AVEVA EDGE

Q·MATION

COURSE DESCRIPTION

The AVEVA™ Edge course is a 4-day, instructor-led class designed to provide a fundamental understanding of the AVEVA Edge software's features and functionality. The software enables users and machine builders to quickly create intuitive, secure, and highly maintainable HMI applications for intelligent machines on various platforms, including Windows, Windows IoT, and Linux, as well as on low-level devices.

The course provides lectures and hands-on labs to supply and reinforce the knowledge needed to use the software to develop an HMI for a plant floor environment, using basic software elements. The HMI application will be developed using AVEVA Edge software features, such as tags, classes, indirect addressing, animation, symbols, scripting, alarms, real-time and historical trending, reports, and recipes. The HMI application also will have connections to databases, including SQL Server, Oracle, and MySQL; AVEVA™ Historian; PLC drivers; and OPC UA. It will provide remote troubleshooting, remote client project security, and application backup. InduSoft users can use the InduSoft software during the class, but the manual will only address AVEVA Edge 2020. (Please note that InduSoft Web Studio is now AVEVA Edge.)

OBJECTIVES

Upon completion of this course, you will be able to:

- Identify target markets for AVEVA Edge (End Users and Machine builders).
- Use AVEVA Edge to develop a complete HMI application that includes basic navigation, pushbuttons, pilot lights, alarms, trends, recipes, scripting, PLC integration, and database connectivity.
- Demonstrate a clear understanding of the AVEVA Edge seamless integration with AVEVA System Platform and AVEVA Historian.

AUDIENCE

Plant floor operators and managers, system administrators, system integrators, and other individuals who need to use the AVEVA Edge software in manufacturing processes.

PREREQUISITES

- Basic PLC experience
- Manufacturing industry experience
- Familiarity with Personal Computers and the Windows operating system

COURSE OUTLINE – AVEVA EDGE

MODULE 1 – GENERAL CONCEPTS
- Section 1 – Introduction

MODULE 2 – INSTALLATION AND LICENSING
- Section 1 – Installation
- Section 2 – Licensing

MODULE 3 – GETTING STARTED
- Section 1 – Studio
- *Lab 1 – Creating the Training Project*
- Section 2 – Tags and the Project Database
- *Lab 2 – Creating Project Tags*
- Section 3 – Distributing an Edge Application
- *Lab 3 – Distributing an Edge Application*

MODULE 4 – COMMUNICATING WITH EXTERNAL DEVICES
- Section 1 – Communication Drivers
- *Lab 4 – Configuring a Modbus TCP Driver*
- Section 2 – OPC DA
- Section 3 – Tag Integration
- Section 4 – Monitoring and Troubleshooting
- *Lab 5 – Using the Watch and LogWin Windows*

MODULE 5 – NATIVE SCREENS AND NATIVE GRAPHICS
- Section 1 – Native Screens and Screen Groups
- *Lab 6 – Creating Screens and a Screen Group*
- Section 2 – Shapes
- Section 3 – Formatting
- Section 4 – Active Objects
- *Lab 7 – Using Active Objects*
- Section 5 – Animations
- *Lab 8 – Using Animations*
- Section 6 – The Symbol Library
- *Lab 9 – Using the Symbol Library*
- *Lab 10 – Creating Your Own Project Symbols*
- Section 7 – Project Localization

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MODULE 6 – OVERVIEW OF SCRIPTING
- Section 1 – Client-Side Scripts
- Section 2 – Background Tasks
- *Lab 11 - Using Background Scripts*

MODULE 7 – ALARMS AND EVENTS
- Section 1 – Alarms
- *Lab 12 – Working with Alarms*
- Section 2 – Events
- *Lab 13 – Working with Events*

MODULE 8 – DATA LOGGING AND DISPLAY
- Section 1 – Trend
- *Lab 14 – Working with Trends*
- Section 2 – Grid Control

MODULE 9 – RECIPES AND REPORTS
- Section 1 – Recipes
- *Lab 15 – Using Recipes*
- Section 2 – Reports
- *Lab 16 – Using Reports*

MODULE 10 – PROJECT SECURITY
- Section 1 – Security Overview
- Section 2 – Protecting Your Intellectual Property
- *Lab 17 – Configuring the Project Security System*

MODULE 11 – REMOTE CLIENTS
- Section 1 – Mobile Access
- *Lab 18 – Configuring and Using Mobile Access*

MODULE 12 – USING DATABASES
- Section 1 – The Project Database
- *Lab 19 – Configuring a Project Database*
- Section 2 – Database/ERP Task
- *Lab 20 – Using the Database/ERP Task*

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MODULE 13 – INTEGRATING WITH AVEVA SOFTWARE PRODUCTS
- Section 1 – AVEVA Historian
- Lab 21 – Writing to AVEVA Historian
- Section 2 – AVEVA System Platform

MODULE 14 – INDUSTRIAL GRAPHICS
- Section 1 – Industrial Graphics and Situational Awareness Visualization
- Section 2 – Using the Industrial Graphics Editor
- *Lab 22 – Using Industrial Graphics*
- Section 3 – Custom Properties and Animations in Symbols
- *Lab 24 – Applying Animation to Industrial Graphics*
- Section 4 – QuickScript.NET for Industrial Graphics