Training Course Data Sheet

# Aspen DMCplus® Online Tools

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| Course Number: | **MA310** |
| Duration: | **5 days** |
| CEUs Awarded: | **3.5** |
| Level: | **Advanced** |

## Objective

- To learn fundamental concepts of client/server communication and how that is accomplished using Aspen CIMIO™ software
- To understand how to install, configure, and maintain Aspen DMCplus Online and Aspen Production Control Web Server software
- To understand how to perform common tasks involved with Aspen DMCplus online implementation: data collection, data extraction, loading and starting a controller process, commissioning a controller, and updating a controller as operating objectives change
- To understand the capabilities of the Production Control Web Interface

## Course Benefits

- Increased effectiveness in troubleshooting and maintenance of Aspen DMCplus controllers at the plant level enables sustained performance improvements

## Who Should Attend

- Engineers who are designing or implementing Aspen DMCplus controllers
- Engineers who are responsible for maintaining Aspen DMCplus controllers and/or the Production Control Web Interface

## Approach

- Description of the online Aspen DMCplus controller software design concepts
- Demonstrations of the offline and online tools
- Hands-on exercises that focus on the use of the online controller tools, including installation of the Aspen DMCplus Online software and the Aspen Production Control Web Server
- Course notes are provided
- Review quizzes reinforce each day's learning

## Prerequisites

- Attend Introduction to Multivariable Predictive Control with Aspen DMCplus training course, or have equivalent experience with at least one Aspen DMCplus control application
- Good working knowledge of the Aspen DMCplus controller and a familiarity with chemical process engineering and/or process operations
- Familiarity with the process control computer and distributed control system
- Some familiarity with using Microsoft operating systems. The course is presented within a Windows Server 2003 software environment

## Subsequent Courses

- Aspen Watch for Aspen DMCplus Performance Improvement

*Aspen Technology, Inc. awards Continuing Education Units (CEUs) for training and development activities conducted by our organization in accordance with the definition established by the International Association of Continuing Education & Training (IACET). One CEU is granted for every 10 hours of class participation.*

## Aspen DMCplus Online Tools Course Agenda

### Day 1

- Aspen DMCplus technology review
- Overview of online controller tasks and

### Day 3

- Aspen DMCplus Model and Build
  - Model: calculations and transformations

client/server architecture

- Software required for Aspen DMCplus Online
  - DAIS Trader and trader operation
  - ACO Base
  - Aspen DMCplus Online
- Aspen DMCplus Online Installation
  - System requirements
  - Installation procedure
  - Aspen Cim-IO configuration
  - Other post-installation tasks
  - Troubleshooting
- Aspen Production Control Web Server Installation
  - System requirements
  - Installation procedure
  - Importing the Web Server application
  - Setting roles and permissions
  - Securing the AFW Security Manager
  - Other administration tasks
  - Troubleshooting
- Lab exercise: Installing Aspen DMCplus Online and Aspen Production Control Web Server

**Day 2**

- Process Testing and Data Collection
  - Data collection theory
  - Building the data collection file
  - Tag naming conventions
  - Source and device data types
  - Starting and stopping a collection
  - Adding tags to a collection
  - Extracting data
- Lab exercise: Pretest and plant test
  - Build: the controller CCF and on-line context
  - Build: Templates, Tag Wizard, and Entry Replacement Editor
  - Build: Sections
  - Build: External Targets, Subcontrollers, Composite
- Aspen DMCplus Manage
  - Main and context menus
  - Menu and command-line mode
  - Understanding the messaging system
- Aspen Production Control Web Interface
  - Using the Web Interface
  - Using input/output calculations
- Lab exercise: Aspen DMCplus Controller Configuration and Commissioning

**Day 4**

- Aspen DMCplus Variable Validation
  - General controller validation
  - Validation for all variables
  - Special MV considerations
  - Special CV considerations
  - Subcontroller/Aspen DMCplus Composite validation
  - External target validation
- Lab exercise: Controller Maintenance

**Day 5**

- Sustained Performance and Aspen Watch
  - Importance of benefits monitoring
  - Aspen Watch system overview
  - Aspen Watch Server
  - Aspen Watch Desktop
  - Aspen Watch Inspector
  - Production Control Web Interface
  - Aspen PID Watch
  - Aspen Watch Report System
  - Operator and Engineer Training
  - Communicating with Planning and Marketing Personnel