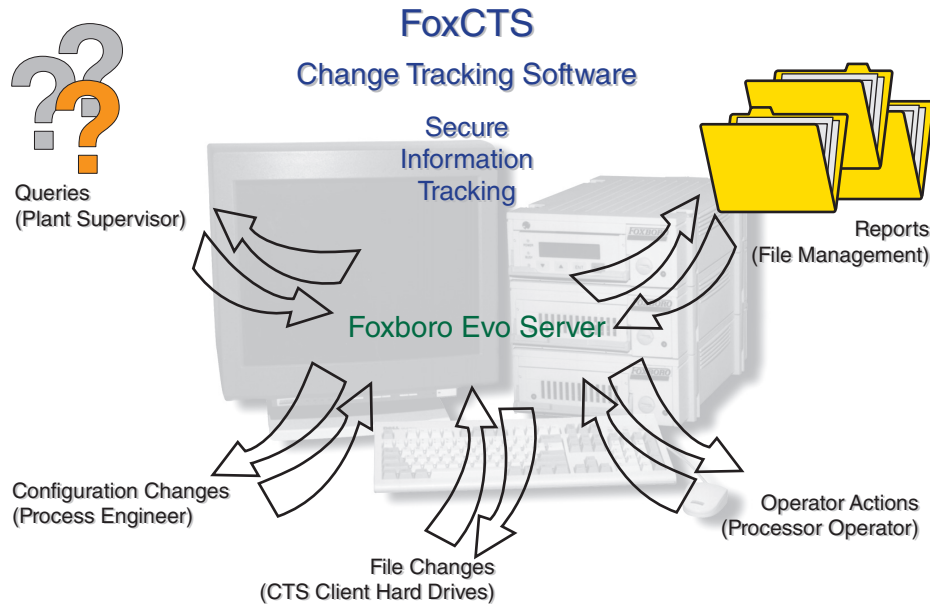


**FoxCTS - Change Tracking Software**



*In many industries, Plant Operators require that their staffs have a positive knowledge of the control system's configuration. This starts with system validation testing and is maintained during operation through rigorous change management practices. FoxCTS automates this process, tracking specific changes along with their authorized user.*

**OVERVIEW**

The FoxCTS change tracking software adds enhanced change tracking, security, configuration, and management functions to Foxboro Evo systems. This software can be used within a regulated environment when combined with appropriate management policies, practices, and procedures.

**Features**

The FoxCTS product features include:

- ▶ Associating the current FoxCTS user to configuration changes at the control stations
- ▶ Tracking control configuration modifications
- ▶ Tracking ladder logic and sequence logic changes made to either primary or included files
- ▶ Tracking FOUNDATION™ fieldbus device changes
- ▶ Tracking changes made to ASCII, binary, graphic, and other file types on FoxCTS Client stations

- ▶ Tracking the usage of configuration tools found under the folders d:/usr/fox/sys, d:/usr/fox/soft, and d:/usr/fox/config
- ▶ An application that stores enhanced Operator Action Journal (OAJ) information to the FoxCTS change database. The enhanced OAJ message includes FoxCTS user information in the message.

### **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.

### **Security Enhancements**

The security enhancements that the FoxCTS software provides include:

- ▶ 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.

### **Miscellaneous Features**

The FoxCTS product provides these additional features:

- ▶ Supports FoxCTS domain management via the FoxCTS Configurator.
- ▶ Supports FoxCTS change reporting via the FoxCTS Viewer.
- ▶ Supports notification of FoxCTS diagnostic events, i.e. failed writes to the FoxCTS change databases and failed 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 FoxView displays based on inactivity.

### **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. Figure 1 shows 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.

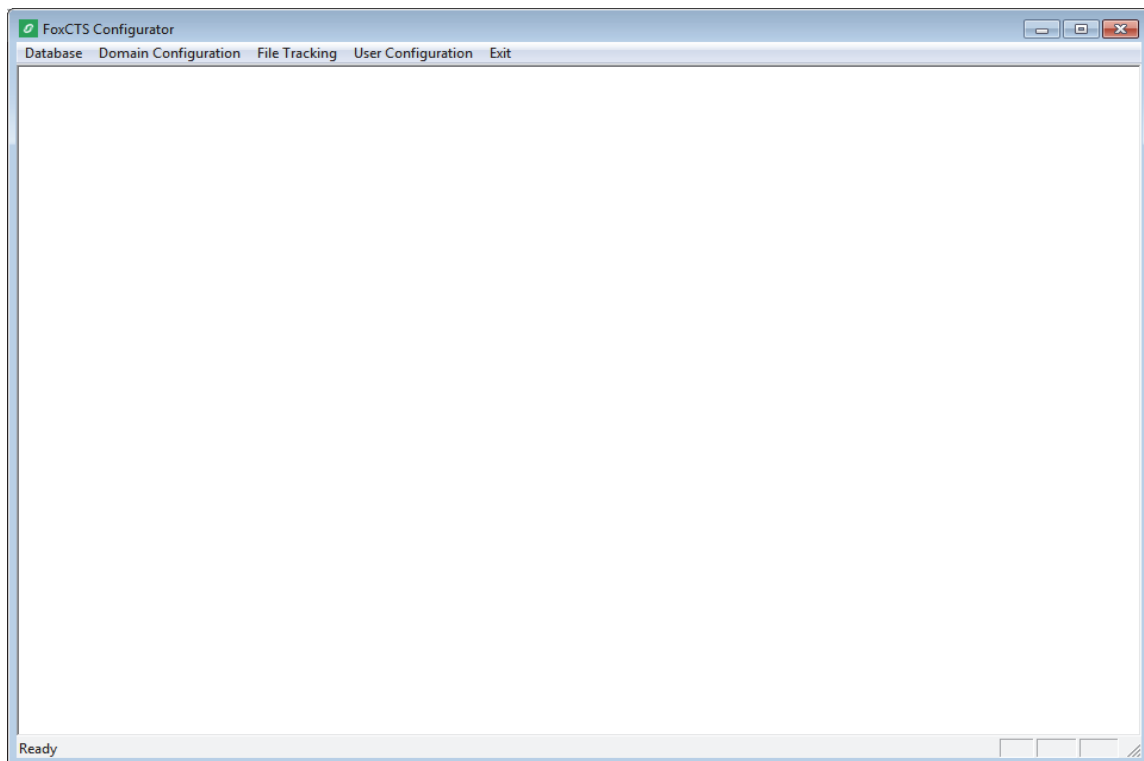


Figure 1. FoxCTS Configurator Main Menu

### HUMAN INTERFACE

FoxCTS login begins when FoxView launches or at the optional FoxCTS User Login box, as shown in Figure 2.

In the case of domain logins, no FoxCTS User Login box displays.

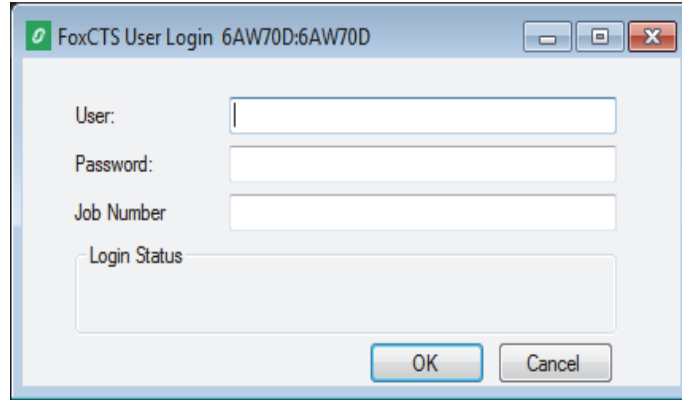


Figure 2. FoxCTS Login Box (Optional)

The FoxCTS software restricts access to FoxView. After a successful FoxCTS login, the environment changes to the FoxCTS user's configured default home environment.

- ▶ After successful FoxCTS login, only the environments configured for the FoxCTS user appear in the change environment pop-up list, as shown in Figure 3.

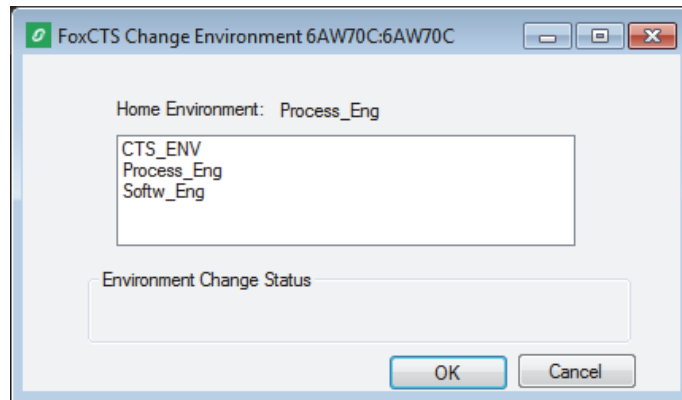


Figure 3. FoxCTS Change Environment Box

### 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.

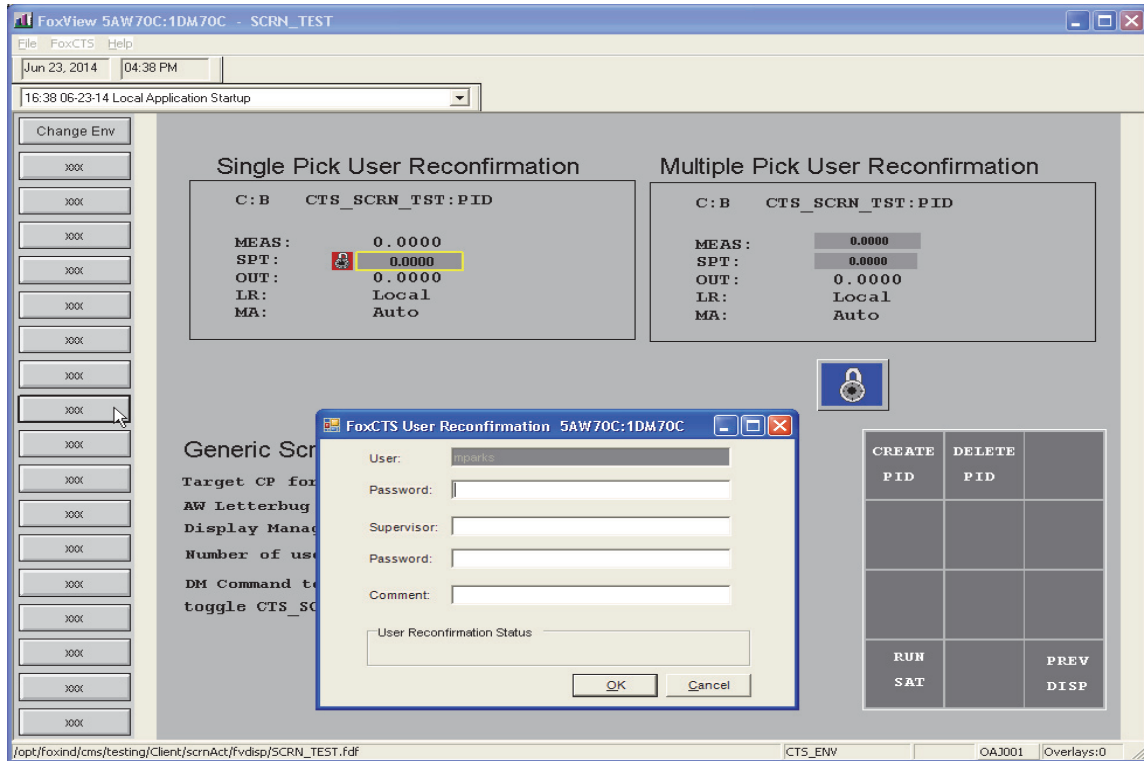
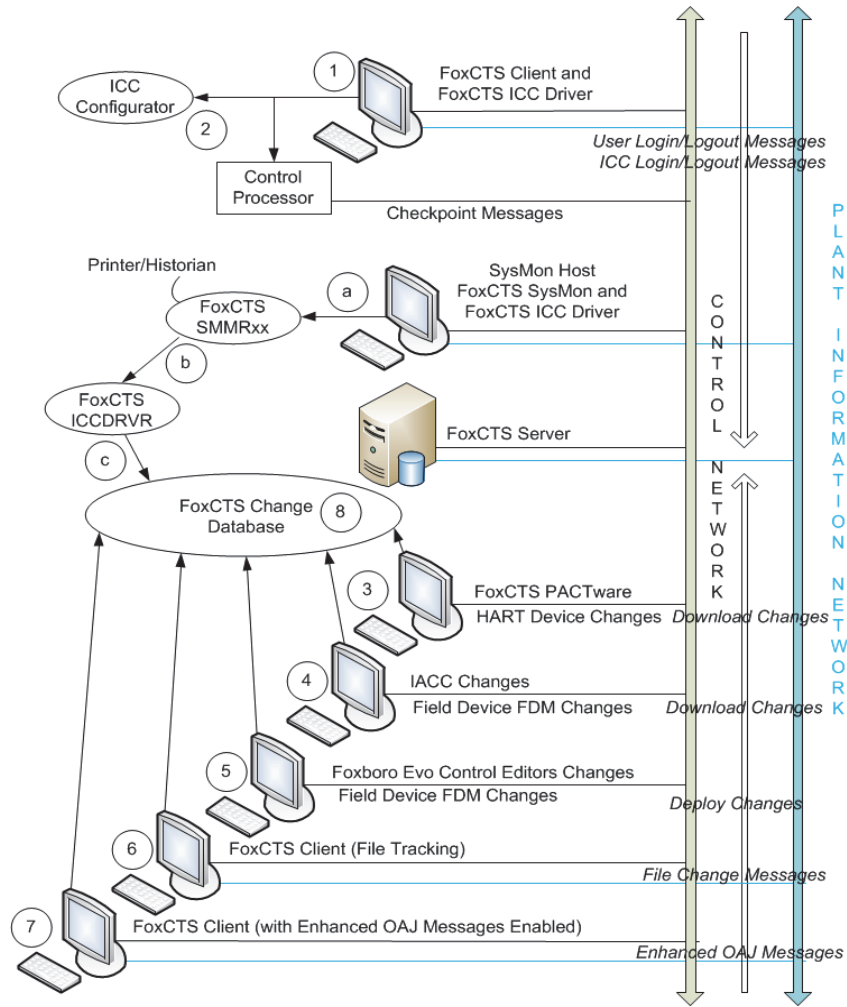


Figure 4. User Reconfirmation Showing Dual Login

STRUCTURE



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

- 1 The FoxCTS user logs into the FoxView display thereby generating a login message recorded by the FoxCTS Server.
- 2 Configuration changes made via ICC generates an ICC login message to the FoxCTS Server. Making changes to the Control Processor 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.

- a) 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.
- b) The FoxCTS ICCDRVR process determines the CP changes made.
- c) The FoxCTS Server receives and collects the change information to record and records it in the FoxCTS change databases.

- 3** HART Device changes made via the PACTware software are transferred to the FoxCTS Server every five minutes.
- 4** Configuration changes made via IACC and FDM Field Devices accumulate at their respective server and are transferred to the FoxCTS Server.
- 5** Configuration changes made via Foxboro Evo Control Editors and FDM Field Device accumulate at their respective server and are transferred to the FoxCTS Server.
- 6** Someone or some program alters a tracked file and the FoxCTS Client workstation notifies the FoxCTS Server of the change.
- 7** FoxCTS enhanced OAJ messages are sent to the FoxCTS Server for recording.
- 8** The FoxCTS Server receives and collects change information and records it to the FoxCTS change databases.

### 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, as shown in Figure 5. (Control history records may 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.

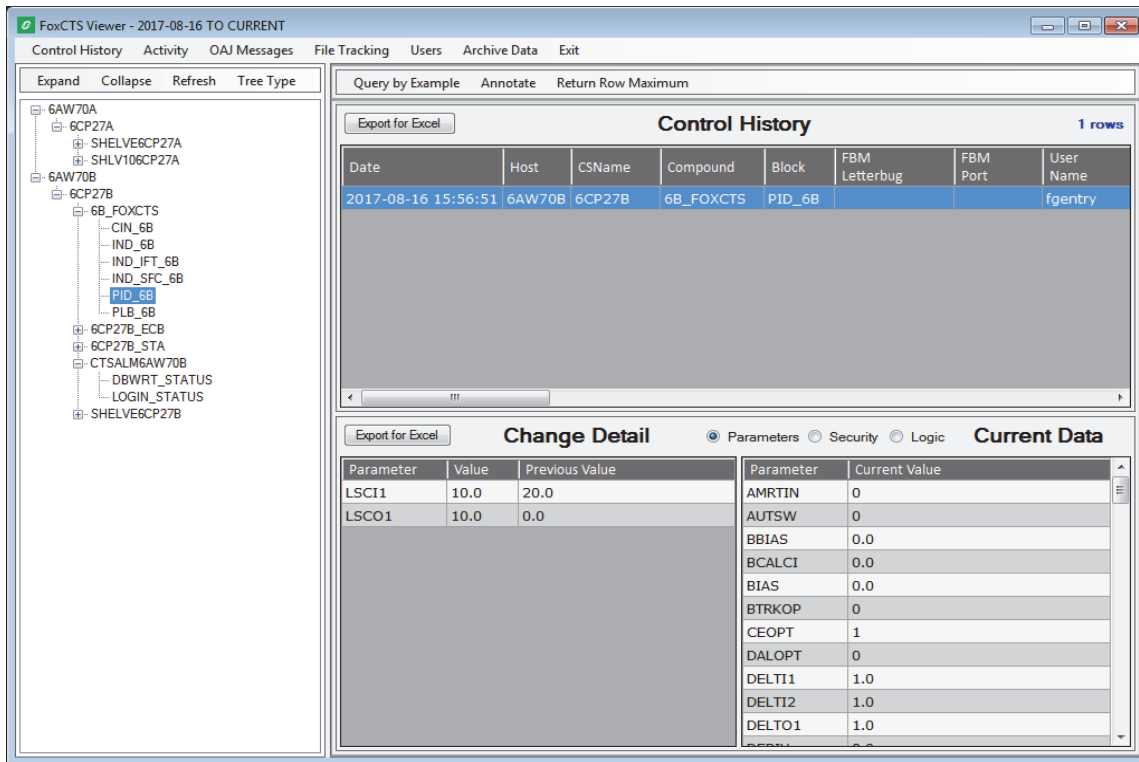


Figure 5. FoxCTS Viewer - Control History View



## REQUIREMENTS

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

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

### Supported Software Versions

FoxCTS version 7.01.00 currently supports the following software:

- ▶ Foxboro Evo Control Core Services Software v9.0-v9.3 Standard or Security Enhanced 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.

### Additional Requirements

The FoxCTS modules listed have additional requirements.

#### FoxCTS Server Module

- ▶ 10 GBs for the FoxCTS databases. More disk space will be needed as the FoxCTS databases grow.

#### FoxCTS Client Module

- ▶ I/A Series Software v8.8 requires 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.

## 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

## COMPLIANCE

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

to assist you in meeting your requirements.

Visit the website, *<http://software.schneider-electric.com/services/security-and-compliance-services/regulatory-compliance-services/>*, for more information on achieving compliance.





Schneider Electric Systems USA, Inc.  
38 Neponset Avenue  
Foxborough, MA 02035-2037  
United States of America  
[www.schneider-electric.com](http://www.schneider-electric.com)

Global Customer Support  
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