CS463382

Setting Up and Using Desktop Connector with BIM 360 Docs

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Autodesk

Learning Objectives

- Manage construction documentation using Desktop Connector with BIM 360 Docs
- Set up and use Desktop Connector
- Troubleshoot most common issues
- Best practices and recommendations

Description

The Document Management module in BIM 360 allows the storage and collaboration of construction documents with project stakeholders. With Desktop Connector, manage files in Document Management through a connected drive, letting users benefit from easy syncing of files and folders and offline working. This class teaches how to set up and use Desktop Connector with BIM 360 Docs, and how to troubleshoot the most common issues. This document contains updated information since the previous AU 2019 class.

Speaker

Luciane has been helping Autodesk customers and partners for 18 years. As a Senior Technical Support Specialist, she has experience troubleshooting a range of Autodesk BIM 360 applications. Born in Brazil, she holds an Architecture and Urbanism university degree, and is a Business for Architects and Engineers postgraduate. She worked as an architect for a few years. In 2002, she started working for Autodesk in São Paulo, Brazil, providing support for Latin American users with their technical queries related to AutoCAD, Revit, AutoCAD Architecture, and other Autodesk products.
She moved to England in 2007 and joined the AutoCAD technical support team. In 2014 she started providing support for BIM 360 products and was a Desktop Connector for BIM 360 point of contact for two years.
Luciane was a speaker at Autodesk University Las Vegas in 2019.

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Learning Objective 1:

Manage construction documentation using Desktop Connector with BIM 360 Docs

Autodesk cloud services

Autodesk offers a variety of cloud services that are targeted at different industry sectors. These cloud services allow document storage and collaboration. Some of them can be accessed only via a web browser, and some are also compatible with Desktop Connector.

What is Desktop Connector?

Desktop Connector is a desktop application that, once installed on a computer and connected to the internet, allows the bi-directional synchronization of files and folders when signed into a compatible Autodesk cloud service.

Desktop Connector and cloud services

The following cloud services are compatible with Desktop Connector:

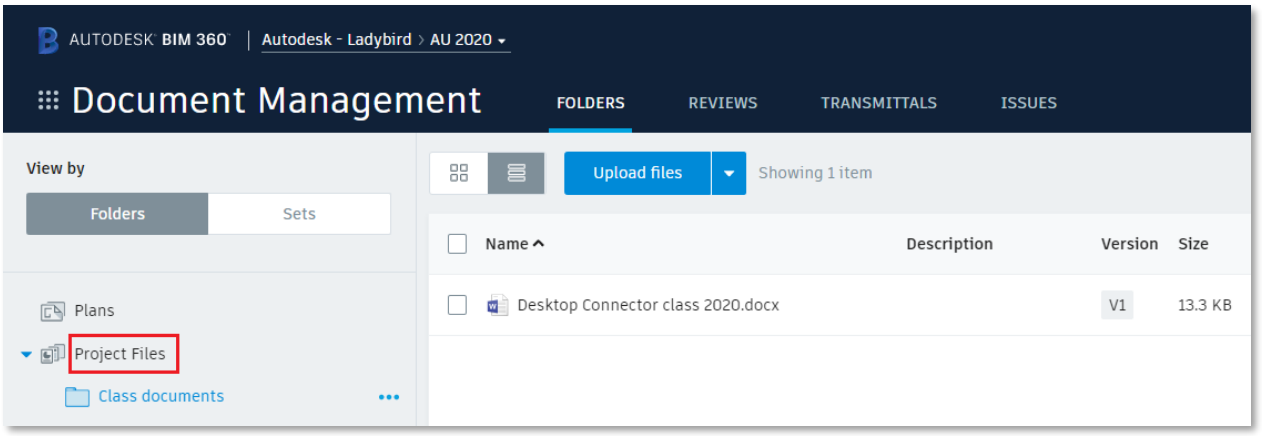
- Autodesk BIM 360 Docs;
- Autodesk BIM 360 Team;
- Autodesk Drive;
- Autodesk Fusion Team.

This document covers the functionality of Desktop Connector with the Document Management service in BIM 360. This flavor of Desktop Connector is also known as **Desktop Connector for BIM 360**.

BIM 360 Docs

The Document Management service in BIM 360 Docs allows the storage and management of 2D plans, 3D models, and other construction documents.

Document Management has two different options for document storage: *Plans* folder and *Project Files* folder. Desktop Connector accesses the *Project Files* folder, so any documents stored in the *Plans* folder will not be synced.



Desktop Connector accesses the Project Files folder in Document Management

Document Management allows setting up different user permission levels, and these are verified by Desktop Connector so that only users with adequate permissions have access to files and folders.

To know more about user permissions in BIM 360 Docs, see the Folder Permissions page in the BIM 360 help.

What does Desktop Connector do?

Desktop Connector is not a required application to be used with BIM 360. However, it is a time saver.

Once installed and connected, Desktop Connector creates the folder structure and placeholder files in a local drive, that replicates the folder structure that the user signed in can access in Document Management.

Desktop Connector does not download all data that is stored in BIM 360 Docs. Instead, it only downloads files and linked files that are opened by the user, or manually synced (on demand).

Desktop Connector does not require a separate fee, it is a free of charge application.

Sync Document Management files and folders

Desktop Connector allows users to upload files, and access, edit and delete cloud-stored files from their computers, without the need to use a web browser. Automatic download and upload of files and folders are the main features that promote increased productivity.

It is possible to create a folder structure in your local drive, with or without files in them, and upload the entire structure to a BIM 360 project.

You can also work offline when an Internet connection is not available, and upload the changes made to your files when you go back online.

Desktop Connector can also be used to link files that are available in the BIM 360 project.

Work with BIM 360 Issues in Navisworks

Install the **BIM 360 Issues** app to create and review BIM 360 Docs issues in Navisworks NWD files. Files will be accessed via Desktop Connector.

The application can be downloaded from the Autodesk App Store and works with Navisworks Manage and Simulate versions 2019, 2020, and 2021.

For more information, access:

- To Work with Issues in BIM 360
- Navisworks & BIM360 Docs Issues – The new best friends on the block!!!

Share data from Civil 3D to BIM 360

The Start tab in Autodesk Civil 3D allows access to Document Management files and folders stored in BIM 360 via Desktop Connector.

You can use the *Publish Surfaces* tool to publish Civil 3D surfaces to BIM 360 Docs. These files will then be available for linking via the Desktop Connector drive, for example when adding topography links into Revit models.

See how to publish surfaces:

- To Publish Surfaces to Autodesk BIM 360 to Reference into an Autodesk Revit Model

Additional features are available with Collaboration for Civil 3D.

Collaboration for Civil 3D models

Collaboration for Civil 3D allows users to collaborate Civil 3D models and data shortcuts in BIM 360. Collaboration for Civil 3D allows the creation and management of data shortcuts and automatic file locking.

A BIM 360 Design license includes the Collaboration for Civil 3D entitlement, and AutoCAD Civil 3D 2020.2 or later is required.

For more details, review:

- What is Collaboration for Civil 3D?
- Tips for Working With Autodesk Collaboration for Civil 3D
- Louisa Holland's AU 2020 classes on Civil 3D and BIM 360 workflows

Learning Objective 2:

Set up and use Desktop Connector

Set up Desktop Connector

Desktop Connector, as the name says, is a desktop application. It needs to be installed on a computer to function. Some requirements are needed to be addressed, as follows.

System requirements

The system requirements for Desktop Connector are:

- Microsoft Windows®–8.1, or 10 (v. 1607 Anniversary Update or later).
- Desktop Connector is not supported when run "elevated".
- Desktop Connector must be installed by an administrator.
- There must be enough free memory space to install and store files.

Installation

Desktop Connector Installation files can be downloaded from the *Autodesk.com* website. It is possible to download the latest version or, for troubleshooting purposes, it is also possible to download previous versions.

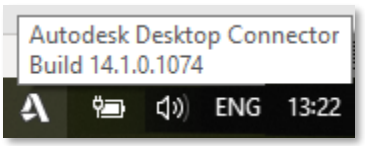
The current links for download of installation files are:

- Current version - Desktop Connector Release Notes
- Previous versions - Older Releases

Note that it is not possible to have two different versions installed on the same computer at the same time, and it is highly recommended to install the latest version available.

After downloading the desired version, run the installer. Desktop Connector will install Microsoft Visual C++ Redistributable (x64) and Microsoft .Net Framework during the setup process. After the installation, it is necessary to restart the computer.

You can review the version installed by hovering the mouse over the Desktop Connector “A” icon in the Windows tray.

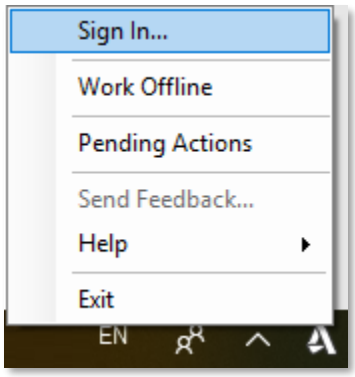


Desktop Connector version 14.1.0.1074 is installed

Start up and sign in

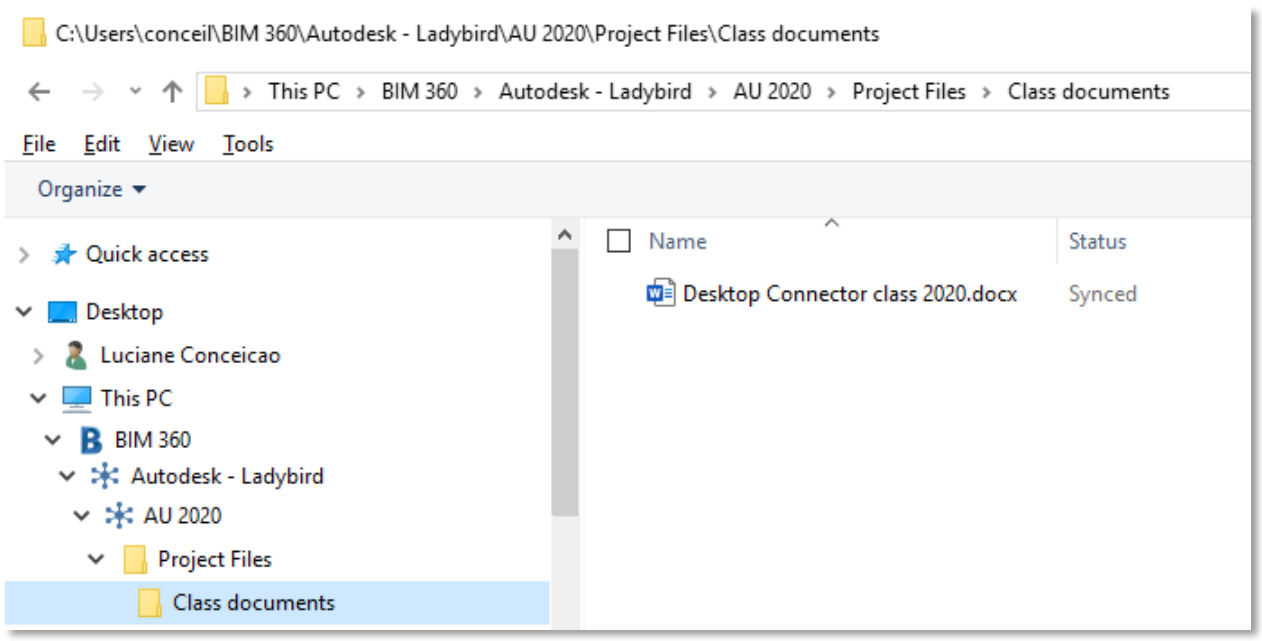
Once Desktop Connector is installed, the Desktop Connector icon displays in the Windows tray. If it doesn't display, start Autodesk Desktop Connector from the Windows Start menu.

To sign in, right-click the icon and click in *Sign in…* . The same email and password that is used to log into BIM 360 should be used here.



Sign into Desktop Connector

Once signed in, Desktop Connector will check what the user is allowed to access. This is directly related to user's permissions to folders in Document Management. It will then display all accessible BIM 360 accounts, projects, and folders in the BIM 360 connected drive in Windows File Explorer, under *This PC*.



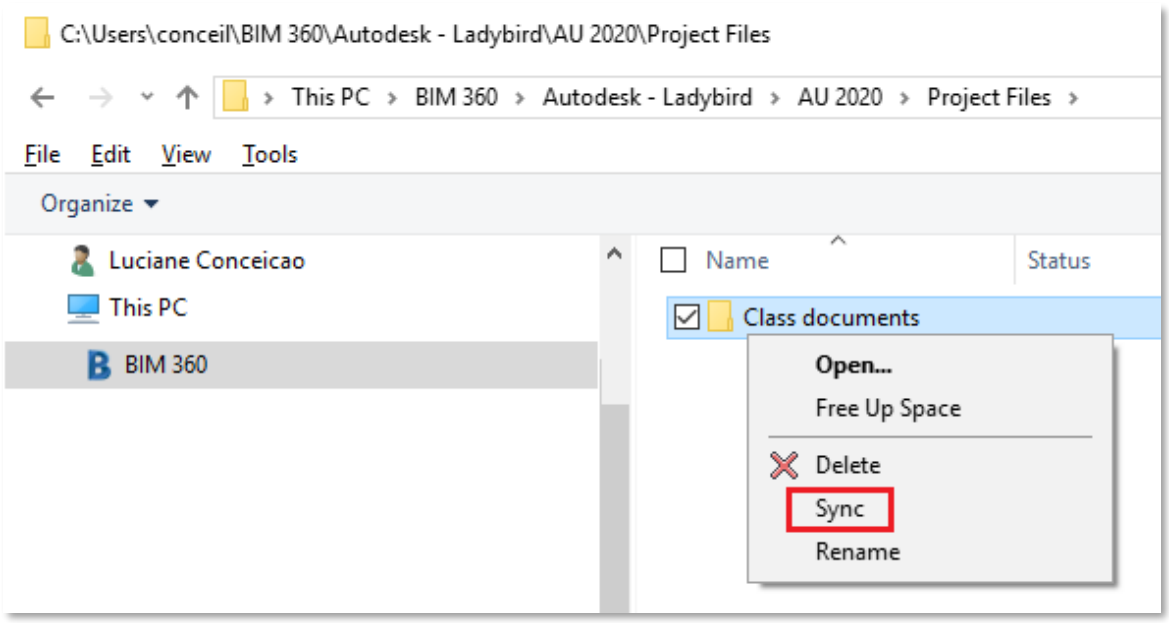
Folder structure of the BIM 360 connected drive in File Explorer

The location used by Desktop Connector is *C:\Users\<username>\BIM 360\<account name>\<project name>*. This is known as the connected drive, or local cache folder. This location cannot be changed. The folder structure seen is a mirror of the folders the user has permissions to in the Project Files folder in Document Management.

Note that the actual files are not downloaded to the local drive when you start using Desktop Connector. Only files that are opened or synced are downloaded locally. When opening files with linked files, such as AutoCAD XREFs, the links are also downloaded.

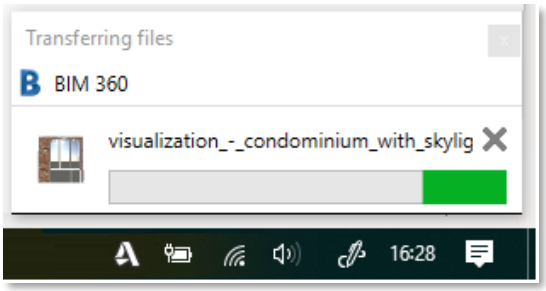
Files can be opened by double-clicking in File Explorer, right-click > *Open*, or via the *Open* command in the authoring application.

You can sync files to have a copy transferred to your local drive. To sync a file or folder, right-click the file or folder and select *Sync*.



Sync files and folders via right-click

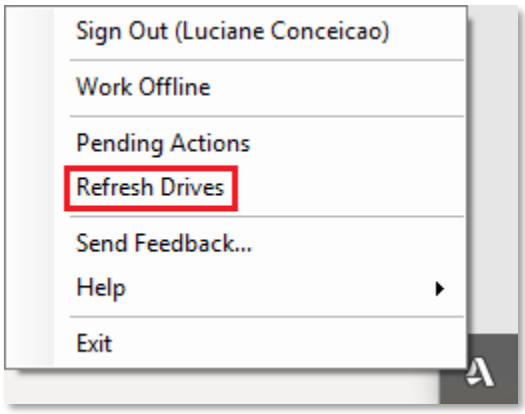
A notification that the file is being transferred is displayed.



The Transferring files notification is displayed when a file is synced

Refresh drives

If your access to BIM 360 accounts changes, use the *Refresh Drives* option to force the access update.



Refresh drives to update BIM 360 user entitlements

Once drives are refreshed, you may see more or less BIM 360 accounts available to you in the connected drive, depending on BIM 360 account access or lack of.

Update Desktop Connector

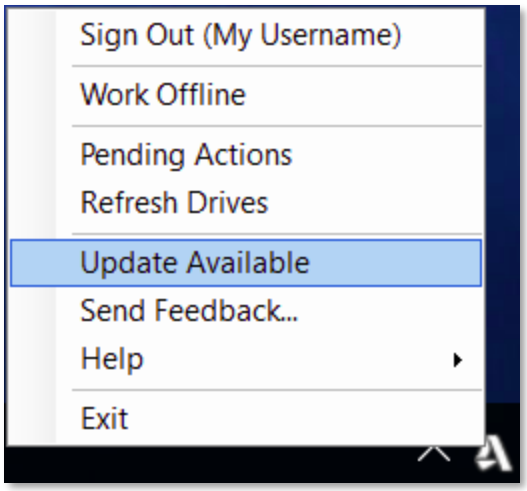
Updates for Desktop Connector are available usually monthly or bi-monthly. These updates contain feature requests and improvements.

Once an update is available, a new version is published to *Autodesk.com*. Users will receive a notification that a new version is available directly in Desktop Connector about one week after the update is released on the Autodesk web page.

This period between the new version publication and the user notification allows IT teams to plan the deployment of the updated version on multiple machines when required.

Users that have local administrator rights will be able to install the new version by following the link in the notification.

It is also possible to update it later, and the easiest way is to click the *Update Available* option from the Desktop Connector menu. This option is only available a few days after the new version is published to *Autodesk.com*.



A new version of Desktop Connector is available for install

Uninstall Desktop Connector

Desktop Connector can be uninstalled from Windows Control Panel > Products and Features.

In the rare event that some installation files are left behind after an uninstall, these can be cleared by using an application such as Microsoft Program Install and Uninstall troubleshooter.

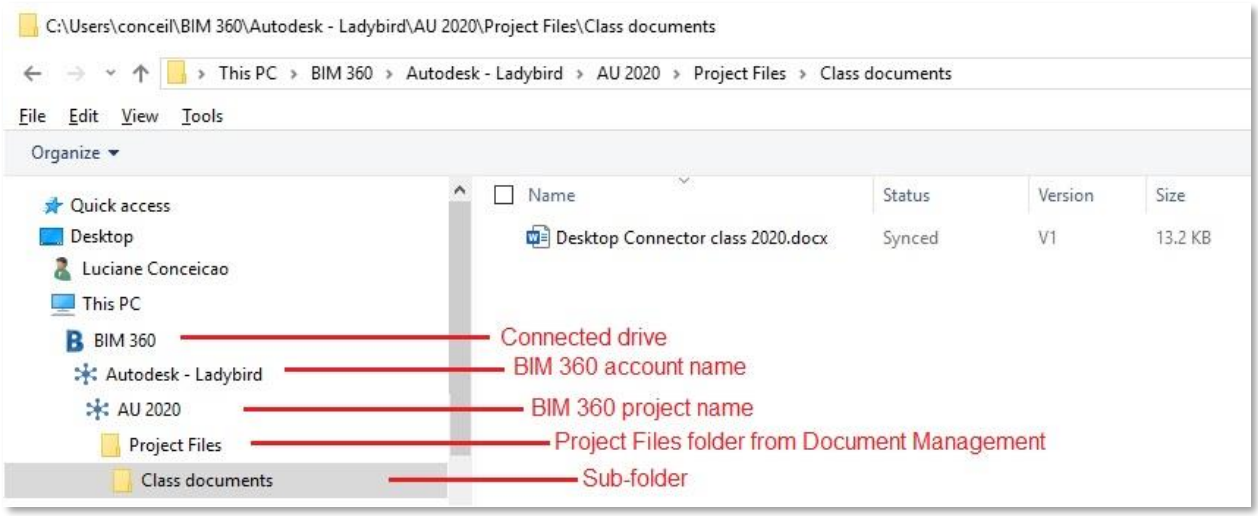
Use Desktop Connector

Take advantage of the Windows File Explorer familiarity interface to work with your documents in BIM 360 Docs.

Work with your documents

Once signed in and connected to your BIM 360 account and project, you will see the folder structure of your BIM 360 project replicated in Windows File Explorer.

The connected drive is created under *This PC,* and its name is **BIM 360**.



Contents of the BIM 360 connected drive displayed in Windows File Explorer

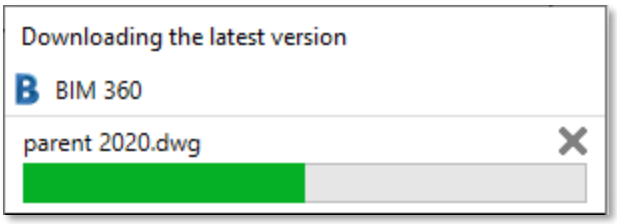
Once the drive is created and connected, you can:

- Review files and folders that you have permission to;
- Upload files and folders via drag & drop in File Explorer, or with the Save command in the authoring application;
- Delete documents;
- Sync (download) documents to create a local copy;
- Open documents;
- Create and delete sub-folders in File Explorer;
- Rename folders and sub-folders;
- Lock files to prevent other users from editing files you are working with;
- Access cloud-stored files to link them into other files;
- Work with documents in offline mode;
- Work with BIM 360 Docs issues in Navisworks;
- Collaborate Civil 3D files.

You are now able to open, edit and save changes to your documents stored in BIM 360 via File Explorer. You can also upload locally saved files to Document Management.

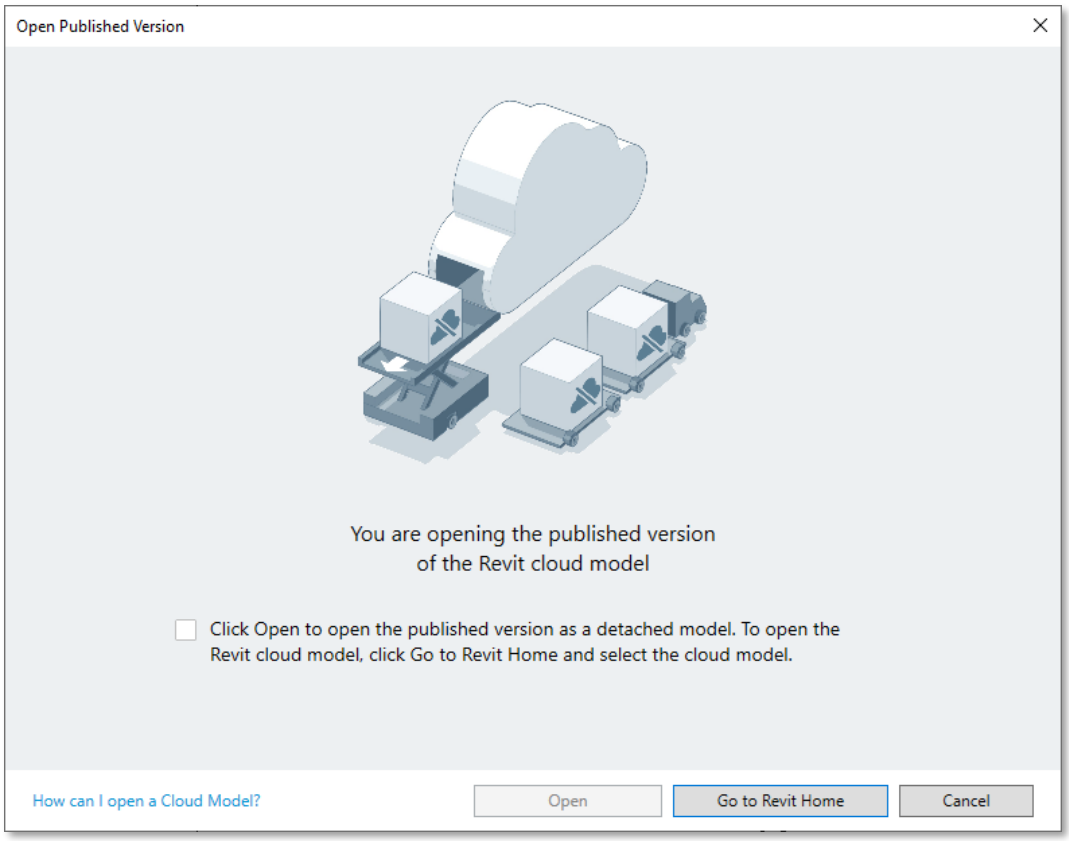
When opening a file from the connected drive in File Explorer, it will try to find the associated application to open it.

When a file is opened from the BIM 360 connected drive, it will download a local copy from the project first, so that you can work on the latest version of the file saved in the project.



The file is downloaded locally when opened

When opening a Revit cloud model via the connected drive, a message will display asking if you want to open the published version as a detached copy of the file, or open it from Revit Home.



Opening a published Revit cloud model via Desktop Connector

If you choose to detach the model, you can save it later as a new Revit model but will lose the connection to the original Revit cloud model. To keep the relationship, use the BIM 360 Design workflow, opening the file via Revit Home.

Therefore, it is possible to open Revit cloud models via Desktop Connector, but it is not possible to save them back to BIM 360.

For more details, see About BIM 360 Docs Connected Drive Integration with Revit.

Link Files

Use the Desktop Connector drive to link files, so that other project members can also see file references when working with parent/host files.

When uploading drawing files (DWGs) with external references (XREFs) to BIM 360 via the Desktop Connector drive, the parent and children (XREFs) files will also be synced.

If the XREFs are stored in a different folder than the parent file, then the folder structure is also uploaded to the BIM 360 project.

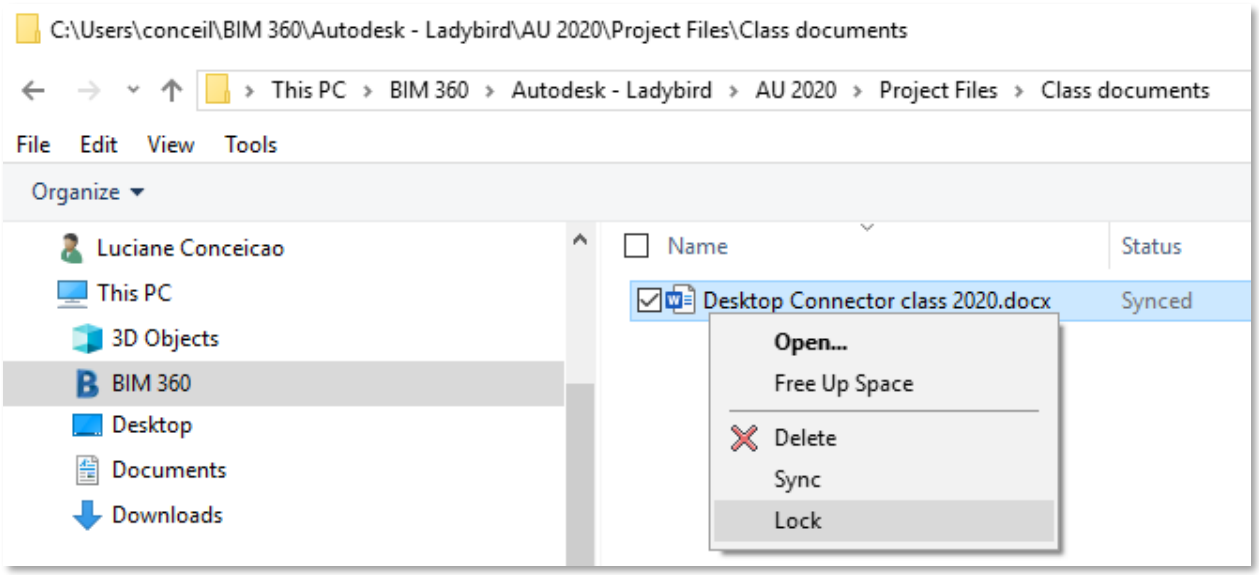
When linking a Revit file stored in BIM 360 via Desktop Connector, the link will not be displayed when the host file is opened in Document Management via a web browser, only when the host file is opened in Revit.

Note that file linking is not available for all file types and is officially supported and tested only for DWG files.

Lock files

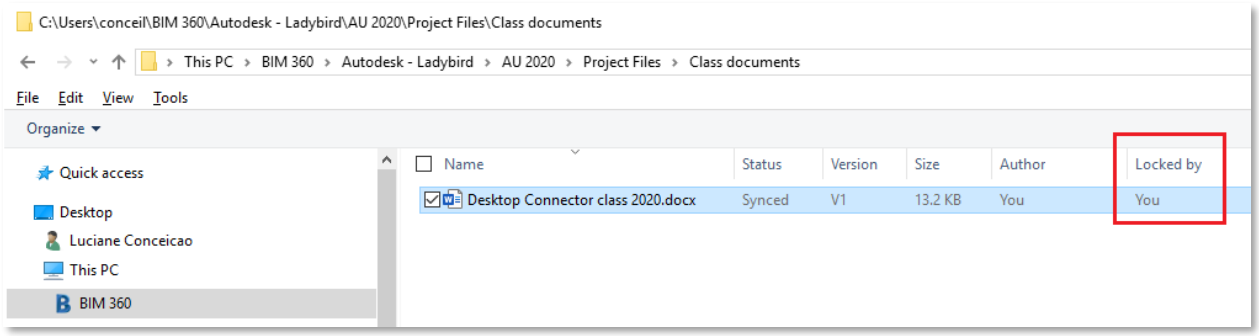
Use the *Lock* tool to avoid having multiple users working on the same file at the same time.

A file can be locked directly in the connected drive. Simply right-click the file in the connected drive and select *Lock*.



Locking a file

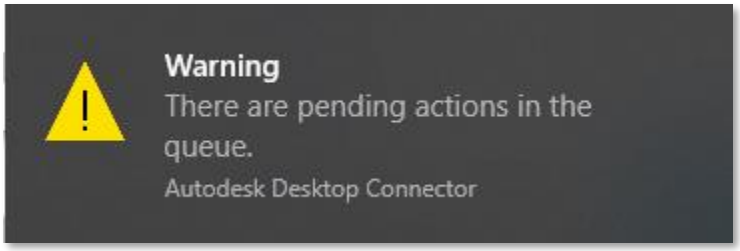
Your name will display in the *Locked By* value for other users.



A file locked by you

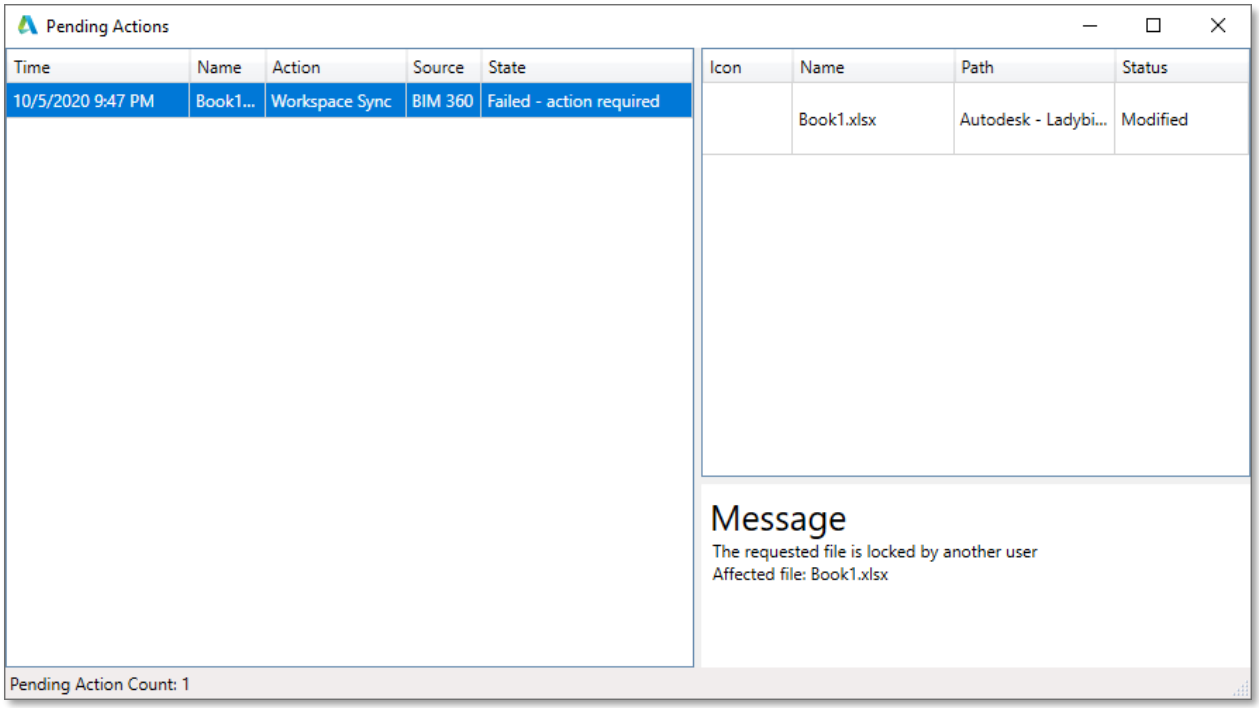
It is possible to open a file that was locked by another user, but it is not possible to sync the saves made to it.

When you try to save a file that was locked by someone else, a warning pops up at the bottom right of the screen, and the Desktop Connector icon shows with a red dot.



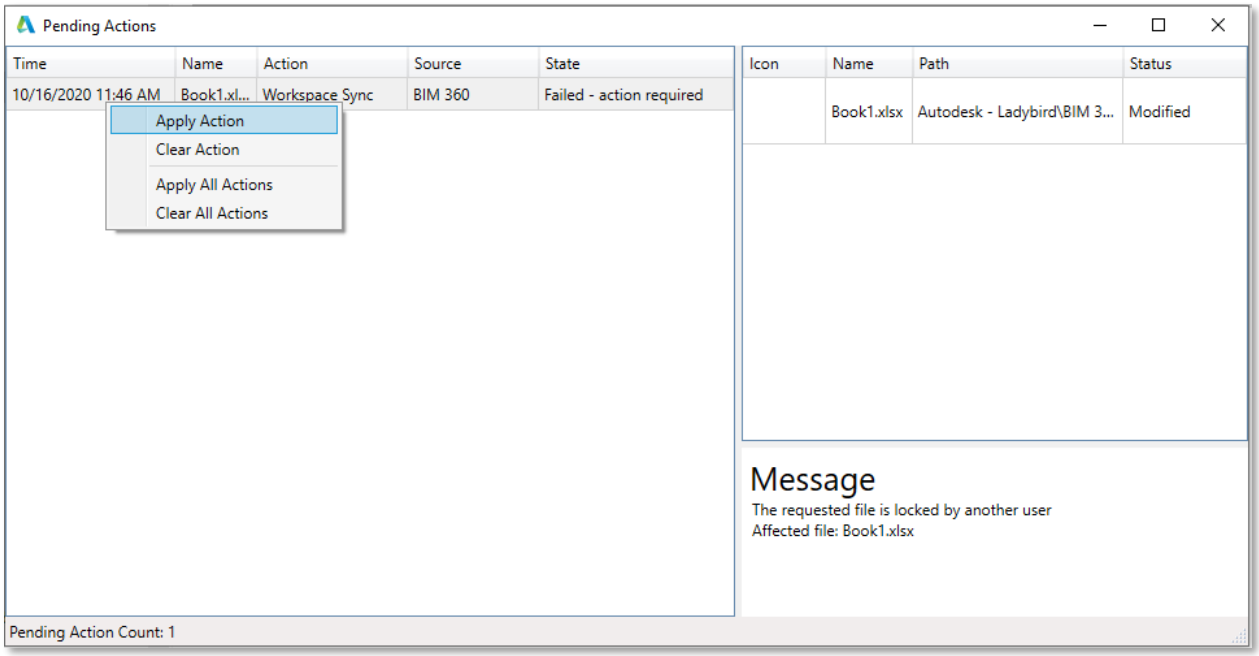
Warning received when trying to save changes to a locked file

In Pending Actions, an action with a “Failed – action required” state will be displayed. Select the action to display shows further details on the right-side panel, including the reason why it failed.



The requested file is locked by another user

Once the file is unlocked, it is necessary to manually apply the action in the Pending Actions dialog. To do so, right-click the action and select “Apply Action”.



The user needs to apply action after the file is unlocked

Note that users with higher permissions can override the lock setting. Project members with View + Upload + Edit + Control permissions for a folder can unlock any document in that folder.

File Locking for Autodesk BIM 360 is a free application that can be downloaded from the Autodesk App Store. It provides automatic locking and unlocking for DWG and DWT files that are stored in BIM 360 when they are opened in AutoCAD.

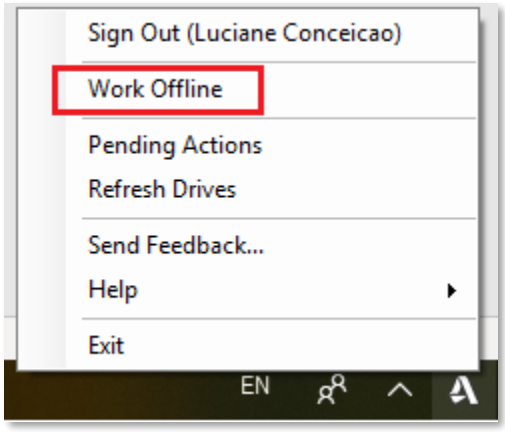
File Locking for Autodesk BIM 360 supports AutoCAD 2020 and 2021-based products.

Note: Civil 3D 2020.2, 2020.3, and 2021 already provide these automatic locking and unlocking capabilities.

Work offline

Working offline allows users to work with documents when not connected to the Internet while keeping the relationship with the files stored in BIM 360 Docs.

To work offline, download the latest version available online with the *Sync* command, and then change to *Work Offline* mode.

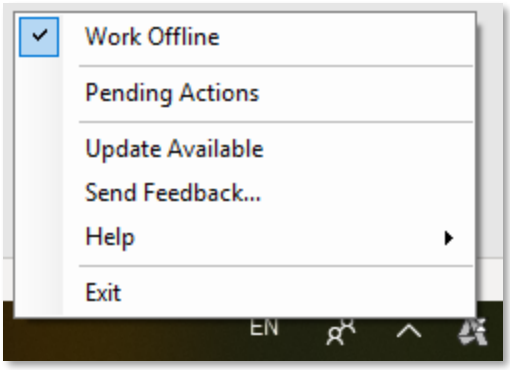


Use Work offline mode when no Internet connection is available

The Desktop Connector icon will go from white to grey, and then blue . The BIM 360 drive will show a pause symbol .

Open the local copy of the file, make the desired changes and save. This only saves the local copy of the file.

To revert to online mode, right-click the Desktop Connector icon and uncheck the *Work Offline* option.



Uncheck Work Offline to go online again

The Desktop Connector icon will go grey and then white again.

Desktop Connector will then update the file to a new version in Document Management with the changes saved.

In Pending Actions, the action shows as Scheduled and will be automatically processed.

Note that the Work Offline tool does not lock files automatically.

Learning Objective 3:

Troubleshoot most common issues

Review the basics

Desktop Connector interacts with different applications and all of them need to be properly set up and connected for best performance. The list below shows the main points to review.

Computer settings

During the installation of Desktop Connector, the user needs local administrator rights.

To use Desktop Connector, running as Elevated (run as Admin) is not supported. This includes:

- If a user performs a right-click "Run as Administrator" on Desktop Connector;
- If group policies are configured in a way to run applications Elevated;
- Desktop Connector does not support interacting with other applications which are running Elevated.

To check if Desktop Connector is being run in Elevated mode:

1. Start Task Manager;
2. In the Details tab, right-click on the column headers and choose "Select columns". Scroll down and enable "Elevated";
3. Find “DesktopConnector.Applications.Tray.exe” and see if the Elevated value is *Yes* or *No*.

Ensure that firewall, antivirus, and other connectivity settings allow the proper functioning of Desktop Connector. TCP communication on "localhost" should be enabled on port range 51001 – 51010.

Also, review which IP addresses, ports, and domains are used for BIM 360 services

When working with large datasets, make sure there is enough free storage space on your computer. Desktop Connector uses up to three times the size of data being synced in the connected drive.

Desktop Connector Status

Make sure Desktop Connector is online (or in Work Offline mode if you changed the status). Here are the possible statuses:

 Desktop Connector is starting up, going offline, or reconnecting;

 Desktop Connector requires an update. It is highly recommended to update to the latest version of Desktop Connector to continue using your connected drives. Note that not all updates are absolutely required, this status is only displayed occasionally;

 Desktop Connector is online or the user is not signed in yet;

 Desktop Connector is in Work Offline mode;

 There are pending actions that could not be processed;

 Actions are being processed.

Document Management

Any Document Management limitation also applies to Desktop Connector. For example, supported file types in BIM 360 are the same for Desktop Connector.

To sync files, you need to be able to access the BIM 360 project and have adequate permissions to Document Management folders. *Download* permission is required for all folders where files and linked files are stored. In some cases, *Edit* permission may be required.

Dataset

If there are long paths in the folder structure of the dataset (exceeding 244 characters in total), the job will not process. This is a Windows limitation. A warning will be displayed, and an error message will be displayed.

Items with a path too long have a unique icon. To know more details visit the Long Path page.

Certain file types are now skipped from uploading. These can be backup or log files that are usually required by the system and rarely needed by the user. Examples: HTML, ATMP, DS$, DCE, RWS, DAT, SLOG.

Files with EXE extension are blocked from uploading for security reasons.

Authoring application

If a file is being saved in the authoring application (AutoCAD, Revit, Civil 3D, MS Office…) and it is not being uploaded to BIM 360, close the application to release the file.

Working with AutoCAD

AutoCAD and Desktop Connector have a special relationship. DWG is the only file format that is supported for roundtrip linking operations.

When a DWG file has an external reference (XREF), this connection is kept during upload and download with Desktop Connector. If the XREF is saved in a different folder than the parent file, Desktop Connector can read and act upon this information.

Dragging and dropping an AutoCAD DWG file with XREFs to a Desktop Connector folder also uploads its children to the BIM 360 project. When uploading a file with links to other files in folders that don't exist in Document Management, a new folder is created for these files.

When opening or syncing a DWG file from Desktop Connector, its reference files are also synced. If you don't have permissions for the referenced documents, these documents won't load, but all other XREFs are maintained.

Working with Revit

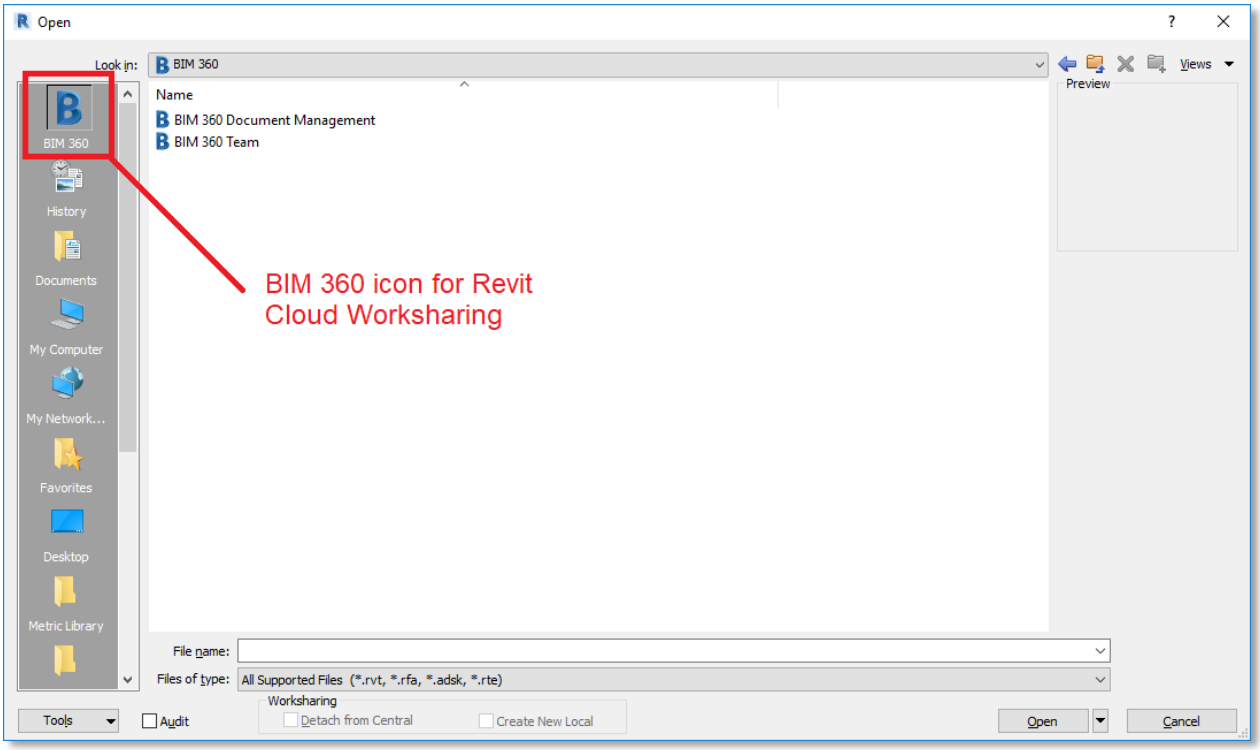
Desktop Connector can be a very helpful tool when working with Revit files. However, special attention needs to be paid.

There are a few different ways to upload a Revit file to Document Management. A Revit model can be uploaded via web browser, Revit Cloud tool, Revit Cloud Worksharing (Design Collaboration), and the connected drive (Desktop Connector). Mixing these processes may result in unexpected results.

When using the connected drive, have in mind that Revit cloud files cannot be updated by Desktop Connector. This is because a Revit cloud model is not a live file in Document Management – it is a published model at a certain point in time.

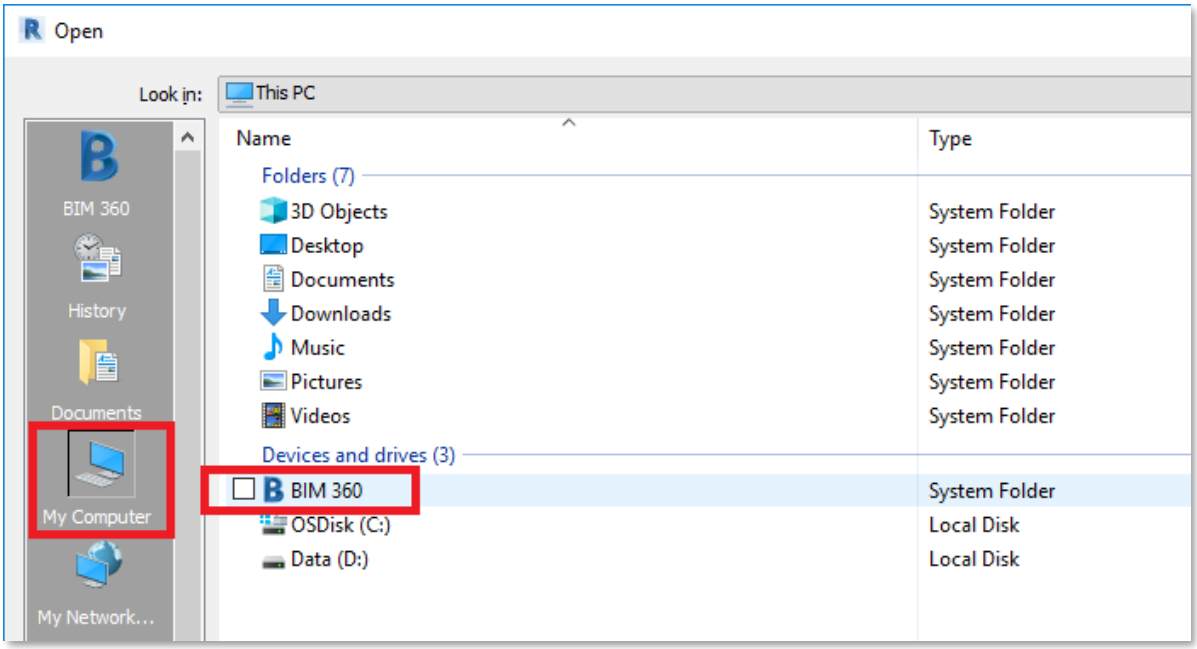
A Revit cloud model can be linked to a non-cloud (workshared) model, though. Other file types can also be linked to a Revit model via Desktop Connector.

When working with older versions of Revit, make sure that the model is being opened from the correct location. Although the BIM 360 icon is identical, Desktop Connector uses a different icon than the one that displays at the top of the Revit Open File dialog box.



BIM 360 icon in Revit for Revit Cloud Worksharing

The BIM 360 Desktop Connector icon is located under “My Computer” or “This PC” in the Revit Open file dialog box.



BIM 360 icon for Desktop Connector in Revit Open dialog

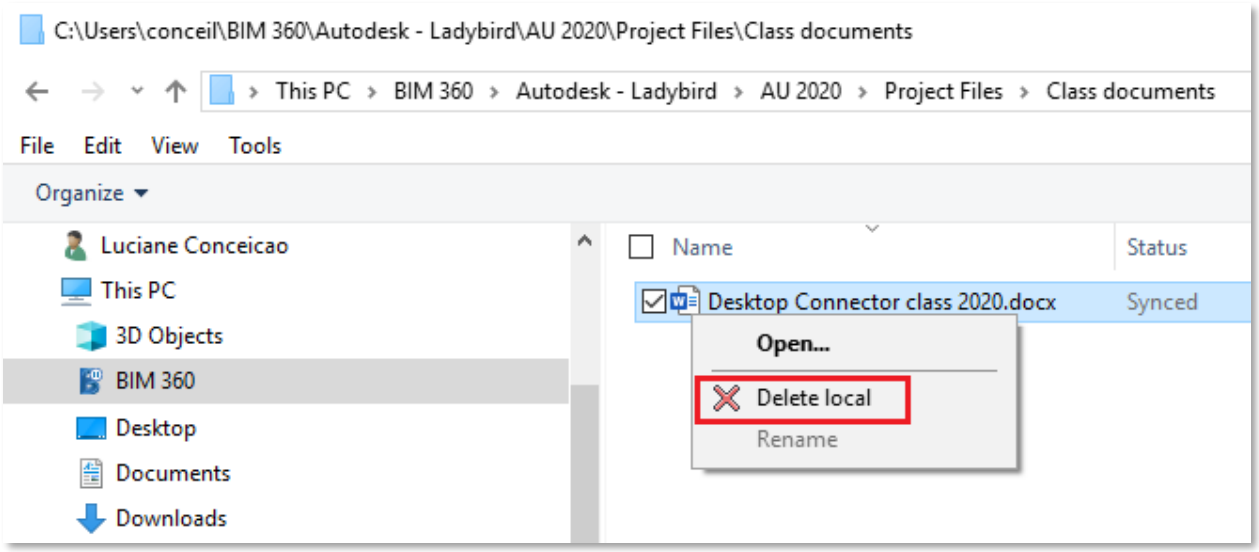
Working with Navisworks

It is possible to open and save files using Desktop Connector and Navisworks. However, file linking in Navisworks via Desktop Connector is not supported at this time.

Delete local files

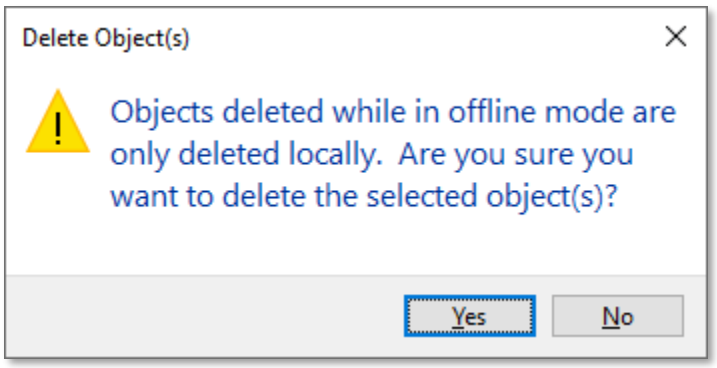
It is possible to delete local file copies in the connected drive. This can be used for troubleshooting file syncing issues.

To delete local files, go in Work Offline mode (otherwise you might delete the online file copy as well). Then, in File Explorer, navigate to the file in the BIM 360 connected folder, right-click and choose *Delete local*. You can also press the Delete key.



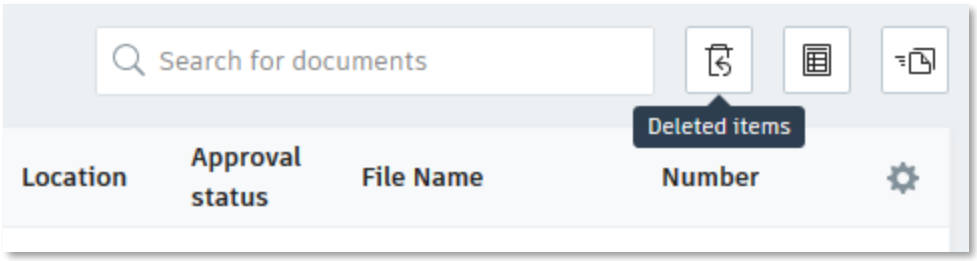
Delete the local copy of a file

The following warning will then be displayed:



Warning when deleting a local copy of a file

If, by mistake, files are deleted when in online mode, they can be restored from Deleted Items in Document Management.

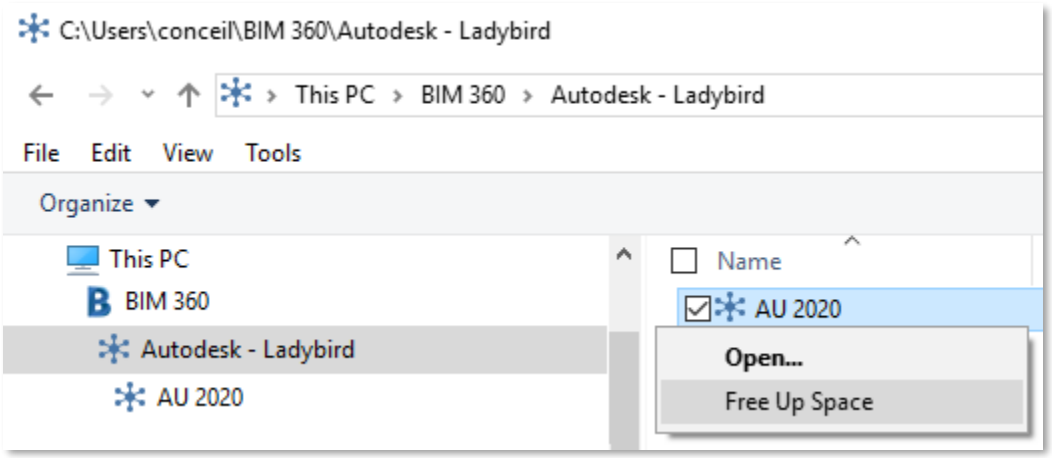


Deleted Items folder in Document Management

Free up space

Use this tool to delete project data from your local drive. The data will not be deleted from your BIM 360 project.

To free up space on your local drive, right-click the account name, project name, folder, or file and click *Free Up Space.*



Free up local drive space

Common issues

See below for tips on how to resolve some common issues when using Desktop Connector for BIM 360.

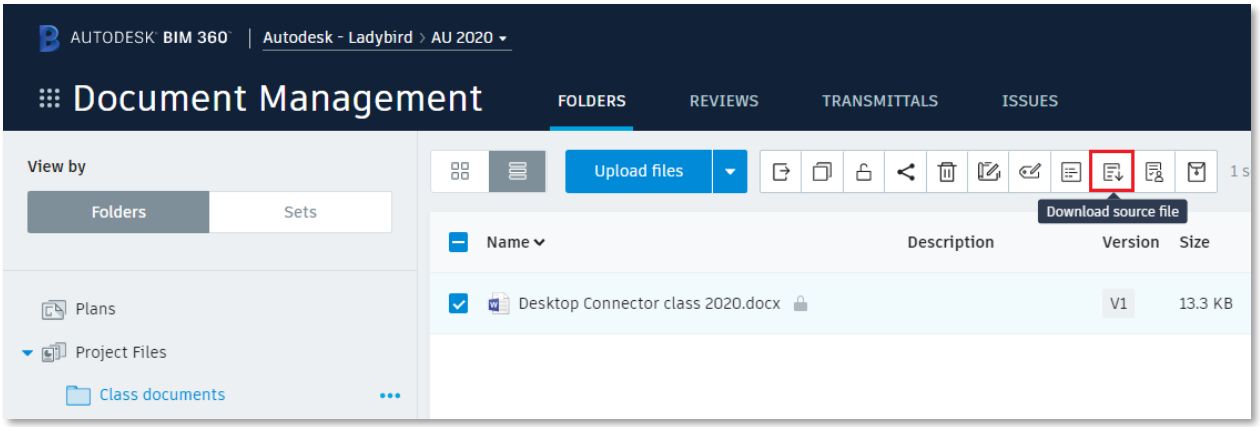
Copy and move files and folders

It is not possible to copy and move files and folders from a folder in the connected drive to another folder in the connected drive. Do this via web browser in Document Management.

It is possible to copy a **file** from the connected drive to a local folder by drag & drop or copy and paste. From the local drive, it is possible to drag & drop and Copy and Paste to the connected drive. Moving files from the connected drive to a local folder is not possible – it will trigger the Copy command instead of Move.

It is not possible to drag & drop a **folder** from the connected drive to a local folder, but it is possible to select a folder on the right-side panel in Windows File Explorer and use Copy and then Paste Shortcut. A shortcut is created in the target folder, and the shortcut takes to the folder in the connected drive.

You can download multiple files and folders as a ZIP file from Document Management using the **Download source files** option in the web browser.



Use the Download source files option to download multiple files and folders

Another alternative is to create a **Transmittal**, which is a ZIP file with the content selected in the Document Management web interface. Review the Transmittals topic in the BIM 360 Docs Help page for more details.

File versioning

Sometimes, the file version in the local drive is not the same as in BIM 360. This usually happens when a new version is uploaded to Document Management by another user. In this case, the local file status shows as “Stale”. Opening or syncing the file should update the local version.

Possible values for file status:

- **New**: The local file has not been uploaded;
- **Synced**: The local file is up-to-date with the file in the data source;
- **Online**: The file has not been downloaded locally (the file will be downloaded on demand);
- **Modified**: The existing file has been modified locally and the modification has not uploaded;
- **Conflict**: Edits have been made to the file both locally and in the data source. Next time the file is read, the local file will be sent to the recycle bin. It might be necessary to clear the related failed action in the Pending Actions dialog;
- **Stale**: The local file is an older version than what is in the cloud (the file will be downloaded on demand). Once the file is downloaded it will show as Synced;
- **Error**: There was an error obtaining the local file Status value. Refreshing the window usually resolves the status value.

Folders and files don’t upload

If files and folders don’t upload from your local drive to Document Management, review the BIM 360 project settings. The Document Management service should be active and users trying to upload files and folders to the BIM 360 project need to be able to upload and download project data via web browser.

If the user can upload files via web browser, make sure that Desktop Connector is up and running, the email address used to sign in is correct, and that Desktop Connector is up-to-date.

If files saved directly from the authoring application do not upload to the BIM 360 project, close the application. This will release the file in case the application does not release it when it is closed.

Your file will not upload if was locked by another user. See Lock Files for more details.

It is a good idea to check for file corruption. If a file does not upload, clear any corruption it might have and try again.

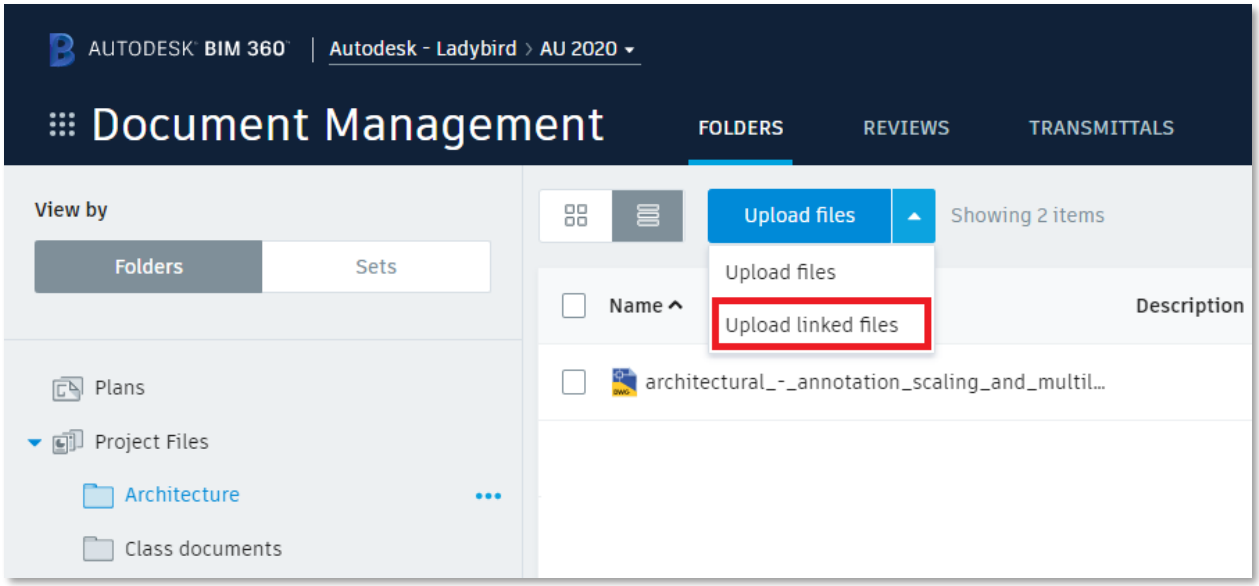
Folders and files don’t download

Files that are still processing in Document Management may not be available via the connected drive. If necessary, check if the file was uploaded and processed successfully in Document management.

If it’s not possible to download data from the BIM 360 project, make sure there is enough free memory on the computer to download the data. Note that the free space should be at least three times the size of the data being downloaded. This is because some copies need to be created to complete the download job.

If external references or linked files do not download when the parent file is downloaded or opened, make sure the linked file is saved to a location that is accessible to the user in the same BIM 360 project. Review the link path in the authoring application, and make sure it is a *Relative* path.

Note that links will only download with the parent file if the files were uploaded to BIM 360 Docs via the connected drive, or via the “Upload linked files” option in Document Management. Dragging the files into the Document Management folder will not keep the link relationship.



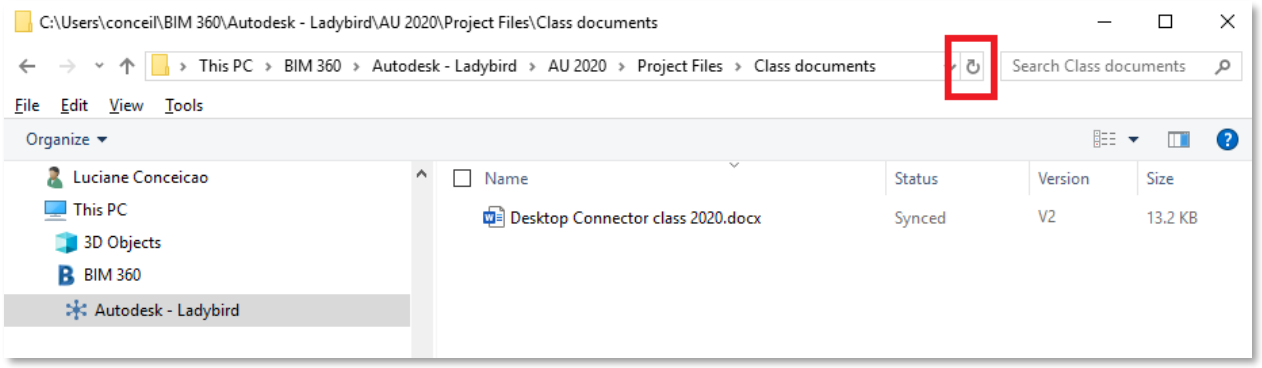
Upload linked files so that they can follow the parent file

Documents might take a few minutes to refresh in the local system when they are updated by other project users. Files need time to cache, that is, the time to have changes made in BIM 360 Document Management to reflect in the connected drive.

The time required for the refresh varies according to the type of changes made:

- Accounts: 12 minutes (minimum 2 minutes);
- Projects: 3 minutes (minimum 1 minute);
- Folders and documents: 3 minutes (minimum 1 minute);
- User permissions: 35 minutes (minimum 5 minutes).

Note: The Windows File Explorer view refreshes automatically every 10 minutes. Refresh the view manually to see the latest file properties.



Refresh the File Explorer view to see the latest file properties

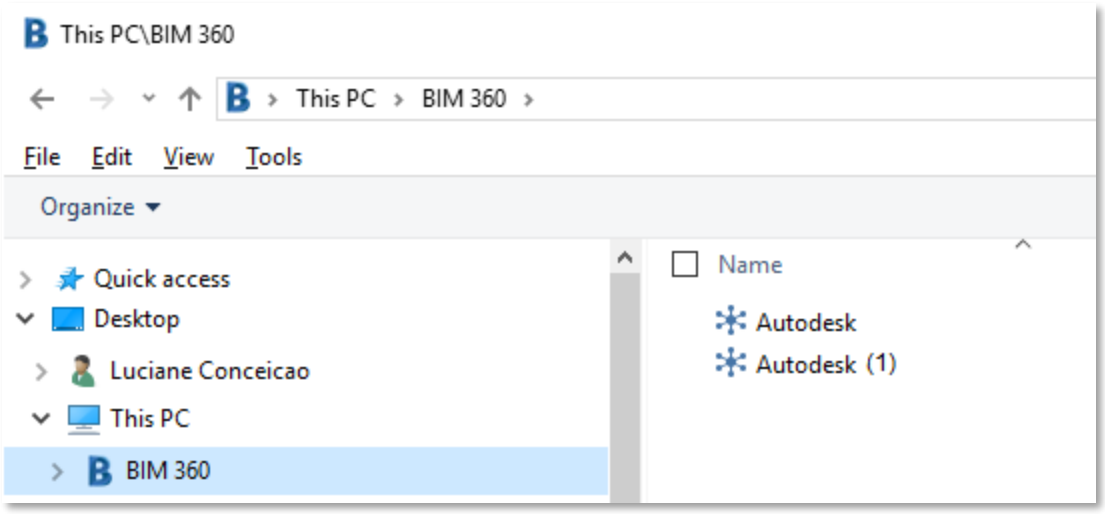
Renamed accounts and folders

In certain circumstances, the connected drive may show two or more folders with the same name, with an added number to it in parenthesis.

This is the default behaviour of Windows and happens when the user has access to folders or subfolders with the same name. Windows does not allow having more than one folder with the same name in the same location, so it adds a number to create a differentiator.

To resolve this, either change the name of folders so that there are no duplicates, or increase the level of permission to the user, so that top folders are also accessible and displayed.

This can also happen with account names when the user has access to more than one BIM 360 account with the same name. This is more common when the user has access to two accounts in different BIM 360 server locations (Americas and Europe).



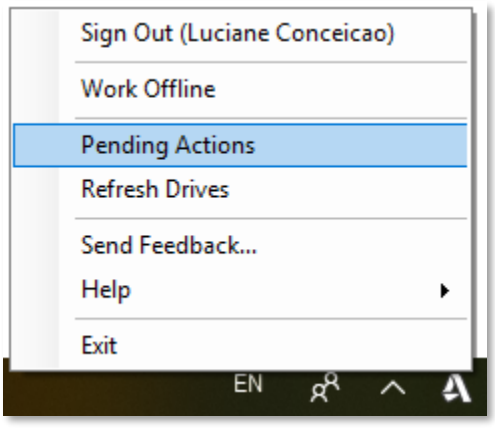
Windows renames duplicated values in the connected drive

Troubleshooting techniques

Follow the suggestions below to discover the root cause of an issue you may encounter while using Desktop Connector.

View Pending Actions

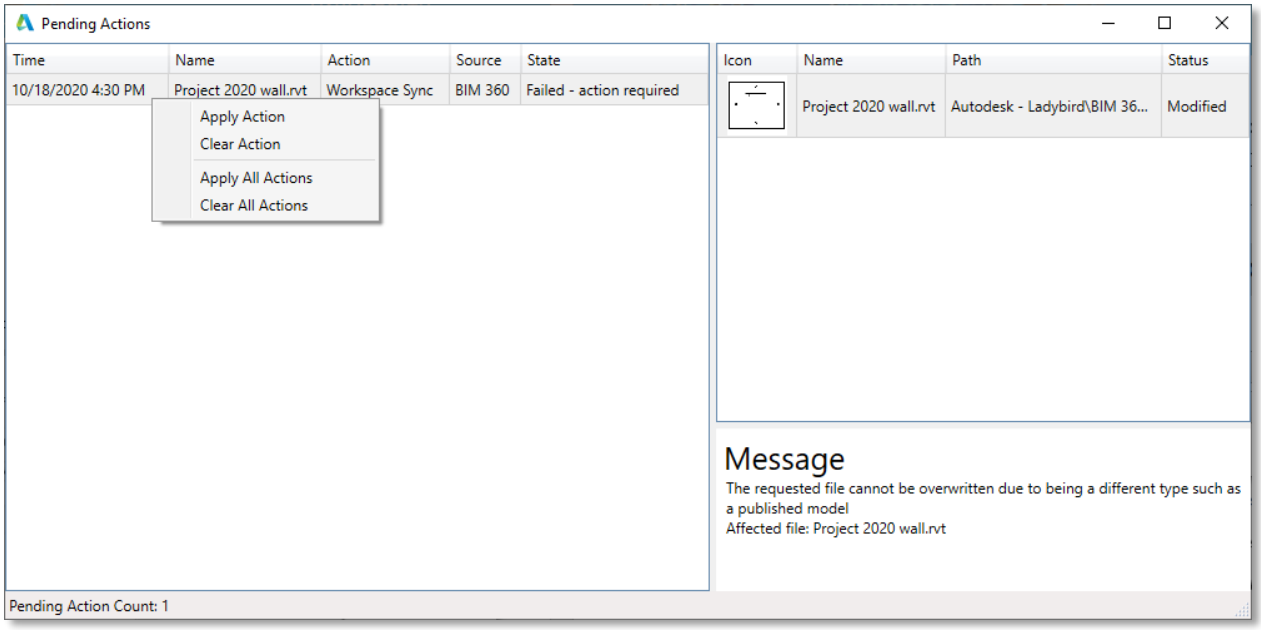
Right-click the Desktop Connector icon in the Windows tray to access the Pending Actions.



Review pending actions

In the Pending Actions dialog, jobs that are processed successfully quickly display and disappear. Any pending jobs will remain in the list, waiting for user action. When this happens, the Desktop Connector icon shows a red dot in the Windows tray.

Select the action in the left pane, and it will expand with further details in the right pane. Here you can check which files are affected and if there is a message related to the pending action. This will give you a clue about what you should do next.



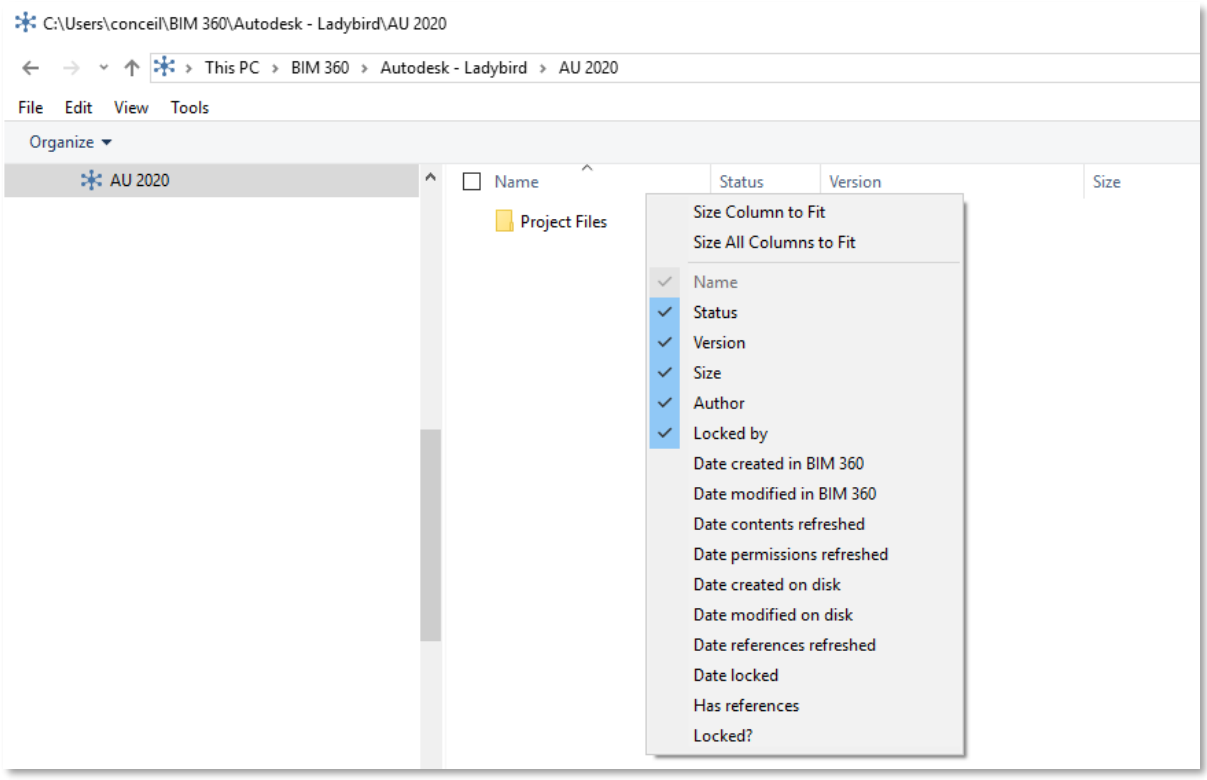
Verify the pending actions and apply or clear actions

Note that while jobs are being processed, Desktop Connector will prevent the machine from going to sleep, even if the display automatically turns off and the user is logged off.

Check file properties

Review folder and file properties in File Explorer. Some extra properties can be displayed by right-clicking the column header.

Review when the files are refreshed, created, and modified to track their changes.

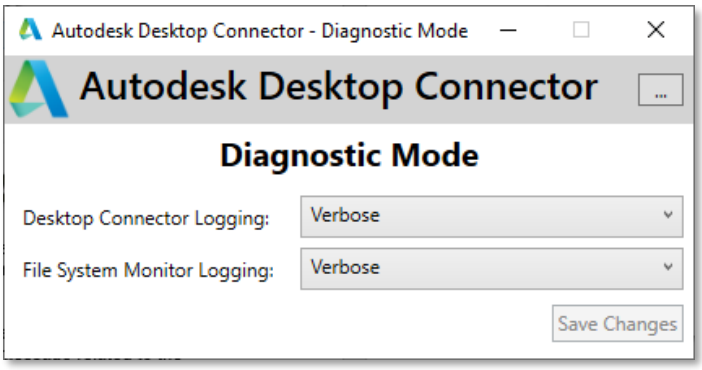


Enable additional column properties in the connected drive

Review the Diagnostics log

Create a diagnostics log to review any error messages related to Desktop Connector. The log can collect information about the system and Desktop Connector events, depending on the logging mode.

To change the logging mode, right-click the Desktop Connector icon in the tray while pressing the Shift key. Select Help and click Diagnostic Mode. For a complete log, select Verbose for both Desktop Connector and File System Monitor logs.



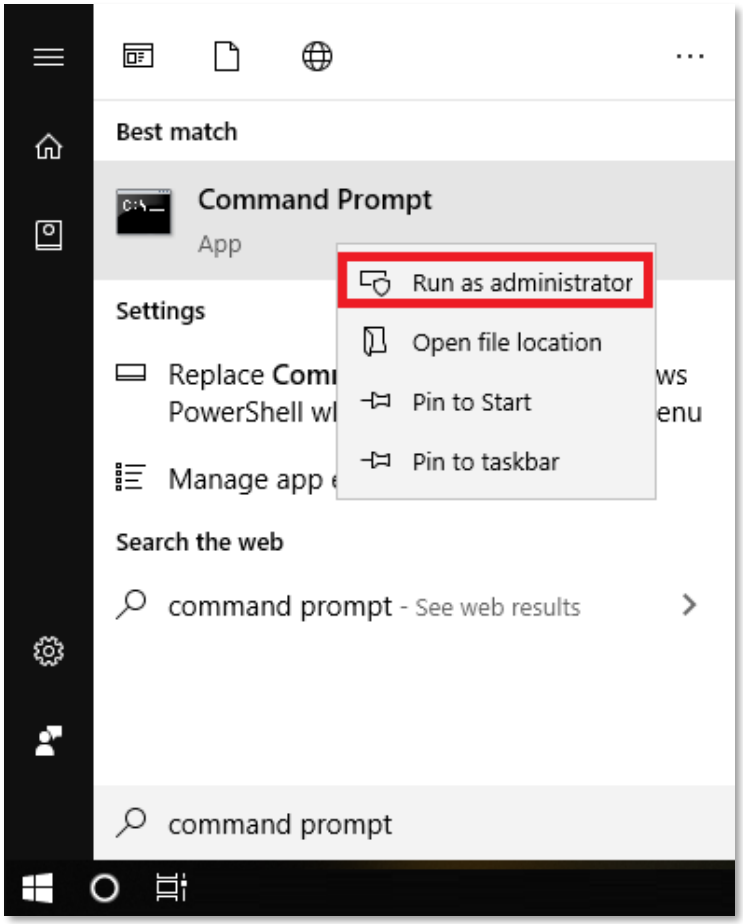
Set the log mode for the diagnostic logs

To create the log, right-click the Desktop Connector icon, select Help, and click Diagnostic Logs. A ZIP file is created and saved in the *C:\Users\<username>\AppData\Local\Autodesk\Desktop Connector* Diagnostics folder.

Use the Netstat command

The **Netstat** command helps identify if Desktop Connector is using a compatible port:

1. Right-click the Command Prompt in Windows, select *Run as administrator* and click Yes;



Run Command Prompt as administrator to use the Netstat command

2. Type **netstat -ab > c:\temp\netstatab.txt** and press Enter. This creates a netstatab.txt file in the *C:\Temp\ folder*;
3. Open the netstatab.txt file in a text editor such as Notepad and search for "DesktopConnector.Applications.Tray.exe" or port number (check port range 51001 - 51010). It should find something similar to:

TCP 0.0.0.0:51001 NOVPC0SQ9ES:0 LISTENING [DesktopConnector.Applications.Tray.exe]

If “DesktopConnector.Applications.Tray.exe” is not found, this means the service is not running and could be due to a conflict with another application.

Handle Sysinternals tool

Microsoft’s Handle Sysinternals tool shows which files are open by which processes. To use it:

1. Download and install the Handle tool;
2. Follow step 1 above (in Netstat command instructions) to run Command Prompt as administrator;
3. Navigate to the directory where the Handle tool was extracted;
4. Type **handle.exe net.pipe > netpipehandles.txt** and press Enter;
5. Open the netpipehandles.txt file that is generated in the Handle folder and review it.

Once you find the conflicting application, disable or uninstall it and see if this resolves the conflict. You can then report the conflict to Autodesk and/or the conflicting application’s manufacturer.

Process Monitor

Review a Process Monitor file to detect system conflicts.

Visit the page General Systems: The basics of using Process Monitor for instructions.

Troubleshooting resources

Help pages:

- Desktop Connector Help - for general Desktop Connector information. This includes information about functionality designed for Desktop Connector when using BIM 360 Team, Autodesk Drive, and Fusion Team cloud services. Some of these may not apply to Desktop Connector for BIM 360;
- Desktop Connector for BIM 360 Help - for information specifically related to Desktop Connector working with BIM 360 Docs;
- BIM 360 Help;
- Cloud Services.

Autodesk Knowledge Network: Visit the AKN website for learning materials, product documentation, technical articles, and troubleshooting documentation.

Learn BIM 360: Visit the Learn BIM 360 page to access free BIM 360 online courses.

Release Notes: Desktop Connector and Document Management are improved constantly. To review these changes, visit the following pages:

- Desktop Connector Release Notes
- BIM 360 Release Notes

Forum: Ask for help and suggestions from other Desktop Connector users in the BIM 360 Support Forum.

Health dashboard: Visit the Health Dashboard to view the current status and upcoming maintenance schedule for the Autodesk Cloud Services.

Ideas website: Post your enhancement request Ideas for possible inclusion in a future release.

Autodesk support: Create a support case to obtain assistance from the Autodesk technical support team by completing the form on the Contact Support page. For special technical support contracts, follow the guidelines described in your terms and conditions.

Autodesk University content: Visit the Autodesk University website to access class recordings from previous years, such as my previous AU Las Vegas 2019 class Setting Up and Using Desktop Connector with BIM 360 Docs. Some of its content is outdated and has been updated in this 2020 AU class.

Learning Objective 4:

Best practices and recommendations

A bit of planning and attention to system and permission requirements go a long way! Follow the suggestions below to have a smooth experience using Desktop Connector for BIM 360.

Review BIM 360 project permissions

Users that don't have enough permissions to Document Management folders (be it for a single file or linked files) will not be able to work with Desktop Connector. Organization is key!

Keep it simple

Have you ever worked with very long and complicated file names? Is it hard to find the file you are looking for?

For your benefit and the benefit of your team, keep your project as clean as possible:

- Use short names. Save your files and folders with short and simple names and avoid hitting the Windows character limitation;
- Avoid special characters and periods;
- Avoid duplication of project and folder names to prevent confusion;
- BIM 360 account names must be unique.

Single user account

If multiple users share the same computer, make sure they have their own Windows account and use their separate login details when working with Desktop Connector. Multiple users should not log into Desktop Connector under the same Windows account.

The same email address should be used to invite a project member to a BIM 360 Docs project, and to assign an Autodesk product license. If you have, for example, an AutoCAD license assigned to a primary email address, and you are invited to a BIM 360 project with a different email address, when you log into Desktop Connector you will be logged off AutoCAD and may not be able to use it for more than ten minutes.

Consistent workflows

Especially when not working with AutoCAD files, review your workflow before collaborating with the team. Have a standard way of making changes to files and share the method with project

members. This is particularly important when working with Revit workshared files and linked documents.

Again, when working with Revit cloud models, you will not be able to save changes using Desktop Connector. If possible, use the Revit cloud worksharing method to upload your Revit models to BIM 360. If working with non-cloud models, you can add Revit cloud models to these non-cloud models as a link.

Test first

It is always a good idea to check if everything is working as expected before deploying Desktop Connector to many computers. Review the list of known conflicting software and see if any of these are installed in your computer(s).

Remember that Desktop Connector is not a large dataset syncing tool. It is primarily designed to assist in daily tasks.

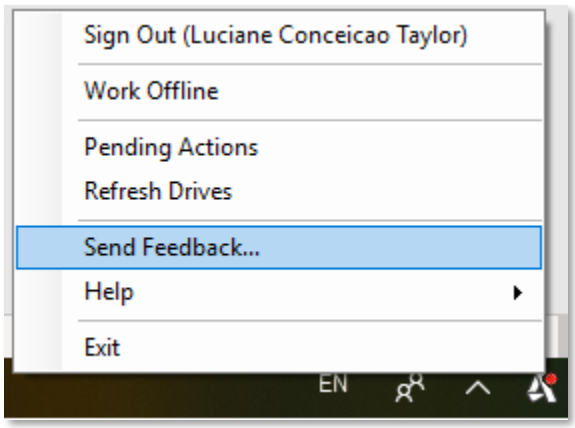
If you upload Desktop Connector to a new version and find an issue, you can always uninstall the new version and install the previous version so that you can continue working, but please report the issue encountered to Autodesk.

Communicate

Keep your team up to date: inform about project changes, how to handle special types of documents, and general housekeeping.

Feedback

Finally, the Desktop Connector management teams are very interested in hearing from you. Use the *Send Feedback…* option (right-click the Desktop Connector icon in the Windows tray) to send your feedback.



Send feedback to Autodesk