

Operator Training Simulator

Omega **Land** *Trainer* Enterprise



Make Every Operation Experience More Accessible

OmegaLand Trainer Enterprise provides a simulator execution environment for education and training purposes, accessible across the enterprise. OmegaLand is a simulation environment for the objective evaluation and improvement of trainee's understanding of a plant operation including process principles. It makes every operation experience more accessible in a way that is impossible on actual plant operation. With OmegaLand Trainer Enterprise, operators can freely experience various situations in a virtual environment. It supports operational knowledge transfer at the factory floor and enhances employee engagement by utilizing the latest information and communication technology.

System

Free from time, location and space limitations

OmegaLand Trainer Enterprise is highly flexible in the way it can be configured to deliver training. With server-client architecture, trainee's client PCs can be deployed wherever is optimal for the trainee learning experience. For example, trainee's client PCs and the instructor's client PC can be set up for classroom training in the training center, or distributed to such locations as the control room while the instructor conducts the training remotely.

Comfort

A stress-free learning environment

A stressful training environment leads to poor educational outcomes. OmegaLand Trainer Enterprise server-client architecture empowers the trainers to configure the training environment for a comfortable and enriching training experience.

The management panels including system configuration, scenarios for training and the simulator selection/starter panels are represented on web pages. Therefore, this provides a user-friendly environment even for beginners.

Performance

Comfortable performance acceleration, learnings are also accelerated

With an excellent performance of OmegaLand Trainer Enterprise, the execution speed of 1 client PC can be accelerated up to tens of times*. This ensures smooth and responsive experience with operation results confirmations, and users can execute training and education efficiently.

* The speed depends on the size of an executed simulator process model

Maintenance

Keep system and applications up-to-date

OmegaLand Trainer Enterprise includes a simple and trouble-free maintenance service, removing the requirement for manual intervention to maintain the system.

A maintenance contract provides for a periodic onsite support service, including upgrades and system compatibility checks.

Scalability

Seamless system scalability

OmegaLand Trainer Enterprise scales up seamlessly from a small sized training environment to a larger system for accommodating more trainees or adding another application (simulator).

The system is easily expanded by downloading the required client PC licenses or newly added applications.*

This eliminates software installation via media.

* This excludes software running on Windows OS to activate OmegaLand Trainer Enterprise.



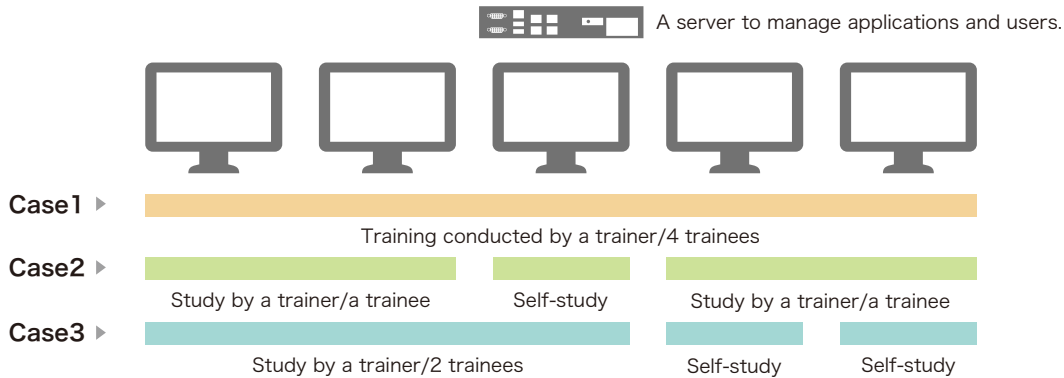
Functional Overview

OmegaLand Trainer Enterprise is “Server-Client Architecture”.

All applications are managed by the server and the application is automatically installed to each client PC at startup of the simulator if not already installed. The application version in the server is automatically synchronized with ones in the client PC if their version is older than the one in the server. Users can execute the downloaded application in a client PC simultaneously for

educational purposes and monitor/operate the executing simulator in one PC from other PCs through a graphical interface.

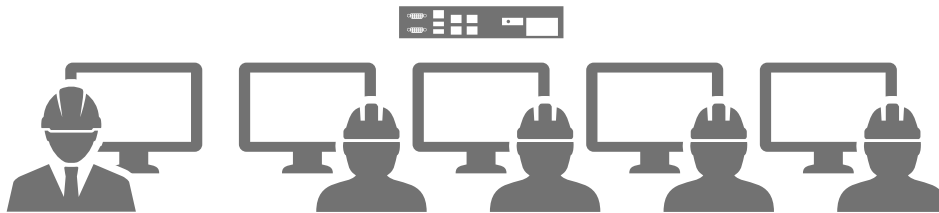
For instance, a user can arrange a full-fledged training system using 5 client PCs connect to the Trainer Enterprise server, such as 1 client PC for a trainer, 3 client PCs for panel operators and 1 client PC for a field operator.



Various types of system architecture can be arranged depending on training contents and group structures.

Study and Training Led by a Trainer

OmegaLand Trainer Enterprise function for a trainer to conduct study and training.



4 trainees can control a specified simulator which a trainer executed through the graphic function.

Training scenario, trainee selection and execution

After executing a new training scenario, a trainer can invite trainees to the training. Inviting trainees to a running training and setting a trainee's mandatory participation are also possible.

Training execution

During the training, trainee's operation status can be monitored remotely from a trainer's client PC. Using the monitoring function, process behavior is indicated by a trend and trainee's operation is indicated by an event list. The trainer can interrupt a trainee's simulator if necessary.

End of the training

When closing the executed training in study mode, users can select to save the result of the operational evaluation. The evaluation results includes pass/fail assessment. The simulator condition saved during the training can be saved as an initial condition in the server when the user leaves an

ongoing training course. The user can start the training from the saved initial condition when they next start a session. When the training is operated in evaluation mode, the operational evaluation result is automatically saved when closing the training.

Viewing training results

By using a name of the trained scenario as a keyword, a trainer can search and review evaluation results and output the result as a report.

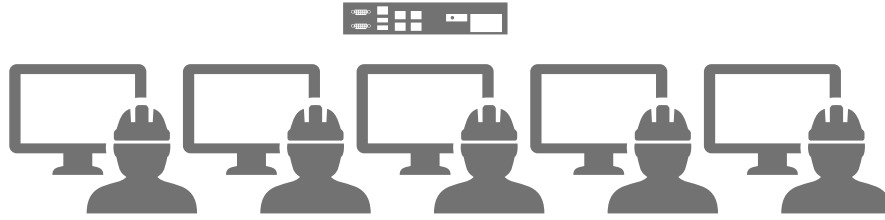
Certification issuance

When a trainee receives training in evaluation mode and pass the training scenario, a certification of the scenario is issued. A trainer can review the trainee's pass-fail status and the score of a training program by searching the training result.

An account name shown on the certificate can be changed to the trainee's name when issuing the certificate.

Self Training/Learning

Introduction of OmegaLand Trainer Enterprise function for trainee's proactive self-learning and training.



Trainees can use different simulators on their own PC and collaboratively operate with other trainees by using one simulator.

Training scenario select and execution

A user assigned as a trainee can conduct self-study as many times as he/she wants by executing training scenarios in study mode. Multiple trainees can use the same training scenario for collaborative operation. When a trainee executes a training scenario in evaluation mode, an operational evaluation result is saved in the server as a formal result. The trainee can receive it after completing self-study.

The scenario is evaluated based on an evaluation standard which is included beforehand in the project. Quiz score is calculated based on a scenario definition set in advance.

Cooperation or operation reference by several trainees

Users can join training sessions of other users as a collaborator or for reference purpose. The users can collaboratively operate one plant model with other trainees.

End of the training

Saving the operational evaluation results can be selected when leaving an executed training in study mode. This evaluation results include pass/fail assessment. When a user leaves a running training session without completing it, the last saved condition is saved in a personal space of the

server and the user can start the training from it as the initial condition when they next initiate a session.

The operational evaluation result is automatically saved when the training conducted in evaluation mode ends.

Execution and evaluation of quiz

When there are quizzes linked to a training scenario, users can try them to test their comprehension of the training.

The result of the quiz is saved in the operational evaluation result.

Training results review

A trainee can review operational evaluation results of previous trainings and output them as a report from the training scenario history including the quiz.

Certification issuance

Certification of the training scenario can be issued only when a trainee passes a training scenario in evaluation mode.

The account name is shown as the trainee's name in the certification.



System Management

Main functions to operate and manage the system, provided by OmegaLand Trainer Enterprise

User management

User authorization is defined by each system user based on their role. Following roles are defined.

● Administrator/Maintenance staff

A person who configures the Trainer Enterprise server and is responsible for maintenance. In general, those who have knowledge about servers and network is suitable for this role.

● Engineer

A person who develops a simulator by using OmegaLand development environment.

● Trainer

A person who acts as a trainer in a training session.

● Evaluation standard designer

A person who assigns a trainer and trainees to one or several training scenarios and defines a training program by organizing several training scenarios.

● Operator/Trainee

The person who receives training by using a simulator included in the training scenario.

Simulator project management

The minimum unit of the simulator created in OmegaLand development environment is called a project. A project includes a plant model, graphics and an evaluation standards.

In simulator project management, a user can register a new project in the server, change a project name and upgrade the version of the project.

Training result review by scenario

Users can review the evaluation result of the operation scenario saved in the server as a report by searching the name of the training scenario or the user as a keyword.

Training scenario management

Definitions of simulator activation conditions, an initial condition of the simulator execution and adaptive release for each project are called "training scenario".

A combinations of training scenarios corresponding to a training curriculum is called a "training set".

A user can define and revise the training scenarios and training sets in the training scenario management interface and link the training scenario to a quiz.

Trainees can try the linked quiz after the training using training scenarios. Quiz can be defined as one of the training scenario together with passing criteria of the quiz and setting time limit.

Group management

A set of users assigned to trainers and trainees is called as a group. Using group management function, a user can define a group and assign a group to a training set, managed in the training scenario management.

Releasing a role of a user whose role is temporally changed is also managed by scenario member management.

Scenario member management

When a group is defined and a training set is assigned, a user can temporary change group user's role from the training scenario's point of view. Using group management function, a trainer assigned user can be shifted to a trainee only when some scenario is executed.

Quiz management

The quizzes created in CSV format is registered, changed and deleted in Quiz management.

Association of Quiz with a training scenario is managed in scenario management. Depending on a training scenario, only a quiz is defined.

Users can review the results of the quiz trial in the training scenario auditing history. The results including the date, time, a name of the user, quiz answers, the quiz score and the passing status are shown in a table format.

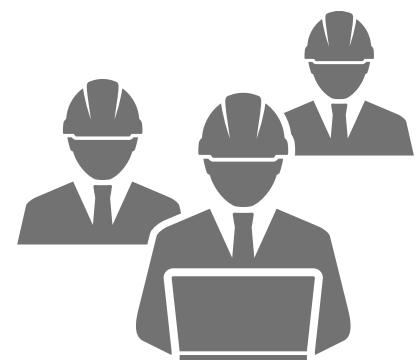
Quiz trial and execution

A trainer assigned user can try a quiz linked to a training scenario. Trainee assigned users can assess their training comprehension in a quantitative manner by answering the quiz. Challenging only quiz is also feasible depending on the training set.

Certification issuance

When evaluation criteria are set in a training scenario, a trainee can issue a certification if the training scenario result exceeds the passing criteria.

The default entry of trainer's name in the certification is the blank for a trainer to sign after print out. Alternatively, an image file of a signature can be imported.



Trainee's screen

Simple and Easy-to-use Operation Screen

Users can select and manage applications in a web browser. Scenarios and tests available for trainees are perceived in one glance.

Menu for trainee's screen

OML Trainer Enterprise: Display Enterprise homepage.
Training scenario: Display the scenario information and training result confirmation function.
Utility: Display analysis function of the trouble caused on activation of the simulator.

The left pane

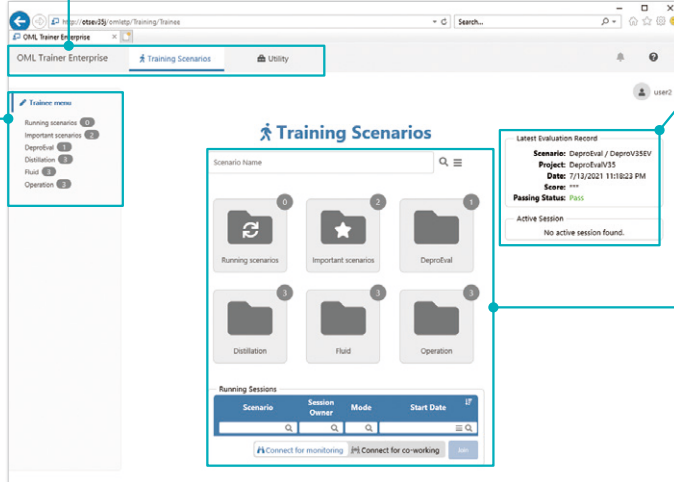
Trainee menu:
 The secondary items related to selected primary items on the menu are displayed. Training scenarios available for a user are displayed in here.

The right pane

The executing scenario status and the evaluation result of the last performed training scenario are displayed.

The middle of the screen for trainees

Search function:
 Scenarios are searched by their name.
Center display:
 Scenarios available for trainees are grouped and displayed as secondary items corresponding to primary items on the menu.
Executing session:
 When an assigned scenario is executed by other trainees, this information is shown in the list.



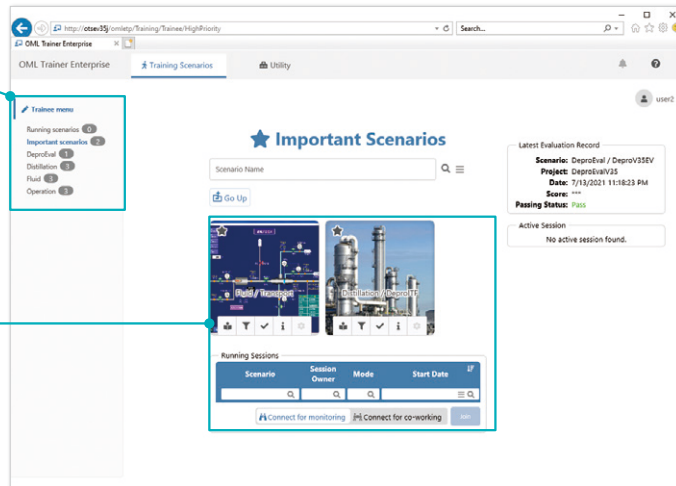
Trainee's training scenario screen

The left pane

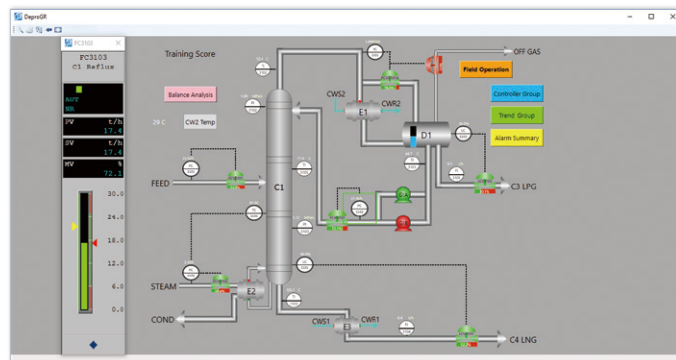
Display secondary item menu.

The middle of the screen

Center display:
 The scenario belonged to a group selected in the secondary item is displayed as a scenario box. In the scenario box, pictures and names related to the scenario and icons are displayed. The icons represent a scenario activation, collaboration with other users and training results. Execution of a targeted scenario and the level of importance are displayed as a notification. When a scenario is activated, a graphic panel of a targeted simulator is invoked in an additional window.



In case of an important scenario is selected



A simulator is launched in an additional window

Trainer's screen

Managing executed study and training easily

Scenario management by the trainer, allocation of trainees and training execution status are perceived at one view.

Menu for trainer's screen

OML Trainer Enterprise: Display Enterprise homepage.

Training scenario: Display a scenario information and training result confirmation function.

Preparation: Display functions required for an execution of the scenario.

Utility: Display analysis functions of the trouble caused on activation of the simulator.

The left pane

Instructor menu:

The secondary items related to selected primary items on the menu are displayed.

Training scenarios available for a trainer are displayed in here.

Trainee menu:

Select trainee menu to display trainee's menu.

The right pane

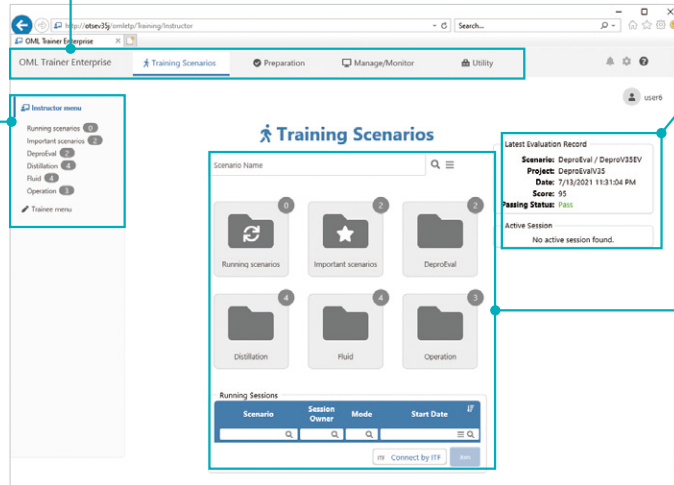
The executing scenario status and the evaluation result of the last performed training scenario are displayed.

The middle of the screen for trainer

Search function: Scenarios are searched by their name.

Center display: Scenarios available for trainers are grouped and displayed as secondary items corresponding to primary items on the menu.

Executing session: When an assigned scenario is executed by other trainees, it is shown in the list.



Trainer's training scenario screen

The left pane

Display secondary item menu.

The middle of the screen

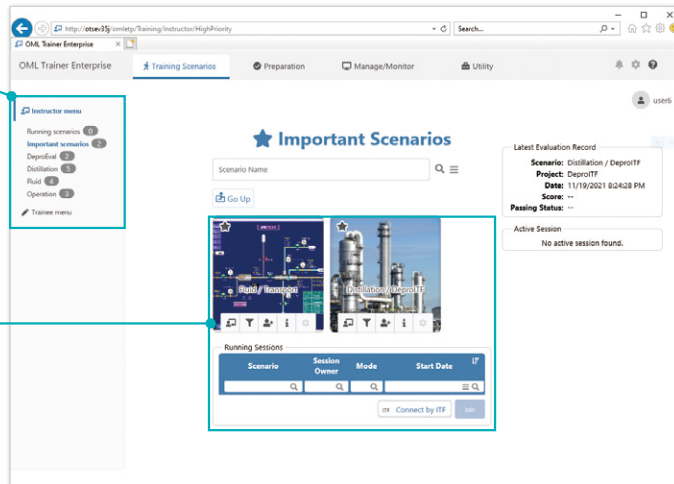
Center display:

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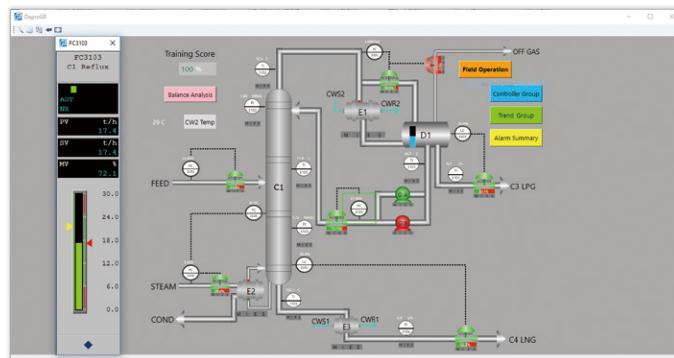
In the scenario box, pictures and names related to the scenario and icons are displayed. The icons represent a scenario activation, collaboration with other users and training results.

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In case of an important scenario is selected



A simulator is launched in an additional window

Proper training improves employee engagement

Self-learning

Self-learning further develops your operating skills.

Instructor Support

Instructors can instruct operators through an intuitive user interface that monitors process conditions.

Remote Training

An integrated training environment allows for self-learning and team training remotely.

Operation Training

Operators can acquire various skills, such as plant startup/shutdown, steady-state monitoring, load fluctuations, and responding to abnormalities.



Basic Process Learning

Operators can learn basic theory such as heat/mass balance, fluid, heat transfer, and process control, as well as unit operations such as distillation columns and compressors.

Education/ Training Plan

Trainers can plan effective learning programs based on individual and team evaluation results of the operation trainings.

Operation Evaluation

You can evaluate the trainee's operations by assigning a score based on preprogrammed statistical evaluation criteria.

System Requirement

Please refer to our company website for System Requirement.

URL : https://www.omegasim.co.jp/contents_e/product/ol/enterprise.htm

Service

Following table shows services for OmegaLand Trainer Enterprise.

Server Deployment Service	Our experts to lead system deployments from planning with a customer, network security setting and server-client communication configuration setting to install OmegaLand Trainer Enterprise to a customer's intranet.
Server Installation Service	Installation of the Trainer Enterprise server and connect it to a customer's intranet.
Server Configuration Change Service	Setting changes of the Trainer Enterprise server caused by the existing intranet configuration change and additional number of client PC.
Client PC Installation Service	Supporting additional client PC configuration setting and their operation check when client PC are added after the installation of OmegaLand Trainer Enterprise.
Maintenance Service	The service includes answering questions about OmegaLand Trainer Enterprise, providing latest software, updating for server system software and aligning existing application with latest version.
LMS Connection Support Service	Support to connect the Trainer Enterprise server with LMS by developing an interface based on SCORM V1.2 standard to transmit required data to customer's LMS server.

*Providing service varies depending on countries. Please contact a sales office in your country for more information.



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