

Profit Controller Implementation



Course Overview

Course number: 4516

Course length: 4.5 days

Need to implement Profit[®] Controller for the first time, or provide on-going support for an APC System running in AppNodes or in Experion Application Server nodes?

This course provides a fundamental understanding of multivariable predictive control design and hands-on implementation using Profit Controller software.

After a brief introduction to basic control concepts, Profit Controller control concepts are presented. The workings of Profit Design Studio is presented to provide an in-depth understanding of the model identification tools and exercises are used extensively throughout the course to illustrate the different features of the software tools. Implementation on AppNode is covered extensively, as well as configuration to run on an EAS node.

This course is a prerequisite for other Advanced Control Optimisation (profit Suite) Courses such as 4513 (Profit[®] Controller Theory and Implementation – Advanced).

Course Benefits

Implement a Profit Controller from A to Z

- Gain theoretical knowledge of multivariable control concepts.
- Learn about Profit Controller differentiating features.
- Gain the basic skills required to design a plant step test and identify dynamic models using Profit Design Studio.
- The ability to use the software tools to build and test the Profit Controller before commissioning.
- How to install the controller and bring it on-line, and finally how to commission.
- Gain the skills to implement new controllers and maintain existing APC.
- Conduct operator training.

Course Delivery Options

- In-Center Instructor-Led Training.
- On-Site Instructor-Led Training.

Who Should Take This Course?

Customers who implement APC using Profit Controller

- Responsible for new implementing and/or supporting an existing Profit Controller implementation Lead Operators.

Prerequisite/Skill Requirements

Prerequisite Course(s)

- Completion of basic Process Control courses.

Required Skills and/or Experience

- Knowledge of process dynamics and some exposure to multivariable control.
- Acquaintance or knowledge of linear models and linear algebra.

Course Topics

- Design the most suitable controller structure, determine controller configuration, i.e. its MVs, CVs and DVs.
- Design a pre-step plan in order to perform preliminary step testing with the objective of extracting gain and settling time information.
- Design a rigorous step test plan and carry it out.
- Identify dynamic models from raw data obtained from a step test.
- Build the controller model and configuration files needed for the on-line implementation of Profit Controller.
- Simulate a controller off-line with the objective of performing preliminary tuning and stress testing before on-line commissioning.
- Operate the LCN and PC resident user interfaces to interact with the controller.
- Install controller software in the AppNode.
- Use of Profit Suite Runtime Studio for configuration to run on an Experion Application Server.
- Activate a controller, verify I/O and predictions and perform commissioning.
- Establish the foundation for further training in the more advanced implementation topics of APC and optimization.

Additional Information

For additional information, please contact automationcollege.hpsemea@honeywell.com.