MFG322651

Using Vault Professional and BIM360 Docs – Publishing Drawings to the Outside World

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Learning Objectives

- Understand the publishing workflows that are enabled by using Vault with BIM360 Docs.
- Learn how to configure Vault Professional to publish drawings and models to BIM360 Docs.
- Learn how to configure BIM360 Docs folder security levels.
- Learn how to mark-up drawings in BIM360 Docs and how to communicate those markups back to the designers.

Description

Autodesk Vault is the best tool to manage your CAD data, particularly for those involved in the design and engineering process. Once the design is completed, people outside the design team will need to see your drawings – the clients, fabricators, manufacturers and installers. This class will show you how to use BIM360 Docs as your published documents portal and how to get your approved drawings from Vault Professional to BIM360 Docs – where external consumers can access it through the BIM360 Docs web portal or mobile device. We will walk through configuring Vault Project Sync to publish the files to BIM360 Docs, as well as configuring BIM360 Docs to ensure only the right people get access to the files. We will also discuss the markup capabilities in BIM360 Docs, and how to get the design team to see those markups.

Speaker

Carlos is a Mechanical Engineer with a particular interest in Mechatronics, and has more than 20 years of experience in the industrial equipment design and automation industry. Carlos has a wide breadth of experience in data management, industrial automation and collaboration solutions, having led and consulted on various software development and implementation projects. Carlos is a long-time AutoCAD, Inventor, Fusion360 and Vault user, trainer and workflow consultant, and he is very passionate about the new advent of manufacturing – the democratization of design & manufacturing and the adoption of Industry 4.0

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The Building Blocks

Let's set the stage on what you need to get this working.

Software Applications
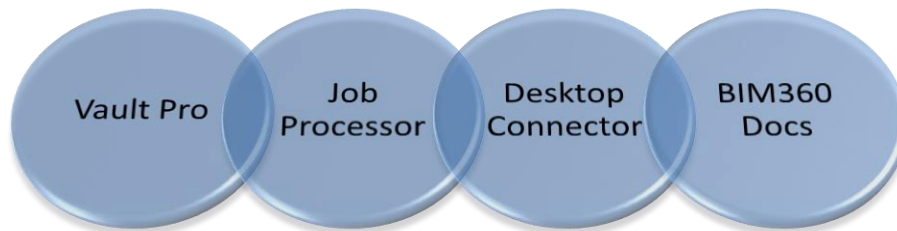
- Vault Professional – Vault is the primary data management application that allows you to access, control and share your CAD data. To publish data to BIM360 Docs, we'll be using the ProjectSync function, which is only available in Vault Professional.

- Job Processor – the Job Processor is a utility that comes with the Vault Professional client. Think of it as a robot Vault user that can perform actions automatically. The Job Processor is best installed on a dedicated machine and needs its own Vault Professional license to run, though thankfully, it doesn't need an Inventor or AutoCAD license to do its job.

- Autodesk Desktop Connector – this is the link that allows your Vault to talk to BIM360 Docs. It's a smart utility that sits on your Windows Desktop, making BIM360 Docs act like a normal storage location in the eyes of Windows. However, instead of storing it on your hard drive, it syncs it with the BIM360 Cloud. For the Desktop Connector to work, you will need to log-in to it using your BIM360 Docs credentials.

- BIM360 Docs – this is the cloud-based document management platform we'll be publishing to. Access to BIM360 Docs require a subscription, so you'll need to create a user that Vault will use to upload the files to BIM360 Docs.

Figure 1 - System Map

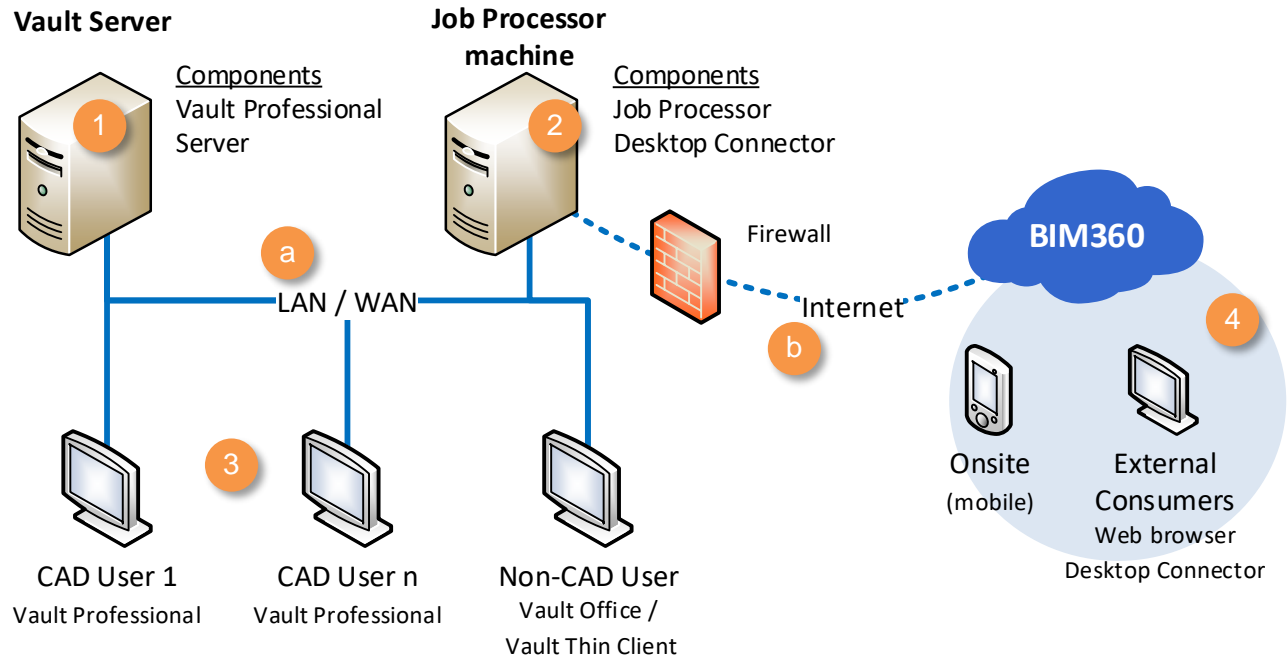**System Map**

1. The Vault server runs a Windows Server operating system, and has the **Vault Server** application installed on it. The Vault server houses the files itself, and a database that catalogues the files and their metadata. It uses a Microsoft SQL Server for the database functions of Vault and runs Internet Information Services (IIS) to handle communication between the Vault clients and the server.

2. The Job Processor machine runs the **Job Processor** utility, which runs specific tasks automatically, such as PDF file generation, and syncing of files to the BIM360 Docs site. This is also where the **Desktop Connector** is installed, which is the link between Vault and BIM360 Docs.

3. The CAD workstations have the **Vault Professional** clients installed on them. Vault Pro clients allow users to add, edit and manage CAD files. Non-CAD users within the Local Area Network (LAN) or Wide Area Network (WAN) can access files using **Vault Office** client or the **Vault Thin Client**.
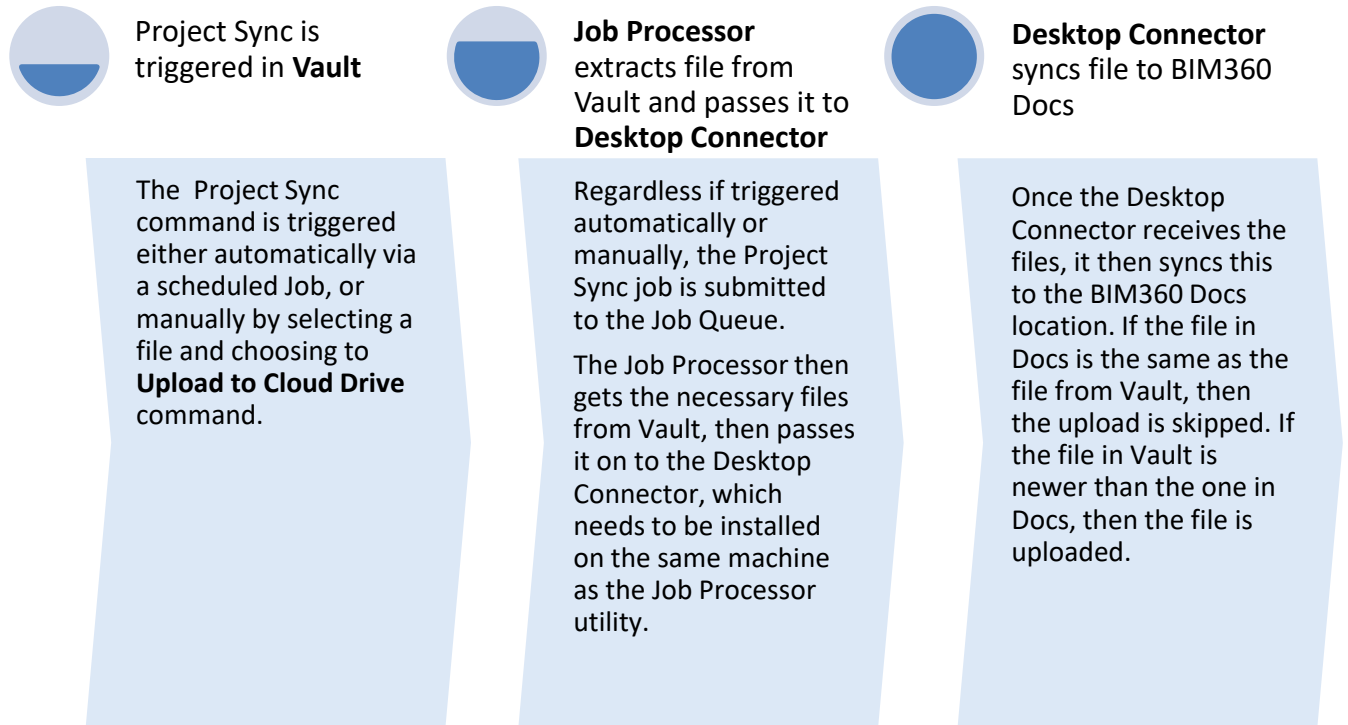
4. Files stored in **BIM360 Docs** are accessed either via a web browser, the Desktop Connector, or the BIM360 mobile app.

a. Components 1, 2 & 3 are all within the corporate LAN or WAN.

b. Through BIM360 Docs, external users (4) can get access to data synced from Vault without having to go through your corporate firewall. Access to BIM360 Docs is over the internet.

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How it Works

The flow below shows how a file gets from Vault to BIM360 Docs:

Project Sync is triggered in Vault

The Project Sync command is triggered either automatically via a scheduled Job, or manually by selecting a file and choosing to **Upload to Cloud Drive** command.

Job Processor extracts file from Vault and passes it to **Desktop Connector**

Regardless if triggered automatically or manually, the Project Sync job is submitted to the Job Queue.

The Job Processor then gets the necessary files from Vault, then passes it on to the Desktop Connector, which needs to be installed on the same machine as the Job Processor utility.

Desktop Connector syncs file to BIM360 Docs

Once the Desktop Connector receives the files, it then syncs this to the BIM360 Docs location. If the file in Docs is the same as the file from Vault, then the upload is skipped. If the file in Vault is newer than the one in Docs, then the file is uploaded.

Preparing the Ground

Before we start configuring the Vault to sync with BIM360 Docs, we need to configure the following:

- A BIM360 Docs Project where we will upload our Vault files to.
- A Job Processor machine installed with Autodesk Desktop Connector.
- Configure the Job Processor machine with Autodesk Vault Job Processor.

Part 1 – Create a BIM360 Docs Project

1. Sign-in to the BIM360 Account Admin page on https://admin.b360.autodesk.com. You will need to be an Account Admin to be able to log-in to this page.

2. Choose the appropriate Hub – in the example below I've chosen the **Cadgroup Au** hub.

3. Select the **PROJECTS** tab.

4. In the Project Directory, click **Add** to create a new Project.
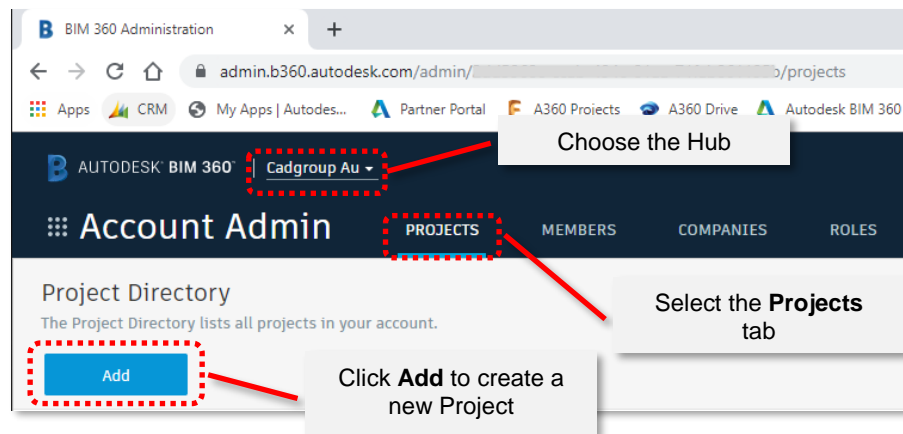
Figure 2 - Creating a new BIM360 Docs Project

5. In Step 1 of the Create Project Profile page, fill in the necessary details. In this page, the fields marked with an * are required. Click **Save & continue**.

Figure 3 - Create Project step 1

6. In the Activate Services page, activate the **Document Management** module by clicking **Activate**.

7. Assign a Project Administrator for this specific project. You can assign yourself as the project administrator.

8. The Copy project settings allow you to copy folder structures, workflows, etc. from an existing project. For this example, just leave this blank.

9. Click **Finish**.
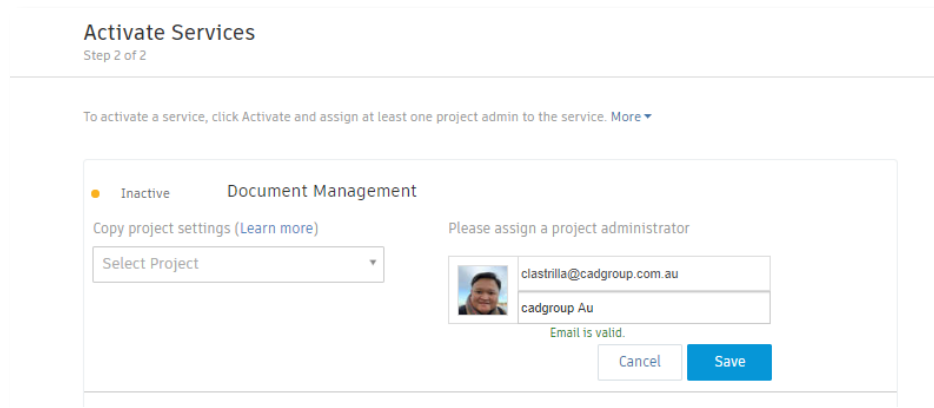
Figure 4 - Create Project step 2

10. This Project Administrator account is what we will use to log-in to the BIM360 Docs via the Autodesk Desktop Connector.

Part 2 – Install the Autodesk Desktop Connector

1. Download the Autodesk Desktop Connector app from the internet. The link can be found here:

   https://knowledge.autodesk.com/support/bim-360/learn-explore/caas/CloudHelp/cloudhelp/ENU/BIM360D-Desktop-Connector/files/GUID-F65B9FA9-630B-462A-8A7B-FA71C6ECED76-html.html

2. On the nominated Job Processor machine, install the Desktop Connector.

   It's recommended that the Job Processor machine is a stand-alone machine, i.e. not used as a full-time CAD workstation. In addition, if you are already using other Job Processor tasks like Sync Properties, Create DWF (Update View) or creating PDF's, etc., consider setting up a separate Job Processor dedicated to running Project Sync.

   This is because the Project Sync command may take longer than other jobs to process, and thus hold-up other more time-sensitive jobs like Sync Properties.

   In order to configure the Job Processor to only run Project Sync jobs, see the section below on **Configuring the Job Processor to only perform only Sync Jobs**.

3. Once the Desktop Connector is installed, you will be prompted to Sign-In. Sign-in using the credentials we created in Part 1.

4. On a successful Sign-In, the Desktop Connector appears as an icon in your Windows Task Bar (Figure 5).

5. You will also see additional drive icons in Windows Explorer, depending on what kind of Autodesk Cloud Services you have access to. In our scenario, we will need to have the BIM360 Drive visible (Figure 6).
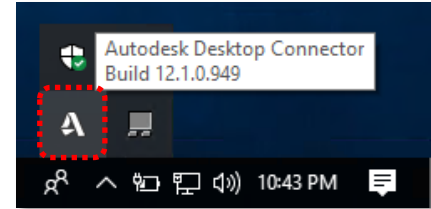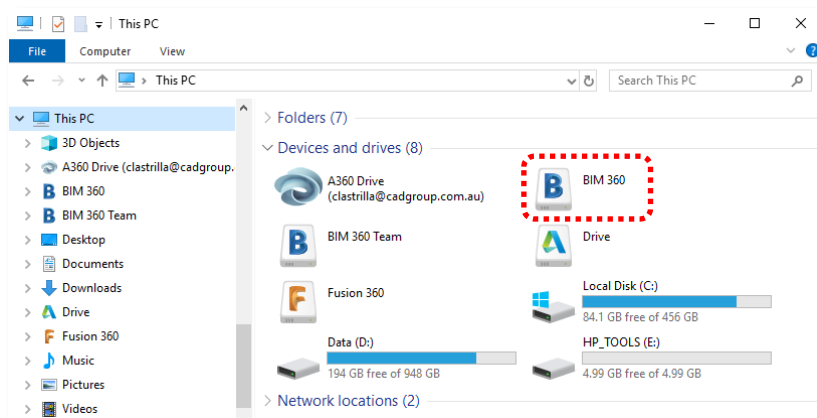

Figure 5 - Desktop Connector in the Task Bar

Figure 6 - BIM360 Drive on This PC in Windows Explorer

Part 3 – Install the Job Processor

1. On the nominated Job Processor machine, you will need to install the Vault Professional Client, which by default installs the Job Processor Utility.

2. Run the Job Processor by going to **Windows Start → All Programs → Autodesk Data Management → Autodesk Job Processor 20xx for Vault Professional**. You will be prompted to log-in to Vault.

    It is best to use a specific Job Processor account to run the Job Processor. This Job Processor account should have the Administrator Role and also have permissions to edit the file even when the file is in a Released state.

3. You may also be prompted to Sign-In, if so sign-in using the same credentials you used to sign-in into Autodesk Desktop Connector.

4. To check if the Job Processor is correctly configured to process Project Sync jobs, go to **Administration → Job Types**. You should see the following job types:

- autodesk.vault.sync.manualupload

- autodesk.vault.sync.manualdownload

- autodesk.vault.sync.scheduledupload

- autodesk.vault.sync.scheduleddownload

- autodesk.vault.sync.scheduledsync

If those specific jobs do not appear, or if they do not have a tick mark next to them, it's possible that the Job Processor has started up before the Desktop Connector. In that case, close the Job Processor by using **File → Exit***, and ensure Desktop Connector is running (*Part 2, Step 4*). Once Desktop Connector is running, run Job Processor.*

Job Types
Job Types
The following job types are processed by this Job Processor.
☑ autodesk.vault.extractbom.inventor
☑ autodesk.vault.sync.manualupload
☑ autodesk.vault.sync.manualdownload
☑ autodesk.vault.sync.scheduledupload
☑ autodesk.vault.sync.scheduleddownload
☑ autodesk.vault.sync.scheduledsync
Close
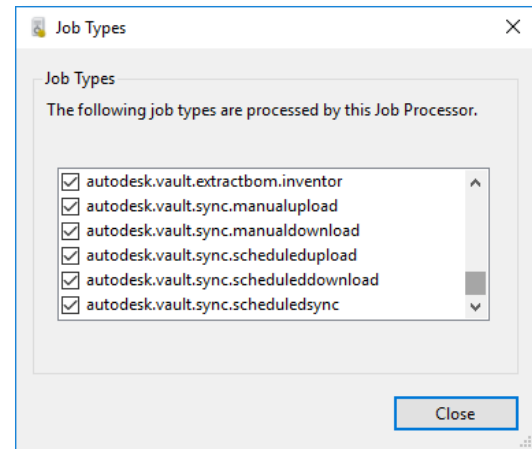
Figure 7 - Job Processor job types

Use Cases

Use Case 1 – Sending files out for Fabrication

In this scenario, the CAD design is ready to be sent out for fabrication. For example, you've got several DXF files that you want to send to the plasma cutting contractor to cut from, but it would also be a good idea to send them the dimensioned drawings in PDF format so that they can verify details if needed.

In this use case, we will configure the Vault so that any DXF and PDF files that are in the Issued for Fabrication state get uploaded to BIM360 Docs. We will also add additional criteria that only PDF and DXF files with a specific property called **PROCESS** with a value of **PLASMA** will be uploaded to Docs.

In the example below, I've used the out-of-the-box function of Vault Professional 2020 to generate PDF files on Release of 2D IDW or DWG files. I've also used a Vault add-on called **coolOrange powerJobs** to automatically create DXF files from Inventor IPT sheet metal files. You could also generate the DXF files manually in Inventor and check them into Vault.

Configuring Collaboration Options – Use Case 1

1. In **Vault Professional 20xx**, go to **Tools → Administration → Vault Settings**.
2. In the **Collaborate** tab, click **Configure**.
3. In the **Cloud Drive Mapping** dialog box, click **New**.
4. Enter the name of the Cloud Mapping Definition. In this example, I've named the mapping as **PDF and DXF files for Plasma Cutting**.
5. Make sure **Enable cloud drive mapping** option is ticked.
6. If you want to give the user the capability to manually trigger the upload, make sure **Enable manual sync** is ticked.
7. For the Vault folder, navigate to the folder that contains the CAD data. Because we are only syncing PDF and DXF files, choose the top-most folder which encompasses all the sub-folders containing the PDF and DXF files. In the example (Figure 8), I've chosen the Designs top-level folder, as all the PDF and DXF files are in sub-folders under the Designs folder. In this configuration, and files outside the Designs folder will not be included in the Sync.

Figure 8 - Designs folder in Vault Project Explorer

8. For the Cloud Drive folder, navigate to your BIM360 Docs hub and project. Notice that you will only be able to select folders under the Project Files area of BIM360 Docs. All folders you choose in the Sync Folders section will be placed in under the location you've chosen in BIM360 Docs Cloud Drive folder.

9. In the **Sync Folder** section, click on the green **+** symbol.
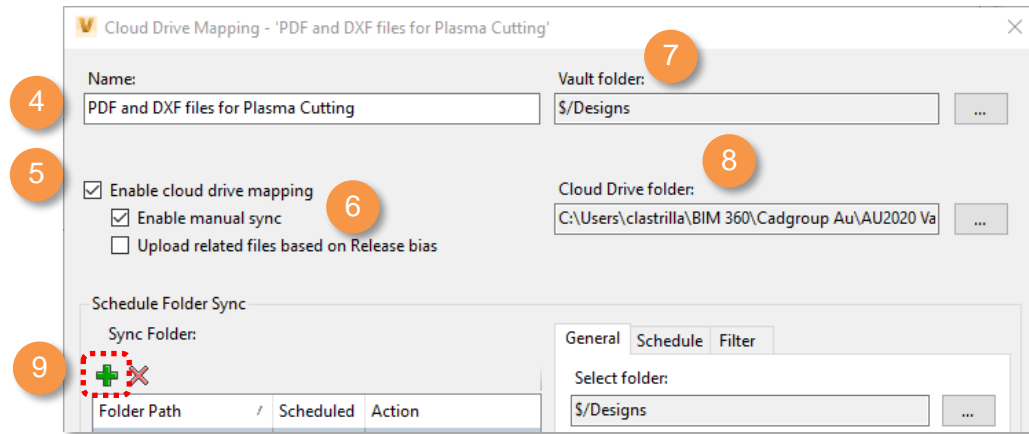
Figure 9 - Cloud Drive Mapping dialog

10. In the **Define Folder Sync** dialog box, navigate to the **$/ Designs** folder. This allows us to further define the subfolders we want to sync. Additionally, we can apply specific syncing, scheduling and filtering rules to specific subfolders.

11. Choose the option to **Upload to cloud drive**.

12. Select the option to **Apply selected action to subfolders**.

13. Click **OK** to exit the dialog.

14. Go to the **Schedule** tab. This section allows you to set the schedule for automatic syncing. This can be set to a specific time, or a specific interval. For this configuration, I'm setting the sync to be performed every 8 hours.

> The minimum interval setting is set to 8 hours. This can be set to a minimum of one (1) hour by modifying the Vault Client config file. See the section below on **Changing the Minimum Interval for Syncing**.
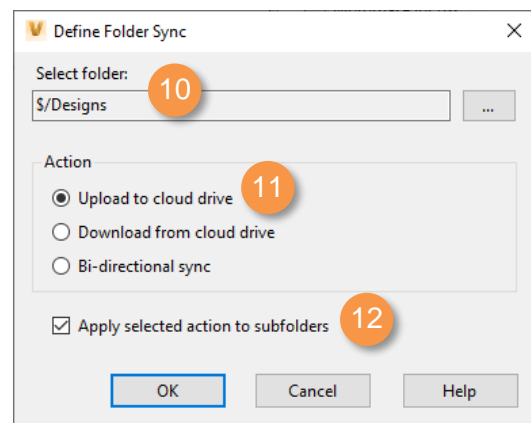
Figure 10 – Specifying specific folders
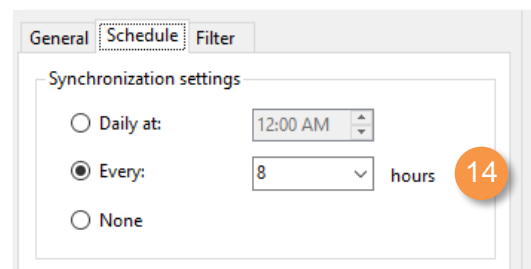
Figure 11 - Setting the Sync Schedule

15. Go to the **Filter** tab. This is where you can configure which files are uploaded to BIM360 Docs. You can build rules by specifying Vault property fields, and the necessary criteria for selection. It is possible to add multiple rules, and each rule works with the AND operator with each other. You can also use Boolean operators within the Value field, such as in the example below.

16. In the **Property** drop-down select the Vault property **File Extension**.

17. In the **Condition** drop-down, select contains.

18. In the **Value** field, type **PDF OR DXF**. This is not case-sensitive.

19. Click **Add**.

20. Continue to populate the filter as seen in Figure 12.

   In the configuration shown, the file must meet ALL of the following criteria for it to be synced:

   o The File Extension must be either PDF OR DXF
   o The file State must be Issued for Fabrication.
   o The Vault property called Process must contain the word PLASMA.
   o Only include files checked in the last 3 days*.

21. Click on the **Preview** button. This will give you a list of the files that the Filter has found, depending on how you built the Rules.

22. Click **OK** and **Close** to close the Cloud Drive Mapping dialogs.
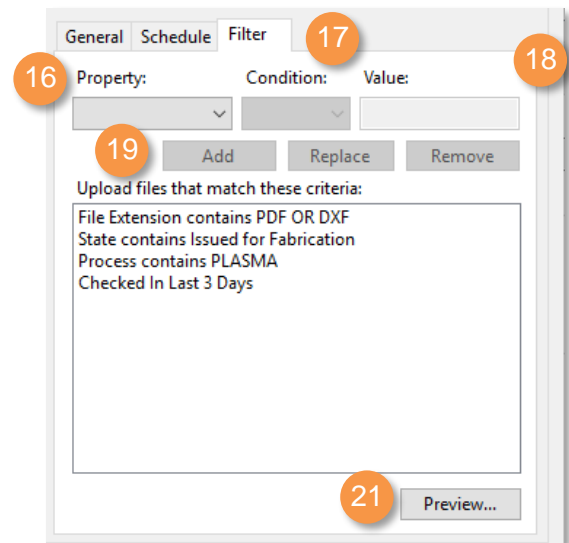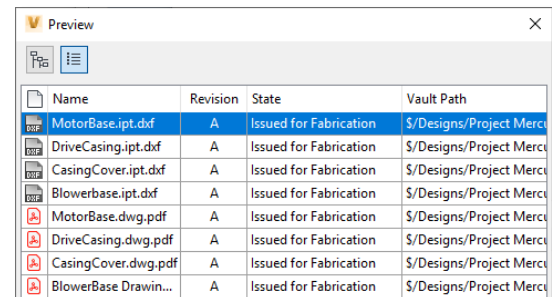
Figure 12 - Configuring the filter

Figure 13 - Result of the Filter as shown in the Preview

Each Cloud Drive Mapping configuration will create a corresponding Server Task in the ADMS Console. To view these tasks, see the section below on **Server Tasks in ADMS Console**.

* As the size of your Vault grows in terms of the number of files you want to upload, it's best to limit the number of files that the Job Processor and Desktop Connector handles. By adding a filter that includes only syncing files checked in the last 3 days, it may mean the difference between attempting to sync 3,000 files vs. 30 files.

About Design Representation Lifecycles

When Vault, via the Job Processor generates the PDF files, by default it places it in the Design Representation Category, which uses the Design Representation Lifecycle. It is important that the Design Representation Lifecycle also has the same state names as the lifecycle states of the CAD files (at least for the states that need the PDF's generated).
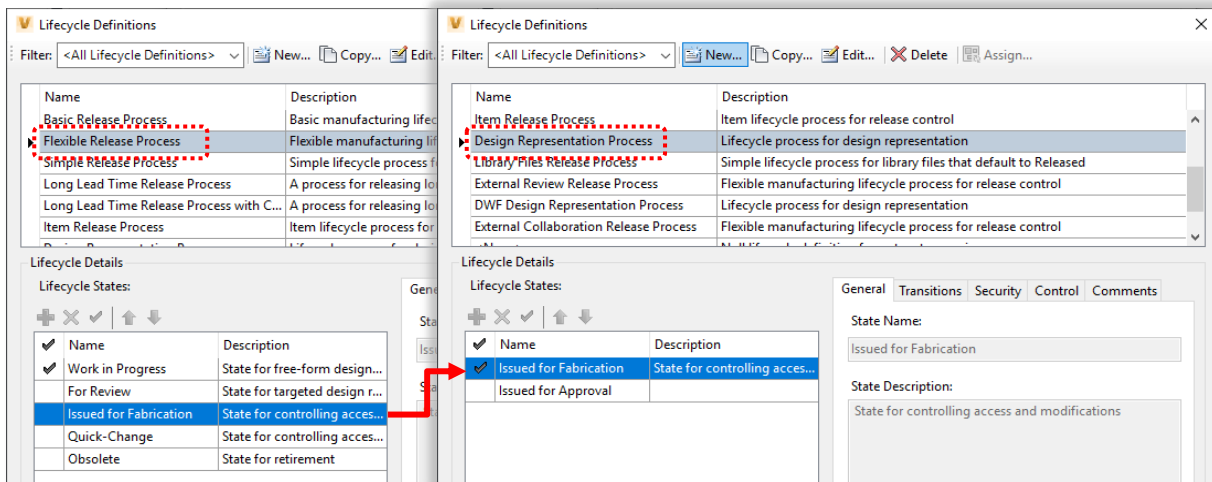
Figure 14 - CAD lifecycle state vs. Design Representation state

Using the Workflow
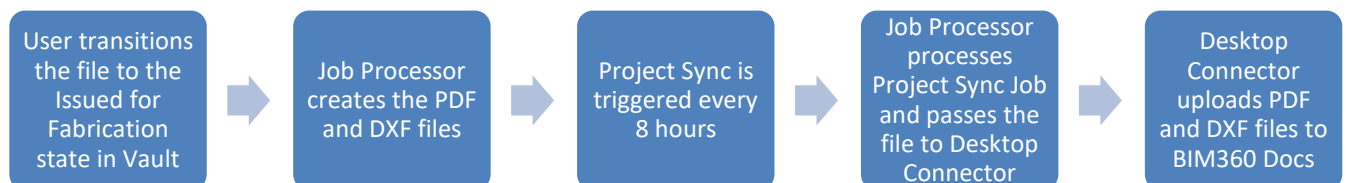
Figure 15 - Workflow for Use Case 1

In this configuration, the process is initiated when the user transitions the file to the Issued for Fabrication state in Vault. From there, the process is automated, from the generation of DXF and PDF files (DXF files courtesy of the coolOrange powerJobs add-on), to the upload of the file to BIM360 Docs on a defined schedule.

Once the sync has been executed by the Job Processor, the Desktop Connector will then upload the files to BIM360 Docs. The image below shows the files in BIM360 Docs. See how the folder structure in Vault is replicated in BIM360 Docs in Figure 16.

The PDF's are uploaded in the same folder as the source 2D DWG file. The DXF's are uploaded to the same folder as the source IPT file. All necessary subfolders are created within BIM360 Docs to mirror the Vault folder structure.
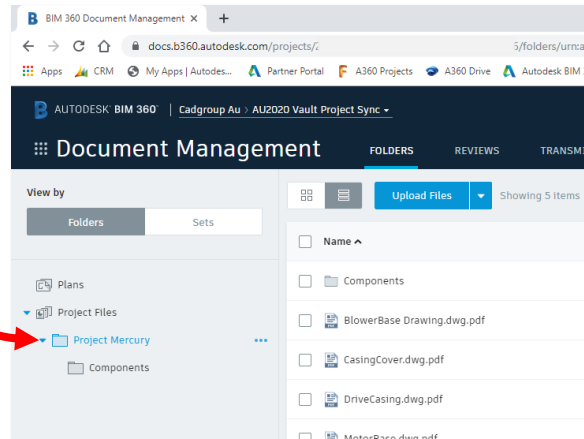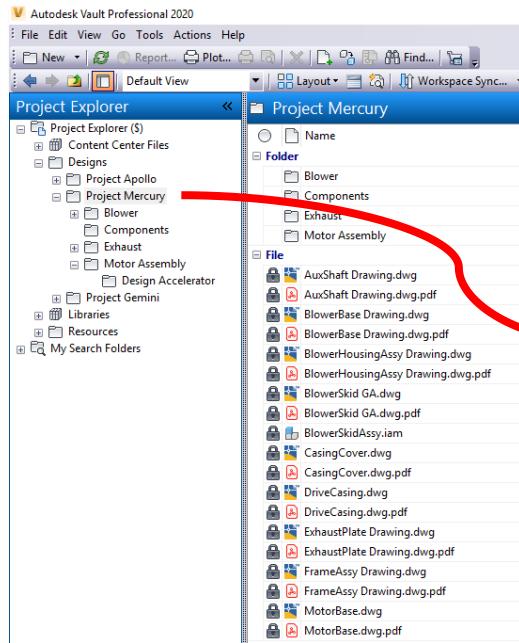
The contents of the **$/Designs** folder in Vault is mapped to the Project Files folder in BIM360 Docs. The necessary subfolders are created.

Because of the filtering, only PDF files are uploaded to this folder.
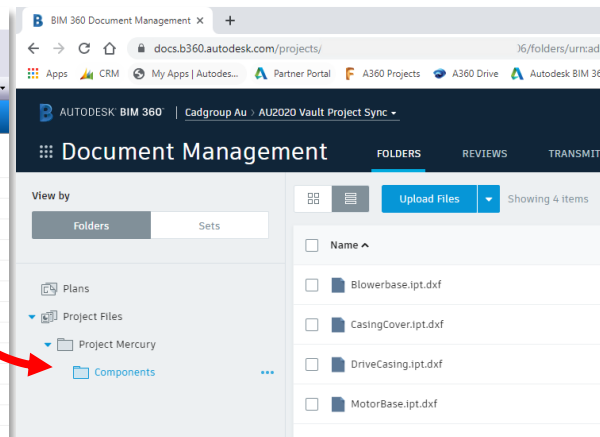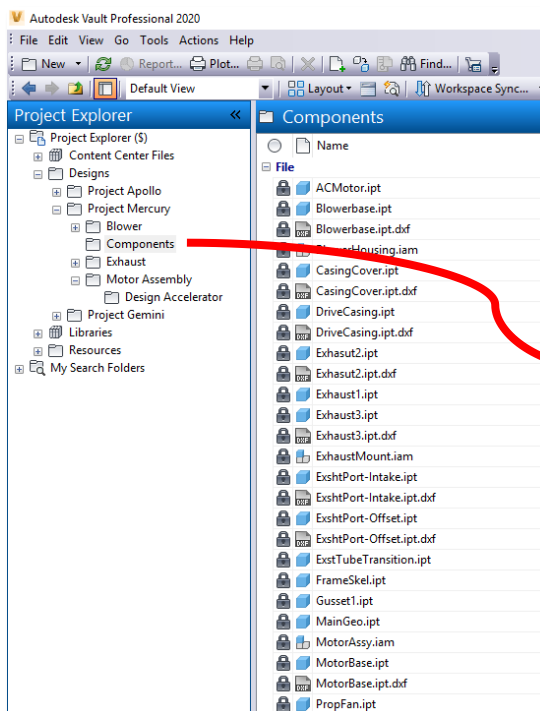
Any required subfolders are also created. In this configuration, because the DXF files in Vault are in the Components subfolder, a similar folder in BIM360 Docs is also created to house the DXF files.

Figure 16 - Folder mapping results in BIM360 Docs

Use Case 2 – Issuing Drawings for External Approval

In this scenario, the design is ready for approval by external stakeholders. We need to send the external stakeholder both the 3D model and the associated 2D files so that they can review, and if needed, identify issues and mark-up the files. Vault and Inventor's Shared Views feature can achieve a similar result but is best used for the Work-In-Progress design review and feedback stage, as it is more convenient to communicate mark-ups between the reviewer and the designer.

The advantage of BIM360 Docs comes in when you need to have traceability of issues and mark-ups in the design, and granular folder permission levels. With BIM360 Docs, you can give specific users, roles and companies specific access permissions to folders.

In order to keep the uploads small and prevent the need to upload the entire working model, we'll use coolOrange powerJobs to convert the IAM file into a DWFx file, and that DWFx file is what gets uploaded to BIM360 Docs.

Furthermore, the 2D DWG's are converted to PDF's using the out-of-the-box PDF generation of Vault Professional 2020. The creation of the DWFx file and PDF file is automatically triggered by a transition to a state called *Internal Review* to a state called *Issued for Approval*.

In this use case, we'll also explore setting specific folder permissions inside BIM360 Docs so that only specific users can view specific folders.

The Vault Lifecycle is configured as below:
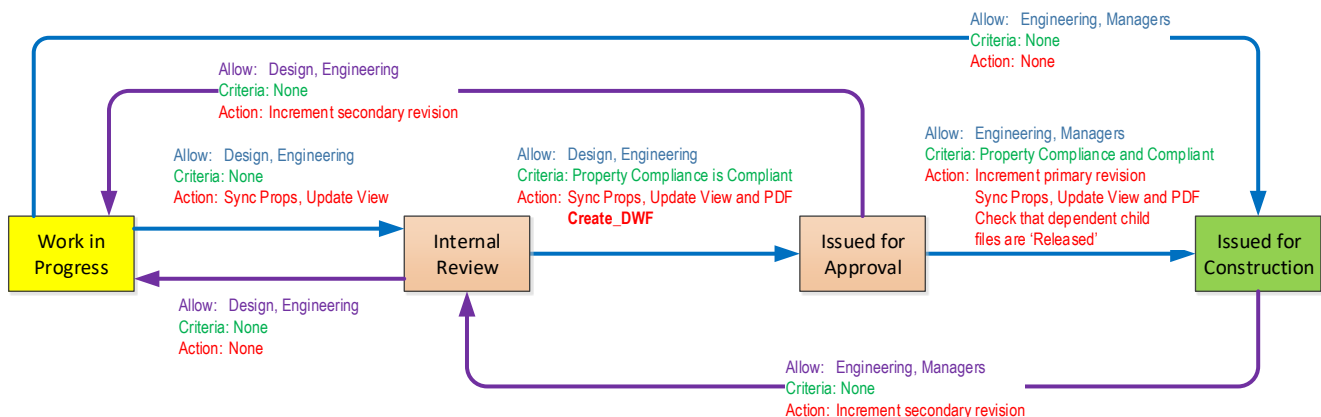
Figure 17 - Vault Lifecycle configuration for Use Case 2

In this Vault Lifecycle configuration, when a file reaches the Issued for Approval state it's meant to be sent out for review of external users. While the file is in the Issue for Approval state, it's best if all Vault users are prevented modify rights to the file.

Configuring Collaboration Options – Use Case 2

Configuration of this use case is similar to Use Case 1. We'll be uploading DWF files instead of DXF files, but also uploading the PDF file. In addition, we're filtering the state of the files to be in the Issued for Approval state.

The files are to be uploaded to a folder in BIM360 Docs called Project Gemini.
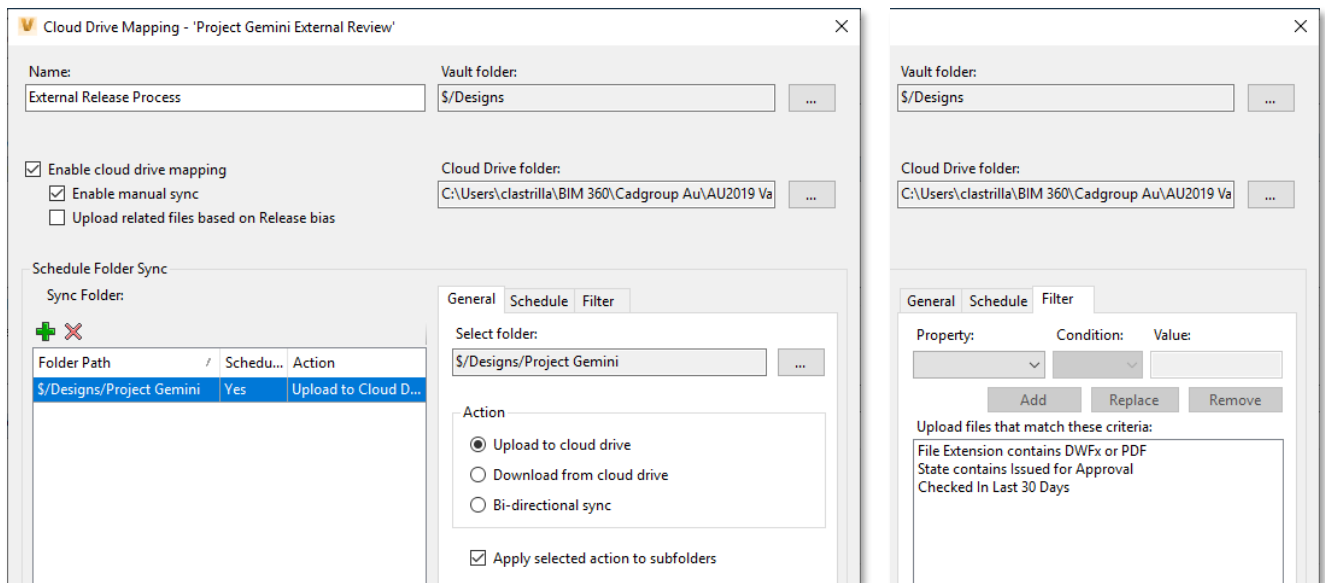
Figure 18 – Cloud Drive Mapping configuration for Use Case 2

Configuring the Issued for Approval state in Vault

To ensure that the files in Vault are not modified while they are in the Issued for Approval state, it's best if the Vault users are not allowed to modify the files.

NB: This assumes that you have created a lifecycle definition for External Release Process.

1. In Vault Professional Client, go to **Tools → Administration → Vault Settings**.
2. In the **Behaviors** tab, click on **Lifecycles**.
3. Select the **External Release Process** and click **Edit**.
4. In the Lifecycle Definition dialog, select the **Issued for Approval** state and go to the **Security** panel. Use the Add and Remove buttons to configure the Access Control List similar to Figure 19.

Following the best practice of using Groups in the Access Control List:

The members of the **Everyone** group can Read the files but is not given explicit permissions to Modify or Delete files.

The members of the **Vault Administrators** group can Read and Modify files, but not Delete.

The members of the **JobProcessorGroup** can Read, Modify and Delete the files.
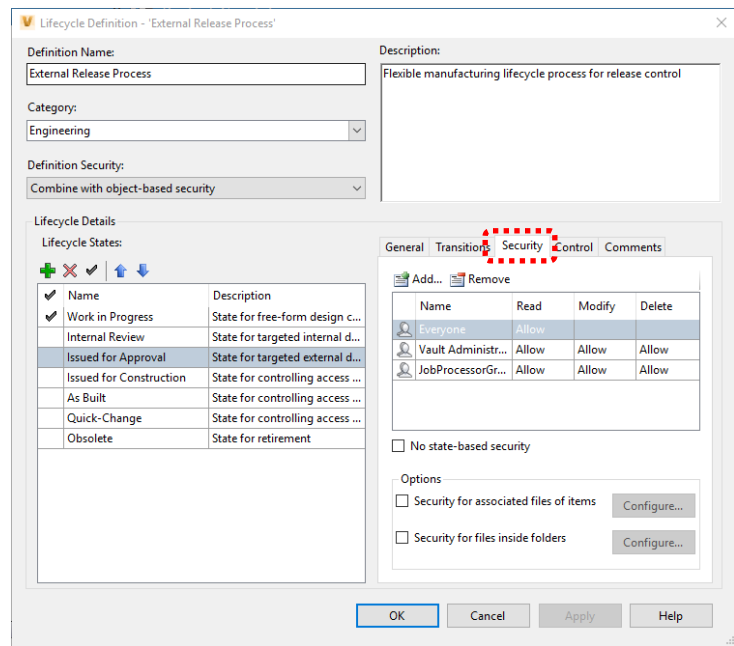
Figure 19 – Issued for Approval state security

Setting Folder Security in BIM360 Docs

BIM360 Docs is capable of highly granular security permissions on the folders. We'll need to do some initial set-up to add users in BIM360 Docs, and once we've done that, we can then set the folder permissions. The overall process is:
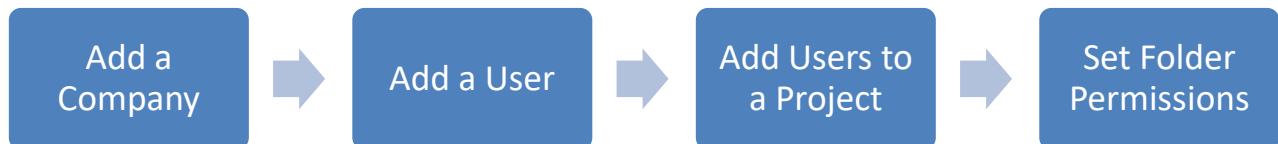
Figure 20 - Overall process of User setup

Adding a Company in BIM360 Docs

We'll add a Company entity first in BIM360 Docs to make it more convenient to assign users, and subsequently, folder permissions.

1. In BIM360 Docs, go to the **Account Admin** page (Figure 21).
2. In the Account Admin page, go to the **Companies** tab.
3. In the Companies tab, click **Add**. The Create Company dialog box appears (Figure 22).
4. In the Create Company dialog box, complete the fields. Note that only the **Company Name** and **Trade or Company type** fields are required.
5. Click **Save**.
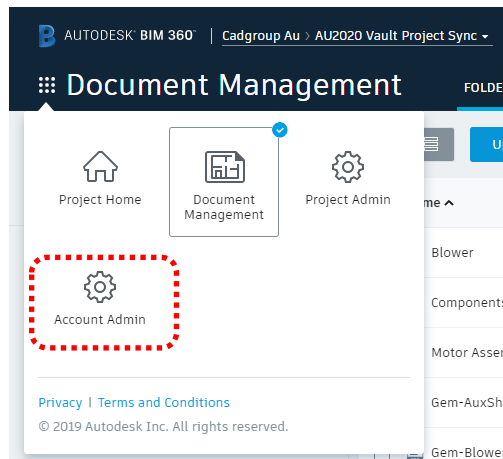
Figure 21 - Accessing Account Admin page
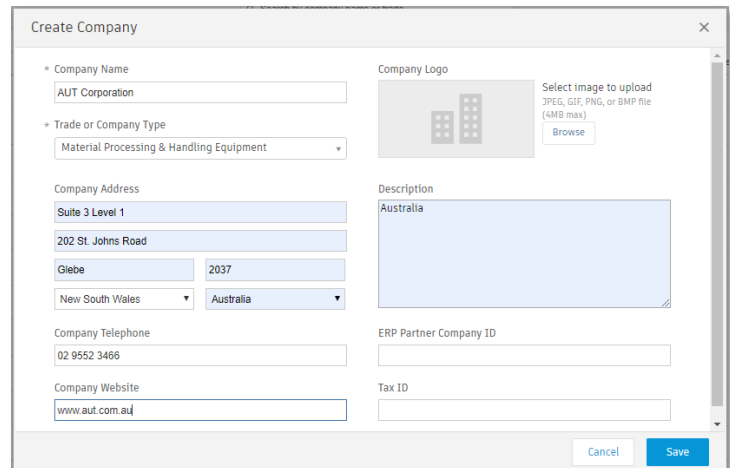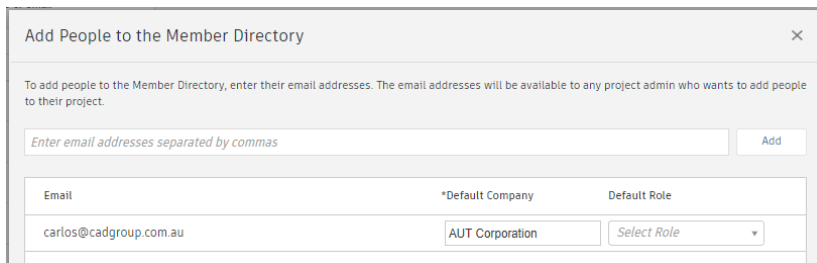
Figure 22 - Add a new Company

Adding a User in BIM360 Docs

1. In BIM360 Docs, go to the **Account Admin** page.
2. In the Account Admin page, go to the **Members** tab.
3. In the Members tab, click on **Add → Add people to the member directory** to add a new user to the BIM360 Hub.
4. In the Add People to the Member Directory, enter the email address of the user you want to add and click **OK**.
5. Choose a default company for the user you're adding. Note that as you type the company name, the Autofill function attempts to fill the company name for you.

6. Click **Save**.

Figure 23 - Adding a new user

After clicking OK, an email invitation is automatically sent to the user you invited. Once the user clicks on the link in the email and activated their account, then you will see that the Status column in the Members tab will change from **Pending** to **Active**.

At this point, one (1) BIM360 Docs license is consumed by the user you have activated.

Adding Users to Projects in BIM360 Docs

1. In BIM360 Docs, go to the **Project Admin** page.

2. In the Project Admin page, go to the **Members** tab.

3. In the Members tab, click **Add**.

4. In the **Add Project Members** screen, start typing in the email address of the user you've added in the previous step. Note that the Autofill will attempt to match the email address to the one in the Members directory. You will only be able to add email addresses that are already in the Members directory in Account Admin. Click **Select**.

5. Once you've chosen Select, then the users name appears in the list. Click **Add to Project**.
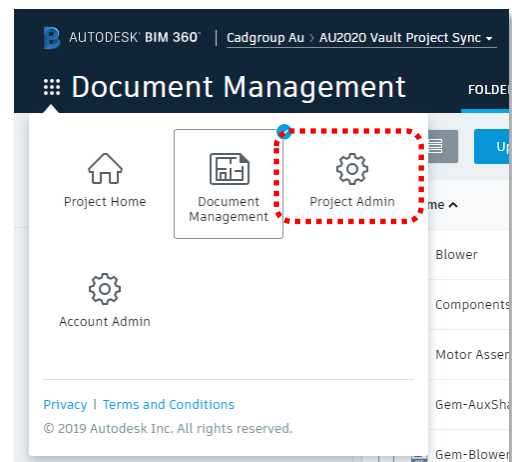
Figure 24 - Accessing Project Admin page

Allowing Users to Create Issues

To raise issues within files in BIM360 Docs, you will need to grant users permissions to create issues. This is done in the Project Admin panel.

1. In BIM360 Docs, go to the **Project Admin** page.

2. In the Project Admin page, go to the **Services** tab.

3. On the left panel, click on **Issues**.

4. Under the **Permissions** group, add the name of the User, Role or Company you wish to grant permission to raise issues.

5. Select the appropriate permission level and click **Add**.
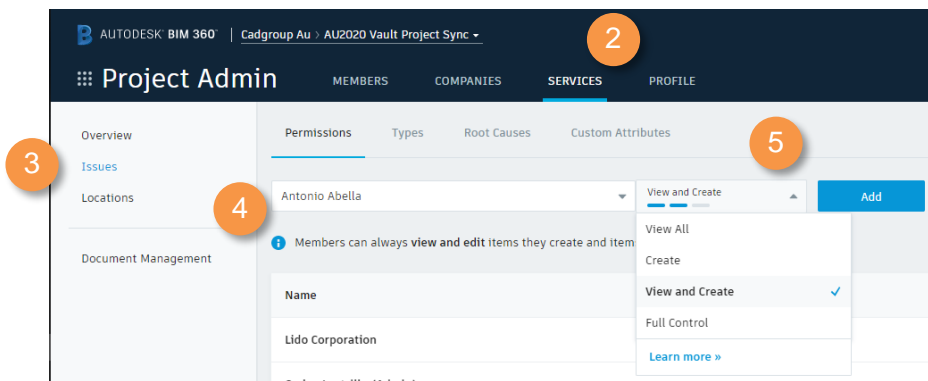
Figure 25 - Setting permissions for Issue creation

Setting Folder Permissions

1. In BIM360 Docs, go to the **Document Management** page.

2. In the Document Management page, expand the **Project Files** node in the left side of the screen.

3. Navigate to the **Project Gemini** folder, and hover to the right-side of the folder name until 3 dots appear.

4. From the fly-out menu, select **Permissions**.

5. The Permissions panel appears on the right side of the screen.

6. Click **Add**. The Add Permissions dialog appears.

7. In the Add Permissions dialog, in the **Add New** field type in the name of the company you want to give access to the Project Gemini folder. In this case,
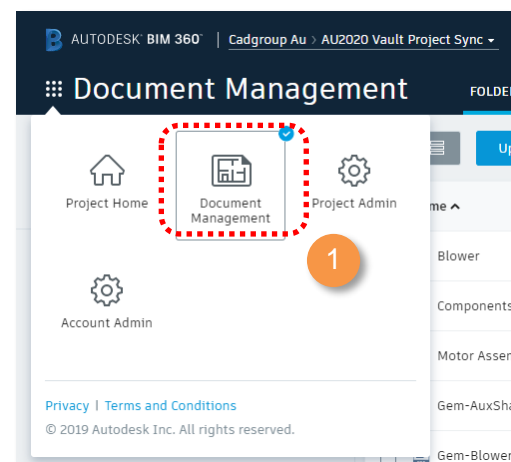
Figure 26 - Accessing the Document Management page

we are typing **AUT Corporation**. Note that Autofill attempts to prompt you with the correct information.

You can add permissions to specific users, roles or companies. In this scenario we are adding permissions to all users who are part of AUT Corporation – more specifically BIM360 Docs users who are part of the AU2020 Vault Project Sync project, and a member of AUT Corporation.

8. In the Permissions Level, select the **View/Download + Upload + Edit** permissions. Take note of the various permission levels allowed by BIM360 Docs.

While the View Only permission will allow users to make mark-ups to the drawings, those mark-ups are categorised as Private mark-ups, which means only the user who created the mark-up will be able to view them. For other project users to view the mark-up, the mark-up needs to be categorised as a Public mark-up, which can only be done if the user has a View/Download + Upload + Edit permission.
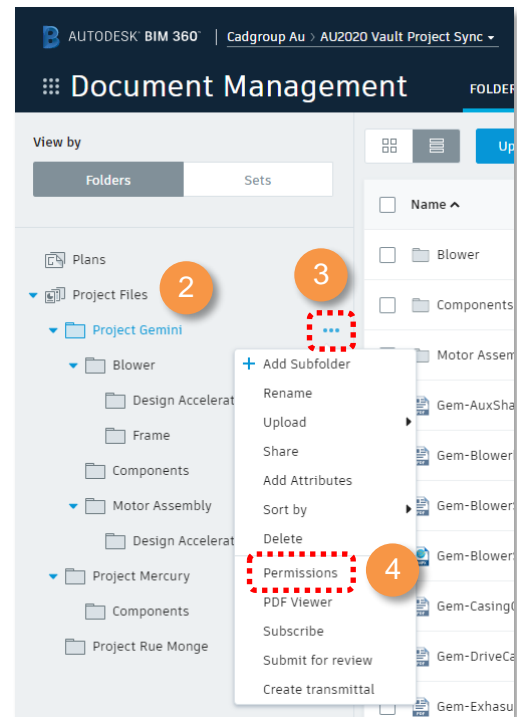
Figure 27 - Accessing Permissions for a folder

9. Click **Add**.
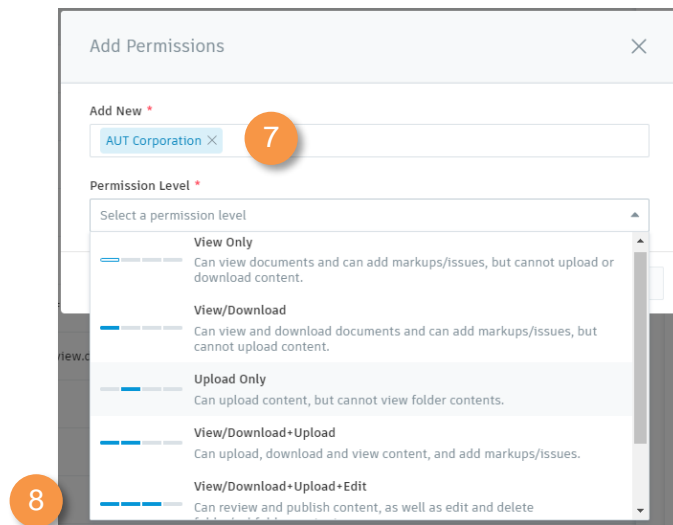
Figure 28 - Various permission level for the folder

Other Tips and Tricks in Configuring Vault

Job Processor Polling Intervals

By default, the Job Processor polls the Job Queue to check for any jobs to process every 10 minutes. This can be changed by editing the **JobProcessor.exe.config** file using a text editor such as Notepad or similar. Before editing, remember to take a backup of the file first. This file is located in:

C:\Program Files\Autodesk\Vault Professional 20xx\Explorer

In the `<appSettings>` section modify the **PeriodInMinutes** value from 10 to **1**. This value is in minutes.

```
</ResolveExtensionHandlerService>
<appSettings>
  <add key="PeriodInMinutes" value="1"/>
  <!-- WebService timeout (in milliseconds)-->
  <add key="WebServiceTimeout" value="1000000"/>
```

Figure 29 - Setting the Job Processor polling interval

You will need to restart the Job Processor for these changes to take effect.

Configuring the Job Processor to only perform only Project Sync Jobs

If you intend to run the Project Sync intervals within normal office hours, then it is recommended that a you use a dedicated Job Processor machine to handle the Project Sync jobs. This is because as the number of files that you sync between Vault and BIM360 Docs project grows, the Job Processor and Desktop Connector takes longer to complete.

If you are running two Job Processors, you will need to configure the Job Processor running the Project Sync jobs to run only the Project Sync jobs, and not any of the other jobs that the Job Processor normally processes.

In order to do this, you will need to edit the **JobProcessor.exe.config** file using a text editor such as Notepad or similar. Before editing, remember to take a backup of the file first. This file is located in:

C:\Program Files\Autodesk\Vault Professional 20xx\Explorer

In the `<jobHandlers>` section, comment out all other jobs by placing a `<!--` at the start of the line, and a `-->` at the end of each line.

For example, a commented line will contain:

```
<!-- <jobHandler class="Autodesk.Vault.PDF.Create.idw"
handler="Connectivity.Explorer.JobHandlerPdfPublish.PdfJobHandler,
Connectivity.Explorer.JobHandlerPdfPublish"/> -->
```

And an active line will look like:

```
<jobHandler class="Autodesk.Vault.Sync.ManualUpload"
handler="Connectivity.Explorer.JobHandler.Portal.PortalJobHandler,
Connectivity.Explorer.JobHandlerPortal"/>
```

Figure 30 shows the file edited so that only the five (5) Project Sync jobs are active.

Figure 30 - Commenting out other job types so only Sync Jobs are active

After editing the file, make sure to restart the Job Processor. You can check that the changes have taken effect if in the Job Processor, go to **Administration → Job Types.** Only the Project Sync jobs should appear.
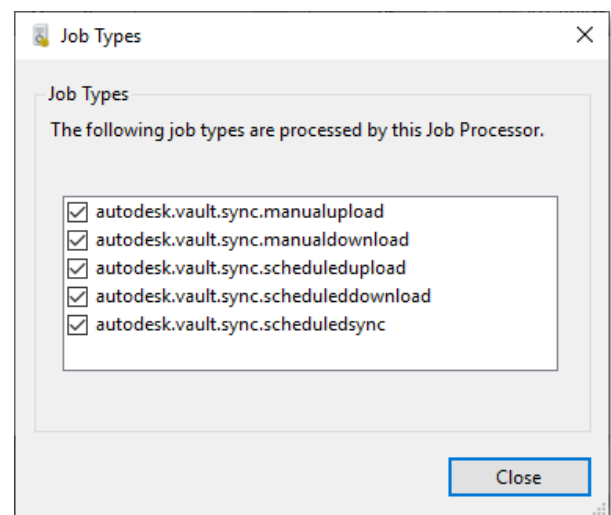
Figure 31 - Job Processor showing only Project Sync jobs

Script to Start the Job Processor Automatically

While it is possible to have the Job Processor start automatically on Windows Log-on via the **Administration → Start on Windows Logon** option, this may cause an issue because for the Project Sync jobs to be available on the Job Processor, the Autodesk Desktop Connector must be started before the Job Processor starts. To achieve this, you can create a small batch file that will trigger the start of the Job Processor after a pause of 3 minutes (180 seconds). This batch file is then executed via Windows Task Scheduler, on the **On Log on** trigger.

The batch file looks like this:
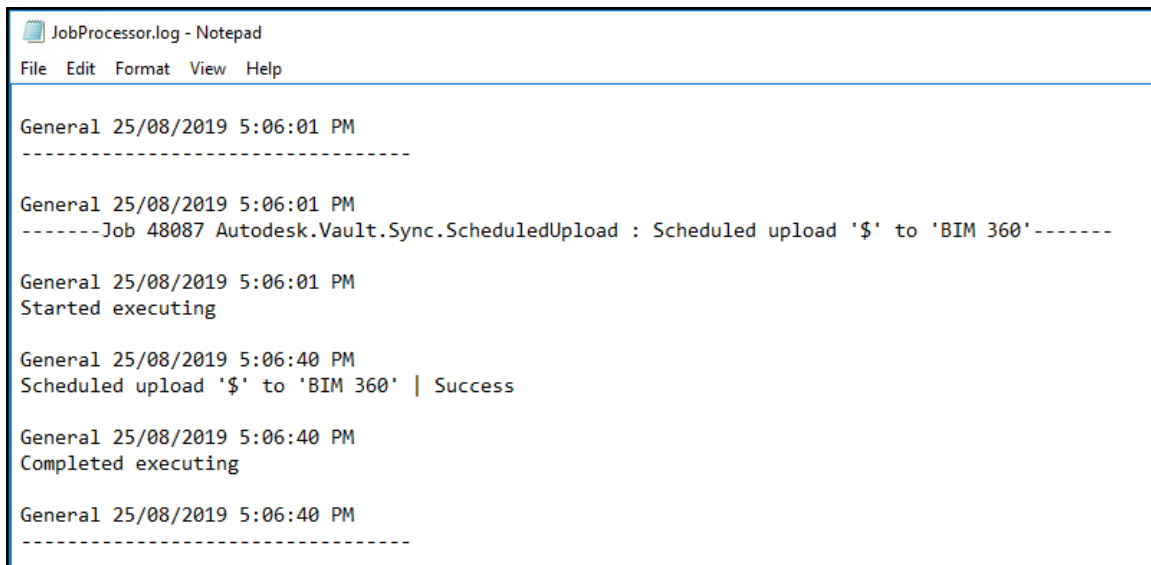
StartJP.bat

```
TIMEOUT /T 180
cd "C:\Program Files\Autodesk\Vault Professional 2020\Explorer"
start JobProcessor.exe
```

For this to work, you will need to run the Job Processor once manually and ensure you enter the correct Vault login and Autodesk Account credentials. The next time the Job Processor is run, whether manually or through the batch file, it will use the credentials previously entered.

Job Processor Log files

Job Processor generates log files in the *C:\Program Files\Autodesk\Vault Professional 20xx\Explorer\JobProcessor.log* file. A sample of the log file with Project Sync job entries are below:
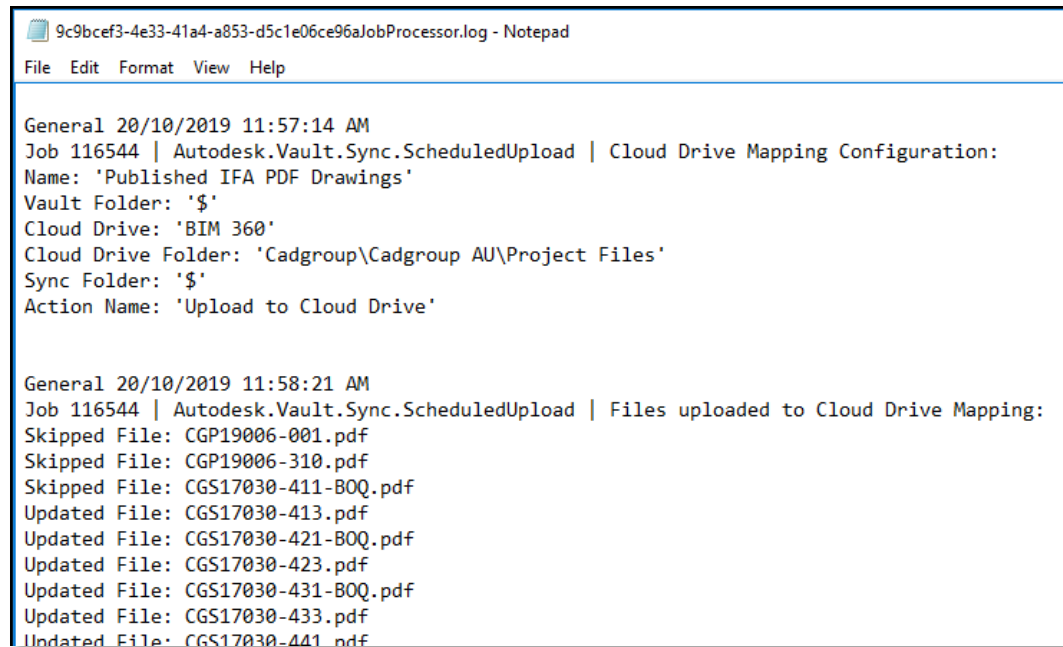
Figure 32 - Snippet of JobProcessor.log file

This log file shows the **Scheduled Upload** task completing successfully, however it does not show which files were synced.

Another log file that shows a list of files synced is in the same folder and is in the format of [**GUID]JobProcessor.log**. A sample of the logfile is below:

Figure 33 - Snippet of log file showing files synced

Changing the Minimum Interval for Syncing

In the **Cloud Drive Mapping – Schedule** options, one of the scheduling options is to sync in intervals. The drop-down menu only allows a minimum syncing interval of 8 hours. This interval can be reduced to as low as 1 hour by editing the **Connectivity.VaultPro.exe.config** file found in (make sure to create a backup first):

C:\Program Files\Autodesk\Vault Professional 20xx\Explorer

In the **<appSettings>** section, add a new line to set the *minimum sync interval* as below:

Figure 34 - Changing Project Sync minimum sync interval

The format is <add key="ProjectSyncMinimumFrequency" value="hh:mm:ss" /> and the minimum value is 1 hour. Note that editing this field only defines the minimum interval – it does not set it.

After restarting the Vault Professional client, you can go back to the Could Drive Mapping and enter 1 hour as the minimum interval for that specific mapping.

Viewing the Job Queue

You can view the status of the jobs that are about to be submitted to the Job Processor, as well as the Jobs the Job Processor is currently processing in the Job Queue.

In the Vault Professional client, go to **Tools → Job Queue**. This opens the Job Queue dialog as below:
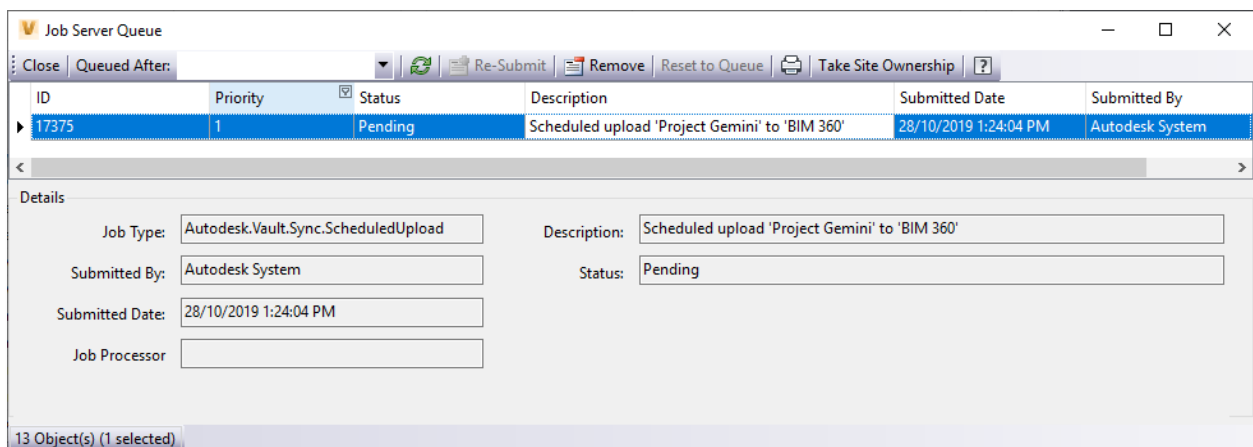
Figure 35 - Job Server Queue

The Job Queue shows a list of all the jobs and their status. In the example above, the **Scheduled upload job** has a status of Pending – and is awaiting it's turn for the Job Processor to action.

Viewing Server Tasks in ADMS Console

For every Cloud Drive Mapping configuration you configure with an automatic syncing schedule - whether a Daily or Interval sync - creates a corresponding entry in the Server Tasks in Autodesk Data Management Server (ADMS) Console. Open the ADMS Console on the Vault server machine, go to **Tools → View Server Tasks**.

Figure 36 - Server tasks in the ADMS Console

In the example above, there are two tasks called **Job queue scheduler (Autodesk Vault.Sync.ScheduledUpload)**.

The **Start/Scheduled Time** is indicated in the next column and shows when the task will get submitted to the Job Queue.

The **Frequency** shows the frequency of the submission of the task to the Job Queue in minutes. In the example above, the 1 project sync job is submitted to the Job Queue every 480 minutes or 8 hours, and the other is submitted ever 1440 minutes or 24 hours.