



AVEVA™ InTouch HMI 2023

Course Description

The tag-based AVEVA™ InTouch HMI course is a 3-day, instructor-led class that explains how to create and configure a Stand-alone InTouch application using Industrial Graphics. The course provides a fundamental understanding of the basic principles of InTouch HMI visualization software and the steps necessary to develop a Human Machine Interface system for a plant floor or facility. You are guided through setup, layout, best practice concepts, features, and functions of the InTouch HMI software platform. Hands-on labs reinforce concepts and features.

Objectives

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

- Create an 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 tag
- Build displays with pre-built library graphics, widgets, and controls
- Build displays with custom graphics
- Visualize and interact with data
- Present and manage live and historical alarms
- Configure and apply security to an application
- Log and trend historical data
- Display real-time data in a trend
- Back up and restore an application
- Distribute an application to a production environment
- View application windows and graphics in a browser

Target Audience

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
- Microsoft Excel for modifying a .csv file



Course Outline

Module 1 – Introduction

Section 1 – Course Introduction

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

Section 2 – InTouch Software Overview

This section will introduce the InTouch, explains the benefits of using InTouch, discusses its key capabilities, and provides 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 17.2).

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 – WindowMaker Overview

This section will provide an overview of using WindowMaker.

Section 2 – WindowViewer Overview

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

Section 3 – Configure and Test Navigation Using WindowMaker

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 – Industrial Graphic and Situational Awareness Visualization

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 Graphic Editor for designing entire window graphic assemblies and custom graphics.

Section 4 – Custom Properties and Animations in Symbols

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

Section 5 – HTML 5 Widgets

This section will discuss InTouch HMI support for the web technology called HTML5 Widgets.

Module 5 – InTouch Alarms

Section 1 – InTouch Tagname Alarm Configuration

This section will explain how to configure a discrete alarm, and 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 of 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 Overview – Data Logging and Trending Tools

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 – Using Historian 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.

Section 3 – Historian Logging

This section will explain that Historian is already installed, configured, licensed, and running, how to configure Historian Logging, and logging data for tags.

Section 4 – Trend Pen

This section will explain how to use Trend Pen.



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 – ArchestrA Symbol QuickScript.NET

This section will provide an overview of ArchestrA Symbol QuickScript.NET, and describe the features and functions that are unique to each script type. This section will also explain the QuickScript Editor.

Section 2 – ShowGraphic() and InTouch Windows

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

Section 3 – ShowGraphic and Industrial Graphics

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 – Lock 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 Distribution

Section 1 – Network Application Distribution

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

Module 11 – Application Maintenance

Section 1 – Manage Industrial Graphics

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

Section 2 – Converting Windows to Industrial Graphics and Frame Windows This section will explain how to set up windows for use in Web Client.

Section 3 – Application Backup and Restore

This section will explain how to back up your Stand-alone + Symbols InTouch application. This section will go on to explain how to restore a Stand-alone + Symbols InTouch application.

Module 12 – Web Client

Section 1 – Web Client

This section will describe the Web Client features and dependencies.