Installation Instructions

Original Instructions

FactoryTalk View Site Edition Installation Guide

Version 13.00.00

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.

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

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

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

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

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

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

🔥	**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).

Rockwell Automation recognizes that some of the terms that are currently used in our industry and in this publication are not in alignment with the movement toward inclusive language in technology. We are proactively collaborating with industry peers to find alternatives to such terms and making changes to our products and content. Please excuse the use of such terms in our content while we implement these changes.

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Contact Rockwell Automation Technical Support

If you have questions about the product, consult the manuals, Help, or Release Notes.

You can also search for technical notes, application tips, solutions to common problems, and the latest patches from Rockwell Automation Knowledgebase https://rockwellautomation.custhelp.com.

If you cannot find the answer, contact Rockwell Automation Customer Support, using any of these methods:

- Customer support telephone: 1.888.382.1583 or 1.440.646.3434
- Local technical support phone numbers: https://rockwellautomation.custhelp.com/app/phone
- Online support: https://www.rockwellautomation.com/en-us/support.html

Support staff are available Monday to Friday from 8:00 to 17:00 local time (North America only), except on statutory holidays.

When you call, it is recommended that you be at your computer and ready to provide the following information:

- the product serial number and product key.
- the product version number.
- the type of hardware you are using.
- the names of Rockwell Automation products installed on the computer.
- the exact wording of any messages that appeared on your screen.
- a description of what happened and what you were doing when the problem occurred.
- a description of how you tried to solve the problem.

If you are running a FactoryTalk View SE network distributed application, also note:

- how many computers are participating in the network application.
- whether computers on the network are connected using a Windows domain controller or a workgroup.
- which FactoryTalk View SE components are installed on participating computers.
- which computers are running servers (the Network Directory server, HMI servers, data servers, or tag alarm and event servers), and whether the servers are set up with redundancy.
- which computers are running clients (FactoryTalk View SE Client or FactoryTalk View Studio).

FactoryTalk View basics

FactoryTalk View, including FactoryTalk View Site Edition (SE) and FactoryTalk View Machine Edition (ME), is human-machine interface (HMI) software designed with a common look, feel, and navigation to help speed HMI application development and training time.

FactoryTalk View provides monitoring and control solutions designed to span stand-alone machine-level applications up through supervisory-level HMI applications across a network.

About FactoryTalk View SE

FactoryTalk View Site Edition (SE) is an integrated software package for developing and running human-machine interface (HMI) applications that can involve multiple users and servers, distributed over a network.

A FactoryTalk View SE system is more than the HMI server and clients. It also includes FactoryTalk Services Platform and data communication products such as FactoryTalk Linx.

Architecture of the FactoryTalk View system

A network distributed FactoryTalk View SE system consists of several components as shown below.

FactoryTalk View SE network distributed system

This example of a distributed system includes a FactoryTalk Directory server, FactoryTalk View SE server and client, FactoryTalk Linx data server, and FactoryTalk View Studio for application development and configuration.
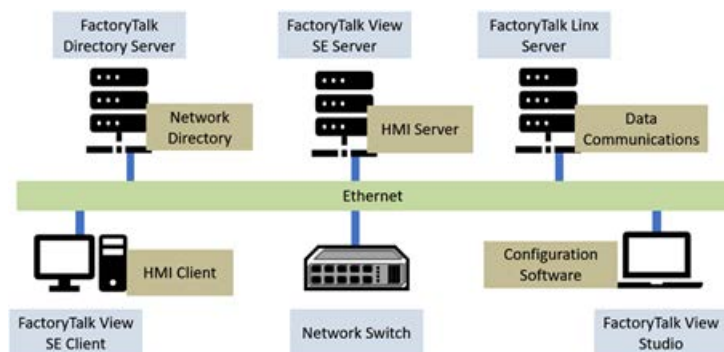
FactoryTalk View Studio Enterprise

FactoryTalk View Studio Enterprise is the configuration software for developing and testing FactoryTalk View SE network distributed, network station, local station, and FactoryTalk View ME applications.

FactoryTalk View Studio is the design-time environment for FactoryTalk View that provides the editors and tools you need to develop and test network distributed, network station, and local station human-machine interface (HMI) applications. It contains editors for creating complete applications, and contains client and server software for testing the applications you create.
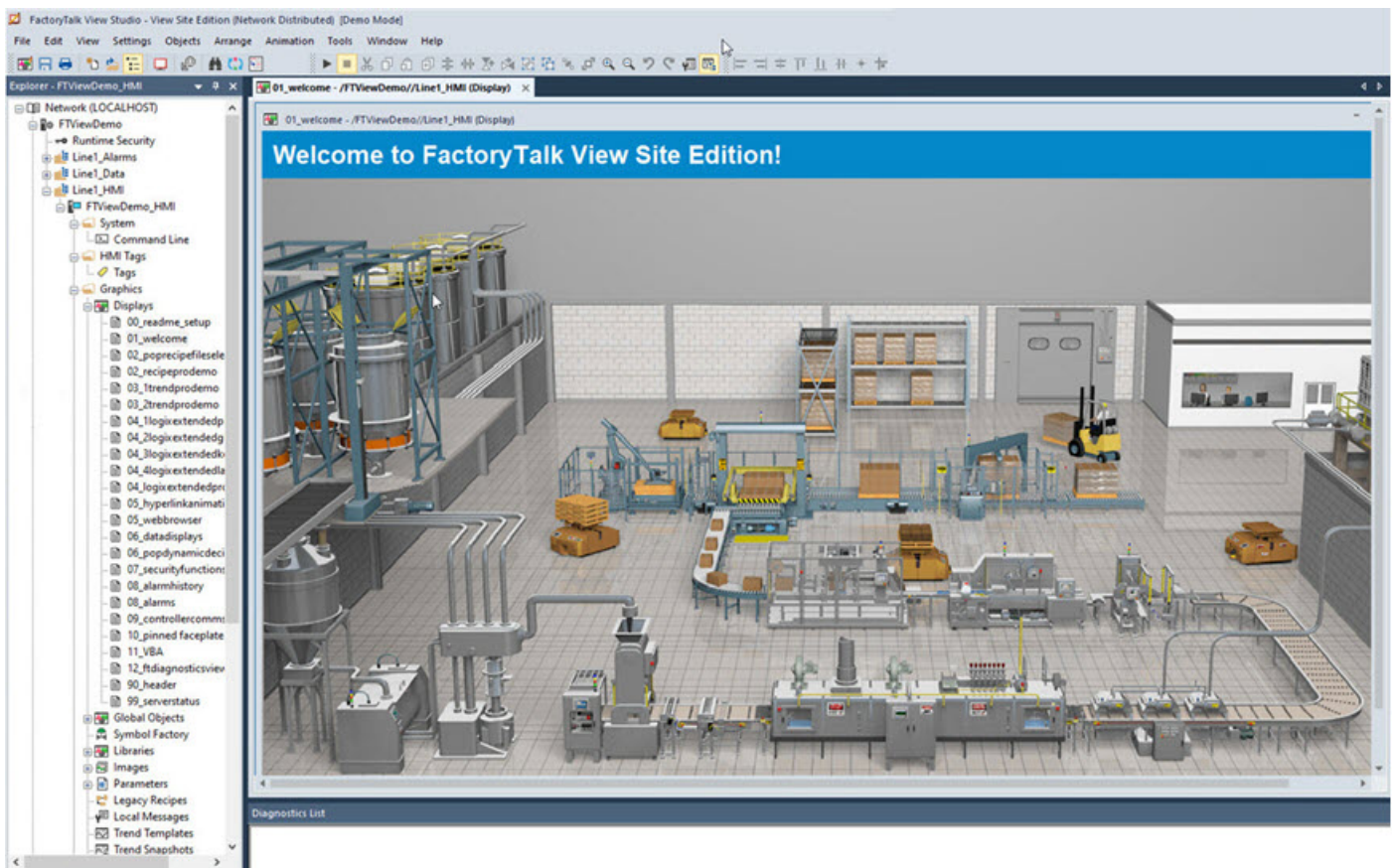
FactoryTalk View SE Server

FactoryTalk View SE Server, also called the HMI server, stores HMI project components (for example, graphic displays) and supplies them to clients. The server also contains a database of tags, and performs historical data logging. FactoryTalk View SE Server has no user interface. Once installed, it runs as a set of headless Windows services that supply information to clients as they request it.

FactoryTalk View SE Client

FactoryTalk View SE Client is software for viewing and interacting with FactoryTalk View SE local station, network station, and network distributed applications at runtime. Use the FactoryTalk View SE Client Wizard to create client configuration files that can be deployed to client host computers.

FactoryTalk View SE Station

FactoryTalk View SE Station is a supervisory HMI software package for enterprise solutions. SE Station is a single-computer HMI that can be operated in either a Local or a Network FactoryTalk Directory. There are key differences between View SE Distributed and View SE Station:

- View SE Distributed can share HMI screens and data with multiple clients.
- View SE Station does not allow sharing of HMI screens or data to other View SE Stations.

FactoryTalk View SE network station system

Several different computers, each hosting a FactoryTalk View SE network station, can use a single FactoryTalk Directory server and a single FactoryTalk Linx communication server. While each network station HMI can access the same controller data, through the shared FactoryTalk Linx server, and the same directory resources through the shared FactoryTalk directory server, they can only access their own HMI data such as graphics, macros, and datalogs.
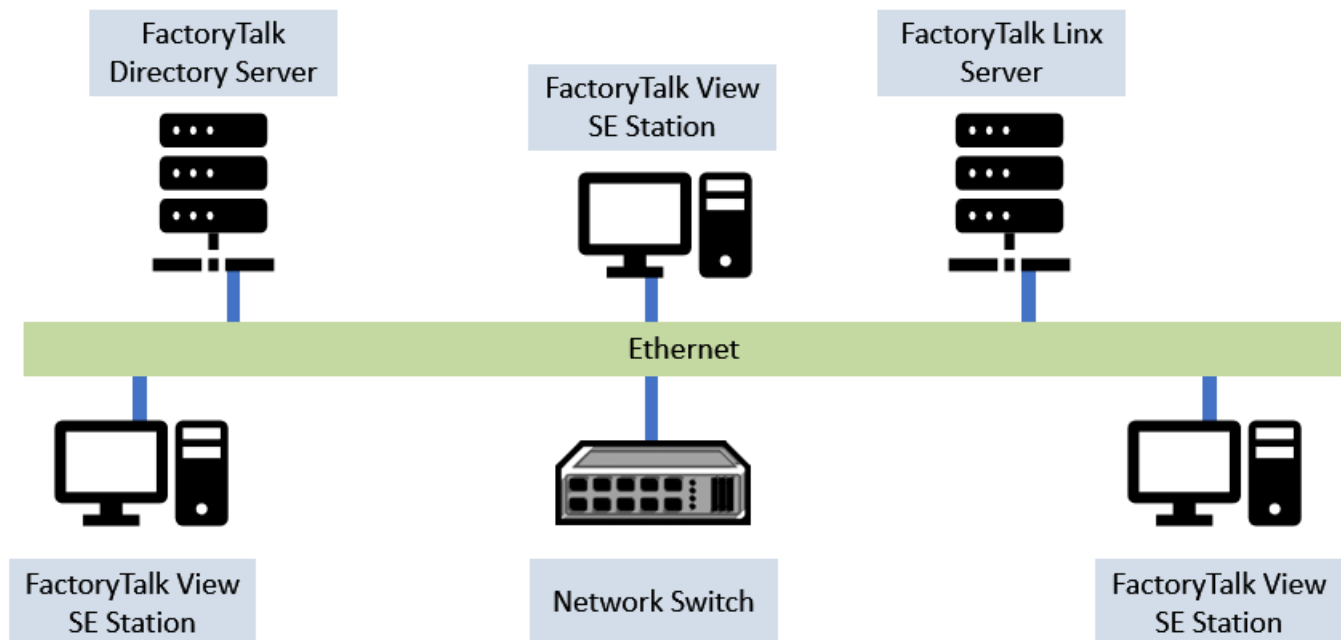
FactoryTalk View SE local station system

A local station system can include several HMI computers, each with its own FactoryTalk Directory server and data server connection to the controllers.
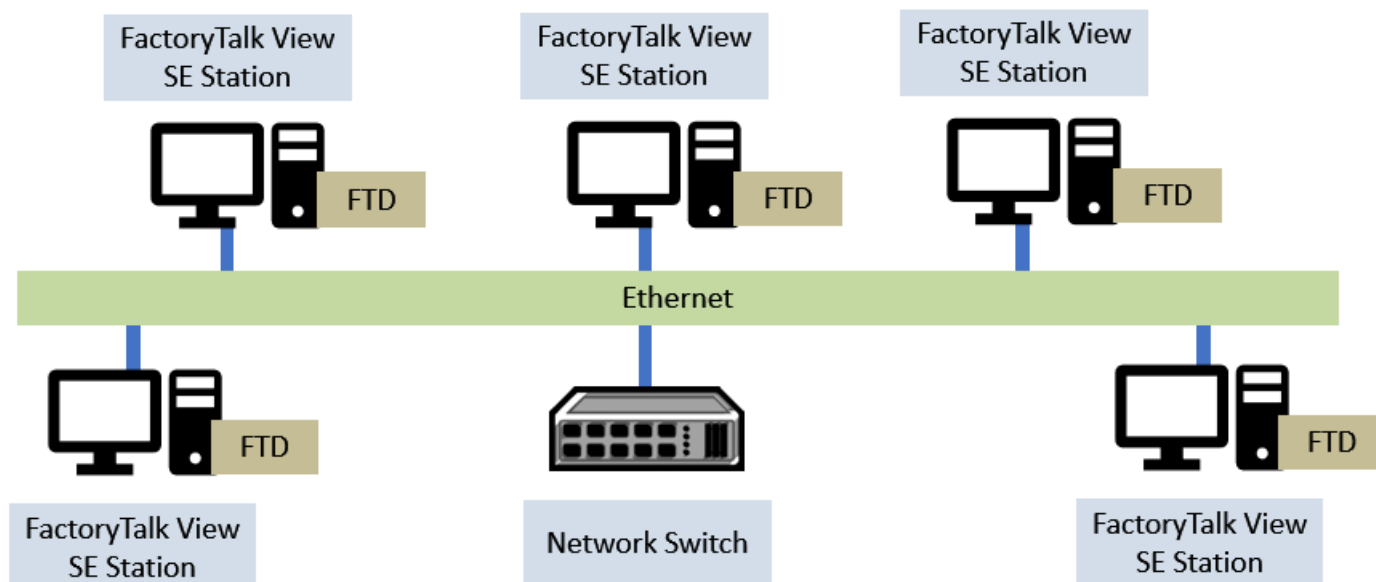
FactoryTalk ViewPoint

FactoryTalk ViewPoint is an add-on to FactoryTalk View that provides for a fully scalable, fully animated, read-and-write view of existing Site Edition (SE) and Machine Edition (ME) web applications from a web browser.

A web application consists of graphic displays selected from the FactoryTalk View application, converted for viewing in a web browser, and then published to a FactoryTalk ViewPoint Server (also called the web server).

- For Site Edition applications, the FactoryTalk ViewPoint Server runs on a desktop or server computer.
- For Machine Edition applications, a PanelView™ Plus operator terminal functions as the server.

Stand-alone FactoryTalk Linx Server

FactoryTalk Linx is a FactoryTalk Live Data server and can be enabled as a FactoryTalk Alarms and Events server. Your applications use FactoryTalk Linx to communicate with devices such as controllers and I/O scanners.

Stand-alone FactoryTalk Directory Server

FactoryTalk Directory provides a central lookup service for a FactoryTalk system so all definitions do not have to exist in a single physical project file. References saved by FactoryTalk Directory are used by FactoryTalk-enabled products and FactoryTalk services to locate definitions when they are needed. It allows clients to locate key configuration information such as system organization, server locations, and policy information. FactoryTalk Directory provides a common address or phone book of factory resources that are shared among FactoryTalk-enabled applications in a distributed system.

FactoryTalk Services Platform

FactoryTalk Services Platform provides a set of common services (such as diagnostic messages, health monitoring services, and access to real-time data) for all the FactoryTalk products and applications used in a control system.

FactoryTalk Administration Console

FactoryTalk Administration Console is a stand-alone tool for developing, managing, and securing multiple FactoryTalk View applications.

FactoryTalk Directory

The FactoryTalk Directory centralizes access to system resources and names for all FactoryTalk products and components participating in an automated control system.

The FactoryTalk Network Directory manages resources for FactoryTalk View SE network applications, and the FactoryTalk Local Directory manages resources for FactoryTalk View SE local applications.

FactoryTalk Alarms and Events

FactoryTalk Alarms and Events, which installs behind the scenes during FactoryTalk View SE installation, provides system-wide alarm monitoring and control centralized at the FactoryTalk Directory.

To distribute device-based and tag-based alarms in a FactoryTalk View SE application, you can set up FactoryTalk Alarms and Events servers in the application.

FactoryTalk Security

FactoryTalk Security centralizes user authentication and authorization at the FactoryTalk Directory.

FactoryTalk Live Data

FactoryTalk Live Data manages connections between FactoryTalk products and data servers.

FactoryTalk Diagnostics

FactoryTalk Diagnostics collects and provides access to activity, status, warning, and error messages generated throughout a FactoryTalk system.

FactoryTalk Activation

FactoryTalk Activation services provide a secure, software-based system for activating Rockwell Software products and managing software activation files.

Connectivity

How you plan to obtain data for an application will determine which communications software you install.

You can use FactoryTalk Linx, RSLinx Classic, or other software and devices that support OPC (OLE for Process Control) communications.

Tip: FactoryTalk Linx is automatically installed for FactoryTalk View applications.

FactoryTalk Linx

FactoryTalk Linx is a communication server built around FactoryTalk technology to assist in developing and running your FactoryTalk View SE applications.

For communications with Allen-Bradley local and remote devices, particularly with Studio 5000 controllers, FactoryTalk Linx is the recommended data communications software for FactoryTalk View applications.

FactoryTalk Linx now allows you to create redundant controller shortcuts and to perform online tasks such as uploading and downloading Studio 5000 Logix Designer files.

Installation package

The Setup wizard offers the following options for FactoryTalk View SE applications:

- Studio Enterprise
- Site Edition Server
- Site Edition Client
- Site Edition Station
- FactoryTalk ViewPoint SE
- Stand-alone FactoryTalk Linx Server
- Stand-alone FactoryTalk Directory Server

The Setup wizard offers the following options for FactoryTalk View ME applications:

- Studio for Machine Edition
- Machine Edition Station for Windows
- Stand-alone ME Transfer Utility

System requirements

This chapter introduces computer and Microsoft Windows support information for a FactoryTalk View SE system, including:

What can I install and run on one server?

In a network application, it is possible for a single server computer that meets the recommended requirements to host all of the following components:

- One FactoryTalk View SE Server
- One FactoryTalk Linx data server (which can also be set up as FactoryTalk Alarms and Events device-based alarm server, or also includes the secondary data server)
- One FactoryTalk Alarms and Events tag-based alarm server
- The FactoryTalk Network Directory

If a network application requires multiple HMI servers, data servers, or alarm servers, to distribute the load, it is recommended that you install the necessary software and run the servers on multiple host computers.

For information about setting up redundant FactoryTalk View SE servers, see *FactoryTalk View Site Edition User's Guide*.

Review hardware requirements

Typically, application servers such as FactoryTalk View SE Server, FactoryTalk Alarms and Events, and FactoryTalk Linx will need to be sized with faster CPUs and more RAM than operator or engineering workstations.

You should also specify a hard drive that has enough disk space to provide virtual memory that is at least twice the size of the physical RAM.

The following is a sample specification of computer hardware to run FactoryTalk View SE applications aligned with the hardware used in product development testing.

Type	Description	CPU	RAM

Operator Workstation	FactoryTalk View SE Client or FactoryTalk View SE Station	Intel® Core™ i5 Standard Power processor	4 GB
Engineering Workstation	FactoryTalk View Studio Enterprise FactoryTalk Linx Studio 5000	Intel Core i5 Standard Power processor	8 GB
Application Server	FactoryTalk View SE server FactoryTalk View Studio Enterprise FactoryTalk Alarms and Events tag-based server FactoryTalk Linx data server with FactoryTalk Alarms and Events enabled	**Smaller systems**: Intel Core i5 Standard Power processor	4 GB
		Medium to larger systems: Quad core Intel Core Xeon family processor	8 GB

Review operating system requirements

The choices you make will depend in part on whether the computer is to host an application client or server. You might choose to run operator or engineering workstations in a Windows Server operating system, but that is not required.

Recommended specifications for application servers are not as flexible, because server computers are more likely to host critical components and to handle more of the processing load in a FactoryTalk View SE application.

FactoryTalk View SE is tested on operating systems installed from original Microsoft media only. FactoryTalk View SE runs on the following Windows operating systems:

- Windows® 10* (v2004, v20H2, v21H1, and v21H2)
- Windows 10 IoT Enterprise 2016 Long-Term Servicing Branch (LTSB)
- Windows 10 IoT Enterprise 2016 (LTSB) Embedded**
- Windows 10 IoT Enterprise 2019 Long-Term Servicing Channel (LTSC)
- Windows 11
- Windows Server® 2012
- Windows Server 2012 R2
- Windows Server 2016*
- Windows Server 2019

  * For more information, see Rockwell Automation Knowledgebase Document ID: IN4493 - Windows 10 Support for the FactoryTalk Suite of Rockwell Software products and IN4718 - Windows Server 2016 Support for the FactoryTalk Suite of Rockwell Software products.

  ** This operating system is supported with the Allen-Bradley® 61xx family of industrial computers and CompactLogix™ 5480 family of controllers.

Recommendations for application servers

For computers hosting application servers (HMI servers, data servers, or Tag Alarm and Event Servers), operating system requirements depend on whether the server will support more or fewer than 10 client connections.

A client can be any of FactoryTalk View SE Client, FactoryTalk View Studio, the FactoryTalk View SE Administration Console, a FactoryTalk Historian SE connector, a FactoryTalk Transaction Manager connector, or another FactoryTalk View SE Server.

For application servers that support:

More than 10 client connections, the recommended operating systems (with the appropriate number of Client Access Licenses installed)

- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019

10 or fewer client connections, the minimum requirement is

- Windows 10
- Windows 11

Note: Do not run the primary and secondary servers in a redundant server pair on the computers that have different operating systems. For example, do not run the primary server on a Windows Server 2012 computer and the secondary server on a Windows Server 2016 computer.

Set up the Windows domain or workgroup

The number of computers participating in a FactoryTalk View SE network application determines whether the computers can belong to a Windows domain or a workgroup.

Workgroups can be used only in applications that include 20 or fewer computers. Do not use Windows Workgroups with more than 20 computers, a Windows domain is recommended in that case.

For more information about setting up domains and workgroups, see the document, *FactoryTalk View SE Distributed System Design Considerations,* attached to Knowledgebase Document ID: [IN3416 - FactoryTalk View SE Distributed System Design Considerations](#).

- A domain controller makes it possible to administer the network and user accounts from a central location. FactoryTalk Security, which manages centralized security services, supports Windows-linked accounts that are managed and authenticated by the Windows operating system, but have separate permissions for accessing the automation system.
- Name resolution is required for the computers to communicate with each other on the network.
- All computers participating in a single FactoryTalk system must be members of the same Windows domain.
- Do not locate the domain controller on the same computer as any FactoryTalk software. Microsoft recommends against third party software being installed on a domain controller.

Domain controller requirements

For network applications consisting of more than 10 computers, the use of a domain controller is strongly recommended, but not required. The following domain controllers are supported:

- Windows Server 2012
- Windows Server 2012 R2
- Windows Server 2016
- Windows Server 2019

> Note: Do not install FactoryTalk Directory, FactoryTalk View SE Server, or any other application software on the same computer as the Windows domain controller. This configuration is not supported.

Windows workgroup requirements

For network distributed applications consisting of 10 computers or fewer, FactoryTalk View SE can be used in a Windows workgroup network environment.

- Name resolution is required for the computers to communicate with each other on the network.
- Workgroups do not use a domain controller, so central network administration is not available. This means that security and network communications (for example, name resolution) must be handled at each individual computer in the workgroup.
- Each workstation in a workgroup must have the same user accounts, with the same user names and passwords on each machine, for all machines participating in a client-server environment.
- All users in a workgroup should have Administrative rights assigned to them.
- FactoryTalk Directory provides centralized security services without requiring a Windows Server and domain controller. When setting up security for applications in a Windows workgroup, it is recommended that you use the FactoryTalk Directory user accounts. This simplifies account management, by centralizing security services at the FactoryTalk Directory.

About synchronizing time on application computers

In a networked system, to ensure that time stamps on alarms, historical data, and diagnostics are accurate, it is highly recommended that time synchronization be configured on all application computers.

For more information about synchronizing application computer clocks to an authoritative time server, see *FactoryTalk View SE Design Considerations*, attached to Knowledgebase Document ID: [IN3416 - FactoryTalk View SE Distributed System Design Considerations](#).

Set up computers with names to be used in production

When you install the FactoryTalk Services Platform with FactoryTalk View SE, the program creates a FactoryTalk account for the current computer, under the Local and Network FactoryTalk Directories.

As a result, if you rename the computer *after* installing FactoryTalk View SE or when you deploy an application, the FactoryTalk Directory will not recognize the new name.

To avoid this problem, it is recommended that you give the application client and server host computers the names they will use in a production setting, before you install the FactoryTalk View SE software.

> Tip: If you must rename a computer and you encounter problems, for assistance, see Knowledgebase Document ID: [BF20782 - FactoryTalk View SE: Inability to access FactoryTalk Network Directory after renaming computer](#) (for FactoryTalk View SE network applications), or [QA3873 - Renaming a PC with ME/SE Local Security](#) (for FactoryTalk View SE local and ME applications).

Pre-installation configuration

This chapter guides you through the steps for preparing your computer for installation of the FactoryTalk View SE product and supporting software.

Use the following checklist for preparing the computer for installation:

Disable Windows automatic updates

When you install Microsoft Service Pack releases and other Windows operating system updates, you introduce new software that could affect the operation of FactoryTalk View SE components on the computer.

> Note: Windows updates should be disabled in all production computers. Updates can cause unexpected behaviors, including shutting down running applications and automatically restarting the computer.

Configure NICs and switch ports

The Network Interface Card (NIC) is the hardware in a computer that lets it connect to other devices on the network. A switch manages traffic on the Ethernet network. Some switches allow ports (physical connections) to be configured individually.

The link speed and duplex settings for network connections can be auto-negotiated (the device determines the best way to communicate), or manually configured (settings are hard coded).

Many NICs also offer a power-saving feature that turns off the network card if it is not being used. This setting sometimes interferes with the ability of the computer to receive data, causing errors such as wireframes, stale data, and other failures. To prevent these errors, disable power saving for your computer's network interface cards.

For FactoryTalk View SE applications, it is recommended that you use managed switches across the control system network and that you manually configure the same link speed and duplex setting for all network connections into the managed switches.

It is also recommended that you manually configure the managed switch ports, using the same settings. To learn how to configure switch ports, see the product documentation provided with the switches you are using.

For an overview of best practices for connecting devices over a network, see the *Ethernet Reference Manual* document in the Rockwell Automation Literature Library. (Search for publication ENET-RM002.)

> Note: If you are using unmanaged switches, the NIC settings must remain auto-negotiated. Connecting an auto-negotiated device to a manually configured device can result in network communication errors and is not recommended.

Disable or uninstall third-party firewalls

FactoryTalk View SE is tested and compatible with the built-in Windows firewall. FactoryTalk View SE is not tested with third-party firewalls. We recommend that you not use third-party firewalls because they may cause unexpected results.

Before installing FactoryTalk View SE, disable or uninstall all third-party firewalls on the computer. For details, see the documentation supplied with your firewall product.

Remove Enhanced Security Configuration

Internet Explorer Enhanced Security Configuration (ESC) is a group of default security settings for Windows Server 2012 and Windows Server 2016 that protects servers by limiting the ways users can browse Internet and Intranet websites on the computer.

If installed on a computer with FactoryTalk View SE software components, the Internet Explorer ESC can interfere with the ability of FactoryTalk View SE Clients to connect to application servers.

To avoid unexpected behavior, it is recommended that you remove the ESC from computers running FactoryTalk View SE.

To remove ESC in Windows Server 2012 or 2016:

1. On the Windows taskbar, select the **Server Manager** icon.
2. In the **Server Manager Dashboard** window, on the left side, click **Local Server**.
3. On the right side of the **Local Server** window, under **Properties**, locate **IE Enhanced Security Configuration** and click **On**.
4. In the **Internet Explorer Enhanced Security Configuration** dialog box, select **Off** to turn off IE Enhanced Security for Administrators and for Users, and then click **OK**.

Set up Data Execution Prevention

Data Execution Prevention (DEP) is a Microsoft Windows security feature that is built into the operating system starting with Windows XP and Windows Server 2003. DEP is intended to protect programs and services from viruses and other security threats.

The DEP settings determine which programs and services are covered by DEP protection. On computers running FactoryTalk View SE components, it is recommended that DEP be turned on for essential Windows programs and services only.

To turn on DEP:

1. Open Windows Control Panel, and then select **System and Security > System**.
2. Under **Related settings** on the left, select **Advanced system settings**.
3. On the **Advanced** tab of the **System Properties** dialog box, under **Performance**, click **Settings**.
4. In the **Performance Options** dialog box, click the **Data Execution Prevention** tab.
5. Select **Turn on DEP for essential Windows programs and services only**, and then click **OK**.

Remove unnecessary DCOM networking protocols

If multiple DCOM protocols are installed and configured on the computer, performance of communications in a FactoryTalk View SE system can be adversely impacted. To ensure that DCOM communications function correctly, and do not affect the performance of the system, remove all protocols other than TCP/IP.

To remove unnecessary DCOM protocols:

1. Select **Start > Run**.
2. In the **Run** dialog box, type **dcomcnfg**, and then click **OK**.
3. In the **Component Services** tool, expand **Component Services**, open the **Computers** folder, right-click **My Computer**, and then select **Properties**.
4. Click the **Default Protocols** tab. If the DCOM Protocols list shows protocols in addition to TCP/IP, remove those unnecessary protocols. For example, remove the protocol Connection-oriented SPX.

Install FactoryTalk View

Install FactoryTalk View to develop and run distributed systems involving multiple computers on a network, or local applications confined to a single computer using FactoryTalk View SE.

To learn about upgrading an existing version of FactoryTalk View SE, see Upgrade an operating FactoryTalk View SE application on page 43.

To learn about modifying or uninstalling the FactoryTalk View software, see Modify or uninstall FactoryTalk View on page 31.

Steps

FactoryTalk View supports the Setup wizard installation and command-line installation.

Setup wizard installation

This chapter uses the Setup wizard to show the installation process, includes:

- Step 1: Prepare for the installation on page 25
- Step 2: Start the installation on page 27
- Step 3: Post-installation procedures on page 28

In a distributed system, you can also install Site Edition clients through the web browser. For instructions, see Install SE clients in a distributed system on page 30.

Command-line installation

In the command-line installation, you type a specified command line with multiple parameters. During the installation process, instead of prompting you for installation and configuration information interactively, the process follows the parameters specified in the command lines and completes the installation silently. For more information, see Use command-line installation on page 71.

Step 1: Prepare for the installation

Before the installation, you need to decide which components to install.

The Setup wizard offers the following options for FactoryTalk View SE applications:

- Studio Enterprise
- Site Edition Server
- Site Edition Client

- Site Edition Station
- FactoryTalk ViewPoint SE
- Stand-alone FactoryTalk Linx Server
- Stand-alone FactoryTalk Directory Server

The option you choose depends on the type of FactoryTalk View SE application or software component you plan to run on the computer and on the design of your control system.

For each selection on the **Setup** screen, the following table shows the mandatory, recommended and optional software components to install.

Selected Application	Mandatory	Recommended	Optional
Studio Enterprise	Studio Enterprise Site Edition Client[1] FactoryTalk Services Platform FactoryTalk Activation Manager FactoryTalk Alarms and Events FactoryTalk Linx	Site Edition Server FactoryTalk ViewPoint SE FactoryTalk ViewPoint ME	FactoryTalk Historian Connectivity[2] FactoryTalk Updater Agent[3]
Site Edition Server	Site Edition Server FactoryTalk Services Platform FactoryTalk Activation Manager FactoryTalk Alarms and Events FactoryTalk Linx		Site Edition Client FactoryTalk Updater Agent
Site Edition Client	Site Edition Client FactoryTalk Services Platform FactoryTalk Activation Manager FactoryTalk Alarms and Events		FactoryTalk Historian Connectivity FactoryTalk Updater Agent
Site Edition Station	Site Edition Server Site Edition Client FactoryTalk Services Platform FactoryTalk Activation Manager FactoryTalk Alarms and Events FactoryTalk Linx	Studio Enterprise FactoryTalk ViewPoint SE	FactoryTalk Historian Connectivity FactoryTalk Updater Agent
FactoryTalk ViewPoint SE	FactoryTalk ViewPoint SE Site Edition Client FactoryTalk Services Platform FactoryTalk Activation Manager FactoryTalk Alarms and Events		FactoryTalk Historian Connectivity FactoryTalk Updater Agent
Stand-alone FactoryTalk Linx Server	FactoryTalk Linx FactoryTalk Services Platform FactoryTalk Activation Manager FactoryTalk Alarms and Events		FactoryTalk Updater Agent
Stand-alone FactoryTalk Directory Server	FactoryTalk Services Platform FactoryTalk Activation Manager		FactoryTalk Updater Agent

1. Site Edition Client is not mandatory if you do not plan to install FactoryTalk ViewPoint SE.
2. For more information about FactoryTalk Historian Connectivity, see About FactoryTalk Historian Connectivity on page 27.
3. For more information about FactoryTalk Updater Agent, see Common upgrade procedures on page 65.

About FactoryTalk Historian Connectivity

FactoryTalk Historian Connectivity allows the trending objects to retrieve data from a Historian SE Server or FactoryTalk Historian ME Module. It makes updates to FactoryTalk Administration Console and FactoryTalk View SE Studio to display an Historian icon for FactoryTalk Historian SE when registered. You can use it to create new FactoryTalk Historian SE points from trending objects, and select existing Historian points from Historian SE or Historian ME.

To trend data points from the FactoryTalk Historian SE server, FactoryTalk Historian ME model, or OSIsoft® PI Server™, FactoryTalk Historian Connectivity must be installed as a minimum required component with Site Edition Client or Studio Enterprise.

> Tip: You cannot install FactoryTalk Historian Connectivity on top of FactoryTalk Historian SE.

Before you start using the trending objects with your FactoryTalk Historian SE server, do the following:

- Add the FactoryTalk Historian SE server to the same FactoryTalk Directory as FactoryTalk View SE computers.
- Create a mapping or trust for security between FactoryTalk View SE and FactoryTalk Historian SE.

For detailed instructions, see *FactoryTalk View SE TrendX and TrendPro* in *FactoryTalk Historian SE Installation and Configuration Guide*.

Step 2: Start the installation

To start the installation:

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. Follow the on-screen instructions.

IMPORTANT	If you install **Studio Enterprise**, **Site Edition Server**, or **FactoryTalk ViewPoint SE** on a computer with no FactoryTalk View component installed, the installation enables HTTPS by default. You can select **Customize** to disable HTTPS.
	For secure communication, HTTPS protocol is recommended. If HTTPS is enabled, you must configure a TLS certificate after installation. If you do not configure the certificate, there will be unexpected errors when operating FactoryTalk View SE components. For details, see Configure a TLS certificate on page 29.
	With HTTPS enabled, port 443 is used by default. However, if port 443 is already in use by other web applications (such as Node.js web server), this will cause a port conflict. To avoid the port conflict, after the installation, change the port number used by FactoryTalk View SE in:
	• Site binding in Internet Information Services (IIS) Manager
	• FactoryTalk View SE's HTTPS protocol properties in FactoryTalk Administration Console
	If you want to install a FactoryTalk View SE component on a computer installed with any FactoryTalk View SE component, the installation will keep the original settings.

FactoryTalk Batch View HMI controls are installed with Site Edition Client and Studio Enterprise by default.

4. When the installation completes:

- To activate now, use the serial number and product key.
- To activate later, use the activation file.

For more information about activation, see *FactoryTalk Activation Manager Help*.

Step 3: Post-installation procedures

After you install FactoryTalk View, there may be several final setup steps that must be completed:

- Specify the Network Directory server location on page 28
- Configure a TLS certificate on page 29
- Install product updates on page 65

Specify the Network Directory server location

After installing FactoryTalk software, specify one of the computers on the network as the Network Directory server, and then point the other computers on the network to that computer. This allows all of the computers on the network to share FactoryTalk Network Directory services and resources.

To configure the Network Directory Server computer:

1. On the computer that you want to use as the Network Directory Server, select **Start > Rockwell Software > Specify FactoryTalk Directory Location**.

   Tip: You will have to log on as an administrator on the computer.

2. In the **FactoryTalk Directory Server** dialog box,

   - If **localhost** is not displayed in the field **Computer hosting directory server**, click the **Browse** button.

- If **localhost** is displayed, the computer is already specified as the Network Directory host. You can close the utility.

3. In the **FactoryTalk Directory Server Configuration** dialog box, select **This computer** and click **OK**.
4. Click **OK** to close the utility.

To configure the client and other application server computers:

1. Select **Start > Rockwell Software > Specify FactoryTalk Directory Location**.
2. Click the **Browse** button beside the field, **Computer hosting directory server**.
3. In the **FactoryTalk Directory Server Configuration** dialog box, select **Remote** computer.
4. Type the name of the Network Directory server computer, or click the **Browse** button to find and select the computer, and then click **OK**.

   💡 Tip: You will have to log on as an administrator on the computer.

5. Click **OK** again to close the utility.
6. Repeat steps 1 to 5 on the remaining client and server computers that will participate in the deployed network distributed application.

Configure a TLS certificate

If you have enabled HTTPS during the installation, configure a Transport Layer Security (TLS) certificate on the HMI server, FactoryTalk View Studio, and FactoryTalk ViewPoint SE server computers.

Certificates from your organization's internal Certificate Authority (CA) and a commercial CA are supported. If you want to use a commercial certificate, you need to obtain it by sending a request to a CA. Once you have a certificate, install it on all HMI server and FactoryTalk View Studio computers.

The steps may vary on different operating systems. Follow the on-screen instructions that apply to the operating system you are using. This instruction uses Windows 10 as an example.

To install a TLS certificate:

1. On the HMI server, FactoryTalk View Studio, and FactoryTalk ViewPoint SE server computers, open Internet Information Services (IIS) Manager.

   💡 Tip: The Setup wizard detects and installs IIS automatically if IIS is not available on the computer.

2. Under **IIS**, double-click **Server Certificates**.
3. In the **Actions** pane:
   - If you have a PFX file containing the certificate (public keys) and the corresponding private keys, click **Import**.
   - If you have a file received from a CA containing the CA's response (a CER file, for example), click **Complete Certificate Request**.
4. Add the certificate.
   - If you selected **Import**:

     a. In the **Import Certificate** dialog box, click the browse button.

b. Navigate to the PFX file, and then click **Open**.

c. Enter the password.

d. Click **OK**.

- If you selected **Complete Certificate Request**:

a. On the **Specify Certificate Authority Response** page, click the browse button.

b. Navigate to certificate file, and then click **Open**.

c. Enter a name for the certificate in the **Friendly name** box.

d. Click **OK**.

After installing the certificate, make sure the TLS certificate is selected for the HTTPS site binding.

To select a TLS certificate for the HTTPS site binding:

1. On the HMI server and FactoryTalk View Studio computers, in the **Connections** pane of Internet Information Services (IIS) Manager, go to the server and site that the certificate binds to.
2. In the **Actions** pane, click **Bindings**.
3. In the **Site Bindings** dialog box, select the HTTPS site binding, and then click **Edit**.
4. From the **SSL certificate** list, select the desired certificate.
5. Click **OK**.

Install SE clients in a distributed system

In a distributed system, after installing the server computer with the Client Install Portal feature, you can install SE clients through the web browser.

To install the SE client application:

1. On the client computer, open Internet Explorer.
2. In the **Address** field, type **http://servername/ftviewclient** where *servername* is the computer name of your FactoryTalk View SE server.

   Note: If you are using TLS, begin with **https://** instead.

   The web page may not be opened if you enable HTTPS on the IIS server and your client is on another computer. You need to configure the client to access the server. To do this, export the server certificate and import the certificate to the client computer. For detailed instructions on exporting and importing server certificates, see Microsoft TechNet.

3. Press **Enter**. Internet Explorer displays a page from the server that allows you to install the FactoryTalk View Site Edition Client application.

   Tip: If Internet Explorer displays an error message that it cannot connect to the install web page, try adding the FactoryTalk View Site Edition website (URL above) to your local intranet site list.

   To do this, in Internet Explorer, click **Tools** > **Internet Options** > **Security** tab > **Local intranet** > **Sites** > **Advanced**, and add the website to the list. For more information about the local intranet, refer to Windows Help and Support.

4. Microsoft .NET Framework 4.0 or higher is required before you can install FactoryTalk View Client. If it is not installed, FactoryTalk View installs .NET Framework 4.8 by default.
5. Follow the on-screen instructions. If prompted to restart your computer, click **Restart Now**.

6. Once the computer has restarted, repeat steps 1 to 4.
7. To install SE Client, click **Install FactoryTalk View Site Edition Client on this computer**. Follow the on-screen instructions.

   If you are displaying data from FactoryTalk Historian on trends, click **Install FactoryTalk Historian Connectivity tools**. Follow the on-screen instructions to complete the installation. For more information about FactoryTalk Historian Connectivity, see <u>About FactoryTalk Historian Connectivity</u> on <u>page 27</u>.

Modify or uninstall FactoryTalk View

To modify components of FactoryTalk View, from the installation package, double-click **Setup.exe**, select one product and click **Modify**.

To uninstall FactoryTalk View, do one of the following:

- From the installation package, double-click **Setup.exe**, select one product and click **Uninstall**.
- From **Programs and Features** of Windows Control Panel, right-click the installed FactoryTalk View product and select **Uninstall**.
- From the **Command Prompt** window, type a command with the following syntax:

  ```
  Setup.exe [/Q | /QS] /Uninstall /Product=product_name
  ```
  Components, such as FactoryTalk Activation Manager, that are shared with other products will not be uninstalled. For more information about command-line parameter, see <u>Command-line parameters</u> on <u>page 71</u>.

Activate FactoryTalk View software

To activate FactoryTalk View SE, use the FactoryTalk Activation Manager installed with FactoryTalk View.

About FactoryTalk Activation Manager

FactoryTalk Activation services provide a secure, software-based system for activating Rockwell Software products and managing software activation files.

FactoryTalk View SE products use two types of activations:

- **Floating** concurrent activations are checked out of an activation server located on the network, and require a continuous network connection.
- **Borrowed** concurrent activations are time-expiring activations checked out of an activation server on the network, and do not require a continuous network connection.

For standard installations of the product software, FactoryTalk View SE does not support node-locked activations.

For more information, see the *FactoryTalk Activation Manager Help*.

What happens if FactoryTalk View is not activated?

If the FactoryTalk View components are not activated, the software will continue to run for up to seven days. After the grace period expires, if you restart FactoryTalk View SE and activation remains unavailable, the software will run for two hours in demo mode.

When running in demo mode, there are some limitations.

- You can run a local station FactoryTalk View application for up to two hours.
- Remote clients cannot connect to a FactoryTalk View server.

Starting from FactoryTalk View version 10.00, some limitations are eliminated. You can create or load over five graphic displays per HMI server now. You can also fully use the Symbol Factory library without restriction.

Activation keys for FactoryTalk View software components

The activation files you download from the Rockwell Software Activation Website contain the activation keys you purchased, in encrypted form. The activation key is the software that activates FactoryTalk View SE components.

Following is a list of activation keys used by the FactoryTalk View SE and ME products. For information about the keys required to activate other Rockwell Automation products in your application, see the product documentation.

To activate this software product or component	Use this key
FactoryTalk View Studio* *Includes software for developing and testing FactoryTalk View Site Edition and Machine Edition applications	RSV.STUDIO
FactoryTalk View SE Server (network distributed applications), unlimited displays	RSVSESRV.MAX
FactoryTalk View SE Server (network distributed applications), 250 displays	RSVSESRV.250
FactoryTalk View SE Server (network distributed applications), 100 displays	RSVSESRV.100
FactoryTalk View SE Server (network distributed applications), 25 displays	RSVSESRV.25
FactoryTalk View SE Redundancy Server (network distributed applications), unlimited displays	FTVSERED.MAX
FactoryTalk View SE Redundancy Server (network distributed applications), 250 displays	FTVSERED.250
FactoryTalk View SE Redundancy Server (network distributed applications), 100 displays	FTVSERED.100
FactoryTalk View SE Redundancy Server (network distributed applications), 25 displays	FTVSERED.25
FactoryTalk View SE Client (network distributed applications), read and write	RSVSECLI.RW
FactoryTalk View SE Client (network distributed applications), view only	RSVSECLI.RO
FactoryTalk View SE Station (network station and local station applications), unlimited displays	RSVSE.MAX
FactoryTalk View SE Station (network station and local station applications), 250 displays	RSVSE.250
FactoryTalk View SE Station (network station and local station applications), 100 displays	RSVSE.100
FactoryTalk View SE Station (network station and local station applications), 25 displays	RSVSE.25
FactoryTalk View SE Station (network station and local station applications), 15 displays	RSVSE.15

Sharing keys among multiple software components

Multiple FactoryTalk View SE software components can function using one activation key in the following cases:

- Multiple instances of FactoryTalk View Studio or the FactoryTalk View SE Client running on the same computer can use a single key (RSV.STUDIO or RSVSECLI), as long as the components are not running in a Terminal Services or a Remote Desktop Services session. However, within that single Terminal Services or a Remote Desktop Services session, the client activation key is sharable.

  Tip: Starting from FactoryTalk View SE version 11.0 and ThinManager version 11.0, a single FactoryTalk View SE Client license is required per ThinManager-managed terminal. This allows you to deliver an unlimited number of sessions (either for ThinManager MultiSession or Failover) and consume only that one SE Client license per ThinManager-managed terminal.

- Local applications use a single key (RSVSE.*) to activate both the FactoryTalk View SE Client and the FactoryTalk View SE Server at runtime. These components running together are also known as FactoryTalk View SE Station. To run multiple station client instances on the same server computer, make sure to launch the clients first and then the server. Otherwise, two activation keys may be required.

  Tip: FactoryTalk View SE Server activations—known as capacity activations because they are based on the number of displays in an application—cannot be shared.

- If you want to switch from a station application to a network distributed application, use the original station key to activate the remote display client in the network distributed application.

Read-write versus view-only activations

In a network application, FactoryTalk View SE Clients can use two types of activation:

- **Read-write** keys (RSVSECLI.RW) allow full read-write privileges.
- **View-only** keys (RSVSECLI.RO) allow view-only privileges.

The type of license obtained by the client decides whether a FactoryTalk View SE Client runs in read-write or in view-only mode.

Do not rely on available activation keys to determine whether the FactoryTalk View SE Client runs in read-write or view-only mode. Instead, to ensure that a client always runs in view-only mode, choose the view-only option when setting up the client's configuration file. For details, click **Help** in the FactoryTalk View SE Client wizard.

Deploy applications

After you finish developing and testing a FactoryTalk View Site Edition application, you can deploy it to run in a live setting, such as the plant floor.

This chapter shows the steps of deploying network distributed applications, network station applications, and local station applications. Most steps are common for the three types of applications. Those that are unique to a certain application are marked with a note.

Step 1: Move the application

Two steps are involved in moving an application:

- On the development computer, back up the application.
- On the production computer, restore the application archive.

> Tip: Before backing up an application, record the user names and passwords of administrative users set up for the application, in case you need this information after restoring the application.

To back up an application on the development computer

1. Select **Start > Rockwell Software > FactoryTalk View SE Application Manager**.

   > Tip: The logged on user must have the **Backup and restore directory contents** permission. For more information, see FactoryTalk Security Help or check with your System Administrator.

2. On the **Create a Backup** tab, select your application and follow the wizard to back up the application.
3. Copy the .apb file to the production computer.

If you are restoring an application on a computer that contains a copy of the original application, use FactoryTalk View SE Application Manager to delete or rename the original application, before you begin the restore operation.

To restore an application on the production computer

1. (optional) If you are restoring a network distributed application, make sure that all client and server computers in the application point to the same FactoryTalk Directory server.

   a. Select **Start > Rockwell Software > Specify FactoryTalk Directory Location**.

   b. Click the **Browse** button beside the field, **Computer hosting directory server**.

   c. In the **FactoryTalk Directory Server Configuration** dialog box, click **Remote computer**.

   You will have to log on as an administrator on the computer.

d. Click **OK**.

2. Select **Start > Rockwell Software > FactoryTalk View SE Application Manager**.

   Tip: The logged on user must have the **Backup and restore directory contents** permission. For more information, see FactoryTalk Security Help or check with your System Administrator.

3. In the **Restore an Archive** tab, specify the restore options and follow the wizard.

Step 2: Move the application's data server files

Ensure that the required communications software (for example, FactoryTalk Linx, RSLinx Classic, or other OPC software) is installed on computers that will run data servers.

Then, if necessary, for the data servers you are deploying, move configuration files to the production computers, and then specify the new host computer names.

   Tip: For information about moving setup files for OPC data servers, see the product documentation for the OPC server.

Step 3: Renew data server shortcuts and device paths

After restoring FactoryTalk Linx data servers in the application, renew or verify the shortcuts and device paths associated with each data server, as needed.

If you are restoring redundant data servers, then the device paths must be confirmed and reapplied for both the primary and the secondary server.

To renew FactoryTalk Linx device paths:

1. Open the restored application in the FactoryTalk Administration Console.
2. In the Explorer window, expand the data server (FactoryTalk Linx), and then double-click **Communications Setup**.
3. In the Communications Setup editor, select each configured FactoryTalk Linx shortcut, point the shortcut at the correct device, and then click **Apply**.
4. Save the configuration, and then close the **Communications Setup** editor.

Step 4: Set up additional HMI server properties

After restoring the application, open the HMI server properties dialog box in FactoryTalk View Studio to verify the HMI server settings and set up additional HMI server properties as needed.

According to the application type, you can:

- Specify startup components
- Specify the startup type (only applicable for network distributed applications)
- Set up redundancy (only applicable for network distributed applications)

If you are deploying a network distributed application, you must set up the HMI server properties separately for each server in the system. You can do this on the computer running the HMI server or from a remote computer.

To open the HMI Server Properties dialog box:

1. Select **Start > FactoryTalk View Studio**.
2. In the **Application Type Selection** dialog box, select the application type and click **Continue**.
3. On the **Existing** tab, select the application and click **Open**.
4. In the Explorer window, right-click the HMI server and select **Properties**.

Specify startup components

On the **Components** tab, select the application components that will start automatically when the HMI server starts, and select the macro that will run when the server shuts down. You can also start or stop components manually.

For a network distributed application, if the HMI server is redundant, you can also start and stop components for the primary and the secondary server, and select **On active** and **On standby** macros.

Specify the startup type

Note: This topic only applies to when you deploy network distributed applications.

On the **General** tab, you can specify that the HMI server will load when the first client attempts to connect to it (**On demand**) or when the host computer starts up (**Load and run startup components when operating system initializes**). The second option is recommended for production HMI servers, and required for an HMI server that is part of a redundant pair.

Set up redundancy

Note: This topic only applies to when you deploy network distributed applications.

On the **Redundancy** tab, select **Provide redundancy using a secondary server**, specify the name the computer that will host the secondary server, and select a switchover option.

After you apply the settings, FactoryTalk View SE automatically copies HMI project information from the primary server to the secondary server.

Synchronize redundant HMI servers and projects

At runtime, you can make changes to the HMI project components in an application while it is running. For example, you can add, modify or delete graphic displays and other components, and have those changes to take effect at connected clients.

To automatically save the project online edits to both active and standby servers, in FactoryTalk View Studio, from the menu, select **Tools** > **Options**. On the **Settings** tab, make sure the **Save edits to both active and standby HMI servers** option is selected. To keep the HMI memory tag values the same on both active and standby servers, on the same tab, select the **Auto synchronize HMI memory tag values to both active and standby HMI servers** option.

If you do not set up the option, manually replicate the changes from the active server to standby server. The replicate operation copies the current active server's configuration files, including settings in the Components tab, to the standby server.

For example, if an On Active and a Shutdown macro are selected for the Active server, the settings will be replicated to the Standby server. This means that the same macros specified for the Active server will run when the Standby server becomes active or shuts down. Information that is not included in the replicate operation includes datalog files generated at runtime, the current value of HMI memory tags, and retentive tags.

> Note: Make sure to verify the current HMI server name and status before the replication.

To manually replicate the changes:

1. In the FactoryTalk View Studio Explorer window, right-click the HMI server and select **Server Status**.
2. In the **Server Status** dialog box, verify that the current HMI server status is **Active** and the other is **Standby**.
   > Tip: To show the status of the HMI servers, FactoryTalk Alarm and Event servers, and data
   > servers at runtime, add one of the following to the application:
   > - A **Server Status** display under the **Library** folder.
   > - A redundancy function, such as **PrimaryServerStatus** and **SecondaryServerStatus**.
3. In the HMI Server Properties dialog box, in the **Redundancy** tab, click **Replicate Active to Standby**.

Step 5: Set up the FactoryTalk View SE Client

The FactoryTalk View Site Edition client provides a complete runtime operating environment that can run on remote client computers.

When using a network station or local station application, the FactoryTalk View SE Client must run on the same computer as the HMI server.

If you have already set up a FactoryTalk View SE Client file for the application, you can copy the file to the production computer. Otherwise, you can create a new client file.

Create a FactoryTalk View SE Client file

The FactoryTalk View SE Client configuration file specifies the name of the application the client will connect to, the components that start when the connection is made, and how the client will behave at runtime. The file is with a .cli extension.

> Tip: It is not necessary to start the HMI server if you want to use the FactoryTalk View SE Client
> Wizard.

To create a FactoryTalk View SE Client file:

1. Select **Start > Rockwell Software > FactoryTalk View Site Edition Client**.
2. In the FactoryTalk View SE Client Wizard, click **Create a FactoryTalk View SE Client configuration file**, and follow the on-screen instructions. For details about options in the wizard, click **Help**.

By default, auto logout is enabled for 10 minutes, which means the current logged-on user will be automatically logged out if there is no mouse or keyboard activity in 10 minutes. You can cancel this option on the FactoryTalk View SE Client Wizard's **Advanced settings > Security and debugging** tab.

Lock operators into the runtime environment

To lock operators inside the FactoryTalk View SE Client at runtime, for example, to prevent access to other programs on the computer, try one or more of the following methods:

- **Limit the ability to manipulate graphic displays**, by removing the title bar or minimize and maximize buttons from selected displays.

   To do this, in the Display Settings dialog box, clear the check boxes **Title Bar, Minimize Button,** and **Maximize Button**. For details, see *Creating graphic displays* in the *FactoryTalk View Site Edition User's Guide*.

- **Limit the ability to manipulate the client window**, by removing the title bar or minimize and maximize buttons from the client.

   To do this, in the FactoryTalk View SE Client wizard, clear the check boxes, **Show title bar,** and **Show system menu and close button**. For details, click **Help** in the FactoryTalk View SE Client wizard.

- **Prevent switching to other applications**. To do this, in the FactoryTalk View SE Client wizard, select the check box, **Disable switch to other applications**. For details, click **Help** in the FactoryTalk View SE Client wizard.

- **Restrict access to the desktop**, using the DeskLock tool.

   To open Desklock, on the desktop select **Start > Rockwell Software > DeskLock**.
   For details about using DeskLock, click **Help** within the tool.

   Note: Do not enable DeskLock until you read the help for the tool and understand how it works. Otherwise, you could end up locking yourself out of the desktop.

- **Restrict access to system files via the Windows file explorer** when saving the trace data or captured image of TrendPro and XY Plot.

   To do this, use the **CustomFileExplorer** VBA property by setting it to **True**. When saving the trace data or captured image, the custom file explorer opens instead of the Windows file explorer.

Copy existing FactoryTalk View SE Client files

When setting up the FactoryTalk View SE Clients for a network distributed application, you can copy existing client files (.cli) from the development computer to the client production computers.

You can run the client configuration from the desktop, or from any other location on the client computer.

By default, client configuration files are saved on the desktop.

Step 6: Run the FactoryTalk View SE Client

Once the application is deployed, test it by running the FactoryTalk View SE Client.

Note: To connect a FactoryTalk View SE Client to a network distributed application, all client and server computers in the application must point at the same FactoryTalk Network Directory server. For details, see Specify the Network Directory server location on page 28.

To run an SE Client from FactoryTalk View Studio:

- In FactoryTalk View Studio, on the Tools menu, click **Launch SE Client**.

To run an SE Client when Windows starts:

1. Create a shortcut to the.cli file (on the desktop, for example).
2. Move the shortcut to the Windows Startup folder.

For information about adding shortcuts to the Startup folder, see the Windows Help.

Administer deployed applications

To make changes to an application after it is deployed, use FactoryTalk View Studio.

To do this in FactoryTalk View Studio	Use this editor
Change the properties of an HMI server.	HMI Server Properties
Change the properties of a data server.	Data Server Properties
Add FactoryTalk users to an application.	Runtime Security
Set up security for commands and macros.	Secured Commands
Run FactoryTalk View commands.	Command Line
Change the paths of data log models.	Data Log Paths
Import and export HMI tags.	Tag Import and Export Wizard

For details about these editors or more administrative operations, see FactoryTalk View SE Help.

Upgrade operating network distributed applications

Upgrading the FactoryTalk View Site Edition software in an automation and control application involves two core tasks: uninstalling the existing software and then installing the new version.

> Tip: Applications developed on versions 6.0 and earlier may need to be converted using the Legacy Tag Database Conversion utility. To start the utility, select **Start > Rockwell Software**, right-click **Legacy Tag Database Conversion** and select **Run as administrator**. For details about using the utility, click **Help**.

Depending on the design, content, and complexity of your control system, you might have to perform additional tasks to support the upgrade, especially if you are upgrading FactoryTalk View SE in a production environment.

The upgrading steps vary depending on your application:

- Upgrade a non-redundant network distributed application on
- Upgrade a redundant network distributed application on

As there are many possible variations for this type of application, parts of the documented process might not apply directly to the application you are upgrading. If you have questions about architectural elements not covered in this chapter, for example, your application is more or less complex than the example provided, contact your local Rockwell Automation Sales office for assistance.

> Tip: RSView Enterprise is the former name of the FactoryTalk View family of software products. If you are upgrading from a version of RSView, the information in this chapter still applies, even though it refers to FactoryTalk View as the previous product version.

Upgrade a non-redundant network distributed application

Use the following checklist as a guideline for upgrading your application.

Part 1: Prepare for the upgrade

- Step 1: Prepare for the upgrade on
- Step 2: Back up the deployed application on

Part 2: Perform upgrade of software components

- Step 3: Shut down all client computers on
- Step 4: Upgrade the FactoryTalk Directory server on
- Step 5: Upgrade the HMI server on
- Step 6: Upgrade the data server on

Example

The following illustration shows an example of a FactoryTalk View SE network distributed application without redundant servers.

In this example, **Workstation #1** is the name of the engineering workstation. Assume that:

- The FactoryTalk Directory server, HMI server, and data server are hosted on different computers.
- The Tag Alarm and Event server and HMI server are hosted on the same computer.

Part 1: Prepare for the upgrade

Step 1: Prepare for the upgrade

Use the following multi-step checklist as a guideline when you prepare for the upgrade.

Log on with administrative rights

Make sure the user performing the upgrade has administrative rights in Windows and at the FactoryTalk Network Directory.

- Windows administrative rights are required to install FactoryTalk View and supporting software.
- FactoryTalk administrative rights are required to log on to the FactoryTalk Network Directory, back up and restore FactoryTalk View SE applications, etc.

Record the names and passwords of administrative users

Before backing up the deployed application, ensure that you have recorded the user names and passwords of users that belong to the FactoryTalk administrators group.

Perform set-up tasks on application computers

To ensure that FactoryTalk View SE runs smoothly after it is installed, review the chapter Hardware, operating system, and domain information on page 15. It describes hardware and software requirements, application limits, and tasks you can perform on application computers.

Step 2: Back up the deployed application

Before backing up the deployed application, ensure that the most recent application data is available for the upgrade at the FactoryTalk Network Directory.

To back up the application on the HMI server

1. Select **Start > Rockwell Software > FactoryTalk View SE Application Manager**.

   Tip: The logged on user must have the **Backup and restore directory contents** permission. For more information, see FactoryTalk Security Help or check with your System Administrator.

2. On the **Create a Backup** tab, select your application and follow the wizard to back up the application.

Part 2: Perform upgrade of software components

Step 3: Shut down all client computers

To disconnect the clients from the servers, shut down all runtime client computers, server computers, and **Workstation #1**.

Step 4: Upgrade the FactoryTalk Directory server

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. On the **Setup** page, select **Stand-alone FactoryTalk Directory Server** and click **Install Now**.

   Tip: If you host the FactoryTalk Network Directory, HMI server, and data server on the same computer, select **Studio Enterprise**, and skip to Step 7: Upgrade the engineering workstation on page 46.

4. Follow the instructions to finish the installation. For more information, see [Install FactoryTalk View](#) on [page 25](#).
5. After installation, install any necessary product updates. For more information, see [Install product updates](#) on [page 65](#).

Step 5: Upgrade the HMI server

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. On the **Setup** page, select **Site Edition Server** and click **Install now**.
4. Follow the instructions to finish the installation. For more information, see [Install FactoryTalk View](#) on [page 25](#).
5. After installation, install any necessary product updates. For more information, see [Install product updates](#) on [page 65](#).

Step 6: Upgrade the data server

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. On the **Setup** page, select **Stand-alone FactoryTalk Linx Server** and click **Install now**.
4. Follow the instructions to finish the installation. For more information, see [Install FactoryTalk View](#) on [page 25](#).
5. After installation, install any necessary product updates. For more information, see [Install product updates](#) on [page 65](#).

Step 7: Upgrade the engineering workstation

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. On the **Setup** page, select **Studio Enterprise** and click **Install now**.
4. If you have **FactoryTalk Historian Management Tools** installed, you need to manually uninstall the Management Tools Suite and the System Management Tools before installing **FactoryTalk Historian Connectivity**. For more information, see Knowledgebase Document ID: [QA25767 - FactoryTalk View SE v8.00 (CPR 9 SR 7): The "FactoryTalk Historian Connectivity" option](#).
5. Follow the instructions to finish the installation. For more information, see [Install FactoryTalk View](#) on [page 25](#).
6. After installation, install any necessary product updates. For more information, see [Install product updates](#) on [page 65](#).

Step 8: Migrate the application

Use the following checklist as a guideline when you migrate the FactoryTalk View SE application:

- [Open the application in FactoryTalk View Studio](#) on [page 47](#)
- [Verify FactoryTalk Linx shortcuts](#) on [page 47](#)

Open the application

To migrate the application, open it in the new version of FactoryTalk View Studio installed on upgraded **Workstation #1**.

To open the application:

1. Select **Start > FactoryTalk View Studio**.
2. In the **Application Type Selection** dialog box, select the application type and click **Continue**.
3. On the **Existing** tab, select the application and click **Open**.
4. If prompted to convert the application the new version, click **OK**.
5. Wait until the HMI server and all project components in the application are loaded, and then leave the application open in FactoryTalk View Studio.

Verify FactoryTalk Linx shortcuts

To confirm that data communications are set up correctly in the migrated application, verify that FactoryTalk Linx shortcuts point at the correct devices.

To verify FactoryTalk Linx shortcuts:

1. In FactoryTalk View Studio, expand the data server **FactoryTalk Linx**, and then double-click **Communications Setup**.
2. In the **Communications Setup** editor, select each configured FactoryTalk Linx shortcut, and ensure that it points at the correct device.
3. Save the configuration and close the **Communications Setup** editor.

Test the migrated application

To test the migrated application, run the application on **Workstation #1**.

1. On **Workstation #1**, start a FactoryTalk View SE Client configuration.
2. Ensure that data communications are functioning as expected.

Step 9: Upgrade all runtime clients

If you already have the **Client Install Portal** feature installed on the HMI server, you can upgrade the clients through a web browser. For detailed instructions, see [Install SE clients in a distributed system](#) on [page 30](#). Otherwise, you can use the installation package. Follow the instructions below.

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. On the **Setup** page, select **Site Edition Client** and click **Install now**.

4. Follow the instructions to finish the installation. For more information, see <u>Install FactoryTalk View</u> on <u>page 25</u>.
5. After installation, install any necessary product updates. For more information, see <u>Install product updates</u> on <u>page 65</u>.

Step 10: Test the migrated application

To test the migrated FactoryTalk View SE application, perform these tasks:

- <u>Run the migrated application on upgraded clients</u> on <u>page 48</u>
- <u>Verify that the system is functioning as expected</u> on <u>page 48</u>

Run the application on upgraded clients

On each of the upgraded runtime client computers, run the existing FactoryTalk View SE Client configuration file (.cli).

Verify that the system is functioning as expected

After the application starts running on the upgraded client computers, verify that display navigation, object animation, communications, alarming (if configured), and other applications features are functioning as expected.

Upgrade a redundant network distributed application

Upgrading a redundant system can be done in parts, allowing you to keep your system running without redundancy temporarily while you upgrade. During an upgrade, a temporary system can help you with verification and validation.

Use the following checklist as a guideline for upgrading your application.

Part 1: Prepare for the upgrade

- <u>Step 1: Prepare for the upgrade</u> on <u>page 49</u>
- <u>Step 2: Back up the application on Server #1</u> on <u>page 50</u>

Part 2: Set up a separate system and perform a partial upgrade

- <u>Step 3: Set up a temporary upgrade system</u> on <u>page 51</u>
- <u>Step 4: Upgrade Server #2</u> on <u>page 53</u>
- <u>Step 5: Upgrade Workstation #1</u> on <u>page 54</u>
- <u>Step 6: Migrate the application</u> on <u>page 54</u>
- <u>Step 7: Upgrade selected runtime clients</u> on <u>page 55</u>
- <u>Step 8: Test the migrated application</u> on <u>page 56</u>

Part 3: Upgrade remaining computers and restore redundancy

- <u>Step 9: Upgrade remaining client computers</u> on <u>page 56</u>

Example

The following illustration shows an example of a FactoryTalk View SE network distributed application with redundant servers.

In this example, **Server #1** is the name of the primary server computer, **Server #2** is the name of the secondary server computer, and **Workstation #1** is the name of the engineering workstation. Assume that:

- The FactoryTalk Directory server, primary data server, primary HMI server, and primary Tag Alarm and Event server are located on **Server #1**.
- The secondary data server, secondary HMI server, and secondary Tag Alarm and Event server are located on **Server #2**.

Part 1: Prepare for the upgrade

Step 1: Prepare for the upgrade

Use the following multi-step checklist as a guideline when you prepare for the upgrade.

Log on with administrative rights

Make sure the user performing the upgrade has administrative rights in Windows and at the FactoryTalk Network Directory.

- Windows administrative rights are required to install FactoryTalk View and supporting software.
- FactoryTalk administrative rights are required to log on to the FactoryTalk Network Directory, back up and restore FactoryTalk View SE applications, etc.

Record the names and passwords of administrative users

Before backing up the deployed application, ensure that you have recorded the user names and passwords of users that belong to the FactoryTalk administrators group.

Perform set-up tasks on application computers

To ensure that FactoryTalk View SE runs smoothly after it is installed, review the chapter Hardware, operating system, and domain information on page 15. It describes hardware and software requirements, application limits, and tasks you can perform on application computers.

Ensure that the latest application files are on the primary server

During the upgrade, the application and HMI project files backed up on the primary server are restored on the secondary server, and then migrated in FactoryTalk View Studio on the upgraded engineering workstation.

To migrate and re-deploy the most recent application, ensure that the application and HMI project files you back up initially, on the primary server, are the most recent application files.

Step 2: Back up the application on Server #1

Before backing up the deployed application, ensure that the most recent application data is available for the upgrade on Server #1.

Use the **FactoryTalk View SE Application Manager** tool to back up the application. The backup archive has an .APB extension, and includes all FactoryTalk Directory data, such as accounts, passwords, policies and security settings. It also includes all application contents like application configurations, HMI servers, data servers, and tag Alarm and Event servers.

To back up the application:

1. On **Server #1**, select **Start > Rockwell Software > FactoryTalk View SE Application Manager**.

   Tip: The logged on user must have the **Backup and restore directory contents** permission. For more information, see FactoryTalk Security Help or check with your System Administrator.

2. In the **Create a Backup** tab, select your application and specify the **Host Machine** as **Server #1**.
3. Follow the wizard to back up the application on **Server #1**. For more instructions, see FactoryTalk View SE Application Manager Help.

Part 2: Set up a temporary system and perform a partial upgrade

During this part, a temporary system is set up to test a partial upgrade that involves **Server # 2**, **Workstation #1**, and selected runtime clients. For the test, **Server #2** is set up to function as the primary server.

> Tip: It is recommended that you upgrade the software on some application clients, confirm that the upgraded application is running as expected, and then upgrade the software on the remaining clients. The number of clients to upgrade initially is left to your discretion.
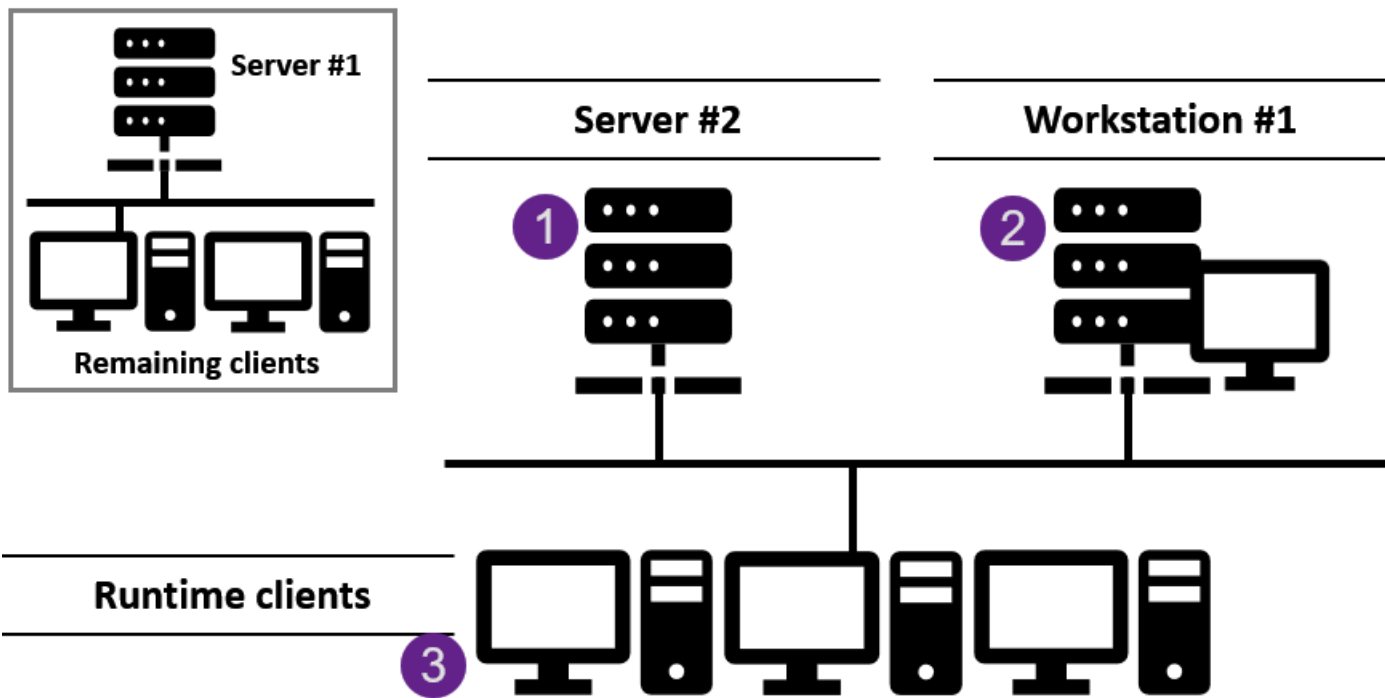
Step	Description
1	First, set up Server #2 as the Network Directory and primary HMI and data server (without redundancy). Then, upgrade the software on Server #2.
2	Next, upgrade the software components on Workstation #1, and then migrate the restored application.
3	Finally, upgrade the software components on some runtime clients only, and then test the partial upgrade.

Step 3: Set up a temporary upgrade system

As part of the process, the original HMI project and application files that were backed up on **Server #1** are restored on **Server #2**. The restored application will be migrated later, after **Workstation #1** is upgraded.

> Note: To avoid introducing incompatible software component versions into a deployed production system, be sure to restore the HMI project and application files before upgrading any software.

To set up a temporary system so that you can test a partial upgrade, perform the tasks below.

- Disable HMI and data server redundancy in the original application on page 52

Disable HMI and data server redundancy in the original application

To ensure that **Server #2** can be detached from the application for upgrading, open the application in FactoryTalk View Studio, and disable redundancy for the HMI server and data server.

To disable HMI and data server redundancy:

1. On **Workstation #1**, open the application in FactoryTalk View Studio.
2. In the Explorer window, right-click the HMI server and select **Properties**.
3. In the **Redundancy** tab, clear the check box **Provide redundancy using a secondary server**, and click **OK**.
4. In the Explorer window, right-click the data server **FactoryTalk Linx** and select **Properties**.
5. In the **Redundancy** tab, clear the check box **Provide redundancy using a secondary server**, and click **OK**.

Copy the archive file to Server #2

Move the archive file (*.apb) created on **Server #1** to **Server #2**.

Specify Server #2 as the Network Directory location

1. On **Server #2**, select **Start > Rockwell Software > Specify FactoryTalk Directory Location**.

   Tip: To use the utility, you have to log on as an administrator on the local computer.

2. Click the **Browse** button beside the field **Computer hosting directory server**.
3. In the **FactoryTalk Directory Server Configuration** dialog box, select **This computer** and click **OK**.

   Tip: To change the Network Directory location, you have to log on as an administrator on
   the new Network Directory computer (local or remote).

4. Click **OK** and then restart **Server #2**.

Restore the application on Server #2 as the primary server

1. On **Server #2**, select **Start > Rockwell Software > FactoryTalk View SE Application Manager**.

   Tip: The logged on user must have the **Backup and restore directory contents**
   permission. For more information, see FactoryTalk Security Help or check with your System
   Administrator.

2. In the **Restore an Archive** tab, specify the restore scope as **Restore application, with FactoryTalk Directory** and the **Primary Host** as **Server #2**.
3. Follow the wizard to restore the application.

Specify Server #2 as the Network Directory location for Workstation #1

1. Select **Start > Rockwell Software > Specify FactoryTalk Directory Location**.
2. Click the **Browse** button beside the field, **Computer hosting directory server**.
3. In the **FactoryTalk Directory Server Configuration** dialog box, select **Remote computer**, type **Server #2** and click **OK**.

   Tip: To change the Network Directory location, you have to log on as an administrator on the new Network Directory computer (local or remote).

4. Click **OK** and then restart **Workstation #1**.

Disable redundancy on Server #2

1. On **Workstation #1**, open the restored application in FactoryTalk View Studio.
2. In the Explorer window, right-click the HMI server and select **Properties**.
3. In the **Redundancy** tab, clear the check box **Provide redundancy using a secondary server**, and click **OK**.
4. In the Explorer window, right-click the data server **FactoryTalk Linx** and select **Properties**.
5. In the **Redundancy** tab, clear the check box **Provide redundancy using a secondary server**, and click **OK**.

Disable alarm and event history logging

After you restore the application, the alarm and event history logging is also enabled on **Server #2**. It is recommended that you disable the history logging. Follow the steps below.

1. On **Workstation #1**, open the restored application in FactoryTalk View Studio.
2. In the Explorer window, right-click the Tag Alarm and Event server and select **Properties**.
3. In the **Priorities and History** tab, clear the **Enable history** check box and click **OK**.

If your system has controller device-based alarms, follow the steps below to disable the history logging.

1. In the Explorer window, right-click the FactoryTalk Linx Data server and select **Properties**.
2. In the **Alarms and Events** tab, clear the **Enable history** check box and click **OK**.

Step 4: Upgrade Server #2

To upgrade the software components, install FactoryTalk View SE and any necessary products updates on **Server #2**.

1. On **Server #2**, close all open Windows programs.
2. Double-click **Setup.exe** within the installation package.
3. On the **Setup** page, select **Site Edition Server** and click **Install now**.
4. Follow the instructions to finish the installation. For more information, see Install FactoryTalk View on page 25.
5. After installation, install any necessary product updates. For more information, see Install product updates on page 65.

Step 5: Upgrade Workstation #1

To upgrade the software components, install FactoryTalk View Studio and any necessary products updates on **Workstation #1**.

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. On the **Setup** page, select **Studio Enterprise** and click **Install now**.
4. Follow the instructions to finish the installation. For more information, see [Install FactoryTalk View](#) on [page 25](#).
5. After installation, install any necessary product updates. For more information, see [Install product updates](#) on [page 65](#).

Step 6: Migrate the application

To migrate the FactoryTalk View SE application that was restored on **Server #2**, perform these tasks:

- [Open the application in FactoryTalk View Studio](#) on [page 54](#)
- [Verify FactoryTalk Linx shortcuts](#) on [page 54](#)
- [Test the migrated application](#) on [page 55](#)

Open the application

To migrate the application, open it in the new version of FactoryTalk View Studio installed on upgraded **Workstation #1**.

To open the application:

1. Select **Start > FactoryTalk View Studio**.
2. In the **Application Type Selection** dialog box, select the application type and click **Continue**.
3. On the **Existing** tab, select the application and click **Open**.
4. If prompted to convert the application the new version, click **OK**.
5. Wait until the HMI server and all project components in the application are loaded, and then leave the application open in FactoryTalk View Studio.

Verify FactoryTalk Linx shortcuts

To confirm that data communications are set up correctly in the migrated application, verify that FactoryTalk Linx shortcuts point at the correct devices.

To verify FactoryTalk Linx shortcuts:

1. In FactoryTalk View Studio, expand the data server **FactoryTalk Linx**, and then double-click **Communications Setup**.
2. In the **Communications Setup** editor, select each configured FactoryTalk Linx shortcut, and ensure that it points at the correct device.

3. Save the configuration and close the **Communications Setup** editor.

Test the migrated application

To test the migrated application, run the application on **Workstation #1**.

1. On **Workstation #1**, start a FactoryTalk View SE Client configuration.
2. Ensure that data communications are functioning as expected.

Step 7: Upgrade selected runtime clients

To upgrade the software components, install FactoryTalk View SE Client and any necessary products updates on the selected runtime clients. Perform these tasks on each client computer. For details, see the procedures that follow.

- Install FactoryTalk View SE Client on page 55
- Specify Server #2 as the Network Directory location on client computers on page 55

Install FactoryTalk View SE Client

If you already have the **Client Install Portal** feature installed on the HMI server, you can upgrade the clients through a web browser. For detailed instructions, see Install SE clients in a distributed system on page 30. Otherwise, you can use the installation package. Follow the instructions below.

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. On the **Setup** page, select **Site Edition Client** and click **Install now**.
4. Follow the instructions to finish the installation. For more information, see Install FactoryTalk View on page 25.
5. After installation, install any necessary product updates. For more information, see Install product updates on page 65.

Specify Server #2 as the Network Directory location on client computers

After upgrading the software on the client computer, specify **Server #2** as the Network Directory location.

To specify Server #2 as the Network Directory:

1. Select **Start > Rockwell Software > Specify FactoryTalk Directory Location**.
2. Click the **Browse** button beside the field, **Computer hosting directory server**.
3. In the **FactoryTalk Directory Server Configuration** dialog box, select **Remote computer**, type **Server #2** and click **OK**.

   > Tip: To change the Network Directory location, you have to log on as an administrator on the new Network Directory computer (local or remote).

4. Click **OK** and then restart the client computer.

Step 8: Test the migrated application

To test the migrated application before upgrading remaining application computers, perform these tasks:

- Start Server #2 and wait for it to finish starting on
- Run the migrated application on upgraded clients on
- Verify that the system is functioning as expected on

Start Server #2 and wait for it to finish starting

If **Server #2** is not already started, start the server and wait for the server to finish starting.

To confirm that Server #2 has finished starting:

1. On **Server #2**, select **Start > Rockwell Software > Diagnostics Viewer**.
2. In the **FactoryTalk Diagnostics Viewer**, check for the following Diagnostics message:

   ```
   The HMI Server <ApplicationName>//Server #2 is the active server.
   ```

   Tip: To find a message faster in the Diagnostics Viewer, on the View menu, click **Options**. Then, in the Filter tab, create a **Message** filter with one or more keywords from the message.

Run the migrated application on upgraded clients

On each of the upgraded runtime client computers, run the existing FactoryTalk View SE Client configuration file (.cli).

Verify that the system is functioning as expected

After the application starts running on the upgraded client computers, verify that display navigation, object animation, communications, alarming (if configured), and other applications features are functioning as expected.

Part 3: Upgrade remaining clients and restore redundancy

This part involves upgrading the remaining runtime clients and **Server # 1**, and restoring the redundancy. After upgrading, **Server #2** becomes the primary server and **Server #1** becomes secondary.

Step 9: Upgrade remaining client computers

After testing the partially upgraded system, on the remaining client computers, install FactoryTalk View SE Client and point at Server #2 as the Network Directory. Perform these tasks:

- Install FactoryTalk View SE Client on
- Specify Server #2 as the Network Directory for remaining clients on

Install FactoryTalk View SE Client

If you already have the **Client Install Portal** feature installed on the HMI server, you can upgrade the clients through a web browser. For detailed instructions, see [Install SE clients in a distributed system](#) on [page 30](#). Otherwise, you can use the installation package. Follow the instructions below.

1. Close all open Windows programs.
2. From the installation package, double-click **Setup.exe**.
3. On the **Setup** page, select **Site Edition Client** and click **Install now**.
4. Follow the instructions to finish the installation. For more information, see [Install FactoryTalk View](#) on [page 25](#).
5. After installation, install any necessary product updates. For more information, see [Install product updates](#) on [page 65](#).

Specify Server #2 as the Network Directory location on client computers

After upgrading the software on the client computer, specify **Server #2** as the Network Directory location.

To specify Server #2 as the Network Directory:

1. Select **Start > Rockwell Software > Specify FactoryTalk Directory Location**.
2. Click the **Browse** button beside the field, **Computer hosting directory server**.
3. In the **FactoryTalk Directory Server Configuration** dialog box, select **Remote computer**, type **Server #2** and click **OK**.

   Tip: To change the Network Directory location, you have to log on as an administrator on the new Network Directory computer (local or remote).

4. Click **OK** and then restart the client computer.

Step 10: Upgrade Server #1

To upgrade FactoryTalk View SE and supporting software on Server #1, install FactoryTalk View SE Server and set up Server #1 to point at Server #2. Perform these tasks:

- [Install FactoryTalk View SE Server](#) on [page 57](#)
- [Specify Server #2 as the Network Directory for Server #1](#) on [page 58](#)

Install FactoryTalk View SE Server on Server #1

1. On **Server #1**, close all open Windows programs.
2. Double-click **Setup.exe** within the installation package.
3. On the **Setup** page, select **Site Edition Server** and click **Install now**.
4. Follow the instructions to finish the installation. For more information, see [Install FactoryTalk View](#) on [page 25](#).
5. After installation, install any necessary product updates. For more information, see [Install product updates](#) on [page 65](#).

Specify Server #2 as the Network Directory for Server #1

1. Select **Start > Rockwell Software > Specify FactoryTalk Directory Location**.
2. Click the **Browse** button beside the field, **Computer hosting directory server**.
3. In the **FactoryTalk Directory Server Configuration** dialog box, select **Remote computer**, type **Server #2**, and then click **OK**.

   > Tip: To change the Network Directory location, you have to log on as an administrator on the new Network Directory computer (local or remote). In this case, the new location is remote.

4. Click **OK** again, and then restart **Server #1**.

Step 11: Restore redundancy and finish upgrading

Before finishing the upgrade, you need to enable the redundancy and check the server status. If the status is not right, restart **Server #1** and **Server #2**. Perform the following tasks:

- Enable HMI and data server redundancy on page 58
- Enable alarm and event history logging on page 58
- Confirm the status of primary and secondary servers on page 59
- Start all runtime clients on page 59

Enable HMI and data server redundancy

1. Select **Start > FactoryTalk View Studio**.
2. In the **Application Type Selection** dialog box, select the application type and click **Continue**.
3. On the **Existing** tab, select the application and click **Open**.
4. In the Explorer window, right-click the HMI server and select **Properties**.
5. (optional) On the **General** tab, make sure **Load and run startup components when operating system initializes** is selected.
6. On the **Redundancy** tab, select the check box **Provide redundancy using a secondary server**.
7. Under the **Secondary Server** area, type **Server #1** and click **OK**.
8. In the Explorer window, right-click the data server **FactoryTalk Linx** and select **Properties**.
9. On the **Redundancy** tab, select the check box **Provide redundancy using a secondary server**.
10. Under the **Computer running secondary server** field, type **Server #1** and click **OK**.
11. From the menu, select **Tools** > **Options**. On the **Settings** tab, make sure the **Save edits to both active and standby HMI servers** option is selected.
12. To keep the HMI memory tag values the same on both active and standby servers, on the **Settings** tab, select the **Auto synchronize HMI memory tag values to both active and standby HMI servers** option.

Enable alarm and event history logging

If the alarm and event history logging is already disabled on **Server #2**, follow the steps below to enable the history logging.

1. On **Workstation #1**, open the restored application in FactoryTalk View Studio.

2. In the Explorer window, right-click the Tag Alarm and Event server and select **Properties**.
3. In the **Priorities and History** tab, select the **Enable history** check box, select the database and click **OK**.

If your system has controller device-based alarms, follow the steps below to enable the history logging.

1. In the Explorer window, right-click the FactoryTalk Linx Data server and select **Properties**.
2. In the **Alarms and Events** tab, select the **Enable history** check box, select the database and click **OK**.

Confirm the status of primary and secondary servers

On **Workstation #1**, in FactoryTalk View Studio, right-click the HMI server and then select **Server Status**.

In the **Server Status** dialog box:

- **Server #2** and **Active** status are displayed in the fields **Primary server** and **Primary status** respectively.
- **Server #1** and **Standby** status are displayed in the fields **Secondary server** and **Secondary status** respectively.

  Tip: To switch the Active server to **Server #1**, click **Switchover**.

Start all runtime clients

To ensure that the entire, upgraded application is functioning as expected, run the existing FactoryTalk View SE Client configuration file on each runtime client computer.

FactoryTalk View tools and utilities

FactoryTalk View provides tools to create powerful, dependable process monitoring and supervisory control applications. This section contains the tools for FactoryTalk View SE and FactoryTalk.

To run the tools, select **Start > Rockwell Software** and then select the tool in the list of apps. The steps may vary depending on your operating system.

FactoryTalk View tools

Use the following tools for FactoryTalk View SE:

- **Application Documenter**

  Used to view the contents of the application's components and the tags used in these components.

- **DeskLock**

  Used to prevent users of FactoryTalk View SE Client and FactoryTalk View ME from gaining access to the Windows desktop and system keys.

- **FactoryTalk View Alarm Migration Tool**

  Used to migrates legacy HMI alarms to FactoryTalk Alarms and Events tag-based alarms.

- **FactoryTalk View File Viewer**

  Used to view and save log files such as SE datalog files, ME datalog files, ME alarm log files and dBASE file.

- **FactoryTalk View SE Application Manager**

  Formerly known as Distributed Application Manager, used to manage all types of SE applications (network distributed, network station, and local station).

- **FactoryTalk View SE Cache File Management Tool**

  Used to manage the temporary files of HMI Server components.

- **FactoryTalk View SE Website Setup Tool**

  Used to enable the HTTPS protocol over the default website and create a custom website on an HMI server computer.

- **HMI Server Backup and Restore**

Used to back up FactoryTalk View SE HMI servers while they are running. Use this utility when backing up or restoring a stand-alone system, or when deploying a distributed system from one set of computers to another.

- **Legacy Tag Database Conversion Utility**

  Used to convert legacy tag database (before View 6.0) to a new format to work with Microsoft SQL database.

- **SE Administration Console**

  Used to administer FactoryTalk View SE applications after they are deployed. Use the sub-set of editors available in the Administration Console to make minor changes to an application without installing FactoryTalk View Studio.

  Tip: SE Administration Console will close automatically after being open for two hours.

- **SE Service Manager**

  Used to stop or start the FactoryTalk View HMI Service manually on the computer.

- **Tag Import and Export Wizard**

  Used to import or export the FactoryTalk View SE Server's tag database.

FactoryTalk tools

Use the following tools for FactoryTalk or FactoryTalk Alarms and Events:

- **Diagnostics Viewer**

  Used to view the contents of FactoryTalk Diagnostics logs, to help with troubleshooting the system.

- **FTAE Database Update Utility**

  Used to merge the ConditionEvent and TrackingEvent tables into the AllEvent table in the same database.

- **FactoryTalk Diagnostics Counter Monitor**

  Used to check the status of tags and to monitor the runtime values of counters and strings that are made available by network clients for diagnostic purposes.

- **FactoryTalk Directory Configuration Wizard**

  Used to set up the FactoryTalk Network Directory or Local Directory on the computer.

- **FactoryTalk Live Data Test Client**

  Used to test client and server data connections in an application.

- **Import RSSecurity Configuration**

  Used to import RSSecurity setup information to FactoryTalk Security.

- **Log On to FactoryTalk**

  Used to log users on and off the FactoryTalk Directory.

- **RSSecurity Emulator Install**

  Used to install the RSSecurity Emulator, which emulates an RSSecurity Server for legacy products.

- **Specify FactoryTalk Directory Location**

  Used to specify which computer on the network contains the FactoryTalk Network Directory service.

- **Windows Firewall Configuration Utility**

  Used to configure Windows firewall settings for FactoryTalk View.

- **FactoryTalk DB Connection Config Utility**

  Used to simplify the configurations needed for using Windows authentication to access database.

Common upgrade procedures

This section contains notes, common procedures and information from the Rockwell Automation Knowledgebase that you may find helpful during installation of FactoryTalk View products.

Install product updates

After installing FactoryTalk View, we recommend installing the latest updates for your software.

Rockwell Automation Knowledgebase provides the updates through the Patch Tables of Contents (TOCs). A Patch TOC describes updates released for a particular product and version, and provides instructions for downloading and installing the updates on computers where the software is installed.

Use the **FactoryTalk Updater** tool to assist with the update. For instructions, see .

You can also manually search Rockwell Automation Knowledgebase and locate the latest updates. For instructions, see .

Update from the product

When you start the installation process for FactoryTalk View, FactoryTalk Updater Agent is installed by default. FactoryTalk Updater Agent is one of the components of FactoryTalk Updater. FactoryTalk Updater assists in management of installed Rockwell Automation software by announcing new versions and patch roll-ups for the software on your computer. Registering for updates is not required to receive announcements from the FactoryTalk Updater.

FactoryTalk Updater includes:

- FactoryTalk Updater Agent

  Collects information and activation license data from the Rockwell Automation software installed on the computer.

- FactoryTalk Updater Client

  Displays information collected by the FactoryTalk Updater Server and enables you to review updates and patches.

- FactoryTalk Updater Server

  Communicates with online FactoryTalk Updater Agents to receive collected data.

Connects to the Product Compatibility and Download Center to retrieve the latest software information.

Responds to requests from the FactoryTalk Updater Client.

Tip: To receive notifications of new versions and patch roll-ups, the tool requires access to the Download Center web service. Verify that the firewall does not block access to this URL: https://api.rockwellautomation.com/es-be-pcdc-vpcprod/

To update from the product:

1. Download FactoryTalk Updater from the [Product Compatibility and Download Center](#).
2. Install the FactoryTalk Updater components.
3. Open the **FactoryTalk Updater**.

    For more information about using FactoryTalk Updater, see the FactoryTalk Updater Help.

Update from Rockwell Automation Knowledgebase

You can also manually search and locate the latest updates in Rockwell Automation Knowledgebase.

To update from Rockwell Automation Knowledgebase:

1. From the web browser, open Rockwell Automation Knowledgebase at
   https://rockwellautomation.custhelp.com.
2. In the search box, type **Factorytalk View Patch TOC** and select **SEARCH**.
3. In the search results, look for Patch TOCs related to the products you installed.
4. Follow the on-screen instructions to download and install the updates.

Install Microsoft IIS

Microsoft Internet Information Services (IIS) is a critical service for a distributed FactoryTalk View SE System. The Setup wizard detects and installs IIS automatically if IIS is not available on the computer.

This appendix servers as a reference to help you troubleshoot issues and verify IIS settings.

The following table shows whether IIS is required on your computers:

IIS required	IIS not needed
• FactoryTalk View SE Server • FactoryTalk View Studio that needs to remotely connect to a Network FactoryTalk View SE system.	• FactoryTalk View SE Client • FactoryTalk View Studio • Stand Alone FactoryTalk Linx Server • Stand Alone FactoryTalk Directory Server

Manually install IIS

The steps may vary because of different versions and configurations. Follow the on-screen instructions that apply to the operating systems you are using. If necessary, install IIS from your Microsoft Windows operating system installation package.

To install IIS on Windows10:

1. Open **Windows Control Panel**, and click **Programs**.
2. Under **Programs and Features**, click **Turn Windows features on or off**. The **Windows Features** dialog box will open.
3. Click the checkbox to the left of **Internet Information Services** to enable settings.
4. Expand the **Web Management Tools** folders, and then expand the **IIS 6 Management Compatibility** folder.
5. Select the **IIS Metabase and IIS 6 configuration compatibility** check box.
6. Expand the **World Wide Web Services** folder and then expand the **Application Development Features** folder.
7. Select the **ASP** check box. The **ISAPI Extensions** check box should then be selected automatically.
8. Under the **World Wide Web Services** folder, expand the **Common HTTP Features** folder.
9. Under **World Wide Web Services** folder, expand the **Security** folder.
10. Select the **Windows Authentication** and **URL Authorization** check boxes.

> Tip: If IIS is installed correctly, you should be able to open the HMI server status page on localhost first, then from another computer. To test this, open Internet Explorer, in the address field, type **http://localhost/rsviewse**, or **http://computername/rsviewse** then press **Enter**.

To install IIS on Windows Server 2019, 2016, or 2012:

1. Select **Start > Administrative Tools > Server Manager**.
2. In the **Server Manager Dashboard** window, click **Add roles and features**.
3. Use the Add Roles and Features Wizard to add the **Web Server (IIS)** role.
4. To install the Web Server, some additional Windows features might need to be installed. In each case, click **Add Required Features**.
5. Click to expand **Security**, and then select the **Windows Authentication** and **URL Authorization** check boxes.
6. Click to expand **Application Development**, and then select **ASP**.
7. When prompted to install ISAPI Extensions, click **Add Required Role Services**.

   The following example shows the installation for Windows Server 2019.
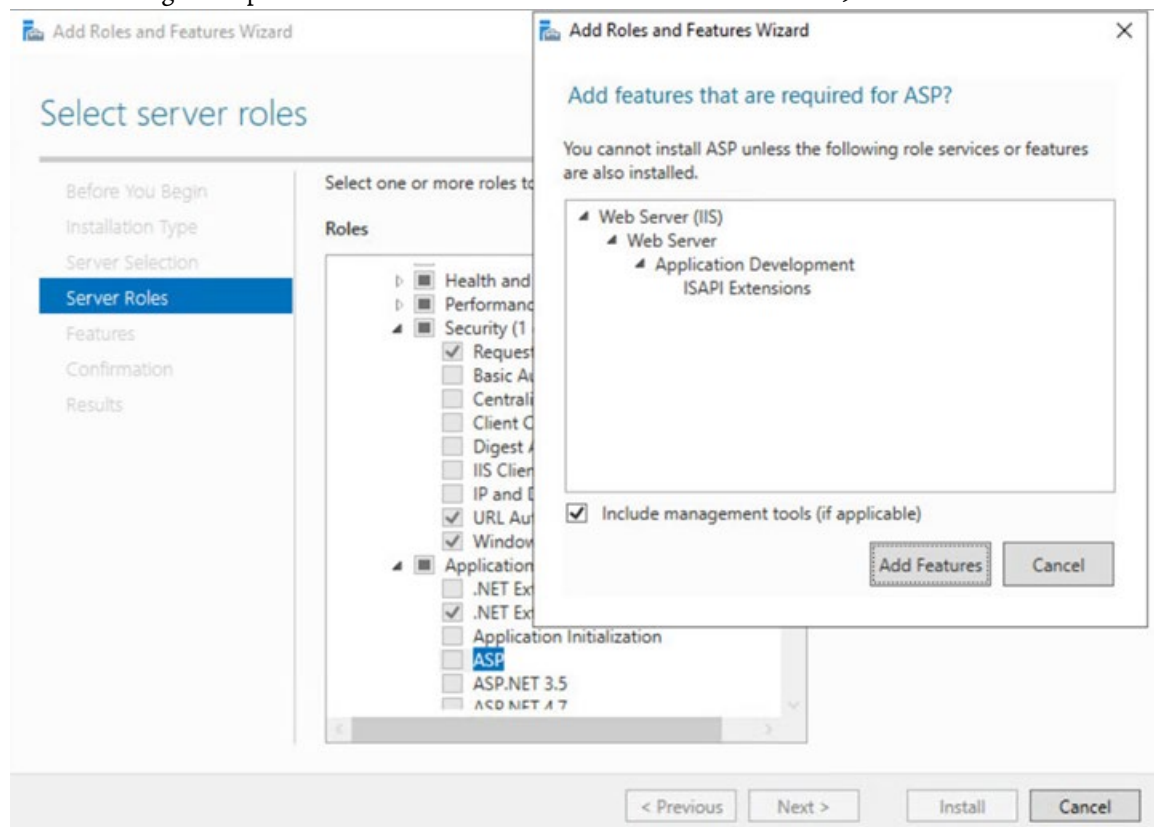
8. Click to expand **Management Tools** and then expand **IIS 6 Management Compatibility**.
9. Under IIS 6 Management Compatibility, select **IIS 6 Metabase Compatibility**.

The following example shows the installation for Windows Server 2019.
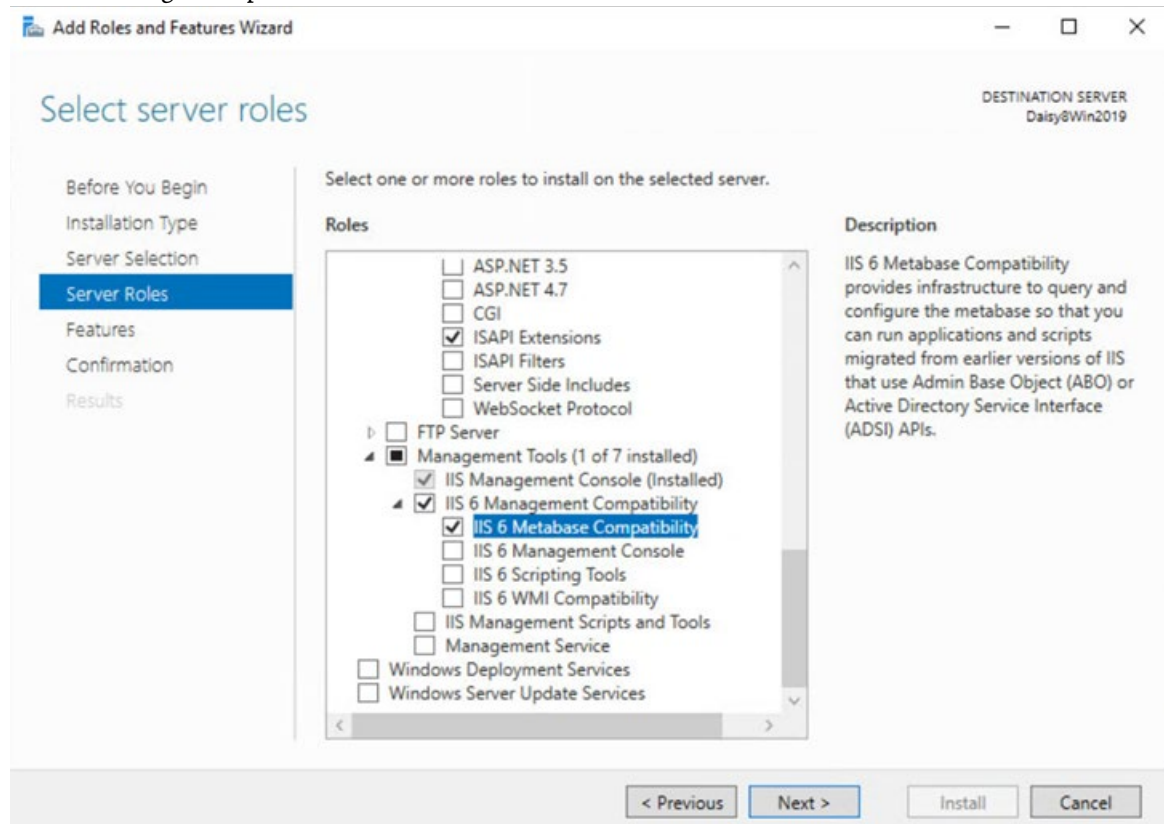
10. Click **Next**, and then accept the default selections at each remaining step of the wizard by clicking **Next** until all of the steps are complete.

11. At the end of the wizard, click **Install** to install the Web Server role.

About uninstalling IIS

If for some reasons, you need to uninstall and then reinstall IIS, after reinstalling, you need to recreate the virtual directories in IIS.

Use **RSViewWebManager** to recreate the virtual directories. The default location is:

- C:\Program Files (x86)\Rockwell Software\RSView Enterprise\RSViewWebManager.exe for 64-bit operating systems
- C:\Program Files\Rockwell Software\RSView Enterprise\RSViewWebManager.exe for 32-bit operating systems

Use command-line installation

You can typically use this installation method for unattended installation.

The unattended installation is an automated installation method that reduces user interaction. It is typically used for large-scale rollouts when it might be too slow and costly to have administrators or technicians interactively install FactoryTalk View on individual computers.

Perform command-line installation

The command-line installation requires the administrator permission. The steps may vary slightly depending on your operating system.

To perform command-line installation:

1. Close all open Windows programs.
2. Open the **Command Prompt** window.
3. In the **Command Prompt** window, navigate to *C:\Users\Public\Documents\FTView*, where *C:\Users\Public\Documents\FTView* is the folder containing the FactoryTalk View installation package, and press **Enter**.
4. If the **User Account Control** dialog box shows, click **Yes**.
5. In the **Command Prompt** window, type a command line with the following syntax and press **Enter**.

   ```
   Setup.exe [/parameter=value] [...]
   ```

For more information about parameters, type **Setup.exe /?** or see .

Command-line parameters

Use command-line parameters to perform an unattended or silent installation of the software.

Command-line parameters

The following table identifies the installation command-line parameters. Command-line parameters are case-insensitive. However, if a specified value includes a space, be sure to enclose the value in quotation marks (for example, "value with spaces").

Parameter	Description
/?	Displays the usage options for installation parameters.

Parameter	Description
/Q	Silent Install, install runs in a quiet mode without any user interface. This parameter is recommended when deploying the software installation using an IT tool or script, and don't expect any error or restart messages. When using this parameter, check the error codes, and respond as needed. For example, if the installation returns error code 1641, then the IT tool or script should restart the computer and relaunch the installation after restart. This parameter is required if /QS is not specified.
/QS	Unattended Install, install runs in a quiet simple mode and shows progress through the UI, it does not accept any input but still shows error or restart messages. When using this parameter, the installation will stop and display a prompt if there are error or restart messages. For example, if an immediate restart is required to complete the install, a restart message will be displayed to confirm the restart. Installation resumes automatically from the point of interruption after restart. This parameter is required if /Q is not specified.
/IAcceptAllLicenseTerms	Acknowledges acceptance of the license terms. This parameter is required for /Q or /QS parameters.
/AutoRestart	Automatically restarts the computer after the installation is complete. Used when a restart is required to complete the installation. This parameter is optional. If this parameter is not used, silent install (/Q) will return either error code 1641 or 3010 if a restart is required, and unattended install (/QS) will result in a confirmation prompt that must be agreed to before the installation is completed.
/Record	Records the installation options chosen to a recording file. This parameter is optional.
/Playback	Plays back a recording file to specify the installation options. This parameter is optional.
/Repair	Runs a repair operation on the installed products. This parameter is optional.
/Uninstall	Uninstalls the product.
/SetupLanguage="*value*"	Specifies which language will be displayed during install process. The value must be the one of the following: • ENU • CHS • DEU • ESP • FRA • ITA • JPN • KOR • PTB This parameter is optional. If this parameter is not used, the default language is the current user or operating system user interface language.

Parameter	Description
/Product="*value*"	Specifies which sub-products will be installed. This parameter is required. For FactoryTalk View ME, the value must be one of the following: • Studio for Machine Edition • Machine Edition Station for Windows • Stand-alone ME Transfer Utility For FactoryTalk View SE, the value must be one of the following: • Studio Enterprise • Site Edition Server • Site Edition Client • Site Edition Station • FactoryTalk ViewPoint SE • Stand-alone FactoryTalk Linx Server • Stand-alone FactoryTalk Directory Server
/ProductLanguage="*value*"	Specifies the language version of the software being installed. The value must be one of the following: • ENU • CHS • DEU • FRA • JPN This parameter is optional. If this parameter is not used, the default language is the same as the setup language. If the software does not support multiple languages, this parameter is not available.
/InstallDrive="value"	Specifies the installation drive. This parameter is optional. If this parameter is not used, the default install drive is C:.
/IgnoreWarning	Specifies that the setup ignores warnings and continues. This parameter is optional. If it is not specified, the setup exits when a warning occurs.
/SerialNumber="*value*"	Specifies the serial number of the software being installed. This is used to activate the software during installation. This parameter is optional. If it is not specified, the software must be activated manually after installation if activation is required. Some software does not require activation. If activation is not required, this parameter is not available.
/ProductKey="*value*"	Specifies the product key used to get activation keys during installation. This parameter is optional. If it is not specified, the software must be activated manually after installation if activation is required. Some software does not require activation. If activation is not required, this parameter is not available.

Parameter	Description
/Version="*value*"	Specifies the version of the software to activate, which corresponds to the product version associated with the SerialNumber and ProductKey. This parameter is optional. If it is not specified, the installer will use the most recent product version available. Some software does not require activation. If activation is not required, this parameter is not available.
/DirectoryServer="*value*"	Specifies the FactoryTalk network directory if you are using a distributed system. This parameter is optional. If it is not specified, the software will use its current computer as the FactoryTalk Directory server. The value must be the host name of the FactoryTalk Directory server.
/NoHTTPS	Specifies that the setup turns off HTTPS. This parameter is optional. If it is not specified, the setup turns on HTTPS for communication, and a TLS certificate must be configured after installation.

For FactoryTalk Services Platform commands to back up and restore directory, system, and applications, see *FactoryTalk Security System Configuration Guide*.

Error codes

The following table identifies the error codes that can be returned by an installation.

Error Code	Value	Description
ERROR_SUCCESS	0	The installation completed successfully.
ERROR_INVALID_PARAMETER	87	One of the parameters was invalid.
ERROR_INSTALL_USEREXIT	1602	The installation was canceled by the user.
ERROR_INSTALL_FAILURE	1603	A fatal error occurred during installation.
ERROR_BAD_CONFIGURATION	1610	The configuration data for this product is corrupt. Contact your support personnel.
ERROR_SUCCESS_REBOOT_INITIATED	1641	The installer has initiated a restart. After restart, the installation will continue.
ERROR_SUCCESS_REBOOT_REQUIRED	3010	A restart is required to complete the installation. After restart, the product is successfully installed.
ERROR_REBOOT_PENDING	3012	Restart pending. Restart the computer for the installation to continue.
ERROR_SUCCESS_NOT_APPLICABLE	3013	The installation cannot proceed because the products are already installed.
ERROR_SUCCESS_WARNING_REBOOT	3014	The installation succeeded with warnings. Check the installation log file for details. To complete the installation, restart the computer.

Examples

The following examples show how to use the commands for the installation.

Example 1: Install with default settings

```
Setup.exe /Q /IAcceptAllLicenseTerms /Product="Studio Enterprise"
```

means:

- FactoryTalk View Studio Enterprise will be installed with default settings.

Example 2: Install with customized settings

```
Setup.exe /QS /IAcceptAllLicenseTerms /AutoRestart /SetupLanguage=CHS
/Product="Site Edition Client" /SerialNumber=0123456789 /ProductKey=ABCDE-FGHIJ
/Version=10.00.00
```

means:

- FactoryTalk View Site Edition Client version 10.00.00 will be installed.
- The displayed language is Chinese during the installation.
- The setup will get activation keys during installation if the serial number *0123456789* and product key *ABCDE-FGHIJ* are valid.
- After the installation, if a restart is required, the computer will be restarted automatically.

Example 3: Install with customized FactoryTalk Directory server

```
Setup.exe /Q /IAcceptAllLicenseTerms /Product="Studio Enterprise"
/DirectoryServer=ServerName
```

means:

- FactoryTalk View Studio Enterprise will be installed with customized FactoryTalk Directory server. *ServerName* is host name of the customized FactoryTalk Directory server.

Example 4: Install and record selections

```
Setup.exe /Record
```

means:

- FactoryTalk View will open the Setup wizard and record your selections during the installation.
- When complete, FactoryTalk View will save the recording file to your desktop.

Example 5: Install with a recording file

```
Setup.exe /Q /IAcceptAllLicenseTerms /Playback="C:\Users\Public\FactoryTalk View
Studio Enterprise.rec"
```

means:

- FactoryTalk View will use the recording file *FactoryTalk View Studio Enterprise.rec* to complete the installation.

Example 6: Uninstall

```
Setup.exe /Q /Uninstall /Product="Studio Enterprise"
```

means:

- FactoryTalk View Studio Enterprise and the components that are installed with FactoryTalk View Studio Enterprise will be uninstalled.

- Components, such as FactoryTalk Activation Manager, that are shared with other products will not be uninstalled.

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C:\Program Files (x86)\Common Files\Rockwell\license.rtf.

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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 oss_license.txt file located in your product's OPENSOURCE folder on your hard drive. This file is divided into these sections:

- Components

  Includes the name of the open source component, its version number, and the type of license.

- Copyright Text

  Includes the name of the open source component, its version number, and the copyright declaration.

- Licenses

  Includes the name of the license, the list of open source components citing the license, and the terms of the license.

The default location of this file is:

C:\Program Files (x86)\Common Files\Rockwell\Help*<product name>*\Release Notes\OPENSOURCE\oss_licenses.txt.

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.

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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

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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.