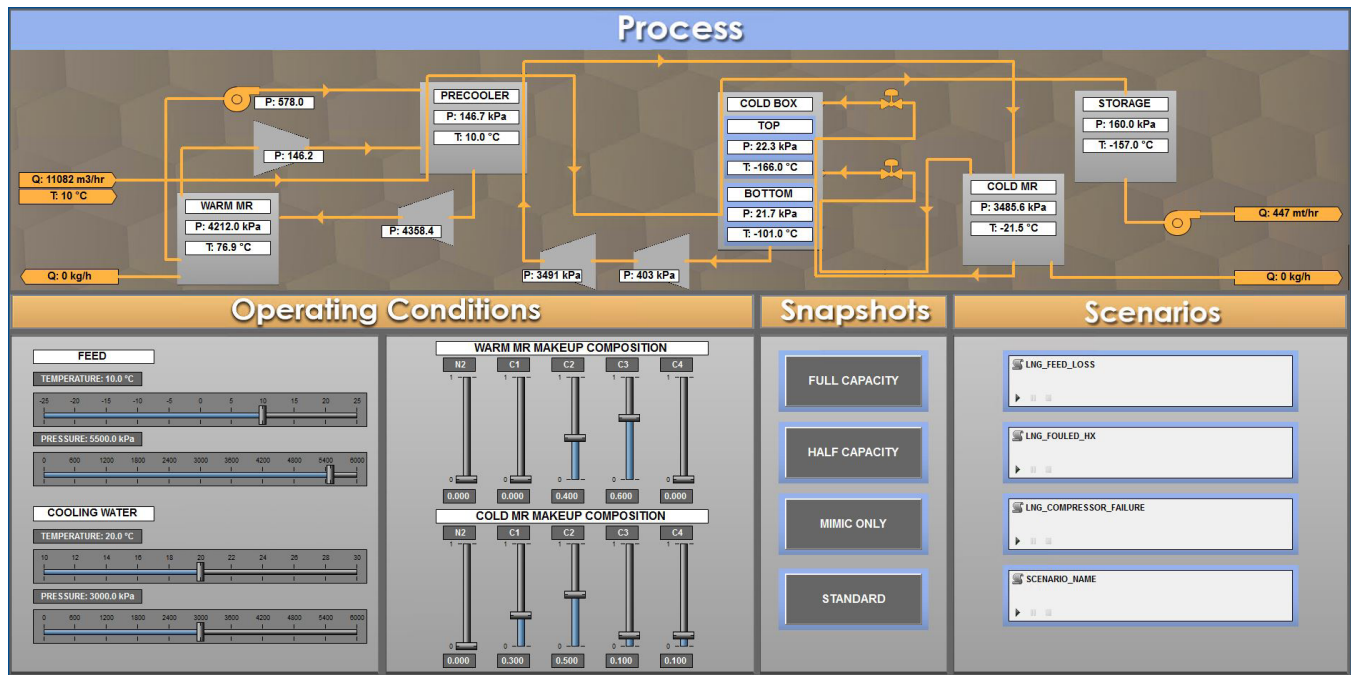


Mimic™ Operator Training Manager



- Create training scenarios for specific process events and malfunctions
- Freeze, save, and restore complete snapshots of the simulation
- Speed up or slow down model execution time
- Create easy to use graphical instructor screens
- Maintain training report records scoring students based on preferred operator actions

Introduction

Mimic™ Operator Training Manager (OTM) is an option for Mimic Simulation Software that allows users to develop structured, repeatable, measurable operator training sessions.

Mimic OTM works with existing simulation models, adding the capability of operator training scenarios and training session controls. It functions as a supervisory manager of the training session allowing complete access and control of the Mimic Simulation and the OPC-compatible off-line control system.

Benefits

Create training scenarios for specific process events and malfunctions

Configurable training scenarios can contain pre-defined malfunctions or process events. The scenarios include malfunctions, triggers, scoring conditions, and clean-up conditions to train and test operators.

Freeze, save, and restore complete snapshots of the simulation

Coordinated with the off-line control system, snapshots give full ability to freeze the simulation, save a complete image of the simulation, and restore it at any time. Reset any training scenarios or sessions with one click, allowing for more time spent on training and less on retuning the simulator.

Speed up or slow down model execution time

Speed control allows model execution for the entire snapshot group to be sped up to 30 times the real time or slowed down to 1/30 times the real time. Coordinated with the off-line control system, speeding up model execution can reduce the wait time of certain process elements when training operators.

Create easy to use graphical instructor screens

Build instructor station graphics to allow an operations leader or plant trainer to run and manage the operator training sessions without having to be a simulation or control system expert.

Maintain training report records scoring students based on preferred operator actions

Training reports contain student and instructor information that details malfunctions faced, actions taken, scoring based on pre-determined conditions, and comparison to the best score possible. These can be saved in HTML, PDF, or RTF format.

Product Description

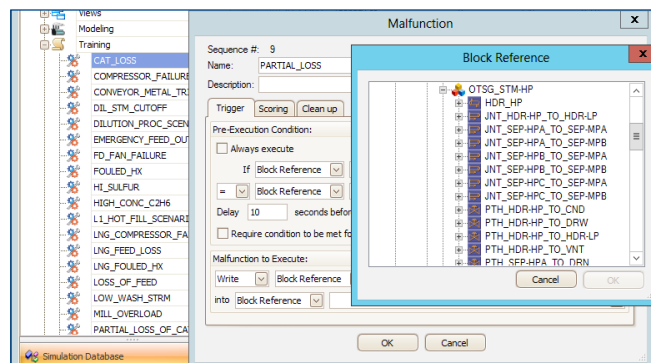
Training Scenarios

Mimic OTM Training Scenarios provide a complete environment for defining operator training sessions. Defining and managing Training Scenarios can be done in the interface.

Configurable options within each scenario include:

- Process Events and Malfunctions that are introduced to Mimic or the OPC-compatible off-line control system
- Pre-execution Conditions (or Triggers) for each Malfunction or Process Event that controls the execution of the scenario
- Malfunction Actions integrated into the simulation that allow users to Freeze, Fail, or write a value to the model or object
- Scoring Conditions defined for each Malfunction to set a quantitative result for expected operator actions or results
- Clean Up Conditions defining the requirements to end the malfunction

Defining operator training scenarios is done in dialog boxes in Mimic Explorer. No programming is required. Simply browse to set malfunctions, triggers, scoring conditions, or clean-up conditions directly to the Mimic models and data sources or to an OPC-compatible off-line control system.



Operator Training Scenarios can be run in one of four modes. The mode of operation is set before starting the operator training session.

1. **Parallel mode** in which all malfunctions are active initially, and execute when their Pre-Execution conditions become true.
2. **Sequential mode** in which all malfunctions execute in their order in the Scenario definition. Users can change the order of malfunction in the Scenario definition.
3. **Manual mode** in which the trainer selects malfunctions to execute. In this mode, the pre-execution conditions are ignored.
4. **Ad-hoc mode** in which the trainer triggers malfunction actions of individual simulation objects in a Mimic Component Studio instructor station graphic.

These training modes give the trainer flexibility and control over how the operator training sessions are run.

Process Snapshots and Model Speedup/Slowdown

Process Snapshots of model conditions and the off-line control system are managed in the Mimic Explorer Snapshot Control. Users have full ability to freeze the simulation, save a complete image of the simulation, and restore it at any time. There is no limit on the number of process snapshots that can be saved in a Mimic system.

Execution Speed Control allows model execution for the entire snapshot group to be sped up to 30x real time or slowed down to 1/30 real time. Coordinated control of Execution Speed Control in the off-line control system is provided for DeltaV Simulate v7.2 or higher.

Training Reports

Mimic OTM saves operator training session results in HTML, PDF, or RTF format. These training session reports provide a permanent record of the operator training session.

They include:

- Student and instructor information
- Scenario definition used in the training session
- Malfunctions executed with the time and date stamp of their execution
- Scenario scoring results based upon the defined scoring conditions
- Training Session summary score based upon the session actual score and potential perfect score

Management in Mimic Explorer

Operator Training Manager components are managed and viewed in the Simulation Database folder of Mimic Explorer. Training session scenarios are built directly in the application. Scenarios and Snapshots are stored in the Mimic SQL database. All functions have right-mouse-button menu control specific for the allowable operations of that node.

Component Studio Instructor Station

Instructor stations graphics can be built in Mimic Component Studio to allow an operations leader or plant trainer to run and manage the operator training sessions without having to be a simulation or control system expert. Instructor station graphics in Component Studio allow for:

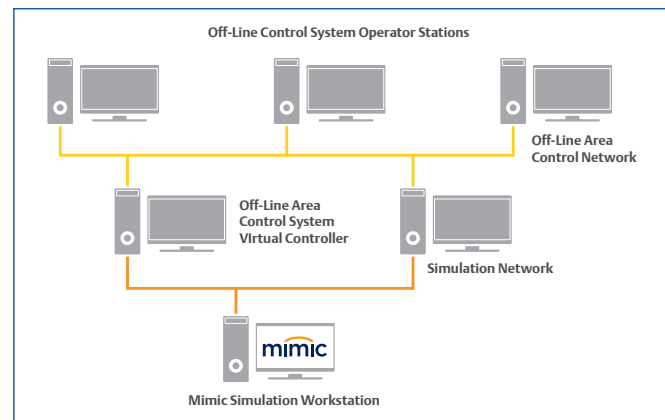
- Control of operator training scenarios and training sessions
- Control of plant operations outside of the control system control (i.e. field start, stops)
- Monitoring of student actions and progress
- Graphical controls for simple simulator functions

Mimic Training System Architectures

Mimic OTM supports operator training systems that are intended for team or individual operator training environments.

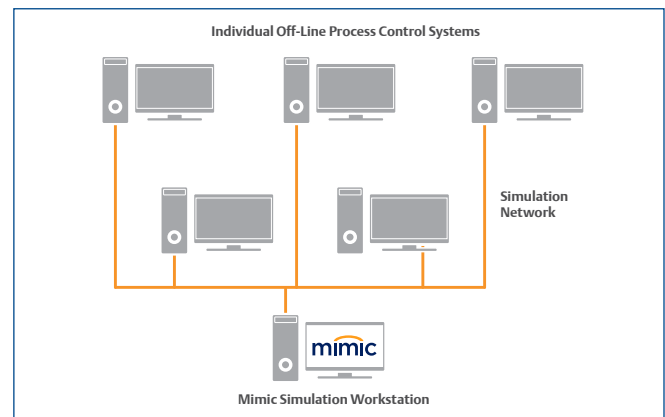
Team Training

Team operator training systems use multiple operator workstations in one off-line control system to allow operators to be trained in a team environment like what may be found in the control room. Changes made by one operator, to the simulated control system and process, are seen and experienced by all the operators in the team.



Individual Training

Individual operator training systems allow multiple operators to be trained concurrently, independently of each other. Each operator has a separated virtual process control system and plant to work on. Changes made by one operator, to the simulated control system and process, are only seen by that operator.



Mimic Operator Training and Simulations systems use open, fast and inexpensive Industrial Ethernet networks for communication. Industrial Ethernet allows flexibility for designing team or individual operator training systems. Mimic Simulated IO (SIO) Drivers use open data communication protocols, on the Industrial Ethernet backbone, including OPC, Modbus TCP/IP, Ethernet/IP, as well as proprietary, vendor-specific protocols.

Ordering Information

Mimic Operator Training Manager is an optional package to the Mimic base software license that can be purchased when ordering the base license or as a later addition. To purchase the Mimic OTM license, the base Mimic package must be current on Mimic Software Support.

Description	Model Number
Mimic Operator Training Manager	MM3-3101

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