

SYSTEM PLATFORM 2017 PART 1

APPLICATION SERVER



COURSE DESCRIPTION

The System Platform 2017 Part 1 course is a 5-day, instructor-led class designed to provide a fundamental understanding of the features and functionality of Wonderware Application Server and ArchestrA Graphics within an InTouch Managed Application. This course provides lectures and hands-on labs from Application Server 2017 and InTouch for System Platform 2017 courses to supply and reinforce the knowledge necessary to use the ArchestrA tools and services in the System Platform for plant modeling.

The class will demonstrate how to use Wonderware Application Server to utilize the ArchestrA technology to connect to field devices, process data, run scripts, handle alarms, and historize alarms/events. This is achieved using functionality such as Automation Objects, templates, instances, the ArchestrA Integrated Development Environment (IDE) and the QuickScript .NET scripting engine.

This course will also illustrate the use of visualization tools in Wonderware Application Server to provide a Human Machine Interface (HMI) utilizing connectivity to the Galaxy, graphic symbols, animations and scripting features found in InTouch WindowMaker, ArchestrA symbols, the ArchestrA symbol editor, and QuickScript .NET.

OBJECTIVES

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

- Create and deploy new projects using ArchestrA IDE
- Model the plant floor using automation objects
- Acquire data from field devices
- Configure alarm and history settings in a Galaxy
- Define the security model for a Galaxy
- Configure application level and device-integration redundancy
- Create and deploy Managed InTouch applications using the ArchestrA IDE
- Create ArchestrA symbols
- Embed ArchestrA symbols in automation objects and reference the object's attributes
- Use ArchestrA symbols in a containment relationship
- Work with the ArchestrA Alarm Client control for alarm visualization
- Apply ArchestrA security in a Managed InTouch application

AUDIENCE

- Application developers
- Engineers
- System integrators
- Other individuals who use Application Server in their manufacturing processes

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PREREQUISITES

- Manufacturing industry experience
- Some graphical design experience is helpful

COURSE OUTLINE – APPLICATION SERVER 2017

MODULE 1 – INTRODUCTION

- Section 1 – Course Introduction
- Section 2 – System Platform Review
- Section 3 – Application Server Overview
- Section 4 – The ArchestrA IDE
- Section 5 – Automation Objects
- Section 6 – System Requirements and Licensing

MODULE 2 – APPLICATION PLANNING

- Section 1 – Application Server Project Workflow
- Section 2 – Case Study

MODULE 3 – APPLICATION INFRASTRUCTURE

- Section 1 – The Plant Model
- Section 2 – The Deployment Model
- Section 3 – System Management Console
- Section 4 – The Runtime Environment
- Section 5 – Data Simulation

MODULE 4 – APPLICATION OBJECTS

- Section 1 – Introduction to Application Objects
- Section 2 – Object Attributes
- Section 3 – Change Control and Propagation
- Section 4 – Containment

MODULE 5 – DEVICE INTEGRATION

- Section 1 – Device Integration Servers
- Section 2 – Device Integration Objects
- Section 3 – Connecting Application Objects to Field Data
- Section 4 – Device Integration Redundancy

MODULE 6 – HISTORY

- Section 1 – Historizing Data for Application Server

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MODULE 7 - ALARMS AND EVENTS

- Section 1 – Alarms and Events Overview

MODULE 8 - OBJECT MANAGEMENT

- Section 1 – Object Export and Import
- Section 2 – Galaxy Dump and Galaxy Load

MODULE 9 - SECURITY

- Section 1 – Security Overview
- Section 2 – Object Security

MODULE 10 - INTRODUCTION TO QUICKSCRIPT.NET

- Section 1 – Introduction to Scripting
- Section 2 – Variables and Control Statements

MODULE 11 - GALAXY BACKUP AND RESTORE

- Section 1 – Galaxy Backup and Restore

COURSE OUTLINE - INTOUCH FOR SYSTEM PLATFORM 2017

MODULE 1 - INTRODUCTION TO QUICKSCRIPT.NET

- Section 1 – Course Introduction
- Section 2 – System Platform Overview
- Section 3 – ArchestrA Visualization Overview
- Section 4 – System Requirements and Licensing

MODULE 2 - GETTING STARTED

- Section 1 – Introduction
- Section 2 – Development Environment and InTouch Windows
- Section 3 – Runtime Environment and Application Design

MODULE 3 - ARCHESTRA SYMBOLS

- Section 1 – ArchestrA Symbols Overview
- Section 2 – Symbol Editor
- Section 3 – ArchestrA Symbols with Objects
- Section 4 – Tools and Animations
- Section 5 – The OwningObject Property
- Section 6 – Custom Properties
- Section 7 – Scripts in ArchestrA Symbols
- Section 8 – Galaxy Styles

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MODULE 4 - ALARMS AND EVENTS VISUALIZATION

- Section 1 – ArchestrA Alarming Overview
- Section 2 – Live Alarms Visualization
- Section 3 – Logged Alarms and Events Visualization

MODULE 5 - TREND VISUALIZATION

- Section 1 – ArchestrA Historization Overview
- Section 2 – Real-Time Trending
- Section 3 – ArchestrA Trend Client Control
- Section 4 – Historian Client Trend Control

MODULE 6 - SECURITY

- Section 1 – Security Overview
- Section 2 – Signed Writes
- Section 3 – Customization of the Runtime Environment

MODULE 7 - WEB CLIENT

- Section 1 – Web Client Overview