix Designer policies and permissions for Studio 5000 Architect software	138

Legal Notices
Index

Required FactoryTalk View SE permissions for Studio 5000 Architect software..... 139

Required FactoryTalk View ME permissions for Studio 5000 Architect software..... 139

Log on to FactoryTalk.....140

Legal Notices 141

About Studio 5000 Architect software

Studio 5000 Architect® software is a tool for creating the basic I/O and communication configurations for automation systems. Use the visual editing system in Studio 5000 Architect software to rapidly assemble and connect control hardware, I/O modules, and visualization devices.

Use Studio 5000 Architect software to create and import ControlLogix®, CompactLogix™, Compact I/O™, FLEX™ I/O, FLEX Ex™, POINT I/O™, GuardLogix®, Kinetix®, and PowerFlex® controllers, modules, and drives. Edit chassis positions, firmware settings, I/O aliases, and network configurations in Studio 5000 Architect software. Launch Studio 5000® Logix Designer software to edit program logic and advanced configurations.

Studio 5000 Architect can also create and import FactoryTalk® View Site Edition and FactoryTalk View ME visualization projects, including PanelView™ Plus graphic terminals, MobileView™ graphic terminals, FactoryTalk® Linx™ and FactoryTalk Alarms and Events servers. Edit screen resolution, areas, shortcuts, and network configuration in Studio 5000 Architect. Launch FactoryTalk® View Studio to edit application screens and program logic.

Connect components using ControlNet™ network trunks or EtherNet/IP™ networks using generic or Stratix™ switches. Once connected, configure ownership relationships, producer/consumer relationships, and shortcuts so that devices share tags across the network.

Studio 5000 Architect can import components from EPLAN® or Integrated Architecture® Builder and export components to EPLAN. Custom components such as Add-On Instructions (AOI), User-Defined Types (UDT), Displays, Global Objects, and Images can be exchanged between Logix Designer software, FactoryTalk View Studio software, and the Rockwell Automation Process Library.

Import automation system data into Studio 5000 Architect and export out of Studio 5000 Architect using OWL (.rdf), AML (.aml), XML (.xml) files.

See also

[Install and activate Studio 5000 Architect software](#) on [page 17](#)

[Create, open, save, and close projects](#) on [page 21](#)

[Add hardware diagrams](#) on [page 27](#)

[Add new components](#) on [page 33](#)

[Add relationships and tags](#) on [page 77](#)

Hardware Diagram

How do I open Hardware Diagram?

- In **Project Explorer**, expand the **Devices** folder, then select a hardware diagram.

Use **Hardware Diagram** to view and organize components that are added to a Studio 5000 Architect project. If multiple hardware diagrams are open simultaneously, switch between them using the tabs at the top of **Hardware Diagram**.

A large hardware diagram can exceed the display area in **Hardware Diagram**. Use the scroll bars or **Diagram Overview** to navigate to a section of a hardware diagram.

See also

[Add a hardware diagram](#) on [page 28](#)

[Open a hardware diagram](#) on [page 28](#)

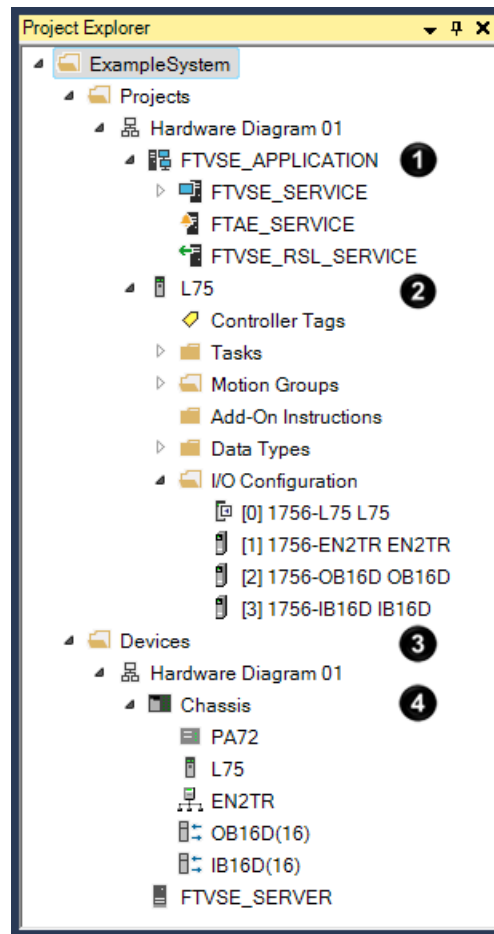
[Diagram Overview](#) on [page 30](#)

Project Explorer

How do I open Project Explorer?

- From the **View** menu, select **Project Explorer**.

Use **Project Explorer** to view or edit the contents of a Studio 5000 Architect project.



Item	Name	Description
1	FactoryTalk View applications	An alphabetical list of FactoryTalk View applications associated with this Studio 5000 Architect project. If Arrange Projects by Hardware Diagram is enabled, projects are grouped by hardware diagram (shown).
2	Logix Designer projects	An alphabetical list of Logix Designer projects associated with this Studio 5000 Architect project, grouped by hardware diagram.
3	Devices	An alphabetical list of devices in this Studio 5000 Architect project, grouped by hardware diagram.
4	Components	An alphabetical list of hardware components added to a hardware diagram, such as chassis, controllers, modules, computers, PanelView Plus and MobileView terminals.

See also

[Add, import, and remove components](#) on [page 15](#)

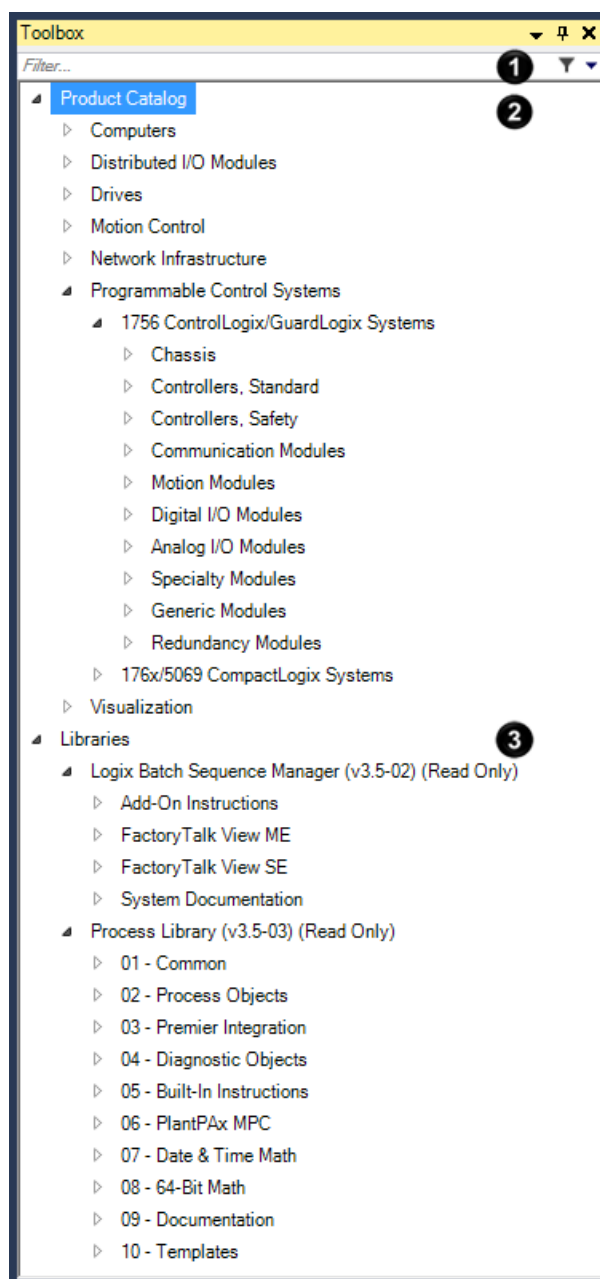
Toolbox

How do I open Toolbox?

- From the **View** menu, select **Toolbox**.

Use **Toolbox** to view default hardware components or add, remove, and manage custom libraries. Drag components from the **Toolbox** to a **Hardware Diagram** to add components to a project.

Components shown in gray are either unsupported in Studio 5000 Architect software or require a version of Logix Designer software that is not installed on the system.



The **Toolbox** sections are:

Item	Name	Description
1	Filter	Enter a catalog number or name to show matching Logix Designer, FactoryTalk View Studio, and library components.
2	Product Catalog	A list of Logix Designer and FactoryTalk View Studio components that can be added to a hardware diagram.
3	Libraries	A list of libraries containing components that can be added to a hardware diagram or a Logix Designer or FactoryTalk View Studio project.

See also

[Filter the Toolbox](#) on [page 123](#)

[Add, import, and remove components](#) on [page 15](#)

[Create a new library](#) on [page 109](#)

[Import a library](#) on [page 110](#)

Add, import, and remove components

A Studio 5000 Architect project contains one or more components. Each component represents a hardware device, software project, visualization server, or document. Components appear in **Hardware Diagram** and **Project Explorer**.

Add components from a library or import from a file or online controller. Once part of a project, connect components to networks and configure relationships to share tags and control an automation system.

Components that are no longer in use can be removed from a project.

See also

[Add 1756 ControlLogix hardware](#) on [page 33](#)

[Add modules](#) on [page 44](#)

[Add PanelView Plus and MobileView graphic terminals](#) on [page 48](#)

[Add visualization stations and servers](#) on [page 53](#)

Install and activate Studio 5000 Architect software

Install and activate Studio 5000 Architect software on a computer that meets the system requirements to begin designing automation systems.

See also

[System requirements](#) on [page 17](#)

[Install Studio 5000 Architect software](#) on [page 18](#)

[Activate Studio 5000 Architect software](#) on [page 19](#)

System requirements

To run Studio 5000 Architect software version 5.00.00, the host computer must meet the hardware, software, and firmware requirements. For the latest compatibility information, refer to the Product Compatibility and Download Center.

Hardware requirements

Studio 5000 Architect software requires the following hardware:

- Intel® Core 2 Duo, 2.8 Ghz processor
- 1 GB of memory
- 16 GB free hard disk space
- 1024x768, True color graphics device

Software requirements

Studio 5000 Architect software requires the following operating systems:

- Windows® 10 Professional (64-bit)
- Windows 10 Enterprise (64-bit)
- Windows Server® 2019 Standard
- Windows Server® 2019 Datacenter
- 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

* See Studio 5000 Architect Release Notes for anomalies.

Studio 5000 Architect software is compatible with these Rockwell Automation products:

- FactoryTalk® Services Platform version 3.00.00 and 6.20.00
- FactoryTalk® Activation Manager version 4.04
- RSLogix 5000® version 20.00.00
- Logix Designer versions 21.03.01, 23.00.00, and 24.00 through 33.00.00
- FactoryTalk View versions 8.10.00 through 12.00.00
- FactoryTalk® Alarms and Events versions 2.74.00 through 6.20.00
- RSLinx® Enterprise version 5.74.00 through 5.90.00
- RSLinx® Classic version 4.12.00
- FactoryTalk® Linx™ version 6.20.00

Firmware requirements

Studio 5000 Architect software does not have any firmware requirements. Hardware and software products used in Studio 5000 Architect projects might place limits on firmware versions. Read the release notes for each product in the FactoryTalk system to determine firmware limitations.

See also

[Product Compatibility and Download Center](#)

Install Studio 5000 Architect software

Install Studio 5000 Architect software on a computer that meets the system requirements to begin designing automation systems.

To install Studio 5000 Architect software:

1. Log on to the computer as a user with administrative privileges.
2. Run Setup.exe to start the Studio 5000 Architect installation program.
3. In **Setup**, select an installation option:
 - **Install now:** Installs Studio 5000 Architect components using the recommended settings.
 - **Customize:** Select which Studio 5000 Architect components to install, then select **Install**.
4. In **End User License Agreements**, read the license agreements, then select an option:
 - **Accept all:** Accept terms of all license agreements and continue installation.

- **Decline:** Decline terms of all license agreements and cancel installation.
5. When installation is complete, select **Finish**.

See also

[System requirements](#) on [page 17](#)

[Activate Studio 5000 Architect software](#) on [page 19](#)

Activate Studio 5000 Architect software

Studio 5000 Architect software is copy protected and must be activated using FactoryTalk Activation Manager software. When starting Studio 5000 Architect software, FactoryTalk Activation Manager software verifies its activation is valid. If Studio 5000 Architect software was not yet activated, use the software for a seven-day grace period with full functionality. If the grace period ends and Studio 5000 Architect software was not successfully activated, Studio 5000 Architect software does not start and an error is logged to FactoryTalk® Diagnostics.

If unable to complete the activation process from the computer where Studio 5000 Architect software is installed, obtain an activation from the Rockwell Automation Activation web site.

See also

[Rockwell Automation Activation web site](#)

[Legal Notices](#) on [page 141](#)

Create, open, save, and close projects

Use the **Studio 5000® Launcher** to create or open a Studio 5000 Architect project. After designing an automation system, save and close the project.

See also

[About projects](#) on [page 21](#)

[Create a project](#) on [page 22](#)

[Open a project](#) on [page 23](#)

Studio 5000 Architect projects

Studio 5000 Architect projects are saved as a project file (.ADL) and a project folder containing related files. Studio 5000 Architect projects are composed of **Hardware Diagrams** and **Components**.

Hardware Diagrams

A hardware diagram is a collection of hardware, software, and reference components that represent an automation system. Creating a new Studio 5000 Architect project adds a hardware diagram automatically.

Hardware diagrams are displayed in **Hardware Diagram** and under the **Projects** and **Devices** folders in **Project Explorer**. As hardware diagrams are added, removed, and renamed, the corresponding folders in **Project Explorer** are added, removed, and renamed.

Components

Components are added to a hardware diagram to represent part of an automation system.

There are three types of components: hardware components, software components, and reference components.

Hardware components represent physical hardware, such as controllers, modules, computers, visualization devices, and networks. Hardware components are displayed in **Hardware Diagram** and in **Project Explorer** under **Devices**. Hardware components are stored as part of the Studio 5000 Architect project file.

Software components represent Logix Designer and FactoryTalk View applications that run on hardware components. Software components are only shown in the **Project Explorer** tree under the **Projects** folder. Software components are stored as Logix Designer (.ACD) files and FactoryTalk View Studio project folders under the Studio 5000 Architect project folder. Edit the project files and folders using Logix Designer and FactoryTalk View Studio.

Changes made to software components in Studio 5000 Architect projects do not automatically show in Logix Designer projects or FactoryTalk View applications. Similarly, changes made to Logix Designer projects or FactoryTalk View applications do not automatically show in Studio 5000 Architect projects. To push changes from Studio 5000 Architect projects, commit the Studio 5000 Architect project. To pull changes from Logix Designer projects or FactoryTalk View applications, update the Studio 5000 Architect project.

Graphics, files, text boxes, shapes, and links are reference components that describe other components. Reference components are only shown in **Hardware Diagram**. Reference components are stored as part of the Studio 5000 Architect project file.

See also

[Create a project](#) on [page 22](#)

[Open a project](#) on [page 23](#)

[Add a hardware diagram](#) on [page 28](#)

[Add, import, and remove components](#) on [page 15](#)

Create a project

To design a new automation system, create a Studio 5000 Architect project. Studio 5000 Architect projects are stored in the logged in user's directory at **Documents\Studio 5000\Projects** by default.

To create a new project

1. Open **Studio 5000**.
2. Select **New Project**.
3. In the **Project Types** column, select **Architect**.
4. Select an **Architect** project template.
 - **Blank Project** creates a new project with no components.
 - **Distributed Architecture - Connected Enterprise** creates a new project with one engineering workstation, one operator workstation, one FactoryTalk View Site Edition server, and five FactoryTalk View Machine Edition stations. The FactoryTalk View server and stations control one 1756 ControlLogix controller and four 1769 CompactLogix controllers.

- **Distributed Architecture - Multiple Process Servers** creates a new project with one operator workstation and two Process Automation System Servers (PASS) servers. Each PASS server controls five 1756 ControlLogix controllers.
 - **Distributed Architecture - Single Process Server** creates a new project with one operator workstation and one Process Automation System Server. The PASS server controls five 1756 ControlLogix controllers.
 - **Process Skid with Logix Batch Sequence Manager** creates a new project with one PanelView Plus 7 graphic terminal that controls three 1769 CompactLogix controllers.
5. In **Name**, enter a name for the new project.
 6. (optional) In **Location**, type or browse to a location to store the project file.
 7. Select **Finish**.

See also

[Studio 5000 Architect projects](#) on [page 21](#)

[Add, import, and remove components](#) on [page 15](#)

Open a project

To edit an existing Studio 5000 Architect project, open it using **Studio 5000**. Studio 5000 Architect projects are stored in the current user's directory at **Documents\Studio 5000\Projects** by default. Each instance of Studio 5000 Architect software can have a single open project.

If the Studio 5000 Architect project contains Logix Designer or FactoryTalk View applications and those projects changed, Studio 5000 Architect software displays **Project Update** to update the hardware diagram.

To open a project

1. Open **Studio 5000** software.
2. Select **Existing Project**.
3. From the list of file types, select **Architect (.adl)**.
4. Navigate to the folder that contains the Studio 5000 Architect project file.
5. Select the project from the list.
6. Select **Open**.

See also

[Studio 5000 Architect projects](#) on [page 21](#)

[Close a project](#) on [page 24](#)

[Save a project](#) on [page 24](#)

[Project Update](#) on [page 24](#)

Save a project

Saving a project records the locations, properties, relationships, and tags of all components in the Studio 5000 Architect project file. By default, Studio 5000 Architect projects are stored in the directory of the logged in user at **Documents\Studio 5000\Projects**.

Saving a project does not commit changes to Logix Designer projects or FactoryTalk View applications.

To save a project

1. From the **File** menu, select **Save As**.
2. (optional) In **Save Project As**, enter a name for the new project.
3. (optional) In **Save Project As**, select a location to store the project file.
4. Select **Save**.

See also

[Studio 5000 Architect projects](#) on [page 21](#)

[Commit a hardware diagram](#) on [page 99](#)

[Close a project](#) on [page 24](#)

Close a project

Each instance of Studio 5000 Architect software can have a single open project. To open a project in the same Studio 5000 Architect instance, first close the current project.

To close a project

- From the **File** menu, select **Close**.

See also

[Studio 5000 Architect projects](#) on [page 21](#)

[Save a project](#) on [page 24](#)

[Open a project](#) on [page 23](#)

Project Update

How do I open Project Update?

- **Project Update** only appears when opening a Studio 5000 Architect project that contains Logix Designer or FactoryTalk View projects. If the Logix Designer or FactoryTalk View project has changed since the

last time the Studio 5000 Architect project was opened, Studio 5000 Architect displays **Project Update**.

Use **Project Update** to select which controllers and project files overwrite components in the Studio 5000 Architect project. The **Selected controller validation results** table lists all the changes to be made to the Studio 5000 Architect project.

See also

[Studio 5000 Architect projects](#) on [page 21](#)

[Update a hardware diagram](#) on [page 100](#)

Add hardware diagrams

A hardware diagram is a grid that contains components representing an automation system. A Studio 5000 Architect project can contain many hardware diagrams, which can be open simultaneously as tabs in **Hardware Diagram**. Components must be on the same hardware diagram to communicate with each other.

If adding or moving components past the right or bottom edge of a hardware diagram, Studio 5000 Architect automatically expands the hardware diagram to a new page. Page breaks appear as dashed gray lines and do not print. When closing and reopening a hardware diagram, Studio 5000 Architect automatically shrinks the hardware diagram to the number of pages necessary to show the components in the hardware diagram.

Hardware diagrams are displayed in **Hardware Diagram** and under the **Projects** and **Devices** folders in **Project Explorer**.

See also

[Add a hardware diagram](#) on [page 28](#)

[Open a hardware diagram](#) on [page 28](#)

Optimize Network Layout

When manually configuring a hardware diagram, or adding or importing devices from a library or file, devices may appear in a random order and network cables may appear crossed. **Optimize Network Layout** repositions the devices and refines the network layout.

When importing data files into Studio 5000 Architect, the hardware diagram is optimized upon import.

To Optimize Network Layout

- Right-click in the hardware diagram and select **Optimize Network Layout**.

See also

Add, edit and remove hardware diagrams

[Open a hardware diagram](#) on [page 28](#)

[Import a controller project from an online controller](#) on [page 66](#)

Add a hardware diagram

Add a hardware diagram to group a new set of components within the same Studio 5000 Architect project.

To add a hardware diagram

1. In **Project Explorer**, right-click on the **Devices** folder, then select **New Hardware Diagram**.
2. (optional) In **Enter New Hardware Diagram Name**, type a name for the new hardware diagram.
3. Select **OK**. The new hardware diagram appears in the **Hardware Diagram** and under the **Project** and **Devices** folders in **Project Explorer**.

See also

[Add, import, and remove components](#) on [page 15](#)

[Remove a hardware diagram](#) on [page 30](#)

Open a hardware diagram

Open a hardware diagram to view or edit its components.

To open a hardware diagram

- In **Project Explorer**, expand the **Project** or **Devices** folders, then select the hardware diagram to open.

See also

[Add, import, and remove components](#) on [page 15](#)

[Print a hardware diagram](#) on [page 122](#)

[Close a hardware diagram](#) on [page 29](#)

Navigate a hardware diagram

A large hardware diagram can exceed the display area in **Hardware Diagram**. Use **Diagram Overview** to quickly navigate to a section of a hardware diagram.

To navigate a hardware diagram

1. (optional) If **Diagram Overview** is not visible, select **View > Diagram Overview**.
2. In **Diagram Overview**, select to center **Hardware Diagram** at the selected location.

See also

[Diagram Overview](#) on [page 30](#)

[Hardware Diagram](#) on [page 12](#)

Show or hide the grid

Snap to Grid aligns components vertically or horizontally on a hardware diagram according to grid lines. **Show grid** displays the alignment grid in the hardware diagram, **Hide grid** removes the grid lines from the hardware diagram display, so that only components are shown.

Components placed on the hardware diagram use the **Snap to Grid** setting even when the grid is hidden.

To show or hide the grid

- Below **Hardware Diagram**, select **Hide grid** or **Show grid**.

See also

[Enable or disable Snap to Grid](#) on [page 29](#)

Enable or disable snap to grid

When **Snap to Grid** is enabled, components dropped on the **Hardware Diagram** pane automatically align horizontally and vertically to the grid lines, even if the grid lines are hidden. When **Snap to Grid** is disabled, components are placed on the **Hardware Diagram** pane where they are dropped.

To enable or disable Snap to Grid

- Below **Hardware Diagram**, select **Snap to grid** or **Turn off snap to grid**.

See also

[Show or hide the grid](#) on [page 29](#)

Close a hardware diagram

Close a hardware diagram to hide a hardware diagram from view without closing the Studio 5000 Architect project.

To close a hardware diagram

- At the top of **Hardware Diagram**, right-click the name of the hardware diagram, then select **Close**.

See also

[Open a hardware diagram](#) on [page 28](#)

[Remove a hardware diagram](#) on [page 30](#)

Remove a hardware diagram

Remove a hardware diagram to delete it and all associated hardware components and software projects from a Studio 5000 Architect project. The remove operation cannot be undone.

To remove a hardware diagram

1. In **Project Explorer**, expand the **Devices** folder, right-click on a hardware diagram, then select **Delete**.
2. In the confirmation prompt, select **Yes**.

See also

[Add a hardware diagram](#) on [page 28](#)

[Close a hardware diagram](#) on [page 29](#)

Diagram Overview

How do I open Diagram Overview?

- From the **View** menu, select **Diagram Overview**.

Use **Diagram Overview** to quickly navigate large hardware diagrams. **Diagram Overview** shows the full contents of the active hardware diagram, including all devices, networks, and images.

The red rectangle in **Diagram Overview** represents the current view in **Hardware Diagram**. Clicking in **Diagram Overview** centers both the red rectangle and **Hardware Diagram** at the selected location.

See also

[Navigate a hardware diagram](#) on [page 28](#)

[Hardware Diagram](#) on [page 12](#)

Hardware Diagram

How do I open Hardware Diagram?

- In **Project Explorer**, expand the **Devices** folder, then select a hardware diagram.

Use **Hardware Diagram** to view and organize components that are added to a Studio 5000 Architect project. If multiple hardware diagrams are open simultaneously, switch between them using the tabs at the top of **Hardware Diagram**.

A large hardware diagram can exceed the display area in **Hardware Diagram**. Use the scroll bars or **Diagram Overview** to navigate to a section of a hardware diagram.

See also

[Add a hardware diagram](#) on [page 28](#)

[Open a hardware diagram](#) on [page 28](#)

[Diagram Overview](#) on [page 30](#)

Add new components

A Studio 5000 Architect project contains one or more components. Each component represents a hardware device, software project, visualization server, or document. Components appear in **Hardware Diagram** and **Project Explorer**.

Add components to your project from the **Toolbox**, using the predefined components or an imported library. Once added, connect components to networks and configure relationships to share tags and control an automation system.

For a list of supported Logix Designer controllers, see Studio 5000 Architect Help.

See also

[Add 1756 ControlLogix hardware](#) on [page 33](#)

[Add modules](#) on [page 44](#)

[Add motion controls](#) on [page 45](#)

[Add PanelView Plus and MobileView graphic terminals](#) on [page 48](#)

[Add visualization stations and servers](#) on [page 53](#)

Add 1756 ControlLogix hardware

Add a variety of 1756 ControlLogix hardware, including chassis, controllers, and modules to a Studio 5000 Architect project. Chassis, controllers, and modules appear in **Hardware Diagram** and **Project Explorer**.

See also

[Add a 1756 ControlLogix chassis](#) on [page 33](#)

[Add a 1756-L6x or L7x ControlLogix controller](#) on [page 34](#)

[Add a 1756-L8x ControlLogix controller](#) on [page 35](#)

[Import a controller project from a file](#) on [page 65](#)

[Import a controller project from an online controller](#) on [page 66](#)

Add a 1756 ControlLogix chassis

Automation systems driven by 1756 ControlLogix controllers require one or more chassis to connect controllers and I/O modules.

To add a 1756 ControlLogix chassis

1. In **Toolbox**, expand **Product Catalog, Programmable Control Systems, 1756 ControlLogix/GuardLogix Systems**, and **Chassis**.
2. Drag a chassis from **Toolbox** to **Hardware Diagram**.
3. (optional) In **New Chassis Graphic**, enter a unique name for the chassis.
4. Select **OK**. The chassis appears in **Hardware Diagram** and **Project Explorer**.

See also

[Add a 1756-L6x or L7x ControlLogix controller](#) on [page 34](#)

Automation systems driven by 1756-L6x or L7x ControlLogix controllers require one or more controllers to manage inputs, outputs, and run applications.

Add a 1756-L6x or L7x ControlLogix controller

Prerequisites

- Add a 1756 ControlLogix chassis

To add a 1756-L6x or L7x ControlLogix controller

1. In **Toolbox**, expand **Programmable Control Systems** and **1756 ControlLogix/GuardLogix Systems**.
2. Expand either **Controllers, Standard** or **Controllers, Safety**.
3. Drag a 1756-L6x or L7x controller from **Toolbox** to an unused slot on a chassis in **Hardware Diagram**.
4. (optional) In **New Controller Graphic**, configure the controller settings:
 - **Name:** Enter a unique name.
 - **Controller Firmware Version:** Select a firmware version. The default value is the most recent firmware version.
 - **ACD File Name:** Enter a name for the Logix Designer project. The default value is the controller name.
5. Select **OK**. In **Hardware Diagram**, the controller snaps into its slot in the chassis. **Project Explorer** shows the controller in **Devices**.

See also

[Add a 1756 ControlLogix chassis](#) on [page 33](#)

[Add a module](#) on [page 44](#)

[New Controller Graphic](#) on [page 35](#)

Add a 1756-L8x ControlLogix controller

Automation systems driven by 1756-L8x ControlLogix controllers require one or more controllers to manage inputs, outputs, and run applications.

Prerequisites

- Add a 1756 ControlLogix chassis.

To add a 1756-L8x controller

1. In **Toolbox**, expand **Programmable Control Systems** and **1756 ControlLogix/GuardLogix Systems**.
2. Expand **Controllers, Standard**.
3. Drag a 1756-L8x controller from **Toolbox** to an unused slot on a chassis in **Hardware Diagram**.
4. (optional) In **New Controller Graphic**, configure the controller settings:
 - **Name:** Enter a unique name.
 - **Controller Firmware Version:** Select a firmware version. The default value is the most recent firmware version.
 - **ACD File Name:** Enter a name for the Logix Designer project. The default value is the controller name.
 - **Address / Host Name:** Select a network type, then enter an IP address or host name.
5. Select **OK**. In **Hardware Diagram**, the controller snaps into its slot in the chassis. **Project Explorer** shows the controller in **Devices**.

See also

[Add a 1756 ControlLogix chassis](#) on [page 33](#)

[Add a module](#) on [page 44](#)

[New Controller Graphic](#) on [page 35](#)

New Controller Graphic

How do I open New Controller Graphic?

When adding a controller to a project

1. In **Toolbox**, expand the **Programmable Control Systems**, controller family and **Controllers** folders.
2. Drag the desired controller from **Toolbox** to the **Hardware Diagram**.
3. (optional) In **Enter Name**, type a unique name for the controller, then click **OK**.

When editing an existing 1769/68 CompactLogix controller

1. In the **Hardware Diagram**, right-click on a 1769/68 CompactLogix controller, then click **Configure CompactLogix Chassis**.

Use **New Controller Graphic** to set firmware, project, and hardware settings for a new controller. Edit these settings after the controller is added to the project.

Settings that do not apply to the controller are hidden.

Setting	Description	Controllers
Controller Firmware Version	Sets the controller firmware version.	All
ACD File Name	Sets the name of the controller project (.acd) file.	All
Bank 1	Contains the information of the first bank, for example, slot number, power supply, and cable type. Bank 1 is the parent chassis of the controller. If the system contains expansion banks, configure them in Bank 2 and Bank 3.	L3x and L4x
Bank 2	Contains the information of the expansion bank, for example, slot number, power supply, and cable type.	L3x and L4x
Bank 3	Contains the information of the expansion bank, for example, slot number, and power supply.	L3x and L4x
Slots Left	Specifies the number of 1769 slots to the left of the power supply in the bank. The total number of slots to the left and slots to the right must be greater than zero.	L3x and L4x
Slots Right	Specifies the number of 1769 slots to the right of the power supply in the bank. The total number of slots to the left and slots to the right must be greater than zero.	L3x and L4x
Power Supply	Specifies the power supply catalog number.	L3x and L4x
Cable Type	Specifies the cable type between banks. After selecting a cable type, the banks are connected automatically. There are three cable types, 1769-CRLx, 1769-CRRx, and 1769-CLLx, where <i>x</i> means the length of the cable (1 or 3): • 1769-CRLx: connection from the right side of one bank to the left side of the next bank. • 1769-CRRx: connection from the right side of one bank to the right side of the next bank. • 1769-CLLx: connection from the left side of one bank to the left side of the next bank. This cable can be used only to connect banks 2 and 3.	L3x and L4x

See also

[Add a 1756-L6x or L7x ControlLogix controller](#) on [page 34](#)

[Add a 1756-L8x ControlLogix controller](#) on [page 35](#)

[Add a 1769-L3x CompactLogix controller](#) on [page 40](#)

[Add a 5069-L3x CompactLogix controller](#) on [page 41](#)

Add 176x/5069 CompactLogix hardware

Add a variety of 1768, 1769, and 5069 CompactLogix controllers, banks, expansion slots, and modules to a Studio 5000 Architect project. Controllers, banks, slots, and modules appear in **Hardware Diagram** and **Project Explorer**.

See also

[Add a 1769-L1x CompactLogix controller](#) on [page 38](#)

[Add a 1769-L23x CompactLogix controller](#) on [page 38](#)

[Add a 1769-L24x or L27x CompactLogix controller](#) on [page 39](#)

[Add a 1769-L3x CompactLogix controller](#) on [page 40](#)

[Add a 1768-L4x CompactLogix controller](#) on [page 37](#)

Add a 1768-L4x CompactLogix controller

Automation systems driven by 1768-L4x CompactLogix controllers require one or more controllers to manage inputs, outputs, and run applications.

To add a 1768-L4 CompactLogix controller

1. In **Toolbox**, expand **Programmable Control Systems, 176x/5069 CompactLogix Systems, 1768 CompactLogix System**, and either **Controllers, Standard** or **Controllers, Safety**.
2. Drag a controller from **Toolbox** to **Hardware Diagram**.
3. (optional) In **New Controller Graphic**, type a unique name for the controller and then **OK**.
4. In **New Controller Graphic**, configure the controller settings, and select **OK**:
 - (optional) **Name**: Enter a unique name.
 - (optional) **Description**: Enter a description. Cannot be longer than 128 characters.
 - **Controller Firmware Version**: Select a firmware version. The default value is the most recent firmware version.
 - **ACD File Name**: Enter a name for the Logix Designer project. The default value is the controller name.
 - **Address / Host Name**: Select a network type, then enter an IP address or host name.
5. (optional) In **New Bank Graphic**, configure the controller settings:
 - **Slot Left**: Enter the number of left slots for each bank.
 - **Power Supply**: Select the power supply for each bank.
 - **Slot Right**: Enter the number of right slots for each bank.
 - **Cable Type**: Select a type of cable to connect banks 1 and 2 or banks 2 and 3.

6. Select **OK**. The CompactLogix controller, banks, slots, power supplies, and cables appear in **Hardware Diagram**. **Project Explorer** shows the CompactLogix controller, banks, slots, and power supplies in **Hardware Diagrams**.

See also

[Add an expansion slot](#) on [page 42](#)

[Add a module](#) on [page 44](#)

Add a 1769-L1x CompactLogix controller

Automation systems driven by 1769-L1x CompactLogix controllers require one or more controllers to manage inputs, outputs, and run applications.

To add a 1769-L1x CompactLogix controller

1. In **Toolbox**, expand **Programmable Control Systems, 176x/5069 CompactLogix Systems, 1769 CompactLogix System, and Controllers, Standard**.
2. Drag a controller from **Toolbox** to **Hardware Diagram**.
3. In **New Controller Graphic**, configure the controller settings:
 - (optional) **Name**: Enter a unique name.
 - (optional) **Description**: Enter a description. Cannot be longer than 128 characters.
 - **Controller Firmware Version**: Select a firmware version. The default value is the most recent firmware version.
 - **ACD File Name**: Enter a name for the Logix Designer project. The default value is the controller name.
 - **Address / Host Name**: Select a network type, then enter an IP address or host name.
 - **Number of Expansion I/O Slots**: Enter the number of expansion slots.
4. Select **OK**. The CompactLogix controller, banks, and expansion slots appear in **Hardware Diagram**. **Project Explorer** shows the CompactLogix controller, banks, and expansion slots in **Devices**.

See also

[Add an expansion slot](#) on [page 42](#)

[Add a module](#) on [page 44](#)

Add a 1769-L23x CompactLogix controller

Automation systems driven by 1769-L23x CompactLogix controllers require one or more controllers to manage inputs, outputs, and run applications.

To add a 1769-L23x CompactLogix controller

1. In **Toolbox**, expand **Programmable Control Systems, 176x/5069 CompactLogix Systems, 1769 CompactLogix System, and Controllers, Standard**.
2. Drag a controller from **Toolbox** to **Hardware Diagram**.
3. In **New Controller Graphic**, configure the controller settings:
 - (optional) **Name**: Enter a unique name.
 - (optional) **Description**: Enter a description. Cannot be longer than 128 characters.
 - **Controller Firmware Version**: Select a firmware version. The default value is the most recent firmware version.
 - **ACD File Name**: Enter a name for the Logix Designer project. The default value is the controller name.
 - **Address / Host Name**: Select a network type, then enter an IP address or host name.
 - **Number of Expansion I/O Slots**: Enter the number of expansion slots.
4. Select **OK**. The CompactLogix controller, banks, and expansion slots appear in **Hardware Diagram**. **Project Explorer** shows the CompactLogix controller, banks, and expansion slots in **Devices**.

See also

[Add an expansion slot](#) on [page 42](#)

[Add a module](#) on [page 44](#)

Add a 1769-L24x or L27x CompactLogix controller

Automation systems driven by 1769-L24x or L27x CompactLogix controllers require one or more controllers to manage inputs, outputs, and run applications.

To add a 1769-L24x or L27x CompactLogix controller

1. In **Toolbox**, expand **Programmable Control Systems, 176x/5069 CompactLogix Systems, 1769 CompactLogix System, and Controllers, Standard**.
2. Drag a controller from **Toolbox** to **Hardware Diagram**.
3. In **New Controller Graphic**, configure the controller settings:
 - (optional) **Name**: Enter a unique name.
 - (optional) **Description**: Enter a description. Cannot be longer than 128 characters.
 - **Controller Firmware Version**: Select a firmware version. The default value is the most recent firmware version.

- **ACD File Name:** Enter a name for the Logix Designer project. The default value is the controller name.
 - **Address / Host Name:** Select a network type, then enter an IP address or host name.
 - **Number of Expansion I/O Slots:** Enter the number of expansion slots.
4. Select **OK**. The CompactLogix controller, banks, and expansion slots appear in **Hardware Diagram**. **Project Explorer** shows the CompactLogix controller, banks, and expansion slots in **Devices**.

See also

[Add an expansion slot](#) on [page 42](#)

[Add a module](#) on [page 44](#)

Add a 1769-L3x CompactLogix controller

Automation systems driven by 1769-L3x CompactLogix controllers require one or more controllers to manage inputs, outputs, and run applications.

To add a 1769-L3x CompactLogix controller

1. In **Toolbox**, expand **Programmable Control Systems**, 176x/5069 CompactLogix Systems, **1769 CompactLogix System**, and either **Controllers, Standard** or **Controllers, Safety**.
2. Drag a controller from **Toolbox** to **Hardware Diagram**.
3. In **New Controller Graphic**, configure the controller settings, then click **OK**:
 - (optional) **Name:** Enter a unique name.
 - (optional) **Description:** Enter a description. Cannot be longer than 128 characters.
 - **Controller Firmware Version:** Select a firmware version. The default value is the most recent firmware version.
 - **ACD File Name:** Enter a name for the Logix Designer project. The default value is the controller name.
 - **Address / Host Name:** Select a network type, then enter an IP address or host name.
4. (optional) In **New Bank Graphic**, configure the bank settings:
 - **Slot Left:** Enter the number of left slots for each bank.
 - **Power Supply:** Select the power supply for each bank.
 - **Slot Right:** Enter the number of right slots for each bank.
 - **Cable Type:** Select a type of cable to connect banks 1 and 2 or banks 2 and 3.

5. Select **OK**. The CompactLogix controller, banks, slots, power supplies, and cables appear in **Hardware Diagram**. **Project Explorer** shows the CompactLogix controller, banks, slots, and power supplies in **Devices**.

See also

[Add an expansion slot](#) on [page 42](#)

[Add a module](#) on [page 44](#)

Add a 5069-L3x CompactLogix controller

Automation systems driven by 5069-L3x CompactLogix controllers require one or more controllers to manage inputs, outputs, and run applications.

To add a 5069-L3x CompactLogix bank

1. In **Toolbox**, expand **Programmable Control Systems, 176x/5069 CompactLogix Systems, 5069 CompactLogix System**, and **Controllers**.
2. Drag a controller from **Toolbox** to **Hardware Diagram**.
3. In **New Controller Graphic**, configure the controller settings, then select **OK**:
 - (optional) **Name**: Enter a unique name.
 - (optional) **Description**: Enter a description. Cannot be longer than 128 characters.
 - **Controller Firmware Version**: Select a firmware version. The default value is the most recent firmware version.
 - **ACD File Name**: Enter a name for the Logix Designer project. The default value is the controller name.
 - **Address / Host Name**: Select a network type, then enter an IP address or host name.
 - **Number of Expansion I/O Slots**: Enter the number of expansion slots.
4. Select **OK**. The CompactLogix controller, banks, and slots, appear in **Hardware Diagram**. **Project Explorer** shows the CompactLogix controller, banks, and slots in **Devices**.

See also

[Add an expansion slot](#) on [page 42](#)

[Add a module](#) on [page 44](#)

Add a 5069-AEN2TR communication module

Add a 5069-AEN2TR communication module to connect remote modules to a 5069 controller.

To add a 5069-AEN2TR communication module

1. In **Toolbox**, expand **Programmable Control Systems**, **176x/5069 CompactLogix Systems**, **5069 CompactLogix System**, and **Communication Modules**.
2. Drag the **5069-AEN2TR** communication module from **Toolbox** to **Hardware Diagram**.
3. In **New 5069-AEN2TR Graphic**, configure the module settings, then select **OK**:
 - (optional) **Name**: Enter a unique name.
 - **Number of Expansion I/O Slots**: Enter the number of expansion slots.
4. Select **OK**. The 5069-AEN2TR, 5069 CompactLogix bank and slots appear in **Hardware Diagram**. **Project Explorer** shows the CompactLogix controller, banks, and slots in **Devices**.

See also

[New 5069-AEN2TR Graphic](#) on [page 43](#)

Add an expansion slot

Before adding a module to a 1769/68 CompactLogix bank or POINT I/O™ communication module, the controller must have an available expansion slot. Each controller has a certain number of expansion slots. Once a controller has reached its limit of expansion slots no further expansion slots can be added.

To add an expansion slot

- In **Hardware Diagram**, right-click the controller or an existing expansion slot, then select **Insert Empty Slot After**. A new expansion slot appears.

See also

[Add 176x/5069 CompactLogix hardware](#) on [page 37](#)

New Controller Graphic

How do I open New Controller Graphic?

When adding a controller to a project

1. In **Toolbox**, expand the **Programmable Control Systems**, controller family and **Controllers** folders.
2. Drag the desired controller from **Toolbox** to the **Hardware Diagram**.
3. (optional) In **Enter Name**, type a unique name for the controller, then click **OK**.

When editing an existing 1769/68 CompactLogix controller

1. In the **Hardware Diagram**, right-click on a 1769/68 CompactLogix controller, then click **Configure CompactLogix Chassis**.

Use **New Controller Graphic** to set firmware, project, and hardware settings for a new controller. Edit these settings after the controller is added to the project.

Settings that do not apply to the controller are hidden.

Setting	Description	Controllers
Controller Firmware Version	Sets the controller firmware version.	All
ACD File Name	Sets the name of the controller project (.acd) file.	All
Bank 1	Contains the information of the first bank, for example, slot number, power supply, and cable type. Bank 1 is the parent chassis of the controller. If the system contains expansion banks, configure them in Bank 2 and Bank 3.	L3x and L4x
Bank 2	Contains the information of the expansion bank, for example, slot number, power supply, and cable type.	L3x and L4x
Bank 3	Contains the information of the expansion bank, for example, slot number, and power supply.	L3x and L4x
Slots Left	Specifies the number of 1769 slots to the left of the power supply in the bank. The total number of slots to the left and slots to the right must be greater than zero.	L3x and L4x
Slots Right	Specifies the number of 1769 slots to the right of the power supply in the bank. The total number of slots to the left and slots to the right must be greater than zero.	L3x and L4x
Power Supply	Specifies the power supply catalog number.	L3x and L4x
Cable Type	Specifies the cable type between banks. After selecting a cable type, the banks are connected automatically. There are three cable types, 1769-CRL x , 1769-CRR x , and 1769-CLL x , where x means the length of the cable (1 or 3): • 1769-CRLx: connection from the right side of one bank to the left side of the next bank. • 1769-CRRx: connection from the right side of one bank to the right side of the next bank. • 1769-CLLx: connection from the left side of one bank to the left side of the next bank. This cable can be used only to connect banks 2 and 3.	L3x and L4x

See also

[Add a 1756-L6x or L7x ControlLogix controller](#) on [page 34](#)

[Add a 1756-L8x ControlLogix controller](#) on [page 35](#)

[Add a 1769-L3x CompactLogix controller](#) on [page 40](#)

[Add a 5069-L3x CompactLogix controller](#) on [page 41](#)

New 5069-AEN2TR Graphic

How do I open New 5069-AEN2TR Graphic?

1. In **Toolbox**, expand **Programmable Control Systems, 176x/5069 CompactLogix Systems, 5069 CompactLogix System**, and **Communication Modules**.
2. Drag the **5069-AEN2TR** communication module from **Toolbox** to **Hardware Diagram**.

Use **New 5069-AEN2TR Graphic** to set a name and number of expansion slots for a new 5069-AEN2TR communication module.

See also

[Add a 5069-AEN2TR communication module](#) on [page 41](#)

Add modules

Add or remove modules for 1756 ControlLogix, 1769/68 CompactLogix, 1794/97 FLEX I/O, and 1734 POINT I/O hardware. Although modules can be added to a project without a related chassis or controller, most modules require a controller to operate properly. Modules appear in **Hardware Diagram** and **Project Explorer**.

See also

[Add a module](#) on [page 44](#)

[About unsupported modules](#) on [page 45](#)

Add a module

Automation systems require one or more modules to drive inputs, outputs, or handle communications.

Prerequisites

- Add 1756 ControlLogix, 1769/68 CompactLogix, 1794/97 FLEX I/O, or 1734 POINT I/O hardware to the project.

To add a module

1. In **Toolbox**, expand the product family and module type.
2. Drag the module from **Toolbox** to an unused slot on a chassis, bank, or DIN rail in **Hardware Diagram**.

Tip: The unused slot turns green if it is compatible or red if it is not compatible.

3. (optional) In **New Module Graphic**, enter a unique name for the module, then select **OK**. In **Hardware Diagram**, the module snaps into its slot in the chassis. **Project Explorer** shows the module in **Projects** and **Devices**.

See also

[About unsupported modules](#) on [page 45](#)

About unsupported modules

Modules updated or imported from a controller or Logix Designer project may not be supported in Studio 5000 Architect. When a module is not supported, Studio 5000 Architect displays an unsupported module image in the appropriate chassis, DIN rail, or expansion slot.

Unsupported modules have these limitations:

- Cannot change the properties of unsupported modules.
- Cannot move unsupported modules to another chassis, DIN rail, or expansion slot.
- Cannot cut, copy, or paste unsupported modules. However, cutting or copying its chassis or DIN rail copies the unsupported module.

For this family of devices:	Studio 5000 Architect displays this image:
1756 ControlLogix	
1768/69 CompactLogix	
1794/97 FLEX I/O	

See also

[Add a module](#) on [page 44](#)

[Import a controller project from a file](#) on [page 65](#)

[Import a controller project from an online controller](#) on [page 66](#)

[Update a hardware diagram](#) on [page 100](#)

Add Kinetix servo drives

Add Kinetix servo drives to operate multi-axis motion controls using a Logix Designer project. Servo drives appear in **Hardware Diagram** and **Project Explorer**.

Important: Using Kinetix drives in Studio 5000 Architect software requires Logix Designer 24.x through 33.x.

See also

[Add a Kinetix servo drive](#) on [page 46](#)

Add a Kinetix servo drive

Add a Kinetix servo drive to run multi-axis motion controls from a Logix Designer project.

Important: Using Kinetix drives in Studio 5000 Architect software requires Logix Designer 24.x through 33.x.

To add a Kinetix servo drive:

1. In **Toolbox**, expand **Motion Control** and **Servo Drives**.
2. Expand the drive type and Kinetix product family.
3. Drag a servo drive from **Toolbox** to **Hardware Diagram**.
4. In **New Servo Drive Graphic**, configure the drive settings:
 - (optional) **Name:** Enter a unique name.
 - (optional) **Description:** Enter a description. Cannot be longer than 128 characters.
 - **Address / Host Name:** Select a network type, then enter an IP address or host name.
 - (optional) **Change DC BUS Supply/Line Filter:** Select either **Single** or **Multiple** supply/line filters, then select a power supply.
5. Select **OK**. The servo drive appears in **Hardware Diagram**. **Project Explorer** shows the servo drive in **Devices**.

See also

[New Servo Drive Graphic](#) on [page 46](#)

New Servo Drive Graphic

How do I open New Servo Drive Graphic?

1. In **Toolbox**, expand **Motion Control** and **Servo Drives**.
2. Expand the drive type and Kinetix product family.
3. Drag a servo drive from **Toolbox** to **Hardware Diagram**.

Use **New Servo Drive Graphic** to set description, and network settings for a new servo drive.

Important: Using Kinetix drives in Studio 5000 Architect software requires Logix Designer 24.x through 33.x.

The **Kinetix Servo Drives Configuration** settings are:

Setting	Description
Type	Sets the type of the servo drive.
Vendor	Shows the vendor information of the servo drive.
Name	Sets the name of the servo drive.
Description	Sets the description of the servo drive. Cannot be longer than 128 characters.
Change DC BUS Supply/Line Filter	Sets the number and type of power supply/line filters for the servo drive. Only shown for Kinetix 5700 devices.
Address/Host Name	Sets the network configuration of the servo drive. • Private Network: Select the value from the list, from 1 to 254. • IP Address: Enter a unique IP address to identify the servo drive on the IP network. • Host Name: Enter a fully qualified domain name, such as <i>servodrive.yourcompany.com</i>.

See also

[Add a Kinetix servo drive](#) on [page 46](#)

Add PowerFlex drives

Add a PowerFlex drive to connect and control it in a FactoryTalk system.

Important: Using PowerFlex drives in Studio 5000 Architect software requires Logix Designer 24.x through 33.x.

See also

[Add a PowerFlex drive](#) on [page 47](#)

[New PowerFlex Graphic](#) on [page 48](#)

Add a PowerFlex drive

Add a PowerFlex drive to control it from a Logix Designer project.

Important: Using PowerFlex drives in Studio 5000 Architect software requires Logix Designer 24.x through 33.x.

To add a PowerFlex drive

1. In **Toolbox**, expand **Drives** and **Drives, AC Low Voltage**.
2. Expand either **Architecture Drives** or **Compact Drives**, then expand the product family folder.
3. Drag the drive from **Toolbox** to **Hardware Diagram**.
4. In **New PowerFlex Graphic**, configure the PowerFlex settings:
 - (optional) **Name:** Enter a unique name.
 - (optional) **Description:** Enter a description. Cannot be longer than 128 characters.
 - **Address / Host Name**, set the IP address or host name for the drive.
5. Select **OK**. The drive appears in the **Hardware Diagram** pane. **Project Explorer** shows the drive in **Devices**.

See also

[New PowerFlex Graphic](#) on [page 48](#)

New PowerFlex Graphic

How do I open New PowerFlex Graphic?

1. In **Toolbox**, expand **Drives** and **Drives, AC Low Voltage**.
2. Expand either **Architecture Drives** or **Compact Drives**, then expand the product family folder.
3. Drag the drive from **Toolbox** to **Hardware Diagram**.

Use **New PowerFlex Graphic** to add PowerFlex drives to a hardware diagram.

Important: Using PowerFlex drives in Studio 5000 Architect software requires Logix Designer 24.x through 33.x.

The **New PowerFlex Graphic** settings are:

Field	Description
Name	Sets a unique name for the drive.
Description	Sets the description for the drive. Cannot be longer than 128 characters.
Address / Host Name	Sets the IP address or host name for the drive.
Always show this dialog	If unchecked, New PowerFlex Graphic does not open the next time a drive is added to the Hardware Diagram. New drives use the default settings.

See also

[Add a PowerFlex drive](#) on [page 47](#)

Add PanelView Plus and
MobileView graphic
terminals

Add or remove PanelView Plus and MobileView graphic terminals to the project. Adding a PanelView Plus or MobileView terminal creates a new FactoryTalk View ME application.

See also

[Add a PanelView Plus graphic terminal](#) on [page 48](#)

[Add a MobileView graphic terminal](#) on [page 49](#)

Add a PanelView Plus
graphic terminal

Add a variety of PanelView Plus graphic terminals to a Studio 5000 Architect project. Adding a PanelView Plus terminal creates a new FactoryTalk View ME application.

To add a PanelView Plus graphic terminal

1. In **Toolbox**, expand **Visualization** and **Graphic Terminals**.
2. Expand the PanelView Plus model family and size items.
3. Drag a PanelView Plus model from **Toolbox** to **Hardware Diagram**.
4. In **New PanelView Plus Graphic**, configure settings for the PanelView Plus terminal:

- (optional) **Name:** Enter a unique name for the terminal.
 - (optional) **Description:** Enter a description of the terminal. Cannot be longer than 128 characters.
 - **IP Address:** Enter a static IP address for the terminal.
 - (optional) **Catalog Number:** Select a catalog number from the list.
5. Click **OK**.
 6. In **New PanelView Plus Project**, configure settings for the new FactoryTalk View ME application:
 - **Name:** Enter a unique name for the application. Studio 5000 Architect creates a new FactoryTalk View ME application.
 - (optional) **Description:** Enter a description of the application. Cannot be longer than 128 characters.
 - (optional) **Scale Replace Displays:** Select to scale objects in Replace displays to the resolution of the panel.
 - (optional) **Scale OnTop Displays:** Select to scale objects in OnTop displays to the resolution of the panel.
 - (optional) **Language:** Select a language for the application.
 7. Select **OK**. The PanelView Plus graphic terminal appears in **Hardware Diagram** and in **Project Explorer** under **Devices**. The FactoryTalk View ME application appears in **Project Explorer** under **Projects**.

See also

[New PanelView Plus Graphic](#) on [page 50](#)

[New PanelView Plus Project](#) on [page 50](#)

Add a MobileView graphic terminal

Add a variety of MobileView graphic terminals to the Studio 5000 Architect project. Adding a MobileView terminal creates a new FactoryTalk View ME application.

To add a MobileView graphic terminal

1. In **Toolbox**, expand **Visualization** and **Mobile Terminals**.
2. Expand the MobileView model family and size items.
3. Drag a MobileView model from **Toolbox** to **Hardware Diagram**.
4. In **New MobileView Graphic**, configure settings for the MobileView terminal:
 - **Name:** Enter a unique name for the terminal.
 - (optional) **Description:** Enter a description of the terminal. Cannot be longer than 128 characters.
 - **IP Address:** Enter a static IP address for the terminal.
 - (optional) **Catalog Number:** Select a catalog number from the list.
5. Select **OK**.

6. In **New MobileView Project**, configure settings for the new FactoryTalk View ME application:
 - **Name:** Enter a unique name for the application. Studio 5000 Architect creates a new FactoryTalk View ME application.
 - (optional) **Description:** Enter a description of the application. Cannot be longer than 128 characters.
 - (optional) **Scale Replace Displays:** Select to scale objects in Replace displays to the resolution of the panel.
 - (optional) **Scale OnTop Displays:** Select to scale objects in OnTop displays to the resolution of the panel.
 - (optional) **Language:** Select a language for the application.
7. Select **OK**. The MobileView graphic terminal appears in **Hardware Diagram** and in **Project Explorer** under **Devices**. The FactoryTalk View ME application appears in **Project Explorer** under **Projects**.

See also

[New MobileView Graphic](#) on [page 51](#)

[New MobileView Project](#) on [page 51](#)

New PanelView Plus Graphic

How do I open New PanelView Plus Graphic?

1. In **Toolbox**, expand **Visualization** and **Graphic Terminals**.
2. Expand the PanelView Plus model family and size items.
3. Drag a PanelView Plus model from **Toolbox** to **Hardware Diagram**.

Use **New PanelView Plus Graphic** to set name, description, and IP address settings for a new PanelView Plus graphic terminal. These settings are editable after the project contains the PanelView Plus terminal.

See also

[Add a PanelView Plus graphic terminal](#) on [page 48](#)

[PanelView Plus Properties settings](#) on [page 51](#)

New PanelView Plus Project

How do I open New PanelView Plus Project?

1. In **Toolbox**, expand **Visualization** and **Graphic Terminals**.
2. Expand the PanelView Plus model family and size items.
3. Drag a PanelView Plus model from **Toolbox** to **Hardware Diagram**.
4. Configure the settings in **New PanelView Plus Graphic**, then click **OK**.

Use **New PanelView Plus Project** to set the name and description for a new PanelView Plus project. The name and description are editable after the project is part of the Studio 5000 Architect project.

See also

[Add a PanelView Plus graphic terminal](#) on [page 48](#)

[FactoryTalk View Machine Edition Project settings](#) on [page 61](#)

New MobileView Graphic

How do I open New MobileView Graphic?

1. In **Toolbox**, expand **Visualization** and **Mobile Terminals**.
2. Expand the MobileView model family and size items.
3. Drag a MobileView model from **Toolbox** to **Hardware Diagram**.

Use **New MobileView Graphic** to set name, description, and IP address settings for a new MobileView graphic terminal. These settings are editable after the MobileView terminal is in the project.

See also

[Add a MobileView graphic terminal](#) on [page 49](#)

[MobileView Properties settings](#) on [page 52](#)

New MobileView Project

How do I open New MobileView Project?

1. In **Toolbox**, expand **Visualization** and **Graphic Terminals**.
2. Expand the MobileView model family and size items.
3. Drag a MobileView model from **Toolbox** to **Hardware Diagram**.
4. Configure the settings in **New MobileView Graphic**, then click **OK**.

Use **New MobileView Project** to set the name and description for a new MobileView project. The name and description are editable after the project is part of the Studio 5000 Architect project.

See also

[Add a MobileView graphic terminal](#) on [page 49](#)

[FactoryTalk View Machine Edition Project settings](#) on [page 61](#)

PanelView Plus Properties settings

The **PanelView Plus Properties** settings define name, description, and network settings for PanelView Plus graphic terminals. Set these settings from **New PanelView Plus Graphic** when adding a PanelView Plus terminal or from the **Properties General** tab when editing a PanelView Plus terminal.

The PanelView Plus Properties settings are:

Setting	Description
Name	Sets the PanelView Plus terminal name.
Description	Sets the PanelView Plus terminal description. 255 character maximum.
IP Address	Sets the unique address that identifies the PanelView Plus terminal on the IP network.
Catalog Number	Sets a PanelView Plus terminal catalog number.

See also

[New PanelView Plus Graphic](#) on [page 50](#)

MobileView Properties settings

The **MobileView Properties** settings define name, description, and network settings for MobileView components. Set these settings in **New MobileView Graphic** when adding a MobileView terminal or from the **Properties General** tab when editing a MobileView terminal.

The MobileView Properties settings are:

Setting	Description
Name	Sets the MobileView name.
Description	Sets the MobileView description. 128 character maximum.
IP Address	Sets the unique address that identifies the MobileView on the IP network.
Catalog Number	Sets a MobileView catalog number.

See also

[New MobileView Graphic](#) on [page 51](#)

Add computers

Add or remove computers from your project. Computers represent the hardware that serve FactoryTalk View SE and FactoryTalk View ME applications to visualization devices. Computers appear in **Hardware Diagram** and **Project Explorer**.

See also

[Add a computer](#) on [page 52](#)

[Add visualization stations and servers](#) on [page 53](#)

Add a computer

Add a computer to a Studio 5000 Architect project to represent a host machine for FactoryTalk View SE and FactoryTalk View ME servers.

To add a computer

1. In **Toolbox**, expand the **Computers** and **Generic Computer** folders.
2. Drag a computer from **Toolbox** to **Hardware Diagram**.
3. In **New Computer Graphic**, configure these settings:
 - **Name:** Type a unique name for the computer.
 - (optional) **Description:** Type a description for the computer. Cannot be longer than 128 characters.
 - **Computer Name:** Enter or select the computer's hostname.
4. Select **OK**. The computer appears in the **Hardware Diagram** and in **Project Explorer** under **Devices**.

See also

[New Computer Graphic](#) on [page 53](#)

New Computer Graphic

How do I open New Computer Graphic?

1. In **Toolbox**, expand the **Computers** and **Generic Computer** folders.
2. Drag a computer from **Toolbox** to the **Hardware Diagram**.

Use **New Computer Graphic** to set the name, description, and host name for a new computer. Edit these settings after adding the computer to the project.

The computer properties are:

Field	Description
Name	Sets the name for the computer.
Description	Sets the description for the computer. Cannot be longer than 128 characters.
Computer Name	Sets the unique name that identifies the computer on the network.

See also

[Add a computer](#) on [page 52](#)

Add visualization stations and servers

Visualization stations and servers represent software applications that provide visual, communication, alarm, and event data to FactoryTalk View SE and FactoryTalk View ME components. Visualization stations and servers display in **Project Explorer**.

See also

[Add a FactoryTalk View SE Station](#) on [page 53](#)

[Add a FactoryTalk View ME Station](#) on [page 54](#)

[Add a FactoryTalk View SE Server Project](#) on [page 55](#)

[Add a FactoryTalk Linx Server Project](#) on [page 56](#)

[Add a Tag Alarm and Event Server Project](#) on [page 57](#)

Add a FactoryTalk View Site Edition Station

If integrating an automation system with FactoryTalk View Site Edition visualization devices, add a FactoryTalk View Site Edition station to the Studio 5000 Architect project.

Prerequisites

- Add a computer

To add a FactoryTalk View Site Edition Station

1. In **Toolbox**, expand **Visualization** and **Stations**.
2. Drag a **FactoryTalk View SE Local** or **FactoryTalk View SE Network** station from **Toolbox** to a computer in **Hardware Diagram**.
3. In **New View SE Station Project**, configure settings for the application:
 - **Name:** Enter a unique name for the application. The Studio 5000 Architect software creates a new FactoryTalk View Site Edition application.
 - (optional) **Description:** Enter a description of the application. Cannot be longer than 255 characters.
 - (optional) **Language:** Select a language for the application.
4. In **New View SE Station Project**, configure settings for the HMI server:
 - (optional) **Area:** Enter a View SE area to assign the HMI server to the area.
 - **Name:** Enter a unique name for the HMI server.
 - (optional) **Description:** Enter a description of the HMI server. Cannot be longer than 255 characters.
5. (optional) In **New View SE Station Project**, select additional server functions:
 - **New FactoryTalk Linx Server:** Select if this computer is also a FactoryTalk Linx server. The Studio 5000 Architect software creates a new FactoryTalk Linx Server and displays **New FactoryTalk Linx Server Project**.
 - **New Tag Alarm and Event Server:** Select if this computer is also a Tag Alarm & Events server. Studio 5000 Architect creates a new Tag Alarm and Event server and displays **New Tag Alarm and Event Server Project**.
6. Select **OK**.

Project Explorer shows the View SE Station project in **Projects**.

See also

[Add a computer](#) on [page 52](#)

[New Site Edition Project](#) on [page 58](#)

[New FactoryTalk Linx Server Project](#) on [page 59](#)

[New Tag Alarm and Event Server Project](#) on [page 59](#)

Add a FactoryTalk View Machine Edition Station

If integrating an automation system with View Machine Edition (ME) Visualization devices, add a View ME Station to the Studio 5000 Architect project.

Tip: RSLinx Enterprise is renamed to FactoryTalk Linx. Some software applications may refer to RSLinx Enterprise. FactoryTalk Linx is compatible with all software applications that used RSLinx Enterprise.

Prerequisites

- Add a computer

To add a FactoryTalk View Machine Edition Station

1. In **Toolbox**, expand **Visualization and Stations**.
2. Drag **FactoryTalk View Machine Edition** from **Toolbox** to a computer in **Hardware Diagram**.
3. In **New View ME Station Project**, configure the station settings:
 - **Name:** Enter a unique name.
 - (optional) **Description:** Enter a description. Cannot be longer than 255 characters.
 - (optional) **Language:** Select a project language.
 - (optional) **Resolution:** Select a project resolution.
 - (optional) **Scale Replace Displays:** Select to scale objects in Replace displays to the resolution of the panel.
 - (optional) **Scale OnTop Displays:** Select to scale objects in **OnTop** displays to the resolution of the panel.
4. Select **OK**.

In **Hardware Diagram**, Studio 5000 Architect software displays a new computer. Project Explorer shows the View ME Station project in **Projects**.

See also

[Add a computer](#) on [page 52](#)

[New Machine Edition Station Project](#) on [page 59](#)

Add a FactoryTalk View Site Edition Server Project

If integrating an automation system with FactoryTalk View SE Visualization devices, add a FactoryTalk View SE Server project to the Studio 5000 Architect project.

Prerequisites

- Add a computer

To add a FactoryTalk View SE Server Project

1. In **Toolbox**, expand **Visualization** and **Servers**.
2. Drag **FactoryTalk View SE Server** from **Toolbox** to a computer in **Hardware Diagram**.
3. In **New FactoryTalk View SE Server Project**, configure the **Application** settings:
 - **Name:** Enter a unique name.
 - (optional) **Description:** Enter a description. Cannot be longer than 255 characters.
 - (optional) **Language:** Select a project language.
4. In **New FactoryTalk View SE Server Project**, configure settings for the HMI server:
 - (optional) **Area:** Enter a View SE area to assign the HMI server to the area.
 - **Name:** Enter a unique name for the HMI server.
 - (optional) **Description:** Enter a description of the HMI server. Cannot be longer than 255 characters.
5. (optional) In **New FactoryTalk View SE Server Project**, select additional server functions:
 - **New FactoryTalk Linux Server:** Select if this computer is also a FactoryTalk Linux server. The Studio 5000 Architect software creates a new FactoryTalk Linux Server and displays **New FactoryTalk Linux Server Project**.
 - **New Tag Alarm and Event Server:** Select if this computer is also a Tag Alarm & Events server. The Studio 5000 Architect software creates a new Tag Alarm and Event server and displays **New Tag Alarm and Event Server Project**.
6. Select **OK. Project Explorer** shows the View SE Server project in **Projects**.

See also

[Add a computer](#) on [page 52](#)

[New Site Edition Project](#) on [page 58](#)

Add a FactoryTalk Linux Server Project

If an automation system has a dedicated FactoryTalk Linux server, add a FactoryTalk Linux server project to the Studio 5000 Architect project.

Prerequisites

- Add a computer

To add a FactoryTalk Linx Server Project

1. In **Toolbox**, expand **Visualization** and **Servers**.
2. Drag **FactoryTalk Linx Server** from **Toolbox** to a computer in **Hardware Diagram**.
3. In **New FactoryTalk Linx Server Project**, on the **General** tab, enter the **Application** settings.
 - **Type:** Select a View SE application type.
 - **Name:** Enter a unique name for the application. The Studio 5000 Architect software creates a new FactoryTalk View SE application.
 - (optional) **Description:** Enter a description of the application. Cannot be longer than 255 characters.
 - (optional) **Language:** Select a language for the application.
4. On the same tab, enter the **FactoryTalk Linx Server** settings.
 - (optional) **Area:** Enter a View SE area to assign the FactoryTalk Linx server to the area. If the area does not exist, the Studio 5000 Architect software creates a new area.
 - **Name:** Enter a unique name for the server.
 - (optional) **Description:** Enter a description of the server. Cannot be longer than 255 characters.
 - (optional) **Create HMI Server:** Select to create an associated HMI server.
5. (optional) To select alarm and event options, select the **Alarms and Events** tab:
 - **Enable alarm and event support:** Select if this server monitors alarm and event tags.
 - **Enable server-assigned priorities:** Select and assign severity ranges if this server has custom warning levels for alarms and events.
6. Select **OK**.

Project Explorer shows the FactoryTalk Linx server project in **Projects**.

See also

[Add a computer](#) on [page 52](#)

[New FactoryTalk Linx Server Project](#) on [page 59](#)

Add a Tag Alarm and Event Server project

If the automation system has a dedicated FactoryTalk Alarms and Events server, add a Tag Alarm and Event server project to the Studio 5000 Architect project.

Prerequisites

- Add a computer

To add a Tag Alarm and Event Server Project

1. In **Toolbox**, expand **Visualization** and **Servers**.
2. Drag **Tag Alarm and Event Server** from **Toolbox** to a computer in **Hardware Diagram**.
3. In **New Tag Alarm and Event Server Project**, enter the **Application** settings:
 - **Type:** Select a View SE application type.
 - **Name:** Enter a unique name for the application. If entering a unique name, the Studio 5000 Architect software creates a new FactoryTalk View SE application.
 - (optional) **Description:** Enter a description of the application. Cannot be longer than 255 characters.
 - (optional) **Language:** Select a language for the application.
4. In **New Tag Alarm and Event Server Project**, enter the **Tag Alarm and Event Server** settings:
 - (optional) **Area:** Enter a View SE area to assign the tag server to the area. If entering a unique area, the Studio 5000 Architect software creates a new area.
 - **Name:** Enter a unique name for the server.
 - (optional) **Description:** Enter a description of the server. Cannot be longer than 255 characters.
 - (optional) **Create HMI Server:** Select to create an associated HMI server.
5. (optional) In the **Priorities** tab of **New Tag Alarm and Event Server Project**, enter the Priority settings.
 - **Enable server-assigned priorities:** Select to change default event ranges.
 - **Urgent:** Set the low threshold for Urgent level events.
 - **High:** Set the low threshold for High level events.
 - **Medium:** Set the low threshold for Medium level events.
6. Select **OK**. **Project Explorer** shows the Tag Alarm and Event server project in **Projects**.

See also

[Add a computer](#) on [page 52](#)

[New Tag Alarm and Event Server Project](#) on [page 59](#)

[New Site Edition Project](#) on [page 58](#)

New Site Edition Project

How do I open New Site Edition Project?

1. In **Toolbox**, expand the **Visualization** and **Stations** folders.

2. Drag **FactoryTalk View Site Edition Station** from **Toolbox** to a computer in the **Hardware Diagram**.

Use **New Site Edition Project** to set application and HMI server settings for a new local or network distributed Site Edition project. Edit these settings after the Site Edition project is added to the Studio 5000 Architect project.

See also

[Add a FactoryTalk View Site Edition Station](#) on [page 53](#)

[FactoryTalk View Site Edition Project settings](#) on [page 60](#)

New Machine Edition Station Project

How do I open New Machine Edition Station Project?

1. In **Toolbox**, expand the **Visualization** and **Stations** folders.
2. Drag **FactoryTalk View ME Station** from **Toolbox** to a computer in the **Hardware Diagram**.

Use **New Machine Edition Station Project** to set name, description, resolution, scaling options, and language for a new FactoryTalk View Machine Edition project. Edit these settings after the FactoryTalk View Machine Edition project is added to the Studio 5000 Architect project.

See also

[Add a FactoryTalk View Machine Edition Station](#) on [page 54](#)

[FactoryTalk View Machine Edition Project settings](#) on [page 61](#)

New Tag Alarm and Event Server Project

How do I open New Tag Alarm and Event Server Project?

1. In **Toolbox**, expand the **Visualization** and **Servers** folders.
2. Drag the **Tag Alarm and Event Server** from **Toolbox** to a computer in the **Hardware Diagram**.

Use **New Tag Alarm and Event Server Project** to set server and alarm properties for a new Tag Alarm and Event Server.

See also

[Add a Tag Alarm and Event Server Project](#) on [page 57](#)

[FactoryTalk Alarms and Event Server General settings](#) on [page 61](#)

[FactoryTalk Alarms and Event Server Priorities settings](#) on [page 62](#)

New FactoryTalk Linx Server Project

How do I open New FactoryTalk Linx Server Project?

1. In **Toolbox**, expand the **Visualization** and **Servers** folders.

2. Drag the **RSLinX Enterprise Server** from **Toolbox** to a computer in the **Hardware Diagram**.

Use **New FactoryTalk Linx Server Project** to set application, server, and alarm and event settings for a new FactoryTalk Linx server

See also

[Add a FactoryTalk Linx Server Project](#) on [page 56](#)

[FactoryTalk Linx Server General settings](#) on [page 62](#)

[FactoryTalk Linx Server Alarms and Events settings](#) on [page 63](#)

FactoryTalk View Site Edition Project settings

The **FactoryTalk View Site Edition Project** settings define application and HMI server settings for a Site Edition project. Set these settings from **New Site Edition Project** when adding a local or network server or from the **Properties General** tab when editing a Site Edition project.

The **FactoryTalk View Site Edition Project** application and HMI server settings are:

Application Field	Description
Type	Specifies the project type for the FactoryTalk View Site Edition project. Can only be set when adding an HMI, FactoryTalk Linx, or Tag Alarm and Event server without a station.
Name	Specifies the name for the FactoryTalk View Site Edition project. The project name must not be empty.
Description	Specifies the description for the FactoryTalk View Site Edition project. Cannot be longer than 255 characters.
Language	Specifies the display language for the FactoryTalk View Site Edition project.

The **FactoryTalk View Site Edition Project** HMI server settings are:

HMI Server Field	Description
Area	Specifies the area for the project's HMI server. • If the area name is unique, a new area is created as a child of the FactoryTalk View Site Edition project. The HMI server is added as a child of the new area. • If the area name already exists, the HMI server is added as a child of the specified area. • If the area name is blank, the HMI server is added as a child of the FactoryTalk View Site Edition project. Cannot be set when adding or editing a FactoryTalk View Site Edition Local Station.
Name	Specifies the name for the project's HMI server. The HMI server name must not be empty. Cannot be set when adding or editing a FactoryTalk View Site Edition Local Station.
Description	Specifies the description for the project's HMI server.

The **FactoryTalk View Site Edition Project** server settings are:

Server Setting	Description
New FactoryTalk Linx Server	If checked, opens New FactoryTalk Linx Server . This check box is only available when adding a new project.
New Tag Alarm and Event Server	If checked, opens New Tag Alarm and Event Server . This check box is only available when adding a new project.

See also

[New Site Edition Project](#) on [page 58](#)

[New FactoryTalk Linx Server Project](#) on [page 59](#)

[New FactoryTalk Alarm and Event Server dialog box](#) on [page 59](#)

FactoryTalk View Machine Edition Project settings

The **FactoryTalk View Machine Edition Project** settings define name, description, language, resolution, and scaling options for a FactoryTalk View ME application. Set when adding a FactoryTalk View ME application from **New ME Station Project** or when editing a FactoryTalk View ME application from the **Properties General** tab.

The **FactoryTalk View ME Project** settings are:

Setting	Description
Name	Sets the FactoryTalk View ME application name. The project name must not be empty.
Description	Sets the FactoryTalk View ME application description. 255 character maximum.
Language	Sets the FactoryTalk View ME application display language.
Resolution	Sets the FactoryTalk View ME application target resolution.
Scale Replace Displays	Set if objects in Replace displays should be scaled to the resolution of the panel.
Scale OnTop Displays	Set if objects in OnTop displays should be scaled to the resolution of the panel.
Ensure runtime application can execute on PanelView Plus 7 Standard	Set if an application should be compatible with both PanelView Plus 7 Performance and PanelView Plus 7 Standard graphic terminals.

See also

[New Machine Edition Station Project](#) on [page 59](#)

Tag Alarm and Event Server General settings

The **Tag Alarm and Event Server General** settings define server settings for a Tag Alarm and Event server. Set from the **General** tab of **New Tag Alarm and Event Server** when adding a new Tag Alarm and Event server or from the **Properties - General** tab when editing a Tag Alarm and Event server.

The **General** settings are:

Tag Alarm and Event Server Field	Description
Area	Specifies the area for the Tag Alarm and Event server. • If the area name is unique, creates a new area as a child of the FactoryTalk View Site Edition project. Adds the Tag Alarm and Event server as a child of the new area. • If the area name already exists, adds the Tag Alarm and Event server as a child of the specified area. • If the area name is blank, adds the Alarm and Event server as a child of the FactoryTalk View Site Edition project. Cannot set when the project type is a FactoryTalk View Site Edition Local Station.
Name	Specifies the name for the Tag Alarm and Event server. The server name cannot be empty.
Description	Specifies the description for the server. 255 character maximum.

The server settings are:

Server Setting	Description
Create HMI Server	If checked, opens New HMI Server . This check box is only available when adding a new project.

See also

[New Tag Alarm and Event Server Project](#) on [page 59](#)

[Tag Alarm and Event Server Priorities settings](#) on [page 62](#)

Tag Alarm and Event Server Priorities settings

The **Tag Alarm and Event Server Priorities** settings define settings for a Tag Alarm and Events server. Set from the **Priorities** tab of **New Tag Alarm and Event Server Project** when adding a new Tag Alarm and Events server or from the **Priorities** tab when editing a Tag Alarm and Events server.

The **Tag Alarm and Event Server Priorities** settings are:

Setting	Description
Enable server-assigned priorities	If selected, can set custom priority values for Urgent, High, and Medium priority events.
Urgent	Specifies the priority at which an Urgent priority alarm or event are created.
High	Specifies the priority at which a High priority alarm or event are created.
Medium	Specifies the priority at which a Medium priority alarm or event are created.

See also

[New Tag Alarm and Event Server Project](#) on [page 59](#)

FactoryTalk Linx Server General settings

The **FactoryTalk Linx Server General** settings define options for a FactoryTalk Linx server. Configure these settings from the **General** tab of **New FactoryTalk Linx Server** when adding a FactoryTalk Linx server or from the **Properties > General** tab when editing a FactoryTalk Linx server.

The general settings of a FactoryTalk Linx Server are:

FactoryTalk Linx Server setting	Description
Area	Specifies the area for the FactoryTalk Linx server. • If the area name is unique, a new area is created as a child of the FactoryTalk View SE project. The FactoryTalk Linx server is added as a child of the new area. • If the area name already exists, the FactoryTalk Linx server is added as a child of the specified area. • If the area name is blank, the FactoryTalk Linx server is added as a child of the FactoryTalk View SE project. Cannot set when the project type is a FactoryTalk View SE Local Station.
Name	Specifies the name for the FactoryTalk Linx server. The FactoryTalk Linx server name must not be empty.
Description	Specifies the description for the FactoryTalk Linx server. 255 character maximum.

The server settings are:

Server Setting	Description
Create HMI Server	If checked, opens New HMI Server . This check box is only available when adding a new project.

See also

[New FactoryTalk Linx Server Project](#) on [page 59](#)

FactoryTalk Linx Server Alarms and Events settings

The **FactoryTalk Linx Server Alarms and Events** settings define alarm and event settings for a FactoryTalk Linx server. Set from the **Alarms and Events** tab of **New FactoryTalk Linx Server** when adding a new FactoryTalk Linx server or from the **Properties Alarms and Events** tab when editing a FactoryTalk Linx server.

The FactoryTalk Linx Server Alarms and Events settings are:

Setting	Description
Enable alarm and event support	If selected, sets the FactoryTalk Linx Data Server to act as an Alarm and Event server.
Enable server-assigned priorities	If selected, enables custom priority values for Urgent, High, and Medium priority events.
Urgent	Sets the priority at which an Urgent priority alarm or event is created.
High	Sets the priority at which a High priority alarm or event is created.
Medium	Sets the priority at which a Medium priority alarm or event is created.

See also

[New FactoryTalk Linx Server Project](#) on [page 59](#)

[FactoryTalk Linx Server General settings](#) on [page 62](#)

Import existing components

A Studio 5000 Architect project contains one or more components. Each component represents a hardware device, software project, visualization server, or document. Components appear in **Hardware Diagram** and **Project Explorer**.

Import existing components from a project file or online controller to add them to a Studio 5000 Architect project. Once added, connect components to networks and configure relationships to share tags and control an automation system.

See also

[Import a controller project from a file](#) on [page 65](#)

[Import a controller project from an online controller](#) on [page 66](#)

[Import a FactoryTalk View application from a file](#) on [page 67](#)

Import a controller project from a file

Import Logix Designer project files (.acd) to a Studio 5000 Architect project. Studio 5000 Architect software adds the controller, chassis or DIN rail, and all associated modules, tags, and aliases to the project.

If the imported project contains unknown or unsupported modules, Studio 5000 Architect stops the import operation.

If the imported project contains produced or consumed tags using user defined data types, define the user defined data type in the producer controller before committing the hardware diagram.

To import a controller project from a file:

1. In **Hardware Diagram**, right-click on a blank area of the hardware diagram, then select **Add Controller Project**.
2. In **Open**, locate and select the project file to add, then select **Open**.
3. If importing a 1769 controller, in **Bank Configuration**, change the configuration to match your physical controller, then select **OK**.
4. In **Confirm Update Changes**, select **OK**. The controller, chassis or DIN rail, and all associated modules appear in **Hardware Diagram**.

Note: Select **Cancel** if the project contains unknown or unsupported modules. Remove unsupported modules in Logix Designer and try again.

See also

[About unsupported modules](#) on [page 45](#)

[Import a controller project from an online controller](#) on [page 66](#)

[Confirm Update Changes](#) on [page 68](#)

Import a controller project from an online controller

Import a controller project to the Studio 5000 Architect project from an online controller using either RSLinx Classic or FactoryTalk Linx. Studio 5000 Architect software adds the controller, chassis or DIN rail, and all associated modules, tags, and aliases to the project.

The Import option is only available for the modules supported by Studio 5000 Architect software. Locate the children node when choosing modules to make sure that the selected modules are supported by Studio 5000 Architect.

If the imported project contains produced or consumed tags using user defined data types, define the user defined data type in the producer controller before committing the hardware diagram.

To import a controller project from an online controller:

1. In **Hardware Diagram**, right-click on a blank area of the hardware diagram, then select **Import from Online Controller....**
2. In **Import from Online Controller**, in **Communication Software** select either RSLinx Classic or FactoryTalk Linx.
3. Browse the network tree to select the controller to import into your project, then select **Import**.
4. In **Choose Matching Controller Configuration File**, perform one of these steps:
 - To create a new project file, select **Create New**.
 - To use controller settings from a project file in the list, select the file, then select **Select**.
 - To use controller settings from a different project file, select **Browse**, then add the file to the list. Once Studio 5000 Architect software verifies the validity of the file, select **Select**.
5. If importing a 1769 controller, in **Bank Configuration**, modify the configuration to match the physical controller, then select **OK**.
6. In **Confirm Update Changes**, select **OK**.

See also

[Import a controller project from a file](#) on [page 65](#)

[Update a hardware diagram with an online controller](#) on [page 101](#)

[Select Online Controller to Import](#) on [page 67](#)

[Choose Matching Controller Configuration File](#) on [page 68](#)

[Confirm Update Changes](#) on [page 68](#)

Import a FactoryTalk View application from a file

Import a FactoryTalk View application to the Studio 5000 Architect project. Studio 5000 Architect software adds the associated PanelView Plus or MobileView terminal, tags, displays, global objects, images, macros, and servers to the project.

To import a FactoryTalk View application from a file:

1. In **Hardware Diagram**, right-click on a blank area of the hardware diagram, then select **Add Existing FactoryTalk View Project**.
2. In **Add Existing FactoryTalk View Project**, select an application and its settings:
 - **Application Type:** Select a type of FactoryTalk View application.
 - **Applications:** Select the application to import.
 - **Language:** Select a language for the application.
 - **Diagram to add discovered hardware to:** Select a hardware diagram where Studio 5000 Architect software imports the components.
3. Select **OK**.
4. In **Update Summary**, review the changes, then select **OK**.

The FactoryTalk View application displays in **Project Explorer**. If importing a FactoryTalk View ME application, a PanelView Plus or MobileView terminal is added to the hardware diagram and its catalog number is set based on the station resolution of the project.

See also

[Add Existing FactoryTalk View Project](#) on [page 69](#)

Select Online Controller to Import

How do I open Select Online Controller to Import?

- From the **Hardware Diagrams** menu, select **Import from Online Controller...**

Select Online Controller to Import lists controllers connected to the network. Select a controller to import settings from the online controller to settings in the Studio 5000 Architect project.

See also

[Import a controller project from an online controller](#) on [page 66](#)

Choose Matching Controller Configuration File

How do I open Choose Matching Controller Configuration File?

If you are importing a controller from an online controller

1. Select **Hardware Diagrams > Import from Online Controller...**
2. In **Select Online Controller to Import**, browse the network, select the controller to import into the project, then click **Select**.

If you are updating a hardware diagram with an online controller

- Select **Use external controller configuration file** in **Select Online Controller to Update**.

Choose Matching Controller Configuration lists existing project files that are compatible with the controller you are importing. The selected controller project and its documentation are added to the Studio 5000 Architect project.

- To import or update to a new project file, select **Create New**.
- To import or update to a project file in the list, select the file, then select **Select**.
- To import or update to a different project file, select **Browse**, then add the file to the list. Once Studio 5000 Architect software verifies the validity of the file, select **Select**.

See also

[Import a controller project from an online controller](#) on [page 66](#)

[Update a hardware diagram with an online controller](#) on [page 101](#)

[Select Online Controller to Import](#) on [page 67](#)

Confirm Update Changes

How do I open Confirm Update Changes?

If you are importing a controller from a file

1. In **Hardware Diagram**, right-click on a blank area of the hardware diagram, then click **Add Controller Project**.
2. In **Open**, locate and select the project file you wish to add, then click **Open**.
3. If you are importing a 1769 controller, in **Bank Configuration**, modify the configuration to match your physical controller, then click **OK**.

If you are importing a controller from an online controller

1. In **Hardware Diagram**, right-click on a blank area of the hardware diagram, then click **Import From Online**.
2. In **Select Online Controller to Import**, browse the network and click the controller you want to import into your project, then click **Select**.
3. In **Choose Matching Controller Configuration File**, perform one of following steps:
 - To create a new project file, click **Create New**.
 - To use controller settings from a project file in the list, click the file, then click **Select**.
 - To use controller settings from a different project file, click **Browse**, then add the file to the list. Once Studio 5000 Architect verifies the validity of the file, click **Select**.
4. If you are importing a 1769 controller, in **Bank Configuration**, modify the configuration to match your physical controller, then click **OK**.

Confirm Update Changes lists pending changes to a Studio 5000 Architect project. This message appears before a project import changes a Studio 5000 Architect project. Review the changes, then continue or cancel the update.

See also

[Import a controller project from a file](#) on [page 65](#)

[Import a controller project from an online controller](#) on [page 66](#)

[Update a hardware diagram](#) on [page 100](#)

[Update a hardware diagram with an online controller](#) on [page 101](#)

Add Existing FactoryTalk View Project

How do I open Add Existing FactoryTalk View Project?

- In **Hardware Diagram**, right-click on a blank area of the hardware diagram, then click **Add Existing FactoryTalk View Project**.

Use **Add Existing FactoryTalk View Project** to import a FactoryTalk View application into a Studio 5000 Architect project. Studio 5000 Architect software updates the project after import.

When importing a FactoryTalk View ME application, a PanelView Plus or MobileView terminal is added to the hardware diagram and its catalog number is set based on the project's station resolution.

See also

[Import a FactoryTalk View application from a file](#) on [page 67](#)

Add networks

Networks in Studio 5000 Architect represent the hardware and cables that allow components to communicate. After connecting components to the same network, create ownership relationships, tags, and I/O aliases.

In ControlNet and other non-Ethernet networks, must connect components that communicate with each other to the same network trunk. ControlNet and other network trunks are only shown in **Hardware Diagram**.

In Ethernet networks, connect components that communicate with each other to each other, either directly or through Ethernet switches. Ethernet switches display in **Hardware Diagram**. Managed switches owned by a controller also appear in **Project Explorer**.

See also

[Add a managed Ethernet switch](#) on [page 71](#)

[Add an unmanaged Ethernet switch](#) on [page 72](#)

[Add a Generic switch](#) on [page 72](#)

[Add a network trunk](#) on [page 73](#)

Add a managed Ethernet switch

Add a managed Ethernet switch to build or expand an Ethernet network using Stratix devices. Studio 5000 Architect software supports managed Stratix switches ranging from 3 to 20 ports in their default configuration. Some switches support expansions up to a total of 26 ports.

To add a managed Ethernet Switch

1. In **Toolbox**, expand **Network Infrastructure** and **Ethernet Switches**.
2. Expand **Managed Switches**, then expand the list by switch port size.
3. Drag a switch from **Toolbox** to **Hardware Diagram**.
4. (optional) In **New Switch Graphic**, enter the switch properties:
 - a. (optional) **Name**: Enter a unique name for the switch.
 - b. (optional) **Description**: Enter a description for the switch. Cannot be longer than 128 characters.
 - c. **Address / Host Name**: Set the IP address or host name for the switch.

5. Select **OK**. The Stratix switch appears in the **Hardware Diagram** and in **Project Explorer** under **Devices**.

See also

[Switch Configuration](#) on [page 75](#)

Add an unmanaged Ethernet switch

Add an unmanaged Ethernet switch to build or expand an Ethernet network using Stratix devices. Studio 5000 Architect software supports unmanaged Stratix switches ranging from 4 to 8 ports.

To add an unmanaged Ethernet switch

1. In **Toolbox**, expand **Network Infrastructure** and **Ethernet Switches**.
2. Expand **Unmanaged Switches**, then expand the list by switch port size.
3. Drag a switch from **Toolbox** to **Hardware Diagram**.
4. In **New Switch Graphic**, enter a unique name for the switch, then select **OK**. The switch appears in **Hardware Diagram** and in **Project Explorer** under **Devices**.

See also

[Switch Configuration](#) on [page 75](#)

Add a Generic switch

Add a generic switch to the Studio 5000 Architect project. Use generic switches to connect mainstream Ethernet hardware to the automation system.

To add a Generic Switch

1. In **Toolbox**, expand **Network Infrastructure** and **Generic Switch**.
2. Drag a **Generic Switch** from **Toolbox** to **Hardware Diagram**.
3. (optional) In **New Generic Switch Graphic**, configure the switch properties:
 - **Name:** Enter a unique name for the switch.
 - **Description:** Enter a description for the switch. Cannot be longer than 255 characters.
 - **Type:** Select whether the switch is Managed or Unmanaged.
 - **Number of Ports:** Select the number of ports on the switch.
 - **Address / Host Name:** If the switch is managed, set the IP address or host name for the switch.
4. Select **OK**. The generic switch appears in **Hardware Diagram** and in **Project Explorer** under **Devices**.

See also

[New Generic Switch Graphic](#) on [page 74](#)

Add a network trunk

ControlNet and other network trunks represent the cabling that connects non-Ethernet components. Using multiple controllers or modules to communicate across a ControlNet or other non-Ethernet network requires a network trunk.

ControlNet trunks are blue, other network trunks are black.

To add a network trunk

1. From the **Network Trunk** list, select a network trunk type, then select **Network Trunk Tool**.
2. In **Hardware Diagram**, either:
 - Select the location to set the trunk position.
 - Drag over a location to set both the trunk position and size.

Studio 5000 Architect software displays the network trunk in **Hardware Diagram**.

See also

[Connect components to a network trunk](#) on [page 74](#)

[Add, import, and remove components](#) on [page 15](#)

Connect Ethernet components

For Ethernet components to communicate with each other, connect them to the same Ethernet network. In most cases, components connect to an Ethernet switch. Components with multiple Ethernet ports support Device Level Ring (DLR) connections and can connect components without a switch.

Ethernet connections and ports are green.

To connect Ethernet components

1. In **Hardware Diagram**, drag the component or component port to an unused port on an Ethernet switch or other Ethernet component.
2. (optional) If the new connection links two previously unconnected networks, Studio 5000 Architect software combines them into a single network. In **Select Network Name**, enter a network name for the combined network, then select **OK**.

See also

[Add a managed Ethernet switch](#) on [page 71](#)

[Add an unmanaged Ethernet switch](#) on [page 72](#)

[Add a Generic switch](#) on [page 72](#)

[Connect components to a network trunk](#) on [page 74](#)

Connect components to a network trunk

In order for ControlNet and other non-Ethernet components to communicate with each other, connect the components to the same network trunk. Components can only connect to one network trunk at a time.

ControlNet connections are blue, other network connections are black.

To connect a device to a network trunk

- In **Hardware Diagram**, drag the component or component port to the ControlNet or other network trunk.

See also

[Add a network trunk](#) on [page 73](#)

[Connect Ethernet components](#) on [page 73](#)

Add an Ethernet Tap

Add an Ethernet tap to monitor messages on an Ethernet network.

To add an Ethernet tap

1. In **Toolbox**, expand **Network Infrastructure**, **Ethernet Switches**, **Managed Switches**, and **3-Port Switches**.
2. Drag an Ethernet tap from **Toolbox** to **Hardware Diagram**.
3. In **New Switch Graphic**, configure the switch properties, then select **OK**:
 - (optional) **Name**: Enter a unique name for the Ethernet tap.
 - (optional) **Description**: Enter a description for the Ethernet tap.
 - **Address / Host Name**: Select a network type and set the IP address or host name for the Ethernet tap.
4. Select **OK**. The Ethernet tap appears in **Hardware Diagram** and in **Project Explorer** under **Devices**.

See also

[Connect Ethernet components](#) on [page 73](#)

[Switch Configuration](#) on [page 75](#)

New Generic Switch Graphic How do I open New Generic Switch Graphic?

1. In **Toolbox**, expand the **Network Infrastructure** and **Generic Switch** folders.
2. Drag a **Generic Switch** from **Toolbox** to the **Hardware Diagram**.

Use **New Generic Switch Graphic** to set switch settings for a new Ethernet switch. Edit these settings after the switch is added to the project.

Settings	Description
Name	Specifies the name of the generic switch.
Description	Specifies the description of the generic switch. Cannot be longer than 255 characters.
Type	Specifies the type of switch: • Unmanaged: Unmanaged switches provide a basic network connection. No additional network configuration is required with this option. • Managed: Managed switches allow taking control of communication over an Ethernet network. Configure the address or host name if choosing this option.
Number of Ports	Specifies the number of ports to create connections between communication modules. The value range is 2 to 26.
Address/Host Name	Specifies the IP configuration for a managed switch. Three options are: • Private Network: Select the value from the list, from 1 to 254. • IP Address: Enter a unique IP address to identify each node on the IP network. • Host Name: Enter a fully qualified domain name, such as switch.yourcompany.com.

See also

[Add a Generic switch](#) on [page 72](#)

Switch Configuration

How do I open Switch Configuration?

1. In **Toolbox**, expand the **Network Infrastructure**, **Ethernet Switches**, **Managed Switches** or **Unmanaged Switches**, and number of port folders.
2. Drag the desired switch from **Toolbox** to the **Hardware Diagram**.

Use **Switch Configuration** to set the name, description, and network settings for a new Stratix switch or Ethernet tap. Edit these settings after the switch or tap is added to the project.

Settings that do not apply to the switch or tap are hidden.

Setting	Description
Type	Specifies the type of the switch.
Vendor	Shows the vendor information of the switch.
Name	Shows the switch name specified in New Switch Graphic .
Description	Specifies the description for the switch. Cannot be longer than 128 characters.
Expansions	Specifies the port expansion information. Three available options are: • (0) - None • (1) - 8 port expansion • (2) - 8 port expansion (16 ports total)

Setting	Description
Address / Host Name	Specifies the configuration for the switch. The setting is available if the switch type is Managed. Three options are: • Private Network: Select the value from the list, from 1 to 254. The Private Network setting is not available for Stratix 6000 switches. • IP Address: Enter a unique IP address to identify each node on the IP network. • Host Name: Enter a fully qualified domain name, such as switch.yourcompany.com.

See also

[Add a managed Ethernet switch](#) on [page 71](#)

[Add an unmanaged Ethernet switch](#) on [page 72](#)

[Add an Ethernet Tap](#) on [page 74](#)

Add relationships and tags

For components to communicate with each other in production, they must have one of three relationships:

Relationship	Description
Ownership relationship	Connects one module to one controller or FactoryTalk Linx server.
Producer/consumer relationship	Connects one controller to another controller.
Shortcut	Connects one controller to a FactoryTalk Linx server for use in a FactoryTalk View application.

Once two components have a relationship, they can communicate with each other using one or more tags. Add tags for producer/consumer relationships, point tags, and axis tags using Studio 5000 Architect or Logix Designer.

See also

[Add an ownership relationship](#) on [page 83](#)

[Add a producer/consumer relationship](#) on [page 83](#)

[Add a shortcut](#) on [page 84](#)

[Add a produced and consumed tag](#) on [page 85](#)

[Add a point tag](#) on [page 86](#)

About ownership relationships

An ownership relationship connects one module to one controller or FactoryTalk Linx server. Once the relationship is added, the controller or server "owns" the module and can read from or write to its tags. A controller or server can own multiple modules. Modules can have multiple owners. In large automation systems, ownership relationships can be very complex with many modules owned by many controllers across multiple chassis.

Ethernet devices owned by or added to the I/O configuration of a controller are counted toward the node limits of the controller.

Studio 5000 Architect software displays the owned modules for each controller in **Project Explorer** under the controller project's **I/O Configuration** folder. Studio 5000 Architect displays owned modules for each FactoryTalk Linx server in **Communications**.

To add an ownership relationship, one of these conditions must be true:

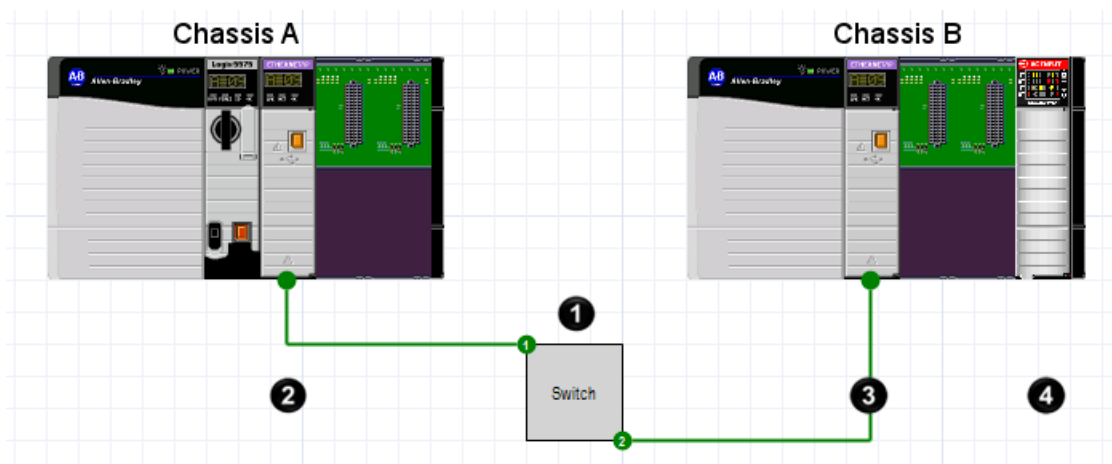
- Either the controller and the target module must be on the same chassis

- Or the controller or FactoryTalk Linx server must own all communication modules along the path to the target module's chassis

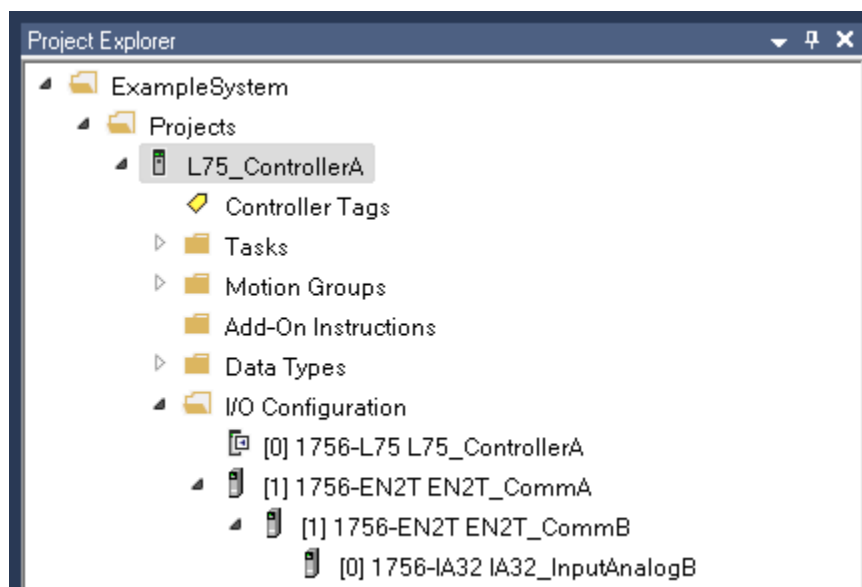
Example

A controller in Chassis A needs to read tags from an input module across the factory floor in Chassis B. The two chassis are physically connected using an Ethernet network. Adding an ownership relationship between the controller and the input module is a four step process:

1. In Studio 5000 Architect software, connect the two chassis together using communication modules and an Ethernet switch.
2. Add an ownership relationship between the communication module in Chassis A and the controller.
3. Add an ownership relationship between the communication module in Chassis B and the controller.
4. Add an ownership relationship between the input module in Chassis B and the controller.



Project Explorer shows the path of owned modules in the controller project's **I/O Configuration** folder.



See also

[Add networks](#) on [page 71](#)

[Add an ownership relationship](#) on [page 83](#)

[Common module configuration errors](#) on [page 88](#)

[Ethernet node limitations](#) on [page 88](#)

[Project Explorer](#) on [page 12](#)

About producer/consumer relationships

A producer/consumer relationship connects one controller to another controller. Once the relationship is added, the consumer controller can read from or write to specific tags provided by the producer controller. A consumer controller can consume tags from many producer controllers. Similarly, a producer controller can produce tags for many consumer controllers. In large automation systems, producer/consumer relationships can be very complex with many controllers producing and consuming tags from multiple controllers.

Studio 5000 Architect software displays the producer controllers for each consumer controller in **Project Explorer** under the controller project's **I/O Configuration** folder.

To add a producer/consumer relationship, one of these conditions must be true:

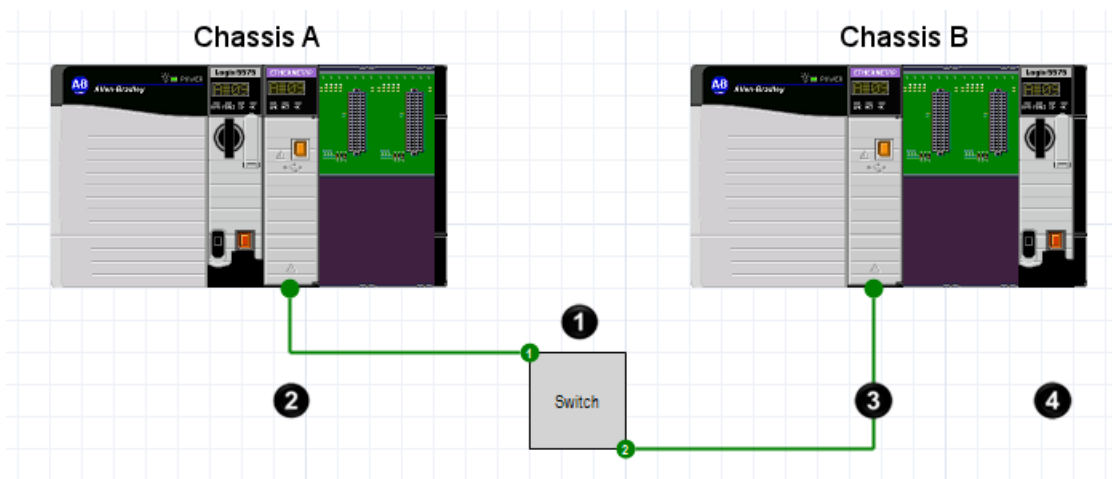
- Either the consuming controller and the producing controller must be on the same chassis

- Or the consuming controller must own all communication modules along the path to the producer controller's chassis

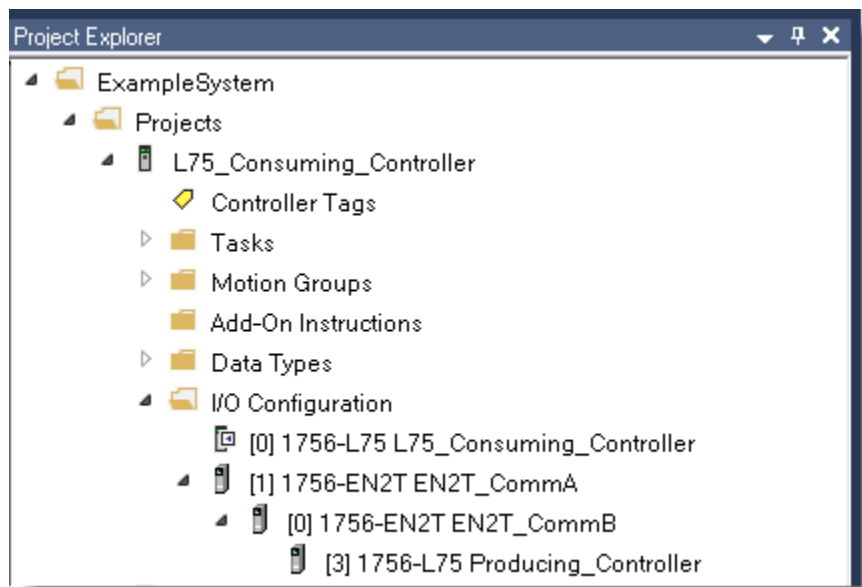
Example

A controller in Chassis A needs to consume tags from a controller across the factory floor in Chassis B. The two chassis are physically connected using an Ethernet network. Adding a producer/consumer relationship between the consuming controller and the producing controller is a four step process:

1. In Studio 5000 Architect software, connect the two chassis together using communication modules and an Ethernet switch.
2. Add an ownership relationship between the communication module in Chassis A and the consuming controller in chassis A.
3. Add an ownership relationship between the communication module in Chassis B and the consuming controller in chassis A.
4. Add a producer/consumer relationship between the producing module in Chassis B and the consuming controller in Chassis A.



Project Explorer shows the path of owned modules and producer controllers in the consumer controller project's **I/O Configuration** folder.



See also

[Add networks](#) on [page 71](#)

[Add an ownership relationship](#) on [page 83](#)

[Add a producer/consumer relationship](#) on [page 83](#)

[Project Explorer](#) on [page 12](#)

About shortcuts

A shortcut connects one controller to a FactoryTalk Linx server for use in a FactoryTalk View project. Once the relationship is added, the FactoryTalk Linx server can read from or write to the controller's tags. This allows a FactoryTalk View application to communicate with a controller.

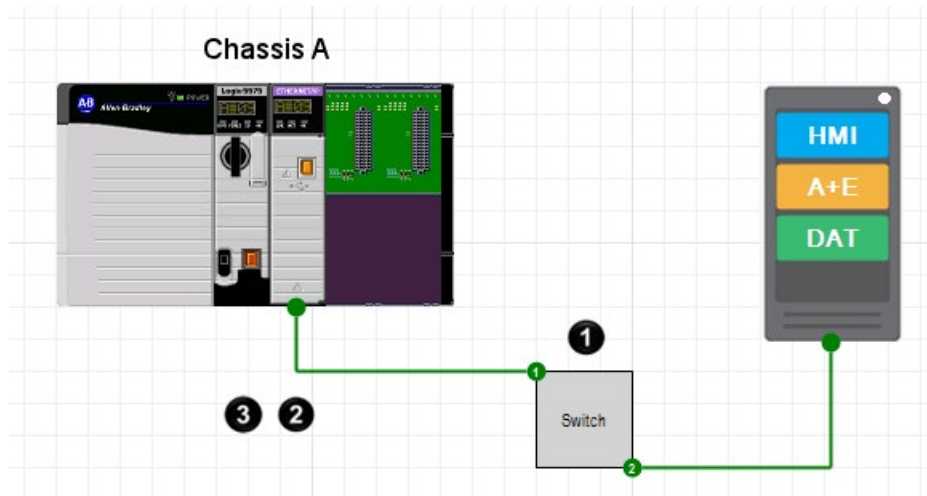
Studio 5000 Architect software displays the shortcuts for each FactoryTalk Linx server in **Communications**.

To add a shortcut, the FactoryTalk Linx server must own all communication modules along the path to the target module's chassis.

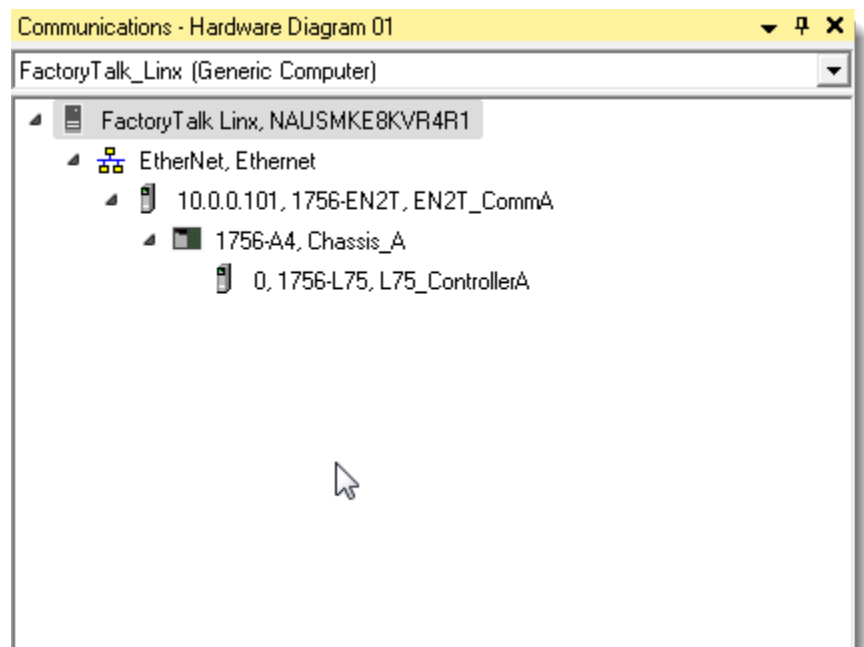
Example

A FactoryTalk View application with a FactoryTalk Linx server (right) needs to read tags from a controller across the factory floor in Chassis A. The chassis and the computer are physically connected using an Ethernet network. Adding a shortcut between the FactoryTalk Linx server and the controller is a three step process:

1. In Studio 5000 Architect software, connect the computer hosting the FactoryTalk Linx server to Chassis A using communication modules and an Ethernet switch.
2. Add an ownership relationship between the communication module in Chassis A and the FactoryTalk Linx server.
3. Add a shortcut between the controller in Chassis A and the FactoryTalk Linx server.



Communications shows the path of each shortcut from the FactoryTalk Linx server to the controller.



See also

[Add networks](#) on [page 71](#)

[Add an ownership relationship](#) on [page 83](#)

[Add a shortcut](#) on [page 84](#)

[Communications](#) on [page 93](#)

Add an ownership relationship

An ownership relationship connects one module to one controller or FactoryTalk Linx server. Once the relationship is added, the controller or server owns the module and can read from or write to its tags.

FactoryTalk Linx servers can only own controllers or communication modules and can only read tags from controllers.

Prerequisites

- Either place the controller and the target module on the same chassis, or make the FactoryTalk Linx server the owner of all communication modules along the path to the target module.

To add an ownership relationship

1. In **Hardware Diagram**, locate the module to be owned by the controller or FactoryTalk Linx server.
2. Drag the module on top of the controller or FactoryTalk Linx server.
3. In **Configure Module**, set the keying, and network settings, then select **OK**.
4. Commit the hardware diagram to save the module configurations to the Logix Designer project or FactoryTalk View application.

Project Explorer displays the owned modules for each controller and **Communications** displays owned modules for each FactoryTalk Linx server.

See also

[About ownership relationships](#) on [page 77](#)

[Configure Module](#) on [page 89](#)

Add a producer/consumer relationship

A producer/consumer relationship connects one controller to another controller. Once the relationship is added, the consumer controller can read from or write to specific tags provided by the producer controller.

Prerequisites

- Either place the consumer controller and producer controller on the same chassis, or make the consumer controller the owner of all communication modules along the path to the producer controller

To add a producer/consumer relationship

1. In **Hardware Diagram**, locate the controller to produce tags for the consumer controller.
2. Drag the producer controller on top of the consumer controller.
3. In **Configure Module**, set the keying settings, then select **OK**.
4. Commit the hardware diagram to save the controller configurations to the Logix Designer projects.

Project Explorer shows the path of owned modules and producer controllers in the **I/O Configuration** folder of the consumer controller project.

See also

[About producer/consumer relationships](#) on [page 79](#)

[Configure Module](#) on [page 89](#)

Add a shortcut

A shortcut connects one controller to a FactoryTalk Linx server for use in a FactoryTalk View application. Using the shortcut, the FactoryTalk Linx server reads from or writes to the controller's tags. This allows a FactoryTalk View application to communicate with a controller.

Prerequisites

- The FactoryTalk Linx server must own all communication modules along the path to the target controller.

To add a shortcut

1. In **Hardware Diagram**, locate the controller to use in the FactoryTalk View application.
2. Drag the controller on top of the computer that hosts the FactoryTalk Linx server.
3. In **Add New or Modify Existing Shortcut**, set the shortcut settings, then select **OK**:
 - **Shortcut name:** Enter a new shortcut name or select an existing shortcut from the list. Selecting an existing shortcut overwrites it.
 - **Offline tag file:** Enter a path to an offline tag file
 - **Enable Alarms and Events:** Enable or disable Alarms and Events support on the shortcut. Only enable if alarms and events are defined in the controller and the FactoryTalk View application responds to those alarms or events.
4. Commit the hardware diagram to save the controller configurations to the FactoryTalk View applications.

Communications shows the path of each shortcut from the FactoryTalk Linx server to the controller.

See also

[About shortcuts](#) on [page 81](#)

[Add New or Modify Existing Shortcut](#) on [page 93](#)

[Communications](#) on [page 93](#)

[Add an RSLinx Enterprise Server Project](#) on [page 56](#)

Add a produced and consumed tag

Add produced and consumed tags to allow a consumer controller to read and write values in a producer controller.

Prerequisites

- Add a producer/consumer relationship between two controllers.
- In the **View** menu, verify **Produce/Consume Tags** is checked.

To add a produced and consumed tag

1. In **Produce/Consume Tags**, select **Add**.
2. In **Consumer Tag**, select a consumer controller and a name for the tag.
3. Select **Connection**.
4. In **Producer Tag**, select a producer controller.
5. (optional) In **Producer Tag**, configure the tag options:
 - **External Access:** Select the type of access for external controllers: Read/Write, Read Only, or None.
 - **RPI:** Enter a requested packet interval in milliseconds. The producer controller updates the tag once per interval.
 - **Allow Unicast Consumer Connection:** Select whether the tag is broadcast using a one-to-one consumer connection.
6. Select **OK**.
7. In **Consumer Tag**, configure the remaining tag options:
 - **Data Type:** Select a data type for the tags.
 - **External Access:** Select the type of access for external controllers: Read/Write, Read Only, or None.
 - **Array Dimensions:** Select the number of dimensions. Only available for array-like data types.
 - **Use Unicast Connection over EtherNet/IP:** Select whether the tag is consumed using a one-to-one consumer connection.
8. Select **OK**.

9. Commit the hardware diagram to save the tags to the Logix Designer projects.

See also

[Produce/Consume Tags](#) on [page 90](#)

[Consumer Tag](#) on [page 91](#)

[Producer Tag](#) on [page 91](#)

Add a point tag

A point tag, also known as an I/O alias, allows referencing the point tag instead of the I/O point in your controller programs. This is useful shorthand for controllers with many inputs and outputs.

If the **Create alias tags automatically when Point Tag is defined** setting in Studio 5000 Architect options is enabled, adding a point tag automatically adds controller scope alias tags in each owning controller's project. If the setting is disabled, corresponding alias tags are not added.

Prerequisites

- Verify the I/O module is owned by at least one controller.
- In the **View** menu, verify **I/O Aliases** is checked.

To add a point tag

1. In **Hardware Diagram**, select an I/O module.
2. In **I/O Aliases**, click in the **Point Tag** column for an I/O point.
3. Enter a name for the point tag, then select **Enter**.
4. Commit the hardware diagram to save the tags to the Logix Designer projects.

See also

[I/O Aliases](#) on [page 92](#)

Add an axis tag

An axis tag allows a controller project to reference a specific axis of motion on a Kinetix 5500 servo drive. Create the tag in either Studio 5000 Architect or Logix Designer software. The tag is committed and updated as part of a Logix Designer project.

To add an axis tag

1. Drag the Kinetix 5500 servo drive on top of a controller to create an ownership relationship.
2. In **Kinetix 5500 Servo Drives Configuration**, set the keying settings.
3. Select the **Associated Axes** tab.
4. In **Axis Name**, enter the name for the axis tag.
5. (optional) In **Motion Group**, enter or select a motion group to contain the axis tag.
6. Select **OK**.
7. Commit the hardware diagram to save the tag to the Logix Designer project.

Studio 5000 Architect displays the new axis tag and motion group in **Project Explorer** under the controller project's **Motion Groups** folder.

See also

[Add an ownership relationship](#) on [page 83](#)

[Kinetix 5500 Servo Drives Configuration](#) on [page 46](#)

Edit a produced and consumed tag

Edit a produced and consumed tag to change its name, description, data type, access options, or RPI.

To edit a produced and consumed tag

1. In **Produce/Consume Tags**, locate and select the tag to edit.
2. Select **Edit**.
3. In **Consumer Tag**, edit the name, description, data type, or access options.
4. (optional) Select **Connection** to open **Producer Tag** to edit the RPI, then select **OK**.
5. Select **OK**.

See also

[Produce/Consume Tags](#) on [page 90](#)

[Consumer Tag](#) on [page 91](#)

[Producer Tag](#) on [page 91](#)

Edit a shortcut

Edit a shortcut to change its name or offline tag file.

To edit a shortcut

1. In **Project Explorer**, expand the **Projects** folder and hardware diagram containing the FactoryTalk View application.
2. Expand the FactoryTalk View project containing the FactoryTalk Linx server to modify.
3. Right-click the FactoryTalk Linx server, then select **Properties**.
4. In **Properties**, select **Shortcuts**.
5. Select the arrows next to the shortcut to edit.
6. Change the name or controller tag file.
7. Select **OK**.

See also

[About shortcuts](#) on [page 81](#)

Common module configuration errors

When adding an ownership relationship between an Add-On Profile (AOP) module and a controller, Studio 5000 Architect software checks the validity of the relationship against Logix Designer relationship rules. If the relationship is invalid, Studio 5000 Architect software displays an error message.

Common error messages include:

Error Message	Resolution
Child module incompatible with parent module.	Verify module properties in Logix Designer.
Network size exceeds the allowable size for a network.	Remove EtherNet devices from the network.
Child will not work under the specified parent port.	Add the ownership relationship with the controller using a compatible port.
Catalog Services could not be found. This could indicate the Catalog Services is not installed.	Verify Logix Designer and Catalog Services are installed properly.
The maximum number of Ethernet nodes for this controller type has been exceeded.	Remove Ethernet devices from the I/O configuration of the controller.
The module does not allow disabled electronic keying when safety connections are present.	Enable Electronic Keying in module properties or remove the safety connections.
Module is not initialized. Likely cause is the module identity (CIP Key) or the module parent is not set.	Remove Powerflex 523 or 525 AC drive devices from the drive configuration of the controller.

See also

[About ownership relationships](#) on [page 77](#)

[Add an ownership relationship](#) on [page 83](#)

Ethernet node limitations

Any Ethernet/IP device that is owned by or added to the I/O configuration of a controller is counted towards the node limits of the controller. ControlLogix and CompactLogix controllers count all devices connected to local and remote Ethernet ports.

The maximum number of connected Ethernet nodes varies by controller. Use the **Capacity** tab in the Logix Designer software to determine limits for a controller.

Examples of devices counted as Ethernet nodes when added to the I/O Configuration tree are:

- Remote communication adapter
- I/O modules connected to the EtherNet/IP network
- Motion devices, such as drives
- Remote controllers
- HMI devices that are included in the I/O Configuration tree, for example, PanelView Plus terminals
- Linking devices, such as the 1788-EN2DNR
- Third-party devices that are directly connected to the EtherNet/IP network

The local Ethernet modules and embedded Ethernet ports are not included in the count.

See also

[Add an ownership relationship](#) on [page 83](#)

Configure Module

How do I open Configure Module?

If adding an ownership relationship:

1. In **Hardware Diagram**, locate the module that will be owned by the controller or RSLinx server.
2. Drag the module on top of the controller or RSLinx server that will own it.

If adding a producer/consumer relationship

1. In **Hardware Diagram**, locate the controller that will produce tags for the consumer controller.
2. Drag the producer controller on top of the consumer controller.

Use **Configure Module** to set keying and connection settings for a module or producer controller. Use these settings to create an ownership relationship or a producer/consumer relationship. Edit these settings using the **Edit Device Properties Module Configuration** tab.

Settings that do not apply to a module or controller are hidden.

Setting	Description
Type	Specifies the type of the module.

Setting	Description
Vendor	Shows the vendor information of the module.
Parent	Shows the name of the parent module. If the module is in the local chassis, displays Local .
Name	Shows the name of the module.
Description	Specifies the description for the module.
Comm Format	Specifies the format of the module (input or output).
Slot	Shows the slot in the chassis where the module exists.
Electronic Keying	Specifies the electronic keying protection mode to prevent a module from being inserted in the wrong slot. • Exact Match. Requires all attributes of the physical module and the module created in the software to match. • Compatible Module Keying. Accepts or rejects the connection based on firmware compatibility. • Disable Keying. Requires no attributes of the physical module and the module configured in the software to match. Modifying the Electronic Keying option may cause the module connection to break or result in a loss of data, or both. If used incorrectly, this option can lead to personal injury or death, property damage or economic loss.
Revision	Specifies the major (primary) and minor (secondary) firmware version of the module.
Node	Specifies the node on the module trunk where the module exists. This option is only available for ControlNet modules that you are associating with a controller.
Address / Host Name	Specifies the configuration for the switch. These settings are available for managed Ethernet switches. There are three options: • Private Network: Select the value from the list, from 1 to 254. • IP Address: Enter a unique IP address to identify each node on the IP network. • Host Name: Enter a fully qualified domain name, such as switch.yourcompany.com.

See also

[Add an ownership relationship](#) on [page 83](#)

[Add a producer/consumer relationship](#) on [page 83](#)

Produce/Consume Tags

How do I open Produce/Consume Tags?

- From the **View** menu, check **Produce/Consume Tags**.

Use **Produce/Consume Tags** to add, edit, and remove produced and consumed tags from controller projects.

Produce/Consume Tags - Hardware Diagram 01							
	Consumer Controller	Consumer Tag	Data Type -	Producer Controller	Producer Tag	RPI (ms)	Class
▶	Consumer1	Producer1_Status	DINT	Producer1	Producer1_Status	20	
	Consumer1	Producer2_Status	DINT	Producer1	Producer2_Status	20	
	Consumer1	Producer3_Status	DINT	Producer1	Producer3_Status	20	
*							
Add Edit Remove							
Output Produce/Consume Tags - Hardware Diagram 01 Find Results I/O Aliases							

The columns in **Produce/Consume Tags** are:

Column	Description
Consumer Controller	The name of the consumer controller.
Consumer Tag	The name of the consumed tag in the consumer controller project.
Data Type	The data type of the tag, such as BOOL or DINT.
Producer Controller	The name of the producer controller.
Producer Tag	The name of the produced tag in the producer controller project.

Column	Description
RPI	The requested packet interval (RPI) of the tag. The producing controller updates the tag once per interval. The default interval is 20ms.
Class	The class of the tag, either Standard or Safety. Only available for safety controllers, such as a 1756-L61S.

See also

[Add a produced and consumed tag](#) on [page 85](#)

[Edit a produced and consumed tag](#) on [page 87](#)

Consumer Tag

How do I open Consumer Tag?

- In **Produce/Consume Tags**, click **Add** or **Edit**.

Use **Consumer Tag** to add or edit a consumer tag.

The **Consumer Tag** settings are:

Setting	Description
Controller	The controller that consumes the tag.
Tag Name	The tag name used in both the producer and consumer controller.
Description	The description of the tag. Cannot be longer than 120 characters.
Data Type	The data type of the tag, such as BOOL or DINT. For safety class producer/consumer tags, the user defined data type must be defined in Logix Designer and the data type of the first element must be CONNECTION STATUS .
Class	The class of the tag, either Safety or Standard. Only available for safety controllers, such as a 1756-L61S.
External Access	The level of access that external applications and devices have to the tag. • Read/Write: External applications and devices can both read and change the tag's value. • Read Only: External applications and devices can only read the value of the tag. • None: External applications and devices cannot read or change the tag's value.
Array Dimensions	Sets the number of dimensions for the tag. The default is 0
Use Unicast Connection over EtherNet/IP	Sets whether or not the tag is consumed using a unicast connection. This setting is only available if the connection between the producer and the consumer is over EtherNet/IP.

See also

[Add a produced and consumed tag](#) on [page 85](#)

[Edit a produced and consumed tag](#) on [page 87](#)

[Producer Tag](#) on [page 91](#)

Producer Tag

How do I open Producer Tag?

1. In **Produce/Consume Tags**, click **Add** or **Edit**.
2. In **Consumer Tag**, click **Connection**.

Use **Producer Tag** to add or edit a producer tag.

The **Producer Tag** settings are:

Setting	Description
Controller	The controller that produces the tag.
Tag Name	The tag name used in both the producer and consumer controller.
Description	The description of the tag. 120 character maximum.
Class	The class of the tag, either Safety or Standard. Only available for safety controllers, such as a 1756-L61S.
External Access	The level of access that external applications and devices have to the tag. • Read/Write: External applications and devices can both read and change the tag's value. • Read Only: External applications and devices can only read the value of the tag. • None: External applications and devices cannot read or change the tag's value.
RPI	The requested packet interval (RPI) of the tag. The producing controller updates the tag once per interval. The default interval is 20ms.
Allow Unicast Consumer Connections	Sets whether or not the tag is provided using a unicast connection to the consumer controller. This setting is only available if the connection between the producer and the consumer is over EtherNet/IP.

See also

[Add a produced and consumed tag](#) on [page 85](#)

[Edit a produced and consumed tag](#) on [page 87](#)

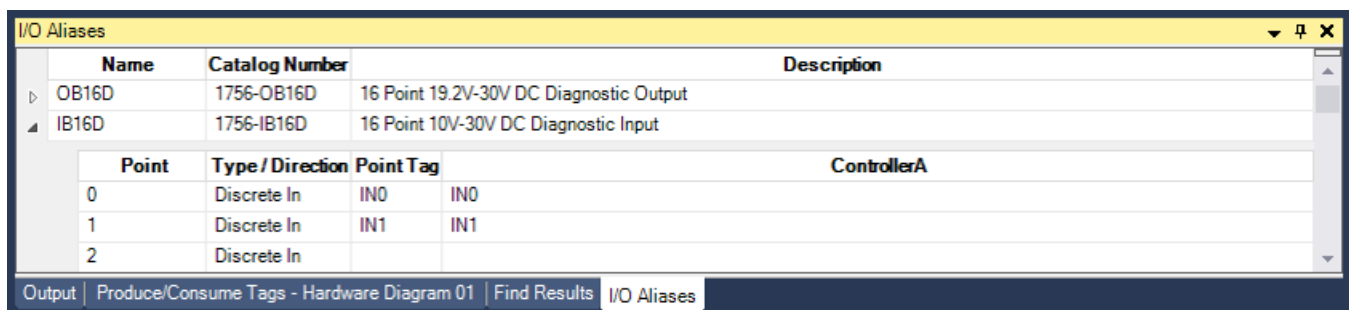
[Consumer Tag](#) on [page 91](#)

I/O Aliases

How do I open I/O Aliases?

- From the **View** menu, check **I/O Aliases**.

Use **I/O Aliases** to add, edit, and remove point tags. I/O Aliases shows each I/O module owned by a selected controller and lists the I/O points, direction, and created point tags of the module. Cannot create or edit tags for an I/O module unless the module is owned by at least one controller.



Name	Catalog Number	Description
OB16D	1756-OB16D	16 Point 19.2V-30V DC Diagnostic Output
IB16D	1756-IB16D	16 Point 10V-30V DC Diagnostic Input

Point	Type / Direction	Point Tag	ControllerA
0	Discrete In	IN0	IN0
1	Discrete In	IN1	IN1
2	Discrete In		

The I/O Aliases columns are:

Column	Description
Name	The name of the module.
Catalog Number	The catalog number of the module.
Description	The description of the module.

Column	Description
Point	The number of the physical input or output point on the module.
Type/Direction	The type of input or output, as defined by the module.
Point Tag	The point tag as defined for the module.
InputController	Shows the alias tag as defined in each owner controller's project. If multiple controllers own the module, multiple columns are shown.

See also

[Add a point tag](#) on [page 86](#)

[Add an ownership relationship](#) on [page 83](#)

Communications

How do I open Communications?

- From the **View** menu, check **Communications**.

Use **Communications** to view and edit shortcut paths for FactoryTalk View applications that have FactoryTalk Linx servers.

See also

[Add a shortcut](#) on [page 84](#)

Add New or Modify Existing Shortcut

How do I open Add New or Modify Existing Shortcut?

1. In **Hardware Diagram**, locate the controller that will be used in the FactoryTalk View project.
2. Drag the controller on top of the computer that hosts the RSLinx server.

Use **Add New or Modify Existing Shortcut** to set a name and offline tag file for a new or existing shortcut. Change these settings after the shortcut is created using the **Properties Shortcuts** tab when editing a FactoryTalk Linx server.

See also

[Add a shortcut](#) on [page 84](#)

[Edit a shortcut](#) on [page 87](#)

Customize a hardware diagram

Add graphics, files, text boxes, shapes, and links to display additional information or reference material about the project. Graphics, files, text boxes, shapes and links appear in **Hardware Diagram**.

See also

[Add a graphic](#) on [page 95](#)

[Add a file](#) on [page 95](#)

[Add a text box](#) on [page 96](#)

[Add a shape](#) on [page 96](#)

[Add a link](#) on [page 97](#)

Add a graphic

Add a graphic in **Hardware Diagram** to display information related to the network design. Studio 5000 Architect software provides a set of sample device images, located at **C:\Users\Public\Documents\Studio 5000\Samples\Architect\Graphics**.

To add a graphic:

1. Select **Edit > Add Graphic**.
2. In **Add Graphic**, type the path to the file or select **Browse** to select an image file, then select **OK**.

See also

[Supported graphic formats](#) on [page 97](#)

[Add a file](#) on [page 95](#)

Add a file

Add any file to **Hardware Diagram** to accompany the project. Add any file type. Commonly added files are configuration and documentation. Added files are copied into the project folder and appear in **Hardware Diagram** as images.

To add a file:

1. Select **Edit > Add File**.
2. In **Add File**, configure the image and file settings:
 - **Image file name:** Enter the path to the file or select **Browse** to select an image file.
 - **File name:** Enter the path to the file or select browse to select the file.
3. Select **OK**. Studio 5000 Architect software adds the file to the project and the file appears in **Hardware Diagram** as the selected image.

See also

[Add a graphic](#) on [page 95](#)

[Supported graphic formats](#) on [page 97](#)

Add a text box

Add text boxes in **Hardware Diagram** to label components.

To add text:

1. From the **Drawing** toolbar, select the **Text Tool**.
2. Click in **Hardware Diagram** to set the position or select and drag to set both the position and size.
3. In **Text Box Properties**, configure the text settings:
 - In the space provided, type the text.
 - (optional) Select the text properties, such as bold, italic, underline, strikethrough, color, font
 - (optional) Choose a border for the text box and specify the options for the border style.
4. Select **OK**. The text appears in **Hardware Diagram**.

See also

[Text Box Properties](#) on [page 97](#)

Add a shape

Add shapes in **Hardware Diagram** to label and group components.

To add shapes:

1. From the **Drawing** toolbar, select the appropriate tool:
 - **Line Tool**
 - **Rectangle Tool**
 - **Circle Tool**

2. Drag in **Hardware Diagram** to set the position and size.

See also

[Element Properties](#) on [page 98](#)

Add a link

Add a web link in **Hardware Diagram** to refer to a web page or document containing more information about the network design. Web links are represented in **Hardware Diagram** using text and an optional image.

To add a link:

1. Select **Edit > Add Web Link**.
2. In **Add Web Link**, configure these settings:
 - **Text:** Enter the text to display in the hardware diagram.
 - (optional) **Image:** Enter the path to the file or select **Browse** to select an image file.
 - **URL:** Enter the URL to the content.
3. Select **OK**. Studio 5000 Architect software displays the link in **Hardware Diagram**.

See also

[Supported graphic formats](#) on [page 97](#)

Text Box Properties

How do I open Text Box Properties?

- If you are adding a text box, click the  **Text Tool**, then click in **Hardware Diagram** to set the position or drag across the hardware diagram to set both the position and size.
- If you are editing a text box, right-click the text box and select **Properties**.

Use **Text Box Properties** to add or edit a text box in a Studio 5000 Architect project. Change the text, font, size, color, effects, and borders of a text box.

See also

[Add a text box](#) on [page 96](#)

Supported graphic formats

Studio 5000 Architect software supports these graphic formats:

- Bitmap (BMP)
- Device-independent bitmap (DIB)
- Graphics interchange format (GIF)
- Joint Photographic Experts Group (JPEG)

- Portable Network Graphics (PNG)
- Icon (ICO)

See also

[Add a graphic](#) on [page 95](#)

[Add a file](#) on [page 95](#)

[Add a link](#) on [page 97](#)

Element Properties

How do I open Element Properties?

- In **Hardware Diagram**, right-click on a rectangle, circle, or line, then click **Properties**.

Use **Element Properties** to set border and fill options for a rectangle, circle, or line.

See also

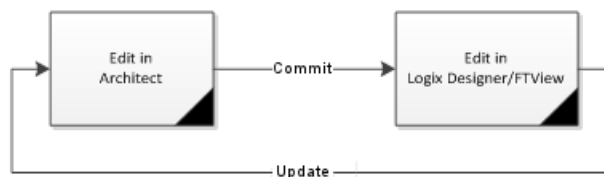
[Add a shape](#) on [page 96](#)

Commit and update hardware diagrams

Committing a hardware diagram pushes all changes made to software components in Studio 5000 Architect into the associated Logix Designer and FactoryTalk View project files. Any differences in the project files, including AOIs and UDTs, are overwritten. Studio 5000 Architect creates a new project file if it does not exist.

Updating a hardware diagram pulls all changes made in associated Logix Designer or FactoryTalk View project files into Studio 5000 Architect software components. Updating with an online controller applies changes in the controller project to Studio 5000 Architect software components. Any differences in the Studio 5000 Architect components, including Add-On Instructions (AOIs) and User Defined Types (UDTs), are overwritten.

To avoid accidentally overwriting project and application changes, commit changes from Studio 5000 Architect before editing in Logix Designer or FactoryTalk View Studio. Similarly, update changes from Logix Designer or FactoryTalk View Studio before editing in Studio 5000 Architect.



See also

[Commit a hardware diagram](#) on [page 99](#)

[Update a hardware diagram](#) on [page 100](#)

[Update a hardware diagram with an online controller](#) on [page 101](#)

[Commit a single project](#) on [page 102](#)

[Update a single project](#) on [page 103](#)

Commit a hardware diagram

Committing a hardware diagram pushes all changes made to software components in Studio 5000 Architect software into the associated Logix Designer and FactoryTalk View application files. Committing overwrites any differences in the project files. Studio 5000 Architect software creates new project files if they do not exist. Commit each hardware diagram separately.

To avoid accidentally overwriting project and application changes, commit changes from Studio 5000 Architect software before editing in Logix Designer or FactoryTalk View Studio software.

Important: If a FactoryTalk View application has a shortcut that is not in the Studio 5000 Architect project, the commit does not remove the shortcut from the FactoryTalk View application.

To commit a hardware diagram

1. In **Project Explorer**, expand the **Devices** folder, then select a hardware diagram.
2. From the **Sync** menu, select **Commit Diagram Changes**.
3. In **Commit Summary**, review the changes to the Logix Designer or FactoryTalk View applications, then select **OK**.
4. When Studio 5000 Architect software finishes committing the hardware diagram, in **Committing Projects**, select **Close**. The results appear in **Output**.

See also

[Output](#) on [page 103](#)

[Errors during commit and update](#) on [page 106](#)

Update a hardware diagram

Updating a hardware diagram applies all changes made in associated Logix Designer or FactoryTalk View application files to Studio 5000 Architect software components. Any differences in the Studio 5000 Architect components are overwritten. Update each hardware diagram separately.

If a Logix Designer project or FactoryTalk View application contains a module that is not supported, Studio 5000 Architect software adds an unsupported module image in the appropriate chassis, DIN rail, or slot. If a module is unnamed, Studio 5000 Architect software automatically generates a module name based on the catalog number of the module.

To avoid accidentally overwriting project and application changes, update changes from Logix Designer or FactoryTalk View Studio software before editing in Studio 5000 Architect software.

To update a hardware diagram

1. In **Project Explorer**, expand the **Devices** folder, then select a hardware diagram.
2. From the **Sync** menu, select **Update Diagram Changes**.
3. (optional) If **Ethernet Configuration** appears, configure the Ethernet connections, then select **OK**.

4. In **Update Summary**, review the changes to the hardware diagram, then select **OK**.
5. (optional) If **Validate Results for PointTag update** appears, review changes to point tags, then select **OK**.

The results of the update show in **Output**.

See also

[Output](#) on [page 103](#)

[About unsupported modules](#) on [page 45](#)

[Errors during commit and update](#) on [page 106](#)

Update a hardware diagram with an online controller

Updating with an online controller applies changes from the controller project into Studio 5000 Architect software components. Any differences in the Studio 5000 Architect components are overwritten. Update each hardware diagram separately.

If the controller project contains a module that is not supported, Studio 5000 Architect software adds an unsupported module image in the appropriate chassis, DIN rail, or slot. If a module is unnamed, Studio 5000 Architect software automatically generates a module name based on the module's catalog number.

To avoid accidentally overwriting project and application changes, update changes from Logix Designer or FactoryTalk View Studio software before editing in Studio 5000 Architect software.

To update a hardware diagram with an online controller

1. In **Project Explorer**, expand the **Devices** folder, then select a hardware diagram.
2. From the **Sync** menu, select **Update Changes from Online Controller**.
3. In **Select Online Controller to Update**, browse the network and select the controller to import into the hardware diagram.
4. (optional) To update the online controller to a project other than the one associated with the existing controller component, select **Use external controller configuration file**.
5. Click **Select**.
6. (optional) If **Use external controller configuration file** is selected, **Choose Matching Controller Configuration File** appears. Perform one of these steps:
 - To update to a new project file, select **Create New**.
 - To update to a project file in the list, select the file, then **Select**.

- To update to a different project file, select **Browse**, then add the file to the list. Once Studio 5000 Architect software verifies the validity of the file, click **Select**.
- 7. (optional) If updating with a 1769 controller, in **Bank Configuration**, change the configuration to match the physical controller, then select **OK**.
- 8. In **Update Summary**, review the changes to the hardware diagram, then select **OK**.
- 9. (optional) If **Validate Results for PointTag update** appears, review changes to point tags, then select **OK**.

The results of the update show in **Output**.

See also

[Update a hardware diagram](#) on [page 100](#)

[Select Online Controller to Update](#) on [page 104](#)

[Choose Matching Controller Configuration File](#) on [page 68](#)

[Errors during commit and update](#) on [page 106](#)

Commit a single project

Commit a single project to apply all changes made in the Studio 5000 Architect project to the associated Logix Designer project or FactoryTalk View application file. Any differences in the project file are overwritten. Studio 5000 Architect creates a new project file if one does not exist.

To avoid accidentally overwriting project and application changes, commit changes from Studio 5000 Architect software before editing in Logix Designer or FactoryTalk View Studio software.

Important: If a FactoryTalk View application has a shortcut that is not in the Studio 5000 Architect project, the commit does not remove the shortcut from the FactoryTalk View application.

To commit a single project

1. In **Project Explorer**, expand the **Projects** folder
2. (optional) If **Arrange Projects by Hardware Diagram** is enabled, expand the hardware diagram containing the project.
3. In **Project Explorer**, select a project.
4. From the **Sync** menu, select **Commit Project Changes**.
5. In **Commit Summary**, review the changes to the Logix Designer project or FactoryTalk View application, then select **OK**.
6. When Studio 5000 Architect software finishes committing the project, in **Committing Projects** select **Close**. The results display in **Output**.

See also

[Output](#) on [page 103](#)

[Errors during commit and update](#) on [page 106](#)

Update a single project

Update a project to apply all changes made in its associated Logix Designer project or FactoryTalk View application file to the Studio 5000 Architect project. Any differences in the Studio 5000 Architect project are overwritten.

If a Logix Designer project or FactoryTalk View application contains a module that is not supported, Studio 5000 Architect software adds an unsupported module image in the appropriate chassis, DIN rail, or slot. If a module is unnamed, Studio 5000 Architect software automatically generates a module name based on the module's catalog number.

To avoid accidentally overwriting project and application changes, update changes from Logix Designer or FactoryTalk View Studio software before editing in Studio 5000 Architect software.

To update a single project

1. In **Project Explorer**, expand the **Projects** folder.
2. (optional) If **Arrange Projects by Hardware Diagram** is enabled, expand the hardware diagram containing the project.
3. In **Project Explorer**, select a project.
4. From the **Sync** menu, select **Update Project Changes**.
5. (optional) If **Ethernet Configuration** appears, configure the Ethernet connections, then select **OK**.
6. In **Update Summary**, review the changes to the hardware diagram, then select **OK**.
7. (optional) If **Validate Results for PointTag update** appears, review changes to point tags, then select **OK**.

The results of the update show in **Output**.

See also

[Output](#) on [page 103](#)

[About unsupported modules](#) on [page 45](#)

[Errors during commit and update](#) on [page 106](#)

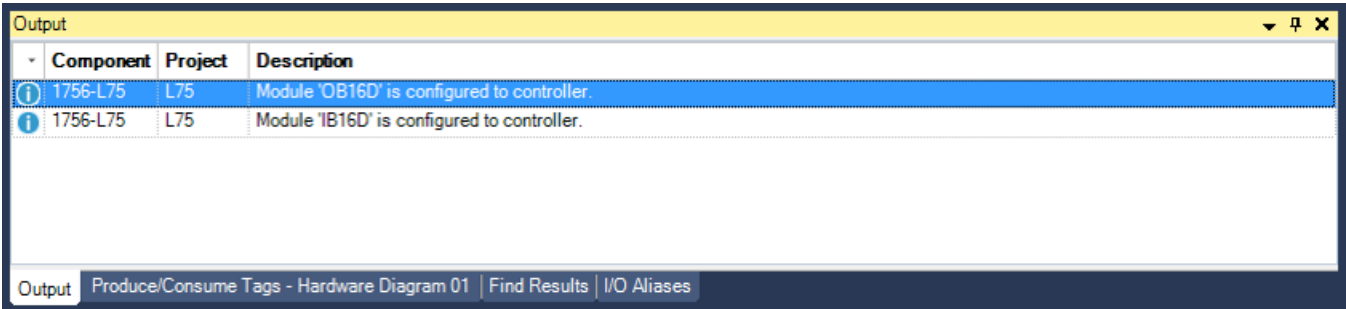
Output

How do I open Output?

- From the **View** menu, click **Output**.

Use **Output** to view error, warning, and informational messages about a Studio 5000 Architect project. By default, messages are sorted by time, with

the newest message at the bottom of the list. Messages are cleared when the project is closed.



Column	Description
Severity	The type of message, including: • Error: An operation was canceled or could not continue. Resolve the error condition and repeat the operation to continue. • Warning: An operation completed, but may have significantly changed one or more components in the project. Review these components to ensure they function as expected. • Info: An operation completed successfully.
Time	The time the message occurred. Hidden by default.
Hardware Diagram	The hardware diagram associated with the message. Hidden by default.
Project	The Logix Designer project or FactoryTalk View application associated with the message.
Type	The model number of the hardware component associated with the message.
Message	The message description, explaining the operation status and severity.

See also

[Commit a hardware diagram](#) on [page 99](#)

[Update a hardware diagram](#) on [page 100](#)

Select Online Controller to Update

How do I open Select Online Controller to Update?

- In **Hardware Diagram**, right-click a controller, then click **Update With Online**.

Select Online Controller to Update lists controllers connected to the network. Select a controller to update settings from the online controller to settings in the Studio 5000 Architect project. Select **Auto Find** to automatically scan the network for a matching controller.

See also

[Update a hardware diagram with an online controller](#) on [page 101](#)

[Auto Find Matching Controller](#) on [page 105](#)

Auto Find Matching Controller

How do I open Auto Find Matching Controller?

1. In **Hardware Diagram**, right-click a controller, then click **Update With Online**.
2. In **Select Online Controller to Update**, click **Auto Find...**

Use **Auto Find Matching Controller** when importing or updating a project to scan the network for a matching controller.

See also

[Update a hardware diagram with an online controller](#) on [page 101](#)

[Select Online Controller to Update](#) on [page 104](#)

Choose Matching Controller Configuration File

How do I open Choose Matching Controller Configuration File?

If you are importing a controller from an online controller

1. Select **Hardware Diagrams > Import from Online Controller...**
2. In **Select Online Controller to Import**, browse the network, select the controller to import into the project, then click **Select**.

If you are updating a hardware diagram with an online controller

- Select **Use external controller configuration file** in **Select Online Controller to Update**.

Choose Matching Controller Configuration lists existing project files that are compatible with the controller you are importing. The selected controller project and its documentation are added to the Studio 5000 Architect project.

- To import or update to a new project file, select **Create New**.
- To import or update to a project file in the list, select the file, then select **Select**.
- To import or update to a different project file, select **Browse**, then add the file to the list. Once Studio 5000 Architect software verifies the validity of the file, select **Select**.

See also

[Import a controller project from an online controller](#) on [page 66](#)

[Update a hardware diagram with an online controller](#) on [page 101](#)

[Select Online Controller to Import](#) on [page 67](#)

Errors during commit and update

Duplication, configuration, permission, communication, and license errors may occur when committing or updating a Studio 5000 Architect project. These errors either cancel the action or continue with limited functionality. They are not displayed in **Commit Summary** or **Update Summary**.

Error Message	Resolution
Unable to commit a duplicated node <object> with name <name>.	Remove the duplicated node from the target project.
HMI <name> is unable to be created for it already exists.	Remove the duplicated HMI server from the target project.
Project <name> contains invalid configuration data. Verify the project properties, then try again.	Remove the invalid device configuration from the target project.
User does not have permissions <permission> for <scope>.	Verify the permissions of the user are set correctly in FactoryTalk Security.
User does not have permission to read or list children for <scope>.	Verify the permissions of the user are set correctly in FactoryTalk Security.
User does not have permission to read/write or list children for <scope>.	Verify the permissions of the user are set correctly in FactoryTalk Security.
User does not have permission to delete <object>	Verify the permissions of the user are set correctly in FactoryTalk Security.
User does not have permission to create <object>	Verify the permissions of the user are set correctly in FactoryTalk Security.
User does not have permission to read <object>	Verify the permissions of the user are set correctly in FactoryTalk Security.
User does not have permission to write <object>, all children under it will not be created.	Verify the permissions of the user are set correctly in FactoryTalk Security.
<Scope> scope is in Read-only mode, for the FactoryTalk Directory server is not available.	Verify the FactoryTalk Directory is configured properly. If it is remotely hosted, ensure the server is online and can be reached on the network.
Component added event could not be fired properly, for it could not connect to FactoryTalk Event subsystem.	Verify FactoryTalk View is installed and configured correctly.
Failed to open HMI <name>.	Verify the path to the FactoryTalk View application is correct and the file is not corrupt.
The HMI server is offline.	Verify the <HMI> server is online can be reached on the network.
Unable to add the display to the application. The application already contains the PanelView Plus 7 Standard or Compact Machine Edition maximum displays.	Reduce the number of displays in the FactoryTalk View application.
Unable to add the display to the application. The application already contains the maximum displays the license allowed.	Reduce the number of displays in the FactoryTalk View application.
Unable to commit or upload HMI server. The maximum number of HMI servers allowed to load on a single computer has been reached.	Reduce the number of HMI servers configured to run on the computer.
Unable to set the application to compact version because the PanelView Plus 7 Standard or Compact Machine Edition display limits have been exceeded.	Reduce the number of displays in the FactoryTalk View application.
HMI <name> is not licensed to allow remote connections.	Remove remote connections in the FactoryTalk View application.
HMI <name> is not licensed and could not be opened.	Change the FactoryTalk View license or remove the HMI server from the application.
Unknown error. Controller <name> requires a different Logix Designer version 21 to be installed.	This occurs when you attempt to configure, commit, update, or open a project in Logix Designer. Update Logix Designer to at least version 21.03.
Controller project requires RSLogix 5000 version 0 to be installed.	This occurs when you attempt to add a controller project. Update Logix Designer to at least version 21.03

See also

[Commit a hardware diagram](#) on [page 99](#)

[Update a hardware diagram](#) on [page 100](#)

[FactoryTalk View commit validation rules](#) on [page 107](#)

[Shortcut commit validation rules](#) on [page 107](#)

FactoryTalk View commit validation rules

Studio 5000 Architect software validates each component of FactoryTalk View applications before committing to ensure compatibility with FactoryTalk View.

Scenario	FactoryTalk View Compatibility	Result
Display or global object has a higher version than the FactoryTalk View application.	Incompatible	Commit cancels. Error appears in Commit Summary .
Display or global object has a lower version than the FactoryTalk View application.	Compatible	Commit succeeds. FactoryTalk View upgrades the display or global object when opened in FactoryTalk View Studio software.
FactoryTalk View ME display or global object added to FactoryTalk View SE application.	Compatible	Commit succeeds. FactoryTalk View converts the display or global object when opened in FactoryTalk View Studio software.
FactoryTalk View SE display or global object added to FactoryTalk View ME application.	Incompatible	Commit cancels. Error appears in Commit Summary .
FactoryTalk View ME macro added to FactoryTalk View SE application.	Incompatible	Commit cancels. Error appears in Commit Summary .
FactoryTalk View SE macro added to FactoryTalk View ME application.	Incompatible	Commit cancels. Error appears in Commit Summary .

See also

[Errors during commit and update](#) on [page 106](#)

Shortcut commit validation rules

Studio 5000 Architect software validates shortcuts before committing to ensure compatibility with the FactoryTalk Linx server.

Scenario	FactoryTalk Linx Compatibility	Result
Shortcut in Studio 5000 Architect software points to communication module and controller that match FactoryTalk Linx server device tree.	Compatible	Commit succeeds.
Shortcut in Studio 5000 Architect software points to IP address not used by any device in FactoryTalk Linx server device tree.	Compatible	Commit succeeds. Communication module and controller added to FactoryTalk Linx server device tree.
Shortcut in Studio 5000 Architect software points to a controller with a different catalog number than the controller in the FactoryTalk Linx server device tree.	Incompatible	Commit succeeds. The path is removed from the shortcut. Studio 5000 Architect software displays a warning in Commit Summary .

See also

[Errors during commit and update](#) on [page 106](#)

Create and use libraries

A library is a list of components from Logix Designer, FactoryTalk View, and other Rockwell Automation® products. Libraries are independent from Studio 5000 Architect and configured separately. Use libraries to add components to a Studio 5000 Architect project or export and import libraries to transfer groups of components to another computer.

Library components are add-on instruction (AOI), user defined tag (UDT), FactoryTalk View components, or hardware definitions exported from Logix Designer as .l5x XML files. Libraries have a .lal file extension and are an archive of the individual .l5x files, each containing the definitions of each component and any referenced AOIs and UDTs. The .lal file name matches the name defined for the library.

This table identifies the types of supported library components:

Logix Designer	FactoryTalk View SE	FactoryTalk View ME	Other
AOI	Displays	Displays	PDF
UDT	Global Objects	Global Objects	
	Macros	Macros	
	Images	Images	
		Tag list	

See also

[Create a new library](#) on [page 109](#)

[Import a library](#) on [page 110](#)

[Delete a library](#) on [page 111](#)

Create a new library

Libraries contain the components used in designing an automation system. Create custom libraries for organizing groups of components. Libraries are not specific to Studio 5000 Architect projects.

To create a new library

1. From the Studio 5000 Architect menu, select **Library Management > New Library**.
2. In **Name**, type a unique library name.

3. (optional) In **Description**, type a phrase to describe the library contents.
4. (optional) In **Revision**, use the arrows to establish major and minor revisions for the library to support manual tracking of libraries over time.
5. (optional) In **Revision Note**, type a phrase that provides a revision specific description for the library.
6. Select **OK** to create new Studio 5000 Architect Library (.lal) file in the libraries directory (by default C:\Users\Public\Documents\Studio 5000\Libraries\Architect).

See also

[Add a component to a library](#) on [page 114](#)

[Toolbox](#) on [page 13](#)

Rename a library

Libraries contain the components used to design an automation system. Components refer to other components by component name and type only, not library location. Renaming a library does not require changes to the components in that library.

To rename a library

1. In **Toolbox**, right-click a library, then select **Rename**.
2. Type in a new name for the library, then select **Enter**.

See also

[Import a library](#) on [page 110](#)

[Toolbox](#) on [page 13](#)

Import a library

Libraries contain the components used to design an automation system. Libraries are not specific to Studio 5000 Architect projects and can be imported from Logix Designer, FactoryTalk View, PlantPAx®, and other Rockwell Automation products.

To import a library

1. From the Studio 5000 Architect menu select **Library Management > Import Library**.
2. In **Import Library**, navigate to and select one or more library files, then select **Open**.

The library (or libraries) are automatically shown in **Toolbox**. If a library of the same name already exists in **Toolbox**, Studio 5000 Architect software prompts to select a different library or import the library under a new name.

See also

[Add a component to a library](#) on [page 114](#)

[Toolbox](#) on [page 13](#)

Delete a library

Libraries contain the components used to design an automation system. If a custom library is no longer useful, it can be deleted. The **Default Hardware Libraries** cannot be deleted.

To delete a library

1. In **Toolbox**, right-click a library (or libraries), then select **Delete**.
2. In **Deletion Confirmation in Library Manager** select **OK**. The library archive file for each selected library, and all of its contents, is deleted from the libraries directory.

See also

[Create a new library](#) on [page 109](#)

[Import a library](#) on [page 110](#)

[Toolbox](#) on [page 13](#)

Export a library

Libraries contain the components used to design an automation system. Libraries are not specific to Studio 5000 Architect software and can be exported from Studio 5000 Architect for use in Logix Designer software, FactoryTalk View software, and other Rockwell Automation software products.

To export a library

1. From the Studio 5000 Architect menu select **Library Management > Export Library**.
2. In **Export Library**, navigate to and select the location to export the library file.
3. In **File Name** type the name for the library file.
4. Select **Save** to export the library.

If a library file of the same name already exists in the directory, Studio 5000 Architect software prompts to replace the file.

See also

[Add a component to a library](#) on [page 114](#)

Export part of a library

Libraries contain the components used to design an automation system. To export a subset of a library, such as a single folder of components, create a new library that contains just that subset and then export that library.

To export part of a library

1. From the Studio 5000 Architect menu select **Library Management > New Library**.
2. In **Name**, type a unique library name.
3. (optional) In **Description**, type a phrase to describe the contents of the library.
4. (optional) In **Revision**, use the arrows to establish major and minor revisions for the library.
5. (optional) In **Revision Note**, type a phrase that provides a revision specific description for the library.
6. Select **OK** to create the new Studio 5000 Architect Library file in the libraries directory (by default C:\Users\Public\Documents\Studio 5000\Libraries\Architect).
7. In **Toolbox**, right-click a component (or components), then select **Copy**.
8. In **Toolbox**, right-click on the target library or folder, then select **Paste**. Studio 5000 Architect verifies that components with the same name and type do not exist in the target folder or library.
9. Select **OK**. Studio 5000 Architect displays the component (or components) in the target library or folder. Repeat the copy and paste process as needed to copy the entire subset of components.
10. From the Studio 5000 Architect menu, select **Library Management > Export Library**.
11. In **Export Library**, navigate to and select the location to export the library file.
12. In **File Name**, type a unique name for the library file.
13. Select **Save** to export the library.

See also

[Create a new folder](#) on [page 112](#)

[Toolbox](#) on [page 13](#)

Create a new folder

Use folders to organize the components in a custom library. Folder names must not include \ / ? : * " > < or |.

Once created, copy, paste, and move the folders. Components can be imported directly into a folder.

To create a new folder

1. In **Toolbox**, right-click a custom library, then select **New Folder**. A folder is added to the tree with the default name *New Folder_1* selected.
2. Type in a name for the folder, then select **Enter**.

See also

[Rename a folder](#) on [page 113](#)

[Delete a folder](#) on [page 113](#)

[Import a component to a library](#) on [page 115](#)

[Toolbox](#) on [page 13](#)

Rename a folder

Use folders to organize the components in a custom library.

To rename a folder

1. In **Toolbox**, right-click a folder, then select **Rename**.
2. Type in a new name for the folder, then select **Enter**.

See also

[Create a new folder](#) on [page 112](#)

[Delete a folder](#) on [page 113](#)

[Toolbox](#) on [page 13](#)

Delete a folder

Use folders to organize the components in a custom library. If a folder is no longer useful, it can be deleted.

To delete a folder that contains components, delete each component from the folder first. After all components are deleted from the folder, delete the folder from the library.

To delete a folder

1. In **Toolbox**, right-click a folder then select **Delete**.
2. In **Delete Confirmation in Library Manager**, select **Yes**. The folder (or folders) are deleted from the **Toolbox**.

See also

[Delete a component](#) on [page 117](#)

[Rename a folder](#) on [page 113](#)

[Create a new folder](#) on [page 112](#)

[Toolbox](#) on [page 13](#)

Add a component to a library

A library component is a Logix Designer add-on instruction (AOI) or user defined tag (UDT), or a FactoryTalk View Studio display, graphic object, or image. When a component is added to the library, the export file is added to the archive file in the libraries directory.

Components with the same name but different types (for example, AOI or UDT) can exist in the same library or folder in the library. Components with the same name and type (for example, AOI) cannot exist in the same library.

Once a component is added to a library, the component can be copied or moved into another library.

To add a component to a library from Logix Designer or FactoryTalk View Studio

1. Start Logix Designer or FactoryTalk View Studio and open a project.
2. In the **Controller Organizer**, drag the selected component from Logix Designer or FactoryTalk View Studio software to a folder in the **Toolbox** in Studio 5000 Architect software. Studio 5000 Architect software adds the component to the selected library.

To add a component to a library from a project

1. Save the project in Logix Designer.
2. Start Studio 5000 Architect software and open a project.
3. From the main menu, select **Library Management > Add Component to Library**.
4. In **Add component to Library**, click to locate the component, then select **OK**. Studio 5000 Architect software displays the component in the selected library.

See also

[Rename a component](#) on [page 116](#)

[Delete a component](#) on [page 117](#)

Import a component to a library

Import previously exported components from Logix Designer into a selected library or folder. Multiple components can be imported in a single operation.

To import a component from a file

1. In **Toolbox**, right-click the folder or library, then select **Import Component**.
2. In **Import Component**, select one or more .l5x files to import, then select **Open**.

The **Toolbox** displays the imported component or components.

See also

[Copy library components from Studio 5000 Architect software to Logix Designer software](#) on [page 115](#)

[Copy library components from Studio 5000 Architect software to FactoryTalk View Studio software](#) on [page 116](#)

[Add a component to a library](#) on [page 114](#)

[Toolbox](#) on [page 13](#)

Copy library components from Studio 5000 Architect software to Logix Designer software

Add-on instruction (AOI) and user defined tag (UDT) objects in Studio 5000 Architect libraries are items that can be copied into Logix Designer projects. Any references within the AOI and UDT objects are automatically copied into the Logix Designer project.

When updating a Logix Designer project, if a reference in an AOI or UDT is missing from the Logix Designer project, the referenced objects must be copied to the project.

To copy library components from Studio 5000 Architect software to Logix Designer software

1. Open Studio 5000 Architect software.
2. Open the Logix Designer project.
3. In Studio 5000 Architect select **View > Toolbox**.
4. In **Toolbox**, drag an AOI to the **Add-On Instructions** folder or a UDT to the **Data Types > User-Defined** folder in the Logix Designer **Controller Organizer**.

See also

[Toolbox](#) on [page 13](#)

[Add a component to a library](#) on [page 114](#)

[Copy library components from Studio 5000 Architect software to FactoryTalk View Studio software](#) on [page 116](#)

Copy library components from Studio 5000 Architect software to FactoryTalk View Studio software

Displays, global objects, and images in Studio 5000 Architect libraries can be copied into FactoryTalk View SE or FactoryTalk View ME applications.

To copy library components from Studio 5000 Architect software to FactoryTalk View Studio software

1. Open Studio 5000 Architect software.
2. Open the FactoryTalk View application in FactoryTalk View Studio software.
3. In Studio 5000 Architect software, select **View > Toolbox**.
4. In **Toolbox**, drag a display, global object, macro, or an image into the FactoryTalk View Studio **Explorer**.

See also

[Toolbox](#) on [page 13](#)

[Add a component to a library](#) on [page 114](#)

[Copy library components from Studio 5000 Architect software to Logix Designer software](#) on [page 115](#)

Rename a component

A library component consists of a single Logix Designer export file. This export file may contain multiple AOIs or UDTs - if the export includes all referenced components. When a component is added to the library, the export file is added to the archive file in the libraries directory.

Components with the same name but different types (for example, AOI or UDT) can exist in the same library or folder in the library. Components with the same name and type (for example, AOI) cannot exist in the same library.

To rename a component

1. In **Toolbox**, right-click a component, then select **Rename**.
2. Type in a new name for the component, then select **Enter**.

See also

[Add a component to a library](#) on [page 114](#)

[Delete a component](#) on [page 117](#)

[Toolbox](#) on [page 13](#)

Delete a component

If no longer useful, delete components added to custom libraries. Deleting a component may break the reference relationship with another component in a different folder of the same library.

To delete a component

1. In **Toolbox**, right-click a component (or components), then select **Delete**.
2. In **Delete Confirmation in Library Manager** select **Yes**.

Studio 5000 Architect software reviews all components to determine if they are exclusively referenced by the component (or components) being deleted. If referenced exclusively by the component (or components) being deleted, Studio 5000 Architect software prompts to delete them as well.

Important:

If a library component was placed in a Logix Designer project and the Studio 5000 Architect project was committed, even though the component was deleted from the library the component cannot be deleted from the controller project.

See also

[Add a component to a library](#) on [page 114](#)

[Toolbox](#) on [page 13](#)

View component properties

Components added to custom libraries have associated properties that provide additional information about the component. Properties are read-only.

To view the properties of a component

- In **Toolbox**, right-click a component, then select **Properties**.

See also

[Toolbox](#) on [page 13](#)

Replace an AOI in the current project

One or more instances of an Add-On Instruction (AOI) in a project can be replaced with an AOI from the library.

To replace an AOI in the current project:

1. In **Toolbox**, right-click an AOI, then select **Replace AOI in Project**.
Studio 5000 Architect software searches the current project for all instances of the selected AOI.
During the search operation, the cursor turns into an hourglass-pointer. Upon completion, the results appear in the **Select one or more AOIs to be replaced** list.
2. Under **AOI_Name Details**, view relevant details about the currently selected AOI.
3. In **Select one or more AOIs to be replaced**, review all instances of the selected AOI that are included in the current Studio 5000 Architect project and differ from the AOI in the library. Any differences between the currently selected AOI in the library and each instance of that AOI in the current project are highlighted.
4. Confirm all AOIs that are selected for replacement. Make any necessary changes.
5. Select **Replace**. All selected instances are replaced. A message appears in **Results** for each replaced instance. The AOI changes are not shown in the controller project until the hardware diagram is committed.
6. Select **File > Save**.

See also

[Add a component to a library](#) on [page 114](#)

[Commit a hardware diagram](#) on [page 99](#)

Show references to AOIs and UDTs

References identify the other instructions that depend on the selected Add-on Instruction (AOI) or user-defined data type (UDT).

To show references to AOIs or UDTs

1. In **Toolbox**, right-click an AOI or UDT component, then select **References**.
2. Review the references information for the selected component. To query the current library to identify all references of the selected AOI or UDT, select **Search Library for All References**.
3. When complete, select **OK**.

See also

[Replace an AOI in the current project](#) on [page 117](#)

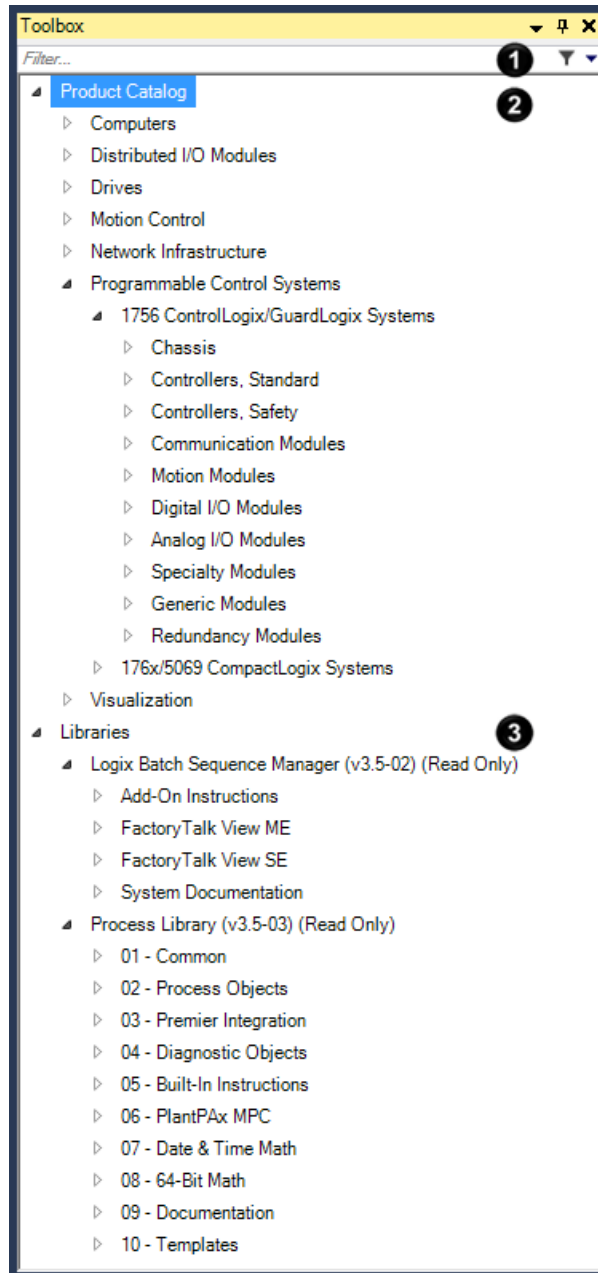
Toolbox

How do I open Toolbox?

- From the **View** menu, select **Toolbox**.

Use **Toolbox** to view default hardware components or add, remove, and manage custom libraries. Drag components from the **Toolbox** to a **Hardware Diagram** to add components to a project.

Components shown in gray are either unsupported in Studio 5000 Architect software or require a version of Logix Designer software that is not installed on the system.



The **Toolbox** sections are:

Item	Name	Description
1	Filter	Enter a catalog number or name to show matching Logix Designer, FactoryTalk View Studio, and library components.
2	Product Catalog	A list of Logix Designer and FactoryTalk View Studio components that can be added to a hardware diagram.
3	Libraries	A list of libraries containing components that can be added to a hardware diagram or a Logix Designer or FactoryTalk View Studio project.

See also

[Filter the Toolbox](#) on [page 123](#)

[Add, import, and remove components](#) on [page 15](#)

[Create a new library](#) on [page 109](#)

[Import a library](#) on [page 110](#)

Create New Library

How do I open Create New Library?

- From the Studio 5000 Architect menu, click **Library Management**, then click **New Library**.

Use **Create New Library** to set the name, description, and revision information for a custom library. Edit these settings from **Library Properties**.

See also

[Export a library](#) on [page 111](#)

[Add a component to a library](#) on [page 114](#)

Search and print project information

Use the search tool to quickly find tags, data types, tasks, programs, instructions, and folders within custom libraries and Logix Designer projects. Print hardware diagrams to a printer to save or reference.

See also

[View relationships](#) on [page 121](#)

[Search a project](#) on [page 122](#)

[Print a hardware diagram](#) on [page 122](#)

View relationships

Use **Show Owner Mode** to view ownership, producer/consumer, and shortcut relationships in a hardware diagram.

To view relationships:

1. In **Hardware Diagram**, right-click anywhere and select **Show Owner Mode**.
2. In **Hardware Diagram**, select the controller or server.

The selected controller or server has a light blue highlight. The owned components have darker blue highlights.



See also

[About ownership relationships](#) on [page 77](#)

[About producer/consumer relationships](#) on [page 79](#)

[About shortcuts](#) on [page 81](#)

Print a hardware diagram

Print a hardware diagram to review or archive it outside of Studio 5000 Architect software. Large hardware diagrams are automatically split across multiple pages. By default, print margins are set at approximately 0.25 inches per side.

To print a hardware diagram

1. In **Project Explorer**, expand the **Project** or **Devices** folder, then select the hardware diagram.
2. Select **File > Print**.
3. In **Print**, select a printer and print options, then select **OK**.

See also

[Print Preview](#) on [page 124](#)

Search a project

Search a Studio 5000 Architect project to find instances of tags, data types, tasks, programs, instructions, and folders within custom libraries and Logix Designer projects.

To search a project

1. From the **Edit** menu, select **Find**.
2. In **Find**, enter search terms, select locations to search, then select **Start Search**. The results display in **Find Results**.

See also

[Print search results](#) on [page 122](#)

[Find](#) on [page 123](#)

Print search results

Print search results to review or archive found tags, data types, tasks, programs, instructions, and folders outside of Studio 5000 Architect software.

To print search results

1. From the **View** menu, select **Find Results**.
2. In **Find Results**, right-click a row, then select **Print Preview**.
3. (optional) To set print options such as page size and orientation, in **Print Preview**, select **File > Page Setup**.
4. In **Print Preview**, select **File > Print**. The results are printed using your system default printer.

See also

[Find Results](#) on [page 123](#)

[Print Preview](#) on [page 124](#)

Filter the Toolbox

Use **Filter** to limit which products or library components appear in the **Toolbox**.

To filter the Toolbox

- At the top of **Toolbox**, select **Filter**, then enter a filter term.
Matching Logix Designer, FactoryTalk View Studio, and library components appear.

See also

[Toolbox](#) on [page 13](#)

Find

How do I open Find?

- From the **Edit** menu, click **Find**.

Use **Find** to search for terms in custom libraries and Logix Designer projects included in a Studio 5000 Architect project. **Find** does not search FactoryTalk View applications.

Setting	Description
Find	Enter search term.
Match case	Determines if the search term is case sensitive.
Whole word	Determines if the search must find an exact match, including spaces.
Controller Projects	Determines the controller projects to search.
Libraries	Determines the custom libraries to search.
Look for	Determines object types to search.
Close on Search Complete	Determines if the Find closes once the search has completed.

See also

[Search a project](#) on [page 122](#)

Find Results

How do I open Find Results?

- From the **View** menu, click **Find Results**.

Use **Find Results** to view the results of a search. Double-click an item in **Find Results** to open the item in Logix Designer. By default, items are sorted alphabetically by name. Results are cleared when the project closes.

Name	Kind	Type	Container	Location	Description
AB:1756_DI_DC_Diag:C:0	DataTypes	IO	Controller	Hardware Diagr...	
AB:1756_DI_DC_Diag:I:0	DataTypes	IO	Controller	Hardware Diagr...	
AB:1756_DO:O:0	DataTypes	IO	Controller	Hardware Diagr...	
AB:1756_DO_DC_Diag:C:0	DataTypes	IO	Controller	Hardware Diagr...	
AB:1756_DO_DC_Diag:I:0	DataTypes	IO	Controller	Hardware Diagr...	
Local:1:C	Tags	AB:1756_DO_D_...	Controller Tags	Hardware Diagr...	

Item	Description
Name	The name of the search result, such as AB:1756_A06_Struct:C:0.
Kind	The kind of the search result, such as DataTypes.
Type	The data type of the search result, such as DINT or IO.
Container	The component in the project or library that contains the search result, such as Controller.
Location	The name of the project or library that contains the search result, such as Hardware Diagram 01:L75.
Description	The description of the search result, if available.

See also

[Search a project](#) on [page 122](#)

[Print search results](#) on [page 122](#)

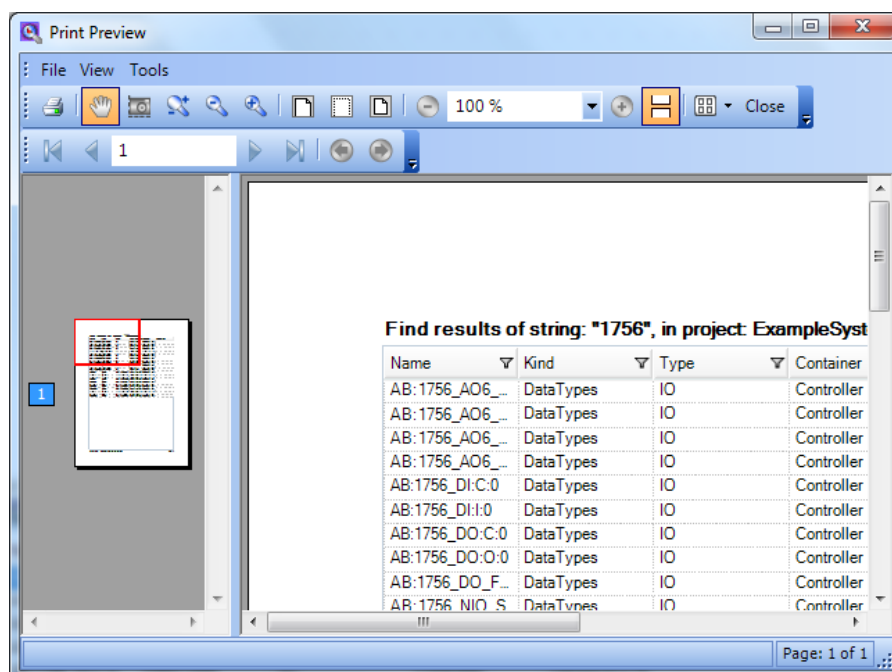
[Find](#) on [page 123](#)

Print Preview

How do I open Print Preview?

1. Perform a search using **Find**.
2. In **Find Results**, right-click on a row, then click **Print Preview**.

Use **Print Preview** to review and print search results and hardware diagrams.



Icon	Description
	Print. Print the project search results or hardware diagram.
	Hand Tool. Select and scroll through the contents of the search results or hardware diagram.
	Snapshot Tool. Select or drag the search results or hardware diagram to copy the page or selection to the clipboard.
	Dynamic Zoom Tool. Drag up to increase the zoom level and drag down to decrease the zoom level.
	Zoom Out Tool. Drag a rectangle to decrease the zoom level or select to incrementally decrease zoom level.
	Zoom In Tool. Drag a rectangle to increase the zoom level or select to incrementally increase zoom level.
	Page Width. Display the search results or hardware diagram, including page margins, in the display area.
	Margin Width. Display only the search results or hardware diagram that appears within the margins in the display area.
	Whole Page. Display the search results or hardware diagram page in the display area.
	Zoom Out. Decrease the zoom level.
	Zoom. Change the zoom level.
	Zoom In. Increase the zoom level.
	Continuous. Successively scroll between multiple pages, displaying a continuous flow of project search results or hardware diagrams without any page breaks.
	Layout. Configure the display area to show multiple pages simultaneously.
	Close. Close Print Preview .
	First Page. Display the first page in Print Preview .
	Previous Page. Display the previous page in Print Preview .
	Current Page. Display the desired page in Print Preview .
	Next Page. Go to the next page in Print Preview .
	Last Page. Go to the last page in Print Preview .
	Previous View. Display the last selected view in Print Preview .

Icon	Description
	Next View. Display the next selected view in Print Preview .

See also

[Print search results](#) on [page 122](#)

[Print a hardware diagram](#) on [page 122](#)

[Find Results](#) on [page 123](#)

Set Studio 5000 Architect options

Set a variety of options to customize how Studio 5000 Architect software operates. In most cases, changes to the project settings take effect immediately. However, if the changed behavior does not occur, close and restart Studio 5000 Architect software.

Specify options settings by configuring the **Options** properties tabs.

See also

[Project Settings](#) on [page 127](#)

[Hardware Diagram](#) on [page 128](#)

[User Prompts](#) on [page 129](#)

[Libraries](#) on [page 130](#)

Project Settings

How do I open Project Settings?

- From the **Tools** menu, select **Options**.

Use **Project Settings** to set basic project options.

Option	Description
Workspace Directory	Specifies the directory used for project backups and projects imported from online controllers.
Create project subdirectory under the main project directory	By default, creates a subdirectory named for the project under the default project directory. Clearing this checkbox stores all project files in the default project directory.
Launch new instance of Studio 5000 Architect if a project is already open	Specifies how Studio 5000 Architect software opens projects. • When selected, Studio 5000 Architect software automatically starts a new Studio 5000 Architect instance when a project is open and choosing to open or create a new project. • When cleared, Studio 5000 Architect software closes the currently open project and prompts to save changes before opening or creating a new project
Create alias tags automatically when Point Tag is defined	Specifies whether alias tags are created automatically when the point tag is defined. • When selected, Studio 5000 Architect software automatically unifies alias tag names across Studio 5000 Architect, Logix Designer, and third party software packages (for example, EPLAN Electric P8 software). • When cleared, Studio 5000 Architect software permits unique alias tag names across Studio 5000 Architect, Logix Designer, and third party software packages.

Option	Description
Update alias tags automatically when Point Tag is updated	Specifies whether existing alias tags are replaced upon import. - When selected, Studio 5000 Architect software automatically updates alias tags when importing a file from a third party software package (for example, EPLAN Electric P8 software). - When cleared, Studio 5000 Architect software maintains existing alias tags when importing an XML file from a third party software package.
Arrange projects in the Project Explorer by the hardware diagram they support	Specifies whether Project Explorer sorts projects and applications: - When Arrange Projects by Hardware Diagram is enabled, Project Explorer lists Logix Designer projects and FactoryTalk View applications by the hardware diagram that contains the project or application hardware. - When Arrange Projects by Hardware Diagram is disabled, Project Explorer lists all Logix Designer projects and FactoryTalk View applications in a single list.
Restore Defaults	Restore to the default settings.

See also

[Hardware Diagram](#) on [page 128](#)

[User Prompts](#) on [page 129](#)

[Libraries](#) on [page 130](#)

Hardware Diagram

How do I open Hardware Diagram?

- From the **Tools** menu, select **Options**, then select **Hardware Diagram**.

Use **Hardware Diagram** to set the size, orientation, and language options for hardware diagrams.

Option	Description
Size	Specifies the desired page size for hardware diagrams. To ensure that hardware diagrams print correctly, set the hardware diagram size to match the page size for the printer.
Orientation	Specifies how hardware diagrams display and print, either Portrait for a vertical alignment or Landscape for a horizontal alignment.
Using Logix Designer	Specifies language the Logix Designer application should use when started from within Studio 5000 Architect software. This setting has no impact on the language display of Studio 5000 Architect software.
Show Sheet Boundaries	Select to display the boundaries of the printable area in the hardware diagram.

See also

[Project Settings](#) on [page 127](#)

[User Prompts](#) on [page 129](#)

[Libraries](#) on [page 130](#)

User Prompts

How do I open User Prompts?

- From the **Tools** menu, select **Options**, then select **User Prompts**.

Use **User Prompts** to set the options for displaying prompts. Items selected on this tab result in a prompt. Clearing the check box stops the prompt from occurring and Studio 5000 Architect software performs the default action.

Option	Description
Prompt for configuration changes	When attempting to close a project, prompt to save and commit to implement the configuration changes.
Prompt for ACD filename change	When the .acd file name for a controller changes, prompt to commit the hardware diagram.
Prompt for module names	When a module is created, prompt with a default module name and the opportunity to rename the module.
Prompt for overwrite configuration	Before importing or updating with an online controller, prompt that the process overwrites the current controller configuration.
Prompt for commit pending changes	Before updating with an online controller, prompt to commit any pending changes to a hardware diagram.
Prompt for change to recommended Flex terminal base	When an alternate Flex wiring base is specified, prompt to change back to the recommended Flex wiring base.
Show docking indicators when dragging views	When a view is rearranged in the hardware diagram, display indicators (top, bottom, left, right, or as a tab of another view group) to show where it can dock.
Auto scroll upon selection	When a device is selected either in Project Explorer or Hardware Diagram , automatically locate the device in the Project Explorer or Hardware Diagram .
Prompt for confirmation before updating from a project	Prompt to confirm changes and update the Studio 5000 Architect project prior to updating changes from a controller project.
Prompt for confirmation before committing changes to a project	Prompt to confirm changes and update the Studio 5000 Architect project prior to a commit operation.
Prompt for update when opening a project file	Prompt to update changes to the associated .acd file made in the Logix Designer application since the last time the Studio 5000 Architect project was open.
Prompt for confirmation when deleting a controller (and associated controller project file)	Prompt to delete the controller from the hardware diagram, as well as the controller project file (*.acd) associated with that controller.
Show duplicate library name dialog box	Prompt when specifying a library name that already exists.
Prompt for deletion of referenced component in the Toolbox pane	Prompt to delete components exclusively referenced by a component currently selected for deletion in Toolbox .
Show duplicate component name dialog box	Prompt when specifying a library component name that already exists.
Set replace (no backup) as the default when duplicate component names are found	Prompt to replace a component (without backing up the original with a '_bk' extension) when duplicate component names are found (default).
Prompt for Ethernet configuration after updating from a project	Prompt to change Ethernet switches and connection settings after updating a project

See also

[Project Settings](#) on [page 127](#)

[Hardware Diagram](#) on [page 128](#)

[Libraries](#) on [page 130](#)

Libraries

How do I open Libraries?

- From the **Tools** menu, select **Options**, then select **Libraries**.

Use **Libraries** to set the default location for libraries. If changing the directory location, manually move any existing libraries to this new directory location.

Option	Description
Default Library Directory	The default location is C:\Users\Public\Documents\Studio 5000\Libraries\Architect . Library paths can include mapped network drives and UNC paths. All libraries are stored in the same directory. Libraries are not moved or copied when the directory changes. To use existing libraries after the directory changes, copy the .lal files to the new directory location.
 Browse button	Use to browse a directory structure to provide the path to the library directory.

See also

[Project Settings](#) on [page 127](#)

[Hardware Diagram](#) on [page 128](#)

[User Prompts](#) on [page 129](#)

Log on, log off, and set security policies

By default, FactoryTalk Security single sign-on is enabled. In most cases, FactoryTalk Security handles log on and log off automatically.

If single sign-on is disabled, users must log on and log off of the FactoryTalk Directory Network and Local Directory before using Studio 5000 Architect.

FactoryTalk Security policies set permissions that determine if a user or group can perform an action in Studio 5000 Architect or other FactoryTalk products. If the user or group does not have the required permissions, Studio 5000 Architect actions either displays an error message or has limited functionality.

See also

[About Studio 5000 Architect and FactoryTalk Security Single Sign-On](#) on [page 131](#)

[Log on to Factory Talk](#) on [page 132](#)

[Required Studio 5000 Architect permissions](#) on [page 137](#)

Studio 5000 Architect software and FactoryTalk Security Single Sign-On

FactoryTalk Security policy setting "Use single sign-on" (SSO) is enabled by default. When enabled, log on once per directory, on a given computer using SSO. After logging on, all participating FactoryTalk products that run in that directory on that computer automatically use the security credentials of the logged-on user. Work with multiple Rockwell Automation products simultaneously, without having to log on to each software product separately.

When SSO is enabled, no additional operations are necessary unless an alternate FactoryTalk user wants to use Studio 5000 Architect software. Use **Log On to FactoryTalk** to log on that user account.

Keep these items in mind concerning how SSO policy settings are used with Studio 5000 Architect software:

- The **Tools > Security > Log On To FactoryTalk** menu selection is available unless the Studio 5000 Architect product policies are installed. Use this menu to change the user credentials that Studio 5000 Architect software is currently running under, or to change from the SSO user if SSO is enabled.
- If SSO is disabled, Studio 5000 Architect software removes all ties with the computer-wide SSO at startup. When you start Studio 5000 Architect software a prompt to log on to FactoryTalk appears.

- When SSO is enabled, selecting **Tools > Security > Log Off** does not result in a logged off situation as Studio 5000 Architect software automatically logs on the SSO user again.

See also

[Change the logged on user account](#) on [page 132](#)

Log on to FactoryTalk

When single sign on is disabled, logging on to FactoryTalk Security from the Start menu does not automatically log into Studio 5000 Architect software. Instead, when starting Studio 5000 Architect software you are prompted to log on to FactoryTalk before editing a project.

To log on to FactoryTalk

- In **Log On to FactoryTalk**, type the **User name** and **password**, and then select **OK**.

The **Change Password** prompt displays if the password to the account is expired or if the administrator requires a password change at log on.

See also

[Log on to FactoryTalk](#) on [page 140](#)

[Change a password](#) on [page 133](#)

Change the logged on user account

If a different user account needs to open or edit a Studio 5000 Architect project, use **Log On to FactoryTalk** to change to that user account. Change the logon for the network directory, the local directory, or both.

To change the logged on user account

1. From the Studio 5000 Architect menu select **Tools > Security > Log On to FactoryTalk**
2. In **Log On to FactoryTalk**, select **Change Logon**.
3. Type the **User name** and **Password**, and then select **OK**.

The **Change Password** prompt displays if the account password expired or the administrator requires a password change at log on.

See also

[Change a password](#) on [page 133](#)

Change a password

If the password to an account expired, was compromised, or if the administrator requires a password change at log on, change the password from within Studio 5000 Architect software. If changing the password of the user account used to log on to the computer, it may be necessary to lock the computer and unlock it using the new password to refresh the credentials to access network resources.

To change a password

1. From the Studio 5000 Architect menu select **Tools > Security > Log On to FactoryTalk**
2. In **Log On to FactoryTalk**, select **Change Logon**.
3. Select **Change Password**.
4. In **Change Password**, in **User name**, type the domain and alias, for example DOMAIN-NA\alias1
5. In **Old Password**, type the current password.
6. In **New Password**, type the new password. This password must meet any password complexity requirements enforced in the organization.
7. In **Confirm New Password**, retype the new password to confirm and select **OK** to apply the change.

See also

[Log on to FactoryTalk](#) on [page 132](#)

Log off Studio 5000 Architect software

When logging off, choose whether to log off the local user account or the network user account.

If the FactoryTalk Security policy setting "Use single sign-on (SSO)" is enabled, your local user and network user accounts are automatically logged on after attempting to log off Studio 5000 Architect software. In this environment, Changing the logged on user account permits a different user to work with Studio 5000 Architect software.

If SSO is not enabled, log on and log off through the Studio 5000 Architect Tools menu.

To log off Studio 5000 Architect software:

- From the Studio 5000 Architect menu point to **Tools > Security > Log Off** and select the account to log off.

If SSO is enabled, a message appears describing the automatic logon behavior. Confirm the log off.

If SSO is disabled, a log on to FactoryTalk prompt appears.

See also

[Log on to FactoryTalk](#) on [page 132](#)

[Change the logged on user account](#) on [page 132](#)

[Studio 5000 Architect software and FactoryTalk Security Single Sign-On](#) on [page 131](#)

Set FactoryTalk Directory permissions

Use FactoryTalk Directory permissions to set the actions a user can perform in a Studio 5000 Architect, FactoryTalk View, or Logix Designer project. Unless overridden by individual product policies, these permissions apply to all FactoryTalk products.

To set FactoryTalk Directory permissions

1. Open the **FactoryTalk Administration Console**.
2. In **Select FactoryTalk Directory**, select **Network** or **Local**, then select **OK**.
3. In the **Explorer** tree, right-click on the top-level node (either **Network** or **Local**), then select **Security**.
4. In **Security Settings**, select a user or group from the list.
5. Locate the action, set whether the user is allowed to perform the action, then select **OK**.

See also

[Set Studio 5000 Architect permissions](#) on [page 134](#)

[Set Logix Designer permissions](#) on [page 135](#)

[Set FactoryTalk View SE permissions](#) on [page 136](#)

[Set FactoryTalk View ME permissions](#) on [page 136](#)

[Studio 5000 Architect Feature Security policies](#) on [page 137](#)

Set Studio 5000 Architect permissions

Use Studio 5000 Architect permissions to set the actions a user can perform in a Studio 5000 Architect project.

To set Studio 5000 Architect permissions

1. Open the **FactoryTalk Administration Console**.
2. In **Select FactoryTalk Directory**, select **Network**, then select **OK**.
3. In the **Explorer** tree, expand the **System > Policies > Product Policy > Studio 5000 Architect** folders, then double-click the **Feature Security** policy.

4. In **Feature Security Properties**, select a policy, then select  to open its security settings.
5. In **Configure Securable Action**, add or remove users and groups, set whether they are allowed to perform the action, then select **OK**.
6. Select **OK**.

See also

[Studio 5000 Architect Feature Security policies](#) on [page 137](#)

[Required Studio 5000 Architect permissions](#) on [page 137](#)

[Set FactoryTalk Directory permissions](#) on [page 134](#)

[Set Logix Designer permissions](#) on [page 135](#)

[Set FactoryTalk View SE permissions](#) on [page 136](#)

Set Logix Designer permissions

Use Logix Designer permissions to limit the actions a user or group can perform in a Logix Designer project. These settings also affect what actions Studio 5000 Architect software can perform on Logix Designer projects, such as adding, saving, committing, and updating Logix Designer projects.

To set Logix Designer permissions:

1. Open the **FactoryTalk Administration Console**.
2. In **Select FactoryTalk Directory**, select **Network**, then select **OK**.
3. In the **Explorer** tree, expand the **System > Policies > Product Policies > RSLogix 5000** folders, then double-click the **Feature Security** policy.
4. In **Feature Security Properties**, select a policy, then select  to open its security settings.
5. In **Configure Securable Action**, add or remove users and groups, set whether they are allowed to perform the action, then select **OK**.
6. Select **OK**.

See also

[Required Logix Designer policies and permissions for Studio 5000 Architect software](#) on [page 138](#)

[Set FactoryTalk Directory permissions](#) on [page 134](#)

[Set Studio 5000 Architect permissions](#) on [page 134](#)

[Set FactoryTalk View SE permissions](#) on [page 136](#)

[Set FactoryTalk View ME permissions](#) on [page 136](#)

Set FactoryTalk View SE permissions

Use FactoryTalk View SE application or area permissions to limit the actions a user or group can perform in a FactoryTalk View SE application. These settings also affect what actions Studio 5000 Architect software can perform on FactoryTalk View SE applications, such as adding, saving, committing, and updating the application.

To set FactoryTalk View SE application or area permissions:

1. Open the **FactoryTalk Administration Console**.
2. In **Select FactoryTalk Directory**, select **Network** or **Local**, then select **OK**.
3. In the **Explorer** tree, right-click on the FactoryTalk View application or FactoryTalk View SE area, then select **Security**.
4. In **Security Settings**, select a user or group from the list.
5. Locate the action, set whether the user is allowed to perform the action, then select **OK**.

See also

[Required FactoryTalk View SE permissions for Studio 5000 Architect software](#) on [page 139](#)

[Set FactoryTalk View ME permissions](#) on [page 136](#)

[Set FactoryTalk Directory permissions](#) on [page 134](#)

[Set Studio 5000 Architect permissions](#) on [page 134](#)

[Set Logix Designer permissions](#) on [page 135](#)

Set FactoryTalk View ME permissions

Use FactoryTalk View ME permissions to limit the actions a user or group can perform in a FactoryTalk View ME application. These permissions are applied on a per-application basis and affect what actions Studio 5000 Architect software can perform on FactoryTalk View ME applications, including adding, saving, committing, and updating the application.

To set FactoryTalk View ME application or area permissions:

1. Open the FactoryTalk View ME application in **FactoryTalk View Studio**.
2. In the **Explorer** tree, right-click on the FactoryTalk View ME application at the top of the tree, then select **Security**.
3. In **Security Settings**, select a user or group from the list.
4. Locate the action, set whether the user is allowed to perform the action, then select **OK**.

See also

[Required FactoryTalk View ME permissions for Studio 5000 Architect software](#) on [page 139](#)

[Set FactoryTalk Directory permissions](#) on [page 134](#)

[Set Studio 5000 Architect permissions](#) on [page 134](#)

[Set Logix Designer permissions](#) on [page 135](#)

Studio 5000 Architect Feature Security policies

Studio 5000 Architect Feature Security policies control user permissions, which determine whether a user or group can perform a specific action in Studio 5000 Architect software.

Project Policies	Description
Create	Specifies whether a user is allowed to create a new Studio 5000 Architect project.
Open	Specifies whether a user is allowed to open an existing Studio 5000 Architect project.
Save	Specifies whether a user is allowed to save a Studio 5000 Architect project.

See also

[Set Studio 5000 Architect permissions](#) on [page 134](#)

[Required Studio 5000 Architect permissions](#) on [page 137](#)

Required Studio 5000 Architect permissions

Permissions set in FactoryTalk Security policies determine if a user or group can perform actions in Studio 5000 Architect projects. If the user or group does not have the required permissions, Studio 5000 Architect actions either displays an error message or has limited functionality.

Action	Required Studio 5000 Architect permissions
Create a new Studio 5000 Architect project	Create: Allow Save: Allow
Open an existing Studio 5000 Architect project	Open: Allow
Save an existing Studio 5000 Architect project	Open: Allow Save: Allow

See also

[Set Studio 5000 Architect permissions](#) on [page 134](#)

[Studio 5000 Architect Feature Security policies](#) on [page 137](#)

Required Logix Designer policies and permissions for Studio 5000 Architect software

Logix Designer Feature Security policies and permissions set in FactoryTalk Security determine if a user or group can perform actions on Studio 5000 Architect projects that contain Logix Designer projects. If the user or group does not have the required permissions, Studio 5000 Architect actions either displays an error message or has limited functionality.

Action	Required RSLogix 5000 Feature Security policies	Required FactoryTalk Directory > RSLogix 5000 permissions
Add a Logix Designer project	Controller: Secure Project: New	Project: Open
Import a Logix Designer project from an online controller	Controller: Secure Project: New (new project file only)	Project: Go Online Project: Open Project: Save Project: Upload
Add a module	Controller: Secure	Module: Create Properties Module: Modify Properties
Edit module properties	Controller: Secure	Module: Modify Properties
Move a module in a hardware diagram	Controller: Secure	Module: Create Module: Delete Module: Modify Properties
Remove a module	Controller: Secure	Module: Delete Module: Modify Properties
Open a Logix Designer project in Logix Designer	Controller: Secure	Project: Open
Go online with a controller	Controller: Secure	Project: Go Online Project: Open
Commit a Logix Designer project	Controller: Secure Project: New (first commit only)	Controller: Modify Properties Controller: Unsecure Module: Modify Properties Project: Open Project: Save Tag: Modify Properties
Update a Logix Designer project	Controller: Secure	Project: Open
Update a Logix Designer project with an online controller	Controller: Secure Project: New (first update only)	Project: Go Online Project: Open Project: Save Project: Upload
Browse tags in the controller	Controller: Secure	Project: Open
Create aliases for I/O tags	Controller: Secure	Tag: Modify Properties
Use current tags in a controller to create a produce/consume tag relationship	Controller: Secure	Tag: Create Tag: Delete
Add a new tag, and then create a produce/consume tag relationship	Controller: Secure	Tag: Create
Add a new AOI	Controller: Secure	Add-On Instruction: Create
Overwrite an AOI that already exists (properties are modified)	Controller: Secure	Add-On Instruction: Modify
Delete an AOI	Controller: Secure	Add-On Instruction: Delete
Add a new UDT	Controller: Secure	User Defined Type: Create
Overwrite an UDT that already exists (properties are modified)	Controller: Secure	User Defined Type: Modify
Delete an UDT	Controller: Secure	User Defined Type: Delete
Search a Logix Designer project	Controller: Secure	Project: Open

See also

[Set FactoryTalk Directory permissions](#) on [page 134](#)

[Set Logix Designer permissions](#) on [page 135](#)

Required FactoryTalk View SE permissions for Studio 5000 Architect software

FactoryTalk View SE permissions set in FactoryTalk Security determine if a user or group can perform actions on Studio 5000 Architect projects that contain FactoryTalk View SE applications. If the user or group does not have the required permissions, Studio 5000 Architect actions either displays an error message or has limited functionality.

Action	Required FactoryTalk Directory permissions	Required Application permissions	Required Area permissions
Add existing FactoryTalk View SE application	List Children: Allow Read: Allow	List Children: Allow Read: Allow	List Children: Allow Read: Allow
Open FactoryTalk View SE application in FactoryTalk View Studio	List Children: Allow Read: Allow	List Children: Allow Read: Allow	List Children: Allow Read: Allow
Commit new FactoryTalk View SE application	Create Children: Allow List Children: Allow Read: Allow Write: Allow	Not applicable.	Not applicable.
Commit existing FactoryTalk View SE application	Create Children: Allow Delete: Allow List Children: Allow Read: Allow Write: Allow	Create Children: Allow Delete: Allow List Children: Allow Read: Allow Write: Allow	Create Children: Allow Delete: Allow List Children: Allow Read: Allow Write: Allow
Update existing FactoryTalk View SE application	List Children: Allow Read: Allow	List Children: Allow Read: Allow	List Children: Allow Read: Allow

See also

[Set FactoryTalk Directory permissions](#) on [page 134](#)

[Set FactoryTalk View SE permissions](#) on [page 136](#)

Required FactoryTalk View ME permissions for Studio 5000 Architect software

FactoryTalk View ME permissions set in FactoryTalk Security determine if a user or group can perform actions on Studio 5000 Architect projects that contain FactoryTalk View ME applications. If the user or group does not have the required permissions, Studio 5000 Architect actions either displays an error message or has limited functionality.

Action	Required FactoryTalk Directory permissions	Required Application permissions
Add existing FactoryTalk View ME application	List Children: Allow Read: Allow	List Children: Allow Read: Allow
Open FactoryTalk View ME application in FactoryTalk View Studio	List Children: Allow Read: Allow	List Children: Allow Read: Allow

Action	Required FactoryTalk Directory permissions	Required Application permissions
Commit existing FactoryTalk View ME application	Create Children: Allow Delete: Allow List Children: Allow Read: Allow Write: Allow	Create Children: Allow Delete: Allow List Children: Allow Read: Allow Write: Allow
Update existing FactoryTalk View ME application	List Children: Allow Read: Allow	List Children: Allow Read: Allow

See also

[Set FactoryTalk Directory permissions](#) on [page 134](#)

[Set FactoryTalk View ME permissions](#) on [page 136](#)

Log on to FactoryTalk

How do I open Log On to FactoryTalk?

- From the **Tools** menu, select **Security > Log On to FactoryTalk**.

Use **Log On to FactoryTalk** to choose the logon credentials used to authenticate Studio 5000 Architect software.

- Use a **Network** log on to access Network (distributed) applications on the Network Directory Server.
- Use a **Local** log on to access Local (stand-alone) applications on the Local Directory.

If you cannot log on to a particular directory on this computer, verify that the user account has permissions to that directory.

See also

[Log on to FactoryTalk](#) on [page 132](#)

[Change the logged on user account](#) on [page 132](#)

Legal Notices

Rockwell Automation publishes legal notices, such as privacy policies, license agreements, trademark disclosures, and other terms and conditions on the [Legal Notices](#) page of the Rockwell Automation website.

End User License Agreement (EULA)

You can view the Rockwell Automation End User License Agreement (EULA) by opening the license.rtf file located in your product's install folder on your hard drive.

The default location of this file is:

C:\Program Files (x86)\Common Files\Rockwell\license.rtf.

Open Source Software Licenses

The software included in this product contains copyrighted software that is licensed under one or more open source licenses.

You can view a full list of all open source software used in this product and their corresponding licenses by opening the index.html file located your product's OPENSOURCE folder on your hard drive.

The default location of this file is:

C:\Program Files (x86)\Common Files\Rockwell\Help\Architect
Release Notes\OPENSOURCE\index.htm

You may obtain Corresponding Source code for open source packages included in this product from their respective project web site(s).

Alternatively, you may obtain complete Corresponding Source code by contacting Rockwell Automation via the **Contact** form on the Rockwell Automation website: <http://www.rockwellautomation.com/global/about-us/contact/contact.page>. Please include "Open Source" as part of the request text.

Index

A

add

- 1756-L8x ControlLogix controller 33
- 5069-AEN2TR communication module 39
- 5069-L3x CompactLogix controller 38
- ownership relationship 78
- PowerFlex drive 45
- producer/consumer relationship 79
- shortcut 79
- switch
 - unmanaged 68
- tag
 - axis 82
 - point 81

axis tag

- add 82

C

commit

- validation rules 100, 101

F

find

- matching controller 98

G

graphic

- supported formats 91

I

I/O Aliases 87

image

- supported formats 91

install 18

M

managed switch

- add 68

O

ownership relationship

- add 78

P

point tag

- add 81

PowerFlex drive

- add 45

producer/consumer relationship

- add 79

Project Explorer 12

S

shortcut

- add 79

- edit 83

system requirements 17

T

Toolbox 13

U

unmanaged switch

- add 68

Rockwell Automation support

Use these resources to access support information.

Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, and product notification updates.	rok.auto/support
Knowledgebase	Access Knowledgebase articles.	rok.auto/knowledgebase
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
Literature Library	Find installation instructions, manuals, brochures, and technical data publications.	rok.auto/literature
Product Compatibility and Download Center (PCDC)	Get help determining how products interact, check features and capabilities, and find associated firmware.	rok.auto/pcdc

Documentation feedback

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental information on its website at rok.auto/pec.

Allen-Bradley, expanding human possibility, Logix, Rockwell Automation, and Rockwell Software are trademarks of Rockwell Automation, Inc.

EtherNet/IP is a trademark of ODVA, Inc.

Trademarks not belonging to Rockwell Automation are property of their respective companies.

Rockwell Otomasyon Ticaret A.Ş. Kar Plaza İş Merkezi E Blok Kat:6 34752, İçerenköy, İstanbul, Tel: +90 (216) 5698400 EEE Yönetmeliğine Uygundur

Connect with us.    

rockwellautomation.com — expanding **human possibility**™

AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846