SAS® Visual Analytics 8.5: Designing Reports

About Reports in SAS Visual Analytics

Using SAS Visual Analytics, you can drag table, graph, geographic, control, analytic, container, and content objects to create a well-designed report (or dashboard). You can add text, images, and page controls to reports. A report can have one or more pages. Each page can have a different layout and contain different objects. For more information about specific objects, see "About Objects" in *SAS Visual Analytics: Working with Report Content*.

Whether you work with text, tables, or linear regressions, all objects are added to a page in a report. Modeling objects are available if either the SAS Visual Statistics add-on or both SAS Visual Statistics and SAS Visual Data Mining and Machine Learning add-ons are licensed at your site. (The SAS Visual Data Mining and Machine Learning add-on cannot be licensed without the SAS Visual

Statistics add-on.) For more information about models, see "Modeling Information" in *SAS Visual Analytics: Working with SAS Visual Statistics* or "Modeling Information" in *SAS Visual Analytics: Working with SAS Visual Data Mining and Machine Learning*.

When you design a report, keep in mind that it might look slightly different when you view the report as opposed to when you open the report on a mobile device. For example, the layout of the tiles in the treemap is dependent on the size of the display area. Therefore, the same treemap might appear slightly different in SAS Visual Analytics than on a mobile device. For information about the mobile app, see documentation and videos on the SAS support site.

If you are designing reports that need to comply with the Web Content Accessibility Guidelines (WCAG) and are accessible to users with disabilities, refer to *Creating Accessible Reports Using SAS Visual Analytics*.

Understanding the SAS Visual Analytics Interface

About the Home Pane

After you log on to SAS Visual Analytics, the home pane is displayed. You can work with a new or existing report, or with data.

Some users prefer to start working with data, and others want to start with designing the report. If your site already has lots of reports, you can start with an existing report. The home pane gives you the flexibility to work the way that is best for you.

TIP

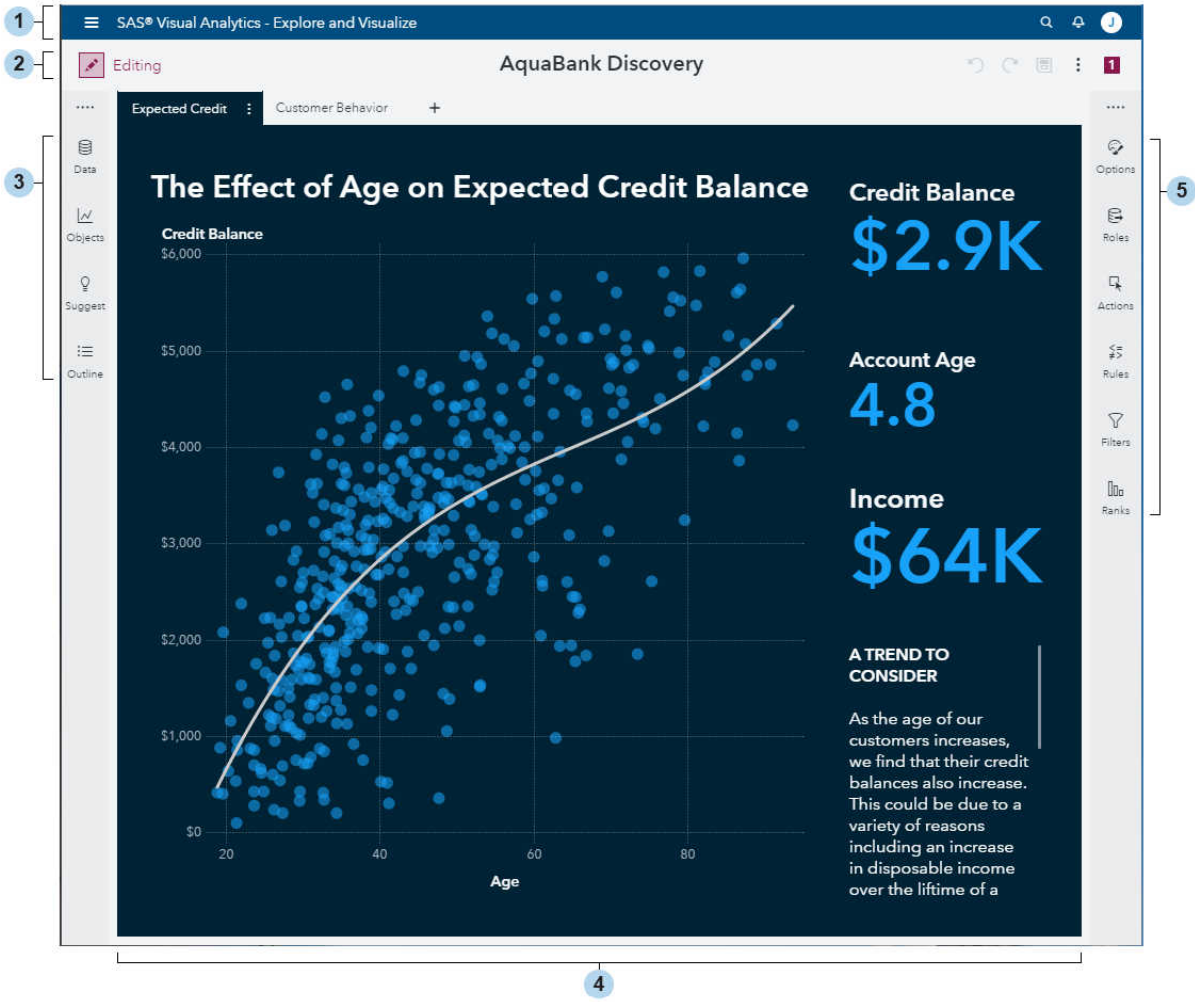
To work with an existing report, click **All Reports** in the home pane. Then, select the report that you want to edit.

Your First Look at the Interface

In SAS Visual Analytics, you can design reports, view reports, explore data, and run interactive, predictive models. Note that the models require separate licenses for SAS Visual Statistics and SAS Visual Data Mining and Machine Learning, which are add-ons to SAS Visual Analytics.

When you first sign in to SAS Visual Analytics, the home pane is displayed. The home pane provides two options for creating a new report. You can select **New Report** to display an empty canvas or select **Start with Data** to display the **Choose Data** window.

Here are the features of the interface:



1 The application bar at the top enables you to access other SAS applications. You can search for items, view your notifications, view a list of your recent items, access help, update your settings, and sign out of SAS Visual Analytics. For more information about application-specific settings, see "Modify SAS Visual Analytics Settings" on page 37. For more information about search and global settings, see *SAS Viya Web Applications: General Usage Help*.

2 The report toolbar displays the report name and the number of open reports. Use the report toolbar to move between editing and viewing a report; to undo, redo, or save changes; and to access other menu options.

3 Use the left pane to work with data, add objects, view and add suggested objects, and use the report outline to organize your content.

4 The canvas is the workspace for building a report. The appearance of the canvas is affected by the report theme. A report can have multiple pages.

5 Use the right pane to work with details about the report, its pages, and its objects.

TIP To keep informational messages in the user interface displayed, hover over the message.

About the Canvas

The canvas is the workspace for building a report. It enables you to work with pages and objects in your report.

Above the canvas, there are tabs for pages. For more information, see “Working with Pages” on page 13.

The following icons are available to help you manage report content on the canvas:

Icon	Description
↺	undo changes to your report.
↻	redo changes to your report.
💾	saves your report.
⋮	create a new report, open an existing report, close, view, save, print, share, distribute, localize, and reopen a report. This menu lets you enable or disable auto-refresh, object overlays, and layout guides. This menu also enables you to expand or collapse report controls and page controls, view the Actions Diagram, open the Keyboard Shortcuts window, and take the product tour.
2	indicates the number of open reports. Click the numbered button to display a list of the names of the reports that you have open. Click a report name to switch to that report. You can use the list to close individual reports or you can click **Close all**.

About the Side Panes

In general, data-related tasks are initiated from the left pane and presentation-related tasks are initiated from the right pane.

The side panes can be pinned or unpinned. When unpinned, the pane opens automatically when you select it and it closes when you finish using it. When pinned, the pane can be collapsed and expanded, but remains displayed while you use it. By default, the left pane is unpinned, and the right pane is pinned.

Here are some key points about the side panes:

- You can move side panes to a different location on the canvas by clicking and dragging the ···· indicator to move the pane. (This indicator is visible when the pane is unpinned or pinned and collapsed.)
- Click 📌 to pin a pane displayed while you work on your report. A box around the pin indicates that the pane is pinned.

- You can use the **Restore pane location** setting to return the side panes to their default locations. For more information, see "Modify SAS Visual Analytics Settings" on page 37.

The following table lists the panes for data-related tasks:

Name	Icon	Description
Data		enables you to select a data source (or data sources) and the data items for your report. You can add, import, remove, change, or refresh a data source using the icon beside the data source name field. This icon enables you to join data sources, add a data view, apply data source filters, and more. In addition to using the data items in the data source that you selected, you can use the **New data item** menu to create new data items. For example, you can define a hierarchy, create a custom category, define a calculated item, add a geography item, or add a parameter. If SAS Visual Statistics is licensed at your site, then additional data items are available. For example, you can define interaction effects, spline effects, and partitions. For more information, see "Using the Data Pane" in *SAS Visual Analytics: Working with Report Data*.
Objects		provides a list of the tables, graphs, geo maps, controls, containers, and other objects that can be used in a report or dashboard. Modeling objects are available if either the SAS Visual Statistics add-on or both SAS Visual Statistics and SAS Visual Data Mining and Machine Learning add-ons are licensed at your site. (The SAS Visual Data Mining and Machine Learning add-on cannot be licensed without the SAS Visual Statistics add-on.) For more information about objects, see the following: ■ "Gallery of Objects" in *SAS Visual Analytics: Reference* ■ "About Objects" in *SAS Visual Analytics: Working with Report Content* ■ "Modeling Information" in *SAS Visual Analytics: Working with SAS Visual Statistics*
Suggestions		provides you with suggested objects based on the data that you have selected. For more information, see "About the Suggestions Pane" in *SAS Visual Analytics: Working with Report Content*.
Outline		enables you to work with pages and objects in your report in an outline format. For more information, see "Use the Outline Pane" on page 8.

The following table lists the panes for presentation-related tasks:

Name	Icon	Description
Options		lists the options for the currently selected report, page, or object. This pane enables you to specify styles for a selected object. The options available depend on the selected object. When the report options are displayed, the report theme can be modified. For more information, see "Using SAS Report Themes" on page 10. Here are some key points about the **Options** pane: ■ If an object is not selected on the canvas, then the options are for the page or report. ■ When a page is selected, its name is listed, as well as other page options, such as style and layout. ■ When an object is selected, its name, title, and description are listed. Information that is specific to the object type, such as the axes and legend, is listed. For more information, see "Using the Options Pane" in *SAS Visual Analytics: Working with Report Content*.
Roles		enables you to add or update data role assignments in a selected object that uses a data source. For more information, see "Working with Data Role Assignments" in *SAS Visual Analytics: Working with Report Data*.
Actions		enables you to create links, which can be filters or linked selections. You can define object, page, report, and URL links. You can choose to automatically add actions (one-way filters, two-way filters, or linked selections) to objects. You can access the Actions Diagram by clicking **View Diagram** in the **Actions** pane. For more information, see "Working with Report Actions and Links" in *SAS Visual Analytics: Working with Report Data*.
Display Rules		enables you to create rules to highlight results based on specified values. There are report-level display rules and object-level display rules. You can create alert notifications for a display rule. For more information, see "Working with Display Rules" in *SAS Visual Analytics: Working with Report Data*.
Filters		enables you to add one or more filters to the selected object. For more information, see "Working with Report Filters" in *SAS Visual Analytics: Working with Report Data*.
Ranks		enables you to add rankings to objects. For example, you might want to see the top 10 products that sold last year. For more information, see "Ranking Values in Reports" in *SAS Visual Analytics: Working with Report Data*.

Use the Outline Pane

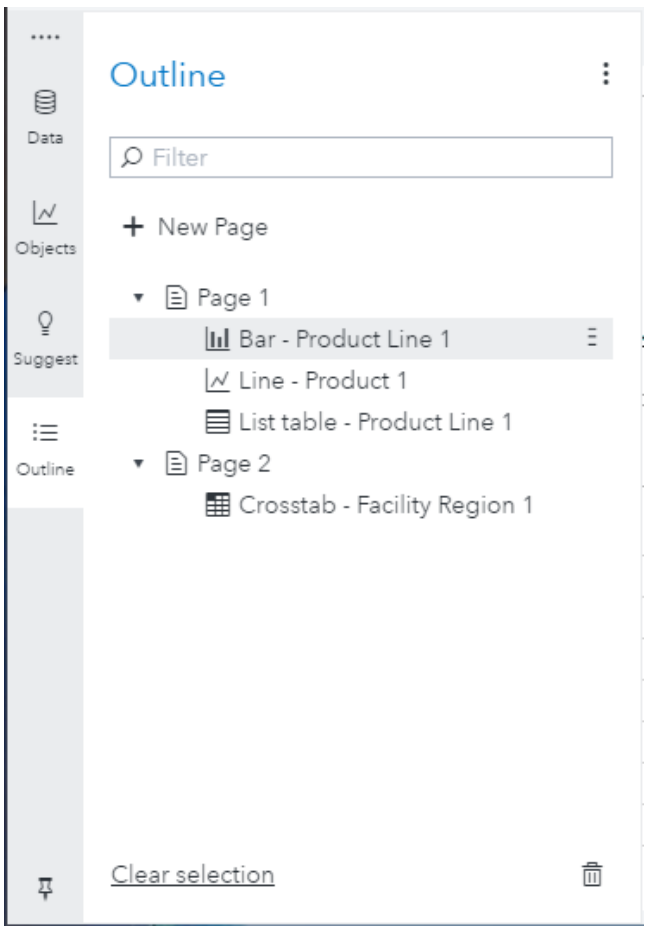
The **Outline** pane enables you to work with pages and objects in your report. You can add, rename, and hide or unhide a page. You can move objects from one page to another. When you right-click an object in the **Outline** pane, you can hide or show a title; maximize, delete, duplicate, and move the object; or add a link. You can save an image, export data, change object types, and print and share an object.

You can use the **Outline** pane to save an object (with its current options and data) as an object template to the **Objects** pane.

Here are some key points about the **Outline** pane:

- The ⋮ enables you to click and drag the selected page or object to a new location in the report.
- You can double-click a page name or object name in the **Outline** pane to rename it.
- You cannot maximize controls or containers using the **Outline** pane.

Here is an example of the **Outline** pane:



When you select items in the **Outline** pane, a toolbar is displayed at the bottom of the pane. The toolbar contains the following items:

Item	Description
📌	keeps a pane displayed while you work on your report. A box around the pin indicates that the pane is pinned.
Clear selection	deselects any pages or objects that are selected in the **Outline** pane.
🗑	deletes the selected pages or objects.

About the Report Layout

The default report layout enables you to place objects directly next to other objects. The objects cannot overlap. All objects on the page are sized to fit on the user's screen. If you adjust the size of an object, then the other objects automatically resize to ensure that all objects continue to fill the entire screen.

If you use container objects in your report, they have additional layout options. By default, when you resize an object, the borders automatically move based on a grid. The grid is 4 x 8 for standard layout and 10 x 10 for precision layout. While resizing an object, pressing and holding the Ctrl key increases the resolution of the grid. To disable the grid (layout guide), select **Disable layout guides** from the main menu. For more information, see "Working with Containers" in *SAS Visual Analytics: Working with Report Content*.

TIP The following SAS Global Forum paper is a useful resource for learning about report layouts: Tips and Techniques for Designing the Perfect Layout with SAS® Visual Analytics.

This paper pertains to the 8.2 release, but the concepts are applicable to later releases.

Using SAS Application Themes

An *application theme* defines the overall look and feel of a SAS application. It is the collection of colors, graphics, and fonts that appear in the application. You can use an application theme to customize SAS Visual Analytics so that it conforms to the rest of your company's software environment.

The default application theme is set by an administrator. Any of these application themes can be used as a basis to create an additional custom theme using SAS Theme Designer.

Note: If you have special requirements for your application theme, then contact your administrator about using SAS Theme Designer to create custom application themes. For more information, see *SAS Theme Designer: User's Guide*.

An application theme is different from a report theme, which contains settings that control the color selections for different elements of a SAS report. For more information, see "Using SAS Report Themes".

To specify the application theme:

1. In the application bar, click your name, and then click **Settings**.
2. Expand the **General** item in the side menu.
3. Select **Choose a theme**, and then select an application theme name from the list.
4. Click **Close**.

For more information about global settings, see *SAS Viya Web Applications: General Usage Help*.

SAS provides the following application themes:

High Contrast
Presents a dark background with high-contrast foreground elements to meet the needs of users with low vision.

Ignite
Presents an all-dark color palette, dark-blue background, and white text.

Illuminate
Presents a clean and uncomplicated color palette that is easy to use.

Inspire
Presents vibrant and cohesive colors that shift the emphasis from the application to the content.

Using SAS Report Themes

A *report theme* applies a consistent look and feel to SAS reports. A report theme provides consistent colors for the objects in your report.

Here are some key points about report themes:

- **Opal** is the default report theme for new reports. If you want older reports to use this report theme, you can change the report theme using the **Options** pane.
- An administrator can change the default report theme.
- Legacy report themes (**SAS Snow**, **SAS Light**, or **SAS Dark**) cannot be edited.

  CAUTION
  Once you change a legacy report theme to another report theme, you cannot revert to the legacy report theme. If your report with a legacy report theme has been promoted from 7.4 or an earlier release, it continues to use that legacy report theme. However, if you change to another report theme (like **Marine**), you cannot go back to the legacy report theme.

- Your site might have custom report themes. Custom report themes are created in SAS Theme Designer. For more information, see *SAS Theme Designer: User's Guide*.

To change the report theme for all reports:

1. In the application bar, click your name, and then click **Settings**.

2 Expand the **SAS Visual Analytics** item in the side menu, and select **General**.

3 Select **Choose a theme**, and then select a report theme name from the list.

For more information, see "Modify SAS Visual Analytics Settings" on page 37.

4 Click **Close**.

To change the report theme for a single report:

1 In the **Options** pane, click ▾ to select the report name. The report options are displayed.

2 Expand the **Style** heading, and use the **Theme** drop-down list to select a new report theme.

For more information, see "Specify Options for a Report" in *SAS Visual Analytics: Working with Report Content*.

SAS Visual Analytics provides the following report themes:

Aqua
Presents a white background with a vibrant color palette and subtle gradient on graphical elements.

High Contrast
Presents a dark background with high-contrast foreground elements to meet the needs of users with low vision.

Marine
Presents a white background with teal, orange, and green foreground elements.

Midnight
Presents a dark-blue background with a bright color palette and strong outlines that make the graphical elements glow.

Opal
Presents a white background with a bright color palette and strong outlines that make the graphical elements glow.

Creating a New Report

About New Reports

There is no single process for creating a new report in SAS Visual Analytics. For example, some users select their data source (or data sources) before they add the objects, and other users add objects to the canvas and then select their data source (or data sources). Some users choose to update the options for their reports. And, some users choose to view the detail data for their objects using maximize mode.

If you are designing new reports that need to comply with the Web Content Accessibility Guidelines (WCAG) and are accessible to users with disabilities, refer to *Creating Accessible Reports Using SAS Visual Analytics*.

Start a New Report

To quickly create a new report, click ⋮ on the report toolbar, and then select **New**. A blank canvas is displayed.

Note: Starting in the 8.5 release, multiple new reports can be open at one time.

Example of a New Report Workflow

The following list of steps is one way that you can create a new report.

Note: These steps assume that data has been brought into the SAS Cloud Analytic Services (CAS) environment and is available. For information about importing your own data, see *SAS Data Explorer: User's Guide*.

1. In the home pane, click **Start with Data**.

   Using the Choose Data window, select a data source. You can select additional data sources using the **Data** pane. For more information about data and reports, see *SAS Visual Analytics: Working with Report Data*.

   Note: The first time that you sign in to SAS Visual Analytics, you can view the product tour. (The tour is also available from the report toolbar.)

2. Click |⁄ to open the **Objects** pane. Add objects by dragging them onto the canvas. Alternatively, you can create an automatic chart by selecting data items in the **Data** pane, and dragging them onto the canvas. (An automatic chart can be modified.)

3. Add data items to objects by dragging data items from the **Data** pane onto the object.

   For a definition and picture of each object, see "Gallery of Objects" in *SAS Visual Analytics: Reference*.

4. (Optional) Modify the report.

   - Modify data role assignments. For more information, see "Add Required Data Role Assignments to an Object" in *SAS Visual Analytics: Working with Report Data*.
   - Add more objects. For more information about objects, see *SAS Visual Analytics: Working with Report Content*.
   - Update the options for the objects using the **Options** pane. For more information, see "Using the Options Pane" in *SAS Visual Analytics: Working with Report Content*.
   - Create or modify advanced data items (for example, hierarchies or geographic data items). For more information, see "Working with Data Items in a Report" in *SAS Visual Analytics: Working with Report Data*.

- Create or modify display rules for objects. For more information, see "Working with Display Rules" in *SAS Visual Analytics: Working with Report Data*.
- Add filters to the report. For more information, see "Working with Report Filters" in *SAS Visual Analytics: Working with Report Data*.
- Add actions between the objects on a page. For more information, see "Working with Report Actions and Links" in *SAS Visual Analytics: Working with Report Data*.
- Switch to maximize mode to view detail data or compare objects. For more information, see "Maximizing Objects" in *SAS Visual Analytics: Working with Report Content*.
- Add a rank to an object. For more information, see "Ranking Values in Reports" in *SAS Visual Analytics: Working with Report Data*.

Note: If you add a graph to your report, and there is not enough space for both the graph and the legend to display, then the legend is collapsed or hidden.

5 (Optional) Add a new page (or pages) to the report. For more information, see "Working with Pages" on page 13.

6 (Optional) View or change the report options using the **Options** pane.

7 Save the report. For more information, see "Save a Report" on page 17.

8 (Optional) View your report by clicking ✎ in the report toolbar.

Alternatively, click ⋮, and then select **View report**.

> **TIP** To return to designing your report, click ✎ in the report toolbar.

9 (Optional) Print your report. For more information, see "Printing Reports and Objects" on page 20.

10 (Optional) Share your report. For more information, see "Share a Report" on page 32.

Working with Pages

Overview of Pages

Any report in SAS Visual Analytics can have multiple pages. Multiple pages can be used to present different views of the data. Each page can have one or more data sources. You can have one or more objects on a page. There is no limit to the number of pages in a report.

A page is not required to contain any objects. For example, you might have a report that you use only as a template to create other reports if you want all reports to have a similar appearance. A template-like report might contain data sources, calculated items, global data filters, and display rules, but it might not contain objects.

You can add a link from an object to a specific page in the current report. For more information, see "Create a Manual Link to a Page" in *SAS Visual Analytics: Working with Report Data*.

Page prompts are controls that are placed in the special row area above the objects on the canvas. A page prompt enables the user to select a value to filter data on that page. For more information, see "Use a Control to Create a Page Prompt" in *SAS Visual Analytics: Working with Report Content*.

A report can have one or more hidden pages, which are visible only to the report designer and report viewers via a link. A hidden page is identified by a shaded background on the page tab. Hidden pages can have one or more objects. You must provide a link to a hidden page from an existing object to display a hidden page in a new window when the report is viewed.

You can use a hidden page with an object link to provide additional information about the data for an object to the user who is viewing it. When the user who is viewing the report clicks the data in the object, the hidden page is displayed. If there are objects on the hidden page, then they are filtered by the data that the user clicked in the report. For example, you can provide detail data for a bar chart by linking to a hidden list table, or you can provide additional text about what is displayed in the data for a particular object. When a user views the report and double-clicks the data (for example, a bar, a bubble, a pie slice, a table row, and so on) in an object that is linked to a hidden window, the additional information is displayed in a new window.

TIP You can use a hidden page for personal notes or for other documentation about a report. Create a hidden page, but do not link to it from another part of the report. That hidden page is available only to the users who can edit the report in SAS Visual Analytics.

Add a Page to a Report

To add a new page to a report, click **+** to the right of the first page tab (or the last page tab that was added) in the report. The new page appears to the right of the existing page (or pages).

Alternatively, you can click **New Page** in the **Outline** pane to add a new page to your report.

You can specify options for a new page. For example, you can specify the **Padding**, **Periodically reload page data**, and **Avoid scrollbars** options, as well as other options. For more information, see "Specify Options for a Page" in *SAS Visual Analytics: Working with Report Content*.

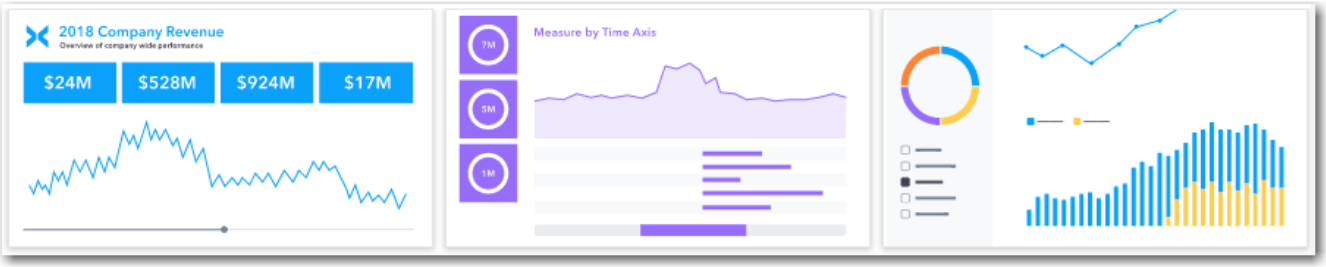
Add a New Page by Using a Page Template

SAS Visual Analytics provides six templates for new pages. By default, the page templates are displayed in a gallery at the bottom of the canvas. The page templates work with all report themes.

Here are some key points about page templates:

- The page templates are available when you press and hold **+** to the right of the first page tab (or to the right of the last page tab that was added) in the report.
- Page templates are not available for hidden pages.

Here is an example of the templates that are displayed in the gallery:



To use a page template:

1 Drag a page template onto the canvas. The Report Template Options window is displayed.

Alternatively, position your pointer over the template and click +.

2 Click the **Assign Data** button for each object to assign the required data items to the data roles.

3 Customize the report title and any other text in the report.

TIP To minimize the page templates, click ▾ above the **Start from a Page Template** label.

Add a Hidden Page to a Report

To add a new hidden page:

1 Click + to the right of the first page tab (or the last page that was added) in the report. The new page appears to the right of the existing page (or pages).

2 Click the ⋮ on the page tab, and then select **Hide page**. The background of the page tab is shaded to indicate that the page is hidden.

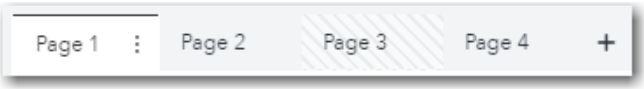
Alternatively, you can change an existing page to a hidden page. Do one of the following:

- In the **Options** pane, expand the **General** heading, and then select the **Hide and link to page as pop-up window** check box. For more information, see "Specify Options for a Page" in *SAS Visual Analytics: Working with Report Content*.
- In the **Outline** pane, right-click the page name, and select **Hide page**.

Note:

If the page currently has a page or report link, then the option to hide is disabled on the menu and on the **Options** pane. Only URL links from an object on a hidden page are supported. For more information, see "Creating Links" in *SAS Visual Analytics: Working with Report Data*.

Here is an example of four page tabs where the third page is hidden.



Specify the Size of a Hidden Page

To specify the size of the window that is displayed when the report is viewed:

1. In the **Options** pane, click ▾ to select the page name. The page options are displayed.
2. Expand the **General** heading, and then select the **Hide and link to page as pop-up window** check box.
3. (Optional) Specify the **Window width (percentage)** and **Window height (percentage)**.
4. (Optional) If you want the page to refresh automatically, select **Periodically reload page data**.

Note: Selecting the **Periodically reload page data** option might affect the report's performance.

Change a Hidden Page to a Regular Page

To change a hidden page to be unhidden, do one of the following:

- Click the ⋮ on the page tab, and then click **Unhide page**.
- In the **Options** pane, expand the **General** heading, and then clear the **Hide and link to page as pop-up** check box.
- In the **Outline** pane, right-click the page name, and select **Unhide page**.

Reorder Pages

To change the order in which pages are displayed, you can drag the page tab to a new position in the list of tabs.

Alternatively, you can use the **Outline** pane to change the order of pages. Use the ⋮ to click and drag the selected page to a new location.

Rename a Page

To rename a page, do one of the following:

- Click ⋮ on the page tab, and then select **Rename page**. Edit the name when the field is displayed.
- Right-click the page tab, and then select **Rename page**.
- Double-click the page name on the tab. Edit the name when the field is displayed.

- In the **Options** pane, expand the **General** heading, and then edit the **Name** field.
- In the **Outline** pane, double-click the page name, and then edit the name.

Duplicate a Page

To duplicate a page, click ⋮ on the page tab, and then select **Duplicate page**. All of the objects on the page are also duplicated.

Move an Object to Another Page

To move an object from one page in a report to another page, do one of the following:

- In the **Outline** pane, select the object that you want to move, and then click and drag the ⋮ indicator to move the object to a different page in the outline.
- On the canvas, select the object that you want to move. Click and drag the ···· indicator onto an existing page tab in the report.

  To add the object to a new page, on the canvas, select the object that you want to move. Click and drag the ···· indicator onto + to the right of the last page tab that was added.
- You can click ⋮ on the object's toolbar, and select **Move to**. Then, select an existing page or **New page**. If there is only one page in your report, then only **New page** is available.
- On the canvas, click ⋮ on the object's toolbar, press the Alt key, and then select **Duplicate on new page**.

  For more information, see "Duplicate an Object" in *SAS Visual Analytics: Working with Report Content*.

Delete a Page

To delete a page from a report, click ⋮ on the page tab, and then select **Delete page**.

Alternatively, you can delete a page using the **Outline** pane. Select the page that you want to delete, and then press the Delete key.

Save a Report

The default location for the first save of a report is `My Folder`. After that, the default save location is the most recently accessed folder.

Here are some key points about report names:

- Report names are limited to 100 characters and cannot include these characters: / \

- Report names cannot have leading or trailing spaces.

Reports in SAS Visual Analytics are saved when you click the on the report toolbar, or click ⋮, and then select either **Save** or **Save As**. A saved report contains at least one page. Typically, a page uses data items from a data source to perform queries. The page displays the results with one or more objects (for example, a table, a graph, a control, and so on). For more information about pages, see "Working with Pages" on page 13.

Note: When you use the **Save as** option to save a copy of a report, any existing report distributions are not saved with the copy. If the original report has alert notifications for display rules, the alert conditions are copied, but the recipients are not. For more information about alert notifications and display rules, see "Working with Display Rules" in *SAS Visual Analytics: Working with Report Data*.

Open a Report

You can open a report in SAS Visual Analytics or in SAS Drive. Do one of the following:

- When the SAS Visual Analytics canvas is displayed, click ⋮. The home pane is displayed. Double-click the report that you want to open.
- In SAS Drive, double-click a report that is displayed on the **All**, **Recent**, or **Reports** tabs to open it in SAS Visual Analytics.

> **TIP** To open SAS Drive, click ☰ in the application bar, and then select **Share and Collaborate**.

Note: When you open a saved report that has multiple data sources, SAS Visual Analytics displays the data source that was displayed in the **Data** pane when the report was saved. If there are multiple pages, the first page of the report is displayed.

You can use the application bar in SAS Visual Analytics to open a report that you have recently edited or viewed. Click the user name button, and then select **Recent items**. In the Recent Items window, select the name of a report.

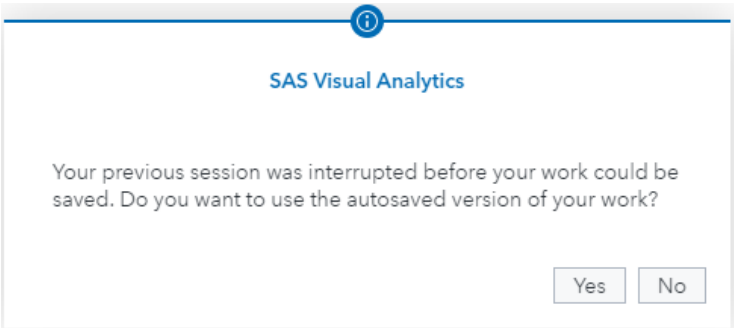
Note: The Recent Items window can include items that you opened in other SAS applications. The list is not restricted to SAS reports unless you selected the **Current application only** check box.

Note: You cannot navigate to the Projects folder in SAS Visual Analytics. You can view the reports that are collected in a SAS Drive project, on the **Projects** tab in SAS Drive.

Use an Autosaved Report

If your previous session was interrupted before you had a chance to save the report, SAS Visual Analytics provides you the opportunity to use an autosaved version of your report. Reports are autosaved every five seconds.

Here is an example of the message that is displayed if your session was interrupted:



In addition, if you open a report that has unsaved changes, SAS Visual Analytics provides you the opportunity to use the latest (autosaved) version.

Viewing a Report

Overview of Viewing Reports

You can view reports in SAS Visual Analytics or by using the SAS Visual Analytics Apps. Here are some ways to view a report:

- If you are editing a report, do one of the following:
  - Click ✎ in the report toolbar.
  - Click ⋮, and then select **View report**.

  For more information about report viewing tasks, see *SAS Visual Analytics: Viewing Reports*
- If you are using SAS Drive, double-click a report that is displayed in the **All**, **Recent**, or **Reports** tabs to open it in SAS Visual Analytics.
- If you are using a mobile device, launch the SAS Visual Analytics App, connect to a server, navigate to the report, and open it. Instructions vary by device. See the SAS Visual Analytics Apps documentation and videos on SAS support site.

Note: The SAS Visual Analytics Apps are available from Apple App store, Google Play, and Microsoft Store.

Accessibility for Viewing Reports

SAS provides the following report viewers:

- SAS Visual Analytics (the report viewing interface of theSAS Visual Analytics web application)
- SAS Visual Analytics App for Android
- SAS Visual Analytics App for iOS
- SAS Visual Analytics App for Windows 10

The type of accessibility support that is provided by each report viewer varies. Each report viewer has particular strengths. Depending on the type of support that you require, you might prefer one report viewer over the others.

For more information about the accessibility feature of the report viewers, see the following:

- *SAS Visual Analytics App for iOS: Accessibility Features*
- *SAS Visual Analytics App for Android: Accessibility Features*
- *SAS Visual Analytics App for Windows: Accessibility Features*

TIP In these documents, a **Version** list is located above the title. Select the version of the software that you have installed.

Printing Reports and Objects

Overview of Printing

You can create a PDF for a report, a page in a report, or an object. The PDF can then be printed. By default, an appendix is included in the PDF if the report, page, or object has descriptions, filters, warnings, errors, or display rule legends.

Here are some considerations for printing:

- Data-driven content objects and web content objects are not included in the PDF.

  To print static web content, configure the `webContentRendererLink` property for the SAS Viya Report Renderer Service. For more information, see "Report Renderer Service" in *SAS Viya Administration: Configuration Properties*.

- Hidden pages, report prompts, page prompts, and prompt containers are not included in the PDF. However, any filters that are applied to an object are displayed in an appendix.

- By default, containers print only the currently selected object.
- If a list table or a crosstab has scroll bars, then some of the scrolled content might not be printed. However, more columns or rows might be printed than are visible in SAS Visual Analytics. The print feature attempts to fill the space available on the page in the PDF.
- A list table or crosstab that is printed from SAS Visual Analytics might show more rows than when it is printed after the report has been distributed. This happens because the state of the report is taken into consideration when it is printed. The print feature attempts to match what the user sees in SAS Visual Analytics. When you print a report that has been distributed, there is no report state for the print feature to match.
- If an object has a high-cardinality filter, and the **Include appendix information** option is selected, then the filter description might be truncated in the printed appendix.
- There can be differences in the fonts in a printed report if the fonts that are used to create a report do not match the fonts that are available on the server that generates the PDF.
- If your SAS Visual Analytics report includes a Compact File Format (CFF) font, then printing fails with an error. Printing fails because CFF fonts are not supported by the PDF-generation code. To work around the issue, you can convert the CFF font to a TTF font. Free online tools, such as Convertio's CFF to TFF Converter Tool, are available to perform this task.
- If you want to print from SAS Visual Analytics using Mozilla Firefox, you must have Firefox configured to open a link in a new tab instead of in a new window. Instructions for making this change might vary between Firefox releases, so refer to the Firefox documentation. As an alternative, you can use a different supported browser, such as Google Chrome.
- Depending on your locale, a PDF might not render correctly in Microsoft Edge. Try using Adobe Reader as the PDF viewer.
- An image URL that requires authentication cannot be printed.

Print a Report, a Report Page, or an Object

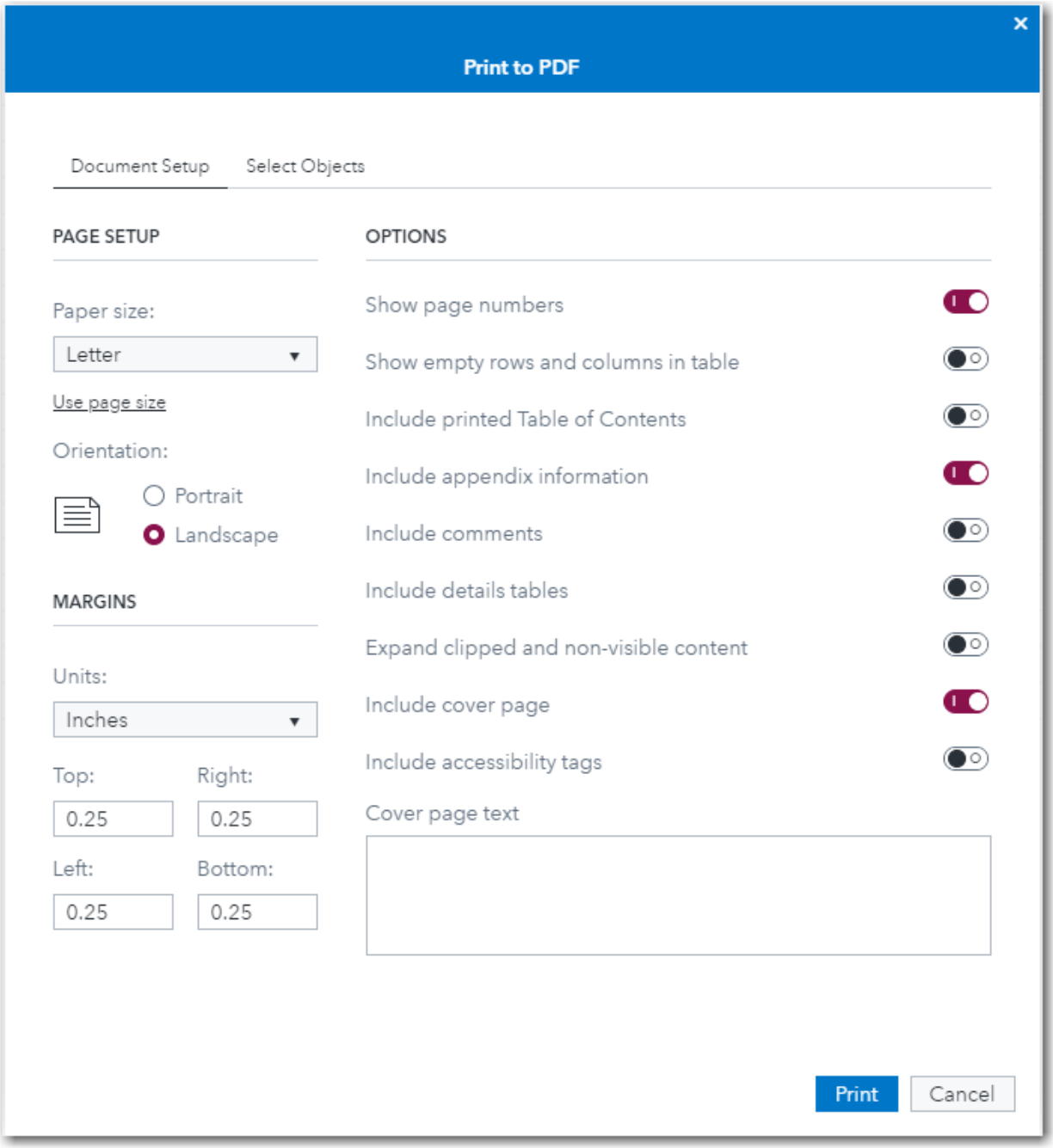
1 With the report open on the canvas, click ⋮ on the report toolbar, and then select **Print**. The Print to PDF window is displayed.

> **TIP** To print a page, click the ⋮ on the page tab, and then select **Print page**.

> **TIP** To print an object, click the ⋮ on the object toolbar, and then select **Print object**. This option is not available for objects in the report prompt control area, in the page prompt control area, or in a container.

2 In the Print to PDF window, specify the options that you want for **Document Setup**.

Note: The **Document Setup** options are saved with the report and are used when you distribute it to other users.



Here are some details about the setup options:

- **Use page size** lets you print a report based on the current size of your browser window. You can use the browser window size that is calculated by SAS Visual Analytics, or you can specify **Units** of measurement (**Inches** or **Centimeters**), including a specific **Width** and **Height**.
- **Show empty rows and columns in table** applies to both list tables and crosstabs.
- **Include appendix information** is selected by default if the report, page, or object has parameters, descriptions, filters, warnings, errors, or display rule legends.

  When the **Include appendix information** option is specified, and the report, page, or object has parameters, descriptions, filters, warnings, errors, or display rule legends, then an appendix is created. Each object that is selected to be included in the PDF is automatically assigned a value so that you can reference that object in the appendix. For example, suppose that you select two objects on the **Select Objects** tab. The first object is assigned the value

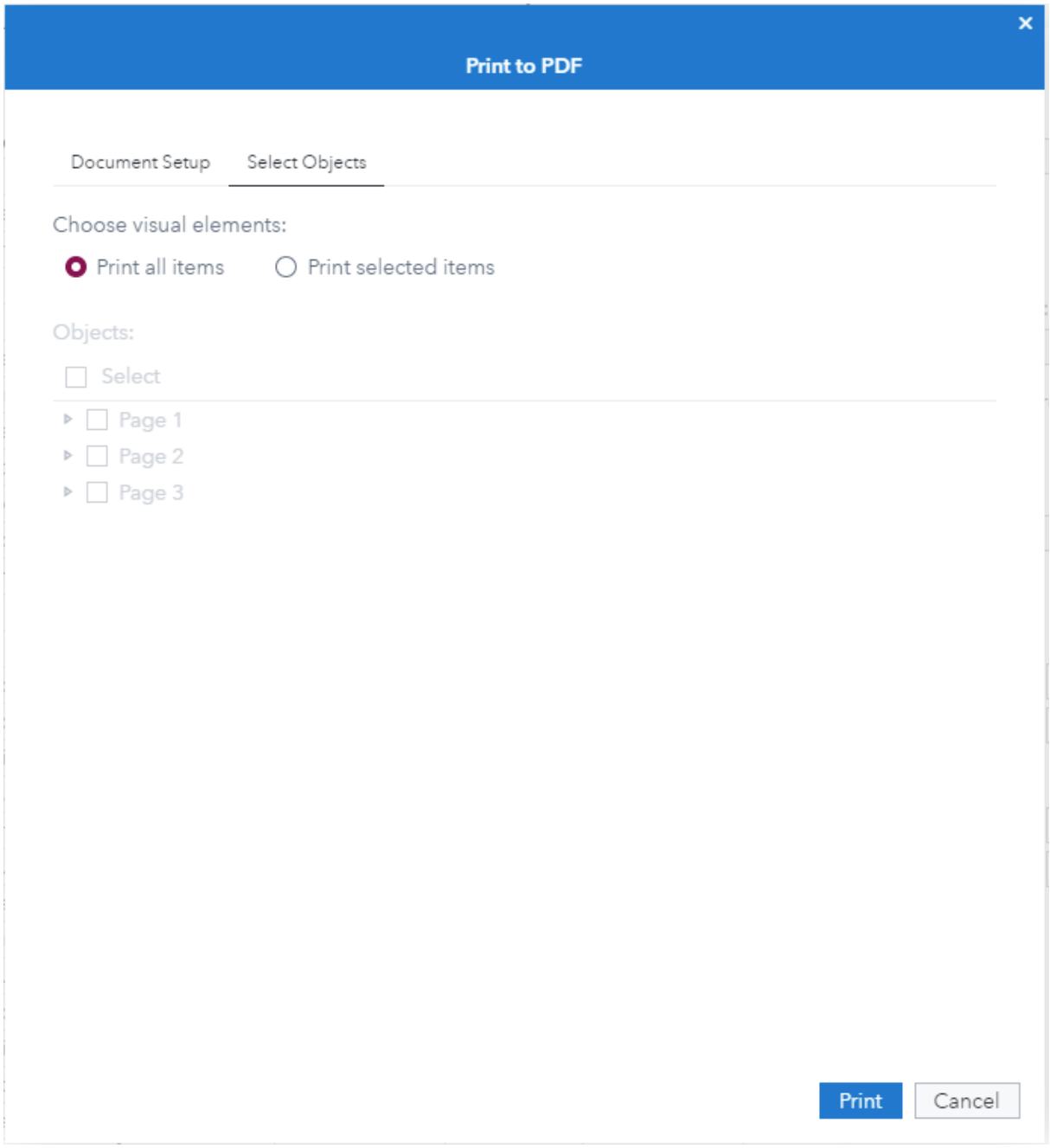
`A1.1`, and the second object is assigned the value `A1.2`. Suppose that the first object has a description and the second object has a filter that has been applied. The first object's description is displayed in the appendix under the `A1.1` heading. The second object's filter is displayed in the appendix under the `A1.2` heading.

- **Include details tables** adds a section at the end of the PDF that includes the details tables for all of the objects in the report that have detail tables associated with them.
- **Expand clipped and non-visible content** enables you to see all of the content for tables, crosstabs, gauges, and containers. This includes content that is only partially available in the layout of the page. Each object is displayed on a separate page at the end of the report.
- If you select **Include cover page**, then the cover page prints the name of the report (or the label if the report has not been saved), the date of the print request, the user name, and the number of pages. Use the **Cover page text** field to add text to the cover page.
- **Include accessibility tags** enables you to create a tagged PDF, which contains accessibility markup that optimizes the reading experience for users who use screen readers or other assistive technology.

  Note: This feature can be controlled by an administrator. If your administrator has enabled this feature, then all of the printed reports are tagged PDF files.

3 (Optional) For reports and pages, you can specify which objects you want to print by using the **Select Objects** tab. You can select report pages, objects, or both.

Note: The **Select Objects** options are not saved with the report.



4 Click **Print**. The PDF is displayed in a browser.

Create a Report Summary

Overview of Report Summaries

You can create a summary for your report. The summary can be displayed:

- when you are viewing the report
- when you preview the report in SAS Drive
- in SAS Visual Analytics Apps

Report summaries are particularly useful if your audience includes individuals with visual impairments. The report summary can easily be read by screen readers.

Create a Report Summary

To create a report summary:

1. In the **Options** pane, select the name of your report from the drop-down list.
2. Expand the **Summary** option.
3. Enter summary text. You can edit summary text by using the following methods:
   - Enter text in the text box.
   - Enter Apache Velocity syntax in the text box. The summary text is an Apache Velocity template. For more information, see the Apache Velocity User Guide at http://velocity.apache.org and see the NumberTool and MathTool classes in the Velocity Tools API.
   - Click , and then select a data element or a label in an object. Here are some examples of elements or labels that you can select:
     - cells in a list table
     - bars in a bar chart
     - slices in a pie chart
     - axis labels
     - object titles

     References to data element values are dynamic and based on the structure of the object. For example, if you select the first bar of a bar chart, then the summary always displays the value of the first bar in the bar chart. The value that is displayed might be different if you change the sorting of the chart, if you change the data source, if you apply filters or ranks to the chart, and so on.

     Here are some important points about using data element values in the summary:

- Data element values are displayed without any formatting. Date and datetime values are not easily understood without formatting.
- If a reference to a data element is no longer working (for example, if you remove the data item or if you change the object type), then the value is displayed as `{{REFMISSING}}`.
- If you select a total from a list table, the reference is to the table cell. If the number of rows in the table changes, then the reference no longer displays the total; it displays whatever is in the table cell.
- Some objects do not support selection with the point and click tool. When you move the cursor over an object that does not support selection, the cursor changes to indicate that the selection is disabled.
- You cannot reference hierarchy values in a report summary.
- If a data element's value is suppressed or if it represents an "All Other" grouping, the value is not displayed in the summary. A token (~S or ~O) is displayed instead.

4 Click **Preview Summary** to preview the current summary.

Note: The data values in the preview summary might differ from those that are displayed when a user views the report. Values in the preview summary do not show the effects of filter actions between objects.

When a user views the report, the values in the summary reflect any selections that the user made in the view state for the report.

The summary is saved when you save your report.

Distributing Reports

Overview of Distributing Reports

You can distribute reports using SAS Visual Analytics. Distributing reports automates the process of delivering updated content to report users. You can distribute reports once or at recurring intervals, such as daily, multiple times daily, weekly, monthly, or yearly. In addition, distributing reports gives you the ability to generate reports during non-peak hours.

The Distribute Report window enables you to schedule, unschedule, run now, and delete the distributions that you are authorized to view.

In order for report distribution to work in SAS Visual Analytics on SAS Viya, an administrator must complete the following tasks:

- configure the mail service for SAS Viya. For more information, see "Configure the Connection to the Mail Service" in *SAS Viya for Linux: Deployment Guide*.
- configure an external URL. For more information, see "Configure an Additional External URL" in *SAS Viya Administration: Mobile*.

Here are some key points about distributing reports:

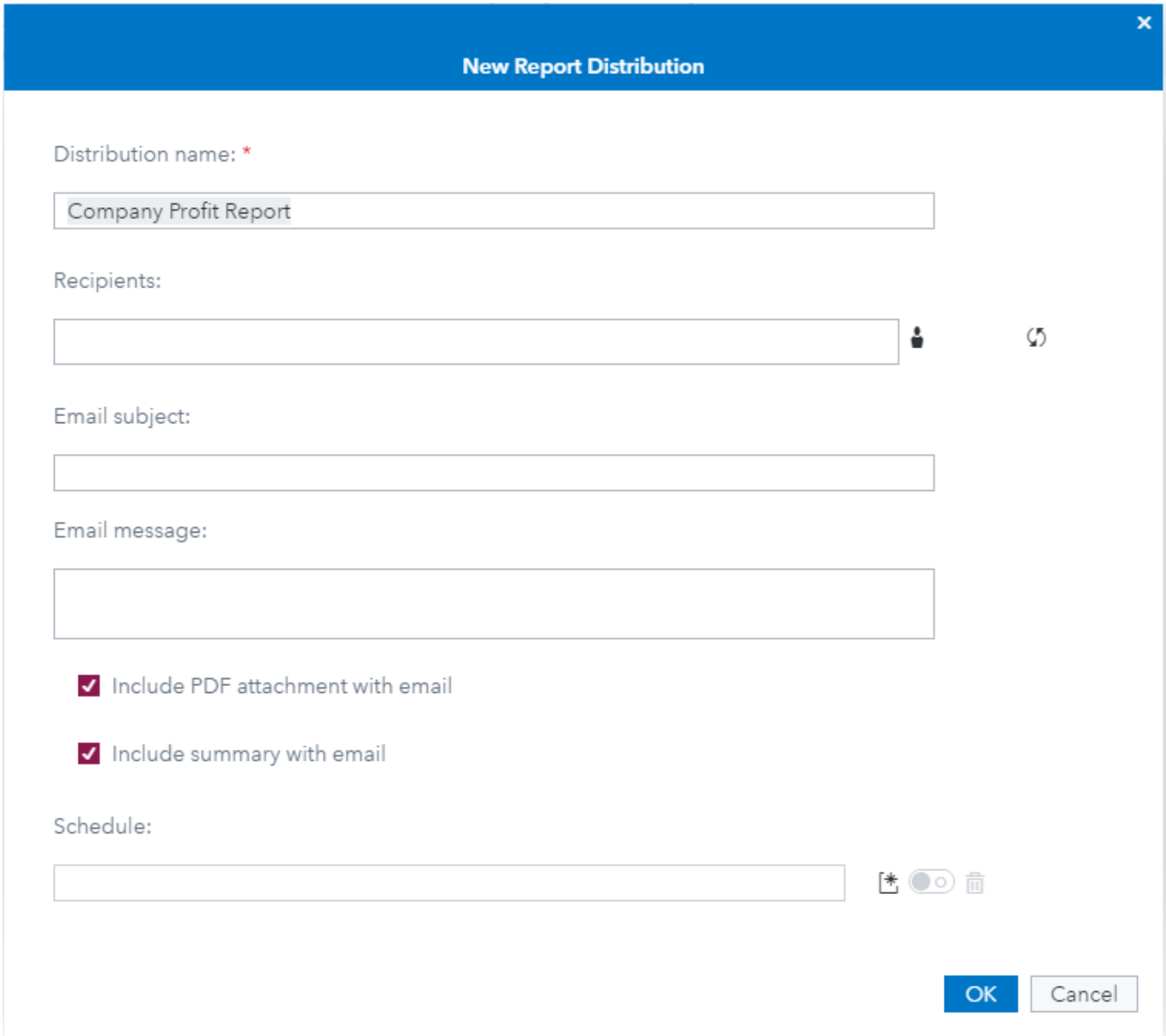
- By default, you must be an application administrator to distribute reports. An administrator can modify your access.
- The **Document Setup** options for printing that you save with a report are used when you distribute the report to other users.
- You must open a report to set up its distribution.
- You can choose to distribute a report to a set of users, groups, or both.
- By default, the email for a report distribution contains a link to the report, an attached PDF, and a summary. You can specify whether you want to include a PDF, a summary, or both.
- If you save a copy of a report with a report distribution, the report distribution is not saved with the copy.
- If you distribute reports to multiple locales or if you receive distributed reports, then you can specify your **Region and Language** settings in the global SAS settings. Report distribution uses the **Locale for offline processes** setting. It does not use the **Locale for regional formats and sorting** setting.

  For more information about global settings, see *SAS Viya Web Applications: General Usage Help*.
- The PDF that is generated by report distribution is based on the default report state, which is the state of the report when the report designer saved it. This is different from the view state of a report, which can include the results of a user making changes to controls, navigation, drill states, and so on, while viewing the report.

Note: A distribution email is delivered at least once to any user who has signed in to the SAS Viya environment at least once. If a new user signs in to the SAS Viya environment, they will receive the next email distribution if it is run again.

Schedule a New Report Distribution

1. Open the report that you want to distribute.
2. Click ⋮, and then select **Distribute report**. The New Report Distribution window is displayed.



Do the following:

a Specify a **Distribution name**. The default name is the report name.

b Click beside the **Recipients** field. The Choose Members window is displayed. Specify the **Selected members**, and then click **OK**.

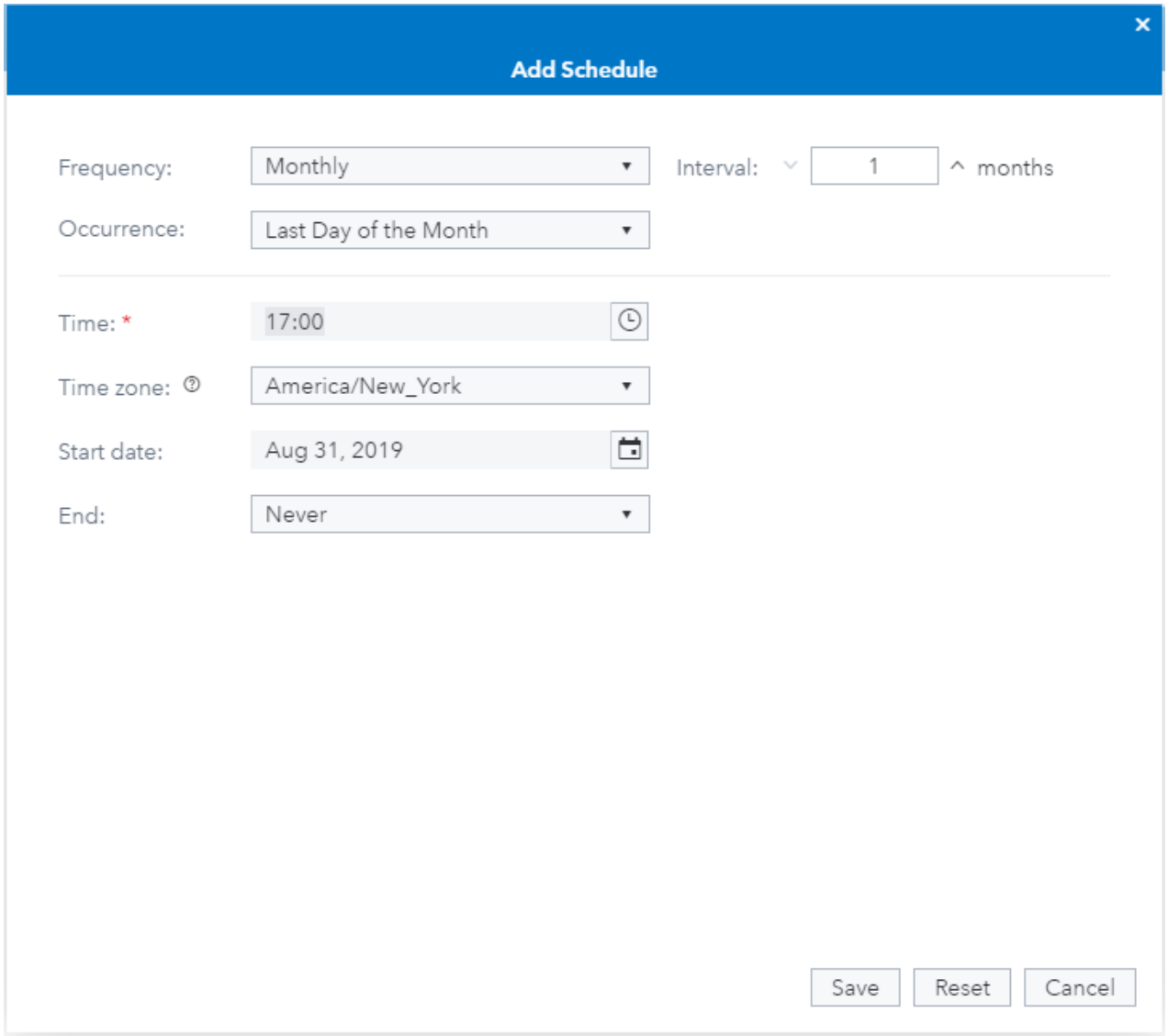
c (Optional) Do the following:

- Enter a subject. If you leave the **Email subject** field blank, the subject line says `This is a distributed report email`.
- Enter a message.
- Clear the **Include PDF attachment with email** check box if you do not want to distribute the report in PDF.
- Clear the **Include summary with email** check box if you do not want to distribute a summary. The summary can include text and dynamic values that are derived from objects in the report. For more information, see "Create a Report Summary" on page 25.

d Click to enter the **Schedule**. The Add Schedule window is displayed.

3 Specify the frequency, interval, time, time zone, start date, and end for your report distribution's schedule.

Here is an example of the Add Schedule window for a report that will be distributed at 5:00 PM on the last day of every month.



Click **Save** to return to the New Report Distribution window.

> **TIP** The beside the **Schedule** field indicates that the schedule is active. For example, suppose that your company is closed for a week to observe a national holiday. You can use the indicator to deactivate the distribution schedule during that week. When the holiday is over, you can make the schedule active again.

4 Click **OK**. The report distribution is displayed in the table in the Distribute Report window.

5 Click **Close**.

Distribute a Report Immediately

1 Open the report that you want to distribute immediately.

2 Click ⋮, and then select **Distribute report**. The Distribute Report window is displayed.

3 Select the name of the distribution that you want to activate in the list.

4 Click ▷ in the Distribute Report window to distribute the report immediately.

5 Click **OK**.

Edit a Report Distribution

1 Open the report for which you want to edit the distribution.

2 Click ⋮, and then select **Distribute report**. The Distribute Report window is displayed.

3 Select the name of the report distribution that you want to edit in the table.

4 Click ✎. The Edit Report Distribution window is displayed.

5 Make changes to the report distribution.

6 Click **OK** to save your changes.

Unschedule a Report Distribution

1 Open the report for which you want to unschedule the distribution.

2 Click ⋮, and then select **Distribute report**. The Distribute Report window is displayed.

3 Select the name of the distribution that you want to unschedule in the table.

4 Click ✎. The Edit Report Distribution window is displayed.

5 Click ◯ to deactivate a schedule in the Edit Report Distribution window.

6 Click **OK** to save your changes.

Delete a Report Distribution

1 Open the report for which you want to delete the distribution.

2 Click ⋮, and then select **Distribute report**. The Distribute Report window is displayed.

3 Select the name of the distribution that you want to delete in the table.

4 Click 🗑. Then, click **Yes** in the confirmation message that is displayed.

5 Click **Close**.

Sharing Reports and Objects with Other Users

Overview of Sharing

Sharing enables you to make report content available to other users. In SAS Visual Analytics, you can share content in two ways:

- share the report directly with the user. When you share a report in this way, you can grant permissions to the recipients. The recipients of the shared report can open it from SAS Drive.
- generate a link to a report or to an object in a report that you can copy and then share with other users. Here are some key points about what happens when a recipient clicks the link to a report:
  - If the recipient has already signed in to SAS, the report is displayed when the report link is clicked.
  - If the recipient is not signed in to SAS and guest access is enabled, they are prompted for a user ID and password. Recipients can sign in as a guest by clicking **Guest** on the standard sign-in window for SAS applications.
  - If the recipient opens the email message on an iOS or Android mobile device, and then clicks the link, the report is displayed using the SAS Visual Analytics App if the recipient has it installed. If the recipient opens the email message on a Windows mobile device, and then clicks the link, the report is displayed in the report viewing interface.

The SAS Visual Analytics implementation of sharing is different from the following features:

- Limiting a user's ability to customize their view of the report, which requires a report designer to use the **Viewer Customization** options. For more information, see "Specify Options for a Report" in *SAS Visual Analytics: Working with Report Content*.
- Sharing of Model Studio projects. For more information, see "Sharing a Project" in *SAS Visual Data Mining and Machine Learning: User's Guide*.
- Sharing of generic (formerly SAS Data Management) projects, which is achieved by assigning owners and members. For more information, see "Working with Projects" in *SAS Drive: Documentation*.

Starting in the 8.4 release, a report designer can limit a user's ability to customize their view of the report. The **Viewer Customization** options are part of report options. These options affect the reports and objects that you share with other users. For more information, see "Specify Options for a Report" in *SAS Visual Analytics: Working with Report Content*.

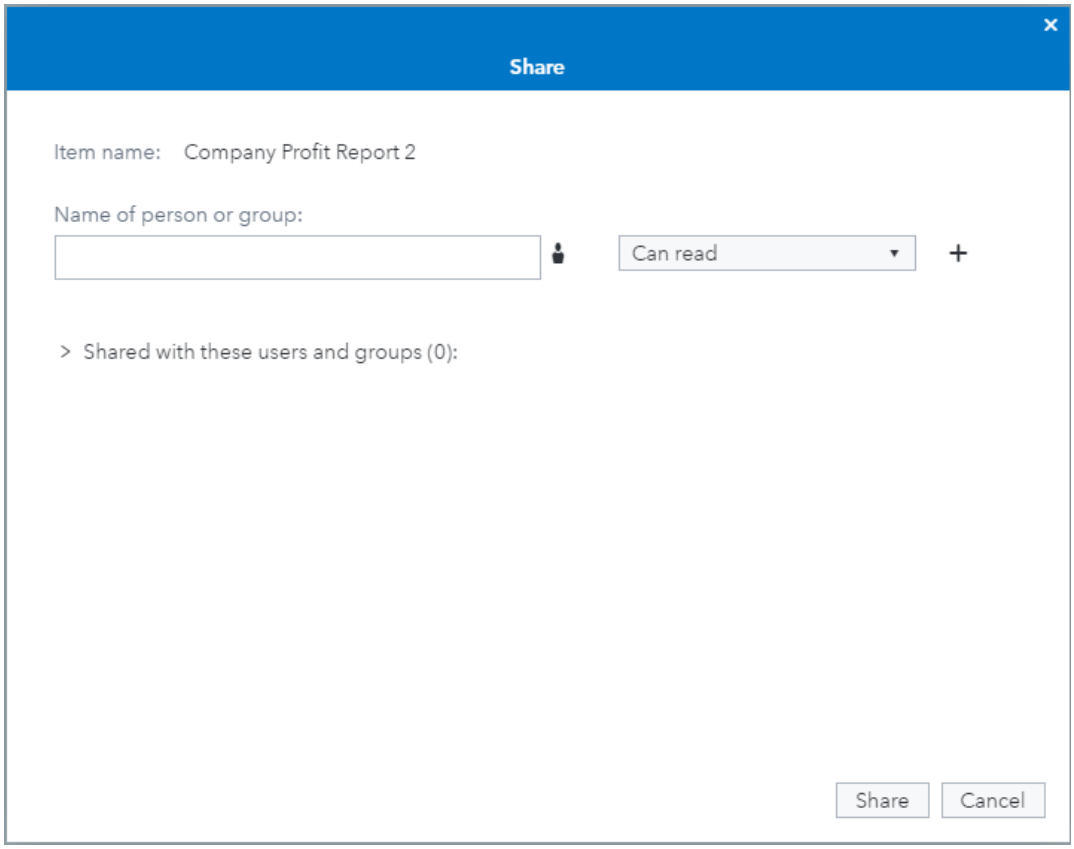
Share a Report

You can share a report directly with a recipient, who can open it from SAS Drive. The ability to share a report depends on how SAS Viya is configured at your site. By default, you can share reports that are in **My Folder** and reports that have been shared with you. If sharing is not available for a report, contact your system administrator.

To share a report:

1 Save the report.

2 Click ⋮ on the report toolbar, and then select **Share report**. The Share window is displayed.



3 Add recipients in the **Name of person or group** field. You can enter names in the field or click 👤. The Choose Members window is displayed. Add users to the **Selected members** field. Click **OK** to return to the **Share** window.

4 For each user, specify either **Can read** or **Can read and edit**.

5 (Optional) Click + to add more users to the list.

6 (Optional) Expand **Shared with these users and groups** to see which users you have shared the report with.

7 Click **Share**. The system generates an alert for the user, and the user can access the report in the **Shared** folder on the **All** tab in SAS Drive.

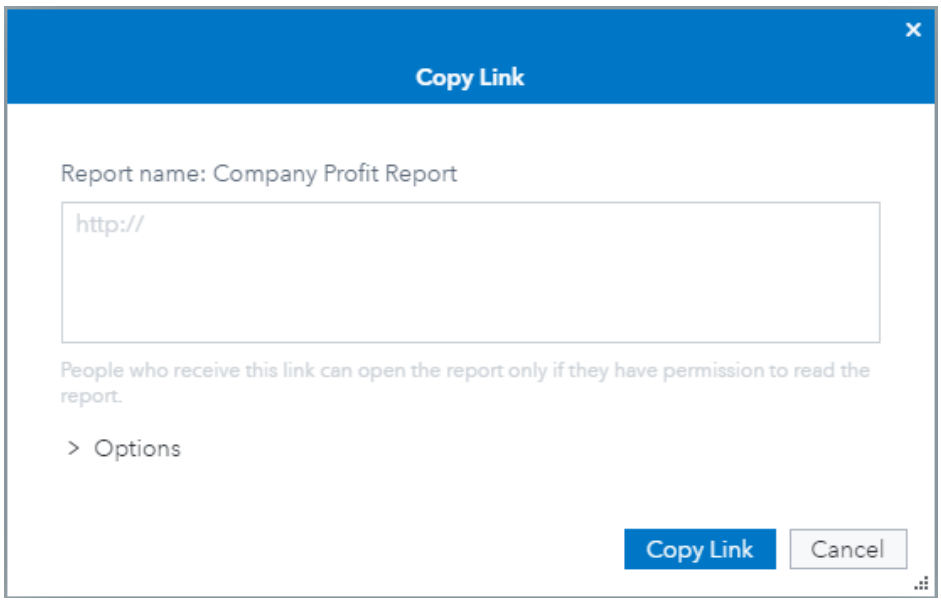
Copy a Link to a Report

You can copy a link to a report. Once the link is generated, you can share it with other users.

Note: SAS Visual Analytics provides other linking features. It enables you to add a link from an object to another report, to a specific page in the current report, or to an external URL. For more information about these features, see "Creating Links" in *SAS Visual Analytics: Working with Report Data*.

To generate a link to a report:

1 Click ⋮ in the application bar, and then select **Copy link**. The Copy Link window is displayed.



2 Expand **Options** to select or clear any of the following options for the report link:

Guest access
specifies that users bypass the sign-in screen. Guest credentials are automatically used. This option is not available if guest access is not available for your deployment.

Interactive report
specifies that users can interact with the report content.

Embeddable web component
wraps the link in HTML tags so that the report link can be displayed inline on a web page.

Application bar
hides the application bar at the top of the report. When the application bar is hidden, users cannot navigate to other SAS applications, search for content, view notifications, or adjust user settings.

Report toolbar
hides the report toolbar at the top of the report. When the report toolbar is hidden, users cannot access other reports.

Page navigation
hides the page tabs in the report. Use this option when a report has only one page and you do not want the single page tab to be displayed to users who are viewing the report.

> **TIP** If you select this option for a report that has multiple pages, then you need to ensure that there are page links that enable users who view the report to move between the pages.

Display first page when opened
displays the first page of the report, even if you saved it while working on another page.

Show static report while loading
displays a static image of the report for the user while the report is loading.

Note: A recipient of the link with the static image who does not have access to the report receives an error.

3 If your report contains parameters, expand **Parameters** to add a parameter to the URL. Click **Add Parameter**, and then select a parameter.

4 Click **Copy Link**. Then, paste the link wherever you need it.

Copy a Link to an Object

You can copy a link to an object. Once the link is generated, you can share it with other users.

By using this feature for a container, you can embed the container (and all of its objects and prompts) in the SAS Visual Analytics SDK. The SAS Visual Analytics SDK is available from the SAS Visual Analytics SDK product page.

Note: SAS Visual Analytics provides other linking features. It enables you to add a link from an object to another report, to a specific page in the current report, or to an external URL. For more information about these features, see "Creating Links" in *SAS Visual Analytics: Working with Report Data*.

To copy a link to an object:

1 Click ⋮ on the object toolbar, and then select **Copy link**. The Copy Link window is displayed.

2 Select or clear any of the following options for the object link:

Guest access
specifies that users bypass the sign-in screen. Guest credentials are automatically used. This option is not available if guest access is not available for your deployment.

Interactive report
specifies that users can interact with the report content.

Embeddable web component
wraps the link in HTML tags so that the report link can be displayed inline on a web page.

Show static report while loading
displays a static image of the object for the user while the data is loading.

3 Click **Copy Link**. Then, paste the link wherever you need it.

Delete a Report

1 In the application bar, click ☰, and then select **Share and Collaborate** to open SAS Drive.

2 On the **All** tab, right-click the report that you want to delete, and then click **Delete**.

For more information about working with content in SAS Drive, see *SAS Drive: Documentation*.

Localizing Reports

About Localizing Reports

SAS Visual Analytics enables you to localize (or translate) the labels, tooltips, and other descriptive text that is part of your report. You can export localizable text from your report so that you can apply one or more translations. You can translate your report into a new language without removing the text from SAS Visual Analytics.

There is no limit to the number of translations that you can add to the report.

> **TIP** All report text is encoded as UTF-8. If you export text from SAS Visual Analytics into a file, be sure to use an editor that can save translated results as UTF-8. For more information, see "Export Translated Strings for a Report" on page 36.

You can localize almost all of the text that is displayed in a report. Exceptions include the following:

- the name of the report
- the names of the reference lines that are associated with a graph
- the currency format, which is based on the data source locale of the original report
- the sort order, which is based on the data source locale of the original report
- rich text that contains frequent or elaborate style changes or line breaks
- the values of a custom group (but not the group name itself, which appears as a column heading)

Localize Report Text

1 Save a copy of the report before you start localizing the text.

2 With the report open on the canvas, click ⋮ on the report toolbar, and then select **Localize report**. The Localize Report Text window is displayed. The **Original Language** for the report text (for example, the page names) is displayed in the table.

3 In the **Translation** drop-down list, select the language that you want to localize the report text to.

4 Enter the translated (or localized) text in the **Translation** column in the table.

5 Click **OK**.

Alternatively, you can use the SAS Viya command-line interface (CLI) to export translation worksheets for reports. For more information, see "CLI Examples: Reports" in *SAS Viya Administration: Using the Command-Line Interfaces*.

Export Translated Strings for a Report

By using SAS Visual Analytics, you can export translated strings for localized text that you have already provided. For example, after you import a translation, you might want to correct some of the text or you might want to add a country-specific translation to allow for regional differences. For example, if the French version of your report is for users in Canada as well as in France, you can create localized text that contains terminology more familiar to your Canadian users.

To export localized text from your report:

1 Set the browser language to the locale that you want to export.

2 Open the report in SAS Visual Analytics and select **File** ⇨ **Localize Report**. The translated strings are displayed in the Localize Report Text window.

3 Edit the strings, and then click **OK** to save your changes.

Alternatively, you can copy the localized text to a file, make changes, and then re-import the localization.

Note: If you apply or import localizations, all localizations that are already in place are overwritten.

Best Practices for Creating Reports That You Want to Localize

Here are some best practices for creating reports that will be localized:

- Design the report in its original language before you begin to localize the strings.
- Create localized strings in either the Localize Report Text window in SAS Visual Analytics or in another editor that can save files that are encoded as UTF-8.
- Avoid mixing styles and colors of text when you use rich text in a report.
- Use a naming convention for translation files. When a report contains more than two languages, you can include the ISO 639 two-letter language code as a suffix to the file name. To further distinguish a localization for a country or region, you can include the ISO 3166 two-letter country code.

For example, suppose you have a report called MyReport. You can save the text in the original language to a file that is named MyReport.xml. In accordance with the naming convention, the Russian translation file would be MyReport_ru.txt and the French Canadian translation file would be MyReport_fr_CA.txt.

Modify SAS Visual Analytics Settings

There are two types of settings. Local settings that are specific to SAS Visual Analytics, whereas global settings apply to all SAS web applications. For more information about global settings, see *SAS Viya Web Applications: General Usage Help*.

1 In the application bar, click the user name button, and then click **Settings**.

2 Expand the **SAS Visual Analytics** item in the side menu, and then select **General**, **Geographic Mapping**, **Network Analysis**, **Visual Statistics**, or **Themes**. Update the settings that you want to change.

> **TIP** When you click **Reset**, the settings revert to their original SAS Visual Analytics configuration.

3 Click **Close** to apply your changes.

Settings for SAS Visual Analytics are saved on a per-user basis. All of your settings persist between sessions.

SAS Visual Analytics provides the following settings:

- **General**

  Report theme for new reports
  Select your preferred report theme. For more information, see "Using SAS Report Themes" on page 10.

  Note: This setting does not affect existing reports.

  Action mode for new pages
  Select your preference for actions. (Actions allow data to be subset to reduce the amount of data, and they enable users to understand the data within a particular context.) For more information, see "Working with Report Actions and Links" in *SAS Visual Analytics: Working with Report Data*.

  Note: This setting does not affect existing pages in existing reports.

  Default report controls placement
  enables you to select top, right, bottom, or left position for report controls.

  Expand report controls by default
  expands the report prompt area by default.

  Default page controls placement
  enables you to select top, right, bottom, or left position for page controls.

Expand page controls by default
expands the page prompt area by default.

Restore pane location
When you click this setting, any pane that you have moved is restored to its default location in SAS Visual Analytics.

Bypass retrieving cardinality values for the Data pane
specifies that you do not want cardinality values to be displayed beside data items in the **Data** pane. If you specify this setting after the cardinality values are already displayed in the **Data** pane, SAS Visual Analytics will not retrieve the values in the future. If you close and reopen the report, then the cardinality values will not be displayed.

Specifying the **Bypass retrieving cardinality values for the Data pane** setting can improve performance. However, the **Suggestions** pane cannot be displayed if this setting is specified.

Bypass retrieving correlation values for the Data pane
specifies that you do not want correlation values to be displayed in the **Data** pane. If you specify this setting, then you cannot select measures that are correlated with a selected measure.

Specifying the **Bypass retrieving correlation values for the Data pane** setting can improve performance. However, the **Suggestions** pane cannot be displayed if this setting is specified.

Apply changes made while viewing when you return to editing the report
specifies that you always want to save the changes that you make while you are viewing a report.

Default titles for new objects
specifies your preference for object titles for new reports. When you select **Automatic title**, SAS Visual Analytics uses the data items that you add to the object to generate a title for the object. The title can change as you add or remove data items from the object. (Some data items do not affect the automatic title.) Automatic titles are not available for list tables, crosstabs, or content objects.

When you select **Custom title**, the title that you specify for the object is used. For more information, see "Customize an Object's Title" in *SAS Visual Analytics: Working with Report Content*.

Note: This setting does not affect existing objects in a report.

- **Geographic Mapping**

Default geographic map provider
creates the background map for geo maps and for network analysis objects that are displayed on a map. OpenStreetMap is selected by default.

Note: If your site has more than one map provider, you can change the map provider for an individual object by editing the **Map service** option.

Default distance unit
specifies the unit of measurement for distances in geographic selections and routes.

Accept Esri ArcGIS Online Services terms and conditions
enables you to use background maps from ArcGIS Online Services in your geographic objects.

Enable Esri premium services
enables additional geographic mapping features from Esri premium services. This option is available only if your organization has an ArcGIS Online account and you are a member of the Esri Users group.

Esri Custom Services Credentials
specifies credentials that are used when you access background maps or custom polygons from your organization's Esri server. This setting is available only if your organization provides map services on an Esri server.

- **Network Analysis**

Default node label for hierarchical networks
specifies whether the node labels display the node value (**ID**) or the node value and the data item that it is based on (**ID (column name)**).

- **Visual Statistics**

Fit summary p-value precision
determines the minimum number of decimal places used when displaying p-values.

Sort categorical response levels in descending order
specifies your preference for sorting categorical response levels. This setting is selected by default.

Automatically convert measure variables with two levels to category
applies when data is first opened in SAS Visual Analytics. You can manually convert the category back to a measure variable. This setting does not apply if the data was opened with a default data view applied.

Default Statistic
specifies your default statistic preference for **Category Response** and **Measure Response** variables to use for all models and model comparison.

For more information, see "Specifying Settings for SAS Visual Statistics" in *SAS Visual Analytics: Working with SAS Visual Statistics*.

- **Themes**

Override the report theme and use the SAS High Contrast report theme
specifies your preference for using the SAS High Contrast report theme for all reports. (The SAS High Contrast theme presents a dark background with high-contrast foreground elements to meet the needs of users with low vision.)

Defining URL Mappings for Data-Driven Content

URL mappings store the URLs for third-party visualizations for data-driven content. When URL mappings are defined, all users can select them from the **URL** drop-down list when they create data-driven content objects. If there is no URL mapping for a third-party visualization, then users must manually enter its URL.

If you have permissions for the `/SASVisualAnalytics/rest/customGraphTypes` URI, then you can define URL mappings for your third-party visualizations so that all users can access them.

To define a URL mapping:

1. Select **Edit administration settings** from the report toolbar. The Administration Settings window is displayed.
2. Click **+** to create a new mapping, and then enter the **Display Label** and **URL** for the visualization.

3 (Optional) Define additional URL mappings.

4 Click **OK**.

Moving Content from a Previous Release of SAS Visual Analytics

Overview of Promoting and Moving Content

Promotion is the process of capturing content and moving it to a different location. The following scenarios are supported for SAS Visual Analytics:

- Content can be promoted from the 7.1, 7.2, 7.3, 7.4, or 7.5 release to the 8.5 release.
- Content can be moved from the 8.1, 8.2, 8.3, 8.4 releases to the 8.5 release or from one 8.5 release to another 8.5 release (for example, from a test environment to a production environment).

An administrator can promote the following types of SAS Visual Analytics content:

- reports and folders
- explorations (from a 7.1, 7.2, 7.3, or 7.4 release)
- statistical models
- externally created files
- graph templates (from a 7.1, 7.2, 7.3, 7.4, or 7.5 release)
- comments

For more information and instructions, see SAS Viya Administration: Promotion (Import and Export).

Troubleshooting: Promoting a Report from a Previous Release

There is a delay each time I open an older report in the current release of SAS Visual Analytics.

A report is converted every time you access it. In some cases, conversion might cause a delay when you open the older report in the current release of SAS Visual Analytics.

To prevent this delay, open the report in the current release of SAS Visual Analytics, and then save the report. The report is saved in the format of the current release, which eliminates the need to run the conversion process.

When I print analytics objects from an older report, the object toolbar does not retain all of the content.

A report is converted every time you access it. In some cases, when analytics objects are printed, the object toolbar does not retain all the content.

To prevent this printing problem, open the report in the current release of SAS Visual Analytics, and then save the report. The report is saved in the format of the current release, which eliminates the need to run the conversion process.

I promoted my report from a test environment to a development environment, but the alert notifications were not promoted.

Alert conditions are saved with reports. However, alert notifications are not part of a report and are not promoted. After a report is promoted, the notifications will need to be redefined.