



Smartsheet File Attachments Storage Guide

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Introduction

“Beware of the ‘Unlimited’ lure of SaaS platforms”

For Smartsheet customers, one of the attractions of the platform, is the ability to attach an unlimited number of attachments to a sheet. However, if you are using this feature extensively, you should be aware that you may encounter significant challenges in the future if you would also like to back up or export all your data, or eventually move to a different platform.

In this guide, we will be describing several use cases that we have encountered where Smartsheet customers are using the “attach file to sheet” feature extensively. We will discuss the resulting challenges and will propose alternative solution approaches to consider.

Smartsheet Attachments Feature

In Smartsheet, as a user, you can attach documents, PDFs, videos, and other types of content to a Sheet, at the Sheet level or at the Row level.

Depending on your Smartsheet License, you may have some limitations on the total number of Sheets, but in most cases, there is no limitation on the number of attachments you can add to a Sheet. In theory, this means that each Smartsheet Licensed User in your organization can create an unlimited number of Sheets, and each Sheet can have an unlimited number of Attachments.

These Attachments can be files that are uploaded to Smartsheet, or they can be links to files that live in other systems such as OneDrive, Box, Dropbox, Google Drive, Evernote, Egnyte or more sophisticated content management solutions like Brandfolder, etc.

The screenshot displays the Smartsheet interface for a sheet titled "Sheet - Sales Pipeline". The main area shows a table with columns: Status, Opportunity, Customer Contact Name, Sales Stage, Forecast Amount, Probabi..., Weight..., Expected Close Date, and Sales. Row 18 is highlighted, showing a status of "Green", opportunity "Cross Tyme Moving", customer "Kai Senjima", sales stage "3 - Proposal", forecast amount "\$90,000", probability "100%", weight "\$90,000", and expected close date "12/25/22".

On the right side, the "Attachments" panel is open for Row 18. It shows a list of attachment options: "Upload a File", "Attach from Brandfolder", "Link", "URL", "Google Drive", "OneDrive", "Box", "Dropbox", "Evernote", and "Egnyte". A blue button at the bottom of the panel says "Attach Files to Row 18".

Row	Status	Opportunity	Customer Contact Name	Sales Stage	Forecast Amount	Probabi...	Weight...	Expected Close Date	Sales
1	Green	Shine Bright	Aviv Perez	4 - Contracts	\$100,000	90%	\$90,000	01/27/23	
2	Yellow	Fabricatorz	Brooklyn Jansen	3 - Proposal	\$125,000	75%	\$93,750	02/02/23	
3	Green	Pear	Diana Kennedy	Closed Won	\$128,000	90%	\$115,200	12/25/22	
4	Green	Print Company	Dyna Appforth	Closed Won	\$84,000	50%	\$42,000	01/03/23	
5	Red	inky	Diego Martinez	2 - Assessment	\$75,000	50%	\$37,500	01/12/23	
6	Red	Akp	Guadalupe Garcia	2 - Assessment	\$48,000	50%	\$24,000	01/27/23	
7	Red	Welder Worldwide	Harley Sterling	Closed Lost	\$42,000	10%	\$4,200	02/02/23	
8	Green	Cross Tyme Moving	Kai Senjima	3 - Proposal	\$90,000	100%	\$90,000	12/25/22	
9	Yellow	Transland Shipping	Clark Kent	1 - Prospect	\$55,000	85%	\$46,750	01/03/23	
10	Yellow	NW Logistics	Sasha Petrov	2 - Assessment	\$40,000	85%	\$34,000	01/12/23	
11	Green	Shine Bright	Aviv Perez	4 - Contracts	\$100,000	90%	\$90,000	01/27/23	
12	Yellow	Fabricatorz	Brooklyn Jansen	3 - Proposal	\$125,000	75%	\$93,750	02/02/23	
13	Green	Pear	Diana Kennedy	Closed Won	\$128,000	90%	\$115,200	12/25/22	
14	Green	Print Company	Dyna Appforth	Closed Won	\$84,000	50%	\$42,000	01/03/23	
15	Red	inky	Diego Martinez	2 - Assessment	\$75,000	50%	\$37,500	01/12/23	
16	Red	Akp	Guadalupe Garcia	2 - Assessment	\$48,000	50%	\$24,000	01/27/23	
17	Red	Welder Worldwide	Harley Sterling	Closed Lost	\$42,000	10%	\$4,200	02/02/23	
18	Green	Cross Tyme Moving	Kai Senjima	3 - Proposal	\$90,000	100%	\$90,000	12/25/22	
19	Yellow	Transland Shipping	Clark Kent	1 - Prospect	\$55,000	85%	\$46,750	01/03/23	
20	Yellow	NW Logistics	Sasha Petrov	2 - Assessment	\$40,000	85%	\$34,000	01/12/23	
21	Green	Shine Bright	Aviv Perez	4 - Contracts	\$100,000	90%	\$90,000	01/27/23	
22	Yellow	Fabricatorz	Brooklyn Jansen	3 - Proposal	\$125,000	75%	\$93,750	02/02/23	
23	Green	Pear	Diana Kennedy	Closed Won	\$128,000	90%	\$115,200	12/25/22	
24	Green	Print Company	Dyna Appforth	Closed Won	\$84,000	50%	\$42,000	01/03/23	
25	Red	inky	Diego Martinez	2 - Assessment	\$75,000	50%	\$37,500	01/12/23	

For Uploaded Files, the maximum size for each file is 250MB.

While there isn't a limit on the total number of attachments allowed on a row or sheet, you may be bound by the amount of storage space included in the sheet owner's subscription plan. For the Enterprise Plan, there is no limit on the amount of file storage.

At first, this may seem to be a good feature to use, especially if you have processes that include documents that need to be tracked. But as with all good ideas, there are also some downsides or implications to consider.

Special Use Case: "Mobile Apps"

One of the "features" that Smartsheet marketing teams emphasized for several years was the ease of being able to create solutions for mobile devices and using forms to collect and submit data to an associated sheet in Smartsheet.

On the surface it sounds like a great idea, and it is definitely easy to create and deploy to hundreds of mobile users. Additionally, in many cases these "mobile apps" also included the ability for the user to take (high quality) photographs using their mobile device and to submit those together with the form data. Again, great idea! But it does not take into consideration what happens behind the scenes. Those forms with their data and photos and documents all get saved as rows with attachments in that one Sheet in Smartsheet.

This results in two big problems

1. the Sheet gets really big and will eventually reach maximum capacity.
2. all the Attachments together typically result in huge storage sizes – which makes it virtually impossible to create a copy of the Sheet that includes the attachments, or to simply export all the attachments.

Both scenarios prove to be big concerns for Smartsheet Admins and the Sheet owners as well.

Let's review some of these considerations.

Initial Considerations

Note that for customers on a Smartsheet Enterprise plan, it is possible for the Systems Administrator to restrict or configure the Attachments feature for all Users.

Initial considerations when enabling the File Upload Attachments feature for all users include the following:

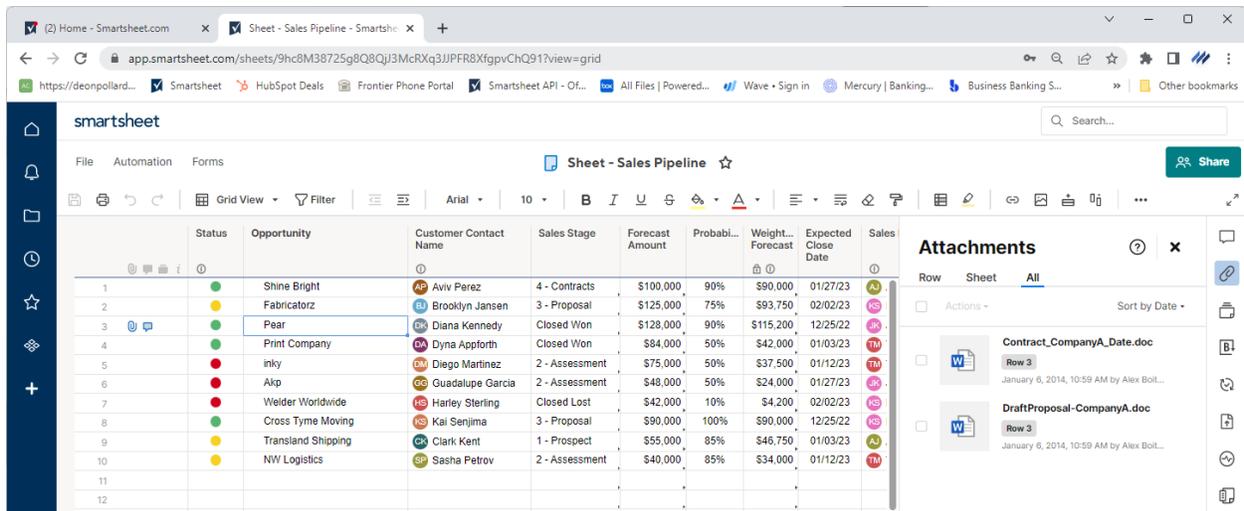
- Depending on how your processes are defined, you could be storing personal or sensitive information in Smartsheet in a way that is difficult to track, and difficult to audit.
- It is possible for a user, or multiple users to be uploading multiple copies of the same document, or different versions of the same document, which can lead to confusion, data sprawl and an unmanaged situation.
- There is no easy way to get a consolidated list of all attachments for a user, for a group, or for the organization.

- There is no easy way to search for a particular attachment – and even if there were, you would have no way to identify which copy would be the correct copy, or version – as there is no file naming policy implemented.
- When files are uploaded to Smartsheet, a “point in time” copy is made, which could be the desired result, or it could also result in outdated information that is very difficult to locate and update.
- When files are uploaded to Smartsheet, there is no associated date/time stamp, and no indicator of if a file attachment has been altered. This has implications for backup solutions, as it is not possible to determine if a file attachment is new or is in fact unchanged and has been backed-up before.
- If your organization has a need to support eDiscovery, then it will be virtually impossible to find specific attached documents and related documents, and you would not have any date/time stamp information or version information available for each attachment.
- And most importantly – if your users are allowed to upload files to Smartsheet in an unmanaged way, then over time you could end up with a scenario where some users may have hundreds of sheets with each sheet having hundreds or thousands of attachments. A scenario that we have encountered several times with customers. An implication of this is that it may not be possible for you to then create a full backup or export of your Smartsheet data, as the total files size would be prohibitive.

Of these considerations, we will examine the last point in more detail, as this could have serious implications for your business.

Smartsheet Attachments Feature

In Smartsheet, if the feature has been enabled by your Smartsheet Administrator, then you will have the ability to attach files to rows in a Sheet, or to the Sheet as a whole.



Note that Smartsheet supports almost all file types, except for those that could pose a risk when downloaded (.exe, .cmd, .js, and .bat files).

Then as a user, you can either attach files to the overall Sheet, or you can attach files to specific rows. You can also attach multiple files to a row or to the sheet itself. The maximum file size per file is 250MB, and there is no limit on the number of attachments in a sheet.

This feature can be considered as both a good thing and a bad thing, depending on how it is used, and in a typical Smartsheet customer environment, there is no way for the Smartsheet Administrator, or Systems Administrator to know if this feature is being used or not, and if it is being used, how extensively is it being used.

In other words, how many users are attaching files to sheets? How many files are they attaching? What is the overall file size for all attachments in the organization's Smartsheet installation?

Another variable to consider is how the files are being attached to the sheets. Smartsheet provides three main ways to associate an attachment with a sheet.

- The first is by uploading a “point in time” copy of the file and saving that copy in Smartsheet. This is referred to as a “File Upload”.
- The second is by capturing a link to the file in the sheet. This link connects to the source file which resides in another location such as a link to any other system or tool, or native integrations with Google Drive, OneDrive, Box, Dropbox, Evernote, or Egnyte.
- The third is a native integration with Brandfolder, which is a Smartsheet premium app.

Systems Administrator Considerations

Some questions that a Systems Administrator needs to answer include:

- Where are the files stored?
- Are the files secure?
- How are the files being used?
- Are there multiple copies, or multiple versions of the files?
- How much storage space do the files consume?
- How do I create a backup or export of all the files?
- Are there governance, auditing, or eDiscovery implications associated with these files?

These questions and more are one of the reasons why AcuWorkflow developed the SmartDataPlan solution. SmartDataPlan consists of several dashboards and reports that provide detailed information about an organization's Smartsheet deployment. This includes information about the number of Smartsheet Users in the organization, the number of sheets, reports, and dashboards each user owns, and the number of attachments associated with those sheets. This type of information is currently not available from Smartsheet or any other vendor.

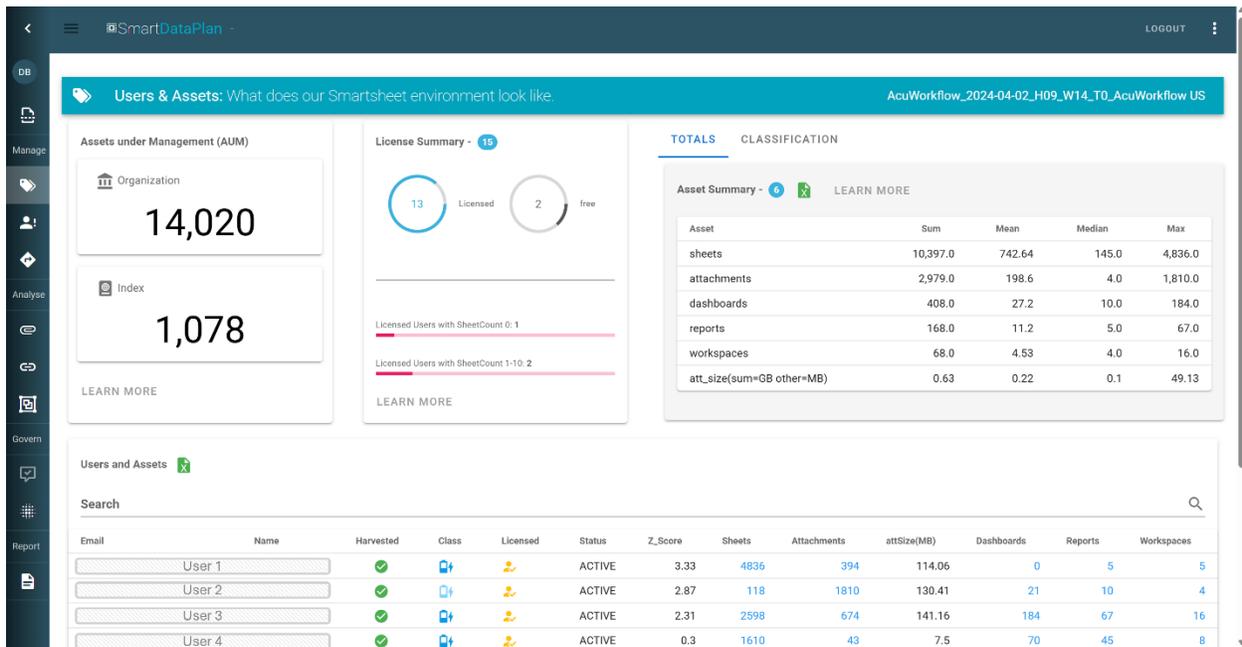
Having access to this type of information is very important for Systems Administrators, as it provides them with visibility into their Smartsheet environment, and can be highly beneficial when designing, securing, and managing the platform as well as associated document management solutions, processes, and policies.

For this reason, the total amount of storage consumed by uploaded file attachments becomes very important for backup planning and design as well as document management planning, design, and management.

In our experience, we have come across many Smartsheet customers that were unaware of how their users were using the attachments feature, and how much storage that represented. This led to significant issues later, when the Systems Administrator needed to run a backup/export of all the Sheets and Attachments for the organization. In some cases, the total storage required for an external backup copy was in the region of 1-2TB, almost all due to the sheer quantity and size of the file upload attachments.

It is, of course, not a simple matter to create a regular backup copy of that amount of data, and is exacerbated in the Smartsheet environment, due to the process complications, delays, and overheads associated with making an external copy of an item from an online SaaS platform using the Smartsheet API.

The following is an example of a section of an AcuWorkflow SmartDataPlan dashboard view that shows the level of detail typically provided. Additional data is available to enable further analysis as needed. That additional detail includes views showing the number of sheets and attachments per user and the total amount of storage per user, as well as the total amount of storage for all attachments.



Now, armed with visibility into the ways that users are using the attachments feature, together with information on the number of sheets and attachments and the total file size, a Systems Administrator can investigate how best to optimize the environment while also improving the overall governance and management of the files in the organization.

Attachment Options

If you determine that your organization has been exploiting the File Upload attachment feature extensively, and that your environment is at risk of not being able to be backed up, then you can investigate alternative approaches.

As mentioned above, besides the File Upload option, your users can use several other “Link” options, which include Brandfolder, as well as the standard cloud storage providers. Additionally, you could investigate other CMS/DMS solutions such as NetDocuments for example, although these other solutions do not have a native integration with Smartsheet.

Overview of Options

Some of the key linked-attachment options include:

- Google Drive, OneDrive, Box and Dropbox:** These traditional cloud storage offerings are well known and deliver good performance through a relatively simple user interface. These solutions can be considered as “general purpose” cloud storage solutions and may lack some of the more robust document management capabilities.
- Brandfolder:** Fully integrated into Smartsheet, with a clean and intuitive user interface, and excellent performance deployed as a dedicated instance for your implementation. Excellent integration with the Smartsheet Attachments feature, and competitively priced. Includes several robust document management capabilities in addition to other key features such as document collaboration, marketing and brand processes, deep analytics, etc.
- External Systems:** These are typically specialized document management or content management systems with very robust capabilities, and often targeted to specific industries such as legal or eDiscovery requirements. For these solutions there is no native integration with Smartsheet, so each file attachment would be captured using the generic “link” option.

Evaluation

With these attachment approaches in mind, you should conduct an in-depth evaluation of the various options that align to your needs and identify the best option for your organization. Note that most of these vendors offer a trial mode which can be used for evaluation purposes.

The screenshot displays the Smartsheet interface for a project titled "DEMO Campaign Plan". The main workspace shows a task list with columns for Status, Task Name, Description, and Assigned To. The tasks are categorized into sections like "Marketing Campaign Schedule" and "Integrated Campaign Planning".

Row	Status	Task Name	Description	Assigned To
1		Campaign Dashboard		
2		Risks and Issues	New Formula below:	
3		Campaign Budget	2	
4		Audience Framework	0.3	
5		Marketing Campaign Schedule		
6	Not Started	Campaign in Market		
7	Not Started	Campaign Start Date	This is an updated row.	Lois Lane
8	Not Started	Campaign End Date		Lois Lane
9	In Progress	Linked Attachment Export test - DELETE TEST		Lois Lane
10	In Progress	Linked Attachment Export test 2 - DELETE TEST		Lois Lane
11		Integrated Campaign Planning		
12	Not Started	Integrated Campaign Brief		
13	Complete	GTM Plan		Clark Kent
14	In Progress	Social Plan - LinkedIn		Clark Kent
15	In Progress	Social Plan - Twitter		Clark Kent
16	In Progress	Chinese Characters in Attachment		Clark Kent
17	In Progress	Japanese Characters in Attachment		Lois Lane
18	Complete	AR Plan		Lois Lane
19	Complete	Tradeshow Plan		Lois Lane
20	Not Started	Web Plan		Lois Lane
21	Not Started	Field Event Plan		Lois Lane
22		Integrated Campaign Creative		
23	Not Started	Integrated Campaign Creative Brief		Lois Lane
24	In Progress	Integrated Campaign Creative Concept		Lois Lane
25	In Progress	Creative Asset Checklist		Lois Lane

On the right side, a sidebar shows the "Brandfolder" integration. It displays a "Sonata Asset Library" with 35 collections and 41 assets. A preview of documents is visible, including a "Photo-Release-Form" PDF and a "Sonata Traveler Ques" DOCX. Other assets shown include "Sonata Pitch Deck.pptx" and "Sonata Travel App-14.png".

In our research we have found that of these options, [Brandfolder](#) offers the best integration, and a strong set of capabilities for most attachment requirements.

Once you have identified the best solution, you will need to create a migration plan to move all the existing File Upload attachments to the new document management solution and replace those attachments with links.

Benefits

As mentioned at the beginning of this document, deploying a link-based attachment approach has several potential benefits, including:

- Significant reduction in the overall file size and storage requirements – which is very important for creating a reliable backup solution.
- Deduplication of files, and one single source of truth of organizational files.
- Easy versioning of documents and files.
- Ability to easily search across all files at once.
- Ability to support audit and eDiscovery across all files.
- Supports documentation categorization and departmentalization.

Recommendations for SmartBackup Customers

For customers of our SmartBackup for Smartsheet solution we recommend the following guidelines which respect to the use of Uploaded File Attachments in your Smartsheet deployment.

- **Scenario A:** If you have File Upload Attachments in Smartsheet enabled, and your users are attaching on average a maximum of 100 file upload attachments per sheet, then you should not experience many difficulties with running regular Backup, Archive, and Export/ShadowCopy functions. However, we do still recommend that if you have the SmartBackup Export Attachments option turned ON, then set the Maximum number of Attachments per sheet field to 100. In this case, only the most recent 100 attachments will be exported for each sheet, which would be more than adequate for most users.
- **Scenario B:** If you have File Upload Attachments enabled, and your users are attaching more than 100 file upload attachments per sheet, and you have the SmartBackup Export Attachments option turned ON, then you must set the Maximum number of Attachments per sheet to 100. In addition, you may need to configure multiple instances of SmartBackup so that you can separate your “heavy” users from your “regular” users and optimize the backup plan. Alternatively, you could also leverage the “Queues” feature for the SmartBackup Export or ShadowCopy functions to run separate Export or ShadowCopy jobs for different groups of users. Note that the current version of ShadowCopy does not use the “soft limit” setting, so in this case it would be best to use the Queues feature to distribute the workload.
- **Scenario C:** If you have the File Upload Attachments in Smartsheet enabled, and your users are not using the feature, or if you have turned OFF the SmartBackup Export Attachments options, then you should be able to run all SmartBackup functions without issues or constraints.

Support and Guidance

As you work through these various options and the associated deployment approaches and migration needs, together with optimizing your Smartsheet Backup solution, feel free to reach out to us if you

have any questions about [SmartBackup](#), or [High Speed Offloader/Onloader \(HSO\)](#), our data mover solution.

Remember to visit our website at www.acuworkflow.com for more details about our solutions and for detailed documentation, together with contact and support details.