



Controller Configuration Tool (CCT) Installation Instructions

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Document introduction

Use this document to install or upgrade Controller Configuration Tool (CCT) software and field controller package files.

To order CCT software, specify the part number TL-CCT-0.

Note:

- If you have Metasys CCT or Facility Explorer™ Programmable Configuration Tool (FX-PCT) Release 10.2 software or earlier installed on your computer, you must first uninstall it before installing CCT Release 10.3 or later. To determine what release you

are using, go to Help > About Tool in the tool. The release number is displayed next to Tool Version.

- If you have CCT or FX-PCT software at Release 10.3 installed on your computer, you can upgrade directly to CCT Release 13.0 or later.
- You are required to license both CCT software and field controller package files at Release 13.0 and later. For further information, see [Installing and licensing the CCT software](#).
- At CCT 15.0, there is now a release mode 10.6 and release model 10.4 is no longer included. If you require Release Mode 10.4, you can download this separately from the license portal.
- At CCT 16.0, there is now a release mode 10.7 and release mode 10.5 is no longer included. If you require Release Mode 10.5, you can download this separately from the license portal. For details about the different supported modes, refer to *Controller Tool Help (LIT-12011147)*.

CCT provides the option to use and switch between 10.2, 10.6, and 10.7 release modes. Refer to the *User Interface* section in the *Controller Tool Help (LIT-12011147)* for procedures. You can view Controller Application Files (CAFs) created at an earlier release of CCT or FX-PCT. If you want to edit these files, you need to upgrade them to an available release mode. For information on how to upgrade CAFs, refer to the *Upgrading System Files* section in *Controller Tool Help (LIT-12011147)*.

Summary of changes

The following information is new or revised at Release 16.0:

- Updated [Supported operating systems](#).
- Updated [SQL Server software](#).
- Introduced Release Mode 10.7.

CCT documentation

The following table lists documents related to CCT.

Table 1. CCT documentation

For information on	Refer to
Features of CCT	<i>Controller Configuration Tool (CCT) Catalog Page (LIT-1900386)</i>
Using the CCT software	<i>Controller Tool Help (LIT-12011147)</i>
Using the Metasys System Site Management Portal	<i>Metasys Site Management Portal Help (LIT-1201793)</i>

For information on	Refer to
Strategies for Replacing Legacy N2 Controllers	<i>Modernization Guide for N2 Controllers - Metasys (LIT-12012005)</i>
Using Software Manager and software licensing	<i>Software Manager Help (LIT-12012389)</i>

Controller Tool help

The *Controller Tool Help (LIT-12011147)* is the user's guide to the CCT software. Use the tool to configure, simulate, and commission the following:

- Advanced Application Field Equipment Controllers (FACs)
- Advanced Application Programmable Controllers (PCAs)
- Expansion Input/Output Modules (PCXs)
- Field Equipment Controllers (FECs)
- General Purpose Application Controllers (CGMs and CGEs)
- General Purpose Programmable Controllers (PCGs)
- Input/Output Modules (IOMs)
- Programmable Variable Air Volume Box Controllers (PCVs)
- SNC Series network engines
- Variable Air Volume Controllers (VAVs)
- Variable Air Volume Modular Assembly Controllers (VMAs)
- Variable Air Volume Terminal Equipment Controllers (CVMs and CVEs)
- Expansion I/O Modules (XPMs)

The *Controller Tool Help (LIT-12011147)* provides guidance on communication switching, N2 point mapping, and N2 modules for N2 compatible controllers.

Supported operating systems

The following operating system and SQL Server configurations are supported for CCT.

Desktop operating systems

- Windows® 11 Pro and Windows® 11 Enterprise Editions (version 21H2, 22H2) (64-bit)
- Windows® 10 Enterprise LTSC (1809, 21H2) (64-bit)
- Windows® 10 Pro and Windows 10 Enterprise Editions (versions 21H2, 22H2) 64-bit).

Server operating systems

- Windows® Server® 2022 (64-bit)
- Windows® Server® 2019 (version 1809 or later) (64-bit)

SQL Server software

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

Windows 11 Pro and Windows 11 Enterprise Editions (version 21H2, 22H2) (64-bit)

- SQL Server 2022 Express
- SQL Server 2019 Express with CU18 (64-bit)
- SQL Server 2017 Express with CU31 (64-bit)

Windows 10 Pro, and Windows 10 Enterprise Build 1903 (64-bit):

- SQL Server 2022 Express
- SQL Server 2019 Standard, Enterprise, and Express (64-bit) version 15.0.2000.5 or later.
- SQL Server 2017 Standard, Enterprise, and Express (64-bit) version 14.0.3238.1 or later.

Windows Server 2022 (64-bit)

- SQL Server 2019 with CU18 (64-bit)
- SQL Server 2017 with CU31 (64-bit)

Windows Server 2019 Build 1903 (64-bit):

- SQL Server 2022
- SQL Server 2019 Standard, Enterprise (64-bit) version 15.0.2000.5 or later.
- SQL Server 2017 Standard, Enterprise (64-bit) version 14.0.3238.1 or later.
- If you install CCT on a Server OS and you do not have an earlier release of CCT installed, first install or verify that you have a supported version of SQL Server software.
- If you install CCT on a desktop operating system without a version of SQL software installed, the CCT setup automatically installs SQL Server 2019 Express with CU18 (64-bit).
- If CCT installs SQL Server Express, it uses MSSQLSERVER as the default instance name. If you require an alternate instance name, you must separately install SQL before CCT and enter a custom instance name. This can be done using the SQL Installer tool. Refer to the *SQL Server Software Installation and Upgrade Instructions (LIT-12012240)* for details.
- Ensure you configure the firewall to allow connection on port 1433 to avoid install errors from SQL connection failures. To configure your computers fire wall settings, navigate to Control Panel > System and Security > Windows Firewall.

Prerequisites

You require the following prerequisites to install CCT:

- Computer memory: 16 GB (4 GB minimum)
- .NET Framework version 3.5 SP1, 4.0 or 4.6.1
- Private Java® Runtime Environment (JRE)
- Adobe® Reader (required to print in CCT)

Upgrading CCT and FX-PCT software

About this task

Note:

- If you have CCT or FX-PCT Release 10.2 software or earlier installed on your computer, you must first uninstall it before installing CCT Release 10.3 or later. To uninstall FX-PCT Release 10.2 software see [Uninstalling FX-PCT Release 10.2 or Earlier Software](#). To uninstall CCT Release 10.2 software see [Uninstalling CCT Release 10.2 or Earlier Software](#).
- If you have CCT or FX-PCT software at Release 10.3 installed on your computer, you can upgrade directly to CCT Release 13.0 or later. For details on upgrading FX-PCT and CCT Release 10.3 software see [Upgrading FX-PCT Release 10.3 Software](#).
- CCT 16.0 provides the option to use and switch between 10.2, 10.6, and 10.7 release modes. Refer to the *User Interface* section in the *Controller Tool Help (LIT-12011147)* for procedures. CAFs created at an earlier release of CCT or FX-PCT can be viewed only, but can be upgraded to an available release mode if full editing is required. For information on how to upgrade CAFs, refer to the *Upgrading System Files* section in *Controller Tool Help (LIT-12011147)*.
- If you require another release mode such as 10.5, you can download this separately from the license portal.

Uninstalling FX-PCT release 10.2 or earlier software

Perform these steps to uninstall FX-PCT at release 10.2:

1. On the Start menu, click Control Panel.
2. Click Programs and Features.
3. In the list of programs, right-click FX-PCT and click Uninstall.
4. On the Welcome window, click Next. The Uninstall Databases window appears.
5. On the Uninstall Databases window, click Next.
6. On the Remove the Program window, click Remove. The Setup Wizard uninstalls the program.
7. On the Setup Wizard Completed window, click Finish. At the prompt to restart your computer, choose to restart now or later.

To install CCT Release 16.0, refer to [Installing and licensing the CCT software](#).

Uninstalling CCT release 10.2 or earlier software

Perform these steps to uninstall CCT at release 10.2.

1. On the Start menu, click Control Panel.
2. Click Programs and Features.
3. In the list of programs, right-click Metasys CCT 10.2 and click Uninstall.
4. On the Welcome window, click Next.
5. On the Uninstall CCT Databases window, click Next.
6. On the Remove the Program window, click Remove. The Setup Wizard uninstalls the program. When finished, the Setup Wizard Completed window appears.
7. Click Finish. At the prompt to restart your computer, choose to restart now or later.

To install CCT Release 16.0, refer to [Installing and licensing the CCT software](#).

Upgrading FX-PCT release 10.3 and CCT release 10.3 and later software

About this task

Perform these steps to upgrade FX-PCT release 10.3 and CCT release 10.3 and later software to CCT 16.0.

Procedure

1. Obtain the product installation file.
2. Double-click the **ControllerConfigurationTool_16.0** file. The Johnson Controls Controller Configuration Tool 16.0 Setup window appears.
3. If you are using Windows credentials to login to the SQL Server, click Upgrade. If you are not using Windows credentials, unselect the Windows Authentication check box and click Upgrade.
4. Click Finish when the Complete! window appears.

Installing and licensing the CCT software

CCT custom installation and licensing

Procedure

1. Obtain the product installation file.
2. Run the **ControllerConfigurationTool_16.0.exe** file. The Controller Configuration Tool 16.0 Setup window appears.
3. Click Custom. The SQL Server Selection window appears from the Database tab.
4. If you do not have a supported version of Microsoft SQL Server software, the Controller Configuration Tool setup automatically installs Microsoft SQL Server 2019 Express with CU18. 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.

Note: When you install CCT on a computer running SQL Server, the startup type of the SQL Server Browser service must be set to Automatic. The SQL Server Browser service must be running when you start CCT.

5. Click the General tab. The Install Path window appears.

6. To install CCT in the specified destination folder, click **Install**. To install CCT in a different location, click **Browse**, select the location, and then click **Install**. All prerequisite software for CCT and the Software Manager are installed first, then the CCT software is installed. A progress bar window appears.
7. Click **Finish** when the **Complete** window appears.
8. Obtain Field Controller packages and SA Bus Device Packages to install. To import a package, double-click on the package collection file or use the **Package Importer**, located in the Windows **Start** menu. The **Package Importer** displays the message **Finished importing** when the import is complete.
9. To license CCT, run **Software Manager** from the Windows **Start** menu. Locate CCT in the **Software Manager License Inventory** and then click **Activate New** in the **Choose Action** menu. See *Software Manager Help (LIT-12012389)* for additional details on activating licenses.
10. To license Field Controller packages, run **Software Manager** from the Windows **Start** menu. Use the **Add License** button in **Software Manager** if the Field Controller package is not listed in the **Software Manager License Inventory**. If the Field Controller package is listed in **Software Manager**, click **Activate New** in the **Choose Action** menu. See *Software Manager Help (LIT-12012389)* for additional details on activating licenses.

Note:

- Unlike CCT software, Field Controller package files are not automatically added to the **Software Manager License Inventory** when they are installed. Field Controller packages are listed in **Software Manager** only after they have been initially licensed.
- If you do not license the CCT software after installation, the **Software License Check** appears when you access CCT for the first time. Field Controllers without a licensed Field Controller package are set to **Artificial Field Device** or **Artificial IO Device** in CCT.
- **Johnson Controls SA Bus Device Packages** are included as a **Feature** within the CCT license for Release 14.x and later. No additional action is necessary to license SA Bus Device Packages after install.

CCT default installation and licensing

About this task

Note:

- The default installation is available if you want to accept all default options. If you want to customize your installation options, refer to the [CCT custom installation and licensing](#) section.
- All prerequisite software for CCT and the Software Manager are installed during the CCT installation process.

Procedure

1. Obtain the product installation file.
2. Run the **ControllerConfigurationTool_16.0.exe** file. The **Johnson Controls Controller Configuration Tool 16.0 Setup** window appears.
3. Click **Install**. All prerequisite software for CCT and the Software Manager are installed first, then the CCT software is installed.

4. Click Finish when the Complete window appears.
5. Obtain Field Controller packages and SA Bus Device packages to install. To import a package, double-click on the package collection file or use the Package Importer, located in the Windows **Start** menu. The Package Importer displays the message **Finished importing** when the import is complete.
6. To license CCT, run Software Manager from the Windows **Start** menu. Locate CCT in the Software Manager **License Inventory** and then click **Activate New** in the **Choose Action** menu. See *Software Manager Help (LIT-12012389)* for additional details on activating licenses.
7. To license field controller packages, run Software Manager from the Windows **Start** menu. Use the Add License button in Software Manager if the field controller package is not listed in the Software Manager **License Inventory**. If the field controller package is listed in Software Manager, click **Activate New** in the **Choose Action** menu. See *Software Manager Help (LIT-12012389)* for additional details on activating licenses.

Note:

- Unlike CCT software, field controller package files are not automatically added to the Software Manager **License Inventory** when they are installed. Field controller packages are listed in Software Manager only after they have been initially licensed.
- If you do not license the CCT software after installation, the Software License Check appears when you access CCT for the first time. Field controllers without a licensed field controller package are set to Artificial Field Device or Artificial IO Device in CCT.
- Johnson Controls SA Bus Device Packages are included as a Feature within the CCT license for Release 14.x and later. No additional action is necessary to license SA Bus Device Packages after install.

Troubleshooting

Table 1. Troubleshooting

Problem	Solution
<p>Both FX-PCT and CCT do not function properly when you downgrade to an earlier version (for example, you uninstall Release 15.0 and install Release 16.0).</p>	<p>To resolve this issue, follow the below procedures to complete a clean installation:</p> <p>For CCT:</p> <ol style="list-style-type: none"> 1. Uninstall the current version of CCT. 2. Back up the data found in the CCT folder: <ul style="list-style-type: none"> ○ C:\ProgramData\Johnson Controls\MetasysIII\ 3. Delete the CCT folder from the following locations:

Problem	Solution
	<ul style="list-style-type: none"> ○ C:\Program Files (x86)\Johnson Controls\ ○ C:\ProgramData\Johnson Controls\MetasysIII\ <p>4. Back up the data found in the DataAccess folder:</p> <ul style="list-style-type: none"> ○ C:\ProgramData\Johnson Controls\MetasysIII\ <p>5. Delete the DataAccess folder from the following location:</p> <ul style="list-style-type: none"> ○ C:\ProgramData\Johnson Controls\MetasysIII\ <p>6. Install the earlier version of CCT.</p> <p>7. Restart your computer.</p> <p>For FX-PCT:</p> <p>1. Uninstall the current version of FX-PCT.</p> <p>2. Back up the data found in the PCT folder:</p> <ul style="list-style-type: none"> ○ C:\Program Files (x86)\Johnson Controls\ <p>3. Delete the PCT folder from the following location:</p> <ul style="list-style-type: none"> ○ C:\Program Files (x86)\Johnson Controls\ <p>4. Back up the data found in the DataAccess folder:</p> <ul style="list-style-type: none"> ○ C:\ProgramData\Johnson Controls\MetasysIII\ <p>5. Delete the DataAccess folder from the following location:</p> <ul style="list-style-type: none"> ○ C:\ProgramData\Johnson Controls\MetasysIII\ <p>6. Install the earlier version of FX-PCT.</p> <p>7. Restart your computer.</p>

Problem	Solution
<p>When you install on the Open Application Server (OAS), OAS captures port 47808 for the network adapter which prevents CCT from using the port to download IP controllers through ethernet.</p>	<p>To work around this issue, do not install CCT on the OAS machine.</p>
<p>You experience installation problems and would like to consult the error log.</p>	<p>The error messages are located in the following folder: C:\Users\ <username>\AppData\Local.</p> <p>Look for the file called:\Controller_Configuration_Tool_<xxxxxxxxxxxxxx>.html.</p>
<p>You receive the following error message when installing CCT: No valid MSSQL Server instances found on the local machine or Unsupported version of SQL Server</p>	<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. • 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 CCT installation.</p>

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

www.johnsoncontrols.com/techterms. Your use of this product constitutes an agreement to such terms.

Product warranty

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

Patents

Patents: <https://jciapat.com>

Contact information

Contact your local Johnson Controls representative: www.johnsoncontrols.com/locations

Contact Johnson Controls: www.johnsoncontrols.com/contact-us