What’s New in SAS Visual Analytics 7.5: General Enhancements

The following list includes the general enhancements for this release:

- The user interface has been rewritten in HTML5. Previously, many SAS applications and SAS solutions used the Adobe Flash Player to provide interactive user interfaces. Adobe announced that it intends to end support for Flash technology and will cease to update and distribute the Flash Player at the end of 2020. Browser vendors will disable Flash by default in 2019. For more information about Adobe Flash end-of-life, see SAS Software and Its Use of the Adobe Flash Player.

- The SAS Visual Analytics Explorer (the explorer) and the SAS Visual Analytics Designer (the designer) interfaces have been combined into a single interface.

- There are new side panes. For example, the new Outline pane provides you with a convenient way to work with pages and objects in your report.

- The existing side panes have been updated. For example, you can right-click a data item in the Data pane to add it as either a report control or a page control.

- New objects have been added. For example, the new key value object can be used to highlight numeric and categorical values in an infographic.

- Existing objects have been improved. For example, the pop-up menus now enable you to move objects; sort, replace, or remove data items; change options; and print or share an object.

- New features are available for geo maps. For example, geo maps support animation for all map types.

- There are enhanced parameters. For example, you can have parameters based on date and datetime formats.

- Accessibility has been enhanced. SAS Visual Analytics is now accessible via the keyboard. Some graphs have integration with SAS Graphics Accelerator.

For related information, see:

- What’s New in SAS 9.4 and SAS Viya
- SAS Guide to Software Updates and Product Changes
What’s New in SAS Visual Analytics 7.5: Details

The following lists include the new features and enhancements since SAS Visual Analytics 7.4 was released.

Enhanced User Interface
- There are now undo and redo features for reports.
- Autocharting is now available for the report objects that were formerly available in the designer.
- You can add images from a URL.
- The application menu bar has been updated. It now displays the report name and has new icons for undo, redo, and save. The menu has more options. For example, it provides the ability to access and open recent reports and lets you expand report controls.
- There are new report themes: Aqua, Marine, Midnight, and Opal. There are new SAS application themes: Ignite, Illuminate, and Inspire.
- The page bar has been redesigned. A new menu enables you to quickly rename and duplicate pages. There is a new way to hide pages in a report and expand page controls.
- You can specify the height and the width for a hidden page.
- You can add margins to your report and to your pages using the Padding option.
- You can generate a link to a report or an object. There are many link options available, which means you do not have to manually add parameters to the URL.
- You can now create a basic report filter by selecting data in an object that has at least one data item assigned.

New Side Panes
- The new Outline pane enables you to work with pages and objects in your report. You can add, rename, and hide or unhide a page. You can move objects from one page to another. When you right-click an object in the Outline pane, you can remove the title or maximize, delete, and duplicate the object. You can save an image, export data, and change object types.
- The new Suggestions pane provides you with suggested objects that work best with the data that you have selected. You can drag items from the Suggestions pane and drop them onto the canvas.

Enhanced Side Panes
The panes on the side of the canvas can stay hidden until you need them or you can pin them to be displayed all of the time. The state of a heading within a pane is maintained across SAS Visual Analytics sessions. For example, suppose the Style heading in the Options pane is expanded when you exit SAS Visual Analytics. The Style heading is expanded when you start another session. You can drag a side pane to a new location, and then restore the pane’s location using the general settings.

The panes have the following updates:
- The Data pane has the following enhancements:
  - When a measure is selected, any measures that have a moderate degree of correlation with the selected measure are marked with a dot.
You can select all measures that are related to a selected measure based on correlation, aggregation, or data format.

You can create a custom sort so that category data items in a table or graph can have their values sorted in a customized order.

The new Hidden role for data items enables you to include a category or date in the data query without it being displayed. A list table is the only object that supports a measure data item in the hidden role. Data items that are assigned to the Hidden data role are available for color-mapped display rules, external links, mapping data sources, and actions.

You can drag a data item from the Data pane and drop it onto the Roles pane.

When you create a hierarchy by clicking New data item in the Data pane and selecting Hierarchy, the hierarchy is given an automatic name based on the data items that you select.

You can right-click a measure data item in the Data pane to change its aggregation or format. You can select multiple measure data items in the Data pane and change the aggregation or format of all of the measure data items to be the same.

You can right-click a data item in the Data pane to add it as either a report control or a page control.

The Objects pane lets you right-click a control to create a report control or page control.

The Options pane has been updated to enable you to view report options such as Created by and Date modified.

The Roles pane enables you to drag and drop an assigned data item onto another assigned data item to swap the data roles. Hold down the Alt key while you drag and drop an assigned data item to replace the one already assigned to the role.

The Actions pane has been redesigned to make it easier to create object links, page links, report links, and URL links.

The Display Rules pane has been enhanced to let you create a new display rule by dragging and dropping a data item onto the pane. You can now create expression-based display rules using dates.

The Filters pane has been updated to make it easier for you to see and update filters. For example, if you have a filter based on a category data item with six or more values, then a scroll bar is added to make it easier to see the data items.

**New Objects**

**Forecasting**

Forecasting is now a dedicated object rather than a feature of the time series plot. The forecast displays historical predicted values (hindcast) overlaid with the actual historical values in your data.

**Key value**

The key value object can be used to highlight numeric and categorical values as text or in an infographic. The key value object updates automatically when your data updates.

**Network analysis**

A network analysis object displays the relationships between data item values as a series of linked nodes. In SAS Visual Analytics 7.4 and earlier, the network diagram object provided this feature.

**Path analysis**

The path analysis object displays flows of data from one event to another as a series of paths. In SAS Visual Analytics 7.4 and earlier, the Sankey diagram object provided this feature.

**Text topics**

The text topics object analyzes each value in a document collection as a text document that can contain multiple words. English and German languages are supported. You can view the full text of your documents in a pop-up window or in a list table. You can analyze sentiment based on the text in your documents.
Enhanced Objects

- The network analysis object has new **Force strength** and **Node distance** options that enable you to influence the layout of the nodes.

- A new maximize mode enables you to see detailed information about any object, which is especially useful for analytical models. You can maximize an object at any time to expand it to the full size of the canvas and display the details table for the object. Only a single object can be maximized at one time.

- The object toolbar now enables you to duplicate an object and change its type at the same time. For example, you can duplicate a pie chart as a bar chart.

- For objects that have a category assigned, you can create value groupings based on the values that are selected.

- Automatic titles are available for objects. The title changes as data is added or modified, unless you customize the title. There is a new setting available for object titles if you want to use the same type of title across sessions.

- Automatic charts have been updated. You can now easily return to the system-recommended object. A new menu item lets you select the system-recommended object.

- Containers have new layout options to specify how containers and their contents are resized.

- For precision containers, you can now select multiple objects and align them together.

- Gauge objects can display a lattice of gauges (also known as a KPI grid) by assigning the **Group** role.

- Text objects have an improved user interface.

- Crosstabs and list tables have the following updates:
  - Crosstabs and list tables have a new option for displaying abbreviated numerical values (for example, 1,100,000 is displayed as 1.1M).
  - Crosstabs and list tables can now have a cell graph (either a bar chart or a heat map) added to a column that uses a measure data item.
  - Crosstabs and list tables have a new default **Fit columns to width** option that sets the widths of columns based on the space available.
  - Crosstabs and list tables have a new **Condense row height** option that enables you to increase or decrease the row height.
  - Crosstabs can be sorted by clicking the column heading. Crosstabs now have one-click calculations (for example, percent of column total, percent of column subtotal, or percent of row total) that are available when you right-click and select **Create and add calculation**.
  - Crosstabs can now have measures on rows using a new placement option.
  - Crosstabs enable you to specify an alternating row background color.
  - By default, the columns in list tables are now automatically sized based on the space available. You can sort columns in a list table in ascending or descending order using the pop-up menu.
  - List tables have a new option that enables you to choose which numeric columns display totals.
  - List tables have a new option that lets you freeze columns.

- By default, SAS Visual Analytics automatically computes the height and width of any control or text object when the report is rendered. (This makes reports or text objects more portable across various screen sizes.) There are new **Specify width** and **Specify height** layout options that let you specify the width or height as a percentage of the space on the canvas when the report is opened in SAS Visual Analytics Viewer (the report viewer).
- By default, all pie charts use abbreviated numerical values (for example, 1,100,000 is displayed as 1.1M). The default style option for a pie chart is now the donut style.
- In box plots, the display of outlier values has been enhanced. When the range of outlier values is represented by a bar, the bar is divided into heat map bins.
- Controls can now dynamically select the first or last value of the data items assigned to the data role.
- An object now has an automatic name, which is based on the object type and the data items assigned to the data role.
- You can sort, remove, or replace data items in an object using the pop-up menu.
- You can change many of the options for your objects using the pop-up menu.
- In a correlation matrix or box plot, if you have licensed SAS Visual Statistics, then you can explore selected data as a new object, such as a heat map or analytical model.
- You can now share or print an individual report object or a page.
- You can right-click an object that is on the canvas to move it to an existing page or to a new page. If there are multiple objects on the canvas, you can move an object to a new place on the page. For example, you might move a bar chart to the beginning of the page.
- Bar charts have a new option that enables you to control the spacing between the bars.
- You can now sort, remove, or replace data items in an object using the pop-up menu.
- The stacking container has been improved with new button styles and behavior.
- Layout guides are now displayed when you move or size an object. You can disable layout guides using the menu bar.
- Bar charts, bubble plots, line charts, pie charts, scatter plots, and time series plots provide access to SAS Graphics Accelerator, which enables users with visual impairments or blindness to explore data visualizations.

Enhanced Geo Maps
- For all geo map types, you can assign an **Animation** data role to animate your maps over time.
- You can assign a **Size** role using measure values for the **Coordinates** map type.

Enhanced Parameters
- Parameters have been enhanced. They can now be based on date and datetime formats.
- You can synchronize prompt values and parameters across linked reports.

Enhanced Accessibility
- Keyboard navigation is supported.
- A new **Keyboard Shortcuts** window is available from the menu bar.
- Some graphs have integration with SAS Graphics Accelerator, a Google Chrome extension, which enables users with visual impairments or blindness to explore data visualizations.

Enhanced Report Viewer
- Sorting the data in tables, crosstabs, and graphs is now easier to do using pop-up menus.
Automatic report playback displays the pages of your report in a slideshow. This is especially useful for kiosk displays and other settings where the audience cannot navigate the report interactively.

You can hide object overlays such as toolbars.

Reports periodically refresh their data (every five minutes, for example) if they have been configured to do so by the report author.

Bar charts, bubble plots, line charts, pie charts, scatter plots, and time series plots provide access to SAS Graphics Accelerator, which enables users with visual impairments or blindness to explore data visualizations.

Changes to SAS Visual Analytics Terminology

The following terminology changes have been made since SAS Visual Analytics 7.4 was released:

<table>
<thead>
<tr>
<th>7.4 Terminology</th>
<th>7.5 Terminology</th>
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</thead>
<tbody>
<tr>
<td>data brushing</td>
<td>linked selections</td>
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<tr>
<td>info window</td>
<td>hidden page</td>
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<tr>
<td>network diagram</td>
<td>network analysis object</td>
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<tr>
<td>properties</td>
<td>options</td>
</tr>
<tr>
<td>report interactions</td>
<td>actions</td>
</tr>
<tr>
<td>report objects</td>
<td>objects</td>
</tr>
<tr>
<td>Sankey diagram</td>
<td>path analysis object</td>
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<td>SAS Mobile BI</td>
<td>SAS Visual Analytics App</td>
</tr>
<tr>
<td>sections</td>
<td>pages</td>
</tr>
<tr>
<td>Show Interactions</td>
<td>Actions diagram</td>
</tr>
<tr>
<td>tabs</td>
<td>panes (for example, the Objects pane)</td>
</tr>
</tbody>
</table>

Differences between SAS Visual Analytics 7.4 and 7.5

Here are some differences between SAS Visual Analytics 7.4 and 7.5:

- The SAS Visual Analytics Explorer (the explorer) and SAS Visual Analytics Designer (the designer) interfaces have been combined into a single HTML5 interface. There is no longer a choice of application presentation mode (classic or modern).
- Explorations and report objects have been merged into a single object type, SAS report (2G).
- The details tables behind the analytics that were available in the explorer are available in a new maximize mode, which enables you to see detailed information about any object. This is especially useful for analytical models.

- SAS Mobile BI is now SAS Visual Analytics App.

- SAS SDK for iOS and SAS SDK for Android are available from developer.sas.com to allow customers to create custom mobile apps that embed SAS Visual Analytics content.

- The Microsoft Internet Explorer browser was supported for the 7.4 and earlier releases. However, it is not a supported browser for the SAS Visual Analytics 7.5 release.

- The Sankey diagram is now referred to as the path analysis object. In the path analysis object, path weights are aggregated differently from how they were aggregated in the SAS Visual Analytics 7.4 Sankey diagram. The values for each path are summarized before the path weight values are aggregated for each link.

- The network diagram is now referred to as the network analysis object. In the network analysis object, the node layout algorithm has changed and the positions of your nodes might be different. Custom node layouts from reports that were created in previous releases are not migrated.

- Alerts for report objects are now an option in the Display Rules pane.

- Importing content from another report was supported for the 7.4 release and earlier releases. However, it is not supported for the 7.5 release.

- Functionality that was previously in SAS Visual Analytics Administrator is now incorporated in SAS Environment Manager Administration. For more information, see “What’s New in Administration of SAS Visual Analytics” in SAS Visual Analytics: Administration Guide.