

# AVEVA SYSTEM PLATFORM PART 2



## COURSE DESCRIPTION

The AVEVA™ System Platform Part 2 course is a 4-day, instructor-led class designed to provide a fundamental understanding of the features and functionality of AVEVA Historian for both AVEVA Application Server and AVEVA InTouch HMI applications. This course provides lectures and hands-on labs to present and reinforce the knowledge necessary to use Historian for SCADA and factory data. This information includes how to configure, historize, and retrieve historical data; retrieve auto-summary data; implement data replication to a remote historian; and insert, update, and import historical data.

The course also provides lectures and hands-on labs to supply and reinforce the knowledge necessary to use AVEVA Historian Client and AVEVA Insight Client. The AVEVA Historian Client trending, analysis, and reporting software offers a suite of data analysis and reporting clients that maximize the value of data stored in AVEVA Historian Server. AVEVA 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. AVEVA Insight allows easy HTML5 web dashboards for your Historian data.

## OBJECTIVES

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

- Configure Start and configure Historian
- Configure and historize Application Server and InTouch HMI data
- Retrieve data with Historian tools
- Retrieve data with SQL queries
- Distinguish between retrieval modes
- Use time-domain extensions in SQL queries
- Update, insert, and import historical data
- Use a Tier-2 Historian for replication and summarization
- Backup and restore Historian data
- Use Historian Client Trend to retrieve and represent historical data in graphical and tabular formats.
- Use Historian Client Workbook to retrieve historical data in Microsoft Excel
- Use Historian Client Query to build and execute queries against Historian Server and display results in the Historian Client Query and in Microsoft Excel
- Use Historian Client Report to execute queries using Historian Client Query and represent the results in Microsoft Word

## AUDIENCE

Individuals who need to historize, analyze, and maintain data from Application Server or an InTouch HMI application. Plant floor operators, managers, and other individuals whose jobs include using Historian data for assessment and reporting within production or administrative environments.

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## PREREQUISITES

- Familiarity with Windows
- Manufacturing industry experience (recommended)

## COURSE OUTLINE - AVEVA HISTORIAN

### MODULE 1 - INTRODUCTION

- Section 1 – Course Introduction
- Section 2 – Introduction to Historian Server
- Section 3 – System Requirements and Licensing

### MODULE 2 - HISTORIAN CONFIGURATION

- Section 1 – Configurator
- Section 2 – Historian and the System Management Console
- *Lab 1 – Configuring Historian*

### MODULE 3 - HISTORIAN AND SYSTEM PLATFORM

- Section 1 – Integrating Historian Server with System Platform
- *Lab 2 – Creating a Galaxy*
- *Lab 3 – Historizing a Galaxy*

### MODULE 4 - HISTORIAN AND INTOUCH HMI

- Section 1 – Historian and InTouch HMI
- *Lab 4 – Historizing an InTouch HMI Application*
- *Lab 5 – Manually Creating IDAS Tags*

### MODULE 5 - DATA RETRIEVAL

- Section 1 – Historian Data Retrieval Tools
- *Lab 6 – Retrieving Data with Historian Tools*
- Section 2 – Data Retrieval Subsystem
- *Lab 7 – Retrieving Data with SQL Queries*
- Section 3 – Retrieval Modes
- *Lab 8 – Using Retrieval Mode*

### MODULE 6 - MANUAL DATA

Section 1 – Section 1 – Data Definitions

Section 2 – INSERT and UPDATE Query Syntax

*Lab 9 – Inserting Data Manually*

Section 3 – Importing and Backfilling Historical Data

*Lab 10 – Importing Historical Data*

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## MODULE 7 – SUMMARIES AND DATA REPLICATION

- Section 1 – Data Summarization and Replication
  - *Lab 11 – Summarizing and Replicating Data to a Tier-2 Historian*
- Section 2 – Summarized and Replicated Data Retrieval
  - *Lab 12 – Querying Replicated Data from the Tier-2 Historian*

## MODULE 8 – HISTORIAN MAINTENANCE

- Section 1 – History Block Maintenance
- Section 2 – Historian Database Management

## COURSE OUTLINE – HISTORIAN CLIENT

### MODULE 1 – INTRODUCTION

- Section 1 – Course Introduction
- Section 2 – Review of Historian Server
- Section 3 – Introduction to Historian Client
- Section 4 – System Requirements and Licensing

### MODULE 2 – HISTORIAN CLIENT TREND

- Section 1 – Section 1 – Introduction to Historian Client Trend
  - *Lab 1 – Using Historian Client Trend Basic Functions*
- Section 2 – Trend Annotations and Data Logs
  - *Lab 2 – Creating Data Logs and Annotations*
- Section 3 – Public and Private Group Organization
  - *Lab 3 – Configuring Public Groups*
- Section 4 – Time Offset and Target Regions
  - *Lab 4 – Configuring Time Offsets and Target Regions*
- Section 5 – Retrieval Styles and Data Transformations in Trend
  - *Lab 5 – Using Retrieval Styles and Data Transformations*

### MODULE 3 – HISTORIAN CLIENT WORKBOOK

- Section 1 – Introduction to Historian Client Workbook
  - *Lab 6 – Using Historian Client Workbook Basic Functions*
  - *Lab 7 – Using the Tag Analysis Wizard*
  - *Lab 8 – Applying Criteria to Historical Data Retrieval*
- Section 2 – Enhance Workbook with Excel Functionality
  - *Lab 9 – Using Excel References with Workbook*
  - *Lab 10 – Creating an Hourly Average Shift Report*

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## MODULE 4 – HISTORIAN CLIENT QUERY

- Section 1 – Section 1 – Introduction to Historian Client Query
- *Lab 11 – Using Historian Client Query*
- Section 2 – Direct Query in Historian Client Workbook
- *Lab 12 – Using Historian Client Query in Workbook*

## MODULE 5 – HISTORIAN CLIENT REPORT

- Section 1 – Introduction to Historian Client Report
- Lab 13 – Using Historian Client Report
- Section 2 – Use of Wildcards in Reports
- Lab 14 – Using Wildcard Time Options and Editing a Report