Transitioning from Collaboration for Revit to BIM 360 Design
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Learning Objectives
- Recognize the differences between Collaboration for Revit and BIM 360 Design
- Learn how to set up projects in BIM 360 Docs
- Learn how to implement design collaboration to improve team efficiency
- Learn how to manage files in Desktop Connector to help keep information current

Description
The next-generation BIM 360 platform creates a more integrated solution for your cloud-work-shared projects. With the Design Collaboration workflow, project data and members are more unified throughout every stage of the project lifecycle, creating a more efficient process. So, before shaking up the office by switching to BIM 360 Design software, it’s best to understand what the next-generation BIM 360 platform is and how you can benefit from making the switch. In this session, we will explore the differences between Collaboration for Revit and BIM 360 Design, and we’ll look at how you can improve your team’s efficiency by switching to the BIM 360 platform. We will also go through workflows and methods to help make the transition from Collaboration for Revit to BIM 360 Design smoother for you and your firm.

Speaker
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Introduction

The next-gen BIM 360 platform brought together products that were previously separate into a common data environment. One of those products was Collaboration for Revit. Not only did Autodesk rebrand the name, but they also changed where teams collaborate in the cloud. Knowing that new product adoption and use can be challenging, I wanted to see where, during the transitioning process, users were having the most problems. So, I created a survey and posted it on social media to find out directly from users who are experiencing the transition firsthand. In this session, I will share the results and discuss the transitioning process from C4R to BIM 360 Design. My goal is to help users experience a smooth transition process as they set up their BIM 360 account, invite account members, create a project, and activate the BIM 360 modules.

Survey Results

When Autodesk released next-gen BIM 360, the major platform update affected users across multiple products and resulted in a steep learning curve. So, the data that was collected for this session is based on a survey. The intent of the survey was to find out how well users are adjusting to the new Revit cloud worksharing platform with BIM 360, and to help identify areas that users are struggling with. As I started analyzing the results, I realized it’s everything from activating your account to understanding the Design Collaboration interface. Before we examine the transitioning process, let’s take step back and explain BIM 360 and the reason behind this major update.

What is BIM 360?

The BIM 360 platform is built around project delivery and construction management workflows. BIM 360 is made up of multiple modules, all connected to the same platform. Each module helps connect phases throughout the entire project lifecycle, creating a more streamlined process. The modules replaced classic BIM 360 products—Collaboration for Revit, BIM 360 Team, BIM 360 Glue, and BIM 360 Field, all of which operated within their own silos. Having these different products as separate entities limited the integration between them and between the project data that needed to be dispersed.

The Modules

Each module has its own interface. To switch between the different modules, click the Module Selector to display the modules you have access to. The modules that appear are the modules that the administrators have granted you access to.
Why BIM 360 Design?

Both Collaboration for Revit and BIM 360 Design allow multiple team members from multiple sites to collaborate on Revit models in the cloud. So, why did Autodesk make a change? Autodesk strives to deliver the highest quality of software, and with that comes changes—lots and lots of changes. Over the years, we have seen cloud-based collaboration products from Autodesk evolve. Remember A360?

Today, projects and teams are becoming more unified, and I don’t just mean Revit design teams. Everything and everyone from conceptual design to the handover process is being integrated into what Autodesk is calling a single source of truth. With that, classic C4R and BIM 360 Team products have been replaced with BIM 360 Design, the Document Management module, and the Design Collaboration module, so the centralized platform is maintained.

<table>
<thead>
<tr>
<th>Classic C4R</th>
<th>Next-Generation BIM 360</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="C4R" /></td>
<td><img src="image" alt="BIM 360 Design" /></td>
</tr>
</tbody>
</table>

Overall Update

Collaboration for Revit (C4R) has been rebranded as BIM 360 Design. Previously, the C4R subscription package included C4R and BIM 360 Team. Now, with the BIM 360 Design subscription package, you get access to BIM 360 Design, the Document Management module, and the Design Collaboration module.

**BIM 360 Design release date:**
April 9th, 2018

**Compatibility:**
Collaboration for Revit – Revit 2015 - 2018.3
BIM 360 Design – Revit 2018.3 and later versions

Understanding BIM 360 Design

Before we get started, there are several things you need to understand about BIM 360 Design. First, the BIM 360 Design package includes BIM 360 Design, the Document Management module, and the Design Collaboration module. You can use BIM 360 Design with only the Document Management module in your workflow; or, you can also include the Design Collaboration module in your workflow. Which one you choose depends on your firm.

If your firm is working internally on a small project, you would typically not activate the Design Collaboration module. If your firm is working with multiple disciplines where multiple Revit models need to be coordinated, it is best to use the Design Collaboration module. However, this decision is usually made by a stakeholder in the project, such as the client, general contractor, etc.
To understand the transition from C4R to BIM 360 Design, you also need to understand the differences between the BIM 360 Design workflows. So, we’ll cover the traditional C4R workflow with BIM 360 Team, and then we’ll examine both BIM 360 Design workflows.

Cloud Worksharing Processes

C4R and BIM 360 Team
With the C4R workflow, you must first have a project created in BIM 360 Team before you can enable cloud worksharing for a Revit project. When cloud worksharing is enabled, the central model is uploaded to both the C4R cloud and the BIM 360 Team project. As the project progresses, changes are synchronized with the central model in the C4R cloud. In order to update the model in BIM 360 Team, the model must be published, which is a separate process from synchronizing with central.

BIM 360 Design
This workflow is using Revit and BIM 360 Design. In order to enable cloud worksharing, you must have a project created in BIM 360, and the Document Management module must be activated. When cloud worksharing is enabled, the central model is uploaded to both the BIM 360 Design cloud and the Document Management project. As the project progresses, changes are synchronized with the central model in the BIM 360 Design cloud. To update the model in Document Management, the model still needs to be published.

BIM 360 Design with Design Collaboration
The workflow involving the Design Collaboration module creates a more collaborative workflow between multidisciplinary firms. The synchronizing and publishing processes are the same as above, however, the project setup is slightly different. Before you can enable cloud worksharing, you must have a project created in BIM 360, and the Document Management and Design Collaboration modules must be activated. Within Design Collaboration, teams need to be created. This allows teams to collaborate independently on Revit cloud workshared models. Essentially, you can create teams for each discipline, which will allow them to collaborate independently. When your team enables cloud worksharing, the central model is uploaded to both the BIM 360 Design cloud and the team folder in Document Management. In addition, your team space in Design Collaboration is updated. As the project progresses, teams use their team space in Design Collaboration as a workplace to view, create, modify, and consume packages.
This allows your team to have more control of what state of your model is being shared with other teams.

How It Was with C4R and BIM 360 Team

Users of Revit 2018.3 and earlier may already be working with C4R and BIM 360 Team. When someone gets a subscription to C4R, they also get access to BIM 360 Team. BIM 360 Team provides a hub for projects and team members. Essentially, when worksharing in the cloud is enabled for a Revit project, the central model is saved to the C4R cloud and is also published to the specified BIM 360 Team project. At this point, the model is located in the C4R cloud and in the BIM 360 Team hub. Revit users can then open the project in Revit and begin working as they normally would in a workshared project.

As the design team works on the project in Revit, they can synchronize their changes to the central model. More specifically, any modifications they make are synchronized to the central model located in the C4R cloud. The model located in the BIM 360 Team project is unaffected by the synchronization. In order to update the model in BIM 360 Team, there is a separate publishing process. This workflow allows for the design team to work in Revit and synchronize changes as they normally would, without every single change being visible to the entire project team in BIM 360 Team.

Getting Started with BIM 360

Once a BIM 360 subscription is created, the account admin can activate the account through an email invitation link. Take note that the email invitation to activate the account is meant for only one person and is not meant to be forwarded.
Account Admin Module

Only account admins can access the Account Admin Module. Account admins have the greatest amount of control over members and projects.

Account admins can:
- Add companies
- Invite new admins to the account, including making an existing account member an account admin
- Add account members
- Manage account members
- Create projects
  - Assign project admins to projects to manage project data
  - Activate project services (modules)
- Control account settings
- Control third-party app integrations

Adding Companies
Before adding account members or creating projects, account admins should add companies to the Company Directory. When account members are added to the Member Directory, a default company must be defined for the member.
In order to save a company to the directory, the **Company Name** and **Trade or Company Type** fields must be specified.

**Adding Account Members**
You must be an account admin to have access to the Account Admin module. On the **Members** tab, the **Member Directory** lists all members in the account. Account admins can add members to the directory, so that project admins can quickly add them to projects.

**To add members to an account:**
In the **Account Admin** module, **Members** tab, the **Member Directory** lists all members in the account. When you click **Add**, a drop-down list appears. Select **Add people to the member directory**. When you do, the **Add People to the Member Directory** dialog opens.

Next, enter an email address and click **Add**. In order to add the member to the account, a **Default Company** is required. The **Default Role** field is optional, however, assigning a role-based default permission automatically grants the member access to the modules associated with that role. To understand the default permissions, see [Controlling Module Access with Role-based Permissions](#).
When you click Save, an invitation is sent, and the member is added to the member directory. Then, project admins can add them to a project.

**Controlling Module Access with Role-Based Permissions**

When adding account and project members, you can assign the members a role. Assigning a role to a member automatically grants the member access to the modules associated with that role. When adding account members, account admins can define a Default Role. Then, when the member is added to projects, they will inherit that role for every project they are added to. In addition, when the user is added to a project, you can remove the default role that was assigned, or you can add additional roles, if needed. Therefore, it is possible for a member to be assigned multiple roles with different access levels. When this occurs, the member will have permission access based on all the roles. For example, if a member is assigned the Architect and Project Manager roles, the member is granted Project Admin rights from the Project Manager role.

However, you can overwrite the access level granted by the role, if needed. Simply click in the Project Admin or module column to change a member’s access level. When you overwrite role-based permissions, it only overwrites the individual member’s access level, not every user with that role.

<table>
<thead>
<tr>
<th>Role</th>
<th>Project Admin</th>
<th>Document Management</th>
<th>Model Coordination</th>
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<tr>
<td>Architect</td>
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<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>BIM Manager</td>
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<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Civil Engineer</td>
<td>✗</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Commercial Manager</td>
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<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Construction Manager</td>
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<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Contact Manager</td>
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</tr>
<tr>
<td>Contractor</td>
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<td>✗</td>
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</tr>
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<td>Cost Engineer</td>
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<tr>
<td>Cost Manager</td>
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<td>✗</td>
</tr>
<tr>
<td>Designer</td>
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<td>✗</td>
</tr>
<tr>
<td>Document Manager</td>
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<tr>
<td>Drafter</td>
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<td>Executive</td>
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<td>✗</td>
<td>✗</td>
</tr>
<tr>
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<td>Forman</td>
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<tr>
<td>HVAC Engineer</td>
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<td>Inspector</td>
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<tr>
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<tr>
<td>Plumbing Engineer</td>
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<tr>
<td>Project Engineer</td>
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<td>Project Manager</td>
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<tr>
<td>Quality Manager</td>
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<td>✗</td>
</tr>
<tr>
<td>Quality Surveyor</td>
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<td>✗</td>
</tr>
<tr>
<td>Safety Manager</td>
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<tr>
<td>Scheduler</td>
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</tr>
<tr>
<td>Structural Engineer</td>
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<td>✗</td>
</tr>
<tr>
<td>Subcontractor</td>
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<tr>
<td>Superintendent</td>
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<td>Surveyor</td>
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<td>✗</td>
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</tr>
<tr>
<td>VDC Manager</td>
<td>✗</td>
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<td>✗</td>
</tr>
</tbody>
</table>

It is good practice to control module access with role permissions. This helps project admins keep track of who has access to each module. Of course, there will be times when overwriting permissions are needed, but creating an initial approach for module access could be critical as the project progresses and moves across different modules.
Managing Account Members
If needed, once a member has been added to the member directory, you can disable or delete them from the account. When a member is disabled, they become inactive and will not be able to participate in projects they have access to or view the account until they are enabled.

To delete a member from the account
Switch to the MEMBERS tab and select the member you want to delete. Be sure to select the member, not the checkbox. When you do, their Member Profile opens. Click Delete Member.

To disable a member
There are two ways to disable members. If you want to disable multiple members at once, follow the steps in the first image. Select the checkboxes for the active members and choose Disable Member in the More Actions drop-down.

To disable a single member, you can follow the steps in the first image or second image. In the second image, select the member, not the checkbox, to open their Member Profile. Then, expand the Active drop-down and choose Inactive.

To enable a member
There are two ways to enable members. Whichever route you take, you can only enable one member at a time. In the first image, you select the checkbox for the inactive member and choose Enable Member in the More Actions drop-down.
In the second image, select the member, not the checkbox, to open their Member Profile. Then, expand the Inactive drop-down and choose Active.

To invite new account admins to the account:
There are several ways to add account admins to an account. First, in the Account Admin module, Members tab, account admins can add and manage account members. When you click Add, a drop-down list appears. Select Invite Account Admins. When you do, the Invite Account Admin dialog opens.

Next, enter the email address of the person you are inviting and then click Add. Before you send the invitation, specify the Default Company for the account admin. When you
add account members, you can control their module access by defining a Default Role. Each project role has default access permissions.

When you click Invite, the new account admin will receive an invitation with a link to the BIM 360 account.

To add an existing account member as an account admin:
On the Members tab, the Member Directory lists all members in the account. Select a member that you want to make an account admin. Be sure you select the member, not the checkbox. When you do, their Member Profile opens. Click Edit. Then, under Access Level, select Account Admin. To save your changes, click Save.

In addition, you can add account admins from the Settings tab. When you click Settings, the page opens to the account profile. You can click the plus (+) icon and then enter a name or email address for the account admin. If they are new to the account, an email will be sent that allows them to access the BIM 360 account.
Creating a Project
Up until now, the BIM 360 Design workflows have been the same. When it comes to creating a project, this is where you will start to see differences between the workflows.

**BIM 360 Design (without Design Collaboration)**
To begin, you must be an account admin to create a project. Creating a project is a two-step process:

1. You first need to create a project profile.
2. Activate project services. Project services are the BIM 360 modules.

When you’re creating a project profile, the fields marked with an asterisk (*) are required to create the project. The project information in the Create Project Profile dialog is used for company reporting and analytics. After you specify the project information, click Save & Continue to create the project and display the Activate Services dialog.

When you need to work on Revit cloud workshared projects without Design Collaboration, you just need to activate the Document Management module. Click Activate for the Document Management module and assign a project admin. Project admins can be added individually or as a company. Remember, when you add project admins by company, every member added to the account for that company will be a project admin for the project.

Take note that you can manage project services at any time. Also, project admins can add other project admins after the project is created. To see this, see Adding and Managing Project Admins and Members.

When you are finished activating services, click Finish.
Design Collaboration
To create a project with Design Collaboration, you will still need to follow Step 1 and Step 2 shown above. However, before completing Step 2, you need to activate the Design Collaboration module.

The Document Management module must be activated before you can activate the Design Collaboration module. Once the Document Management module is activated, click **Activate** for the Design Collaboration module. Next, add project admins to the module to complete the activation.

After you click **Finish**, the project is created, and the project admins that were added to the Design Collaboration module can now begin creating teams for Design Collaboration.

![Activate Services Step 2](image)

**Project Admin Module**

**Adding and Managing Project Admins and Members**
To add members to a project, you must be a project admin. Project admins can add new members to a project or add members that have already been added to the account.

To add members that are not yet added to the account, type their email address for Step 3 and click **ENTER**. If the member is already added to the account, simply search the member directory by entering their name or email address in the search field for Step 3.

Next, you can assign the member to a company (Step 5). If the account admin has already added the company to the **Company Directory**, you can search for the company. If not, you...
can add a new company by entering the company name, and then click **Create company** from the drop-down list.

When you add members, you can control their module access by assigning them a role. When roles are assigned, members are automatically granted access to the modules associated with the role. For example, in the image above, you can see that the **Document Manager** role (Step 6) is granted project admin rights for the project. So, it is important to understand each role and their default permissions.

If you need to modify a member’s access level, you can overwrite the default permissions for a role. For example, if you do not want the member in the image above to have project admin rights for the project, you can click the **Admin** icon in the **Project Admin** column (Step 7). Take note that you can modify the access levels after they have been added to the project. To understand the different role-based permissions, see **Controlling Module Access with Role-Based Permissions**.

**Creating Teams in Design Collaboration**

When you are a project admin, you can set up teams in Design Collaboration. This will allow each team to work in their own team workspace and take advantage of the tools available in Design Collaboration.

To begin, follow the steps above to add members to the project. Take note that if you assign roles to members, be sure the Design Collaboration module is associated to the specified role. See **Controlling Module Access with Role-Based Permissions**.

Before creating teams in Design Collaboration, it is important that you understand how Document Management and Design Collaboration communicate. When teams are created in Design Collaboration, team folders are also created in Document Management. Once teams have been created, **Shared** and **Consumed** folders are also automatically created in Document Management. With Design Collaboration, there is no need to create these folders manually. The folder structure that is created automatically helps exchange data among the teams in Design Collaboration and should not be deleted.
Creating Teams
On the **Project Admin** module, switch to the **Services** tab. On the left, you can see all the modules that are activated for your project. Click **Design Collaboration**. To add a team, click **Add Team**. When you do, the **Add Teams** dialog opens. When you add teams, they will appear in Design Collaboration, on the Design Collaboration’s Project Admin page, and in the Document Management module.

After you create teams, switch to Document Management to take a look at the folders that were created. As you can see, team folders, along with **Shared** and **Consumed** folders, were created.
Assigning Permissions

One of the most difficult parts of transitioning from C4R to BIM 360 Design is understanding permissions levels. To begin, permission levels can be defined for individual users, all users in a company, or all users that have a certain role.

When you are just using BIM 360 Design and Document Management, you can specify permission levels for folders in Document Management. By defining permission levels for folders, you can control who can work on cloud workshared projects and restrict folder access.

When you are using Design Collaboration, you can specify team permission levels. By establishing permission levels for teams, you will have more control over who has access to team spaces and how team members publish, view, edit, and share models in Design Collaboration.

BIM 360 Design: Folder Permissions in Docs

As a project admin or someone who has full control of folder data, you can manage folder permissions. By controlling module access with role-based permissions, and defining folder-level permissions in Document Management, you ensure that the proper members have access to the modules and folders they need.

For members enabling cloud worksharing, they must be granted at least the View + Upload permission level for the folder where the central model will be uploaded to in Document Management. However, to work on cloud workshared projects and publish the latest model to Document Management, the member must have at least the View + Upload + Edit permission level assigned.

Understanding Folder Permission Levels

In Document Management, the folder permission levels can be defined for individual users, all users in a company, or all users that have a certain role.

To specify the permission level for an individual, they need to be a member of the project. When you specify the permission level for a role, every user in the project that is assigned that specific role will share the same permissions for that folder. Any members added to the project who share that role will automatically obtain access to the folders you specify. Similar to roles, when you specify the permission level by company, every user within that company will share the same permissions for that folder. To restrict access by a company, the company will first need to be added to the project.
The permission level can be set to **Upload-only, View-only, View + Upload, View + Upload + Edit**, and **View + Upload + Edit + Control**.

<table>
<thead>
<tr>
<th>Permission Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upload-only</strong></td>
<td>allows users to share their own documents in that folder with other team members. This permission level will not allow users to view any documents uploaded by other users.</td>
</tr>
<tr>
<td><strong>View-only</strong></td>
<td>allows users to view documents and add markups or issues, but they cannot upload documents.</td>
</tr>
<tr>
<td><strong>View + Upload</strong></td>
<td>allows users to share and upload their own documents with team members and view any other documents in that folder.</td>
</tr>
<tr>
<td><strong>View + Upload + Edit</strong></td>
<td>allows users to share and upload their own documents with team members and view and edit any other documents in that folder.</td>
</tr>
<tr>
<td><strong>View + Upload + Edit + Control</strong></td>
<td>allows users to share and upload their own documents with team members and view and edit any other documents in that folder. In addition, this permission level gives users the same actions as a project admin within that folder. This includes creating title blocks, adding project members, and managing permissions. This permission level offers the greatest access to folders.</td>
</tr>
</tbody>
</table>

Again, for members enabling cloud worksharing, be sure they are granted at least the **View + Upload** permission level for the folder where the central model will be uploaded to in Document Management.

**Managing Folder Permissions**

To access the Permissions settings for a folder, click the More (…) button for the folder in the folder tree and select Permissions. When you do, the Folder Settings open to the Permissions tab. Here, you can define permissions for users based on a role, a company, or an individual. You simply need to add the role, company, or individual, and then specify the permission level.
Every project will have different project standards and folder structures, so the image above is just to show how permission levels affect folders and subfolders.

**Design Collaboration: Team Permissions**

Permissions can be a great way to restrict teams from accessing other team folders. By establishing permission levels for teams, you will have more control over how team members publish, view, edit, and share models.

![Image showing Design Collaboration: Team Permissions](image)

When users are added to a team in Design Collaboration, they are also added to the team folder in Document Management. And when members are added to a team folder in Document Management, they are also added to that team in Design Collaboration. However, the permission levels between both modules are slightly different.

For example, the Document Management permission levels are **Upload-only**, **View-only**, **View + Upload**, **View + Upload + Edit**, and **View + Upload + Edit + Control**, while the Design Collaboration permission levels are **View only**, **View + edit**, **View + edit + share**, and **Custom**. So, if you assign permission levels for team members in Design Collaboration, it is important to know what permission levels were assigned in Document Management, and vice versa.

**IMPORTANT:** When dealing with team permissions, it is good practice to assign the permission levels in Design Collaboration. However, if someone is needing access to all teams, such as the project manager, you can assign the permission level in Document Management by assigning the project manager the **View + Upload + Edit + Control** permission level for the team’s root folder. When a user is granted access to a root folder in Document Management, the user will inherit the same permission to all subfolders. This keeps you from adding the project manager to each team individually in Design Collaboration.
When you assign permission levels for team members in Design Collaboration, the following permission levels are assigned for team folders in Document Management:

- Users with the **View only** permission in Design Collaboration will have the **View-only** permission in Document Management.
- Users with the **View + edit** or the **View + edit + share** permission in Design Collaboration will have the **View + Upload + Edit** permission in Document Management.

<table>
<thead>
<tr>
<th>Design Collaboration</th>
<th>Document Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>View only</td>
<td>View-only</td>
</tr>
<tr>
<td>View + edit</td>
<td>View + Upload + Edit</td>
</tr>
<tr>
<td>View + edit + share</td>
<td>View + Upload + Edit</td>
</tr>
</tbody>
</table>

When you assign permission levels for team folders in Document Management, the following permission levels are assigned in Design Collaboration:

- Users with the **Upload-only** permission in Document Management will have the **Custom** permission in Design Collaboration.
- Users with the **View-only** or the **View + Upload** permission in Document Management will have the **View only** permission in Design Collaboration.
- Users with the **View + Upload + Edit** permission in Document Management will have the **View + edit** permission in Design Collaboration.
- Users with the **View + Upload + Edit + Control** permission in Document Management will have the **View + edit + share** permission in Design Collaboration.

<table>
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<td>View + edit + share</td>
</tr>
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</table>

There are several capabilities and tasks that can be granted or restricted with the permission level. The permission levels control cloud worksharing, publishing models, and creating and sharing packages.
• **View only** allows users to view their team’s work-in-progress folders in Document Management.

• **View + edit** allows users to publish from Revit or Design Collaboration into their team’s work-in-progress folder, create and update work-in-progress packages, and consume packages from other teams. In addition, users can link other teams’ models in Revit that have been shared or consumed.

• **View + edit + share** allows users to share packages with other teams. This permission level gives users full control in Revit and Design Collaboration.

• **Custom** allows admins to define a permission level for the user. When the **Upload-only** permission level has been assigned for a user in Document Management, the user will be assigned the **Custom** permission level in Design Collaboration. This lets the admin know the permissions have been defined externally and do not match any permission levels in Design Collaboration.

**Revit**

**Enable Revit Cloud Worksharing**

The Revit release you are using determines which cloud worksharing platform you can use. On the **Collaborate** ribbon, in the **Manage Collaboration** panel, click **Collaborate**.

- If you are using Revit 2015 through 2018.2, you will have to use C4R and BIM 360 Team to collaborate on cloud workshared projects.
- If you are using Revit 2018.3, you can choose to use C4R and BIM 360 Team, or BIM 360 Design and Document Management for your cloud workshared project. In the **Collaborate** dialog, both **In BIM 360 Team** and **In BIM 360 Document Management** are available.
- If you are using 2019, you can only use BIM 360 Design and Document Management.

The process to enable cloud worksharing for C4R and BIM 360 Design are similar. The only difference is C4R publishes to BIM 360 Team, and BIM 360 Design publishes to Document Management.
BIM 360 Design
To enable cloud worksharing, you must be a project admin or have at least the View + Upload permission level assigned in Document Management. However, to work on cloud workshared projects and publish the latest model to Document Management, you must have at least the View + Upload + Edit permission level assigned.

When enabling cloud worksharing, you can publish the central model to the Plans or Project Files folder in Document Management. Take note the workflow for each folder is different, and Autodesk recommends using the Project Files folder when collaborating on BIM 360 Design models. Be aware that the Plans folder does not allow you to use the Design Collaboration module.

Also, when you publish to Plans, Document Management extracts the sets and phases from the Revit model. This means all sheets and views included in the sets and Revit phases that were created, will be extracted into individual files when the model is published to the Plans folder. This workflow could quickly create an unorganized folder. With that, Autodesk recommends publishing to the Project Files folder. However, while there may be recommendations on how BIM 360 Design models are published, you can use the folder that meets the needs of your projects.

In the Collaborate dialog, select In BIM 360 Document Management and then click OK. Select the account that contains the project you want to use, and then click Initiate. When you do, the account opens, and you can see all the projects relating to the account that you have access to. Select a project. When you do, only the folders you have access to will appear. Select the folder or subfolder where you want to publish the central model. Next, click Initiate to convert the model to a workshared central model in the BIM 360 Design cloud and publish the Revit model to the Document Management project.

Design Collaboration
Again, when enabling cloud worksharing, the central model is published to the Project Files folder. In order to use the Design Collaboration module for a cloud workshared
project, your team’s central model must be located in your team’s Document Management folder, which is also located in the Project Files folder. This is because the Design Collaboration module only supports folders under Project Files. Also, to enable cloud worksharing and work on cloud workshared projects, you must be a project admin or have at least the View + edit permission level assigned in Design Collaboration.

In the Collaborate dialog, select In BIM 360 Document Management and then click OK. Select the account that contains the project you want to use, and then click Initiate. When you do, the account opens, and you can see all the projects relating to the account that you have access to. Select a project. When you do, only the folders and team folders you have access to will appear. This is because Design Collaboration restricts users from having access to other teams based on access and permission levels. Select your team’s folder.

Next, click Initiate to convert the model to a workshared central model in the BIM 360 Design cloud, publish the Revit model to Document Management, and publish the Revit model and any Revit sets to Design Collaboration.

Opening a project
Whichever workflow you’re using, opening a BIM 360 Design project in Revit is very similar. For a project using just BIM 360 Design and Docs, you navigate to the folder where the central model is located. For a project using Design Collaboration, you navigate to your Design Collaboration team folder.

BIM 360 Design
When opening a model in Revit, the Open dialog appears. Once you have a subscription to BIM 360 Design, a BIM 360 button appears in the places list. Click BIM 360. Once signed in, you will see all the BIM 360 accounts that you have access to, based on your permission level. When you select an account, projects for that account will appear. After you open a project, navigate to the folder containing the Revit model you want to open. At this point, you can select the model you want to work on and click Open.

Design Collaboration
When you open a project that has the Design Collaboration module activated, you can navigate to your team’s folder. When opening a Revit project, Design Collaboration restricts you from opening other team’s models they have shared or models your team has consumed. This is because you can only open your team’s model you have access to based on permission levels. At this point, you can select your team’s Revit model that you want to work on and click Open.

Publishing
As the project progresses, changes are synchronized with the central model in the BIM 360 Design cloud. In order to update the model in BIM 360, the model must be published, which is a separate process from synchronizing with central.

BIM 360 Design
Before publishing your model to Document Management, you should first specify the publish settings. On the Collaborate ribbon, in the Manage Models panel, click Publish
**Settings** to open the **Publish Settings** dialog. This is where you can select the sets of views and sheets you want to include when you publish the latest changes.

After you specify which views and sheets are included in a set, you need to make sure to choose which sets will be included when the latest changes to the model are published to Document Management. If there are no sets selected, only the default 3D view will be published. Once you have specified all the settings, click **Save & Close**.

In order to have the latest and most updated version of the Revit model in Document Management, all members working on the Revit model should synchronize with central before publishing. To publish the Revit model, On the **Collaborate** ribbon, in the **Manage Models** panel, click **Manage Cloud Models**. Next, select the BIM 360 Design project that contains the model you want to publish. When you do, the dialog shows the name of the project, along with all the cloud models in the project. Click **Publish Latest** for the model you want to publish. In the **Publish** dialog, click **Publish**.

**Design Collaboration**

When you publish a model to Design Collaboration, you can include any of the views and sheets in the model. On the **Collaborate** ribbon, in the **Manage Models** panel, click **Publish Settings** to open the **Publish Settings** dialog. After you specify which views and sheets are included in a set, you need to make sure to choose which sets will be included when the latest changes to the model are published to Design Collaboration. If there are no sets selected, only the default 3D view will be published. Once you have specified all the settings, click **Save & Close**.

Before publishing, be sure the team has synchronized their changes with the central model. Instead of going into the **Manage Cloud Models** dialog in Revit to publish the model, you can publish directly from **Design Collaboration**. This will update the central model in Docs and update your team space in Design Collaboration.

In your team space in Design Collaboration, click **Update to latest**. When you do, an **Update sets** dialog opens. Click **Update**. Once the process is complete, your team space is updated with the latest sets, and all team members can access the latest version of the model in Design Collaboration.

**Design Collaboration Module**

Design Collaboration is designed to help multidisciplinary firms collaborate more efficiently. When models are published to Design Collaboration, you can take advantage of the project timeline and team packages.
Team Home
When teams are created, a team space is created for each team in Design Collaboration. The team space is referred to as “Team Home.” Team Home is your team’s home portal that allows team members to view the current state of the model. Within your team space, you can view, create, modify, and consume packages. This viewing experience helps you collaborate more efficiently with multidisciplinary firms.

Also, it allows you to control when packages are consumed in your Team Home environment and what state of your model is being shared. When you publish your team’s Revit model, your team space is updated with the latest sets.

Project timeline
The project timeline tracks packages that teams have shared and consumed throughout the entire lifecycle of the project. By creating packages, teams can control the work they shared and decide when they want to consume other team’s packages. Packages are displayed as nodes in the project timeline. Depending on the status of the package, several different nodes will appear.
Creating Packages
When you create sets in Revit and then publish the latest model to Design Collaboration, you can then create a package. A package allows you to bundle your team’s Revit models and published sets to share with other teams. In order to create packages, you need to be a project admin or have at least the View + edit permission level assigned in Design Collaboration.

Sharing Packages
As your team model progresses, you can create packages and share them with other teams. When you create a package and click Save, Share will become available. Once a package is shared, other teams can preview, explore, and consume your team’s package into their team space in Design Collaboration.
When models are shared, the shared models will appear in the **Shared** folder in Document Management for all teams to view.

**Exploring packages**
When packages have been shared or consumed, teams can explore the package contents.

When you explore packages, you can navigate around the model and view any of the sets that are included in the package. Exploring packages helps teams understand what contents are
being shared before they consume the package into their team space. Also, teams can explore packages even after they have been consumed.

Comparing packages
When a team shares a package, other teams can compare changes between the shared package and the previous version of the shared package. When your team compares packages, you have full control over when you want to consume the changes. In addition, you can compare packages of your own team.

By comparing the changes between two packages, multi-firm teams can better understand design changes and take advantage of the change tools in Design Collaboration.
Consuming packages

Once a package has been shared by another team, your team can preview, explore, and consume the package into your team space in Design Collaboration.

When packages have been consumed, the package contents appear in your team space. This allows your team to view not only your own team’s latest model, but also the latest models from other teams that you have consumed into your team environment. When you view the Project
Model, you can control which teams’ model appears in your Project Model. When you have consumed packages from project teams, you can turn on and off models.

When your team consumes another team’s package, the consumed model will appear in your team’s **Consumed** folder in Document Management.
Linking Revit Models

You can link Revit models in a BIM 360 Design project with or without the Design Collaboration module activated.

**BIM 360 Design**

For Revit project members to see the link, the models must have cloud worksharing enabled and be in the same Document Management project. Take note that when you are using BIM 360 Design without Design Collaboration, any user that has access to the Revit link in Document Management can open and edit the model.

With everyone in the project accessing Document Management, permissions can be a great way to restrict folder access. By establishing permission levels for folders, you will have more control over who has access to the central models and project files. See [BIM 360 Design: Folder Permissions in Docs](#).

**Design Collaboration**

You can link Revit models in a Design Collaboration project that was published in a package. In Revit, there are several methods available to use when linking models. In order for teams to link another team’s model, the model must be shared with the project, consumed by your team, or your team must have permission to access it.

- **Controlled Sharing**
  When teams have shared or consumed a model, they cannot open the model, but they can link it into their team model in Revit. This keeps other teams from making modifications to another team’s Revit model.

  When you link in a model that has been consumed, the model remains static, even after changes have been made. To see any updated changes, a new package needs to be shared, and your team must consume it. When you link in a model that has been shared, the model still remains static, however, when a new version of the model is shared, the link will automatically update when you open Revit.

- **Live Linking**
  In order to live-link Revit models, you must have permission to the team that has the model you want to link. Live linking gives you direct access to another team’s model that they are actively making changes to. In other words, this is their Revit cloud worksharing model that their team is collaborating on. When using live linking, sharing and consuming packages is not needed.

  For example, the Mechanical team may want the Architectural team to have access to the live mechanical model. The Mechanical team will then add members of the Architectural team. This can be done by adding individual users, specific roles, or a company.

No longer available with BIM 360 Design

**Communicator for Revit**

Communicator for Revit is only available with C4R. Communicator for Revit provided communication tools for team members working on Revit cloud workshared projects.
For more information:

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