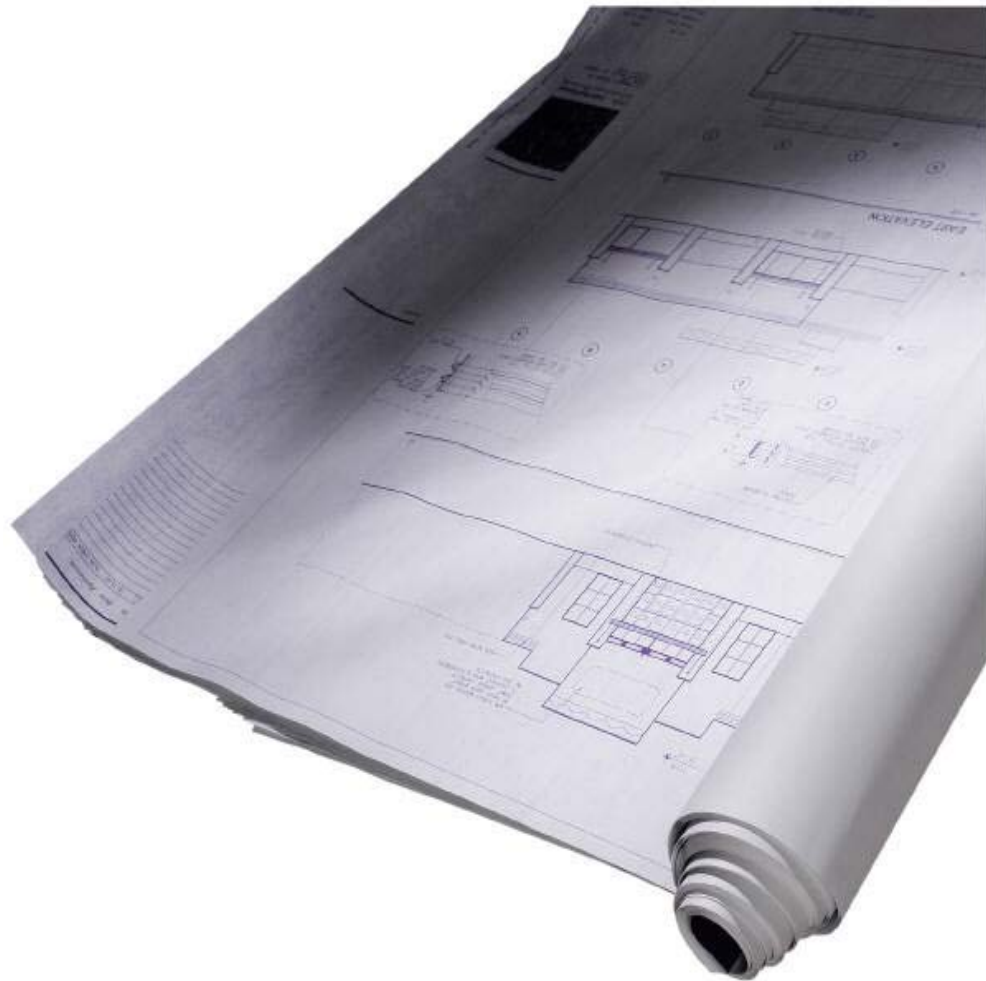


Cloud Storage Integration



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Introduction

This technical white paper covers what you need to know in order to integrate your project documents and attachments with a cloud storage provider, such as Box, Google Drive, Microsoft OneDrive, etc.

This technical white paper assumes you have a basic understanding of sfPMS in general and are a System Administrator (or someone with equivalent permissions).

Scope

This technical white paper explains setup for the Spitfire Project Management System (sfPMS) after you have a cloud storage provider account. It does not include information about the acquisition of the cloud storage provider, the setup of any cloud storage account, or any other steps outside of the Spitfire Project Management System.

Contact your implementer for more information about getting started with a cloud storage provider.

Concepts

Cloud storage refers to the use of cloud drives that provide a repository of files “in the cloud” that can be accessed from anywhere there is an Internet connection. Cloud storage provides device synchronization, so it does not matter if you are using an office computer, tablet or smartphone to open or add a file.

Spitfire's cloud storage integration feature allows you to have your project files in both the Spitfire Catalog and your cloud drive account, so that files added in one location appear in the other. In fact, files added to a particular Spitfire document in one location appear in the same document in the other location because the cloud drive is organized by project, doc type and specific document. Spitfire Items can also appear in your cloud drive.

The image displays two side-by-side screenshots illustrating cloud storage integration. The left screenshot shows the 'Attachments' tab in Spitfire, listing files with columns for Name, Size, Note, Item, Incl, Seq, and Cataloged. The right screenshot shows the Box cloud storage interface, displaying a list of files uploaded from Spitfire.

Spitfire Attachments Table:

Name	Size	Note	Item	Incl	Seq	Cataloged
DSCN2031.JPG - 0001	844KB	First floor restroom...	▼	Assemble	▼	5/4/2009
DSCN2036.JPG - 0001	822KB	Third floor lighting	▼	Assemble	▼	5/4/2009
DSCN2039.JPG - 0001	804KB	Third floor hung cas...	▼	Assemble	▼	5/4/2009
DSCN2043.JPG - 0001	760KB	Second floor northw...	▼	Assemble	▼	5/4/2009
IMG_7286.JPG - 0001	406KB	Printers	▼	Assemble	▼	3/20/2012
IMG_7284.JPG - 0001	563KB	Phone System	▼	Assemble	▼	3/20/2012
IMG_7283.JPG - 0001	503KB	Server Rack	▼	Assemble	▼	3/20/2012
IMG_7285.JPG - 0001	824KB	Northwest Window	▼	Assemble	▼	3/20/2012

Note: One or more Attachments will be created from templates when this document is routed.

Box Cloud Storage Interface:

- Search Files
- GC003 - Norther...
- Daily Field Report
- 0001 - Report for Tuesday Feb 1...
- Upload - New... More...
- Report for Tuesday Feb 17, 2015.htm (535 B)
- DSCN2036.JPG (822.4 KB)
- 9.JPG (804.5 KB)
- .JPG (563.2 KB)
- IMG_7283.JPG (503.2 KB)
- IMG_7285.JPG (824.5 KB)
- DSCN2031.JPG (844.1 KB)
- DSCN2043.JPG (760.5 KB)
- IMG_7286.JPG (405.8 KB)

Files attached to your Spitfire document are also in your cloud drive and vice-versa. Version control works in both locations.

Principles

- Document folders are created in the cloud provider when the Spitfire document is saved with a cloud-enabled status; routing is not required.
- Each cloud-enabled document in sfPMS gets its own folder in the cloud provider. This folder is a subfolder of the Doc type folder, which is a subfolder of the Project folder. Other file levels can also be set up.
- Attaching a file to a published document in sfPMS sends that file to the appropriate folder in the cloud.
- If a file is attached to more than one sfPMS document, that file appears in all applicable cloud folders.
- New files added to the document-specific folder in the cloud drive are automatically attached to the corresponding sfPMS document with project attributes inferred.
- Changing the name of a file in sfPMS also changes the name of the file in the cloud and vice-versa.
- Changing the status of a Spitfire document to one that is not cloud-enabled removes the corresponding folder (and its files) from the cloud drive.
- sfPMS remains the legal repository for files and, therefore, controls deletion of files. Deleting a file in sfPMS will delete it from the cloud, but deleting in the cloud will *not* delete the file in sfPMS.
- sfPMS retains version history of files. If a new version of a file is added either to a document or the cloud, it will be recognized as a new version of the file in both locations and in all cloud folders.
- Once a file is locked in sfPMS (and, therefore, becomes read-only), new versions added to the cloud folder will be ignored by sfPMS. However, if the file is then unlocked, and there is a newer version in the cloud folder, it will be picked up by sfPMS as a newer version.
- Who has access to the files stored in the cloud depends on the cloud storage configuration and sharing rules (which are outside the scope of sfPMS and this technical white paper).
- Only files that are attached to a Spitfire document are sent to the cloud. Files that are added directly to the Spitfire Catalog at the Catalog Dashboard or Project Dashboard are not sent to the cloud.
- Items on a document can also be sent to a cloud folder, if a Doc type is set up correctly.
- sfPMS can integrate with several cloud storage providers. A project can be associated with only one cloud storage provider, but you can associate different projects with different cloud storage providers.
- The cloud storage provider is responsible for the synchronization with all the apps/devices being shared.

Overview of Setup

Cloud Folder Path

You need to determine how you want your folder path to be structured in the cloud. While you need folders for each project (which will contain folders for Doc type and document by default), you can also have higher level folders for location, site, company etc. This folder path is needed for both the Cloud Drives tool and ICTool.

👉 [Cloud Folder Path](#)

Cloud Drives Tool

The folder path needs to be entered in the Cloud Drives tool. This step needs to be done only once per cloud storage provider.

👉 [KBA-01720: Adding a Provider to the Cloud Storage Tool](#)

ICTool

Certain configurations need to be checked and entered. This step needs to be done only once per cloud storage provider.

👉 [KBA-01721: Configuring ICTool for Cloud Storage Integration](#)

Info File

An info file appears in every document folder in the cloud in order for the document folder to not be empty. You can choose to edit the text that appears in the default file.

👉 [KBA-01722: Editing the CloudFolderLinkInfo File](#)

Doc Types

You need to determine which Doc types can be sent to the cloud and indicate such in the Doc Types tool. Files that are attached to these Doc types can be included in the cloud.

👉 [KBA-01723: Enabling a Doc Type for Cloud Integration](#)

Rules

Documents of cloud-enabled Doc types are sent to the cloud when they are given a cloud-enabled status. You can also set up Item status for Items you want to send to the cloud. You need to set up these statuses in the Rules Maintenance tool. In addition, the **CloudStorageConfig** rule group offers several rules to configure your cloud folders. These rules are optional; sfPMS will use defaults for any rules not configured.

👉 [KBA-01724: Configuring Rules for Cloud Storage Integration](#)

Project Setup Document

To connect a project with a cloud drive you need to be able to use the Cloud Storage field on the Project Setup document for that project.

🔗 [KBA-01726](#): **Configuring the Project Setup for Cloud Storage Integration**

Inclusion of Files and Items

In order for a file or Item to appear in your cloud drive, it must meet the following criteria.

Project Setup

Which projects are allowed to appear on specific cloud drives is determined by the Cloud Storage option on the Project Setup's Project tab. A project can be integrated with only one cloud storage provider.

Project Setup-Committed

Northern Lights Office Bldg

DOCUMENT HEADER

CONTRACT NO.

PROJECT GC-003 Northern Lights Office Bldg

DESCRIPTION Northern Lights Office Bldg

CUSTOMER Northern Lights

STATUS Committed

EXECUTED 11/05/2004

DATE 12/11/2007

Details Scope Addr Dates Items Incl/Excl Project

COMMITMENT BUDGETING MODE Update

PLAN ROOM MODE N/A

CLOUD STORAGE (none) GDrive

FORECASTING THRESHOLD

- **(none)** means that no files for this project will appear on the cloud drive. Neither the project itself nor its documents will appear on the cloud drive folder structure.
- **Cloud storage provider** means that documents and files for the project can be sent to the indicated cloud drive (if other conditions are met). In addition, the project itself will appear on the cloud drive folder structure.
Note: the options that appear on the Cloud Storage drop-down are set up through the Cloud Drives tool.

Doc Type

Only those documents of a Doc type that has been set up for the cloud drive can appear on the cloud drive.

For example, if GC-003 has a Cloud Storage option of **GDrive** (as shown above), but the Meeting Minutes Doc type is not designated as cloud-enabled, then Meeting Minutes for GC-003 (and any attached files) will not appear on the cloud drive.

Doc Status

Only designated statuses allow specific documents to appear on the cloud drive. A document must have a cloud-enabled status in order to appear on the cloud drive.

For example, if GC-003 has a Cloud Storage option of **GDrive**, and Drawing documents are cloud-enabled, a Drawings document with a status of **In Process** (which is not set up as a cloud-enabled status) will not appear on the cloud drive and neither will its attached files. However, the document and its files will appear once the document status changes to a cloud-enabled status.

Exceptions

Files that are attached to cloud-enabled documents with a cloud-enabled status and in designated projects will appear on the cloud drive with one exception:

- Files that are **Confidential** will never be sent to the cloud.

Note: Files are Confidential if they are attached to a document marked Confidential, or if the file itself is marked Confidential through its Files Properties.

Item Status

Only designated statuses allow specific document Items to appear on the cloud drive. A document Item must have a cloud-enabled status in order to appear on the cloud drive.

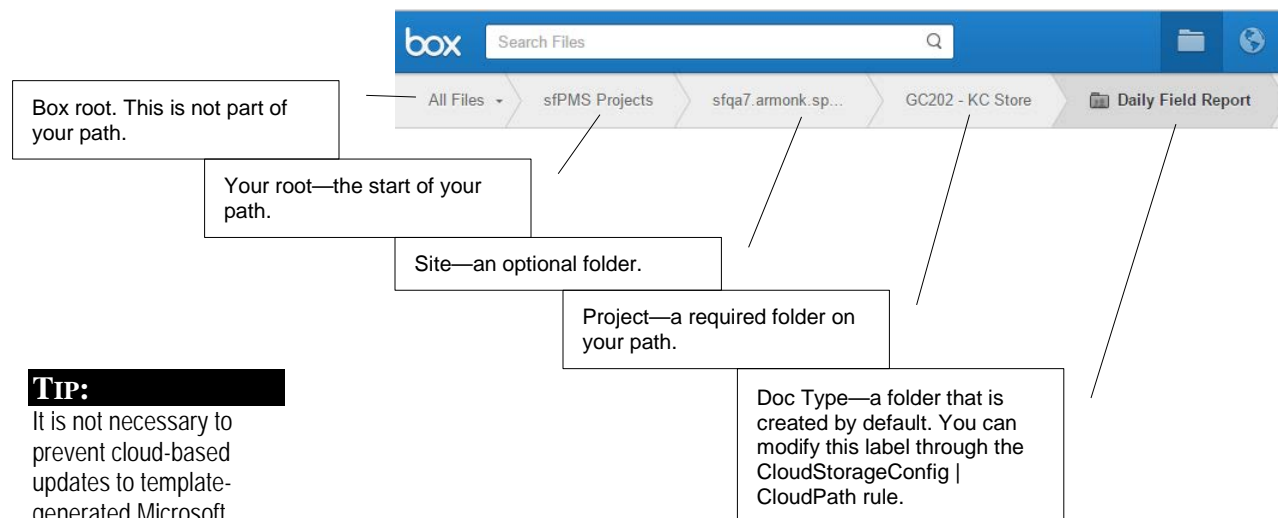
For example, if GC-003 has a Cloud Storage option of **GDrive**, and Submittal documents are cloud-enabled, a Submittal Item with a status of **In Process** (which is not set up as a cloud-enabled status) will not appear on the cloud drive. However, the Submittal Item will appear once the Item status changes to a cloud-enabled status.

Note: Files can be sent to the cloud based on both document and Item levels.

Doc Status	File Attached to Item?	Item Status	File to Cloud?
Cloud-enabled	No	N/A	Yes
Cloud-enabled	Yes	Cloud-enabled	Yes
Cloud-enabled	Yes	Not enabled	No
Not enabled	Yes	Cloud-enabled	No

Cloud Folder Path

The files on your cloud drive will be organized according to a folder structure. You need to decide what you want that folder path to be. For example:



Tip:

It is not necessary to prevent cloud-based updates to template-generated Microsoft Word files with bookmarks. Ask your implementer about using Microsoft Word's Region Protect feature to limit editing to only appropriate parts of the Word file.

Your cloud folder path requires a root folder (which can be indicated with just a slash /) and a Project folder. However, as shown in the example above, the path can also include folders at other levels. You might want the folder path to include any of the following:

- Customer
- Location
- Vendor or Source Company
- Site

Placeholders

Tip

Other choices are also available. A complete list is available at [KBA-01588](#).

Tip

By default **\$Location** displays the name of the company division associated with the document.

The cloud folder path that you will need to enter into the Cloud Drives tool (described in the next chapter) uses placeholders for each folder.

For	Use
Customer Name	<code>\$CustName</code>
Location	<code>\$Location</code>
Vendor or Source Company	<code>\$SourceCompany</code>
Site and App Name	<code>\$SitePath</code>
Site Hostname	<code>\$HostName</code>
Project ID	<code>\$ProjectID</code>
Project Name	<code>\$ProjectName</code>

For example, the path shown in the picture above is written out as

`/sfPMS Projects/$SitePath/$ProjectName - $ProjectID`

Note: Doc Type and document name are not part of your cloud folder path. See the [CloudStorageConfig | CloudPath](#) rule.