

Historian Server 2014 for System Platform

Course Description

The Historian Server 2014 for System Platform course is a 2-day, instructor-led class designed to provide a fundamental understanding of the features and functionality of Historian Server for System Platform Applications. This course provides lectures and hands-on labs to supply and reinforce the knowledge necessary to use Wonderware Historian Server. The class will demonstrate how to use Historian Server for SCADA and factory data, and how it integrates with ArcestrA technology to extend the capabilities of System Platform applications. This includes how to configure, historize, and retrieve Application Server data using multiple retrieval modes, local and remote summarization, replication, event monitoring, store-and-forward, redundancy, and other features.

Objectives

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

- Historize ArcestrA attributes
- Distinguish between the multiple retrieval modes available
- Retrieve data using Time Domain Extensions
- Configure Historian Server for local data summarization
- Configure a Tier-2 Historian for replication and summarization
- Import, update, and insert history data
- Create and configure events
- Configure and verify the store-and-forward functionality
- Configure a redundant historian and test its behavior

Audience

Application developers, engineers, system integrators, consultants, and other individuals who need to use Historian Server to store and analyze Galaxy data

Prerequisites

- Completion of the Application Server course
- Manufacturing industry experience
- Some knowledge of Transact-SQL would be helpful

Course Outline

Module 1 – Introduction

Section 1 – Course Introduction

This section describes the Wonderware Historian Server for System Platform course. It also outlines the Wonderware products and how Historian Server integrates with product offerings.

Section 2 – System Platform Overview

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

Section 3 – Introduction to Historian Server

This section contains a detailed explanation of the system requirements and architectures necessary for Historian Server for System Platform Applications. It also defines the key features available in Historian Server.

Section 4 – System Requirements and Licensing

This section gives an overview of the general hardware recommendations and software requirements to install Wonderware Historian Server. It also explains how the licensing model works.

Module 2 – Historian Server Configuration

Section 1 – ArcestrA System Management Console Interface

This section describes the ArcestrA System Management Console and explains how it is used. It also explains Historian registration and security.

Section 2 – Historian Server and System Platform

This section defines historization and describes configuration features within Historian Server. This section also describes data mapping and Historian Server storage modes.

Section 3 – Historian Parameters

This section contains general configuration requirements for Historian Server. It also explains how to track configuration and historical data changes.

Module 3 – Data Retrieval and Time Domain Extensions

Section 1 – Data Retrieval Subsystem

This section provides a detailed explanation of the data retrieval subsystem and its features. It also outlines Historian Server OLE DB provider and explains its query syntax.

Section 2 – Retrieval Modes

This section describes Historian Server retrieval modes and how to specify retrieval mode in the query syntax.

Section 3 – Retrieval Options

This section provides a detailed explanation of Historian Server extensions wwResolution, wwCycleCount, wwEdgeDetection, and wwFilter, and how they are used to retrieve time-based data.

Section 4 – Advanced Retrieval Modes

This section describes advanced Historian Server retrieval modes and how they are used to retrieve time-based data.

Module 4 – Summaries and Data Replication

Section 1 – Data Summarization

This section introduces the concept of summarizing data and provides a detailed description of analog and state summary replication. It also describes how to summarize data on a local Historian Server.

Section 2 – Data Replication on a Tier-2 Historian Server

This section explains how summary and state replication works for Tier-1 data onto a Tier-2 Historian Server. This section also describes how to specify the naming schemes for the replication process.

Section 3 – Replicated Data Retrieval

This section describes how to retrieve replicated data from Tier-1 and Tier-2 historians using SQL queries.

Module 5 – Manual Modification of History Data

Section 1 – Data Definitions

This section describes the different data categories stored by Historian Server.

Section 2 – INSERT and UPDATE to Manually Modify History Data

This section describes data versioning, T-SQL INSERT and UPDATE functionality, and how to manually insert and modify data using SQL queries.

Section 3 – Data Import

This section describes how to import data using CSV files.

Module 6 – Event Subsystem

Section 1 – Event Subsystem Overview

This section contains an overview of the Historian Server Event Subsystem and explains latency in events configuration.

Section 2 – Event Tag Definitions

This section provides an overview of Historian Server event tags, their characteristics, and usage. It also defines elements associated with event tags, such as event detectors, actions, components, and variables.

Section 3 – ActiveEvent

This section describes Historian Server ActiveEvent Tags and explains how to configure an external event. This section also provides ActiveEvent attributes and uses.

Module 7 – Store-and-Forward and Redundancy

Section 1 – Store-and-Forward Functionality

This section describes store-and-forward functionality and explains how to configure Historian for store-and-forward and how to verify the store-and-forward functionality.

Section 2 – Redundancy

This section contains an overview of Historian redundancy and explains how to configure a redundant Historian Server.