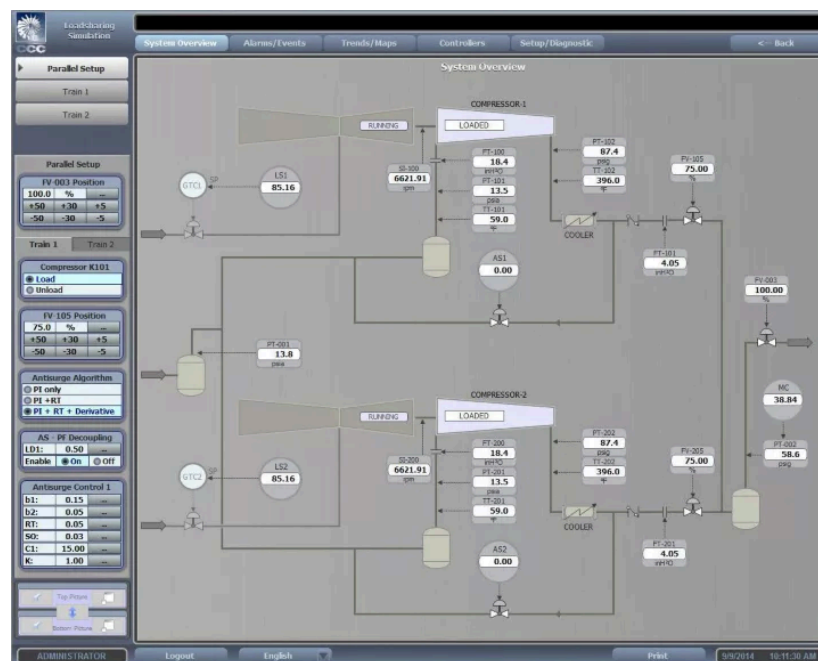


# CCC Training Simulators

CCC Training Simulators are a set of standard simulation projects for training on operation for different types of turbomachinery assets and layouts.

## Overview



Feedback

### Overview

Designed to allow users to familiarize themselves with turbomachinery control theory, operation and interfaces. CCC Training Simulators leverage simplified simulation blocks for the process and turbomachinery assets executed within the CCC TrainTools and Emulator software, providing a simple software package. Multiple compressor and turbine projects are included to enable users to become familiar with operation of different assets.

### What Is It and how does it work?

CCC Training Simulators are simplified simulation projects for different type of turbomachinery assets:

- Loadsharing Demo: control of two parallel compressors.
- Steam Turbine – Compressor Demo: control of an extraction steam turbine driving a single-stage compressor.
- Gas Turbine – Compressor Demo: control of a two-shaft gas turbine driving a single-stage compressor with hot and cold recycle.
- Gas Turbine – Generator Demo: control of a two-shaft gas turbine driving a synchronous generator.
- Power Recovery Train Demo: control of a power recovery train including expander, air blower, steam turbine and motor/generator on the same shaft.
- Compressor Performance Advisor Demo: control of steam turbine driving a single-stage compressor, includes demonstration of Compressor Performance Advisor for detection of performance degradation and valve exerciser, transmitter drift and freeze.

CCC Training Simulators include controls to generate disturbances or initiate events to simulate specific scenarios.

CCC Training Simulators are developed to be executed within the CCC TrainTools and Emulator software, without additional third-party process simulation software. CCC Training Simulator use the same engineering and human machine interface tools as the real CCC control systems.

### What Problems Does It Solve?

Training engineers and operators on theory and practices of turbomachinery control may be challenging without a dynamic environment to demonstrate these concepts and familiarize with the interfaces. CCC Training Simulators offer a simple package of standardize simulation projects to practice operation of multiple types of turbomachinery assets and control applications. They also offer the opportunity to familiarize with the CCC TrainTools engineering software and CCC Human Machine Interface software.

### Who is it for?

CCC Training Simulators are designed for trainers and trainees seeking a simple and effective tool to develop competencies in the theory of turbomachinery control and CCC control software, engineering tools and human machine interfaces.

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