



AVEVA™ System Platform Get Started

2023 R2

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Welcome to AVEVA System Platform

AVEVA System Platform is an industrial software platform that uses System Platform technology for human machine interface (HMI), operations management, Supervisory Control And Data Acquisition (SCADA), and production and performance management.

System Platform contains an integrated set of services and an extensible data model to manage plant control and information management systems. System Platform supports both the supervisory control layer and the manufacturing execution system (MES) layer, presenting them as a single information source.

Modular applications sit on top of System Platform. Other third-party integrators are delivering a growing inventory of application components that use System Platform services.

What's new in System Platform

These release notes describe the new and enhanced functionality available in System Platform and provide an overview of the most significant changes added in each of the following releases:

[June 2024](#)

[December 2023](#)

[July 2022](#)

June 2024

System Platform 2023 R2 P01

This patch release includes the following changes:

- Incorporation of hot fixes for all products
- Miscellaneous bug fixes
- Improvements to the OMI web client.

December 2023

[New in System Platform 2023 R2](#)

[New in Application Server and AVEVA OMI 2023 R2](#)

[New in InTouch HMI 2023 R2](#)

[New Features in Historian 2023 R2](#)

[New features in Historian Client 2023 R2](#)

[New in Communication Drivers 2023R2](#)

New in System Platform 2023 R2

System Platform 2023 R2 includes the following features, as well as miscellaneous bug and security fixes.

Operations Control and the connected experience

AVEVA Operations Control is an industrial software subscription to one or both of two packages that provide access across both on-premises and cloud applications. This flexibility provides multiple configuration, architecture, and deployment options that support your objectives and meet your requirements.

Adding connected experience to an Operations Control subscription provides the security of federated identity management for authentication and authorization, superseding the segmented approach of individual product security configurations. A per-user common identity is configured, authenticated, and managed through AVEVA

Connect.

The *Getting Started with AVEVA Operations Control connected experience* describes the AVEVA Operations Control and connected experience, how Operations Control differs from perpetual and flex license modes, and benefits of the Operations Control mode with connected experience. You can access it at: *Welcome to AVEVA™ Operations Control* (zoominsoftware.io)

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- Use SVG for the **UpImage** and **DownImage** on a button
- Use SVG for the **Quality & Status** display icons under **Styles** configuration

New in Application Server and AVEVA OMI 2023 R2

Application Server 2023 R2 includes support for the latest versions of Microsoft products as well as a number of new features and hot fixes. Refer to the [GCS Technology Matrix](#) for the list of supported Microsoft products.

Improved user interface

The System Platform IDE has an improved user interface that provides object status at a glance.

New OMI web client

The web client for use with OMI ViewApps is completely new. The new client offers better performance, a look and feel more like the desktop client, and an easier way to make ViewApps available from a browser: you just assign them to an instance of the new `WebViewEngine` object type. The OMI web client is supported by the latest versions of the Google Chrome and Microsoft Edge browsers.

OPC UA scripting

You can now use Application Server object scripts and/or Industrial Graphics scripts to call OPC UA servers. Method calls are executed in the OPC UA server through the OPC UA client, and are supported through the OPC

client in the *OI Gateway Communication Driver*.

Alarm latching and Alarm dismiss

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To view the LATCHED state, enable the LATCHED state in the Alarms and events configuration screen of the IDE. You can dismiss the LATCHED alarms to remove the LATCHED alarms from the current mode of the Alarm Client Control grid. The dismissed LATCHED alarms will be visible in the recent mode of the Alarm Client Control.

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Use the Credential Manager utility to securely store and manage login credentials. You can retrieve the stored credentials (from AVEVA Application Manager for standalone applications, and from the Application Server for managed applications) for authenticating access to other components in WindowMaker, WindowViewer, and Alarm utilities.

By default, all named credentials are added to the Administrators group. In addition, we recommend that you add groups to which the users running the application belong. This will allow users to access their credentials even when running the application in a non-administrator mode, such as WindowViewer.

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- Use SVG for the **UpImage** and **DownImage** on a button
- Use SVG for the **Quality & Status** display icons under **Styles** configuration

Support for user defined types (UDTs) in InTouch

This feature supports the following:

- Manually create one or more UDTs, with nesting up to six levels

- Manually create one or more UDT instances from a UDT
- Bind individual UDT instance members to I/O
- Reference individual UDT instance members in Industrial Graphics symbols
- Import and export UDT to a JSON file
- Edit UDT in bulk using external JSON editor
- Edit and override UDT Properties except Name and Type
- Changes in a data type are reflected immediately in the **User Defined Type** view
- Configure the owning object of an embedded graphic and point to an UDT instance. During runtime, the me. relative reference is replaced by the UDT instance. You can also update the owning object to a different UDT instance during runtime.
- Intellisense for UDT instances lists all members and member data structures for the immediate level only. The Industrial Graphic Editor supports intellisense in scripting, animation, and custom properties. Native InTouch supports intellisense in scripting only.
- You can configure UDTs in Industrial Graphic animations and native InTouch animations.
- You can configure UDTs in an Industrial Graphic script and a native InTouch script.
- Update the alarm properties in the **Properties** grid. In the WindowViewer, you can view the members of an instance that are generating alarms and display them in an Alarm Client Control.
- The UDT members of an instance can log data to LGH files or the Historian, as with other InTouch tags.
- The UDT member of an instance behaves the same as other InTouch tags in the MapApp.
- The UDT member of an instance works the same as other InTouch tags in the web client.

Introducing the new Unified Identity

AVEVA Unified Identity enables Single Sign-On (SSO) for all Operations Control products on a given node with AVEVA Connect cloud capabilities. It supports common user authentication, authorization, and access entitlements across AVEVA Operations Control products. It includes the following:

- User Authentication via a single common user ID, configured and managed within AVEVA Connect.
- User Authorization via roles, groups, and rules (allow/deny).
- Single Sign-On: After you sign on to a supported product, subsequent sign-ons to that product or other supported products on the node are automatic.

The connected experience requires access to the AVEVA Connect cloud repository from each node where you want to use it.

Option to secure InTouch application folder

To restrict access to the applications folder for Standalone applications, a new check box has been introduced in Application Manager under **Tools > Security**. When the security feature is enabled on a node, strict read and write permissions are applied to the InTouch View Application.

Update default local working directory for NAD and Managed InTouch application

An option **Enable local working directory integrity check for Managed and NAD InTouch Applications** has been

added in the Application Manager, under **Tools > Node properties > Security**. If this option is enabled, when launching WindowViewer for a Managed InTouch application and NAD (Network Application Development) application, a file time stamp and file content hash comparison is performed between the deployed application and the application in the local working directory. If the files do not match, WindowViewer will copy the deployed application to the local working directory and run the application.

New Features in Historian 2023 R2

AVEVA Operations Control connected experience sign-on support

Historian supports the AVEVA Operations Control connected experience with AVEVA System Platform.

The server must be configured with an advanced license to retrieve data for expressions.

Note that the following still require Windows credentials:

- HTTP communication (HTTPS is required)
- Replication
- SDK connection using Classic Historian (WCF) Windows Communication Foundation.
- Managing Historian with System Management Server

Changes to default Historian communications protocol and ports

The Historian communications protocol has been updated. The port for the new protocol is 32565 by default. The previous port, 32568, is supported as a legacy port for connecting servers that are running older software that doesn't support the new protocol.

Tier 1 Historians, AppEngines, and Platforms that support the new protocol and use the default 32568 port are updated automatically when the software is updated to the latest version. The local IDAS is also updated automatically. Existing connections that use legacy custom ports will need to be updated manually. External firewalls may need to be updated to allow connections on the new port.

- For a remote IDAS, change the port with the remote IDAS configurator.
- Update replication servers via the OCMC.
- Update application servers that use old ports in the engine definitions in the Galaxy.

Connecting servers that support the new protocol but are still using a custom legacy port will show as using the HCAL (Classic) protocol on the Data Acquisition page. (Note that connecting servers on older software will also use the HCAL (Classic) protocol. This is expected. Older software does not support the new protocol, and should still connect on the legacy port and use the classic protocol.)

If you have connecting servers that support the new protocol but still use the legacy port, the following warning appears once each hour in the Operations Control Logger:

The Historian Client Access Point running on XXX:XXX is an older version using a legacy protocol. Please update the port in the connection definition to point to the new Historian Client Access Point (port 32565 by default).

For more information, see the following sections in the *Historian Administrator Guide*:

- *IDAS Security and Firewalls*

- *Configuring IDAS on a Remote Node*

Tags support multiple languages in Historian Client Web, Historian Client Query, and Historian Client Trend

You can now configure multiple translations for the same tag in Historian Client Web, Historian Client Query, and Historian Client Trend.

The language for these applications will be set automatically based on the operating system or browser language.

HTTPS-based communications

Internal Historian network communication is more secure and easily integrated with HTTP proxies.

Live data via iData

You can view latest historical values as the “live” values on OMI displays.

Alarm grid filter and sort in Historian Client Web

Browser-based alarm history in Historian Client Web supports more filtering and sorting options.

Historian Client Web/Excel integration

Easily transition from Historian Client Web charts to detailed analysis in Excel.

New look for Historian Client Web

The Historian Client Web interface is updated to be more powerful and easier to use.

Export/import Historian Client Web content

Include saved charts in CSV configuration import/export.

New features in Historian Client 2023 R2

Ad-Hoc expressions in Trend

Historian Client Desktop Trend control and its embedded ActiveX controls now support Ad-Hoc expressions. The Expression application and pane now appear in the Tag Picker with the Textbox editor.

For embedded ActiveX controls, scripting is supported for ad-hoc expressions in InTouch applications.

Ad-hoc expressions are supported with both SQL and REST connections.

Expanded ad-hoc expression functions

New functions added to ad hoc expressions make results simpler and more valuable.

Runtime language switching

Runtime language switching is supported for Trend Control, Query Control, Embedded control, and the Excel and Word ActiveX controls. It's supported for the following fields:

- Description
- EngineeringUnit
- Message On/Message Off
- Alias

If there is no value for the requested language for a field, the default language is used.

Improved Trend control for InTouch

Configuration is simplified for the Trend control within InTouch. The control is available in the graphic editor and can be placed in InTouch directly.

AVEVA Identity Manager Server login

Trend and Query support single sign-on authentication with AVEVA Identity Manager. This is restricted to REST-based connections and is not available for SQL-based connections.

Additional script functions for OMI Trend App and Graphic Editor support

The event tags TagAdded and TagRemoved have been added and are available at the Graphic level and in the HistoricalTrendApp control.

General performance improvements

Performance has been improved across the Historian Client controls.

Microsoft Office Historian Client Workbook improvements

The classic Historian Client Workbook add-in has been updated. Note the following:

- Microsoft Office is optional. If you install Office after installing Historian Client, the Historian Client add-ins do not appear in the list of Office add-ins. Run the Historian Client installation program and repair the installation to load the Office add-ins.
- When you perform a custom installation of Microsoft Office (32-bit), you must install Office Shared Features and Office Tools so that the Historian add-ins for Workbook or Report can be loaded.

Note: Make sure that you are not using the 64-bit version of Microsoft Office.

Tool for migrating from Historian Client Workbook to the newer Excel task pane add-in

The Excel Migration Tool updates Excel workbooks created in Historian Client Workbook to formulas compatible with the newer Historian Excel task pane add-in.

This tool is supported for files created in Excel 2016 or later.

For more details, see the *Migrate data from Historian Client Workbook to the Excel add-in* section in the *AVEVA Historian Client User Guide*.

New in Communication Drivers 2023R2

OPC UA Methods Support

Client applications (such as Application Server) can call a method in an OPC UA server through the OPC UA client in the Gateway Communication Driver.

July 2022

[New in System Platform 2023 R2](#)

[New in Application Server and AVEVA OMI 2023 R2](#)

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- Edit and override UDT Properties except Name and Type

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- Single Sign-On: After you sign on to a supported product, subsequent sign-ons to that product or other supported products on the node are automatic.

The connected experience requires access to the AVEVA Connect cloud repository from each node where you want to use it.

Option to secure InTouch application folder

To restrict access to the applications folder for Standalone applications, a new check box has been introduced in Application Manager under **Tools > Security**. When the security feature is enabled on a node, strict read and write permissions are applied to the InTouch View Application.

Update default local working directory for NAD and Managed InTouch application

An option **Enable local working directory integrity check for Managed and NAD InTouch Applications** has been added in the Application Manager, under **Tools > Node properties > Security**. If this option is enabled, when launching WindowViewer for a Managed InTouch application and NAD (Network Application Development) application, a file time stamp and file content hash comparison is performed between the deployed application and the application in the local working directory. If the files do not match, WindowViewer will copy the deployed application to the local working directory and run the application.

New in Historian 2023

The AVEVA Historian 2023 release includes these features:

Ad hoc expressions in Historian Client Web and SQL queries

Replication to AVEVA PI and AVEVA Data Hub

Secure web access (HTTPS) that is easy to configure and use

Enhanced Excel add-in

- Streamlined workflow for creating reports
- New "Detailed Values" option
- "Last" (cyclic) option added to "Periodic Values"

Easily backfill to any replication server up to 10x faster (not just auto-summary)

Remote IDAS

- Now firewall-friendly, no longer requiring open inbound TCP ports
- Configuration via "pull" mechanism

Operations Control Management Console (formerly "System Management Console" or "SMC")

- Easy management of storage location indexes
- Supports Windows Integrated Login rather than specific credentials

Modernized Interface

- New Operations Control Management Console icons
- Optional Historian Client Web "new experience" adapted from AVEVA Insight

Hosted Help Integration

- Compiled help files (CHM) replaced with web-based help

Miscellaneous

- More consistent pen colors with default color based on the associated engineering unit dimension (Web and Desktop)
- "Daily" summary statistics adjust for daylight savings time in SQL queries
- InTouch alarm groups are now included in alarm history, and can be used as filters in the Historian Client

Web alarm grid

New in Historian Client 2023 R2

The AVEVA Historian Client 2023 R2 release includes these features:

Modernized Interface

- Ribbon bar for Trend and Query
- Updated interface for embedded Trend and Query controls
- New application icons

Option for auto-scale to always automatically update in Trend

Configurable color for cursor difference color in Trend

Simplified queries and improved alarm queries in Query

Enterprise license support

Hosted Help Integration

- Compiled help files (CHM) replaced with web-based help

Miscellaneous

- More consistent pen colors with default color based on the associated engineering unit dimension
- "Daily" summary statistics adjust for daylight savings time in SQL queries

Use of Microsoft Office with Historian Client

- Microsoft Office is optional. If you install Office after installing Historian Client, the Historian Client add-ins do not appear in the list of Office add-ins. Run the Historian Client installation program and repair the installation to load the Office add-ins.
- When you perform a custom installation of Microsoft Office (32-bit), you must install Office Shared Features and Office Tools so that the Historian add-ins for Workbook or Report can be loaded.

Note: Make sure that you are not using the 64-bit version of Microsoft Office.

New in Communication Drivers

Revised Standard User Privileges and Options

A Standard User will now have only read rights. However, the Standard User will have an option to get the

additional user privileges for a specific time interval by providing the OI Administrator user credentials. For more information on standard user privileges and getting Administrator Privileges, refer to "Accessing OCMC as a Standard User" in the *Communication Drivers Pack Help*.

Microsoft Edge for Auto-Build

Auto-Build now requires the Microsoft Edge browser.

MQTT

- Publisher: You can now publish payloads encoded in Sparkplug format using the MQTT publisher.
- Dedicated Publishing Hierarchy.
- Import/Export MQTT Publisher configuration.
- Performance improvement in displaying large galaxy configuration.
- MQTT Subscriber now provides hierarchical display of Sparkplug device attributes.

Buffered Data

Communication Drivers Pack supports buffered data up to 10K values/tag.

SuiteLink Fallback

Starting with this release, the fallback mode is set to secure (V3) by default, and the fallback mode to accept unsecure (V2) connections is disabled.

OPC UA Reverse Connect

The OPC UA Reverse Connect feature enables the OPC UA server to initiate a connection with the Gateway Communication Driver. In a secure environment, inbound connections to the OPC UA server are restricted as the server operates behind a firewall. By using Reverse Connect, the firewall restriction is alleviated as the connection is being made from the OPC UA server to the client.

New Security Policy Options

OPC UA now supports two new security policies: Aes128_Sha256_RsaOaep and Aes256_Sha256_RsaPss. Basic125Rsa15 and Basic256 are deprecated and supported only for compatibility reasons. For more information, refer to the *Gateway Communication Driver Help*.

Improved Server Browsing

You can now browse and select available endpoints of the OPC UA server and its supported security policy.

OpenSSL 1.1.1n Support

Gateway Communication Driver now uses OpenSSL 1.1.1n for MQTT, SuiteLink, and OPCUA for secure

communication.

Before you start

This booklet describes a set of essential workflows to get you started building applications with System Platform. It explains the steps to create an OMI ViewApp.

For information about creating InTouch HMI applications, see the *InTouch HMI Getting Started Guide*.

Before you get started building an OMI ViewApp, you must install, configure, and activate the licenses of your System Platform products. The last section of this booklet includes a set of tables that list the documentation for each System Platform product.

Installation

Installing System Platform products is a straightforward procedure of selecting options from a series of installation dialogs. You can find more information about hardware and software installation requirements in the *AVEVA System Platform Installation Guide*.

Configuration

Immediately after installation, the Configurator appears to configure various aspects of System Platform, including product licensing, security, and the Historian database. The *AVEVA System Platform Installation Guide* includes guidance for configuring System Platform products.

Licensing

All System Platform products must have their licenses activated to be fully functional. Before you can complete the procedures described in this booklet, you must activate your product licenses and subscriptions.

AVEVA Operations Control connected experience

AVEVA Operations Control is an industrial software subscription to one or more of two packages that provides access across both on-premises and cloud applications. This flexibility provides multiple configuration, architecture, and deployment options that support your objectives and meet your requirements.

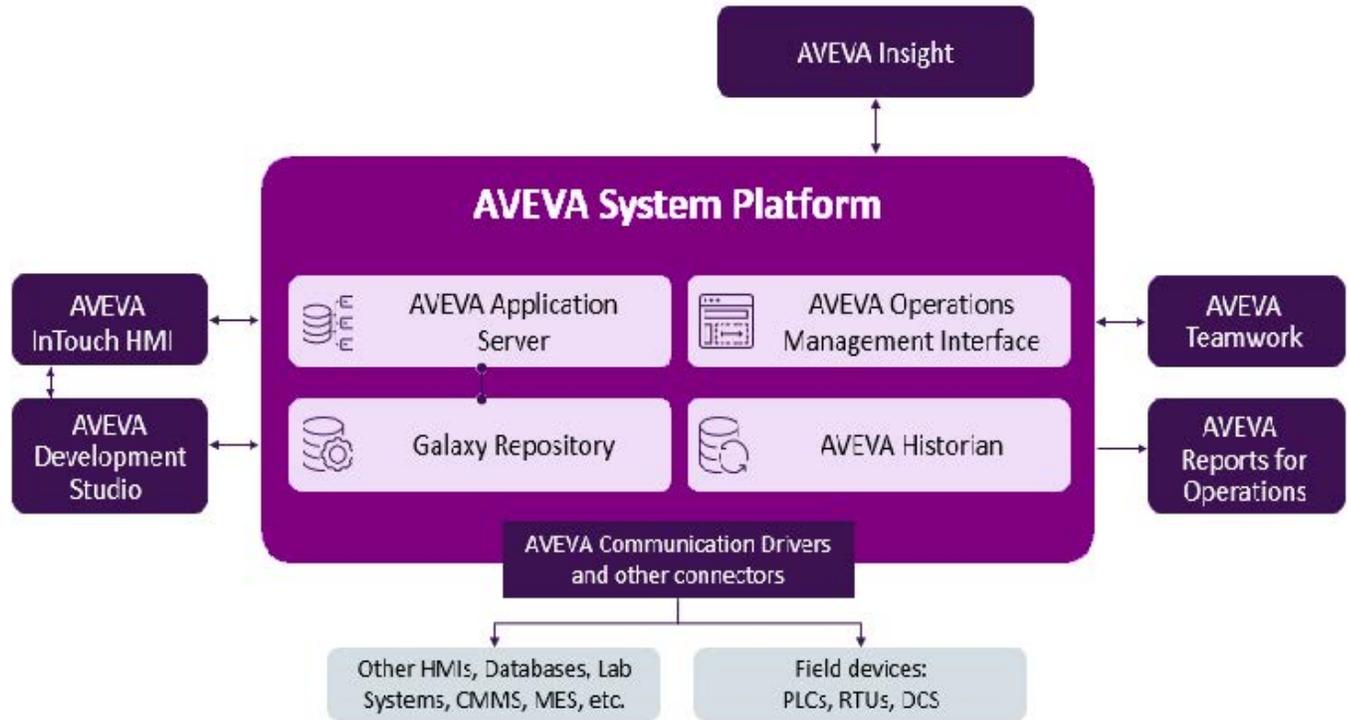
Adding connected experience to an Operations Control subscription provides the security of federated identity management for authentication and authorization, superseding the segmented approach of individual product security configurations. Authentication is via a unified AVEVA ID, configured and managed through AVEVA Connect.

The connected experience provides stable user account and credential management across all products, and streamlines secure access to your licensed products, applications, and data.

AVEVA System Platform functional components

The following figure shows a functional representation of System Platform, which incorporates an architectural

framework.



The framework consists of server-side configuration- and deployment related components. In System Platform, these components include a centralized object repository (Galaxy Repository), an integrated development environment (IDE), and a database to store historical data (Historian).

AVEVA Application Server

AVEVA Application Server provides an object-based framework repository to construct an asset hierarchy of your physical processes. This repository, called a Galaxy, is built on a SQL Server database that manages the deployment and operation of the run-time elements that form a System Platform application.

AVEVA Development Studio

AVEVA Development Studio is an engineering environment for developing, maintaining, and managing for supervisory SCADA and HMI application development. It provides a shared development environment that helps you drive standards and best practices across your company.

Visualization and analysis clients

Visualization and analysis clients enable you to visualize real-time and historical data from System Platform.

- AVEVA InTouch HMI provides an optional visualization capability for control and optimization of any industrial and manufacturing process through unparalleled situational awareness.
- AVEVA Operations Management Interface (OMI) delivers immersive control applications that weave context

throughout the visual design, including situational awareness concepts, for improved operator performance. With AVEVA OMI, you can create responsive visualizations that organize content based on user devices. These visualizations use AVEVA System Platform's asset model hierarchy to drive intuitive navigation, adapting content and context, based on user selection.

- AVEVA Insight is an AI-infused SaaS application for asset reliability and operational performance visualization for hybrid markets. Users can access critical asset and process data with powerful visualization tools that drive prescriptive actions, ranging from self-service analytics with no programming required, to comprehensive analytics for in-depth analysis of critical assets and processes.

AVEVA Historian

AVEVA Historian is a process database integrated with operations control, enabling access to your process, alarm, and event history data. It stores plant data from Communication Drivers and other data sources, allowing operators to make real-time decisions from a secure and trustworthy set of industrial data. AVEVA Historian also contains summary, configuration, and system monitoring information. AVEVA Historian enhances and is tightly coupled to Microsoft SQL Server.

Device integration tools

System Platform can connect to a diverse set of data sources to integrate all plant and industrial data. The System Platform IDE offers I/O auto-assignment and I/O mapping features to streamline device integration and data access.

Data sources include OPC and OPC UA Servers, databases, and any application that exposes data from an API such as XML, SQL, HTTP, or .NET. In addition, a library of device integration tools provide data from the factory floor.

- Communication protocols provide data from PLCs and other factory devices to HMI applications. These protocols can be used with any Microsoft Windows program or supervisory application capable of acting as a DDE, FastDDE, OPC, OPC UA, or SuiteLink™ client.
- A Communication Driver encapsulates the functionality of an I/O server in the System Platform environment. Communication Drivers are models of the network and devices associated with a specific HMI application. The hierarchy of the the Communication Drivers is the same as the hierarchy of the actual devices.

AVEVA System Monitor

AVEVA System Monitor keeps a watchful eye on the critical performance indicators associated with your AVEVA software applications and the underlying hardware to proactively maintain healthy systems for easy maintenance and reliability.

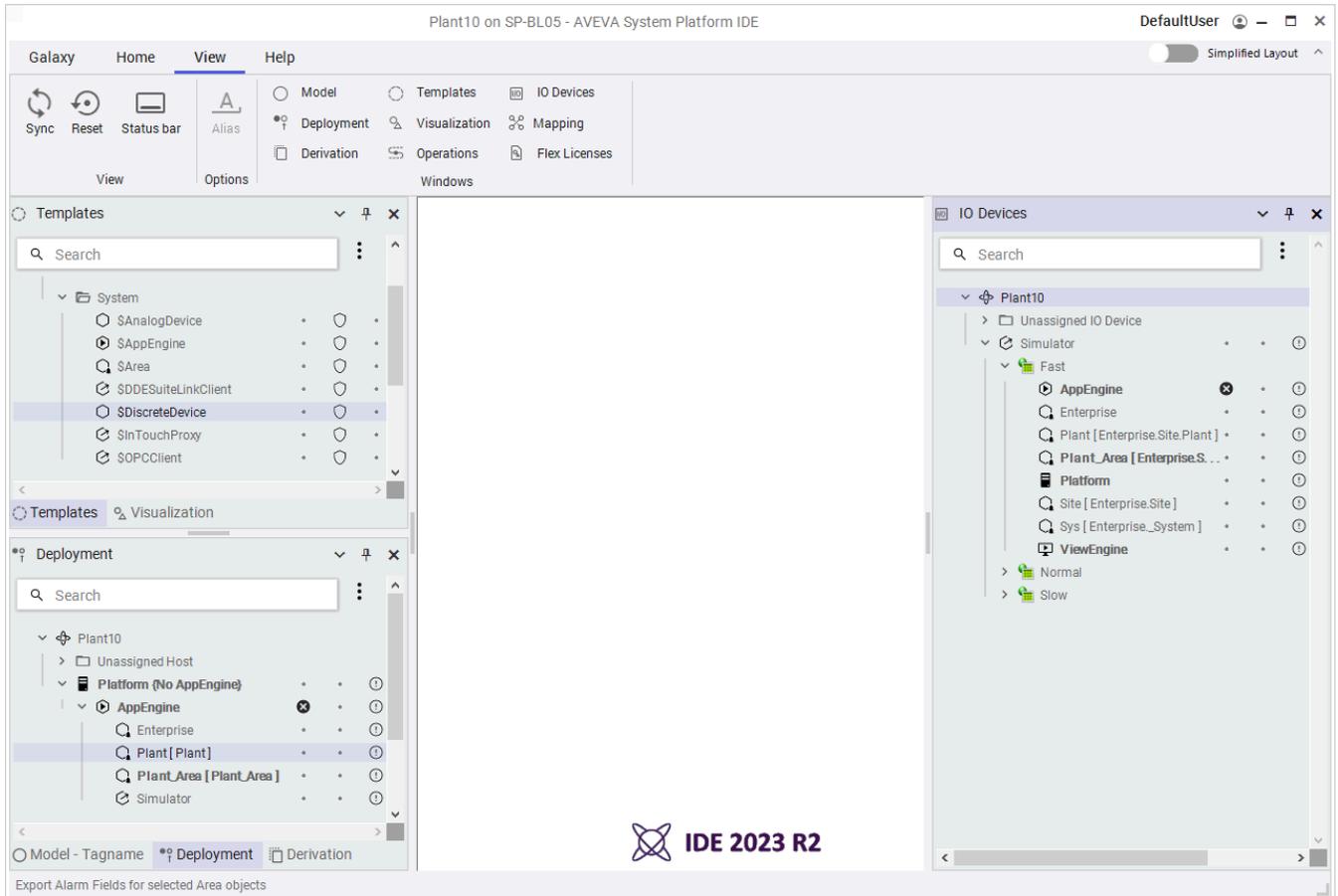
Other tools

System Platform readily integrates with other applications including:

- AVEVA Teamwork is a Software-as-a-Service (SaaS) app that allows users to perform tasks, achieve learning goals, identify and manage issues, and capture and document standards. AVEVA Teamwork enables industrial organizations to implement skills development, knowledge sharing, and collaboration management across their enterprise from the cloud.
- AVEVA Reports is no-code software with simple drag-and-drop, point-and-click configuration, and integration of real-time sources and manual data to HMI/SCADA, historians, enterprise software and relational databases.

Development environment

The System Platform IDE and AVEVA InTouch HMI WindowMaker are typically installed on the same computer, referred to as the System Platform Development Server. You use the System Platform IDE to build your AVEVA OMI ViewApps and InTouch HMI managed applications.



Start the System Platform IDE

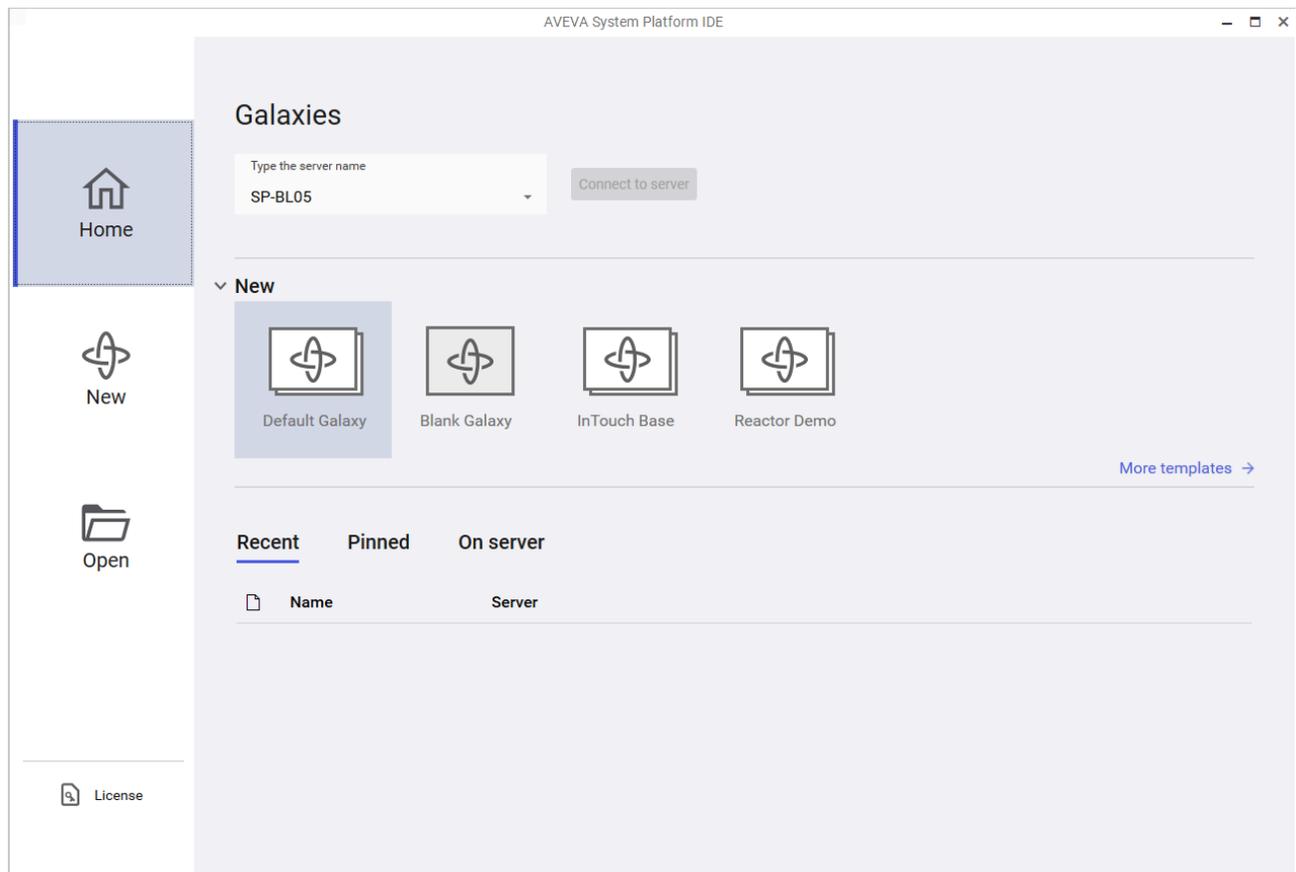
You start the System Platform IDE by selecting the **System Platform IDE** icon from from your computer's **Start menu** or the Windows **Apps** window.

To start the System Platform IDE

1. Open the Windows **Start** menu.
2. Locate the **AVEVA System Platform** app group.
3. Select the **AVEVA System Platform IDE** folder.



The **IDE Home** dialog box appears.



Some details

- You must create and connect to a Galaxy before the System Platform IDE opens.
- Your product licenses or subscriptions must be activated before starting the System Platform IDE
- You must be a member of the aaConfigTools Windows user group to connect to a Galaxy from the IDE. The aaConfigTools user group is created during System Platform installation. Assign users to this group through the **Local Users and Groups** utility of the Windows Control Panel.
- For more information, see "Steps to Create a Galaxy" in the *Application Server Help*.

Some definitions

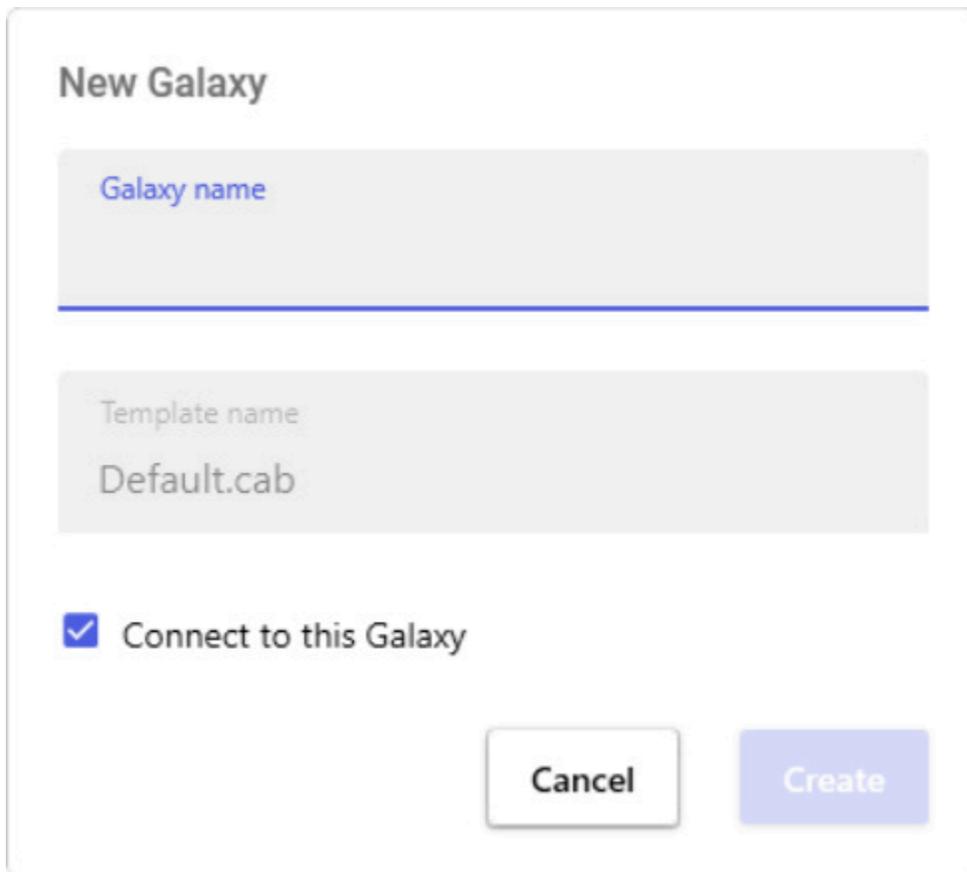
- Galaxy - The entire application. The complete system consisting of a single logical name space (defined by the Galaxy Database) and a collection of Platforms, Engines and objects. It can includes one or more networked computers that constitute an automation system. This is referred to as the Galaxy Namespace.
- Galaxy database - The relational database containing all persistent configuration information like templates, instances, security, etc. The galaxy database is created when you create a galaxy.
- Galaxy repository - Can contain one or more Galaxy Databases.

Create a Galaxy

You must connect to a new or existing Galaxy each time you start the System Platform IDE.

To create a Galaxy

1. Start the System Platform IDE.
2. Select the **New** button and then select a galaxy template. The **New Galaxy** dialog opens.



The image shows a dialog box titled "New Galaxy". It has two input fields: "Galaxy name" (with a blue underline) and "Template name" (with "Default.cab" entered). Below the fields is a checked checkbox labeled "Connect to this Galaxy". At the bottom right are two buttons: "Cancel" and "Create".

3. Enter a Galaxy name in the **Galaxy name** field. Complete the fields of the **New Galaxy** dialog box.
4. Click **Create** to begin creating a new Galaxy.
5. Click **Close** after the new Galaxy is created.

Some details

- You can only create a new Galaxy on a computer with the Bootstrap and Galaxy Repository software installed.
- The IDE automatically connects to the newly created Galaxy when the "Connect to this Galaxy" checkbox is enabled.
- Typically, you will select the **Default.cab** as the Galaxy type to build AVEVA OMI ViewApps.

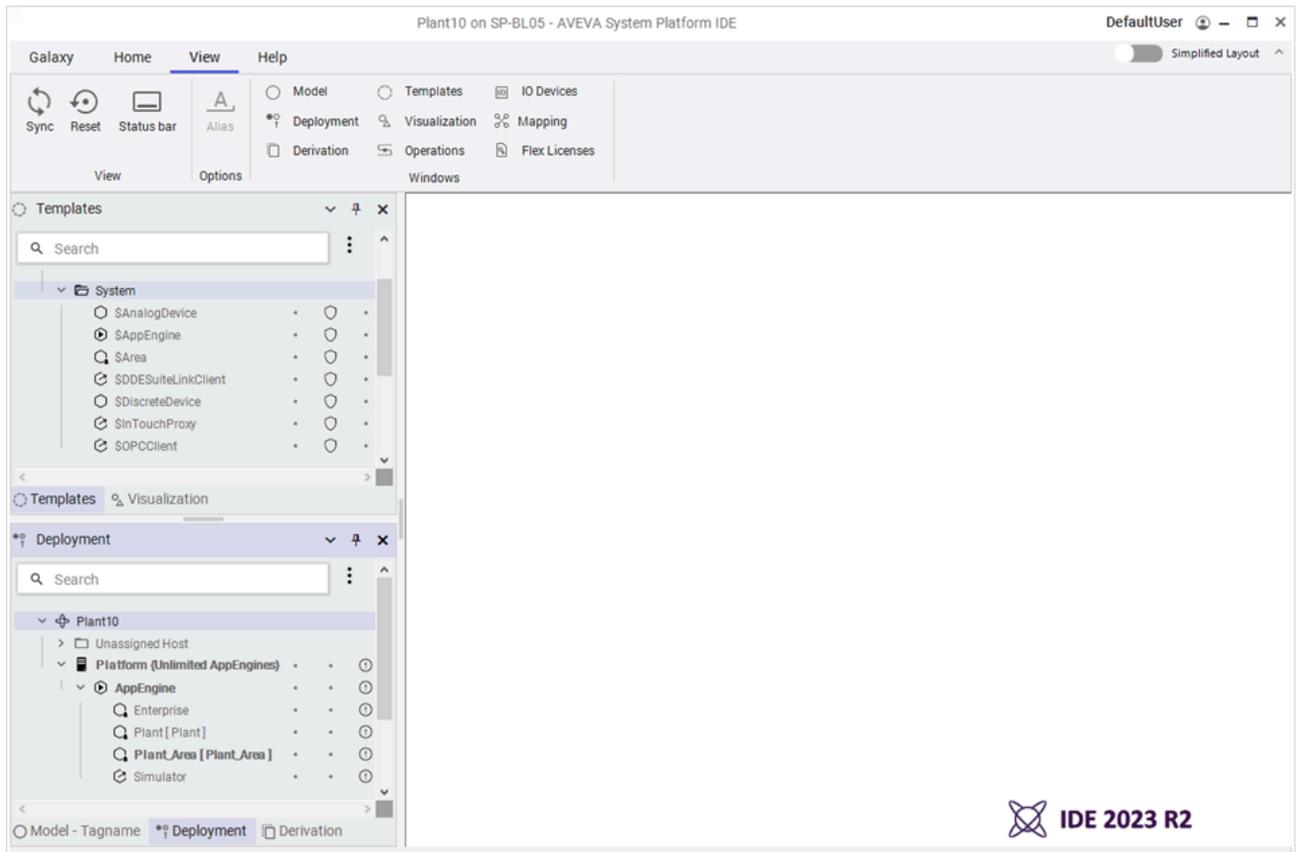
Connect to a Galaxy

You must connect to a Galaxy before you can perform any work on a ViewApp using the System Platform IDE.

To connect to a Galaxy

1. Start the System Platform IDE.
2. Select the **Recent**, **Pinned**, or **On server** tab and then select the Galaxy that you want to open.
3. Select the **Open** icon.

The IDE opens and shows the different views of your Galaxy.



The IDE provides different ways to view the structure of the Galaxy and how it will be deployed to run time.

Some details

- For more information, see "Connect to a Galaxy" in the *AVEVA Application Server Help*.

Run the default System Platform ViewApp

System Platform provides a set of default symbols, apps, and other content, and templates that are accessible from the System Platform IDE. Folders containing default content and templates are located in the **Template Toolbox** and **Graphic Toolbox**.

A default ViewApp is also included. After deploying the ViewApp, you can run immediately without any editing.

To run the default ViewApp

1. Select the **Deployment** tab at the bottom left of the IDE.

The Deployment view shows the arrangement of supporting system objects that are required to run a ViewApp. Beneath the ViewEngine object is the default ViewApp named OMI_ViewApp_Desktop.

The exclamation point icon  to the right of each object indicates the object is in an undeployed state.

2. Select **Deploy** from the ribbon bar, or right-click and select it from the shortcut menu.
3. Click **OK** from the **Deploy** dialog box.

The **Deploy** dialog box shows the progress of deploying all of the objects. The "undeployed" icon disappears as each object is deployed.

4. On the Windows desktop, locate the **AVEVA Application Manager** icon and open it.
5. Select the ViewApp you want to run and click the **LAUNCH** button.

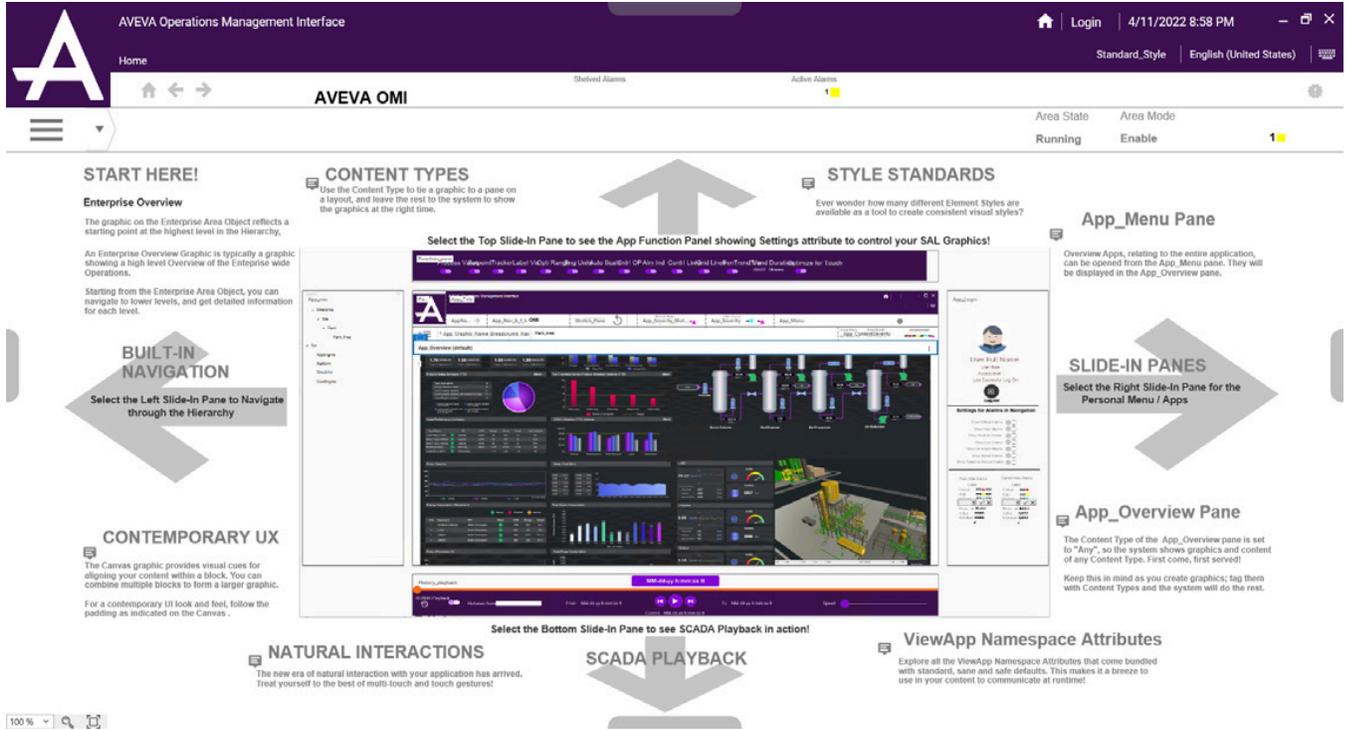
The ViewApp should start running in several seconds.

Some details

- Right-click on deployed objects and select **Properties**. The General tab lists the template the object was derived from.
- Workflow Groups 3 and 4 in this booklet provide more information about deploying and running a ViewApp.

Become familiar with basic ViewApp features

The default ViewApp provided with System Platform demonstrates some of the basic features of a ViewApp.



You can place a slide-in pane on each side of a ViewApp window. During run time, slide-in panes are hidden until you select the tab to extend the slide-in pane and show its contents.

You can place navigation icons within a pane that include short navigation scripts. This allows you to return to the home view or scroll forward or backward through a sequence of views.

System Platform includes a default set of apps that you can drag and drop onto a pane requiring minimal configuration. This example shows the default Map app, which provides controls and touch support to enable users to pan to different areas of the map and zoom in or out to show more or less map detail.

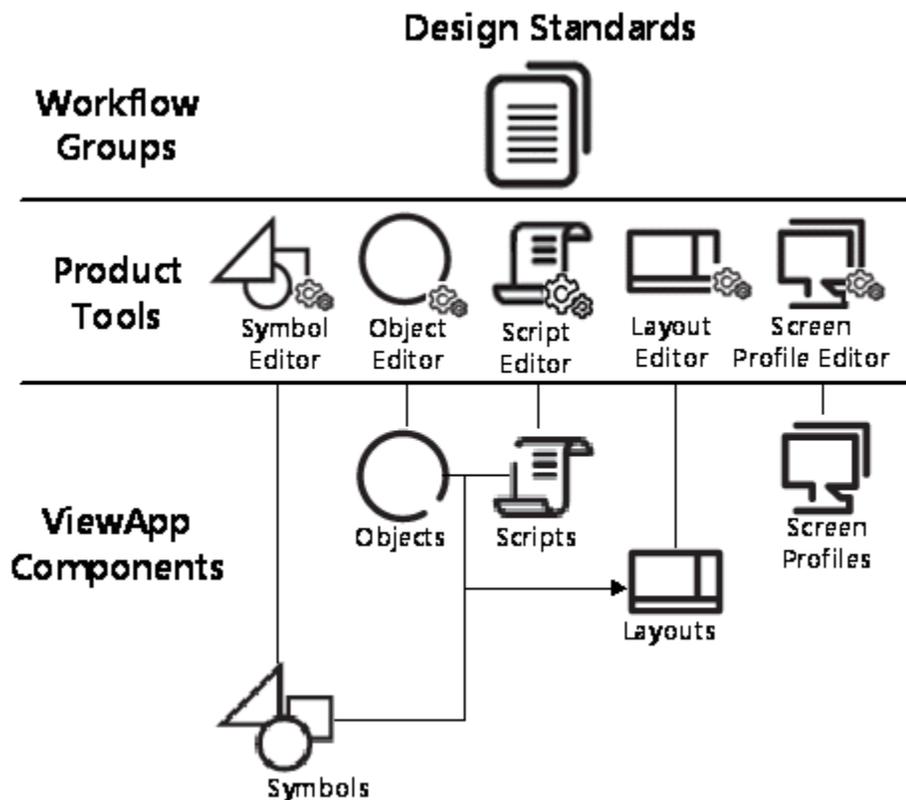


System Platform includes a NavTree app that shows a ViewApp's navigation items arranged in a hierarchical tree. When you select an item from the tree, the content of the selected view are displayed.

Workflow 1: Design standards

You can create symbols and objects that are incorporated into your ViewApps. Rather than create unique symbols and objects for each ViewApp, you can use IDE tools to create a set of reusable template symbols and objects that can be individually configured to meet the differing requirements of your ViewApps.

The following figure summarizes the major workflows to create reusable standards you need to build ViewApps. As shown in the figure, the System Platform IDE includes a set of editors to build reusable symbols, objects, scripts, layouts, and screen profiles.



Design graphic standards

System Platform provides a set of graphic tools and libraries to visualize data in a ViewApp. You can use these tools within the Graphic Editor to create graphics from basic elements, such as rectangles, lines, and text.

You can also embed pre-built graphics from the Industrial Graphic and Situational Awareness libraries in a template to visualize object-specific information. Embedding a graphic enables you to update one graphic template and cascade the changes throughout all of the instances of the graphic in your application.

Standard Industrial Graphics, available from the Visualization folder, show reasonably realistic views of process objects. You can embed an Industrial Graphic in a template or instance of an object to visualize object-specific information.



The Situational Awareness Library contains protected graphics that include multiple visual and functional configurations. These are enabled by selecting values from a set of Wizard Options associated with each graphic. Incorporating multiple configurations in a single graphic reduces the types and numbers of visualization elements you need to develop for an application.



Create a graphic

You can create a symbol in the **Visualization folder** by the following methods:

- **Keyboard shortcut:** Press Ctrl + Shift + H
- **Shortcut menu:** From the **Visualization folder**, right-click on the Galaxy name, select **New**, and then select **Graphic**.
- **Ribbon Bar:** From the **Home** tab, select **Graphic** from the **Create** group

You should see the symbol listed in the **Visualization folder** as Graphic_001 with a blue background. The symbol is selected and you can assign a new name by typing over the default name.

Depending on your development requirements, you can select where and how to store Industrial Graphics.

- Store graphics in the **Visualization folder** if you want to define them as a reusable standard that will be used frequently.
- Store graphics as AutomationObject templates if you want to re-use the graphic in combination with the object functionality.
- Store graphics in the **Content** pane of an AutomationObject instance. Do this if you are unlikely to re-use the graphic in any other situation.

Some details

- Graphic names must be unique within the entire **Visualization folder** hierarchy.
- Valid characters for graphic names include alphanumeric characters, #, and _ (underscore).
- Symbol names cannot contain spaces and the symbol name cannot begin with the \$ character.

Edit a graphic

After you create a graphic, you need to check it out in order to edit it in the **Industrial Graphic Editor**. You also need to check the graphic in the after you are done editing it.

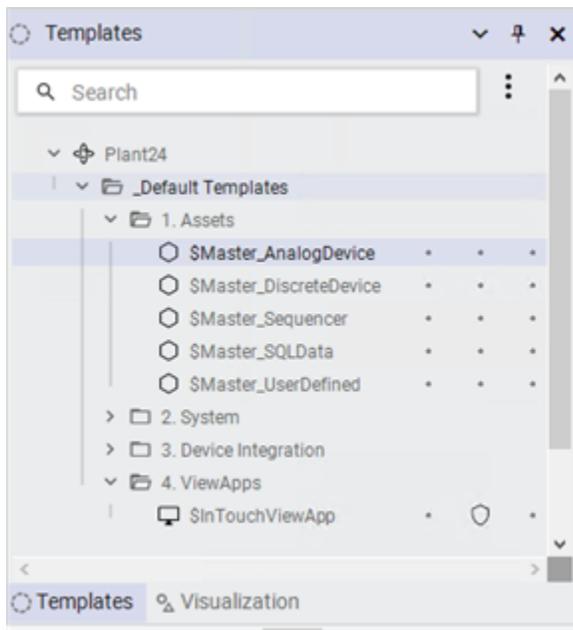
3. Move the cursor over the canvas area.
The cursor shape should change to a plus sign.
4. Holding your left mouse key down, drag the mouse to set the initial size of the graphic element.
5. Select the graphic element and then select an option from the **Configuration** bar to configure the visual appearance of the graphic element.
Continue adding and configuring elements as needed to complete your graphic.
6. Select all graphic elements, right-click, and then select **Grouping >Group** option from the shortcut menu.
7. Save and Close the **Industrial Graphic Editor**. This automatically checks the graphic back into the **Visualization folder**.

Some details

For more information about creating and integrating graphic elements into a ViewApp, see "Working with Graphic Elements" in the *Industrial Graphic Editor Help*.

Create object standards

The **Template folder** is the part of the System Platform IDE that shows host objects organized by folders, from which other object templates are derived or instances are created.



Templates are objects that contain common configuration parameters for object instances that can be re-used. Derived templates are created from base templates. Base and derived templates are identified in the **Template folder** by a dollar sign (\$) as the prefix to their names.

Object instances are the specific devices in your environment that are deployed as part of your ViewApp. You create an instance from a template and then customize the specific instance as needed.

Some details

Only object instances are deployed to the run-time environment. Templates exist in the development environment and cannot be deployed to a ViewApp.

Create a derived template or an instance

Select the template from the **Template folder** that you want to use to create a derived template or instance. You can create a derived template or an instance by the following methods:

- Keyboard shortcut
Derived template: Press Ctrl + Shift + N
Derived instance: Press Ctrl + N
- Shortcut menu
Right-click on the base template, select **New**, and then select either **Instance** or **Derived Template**.
- Ribbon Bar
From the **Home** tab, select **Instance** or **Template** from the **Create** group.

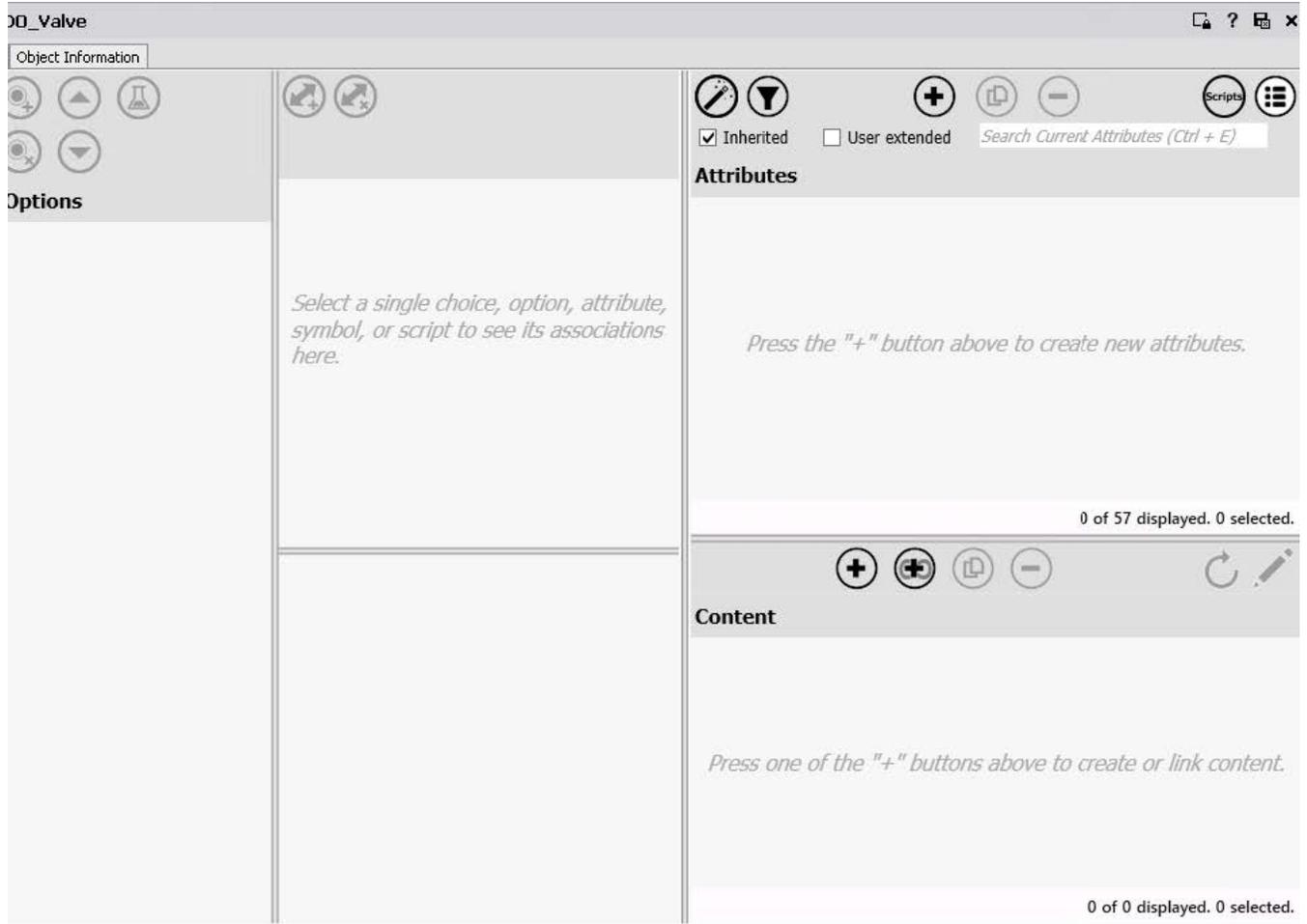
The new derived template is listed in the **Template folder** as \$<ObjectName>_001. A new instance appears in the **Model**, **Deployment**, and **Derivation** views as <ObjectName>_001. You can rename the derived template or instance.

Some details

- All templates you create are derived templates. A derived template inherits attributes and behaviors from the base template. You cannot change the attributes in a base template.
- Derived template and instance names can be up to 32 alphanumeric characters. Derived template and instance names must include at least one letter and cannot include spaces. An instance name cannot have \$ as the first character.

Edit objects

The **Object Editor** contains tabbed pages to modify objects.



Each **Object Editor** page modifies a specific aspect of objects. The **Attributes**, **Scripts**, and **Object** pages are common to all objects. Other pages are unique to certain object types

To edit an object

1. From the **Template folder**, double-click on an object to open it in the **Object Editor**.
2. Make your modifications to the object.
3. Select **Save** or **Close** from the Galaxy menu.

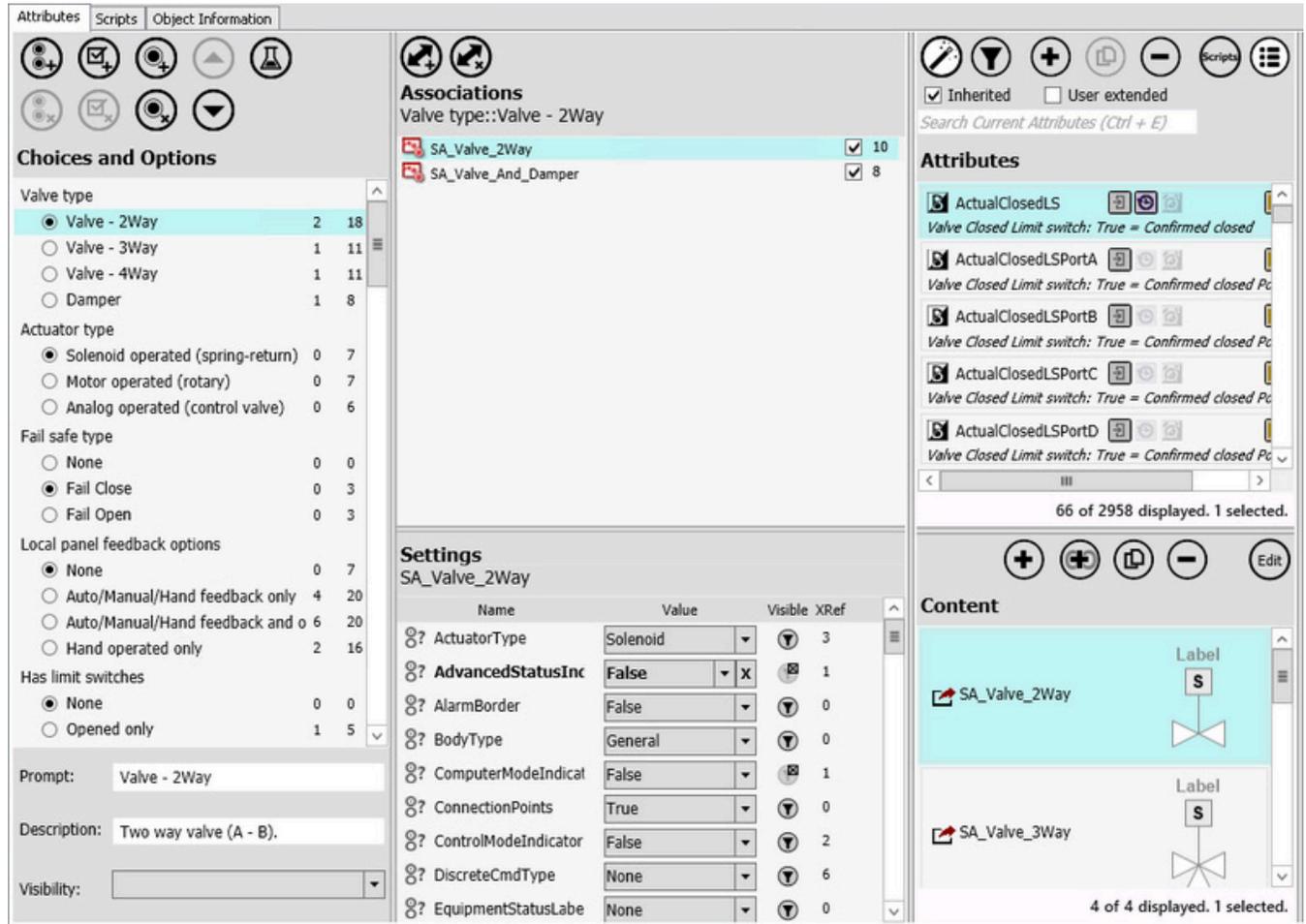
Some details

- When you open the Object Editor, the object is checked out. No one else can edit the checked-out object.
- When you save an object, the configuration data for the object is validated. If errors or warnings are identified during validation, a message appears.
- When you close the object, it is checked in unless you specify that you want to keep it checked out.

Work with Object Wizards

An Object Wizard can be added to any derived template to provide a simplified user interface to build a set of

object configurations. Users select from these choices and options. Each object configuration has a unique combination of attributes, scripts, and graphics.



You can replace the requirement for many derived templates by using a single template with an Object Wizard that supports multiple configurations.

Some details

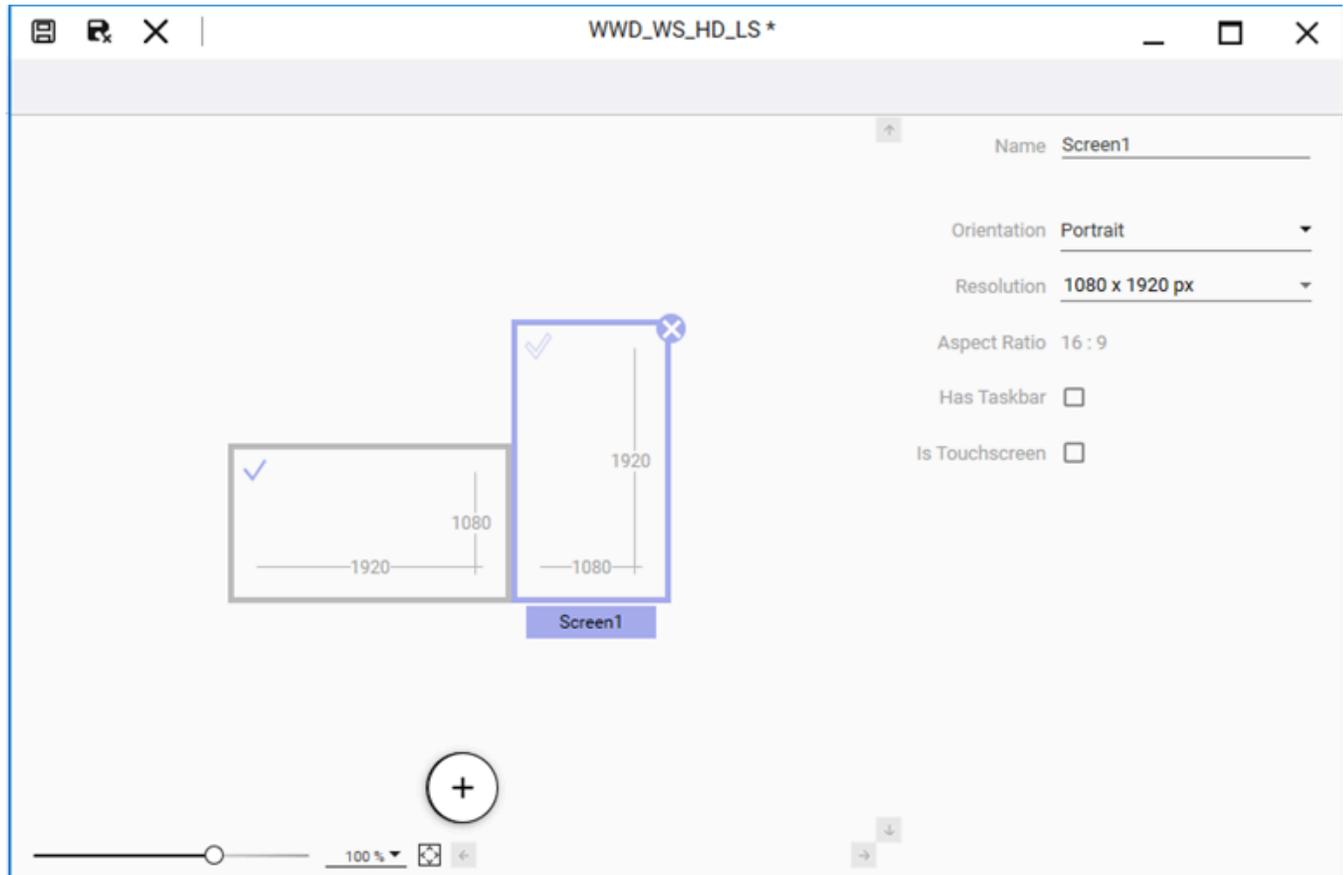
- Attributes and features contained in the Object Wizard that are not needed in a particular instance are removed from the run-time object.
- To maximize the benefits of using Object Wizards, add your Object Wizard to the template as close to the top level of the derivation hierarchy as possible.
- For details on creating Object Wizards, see "Configuring and Using Object Wizards" in the *Application Server Help*.

Create screen profile standards

A screen profile defines the physical characteristics of one or more client workstation screens and how these screens are arranged with respect to each other. Each screen icon that appears in a screen profile represents a physical screen of a computer running a ViewApp.

A screen profile can represent all of the monitors in a production control room or the single screen of a cell

phone.



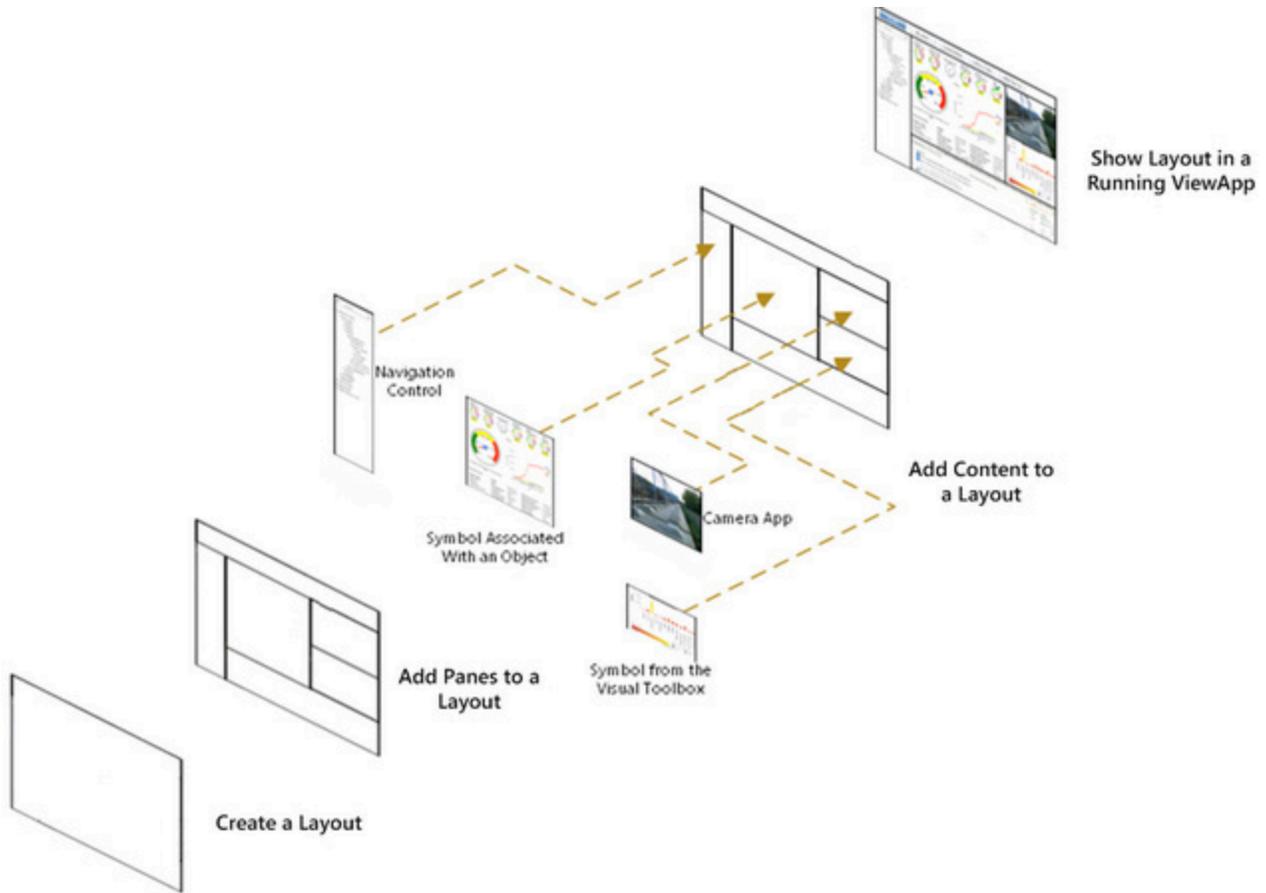
You assign a screen profile to a ViewApp with the **Initialization wizard** the first time you open the ViewApp.

Some details

- The System Platform IDE includes a set of default screen profiles located in the **Visualization folder**. See the Default Content 1. Screen Profiles folder.
- A screen profile includes a set of lock properties to ensure safety using touch screens while running a ViewApp.
- For details on creating and configuring screen profiles, refer to the *AVEVA OMI Help*.

Create layout standards

Layouts define the organization of rectangular areas of a screen called panes that contain content shown in a ViewApp.



You configure layouts with the Layout Editor. The Layout editor includes controls to add panes and adjust their size and arrangement to other panes within the layout's window. The Layout editor provides properties to configure the layout itself and each individual pane. You can also drag and drop content onto panes as part of configuring a layout.

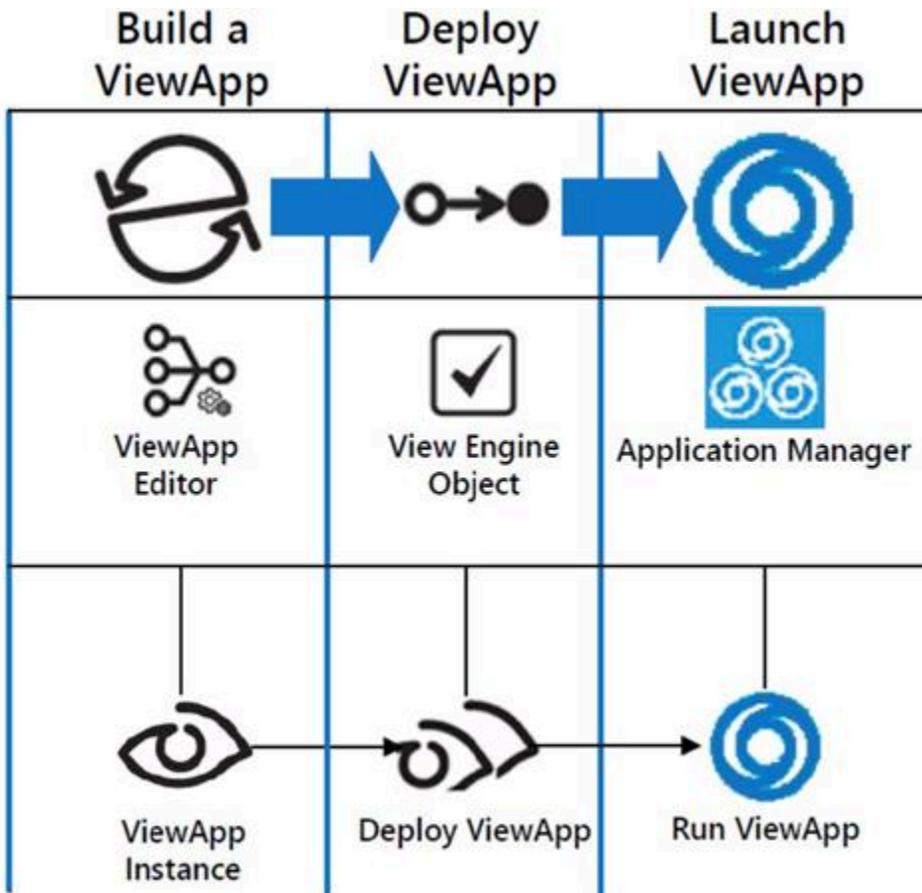
Some details

- The Layout editor includes a script editor to write built-in OnShow, While Showing, and On Hide scripts.
- Responsive layout mode enables you to create a layout for ViewApps that will run on a variety of different device screen sizes.
- For details on creating, configuring, and adding content to layouts, see "Add Content to Panes" in the AVEVA OMI Help.

Workflow Group 2: Build a ViewApp

A ViewApp typically includes a set of related screen profiles and layouts. You associate screen profiles and layouts the first time you open your ViewApp using the Initialization wizard. Graphic and object standards can be added to a ViewApp from either the Layout or ViewApp editors.

The ViewApp Editor is the integration tool to combine your reusable standards to build a ViewApp. The ViewApp Editor incorporates the ability to add, replace, and edit screen profiles, layouts, and content



Also, based on defined user roles and assigned access levels, you can use the ViewApp editor to restrict the display of ViewApp content to specific user roles.

Create a ViewApp

You must create a ViewApp derived template before you can begin editing a ViewApp instance (only instances can be deployed to run time). Create a new ViewApp by any of the following methods:

- Keyboard shortcut: Select base ViewApp template, then press Ctrl + Shift + N to create a derived template. Press Ctrl + N to create a ViewApp instance.
- Shortcut menu: Right-click on the ViewApp base template, select **New**, and then select **Derived Template**. To create a ViewApp instance, select the derived template, select **New**, and then select **Instance**.
- Ribbon bar: Select the ViewApp base template, and then select **Template** from the ribbon bar. To create a ViewApp instance, select the derived template, then select **Instance** from the ribbon bar.

To create a ViewApp derived template

1. Open the System Platform IDE and select the **Template Toolbox** tab to show your Galaxy objects.
2. Expand the **Default Templates** folder and open the **4. ViewApps** folder.
3. Right-click on the \$ViewApp base template, select the **New** option, and then select **Derived Template**. A \$ViewApp derived template appears with an error icon (X in a black circle) to the left of the template name. This indicates that it is not yet configured.



Some details

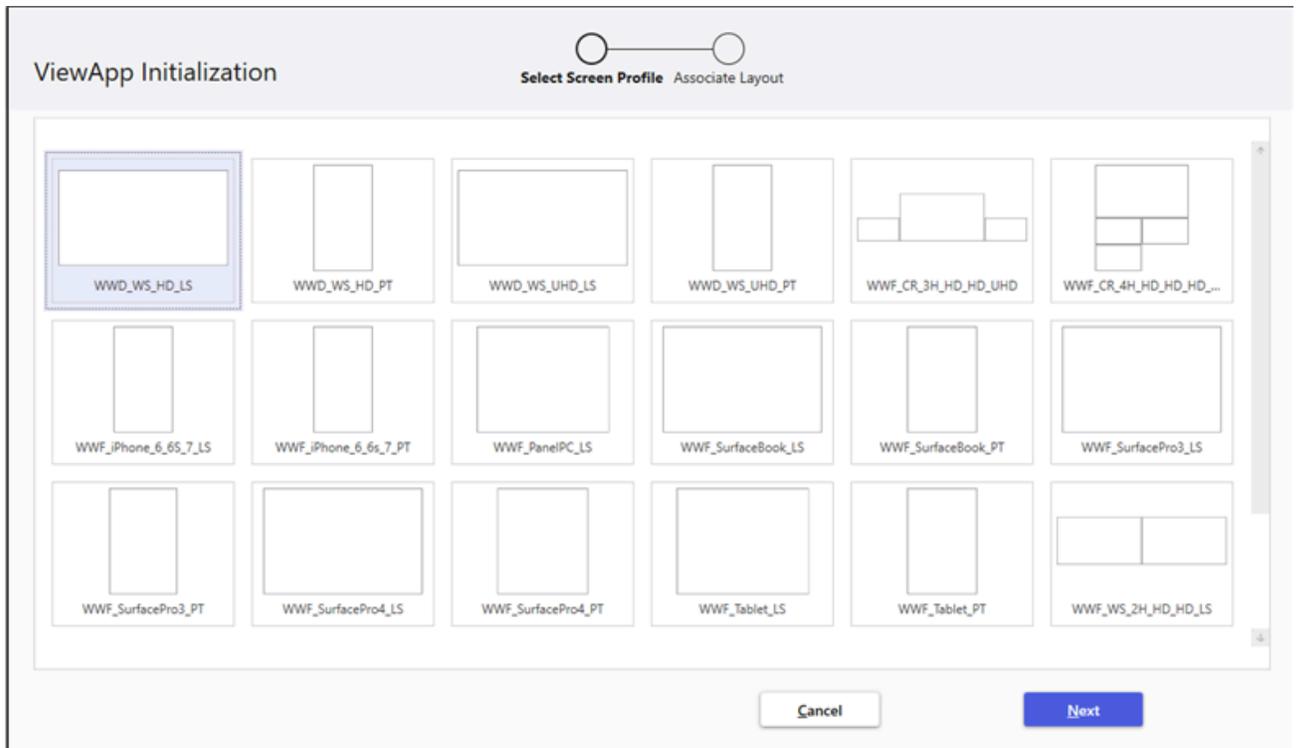
- A screen profile and layouts must be assigned the first time you open a ViewApp in the ViewApp editor.
- See "Steps to Create a ViewApp" in the *AVEVA OMI Help* for more information about assigning a screen profile and layouts to a ViewApp.

Assign screen profiles and layouts to a ViewApp

When you start the ViewApp Editor for the first time after creating a ViewApp, the ViewApp **Initialization Wizard** appears to select a screen profile and layout(s) that will be used with the ViewApp.

To assign screen profiles and layouts to a ViewApp

1. Open the System Platform IDE and select the **Template folder**.
2. Locate the ViewApp derived template and select it.
The **ViewApp Initialization Wizard** appears with a set of screen profiles.



3. Select a screen profile from the list and select **Next**.
4. Select a screen within the profile to place a layout, then select a layout and associate it with the screen.
5. Select **Finish** to open the ViewApp and start editing.

Some details

- At least one screen in a profile must be associated with a layout before editing with the ViewApp editor (profiles can contain multiple screens).
- For more information about assigning a screen profile and layouts to a ViewApp, see "Steps to Create a ViewApp" in the *AVEVA OMI Help*.

Place content in a ViewApp

You can add content to a ViewApp from the ViewApp Editor using a drag and drop mouse action or finger gesture. Assigning content to a pane adds a Show Content action to the ViewApp’s navigation Action List.

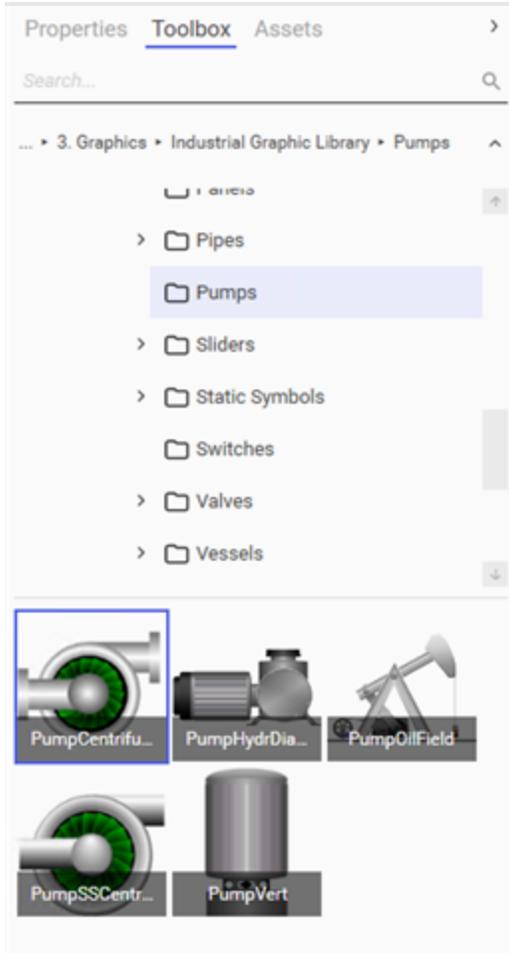
Select either the **Toolbox** or **Assets** tab to show a list of content.

Content can include graphics, layouts, controls, and app instances.

If you select a folder, the content area beneath the list shows thumbnails of the content within it

Embed a graphic in a ViewApp

Preview thumbnails of graphics appear beneath the tabbed **Toolbox** list of the ViewApp or Layout editors.

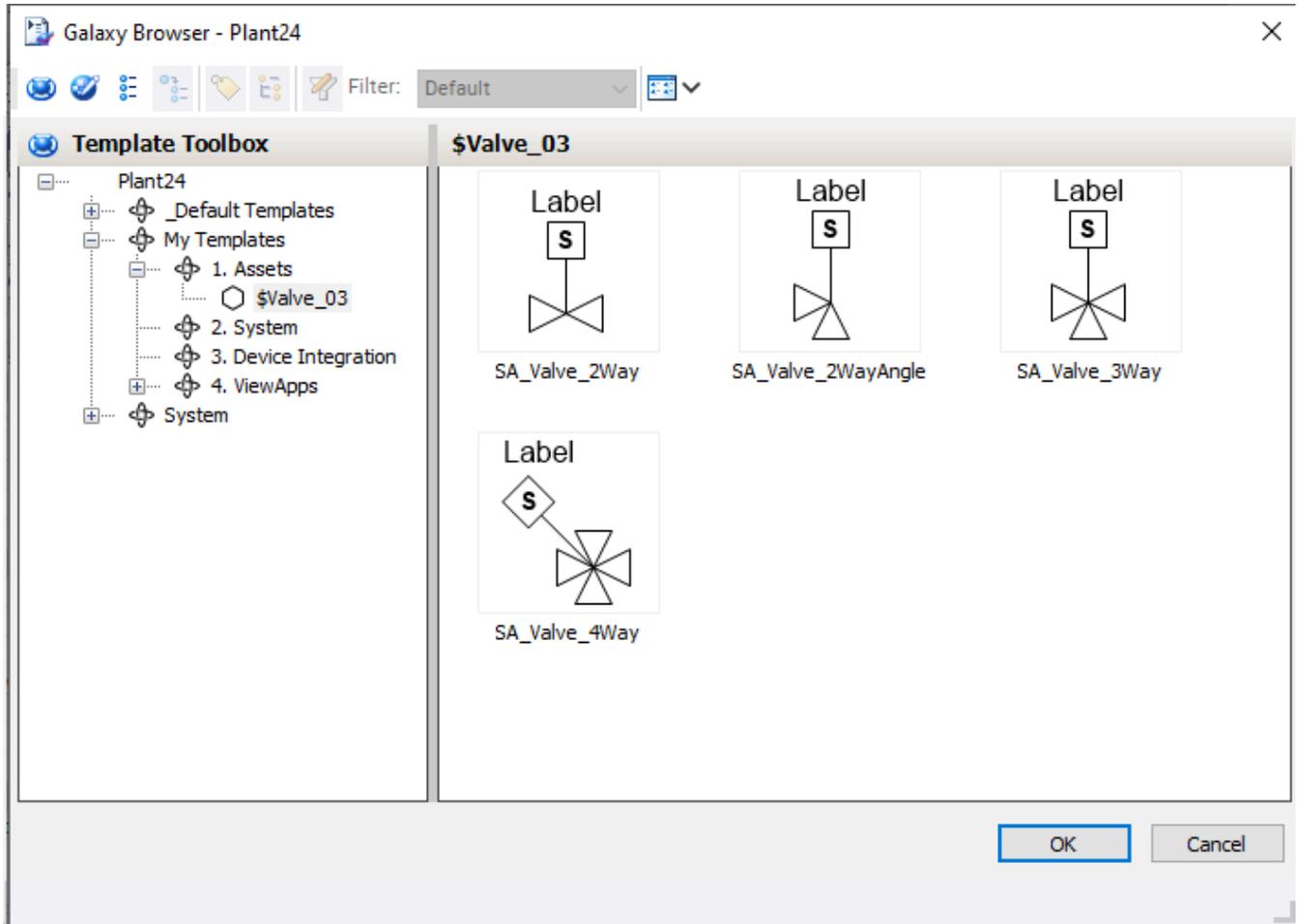


You place a graphic in a ViewApp by using your mouse to select and drag a graphic from the **Toolbox** area and drop it onto a layout pane from the Layout or ViewApp editors.

Objects shown in the tabbed **Assets** area of the Layout or ViewApp editors can be placed in a ViewApp using a similar drag and drop method.

Place an object in a ViewApp

You can create a graphic to embed in an empty pane shown from the ViewApp Editor. Typically, you create a graphic to contain an embedded graphic associated with an object.



The Graphic Editor appears again to embed the graphic you selected in the new symbol.

The **Configure New Asset** wizard appears with options to configure the graphic.

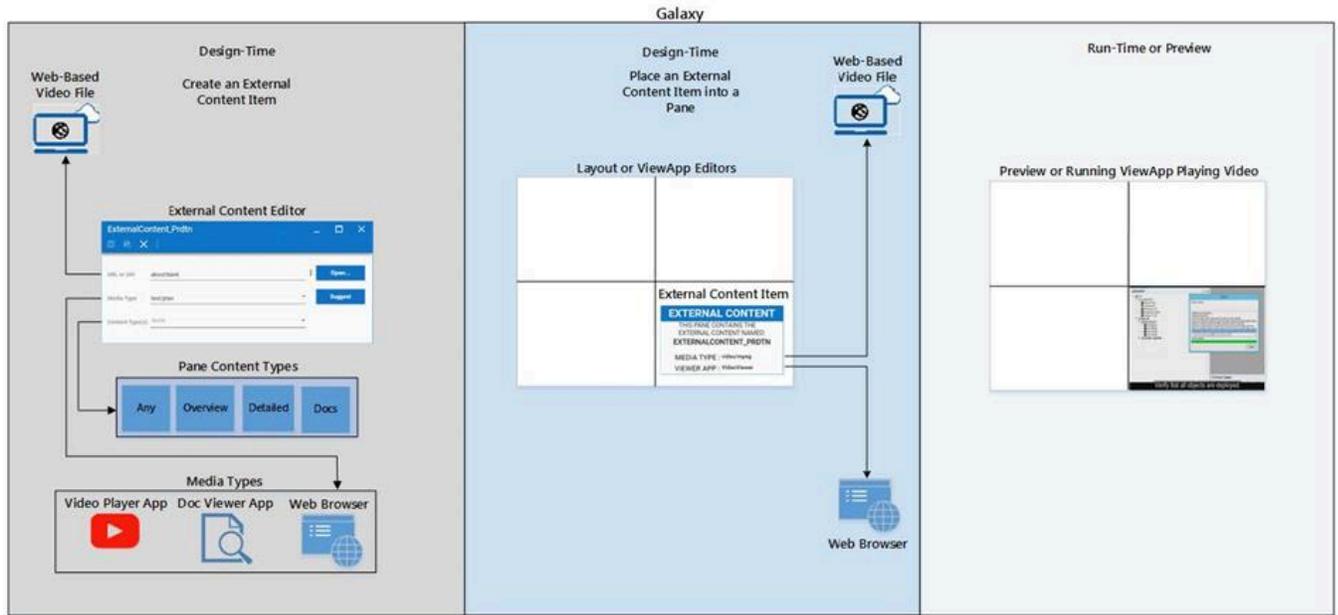
The pane in the ViewApp Editor should show the graphic you created.

Add external content to a ViewApp

External content refers to content outside of a Galaxy that can be shown in a running ViewApp.

External content is associated with a ViewApp by placing an external content item on a layout pane during design time. An external content item is created and then configured with the external content editor to identify the location of the content and the type of content.

The following figure summarizes the major workflows during design time to configure an external content item to point to content that operators can display while managing a running ViewApp.



Some details

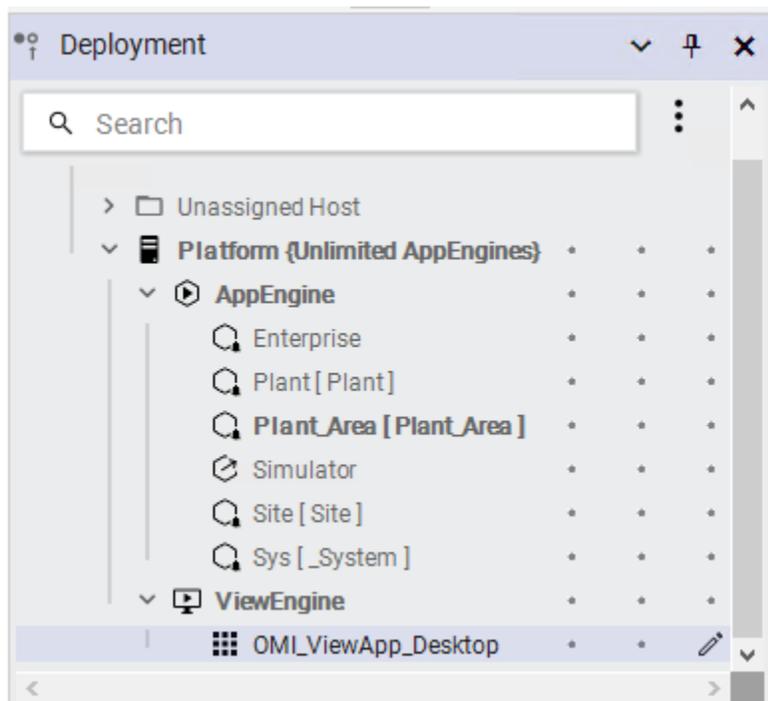
- An external content item can be incorporated into a ViewApp by dragging the item thumbnail onto a layout pane or linking it to an object.
- System Platform includes a set of four default apps to incorporate external videos, spreadsheets, Microsoft Word documents, or images into a running ViewApp.
- Place your external content at a folder location within your network. Verify connectivity between your computer and the folder containing external content.
- You can create, edit, configure and associate an external content item with an OMI ViewApp. See "External Content" in the *AVEVA OMI Help* for details.

Workflow Group 3: Deploy a ViewApp

An instance of your ViewApp must be deployed with a ViewEngine and other system and application objects before you can run it.

Deployment instantiates Galaxy objects in a run-time environment, which are required to run a ViewApp. You must deploy your objects before attempting to run a ViewApp.

You can see the arrangement of your system and application object instances from the **Deployment** or **Model** views of the System Platform IDE.



Some details

- Deployment includes installing the required software on a target computer. Bootstrap software must be installed on every computer running a ViewApp.
- No object can be in an error state to deploy a ViewApp.
- Objects must be checked into the Galaxy.

Prepare to deploy a ViewApp

You can deploy and test your objects at any time during development. When you are ready to test or run a ViewApp in production, you deploy the Galaxy. You can see what your application looks like in the **Deployment** view or **Model** view of the System Platform IDE. Both views show you the structure of your application.

The **Deployment** view provides the simplest way to understand the object hierarchy during deployment. Objects appear in a hierarchical tree structure according to their distribution relationships.

- The top of the tree is the **Galaxy**.
- **WinPlatforms** are shown under the Galaxy.
- **AppEngines** are under each WinPlatform.
- Under each AppEngine, assigned **Areas** and **device integration (DI) objects**, such as OPCClient objects, are listed.
- Assigned **application objects** are listed under each Area.
- Under each application object, contained application objects are listed. Multiple levels are allowed.
- **Communication Drivers** are listed under the device integration object to which they are assigned.
- Unassigned objects are placed in the **Unassigned Area** folder. Area and containment relationships are maintained in this view.

Deploy a ViewApp

You can tell if you have objects that need to be deployed by checking the icons next to the objects. The icons are visible in the Deployment, Model, and Derivation views.

 Deployed

 Not deployed

 Pending update

 Pending software update

To deploy a ViewApp

1. Right-click on the Galaxy object in the **Deployment** view and select the **Deploy** option from the shortcut menu.

The **Deploy** dialog box appears.

Deploy 10 objects

Deployment defaults

Cascade deploy

Include redundant partner

Deployed objects

Skip Force off scan

Deploy changes Preserve runtime changes

Redeploy

Note:
Deploying a host object will force a redeploy of all hosted objects.

Undeployed objects	Initial scan state
<input checked="" type="checkbox"/> Deploy new objects	<input checked="" type="radio"/> On scan
Deploy status mismatch	<input type="radio"/> Off scan
<input type="checkbox"/> Mark as deployed	

InTouchViewApp deploy actions

Override WindowViewer default configuration

- Ignore changes
- Restart WindowViewer
- Prompt user to restart WindowViewer
- Load changes into WindowViewer
- Prompt user to load changes into WindowViewer

2. Accept the default options and select **OK**.

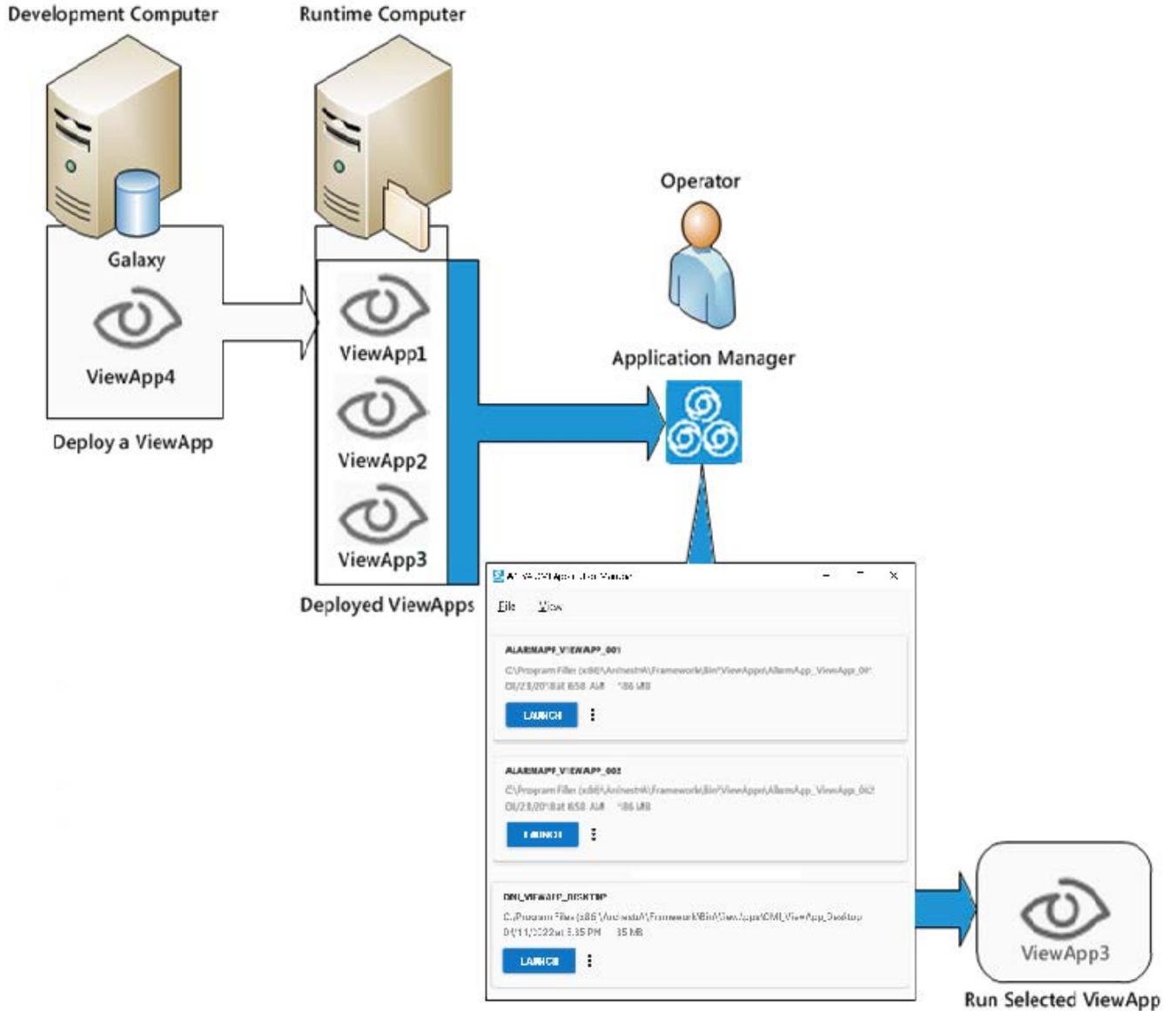
Key points

- During deployment, all files to run a ViewApp are copied to a folder on the client computer designated to run the ViewApp.
- A cascade deploy operation deploys all objects in hierarchical order. A cascade operation deploys a host

object before deploying its child objects.

Workflow Group 4: Run a ViewApp

You typically run a ViewApp on a different computer than the computer you use to develop a ViewApp. You start a ViewApp by selecting it from a list of deployed ViewApps shown from AVEVA OMI Application Manager.



Launch and run a ViewApp

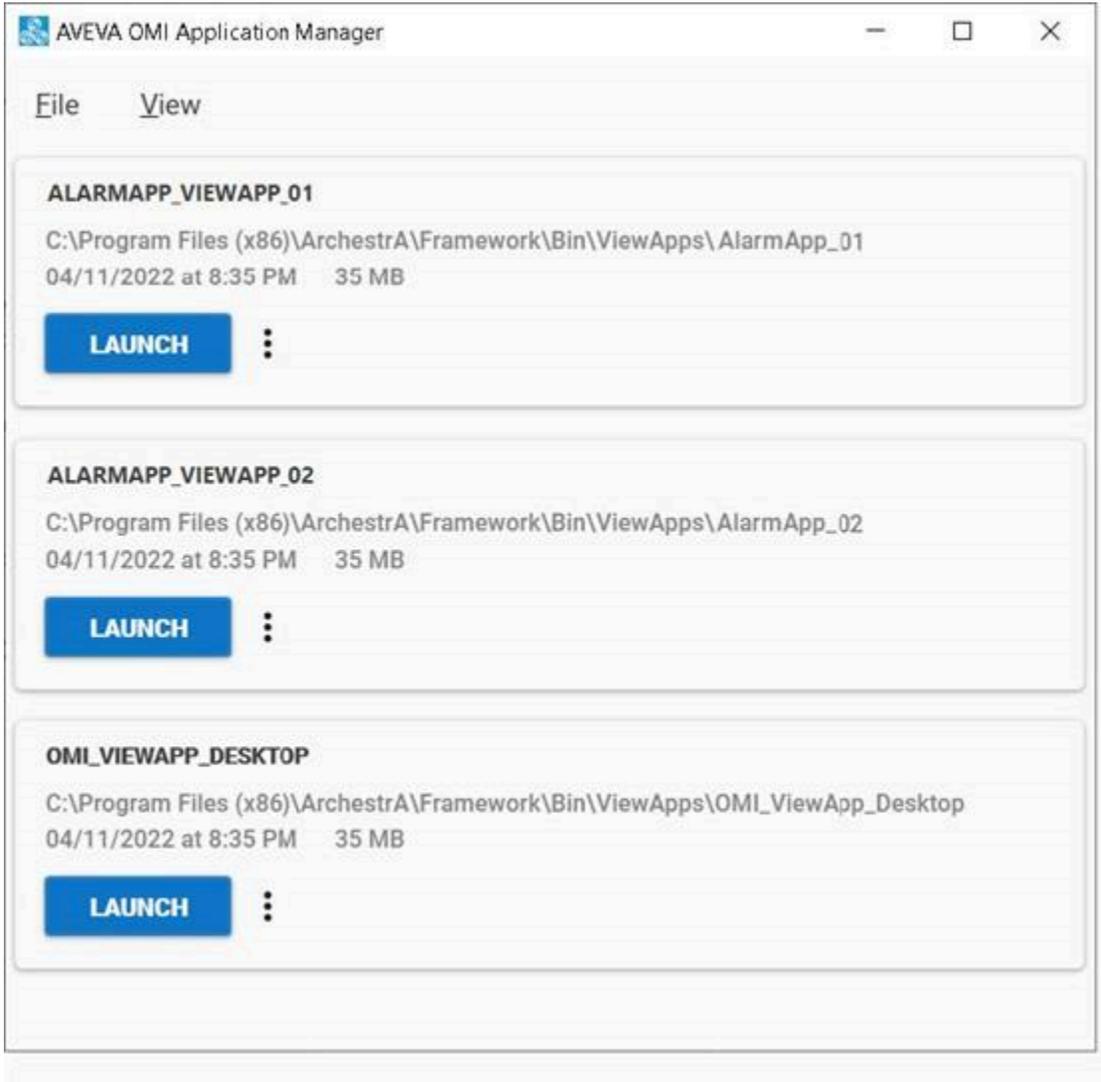
After you successfully deploy your ViewApp, you can launch it from AVEVA OMI Application Manager.

To launch and run a ViewApp

1. Show the Windows desktop of the computer where the ViewApp has been deployed.
2. Select the AVEVA OMI Application Manager icon shown on the Windows desktop.



Application Manager appears with a list of deployed ViewApps.



3. Select the **LAUNCH** button of the ViewApp that you want to run.
After several seconds, the ViewApp's main window appears in a separate window on your screen.

Some details

- You can run multiple ViewApps simultaneously.
- Click the icon shown to the right of the **LAUNCH** button for options to run the ViewApp in read/write mode (default) or launch the ViewApp with a read-only data connection.
- You can run a ViewApp in preview mode to preview and assess your changes in run-time mode. This lets you

work more quickly because you do not have to undeploy and redeploy objects each time you make a change.

Get more information

The System Platform library consists of a set of online books and help. Each product that is part of System Platform includes individual documentation about using the product.

System Platform documentation is offered in two different media:

- Portable Document File (PDF), which can be viewed with Adobe® Reader®. Each book is included on the product installation DVD as a PDF file.
- Installed web help, which is accessible from the Windows start menu (listed as AVEVA help). Hyperlinks built into System Platform products, such as the IDE and InTouch WindowMaker, also provide access to the help.

The PDF books and online help include a table of contents and a search function to find information quickly.

Product documentation uses a task-based approach. This means information is organized by the typical workflows to build, configure, and use the System Platform products.

Application Server

The following table describes each Application Server document in the library.

Publication Name (file name)	Description
<i>AVEVA System Platform Readme</i> ReadMe.html	Includes descriptions of new product features introduced in System Platform, installation requirements, and any known issues.
<i>AVEVA Application Server User Guide</i> IDE.pdf	Explains configuring and deploying Application Server and AVEVA OMI applications.
<i>Industrial Graphics User Guide</i> IndustrialGraphics.pdf	Explains how to create and manage Industrial Graphics with the Graphic Editor within the Integrated Development Environment (IDE).
<i>Application Server Scripting Guide</i> Scripting.pdf	Reference for the Application Server scripting language.
<i>Object Viewer User Guide</i> ObjectViewer.pdf	Explains how to acquire run-time data using the Object Viewer.
<i>Alarm Control Guide</i> AlarmClientControl. pdf	Explains how to configure the alarm control (client) to show current and historical alarms and events in a grid.

Publication Name (file name)	Description
<i>Trend Client User Guide</i> TrendClient.pdf	Explains how to configure a chart to trend real-time data values.
<i>Platform Manager User Guide</i> PlatformManager.pdf	Explains how to start and stop system components.
<i>Galaxy Database Manager User Guide</i> galaxymanagement.pdf	Explains how to back up and restore the Galaxy database.
<i>Log Viewer User Guide</i> LogViewer.pdf	Explains how to use the Log Viewer utility to determine system diagnostics.
<i>Log Flag Editor User Guide</i> LogFlagEditor.pdf	Explains how to turn on and off certain diagnostics logging messages.
<i>AVEVA Enterprise Licensing Guide</i> AELicenseManagerGuide.pdf	Explains how to use the AVEVA Licensing system to manage software product licenses.
<i>Protocols User Guide</i> Protocol.pdf	Explains background information on the main protocols used between components of System Platform products.

Application Server documentation is also available as locally installed web help. Press F1 from the System Platform IDE to show the help in your browser.

AVEVA OMI

All AVEVA OMI product documentation is available as locally installed web help.

The AVEVA OMI help system includes tutorial videos, a search engine, a table of contents, and a set of navigation controls to find information quickly and easily.

AVEVA InTouch HMI

The following table describes the InTouch documentation library delivered as PDF files. Web help is available for each application.

Publication Name (file name)	Description
<i>AVEVA™ InTouch HMI Creating Standards for InTouch HMI Components Guide</i> ITStandards.pdf	Contains information on creating standards for various InTouch HMI components, and describes how to prepare the development environment, view the application in run time, and gain an understanding on

Publication Name (file name)	Description
	<p>how to work with tags, alarms, and data items in the InTouch HMI to connect your application to the physical devices in your plant environment.</p>
<p><i>AVEVA™ InTouch HMI Application Development Guide</i> ITBuild.pdf</p>	<p>Contains information on creating and managing InTouch HMI applications locally and in a network environment, including:</p> <p>How to create visualization windows, how to draw and animate graphic elements, and how to use wizards and ActiveX controls in your application.</p> <p>This guide also includes a reference of the InTouch HMI scripting language and functions, along with details on working with Industrial Graphics in the Cloud..</p>
<p><i>AVEVA™ InTouch HMI Application Deployment Guide</i> ITDeploy.pdf</p>	<p>Contains information on deploying InTouch HMI applications to work with terminal and remote desktop services, and describes how to configure InTouch HMI Network Application Development and use Managed applications at run time.</p>
<p><i>AVEVA™ InTouch HMI Application Run Time Guide</i> ITOperate.pdf</p>	<p>Contains information on using WindowViewer and Web Client to view the InTouch HMI applications in run time, and also describes viewing application graphics in a web browser, with a focus on language switching, tag viewer, and various alarm components.</p>
<p><i>AVEVA™ InTouch HMI Application Maintenance Guide</i> ITMaintain.pdf</p>	<p>Contains information on migrating and upgrading InTouch applications, components, and alarms, and also describes how to set up an InTouch HMI application on tablet PC or multi monitors.</p>
<p><i>AVEVA™ InTouch HMI Troubleshooting Guide</i> ITDiagnose.pdf</p>	<p>Contains troubleshooting information to understand error messages and resolve issues with the InTouch HMI application and Web Client.</p>
<p><i>AVEVA™ InTouch HMI Management Guide</i> ITManage.pdf</p>	<p>Contains authentication and entitlement information for the InTouch HMI application and Web Client, as well as generic and InTouch-specific security configurations, and also describes using other supplementary components.</p>

AVEVA Historian

The following table describes the AVEVA Historian documentation library delivered as PDF files. Locally installed web help is available from within the application.

Publication Name (file name)	Description
<i>Historian Concepts Guide</i> HistorianConcepts.pdf	This guide provides an overview of the entire Historian system and describes each of the subsystems in detail.
<i>Historian Administration Guide</i> HistorianAdmin.pdf	This guide describes how to administer and maintain an installed Historian, such as configuring data acquisition and storage, managing security, and monitoring the system.
<i>Historian Database Guide</i> HistorianDatabase.pdf	This guide provides documentation for all of the Historian database entities, such as tables, views, and stored procedures.
<i>Historian Glossary</i> HistorianGlossary.pdf	This guide provides definitions for terms used throughout the documentation set.
<i>Historian Retrieval Guide</i> HistorianRetrieval.pdf	This guide describes the retrieval modes and options that you can use to retrieve your data.
<i>Historian Scenarios Guide</i> HistorianScenarios.pdf	This guide discusses how to use Historian to address some common customer scenarios.

AVEVA Historian Client

The following table describes the Historian Client documentation delivered as a PDF file. Online help is available from within the application.

Publication Name (file name)	Description
<i>Historian Client User Guide</i> HistClient.pdf	This guide describes how to use the Historian Client to organize, explore, analyze, present, and disseminate process data in a wide variety of formats.

Technical support

AVEVA Technical Support consists of a global team of qualified Certified Support Providers. If you have questions or concerns about System Platform, contact AVEVA Technical Support.

Telephone:	<p>U.S. and Canada 800-966-3371 7 a.m. to 5 p.m Pacific Time</p>
	<p>Outside the U.S. and Canada For local support in your language, contact a certified support provider in your area or country. Refer to the following web address for a local phone number in your country: https://sw.aveva.com/support/ Dial your country's local international direct dialing (IDD) code and then the 800-number listed for your country.</p>
Fax:	<p>+1 949-639-1545</p>
E-mail:	<p>Customer First members, send an e-mail message to our priority address: custfirstsupport@aveva.com</p> <p>Customers without a support agreement, send an e-mail message to: wwwsupport@aveva.com</p>
Web:	<p>Registered customers, submit your questions to our Support web site. https://softwaresupport.aveva.com/ Refer to the following web site for instructions to register for AVEVA technical support: https://sw.aveva.com/support/</p>

Product training

AVEVA offers a training course for System Platform and individual courses for the products that make up System Platform. Training courses are held at our training facilities in Lake Forest, California, as well as at regional offices worldwide. On-site customer training programs are also available at your site.

Telephone:	U.S. and Canada 866-998-7246 Outside the U.S. and Canada +1 949-639-8508
Fax:	1-949-639-1847
Mail:	AVEVA Inc. 26561 Rancho Parkway South Lake Forest, CA 92630 USA Attn: Training Department
E-mail:	avevatraining@aveva.com
Web:	For training in your language, contact a AVEVA-Certified Training Provider in your area or country. Refer to the following web address that lists Certified Training Providers in various countries: https://sw.aveva.com/training/



AVEVA Group plc
High Cross
Madingley Road
Cambridge
CB3 0HB
UK

Tel +44 (0)1223 556655

www.aveva.com

To find your local AVEVA office, visit **www.aveva.com/offices**

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