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## WONDERWARE

### TRAINING CATALOG 2018

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COMMITTED TO THE  
SYSTEM INTEGRATORS  
COMMUNITY & END USERS



## Wonderware – Software Solutions for Real-Time Success

Wonderware is the market leader in real-time operations management software. Wonderware software solutions enable companies to synchronize production and industrial operations with business objectives, obtaining the speed and flexibility to attain sustainable profitability.

Wonderware delivers significant cost reductions associated with designing, building, deploying and maintaining, secure and standardized applications for manufacturing and infrastructure operations.

## World-Class Training

Wonderware offers comprehensive, world-class training courses that match the power and excellence of Wonderware software. Since 1991, thousands of customers have been trained in the use of Wonderware products.

Wonderware Training pushes beyond traditional classroom settings with innovative training products in a wide variety of media including new and exciting distance learning opportunities. As Wonderware adds new components to our products, we will provide the courses and programs critical to our customers' educational needs.

In AITS, we are following strict guidelines and standards to provide Continuing Education Units (CEUs) for all courses and we are committed to delivering intensive & hands-on educational programs that can enable you to develop and use an application as soon as you return to your plant.

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## MARCH TRAINING/UAE, DUBAI

TRAINING COURSE	DATE
InTouch 2014R2	11 March to 15 March
Application Server 2014R2	18 March to 21 March
What's new in System Platform 2017	22 March
InTouch for SP 2014R2	25 March to 29 March
Historian Server 2014R2	1st April & 2nd April
Historian Client 2014R2	3rd April & 4th April

## JULY TRAINING/SAUDI ARABIA, AL KHOBAR

TRAINING COURSE	DATE
InTouch 2014R2	15 July to 19 July
Application Server 2014R2	22 July to 25 July
What's new in System Platform 2017	26 July
InTouch for SP 2014R2	29 July to 2 August
Historian Server 2014R2	5 August & 6 August
Historian Client 2014R2	7 August & 8 August

## OCTOBER TRAINING/UAE, DUBAI

TRAINING COURSE	DATE
InTouch 2017	21 October to 25 October
Application Server 2017	28 October to 1 November
InTouch for SP 2017	4 November to 7 November
What's new in System Platform 2017	8 November
Historian Server 2014R2	11 November & 12 November
Historian Client 2014R2	13 November & 14 November

# Wonderware Instructor-Led Training (ILT) Course Descriptions

## InTouch 2017

The tag-based InTouch HMI (Standard Edition) 2017 Update 2 course is a 5-day, instructor-led class that explains how to create and configure a Modern InTouch application. The course provides a fundamental understanding of the Wonderware visualization module and explains how to develop a Human Machine Interface (HMI) system for your specific plant floor. You are guided through setup, layout, best practice concepts, features, and functions of the InTouch software platform. Hands-on labs reinforce concepts and features.

### Duration:

5 days

### Who should attend?

Individuals who need to configure or modify InTouch HMI applications

### Prerequisites:

- Knowledge of the following tools, features, and technologies is required:
  - Industrial automation software concepts for InTouch HMI
  - Microsoft Excel for exporting, modifying, and importing tags with a .csv file

### Objectives:

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

- ▶ Create a Modern InTouch Application
- ▶ Build an HMI with Situational Awareness symbols
- ▶ Construct a Key Performance Indicator display
- ▶ Configure an OI Server
- ▶ Establish communications with I/O-aware programs
- ▶ Create, export, and import tags
- ▶ Test and monitor tags
- ▶ Build a custom symbol
- ▶ Visualize and interact with data
- ▶ Configure InTouch alarms
- ▶ Present and manage live and historical alarms
- ▶ Configure security
- ▶ Historize and trend data
- ▶ Display real-time data
- ▶ Back up and restore an InTouch application
- ▶ Distribute an application to a production environment
- ▶ View ArchestrA graphics in a browser using Web Client

# Course Outline

## MODULE 1 – INTRODUCTION

### Section 1 – Course Introduction

This section will explain the objectives and agenda for this course. It will also outline Wonderware products and how InTouch meets the human-machine interface requirements for visualization.

### Section 2 – InTouch Software Overview

This section will introduce the InTouch, explain the benefits of using InTouch, discuss its key capabilities, and provide an overview of its features.

### Section 3 – System Requirements and Licensing

This section will describe the operating systems and other software requirements the host computer must meet prior to installing InTouch 2017 (version 17.0).

### Section 4 – InTouch Application Types

This section will provide an overview of the different types of InTouch applications.

## MODULE 2 – WINDOW LAYOUT AND BASIC NAVIGATION

### Section 1 – Window Maker Overview

This section will provide an overview of using WindowMaker.

### Section 2 – Window Viewer Overview

This section will provide an overview of the InTouch runtime environment, Window Viewer.

### Section 3 – Configure and Test Navigation

This section will provide an overview of how to use WindowMaker to embed symbols in windows and apply animations to symbols. This section will also explain how to test animations that will navigate to different windows in runtime.

## MODULE 3 – INTOUCH TAGNAME DICTIONARY

### Section 1 – The Tagname Dictionary

This section will explain tag types and the Tagname Dictionary.

### Section 2 – I/O Configuration

This section will discuss the data acquisition components of InTouch.

### Section 3 – Tag Viewer

This section will describe the Tag Viewer and will explain how to view, save, and import watch windows. This section will also discuss dotfields, and explain how to interpret value, time, and quality information in a watch window.

### Section 4 – DBDump and DBLoad

This section will explain how to use the DBDump and DBLoad utilities for bulk handling of InTouch tags.

### Section 5 – Other Tag Management Utilities

This section will discuss the Cross Reference Utility and Tag use counts. It will explain how to find and delete tags.

## MODULE 4 – SITUATIONAL AWARENESS VISUALIZATION

### Section 1 – HMI Displays with Situational Awareness

This section will explain the capabilities and usage of the Situational Awareness Library.

### Section 2 – Element Styles

This section will discuss element styles and the Application Style Library. It will also explain how to import and export the Application Style Library.

### Section 3 – Window Construction Using Symbol Editor

This section will explain the capabilities of the ArcestrA Symbol Editor for designing entire window graphic assemblies and custom graphics.

### Section 4 – Custom Properties and Animations

This section will provide a brief overview of the graphic tools in the ArcestrA Symbol Editor that pertain to adding custom properties and animations.

## MODULE 5 – INTOUCH ALARMS

### Section 1 – InTouch Tagname Alarm Configuration

This section will explain how to configure a discrete alarm, an analog limit alarm. This section will also discuss alarm dotfields, priority, groups, severity, and advanced alarm features.

### Section 2 – Live Alarms Management

This section will describe alarm management, define alarm ack models, and discuss alarm query syntax. This section will also explain the .NET Alarm Client features, discuss alarm inhibition, and compare alarm inhibition with alarm suppression.

### Section 3 – Historical Alarms Management

This section will explain how to record alarms in a database and retrieve those alarms to view in the Alarm Client.

## MODULE 6 – DATA LOGGING AND TRENDING

### Section 1 – (Optional Path 1) InTouch History and Real-Time Trending

Optional Path 1 has been written for legacy InTouch history users. Select this learning path to learn how to use InTouch historical logging.

This section will discuss the built-in InTouch historical logging features. The features include how to enable InTouch history, visualizing InTouch history, and using HistData for exporting historical logs to .csv files. This section will go on to explain how to use the Trend Client .NET control for real-time trending visualization.

### Section 2 – (Optional Path 2) Using Historian with InTouch

Optional Path 2 has been written for Historian Server users. Select this learning path to learn how to use Historian data with InTouch.

This section will explain how to import tags into Historian Server using the Tag Importer Wizard in the ArchedrA System Management Console.

The section will go on to describe how to build a Historian Client Trend display in InTouch.

## MODULE 7 – INTRODUCTION TO QUICKSCRIPT

### Section 1 – Introduction to InTouch QuickScript

This section will provide an overview of the various InTouch QuickScript types, and describe the features and functions that are unique to each QuickScript type. This section will also explain the QuickScript Editor.

## MODULE 8 – INTRODUCTION TO ARCHESTRA SYMBOL QUICKSCRIPT .NET

### Section 1 – ArchedrA Script Editor

This section will describe how to use the .NET script editor used by ArchedrA Symbols.

### Section 2 – Use Scripts to Drive Animation

This section will explain how to simulate animated movement by using expressions and scripts to calculate angles of arc elements.

### Section 3 – Scalable Window Navigation

This section will explain a scalable method to navigate an InTouch Application.

### Section 4 – ShowGraphic Script Function

This section will explain how to use advanced features of the ShowGraphic script function.

## MODULE 9 – SECURITY

### Section 1 – OS Security Implementation

This section will discuss how to prepare your environment for using OS security. This section will also provide an overview of scripting for OS Security.

### Section 2 – Locking Down Your Application

This section will provide an overview of the Animation Links dialog box and explain Action Script methods you can use to secure your application. This section will also describe the function used to enable and disable the **Alt**, **Escape**, and **Windows** keys.

## MODULE 10 – APPLICATION MAINTENANCE

### Section 1 – Managing ArchedrA Symbols

This section will explain how to manage ArchedrA symbols including exporting, importing, and restoring Library symbols if accidentally deleted.

### Section 2 – Application Backup and Restore

This section will explain how to export a Modern Application to an .aaPKG file. This section will go on to explain how to import a Modern Application from an .aaPKG file.

## MODULE 11 – APPLICATION PUBLISHING AND DISTRIBUTION

### Section 1 – Application Publishing

This section will explain how to publish your InTouch application for your production environment.

### Section 2 – Network Application Distribution

This section will explain how to configure Network Application Development (NAD) and how NAD delivers changes to the production machine.

## MODULE 12 – WEB CLIENT

### Section 1 – Web Client

This section will describe Web Client features and dependencies.

## Wonderware Instructor-Led Training (ILT) Course Descriptions

### Application Server 2017

The Application Server 2017 course is a 4-day, 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.

#### Duration:

5 days

#### Who should attend?

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

#### 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

## Course Outline

### MODULE 1 – INTRODUCTION

#### Section 1 – Course Introduction

This section describes the course and its objectives, intended audience, prerequisites, and agenda.

#### Section 2 – System Platform Overview

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

#### Section 3 – Application Server Overview

This section describes Application Server and its components, discusses what a Galaxy is and how to create one, and gives a brief explanation of Object Wizards.

#### Section 4 – The ArcestrA IDE

This section describes the ArcestrA IDE, including the layout, its key functions, toolboxes and how to create them, and the application views available.

#### Section 5 – Automation Objects

This section describes automation objects, templates, and instances. It discusses the Object Editor and explains the different states of automation objects and operations when editing objects.

#### Section 6 – System Requirements and Licensing

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.

### MODULE 2 – APPLICATION PLANNING

#### Section 1 – Application Server Project Workflow

This section describes the suggested project workflow.

#### 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.

### 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 \$OPCCient 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 and explains data acquisition with Object Viewer.

## Section 4 – Device Integration Redundancy

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

## 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.

## 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.

## Wonderware Instructor-Led Training (ILT) Course Descriptions

### InTouch for System Platform 2017

The InTouch for System Platform 2017 course is a 4-day, instructor-led class designed to provide an overview of the features and functionalities released with InTouch for System Platform. It covers the components and capabilities of the software, as well as topics to help you build and deploy an InTouch for System Platform visualization application. It also introduces tools for creating graphics, visualizing alarms and events, visualizing trends and history, and implementing security in an InTouch for System Platform application. Hands-on labs are provided to reinforce the knowledge necessary to use the InTouch for System Platform software.

#### Duration:

4 days

#### Who should attend?

Individuals who need to configure or modify InTouch for System Platform applications

#### Prerequisites:

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

- ▶ Industrial automation software concepts
- ▶ From the Application Server software product:
  - ArcestrA IDE
  - Automation Objects
  - Alarms of attributes
  - Historization of attributes
  - Security
  - Deployment model
  - Plant model
  - QuickScript .NET scripting language

#### Objectives:

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

- ▶ Describe InTouch for System Platform visualization components
- ▶ Create and run visualization applications
- ▶ Describe situational awareness concepts
- ▶ Create and use graphics
- ▶ Implement navigation for visualization applications
- ▶ Implement alarm visualization
- ▶ Implement real-time and historical trending
- ▶ Implement visualization application security

## Course Outline

### 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 – ARCHESTRA 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. Some WindowViewer settings.

## MODULE 4 – ALARMS AND EVENTS VISUALIZATION

### Section 1 – ArcestrA Alarming Overview

This section provides a brief overview of alarms and events and explains how ArcestrA handles them. An introduction to Alarm Border animation, Alarms aggregation, severity, and shelving is also provided.

### Section 2 – Live Alarms Visualization

This section explains how to visualize live alarms and recent alarms and events by using the Alarm client control available in the Symbol Editor.

### Section 3 – Logged Alarms and Events Visualization

This section explains how to visualize logged alarms and events in the alarm database and explains how they are historized.

## MODULE 5 – TREND VISUALIZATION

### Section 1 – ArcestrA Historization Overview

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

### Section 2 – Real-Time Trending

This section introduces the Trend pen and 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 Client control available from within the 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 6 –

### 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 security tags and script functions. 17

## Section 2 – Signed Writes

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

# Wonderware Instructor-Led Training (ILT) Course Descriptions

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## What's New in Application Server 2017

The What's New in Application Server 2017 course is a 1-day, instructor-led class designed to provide an overview of new features and functionalities provided with Application Server 2017. It covers overall improvements and new features, including Object Wizards, Linked Symbols, and Visual Build. Hands-on labs are provided to reinforce the knowledge necessary to use the new features.

### Duration:

1 days

### Who should attend?

Existing System Platform users who want to learn about new features in Application Server 2017

### Prerequisites:

- ▶ Knowledge of using the ArcestrA IDE
- ▶ Familiarity with the Attributes tab in the Object Editor
- ▶ Experience configuring attribute Features
- ▶ Experience using and creating ArcestrA Symbols
- ▶ Knowledge of working with attribute references
- ▶ Experience using and creating Symbol Wizards
- ▶ Basic knowledge of using and creating scripts
- ▶ Familiarity with the Deployment model
- ▶ Familiarity with the Plant model
- ▶ Back up and restore Historian data

## Objectives

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

- ▶ Identify overall improvements and new features in Application Server
- ▶ Use Visual Build to create instances within the Symbol Editor
- ▶ Use Linked Symbols to add graphics to automation objects
- ▶ Use Object Wizards in derived templates and instances
- ▶ Create Object Wizards

# Course Outline

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## MODULE 1 – INTRODUCTION

### Section 1 – Course Introduction

This section describes the objectives, prerequisites, intended audience, and agenda for this course.

### Section 2 – Overview of New Features and Improvements

This section provides an overview of new features and improvements in Application Server 2017.

### Section 3 – System Requirements and Licensing

This section provides system requirements for Application Server 2017 and introduces the licensing model.

## MODULE 2 – VISUAL BUILD

### Section 1 – Introduction to Visual Build

This section explains how to use the Visual Build approach to create instances within the Symbol Editor.

## MODULE 3 – LINKED SYMBOLS

### Section 1 – Introduction to Linked Symbols

This section introduces the linked symbols feature and describes how to use linked symbols in automation objects.

## MODULE 4 – OBJECT WIZARDS

### Section 1 – Introduction to Object Wizards

This section introduces Object Wizards in automation objects. It also explains how to create and configure instances derived from Object Wizards.

## Section 2 – Object Wizard Creation

This section explains how to create Object Wizards, including how to add Choice Groups, Choices, and Options. It also explains how to associate attributes, symbols, and scripts with Object Wizards, override settings for associated content, and use the Test mode to test how Object Wizards behave in instances.

## Section 3 – Object Wizard Derivation

This section describes Object Wizard derivation and configuration in inherited templates. Topics include how to specialize a derived Object Wizard by configuring default settings and how to add more Object Wizards to extend the capabilities in inherited templates.

# Wonderware Instructor-Led Training (ILT) Course Descriptions

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## Historian Server 2014 R2

The Historian Server 2014 R2 course is a 2-day, instructor-led class designed to provide a fundamental understanding of the features and functionality of Wonderware Historian Server for both Application Server and InTouch tag-based applications.

The course provides lectures and hands-on labs to supply and reinforce the knowledge necessary to use Wonderware Historian Server for SCADA and factory data. This includes how to configure, historize, and retrieve data using multiple retrieval modes, local and remote summarization, replication, event monitoring, and other features.

### Duration:

2 days

### Who should attend?

- ▶ Application developers, engineers, system integrators, consultants, and other individuals who need to historize, analyze, and maintain data from Application Server or from a tag-based InTouch application
- ▶ Completion of the Wonderware Application Server or an InTouch course

### Prerequisites:

- ▶ Knowledge of Transact-SQL would be helpful
- ▶ Manufacturing industry experience

### Objectives

- ▶ Upon completion of this course, you will be able to:
  - ▶ Start and configure Historian Server
  - ▶ Configure and historize Application Server and InTouch data
  - ▶ Distinguish between retrieval modes
  - ▶ Retrieve data with SQL queries
  - ▶ Use time domain extensions in SQL queries
  - ▶ Update and insert history data
  - ▶ Create and configure events and retrieve event data
  - ▶ Configure Historian tags for local summarization
  - ▶ Use a Tier-2 Historian for replication and summarization
  - ▶ Back up and restore Historian data

# Course Outline

## MODULE 1 – INTRODUCTION

### Section 1 – Course Introduction

This section describes the Wonderware Historian Server course and outlines Wonderware software solutions.

### Section 2 – Introduction to Historian Server

This section describes the main functions and features of Historian Server.

### Section 3 – System Requirements and Licensing

This section provides an overview of the general hardware recommendations and software requirements for Historian. It also introduces the licensing model.

## MODULE 2 – HISTORIAN CONFIGURATION

### Section 1 – ArcestrA System Management Console

This section describes the ArcestrA System Management Console. It provides an overview of its interface and explains how to use it to register and start Historians. It also describes Historian options and system parameters.

### Section 2 – Historian and Application Server

This section explains the basics of how Historian Server integrates with the Galaxy. It also describes how to configure platforms, engines, and object attributes for historization.

### Section 3 – IDAS - Historian and InTouch

This section explains the basics of historizing data from tag-based InTouch applications. It describes the Tag Importer Wizard, defines storage options, and explains manual tag configuration.

## MODULE 3 – DATA RETRIEVAL

### Section 1 – Data Retrieval Subsystem

This section describes the Historian Server data retrieval subsystem, the Wonderware Historian OLE DB provider, and extension tables for history data. It explains the syntax for basic SQL queries and those that include the OPENQUERY function. It also describes wide and narrow formats for retrieved data.

### Section 2 – Retrieval Modes

This section describes Historian Server retrieval modes, with a focus on Cyclic, Delta, Full, and BestFit. It also explains how to specify retrieval modes in SQL queries.

### Section 3 – Retrieval Options

21 This section describes Historian Server retrieval options, with a focus on wwCycleCount, wwResolution, wwEdgeDetection, and wwFilter.

## MODULE 4 – MANUAL DATA

### Section 1 – Data Definitions

This section defines Historian data categories. It also explains original versus revision data, as well as streamed versus non-streamed original data.

### Section 2 – INSERT and UPDATE Query Syntax

This section describes data versioning and explains the INSERT and UPDATE query syntax.

## MODULE 5 – HISTORIAN EVENTS

### Section 1 – Classic Event Subsystem

This section describes the Historian classic event subsystem and defines event tags, detectors, and actions. It explains how to configure event tags and latency in event configuration.

### Section 2 – Event Data Retrieval

This section describes Historian tables related to the classic event subsystem. It also explains how to retrieve event data with SQL queries.

### Section 3 – Active Event

This section describes the ActiveEvent ActiveX control and explains methods for triggering an external event using ActiveEvent.

## MODULE 6 – SUMMARIES AND DATA REPLICATION

### Section 1 – Data Summarization

This section defines the concept of summarizing data. It also describes analog and state summary replication and explains naming schemes for the replication process.

### Section 2 – Tiered Historians

This section explains the concept of tiered Historians. It describes replication to a Tier-2 Historian, defines simple replication, and reviews naming schemes for the replication process.

### Section 3 – Summarized and Replicated Data Retrieval

This section describes how to retrieve summarized and replicated data from Historian. It also reviews AnalogSummaryHistory and StateSummaryHistory views.

## MODULE 7 – HISTORIAN MAINTENANCE

### Section 1 – History Block Maintenance

This section explains how to back up history blocks.

### Section 2 – Historian Database Management

This section explains how and when to back up Historian Server databases.

## Wonderware Instructor-Led Training (ILT) Course Descriptions

### Historian Client 2014 R2

The Wonderware Historian Client course is a 2-day, instructor-led class designed to provide a fundamental understanding of the features and functionality of the Wonderware Historian Client software. The course provides lectures and hands-on labs to supply and reinforce the knowledge necessary to use Wonderware Historian Client.

The Wonderware Historian Client trending, analysis, and reporting software offers a suite of data analysis and reporting clients that maximize the value of data stored on Wonderware Historian. Wonderware Historian Client enables individuals at all levels of an organization to easily access plant- and process-related data through simple point-and-click dialog boxes.

#### Duration:

2 days

#### Who should attend?

- ▶ Audience for this course includes Plant floor operators, managers, and other individuals whose jobs include using Wonderware Historian data for assessment and reporting within production or administrative environments.

#### Prerequisites:

- ▶ Knowledge of InTouch
- ▶ Knowledge of Wonderware Historian
- ▶ Knowledge of Microsoft Office Excel and Microsoft Word

#### Objectives

- ▶ Retrieve Wonderware Historian data with the help of Wonderware Historian Client
- ▶ Use the data in its appropriate context, including historical and real-time trend manipulation, and production-related reporting within Microsoft Excel and Word

## Course Outline

### MODULE 1 – INTRODUCTION

#### Section 1 – Course Introduction

This section describes the fundamentals of the Wonderware Historian Client 2014 R2 Software course, the objectives of the course, intended audience, prerequisites, and course agenda. It also includes a description of the Wonderware products.

#### Section 2 – Introduction to Wonderware Historian Client

This section introduces the Wonderware Historian Client applications, the main features, hardware requirements, and licensing.

#### Section 3 – Introduction to Wonderware Historian Server

This section introduces the main features of Wonderware Historian Server, network considerations, hardware and software requirements, and licensing strategies.

#### Section 4 – System Requirements, Licensing, and Support

This section explains the recommended system requirements and licensing information.

### MODULE 2 – WONDERWARE HISTORIAN CLIENT TREND

#### Section 1 – Introduction to Wonderware Historian Client Trend

This section describes the features of Wonderware Historian Client Trend and how to create and configure trends using Wonderware Historian Client Trend.

#### Section 2 – Public and Private Groups

This section describes the function of the Public and Private Groups folders that are used in Wonderware Historian Trend Client to store and share tags.

#### Section 3 – Time Offset and Target Regions

This section describes how to configure time offset and target region in a trend for tag configuration.

#### Section 4 – Retrieval Styles and Data Transformations in Trend

This section takes you through the steps necessary to configure Retrieval styles and create Custom Retrieval styles in Wonderware Historian Client Trend.

### MODULE 3 – WONDERWARE HISTORIAN CLIENT WORKBOOK

#### Section 1 – Introduction to Wonderware Historian Client Workbook

This section explains the basic functionality of Wonderware Historian Client Workbook.

## Section 2 – Historian Event Retrieval

This section explains the various event tag selection methods and the Historian event retrieval functionality.

## Section 3 – Enhanced Workbook with Excel Functionality

This section explains how to use the features of the enhanced workbook with Excel functionality to create reports to get data for a specified shift.

### MODULE 4 – WONDERWARE HISTORIAN CLIENT QUERY

#### Section 1 – Introduction to Wonderware Historian Client Query

This section introduces Wonderware Historian Client Query uses and operation.

### MODULE 5 – WONDERWARE HISTORIAN CLIENT REPORT

#### Section 1 – Introduction to Wonderware Historian Client Report

This section introduces the uses and operation of Wonderware Historian Client Report.

#### Section 2 – Use of Wildcards in Reports

This section explains the use of wildcards for time options and report editing.

### MODULE 6 – WONDERWARE HISTORIAN CLIENT ACTIVEX CONTROLS

#### Section 1 – Wonderware Historian Client Controls

This section explains the use, properties, methods, and events of the ActiveX controls. This section discusses the aaHistClientTrend and aaHistClientActiveDataGrid controls and their common configuration needs.

[Click here](#) for more details about the courses outlines, detailed agenda and to sign up in order to reserve you training seat.



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