AVEVA System Platform 2020 Getting Started Guide

AVEVA™

Contents

Welcome to System Platform

AVEVA System Platform 2020, formerly Wonderware, is an industrial software platform that uses ArchestrA technology for human machine interface (HMI), operations management, 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.

System Platform Functional Components

The following figure shows a functional representation of System Platform, which incorporates the ArchestrA framework.
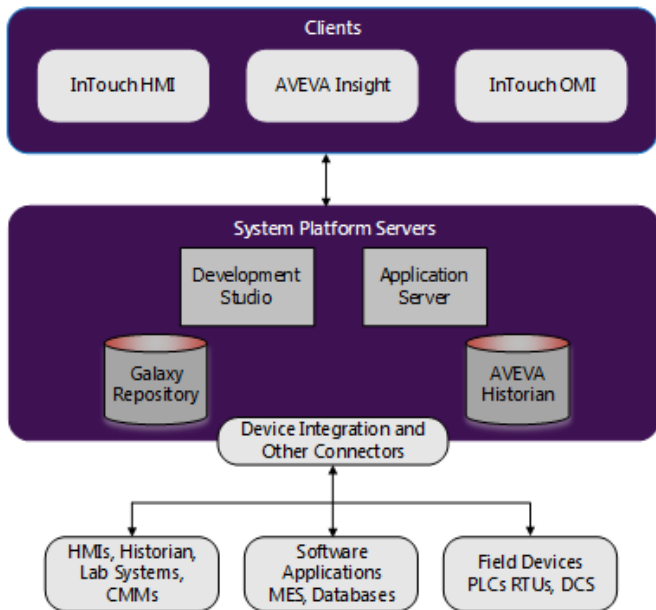
The ArchestrA Framework consists of server-side configuration- and deployment related components. In System Platform, these components include a centralized object repository called Galaxy Repository, an integrated development environment, and a database to store historical data.

Development Studio

Development Studio is your development environment to build applications. The Development Studio consists of the ArchestrA Integrated Development Environment (IDE) and InTouch WindowMaker. Both components include graphic tools, an extensive set of industrial symbols, and program functions that can be included in application scripts.

The Historian

The Historian is a time-series data optimized plant data historian. It stores plant data from legacy DA Servers, Operations Integration (OI) Servers, Communication Drivers, and industrial HMI applications. The Historian also contains event, summary, configuration, and system monitoring information. The Historian is tightly coupled to a Microsoft SQL Server database.

Device Integration Tools

System Platform can connect to a diverse set of data sources to integrate all plant and industrial data. The System Platform Integrated Development Environment (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.

- An OI Server acts as a communication protocol server providing data from a specific vendor's PLCs and other factory devices. System Platform offers an extensive family of DA Servers for a wide variety of PLC manufacturers.

- A Device Integration (DI) object encapsulates the functionality of an IO Server in the ArchestrA environment. DI Objects are models of the network and devices associated with a specific HMI application. The hierarchy of the actual devices is the same as the hierarchy of DI Objects.

Visualization and Analysis Clients

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

- InTouch HMI visualization clients show Human Machine Interface (HMI) applications.

- InTouch OMI extends the core foundation of HMI and Supervisory Control and Data Acquisition (SCADA) products. You can use InTouch OMI to create visual applications (ViewApps) that incorporate the functionality needed by both operational and information technology teams in a production environment

- Insight shows trending and analysis data obtained from running applications.

AVEVA System Monitor

AVEVA System Monitor is a new feature included in System Platform that constantly monitors the License Server to ensure that it is accessible. In the event that the connection to the License Server is lost, AVEVA System Monitor can be configured to send a warning message so you can quickly fix any issues and ensure your operations are not interrupted.

Before You Get Started

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

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

Before you get started building an InTouch 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 straight forward procedure of selecting options from a series of installation dialogs. You can find more information about any hardware and software installation requirements in the *AVEVA System Platform Installation Guide*.

Configuration

Immediately after installing your System Platform products, the Configurator appears to configure the Historian and the AVEVA Enterprise License Server. The *AVEVA System Platform Installation Guide*. includes a chapter that describes how to configure 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 with AVEVA License Manager. For more information about the steps to activate licenses, see the *AVEVA Licensing Guide* and online help.

Development Environment

The ArchestrA IDE and InTouch HMI WindowMaker are typically installed on the same computer called the Development Studio. The ArchestrA IDE is the Integrated Development Environment provided with System Platform. You use the ArchestrA IDE to build InTouch OMI ViewApps and InTouch HMI managed applications.
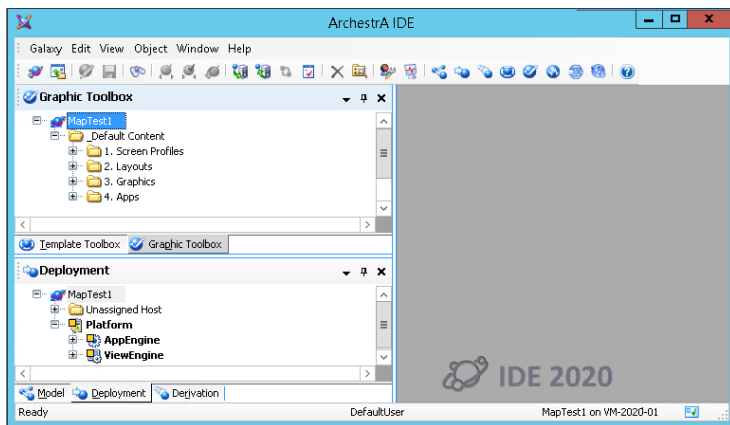
Start the ArchestrA IDE

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

To start the ArchestrA IDE

1. Click the **Apps** icon on the Windows **Start** window to show the **Apps** window.
2. Locate the **System Platform** app group.
3. Select the **System Platform IDE** icon.

System Platform IDE
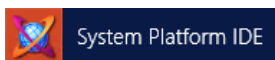
The **Connect to Galaxy** dialog box appears without a Galaxy name the first time it opens.
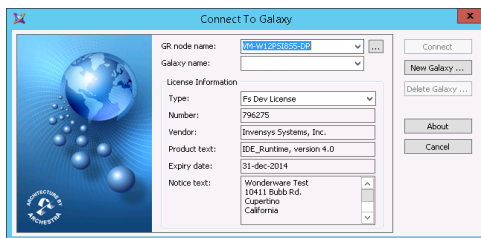
Galaxy commands appear as buttons on the right.

Some Details

- You must create a Galaxy before starting the ArchestrA IDE for the first time.

- Your product licenses must be activated before starting the ArchestrA IDE.

- Users must be a member of the aaConfigTools Windows user group to connect to a Galaxy from the IDE. Assign users to this group through the **Local Users and Groups** utility of the Windows Control Panel.

- For more information, see the *Steps to Create a Galaxy* topic in the InTouch OMI help system.

Create a Galaxy

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

To create a Galaxy

1.   Start the ArchestrA IDE to show the **Connect to Galaxy** dialog.
2.   Click **New Galaxy** to show the **New Galaxy** dialog.
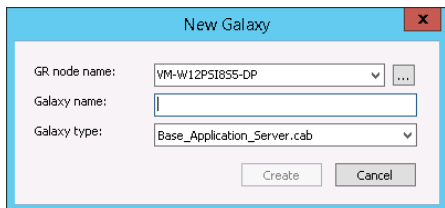
3.   Complete the fields of the **New Galaxy** dialog box.
     a Type the node name of the computer that hosts your Galaxy Repository (GR) in the **GR node name** field.
     b Type a Galaxy name in the **Galaxy name** field.
     c Select **Default.cab** as the type of Galaxy.
4.   Click **Create** to begin creating a new Galaxy.
5.   Click **Close** after the new Galaxy is created.

Some Details

● The Galaxy Repository is the name of the single computer where the Galaxy database is located.

● The Galaxy Repository stores information for InTouch OMI ViewApps or InTouch HMI managed applications.

● You can only create a new Galaxy on a computer with the Bootstrap and Galaxy Repository software installed.

● Select **Default.cab** as the Galaxy type to build InTouch OMI ViewApps.

● See the *Create a Galaxy* topic in the InTouch OMI help.

Connect to a Galaxy and Open the ArchestrA IDE

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

To connect to a Galaxy

1. Start the System Platform IDE to show the **Connect to Galaxy** dialog.
2. Select the Galaxy you want to open from the **Galaxy name** field of the **Connect to Galaxy** dialog.
3. Select **Connect** to open the Galaxy.

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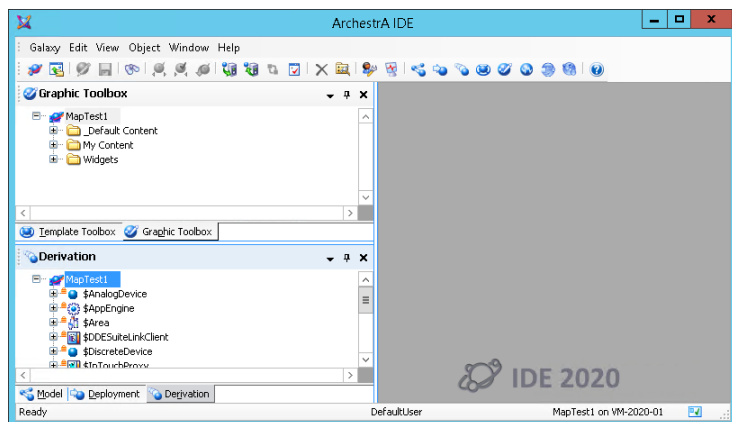
The IDE provides different ways to view the structure of the Galaxy and how it will be deployed to run time.

Some Details

- Select **Galaxy** from the IDE menu bar and then select the **Galaxy Status** option to see the current status of the open Galaxy.

- For more information, see the *Connect to a Galaxy* topic in the InTouch OMI help.

Run the Default System Platform ViewApp

System Platform provides a set of default symbols, other content, and templates that are accessible from the ArchestrA 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, it 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 InTouchOMI_Desktop.

2. Right-click on the WinPlatform object named **Platform** to show a shortcut menu.

   The yellow square next to each object indicates the object is in an undeployed state.

3. Select **Deploy** from the shortcut menu.

4. Click **OK** from the **Deploy** dialog box.

   The **Deploy** dialog box shows the progress of deploying all of the objects. The yellow square disappears after each object is deployed.

5. Show the Windows desktop and locate the **AVEVA Application Manager** icon.

6. Select **AVEVA Application Manager** to open it 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.
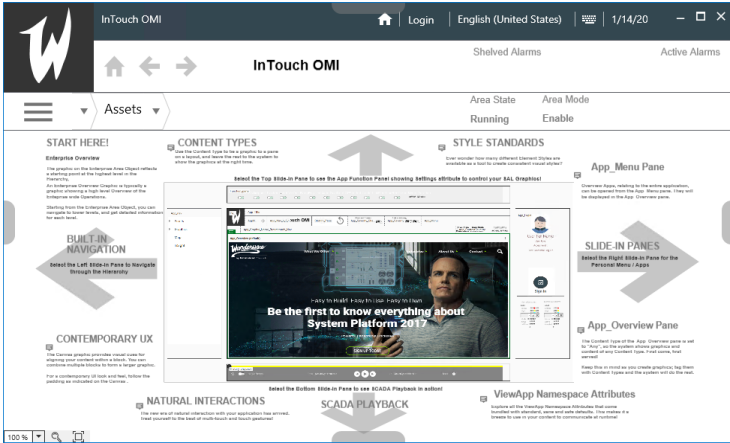
A slide-in pane can be placed at each side of a ViewApp window. During run time, slide-in panes are hidden until the user selects the tab to extend the slide-in pane and show its contents.

Navigation icons can be placed within a pane that include short navigation scripts to enable users to return to the home view or scroll forward or backward through a sequence of views.

System Platform 2020 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 2020 includes a NavTree app that shows a ViewApp's navigation items arranged in a hierarchical tree. Selecting an item from the tree shows the content of the selected view.

Workflow Group 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 reuseable 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 ArchestrA IDE includes a set of editors to build reusable symbols, objects, scripts, layouts, and screen profiles.

Design Standards

Workflow Groups				
Product Tools	Symbol Editor	Object Editor	Script Editor	Layout Editor	Screen Profile Editor
ViewApp Components		Objects	Scripts	Layouts	Screen Profiles
	Symbols				
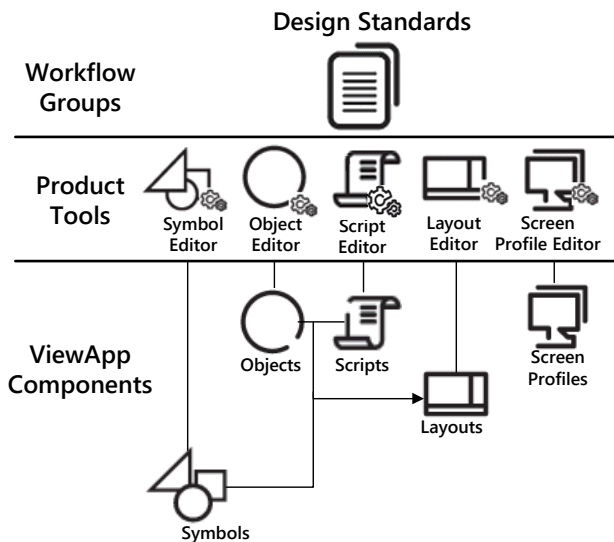
Build Symbol Standards

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

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

Standard Industrial Graphics available from the Graphic Toolbox 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.

Situational Awareness Library symbols are protected symbols that include multiple visual and functional configurations, which are enabled by selecting values from a set of Wizard Options associated with each symbol. Incorporating multiple configurations in a single symbol reduces the types of symbols you need to develop for an application.

Create a Symbol

You can create a symbol in the **Graphic Toolbox** by the following methods:

- **Keyboard shortcut**: Press Ctrl + Shift + S

- **Shortcut menu**: Right-click on the Galaxy name, select **New**, and then select **Symbol**

- **Galaxy Menu**: Select **Galaxy** from the menu bar, select the **New** option, and then select **Symbol** from the sub menu

You should see the symbol listed in the **Graphic Toolbox** as Symbol_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 symbols in the **Graphic Toolbox** if you want to define them as a reusable standard that will be used frequently.

- Store symbols as AutomationObject templates if you want to re-use the symbol in combination with the object functionality.

- Store symbols The Graphics tab of an AutomationObject instance. Do this if you are unlikely to re-use the symbol in any other situation.

Some Details

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

- For more information, see the *Symbols* topic in the InTouch OMI help.

Edit a Symbol

After you create a symbol, you need to check it out to be able to edit it in the **Industrial Graphic Editor.** You also need to check in the symbol after you are finished editing it.

To edit a symbol in the Graphic Toolbox

1. Right-click on your symbol listed in the **Graphic Toolbox** and select **Check Out.**

   A red check mark appears to the left of your symbol's name to indicate that it is checked out.

2. Right-click on the checked-out symbol and select **Open** to show the symbol in the Graphic Editor.

3. After you have finished editing the symbol, click **Save** and **Close** from the task bar of the Graphic Editor.

4. Right-click on the symbol name shown in the **Graphic Toolbox** and select **Check In**.

To edit a symbol contained in an object.

1. Open an object in the Object editor.
2. Click the **Graphics** tab.
3. Select the graphic to edit and click **Open**. The Industrial Graphic Editor appears.
4. Edit the graphic.
5. Click **Save** and **Close**. The **Industrial Graphic Editor** closes and the updated graphic is checked in.

## Some Details

- Situational Awareness Library symbols are protected templates and cannot be directly edited. You must embed an instance of a Situational Awareness Library symbol in another symbol to edit it and make configuration changes.

- You check out a graphic when you open it for editing with the **Industrial Graphic Editor**. No other user can edit the graphic while you have it checked out.

Build a Symbol from Graphic Elements

You can assemble and edit a set of graphic elements in the **Industrial Graphic Editor** to represent a visual component.

To build a symbol from graphic elements

1. Check out and open a symbol from the **Graphic Toolbox**.

   The **Industrial Graphic Editor** opens and shows the **Tools** menu in the upper left corner.
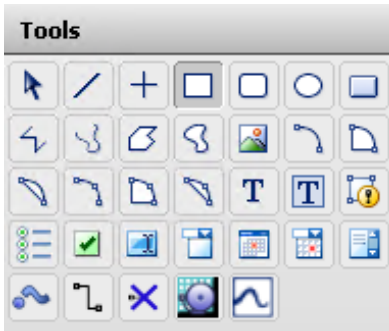

2. Select a graphic element from **Tools** to include in the symbol.
3. Move the cursor over the canvas area.

   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.
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**.
8. Check the symbol back into the **Graphic Toolbox**.

Some Details

● For more information about creating and integrating graphic elements into a ViewApp, see *Graphic Elements* in the System Platform online help.

Build Object Standards

The **Template Toolbox** is the part of the ArchestrA IDE that shows host objects organized by toolsets from which other object templates are derived or instances are created.
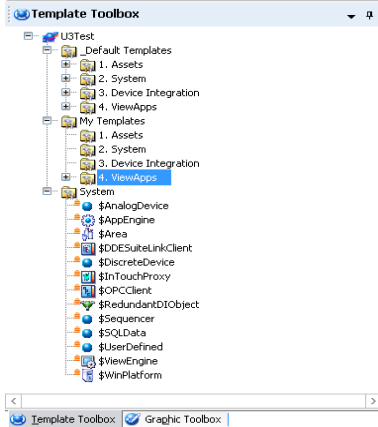
Derived templates are created from base templates. Base and derived templates are identified in the **Template Toolbox** by a dollar sign ($) as the prefix to their names.

Templates are elements that contain common configuration parameters for object instances that can be re-used.

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.

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

- To get a better understanding of base templates, derived templates, and instances, see *About Templates and Instances* in the InTouch OMI help.

Create a Derived Template or an Instance

You first select the base template that you want to create a derived template or instance from the Template Toolbox. 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**.

- Galaxy menu

  Select **Galaxy** from the menu bar, select the **New** option, and then select **Instance** or **Derived Template** from the sub menu.

You should see the new derived template listed in the Template Toolbox as $*ObjectName*_001. A new instance appears in the **Model, Deployment**, and **Derivation** views as *ObjectName*_001. You can assign a new name to the derived template or instance by typing over the default name.

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.

- For more information about creating derived templates, see *Create Derived Templates* in the InTouch OMI online help.

Edit Objects

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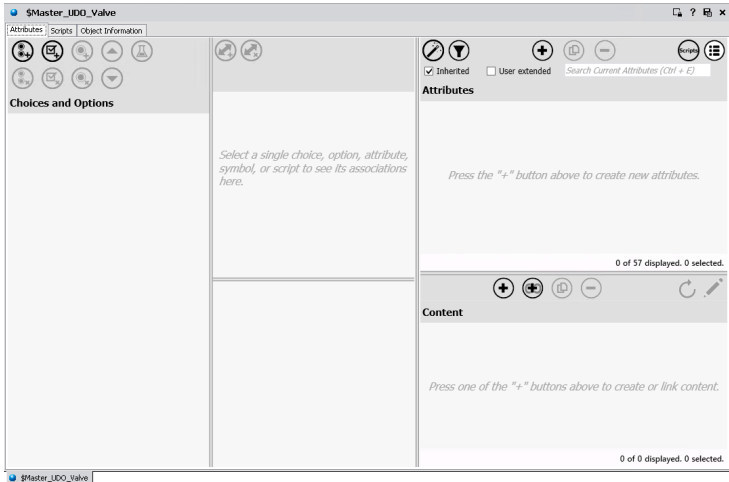
Each **Object Editor** page modifies a specific aspect of objects. The **Attributes**, **Scripts**, and **Object** pages are common to all objects. Other pages are unique to certain object types

To edit an object

1. From the **Template Toolbox**, 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 an 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.

- For more information about editing objects, see *Edit Objects* in the InTouch OMI online help.

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 more information about Object Wizards configurations, see *Object Wizards* in the InTouch OMI online help.

Create a Basic Object Wizard

An Object Wizard includes Choice Groups, each with two or more Choices, and/or Options. A Choice Group is a radio button list that lets the user select one choice. An Option contains a check box that can be selected or deselected.

To create an Object Wizard.

1. Open a derived template in the Object Editor.
2. Configure the template by adding attributes, symbols, and scripts.
3. Select the **Configure Wizard Options** button to open the **Object Wizard** editor.
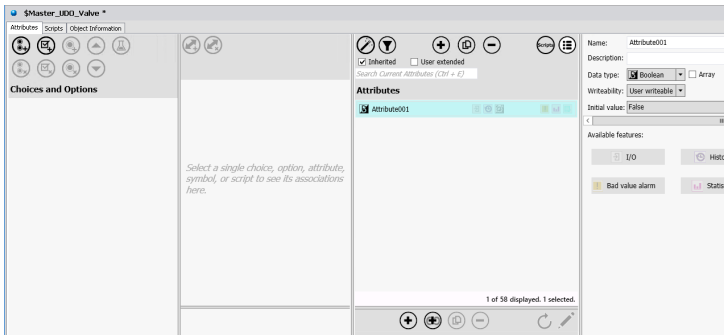
4. Add a Choice Group by selecting the **Add Choice Group** button.
5. Add Options by selecting the **Add Option** button.
6. Use the **Up** and **Down** arrow buttons to change the order of Choices, Choice Groups, or Options.
7. Associate attributes or content with a Choice or Option
   a. Select the Choice or Option.
   b. Select the attribute or content to associate with the Choice or Option.
   c. Select the **Add Association** button.
      Settings for the selected attribute or content appear in the **Settings** pane after making an association.
   d. Configure visibility and value overrides, as needed.

Build Screen Profile Standards

A screen profile defines the physical characteristics of one or more 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 that shows 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.
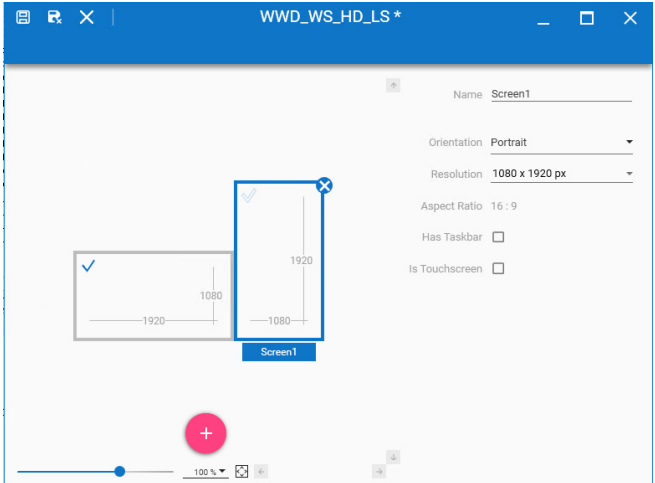
You assign a screen profile to a ViewApp with the **Initialization wizard** the first time you open the ViewApp.

Some Details

- The ArchestrA IDE includes a set of default screen profiles located in the **Graphic Toolbox**. 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 more information about screen profiles, see *Screen Profiles* in the InTouch OMI online help.

Create a Screen Profile

You can create a screen profile in the **Graphic Toolbox** by the following methods:

- **Keyboard shortcut**: Press Ctrl + Shift + E
- **Shortcut menu**: Right-click on the Galaxy name, select **New,** and then select **Screen Profile**.
- **Galaxy Menu**: Select **Galaxy** from the menu bar, select **New**, and then select **Screen Profile** from the sub menu.

To create a screen profile

1. Open the ArchestrA IDE and select **Graphic Toolbox**.
2. With your cursor, select a folder in the **Graphic Toolbox** where you want to place the new screen profile.
3. Press Ctrl + Shift + E.

   A screen profile appears in the **Graphic Toolbox** folder with a default name of ScreenProfile_001 for the first layout you create. A blue background around the screen profile name indicates the name can be changed.
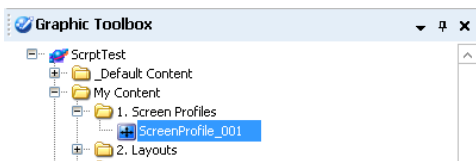
4. Select the screen profile and rename it.

Some Details

- A screen profile can replicate a computer's display properties stored in Windows, including screen resolution, screen orientation, and the configuration of screens to each other.

- You can resize the screen profile shown in the editor with the size controls at the bottom of the canvas area.

- For more information about creating a screen profile, see C*reate a Screen Profile* in the InTouch OMI help.

Configure a Screen Profile

The typical workflow to configure a screen profile includes these essential steps:

- Add a screen
- Position screen icons to represent the actual physical arrangement of screens attached to a computer running a ViewApp
- Assign values to each screens' properties

To configure a screen profile

1. Click the red plus circle to add a screen to a profile.
2. Using a drag and drop mouse gesture, select a screen and move it to the corner of an adjoining screen, and then release the mouse key.
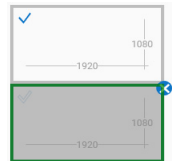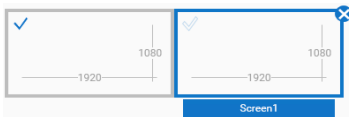
3. Select the check mark in the upper left corner of a screen to designate it as the primary screen of the profile.
4. Define the physical characteristics of each screen by assigning values to screen properties that are listed at the right of the **Screen Profile** editor

Some Details

- Select the **Has Taskbar** property to show the **Taskbar Position** property.
- Select the **Is Touchscreen** property to show the **Touch Local Level** property.
- A valid screen configuration aligns the corner of one screen to the corner of another screen.
- Press F1 from the Screen Profile editor for more information about configuring screen profiles.

Build Layout Standards

Layouts define the organization of rectangular areas of a screen called panes that contain content shown in a ViewApp.
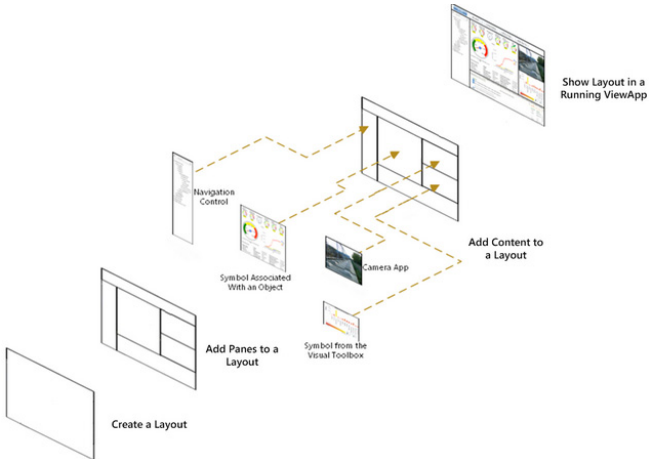
You configure layouts with the Layout editor. The Layout editor includes controls to add panes and adjust their size and arrangement to other panes within the layout's window. The Layout editor provides properties to configure the layout itself and each individual pane. You can also drag and drop content 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.

- Press F1 from the Layout editor for more information in the InTouch OMI web help.

Create a Layout

Create a layout in the **Graphic Toolbox** by these methods:

- **Keyboard shortcut**: Press Ctrl + Shift + L

- **Shortcut menu**: Right-click on the Galaxy name, select **New**, and then select **Layout**

- **Galaxy Menu**: Select **Galaxy** from the menu bar, select the **New** option, and then select **Layout** from the sub menu.

To create a layout

1. Open the ArchestrA IDE and select **Graphic Toolbox**.
2. With your cursor, select a folder in the **Graphic Toolbox** where you want to place the new layout.
3. Press Ctrl + Shift + L.

   A layout appears in the **Graphic Toolbox** folder with a default name of Layout_001 for the first layout you create. A blue background around the layout name indicates the name can be changed.
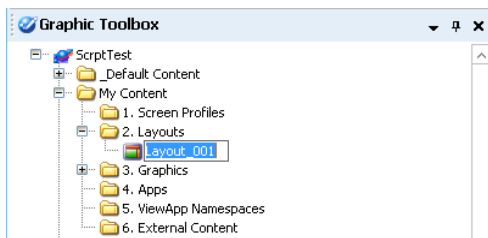
4. Select the layout and rename it.

Some Details

- The initial configuration of a new layout consists of a single pane with no active slide in panes.

- Select the name shown in the upper corner of a pane to rename the pane.

- See *Create a Layout* in the InTouch OMI online help for more information.

Configure a Layout

A layout configuration workflow includes these essential steps:

- Add panes
- Set layout and pane properties

To configure a layout

1. Select a layout to configure from the **Graphic Toolbox**.
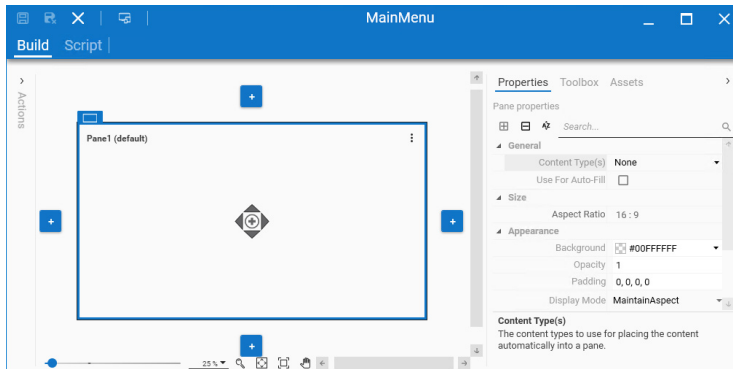
2. Select an arrowhead on the **Add Pane Control** to add a pane by splitting the currently selected pane in half.
3. Select **Properties** from the right column of the editor.
   - Tap outside the border of the layout to show general layout properties.
   - Tap inside of a pane to show the specific properties of the selected pane.
   - Select the divider line between panes to show divider properties.
4. Modify property values and save your layout changes.

Some Details

- Select **Script** from the menu bar to show the **Predefined Script** editor.
- See *Configure a Layout* in the InTouch OMI online help for more information.

Add Content to Layout Panes

You can use a drag and drop mouse action or touch gesture to add content to panes.

To add content to a layout

1. Select a layout from the **Graphic Toolbox** to edit.

2.
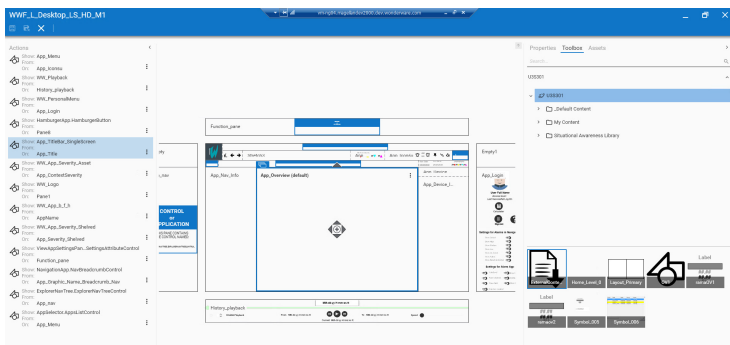
3.

Some Details

- You are not required to add content to panes from the Layout Editor. Content can be added with the ViewApp Editor too.

- A layout contains multiple sets of properties. Layout properties apply to the entire layout. Pane properties apply to the individual panes of a layout. Each pane can be configured separately.

- For more information about adding content to a layout pane, see *Add Content to Panes* in the InTouch OMI online help.

Workflow Group 2: Assemble 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. Symbol 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.

Build a ViewApp	Deploy ViewApp	Launch ViewApp
ViewApp Editor	View Engine Object	InTouch OMI Application Manager
ViewApp Instance	Deploy ViewApp	Run ViewApp
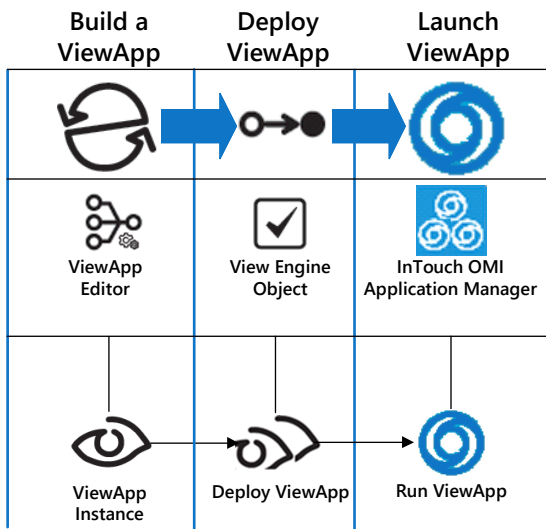
Also, based on defined user roles and assigned access levels, you can use the ViewApp editor to restrict the display of ViewApp content to specific user roles.

Create a ViewApp

You must create a ViewApp derived template before you can begin editing a ViewApp. You can create a derived ViewApp template by these methods:

● Keyboard shortcut

ViewApp template: Press Ctrl + Shift + N

ViewApp instance: Press Ctrl + N

● Shortcut menu

Right-click on the ViewApp base template, select **New**, and then select either **Instance** or **Derived Template**.

● Galaxy menu

Select **Galaxy** from the menu bar, select the **New** option, and then select **Instance** or **Derived Template** from the sub menu.

To create a ViewApp derived template

1. Open the ArchestrA 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 a red icon to indicate no screen profiles or layouts have been assigned to it.

   ![$ViewApp_001 icon] $ViewApp_001
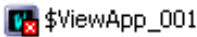
Some Details

● 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 InTouch OMI online 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 layouts that will be associated with the ViewApp.

To assign screen profiles and layouts to a ViewApp

1. Open the ArchestrA IDE and select the **Template Toolbox** tab to show your Galaxy objects.
2. Locate the ViewApp derived template and select it.

   The **ViewApp Initialization Wizard** appears with a set of screen profiles.
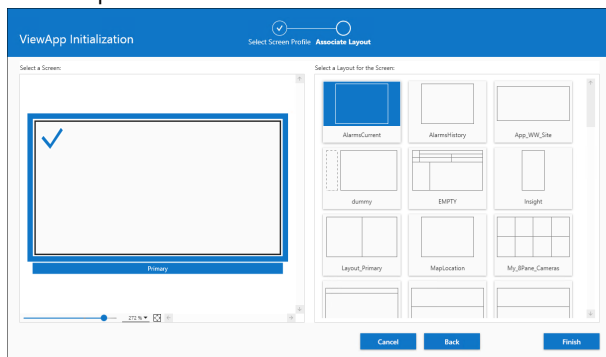
3. Select a screen profile from the list and select **Next.**
4. Select a screen within the profile to place a layout.
5. Select a layout from the list to associate it to the screen.
6. Select **Finish** to open the ViewApp and start editing.

Some Details

- At least one screen in a profile must be associated with a layout before continuing to the ViewApp editor.

- For more information about assigning a screen profile and layouts to a ViewApp, see *Steps to Create a ViewApp* in the InTouch OMI online 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
- Control
- App Instance

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

Search for Content

You can search within the currently displayed **Toolbox** or **Assets** folders to locate objects or graphics by name.

- An Assets search is applied across the entire Galaxy. The results show the assets containing the search term in a multi-column list displayed in alphabetical order.

- A Toolbox search is applied across the entire graphic Toolbox. The results show thumbnails of the graphics that match the search term in alphabetical order.

To search for assets or graphics

1. Open a ViewApp within the IDE.
2. Select either the **Toolbox** or **Assets** tab in the right column of the ViewApp to show the **Search** field.
3. Type a search phrase in the **Search** field.

   As you type, any matching assets or graphics appear whose names contain your search term.


4.

Some Details

- Double-clicking on an asset identified by a search shows the thumbnails of the graphics associated with the asset.

- Place your cursor over a graphic thumbnail in the search results to show its folder location within **Toolbox**.

- For more information about searching for assets or graphics, see *Search for Content* in the InTouch OMI online help.

Embed a Symbol in a ViewApp

Preview thumbnails of symbols appear beneath the tabbed **Toolbox** list of the Layout or ViewApp editors.
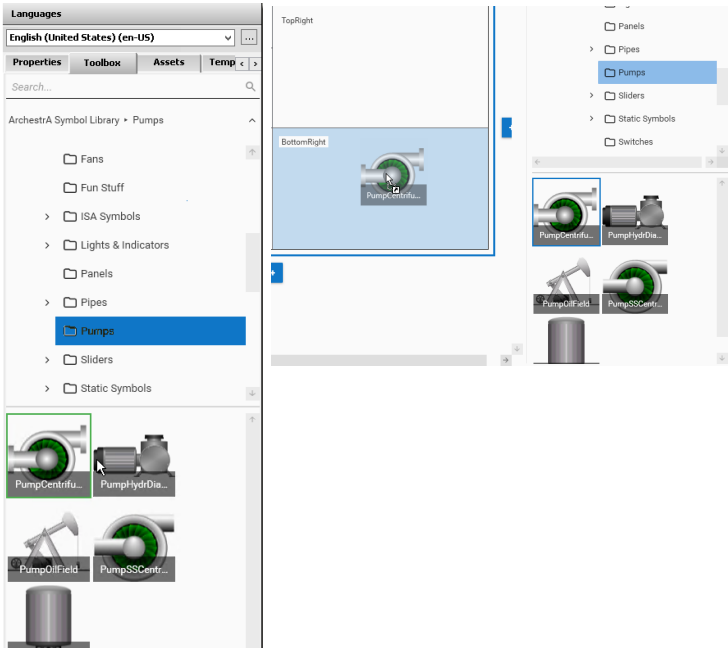
You place a symbol in a ViewApp by using your mouse to select and drag a symbol from the **Toolbox** area and drop it onto a layout pane from the Layout or ViewApp editors.

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.

Some Details

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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 symbol to contain an embedded graphic associated with an object.
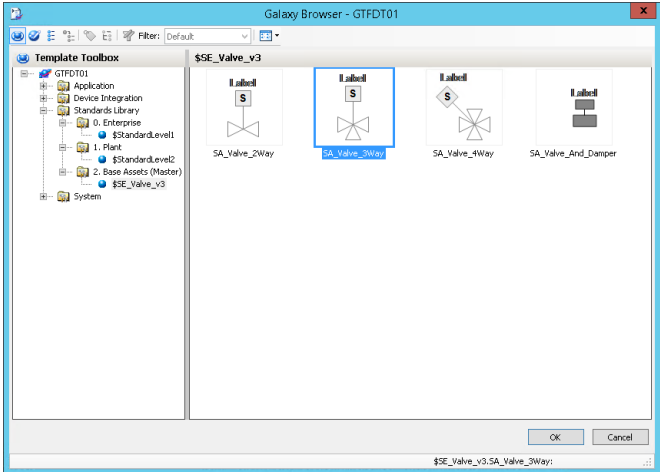
The Graphic Editor appears again to embed the graphic you selected in the new symbol.

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

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

Some Details

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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.
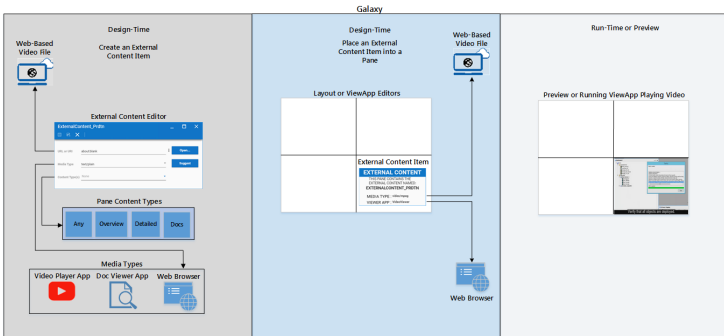
Some Details

- 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, Word documents, or images into a running ViewApp.

- Place your external content at a folder location within your network. Verify connectivity between your Desktop Studio computer and the folder containing External content.

Create an External Content Item

You create an External Content item from the Graphic Toolbox of the ArchestrA IDE using one of the following methods:

- **Galaxy menu**: Select **Galaxy** from the menu bar, select **New**, and then **External Content**.

- **Keyboard Shortcut**: Press Ctrl + Shift + C

- **Accelerator Keys**: Press Alt + G + N + C

- **Shortcut Menu**: Right-click on a folder within the **Graphic Toolbox** to show a shortcut menu. Select the **New** option, and then select **External Content**.

To create an External Content item

1. Open the IDE and select the **Graphic Toolbox** tab.
2. Select a toolset folder within the **Graphic Toolbox** to create the External Content item in the folder.
3. Use the Keyboard Shortcut method to create an External Content item.

   Press Ctrl + Shift + C

   A new External Content item is created in the Graphic Toolbox at the folder you selected. The name of the new item follows a default naming convention of appending a three-digit number to the word ExternalContent.
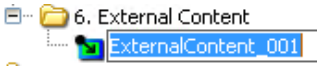
4. Rename the External Content item.

Some Details

- After you create an External Content item, it must be configured to associate it to specific media content.

- Initially, the External Content item defaults to a set of values that can be changed using the External Content editor.

Configure an External Content Item

Each External Content item has three properties that must be assigned values:
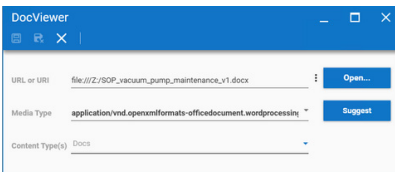
- **URL or URI**
- **Media Type**
- **Content Type(s)**

This step explains how to configure an External Content item for the DocViewer app available with System Platform 2020.

To configure an External Content Item

1. Open the IDE and select the **Graphic Toolbox** tab to show the available External Content items.
2. Double click on an External Content item to open it with the External Content editor.
3. Enter a URI string where the Word document is saved.
4. Select the type of media associated with Word documents from the drop-down list of the **Media Type** field.
5. Select the type of content from the drop-down list of the **Content Type(s)** field.

   The configured External Content item for a Word document should look like the following screen capture.

6. Save your changes and exit from the editor.

Some Details

- You can browse for external content by selecting the vertical dots icon to the right of the **URL or URI** field. A drop-down list includes an option that enables you to browse your network and select a media file

Associate External Content to a ViewApp

You can place an External Content item directly onto a pane from either the Layout or ViewApp editors . External Content items are listed in the **Toolbox** or **Assets** tabs of either editor.

To associate External Content to a ViewApp

1. Open the ArchestrA IDE and select the **Graphic Toolbox** tab to see the list of layouts.
2. Select a layout that you want to insert external content and open it in the Layout editor.
3. Locate the External Content item you want to place in the layout you selected.

   External Content thumbnails appear beneath of the list of content shown in the **Toolbox** list.
4. Select an External Content thumbnail from the **Toolbox** area, and then drag and drop it onto a pane of a layout incorporated into a ViewApp.
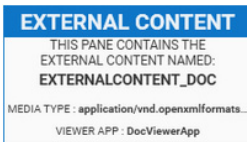
The External Content thumbnail appears in the pane containing the name of the External Content item, the media type of the external content, and the viewer app that will display the media during runtime.

Some Details

- For more information about associating external content to an object that will be included in a ViewApp, see *Link an External Content item to an Object* in the InTouch OMI help

- For more information about the entire set of workflows to add external content to a ViewApp, see *External Content i*n the InTouch OMI help.

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 runtime environment, which are required to run a ViewApp. You must deploy your environment 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 ArchestrA IDE.
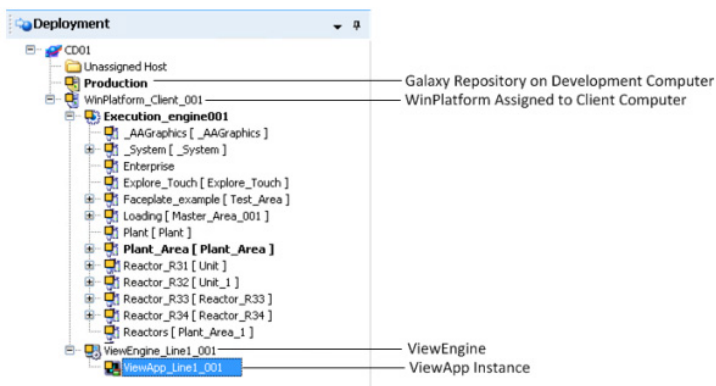
Some Details

- Deployment includes installing required software on a target computer to support objects. Bootstrap software must be installed on the computer running a ViewApp.

- No object can be in an error state to deploy a ViewApp.

- Objects must be checked in to 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 ArchestrA IDE. Both views show you the structure of your application.

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

Galaxy>WinPlatform>AppEngine>Area>App or DI Objects

- 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 DIObjects, such as DINetwork Objects, are listed.

- Under each Area, assigned application objects are listed.

- Under each application object, contained application objects are listed. Multiple levels are allowed.

- Under each DINetwork Object, assigned DIDevice Objects are listed.

- Unassigned objects are placed in the **Unassigned Area** folder. Area and containment relationships are maintained in this view

Some Details

- The appearance of the icons to the left of each object shown in the **Deployment** view indicate the deployment and quality status of each object.

- The **Galaxy Status** dialog shows the condition of your Galaxy. On the **Galaxy** menu, select **Galaxy Status**.
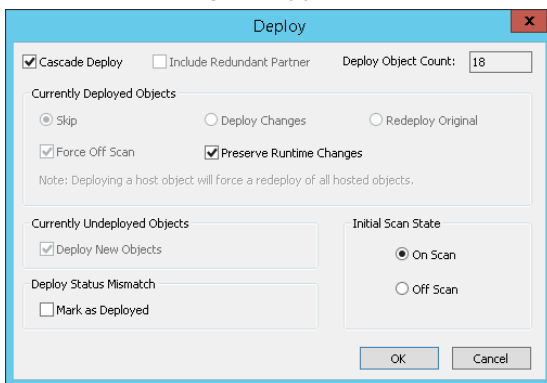
Deploy a ViewApp

You can tell if you have objects that need to be deployed by looking at the icons next to the objects shown in the **Deployment** view. Typical deployment status icons include:

- Not deployed
- Deployed
- Deployed, but pending changes have not been deployed

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.

2. Accept the default deployment 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 the correct 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 InTouch OMI Application Manager.
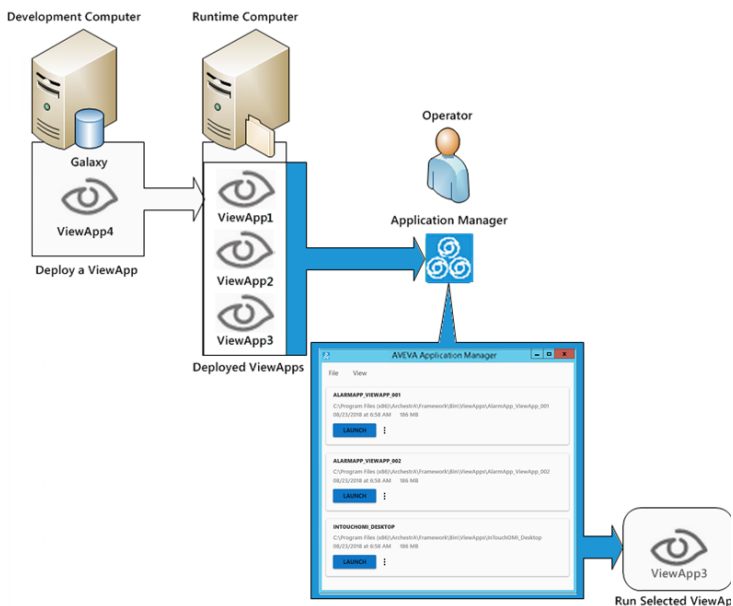
Launch and Run a ViewApp

After you successfully deploy your ViewApp, you can launch it from InTouch 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 InTouch OMI Application Manager icon shown on the Windows desktop.

Application Manager appears with a list of deployed ViewApps.
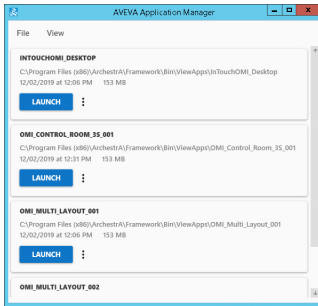
3. Select the **LAUNCH** button of the ViewApp that you want to run.

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.

Run a ViewApp in Preview Mode

When you are building a ViewApp, you can immediately preview and assess your editing changes in run time mode. Previewing your work enables you to work more quickly because you do not need to undeploy and redeploy your Galaxy objects each time you modify your ViewApp to verify your changes.

To preview a ViewApp

1. Open the ArchestrA IDE.
2. Open an undeployed ViewApp in the ViewApp editor.
3. Select the **Preview** button near the top right corner of the ViewApp editor.

   The first time you request a preview, a caution message explains that preview mode is not intended for production usage. Select the check box in the message to not show the message again.

4. Click **OK** to continue.

   Within several seconds the preview session launches from the computer hosting the ArchestrA IDE.

5. Click the standard **Close** icon on the ViewApp window frame to stop running in preview mode.

Some Details

- The **AutoUpdate** icon next to the **Preview** button enables or disables any updates to the ViewApp to appear in preview mode. If the ViewApp contains unsaved changes, the ViewApp will be saved and the new configuration passed to Preview

- The preview window opens and shows the current focus of the ViewApp as it is edited in the ViewApp editor.

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.

- Online help from the IDE, which can be viewed while developing InTouch HMI or InTouch OMI applications.

The PDF books and online help include a table of contents, an index, 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 System Platform products.

Application Server

Online help is available from the IDE and each System Platform product's interface.

The following table describes the Application Server documentation library delivered as PDF files.

Publication Name (file name)	Description
AVEVA System Platform 2020 Readme (Readme.htm)	Includes descriptions of new product features introduced in System Platform, installation requirements, and any known issues.
AVEVA Application Server User Guide (IDE.pdf)	Explains configuring and deploying Application Server and InTouch OMI applications.
Industrial Graphics User Guide (AAGraphics.pdf)	Explains how to create and manage Industrial Graphics with the Graphic Editor within the Integrated Development Environment (IDE).
Application Server Scripting Guide (Scripting.pdf)	Reference for the Application Server scripting language.
Object Viewer User's Guide (ObjectViewer.pdf)	Explains how to acquire run-time data using the Object Viewer.
ArchestrA Alarm Control Guide (aaAlarmClientControl. 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
ArchestrA Trend Client User's Guide (aaTrendClient.pdf)	Explains how to configure a chart to trend real-time data values.
Platform Manager User's Guide (PlatformManager.pdf)	Explains how to start and stop system components.
Galaxy Database Manager User's Guide (galaxymanagement.pdf)	Explains how to back up and restore the Galaxy database.
ArchestrA Log Viewer User's Guide (LogViewer.pdf)	Explains how to use the Log Viewer utility to determine system diagnostics.
ArchestrA Log Flag Editor Utser Guide (LogFlagEditor.pdf)	Explains how to turn on and off certain diagnostics logging messages.
AVEVA Enterprise Licensing Guide AELicenseManagerGuide.pdf	Explains how to use the AVEVA Licensing system to manage software product licenses.
ArchestrA Protocols User Guide (Protocol.pdf)	Explains background information on the main protocols used between components of System Platform products.

Publication Name (file name)	Description
InTouch HMI and ArchestrA Integration Guide (ITAAIntegration.pdf)	Explains how you can use the ArchestrA Integrated Development Environment (IDE) to manage InTouch applications so that you can use symbols you create in the ArchestrA Graphic Editor. This guide is available on the InTouch HMI installation CD.

InTouch OMI

All InTouch OMI product documentation is available as online help that you view with a web browser. Press F1 from the ArchestrA IDE modern editors to show online help:

- Screen Profile editor
- Layout editor
- ViewApp editor
- ViewApp Namespace editor
- External Content editor

Note Internet Explorer Version 11 or later is the recommended web browser to view InTouch OMI help.

The InTouch 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.

InTouch HMI

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

Publication Name (file name)	Description
InTouch HMI Concepts and Capabilities Guide (ITConcepts.pdf)	Describes all of the features and main concepts in the InTouch HMI without going too deep into the technical and procedural details.
InTouch HMI Application Management and Extension Guide (ITAppManagement.pdf)	Describes how to create and manage InTouch applications locally and in a network environment. It also covers application-level functionality, such as security. This guide describes how to run an InTouch application in different environments, such as with Terminal Services, on a Tablet PC, and using multiple monitors.
InTouch HMI Modern Application Guide (ITModernAppGuide.pdf)	Describes how to create, manage, and configure InTouch HMI Modern applications from Application Manager and WindowMaker.
InTouch HMI Data Management Guide (ITDataManagement.pdf)	Describes how to work with data items in the InTouch HMI and connect your application to the physical devices in your plant environment.

Publication Name (file name)	Description
InTouch HMI Visualization Guide (ITVisualization.pdf)	Describes how to develop the graphical operator interface of an InTouch application. This guide includes information on how to create visualization windows, how to draw and animate graphic elements, and how to use wizards and ActiveX controls in your application.
InTouch HMI SmartSymbols Guide (ITSmartSymbols.pdf)	Describes how to create reusable templates for graphic symbols that can save you a lot of engineering time and effort.
InTouch HMI and ArchestrA Integration Guide (ITAAIntegration.pdf)	Describes how to integrate the InTouch HMI and ArchestrA technology to develop more robust applications that use richer graphics.
InTouch HMI Alarms and Events Guide (ITAlarmsandEvents.pdf)	Describes how to configure alarms for your data items, how to view and acknowledge alarms, and how to use the alarm clients and utilities supplied with the InTouch HMI.
InTouch HMI Scripting and Logic Guide (ITScriptsandLogic.pdf)	Describes how to write scripts in the InTouch HMI to automate common tasks and processes. This guide includes a reference of the InTouch scripting language and functions.

Publication Name (file name)	Description
InTouch HMI Supplementary Components Guide (ITSupplementary.pdf)	Describes software components that you can optionally install and use with the InTouch HMI. You can set up connectivity to SQL databases, do statistical process control, trend data, and manage recipes. The supplementary components also include a library of symbols, such as meters, valves, and pumps.
InTouch HMI Tag Viewer Guide (InTouchTagViewer.pdf)	Explains how to enable and start the Tag Viewer, navigate in the Tag Viewer interface and use it to search for tags, view tags, modify tag properties, and add and manage Tag Viewer watch windows.

InTouch Access Anywhere

InTouch Access Anywhere is part of the System Platform family of products and can display InTouch OMI ViewApps on a variety of portable devices. Its documentation is included in the InTouch OMI online help.

InTouch Access Anywhere can also be ordered as a separate product with its documentation library delivered as PDF files.

Publication Name (file name)	Description
InTouch Access Anywhere Server Administrator Manual (ITAA_Server_Admin Manual.pdf)	Provides procedures and references for system administrators to configure and manage the InTouch Access Anywhere server.
InTouch Access Anywhere Secure Gateway Administrator Manual (ITAA_Gateway_Admin Manual.pdf)	Provides procedures and references for system administrators to configure and manage the InTouch Access Anywhere Secure Gateway.
InTouch Access Anywhere User Manual (ITAA_UserManual.pdf)	Provides guidelines for end users to display remote InTouch applications by means of InTouch Access Anywhere.

Historian

The following table describes the Historian documentation library delivered as PDF files. Online help is available from within the application.

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

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
Historian Client User Guide (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 Wonderware Technical Support.

Telephone: U.S. and Canada
800-966-3371
7 a.m. to 5 p.m Pacific Time

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/wonderware
Dial your country's local international direct dialing (IDD) code and then the 800-number listed for your country.

Fax: **+1 949-639-1545**

E-mail: Customer First members, send an e-mail message to our priority address:
custfirstsupport@wonderware.com

Customers without a support agreement, send an e-mail message to:
wwsupport@wonderware.com

Web: Registered customers, submit your questions to our Support web site.
Refer to the following web site for instructions to register for Wonderware technical support:
https://sw.aveva.com/support/wonderware

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 26561 Rancho Parkway South Lake Forest, CA 92630 USA Attn: Training Department
E-mail:	Training@wonderware.com
Web:	For training in your language, contact an 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/wonderware

The following web site provides links to Wonderware training courses and class schedules.

https://www.wonderware.com/support/training-programs/

You can also send an e-mail message or contact us by phone for more information about training fees, class length, materials, and logistics.