

Control, Coordinate, and Create Content with SAS® Drive

Scott Leslie, Cheryl L. Coyle, Bharat Trivedi, and Atrin Assa, SAS Institute Inc., Cary, NC

ABSTRACT

Do you know how to quickly share a SAS® file with your colleagues? Would you like to browse through a report before opening it? Can you organize your SAS content all in one place? This paper shows you how to do these things and more with SAS® Drive. We are excited to announce SAS Drive, a new tool for SAS users. With SAS Drive, you can manage all your content in one convenient location. You can search for an object that was created in a SAS application. You can share, tag, and preview your SAS content. Sharing takes only one click on the object. You decide who you want to share it with and whether they can read, edit, or share it. Tagging content can help you organize your work. Previewing files can help you find the right one. In addition to controlling your SAS content, you can drag-and-drop most content types from your local machine, and SAS Drive will upload it for you. This simple upload feature enables you to add image files for use in reports, CSV files for importing data, and so on. Undo and redo are part of SAS Drive, helping you to instantly recover from any unintentional actions. You can delete objects when you no longer need them, and you can easily create new content. For quick access to what you care most about, SAS Drive includes a collapsible area where you can place any content you choose. This paper includes screen shots and illustrative examples showing you how to manage all your SAS content in one place.

INTRODUCTION

With SAS®, you can do excellent work. The more productive you are, the more content you produce. Wouldn't it be great if you could see, organize, act on, and share all that content from one place? With SAS® Drive you can do exactly that.

We've built SAS Drive so that you can find and manage all the content that matters to you in one place. In SAS Drive, your content is more than a name and a date. SAS Drive brings your content to life. Dynamic thumbnails help you visually scan your items to quickly get to what you're looking for. Dynamic previews give you a quick glimpse of your content. Preview a SAS® Visual Analytics report and you can flip through the sections of the report without having to open the application.

You can organize your content, too. Tag objects to identify items that belong together. Drag and drop to move your materials around. If you love that report you created, add it to your Favorites so that you'll never lose it. If you want something to be readily available in SAS Drive, add it to your Quick Access area.

SAS Drive makes it convenient to act on your content. See a report you want to preview? The SAS Drive smart pop-up menus let you take quick actions on your content without opening applications. Preview a report, or publish a model.

Finally, it's easier than ever to share and collaborate. With a click, you can share your work with others, so they can see it or even edit it. If you want to collaborate with your team, you can create projects that share content between multiple users all in one place.

SAS Drive makes it easy to see, organize, act on, and share all your great work with SAS from one place. Read on to learn more about SAS Drive features and how they'll change the way you work with SAS.

TILES

The default view of files and folders – SAS content – is the tile view. Each item is displayed as a tile, with a thumbnail image of the content inside that item. Figure 1 is an illustration of SAS Drive tiles.

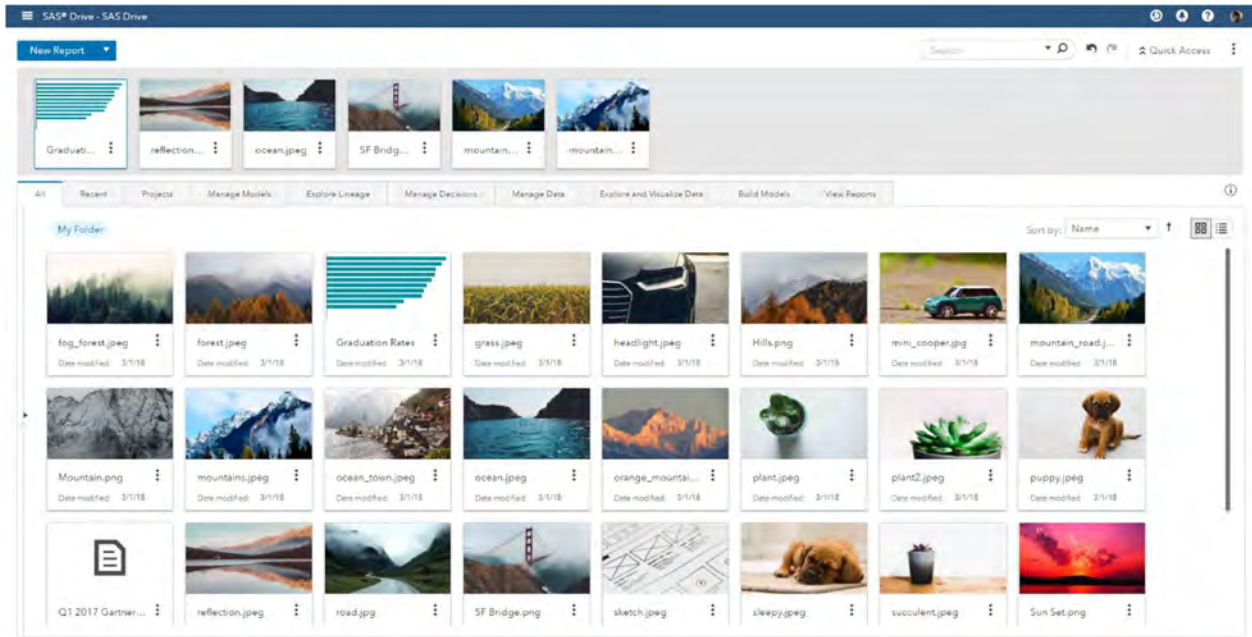


Figure 1 SAS Drive Tiles

When possible, the thumbnail image displayed on the tile is provided by the application that was used to create the object. Other times, the image is similar to a screen shot of the first page of the item. In addition to the thumbnail image, the date last modified is displayed on the tiles. The tiles are small enough so that you can fit many onto the screen at once, but large enough to help you identify the object.

LIST VIEW

In addition to tiles, SAS Drive presents a tabular display of your content. You can change views between tiles and lists whenever you wish. When viewing your content in a list, you cannot see the thumbnail image, but you can see more data for each item, such as name, date created, created by, modified by, and object-type. You can decide which columns you want to see in the list by right-clicking on the column names of the table, and selecting Manage Columns. You can show or hide columns and put them in the order that you prefer.

INFORMATION PANE

If you want to know additional information about an item, or see which tags are associated with it, or who it's been shared with, you can view the Summary provided on the Information Pane.

The Information Pane Summary contains three distinct types of information: Details, Contents, and Related Items. Figure 2 shows an example of Details. This includes the name and type of the object, along with who modified it last, and when. In Details, you can also see the path, or location, of the file. This can be useful if you found the object in a search results tab, or in the list of your recent files. Depending on the object type, the Information Pane might show a collection of thumbnails that you can scroll through.

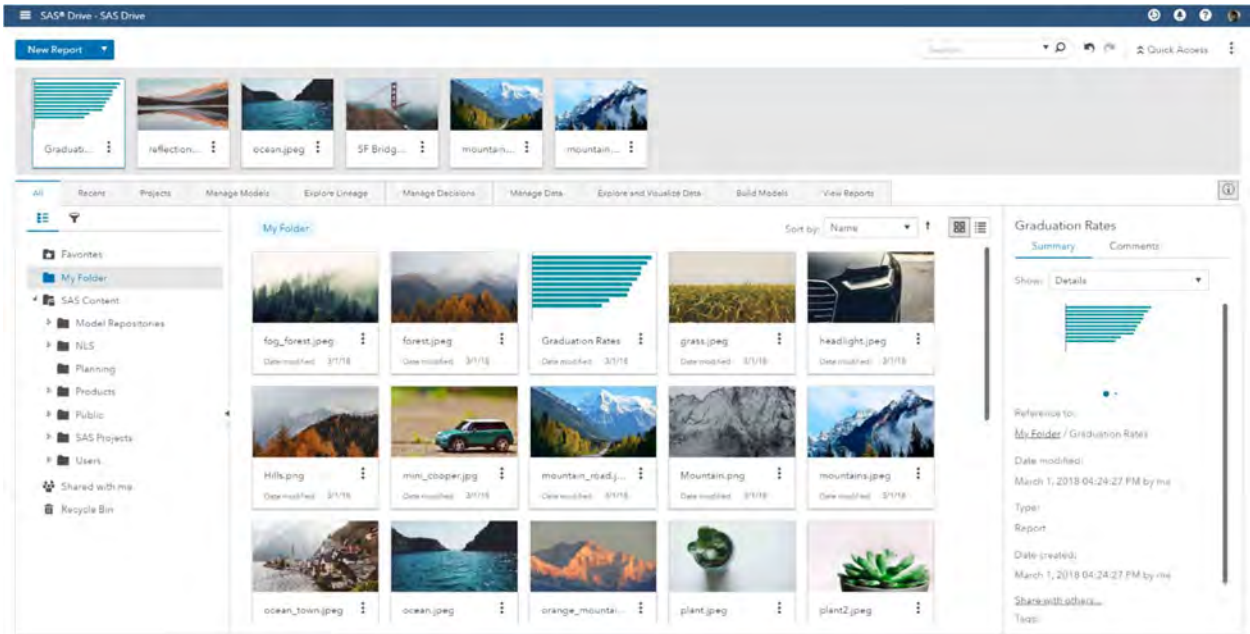


Figure 2 Information Pane - Details

The second set of information lists anything that is contained in the selected item. For example, Related Items for a folder will list all the files contained in that folder, and Related Items for a report will list all the data tables associated with that report. Sometimes a SAS user wants to see which items are contained in an object before opening it.

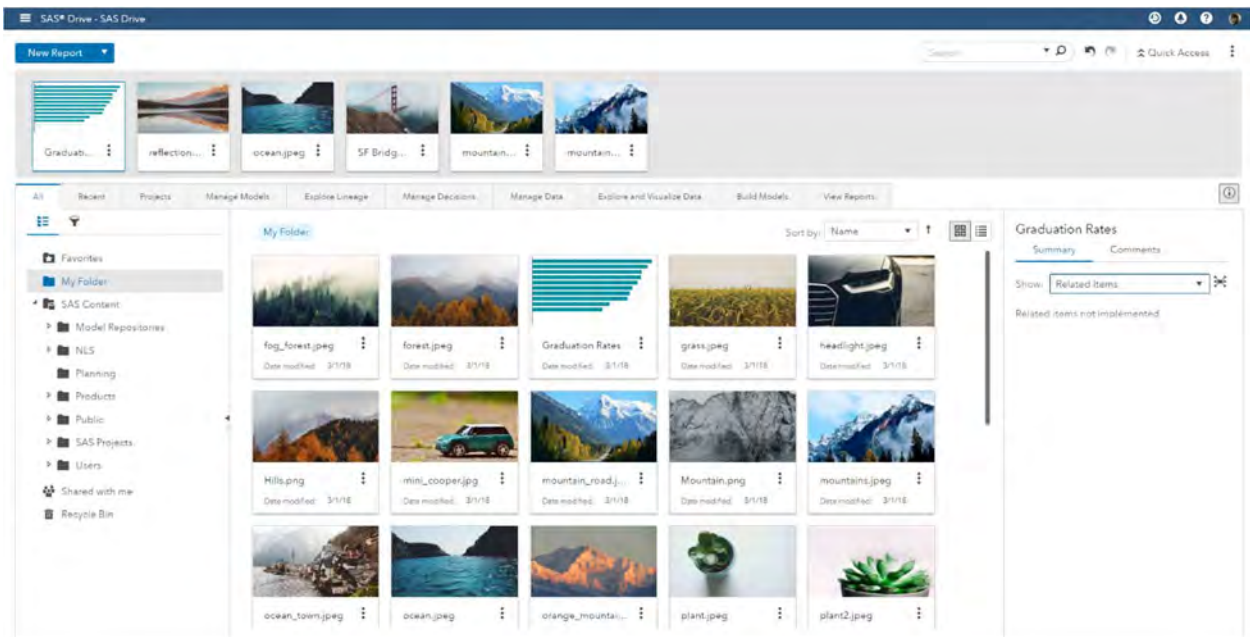


Figure 3 Information Pane – Related Items

In addition to the Summary, the Information Pane shows you all the Comments that have been made. You can read and reply to any of the comments, or post a new comment, all without needing to open the application associated with the item. See Figure 4 for an illustration of Comments.

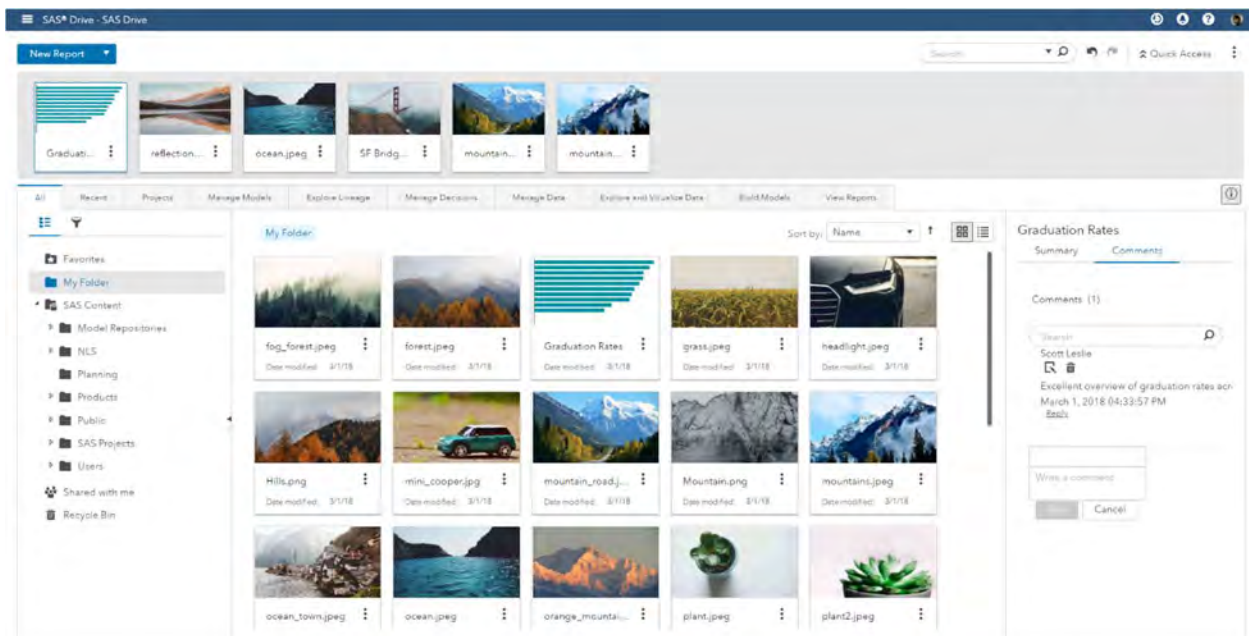


Figure 4 Information Pane - Comments

QUICK ACCESS

Do you ever keep files on your computer's desktop so that you can have them at your fingertips? SAS Drive has an area like that, too. It's called Quick Access, and it appears at the top of the application right below the banner. If Quick Access is not something you'll use very often, you can collapse it. You can bring it back at the click of a button.

PIN TO QUICK ACCESS

You add objects to Quick Access by dragging them directly into the Quick Access area. Or, if you prefer, you can click on the tile menu and select Pin to Quick Access. After being pinned to Quick Access, the item will continue to appear in the content area - in the SAS folder where it lives - as well as in the Recent tab if you've opened it recently. The item isn't being moved; it's being added to an easy access area. You can view the Information Pane for your Quick Access items just as you can for any other items. In fact, you can perform actions on these items the same way you can for any content in SAS Drive.

APPLY LABEL

What if you have two different objects - from different folders - that happen to have the same name, and you want to add both to Quick Access? If they have the same name, how will you tell them apart? You can choose to apply a personal label to any or all of the items displayed in your Quick Access area.

For example, in SAS Content > Marketing, there is a report named "2Q Plans" and in SAS Content > Finance, there is a report named "2Q Plans". If you want to view these reports at a moment's notice, you can add them both to Quick Access. However, if they are both reports, and they both have the same name, you might have to look carefully at their thumbnail images or view the summaries provided in the Information Pane to tell the difference. To make it easier for you to identify your items in Quick Access, you can apply a personal label. The label you add to the item is for your use only; it will not affect the existing name of the report. The label has to be unique within your Quick Access area. If you remove the item from Quick Access and then add it back again, it will no longer have the personal label applied. You will need to create a new label, if desired.

VISION FOR A FUTURE VERSION

SAS Recommendations for Quick Access

You've added one or two items to your Quick Access area, but don't know which other items you might want to have there. In a future release of SAS Drive, you might be able to ask SAS to recommend items for your personal Quick Access area. You can click on an image and take advantage of SAS analytics to add items for you. If you don't want some of the recommended items to be displayed in your Quick Access, you can simply remove them.

Allowing SAS to Manage Your Quick Access Area

Perhaps you always want to see the SAS recommendations. In a future release, you will might be able to choose to have SAS Drive manage your Quick Access, and the Quick Access area will display items that are deemed relevant and useful for you.

CONTENT TABS

This area of the application provides quick ways of seeing your content.

ALL

The All tab shows a hierarchical view of all the SAS content - that you have access to - from top level folders. The tree allows you access to several sections of content including My Folder, SAS Content, Shared, and Recycle Bin. You can drill into the folders to find the content you want to manage. Figure 5 shows the All tab.

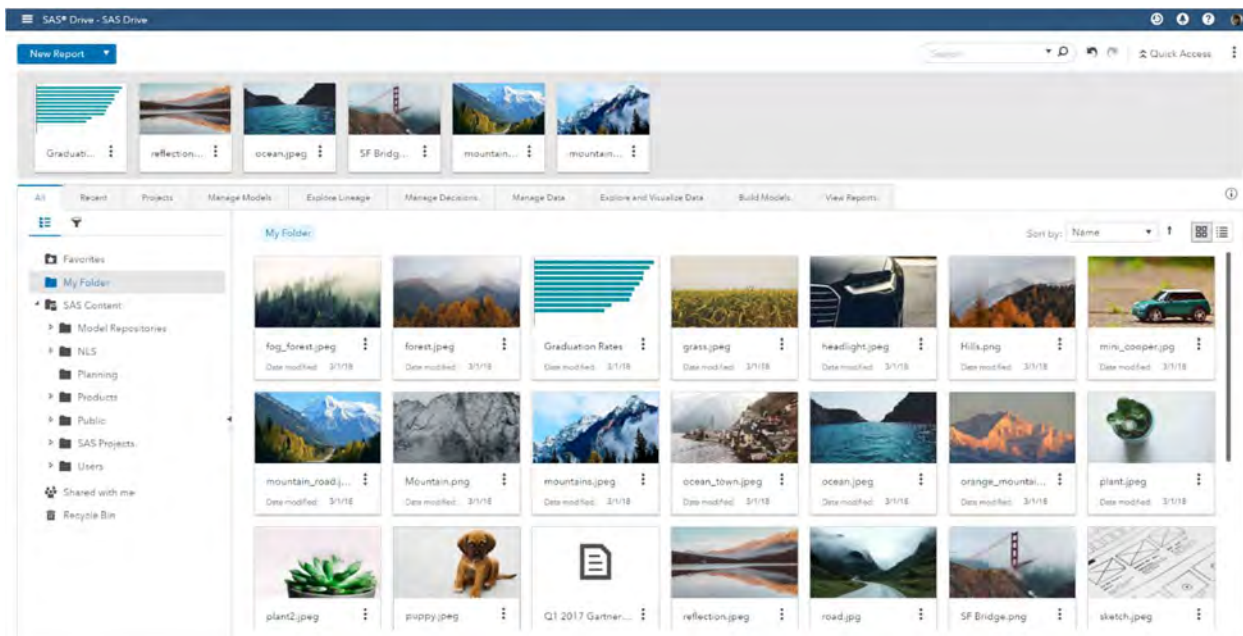


Figure 5 The All Tab

At the top of the All tab is My Folder. My Folder includes your individual SAS content, generally accessible only to you.

SAS Content shows the main folder tree for your SAS Viya installation. This area is often broken up into folders by division, department, or site. You will have access to relevant pieces of the overall folder structure as configured by your system administrator.

Shared shows the items that other people have given you permission to read or edit and those items that you have shared with other users. Once a user shares something with you, it will automatically show up here. You can also see a list of the items you've shared with others.

Recycle Bin shows items that you have deleted. Some operations are not allowed on items in the Recycle Bin. You can choose to restore deleted items from the Recycle Bin to their prior location or to a new location.

RECENT ITEMS

SAS Drive keeps track of all items that you have recently opened. Instead of remembering what you last worked on, you can go to the Recent tab and find the items that you last opened.

FAVORITES

This area of SAS Drive provides a view of all your favorite content. You add content to the Favorites tab by choosing Add to Favorites. Favorite items are marked with a star and can be found in their original location as well as on the Favorites tab.

SOLUTION TABS

Solution tabs contain the different types of SAS content in the system (for example, Reports, Decisions, Rule Sets, and so on). Each tab represents all the content items that a solution creates, uses, or manipulates that you have access to see. For example, on the Reports tab you will see a list of all reports in the system that you have access to view, regardless of location.

Depending on which SAS applications and content you have permission to interact with, you might have multiple solution tabs, each representing different sets of content types. You can choose to remove one or more of the solution tabs from your view by right-clicking on the tab name and selecting Hide.

MANAGE TABS

You can customize which tabs are displayed, and in what order, by right-clicking on the tabs and selecting Manage tabs. SAS Drive will remember your tab settings for you.

SEARCH-RESULTS TABS

Finding relevant content is one of the primary uses of SAS Drive. You can search by name, type, date modified, author, and many other criteria. Once you perform a search from the Search field, a new tab is created in the content area. This tab displays the items matching the search criteria. If a search yields more results than you had hoped for, you can filter them inside the Results tab. You can operate on the items found in your search the same as if they were in one of the other tabs. You can view the Information Pane, Preview, Open, or otherwise manage all the content on a search-results tab. You can even navigate to the folder containing the item. This is useful when you want to find similar content that might not match your original search criteria.

A search-results tab is named based on the search criteria you used. This helps you distinguish it from other search-results tabs. You can have any number of search tabs in the content area at one time. When you are finished with a search-results tab, you can close it by clicking the (x) on the tab header. If you leave a search-results tab open, it will be available the next time you sign in to SAS Drive. This is useful when you have a complex set of search criteria or a search that you perform often. If you want to rename a search-results tab, double-click on the name and you can change it.

Faceted Filtering

On the All tab, solution tabs, and search-result tabs, a facet panel is available from the left side of the content area. This panel can be expanded to show relevant criteria for filtering the items in the content area. See Figure 6.

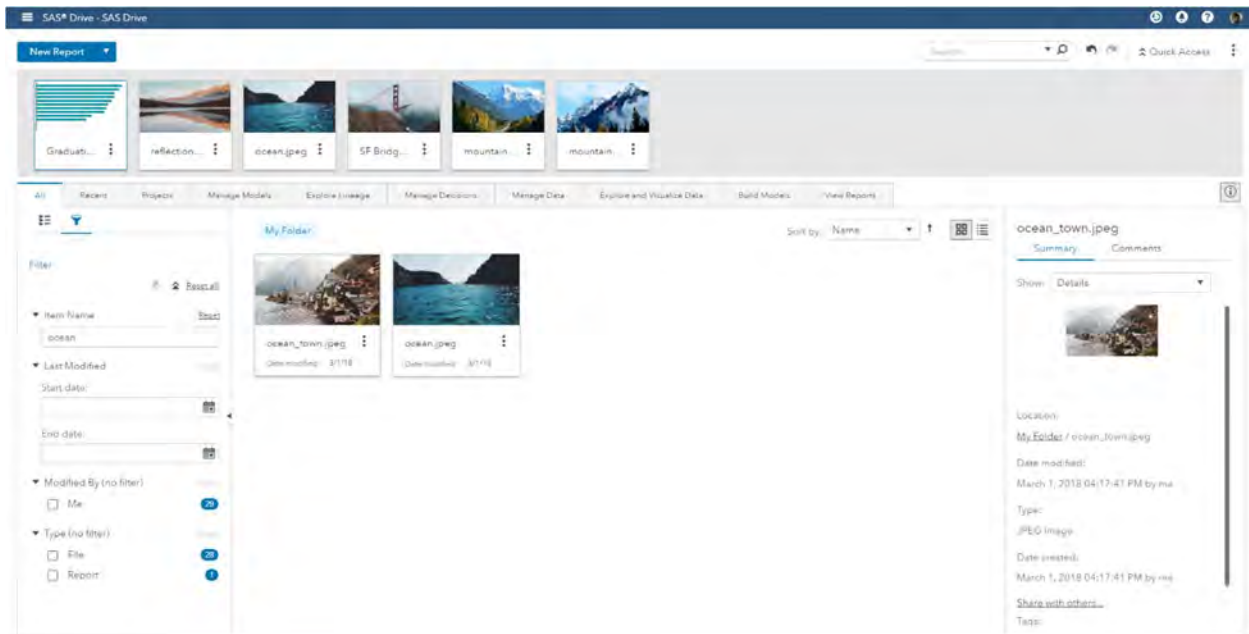


Figure 6 Faceted Filter

SAS DRIVE ACTIONS

OPEN

You can open existing objects. This is probably the most frequent thing you'll do in SAS Drive. Once you locate the item you're interested in, whether by searching, browsing through specific content types, or drilling into the SAS Content Tree or My Folder, you can double-click on the object to open it in its default application. If you don't want to open the default application associated with the item, you can interact with the item in a different SAS application by clicking the tile menu and selection the action you're interested in.

PREVIEW

If you'd like to see more than the thumbnail view of an item in SAS Drive, you can click on the tile menu and choose Preview. A window will appear showing you what is inside the object or, for some object types, a visual representation of that object. For some objects, you can scroll through the pages. (This feature might not be available for all types of objects.) See Figure 7 for an illustration of an item being previewed in SAS Drive.

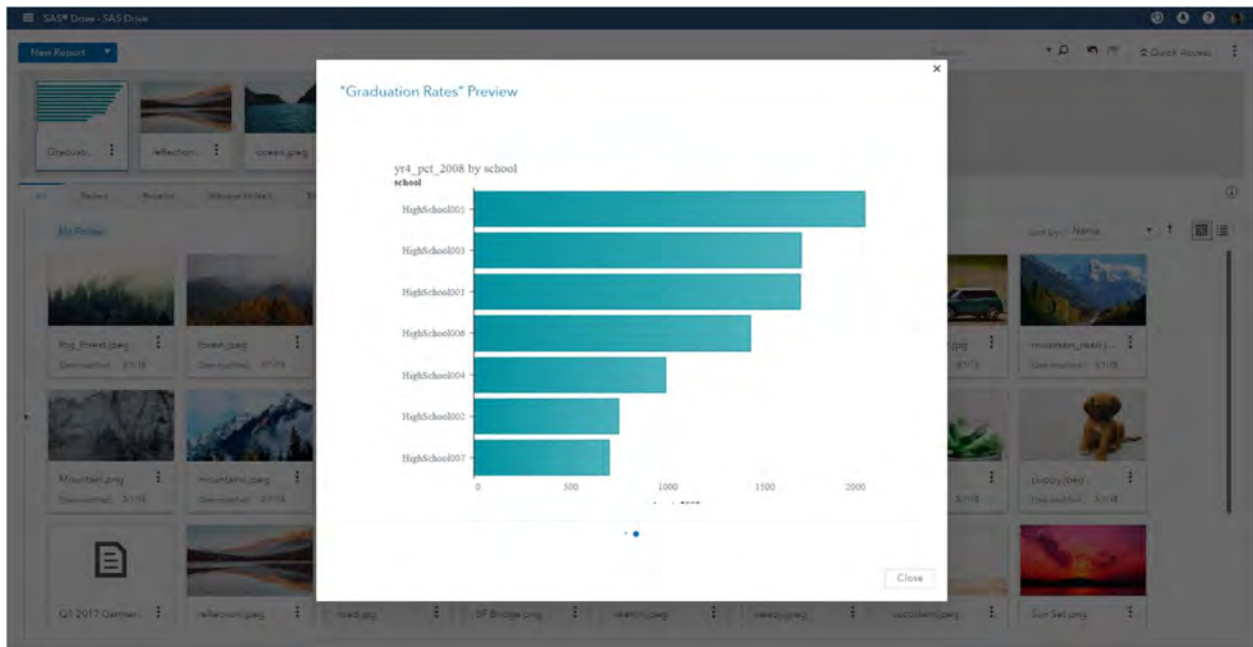


Figure 7 Preview Illustration

SHARE

From SAS Drive, you can share SAS files and folders with other people in your company. If someone shares a SAS object with you, you can share it with others. For example, suppose your boss shared *Model ABC* with you. You received a notification or email letting you know that *Model ABC* was being shared with you, and you can both read and edit it. You can find all files that were shared with you in your Shared folder, on the All Tab.

What if you now want to share *Model ABC* with one of your coworkers? Click the menu and select Share. You can enter the name of anyone in your company just as if you were starting an email, and valid matches will appear. You can include a personal message about the object if you wish.

What if you shared *ACME Plan* with a colleague and now want to “unshare” it? You can do this, too. Touch or click Share and then select the edit icon. You can change the sharing permissions of anyone you shared the object with. In addition, users with special permissions - like Administrators - can edit the sharing permissions of anyone in the chain.

TAG

Tagging allows you to specify a set of labels to be applied to an item. Tags are generally single words but can contain spaces. Example tags might be "Sales", "Verified", and "Release 1". Tags can be added by clicking Tag on the item’s menu, and then entering the text for new or existing tags. You can also view and add tags from the Information Pane. When viewing the list of tags associated with an item, you can click on a tag to quickly request a list of all items that have that tag applied. This will create a new search-results tab with the results.

NEW

From SAS Drive, you can create new SAS content. For example, if you have SAS Visual Analytics, you will be able to create a new report from SAS Drive. If you have SAS Studio, you will be able to create new code from SAS Drive, and if you have SAS Model Manager, you can create a new model. What if you have all three of those applications? The New button on SAS Drive includes all the objects you have permission to create. When you click on the New Report button, you will be taken to SAS Visual Analytics with a new, blank report canvas open. When you choose New Model, you will be taken to SAS Model Manager, and so on.

SORT

This feature provides you with a quick way to find the content you want. There are a variety of options available for sorting, depending on which tab you are using. You can sort content items by name, created by, date created, date modified, or content type. For example, all reports created using SAS Visual Analytics will be of type Report. You can sort items in one of the SAS Content folders by type column and quickly find all reports in that folder. Or, you might want to sort the reports contained on the Reports object tab by date modified in order to find those that have recently been edited.

UPLOAD/DOWNLOAD

Adding your content to SAS Drive allows you to keep all your content for a task in one location and manipulate it using SAS Drive. Uploading can be accomplished by dragging files from your operating system and dropping them onto the content area of SAS Drive. If you prefer, you can use the pop-up menu to upload instead of dragging. Uploading files copies the files into SAS Drive for storage. Once they are in SAS Drive, you can manage them as you would any content that was created by SAS. The download action allows you to download files that are stored in SAS Drive. Files will be downloaded to your operating system's Downloads folder.

COPY/PASTE AND RENAME

It is easy to copy an item and paste it to another location. Select Copy from the menu. Navigate to the folder where you want to paste the item, bring up the pop-up menu, and select Paste.

To rename an item, click the menu item Rename, enter the new name, and click OK. The name of the item is changed.

UNDO/REDO

Many actions in SAS Drive can be undone and redone. For example, if you delete a file, it is moved to the Recycle Bin. If you click Undo (or Control+Z), the file will move back to its previous location. If you then click Redo (or Control+Y), the file will move back to the Recycle Bin. Other operations like Rename and Copy/Paste can be undone and redone. Some operations, like navigating, cannot be undone. Long pressing on the Undo/Redo buttons will display a list of operations that can be undone/redone. The combination of Undo/Redo and the Recycle Bin makes most content manipulation activities safer by allowing accidental changes to be reversed.

CONCLUSION

SAS Drive is a full-featured content management solution that allows you to find, manage, create, and share content. It provides a highly visual representation of all of the content you have access to in the SAS Viya system. It encourages collaboration and sharing while keeping your content secure. Future versions of SAS Drive might expand on these capabilities to see and manage all of your SAS content, all in one place.

DISCLAIMER

SAS Drive is currently under development for its first release. Some features described here might not be in the final production software or might appear in a different form.

CONTACT INFORMATION

Your comments and questions are valued and encouraged. Contact the author:

Scott Leslie
100 SAS Campus Drive
Cary, NC 27513
SAS Institute Inc
Scott.Leslie@sas.com

<http://www.sas.com>

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