



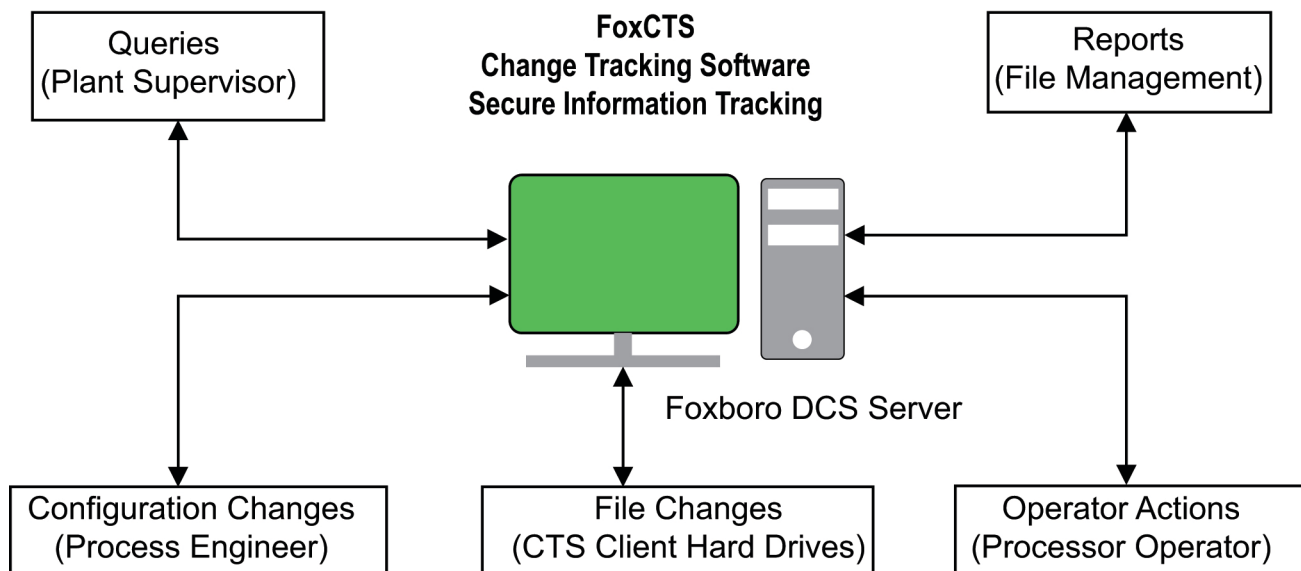
# Foxboro™ DCS

## FoxCTS - Change Tracking Software

### PSS 41S-7CTS

#### Product Specification

November 2022



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# Overview

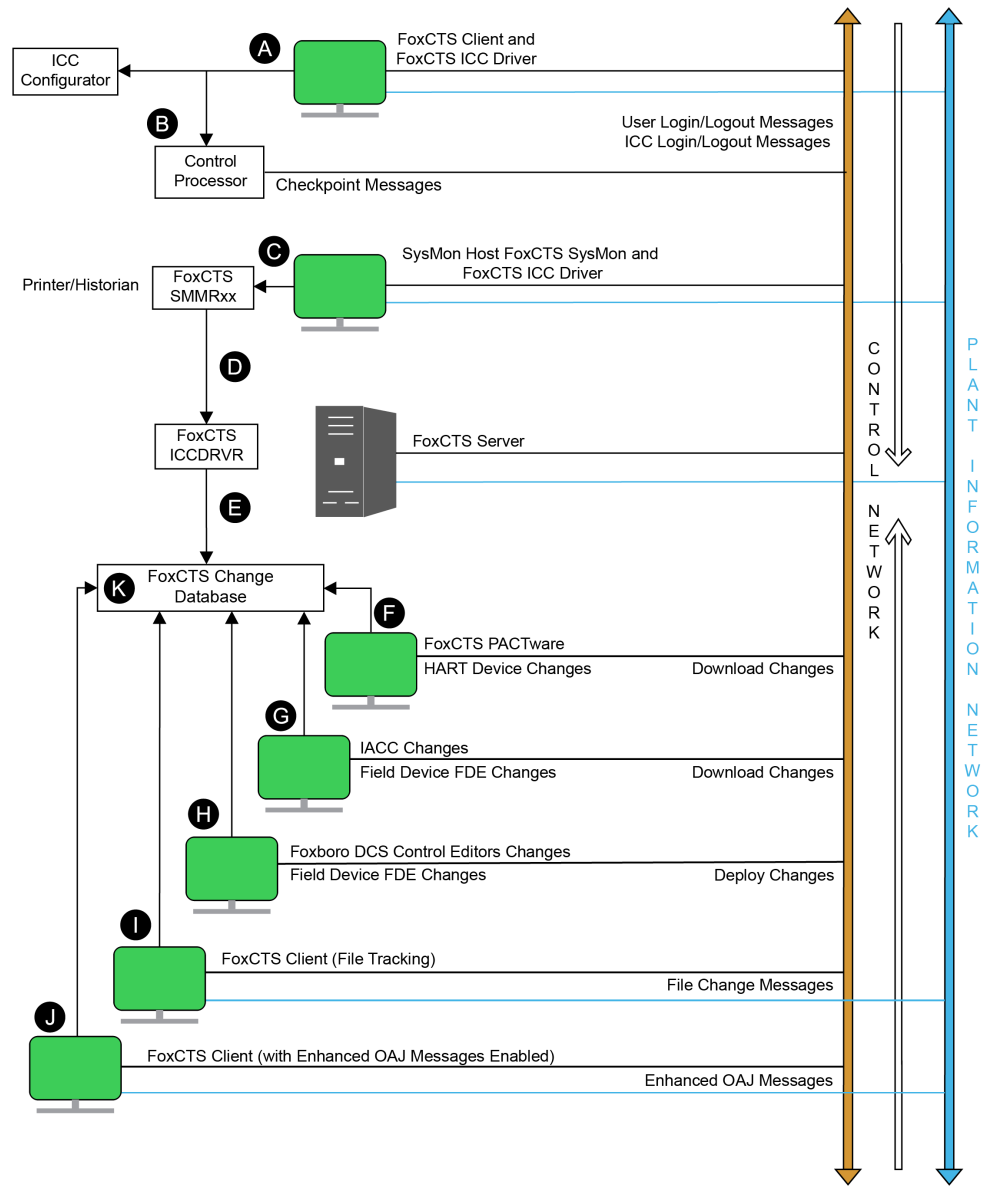
The EcoStruxure™ Foxboro™ DCS Change Tracking Software (FoxCTS) adds enhanced change tracking, security, configuration, and management functions to an EcoStruxure™ Foxboro™ DCS. This software can be used within a regulated environment when combined with appropriate management policies, practices, and procedures.

## Features

- Associates the current FoxCTS user to configuration changes at the control stations.
- Tracks control configuration modifications.
- Tracks ladder logic and sequence logic changes made to either primary or included files.
- Tracks Foundation™ fieldbus device changes.
- Tracks changes made to ASCII, binary, graphic, and other file types on FoxCTS client stations.
- Tracks the usage of configuration tools found under the folders `d:/usr/fox/sys`, `d:/usr/fox/soft`, and `d:/usr/fox/config`.
- Stores enhanced Operator Action Journal (OAJ) information to the FoxCTS change database. The enhanced OAJ message includes FoxCTS user information in the message.
- Supports FoxCTS domain management via the FoxCTS Configurator.
- Supports FoxCTS change reporting via the FoxCTS Viewer.
- Supports notification of FoxCTS diagnostic events, that is, unsuccessful writes to the FoxCTS change databases and unsuccessful login attempts.
- Performs automatic nightly backups of the FoxCTS databases.
- Monitors the size of the FoxCTS change databases and performs automatic archives when necessary.
- Provides automatic logout from the EcoStruxure™ Foxboro™ DCS FoxView displays based on inactivity.

Architecture Flow

The FoxCTS product is based on a client/server architecture. This is the information flow for FoxCTS login and control configurator activity:



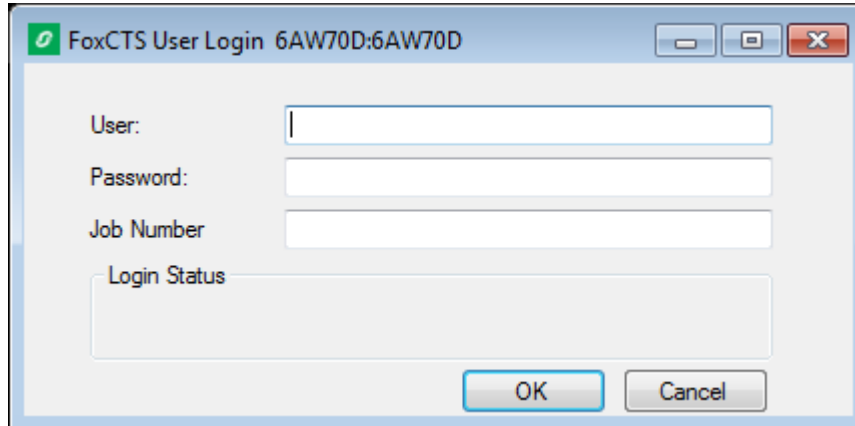
A	The FoxCTS user logs into the FoxView display and generates a login message recorded by the FoxCTS Server.
B	Configuration changes made by the Integrated Control Configurator (ICC) generates an ICC login message to the FoxCTS Server. Making changes to the control processor (CP) alters its memory. Exiting the ICC generates an ICC logout message to the FoxCTS Server and generates a checkpoint notification to the CP's System Monitor.
C	The checkpoint message is sent to the FoxCTS SMMR process, which forwards the message to the FoxCTS ICCDRVR process residing on the CP host machine.
D	The FoxCTS ICCDRVR process determines the CP changes made.
E	The FoxCTS Server receives and collects the change information to record and records it in the FoxCTS change databases.
F	HART device changes made via the PACTware software are transferred to the FoxCTS Server every five minutes.
G	Configuration changes made via I/A Series Configuration Component (IACC) and EcoStruxure™ Field Device Expert (FDE) field devices accumulate at their respective server and are transferred to the FoxCTS Server.
H	Configuration changes made by EcoStruxure™ Foxboro™ DCS Control Editors and FDE field device accumulate at their respective server and are transferred to the FoxCTS Server.
I	Someone or some program alters a tracked file and the FoxCTS Client workstation notifies the FoxCTS Server of the change.
J	FoxCTS enhanced OAJ messages are sent to the FoxCTS Server for recording.
K	The FoxCTS Server receives and collects change information and records it to the FoxCTS change databases.

## Security Enhancements

- The creation of FoxCTS user accounts.
- FoxView™ display access control based on the workstation assignment.
- FoxView environment access control based on environment assignment.
- A User Reconfirmation application that allows an application engineer to easily configure FoxView screen actions to be executed after the FoxCTS user(s) are confirmed.

## Human Interface

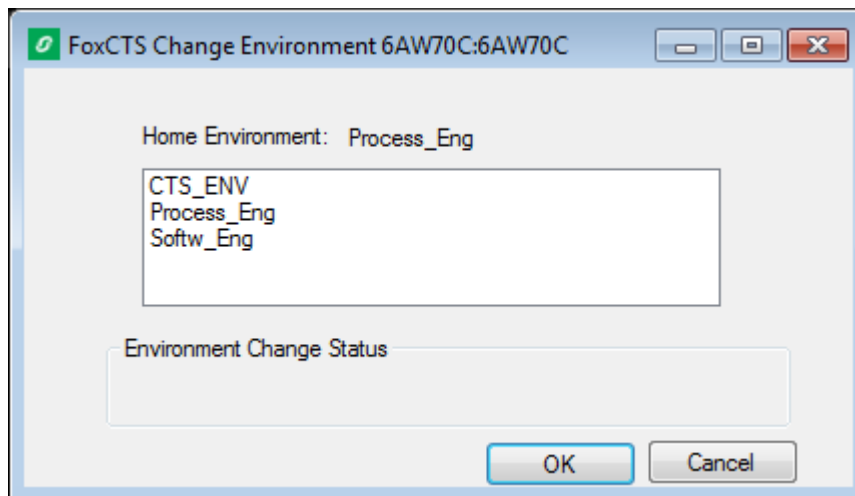
FoxCTS login begins when FoxView launches or at the optional **FoxCTS User Login** dialog box.



The screenshot shows a Windows-style dialog box titled "FoxCTS User Login 6AW70D:6AW70D". It contains four input fields: "User:", "Password:", "Job Number", and "Login Status". The "User:", "Password:", and "Job Number" fields are empty text boxes. The "Login Status" field is a larger text area. At the bottom right, there are "OK" and "Cancel" buttons.

For domain logins, no **FoxCTS User Login** box appears.

The FoxCTS software restricts access to FoxView. After a successful FoxCTS login, the environment changes to the FoxCTS user's configured default home environment. Only the environments configured for the FoxCTS user appear in the change environment list.

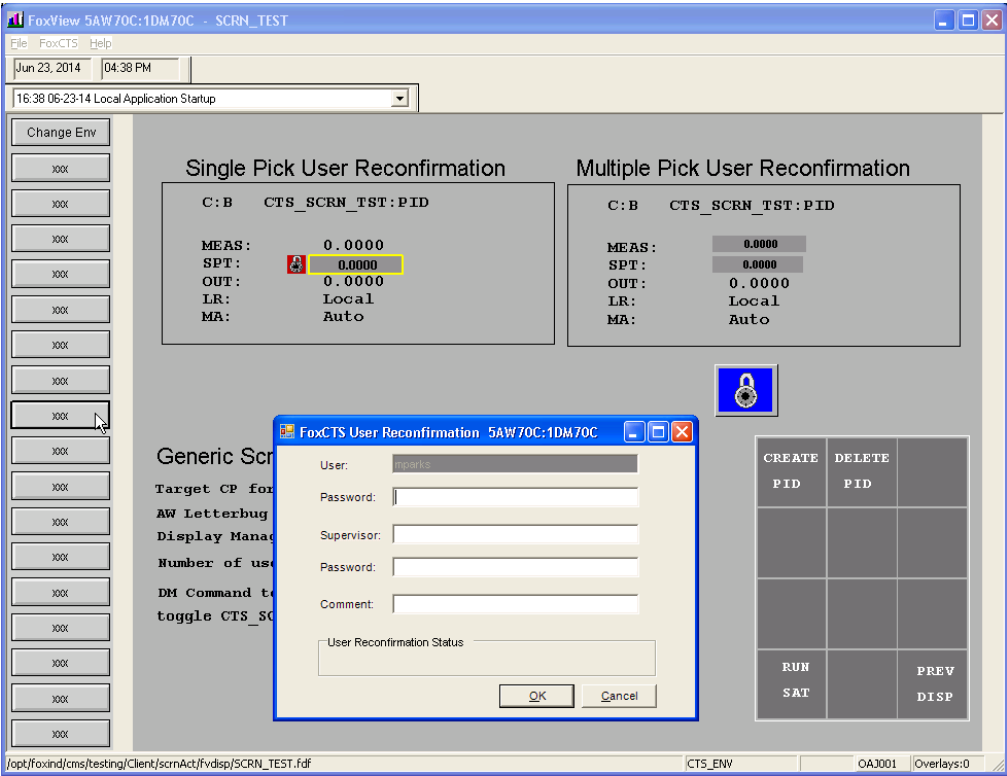


The screenshot shows a Windows-style dialog box titled "FoxCTS Change Environment 6AW70C:6AW70C". It displays "Home Environment: Process\_Eng". Below this is a list box containing three items: "CTS\_ENV", "Process\_Eng", and "Softw\_Eng". At the bottom, there is an "Environment Change Status" text area and "OK" and "Cancel" buttons.

# User Reconfirmation

The FoxCTS User Reconfirmation feature requires either single or double user name/ password validation before execution of the specified action.

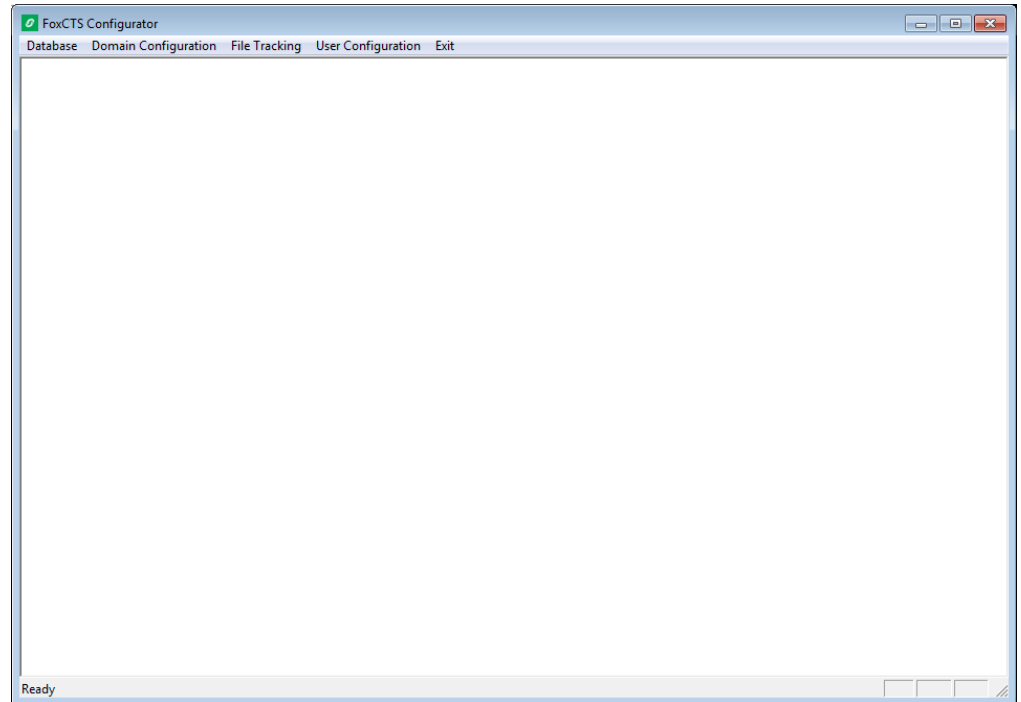
The reconfirmation information is recorded in the FoxCTS change database.





# FoxCTS Configurator

Use the **FoxCTS Configurator** to configure the FoxCTS domain, identify files to be tracked, and maintain the FoxCTS databases. Only FoxCTS users with proper permissions can access the FoxCTS Configurator. This is the main menu of the FoxCTS Configurator:



## FoxCTS Domain

Use the FoxCTS Configurator to create the FoxCTS domain. The FoxCTS domain consists of control processors, workstations, environments, process areas, and user accounts.

## Database Maintenance

Use the FoxCTS Configurator to perform these FoxCTS database maintenance functions:

- Backup: Perform a backup of the current FoxCTS databases.
- Restore: Restores the FoxCTS databases from a selected FoxCTS database backup.
- Archive Create: Creates an archive of the change databases for a range of time.
- Archive Load: Loads a database archive for FoxCTS Viewer access.

## File Tracking

Use the FoxCTS Configurator to identify folders and files to track for changes.

# FoxCTS Viewer

Use the **FoxCTS Viewer** to easily retrieve FoxCTS change records for display. Only FoxCTS users with proper database access levels can access the FoxCTS Viewer.

The FoxCTS Server records change history data to the FoxCTS databases by these data types:

- **Control History:** Changes made to a control processor or field device. Control history records can be annotated.
- **Activity:** FoxCTS user activity on a FoxCTS Domain.
- **Enhanced OAJ Messages:** FoxCTS enhanced OAJ message records.
- **File Tracking:** Modifications made to files configured for file tracking.
- **Users:** FoxCTS Configurator user account modifications.
- **Archive Data:** Archives currently loaded for viewing.

The FoxCTS Viewer displays change data from the current change or archive database.

The screenshot displays the FoxCTS Viewer application window. The title bar reads "FoxCTS Viewer - 2017-08-16 TO CURRENT". The menu bar includes "Control History", "Activity", "OAJ Messages", "File Tracking", "Users", "Archive Data", and "Exit".

On the left is a tree view showing a hierarchical structure of control elements. The selected path is: 6AW70A > 6CP27A > SHLV106CP27A > 6AW70B > 6CP27B > 6B\_FOXCTS > PID\_6B.

The main area is divided into two sections:

- Control History:** Displays a table with 1 row. The columns are Date, Host, CSName, Compound, Block, FBM Letterbug, FBM Port, and User Name. The data row shows: 2017-08-16 15:56:51, 6AW70B, 6CP27B, 6B\_FOXCTS, PID\_6B, Letterbug, Port, fgentry.
- Change Detail:** Displays two tables side-by-side. The left table shows parameters LSCI1 and LSCO1 with their current and previous values. The right table shows parameters AMRTIN, AUTSW, BBIAS, BCALCI, BIAS, BTRKOP, CEOPT, DALOPT, DELTI1, DELTI2, and DELTO1 with their current values.

# Requirements

Five modules comprise the FoxCTS product, with each module having a different set of system requirements.

The FoxCTS product has limited support for EcoStruxure™ Foxboro™ DCS Control Software. The FoxCTS modules can record changes made to control stations managed by the Foxboro Control Editors but the Foxboro™ DCS Control HMI is not supported.

These FoxCTS modules have additional requirements:

Module	Requirements
FoxCTS Server Module	10 GBs for the FoxCTS databases. More disk space is needed as the FoxCTS databases grow.
FoxCTS Client Module	Control Core Services and I/A Series v8.8 require AIM*API software installed and configured.  I/A Series software v8.5-v8.7 requires FoxAPI software installed and configured.
FoxCTS ICC Driver Module	System Monitor running.
FoxCTS PACTware Module	PACTware software installed.

## Supported Software

FoxCTS version 7.03.00 currently supports this software:

- Foxboro™ DCS Control Core Services Software v9.0 and later Local Edition or Enterprise Edition with default domain group policies.
- I/A Series Software v8.5-v8.8 Standard or Security Enhanced with default domain group policies.

When using security enhanced software, be aware that changing the provided default domain group policies or improperly using McAfee® ePolicy Orchestrator (ePO) firewall can adversely affect the proper operation of FoxCTS software. Modifying Active Directory Group Policies is considered an advanced action to be undertaken by qualified personnel. Use of any firewall could also adversely affect the functionality of the FoxCTS software if not configured properly.

## Regulatory Position

The FoxCTS product supports the practices required by FDA Regulation 21 CFR Part 11, OSHA 1910, and by other governmental regulations. These regulations require that changes made to a control system be documented and distributed to the affected parties, especially to the process operators and their supervisors, and that access to the system be controlled and monitored.

Though the FoxCTS product provides support for these regulations, it is not sufficient by itself to verify installation compliance.

Certification of compliance for any given installation is achieved not only through the application of hardware and software products, like the FoxCTS product, but also through external review, internal procedures, and a variety of other mechanisms.

## Compliance

The Schneider Electric company is committed to having a combination of services, policies, procedures and automated tools to help facilitate compliance. Contact your account representative for more information on services provided the company to assist you in meeting your requirements.

## Ordering Information


The FoxCTS product is sold based on the number of control stations (CS). A control station is any station that runs control blocks. Such stations include but are not limited to CP10/30/40/60/270/280 or later processors, DI/5/30, ABGW, ABI, ABS, MDGW, MDI, FDGs, DI, and Micro-IA.

Contact your account representative for details regarding bulk purchases for large plant sites or custom configurations.

FoxCTS installation services is not included.

Expected delivery time is four to six weeks.

- Q0303BM - FoxCTS, Cfg. 1: 1-3 CSs
- Q0303BN - FoxCTS, Cfg. 2: 4-8 CSs
- Q0303BP - FoxCTS, Cfg. 3: 9-15 CSs
- Q0303BQ - FoxCTS, Cfg. 4: 16-25 CSs
- Q0303BR - Upgrade FoxCTS, Cfg. 1: 1-3 CSs
- Q0303BS- Upgrade FoxCTS, Cfg. 2: 4-8 CSs
- Q0303BT - Upgrade FoxCTS, Cfg. 3: 9-15 CSs
- Q0303BU - Upgrade FoxCTS, Cfg. 4: 16-25 CSs

 **WARNING:** This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.p65warnings.ca.gov/](http://www.p65warnings.ca.gov/).

Schneider Electric Systems USA, Inc.  
70 Mechanic Street  
Foxboro, Massachusetts 02035–2040  
United States of America

Global Customer Support: <https://pasupport.schneider-electric.com>

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