Life Is On | Schneider Electric

Ensuring operational integrity throughout the plant lifecycle

System Auditor for Foxboro

Product at a glance

System Auditor for Foxboro® software provides confirmation, system auditing, and alarm shelving.

- Configuration and system auditing, together provide back documentation, system health monitoring, I/O management, change management, and tracking. They also provide alarm management for improved cybersecurity and lifecycle planning and reduce risks in project execution and expansion.
- Alarm shelving temporarily disables alarms or alters priority to improve operator efficiency by helping them avoid nuisance alarms during particular modes of operation in the plant.

Know your system

System Auditor is a knowledge management application that centralizes the electronic documentation and day-to-day management of Foxboro process automation systems. System Auditor improves engineering productivity, efficiency, and effectiveness.

Ensuring operational integrity throughout the plant lifecycle

System Auditor for Foxboro

System Auditor helps with:

- **Operational integrity —** the nonintrusive nature of this software allows Foxboro users to apply these tools without the fear of impacting the performance of running production systems.
- **Future-proofing —** System Auditor can be used across multiple generations of Foxboro systems and with multiple operating systems. This includes both the current Microsoft-based offering as well as the original UNIX-based offerings.
- **Maximizing engineering efficiency —** identifies faults in a logical manner for easier fault finding and reduction of mean time to repair.
- **Operational insight —** the ability to audit and document systems helps in understanding how best to expand a system or migrate to a more modern component of the system, such as upgrading control process from one family to the next.
- **Enhancing system performance —** checks the integrity of systems and remediates any issues that could contribute to the system's degraded performance.
- **Reducing risk —** project engineering teams and engineering, procurement and construction (EPC) contractors value this offering because it helps to minimize overall project execution risk by validating systems configuration and by providing comprehensive management of change auditing.

System Auditor features

System documentation

System Auditor documents many types of information, including:

- Entity interdependence (blocks, historians, displays, modular keyboards, and third-party applications like root cause analyzers)
- System messages
- Process alarms
- Operator actions
- Sequence of events messages
- Links to external documentation that can help you understand the configuration

Ensuring operational integrity throughout the plant lifecycle

System Auditor for Foxboro

A powerful feature of System Auditor is the ability to perform integrity checks. Without these checks, which identify improper configurations, serious operational problems can occur. The main categories of checks include:

- Missing references
- Inactive blocks
- Blocks in manual/local
- Alarm integrity Issues
- Database integrity issues
- Peer-to-peer connections
- Multiple FBM reads/writes
- Missing third-party references

System Auditor has the ability to alert users by sending an email based on any number of conditions when integrity issues arise. This allows users to take action before issues occur.

System Auditor significantly reduces the time and effort to document graphical displays. The documentation of displays in System Auditor includes:

- Block references on displays
- Missing references on displays
- Other display references (to & from)
- Embedded scripts
- Modular keyboard references

Other items that are documented in System Auditor include the historians. System Auditoralso maintains the configuration of the historian against the actual block configuration.

System Auditor also collects:

- Sequence of events messages
- System messages
- Process alarm messages and OAJ messages

These messages can be browsed, filtered, and analyzed. Alerts can be sent to the appropriate System Auditor user based on any set of conditions.This allows the user to quickly and easily find the information he or she is looking for to remedy the problem.

I/O management

Management of I/O is another very important function that costs time and money to maintain. System Auditor automatically documents when an I/O channel has been used, including where the channel is physically located. Users can also document and reserve future I/O using the projected Field Bus Module (FBM) feature. Alerts are provided to signal any change.

System health monitoring

System Auditor includes monitoring of both control network and control processors (CP). Users can browse parameter data to analyze and discover what is happening with the network. Each and every parameter of CP is collected, historized, and made available to the user. Email alerts can be set up to inform any user that certain parameters are crossing certain limits so the user can resolve the issue. This great feature saves both time and effort.

Ensuring operational integrity throughout the plant lifecycle

System Auditor for Foxboro

Change tracking

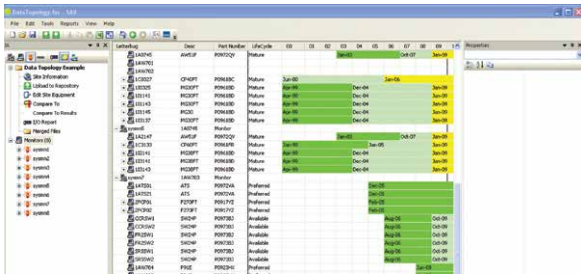
System Auditor is a complete tracking system and will capture every single change made to the system configuration. System Auditor allows you to:

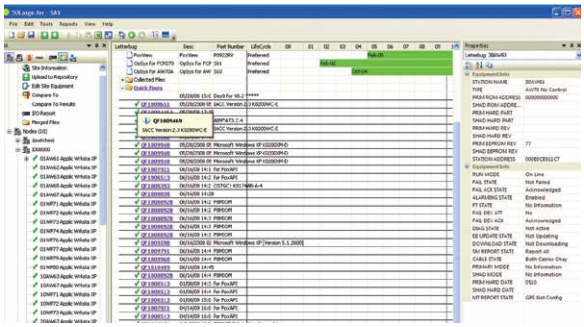
- Track all changes
- Alert users to these changes
- Audit the changes for correctness
- Document the change

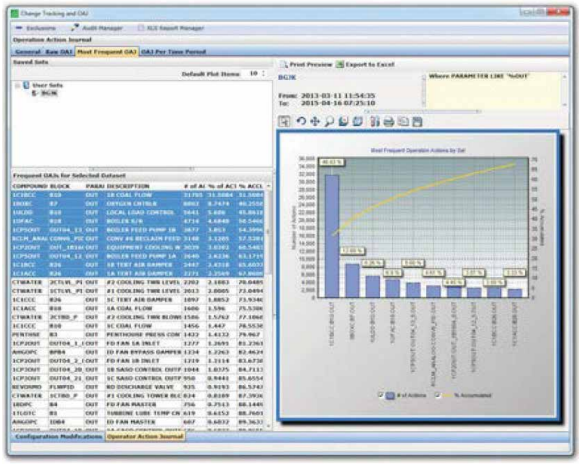
All changes are stored for future use. Access to any Foxboro station can be controlled, thus identifying who made what change. HLBL and PLB code changes are also tracked. Any code change is maintained in case a user needs to recover any past version. System Auditor also compares all changes from one version to the next or between any two versions.

System Auditor includes a management of change (MOC) workflow process. Throughout the MOC process users can submit a change to be made and individuals are alerted to the task that must be performed. At the end of the MOC process this “Electronic Paperwork” document becomes an integral part of the change that will actually be tracked in System Auditor. Thus, users can select a change made in the system and then they can view the “who, what, why, and when” for that change. Operator actions are also tracked. Statistical analysis and reports provided are:

- Raw list of operator actions
- Most frequent operator actions
- Operator actions per time period







Ensuring operational integrity throughout the plant lifecycle

System Auditor for Foxboro

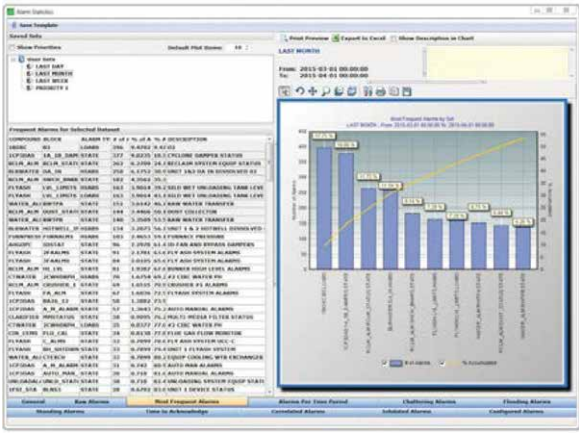
Alarm management

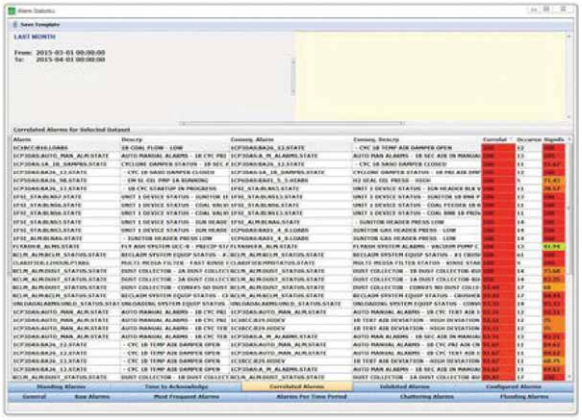
System Auditor follows the EEMUA Standard and Recommendations for Alarm Management. The alarm statistics included are:

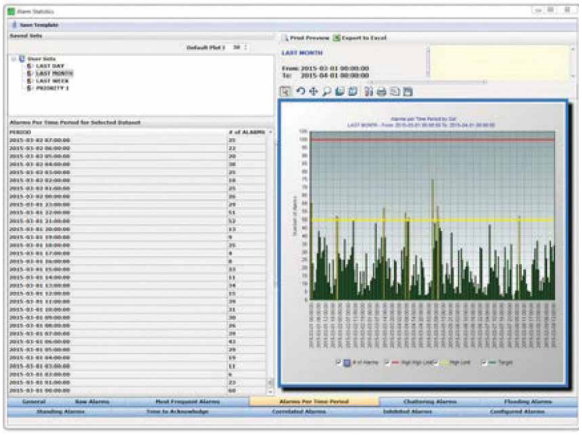
- Raw listing of alarms
- Most frequent alarms
- Alarms per time period
- Chattering, flooding, and standing alarms
- Time to acknowledge
- Correlate, inhibited, and configured alarms

Once the alarms have been benchmarked and the statistical significance understood, and then appropriately modified. The alarm system can be documented using System Auditor's master alarm database, which documents the proper alarm configuration and the potential impacts, causes, and consequences of the alarms.

System Auditor can be configured to quickly alert users to changes made to alarms and what the differences are between the actual versus master alarm documentation. This alert process is critical to help avoid operational issues due to improper configuration. System Auditor is the only application that can completely track every change made to any alarm and check its validity against the master alarm database.







Ensuring operational integrity throughout the plant lifecycle

System Auditor for Foxboro

Other functions

System Auditor has many other features including a CALC block simulator. Users can simulate these block types to test or debug the STEPS in the block. System Auditor also provides documentation to various third-party applications/systems that are connected to the Foxboro system. Support is provided for:

- OSI-PI
- Aspen IP.21
- Aspen DMCplus
- Bently Nevada
- Foxboro Batch
- Allen Bradley PLC5

System Auditor has a bulk configuration tool that allows the user to quickly and accurately create, modify, or delete blocks. This eliminates the need to perform manual changes to many blocks via the configurator.

System Auditor is the secure choice to ensure operational integrity

System Auditor provides the most complete knowledge management solution for your Foxboro system. It helps increase engineering efficiency, plant safety, and system reliability with its easy-to-use, time-saving configuration management, system auditing, and alarm shelving capabilities. Schneider Electric™ invites your company to take advantage of the benefits System Auditor can provide your Foxboro control system.

Top five benefits

- Increases engineering efficiency by supplying users with information and knowledge of the system in a quick and easy-to-use application
- Improves plant safety by allowing users to fault find their systems in a logical manner resulting in reduced mean time to repair and outright errors
- Reduces project risk by minimizing operator distractions through improved alarm handling, shelving, and better configuration
- Improves system reliability by allowing users to check the integrity of their systems and fix any issues that could be contributing to degraded performance of the system
- Protects your investment by documenting all the information and knowledge that is built into the system and then makes this information available to personnel throughout the life cycle of the plant

Ensuring operational integrity throughout the plant lifecycle

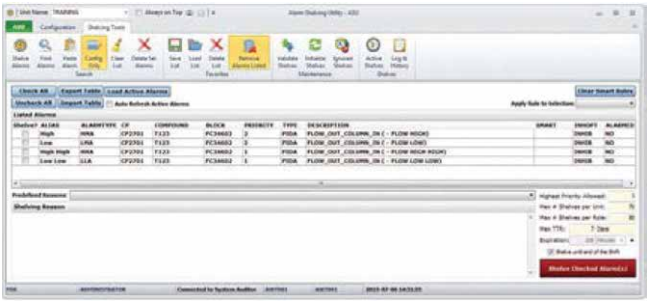
System Auditor for Foxboro

Alarm shelving utility feature

Shelving alarms helps operations by reducing the number of nuisance alarms that may interfere with normal plant operation. Alarm shelving utility (ASU) tool is used in conjunction with System Auditor to provide the most comprehensive alarm shelving tool in the market for the Foxboro control system. ASU allows the user to selectively determine what alarm parameters are going to be shelved (HMA, LMA, HHA, BAD, etc.) and for how long. ASU also provides a fast shelving mode by setting the INHIB parameter for shelving the whole block at once. Everything is managed from the application workstations and easily includes a dual or triple redundancy options. Shelving, unshelving, and extend shelve have never been so easy.

Some of the features include:

- Integration with Foxboro displays
- Ability to shelve the whole block or only the alarmable parameter desired
- Synchronize existing shelves or validate previous unshelved alarms
- Create favorites lists to shelve a group of alarms during startups, shutdowns, maintenance work, or plant upsets
- Customizable security configuration to limit privileges of users that shelve alarms
- Alarm translation to help operators understand the Foxboro alarm terminology(HMA, LMA, LDA, etc.)
- Reports for current shelves, history of shelves, and log messages from the shelving tool
- Exclusion list for alarms not intended to beshelved (or being controlled by an external state-based shelving tool)
- ASU uses native Foxboro tools; no OPC needed
- Full integration with System Auditor (uses the same user accounts, privileges, findblocks, etc.)



Schneider Electric

70 Mechanic Street
Foxborough, MA 02035 USA
+1 877 342 5173

schneider-electric.com/processautomation

Life Is On Schneider Electric