AVEVA™ Simulation for Triconex Systems

Formerly TRISIM

AVEVA Simulation for Triconex Systems is the engine that links Triconex TriStation emulator and AVEVA Dynamic Simulation to execute the Triconex controls. This simulator allows you to access the emulation capabilities available in the TriStation 1131 version 4 series, your first step to achieving shorter commissioning and an improved start-up.

AVEVA

Summary

AVEVA Simulation for Triconex systems provides a comprehensive control system simulation for the Triconex controllers, allowing for modeling, testing, and system checkout.

Benefits

- Dramatically reduces the time to commission and start up a Triconex control system

- Helps control and application engineers design superior quality into real-time control software

- Allows for more accurate analysis and troubleshooting of Triconex controller system response and performance

- Provides a completely safe and non-destructive environment for operator training

- Offers the ideal retrofit/upgrade design environment for control engineers

Key product features

- Identical functionality with Tricon and Trident controllers

- Supports platform types recognized by TriStation1131

- Supports all Tricon and Trident block algorithms

- Supports TriStation peer-to-peer and Modbus communication

- Supports easy tie-back and physical process model builds with drag-and-drop functionality

- Available on both AVEVA™ Connect and on-premise solutions

- Supports EcoStruxure Virtual Engineering

The perfect offline simulation and testing tool

"Perfect fit" Triconex connectivity

AVEVA Simulation for Triconex Systems fully integrates with Triconex TriStation 1131 Developer Workbench version 4 series software for the ideal simulation platform.

Signal cross-referencing utilities

Cross reference your input and output signals from the control blocks to the process model.

Accurate process simulation

AVEVA Simulation for Triconex Systems allows you to generate a wide range of simulation models for testing, validation, and training purposes.

- A control model library used for simple tie-back simulation models
- An AVEVA™ Dynamic Simulation model starter kit with valves, pumps, vessels, heat exchangers, and limited multi-component thermodynamics
- With a full AVEVA Dynamic Simulation license, these models can be extended to detailed process models, including full thermodynamics, compression, distillation, and reactions

Simulation command and control

AVEVA Simulation for Triconex Systems offers special command and control simulation features to empower engineers with absolute command of simulation processes.

- The RUN/FREEZE capability permits users to halt a testing procedure at any point in time and receive a detailed comprehensive view of the entire control system performance
- The STEP capability allows engineers to run a model forward in single steps, which enables extremely accurate diagnoses of equipment trips and stability issues

- The SPEED capability enables engineers to decrease or increase the simulation speed relative to real-time speed
- The SAVE/RESTORE capability enables accurate archiving of any system state for later use in training and/or troubleshooting

AVEVA Simulation for Triconex Systems applications

Control system checkout and engineering

With AVEVA Simulation for Triconex Systems, you can comprehensively checkout and tune the control system before and after plant start-up. The ability to check out new controls and the corresponding HMI well before you commission the control system dramatically reduces the critical plant start-up time and helps you avoid unforeseen defects in the control system software.

Factory acceptance testing

Conduct rigorous factory acceptance testing regardless of system complexity. The bundled process modeling tool provides virtually all the necessary conditions to thoroughly exercise your entire control system.

Operator training

Help your operators learn about control system responses and performance in a safe environment. Operators can run through a variety of start-up, shutdown, and malfunction scenarios without any risks. A reusable training environment allows you to test and compare the reaction time of one of your operators against the rest of your operators' reaction time. Training exercises are replayable, baselined, and certified to provide a convenient review and teaching tool.

Plant performance improvement

Evaluate proposed control system revamps, retrofits, and upgrades in a no-risk simulation environment. Test process modifications, control strategy development, and system additions or changes.

Unit operations and models

Process models

- Source
- Sink
- Valve
- Pipe
- Pump
- Expander
- Header
- Mixer
- Splitter
- Drum
- Heat exchanger
- Utility exchanger
- Stream set
- Transmitter
- Stream send
- Stream receive
- Shaft
- Utilities
- Controls
- Electrical
- Flow network components
- Points
- Primitives
- Widgets
- Connectors
- References
- User template

For more information,
please visit: **aveva.com**