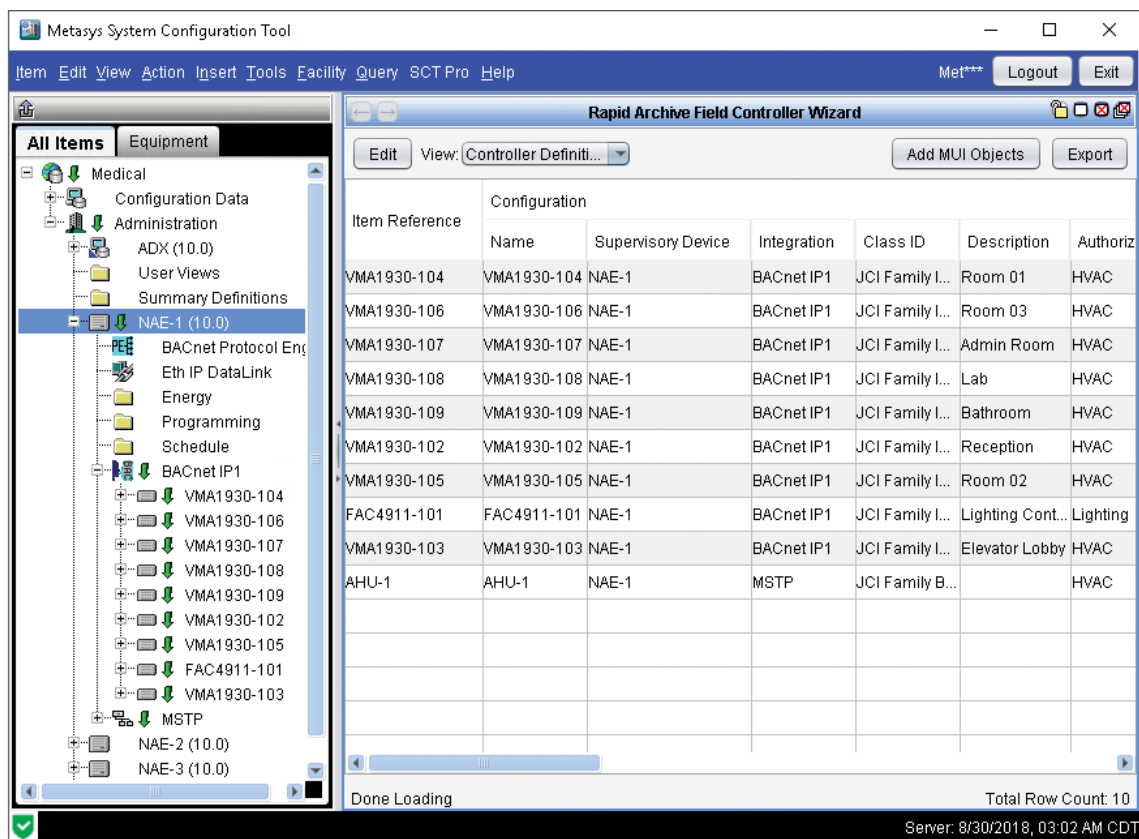


SCT Installation and Upgrade Instructions



Johnson Controls
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Release 13.0



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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. You must uninstall SCT Release 11.0 or earlier software before you install SCT Release 13.0. For details, see [Uninstalling existing SCT release 11.0 or earlier software](#). If you install 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 Microsoft® SQL Server® software. If install SCT on a Desktop Operating Systems and you do not have a supported version of Microsoft SQL Server software, the *Metasys®* System Configuration Tool Setup automatically installs Microsoft SQL Server 2014 Express. For details, see [Verifying your computer has a supported version of SQL Server software installed](#).

Summary of changes

The following information is new or revised:

- 32-bit versions of software and operating systems are **no longer supported**. See [Operating system requirements](#).
- The SCT software and Trunk Utility features require license activation at Release 13.0. SCT and Field Controller packages can be licensed using the Software Activation Manager (SAM) installed through the SCT installation wizard. For more information on software licensing, refer to the *Software Activation Manager Help (LIT-12012389)*.
- Simulation mode is not supported at Release 13.0.
- Support for Standard and Express versions of Microsoft SQL Server® 2016 with SP1 (64-bit), SQL Server® 2014 with SP2 (64-bit), and SQL Server® 2012 with SP4 (64-bit). See the [SQL Server software](#) section.
- SCT Pro is installed with SCT, and provides improved workflows for some features. For more information on accessing SCT Pro, see [Browsing to the Metasys UI Offline or SCT Pro](#). For more information on the features available in SCT Pro, refer to the *SCT Pro User's Guide (LIT-12013035)*.

Getting started

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

Table 1: Components installed by the *Metasys* System Configuration Tool setup

Windows Components Installed	<i>Metasys</i> Products Installed
Microsoft Internet Information Services (IIS)	System Configuration Tool 13.0
Microsoft .NET Framework 4.6.1	SCT Pro 13.0
Microsoft Visual C++ Runtime Libraries	<i>Metasys</i> User Interface (UI) Offline 4.0
Microsoft Message Queuing (MSMQ)	Launcher 1.7
Microsoft SQL Server® 2014 Express with SP2 (64-bit) - Desktop Operating Systems only. Only installs if no version of SQL Server is detected.	Software Activation Manager
	NAE/NIE Update Tool 13.0
	<i>Metasys</i> Engine Importer
	Package Importer
	<i>Metasys</i> SCT databases

Related documentation

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

Table 2: SCT installation and upgrade related documentation

For information on	Document reference
Understanding the <i>Metasys</i> System	<i>Metasys® System Configuration Guide (LIT-12011832)</i>
Installing and Upgrading the Application and Data Server (ADS) and Extended Application and Data Server (ADX) on the SCT Computer	<i>Metasys Server Installation and Upgrade Instructions (LIT-12012162)</i>
Installing and Upgrading ADS-Lite on the SCT Computer	<i>Metasys Server Lite Installation and Upgrade Instructions (LIT-12012258)</i>
Details for Installing and Upgrading SQL Server Software	<i>SQL Server Software Installation and Upgrade Instructions (LIT-12012240)</i>
Using the <i>Metasys</i> Launcher	<i>Launcher Tool Help (LIT-12011742)</i>
Knowing the Features, Benefits, and Specifications of SCT	<i>System Configuration Tool Catalog Page (LIT-1900198)</i>
Creating Archive Databases, Integrating Building Networks, and Auto Discovering Points	<i>Metasys® SCT Help (LIT-12011964)</i>
Understanding Security Risks on the Network	<i>Network and IT Guidance Technical Bulletin (LIT-12011279)</i>
Understanding <i>Metasys</i> UI Offline	<i>Metasys® UI Offline Help (LIT-12012116)</i>
Understanding SCT Pro	<i>SCT Pro User's Guide (LIT-12013035)</i>
Understanding the NAE/NIE Update Tool and the <i>Metasys</i> Engine Importer.	<i>NAE/NIE Update Tool Help (LIT-12011524)</i>

SCT installation and upgrade overview

The Windows operating system that you want to use for SCT software must have the proper components installed. SCT software does not install or function properly if any of these components are missing. The *Metasys* System Configuration Tool Setup installs many of these prerequisites, but make sure you carefully review the software requirements prior to installation. Follow the steps outlined in the [Detailed procedures](#) section in sequential order to ensure SCT successfully installs.

You can install SCT Release 13.0 on a computer with a *Metasys* server that is at *Metasys* Release 9.0 or later. *Metasys* servers include the ADS, ADX, ADS-Lite, and ODS. Some important installation rules to consider are:

- You must **uninstall** any older stand-alone releases of the NAE/NIE Update Tool before using the *Metasys* System Configuration Tool Setup to install SCT Release 13.0.
- You must **uninstall** SCT Release 11.0 or earlier software before installing SCT Release 13.0. You must apply any new OS or SQL service pack after the older version of SCT is removed, but before the new version of SCT is installed.
- Do not install SCT and the *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 SCT on a separate computer.
- You can use SCT Release 13.0 to manage devices from *Metasys* Release 5.2 or later. SCT no longer requires the Site Director to be of an equivalent release version as the tool.
- SCT must be installed on a stand-alone system 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

Please note the following:

- 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 the latest version of SCT is installed.
- SCT software requires 8 GB of available hard disk space. This requirement is to ensure that enough room exists for future database storage used by SCT.
- The *Metasys* System Configuration Tool Setup installs Microsoft .NET Framework versions 3.5.1 and 4.6.1 if they do not already exist on the computer. SCT 12.0 or later requires Windows update 1 (KB2919355) when installing on Windows 8.1 or Windows Server® 2012 R2. This update is a prerequisite of Microsoft .NET Framework 4.6.1.
- Install SCT on a dedicated computer to avoid incompatibility issues. Other non-*Metasys* applications that use IIS may cause unforeseen complications.
- You can use SCT to maintain a variety of release engines from *Metasys* Release 5.2 to 10.0. The Site Director must be at an equivalent or greater release version than the highest versioned 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 *Metasys® SCT 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 login username for the SCT UI is MetasysSysAgent and it is not case sensitive. For the MetasysSysAgent default password, contact your local Johnson Controls® representative. For new SCT installations, you must change the login account password to a valid, complex password when you log in 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 Release 10.0 or later software, the installer also installs the NAE/NIE Update Tool in the background. Separate menu items are created for both SCT and the NAE/NIE Update Tool under **Start > All Programs > Johnson Controls > Metasys**. The SCT installation program creates a *Metasys* SCT icon on the computer desktop, but **does not** create an icon for the NAE/NIE Update Tool. Uninstalling SCT also uninstalls the bundled NAE/NIE Update Tool. However, because the tool is bundled with SCT, you cannot separately uninstall the NAE/NIE Update Tool without also uninstalling SCT. The NAE/NIE Update Tool has no separate entry under the list of installed Windows programs.
- If your computer has an older version of the NAE/NIE Update Tool, you cannot upgrade SCT until you uninstall the older version of the NAE/NIE Update Tool. The releases must match because the SCT and NAE/NIE Update Tool share the same code base for some upload and download operations.
- The SCT 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, CCT is no longer required to be installed 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, the Trunk utilities option is available to transfer CAFs to and from the SCT archive.

Operating system requirements

SCT software is supported on the following Windows operating systems:

- Windows® 10 Pro and Enterprise Editions with Creators Update (version 1709) (64-bit)
- Windows® 8.1 Pro and Enterprise Editions with Update 1 (64-bit)
- Windows® 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit)
- Windows® Server® 2016 (64-bit)
- Windows® Server® 2012 R2 with Update 1 (64-bit)
- Windows® Server® 2012 (64-bit)

Notes:

- We highly recommend that you do not install *Metasys* 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 may adversely affect the installation of *Metasys*

system software. Prepare the computer by performing a clean installation using the Windows installation media.

- Microsoft SQL Server 2008 and SQL Server 2008 R2 are no longer supported.

The *Metasys* System Configuration Tool Setup installs Microsoft .NET Framework versions 3.5.1 and 4.6.1. For Windows 8.1, Windows 10, Windows Server 2016, Windows Server 2012, and Windows Server 2012 R2, a valid connection to Windows Update must be available for the SCT setup to be successful with the installation of .NET Framework 3.5.1. An error message appears if the prerequisite is not present. You need to install any missing software prerequisites before continuing.

SQL Server software

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

- SQL Server 2016 Standard and Express SP1 (64-bit)
- SQL Server 2014 Standard and Express SP2 (64-bit)
- SQL Server 2012 Standard and Express SP3 (64-bit)

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

- If your computer has SQL Server software installed, verify that its version is supported for the current version of SCT Release 13.0 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 licensing portal 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 2014 Standard edition), you need the Microsoft SQL Server media. To use SQL Installer to install an Express version of SQL Server software (for example, SQL Server 2014 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, including Microsoft .NET Framework version 3.5.1. 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, we recommend that you **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 crash the server.
- 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)*.

- If you select a SQL Server installation package that includes Management Tools, the SQL Installer adds the SQL Server Management Studio tool for you. No separate installation is necessary. If you select a version of SQL Server Express software that does not include Management Tools, the SQL Installer **does not** add the SQL Server Management Studio tool for you. 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 *Metasys* server software on a server class machine, SQL Server software must be 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 *Metasys* 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

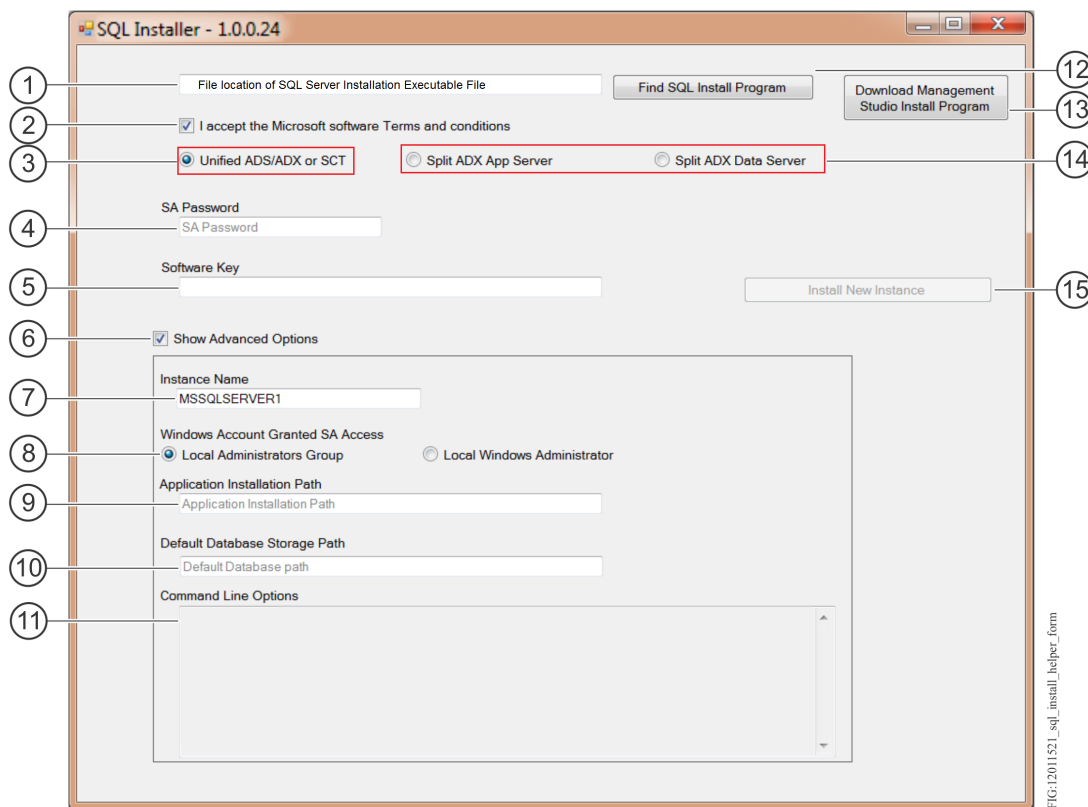


Table 3: Description of SQL Installer window

Callout	Attribute	Action
1	<File Name Location>	Click Find SQL Install Program to enter the location of the SQL Server software installation or upgrade file (<i>setup.exe</i> or <SQL Server Install>.exe) in this field.

Table 3: Description of SQL Installer window

Column	Attribute	Action
2	<License Check Box>	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.
8	Windows Account Granted SA Access <ul style="list-style-type: none"> Local Administrators Group Local Windows Administrator 	Select whether the local Administrators group or the local Windows Administrator user is granted administrator rights to SQL Server databases.
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.

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 *Metasys* 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 Management Tools - Basic (if available)	Unified ADX/ODS or SCT SCT: Database Engine Services Reporting Services Management Tools - Basic Management Tools - Complete Database server on split ADX: Database Engine Services Management Tools - Basic Management Tools - Complete Web/application server on split ADX: Reporting Services Management Tools - Basic Management Tools - Complete
Instance Configuration	Default Instance (Named instance is valid as well)	Default Instance (Named instance is valid as well) ⓘ Note: For a split ADX that will not be renamed in the future, use the default instance for the SQL service on the web/application server and a named instance for the SQL service on the database server. Also, if two web/application servers point to one database server, point each web/application server to a unique SQL Server instance on the data server.

Table 4: SQL Server configuration selections

SQL Server configuration screen	SQL Server Express Edition selections	SQL Server Standard or Enterprise Edition selections
Server Configuration	<p>SQL Server Database Engine:</p> <p>For newer versions of SQL Server software, select <code>Service\SQLSERVERAGENT</code>. For older versions of SQL Server software, select <code>NT AUTHORITY\SYSTEM</code></p> <p>SQL Server Browser:</p> <p><code>NT AUTHORITY\LOCAL SERVICE</code></p>	<p>SQL Server Agent:</p> <p>For newer versions of SQL Server software, select <code>Service\SQLSERVERAGENT</code>. For older versions of SQL Server software, select <code>NT AUTHORITY\SYSTEM</code></p> <p>SQL Server Database Engine:</p> <p>For newer versions of SQL Server software, select <code>Service\SQLSERVERAGENT</code>. For older versions of SQL Server software, select <code>NT AUTHORITY\SYSTEM</code></p> <p>SQL Server Reporting Services:</p> <p>For newer versions of SQL Server software, select <code>Service\SQLSERVERAGENT</code>. For older versions of SQL Server software, select <code>NT AUTHORITY\SYSTEM</code></p> <p>SQL Server Browser:</p> <p><code>NT AUTHORITY\LOCAL SERVICE</code></p>
Database Engine Configuration	<p>Mixed Mode</p> <p>Specify SQL Server Administrators:</p> <p><code>BUILTIN\ADMINISTRATORS (Administrators)</code></p>	<p>Mixed Mode</p> <p>Specify SQL Server Administrators:</p> <p><code>BUILTIN\ADMINISTRATORS (Administrators)</code></p>
Reporting Services Configuration	N/A	<p>Unified ADX/ODS or SCT:</p> <p>Reporting Services Native Mode: Install and configure</p> <p>Web/application server on split ADX:</p> <p>Install but do not configure the report server.</p>

Table 4: SQL Server configuration selections

SQL Server configuration screen	SQL Server Express Edition selections	SQL Server Standard or Enterprise Edition selections
SQL Server Configuration Manager Protocols for <instance name>	Named Pipes: Enabled TCP/IP: Enabled	Named Pipes: Enabled TCP/IP: Enabled

Detailed procedures

Uninstalling existing SCT software introduction

- ❶ **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 *Metasys* 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. 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 *Metasys* Release. You can use SCT Release 13.0 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, you can upgrade it. However, if you upgrade an archive in the SCT, you cannot open that archive in an earlier release of the SCT. For example, if you upgrade an archive to SCT Release 13.0, uninstall SCT Release 13.0, and reinstall SCT Release 12.0, you cannot open the archive in SCT Release 12.0.

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 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 11.0 or earlier software

Follow these steps to uninstall existing SCT 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 **Metasys SCT**. Click **Uninstall** or **Change/Remove**. Click **Allow** or **Yes** if prompted

for consent.

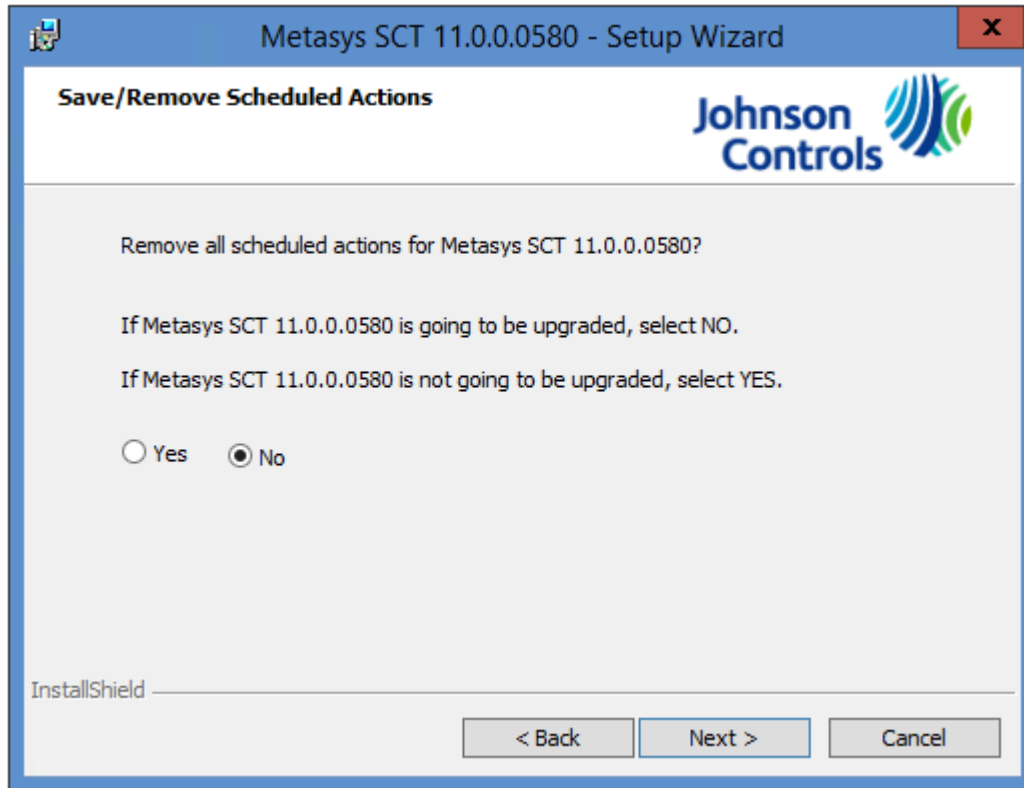
4. The Wizard Welcome screen appears. Click **Next**.
5. The Database Server selection appears, as shown in the image below. Complete the following steps:
 - a. In the *Metasys* SCT data server name field, select the default value that is provided, for example, (local).
 - b. Select one of the following 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.

Figure 2: Database server selection

The screenshot shows a Windows-style dialog box titled "Metasys SCT 11.0.0.0580 - Setup Wizard". The main heading is "Database Server" with the instruction "Select database server and authentication method". The Johnson Controls logo is in the top right. A message states: "Metasys SCT Setup will uninstall the Metasys SCT databases from the SQL Server below." Below this, the "Metasys SCT data server name" field contains "(local)". Under "Connect using:", the radio button for "Windows authentication credentials of current user" is selected. The "Server authentication using the Login ID and password below" option is unselected, with "Login ID" set to "sa" and an empty "Password" field. At the bottom, there are buttons for "< Back", "Next >", and "Cancel". The "InstallShield" logo is in the bottom left corner.

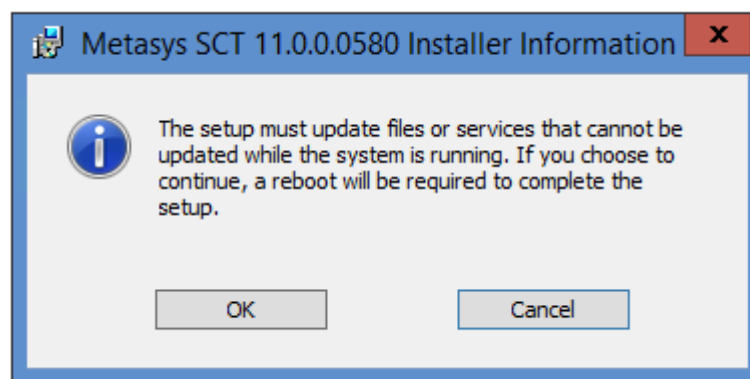
6. The next dialog box asks if you want to remove currently scheduled actions. Click **No** in preparation for the SCT upgrade, then click **Next**.

Figure 3: Scheduled actions question



7. The Remove the Program screen appears. 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. You may also see a message about updating files or services. Click **OK** to continue.

Figure 4: Update files message



9. The Setup Wizard Complete window appears when the SCT uninstallation is complete. Click **Finish**.
10. A computer restart message may appear. Click **Yes** to restart the computer.

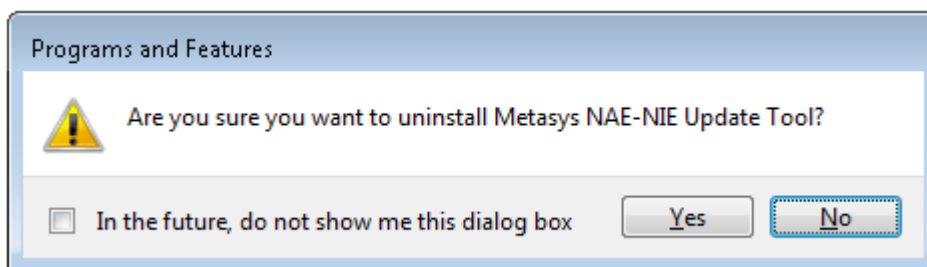
If the computer has an earlier version of the NAE/NIE Update Tool installed, go to [Uninstalling existing NAE/NIE update tool software](#). Otherwise, go to [Installing the SCT software](#).

Uninstalling existing NAE/NIE update tool software

Before you can install the latest version of SCT, you need to uninstall any earlier version of the NAE/NIE Update Tool. Follow these steps.

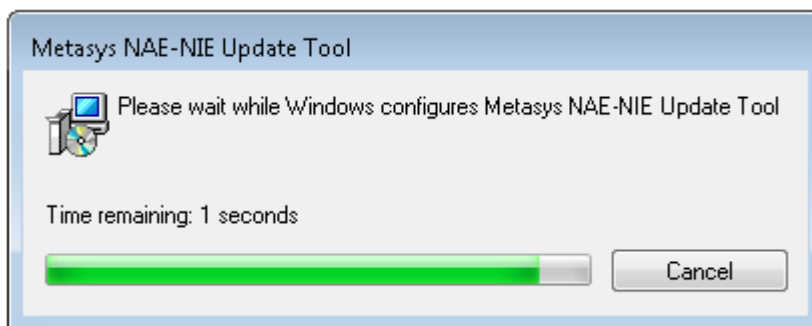
1. Open Control Panel and select **Programs > Programs and Features**. The list of installed programs appears.
2. Select **Metasys NAE-NIE Update Tool**. Click **Uninstall** or **Change/Remove**. A confirmation box appears.

Figure 5: Uninstall confirmation message



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](#).

Figure 6: Metasys NAE-NIE Update Tool progress bar

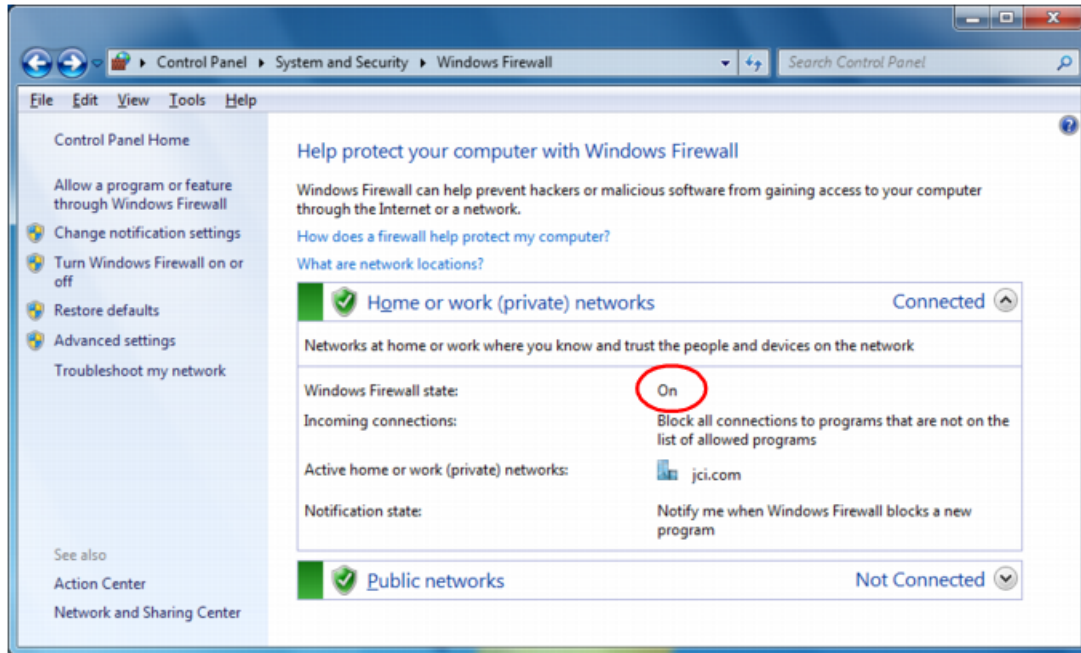


Opening ports and configuring the Windows Firewall

This section provides an overview on how to open ports to make sure *Metasys* software and processes function properly. At 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)*.

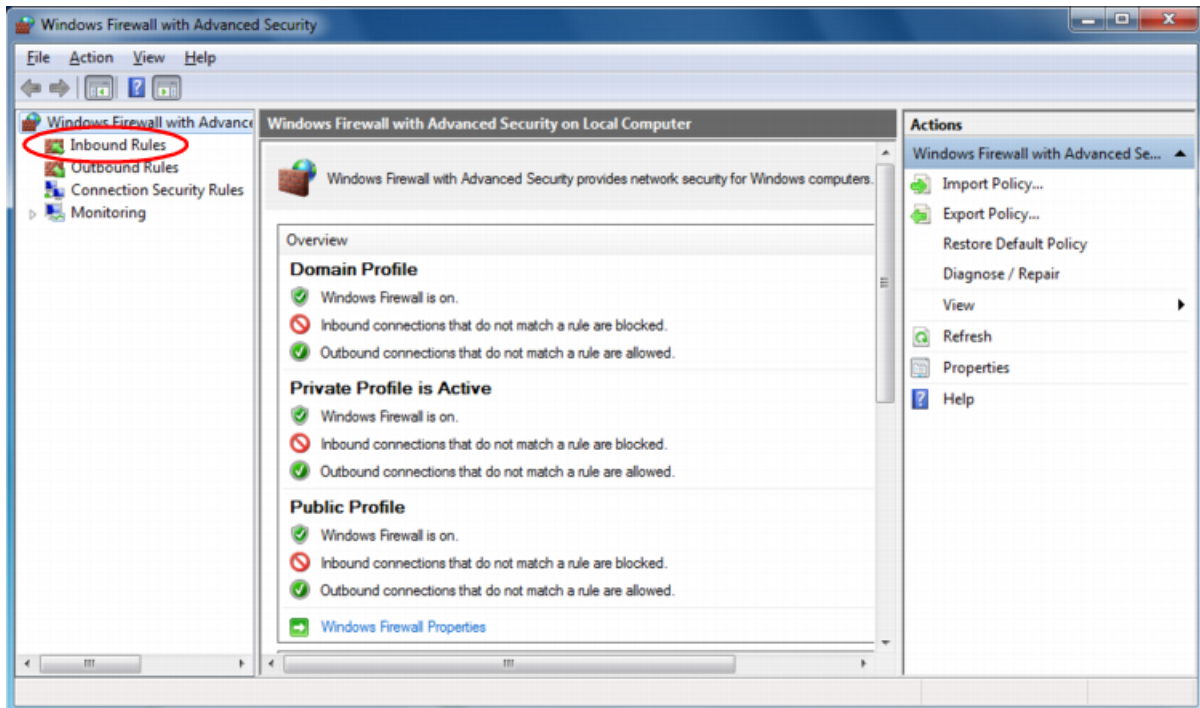
1. In Control Panel, click **System and Security**, then click **Windows Firewall**. The Windows Firewall window appears.
2. In the Windows Firewall window, make sure the firewall is **On**. If not, turn on the Windows Firewall.

Figure 7: Windows Firewall



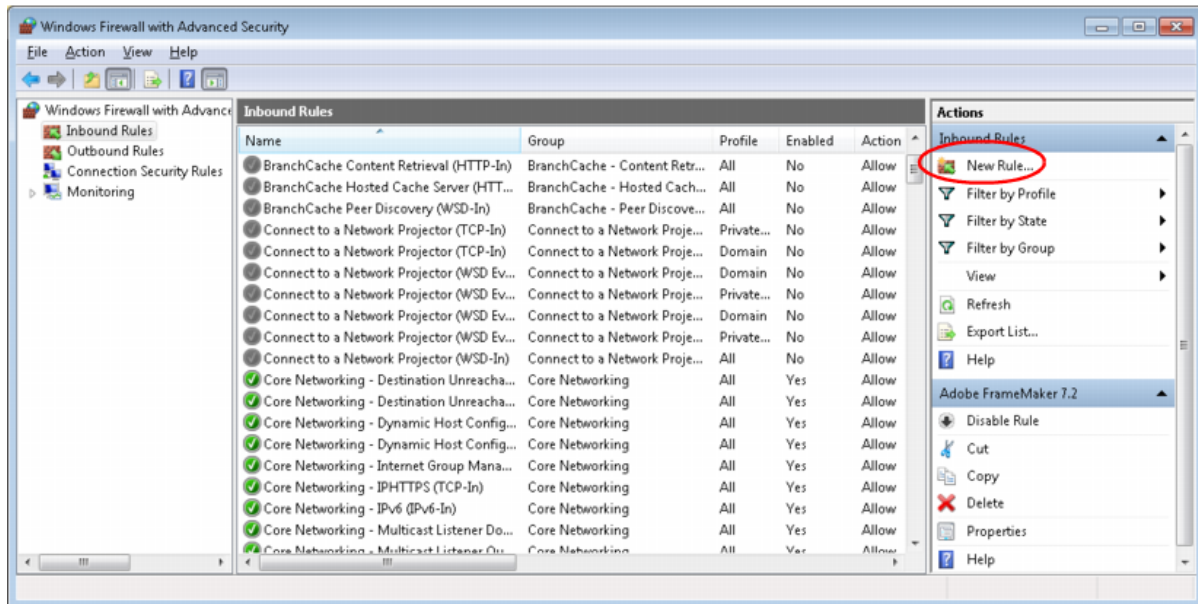
3. Click **Advanced Settings**. The Windows Firewall with Advanced Security window appears.

Figure 8: Windows Firewall with advanced security



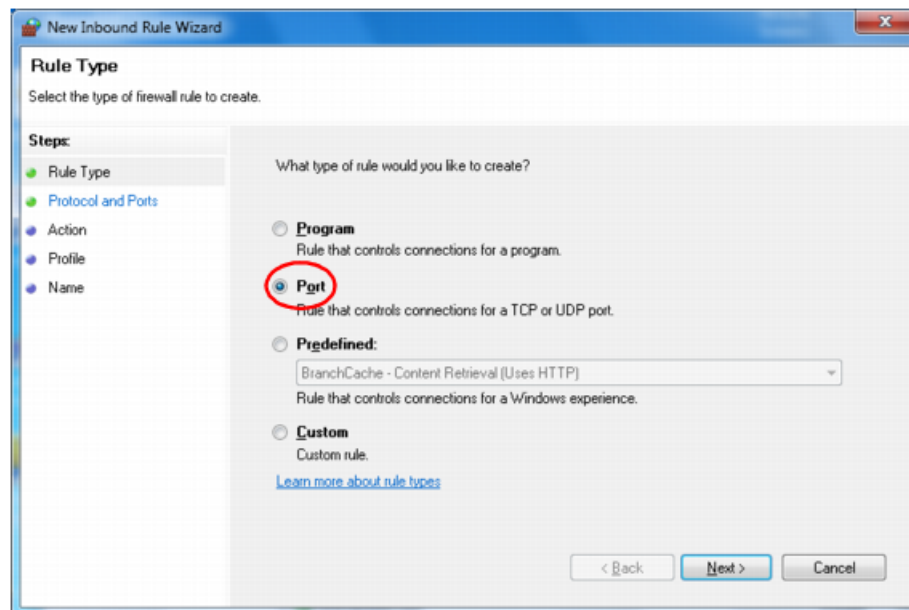
4. In the left pane, click **Inbound Rules**. The Inbound Rules pane appears.

Figure 9: Windows Firewall - Inbound rules



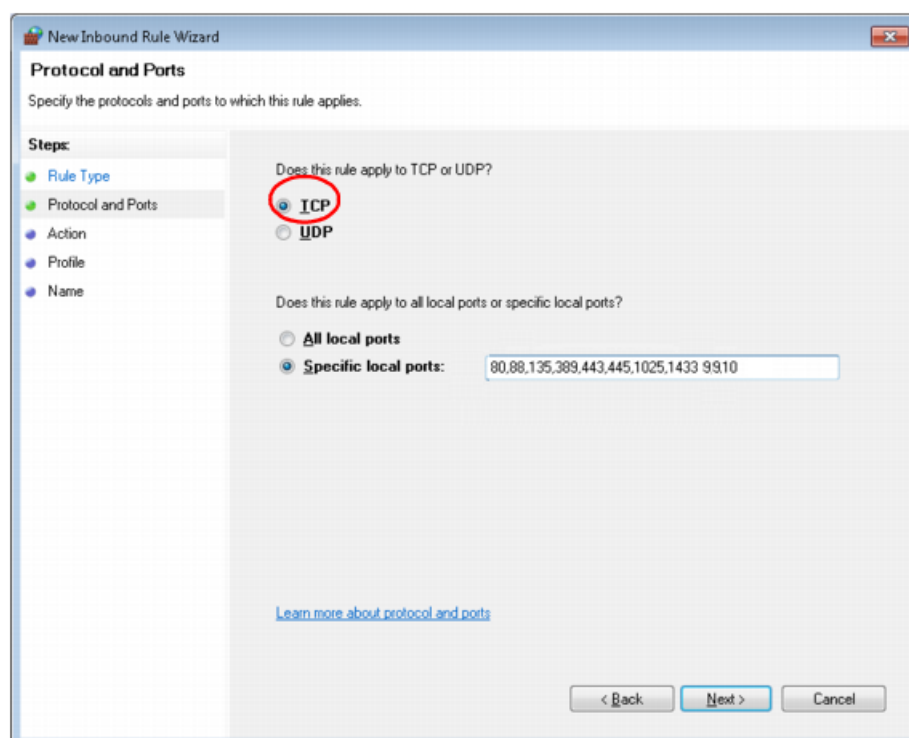
5. In the Actions pane, select **New Rule**. The New Inbound Rule Wizard opens and the Rule Type window appears.

Figure 10: New inbound rule wizard: rule type



6. Select **Port** and click **Next**. The Protocol and Ports window appears.

Figure 11: New inbound rule wizard: TCP protocol and ports



7. Select **TCP**, and in the Specific Local Ports field, enter the port numbers (80, 88, 123, 135, 389, 443, 445, 1025, 1433, 9910) as shown in the figure above.

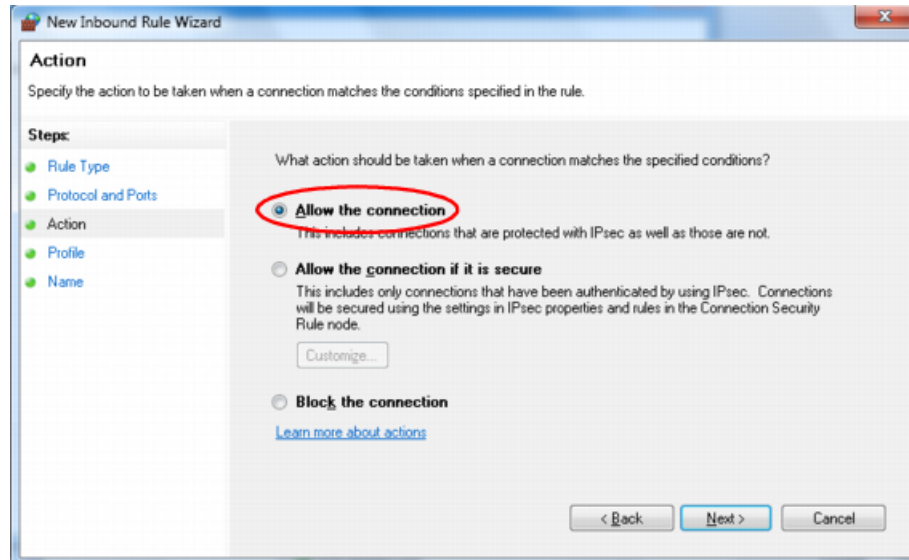
Table 5: Ports to open for TCP protocol

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

❶ **Note:** 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)*.

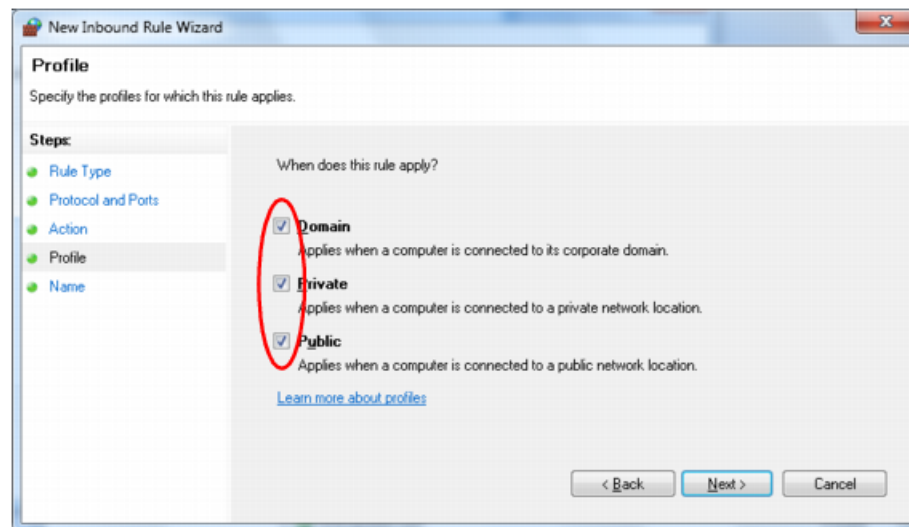
8. Click **Next**. The Action window appears.

Figure 12: New inbound rule wizard: Action



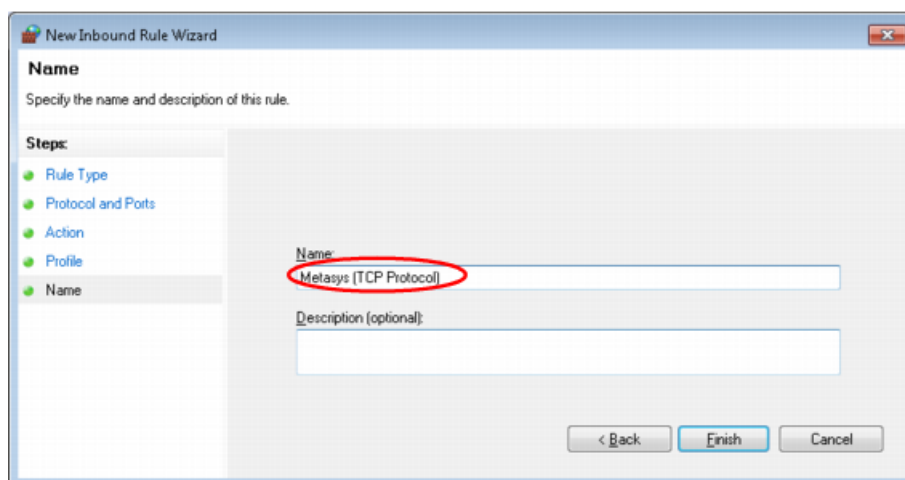
9. Select **Allow the connection**. Click **Next**. The Profile window appears.

Figure 13: New inbound rule wizard: Profile



10. Keep all profile check boxes selected (default). Click **Next**. The Name window appears.

Figure 14: New inbound rule wizard: Name



11. Specify **Metasys (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** inbound rule for the UDP protocol. When the Protocol and Ports window appears (see figure above), select **UDP**, and in the Specific Local Ports field, enter the port numbers as shown in Figure 15 (25, 53, 67, 68, 69, 88, 161, 162, 9910, 9911, 47808).

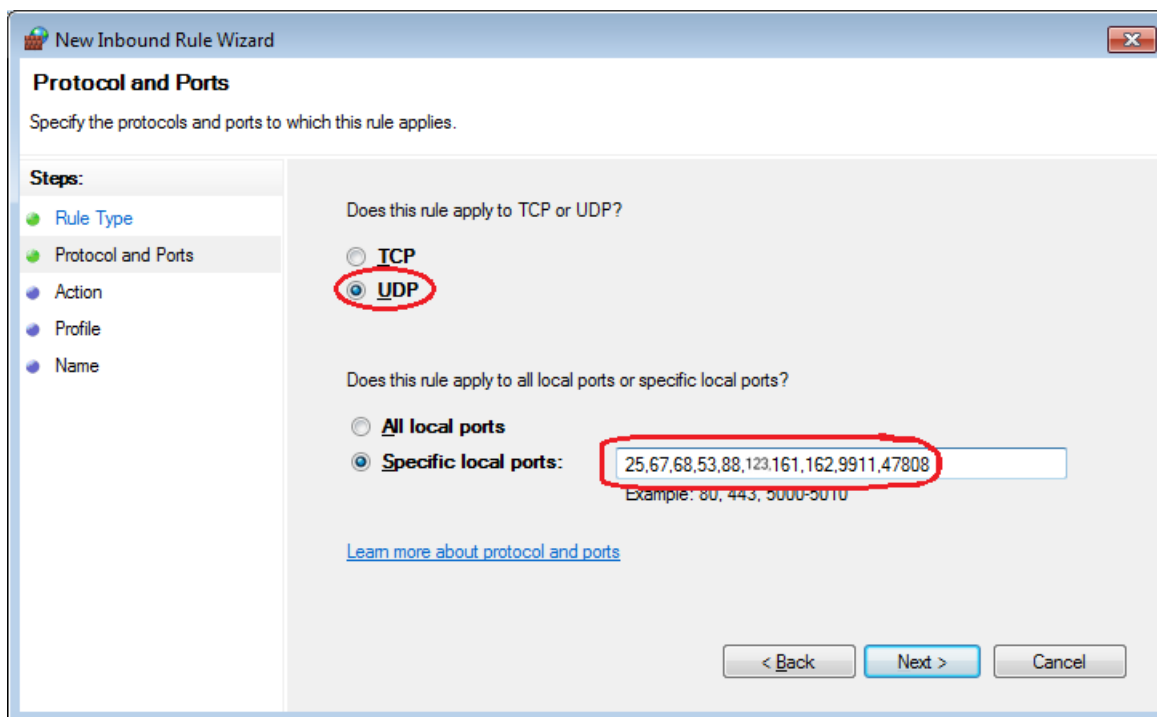
Table 6: Ports to open for UDP protocol

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
SYN-Transport	9911	UDP
BACnet®	47808 (changeable; match with value in <i>Metasys</i> SMP UI)	UDP

① **Note:** 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)*.

13. Complete the steps to add the new inbound rule. Name the new rule *Metasys* (UDP Protocol).

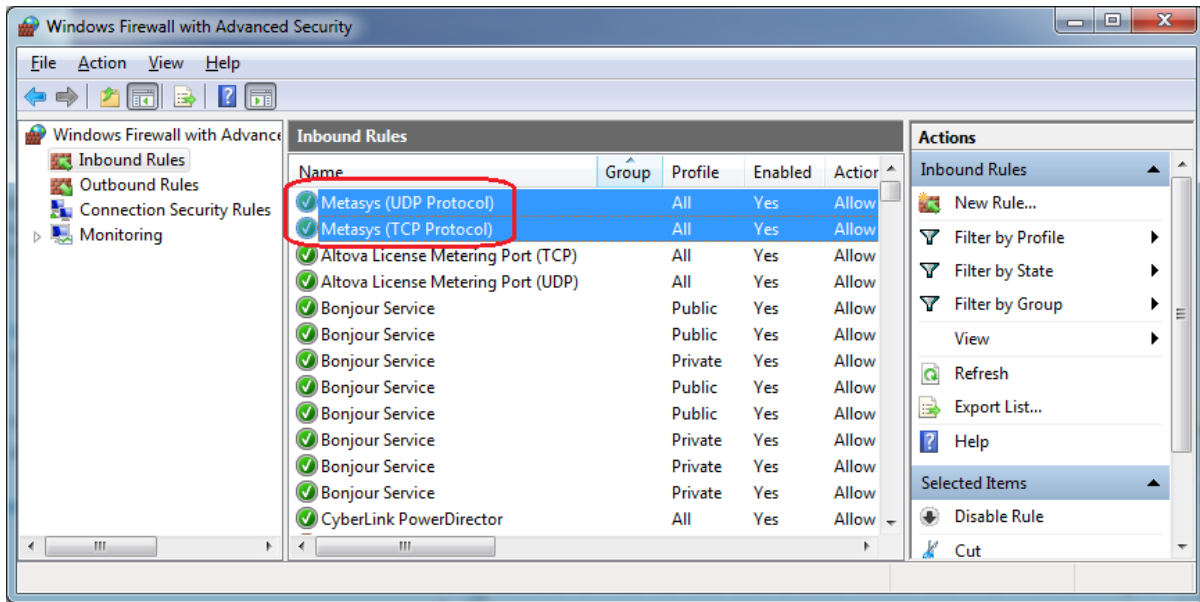
Figure 15: New inbound rule wizard: UDP protocol and ports



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

14. In the Windows Firewall with Advanced Security window, verify that the two new *Metasys* inbound rules are defined and enabled.

Figure 16: *Metasys* inbound rules defined and enabled



15. Close the Windows Firewall with Advanced Security window.
16. Close all windows. Go to [Verifying your computer has a supported version of SQL Server software installed](#).

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

Table 7: Verify SQL Server software version

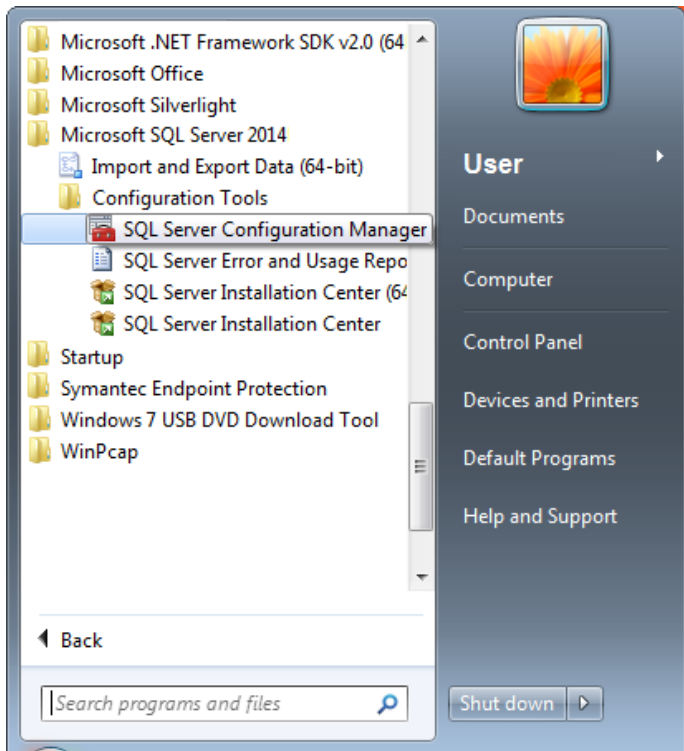
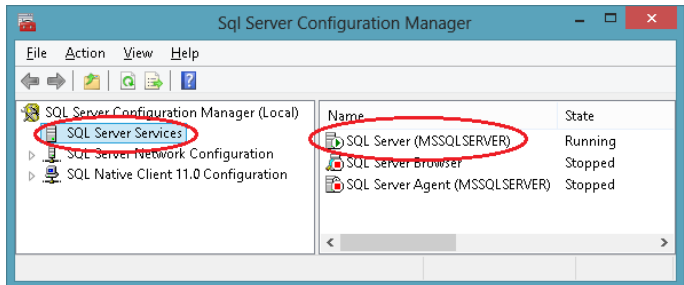
1	<div><div>Start</div><div><div>Figure 17: Selecting SQL Server Configuration Manager</div><p>The screenshot shows a Windows Start menu search interface. The search bar at the top contains the text 'SQL Server Configuration Manager'. Below the search bar, a list of search results is displayed. The first result, 'SQL Server Configuration Manager', is highlighted with a blue selection bar. Other results include 'Microsoft .NET Framework SDK v2.0 (64-bit)', 'Microsoft Office', 'Microsoft Silverlight', 'Microsoft SQL Server 2014', 'Import and Export Data (64-bit)', 'Configuration Tools', 'SQL Server Error and Usage Reports', 'SQL Server Installation Center (64-bit)', 'SQL Server Installation Center', 'Startup', 'Symantec Endpoint Protection', 'Windows 7 USB DVD Download Tool', and 'WinPcap'. On the right side of the search results, there is a 'User' section with links to 'Documents', 'Computer', 'Control Panel', 'Devices and Printers', 'Default Programs', and 'Help and Support'. At the bottom of the search results, there is a 'Shut down' button.</p></div></div>	<p>Open the SQL Server Configuration Manager tool.</p> <p>❗ Note: If you do not see any version of Microsoft SQL Server on your computer, you do not have this required software. Follow the instructions in this document for installing a supported version of SQL Server software.</p>								
2	<div><div>Figure 18: SQL Server Configuration Manager</div><p>The screenshot shows the SQL Server Configuration Manager application window. The left pane displays the 'SQL Server Configuration Manager (Local)' tree, with 'SQL Server Services' selected and circled in red. The right pane displays a list of services, with 'SQL Server (MSSQLSERVER)' selected and circled in red. The services list is as follows:</p><table><tr><th>Name</th><th>State</th></tr><tr><td>SQL Server (MSSQLSERVER)</td><td>Running</td></tr><tr><td>SQL Server Browser</td><td>Stopped</td></tr><tr><td>SQL Server Agent (MSSQLSERVER)</td><td>Stopped</td></tr></table></div>	Name	State	SQL Server (MSSQLSERVER)	Running	SQL Server Browser	Stopped	SQL Server Agent (MSSQLSERVER)	Stopped	<p>In the left pane, select SQL Server Services. In the right pane, double-click the SQL Server instance name (for example, SQL Server [MSSQLSERVER] as shown in Figure 18).</p>
Name	State									
SQL Server (MSSQLSERVER)	Running									
SQL Server Browser	Stopped									
SQL Server Agent (MSSQLSERVER)	Stopped									

Table 7: Verify SQL Server software version

3		<p>Click the Advanced tab and scroll down to the Version row. Verify that the version number is any one of the following:</p> <ul style="list-style-type: none">• 13.x.4001.x (SQL Server 2016 SP1)• 12.x.5546.x (SQL Server 2014 SP2)• 11.x.7001.x (SQL Server 2012 SP4) <p>If the version matches any of the listed version numbers, you have a supported version of SQL Server software.</p> <p>If the version does not match any of these version numbers, you need to either apply the required service pack or upgrade to a newer version of SQL Server software. Follow the instructions in this document for installing a supported version of SQL Server software.</p>
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Installing or upgrading SQL Server software using the SQL install helper

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 11.1 or later to Release 13.0 software

① **Note:** If you have SCT Release 11.0 or earlier installed on your computer you must uninstall the software before you can upgrade to the latest release.

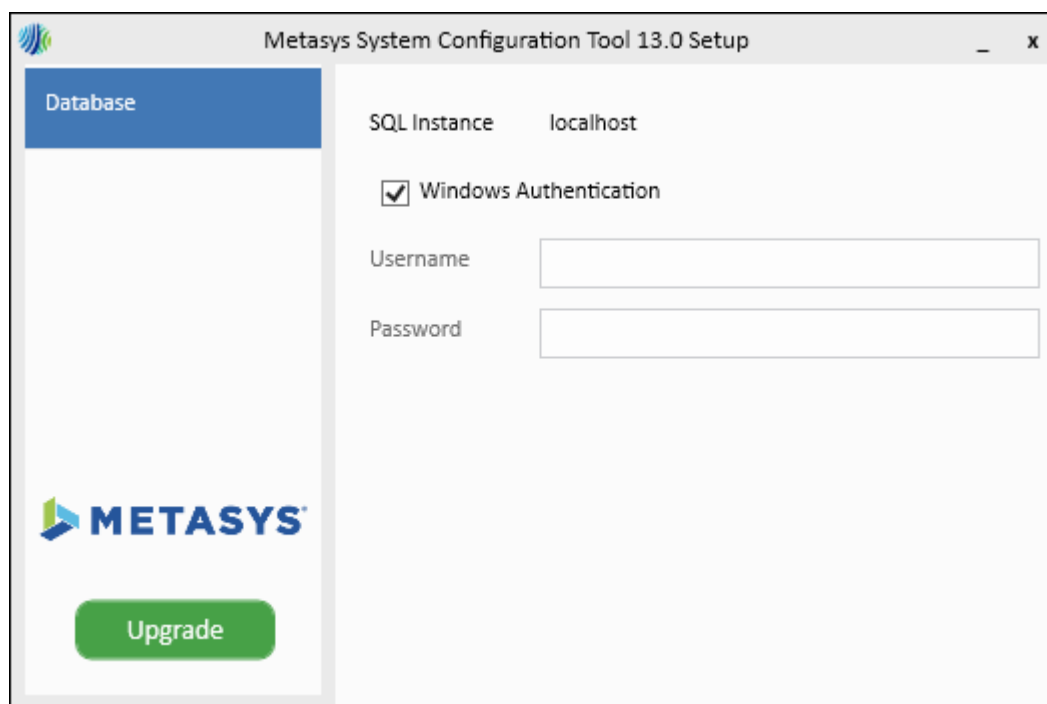
1. Obtain the installation file.
2. Double-click the *MetasysSystemConfigurationTool_13.0.exe*. The *Metasys System Configuration Tool Setup* window appears.

Figure 19: Metasys System Configuration Tool setup window



3. Click **Upgrade**. The SQL Server Credential window appears.

Figure 20: SQL Server credential window

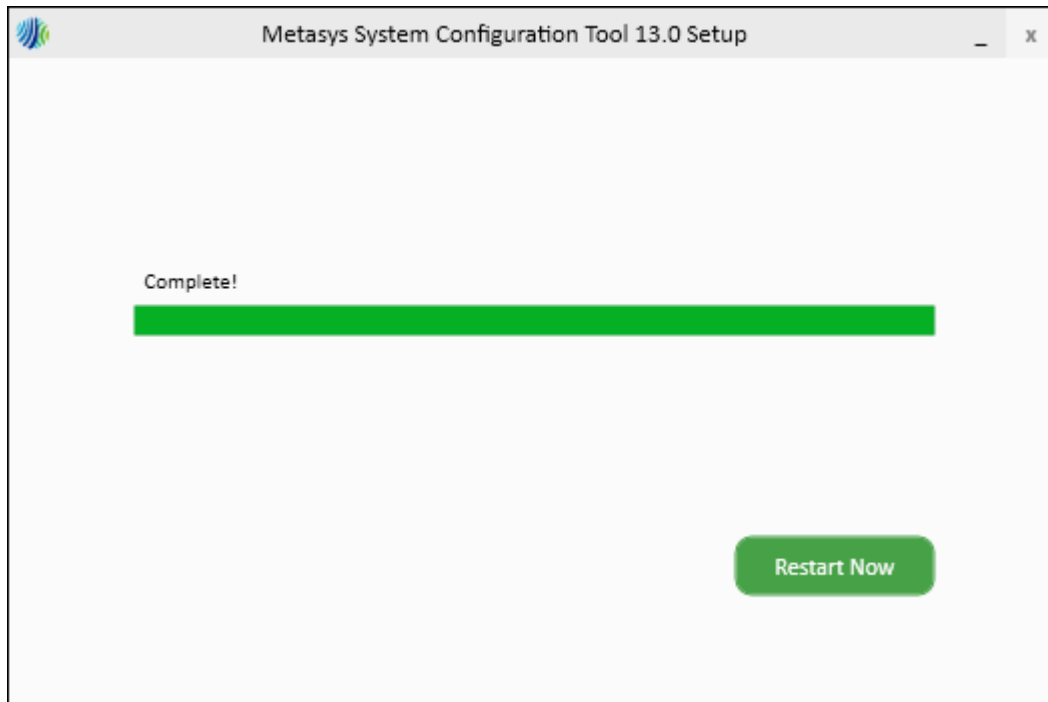


4. Log in to SQL Server in one of two ways:
 - To log in with Windows Credentials, keep the **Use Windows Credentials** checkbox

selected.

- To log in using SQL Server authentication, deselect the **Use Windows Credentials** check box and enter the SA user username and password.
5. Click **Upgrade**
 6. Click **Restart** to restart the computer. The upgrade is complete.

Figure 21: Software upgrade complete window

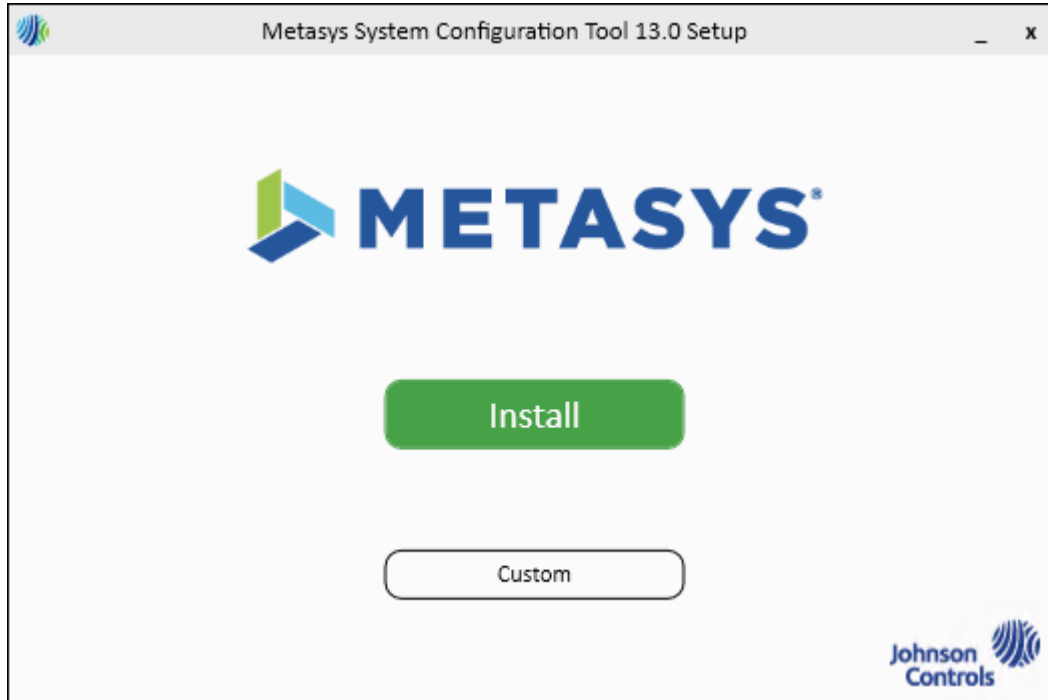


Installing the SCT software

SCT software one-click installation

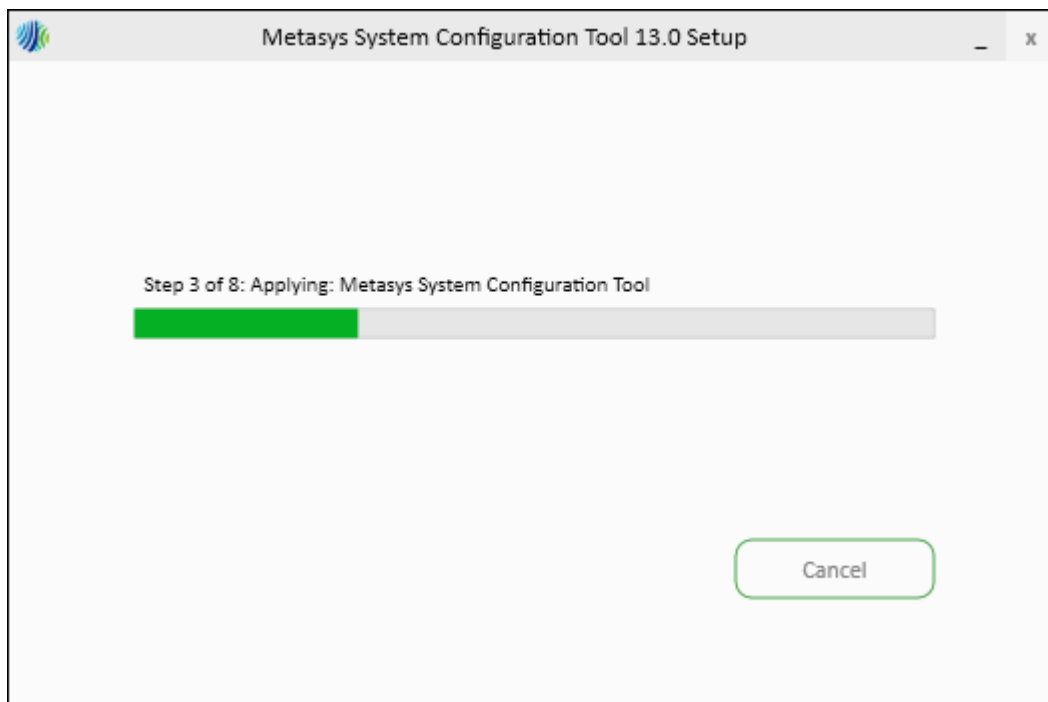
- ① **Note:** All prerequisite software for SCT and the **Software Activation Manager** software are installed through the SCT Installer prior to installing the SCT software.
1. Obtain the product installation file.
 2. Double-click the *MetasysSystemConfigurationTool_13.0.exe* file. The *Metasys* System Configuration Tool Setup window appears.

Figure 22: Metasys System Configuration Tool 13.0 setup window



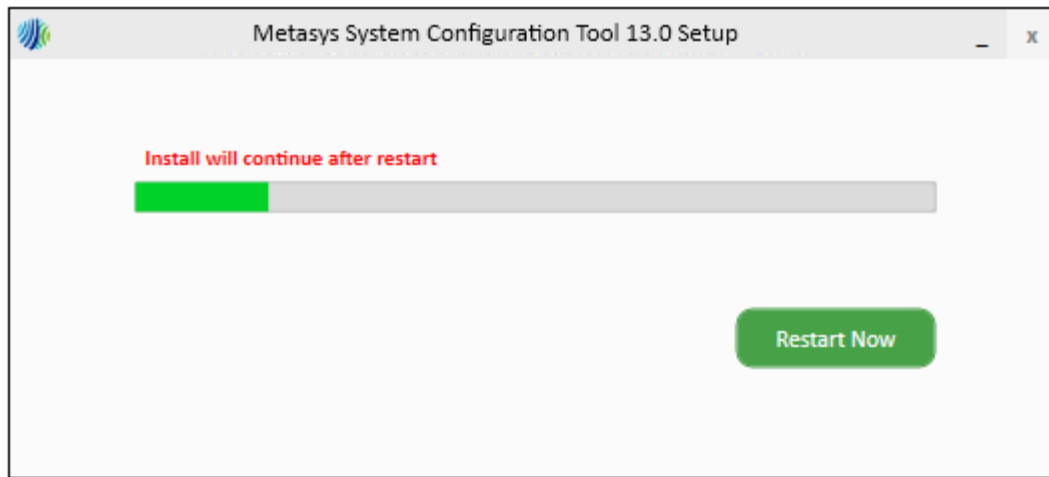
3. Click **Install**. All prerequisite software for SCT and the **Software Activation Manager** software is installed first, then the SCT software is installed. If the install does not detect .NET Framework 4.6.1 or later on your computer, .NET Framework 4.6.1 is installed.

Figure 23: Install program progress window



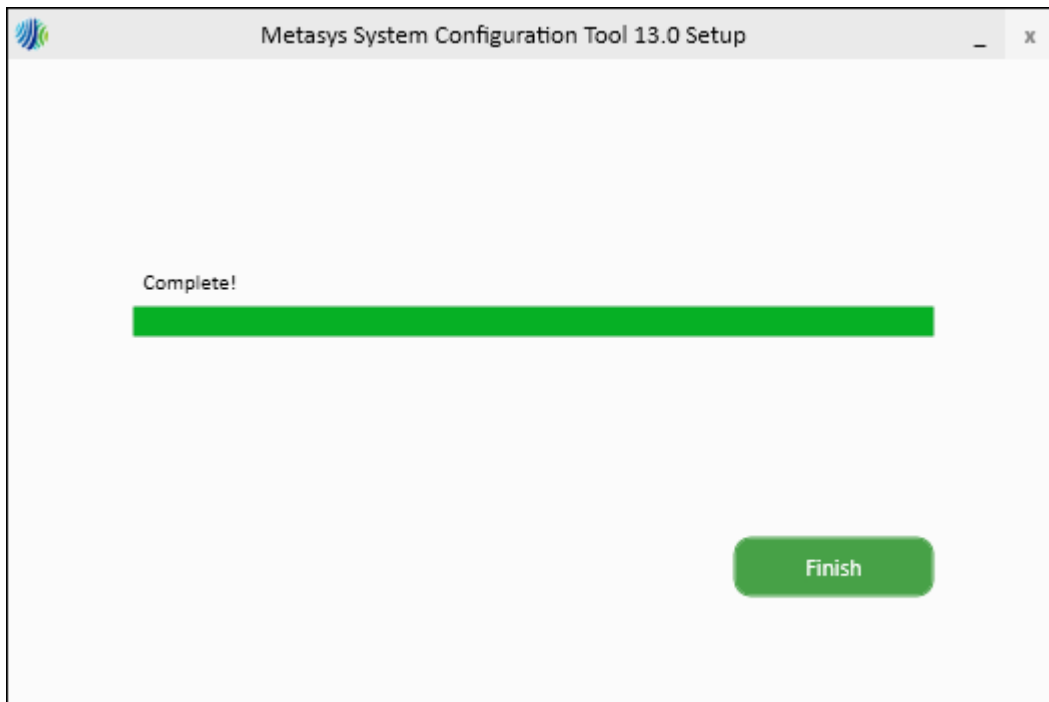
4. If the message `Install will continue after restart` appears, click **Restart Now** to restart your computer. The installation continues after you restart the computer and log in to Windows.

Figure 24: Restart request window



5. Click **Finish**. The installation is complete.

Figure 25: Installation complete window



6. After a complete installation and licensing your software, refer to the *Extracting the Disk Images from the Image DVD CD to Your Computer* section of the *NAE/NIE Update Tool Help (LIT-12011524)* to extract the disk images from the image DVD or CD to your computer.
7. Obtain field controller packages to install. To import a field controller package double-click on the package collection file or use the **Package Importer**, located in the Start menu. The

Package Importer displays the message `Finished importing device` when the import is complete.

- Click the **Add License** button in the SAM to license SCT software and field controller packages. Choose the activation method you would like to use for the license: **Online with a Product Key**, or **Offline with a License Activation File**. Once added, SCT software and field controller package licenses display in the License Inventory.

Figure 26: Software Activation Manager license inventory

Software Activation Manager

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License Inventory🔄

View License Details

Add License

Product	Feature Name ^	Version	License Type	Status	Expires	License Actions
BCPro Field Controller Package 8	BCP-FCP	8.x	Technician	Licensed	2018-Oct-01	Choose Action ▾
System Configuration Tool	SCT	13.x	Technician	Licensed	2018-Oct-01	Choose Action ▾
FX Field Controller Package 8	FX-FCP	8.x	Technician	Licensed	2018-Oct-01	Choose Action ▾
Metasys Field Controller Package 8	MS-FCP	8.x	Technician	Licensed	2018-Oct-01	Choose Action ▾

- ❗ **Note:** If you do not license the SCT software after installation, the **Software License Check** dialog box appears when you access SCT for the first time.

SCT custom installation

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.

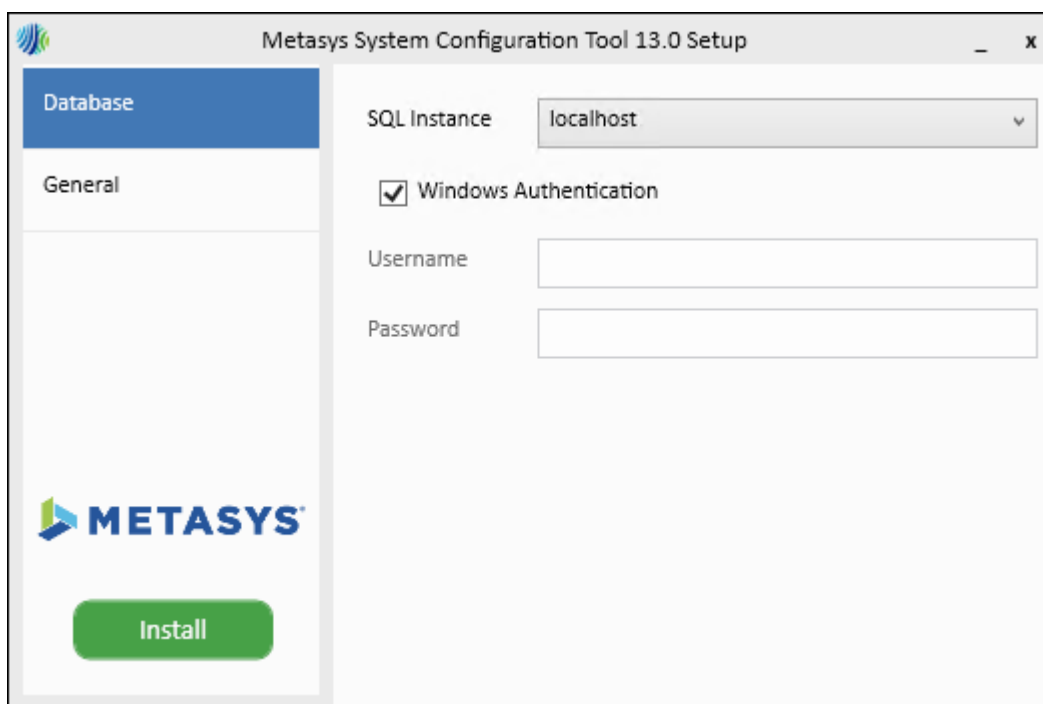
- Obtain the installation file.
- Double-click the *MetasysSystemConfigurationTool_13.0.exe* file. The *Metasys System Configuration Tool 13.0 Setup* window appears.

Figure 27: Metasys System Configuration Tool 13.0 setup window



3. Click **Custom**. The SQL Server Selection window appears with the Database tab highlighted.

Figure 28: SQL Server selection window



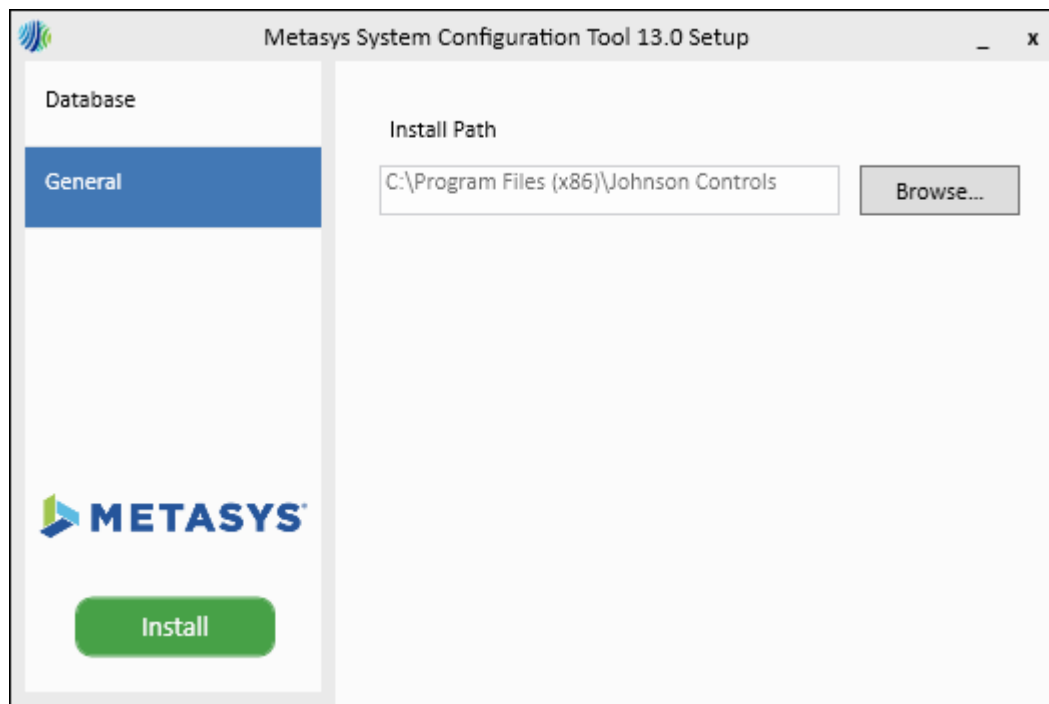
4. Select the **Install SQL Server Express Locally** or **Use Existing Database Server** options to set up your SQL Server preferences, then select one of the following SQL login authentication

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 (Username and Password fields)**
 - 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.

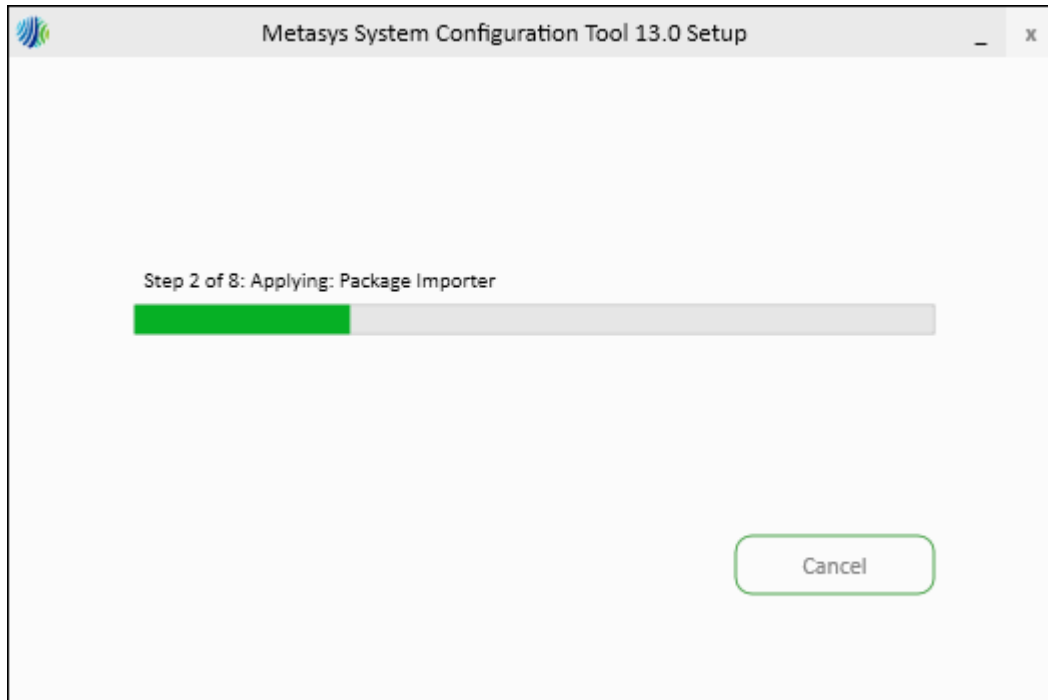
5. Click the **General** tab.

Figure 29: General tab screen



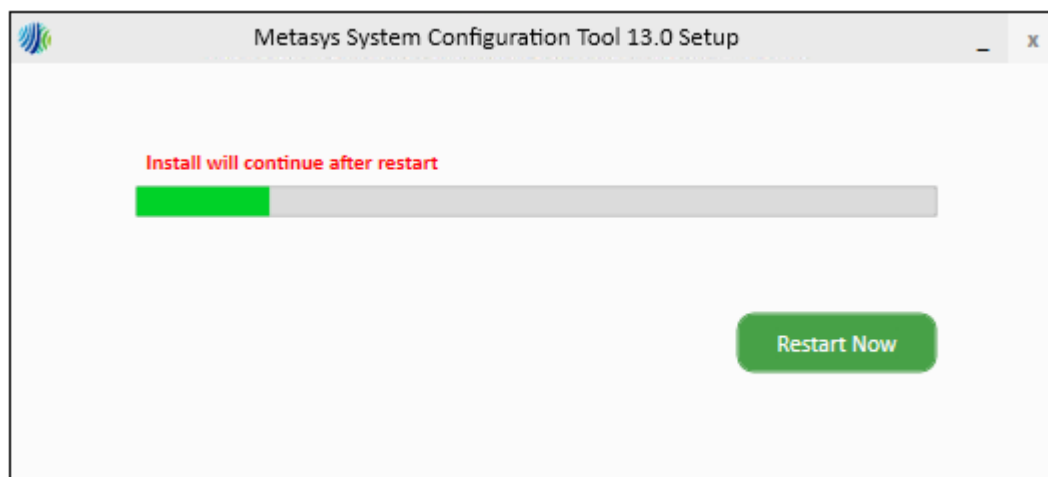
6. Verify that the Install Path indicates the location under which you want to install SCT. If you want to install SCT to a custom location, click **Browse** and select a location.
7. Click **Install**. All prerequisite software for SCT and the Software Activation Manager software is installed first, then the SCT software is installed. If the install does not detect .NET Framework 4.6.1 or later on your computer, .NET Framework 4.6.1 is installed.

Figure 30: Installing program progress window



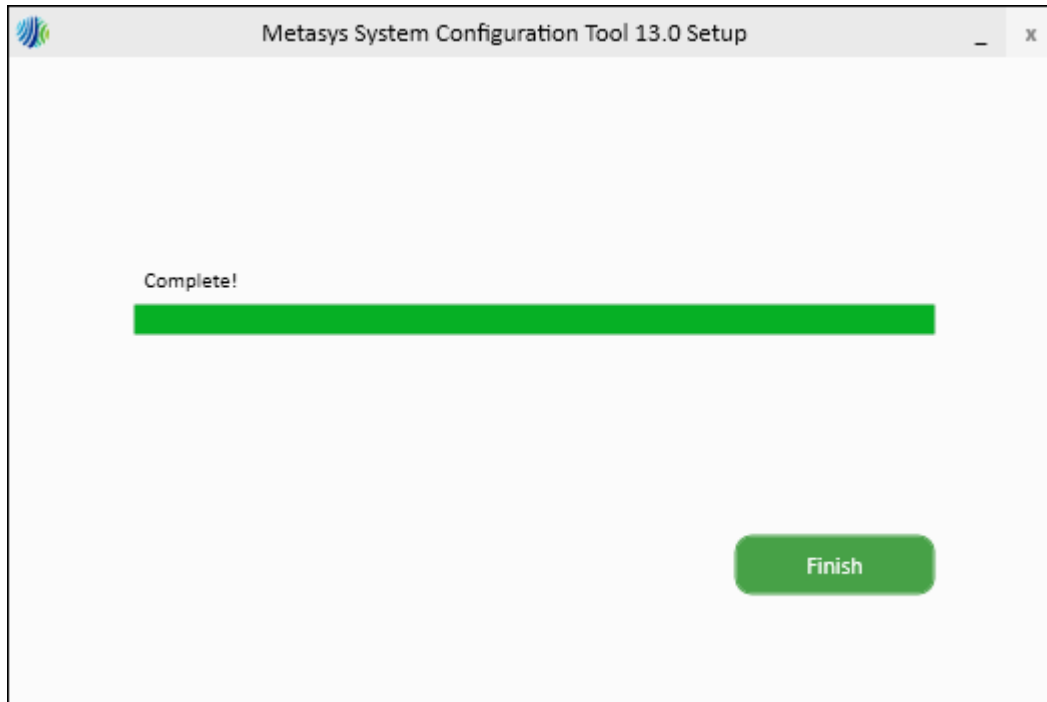
8. If the message `Install will continue after restart` appears, click **Restart Now** to restart your computer. The installation continues after you restart the computer and log in to Windows.

Figure 31: Restart request window



9. Click **Finish**. The installation is complete.

Figure 32: Installation complete window



10. After a complete install, refer to the *Extracting the Disk Images from the Image DVD CD to Your Computer* section of the *NAE/NIE Update Tool Help (LIT-12011524)* to extract the disk images from the image DVD or CD to your computer.
11. Obtain field controller packages to install. To import a field controller package double-click on the package collection file or use the **Package Importer**, located in the Start menu. The **Package Importer** displays the message `Finished importing device` when the import is complete.
12. Click the **Add License** button in the SAM to license SCT software and field controller packages. Choose the activation method you would like to use for the license: **Online with a Product Key**, or **Offline with a License Activation File**. Once added, SCT software and field controller package licenses display in the License Inventory.

Figure 33: Software Activation Manager license inventory

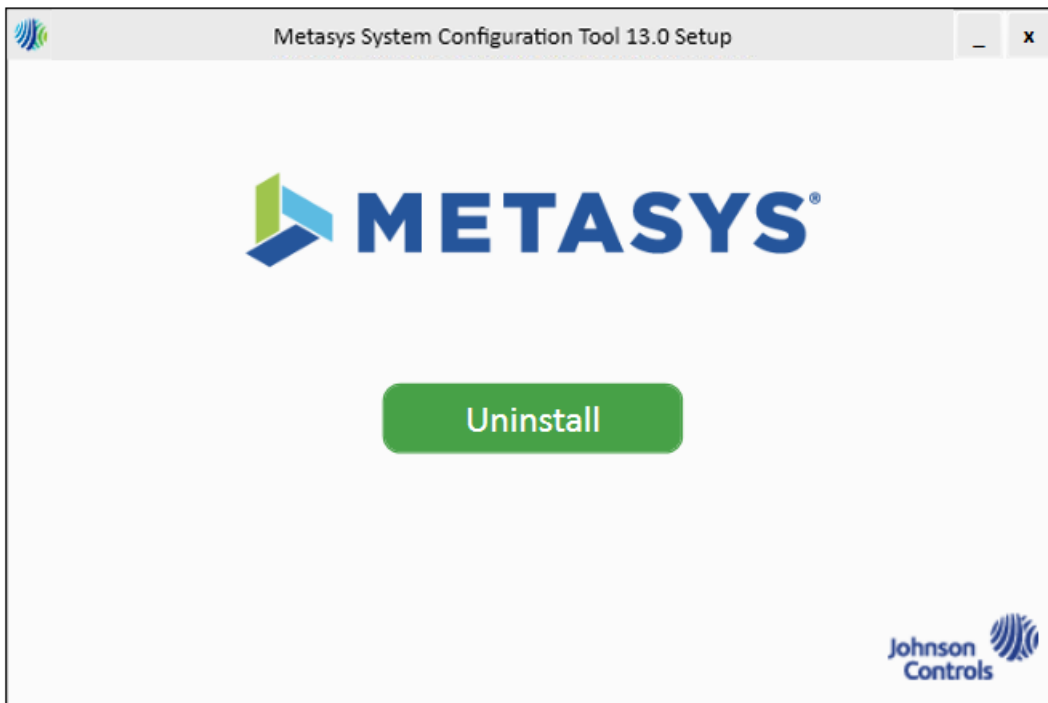
Software Activation Manager						
License Inventory						
<div>View License Details</div> <div>Add License</div>						
Product	Feature Name ^	Version	License Type	Status	Expires	License Actions
BCPro Field Controller Package 8	BCP-FCP	8.x	Technician	Licensed	2018-Oct-01	Choose Action ▾
System Configuration Tool	SCT	13.x	Technician	Licensed	2018-Oct-01	Choose Action ▾
FX Field Controller Package 8	FX-FCP	8.x	Technician	Licensed	2018-Oct-01	Choose Action ▾
Metasys Field Controller Package 8	MS-FCP	8.x	Technician	Licensed	2018-Oct-01	Choose Action ▾

- ① **Note:** If you do not license the SCT software after installation, the **Software License Check** dialog box appears when you access SCT for the first time.

Uninstalling the SCT Release 12.0 and later software

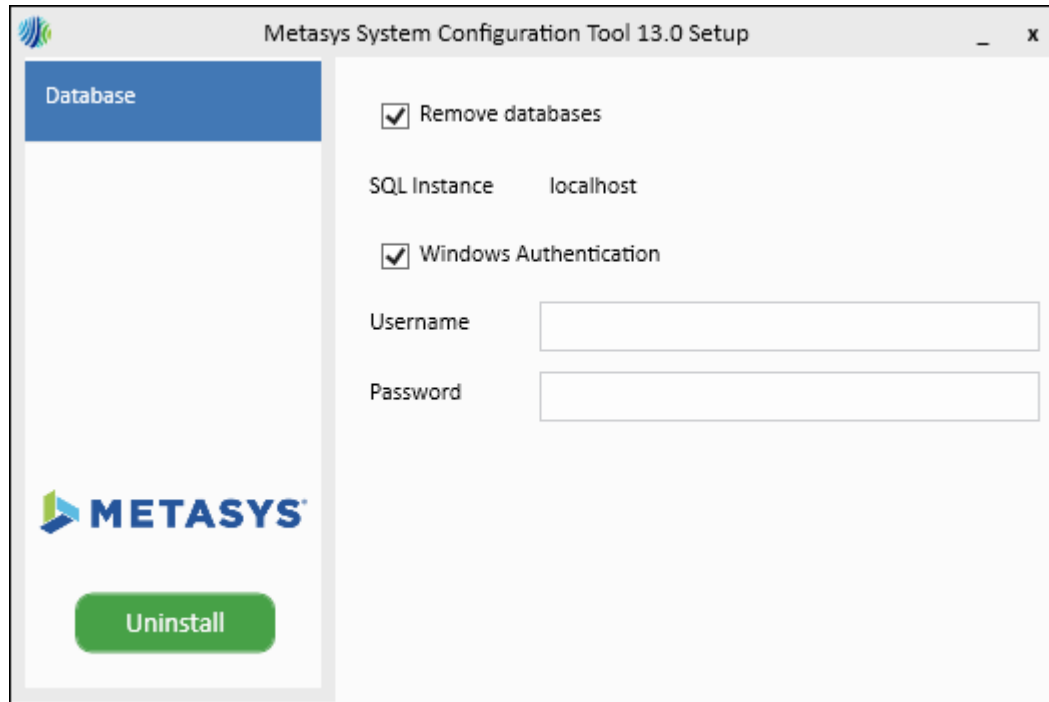
1. On the Start menu, click **Control Panel**. The Control Panel appears.
2. Go to **Programs > Programs and Features**. The Programs and Features window appears.
3. In the program list, right-click *Metasys System Configuration Tool XX.0* and click **Uninstall**. The *Metasys System Configuration Tool Setup* window appears.

Figure 34: Metasys System Configuration Tool setup window



4. Click **Uninstall**. The Remove Databases window appears.

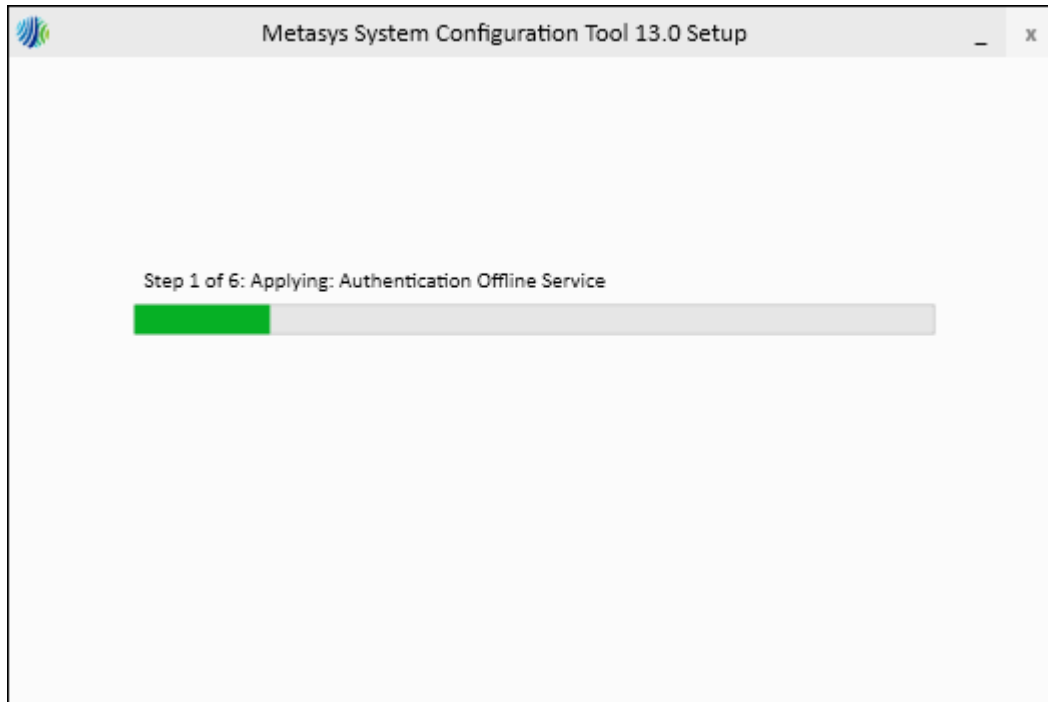
Figure 35: Remove SCT databases window



Notes:

- The **Remove Databases** checkbox is selected by default. If you wish to keep the application's runtime databases after SCT is uninstalled, deselect the **Remove Databases** checkbox.
 - The **Remove Databases** option only deletes the application runtime databases: MetasysSCT, ActionQueueSCT, and SCTTranslationDictionary. It does not remove all existing archive databases.
5. Log in to SQL Server in one of 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** checkbox and enter the SA user username and password.
 6. Click **Uninstall**. The Uninstall Program Progress window appears.

Figure 36: Uninstall program progress window



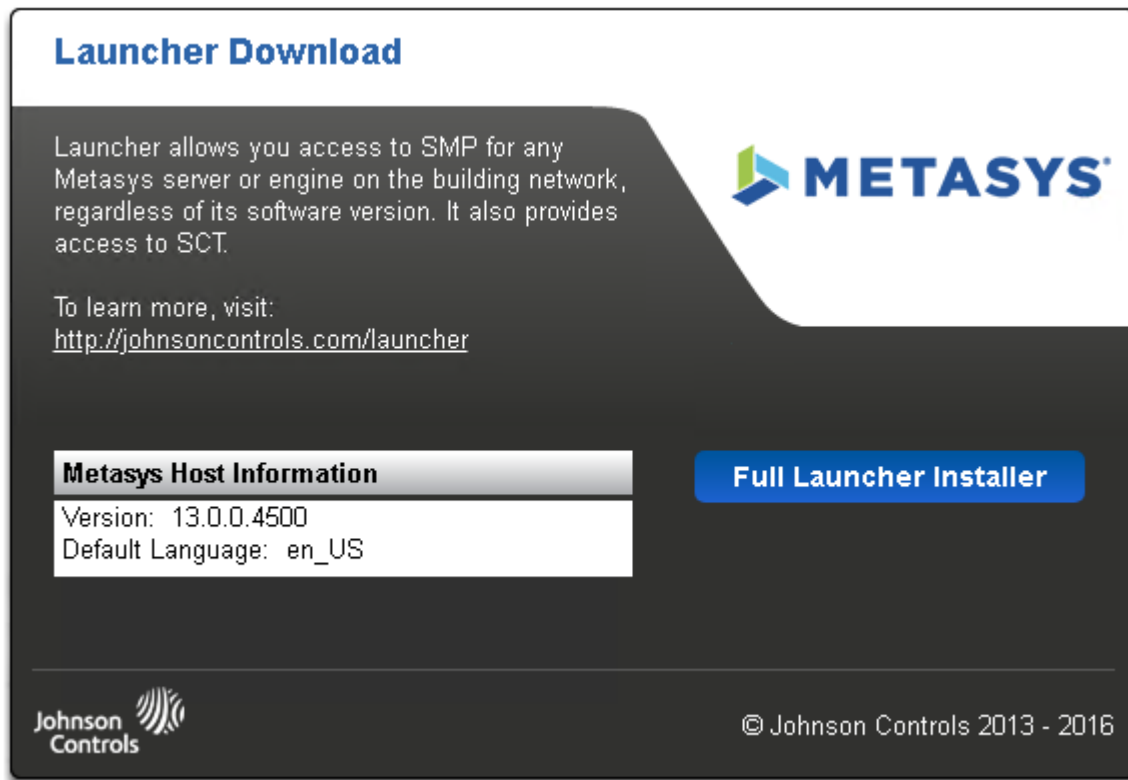
7. Click **Restart** to restart the computer and complete the uninstallation process.

Launching the SCT user interface

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

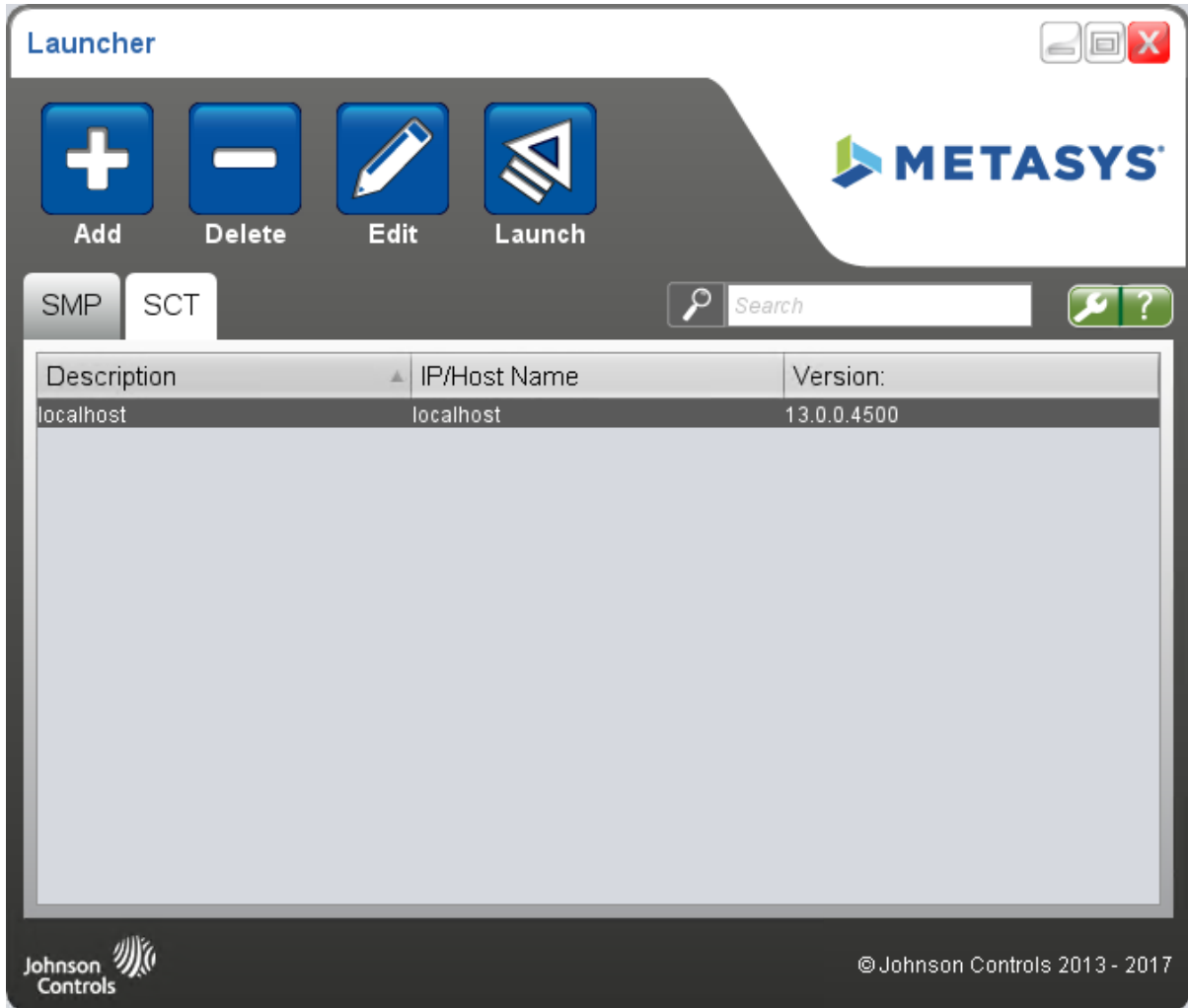
- On the SCT computer, go to **Start > Programs > Johnson Controls > Launcher**. If you are using Windows 10, Windows 8.1, Windows Server 2016, Windows Server 2012 R2, or Windows Server 2012, click the **Launcher** tile on the Start screen. Follow the steps in *Launcher Help (LIT-12011742)* for adding 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://\[name or address\]/SCT/](https://[name or address]/SCT/) where *[name or address]* is the computer name or IP address of the computer that SCT is installed on.
- When you browse to the SCT computer from a client for the first time, the Launcher Download screen appears (Figure 37). The Launcher download installs a private version of the Java Runtime Engine (JRE) on the client computer that is used to start the SCT user interface. 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)*.

Figure 37: Launcher download screen



- 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 38: 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 login screen appears.
- Log in 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 existing archive databases exist on the system, the New Archive Wizard user interface screen appears (Figure 39).

Figure 39: New archive wizard screen

- To learn how to create a new archive and use all the features of SCT, refer to *Metasys SCT Help (LIT-12011964)*. If you see any error messages while logging in to and using SCT, see [Troubleshooting](#).

Browsing to the *Metasys* UI Offline or SCT Pro

To browse to the *Metasys* UI Offline or the SCT Pro from a client computer or device, use a supported web browser and go to the web address shown in the table below, where *[Host Name or IP address]* is the server name of the SCT computer or IP address of the SCT computer.

Table 8: Web addresses

Tool	Web address (URL)
<i>Metasys</i> UI Offline	<i>https://[Host Name or IP address]/UIOffline</i>
SCT Pro	<i>https://[Host Name or IP address]/SCTPro</i>

If you are browsing to the *Metasys* UI Offline or the SCT Pro on the SCT computer, use *localhost* as the Host Name.

❗ **Note:** Ensure that your web browser has cookies enabled before browsing to the *Metasys* UI Offline or the SCT Pro.

➤ **Important:** We strongly advise that you do not browse to the *Metasys* UI, *Metasys* UI Offline, or any website from an ADS/ADX or ADS-Lite computer. Using web browsers to access web sites on the ADS/ADX or ADS-Lite could potentially expose your ADS/ADX or ADS-Lite to malicious software, including ransomware. We recommend browsing to the *Metasys* UI, *Metasys* UI Offline, or other websites on a client computer or device only.

Authentication

The *Metasys* UI Offline and the SCT Pro use the same credentials as the SCT. To log in to the *Metasys* UI Offline or the SCT Pro, use your SCT username and password.

Security certificate warnings

❗ **Note:** Ensure that your web browser has cookies enabled before browsing to the *Metasys* UI Offline or the SCT Pro.

When browsing to the *Metasys* UI Offline or the SCT Pro, your web browser displays a security certificate warning if your *Metasys* UI Offline 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 this warning, browse to the *Metasys* UI Offline or the SCT Pro site by doing the following:

- For Google® Chrome™ browser:
 - 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 that SCT is installed on. The *Metasys* UI Offline or the SCT Pro login screen appears.
 - For Windows Internet Explorer 11 or Microsoft Edge, tap or click **Continue to this website (not recommended)**. The *Metasys* UI or the SCT Pro login screen appears.
 - For Apple® Safari® browser:
 - Tap or click **Continue** in the Cannot Verify Server Identity window. The *Metasys* UI Offline or the SCT Pro login screen appears.
- ❗ **Note:** The *Metasys* UI Offline 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

Problem	Solution
You experience installation problems and would like to consult the error log.	The error messages are located in the following folder: <i>C:\Users\<username>\AppData\Local</i> Look for the file called: <i>\Metasys_System_Configuration_Tool_<xxxxxxxxxxxx>.html</i> .

Problem	Solution
<p>You receive the following error message when installing SCT:</p> <pre>Metasys System Configuration Tool (SCT) previous version detected. Please remove SCT and then run this setup again.</pre>	<p>A previous version of SCT is installed on the computer. You must uninstall any previous version of SCT before installing. Follow the directions in the Uninstalling existing SCT release 11.0 or earlier software and Uninstalling existing NAE/NIE update tool software sections and try the installation again.</p>
<p>You receive the following error message when installing SCT:</p> <pre>No valid MSSQL Server instances found on the local machine.</pre>	<p>There are two instances that cause this error to occur:</p> <ul style="list-style-type: none"> • An unsupported version of SQL Server is installed on the computer. • or • You have a computer with a version of Windows that does not support the one-click install (for example, Windows Server 2012) and no version of SQL Server installed. <p>Cancel the installation and see SQL Server software to review the supported versions of SQL Server. Then, upgrade to a supported version before you proceed with the SCT installation.</p>
<p>In the SQL Server Management Studio, SQL Server Agent has the following text after it:</p> <pre>(Agent XPs disabled)</pre>	<p>CTOOLS is a 16-bit program and is not supported on any 64-bit operating system. Click OK to close the user message window.</p>
<p>During the installation of Windows 8.1 features, a Windows Features dialog box appears that reads:</p> <pre>Windows needs files from Windows Update to finish installing some features.</pre> <p>Two choices are given:</p> <p>Download files from Windows Update</p> <p>Don't connect to Windows Update</p>	<p>This is normal.</p> <p>This text appears if you install SQL Server software without Notification Services, which is not required for the SCT.</p>

Problem	Solution
<p>One of these error messages appear when you try to log in to the Site Management Portal:</p> <p>HTTP 404 File not found Internet Information Services</p> <p>Page cannot be found</p>	<p>Windows 8.1 is trying unsuccessfully to access the Internet to retrieve .NET Framework version 3.5.1 files or other necessary updates. Select either choice and refer to <i>Installing Required Features without Internet Connection for Windows 8.1</i> in the <i>Metasys Server Installation and Upgrade Instructions PDF (LIT-12012162)</i> for further instructions.</p>
<p>While using the SQL Installer tool, you receive a user or error message during SQL Server software installation or upgrade. Possible messages include:</p> <p>SQL Server Install error</p> <p>Instance Name already installed</p> <p>Install failed - Missing Windows Installer 4.5</p> <p>Install failed - Missing .NET 3.5.1 SP1</p> <p>No new features were installed during the setup execution</p> <p>The OS does not meet the minimum requirements for this SQL Server install</p> <p>Install failed - Bad software key</p> <p>WARNING: Please install the following prerequisites: .NET 3.5.1 SP1, Windows Installer 4.5</p>	<p>To eliminate either of these errors, follow these steps:</p> <ol style="list-style-type: none"> 1. Exit all programs. 2. Uninstall the SCT software. 3. Press the Windows key + R. The Run dialog box appears. 4. Type %TEMP% and click OK. Windows Explorer opens to display the contents of the temp folder. 5. Delete all files and folders in this directory. 6. Restart the computer. 7. Reinstall the SCT software.

Problem	Solution
While using the SQL Installer tool, you experience installation problems after you edit the text in the Command Line Options window of the SQL Installer.	Consult the error log file. The error messages file is located in the following folder: <i>C:\Program Files\Microsoft SQL Server\<number based on the SQL release>\Setup Bootstrap\Log\Summary.txt</i> Correct the problem and try the SQL Server installation or upgrade again.
You receive the following error message while installing SCT: Metasys NAE/NIE Update Tool (NUT) previous 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: <ul style="list-style-type: none"> • Attempt to reinstall SQL Server software because it appears to be damaged. • Upgrade from a older version of SQL Server Express software to a newer version of SQL Server Express software outside the regular upgrade process. 	A previous 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.

Problem	Solution
<p>After upgrading to a newer version of SQL Server, SCT no longer starts.</p>	<p>To correctly change your SQL Server software outside the usual installation or upgrade process, follow these steps:</p> <ol style="list-style-type: none"> 1. Back up all archive databases and back up the historical databases: <i>JCIAuditTrails</i>, <i>JCIEvents</i>, <i>JCIHistorianDB</i>, <i>JCIItemAnnotation</i>, and <i>MetasysReporting</i>. 2. 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. 5. Restore the archive databases and the historical databases: <i>JCIAuditTrails</i>, <i>JCIEvents</i>, <i>JCIHistorianDB</i>, <i>JCIItemAnnotation</i>, and <i>MetasysReporting</i>. <p>If you have already changed SQL Server software without uninstalling the SCT, follow these steps:</p> <ol style="list-style-type: none"> 1. Back up all archive databases and back up the historical databases: <i>JCIAuditTrails</i>, <i>JCIEvents</i>, <i>JCIHistorianDB</i>, <i>JCIItemAnnotation</i>, and <i>MetasysReporting</i>. 2. 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: <i>JCIAuditTrails</i>, <i>JCIEvents</i>, <i>JCIHistorianDB</i>, <i>JCIItemAnnotation</i>, and <i>MetasysReporting</i>.

Problem	Solution
<p>The following error appears when you try to log in to the SCT:</p> <p>Unable to Authorize Active Directory User.</p>	<p>To correctly change your SQL Server software outside the usual installation or upgrade process, follow these steps:</p> <ol style="list-style-type: none"> 1. Back up all archive databases and back up the historical databases: <i>JCIAuditTrails</i>, <i>JCIEvents</i>, <i>JCIHistorianDB</i>, <i>JCIItemAnnotation</i>, and <i>MetasysReporting</i>. 2. Uninstall the SCT software using Add/Remove Programs or Uninstall a Program. 3. Reinstall or upgrade SQL Server software as you intended. 4. Reinstall SCT. 5. Restore the archive databases and the historical databases: <i>JCIAuditTrails</i>, <i>JCIEvents</i>, <i>JCIHistorianDB</i>, <i>JCIItemAnnotation</i>, and <i>MetasysReporting</i>. <p>If you have already changed SQL Server software without uninstalling the SCT, follow these steps:</p> <ol style="list-style-type: none"> 1. Back up all archive databases and back up the historical databases: <i>JCIAuditTrails</i>, <i>JCIEvents</i>, <i>JCIHistorianDB</i>, <i>JCIItemAnnotation</i>, and <i>MetasysReporting</i>. 2. Uninstall the SCT software using Add/Remove Programs or Uninstall a Program. 3. Uninstall the SQL Server software. 4. Using Windows Explorer, browse to <i>C:\inetpub\wwwroot</i> and delete the <i>MetasysIII</i> folder. 5. Browse to <i>C:\WINDOWS\inf\009</i> and <i>C:\WINDOWS\inf\inc</i> and delete the <i>MSSQLServer</i> folder in each one. 6. Install SQL Server software. 7. Reinstall SCT. 8. Restore the archive databases and the historical databases: <i>JCIAuditTrails</i>, <i>JCIEvents</i>, <i>JCIHistorianDB</i>, <i>JCIItemAnnotation</i>, and <i>MetasysReporting</i>.

Problem	Solution
<p>The following error appears when you try to log in to the SCT:</p> <p>Error: Unable to Login. Unexpected Error.</p>	<p>The user may have recently changed the password of their Active Directory® (AD) domain account, their account is locked out, or their account does not have sufficient privileges. To work around this problem, follow these steps:</p> <ol style="list-style-type: none"> 1. Log in to the Site Management Portal UI and select Tools > Administrator. 2. Select Active Directory > Configure. 3. Select the user's account and click Edit. 4. Change the password to match the user's new AD password. 5. Click Save. <p>To permanently solve this problem, use a dedicated Active Directory account that has the password set to never expire as the Active Directory Service Account. (For details, refer to the <i>Security Administrator System Technical Bulletin [LIT-1201528]</i>).</p>

Problem	Solution
<p>(Continued) The following error appears when you try to log in to the SCT:</p> <pre>Error: Unable to Login. Unexpected Error.</pre>	<p>Solution 1:</p> <p>The Internet Explorer web browser proxy setting is set to bypass the proxy server for local addresses. To resolve this problem, start the browser and select Tools > Internet Options. Click the Connections tab, then LAN Settings. On the Local Area Network Settings window, select Automatically Detect Settings and select Use automatic configuration script. Type the address of the proxy server. Then, clear both check boxes under the Proxy server section. Relaunch the browser.</p> <p>Solution 2:</p> <p>The URL of the SCT you entered included a space. Remove the space and reload the page.</p> <p>Solution 3:</p> <p>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.</p> <p>Solution 4:</p> <p>Microsoft SQL Server is not running. Start the SQL Server service with the SQL Server Configuration Manager.</p> <p>Solution 5:</p> <p>SQL Server is missing from the computer's Path variable. To resolve this problem, follow these steps:</p> <ol style="list-style-type: none"> 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. On Edit System Variable window, make sure the SQL path is present somewhere within the variable value string. The path should be the following for SQL Server software: <ol style="list-style-type: none"> 5. ;C:\Program Files\Microsoft SQL Server\MSSQL10_50.MSSQLSERVER\MSSQL\Binn. <p>For SQL Server 2012 software, the path should be:</p> <p>;C:\Program Files\Microsoft SQL Server\MSSQL11.MSSQLSERVER\MSSQL\Binn.</p> 6. If the path is not present, add it using a semicolon (;) at the start of the string as a separator. <p>Solution 6:</p> <p>The computer contains files from an earlier operating system or from an earlier version of <i>Metasys</i> 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).</p>

Problem	Solution
You change the default language of the SCT, but when you log in, you do not see the new default language.	<p>Solution 7:</p> <p>SCT has become corrupted and access to the <i>Metasys</i> system folder is broken. To resolve this problem, uninstall SCT then reinstall it.</p> <p>Solution 8:</p> <p>The computer is using an older version of the Internet Explorer web browser. Upgrade the browser to version 11.</p>
<p>The following error appears when you launch SCT from the Launcher:</p> <p>Missing Resource File.</p>	<p>To resolve this problem:</p> <ol style="list-style-type: none"> 1. In Control Panel, select Administrative Tools > Services. 2. Right-click IIS Admin and select Stop. 3. In Windows Explorer, browse to <i>C:\WINDOWS\Microsoft.NET\Framework\v2.0.50727\Temporary ASP.NET Files\sct</i> 4. Delete the files in the sct folder. 5. In the Services window, right-click IIS Admin and select Start. 6. Close all windows and log in again.
<p>The following error appears when you launch SCT from the Launcher:</p> <p>HTTP Error 500.19 - Internal Server Error</p> <p>The requested page cannot be accessed because the related configuration data for the page is invalid.</p>	<p>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 <i>http://<sct computer name or IP address>/launcher.msi</i>.</p>
The Software Activation Manager Notice dialog box appears when you launch SCT.	<p>To resolve this problem:</p> <ol style="list-style-type: none"> 1. Open the Software Activation Manager software installed with SCT. 2. Validate SCT and your field controller package files are listed as a Licensed status. 3. 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. 4. Follow the on-screen prompts through the License Portal or upload an offline License Activation File. When your software is licensed, open the SCT software.

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