

Wonderware InTouch for System Platform 2014R2

Course Description

The InTouch for System Platform 2014 R2 course is a 4-day, instructor-led class designed to provide a fundamental understanding of how Wonderware InTouch provides visualization for plant Galaxy data using ArcestrA symbols within the Wonderware Application Server software.

The focus of this course is to illustrate the use of visualization tools in Wonderware Application Server to provide a Human Machine Interface (HMI) with connectivity to the Galaxy, graphic symbols, animations, and scripting features and functionality in InTouch WindowMaker, ArcestrA symbols, the ArcestrA Symbol Editor, and QuickScript .NET.

The course provides lectures and hands-on labs to provide a fundamental understanding of, and reinforce knowledge about, how to design graphics and windows; apply alarm, trending, and history controls for visualization; and secure an InTouch application.

Objectives

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

- Create and deploy Managed InTouch applications using the ArcestrA IDE
- Use ArcestrA Situational Awareness symbols
- Embed ArcestrA symbols in automation objects and reference the object's attributes
- Use ArcestrA symbols in a containment relationship
- Create ArcestrA symbols
- Work with the ArcestrA Alarm Client control for alarm visualization
- Work with the ArcestrA Situational Awareness trend pen symbols for customized trending
- Use the ArcestrA Trend Client control for real-time trending
- Work with the Historian Client Trend control for real-time trending
- Apply ArcestrA security in a Managed InTouch application

Audience

Application developers, engineers, system integrators, consultants, and other individuals who need to develop InTouch HMI applications for System Platform

Prerequisites

- Completion of an Application Server course
- Attendance at a Historian Client course (recommended to obtain knowledge of the Historian Client Trend component)
- Manufacturing industry experience

Course Outline

Module 1 – Introduction

Section 1 – Course Introduction

This section describes the Wonderware InTouch for System Platform course and outlines Wonderware software solutions. It also provides a high-level overview of System Platform and ArcestrA visualization.

Section 2 – System Platform Overview

This section describes the fundamental concepts and architecture of the Wonderware System Platform.

Section 3 – ArcestrA Visualization Overview

This section introduces ArcestrA graphics and creation of a Managed InTouch application.

Section 4 – System Requirements and Licensing

This section provides a detailed explanation of the system requirements necessary for Wonderware System Platform and the Licensing model.

Module 2 – Application Design Basics

Section 1 – ArcestrA Visualization Objects

This section introduces the InTouchViewApp and ViewEngine objects.

Section 2 – Development Environment and InTouch Windows

This section provides a brief overview of the features of the WindowMaker environment and its settings, and describes InTouch windows.

Section 3 – Runtime Environment and Application Design

This section provides a brief overview of the InTouch WindowViewer and the ViewEngine, and describes some WindowViewer settings.

Module 3 – ArcestrA Symbol Basics

Section 1 – ArcestrA Symbol Overview

This section provides a brief overview of ArcestrA graphics and introduces the Graphic Toolbox.

Section 2 – Situational Awareness Symbols

This section describes the Situational Awareness philosophy and describes the Situational Awareness symbols.

Section 3 – Element Styles

This section describes element style configuration in the Galaxy Style Library, how to update element styles at runtime, and how to import and export element styles.

Section 4 – ArcestrA Symbols with Objects

This section provides a brief overview of using ArcestrA symbols in objects. It introduces how to manage ArcestrA symbols in automation objects and reviews containment relationships between automation objects. This section also introduces how to use ArcestrA symbols in a contained object that is within a symbol in the container object.

Section 5 – ArcestrA Symbol Editor

This section covers the creation and manipulation of graphic objects, lines and outlines, text objects, images, and bitmaps using the ArcestrA Symbol Editor.

Section 6 – The OwningObject Property

This section introduces the OwningObject property.

Module 4 – ArcestrA Symbols Creation

Section 1 – Tools and Animations

This section provides a brief overview of the graphic tools in the ArcestrA Symbol Editor, visualization animations, and interaction animations. It also introduces the element style tool as a property of the element, describes how to apply Element Styles to elements, and explains element style animation.

Section 2 – Custom Properties

This section provides a brief overview of custom properties in an ArcestrA symbol and describes how to link custom properties to external sources.

Section 3 – Quality and Status Display

This section provides a brief overview of the status element and its application in monitoring data status and quality in runtime. It also discusses the quality and status display override in the Galaxy Style Library.

Section 4 – Scripts in ArcestrA Symbols

This section provides a brief overview of the scripting environment, explains execution types and triggers, and introduces ShowGraphic-related functions.

Module 5 – Alarm Visualization

Section 1 – ArcestrA Alarming

This section provides a brief review of the concept of alarms and events and how ArcestrA handles them. An introduction to Alarm Border animation and Alarms aggregation is also provided.

Section 2 – Live Alarms Visualization

This section provides a brief overview of how to visualize live alarms by using the ArcestrA Alarm Client control available from within the ArcestrA Symbol Editor.

Section 3 – Logged Alarms Visualization

This section provides a brief overview of how to visualize logged alarms in the alarm database.

Module 6 – Trend Visualization

Section 1 – Historization Review

This section provides a brief overview of the concepts of historization covered in the Wonderware Application Server course.

Section 2 – ArcestrA Situational Awareness Trend Symbols

This section introduces two Situational Awareness symbols for trending and explains how to configure them.

Section 3 – ArcestrA Trend Client Control

This section provides a brief overview of the ArcestrA Trend control available from within the ArcestrA Symbol Editor.

Section 4 – Historian Client Trend Control

This section provides a brief overview of the Historian Client .NET controls available for use in ArcestrA symbols.

Module 7 – Security

Section 1 – Security Overview

This section provides a brief review of ArcestrA security, authentication modes, general and operational permissions, security classifications, the security audit trail, and InTouch securityrelated tags and script functions.

Section 2 – Signed Writes

This section provides a brief discussion of the Secured Write and Verified Write security classifications, the Can Verify Writes Operational permission, and the Secured Write and Verified Write dialog boxes.

Section 3 – Customization of the Runtime Environment

This section provides a brief review of the customization of the runtime environment to more fully secure and protect the application. It also describes how to configure the InTouch runtime environment for inactivity function, and introduces the EnableDisableKeys() script function.