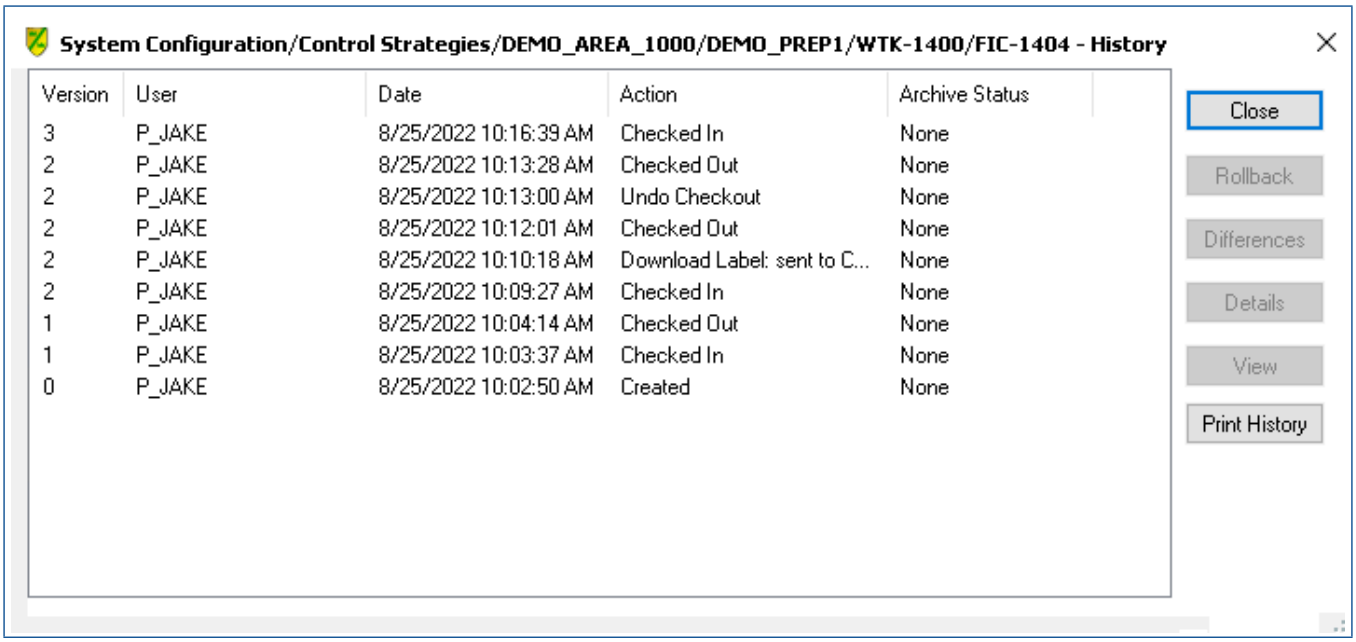
Version Control and Audit Trail



Version Control and Audit Trail makes it easy to manage changes in the DeltaV™ system.

- Tracks configuration changes for DeltaV™ Explorer and/or Graphics Studio
- Displays differences between different versions of a configuration item or graphical element
- Rolls back an individual item or the entire database to a prior version
- Creates change management reports
- Displays version identifiers online for downloaded configuration items
- Recipe authorization
- SIS Module download authorization
- Module testing approval
- Graphic publishing

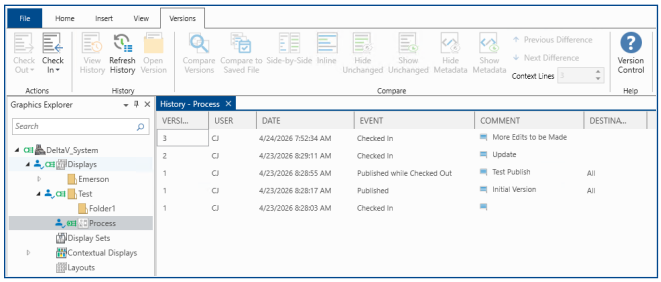
DeltaV™ Version Control and Audit Trail provides comprehensive tracking of configuration changes, ensuring regulatory compliance and operational integrity. Key benefits include detailed "who, what, when" change tracking, ability to roll back to previous configurations, improved safety through change authorization, version comparisons, and detailed audit reports.

Introduction

Version Control and Audit Trail is available for DCS configuration, SIS configuration, User Manager Configuration, and DeltaV Live Configuration.

Version Control and Audit Trail for DeltaV Systems is a powerful tool that tracks changes and manages revision information for any item in the DeltaV configuration database, including Safety Instrumented System (SIS) items. This application creates and maintains a configuration change history for configuration items such as modules, SIS modules, phases, operations, unit procedures, user accounts, etc.

Version Control and Audit Trail for DeltaV Live is available for all systems v15.FP3 and later. It can be enabled with Version Control and Audit Trail for DeltaV Systems or it can stand alone. This application provides all of the same Version Control and Audit Trail functionality within DeltaV Live for graphical components such as Contextual Displays, GEMs, Displays, Layouts, etc.



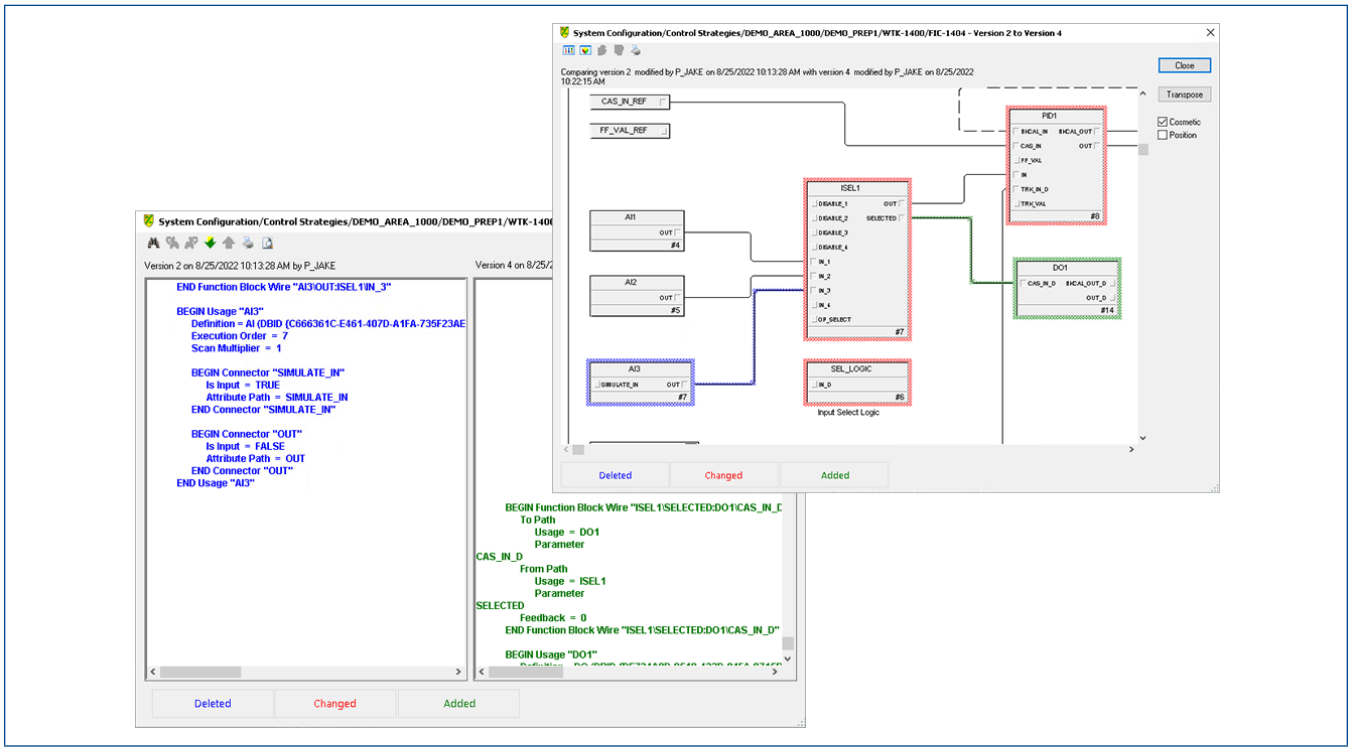
The DeltaV security system provides function locks, which allow the system administrator to control the privileges granted to individual users. Items may be checked out for editing only by approved users. When a change has been made, the version of a configuration item is automatically updated, the new version is time-stamped and a history comment can be recorded when the item is checked back in. Embedded reporting tools give engineers the ability to print configuration change histories for any item in the configuration database.

Benefits

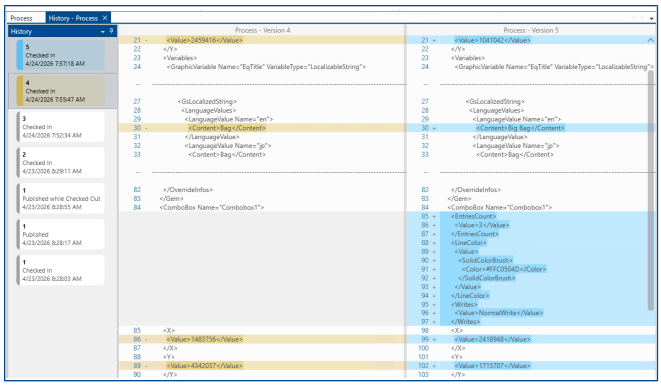
Tracks configuration changes. Keep a change history for modules, I/O, phases, and other configuration items in the DeltaV configuration database. A separate database is maintained to keep a change history for DeltaV Live Elements.

Displays differences between different versions of a configuration item. Immediately determine who made a change, when the change was made, and the detailed difference information for the two versions being compared.

Rolls back an individual item or the entire database to a prior version. The system provides a mechanism to roll back a specific item or the entire database to a previous version. Additionally, labels may be set on configuration items to facilitate rolling back to a common revision.



View differences in graphical or textual format.



Creates change management reports. A variety of reports allowing the user to document the change history for any specific item, or the differences between different versions of a single item is available. The change management report for DeltaV Live objects is viewable directly in Graphics Studio.

Displays version identifiers online for downloaded configuration items. All downloaded modules, phases, and procedural elements have a version identifier. This identifier may be viewed from DeltaV Operate or Control Studio On-line.

Recipe authorization. The recipe authorization feature provides for 1 to 5 electronic signature approvals before a recipe can be released to production for use. Unapproved recipes cannot be downloaded.

SIS Module download authorization. If enabled this feature enforces that electronic signatures, 1 to 5 depending on the SIL level, must be in place before a SIS module can be downloaded into the logic solver.

SIS Module testing approval. If enabled, this allows for 1 to 5 electronic signatures to be recorded, depending on the SIL level, when periodic functional tests are performed on SIS modules.

Graphics Publishing. If enabled for DeltaV Live, all graphics publishing records are recorded and available for view.

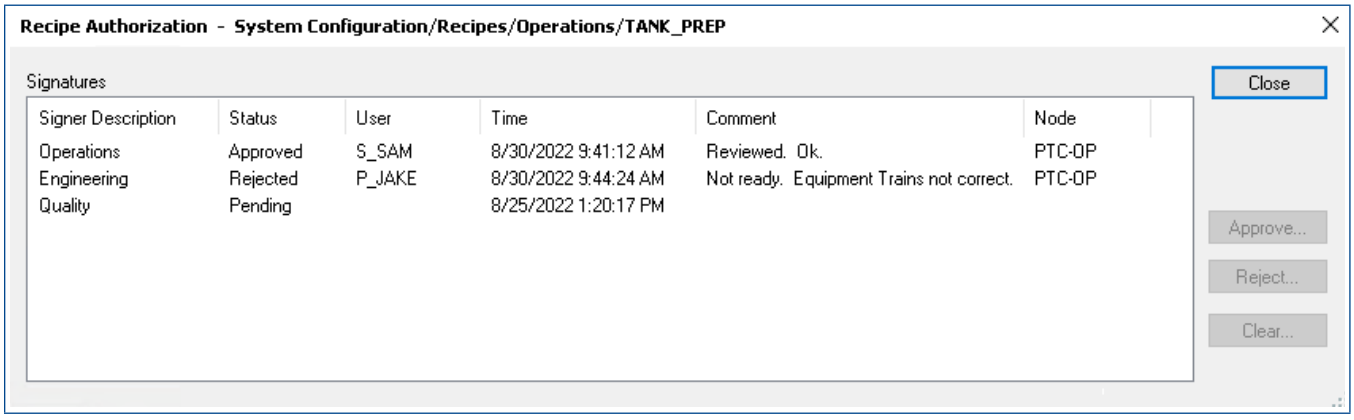
Product Description

Version Control and Audit Trail for DeltaV Systems

Verison Control and Audit Trail for DeltaV Systems is a DeltaV tool that enables an engineer to collect and manage revision information for any item in the DeltaV configuration database. Keeping detailed historical information on configuration items ensures quality data for adhering to regulations.

Version Control and Audit Trail is an optional feature that is tightly integrated with the configuration database. When enabled, it works seamlessly as part of the DeltaV configuration tools such as DeltaV Explorer, Control Studio, Recipe Studio and DeltaV Operate Graphics Configuration. Security function locks control access to Version Control and Audit Trail.

Version Control and Audit Trail tracks changes and creates a configuration change history for all types of configuration items in the DeltaV system. Each time a new version is made, the version identifier is automatically updated. Users easily check out, save, and check in configuration items.



Electronic approvals of recipes.

A recursive checkout/in system enables users to check out/in the selected item and all nested items e.g. a unit and all items under it. Only checked-out items can be edited. A time-stamp and username are recorded in the Version Control and Audit Trail whenever an item is checked in. It is also possible to include comments indicating the reason for the changes. These comments can be viewed at any time from the item's history log. Items can also be opened as read-only.

If a user makes changes to an item and other configuration items will be affected by the change, Configuration Audit Trail will attempt to perform a group checkout. If all items can be checked out, Version Control and Audit Trail will check outthe associated items and update their history logs.

The ability to set labels for configured items in the DeltaV database is also part of Version Control and Audit Trail. Labels are strings that can be used to mark a particular version of an item to facilitate rollback to that version. The history log for each configuration item will be updated to reflect the label. Approved users can roll back a configuration item to a previous version or label. The history log will have an entry to say that a rollback to a previous version was performed.

History logs and difference reports can be viewed and printed from Control Studio and DeltaV Explorer. Live History logs, difference reports and publishing records can be viewed and printed from Graphics Studio.

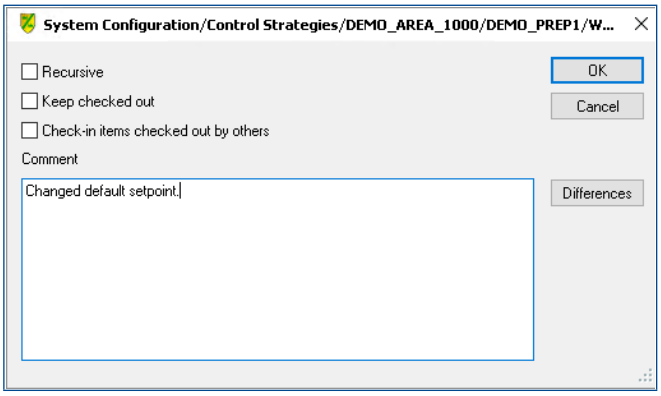
The configuration version identifier is included in the download from DeltaV Operate and Control Studio Online. The identifier is also readable within the control device.

DeltaV administrative tools allow the Version Control and Audit Trail database and the DeltaV database to be backed up together in one operation. It is also possible to archive and restore versions of items in the audit trail database.

DeltaV Live Version Control and Audit Trail is backed up with the Live Graphics database elements. It is possible to restore a backup of the entire database with the associated audit trail.

Sizing

The DeltaV Version Control and Audit Trail applications uses a Microsoft® SQL Server database for the storage of versioned configuration items. The audit trail database size increases as items in the DeltaV configuration database are modified and additional versions of those items are saved in the SQL Server database. Disk space can be conserved by archiving older versions. These can be selectively restored when required.



Keep a running commentary of configuration changes.

Hard Disk Requirements

You will want to ensure that there is adequate disk space to install Microsoft SQL Server and create the Version Control and Audit Trail for DeltaV Systems database with room for expansion of the database. There-fore, your ProfessionalPLUS Station should have a minimum amount of free space on the hard drive or partition where the DeltaV\DVData directory is installed:

- For systems 10,000 DSTs or less: 13Gb
- For systems 10,000 DSTs to 20,000 DSTs: 17Gb
- For systems 20,000 DSTs to 30,000 DSTs: 21Gb
- For Live database: 1Gb initially with room for expansion

Ordering Information

Description	Model Number
Version Control and Audit Trail	VE2139Sxxxxx, where the xxxxx* represents the number of DSTs to be ordered
Version Control and Audit Trail	25 DST Scaleup, VE21UPS041
Version Control and Audit Trail	100 DST Scaleup, VE21UPS024
Version Control and Audit Trail	500 DST Scaleup, VE21UPS042
Version Control and Audit Trail	1000 DST Scaleup, VE21UPS025
Version Control and Audit Trail	5000 DST Scaleup, VE21UPS026

*There are two options when enabling this application: Enable for SIS items only OR enable for all items. If enabled for SIS only, xxxxx must be sufficient to cover the total number of SIS DSTs. If enabled for the entire system, xxxxx must be sufficient to cover the sum of non-SIS and SIS DSTs.

Description	Model Number
Version Control for DeltaV Live w-Year Subscription License; 1 DeltaV System; Annual Price*	VE2140SwS01_YyFYzz*

The model numbers represented above are for the initial subscription term lengths only; renewal model numbers are available with a "-R" at the end of the model number string

*w represents the length of the subscription term in years (1, 3, or 5)

*y represents the specific year of the subscription term (1, 2, 3, 4, or 5)

*zz represents a two-digit indicator of the year of purchase (e.g., 25)

The expiration date of the licensing can be found in the system licensing summary. Customers will be reminded via email to renew subscription.

If the Version Control for DeltaV Live subscription is allowed to expire, users will still be able to finish final check-ins, view history, and compare differences. However, no configuration changes will be allowed to be made until the user disables Version Control. After the final check-ins are complete, no new history will be collected and stored. Once disabled, it will not be allowed to be re-enabled without a valid license. After disabling, functionalities such as check-in / check-out, compare differences, and history reports will be disabled.

Related Products

- **DeltaV Batch Software Suites.** Basic, Advanced, and Professional Batch software suites provide the DeltaV Batch software needed to operate, historize, and integrate your systems.
- **Advanced Unit Management Software.** Provides class-based Unit Modules and aliasing to make developing unit-relative equipment strategies simple.
- **DeltaV Operate.** High performance operator graphics, trends and alarms offered in standard operating layouts and utilizing system-wide built-in security.
- **Configuration Software Suite.** Makes it easy to create Control Strategies and System Graphics to get your plant up and running quickly and efficiently.
- **Monitor and Control Software.** Provides a single user interface with industry standard control languages and functions for graphical control strategy development, testing, and deployment.

Prerequisites

When enabled, Version Control and Audit Trail is always resident on the DeltaV ProfessionalPLUS station. Version Control and Audit Trail uses Microsoft SQL Server which can be installed on a supported server-class or workstation-class operating system. For systems using Version Control and Audit Trail, users simply check a box during installation to install the appropriate SQL Server software. EASY!

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