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The Power of One Source - extending Autodesk Vault Professional beyond your Team

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Learning Objectives

- Define each: Shared Views, Shared Data & Project Sync
- Create use cases for each: Shared Views, Shared Data & Project Sync
- Generate the technical requirements to set up each: Shared Views, Shared Data & Project Sync
- An overview of what is possible – connecting to ERP, connection to Fusion Lifecycle

Description

An intrinsic look into data management using Vault Pro and the ways it can connect to your outside team. Utilizing the in-the-box functionality of Shared Views, Shared Data & Project Sync we will uncover the multiple ways you can share and or collaborate with teams outside of your organization. This class will cover the use cases for each type of collaboration as well as the technical setup for each. We will also touch on the cloud applications that each of these uses including Fusion Team and Autodesk Drive. Additionally, a quick tour of options to connect your Vault data to other applications such as ERP system and Fusion Lifecycle. Each of these solutions will require some outside applications to accomplish; however, a working knowledge of how and what you can integrate to and from your vault data is essential in taking that next step to a complete One Source environment.

Speaker(s)

Kimberley Hendrix

Based in Tulsa, Oklahoma, Kimberley provides custom solutions for lean engineering using Autodesk, Inc., products and industry knowledge to streamline design and engineering departments. Hendrix has worked in the manufacturing/plant industry for over 30 years and she specialized in automated solutions for the heat exchanger industry. She has worked with Autodesk products since 1984. Hendrix is associated with D3 Technologies as a solutions consultant, focusing on data management, automation, and project management.

Senthil Kumar

Product Manager for the Data Management Group at Autodesk in Singapore. Senthil is with Autodesk for the last 14 yrs. In Autodesk, Senthil worked as a Product Support Engineer, QA, QA Manager, and Product Owner before becoming Product Manager. Prior to joining Autodesk, Senthil worked for Autodesk Distributor, PTC and Delcam.

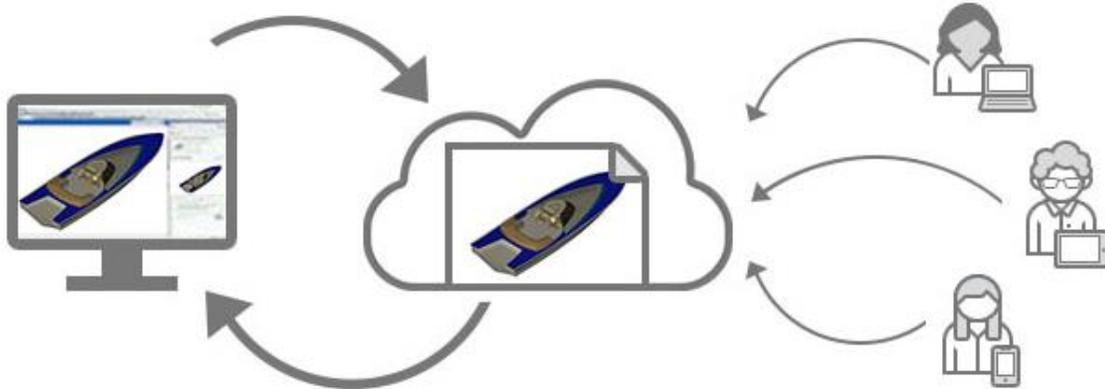
Definitions

Definitions and over view of each Shared Views, Shared Data and Project Sync to help identify which type of collaboration best fits in your working environment.

Shared Views

New in Vault 2018.2 provides a simple, fast, and secure option to share rich multi-sheet 2D or 3D viewables opened on virtually any cloud-connected desktop or mobile device via a simple web link. They avoid the need for reviewers to install anything and provide a built-in feed that makes comments visible right inside the client. Shared Views are temporary visualizations that automatically expire after a period of time.

Owners upload a visual representation of a design to share online



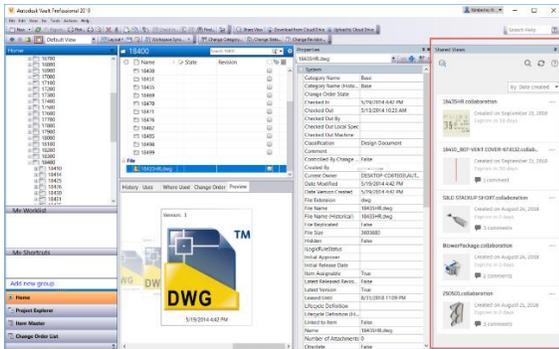
Owners manage shared views and respond to comments from within the product

Collaborators view and post comments from desktop or mobile

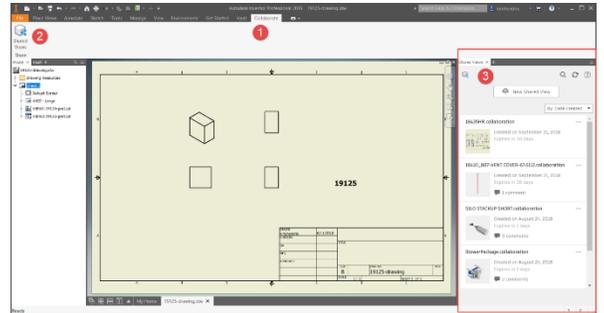
General use

Since Shared Views are intended for quick feedback of Work in Progress files, the visualizations expire after 30 days. The comments and markups that are generated are not captured in the Vault as history.

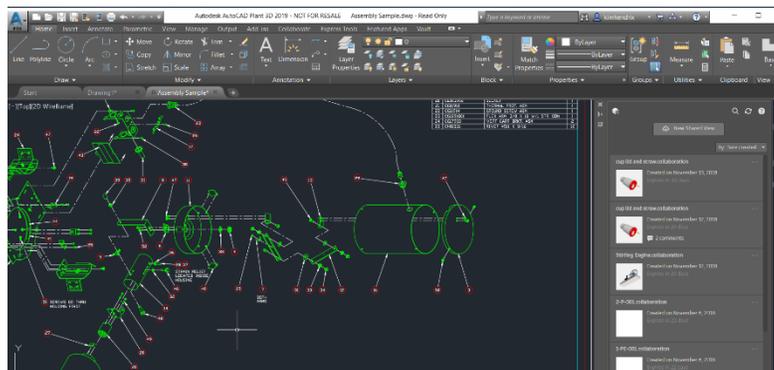
Application Shared View panels



Vault Shared Views



Inventor Shared Views



AutoCAD Shared Views

Shared Views list

As the owner, you can use the shared views list to quickly access your shared views, start new comment threads, and reply to comments from your Autodesk product. The shared view list also provides management options, such as extending the expiration date and deleting a shared view.

Note: Administrators can enable or disable Shared Views.

Shared views enable users to:

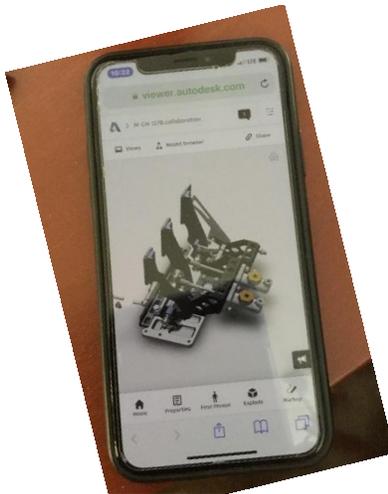
- Quickly create online visual representations from within desktop application
- Generate a link that can be shared with any collaborator
- Collaborators can view the shared view and add comments and mark-up via Autodesk Viewer
- Authors can review comments and see feedback they've received within the authoring application, then respond

Autodesk Viewer

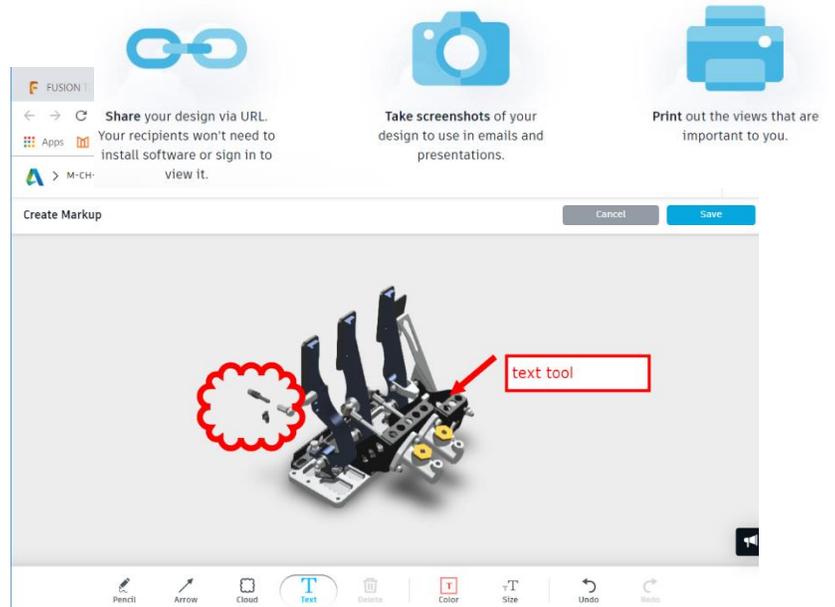
Quickly get the feedback you need from Shared Views with Autodesk Viewer's lightweight mark-up and annotation tools.

Share, screenshot & print.

Autodesk Viewer makes it easy to share views of your design.



Mobile Viewer



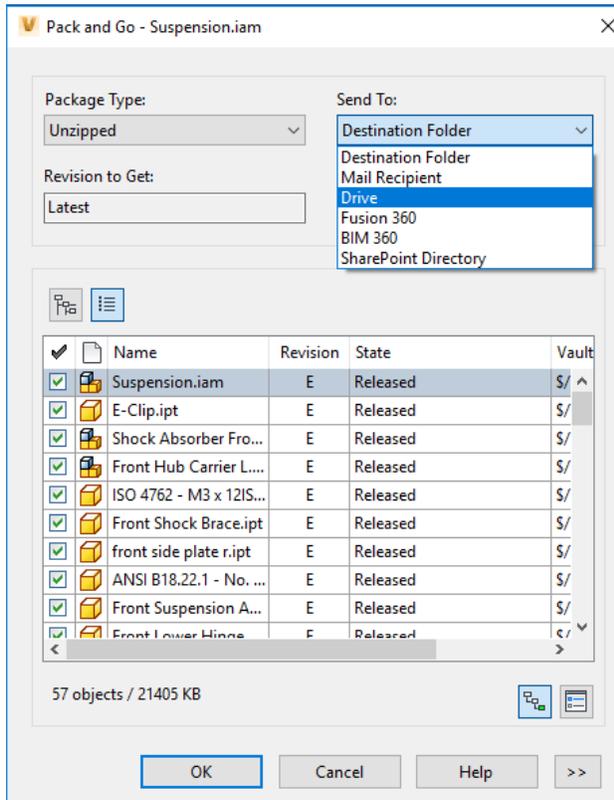
Desktop Web Viewer

Shared Data

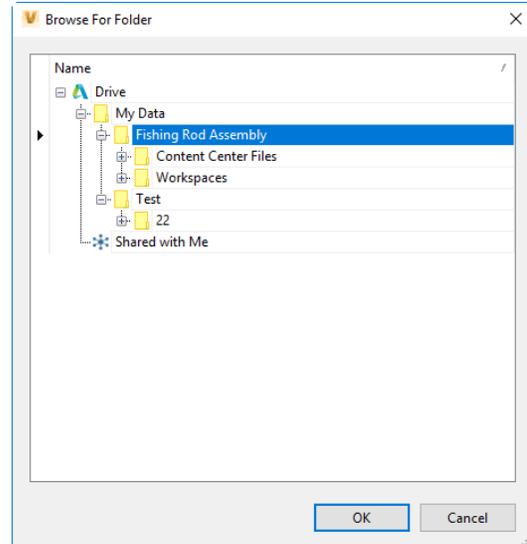
With Vault 2018.2 Update Pack & Go capability is extended to deliver native data outside the firewall by integrating Autodesk Drive and Fusion Team which helps engineering team deliver the actual CAD data to external collaborators.

General use

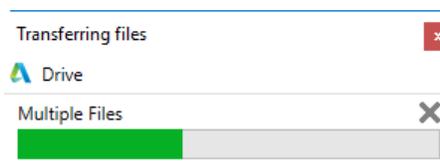
The Pack and Go command collects the file and all its referenced files into a single package. Note that, all files that are referenced are included in the package. In the Pack and Go dialog box, user (ex. Design Engineer) is able to select the type of package to create as well as the package destination. Then browse to the project inside Drive or Fusion Team and select the destination folder. Now all the files copied to the cloud location.



Pack and Go



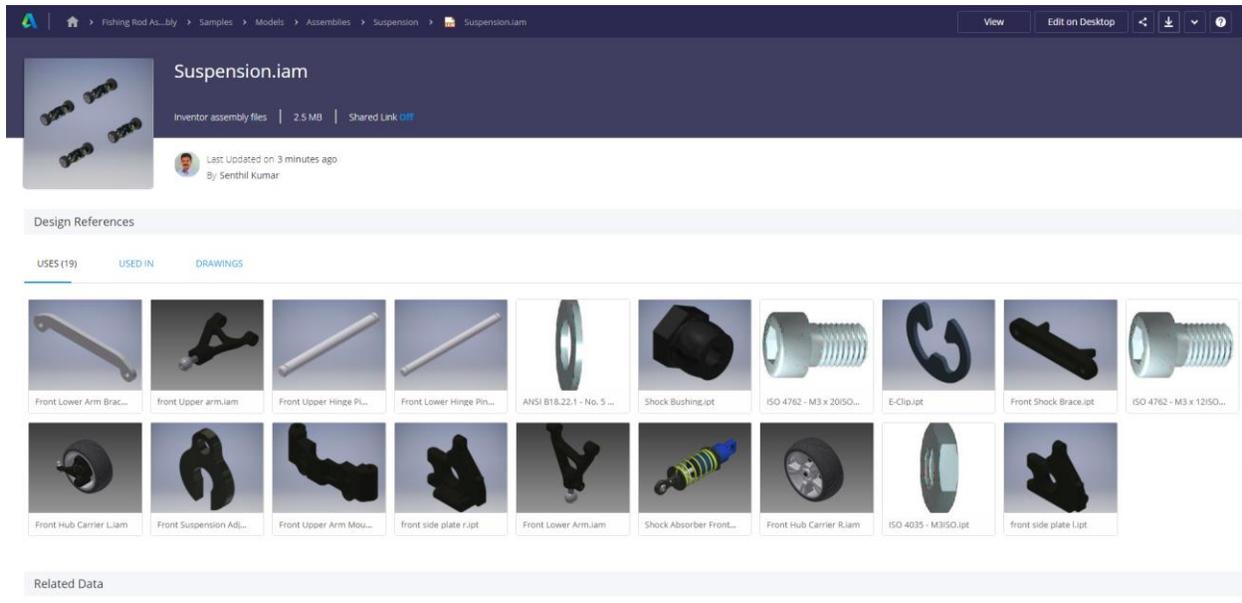
Select the Cloud Folder



Transferring files to Cloud

External Collaborator can now access the design data through Autodesk Drive or Fusion Team user interface and can view models instantly. They can review designs in real time, check the Version of the file, Design References, Uses, Used In and download for downstream manufacturing workflows or archive processes.

If there are changes in Vault on the design e.g. when a new revision is created, the Design Engineer simply selects the same assembly and use the Pack & Go command. Vault will Update the Design data in Fusion Team or Drive and create a new iteration of the same design at the same Cloud Drive location.



Viewing Files in Cloud Drive

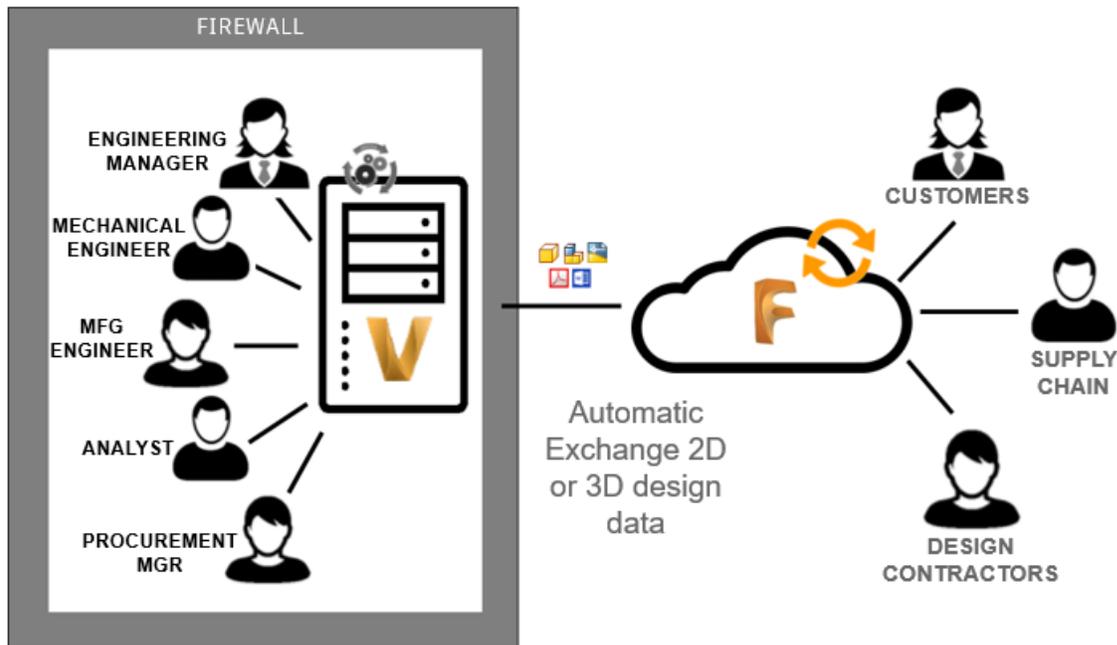
Project Sync

The Project Sync feature provides file and folder synchronization between Vault and supported Autodesk cloud drives.

Note: This feature is available only in Vault Professional. You also need to subscribe to Fusion Team to use Project Sync.

This capability enables Vault users to either automatically or manually synchronize files from a folder in Vault with a folder in a cloud drive. The synchronization can be configured to work in either direction or both directions providing simple and reliable two-way communications between project team members.

The Project Sync utility can be configured to perform synchronization in ways that best suit your needs. A synchronization can occur at a scheduled time each day, at specific time intervals, or on demand. Use the filter options to have even more control over which files are synchronized.



General use

Leveraging Vault Professional and Fusion Team, customers are able to share design files with authorized external collaborators like customers, suppliers and 3rd parties with increased satisfaction and transparency and decreasing losses from miscommunication.

Use Cases

Shared Views, Shared Data and Project Sync are all available and great ways to collaborate with outside team members lets take a look at the best use case for each.

Shared Views:

Intended to be a quick focused, work-in-progress feedback tool, in other words in the middle of the initial design phase to get real time (or at least very quick) feedback on designs and drawings. Since the markups and comments are not stored or recorded Shared Views should be used as part of the design tools while a model or drawing is in the design phase. It should be noted that with Shared Views you are only sharing a viewable file and not the design data itself, so the collaborator is not making markups or corrections on the actual files. Nor can the collaborators open the files and manipulate them in either AutoCAD or Inventor.

Use Cases:

Shared Views capability is a huge step forward to simplify and speed up review cycles. Using Shared Views, Design engineers can collaborate with anyone, receive comments and feedback directly inside Vault.

Reviewers like customers, suppliers and shop floor technicians are not required to install any additional software to access, view, measure, zoom and add comments on shared views. Because shared views are high quality visual representations of the CAD files and not the actual CAD files. This way actual designs or models are always protected.

Shared Data:

Used in cases when you need a way to track and maintain the changes or comments that a collaborator makes, or when the native files are needed for modifications outside of your team. It is a little more robust than Shared Views as it allows for the actual models and drawings to be package natively and uploaded to Autodesk Drive or Fusion Team. Collaborators can then look at and make comments in the cloud or download the native files to modify and upload. This does not automatically update the files in your Vault but does allow for you to retrieve, review and decide what to re-load.

Use Cases:

The project manager creates a project inside Fusion Team or Autodesk Drive.

The design engineer selects a file or multiple files from the file list or the Uses tab or Where Used tab, or the Quick Search and then selects Pack & Go.

The Pack and Go command collects the file and all of its referenced files into a single package. Note that all the files that are referenced are included in the package. In the Pack and Go dialog box, design engineer is able to select the type of package to create as well as the package destination. Then browse to the project inside Fusion Team or Drive and select the destination folder. Click OK, and all files are now copied to the cloud drive location.

External Collaborator can now access the design data through Autodesk Drive or Fusion Team user interface and view models instantly. They can also review designs in real time, check the Version of the file, Design References, Uses, Used In, Drawings tabs and download for downstream manufacturing workflows or archive processes.

If there are changes in Vault on the design e.g. a new revision is created, the design engineer simply selects the same assembly and does the Pack & Go command. Vault will update the Design data in Fusion Team or Drive and create a new iteration of the design.

Project Sync:

The most robust of the options discussed, used when outside teams will work on make modifications and work back and forth on the same models. Fusion Team is required but a scheduled Sync between the Vaulted data and the data in Fusion team can be scheduled making collaboration and shared work outside of your immediate environment possible, traceable and version controlled.

Use Cases:

We are going to look at 3 challenges that the users have highlighted.

First one is Design Engineers need an easy and triggered way to share project related up-to-date released design files with their outside suppliers or customers for consumption. This is required to be triggered and not based on the user interaction.

The second use case is that customer would like to outsource some CAD files and their references to another company so that they can clean up the assemblies, create the drawings and get them back to Vault without any loss of any CAD references. This enables round trip design work.

The last use case is when a customer would like to contract external firms with design tasks for sub assembly due to time constraints, leveraging available up-to-date templates and standard components managed in Vault.

The Technical Stuff

How to configure collaboration

Autodesk Desktop Connector

Is required to sync files using Shared Views or Project Sync. It can be downloaded here and runs in the system tray <https://www.autodesk.com/vignette-connect-toast-enu>. It can also be installed from your Fusion Team page as shown below

Desktop Connector is a desktop service that integrates an Autodesk data management source (or data source) with your desktop folder and file structure for easy file management. The files in the data source are replicated in a connected drive.

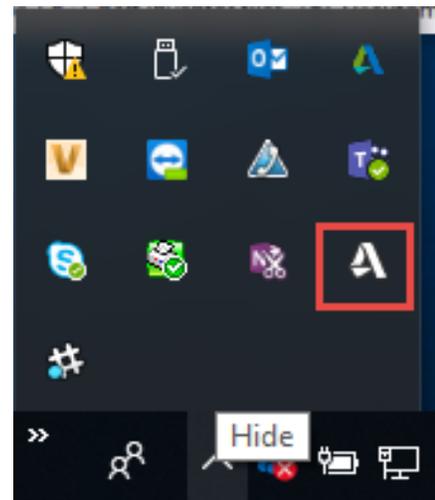
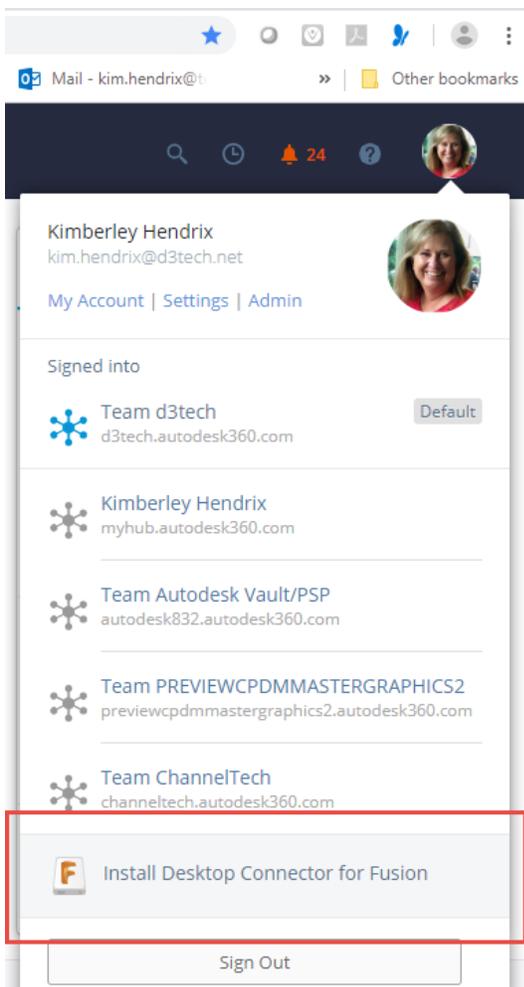
You can manage files in the data source through the connected drive, just as you would any other folder on your machine. Changes made in the connected drive are automatically uploaded to the data source.

A connected drive is a local folder that mirrors the structure of the connected data source.

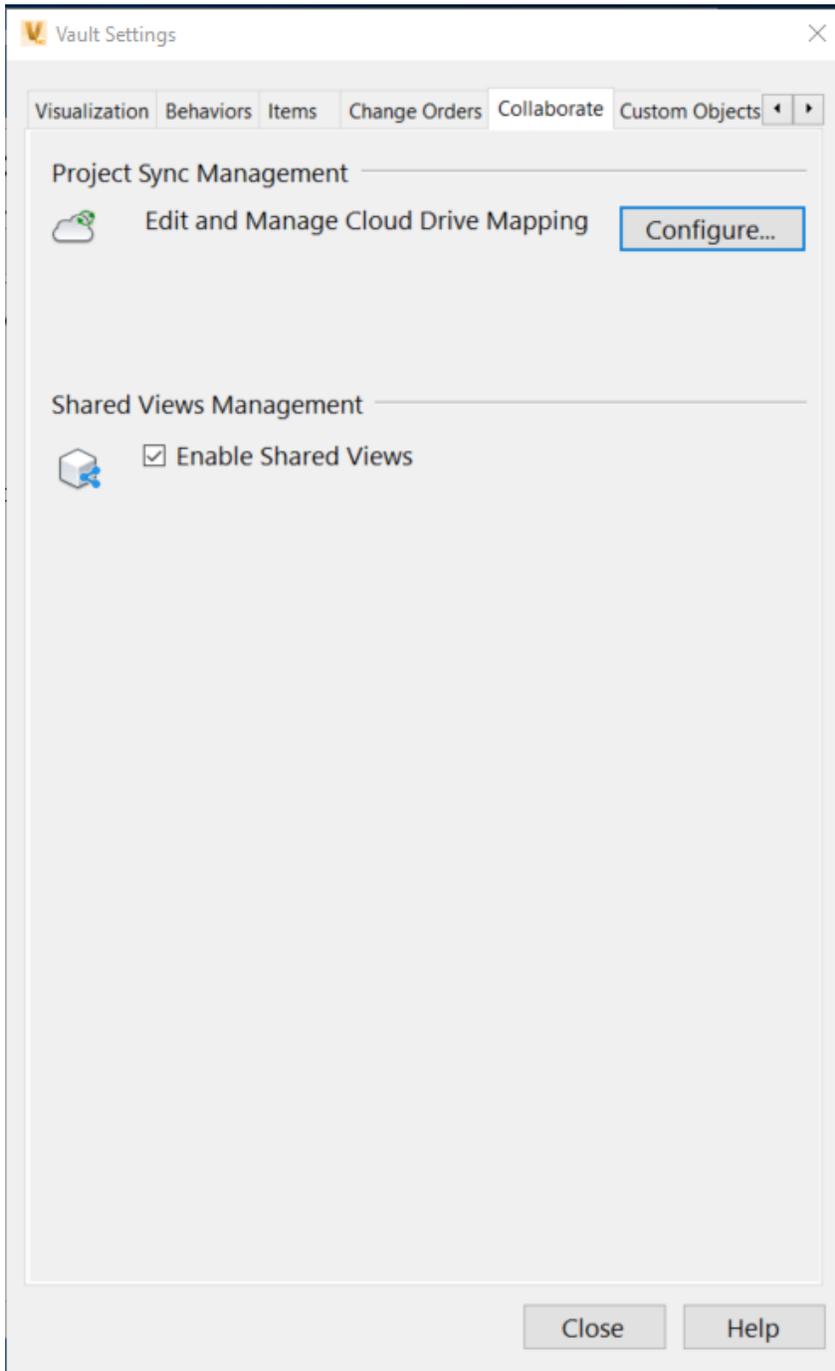
While the structure is replicated in the connected drive, the files are not downloaded until they are opened.

You can open and add files through the connected drive, similar to how you access and modify files and folders using Windows® Explorer on Windows® or Finder on macOS®. The changes are replicated in the data source.

This functionality allows you to manage data or update folder structures without having to launch the data source application.

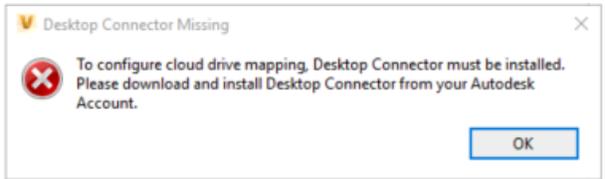


Collaboration Settings
From the Vault Client select
Tools > Administration > Vault Settings > Collaborate (tab)



Shared Views Management a check bock to enable this functionality.

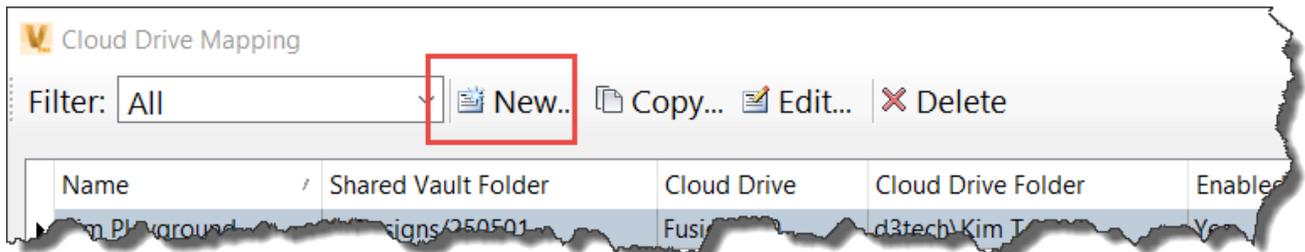
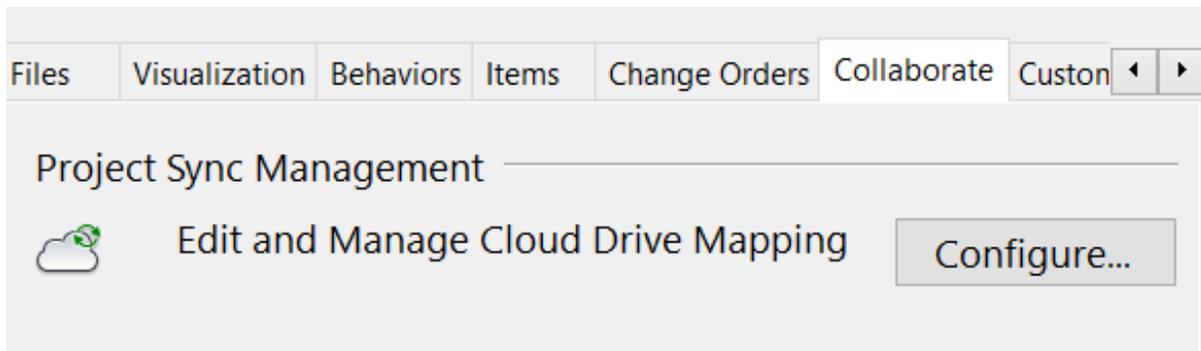
Shared Data & Project Sync requires mapping to your Fusion Team folders under



Note: Autodesk Desktop Connector must be installed to configure mappings

Project Sync Management select Configure...

In the Cloud Drive Mapping Dialog select New ..



Cloud Drive Mapping - 'New Definition'

Name: 1 Vault folder: 2

Enable cloud drive mapping
 Enable manual sync
 Upload related files based on Release bias

Cloud Drive folder: 3

Schedule Folder Sync
 Sync Folder: 4

Folder Path	Scheduled	Action
\$/Designs/AU 2018	No	Bi-directional Sync

Define Folder Sync

Select folder: 5

Action

Upload to cloud drive
 Download from cloud drive
 Bi-directional sync

Apply selected action to subfolders

General | Schedule | Filter 6

Select folder: 6

Action

Upload to cloud drive
 Download from cloud drive
 Bi-directional sync

Apply selected action to subfolders

Synchronization settings 7

Daily at: 7
 Every: hours
 None

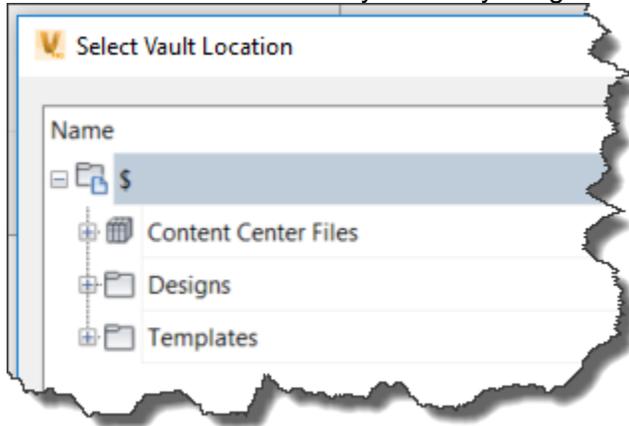
Filter 8

Property: Condition: Value: 8

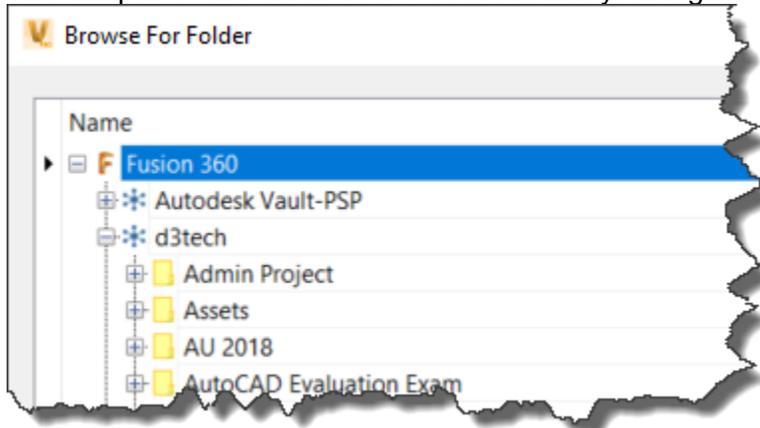
Upload files that match these criteria:
 State contains Released

Buttons: OK, Cancel, Apply, Help

1. Name the connection you can have multiple connection definition
2. Define the Vault folder that you are syncing



3. Define the Cloud location
This will pull of all Fusion Team locations that your login has access to



Note: this will translate to the local drive mapping: *C:\Users\kim.hendrix\Fusion\d3tech\AU 2018*

4. Setup the Schedule for Sync
5. Define the folder from Vault
 - a. Choose Upload, Download or Bi-Directional
 - b. Select whether to apply to sub-folders or not
6. Schedule Setup
7. Define the Schedule time
8. Define filters, workflow states, properties etc.

What is Possible

Connections to SharePoint and other outside systems, such as ERP Systems or Autodesk Fusion Lifecycle

SharePoint

Autodesk Vault has built in functionality to publish to or sent Pack-n-Go files to SharePoint. The SharePoint directories must be set up ahead of time in the Global Settings prior to publishing.
Tools > Administration > Global Settings > Integrations Tab > Configure

Other Connections

While not out-of-the-box functionality it is possible and widely done to have your Vault data such as BOM data, published files etc automatically synced with ERP systems and or Fusion Lifecycle.

Reference the following Autodesk University 2018 classes.

[MFG225785 - PDM and PLM: Together at Last with Vault and Fusion Lifecycle](#)

[IM226113 - Connect Vault with ERP: Items, Bills Of Materials, Files, and More](#)