



# Schulung Application Server 2017

Beschreibung des Kurses

Datum : Juni 2018

## Schulung Application Server 2017

Dauer : 5 Tage

Zeitplan:

Montag	8h30 - 17h30
Dienstag - Donnerstag	8h15 - 17h30
Freitag	8h15 - 17h00

Preis:

CHF 3'250 / Person (20% Rabatt mit gültigem Support-Vertrag)  
das tägliche Mittagessen ist im Schulungspreis inklusive.



## Course Description

The Application Server 2017 course is a 5-days, instructor-led class designed to provide an overview of the features and functionality of Application Server. This course provides lectures and hands-on labs to supply and reinforce the knowledge necessary to use these features and functions for plant modeling.

The class demonstrates how to use Application Server technology to connect to field devices, process data, run scripts, handle alarms, and historize alarms and events. This course also provides a fundamental understanding of application maintenance, real-time alarm recording, and security settings, and describes how to set up redundancy for data acquisition.

## Objectives

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

- Create a new application
- Model the plant floor
- Employ rapid prototyping using a data simulator
- Acquire data from field devices
- Configure data communication redundancy
- Work with alarm and history configurations in an application
- Maintain application functionality using import and export
- Define the security model for the application
- Implement .NET Scripting to enhance application functionality
- Back up and restore an application

## Audience

- Application developers
- Engineers
- System integrators
- Other individuals who use Application Server in their manufacturing processes
- Individuals who need to configure or modify Application Server applications

## Prerequisites

Knowledge of the following tools, features, and technologies is required:

- Industrial automation software concepts



Tag	Inhalt
1	<p data-bbox="384 501 818 539"><b><u>Module 1 – Introduction</u></b></p> <p data-bbox="384 589 825 618"><b>Section 1 – Course Introduction</b> This section describes the course and its objectives, intended audience, prerequisites, and agenda.</p> <p data-bbox="384 743 916 772"><b>Section 2 – System Platform Overview</b> This section describes Wonderware System Platform, including its components, clients, and services. It also introduces ArcestrA technology.</p> <p data-bbox="384 898 941 927"><b>Section 3 – Application Server Overview</b> This section describes Application Server and its components and discusses what a Galaxy is and how to create one.</p> <p data-bbox="384 1052 799 1081"><b>Section 4 – The ArcestrA IDE</b> This section describes the ArcestrA IDE, including the layout, its key functions, toolboxes and how to create them, and the application views available.</p> <p data-bbox="384 1247 826 1276"><b>Section 5 – Automation Objects</b> This section describes automation objects, templates, and instances. It discusses the Object Editor, explains the different states of automation objects and operations when editing objects, and gives a brief explanation of Object Wizards.</p> <p data-bbox="384 1485 1043 1514"><b>Section 6 – System Requirements and Licensing</b> This section describes the System Platform computer roles, the software and hardware requirements for Application Server, the ArcestrA Network Account, and how the product is licensed.</p> <p data-bbox="384 1680 963 1718"><b><u>Module 2 – Application Planning</u></b></p> <p data-bbox="384 1767 1053 1796"><b>Section 1 – Application Server Project Workflow</b> This section describes the suggested project workflow.</p>



## **Section 2 – Case Study**

This section describes the simulated manufacturing environment to be used for the class and explains the naming conventions used in the simulated process.

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## **Module 3 – Application Infrastructure**

### **Section 1 – The Plant Model**

This section describes the importance of the plant model and explains the usage of area objects and the Model view in the ArcestrA IDE.

### **Section 2 – The Deployment Model**

This section describes the Deployment view of the ArcestrA IDE, discusses the hosting relationship between objects, explains the usage of the \$WinPlatform and \$AppEngine objects, and describes the Deployment options.

### **Section 3 – The System Management Console**

This section describes the overall functionality of the System Management Console (SMC). It explains how to back up and restore using the Galaxy Database manager, and includes how to create a new Galaxy from a backup file. It discusses how to use the ArcestrA Logger and Log viewer, and explains how to use Platform Manager.

### **Section 4 – The Runtime Environment**

This section describes the runtime environment of the Galaxy, explains communication between automation objects' attribute references, and introduces the Object Viewer and Platform Manager tools.

### **Section 5 – Data Simulation**

This section describes the OI Simulation Server and explains the configuration of an \$OPCClient to the OI.Sim.

## **Module 4 – Application Objects**

### **Section 1 – Introduction to Application Objects**

This section describes the application objects in the Galaxy and discusses



the basic configuration of the \$UserDefined object.

### **Section 2 – Enhancing Objects with Attributes**

This section describes the attributes page and the features of an attribute. It also discusses the configuration options available for application objects, including automatic and manual I/O binding capabilities.

### **Section 3 – Change Control and Propagation**

This section describes attribute locking and unlocking. It also discusses how template changes can propagate to previously derived objects.

### **Section 4 – Containment**

This section describes containment with templates and application objects, and explains different modeling approaches. It also discusses the naming conventions of contained objects.

## **Module 5 – Device Integration**

### **Section 1 – Device Integration Servers**

This section describes available DI servers, discusses OI servers, and explains the configuration of an OI Server to a Controller.

### **Section 2 – Device Integration Objects**

This section describes DI objects, explains the configuration of a DI object to an OI Server, and discusses how to monitor the connectivity of a DI object in Object Viewer.

### **Section 3 – Connecting Application Objects to Field Data**

This section describes how to change the data source for objects using the autobind capabilities of application objects.

### **Section 4 – Device Integration Redundancy**

This section describes DI redundancy and explains how to configure a redundant DI object.



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### **Module 6 – History**

#### **Section 1 – Historizing Data for Application Server**

This section describes how Wonderware Historian historizes data. It explains how to configure engines and platforms for historization and describes how to configure objects to historize attributes. It also discusses how to retrieve historical data with InSight.

### **Module 7 – Alarms and Events**

#### **Section 1 – Alarms and Events Overview**

This section describes alarms and events. It explains alarms and events reporting of objects through areas, the alarm options for attributes, and how to monitor alarm attributes and states with Object Viewer. It discusses the historization of alarms and events with Historian, as well as how to retrieve alarm history from SQL Server.

### **Module 8 – Object Management**

#### **Section 1 – Object Export and Import**

This section describes how to export and import objects from and to a Galaxy. It also explains how to upgrade objects to new versions or revert to previous configurations.

#### **Section 2 – Galaxy Dump and Galaxy Load**

This section describes how to use the Galaxy Dump and Galaxy Load features of the ArcestrA IDE. It explains how to use these features to modify and create instances of objects..

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### **Module 9 – Security**

#### **Section 1 – Security Overview**

This section describes how ArcestrA handles security. It discusses the security models available in the ArcestrA IDE and describes how to configure general security permissions and operational permissions.

#### **Section 2 – Object Security**

This section describes the security classifications for object attributes and discusses the security audit trail.



## **Module 10 – Introduction to QuickScript.NET**

### **Section 1 – Introduction to Scripting**

This section describes the scripting environment and basic scripting syntax. It also discusses the execution types and triggers.

### **Section 2 – Variables and Control Statements**

This section describes the usage of variables and control statements in a script.

## **Module 11 – Security**

### **Section 1 – Galaxy Backup and Restore**

This section describes the SMC and explains how to back up and restore operations using the Galaxy Database manager. It includes a discussion on how to create a new Galaxy from a backup file and describes the ArcestrA Logger and Log viewer.

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## **InTouch for System Platform 2017**

### **Module 1 – Introduction**

#### **Section 1 – Course Introduction**

This section describes the Wonderware InTouch for System Platform course.

#### **Section 2 – System Platform Overview**

This section describes fundamental concepts about Wonderware System Platform, including its clients, components, and services. It also introduces the ArcestrA technology.

#### **Section 3 – ArcestrA Visualization Overview**

This section introduces ArcestrA graphics and explains how to create a Managed InTouch application.

#### **Section 4 – System Requirements and Licensing**

This section describes system requirements for System Platform and introduces the licensing model.





## **Module 2 – Getting Started**

### **Section 1 – Introduction**

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 Symbols**

### **Section 1 – ArcestrA Symbol Overview**

This section provides a brief overview of ArcestrA graphics and introduces the Graphic Toolbox. A description of the situational awareness philosophy is also provided.

### **Section 2 –Symbol Editor**

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

### **Section 3 – 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 4 – Tools and Animations**

This section provides an overview of the graphic tools in the Symbol Editor, visualization animations, and interaction animations.

### **Section 5 – The OwningObject Property**

This section introduces the OwningObject property.

### **Section 6 – 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 7 – Scripts in ArcestrA Symbols**

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

### **Section 8 – Galaxy Styles**

This section explains the Galaxy Style library and how to override Element Styles, how to update element styles at runtime, and how to import and export element styles. A brief overview of the Status element and its application in monitoring data status and quality in runtime is also provided. for use in ArcestrA symbols.

