PM122788

Total Team Collaboration with Fusion 360

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Learning Objectives

- Get up-to-date information about the new features released
- Learn step by step how to use native CAD data in various formats with Fusion 360
- Learn step by step how to use the new copy features and what they can now do
- Learn step by step how to use new features such as enhanced project and admin options

Description

You've taken the step with Fusion 360 software and Fusion Team to put your company on the right path to total team collaboration. However, it's easy to fall into a routine and not get a chance to see what the new features do or how you can incorporate them into your daily workflow. Let us show you the new features and updates: Use CAD data from your native file formats, updates to roles, and enhanced team and project administration are just a few of the topics we'll discuss.

Speakers

Lisa Darrah is a senior program manager for Fusion 360 cloud-based products and services. She has been at Autodesk, Inc., for 18 years. She started at Autodesk as a product support engineer and then moved onto quality assurance and project management. Her knowledge of the various aspects of software lifecycle has helped her as a program manager to include the views from Autodesk customers while defining and driving the Fusion 360 cloud-based products and services projects.

Jeremy Lambert has always had intrigue for technology and how it can help drive innovation and better products. CAD, CAE, and CAM caught his interest early on and inevitably lead him towards mechanical engineering. Following school, Jeremy gained product development experience working for product manufacturers, including General Dynamics. Jeremy joined Autodesk, Inc., in 2000 and is now a Senior Product Manager on the Fusion 360 product team.

Exploring Fusion Team and Fusion 360

Fusion Team allows you to connect multiple teams and suppliers to share files securely across departments and supply chains. Viewing models can be done instantly and the Live Review functionality allows real time interaction with your designs. These are just some of the things that Fusion Team does to expand on your Fusion 360 toolkit.

Coming Soon to a Hub near you

Currently, all Fusion 360 customers have a personal hub that you can access in Fusion 360. But soon, you will be able to have access to Fusion Team hubs. This will be available in your profile drop down.

Select your profile and select the **Switch Hubs** flyout.

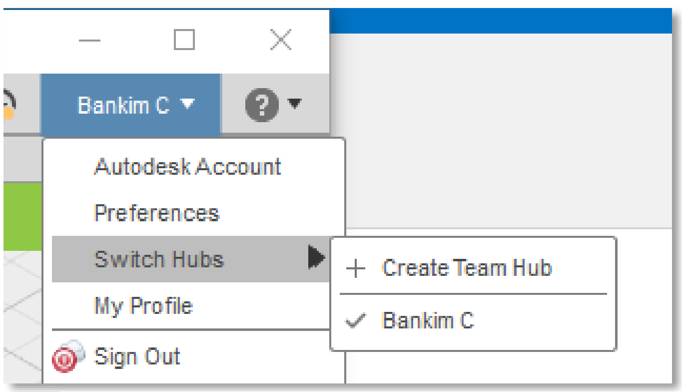


Figure 1:Profile dropdown in Fusion 360.

The **Create Team Hub** option will be available at the top of the list of hubs available. After you select the option to create one, you will be directed to a walkthrough providing information about your hub and the benefits. Most of the benefits will be detailed in this handout.

Note: You only need one Fusion Team Hub. For those of you that are a part of a company, please check with your organization before creating a team hub.

As you review this handout, most workflows are applicable to personal hubs as well. Workflows that are not available in personal hubs will be noted **in red**

Accessing Fusion Team within Fusion 360

When you are working in Fusion 360 and have a design open, you can access your hub by selecting the file dropdown from the menu bar and selecting **Open Details on Web.**

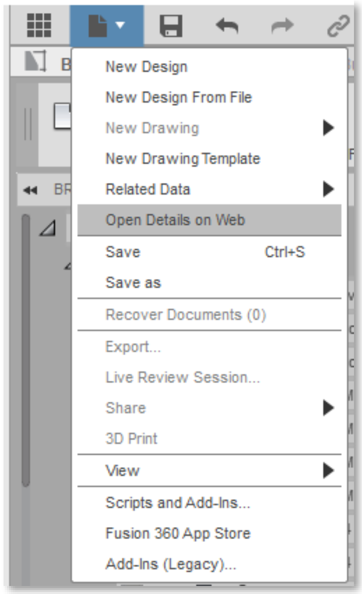


Figure 2:File Menu dropdown in Fusion 360.

Your web browser will open and you will see the Fusion Team Viewer:

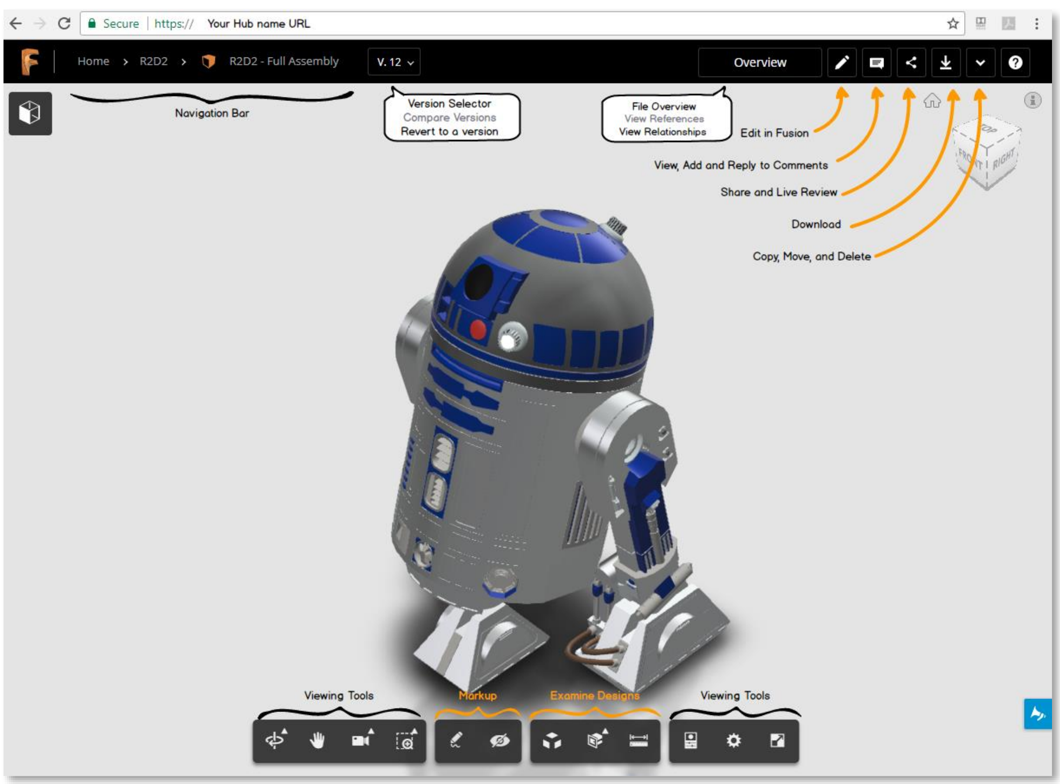


Figure 3: Fusion Team Viewer.

With Fusion 360 files, the Viewer page opens by default. Some of the fundamental areas of the viewer are:

The Navigation Menu Bar- Left Side:

Figure 4:Left Hand Side of navigation Menu bar in Fusion Team.

The top interactive navigation bar will allow you to see where you are within your hub. You can always select the Fusion Icon or *Home* to go to the main hub dashboard. The Version (V.(#)) drop down will allow you to view a different version or promote a version.

The Navigation Menu Bar- Right Side.

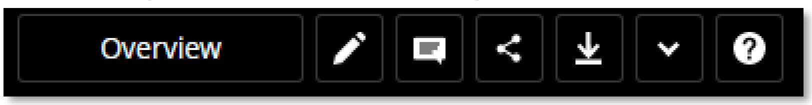


Figure 5:Right Hand Side of navigation Menu bar in Fusion Team.

On the right side of the navigation menu bar you have the following options:

Overview

The overview button will open the overview page. This page provides several types of information about the file like:

- Name
- Version
- Type
- Size
- Last update and time
- Name of person who uploaded it
- Design References
- Related Data
- Comments
- Share Link Status

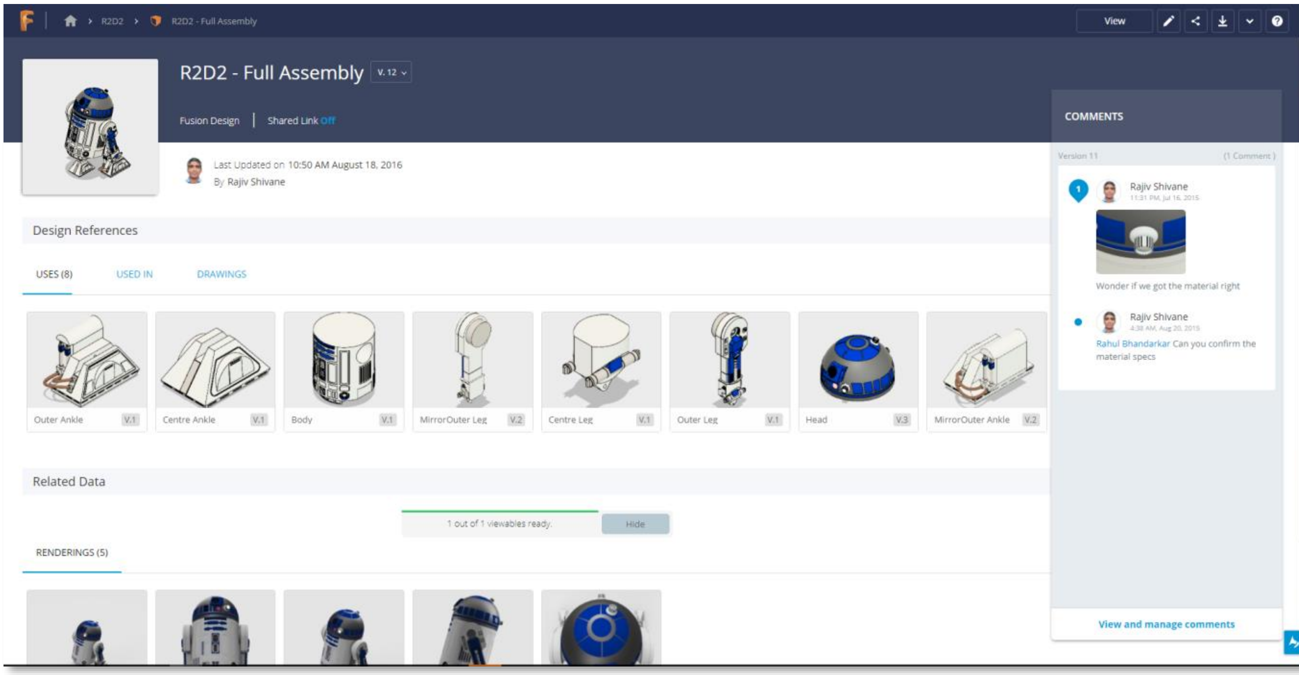
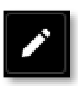


Figure 6: Overview Page of a Fusion Design file.

If you look around on the Overview page, for Fusion files, you can find out information about where the file is used, what drawings are available in the Design References area. Also, any other data like Renderings will be shown below in the Related Data area. To return to the Viewer, just select the View button in the top right-hand corner.

Edit



For Fusion 360 files, you will have two options to edit files. Edit in Browser or Edit on Desktop.

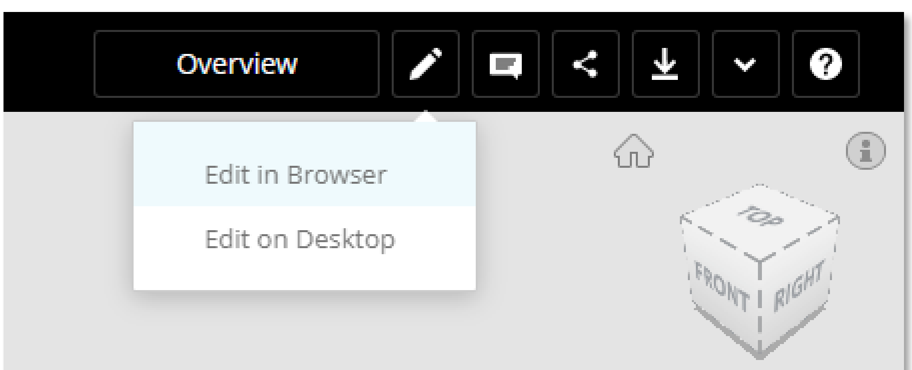
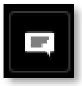


Figure 7:Right Hand Side of navigation Menu bar in Fusion Team with Edit Menu expanded.

Comment

 The Comment feature allows you to make, view and respond to comments about the design.

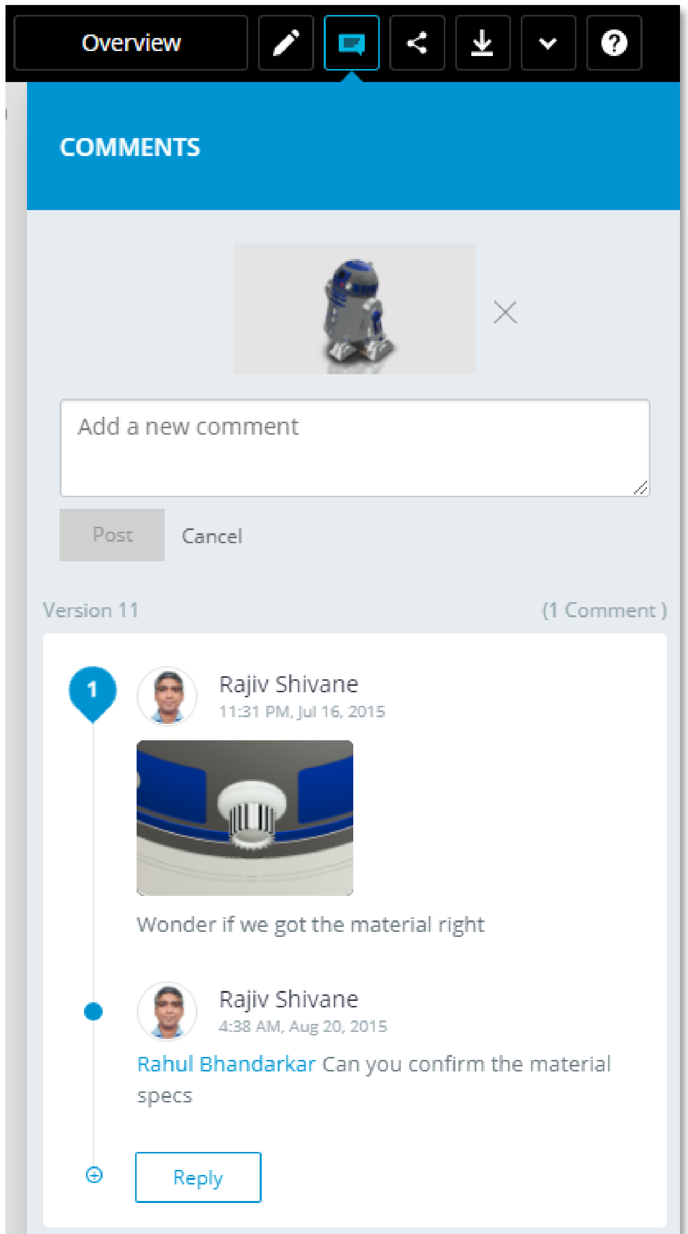
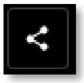


Figure 8:Comment feed expanded

This option is also available in the Overview page. Once you select the option to add a comment, a snapshot of the view you are currently seeing will appear in the comment feed.

Sharing



The Sharing feature will allow you to share your data in many ways. When you select the sharing icon, you will see an option to Share and Live Review.

Share

For sharing, there are three options. You have Share a link to the file, email a link and embed the view in something like a wiki or a web page. When you select the Share option, by default, the download option is on for shared links. If you do not want your stakeholder or collaborator to download the files, make sure you turn this off.

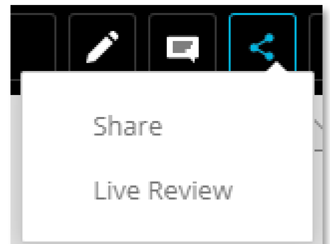


Figure 9:Sharing Menu dropdown options

When you no longer want to share the file, you can turn this off by toggling the share option to off.

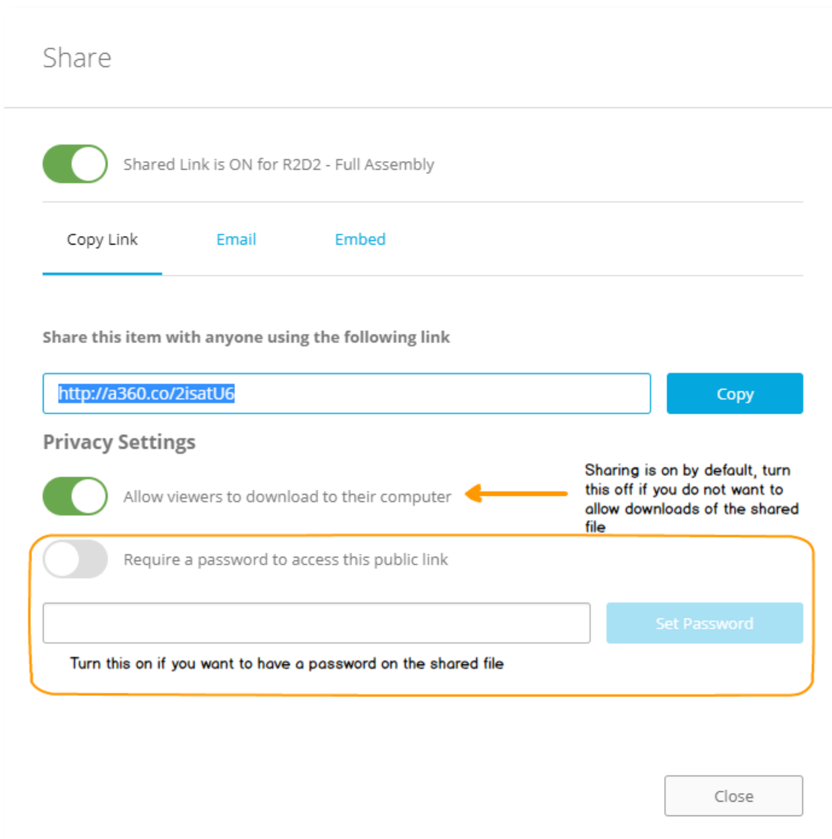


Figure 10: Sharing Dialog options

This can also be done in the file Overview, you will see the status of your shared file at the top of the page. You can just toggle off selecting the on/off status.

Figure 11: File Overview Shared link toggle

Sharing Live Review

Live review is a feature that allows you to interactively collaborate with your project members and stakeholders to review a design or model. When you select the Live Review option, a new web tab will open that is dedicated to the Live Review session. Within the browser window, the Live Review information for your file is available. Add participants by sending them the link. Once the session is started, you can select the comments panel to interactively review the file and collaborate on the design. The list of participants will also appear who are active in the Live Review.

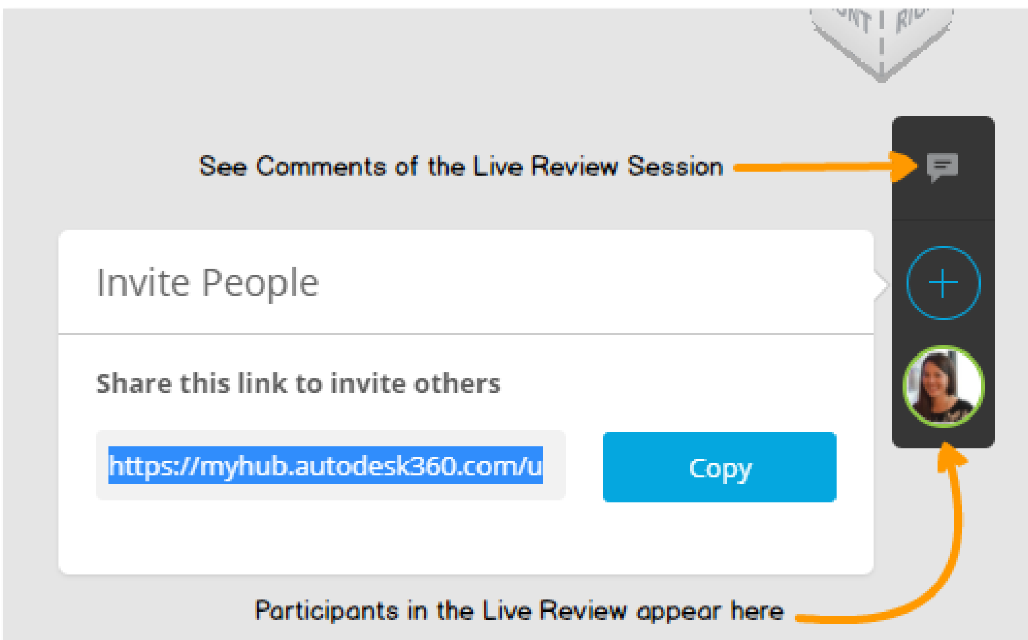
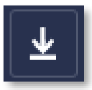


Figure 12: Active Live Review Session

Once you have completed the session, just select the End option in the top upper right-hand corner and the session will end. Close the browser window and return to Fusion Team.

Download



The Download option will display a dropdown with various options for downloading the file. The file formats that appear will be based off the type of file that is open in the viewer. In the example shown in the Download Menu dropdown, with the Fusion 360 file, these are the options to download a Fusion file.

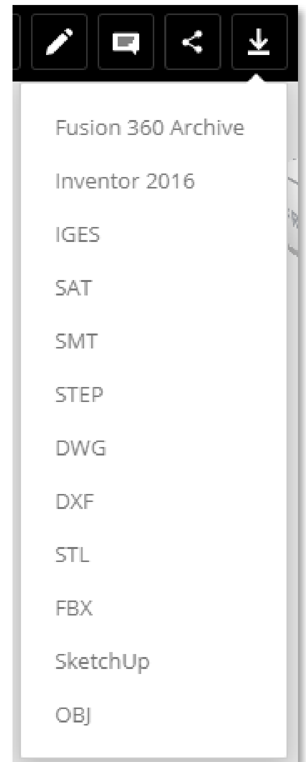
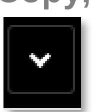


Figure 13: Download Menu dropdown

Copy, Move, Delete



There are 3 options for your data. Project members can Copy, Move, and Delete files from one project to another project they are part of. This is available in the dropdown menu next to download. When you copy a file or folder from one project to another, a copy is made in the project you are copying to. However, comments are not copied.

When you move a file or folder from one project to another, the content is moved along with associated comments into the new project. The content will no longer be available in the original project.

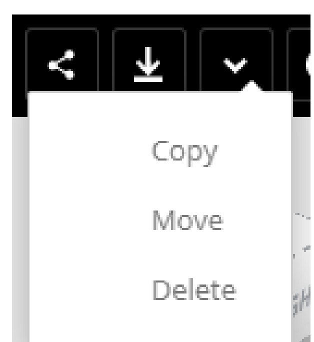
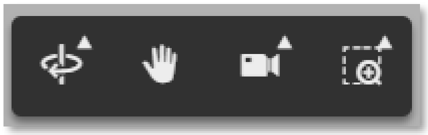


Figure 14: Operations Dropdown Menu

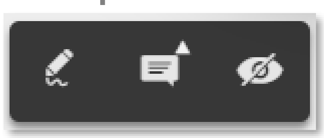
Viewing Tools



At the bottom of the viewer, there are many tools available while in the viewer. This set of tools in order from left to right are:

- ***Orbit:*** There is Orbit and Free orbit when you select the option arrow
- ***Pan:*** Pan allows you to pan around the view
- ***Camera:*** Four options for Camera are: Roll, focal length, Fit to View, and Home.
- ***Zoom:*** The scroll zoom or zoom to window are the 2 options in this command

Markup Tools



Next to the Viewing tools, you have the Markup Tools. This set of tools in order from left to right are:

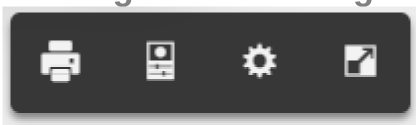
- ***Markup:*** When you select Markup, the viewer will enter the Markup Mode and remains so until you save a markup or cancel. A markup is saved as a comment and it will include a snapshot of your viewpoint to give others the exact context in which you marked up the design.
- ***Comment:*** There are two options in Comment, you have Comment on a point, or on an object an allows you to pan around the view
- ***Hide All Markers***: This option allows you to hide all the markers that may be visible in your design.

Examine Designs

Next to the Markup Tools, you have Examine Designs. This set of tools in order from left to right are:

- ***Explode:*** When you select explode, the viewer will allow you to interactively select your explosion factor with a slide bar above the toolbar
- ***Section Analysis:*** There are four options here. Add a box and add a plane for X, Y, or Z for your section analysis

Viewing Tools: Settings

 Finally you have the Settings and miscellanous options. This set of tools in order from left to right are:

- *Print:* Print the design
- *Properties:* Click to view properties of a selected part within your design.
- *Print:* Print the design
- *Settings:* Click to customize your viewing settings.
- *Full Screen:* Click to change Viewer to full screen view and click Allow. Press Esc or click the Full Screen toggle option to exit Full Screen view.

Fusion Team Project Page

Now that you have viewed the data in your project, Fusion Team has a project page where you can view all the projects that are in Fusion Team that you are a member of.

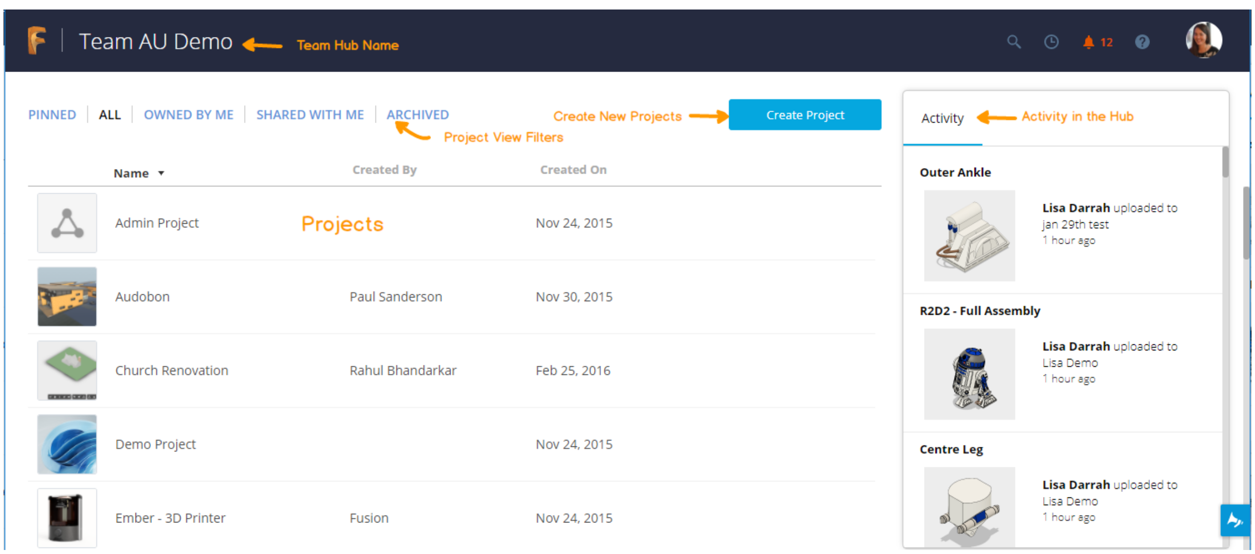


Figure 15: Fusion Team Project Page

Near the top of the project page, you have Project filters that will filter out the view to either pinned projects, Projects Owned by you, Projects Shared with me, and Archived projects. Next to the filters, there is a Create Project option to create new projects in Fusion Team. Finally, there is an Activity feed to display all the activity in your Hub.

Admin Overview *Team Hubs Only*

As an admin of a Team Hub, there are many options to customize the hubs. To access the Admin settings, go to the profile drop down and look for Admin.

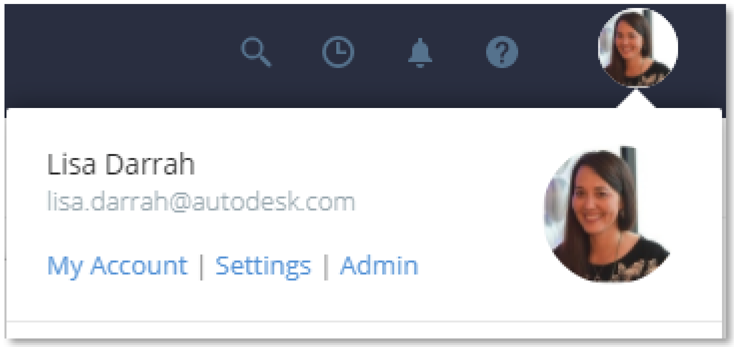


Figure 16: Profile Drop Down with Admin option

Once selected, the Admin page defaults to Team Hub settings. The other options are Members and Roles, Projects, and Subscription.

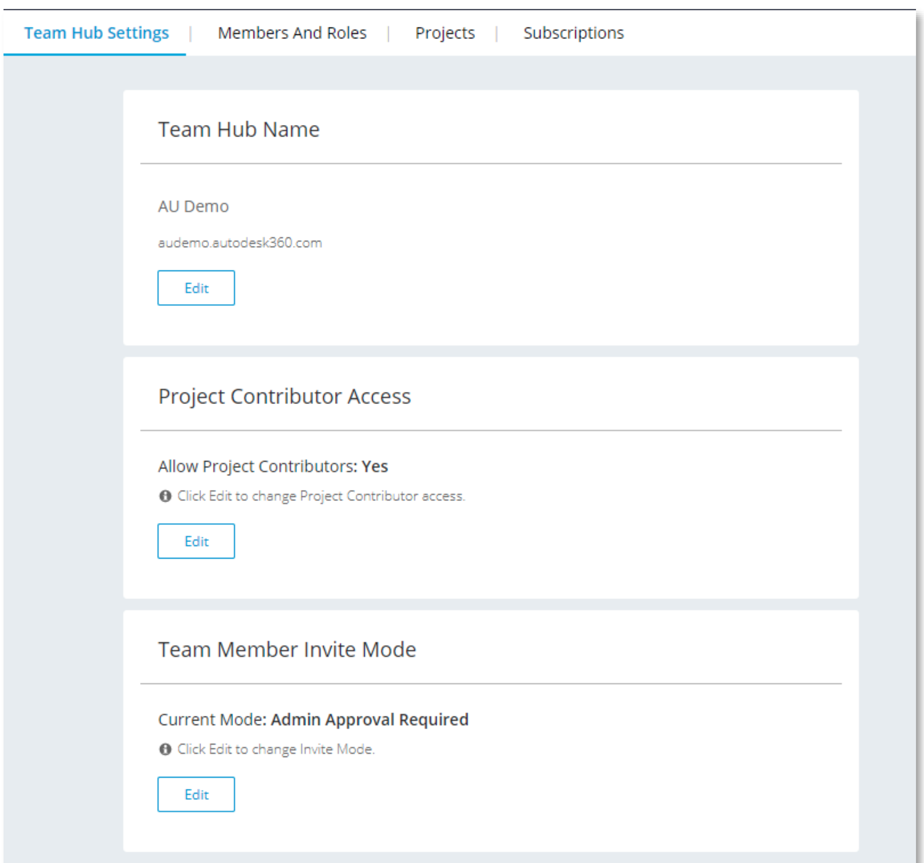


Figure 17: Admin page of a Team Hub

Team Hub Name:

Changing the Team Hub Name by selecting edit and then save.

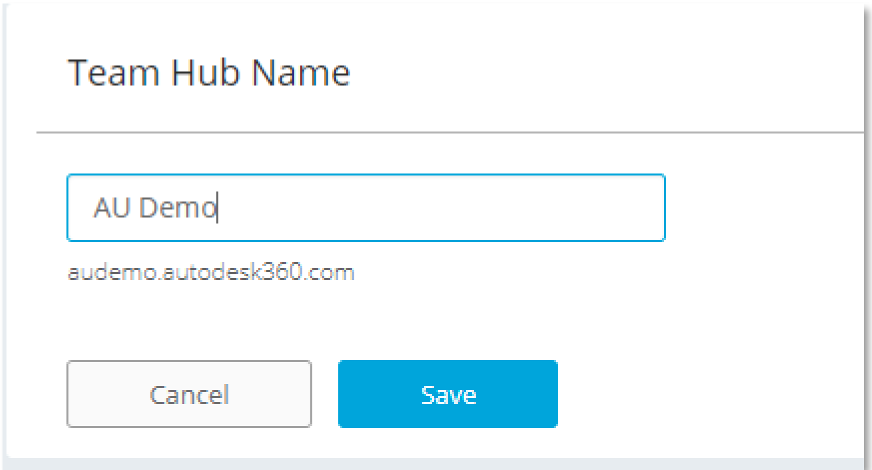


Figure 18: Edit Team Hub Name field

Project Contributor Access:

Project Contributor access is allowed on team hubs by default. Determine at the outset if you do *not* want to allow Project Contributor access. If access is turned off after users have joined as Project Contributors, they will lose access to their projects. If access is re-enabled however, they will regain access to the projects.

Note! Should I allow Project Contributors on the Team Hub?

Consider the following questions

- Do you want to invite external collaborators like customers, vendors, or design partners to your projects?
- Do you want to restrict the number of users who create projects on the hub?

If your answer is Yes to any of these, you want to allow Project Contributors.

To change Project Contributor access

1. On the Administrator Console, select Team Hub Settings > Edit in the Project Contributor Access section.
2. Click the Toggle switch for Allow Project Contributors > Save.

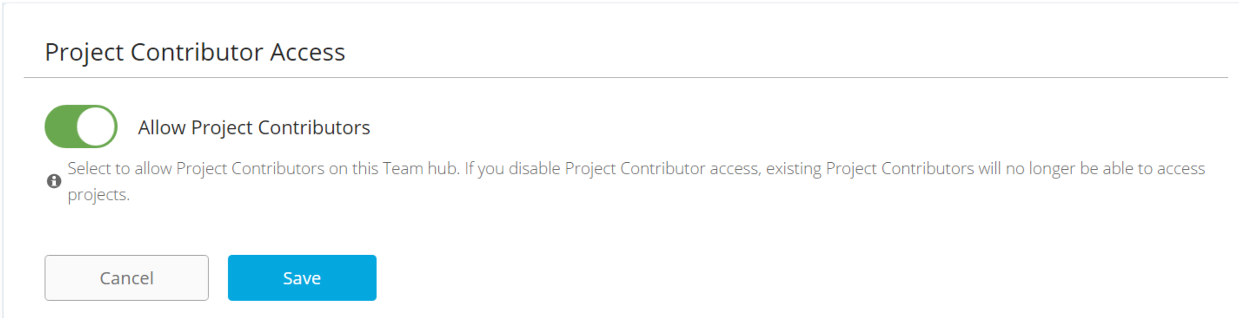


Figure 19:Project Contributor Access option

Team Member Invite Mode:
Team Members can always be invited by Team Administrators, regardless of the setting selected here. The following settings determine whether Team Members may be invited by Team Members.

- By Team Administrators only
- By Team Members but subject to approval by a Team Administrator or directly by Team Administrators + auto-approve users from a specific domain
- By Team Members and Team Administrators

The default setting for Team Member Invite Mode is set to Admin Approval Required.

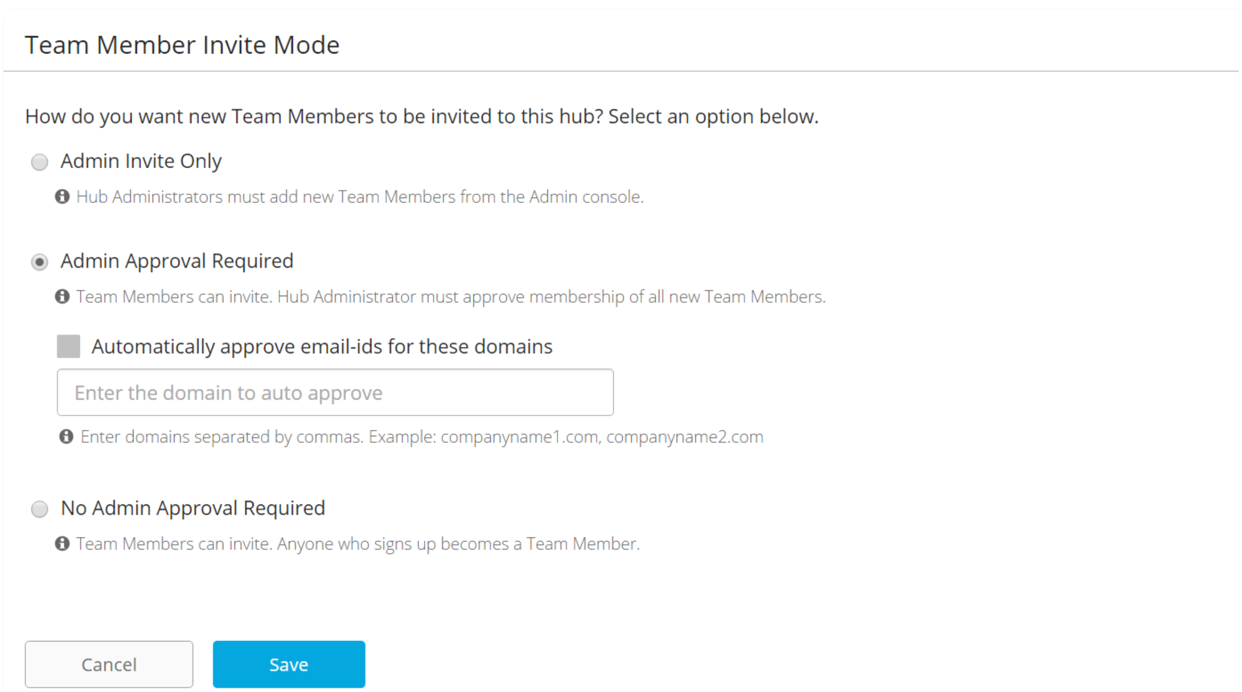


Figure 20: Team Member Invite Mode options

Once the selection of options are on the preferred setting, select save to confirm the changes.

Admin Main Page Overview: Members and Roles

On the Members and Roles tab, there is the People tab, Pending Invitations and Sent Invitations.

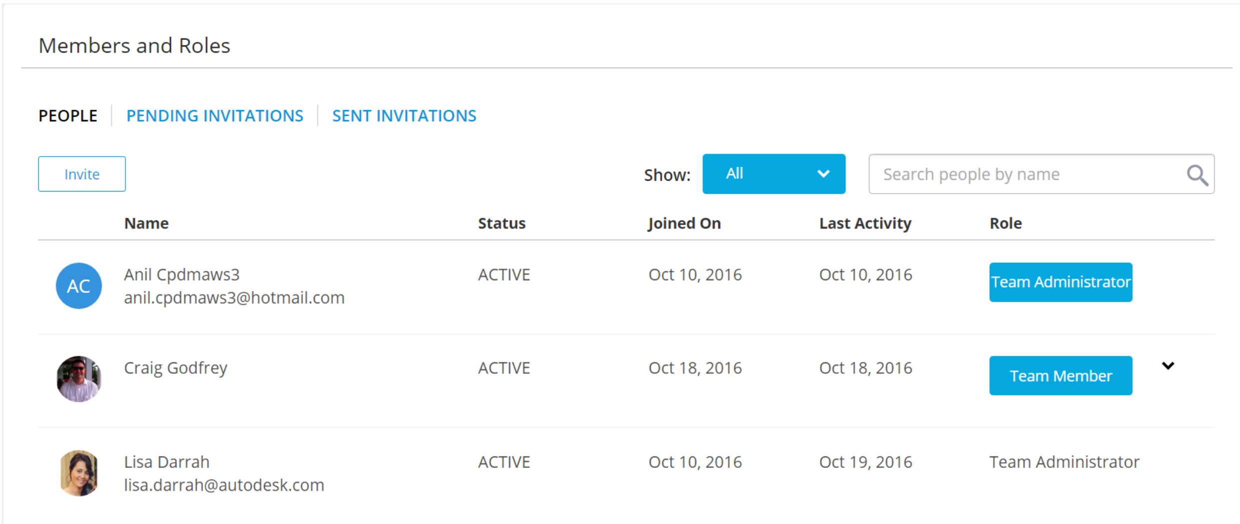


Figure 21: Members and Roles options

People Tab

The Hub members and their status, when they joined, their last activity and their Role are listed. Changing the role of a member can be done by selecting a member, and select the drop down.

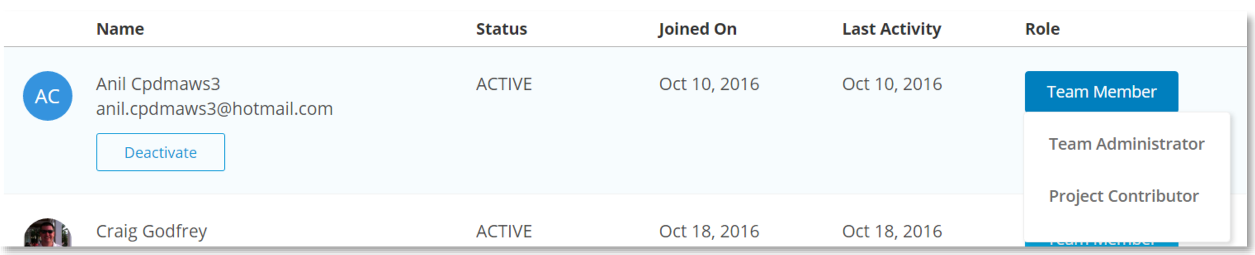


Figure 22:Team Member Role Options

Now the options to change the role from Team Member, to Team Administrator to Project Contributor are visible for selection. There is also an option to deactivate a user.

Pending Invitations

In the Pending Invitations tab, this is where invitations that are pending admin approval will be displayed.

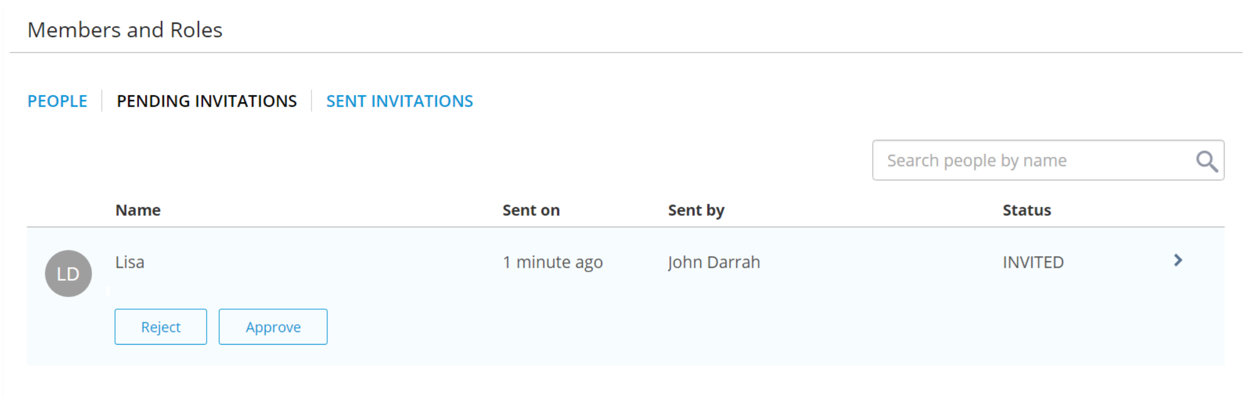


Figure 23: Pending Invitations tab

Here the option to reject or approve the invite is available.

Sent Invitations

This is like the pending invitations, but the option to resend the invitation or withdraw it is available.

Note! Why Should I have more than one Admin?

Consider having more than one admin on your site so that you can have someone else that can approve and administer the hub because of:

- Time off: People take time off for vacations, personal or medical time and a backup admin is needed.
- Change of ownership: In the instance that someone leaves the company, having a backup admin will ensure that the day to day business is not impacted.

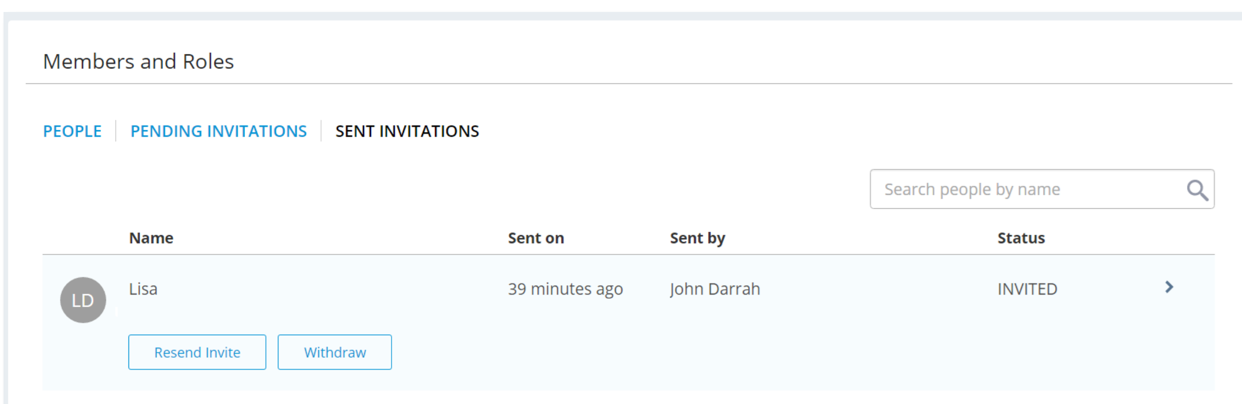


Figure 24:Sent Invitations tab

Team Hub Roles at a glance

	Team Administrators	Team Members	Project Contributor
Project Creation	✓	✓	
Browse and Join Projects	✓	✓	
Invite Team Members * Requires Team Admin Approval	✓	*✓	*✓
Invite Project Contributor	✓	✓	
Can Upload Files	✓	✓	✓
Can SEE other Members	✓	✓	
Can Approve Invitations from other contributors	✓	✓	
Can approve and share public links	✓	✓	
Right to assign hub-level roles to users	✓		
Can purchase seats	✓		

Admin Main Page Overview: Projects

Team Administrators can manage projects and project members in the following ways. They can:

- View projects and project information
- Filter projects based on status
- Transfer, archive, and restore projects
- Delete archived projects
- Change a user's role within a project

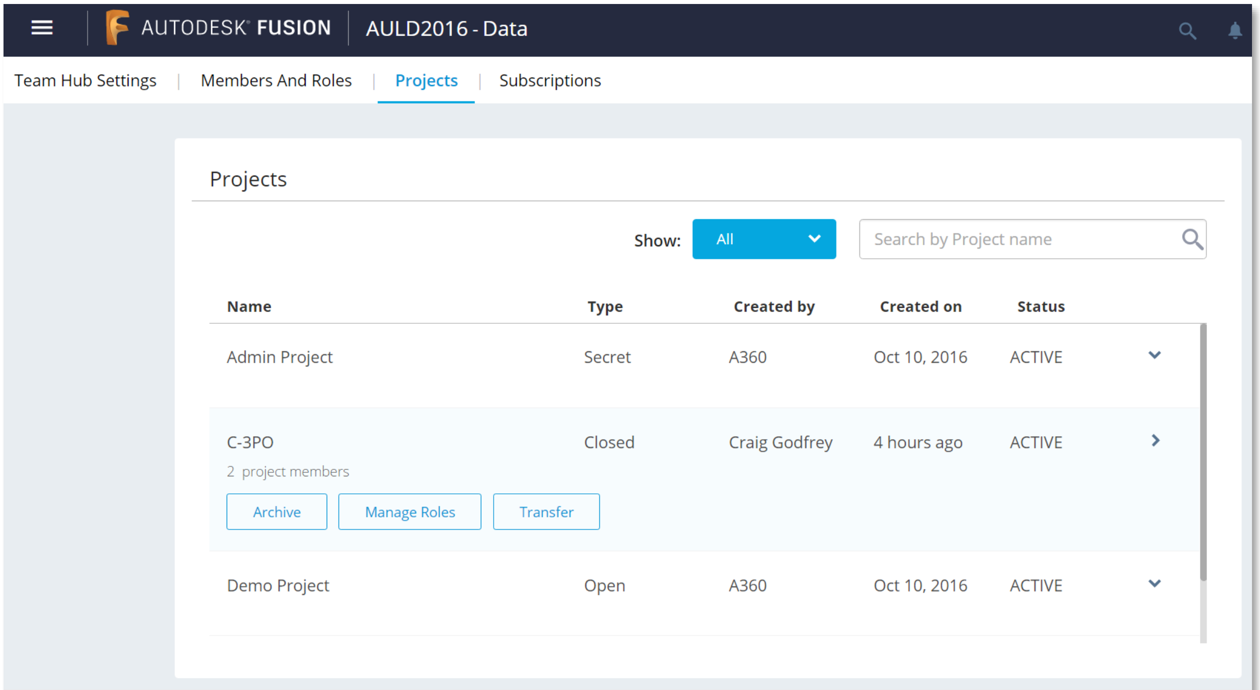


Figure 25:Project Options tab

Archive and Restore Projects

Team Administrators can archive and restore projects from the Projects tab in the Administrator Console. The Administrator can also filter projects to see all archived projects. Archiving a project means:

- Project members can no longer access this project.
- Existing content in the project will no longer be accessible to project members, including the admin.
- No additional content/activity can be added to the project.
- The project and its content will no longer appear in search results or in the Projects list.

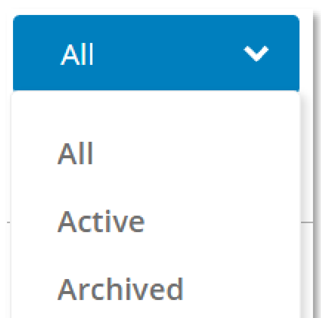


Figure 26:Archive options

After archiving a project, an Admin will still be able to view the archived projects and restore them by selecting the option in the Show Filter drop down.

To archive a project, select the project on the Project tab > Archive > Archive.

To restore a project, select the project on the Project tab > Restore.

Manage Project Roles

Within a project, there are three roles: Project Administrator, Editor, and Viewer. The person who creates the project is the default Project Administrator. Everyone in a project is a project member. The project role of a user determines the following:

- Level of access to project data
- Actions they can take on data
- Right to invite project members and change their roles

Project member roles are visible to all members of a project and the Project Members Project role can be specified at the time of inviting a user to a project. Only a Project Administrator can change the role of project members.

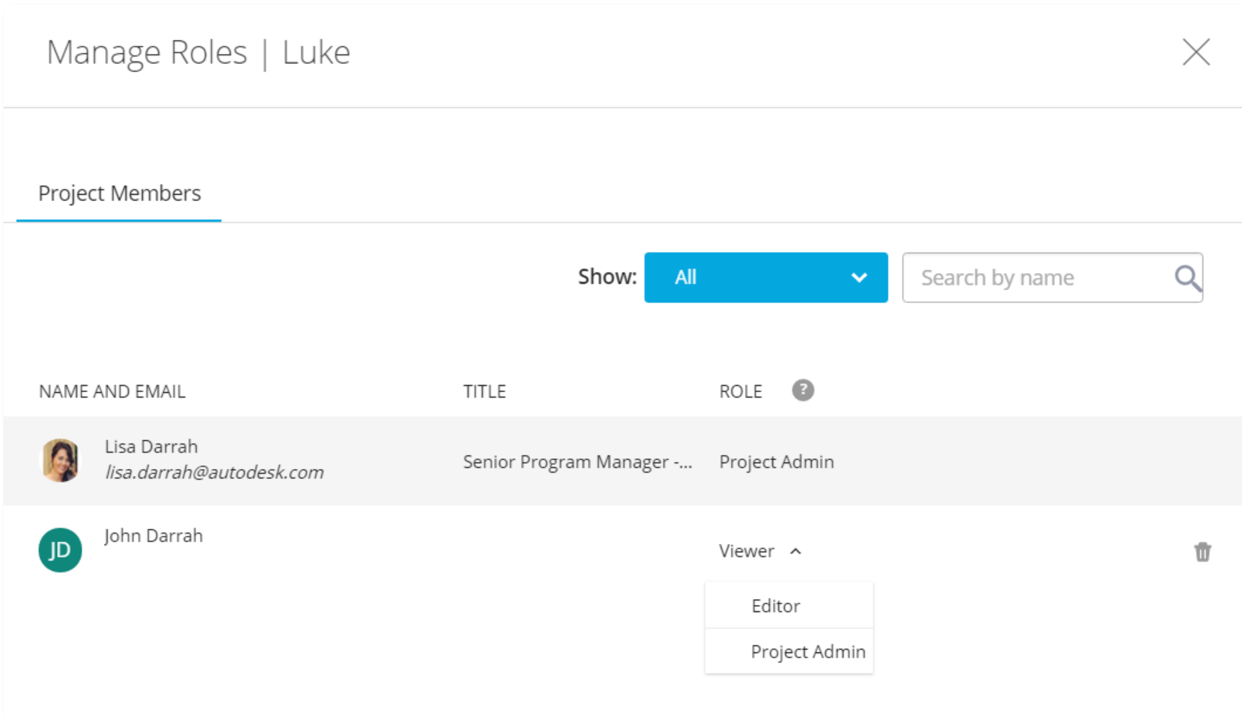


Figure 27: Project Member Roles Dialog

Only a Project Administrator can change the role of project members.

Admin Main Page Overview: Project Access Roles

	Viewer	Editor	Project Admin
View Files(online), folders, comments (view and post) and people	✓	✓	✓
Discussions & Calendar Access to conversations and events	✓	✓	✓
Get Link and Live Review Get link for shared files and initiate live review		✓	✓
Edit, Upload, Download Copy, move, rename, and delete files/folder		✓	✓
Manage Sharing Enable and set public sharing, invite others to the project		✓	✓
Project Admin Project settings, approve people in the project, set access levels			✓

Transfer Projects

Team Administrators can transfer projects across hubs provided they are Team Members on the hub that they are transferring the project to. Team Administrators who are not members of at least one other Team hub will not see the Transfer option.

To transfer a project:

1. Select the project > Transfer.
2. Select the Team hub that you want to transfer the project to > OK.

Note! When would I need to transfer a project?

If your organization has purchased a new hub subscription and requires projects to be moved to that hub, you will need to transfer projects.

Note! What should I do to ensure that my project is transferred successfully?

Make sure the destination hub has the same Project Contributor and Team Member Invite settings as the source hub.

Cross Project References *Team Hubs Only*

Now data or reference data can be reused from separate projects without requiring copies of the data. The options, Insert, Move, Copy and Save as are available to utilize existing data within the projects.

Note! When doing any type of Cross Project Reference activity, any option performed on the data requires membership in the projects where that data will be inserted, moved, copied or saved to.

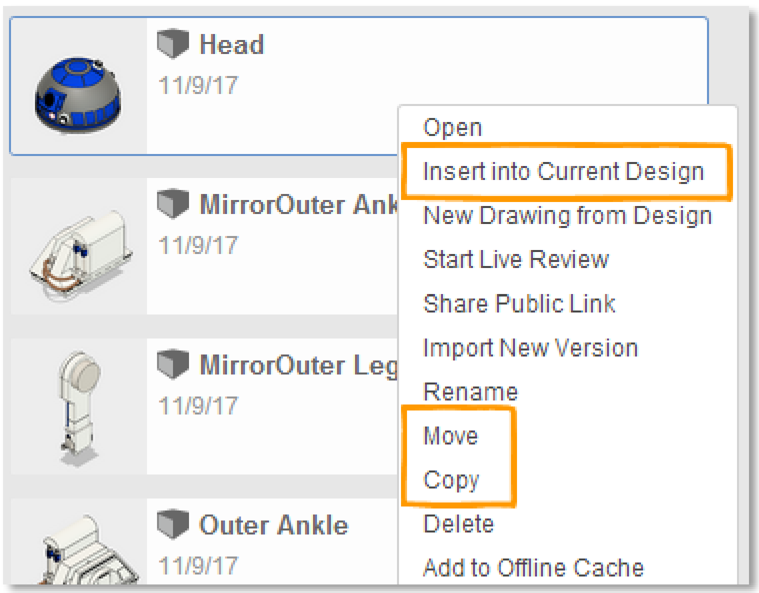


Figure 28:These three options on the right click menu are part of the new Cross Project References functionality

Insert into Current Design

Data from any project can be inserted in a design in a different project. Simply right click on the file and select *Insert into Current Design.* Once inserted the 'Linked' Indicator will appear next to the component in the component tree.

Figure 29: Linked indicator next to inserted component

Move

Data from any project can be moved from a current project into a different project. Simply right click on the file and select *Move.* This helps to structure data in component libraries after the design or during design to help reuse data in the future

Copy

Data from any project can be Copied from a current project into a different project. Simply right click on the file and select *Copy.* Utilizing the copy feature allows preservation of the original data while revising the new copy for concept designs, or new designs.

SaveAs

Data from any project can be Saved As a new Fusion Design into a different project. From the File menu dropdown, select *Save As.* Type in the new file name, then select the location of the project to safe the file to.

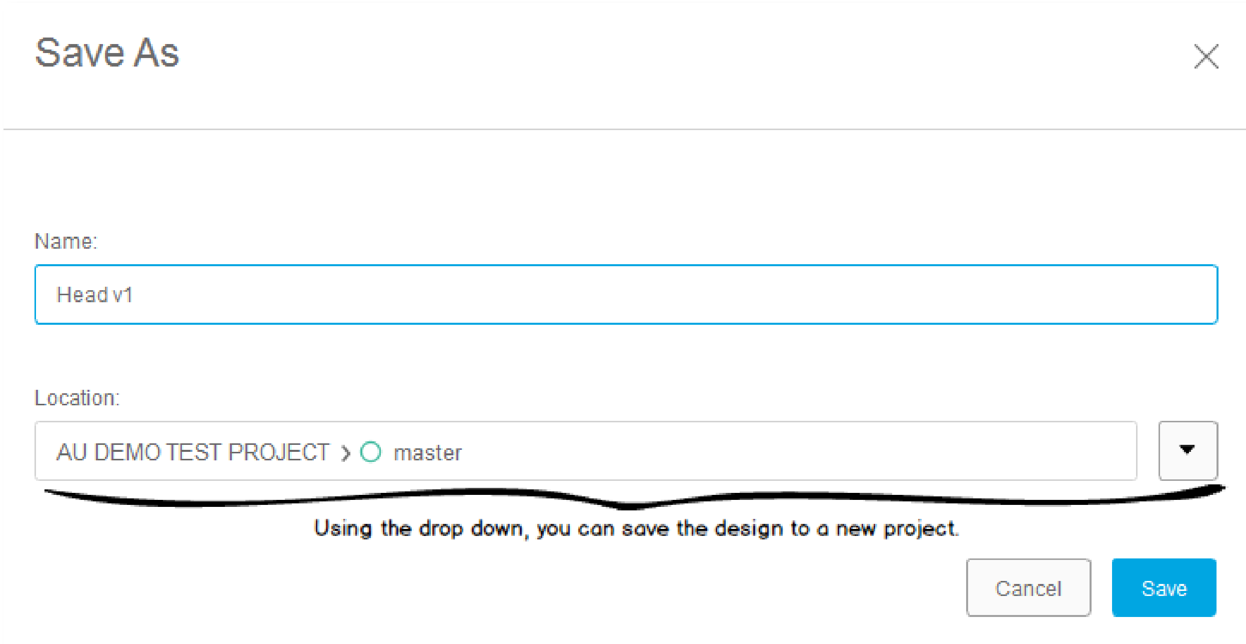


Figure 30:Save As Dialog options

Requesting Access to Cross Project Data

There can be instances where one of the team members is not a part of a project where data is referenced. This will not be an issue because if a team member tries to access data across project that they are not a member of, they will get notified that they need to request access and a notification will be sent to the Project Administrator requesting access for that team member.

AnyCAD *Team Hubs Only* Preview

This new feature allows interoperability between Fusion 360 and Inventor™ and Fusion Team. Now desktop, cloud and browser can have one data source for your entire project. Also, AnyCAD provides the ability to reference almost any CAD data, like Solidworks™ data into Inventor and Fusion 360 while maintaining full file associativity without translation.

Note! Using the AnyCAD functionality, you will need a Fusion Team hub, Desktop Connector, along with Fusion 360.

Getting your CAD data in the Cloud.

Once you log into your Fusion Team Hub, in your profile settings you will see an option to download “Desktop Connector for Fusion”

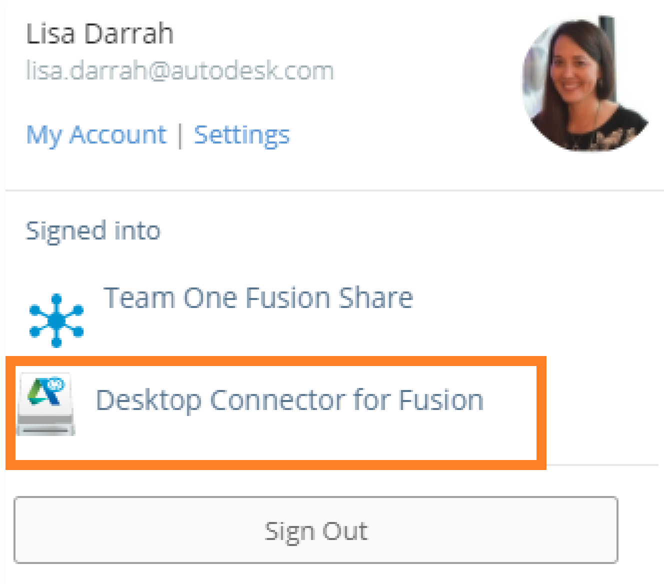


Figure 31:Profile Dropdown with Desktop Connector Install option

Once the Desktop Connector for Fusion is installed, the cloud drives will be displayed in the file explorer. These cloud drives will act like any drive in file explorer. Expand the drive and the Team Hubs you are a member or owner of will be displayed. Selecting the Hub will display the projects as folders. Then CAD or any files can be dragged and dropped into the folders, starting the upload into the Fusion Team.

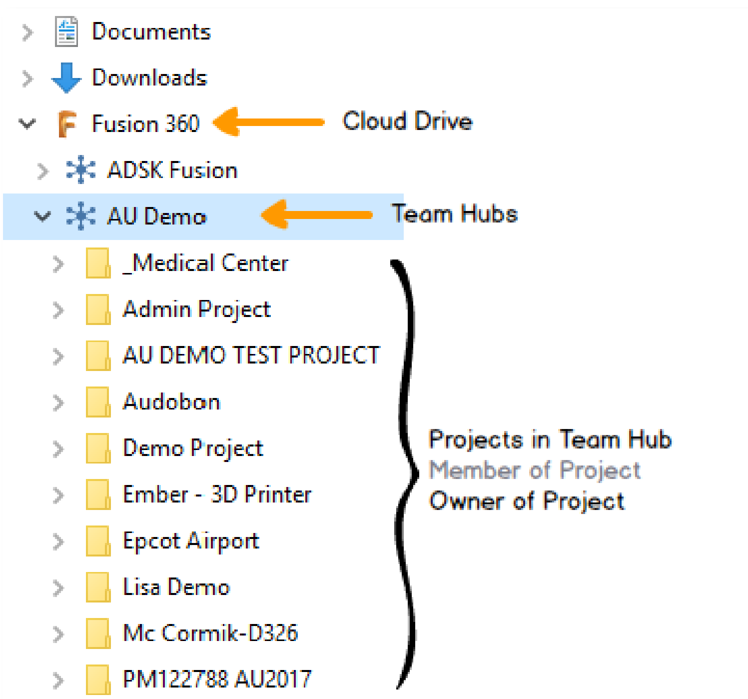


Figure 32: Desktop Connector dialog

Once the CAD files have been uploaded into the cloud drive, they will be visible in Fusion Team in the project they were uploaded into. The will also appear in Fusion 360 in the data panel. Now, the CAD data can be inserted into a fusion design and keep the reference.

Using your CAD data in Fusion 360

While in Fusion 360, have the Fusion Design open and in the data panel, select the part file to insert into the design.

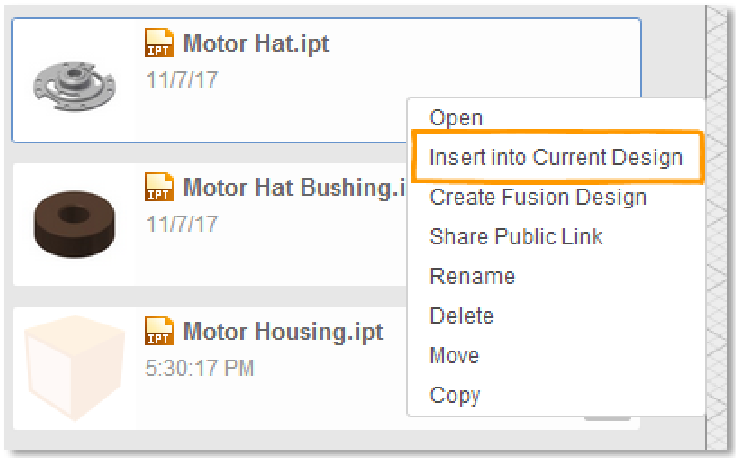
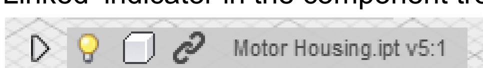


Figure 33:Insert into Current Design

Once the .ipt is inserted into the Fusion design, it still retains it reference to Inventor allowing design data to retain its format without the need of translating it into Fusion 360. Any modifications to the file that are done in the CAD software will be reflected in Fusion 360 after the file is saved. The *Component out of date* message is displayed along with the alert indicator. Once the component is updated the changes done in the CAD software will be reflected in the Fusion Design.

Figure 34:Update needed on .ipt file

Files are identified by a 'Linked' indicator in the component tree easily indicating which components are linked. 

If desired, this link can be broken.

References for Help

If additional support is needed, please check out our customer forums. Here are some links to

[Fusion 360 Customer Forum]

[Fusion Team]