Controller Configuration Tool (CCT) Catalog Page

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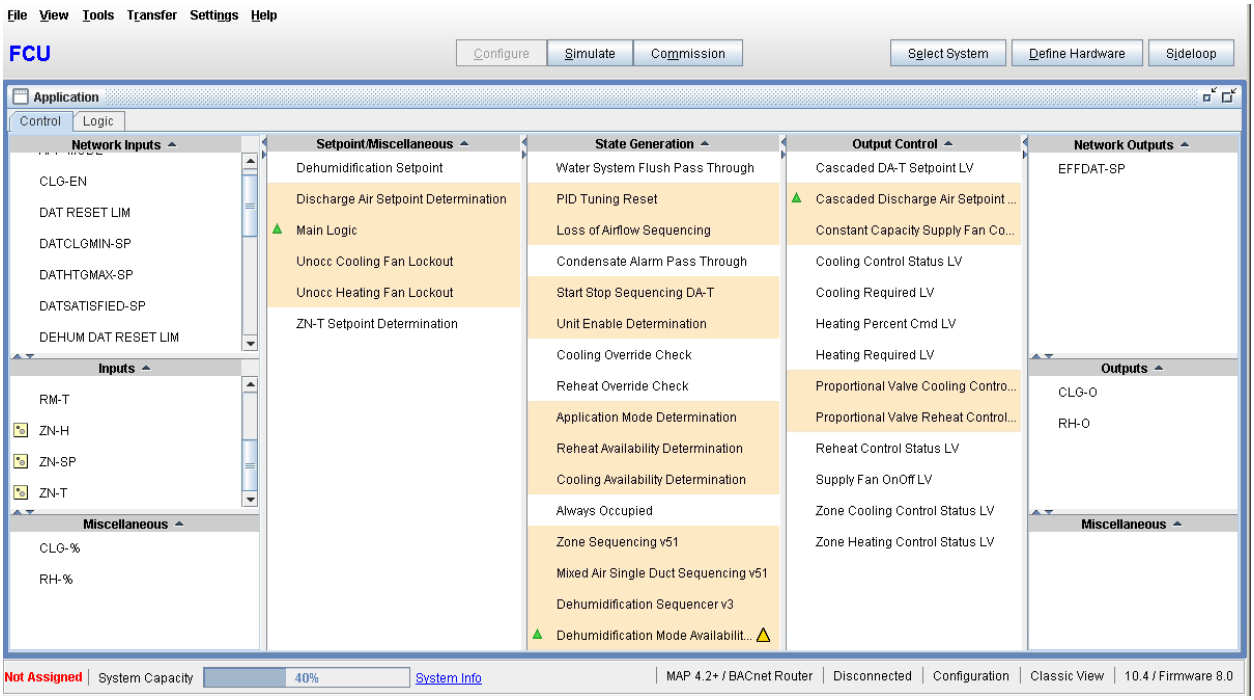
Johnson Controls

CCT

You can use the Controller Configuration Tool (CCT) to configure, simulate, commission, and transfer application files to the following controllers on an MS/TP bus:

- 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)
- General Purpose Programmable Controllers (PCGs)
- Input/Output Modules (IOMs)
- Programmable Variable Air Volume Box Controllers (PCVs)
- Variable Air Volume Controllers (VAVs)
- Variable Air Volume Modular Assembly Controllers (VMAs)
- Variable Air Volume Terminal Equipment Controllers (CVMs)



CCT operates in the following three modes that provide key functionality for your system:

- You can use the ***Configuration*** mode to select a wide variety of mechanical and control logic options through system selection trees for typical air handling, terminal unit, central plant, and VAV box mechanical systems. When required, you can customize the standard logic provided by the system selection process to meet your specialized control logic requirements.
- You can use the ***Simulation*** mode to review the application logic as if you were commissioning the system. You can make adjustments to setpoints, inputs, or sensors during a simulation

session to validate the logic before assigning the configuration to a specific controller. A simulation debugging console is also available to setup break points that pause the simulation session based on criteria that you set up. While viewing a simulation session, transitions taking place in the logic are highlighted for a few seconds to help you quickly identify where the changes occur.

- You can use the ***Commissioning*** mode to connect to a device and view actual data from that device. You can use this mode to monitor your device and set Offsets, COVs, and Polarity in addition to other parameter and detail changes.
  - For VAV applications, CCT includes an optional box flow test to automatically exercise all the VAV boxes to ensure correct mechanical installation and proper configuration of the key flow setup parameters.
  - The ZFR Checkout Tool (ZCT) is available to validate the wireless connectivity and health of your wireless mesh network. Refer to the *ZFR Checkout Tool Help (LIT-12012292*) for details.
  - Controller Application Files (CAFs) can be transferred and commissioned to a device through a wide variety of connection interfaces including: NxE Passthru, MAP 4.2+ /BACnet® router, ZigBee® and Direct Ethernet.

CCT and Field Controller Package Licensing

CCT software and field controller package files require license activation at Release 13.0. You can license CCT and field controller packages using the Software Activation Manager (SAM), which is installed through the CCT installation wizard. For more information on software licensing, refer to the *Software Activation Manager Help (LIT-12012389)*.

Field controller package files are bundled separately at this release. You can use the licensing infrastructure to download package files, and the Package Importer wizard to install them.

For information on CCT and field controller package licensing, and on how to install field controller package files, refer to the *CCT Installation Instructions (LIT-12011529)*.

CCT and FX-PCT

CCT and the Facility Explorer® Programmable Controller Tool (FX-PCT) are no longer separate software tools. Users of CCT and FX-PCT at Release 10.2 must first uninstall the previous version before installing 13.0. Users of CCT and FX-PCT software at Release 10.3 can upgrade directly to Release 13.0. For information on how to upgrade to or install CCT, refer to the *CCT Installation Instructions (LIT-12011529)*.

Features and Benefits

- **FSM Explorer**—Provides a new way of viewing the Finite State Machine (FSM) in Configuration, Simulation and Commissioning mode.
- **New CAF Workflow**—Helps you pick the correct Release Mode for your application.
- **Transfer to Device (Download) Enhancements**—Enables you to control when to activate transferred files on a controller and enable and disable the logic of applications in a device.
- **Online Library**—Enables you to download, publish and share CAF files, Controller Templates, Equipment Definitions and CCT Modules. This feature is only available to Technican licensed users.
- **Support for SA Bus Provisioning**—Provides the ability to update the firmware of all devices attached on the Sensor/Actuator Bus. You can check the status of SA Bus devices in the Transfer Wizard.

- **BBMD Functionality**—Provides you with the ability to configure IP controllers with BACnet Broadcast Management Device (BBMD) enabled.
- **N2 Application Transfer**—Facilitates the transfer of N2 applications to N2 capable devices without requiring explicit communication switching.

Selection Chart

Table 1: Selection Chart

Code Number	Description
TL-CCT-0	New project software for sites that do not have a previous version of CCT installed.
TL-CCT-6	Upgrade software for previous CCT versions being upgraded to the latest release.
MS-FCP-0	*Metasys* Field Controller Packages
FX-FCP-0	FX Field Controller Packages
CH-FCP-0	*BCPro*™ Field Controller Packages

CCT Technical Specifications

Table 2: CCT System Requirements

Recommended Computer	Intel® Core® 2 Duo E6700 or better (Intel Core 2 Duo E4300 minimum) 20 GB free hard disk available (600 MB minimum)
Recommended Memory	Computer Platforms: 16 GB RAM (4 GB RAM minimum)
Supported Operating System (OS) and Database Software	**Windows® 10 Pro and Enterprise Editions with Creators Update (version 1709) (64 bit)** Supports Microsoft® SQL Server® 2016 Express with SP1 (64-bit), Microsoft SQL Server 2014 Express with SP2 (64-bit) , or Microsoft SQL Server 2012 Express with SP4 (64-bit) Supports Microsoft SQL Server 2016 Standard with SP1 (64-bit), Microsoft SQL Server 2014 Standard with SP2 (64-bit) , or Microsoft SQL Server 2012 Standard with SP4 (64-bit) ⓘ **Note:** The OS and software must both be 64-bit.
	Windows 8.1 Pro and Windows 8.1 Enterprise Editions with Update 1 (64-bit) Supports Microsoft SQL Server 2016 Express with SP1 (64-bit), Microsoft SQL Server 2014 Express with SP2 (64-bit) , or Microsoft SQL Server 2012 Express with SP4 (64-bit) Supports Microsoft SQL Server 2016 Standard with SP1 (64-bit), Microsoft SQL Server 2014 Standard with SP2 (64-bit) , or Microsoft SQL Server 2012 Standard with SP4 (64-bit) ⓘ **Note:** The OS and software must both be 64-bit.

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	Windows 7 Professional, Enterprise, and Ultimate Editions with SP1 (64-bit) Supports Microsoft SQL Server 2014 Express with SP2 (64-bit), or Microsoft SQL Server 2012 Express with SP4 (64-bit) Supports Microsoft SQL Server 2014 Standard with SP2 (64-bit), or Microsoft SQL Server 2012 Standard with SP4 (64-bit) ⓘ **Note:** The OS and software must both be 64-bit.
Required Web Browser Software for *Metasys* Client Computers	Windows® Internet Explorer® 11.0.9600.18816 Update version 11.0.47 or later, Microsoft Edge® version 41 or later, Apple Safari® 11 or later, and Google® Chrome™ version 61 or later. ⓘ **Note:** In Internet Explorer 11, select the ***Use Microsoft compatibility lists*** option, found under ***Tools>Compatibility View Settings***, to ensure that websites appear and function correctly. ⓘ **Note:** Web browser software is required if you want to view the *Controller Tool Help (LIT-12011147)* online. However, you can also access this help system as a PDF from the software.
Network Communication for CCT Client Computer	Ethernet network interface card 10/100/1000 Mbps (100 Mbps network or better recommended)
Software Optionally Installed During CCT Install	Microsoft .NET Framework version 4.6.1 Microsoft SQL Server 2014 Express software with SP2

Table 2: CCT System Requirements

Optional Connection Devices (Order Separately)	Bluetooth Commissioning Converter (MS-BTCVT-1) ⓘ **Note:** The BTCVT is no longer available but continues to be supported. Laptop with Bluetooth® wireless communications or a computer with a USB Bluetooth converter The USB Dongle with ZigBee® Driver (ZFR-USBHA-0) has a wireless connection through the CCT for wireless commissioning of the wireless enabled FEC and VMA16 field controllers. It also uses the ZCT in CCT. The Mobile Access Portal (MAP) Gateway (TL-MAP1810-0Px) at Release 4.2 has a BACnet Router connection to the SA Bus of an IP field controller on your subnet. BACnet Router Setup for Tool Connections—The BACnet Router setup has been updated to allow the MAP Gateway to easily connect to the field controller and System Tools through a WIFI connection to perform file transfers and commissioning function. For further information, refer to the *Mobile Access Portal Gateway Product Bulletin (LIT-12011884)*. The Portable BACnet/Internet Protocol to MS/TP Router (TL-BRTRP-0) routes information between BACnet/IP and MS/TP networks. For further information, refer to the *Portable BACnet®/IP to MS/TP Router (Part No. 24-10414-2)*. Adobe® Reader® software ⓘ **Note:** A PDF reader software is required for the Print function in CCT.
Optional Hardware	Any network or local printer supported by the qualified Windows operating system