SCT Installation and Upgrade Instructions

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Document introduction

This document describes how to install and upgrade the System Configuration Tool (SCT) software on a desktop or server-class computer.

Summary of changes

The following information is new or revised for SCT Release 15.0:

- Updated SQL Server Software requirements.
- Updated Operating system requirements.
- Replaced references to Metasys UI Offline with Johnson Controls System Configuration Tool (JCT) throughout this document, because this tool is rebranded.
- Removed references to the Open Data Server (ODS) because the latest available version of the ODS is Release 10.1. The ODS is not available for upgrade to Metasys Release 12.0.
- Updated Upgrading from SCT Release 13.2 or later to Release 15.0 software to include a note that you must upgrade SCT and server products to the same version on a unified server.
- Removed problems related to Windows 7 and Windows 8 from Troubleshooting because these Windows versions are no longer supported.
- Updated Troubleshooting to document an issue about the upgrade of an SCT archive.
- Updated Troubleshooting to document an issue where it is not possible to download legacy archives with SCT.
- Updated Troubleshooting to include a workaround for an issue where appsetting keys are not persisted after an uninstall.
- Updated the document throughout to be generic so that the document applies to both Metasys and Facility Explorer (FX).

Getting started

The SCT setup is a comprehensive utility that includes and installs several Microsoft Windows® components and products. The following table outlines the components and products that the System Configuration Tool Setup installs.

Table 1: Components installed by the System Configuration Tool setup

Windows Components Installed	Products Installed
Microsoft Internet Information Services (IIS)	System Configuration Tool 15.0
Microsoft .NET Framework 4.7.2 and 3.5.1	SCT Pro 15.0
Microsoft Visual C++ Runtime Libraries	Johnson Controls System Configuration Tool
Microsoft Message Queuing (MSMQ)	(JCT) 6.0
Microsoft SQL Server 2017 Express with CU17 -	Launcher 2.0
Desktop Operating Systems only. Only installs if	Software Manager 3.0
no version of SQL Server is detected.	Engine Importer
	Package Importer

Related documentation

The following table provides a list of documents related to SCT software installation.

Table 2: SCT installation and ι	upgrade related documentation
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For information about	Document reference
Understanding the Metasys system	Metasys System Configuration Guide (LIT-12011832)
Installing and upgrading the Application and Data Server (ADS) and Extended Application and Data Server (ADX) on the SCT Computer	Metasys Server Installation and Upgrade Instructions (LIT-12012162)
Installing and upgrading ADS-Lite on the SCT Computer	Metasys Server Lite Installation and Upgrade Guide (LIT-12012258)
Details for installing and upgrading SQL Server software	SQL Server Installation and Upgrade Guide (LIT-12012240)
How to install the Open Application Server (OAS)	<i>Open Application Server (OAS) Installation Guide (LIT-12013222)</i>
Using the Launcher	Launcher Help (LIT-12011742)
Knowing the features, benefits, and specifications of SCT	System Configuration Tool Catalog Page (LIT-1900198)
Creating archive databases, integrating building networks, and Auto Discovering Points	SCT: System Configuration Tool Help (LIT-12011964)
Understanding security risks on the network	Network and IT Guidance Technical Bulletin (LIT-12011279)
Understanding JCT	Johnson Controls System Configuration Tool (JCT) Help (LIT-12012116)
Understanding SCT Pro	SCT Pro Help (LIT-12013035)
Understanding the NAE Update Tool and the Engine Importer.	NAE Update Tool Help (LIT-12011524)
Licensing the SCT and field controller packages.	Software Manager Help (LIT-12012389)
Licensing SCT and field controller packages, the daily use of the Facility Explorer system, and database backup/restore	Facility Explorer Site Management Portal Help (LIT-12013520)
Commissioning the SNC	F4-SNC Commissioning Guide (LIT-12013549)

SCT installation and upgrade overview

The Windows operating system that you want to use for SCT software must have the correct components installed. SCT software does not install or function properly if any of these components are missing. The SCT setup installs many of these prerequisites, but make sure you carefully review the software requirements before installation. Follow the steps outlined in the Detailed procedures section to ensure that the SCT successfully installs.

If you have SCT Release 13.0 or earlier software, you must first uninstall it before you install SCT Release 15.0. For details, refer to Uninstalling existing SCT release 13.0 or earlier software. However if you have SCT Release 13.2 or later software, you can upgrade to SCT Release 15.0. For details, refer to Upgrading from SCT Release 13.2 or later to Release 15.0 software. If you install the SCT on a server and you do not have an earlier release of the SCT installed, first install, or verify that

you have a supported version of Microsoft SQL Server software. If you install the SCT on a Desktop Operating Systems and you do not have a supported version of Microsoft SQL Server software, the SCT setup automatically installs Microsoft SQL Server Express. For details, see Verifying your computer has a supported version of SQL Server software installed.

You can install SCT Release 15.0 on a computer with a Metasys server that is at Metasys Release 9.0 or later. Metasys servers include the ADS, ADX, and ADS-Lite. Do not install the SCT software on an OAS server. Some important installation rules to consider are:

- The SCT software and Trunk Utility features require license activation at Release 13.0 or later. Use the Software Manager to license the SCT and field controller packages. Install the software manager through the SCT installation wizard. For more information on software licensing, refer to the *Software Manager Help (LIT-12012389)*.
- You must uninstall any older stand-alone releases of the NAE/NIE Update Tool (NUT) before you use the SCT setup to install SCT Release 15.0.
- You must uninstall SCT Release 13.0 or earlier software before installing SCT Release 15.0. You must apply any new OS or SQL service pack after you remove an older release of the SCT, but before you install a new release of the SCT.
- Do not install SCT and Metasys Server software on the same computer if more than 100 network engines are to report to one ADX or ODS. If you have more than 100 engines on the site, install the SCT on a separate computer.
- You can use SCT Release 15.0 to manage devices from Metasys Release 5.2 or later. The SCT no longer requires the Site Director to be of an equivalent release version as the tool.
- Install SCT on a stand-alone computer when you use it with a split ADX system. Do not install SCT on the same computer as the web/application server or data server of a split ADX system.

SCT installation and upgrade prerequisites

Consider the following before installing SCT:

- SCT software requires 8 GB minimum of available hard disk space. This requirement is to ensure that enough room exists for future database storage used by SCT.
- The System Configuration Tool Setup installs Microsoft .NET Framework version 4.7.2 if it does not already exist on the computer. SCT Setup also installs .NET Framework version 3.5.1.
- To avoid any incompatibility issues, install SCT on a computer that does not have other non-Metasys applications that use IIS.
- You can use SCT to maintain a variety of release engines at Metasys Release 5.2 and later. The Site Director must be at an equivalent or greater release version than the highest version engine. For example, if you have a Metasys Release 6.5 engine and a Metasys Release 5.2 engine in your archive, your Site Director needs to be greater than or equal to Metasys Release 6.5. For more information, refer to *SCT: System Configuration Tool Help (LIT-12011964)*.
- The Ethernet network interface card (NIC) must have a valid connection status for the installation to complete successfully. Connect your Ethernet NIC to the powered-up Ethernet hub, switch, or router or to a live Ethernet network.
- The initial logon user name for the SCT UI is MetasysSysAgent and is not case sensitive. For the MetasysSysAgent default password, contact your local Johnson Controls® representative. For new SCT installations, change the logon account password to a valid, complex password when you log on for the first time. If the currently installed SCT is upgrade eligible, the MetasysSysAgent password is retained during the upgrade, so you are not prompted to change the password. For more information about passwords, refer to the *Security Administrator System Technical Bulletin (LIT-1201528)*.

- The NAE/NIE Update Tool is bundled with SCT. When you install SCT, the NAE/NIE Update Tool is also installed in the background. At SCT Release 13.0 or later, the tool is renamed to the NAE Update Tool. To launch the NAE Update Tool, navigate to Start > Johnson Controls > NAE Update Tool. The NAE Update Tool does not have a desktop icon and you cannot uninstall the NAE Update Tool without also uninstalling SCT.
- For SCT Release 14.0 or later, use SCT Pro in place of the NAE Update Tool because all of the NAE Update tool functions are available in SCT Pro.
- The SCT Pro includes some of the same functions as the NxE Information and Configuration Tool (NCT). For NCT functions to work, open port 9910 (TCP) and port 9911 (UDP) on the SCT computer. For details about the NCT, refer to *NxE Information and Configuration Tool Technical Bulletin (LIT-1201990)*. For details about opening ports, see Opening ports and configuring the Windows firewall. The SCT and the NCT remain separately installed and maintained tools.
- To upload CAFs into the SCT archive, you no longer need to install CCT on the same computer as SCT. The CAF upload feature is only available for network engines at Release 6.0 or later. At SCT Release 12.0 or later, you can use the Trunk utilities option to transfer CAFs to and from the SCT archive.
- If your computer has an older version of the NAE Update Tool, you cannot upgrade SCT until you uninstall the older version of the NAE Update Tool. The releases must match because the SCT and NAE Update Tool share the same code base for some upload and download operations.
- The security database for the SCT application is not available after uninstalling and re-installing SCT. You must document the existing list of users and add them manually after you install the latest release of the SCT.
- At SCT Release 14.1 and later, you require device package files, field controller package files, and Generic SA Bus packages to use all features in SCT. If you do not install device packages, you cannot add servers, supervisory devices, and field devices. Use the Software Manager, an application that is installed with SCT to license these package files after you download the package files from the license portal. You must import the package files before they can be licensed. Follow the steps in Licensing SCT and importing and licensing packages for SCT to import and license all package files. For further information on software licensing, refer to the *Software Manager Help (LIT-12012389)*.
- If you decide to move your IIS folder or files before you install SCT, please complete the following steps:
 - a. Choose a new location for C:\inetpub and copy the existing files from C:\inetpub to the new location.
 - b. Run the following command to change the Default Web Site physical site location to the new inetpub location: %windir%\system32\inetsrv\appcmd set vdir "Default Web Site/ -physicalPath:f:\inetpub\wwwroot replacing f:\inetpub\wwwroot with the location you choose.
 - c. Run the following command to update the IIS registry settings for the new location: reg add HKLM\Software\Microsoft\inetstp /v PathWWWRoot /t REG_SZ /d f:\inetpub\wwwroot replacing f:\inetpub\wwwroot with the location you choose.
 - (i) **Note:** Refer to Microsoft documentation for further information about moving your IIS site.

Operating system requirements

The following Windows operating systems support SCT software:

- Windows® 10 Enterprise LTSC (21H2) (64-bit)
- Windows® 10 Pro and Windows 10 Enterprise Editions versions 2004, 21H1, and 21H2 (64-bit). For all future Windows 10 updates after version 21H2, we will evaluate and certify that Metasys software can support the updates before we provide guidance on support.
- Windows®Server® 2019 (version 1809 or later) (64-bit)
- Windows® Server® 2016 (version 1607 or later) (64-bit)

Refer to the following guidelines to install SCT:

- If you install the SCT on a server and you do not have an earlier release of SCT installed, first install or verify that you have a supported version of SQL Server software. If you install SCT on a desktop operating system without a version of SQL software installed, the SCT setup automatically installs SQL Server Express. For details, see Verifying your computer has a supported version of SQL Server software installed.
 - (i) **Note:** If you have an unsupported version of SQL server software installed, the SCT installation does not install a supported version automatically. You must update or upgrade the version of SQL or install a supported version manually.
- Do not install the system software on a computer that was updated from an older version of Windows, such as from Windows 7 to Windows 10. This process can leave behind files and registry settings that can adversely affect the installation of system software. Prepare the computer by performing a clean installation using the Windows installation media.
- The System Configuration Tool Setup installs Microsoft .NET Framework version 4.7.2. For Windows 10, Windows Server 2016, and Windows Server 2019, a valid connection to Windows Update must be available for the SCT setup to be successful with the installation of .NET Framework 4.7.2. An error message appears if the prerequisite is not present.

SQL Server Software

Install SQL Server on the same computer as SCT. The following Microsoft SQL Server software versions are supported for use with SCT:

Windows® 10 Pro and Windows 10 Enterprise Editions versions 2004, 21H1, and 21H2 (64bit). For all future Windows 10 updates after version 21H2, we will evaluate and certify that Metasys software can support the updates before we provide guidance on support.

- SQL Server® 2019 Express with CU14 (64-bit): version 15.0.2005.5 or later
- SQL Server® 2017 Express with CU27 (64-bit): version 14.0.3238.1 or later
- SQL Server® 2016 Express with SP2 CU17 (64-bit): version 13.0.5492.2 or later

Windows® Server® 2019 (version 1809 or later) (64-bit)

- SQL Server® 2019 with CU14 (64-bit): version 15.0.2005.5 or later
- SQL Server® 2017 with CU27 (64-bit): version 14.0.3238.1 or later
- SQL Server® 2016 with SP2 CU17 (64-bit): version 13.0.5492.2 or later

Windows® Server® 2016 (version 1607 or later) (64-bit)

- SQL Server® 2019 with CU14 (64-bit): version 15.0.2005.5 or later
- SQL Server® 2017 with CU27 (64-bit): version 14.0.3238.1 or later
- SQL Server® 2016 with SP2 CU17 (64-bit): version 13.0.5492.2 or later

Before you install or upgrade your SQL Server software, consider the following information:

- Uninstall software such as SCT and CCT before you upgrade the version of an existing SQL instance.
- Microsoft SQL Server 2014, 2012, SQL Server 2008, and SQL Server 2008 R2 are no longer supported. For information about how to upgrade SQL Server, refer to *SQL Server Software Installation and Upgrade Guide (LIT-12012240)*.
- If your computer has SQL Server software installed, verify that the current version of SCT Release 15.0 supports this software. Go to Verifying your computer has a supported version of SQL Server software installed.
- A tool called the SQL Installer is provided on the License Portal with the Branch Tools download to help you install or upgrade to any supported version of SQL Server software. If you do not have this tool, refer to the SQL Server Software Installation and Upgrade Instructions (LIT-12012240) for details on how to install or upgrade SQL Server software. Also refer to SQL Server Software Installation and Upgrade Instructions (LIT-12012240) this document if you need to apply a new service pack (SP) to an existing installation of SQL Server software because the SQL Installer does not support service pack installations.
- To use the SQL Installer to install a full version of SQL Server software (for example, SQL Server 2017 Standard edition), you can download the install files for full Microsoft SQL Server. To use SQL Installer to install an Express version of SQL Server software (for example, SQL Server 2017 Express), download the SQL Server Express installation file from the Microsoft SQL Server Express website.
- The SQL Installer verifies that your computer has the prerequisites you need to install SQL Server. An error message appears if a prerequisite is not present. You need to install any missing software prerequisites before continuing.
- The SQL Installer provides an advanced mode that lets you edit the SQL Server command line options before you start the installation. You can also copy the options, paste them into a command window, and run the installation at a command prompt. However, use this method only if you are an advanced user who fully understands SQL Server software options.
- If you are installing SQL Server software manually, do not enable the C2 audit tracing feature. With C2 audit tracing enabled, SQL Server creates a large number of operational log files that might eventually fill the hard disk and cause the server to stop responding. However, if you install MVE, the MVE installer enables the C2 audit tracing feature for you. If you want to conserve hard disk space, be sure to disable C2 audit tracing after installing MVE.
- The SA password that you specify in the SQL Installer window must follow the rules for Microsoft complex passwords. For more information about complex passwords, refer to the *Security Administrator System Technical Bulletin (LIT-1201528)*.
- SQL Server installation packages no longer include Management Tools after SQL Server 2016. If you use this server, or a later version, you must manually install the SQL Server Management Studio tool. For details on how to install SQL Server Management Studio after you install SQL Server software, refer to the *SQL Server Software Installation and Upgrade Instructions* (*LIT-12012240*).
- If you are installing server software on a server class machine, ensure SQL Server software is installed and running before you install SCT software.
- If after you upgrade to a newer version of SQL Server software, you need to open the archive database in an older version of SQL Server software, use the Export Database option in SCT. Then import the archive that uses an older version of SQL Server software into SCT.

Figure 1 shows the SQL Installer tool. Table 3 describes the fields and selections.

Figure 1: SQL Installer Window

	SQL Installer - 1.0.0.24	
(1)	File location of SQL Server Installation Executable File Find SQL Install Program Download Management	12
2	V I accept the Microsoft software Terms and conditions	-(13)
3	Unified ADS/ADX or SCT Split ADX App Server Split ADX Data Server	-14
(4)	SA Password SA Password	
5	Software Key Install New Instance	-(15)
6	Show Advanced Options	
7	Instance Name MSSQLSERVER	
8	Windows Account Granted SA Access	
<u> </u>	Application Installation Path Application Installation Path	
	Default Database Storage Path	
	Command Line Options	
(11)		011521_sql_install_helper_form
		FIG:120115

Table 3: Description of SQL Installer Window

Callout	Attribute	Action
1	<file location="" name=""></file>	Click Find SQL Install Program to enter the location of the SQL Server software installation or upgrade file (setup.exe or <sql Server Install>.exe) in this field.</sql
2	<license box="" check=""></license>	Select the I accept the Microsoft software Terms and conditions check box.
3	Unified ADS/ADX, or SCT	Select this option for a stand-alone SCT computer. This selection appears only for a new SQL Server installation.
4	SA Password	Specify a secure SA password for the SQL Server administrator account. This selection appears only for a new SQL Server installation.
5	Software Key	Enter the software license key required to activate SQL Server software, usually found on the media label. This selection appears only for a new SQL Server installation.
6	Show Advanced Options	Select this check box to enable the advanced options editing window.
7	Instance Name	Specify a database instance name for SQL Server.

Callout	Attribute	Action
8	Windows Account Granted SA Access • Local Administrators Group	Select the appropriate checkbox to grant administrator rights to either the local Administrators group or the local Windows Administrator.
	 Local Windows Administrator 	
9	Application Installation Path	Leave this field blank.
10	Default Database Storage Path	Leave this field blank.
11	Command Line Options	Contains the full command-line options that reflect the dialog box selections you made. Only edit the contents of this box if you fully understand SQL Server software options.
12	Find SQL Install Program	Click to open a browser window from which you can select the location of the SQL Server installation or upgrade file. Select the appropriate SQL Server setup (setup.exe) or executable file.
13	Download Management Studio Install Program	Click to access the Microsoft download page to download the latest version of SQL Server Management Studio (SSMS). SSMS is backward-compatible with all earlier versions of SQL Server.
14	Split ADX App Server Split ADX Data Server	Make no selection; these selections only apply to a split ADX.
15	Install New Instance or Upgrade Existing Instance	Click Install New Instance to start the SQL Server software installation or Upgrade Existing Instance to start the SQL Server software upgrade.

Table 3: Description of SQL Installer Window

If your computer has SQL Server software installed, go to Verifying your computer has a supported version of SQL Server software installed to verify that you have a version the software supports.

The following table lists the default SQL Server installation options that can be used by the Installer.

Table 4: SQL Server configuration selections

SQL Server configuration screen	SQL Server Express edition selections	SQL Server Standard or Enterprise edition selections
Setup role	N/A	SQL Server feature installation
Feature selection	Database engine services	Unified ADX or SCT:
	Management tools - Basic (if	Database Engine Services
	available)	Reporting Services
		Management Tools - Basic
		Management Tools - Complete
		Web/application server on
		split ADX:
		Reporting Services
		Management Tools - Basic
		Management Tools - Complete

SQL Server configuration	SQL Server Express edition selections	SQL Server Standard or Enterprise edition selections
Instance configuration	Default Instance (Named instance is valid as well)	Default Instance (Named instance is valid as well)
Server configuration	SQL Server Database Engine: NT Service\SQLSERVERAGENT or NT AUTHORITY\SYSTEM SQL Server Browser: NT AUTHORITY\LOCAL SERVICE	SQL Server Agent: NT Service\SQLSERVERAGENT or NT AUTHORITY\SYSTEM SQL Server Database Engine: NT Service\SQLSERVERAGENT or NT AUTHORITY\SYSTEM SQL Server Reporting Services: NT Service\SQLSERVERAGENT or NT AUTHORITY\SYSTEM SQL Server Browser: NT AUTHORITY\LOCAL SERVICE
Database engine configuration	Mixed Mode Specify SQL Server Administrators: BUILTIN\ADMINISTRATORS (Administrators)	Mixed Mode Specify SQL Server Administrators: BUILTIN\ADMINISTRATORS (Administrators)
Reporting services configuration	N/A	Unified ADX or SCT: Reporting Services Native Mode: Install and configure
SQL Server configuration manager Protocols for <instance name></instance 	Named Pipes: Enabled TCP/IP: Enabled	Named Pipes: Enabled TCP/IP: Enabled

Table 4: SQL Server configuration selections

Detailed procedures

Uninstalling existing SCT software introduction

- (i) **Note:** If you are uninstalling the SCT to install an earlier release, see Uninstalling SCT to install an earlier release of SCT for more information.
- **Important:** You need to uninstall SCT Release 11.0 or earlier software before you can use the System Configuration Tool Setup to install the latest release of SCT.
- **Important:** If you receive error messages when you uninstall SCT software, you may have problems reinstalling it. Diagnose these problems before you attempt to reinstall the software.
- Important: The security database for the SCT application is not available after uninstalling and reinstalling the software when you select the Remove Databases option. Before uninstalling the SCT software, document the existing list of SCT users and after reinstalling the software manually add the users to the database again.

Uninstalling SCT to install an earlier release of SCT

You do not need to install an earlier release of the SCT to work with devices that are at an earlier Release. You can use SCT Release 14.1 or later to manage devices that are at Metasys Release 5.2 or later.

➤ Important: To open an archive in the SCT, the archive must be at the same release as the SCT. If the archive is at an older release, SCT prompts you to upgrade it. However, if you upgrade an archive in the SCT, you can no longer open that archive in an earlier release of the SCT. For example, if you upgrade an archive to SCT Release 15.0, uninstall SCT Release 15.0, and then install an older release, such as SCT Release 14.2, you cannot open the archive in SCT Release 14.2.

If you uninstall the SCT and attempt to install an earlier release, the install may fail because of conflicting entries in the SQL database. If you need to install an earlier release of the SCT, or you need to open an archive database in an earlier release of the SCT, contact your local Johnson Controls representative for assistance.

Uninstalling existing SCT release 13.0 or earlier software

Follow these steps to uninstall existing SCT 13.0 or earlier software.

- 1. **Optional**: Use the Metasys Database Manager to purge any unwanted data from your databases and create backups. Refer to the *Metasys Database Manager Help (LIT-12011202)* for details.
- 2. Open Control Panel and select **Programs and Features**.
- 3. Right-click **System Configuration Tool <version>.**. Click **Uninstall** or **Change/Remove**. Click **Allow** or **Yes** if prompted for consent.
- 4. On the Wizard Welcome screen, click **Next**.
- 5. On the database server screen, complete the following steps:
 - a. Select or clear the **Remove databases** option.
 - b. Select one of the following authentication methods:
 - Windows authentication credentials of current user: Click this button to log in to the SCT SQL Server software using the Windows operating system credentials of the user logged in to the computer on which you are removing the SCT software.
 - Server authentication using the Login ID and password below: Click this button and fill in the Login ID and Password fields to use SQL Server authentication to access SQL Server software during SCT removal. For Login ID, enter a valid sa login for the SQL Server software on the SCT computer. For Password, enter the matching administrator password for the SQL Server software on the SCT computer.
 - c. Click Next. A user message appears if the connection to the database fails.
- 6. The next dialog box asks if you want to remove currently scheduled actions. Click **No** in preparation for the SCT upgrade, then click **Next**.
- 7. On the **Remove the Program** screen, click **Remove** to start the SCT uninstallation process. If you are uninstalling an SCT with the Advanced Reporting System, a message about removing the Metasys Reports folder may appear. Click **OK** to continue.
- 8. If you see a message about updating files or services, click **OK** to continue.
- 9. On the Setup Wizard Complete window appears when the SCT uninstallation is complete, click **Finish**.

10. If a computer restart message may appear, click **Yes** to restart the computer.

If the computer has an earlier version of the NAE/NIE Update Tool installed, go to Uninstalling existing NAE/NIE Update Tool software. Otherwise, go to Installing the SCT software.

Uninstalling existing NAE/NIE Update Tool software

If you upgrade from SCT 7.0 or earlier, and you have installed the NAE/NIE Update Tool separately, you need to uninstall any earlier version of the NAE/NIE Update Tool before you install the latest version of the SCT. To uninstall the NAE/NIE Update Tool, complete the following steps:

- 1. Open Control Panel and select **Programs > Programs and Features**. The list of installed programs appears.
- 2. Select **Metasys NAE-NIE Update Tool**. Click **Uninstall** or **Change/Remove**. A confirmation box appears.
- 3. Click **Yes** or **Allow** to continue. A progress window appears. When this window clears, the NAE/NIE Update Tool is uninstalled. No computer restart is necessary. Go to Installing the SCT software.

Opening ports and configuring the Windows firewall

This section provides an overview on how to open ports to make sure the SCT software and processes function properly. From SCT Release 8.1 and later, you can create rules to block inbound and outbound traffic over Port 80 (HTTP). For details on closing ports, refer to the *Network and IT Guidance Technical Bulletin (LIT-12011279)*.

- 1. In the **Control Panel**, click **System and Security**, then click **Windows Firewall**.
- 2. On the **Windows Firewall** window, make sure the firewall is **On**. If not, turn on the Windows Firewall.
- 3. Click Advanced Settings. The Windows Firewall with Advanced Security window appears.
- 4. On the left pane, click **Inbound Rules**. The Inbound Rules pane appears.
- 5. On the Actions pane, select **New Rule**.
- 6. On the **Rule Type** window on the New Inbound Rule wizard, select **Port** and click **Next**. The **Protocol and Ports** window appears.
- 7. On the **Protocol and Ports** window, select **TCP**, and in the **Specific Local Ports** field, enter the port numbers as shown in the following table. For detailed information on the purpose of each port, refer to the *Protocols, Ports, and Connectivity for the Metasys System* section of the *Network and IT Guidance Technical Bulletin (LIT-12011279)*.

Protocol	Port	Uses
НТТР	80	ТСР
Kerberos	88	ТСР
Remote Procedure Call (RPC)	135	ТСР
LDAP	389	ТСР
Secure Sockets Layer (SSL)	443	ТСР
NT LAN Manager Version 2 (NTLMv2)	445	ТСР
Remote Procedure Call (RPC)	1025	ТСР
Microsoft SQL Server Database	1433	ТСР
Microsoft Discovery Protocol	9910	ТСР

Table 5: Ports to open for TCP Protocol

- 8. Click **Next**. The **Action** window appears.
- 9. Select Allow the connection. Click Next.
- 10. On the **Profile** window, keep all profile check boxes selected (default). Click **Next**.
- On the Name window, specify Metasys (TCP Protocol) or FX (TCP Protocol) as the name. Optionally, you can add a description to identify this new rule. Click Finish. The Inbound Rules table refreshes to indicate the new rule called Metasys (TCP Protocol). Ports 80, 88, 135, 389, 443, 445, 1025, 1433, and 9910 are now open and ready for use.
- 12. Repeat Step 5 through Step 11 to add a new Metasys or FX inbound rule for the UDP protocol. When the Protocol and Ports window appears, select **UDP**, and in the **Specific Local Ports** field, enter the port numbers as shown in the following table. For detailed information on the purpose of each port, refer to the *Protocols, Ports, and Connectivity for the Metasys System* section of the *Network and IT Guidance Technical Bulletin (LIT-12011279)*.

Protocol	Port	Uses
SMTP	25	UDP
DNS	53	UDP
DHCP	67	UDP
DHCP	68	UDP
Trivial File Transfer Protocol (TFTP)	69	UDP
Kerberos	88	UDP
Network Time Protocol (NTP)	123	UDP
SNMP	161	UDP
SNMP Trap	162	UDP
Microsoft Discovery Protocol	9910	UDP
SYPE-Transport	9911	UDP
BACnet®	47808 (changeable;	UDP
	match with value in	
	SMP UI)	

Table 6: Ports to open for UDP Protocol

13. Complete Step 1 through Step 12 to add the new inbound rule. Name the new rule Metasys (UDP Protocol)

When finished, the **Windows Firewall with Advanced Security** window appears, and the **Inbound Rules** table refreshes to indicate the new rule. Depending on your system, the rule is called **Metasys (UDP Protocol)** or **FX (UDP Protocol)**. Ports 25, 53 67, 68, 69, 88, 123, 161, 162, 9910, 9911, and 47808 are now open and ready for use.

14. In the **Windows Firewall with Advanced Security** window, ensure that you define and enable the two new inbound rules.

Figure 2: Inbound Rules defined and enabled

I Windows Firewall with Advance	d Security	50	Ś.			- • ×
<u>File Action View H</u> elp						
🗢 🄿 🖄 🖬 🗟 🗊						
I Windows Firewall with Advance	Inbound Rules					Actions
Inbound Rules	Name	Group	Profile	Enabled	Actior ^	Inbound Rules 🔺 🔺
Connection Security Rules	Metasys (UDP Protocol)		All	Yes	Allow	🗱 New Rule
🛛 🔊 🌉 Monitoring	Metasys (TCP Protocol)		All	Yes	Allow	Filter by Profile
	Altova License Metering Port (TCP)		All	Yes	Allow	V Filter by State
	🔮 Altova License Metering Port (UDP)		All	Yes	Allow	
	🕑 Bonjour Service		Public	Yes	Allow	🛛 🐨 Filter by Group
	🕑 Bonjour Service		Public	Yes	Allow	View 🕨
	🕑 Bonjour Service		Private	Yes	Allow	Defrech
	🕑 Bonjour Service		Public	Yes	Allow	Cu Kerresh
	🕑 Bonjour Service		Public	Yes	Allow	📑 Export List
	🖉 Bonjour Service		Private	Yes	Allow	? Help
	🕑 Bonjour Service		Private	Yes	Allow	
	🐼 Bonjour Service		Private	Yes	Allow	Selected Items
	🔇 CyberLink PowerDirector		All	Yes	Allow +	Disable Rule
4	< III				E.	🔏 Cut 👻

- 15. Close the Windows Firewall with Advanced Security window.
- 16. Close all windows.

Verifying your computer has a supported version of SQL Server software installed

To verify your computer has a supported version of SQL Server software installed, perform the following steps:

- Open the SQL Server Configuration Manager tool from the Microsoft SQL Server program group. If that application is missing from the Start menu, run SQLServerManager13.msc (SQL 2016), SQLServerManager14.msc (SQL 2017), or SQLServerManager15.msc (SQL 2019) to start it manually.
 - (i) **Note:** If you do not see any version of Microsoft SQL Server on your computer, you do not have the required software. Follow the instructions in this document for installing a supported version of SQL Server software.
- 2. On the left pane, select **SQL Server Services**. On the right pane, double-click the **SQL Server** instance name.
- 3. Click the **Advanced** tab and scroll down to the **Version** row.
- 4. If the version matches any of the listed version numbers, you have a supported version of SQL Server or SQL Server Express software. Verify that the version number is any one of the following or later versions:
 - 15.0.4188.2: SQL Server® 2019 with CU14 (64-bit)
 - 14.0.3421.10: SQL Server® 2017 with CU27 (64-bit)
 - 13.0.5888.11: SQL Server® 2016 with SP2 CU17 (64-bit)
 - (i) **Note:** The SQL Server versions listed here are the minimum supported versions for this release.

5. If the version does not match any of these version numbers or later, you need to either apply the required service pack or upgrade to a newer version of SQL Server or SQL Server Express software. Follow the instructions in the *SQL Server Install and Upgrade Installation Instructions* (*LIT-12012240*) for installing a supported version of SQL Server software.

Installing or upgrading SQL Server software using the SQL installer

As part of the SQL Server installation and upgrade process, SQL Server Setup checks the configuration of your computer and indicates any potential installation problems. For example, if you do not have the required version of Microsoft .NET Framework installed, SQL Server Setup reports an error. Also, if you try to upgrade an old version of SQL Server software that is not at the minimum service pack level, SQL Server Setup reports an error and cannot continue until you apply the required service pack update. You must resolve all issues before you continue with SQL Server software installation.

Upgrading from SCT Release 13.2 or later to Release 15.0

software

About this task:

- (i) **Note:** If you have SCT Release 13.0 or earlier installed on your computer, uninstall the software before you can upgrade to the latest release. See Uninstalling existing SCT release 13.0 or earlier software.
- (i) **Note:** When you install or upgrade SCT on a unified ADS or ADX, the process stops the Metasys Server. Ensure you upgrade the Metasys Server to Release 12.0 immediately after you install or upgrade SCT to Release 15.0.
 - 1. Obtain the SCT installation file from the License Portal.
 - 2. Right click SystemConfigurationTool_15.0.exe and select Run as administrator.
 - 3. On the System Configuration Tool (SCT) 15.0 Setup window, click **Upgrade**.
 - 4. On the SQL Server Credential window, log on to SQL Server in one of two ways:
 - To log on with Windows Credentials, keep the **Use Windows Credentials** check box selected.
 - To log on using SQL Server authentication, deselect the **Use Windows Credentials** check box and enter the SA user name and password.
 - 5. Click **Upgrade**. If you are prompted to restart the computer, click **Restart Now**.
 - 6. Before you use SCT, you must license SCT, as well as install and license packages. See Licensing SCT and importing and licensing packages for SCT for these steps.

Installing the SCT software

SCT software one-click installation

About this task:

- (i) **Note:** Installation of the prerequisite software for SCT occurs before the installation of the SCT software. If not detected, the SCT download manager also installs .NET Framework 4.7.2 or later.
 - 1. Obtain the SCT installation file from the License Portal.
 - 2. Right click SystemConfigurationTool_15.0.exe and select **Run as administrator**.

- 3. On the System Configuration Tool Setup window, click **Install**.
- 4. If the message Install will continue after restart appears, click **Restart Now** to restart your computer. The installation continues after you restart the computer and log on to Windows.
- 5. Click **Finish**.
 - (i) **Note:** Before you can use all features within SCT, you must license both SCT as well as install and license SCT packages. See Licensing SCT and importing and licensing packages for SCT for these steps.

SCT custom installation

About this task:

The SCT Custom installation automatically launches when the installation requires more details from the user regarding software setup. For example, if the computer already has a version of SQL Server installed, the user must specify the SQL Server instance to user during SCT setup.

- 1. Obtain the SCT installation file from the License Portal.
- 2. Right click SystemConfigurationTool_15.0.exe and select **Run as administrator**.
- 3. On the System Configuration Tool Setup window, click **Custom**. The SQL Server Selection window appears with the Database tab highlighted.
- 4. If no SQL instance is present and it is a desktop OS, then the SCT installer adds SQL Server Express 2017 CU 19 during the installation process. However, if any SQL instance is already on the SCT computer, including an unsupported one, or it's a server-class OS, then the SCT install does not install SQL. If an unsupported version is detected, the install presents an error message and you can cancel to install SQL separately. If you do have a supported version installed, select the SQL instance to use, and then select one of the following SQL authentication options:
 - Windows authentication credentials of current user. Select the Windows Credentials check box: Select this option to log in to the SQL Server software by using the Windows operating system credentials of the current Windows user. To use this option, the current Windows user must be a member of the SQL Server sysadmin role for the Selected SQL Server.
 - SQL Server Login and Password. Clear the Windows Credentials check box: Fill in the SQL Username and Password fields to use SQL Server authentication to access SQL Server software during the installation. In the SQL Username field, enter a SQL Server user who is a member of the sysadmin role for the selected SQL Server. In the Password field, enter the corresponding password.
 - (i) **Note:** For Server OS, if an unsupported SQL instance exists, or you require a different version of SQL, refer to *SQL Server Installation and Upgrade Instructions (LIT-12012240)*.
- 5. Click the **General** tab.
- 6. Verify that the Install Path indicates the location under which you want to install the SCT. If you want to install the SCT to a custom location, click **Browse** and select a location.
- Click Install. Installation of the prerequisite software for SCT occurs before the installation of the SCT software. If not detected, the SCT download manager also installs .NET Framework 4.7.2 or later.
- 8. If the message Install will continue after restart appears, click Restart Now. The installation continues after you restart the computer and log on to Windows.
- 9. Click **Finish**.

(i) **Note:** Before you can use all features within SCT, you must license both SCT as well as install and license SCT packages. See Licensing SCT and importing and licensing packages for SCT for these steps.

Licensing SCT and importing and licensing packages for SCT

About this task:

From SCT Release 14.1 and later, you require Device Packages, Field Controller Packages and Johnson Controls SA Bus packages to use all features in SCT. If you do not install device packages, you cannot add servers, supervisory devices, and field devices. To import and license SCT packages, complete the following steps:

- 1. Obtain Device packages and Field Controller Packages from the License Portal.
 - (i) **Note:** Johnson Controls SA Bus Package files are licensed as a feature with CCT.
- To import a package file double-click on the package collection file or navigate to Start > Johnson Controls > Package Importer. The Package Importer displays the message Finished importing device when the import is complete.
- Click the Add License button in the Software Manager to license SCT software and device packages or field controller packages. Choose an activation method: Online with a Product Key or Offline with a License Activation File. Once added, SCT software and package licenses display in the License Inventory.
 - (i) **Note:** The Software Manager only lists device packages and field controller packages after you apply a license.
 - (i) Note: If you do not license the SCT software after installation, the Unlicensed Software Detected dialog box appears when you access SCT and it is not possible to log on to SCT, SCT Pro or JCT until it is licensed.
- 4. After you install and license the SCT software and packages, you can use SCT Pro to reflash engines using images that you download from the Johnson Controls License Portal. To extract the images, double-click the appropriate file. The **Metasys Engine Importer** extracts the contents of the file to C:\NAEUpdateTool\tftpfiles.

Uninstalling SCT Release 12.0 and later software

- 1. On the Start menu, click **Control Panel**.
- 2. Go to **Programs > Programs and Features**. The Programs and Features window appears.
- 3. In the program list, right-click System Configuration Tool (SCTT) XX.0, where XX.0 is the release number, and click **Uninstall**. The System Configuration Tool (SCT) Setup window appears.
- 4. Click **Uninstall**. The Remove Databases window appears.
- 5. In the Remove Databases window, the **Remove Databases** checkbox is selected automatically. If you wish to keep the application's runtime databases after SCT is uninstalled, deselect the **Remove Databases** checkbox.
 - (i) **Note:** The **Remove Databases** option does not remove any existing Archive databases. It removes several runtime databases such as ActionQueueSCT, MetasysSCT, SCT Pro, and SCTTranslationDictionary. The remaining databases continue to exist in SQL and the physical database files remain on disk.
- 6. Log on to SQL Server in one of the following two ways:
 - To log in with Windows Credentials, keep the **Use Windows Credentials** checkbox selected.

- To log in using SQL Server authentication, deselect the **Use Windows Credentials** check box and enter the SA user username and password.

- 7. Click Uninstall.
- 8. Click **Restart** to restart the computer and complete the uninstallation process.

Launching the SCT user interface

About this task:

To launch the SCT UI, do one of the following:

- On the SCT computer, go to Start > Programs > Johnson Controls > Launcher. Click the Launcher icon on the Desktop. Follow the steps in Launcher Help (LIT-12011742) to add the SCT computer's profile to the Launcher.
- On another computer on the same network as the SCT computer, first uninstall any older version of the Launcher software from the client. Then, browse to https://[Host name or address]/SCT/ where [name or address] is the computer name or IP address of the computer on which the SCT is installed.

When you browse to the SCT computer from a client for the first time, the Launcher Download screen appears. Start the SCT UI using the Launcher downloaded JRE. Click **Full Launcher Installer** to retrieve the user interface files from the SCT computer, then run the Launcher installation file. For details, refer to the *Launcher Installation Instructions (LIT-12011783)*.

After you install the Launcher to your local hard disk, double-click its icon on the computer desktop. The Main Screen of the Launcher appears. Add a profile for the SCT computer. For details, refer to *Launcher Tool Help (LIT-12011742)*.



Figure 3: Launcher main screen

After you add the SCT profile, select it from the profile list under the SCT tab and click **Launch**. The Metasys System Configuration Tool logon screen appears.

Log on with the MetasysSysAgent user and default password. To obtain the default password, contact your local Johnson Controls representative. The Change Password screen appears for the MetasysSysAgent user. Type the old password, then type a new password twice. The new password must follow the rules listed in the Change Password screen. To look up words that cannot be passwords, click **View Blocked Words List**.

Click **OK**. When **Successfully changed the password** appears in the Change Password dialog box, click **OK**. The Terms and Conditions dialog box appears. Click **Accept**. If no archive databases exist on the system, the New Archive Wizard user interface screen appears (Figure 4).

Figure 4: N	New archive	wizard screen
-------------	-------------	---------------

	New Archive Wizard			×	
	Enter a unique identifier in t	he box below.			
	MyArchive				
System Configuration Tool					K
<u>I</u> tem <u>E</u> dit ⊻iew <u>A</u> ction I <u>n</u> sert]					it
企	눱 MyArchive1 - Version 14	4.0			
	Туре				
	Scan the site for engir	nes (fast)			
	 Empty Archive 				
		Site Director Reference	ADS-01		
		Site Director IP (optional)			
		User Name	[*****		
×		Password			CST
		Test Login			
		Create	ancel		

To learn how to create a new archive and use all the features of SCT, refer to *SCT: System Configuration Tool Help (LIT-12011964)*. If you see any error messages while logging into and using SCT, see Troubleshooting.

Browsing to JCT or SCT Pro

To browse to JCT or SCT Pro from a client computer or device, use a supported web browser and go to the web address shown in Table 7, where [Host Name or IP address] is the server name of the SCT computer or IP address of the SCT computer.

SCT supports the following web browsers:

Microsoft® Edge® version 91 or later

- Apple® Safari® 13.1 or later
- Google® Chrome[™] version 91 or later

JCT and SCT Pro do not fully support other browsers such as Mozilla® Firefox®.

Table 7: Web addresses

Tool	Web address (URL)
JCT	https://[Host Name or IP address]/ UIOffline
SCT Pro	https://[Host Name or IP address]/ SCTPro

If you are browsing to JCT or the SCT Pro on the SCT computer, use localhost as the Host Name.

(i) **Note:** Ensure that your web browser has cookies enabled before browsing to JCT or the SCT Pro.

To access SCT Pro from SCT rather than directly from a browser, click the link on the SCT logon page, or, after you log on to SCT, select **SCT Pro** > **Dashboards**.

Authentication

JCT and SCT Pro use the same user credentials as the SCT. To log on to the JCT or the SCT Pro, use your SCT user name and password.

Security certificate warnings

(i) **Note:** Ensure that your web browser has cookies enabled before browsing to JCT or SCT Pro.

When browsing to JCT or SCT Pro, your web browser displays a security certificate warning if your JCT and SCT Pro site does not have a trusted security certificate. If you enter localhost as the server name, your web browser displays a security certificate warning even if you install a trusted security certificate.

If you see a security certificate warning, complete the following steps to browse to JCT or SCT Pro:

- For Google® Chrome[™] browsers:
 - a. Tap or click **Advanced**.
 - b. Tap or click **Proceed to [name or IP Address]**, where [name or IP Address] is the computer name or IP address of the computer on which the SCT is installed. The JCT or SCT Pro logon screen appears.
- For Microsoft Edge, tap or click **Advanced**, then click **Continue to localhost (not recommended)**. The JCT or SCT Pro logon screen appears.
- For Apple® Safari®: tap or click **Continue** in the **Cannot Verify Server Identity** window. The JCT or SCT Pro logon screen appears.
- (i) **Note:** JCT does not support autofill functionality for the username or password fields.

For more information about implementing security certificates for the Metasys UI or the SCT Pro sites, refer to the *Appendix: Security Certificate Implementation* section of the *Network and IT Guidance Technical Bulletin (LIT-12011279)*.

Troubleshooting

Use the following table to resolve issues that may occur during installation. Uninstall and then reinstall the SCT if it ceases to function correctly and you cannot find a solution in the following table. Under normal circumstances the SCT software installer sets up all of the required components.

Problem	Solution
You experience installation problems and would like to consult the error log.	The error messages are located in the following folder: C:\Users\ <username>\AppData\Local Look for the file called: \System_Configuration_Tool_(SCT)_15.0_<date <br="">time>.html.</date></username>
You receive the following error message when installing SCT: Metasys System Configuration Tool (SCT) previous version detected. Please remove SCT and then run this setup again.	An earlier version of SCT is installed on the computer. You must uninstall any earlier version of SCT before installing. Follow the directions in the Uninstalling existing SCT release 13.0 or earlier software and Uninstalling existing NAE/NIE Update Tool software sections and try the installation again.
You receive the following error message when installing SCT: No valid MSSQL Server instances found on the local machine.	 Two instances cause this error to occur: An unsupported version of SQL Server is installed on the computer. You have a computer with a version of Windows that does not support the one-click install (for example, Windows Server 2019) and no version of SQL Server installed. See SQL Server Software for supported SQL servers.
	supported versions of SQL Server. Then, upgrade to a supported version before you proceed with the SCT installation.
The SCT 14.1 installation fails and the SCT install log contains the following error if you click View all: DISMHelper: [2019-03-21T11:12:37] ERROR - 0x800f080c Or the following error appears when you launch SCT from the Launcher: Check network connections. Check proxy settings in	 Windows 10 version 1809 uses a new method to install the Simple Network Management Protocol (SNMP) feature, which has components that SCT requires. You can install SCT Release 13.0 on Windows 10 version 1809, but you must first complete the steps described in <i>Flash Sheet: System Configuration Tool (SCT) installation fails on Microsoft® Windows®</i> 10 version 1809 (<i>LIT-2019F1</i>) or contact your local Johnson Controls representative. You cannot install SCT Release 12.0 or earlier on Windows 10 version 1809. Note: SCT Release 14.1 does not support Windows 10 Build 1809; you must install SCT 14.1 on Windows 10 Build 1903 or later.

Problem	Solution
The SCT installation fails	Complete the following steps to stop the Action Queue service:
and the SCT install log	1. In Control Panel, select Administrative Tools > Services .
contains the following	2. Right-click Metasys III SCT Action Oueue , and then click Stop .
error:	
ExecuteSqlDuringInsta	After the Action Queue service stops, try the installation again.
ll: ERROR - The	
database could	
not be exclusively	
locked to perform the	
operation.	
In the SQL Server	CTOOLS is a 16-bit program and is not supported on any 64-bit
Management Studio,	operating system. Click OK to close the user message window.
SQL Server Agent has the	
following text after it:	
(Agent XPs disabled)	
While using the SQL	To eliminate either of these errors, follow these steps:
Installer tool, you receive	1. Exit all programs.
a user or error message	2. Uninstall the SCT software.
during SQL Server	3 Press the Windows key + R. The Run dialog box appears
software installation	A Type %TEMP% and click OK Windows Explorer opens to display
or upgrade. Possible	the contents of the temp folder
	E Delete all files and folders in this directory
SQL Server Install	5. Delete all files and folders in this directory.
Instance Name already	6. Restart the computer.
installed	7. Reinstall the SCI software.
Install failed -	
Missing Windows	
Installer 4.5	
Install failed -	
Missing .NET 3.5.1	
SP1	
No new features were	
installed during the	
setup execution	
The OS does not	
meet the minimum	
requirements for this	
SQL Server install	
Install failed - Bad	
software key	
WARNING: Please	
install the following	
prerequisites: .NET	
3.5.1 SP1, Windows	
Installer 4.5	

Problem	Solution
While using the SQL Installer tool, you experience installation problems after you edit	Consult the error log file. The error messages file is located in the following folder: C:\Program Files\Microsoft SQL Server\ <number based="" on="" release="" sql="" the="">\Setup Bootstrap\Log\Summary.txt</number>
Line Options window of the SQL Installer.	again.
You receive the following error message while installing SCT: Metasys NAE/NIE Update Tool (NUT) earlier version detected. Please remove NUT and then run this setup again.	The text within the Command Line Options window contains errors. Correct the errors or restart the SQL Installer so that the Command Line Options window defaults to its original content.
 The SCT software does not function correctly after you do one of the following: Attempt to reinstall SQL Server software 	An earlier version of the NAE/NIE Update Tool is installed on the computer. You must uninstall prior versions of the NAE/NIE Update Tool before installing SCT. Follow the directions in the Uninstalling existing NAE/NIE Update Tool software section and try the installation again.
because it appears to be damaged.Upgrade from an older	
version of SQL Server Express software to a newer version of SQL Server Express software outside the regular upgrade process.	

Problem	Solution
After you upgrade to a newer version of SQL	To correctly change your SQL Server software outside the usual installation or upgrade process, follow these steps:
Server, SCT no longer starts.	 Back up all archive databases and back up the historical databases: JCIAuditTrails, JCIEvents, JCIHistorianDB, JCIItemAnnotation, and MetasysReporting. Uninstall the SCT and ADS/ADX software using Add/Remove
	Programs or Uninstall a Program.
	3. Reinstall or upgrade SQL Server software as you intended.
	4. Reinstall the SCT.
	 Restore the archive databases and the historical databases: JCIAuditTrails, JCIEvents, JCIHistorianDB, JCIItemAnnotation, and MetasysReporting.
	If you have already changed SQL Server software without uninstalling the SCT, follow these steps:
	 Back up all archive databases and back up the historical databases: JCIAuditTrails, JCIEvents, JCIHistorianDB, JCIItemAnnotation, and MetasysReporting.
	 Uninstall the SCT software using Add/Remove Programs or Uninstall a Program.
	3. Reinstall the SCT.
	4. Restore the archive databases and the historical databases:
	JCIAuditTrails, JCIEvents, JCIHistorianDB,
	JCIItemAnnotation, and MetasysReporting.

Problem	Solution
The following error appears when you try to	To correctly change your SQL Server software outside the usual installation or upgrade process, follow these steps:
log on to the SCT: Unable to Authorize Active Directory User.	 Back up all archive databases and back up the historical databases: JCIAuditTrails, JCIEvents, JCIHistorianDB, JCIItemAnnotation, and MetasysReporting. Uninstall the SCT software using Add/Remove Programs or Uninstall a Program. Reinstall or upgrade SQL Server software as you intended. Reinstall SCT. Restore the archive databases and the historical databases: JCIAuditTrails, JCIEvents, JCIHistorianDB, JCIItemAnnotation, and MetasysReporting. If you have already changed SQL Server software without uninstalling the SCT, follow these steps:
	 Back up all archive databases and back up the historical databases: JCIAuditTrails, JCIEvents, JCIHistorianDB, JCIItemAnnotation, and MetasysReporting. Uninstall the SCT software using Add/Remove Programs or Uninstall a Program. Uninstall the SQL Server software. Using Windows Explorer, browse to C:\Inetpub\wwwroot and delete the MetasysIII folder. Browse to C:\WINDOWS\inf\009 and C:\WINDOWS\inf\inc and delete the MsSQLServer folder in each one. Install SQL Server software. Restore the archive databases and the historical databases: JCIAuditTrails, JCIEvents, JCIHistorianDB, JCIItemAnnotation, and MetasysReporting.

Problem	Solution
The following error	Solution 1:
appears when you try to log on to the SCT: Error: Unable to Login. Unexpected Error.	Active Directory® (AD) authentication may fail for the SCT's AD service account. This can occur if the AD service account is no longer valid, is locked out, its password has changed, or the account does not have sufficient privileges. To work around this problem, follow these steps:
	 Log on to SCT with a local SCT administrator user account and select Tools > Administrator.
	 Select Server Configuration > Active Directory. Edit the existing AD service account to change its password or replace the AD service account with a different user (Remove/ Add).
	4. Click Save .
	Image: The AD service account should be a dedicated Active Directory account where the password is set to never expire. For details, refer to Security Administrator System Technical Bulletin [LIT-1201528]
	Solution 2: The Launcher is configured to use a proxy server, even though the network does not require a proxy server. Open the Launcher and click the Network Settings button. On the Network Settings window, select Use browser settings . Solution 3:
	Microsoft SQL Server is not running. Start the SQL Server service with the SQL Server Configuration Manager.
	SQL Server is missing from the computer's Path variable. To resolve this problem, follow these steps:
	1. Select Settings > Control Panel > System.
	2. Click the Advanced tab, then click Environment Variables button.
	3. Under System Variables, double-click the Path entry.
	4. In the Edit System Variable window, make sure the SQL path is present somewhere within the variable value string. If the path is not present, add it with a semicolon (;) at the start of the string as a separator.
	For SQL Server software, the path is as follows:
	;C:\Program Files\Microsoft SQL Server
	\MSSQL10_50.MSSQLSERVER\MSSQL\Binn.
	For SQL Server 2012 software, the path is as follows:
	C:\Program Files\Microsoft SQL Server
	Auge Construction 2.
	The computer contains files from an earlier operating system or from an earlier version of Metasys software that are conflicting with the updated software. Verify that a folder with an older OS does not exist on the hard disk (for example, WINDOWS.OLD).

Problem	Solution
You change the default language of the SCT, but when you log on, you do not see the new default language.	SCT has become corrupted and access to the Metasys system folder is broken. To resolve this problem, uninstall SCT then reinstall it.
The following error appears when you launch SCT from the Launcher: Missing Resource File.	 To resolve this problem: In Control Panel, select Administrative Tools > Services. Right-click IIS Admin and select Stop. In Windows Explorer, browse to C:\WINDOWS\Microsoft.NET \Framework\v2.0.50727\Temporary ASP.NET Files\sct Delete the files in the sct folder. In the Services window, right-click IIS Admin and select Start. Close all windows and log on again.
The following error appears when you launch SCT from the Launcher: HTTP Error 500.19 - Internal Server Error The requested page cannot be accessed because the related configuration data for the page is invalid.	You are trying to use an older version of Launcher that is not compatible with this SCT release. Uninstall the old version of Launcher, then try again. Or to have the latest Launcher pushed to your computer directly from the SCT computer, open the browser and go to http:// <sct address="" computer="" ip="" name="" or="">/ launcher.msi.</sct>
The Software Manager Notice dialog box appears when you launch SCT.	 To resolve this problem: Run the Software Manager. Validate SCT and your field controller package files, supervisory devices packages and Generic SA Bus packages are listed as a Licensed. If SCT or the field controller packages are listed as Unlicensed, select Activate New in the Choose Action drop-down list or click the Add License button. Follow the on-screen prompts through the License Portal or upload an offline License Activate.

Problem	Solution
After attempting to import or export large archives in SCT, a 520 read/write error may occur.	To resolve this issue extend user timeout settings in the SCT Administration Tool before attempting to export the archive. To configure timeout settings:
	 Open SCT. Select the Tools tab. Select Administrator. Double-click a user to configure. Select the Account Policy tab. In Inactive Session, select Never Terminate. Click OK.
When trying to import a dbexport file it takes a long time, up to 4 hours, and when imported, it can also take a long time, up to 30 hours and several attempts.	 This issue occurs when SCT Pro is not able to connect to the local SQL database. To resolve this issue, you can do one of the following actions: Check the client protocols in SCT Pro to determine if TCP/IP Protocol is disabled and if so, enable TCP/IP. If you decide to change the default SQL Server port, you must manually update SCT and SCT Pro's connection strings to match. The default port for a system not using named instances is 1433. In C:\Program Files (x86)\Johnson Controls \MetasysIII\Tool\bin\Database.config, edit the line add name="SqlConnection to be"
	<add <br="" name="SCTDBConnectionString">connectionString="Server=tcp:localhost;Initial Catalog=SCTPro;Trusted_Connection=True;Pooling=true" providerName="System.Data.ProviderName" /></add>
	. This replaces the localhost to be localhost,xxxx with xxxx being the desired port address. Then repeat these steps in C:\Program Files (x86)\Johnson Controls\SCTPro\Database.config.

Problem	Solution
When you attempt to upgrade an SCT archive to SCT 15.0, the upgrade appears under the Scheduled actions tab with an unidentified command action and it is not possible to run all scheduled jobs in Windows 10.	The issue occurs in Windows 10 if SQL Browser service is not enabled. To resolve this issue, enable the SQL Browser service in the Services Control Panel .
Any user customizations of key values under the <appsettings> section of the ActionQueueTasks.dll. config file for adjusting upload and download performance are not persisted after an uninstall. The file is removed along with the other product resources in C:\Program Files (x86)\Johnson Controls\MetasysIII \Tool\bin.</appsettings>	To work around this issue, save a backup of the file (ActionQueueTasks.dll.config), and after the installation or upgrade, compare the new file to your backup file and add your configuration to the new file.

Product warranty

This product is covered by a limited warranty, details of which can be found at <u>www.johnsoncontrols.com/buildingswarranty</u>.

Software terms

Use of the software that is in (or constitutes) this product, or access to the cloud, or hosted services applicable to this product, if any, is subject to applicable end-user license, open-source software information, and other terms set forth at <u>www.johnsoncontrols.com/techterms</u>. Your use of this product constitutes an agreement to such terms.

Patents

Patents: https://jcipat.com

Contact information

Contact your local branch office: www.johnsoncontrols.com/locations

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