FileCloud Server
Version 23.263
FileCloud ServerSync

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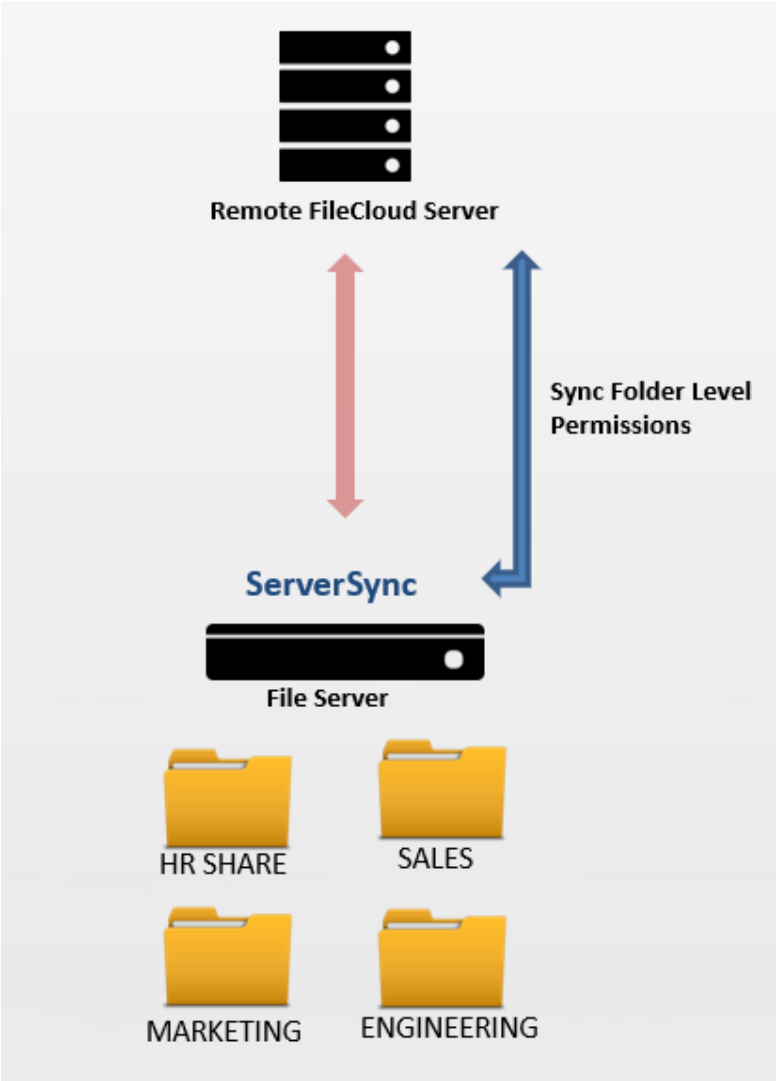
Introduction to ServerSync

FileCloud ServerSync allows you to synchronize content between a local file server and a remote FileCloud Server or FileCloud Online (hosted by FileCloud). It ensures that any changes on your local system—such as new files, updates, or deletions—are automatically synchronized to the cloud.

- ServerSync is supported on both Windows and Linux.
- Synchronized files must be on a physically attached disk to the machine running ServerSync.
- You cannot synchronize files located on Network paths.



ServerSync continuously tracks and syncs the following changes from your local file server to FileCloud:

- Newly added files
- Modified files
- Deleted files

Additionally, ServerSync can optionally sync folder-level permissions from FileCloud to your local system.

- Permissions are applied as NTFS Permissions.

⚠️ To sync folder-level permissions, you must log in with the same user account that originally owns the files.

Find answers to frequently asked questions.

Read the ServerSync FAQ's

To get started with ServerSync:

1. Log in to ServerSync.
2. Select folders to sync.
3. Customize account settings (optional).
4. Import NTFS Permissions (optional).
5. Troubleshoot sync issues

ServerSync FAQ's

How is ServerSync different from the Sync client?

	ServerSync	Sync Client

What gets synced?	• Folders on a physically attached disk to the machine
	• UNC and Network paths are NOT allowed
	• Manual sync of folders with sync permissions
	  • My Files
	  • Shared folders
		• Local, remote, and network folders allowed
		• Automatic sync of folders with sync permissions
		• All sync folders are contained within the FileCloud Sync Folder
		  • My Files
		  • Shared folders

Are backups supported?	• No	• Yes
Are admin permissions required?	• Yes	• No
Are permissions synchronized also?	• FileCloud folder-level permissions synchronized • Permissions are applied to local folders as NTFS permissions	• Not supported
Which operating systems are supported?	• Windows • Linux	• Windows • Mac • Linux
Are Network Folders synchronized?	• No	• Yes

Should I run ServerSync as a service?

Yes, running ServerSync as a service is strongly recommended for enterprise deployments.

- Synchronization of a local file server with a FileCloud Server or FileCloud Online (hosted by CodeLathe) is usually unattended and is configured to run automatically.
- If a file server is unattended, it can restart without an administrator, and unless ServerSync is a service, it will not start when the server restarts.

However, configuring ServerSync to run as a service will not allow the 'Quick Edit' to work.

Run ServerSync as a Service

Can I configure ServerSync to run at startup?

Yes, you can configure ServerSync to run at Windows start-up by creating a shortcut to the application and adding a Registry entry.

- This registry entry allows a batch file to be run at system start-up.
- The batch file in turn executes the ServerSync application with Admin privileges.
- On each system startup, ServerSync will now run automatically.

Run ServerSync on Startup

Why doesn't permission sync work for me?

You must log in with the original file owner account.

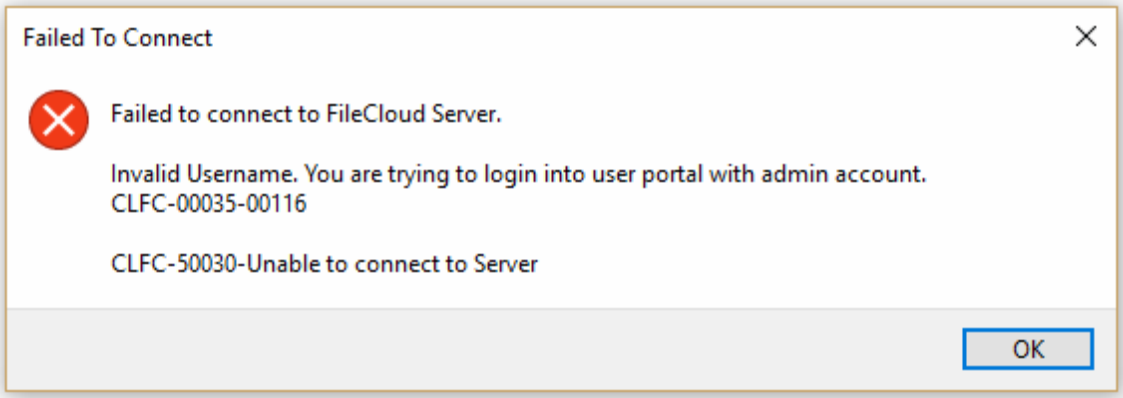
- User accounts that own the actual folders are allowed to set folder permissions on them.
- If you can set folder permissions, then it becomes easier to sync permissions to the content as well.
- If a user account is syncing files that it doesn't own, then permission sync will not work as these folder permissions cannot be applied.

For example, if you are syncing the files into the team folder account, you should be logged in using the team folder account.

Why can't I log in with an admin account?

Administrator accounts are intentionally restricted from ServerSync operations to maintain security boundaries.

If you try to use the administrator account, then you will see an error similar to the following:



Admin accounts are not used for the following reasons:

- Administrator accounts are used to install, configure and manage the system. They are not used to own files or folder that are being shared.
- The Admin account does not have access to the FileCloud User Portal, which is designed exclusively for the sharing of files, and not for configuring the FileCloud site.

What is the difference between sync and revert?

When folder changes exceed 10%, the administrator is prompted to choose sync or revert for each folder. The default of 10% can be changed.

- If **Sync** is clicked: changes made locally to the folder are pushed to the server.
- If **Revert** is clicked: changes are removed from the folder.

Revert means:

- If a file was deleted locally, it is copied to the local destination again from the server.
- If a file was modified, a conflict file appears and administrator must select the server version so that server version can be copied.

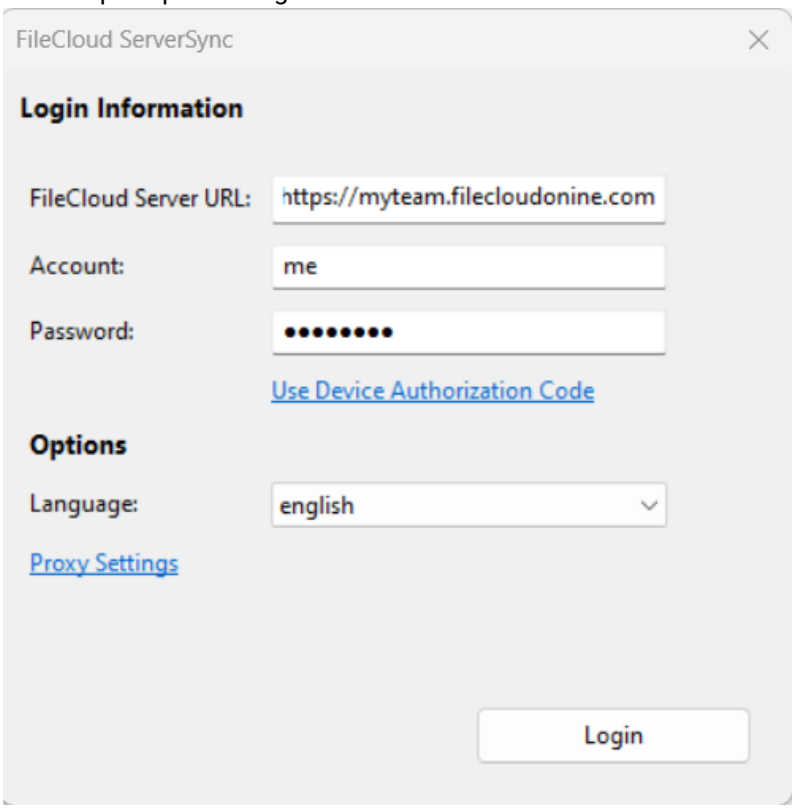
Log In to ServerSync

ServerSync synchronizes changes from your local Windows file server to a remote FileCloud Server or FileCloud Online site.

⚠️ To synchronize file permissions, you must log in with the account that owns the files. When syncing Team Folder files, use the Team Folder account credentials.

To log in to ServerSync:

1. Click the Windows icon on the taskbar.
2. Click **FileCloudServerSync**.
   You are prompted to log in.



3. In **FileCloud Server URL**, enter your FileCloud server web address.
4. In **Account**, type in the name of the account that has access to the FileCloud server.
5. In **Password**, enter the account password
6. If you are using codes for extra security, click **Use Device Authorization Code**.
7. If you are using a language other than English, select it in **Language**.
8. Click **Login**.

The Login settings can also be accessed from:

- The **Home** screen, in the **Logged In As** section by clicking **Change**.

- The **Settings** screen, in the **Account Settings** section, by clicking **Edit**.

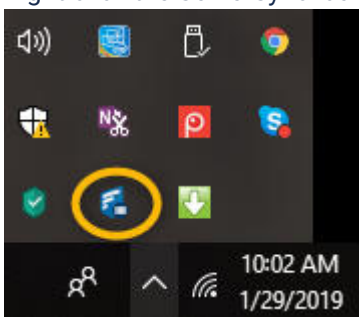
ServerSync Settings

You can view and control all of ServerSync's settings from the Settings dialog.

Access the Settings dialog in the following ways:

From the System Tray:

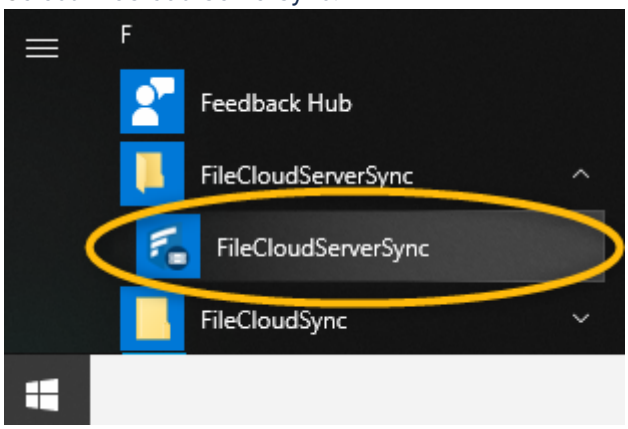
1. Right-click the ServerSync icon.



2. Select Settings.

From the Windows Start Menu:

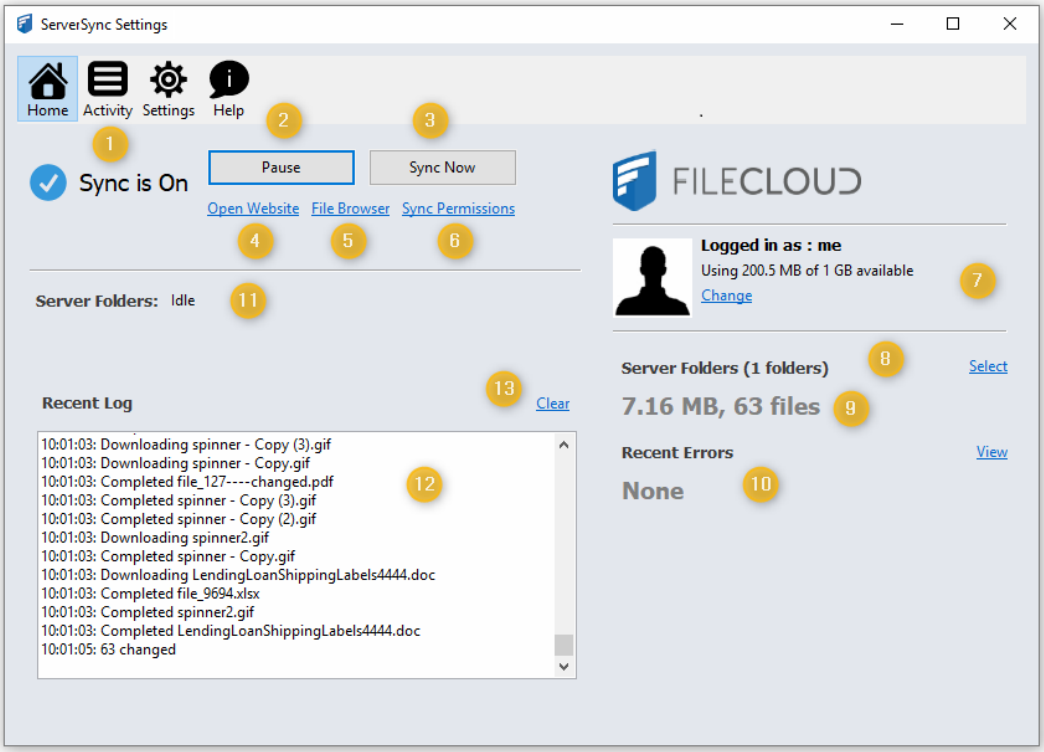
1. Click the Windows icon.
2. Scroll down to FileCloud.
3. Select FileCloud ServerSync.



> You can also add XML settings to the ServerSync config file: %APPDATA%\FileCloudServerSync\synclientconfig.xml.
> These settings are also available for FileCloud Sync. For information about the settings and how to configure them, see XML Options for Sync.

In this section:

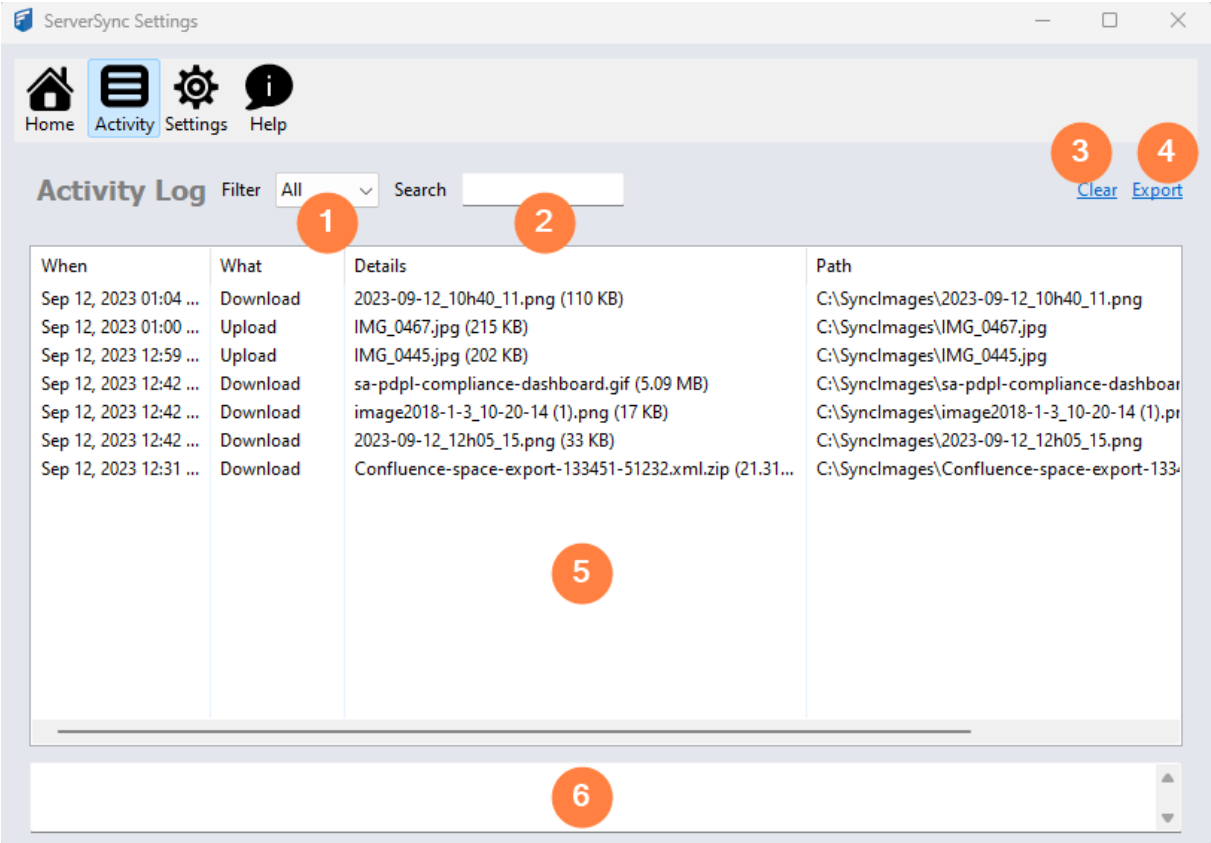
Home Screen Settings



	Option	Notes
1	Sync Status	Indicates the current sync status as one of the following: **ON** - if syncing is enabled **DISABLED** - Syncing is paused or turned off
2	Pause	Allows you to completely disable synchronization temporarily. • Disables the **Sync Now** button. • Displays: **WARNING: Sync is disabled, nothing will be synced** • The text on the button changes from **Pause** to **Start**. 💡 Sync will be re-enabled when you click **Start** or when the computer is restarted.
3	Sync Now	Allows you to manually start an immediate synchronization • The Recent Log will show **Manual Sync Queued...**

	Option	Notes
4	Open Website	Opens a web browser to the User Portal for the associated FileCloud Server Read more about Logging In to the User Portal
5	File Browser	Opens the File Browser application to view the files for the associated FileCloud Server Read more about Managing Files in the File Browser
6	Sync Permissions	Allows you to run a manual permission sync on the folders which have Permission sync enabled • Only folders that are currently configured to be synchronized will get a permission sync • When selecting a folder to sync, you can select the Sync Permissions checkbox to enable this feature Read more about Synchronizing Folders
7	Logged in as *Change*	Shows the user account that is currently logged in. • Displays the associated profile picture • Also displays the user's available storage quota and how much is currently being used Clicking *Change* allows you to log in with a different account.
8	Server Folders *Select*	Displays the number of folders you have configured to sync Clicking *Select* allows you to specify which folders get synchronized locally
9	MB, files	Displays the storage space used to sync all specified files locally, followed by the number of files synchronized
10	Recent Errors *View*	Allows you to view and clear recent syncing errors. Useful for troubleshooting ServerSync problems. Changes the selected tab from the Home screen to the Activity screen. • This is useful for seeing all of the log entries, filter for errors, and get more details.
11	Server Folders	Shows Syncing status for all managed folders, including My Files / Team / Shared Folders
12	Recent Log	Shows recent sync logs 💡 That this log will clear and refresh automatically when it runs out of space
13	Clear	Removes all entries from the recent log display, the Activity log display, and the local log file

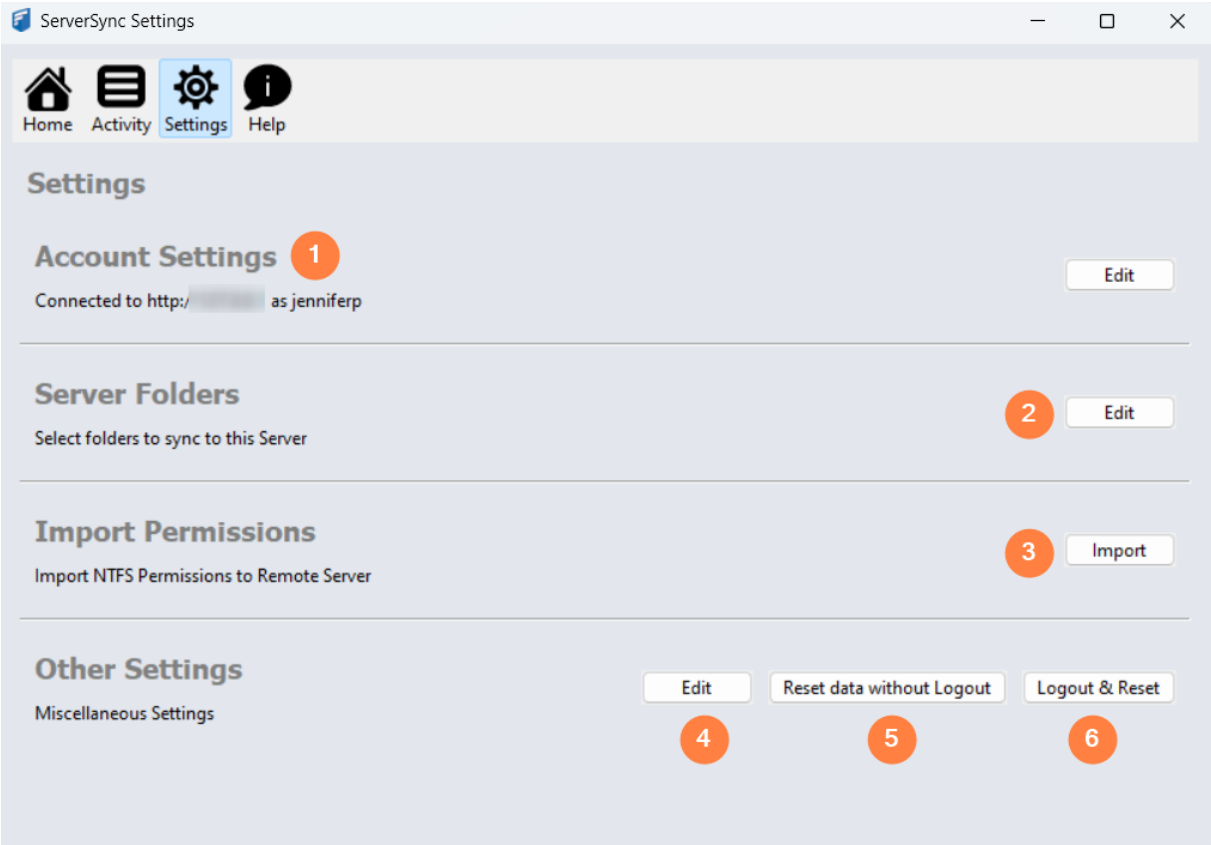
Activity Screen Settings



	Option	Notes
1	Filter	Allows you to change the display by selecting one of the following options: • **Errors** • **Skipped** • **All** After making a selection, the display is updated to show only details of a log entry that have a value in the What column of **Errors** or **Skipped**. To clear the filter, select **All**.

	Option	Notes
2	Search	Allows you to change the display by specifying a string of characters or numbers that may occur in any column of the log entry. To search: 1. Type in a string of characters or numbers. 2. Press Enter. 3. To clear the search results, delete the search parameter(s) and then press Enter. For example, to search for: • A date, type in a string using the format YYYY-MM-DD • A time, type in a string using the 24-hour format of HH:MM:SS • An action, type in a string that would appear in the What column (Download, Error, Skipped) • A string of characters or numbers in the file name • A folder name or location • A user name After making a selection, the display is updated to show only details of a log entry that have a value in the What column of *Errors* or *Skipped*.
3	Clear	Removes all entries from the recent log display, the Activity log display, and the local log file.
4	Export	Opens a Save dialog so that you can choose the location and name of the file that will contain everything displayed in the Log Entries display.
5	Log Entries	Displays information about what actions ServerSync has taken. The information includes: • When • What • Details • Who
6	More Details	Displays additional information about the selected row in the Log Entries.

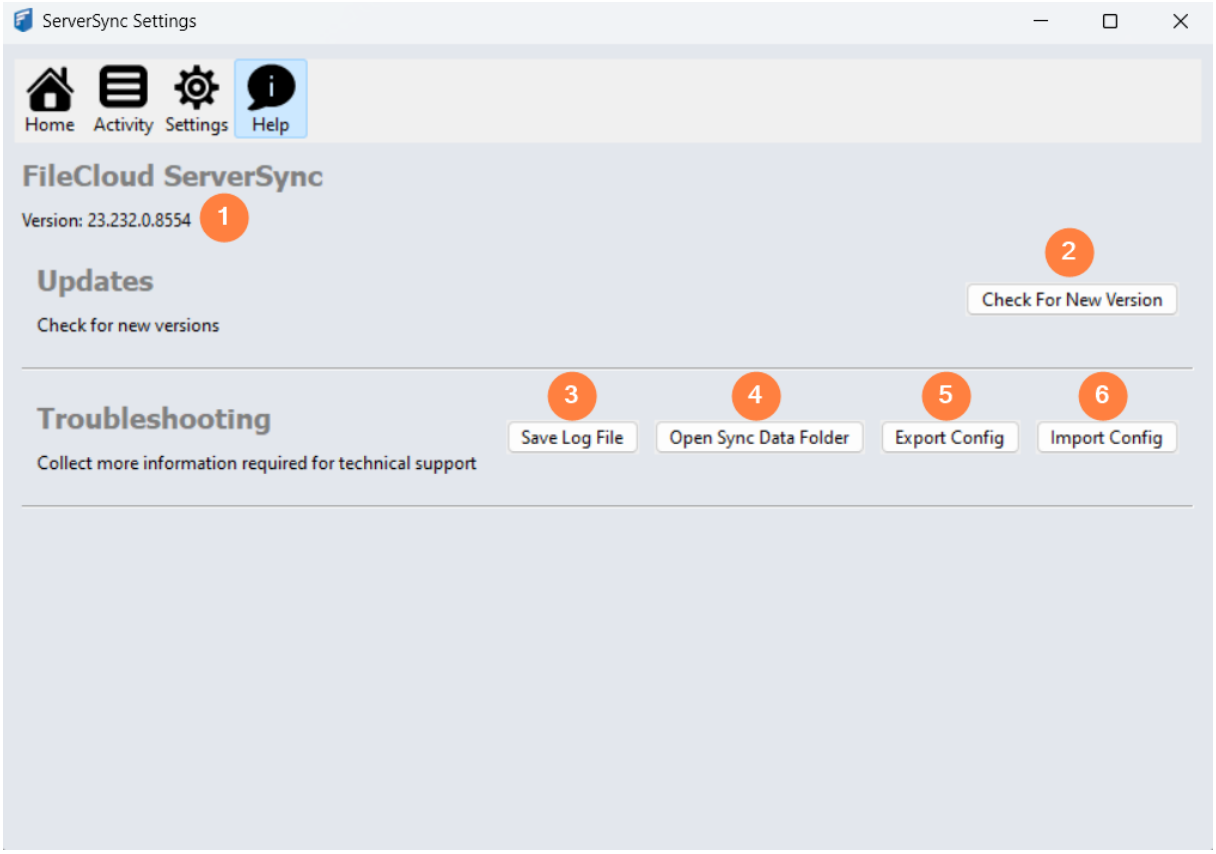
Settings Screen Options

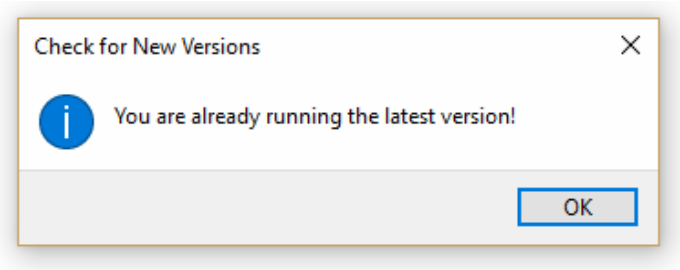


	Option	Notes
1	Account Settings *Edit*	Displays the address of the FileCloud Server you are syncing with, and the user account whose permissions are being applied to the ServerSync operations. Clicking Edit opens the Log In screen so that you can enter new or updated server and account connection information.
2	Server Folders *Edit*	Opens a Settings dialog window so you can choose what folders to sync. This tabbed Settings window also contains a tab for Advanced settings. Read more about how to Synchronize Folders
3	Import Permissions *Import*	Opens an Import Permissions window so that you can import NTFS permissions on the folders which have Permission sync enabled. • Only folders that are currently configured to be synchronized will get a permission sync • When initially selecting a folder to sync, you can select the Sync Permissions checkbox to enable this feature Read more about Synchronizing Folders

	Option	Notes
4	Other Settings *Edit*	Opens a Settings dialog window so you can set Advanced settings, such as: • Using an HTTP Proxy Server • Enabling Active Sync Hours • Set the Sync Frequency • Disable Notifications • Allow Remote Management • Controlling bandwidth use This tabbed Settings window also contains a tab for Folder settings.
5	Other Settings *Reset data without Logout*	Clears the synchronization state information in ServerSync, resets all the internal configuration data, but does not log you out of ServerSync. • This forces the sync state to be re-created again from the server. • No files in the ServerSync folder are deleted or affected. • If the file already exists locally it will not be re-downloaded.
6	Other Settings *Logout & Reset*	Clears the synchronization state information in ServerSync, resets all the internal configuration data, and logs you out of ServerSync. • This forces the sync state to be re-created again from the server. • No files in the ServerSync folder are deleted or affected. • If the file already exists locally it will not be re-downloaded. After clicking this, you will be shown the Log In window so that you can log in again.

Help Screen Settings



	Option	Notes
1	Version	Displays the version you are running to check for compatibility when troubleshooting.
2	Updates *Check For New Version*	Displays tasks related to the version you are running and updates available. Runs a process to check your version against that latest available from CodeLathe. 

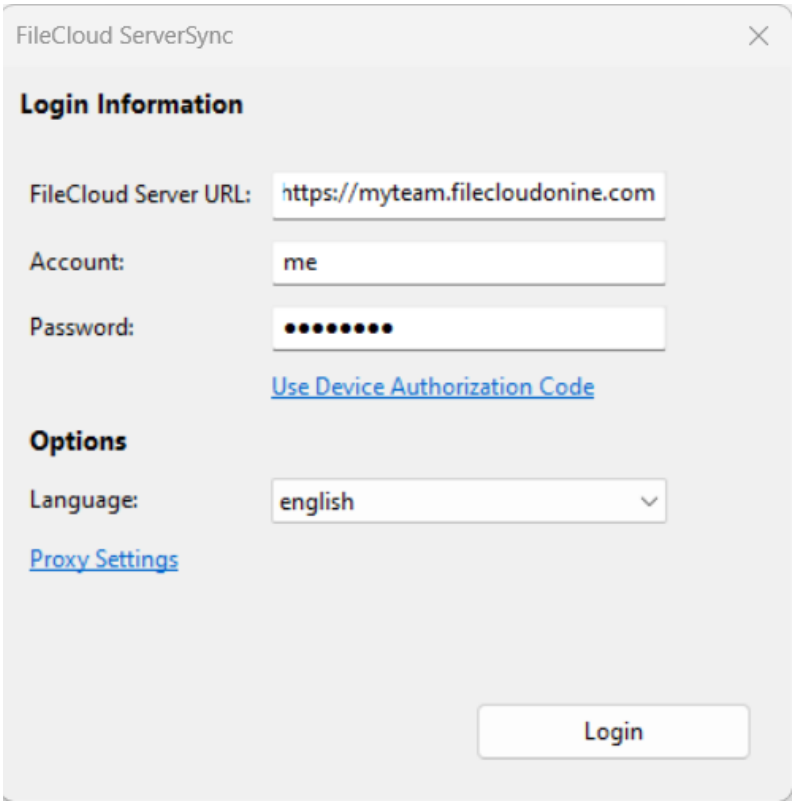
	Option	Notes
3	Save Log File	Opens a Windows dialog that allows you to choose the folder where you want to save the log file. • By default, log file names use the following format: Exported_synclient_2019-01-31-09-10-39 • This file may be required by support service when troubleshooting issues • This is useful to do before clearing a display of log entries
4	Open Sync Data Folder	Opens a Windows dialog that allows you to browse and manage files that are being synced
5	Export Config	Opens a Windows dialog that allows you to choose the folder where you want to save the configuration file. • The configuration file contains the XML code with your current ServerSync settings • By default, the file is named using the following format: fssyncconfig.xml. You can change this name to wherever you want, but the extension must remain XML • By default, the file is saved to the local folder you use for synchronization. You can change this location to wherever you want. • Support Services may request that you export your configuration in order to help you troubleshoot issues • Client Device configuration settings can be configured remotely by administrators by specifying the configuration XML that is exported in this file
6	Import Config	Opens a Windows dialog that allows you to choose the new XML configuration file. • Support Services may request that you export your configuration in order to help you troubleshoot issues • Administrators can use one configuration settings file and copy it to many sync applications to create identical configurations across a deployment

Connect to a FileCloud Server in ServerSync

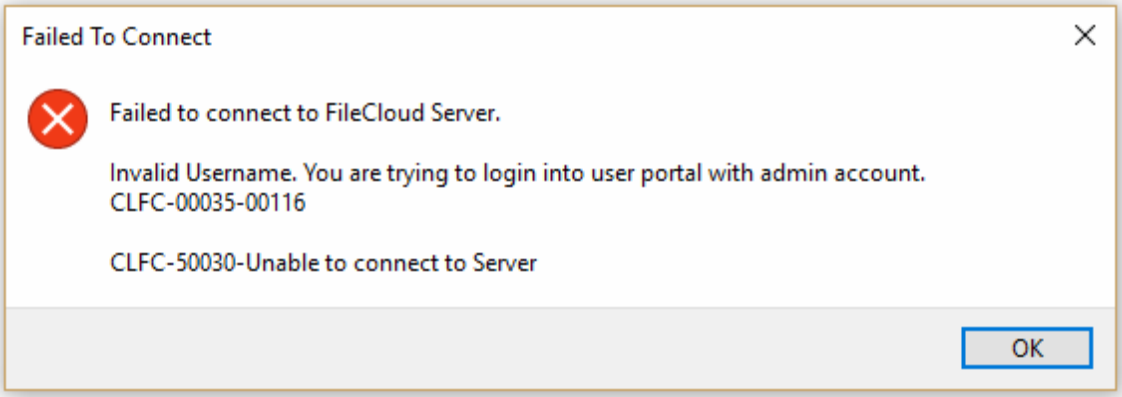
ServerSync captures changes from a local Windows File Server and synchronizes them to a remote FileCloud Server or FileCloud Online site.

To complete seamless synchronization, ServerSync must be able to log in to a remote FileCloud site using the following credentials:

- FileCloud site URL
- FileCloud user account name that has access to the User Portal
- Account password for the user account specified
- (Optional) Device authentication code



If you try to use the administrator account, the following error appears:



Admin accounts are not used for the following reasons:

- Administrator accounts are used to install, configure and manage the system. They are not used as owners of files or folders that are shared.
- The Admin account does not have access to the FileCloud User Portal, which is designed exclusively for the sharing of files, and not for configuring the FileCloud site.

⚠️ You can also sync file permissions. For that, you must log in with the user account that is the original owner of the files. Otherwise, folder-level permission synchronization will not work.

These account settings can be accessed in the following ways:

- The **Home** screen, in the **Logged In As** section by clicking **Change**.
- The **Settings** screen, in the **Account Settings** section, by clicking **Edit.**

💡 It does not matter which screen you use to access the settings. They both function in the same way.

To change your account settings:

1. From the system icon tray, right-click the ServerSync icon, and then select **Settings**.
2. On the **Settings** screen, in the **Account Settings** section, click **Edit**.
3. In **FileCloud Server URL**, type in the website address.
4. In **Account**, type in the username.
5. In **Password**, type in the password of the associated account.
6. Click **Login**.

Selecting Folders to Sync

When you select a folder on the FileCloud server to be synchronized, a local copy is placed in the location you choose.

There are two sync types:

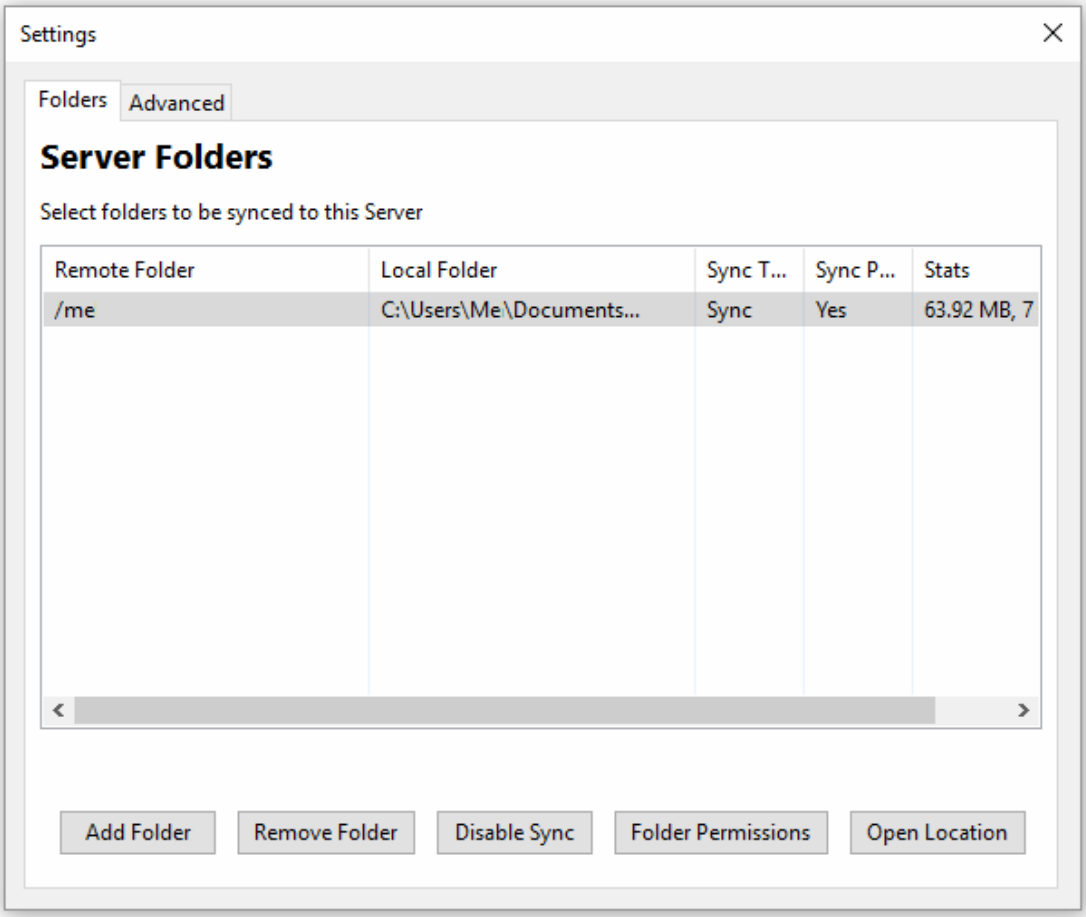
Sync Type	Description	Overwriting Files
Two-way sync	Local changes are uploaded to the server Server changes are downloaded to the local folder	⚠️ When there are conflicts, you are asked to choose which version you want to keep.
One-way sync (Remote to Local)	Only changes from the server are downloaded to the local folder	⚠️ Any changes to local copies are lost when they are overwritten by the server copies.

Performance considerations:

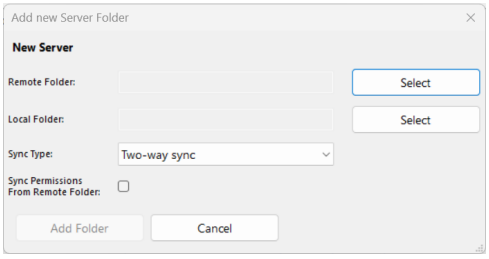
- You can add unlimited folders for synchronization.
- Synchronization occurs sequentially, not in parallel.
- Large numbers of folders may increase synchronization cycle time.

To select and manage sync folders:

1. From the system icon tray, right-click the ServerSync icon, and then select **Settings**.
2. On the **Settings** screen, in the **Server Folders** section, click **Edit**.



3. On the **Settings** screen, on the **Folders** tab, perform any of the following actions:

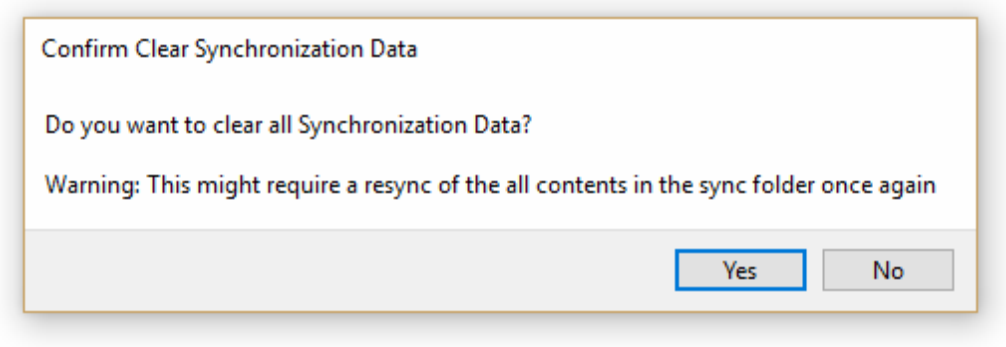
Option	Description
Add Folder  	Opens the **Add new Server Folder** dialog box. **To add a folder:** 1. In **Remote Folder**, click **Select**. 2. In the file explorer window, all managed files for the server you are connected to are listed. Choose the one you want to sync, and then click **Select**. 3. In **Local Folder**, click **Select**. 4. In the file explorer window, choose from the directories on this local computer where you have enough space to store the server copies, and then click **Select Folder**. 5. In **Sync Type**, choose **Two-way sync** or **One-way sync**. 6. To sync permissions as well as folder contents, check **Sync Permissions from Remote Folder**. 7. Click **Add Folder**. When server changes are downloaded to a local folder, the local folder modified date is changed to the current date, but the server folder keeps its original modified date. This is due to operating system constraints.
Remove Folder	Allows you to permanently stop synchronizing a selected folder with FileCloud server. The folder and its contents are not removed from the local machine, in case you want to sync this folder again later. **To stop syncing a folder**: • Select the folder and click **Remove Folder**. To temporarily stop synchronizing a folder, use the **Disable Sync** option.

Option	Description
Disable Sync	Allows you to disable synchronization of folders temporarily. • One or more folders can be disabled, instead of being completely removed. • Folders can be enabled again for synchronization by selecting the folder and clicking **Enable Sync**. • If all folders are disabled, then **WARNING: No Server Folders selected for Sync** is shown on the Home screen. **To stop syncing a folder**: • Select the folder and click **Disable Sync.** **To start syncing the folder again**: • Select the folder and click **Enable Sync.**
Folder Permissions	Allows you to view and manage permissions of a selected folder. • If you have not imported permissions, then this window does not display any data. **To open folder permissions**: • Select the folder and click **Folder Permissions**.
Open Location	Opens a Windows File Explorer window showing the location of the selected folder. Enables you to keep local copies. • This folder was set when you added a FileCloud folder and choose a corresponding local folder. **To open a server folder's corresponding local folder**: • • Select the folder and click **Open Location**.

Reset ServerSync

You are able to clear the synchronization state information in ServerSync.

- This processes resets all the internal configuration data.
- This forces ServerSync to recreate the sync state again from the server.
- Note that no files in the sync folder are deleted or affected. That means that if the file already exists locally it will not be downloaded again on reset.



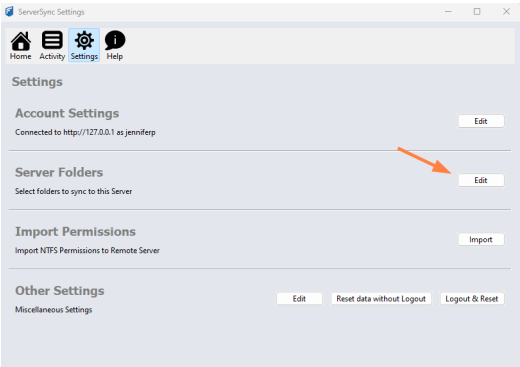
To reset ServerSync:

1. From the system icon tray, right-click the ServerSync icon, and then select **Settings**.
2. On the **Settings** screen, in the **Other Settings** section, click **Logout &Reset**.
3. On the **Confirmation** dialog box, click **Yes**.
4. When logout and reset is finished, you will have to log in again.
5. On the **Login** screen, in **FileCloud Server URL**, type in the website address.
6. In **Account**, type in the name of the account that owns the files you want to sync.
7. In **Password**, type in the string of characters used for the associated account.
8. Click **Login**.

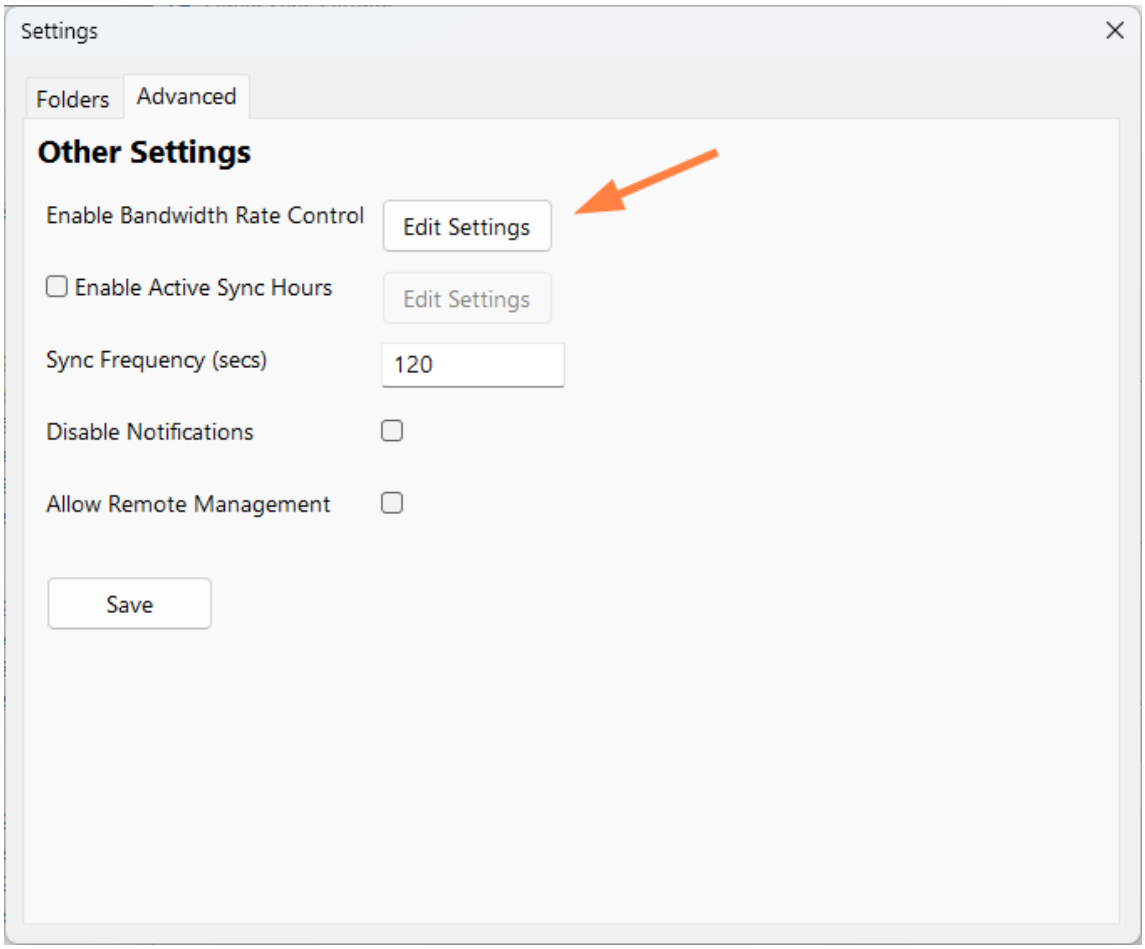
Control ServerSync Bandwidth Use

To improve network performance or closely manage the amount of data flowing into and out of your server, control the amount of bandwidth that ServerSync is permitted to use.

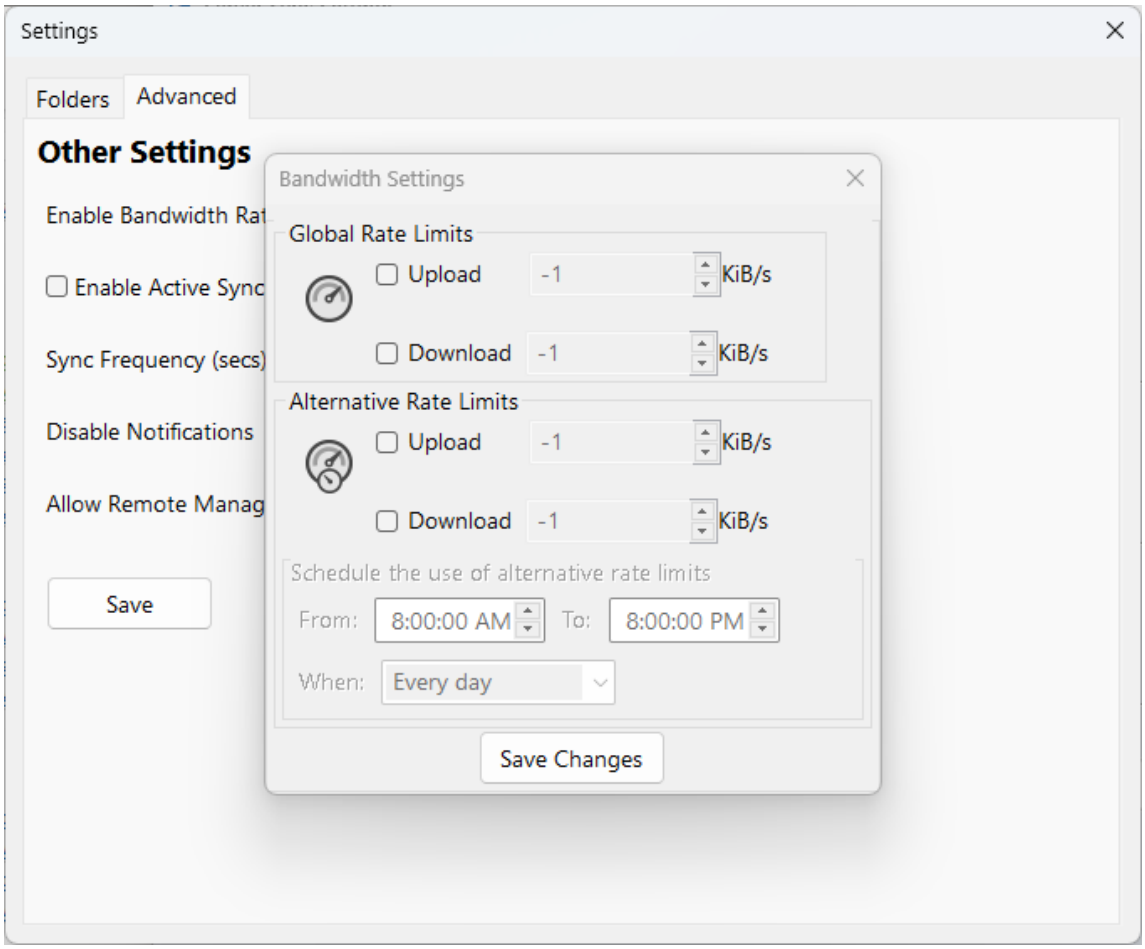
1. Open ServerSync and click the **Settings** button.
2. Click the **Edit** button for **Server Folders**.



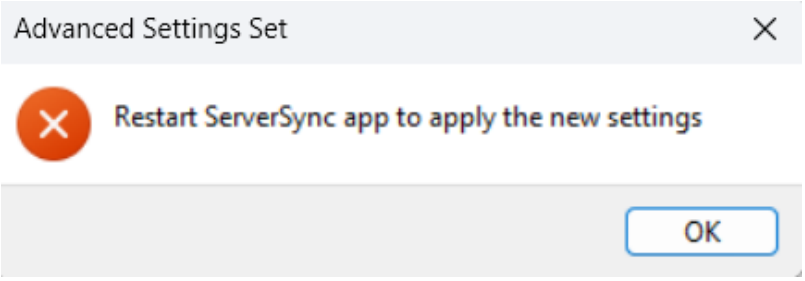
3. Click the **Advanced** tab, and then **Edit Settings** next to **Enable Bandwidth Rate Control**.



4. Enable the limits you would like to enforce for upload or download, input your settings. **Global Rate Limits** are the default controls for bandwidth use and will be enforced unless **Alternative Rate Limits** are defined, enabled, and scheduled.



5. Click **Save Changes**.
6. Click **Save**.
   A notification prompts you to restart ServerSync:



7. Click **OK** and restart ServerSync.

Limit ServerSync to a Schedule

You can schedule when ServerSync runs.

Why Would I Want to Set a Schedule?

- If you are running the FileCloud Sync app on a busy network, you may want ServerSync to run at the least busiest times
- If you just want to save your changes to the FileCloud Server at the end of each day

💡 You can only set one time when ServerSync will run for every day you select. The default time is from 8:00:00 AM To 8:00:00 PM.

For example:

- If you choose Sunday and Tuesday for days of the week
- If you schedule the hours from 8:00:00 AM To 10:00:00 AM
- Then ServerSync will be active only on Sundays and Tuesdays and only during the hours between 8 AM and 10 AM. It will remain disabled on other days and times.

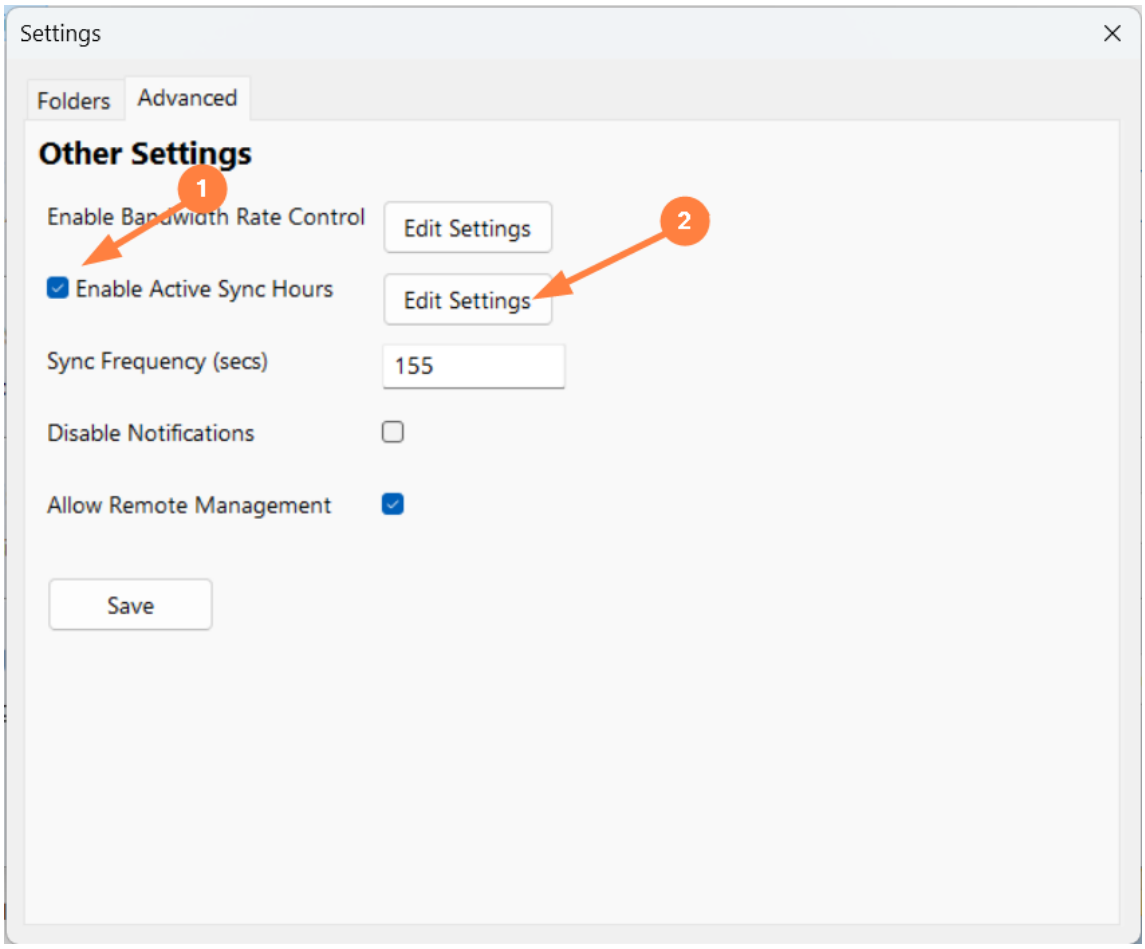
The settings you use impact the Sync application in the following ways:

Setting	Value	Impact	Notes
Time Active Controls	enabled	ServerSync will be active ONLY during the schedule times • At all other times ServerSync remains disabled, which means real-time syncing and offline folders syncing will be disabled. • The Pause button on the Home screen is disabled	To use the Start or Pause buttons again: • Disable Time Active Controls
Time Active Controls	disabled	ServerSync will always be active • The Sync Now button on the Home screen can be used • The Pause button on the Home screen can be used	If Time Active Controls are automatically disabled, you can enable them again by: • Unselecting the Doc editing only mode checkbox • Starts Sync by clicking the "Start" button on Home screen

⚠️ After you make these changes, you must restart ServerSync for the changes to take effect.

To set a schedule for ServerSync times:

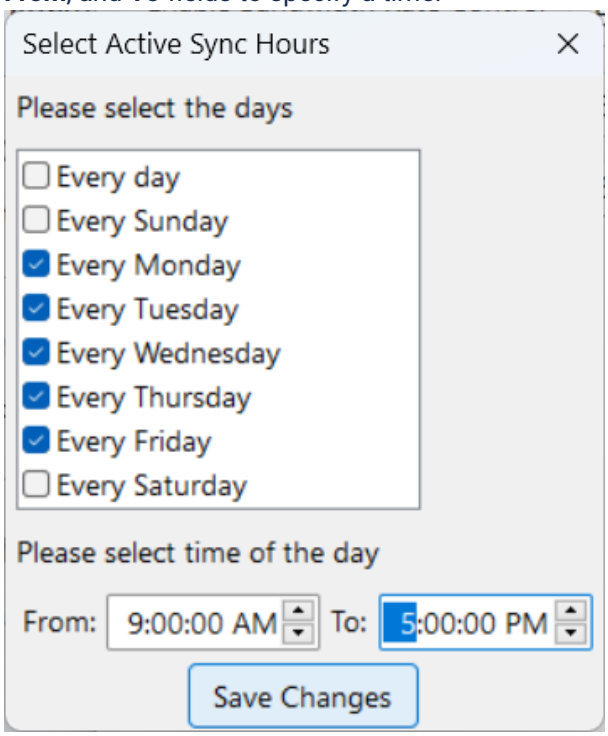
1. In the *System Tray*, right-click on the *ServerSync icon*, and then select *Settings*.
2. On the *Settings* window, in the *Other Settings* section, click *Edit*.
3. Select the *Advanced* tab, in *Other Settings*, select the *Enable Active Sync Hours* checkbox, and then click *Edit Settings*.



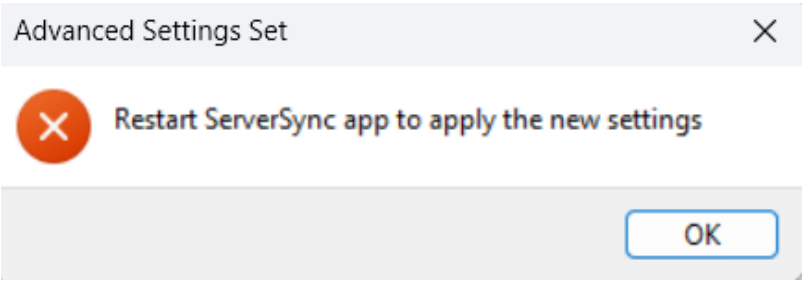
A dialog box for setting active sync hours opens.

4. Check the boxes corresponding with days that you want to run ServerSync.

5. You can only set one time that ServerSync will run. It applies to all of the checked days. Use the **From**, and **To** fields to specify a time.



6. Click **Save Changes**.
7. On the **Settings** window, click **Save**.
   A notification prompts you to restart ServerSync:



8. Click **OK**, and restart ServerSync.

Change ServerSync Frequency

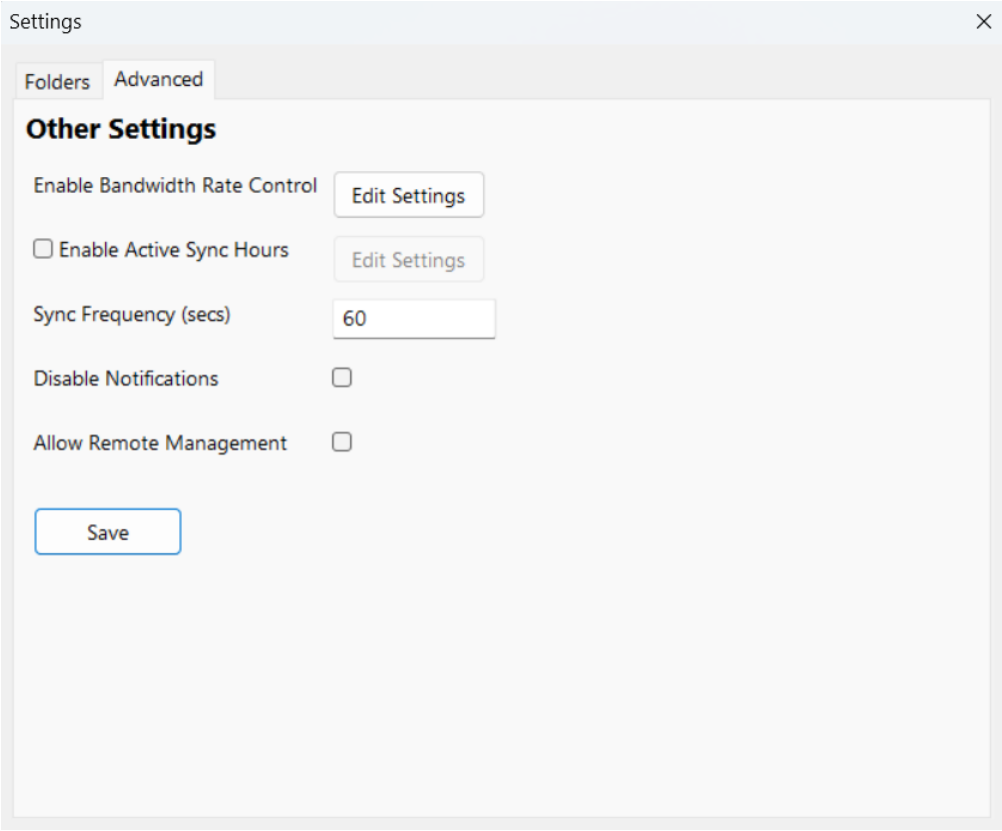
You can change the built-in sync frequency from 120 seconds to something faster or slower, depending on your network traffic.

- You cannot set the frequency lower than 30 seconds

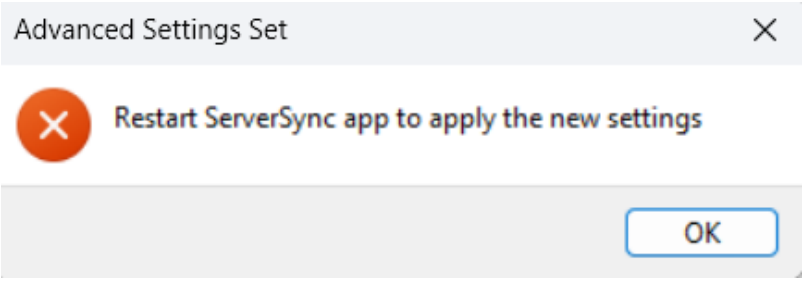
⚠ After you make this change, you must restart ServerSync for the changes to take effect.

To set a schedule for ServerSync times:

1. In the system tray, right-click on the **ServerSync icon**, and then select **Settings**.
2. On the **Settings** window, in the **Other Settings** section, click **Edit**.
3. Select the **Advanced** tab, and change the number of seconds in **Sync Frequency (secs)**.
   Sync Frequency must be 30 seconds or higher.



4. On the **Settings** window, click **Save**.
   You are prompted to restart ServerSync:



5. Click **OK**, and restart ServerSync.

Disable ServerSync Notifications

If you are receiving too many email messages, you can disable the notifications raised by ServerSync.

Notifications are normally sent for:

- Errors

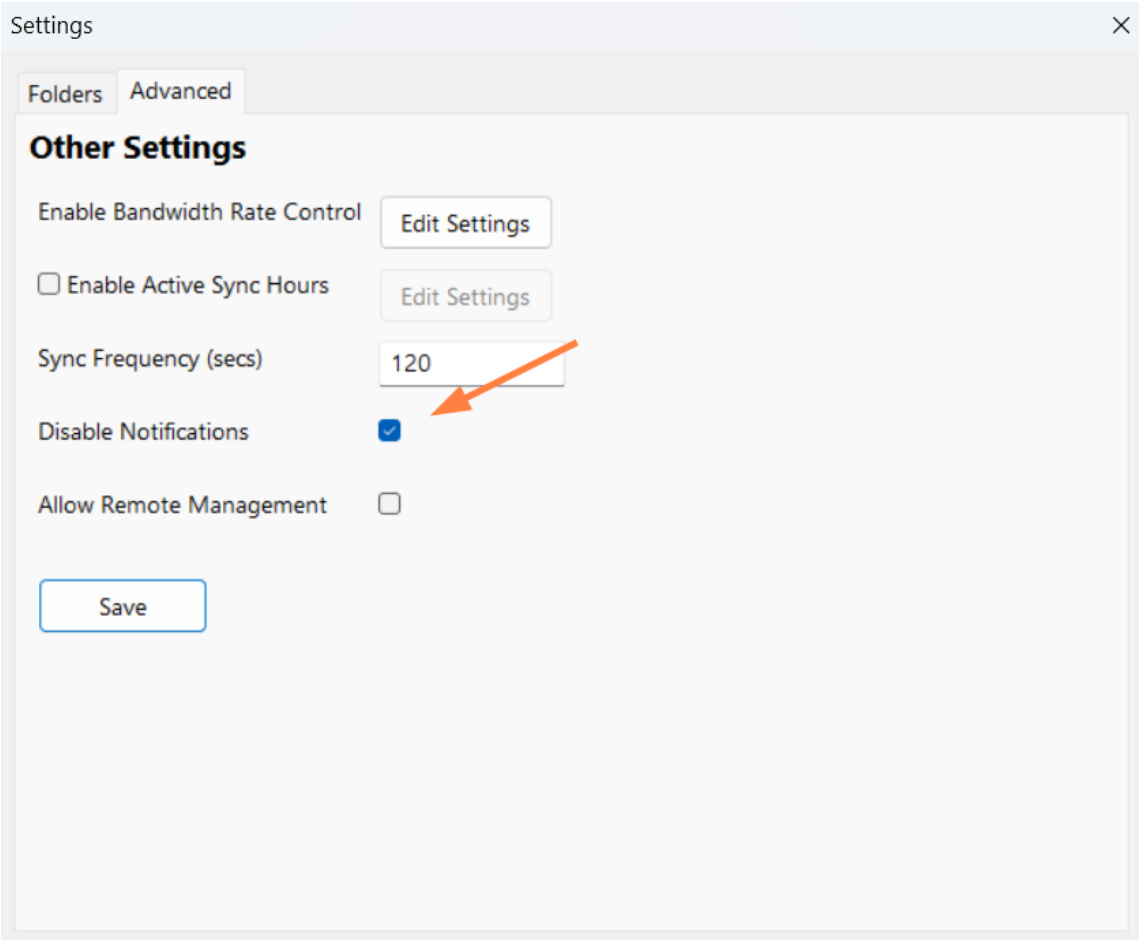
- New files uploaded
- New files downloaded

⚠ After you disable or enable notifications, you must restart ServerSync for the changes to take effect.

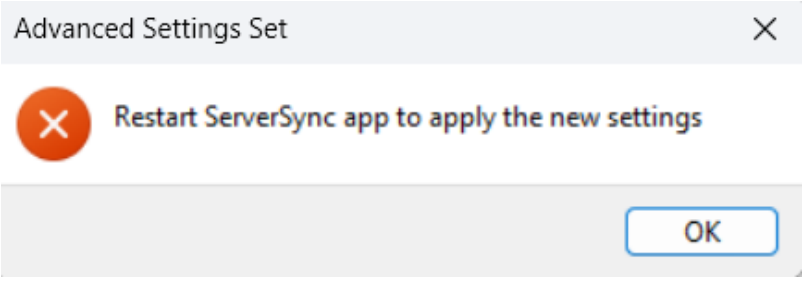
To disable all ServerSync notifications:

> ⚠ Clicking the **Disable Notifications** checkbox disables all notifications including sync client errors and version updates.

1. In the system tray, right-click on the **ServerSync** icon, and then select **Settings**.
2. On the **Settings** window, in the **Other Settings** section, click **Edit**.
3. On the **Settings** window, on the **Advanced** tab, select the **Disable Notifications** checkbox.



4. Click **Save**.
   You are prompted to restart ServerSync.



5. Restart ServerSync.

To disable general notifications but allow error and update notifications:

This option became available in FileCloud Version 19.3.

1. Open %APPDATA%/FileCloudServerSync/syncclientconfig.xml
2. Add the following code:

```
<rowentry>
    <name>disablenotifications</name>
    <type>bool</type>
    <value>1</value>
  </rowentry>
```

3. Restart ServerSync.

Manage ServerSync Remotely

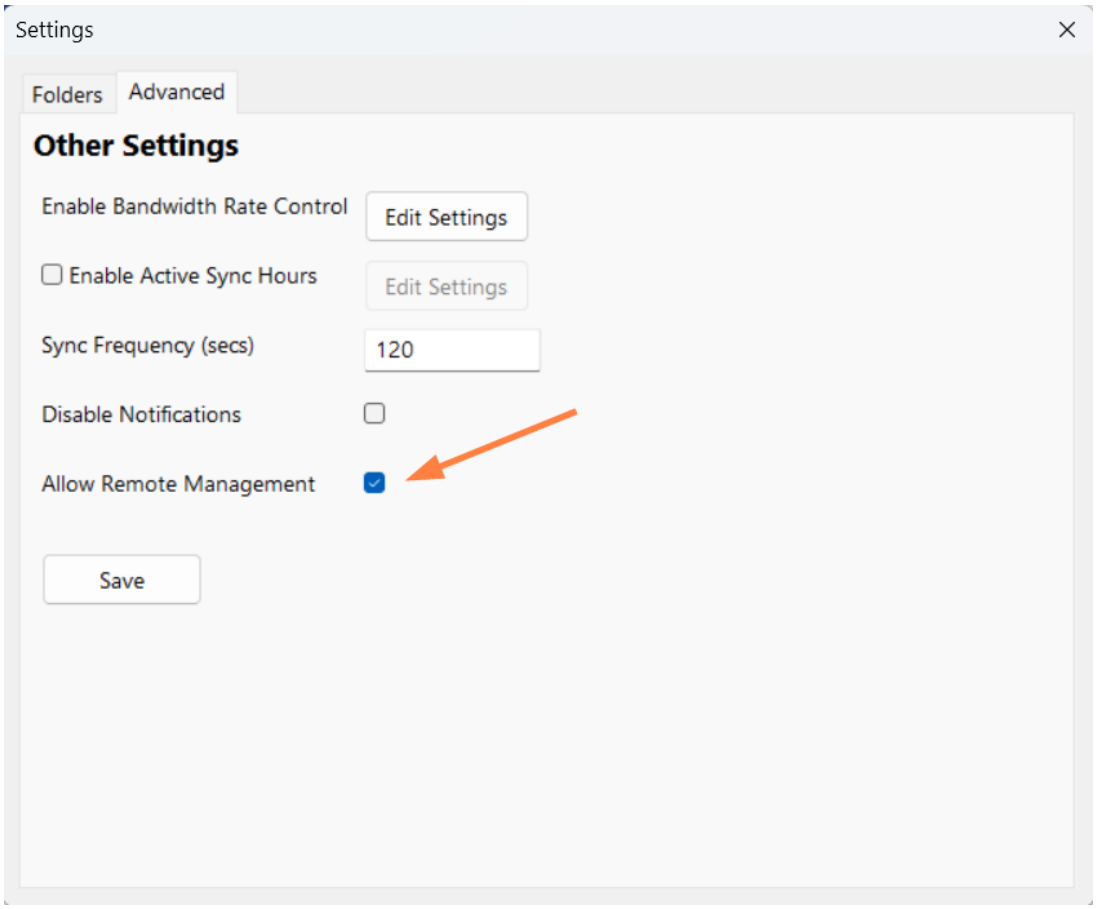
To allow an administrator to manage the ServerSync configuration remotely, you first need to enable this option.

- Enabling this option gives your server administrator potential access to your local data

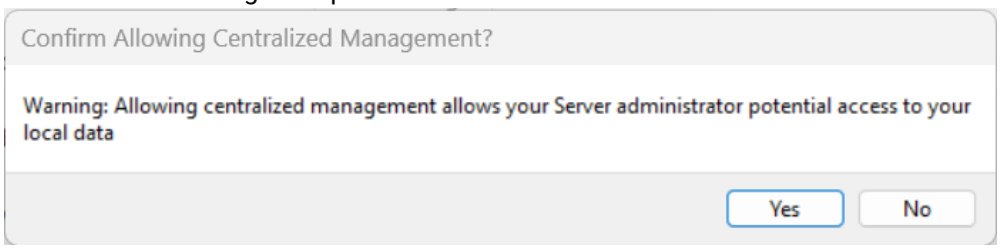
⚠ After you make this change, you must restart ServerSync for the changes to take effect.

To allow ServerSync to be managed remotely:

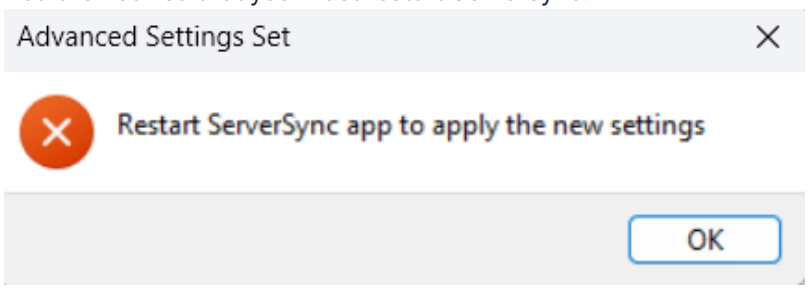
1. In the **system tray**, right-click on the **ServerSync** icon, and then select **Settings**.
2. On the **Settings** window, in the **Other Settings** section, click **Edit**.
3. On the **Settings** window, on the **Advanced** tab, select the **Allow Remote Management** checkbox.



A confirmation dialog box opens:



4. On the confirmation dialog, click **Yes**.
5. Click **Save**.
   You are notified that you must restart ServerSync:



6. Click **OK** and restart ServerSync.

Run ServerSync on Windows Startup

You can configure ServerSync to run at Windows startup by creating a shortcut to the application and making a few registry changes.

⚠️ These steps are required because ServerSync requires Admin privileges to run.

To configure ServerSync to start automatically:

1. On the server where ServerSync is installed, create a shortcut to the application. Select **Run this program as an administrator.**
2. To make the necessary registry changes, download and unzip the following file to any location: StartServerSyncAtStartup.zip.
3. Copy the **StartServerSync.bat** file to the following folder: **C:\Program Files\FileCloudServerSync**
4. Copy the **FSSync** file to the following folder: **C:\Program Files\FileCloudServerSync**
5. To create an entry in the Windows registry, double-click the following file: **StartServerSyncBat.reg**

This registry entry allows the StartServerSync.bat file to run at system start-up.

The batch file then executes the ServerSync application with Admin privileges.

On each system startup, ServerSync will now run automatically.

Run ServerSync as a Service

It is recommended that you run ServerSync as a service.

- Synchronization of a local Windows File Server with a FileCloud Server or FileCloud Online (hosted by CodeLathe) is usually unattended and is configured to run automatically
- If a file server is unattended, it can restart without an administrator, and unless ServerSync is a service, it will not start when the server restarts.

Note the following limitations when running ServerSync as a service:

- Quick Edit does not work when ServerSync is run as a service.
- Only password authentication is effective when ServerSync is run as a service; device authentication and other methods do not work.

Install ServerSync to Run as a Service

To register ServerSync as a service:

1. Download and install ServerSync as usual.
2. Start it up and enter the URL and user name (or email address) and password as usual.
3. Configure ServerSync to run as needed.
4. Uncheck the Option for **Automatic Startup on Login**.
5. After settings are done, exit out of ServerSync.
6. Open the following file for editing:

```
%APPDATA%\FileCloudServerSync\syncclientconfig.xml
```

7. Make the following changes:

Option	Changes	Notes
syncclientlocation	Change DEFAULT to **absolute** paths.	Make sure it matches the sync client folder that sync has already setup or things won't work.

8. Your code should look similar to the following example:

```
<?xml version="1.0" encoding="UTF-8" ?>
<variantrow>
     <rowentry>
         <name>syncclientlocation</name>
         <type>string</type>
         <value>C:
\Users\Administrator\AppData\Roaming\FileCloudServerSyncData\client</value>
     </rowentry>
</variantrow>
```

9. Save your changes and close the file.
10. Copy the syncclientconfig.xml file you just edited to the following location

```
C:\Program Files\FileCloudServerSync
```

11. To register the ServerSync client as a service, run the following command prompt in Administrator Mode. Note the space after each "=" in each parameter.

```
sc create serversync binpath= "C:\Program
Files\FileCloudServerSync\fssyncservice.exe" displayName= "FileCloud ServerSync
Service"
```

12. Start the sync app normally using the Services Control Panel applet.
13. If the app doesn't startup properly, please check the c:\windows\temp\fsservicestartup.log file.

Stop ServerSync from Running as a Service

If you are troubleshooting or need Quick Edit to work, you can stop running ServerSync as a service.

To unregister ServerSync as a service:

1. Run the following command prompt in Administrator Mode. Note the space after each "=" in each parameter.

```
sc delete serversync
```

Install ServerSync on Linux

Beginning with FileCloud Version 21.1, ServerSync supports SUSE Linux versions 12 and 15. To use SUSE Linux version 12 with storage application programs such as Dell Unity VSA, enable LAN file sharing.

How to Install FileCloud ServerSync on Linux

1. Download FileCloud ServerSync app from https://www.filecloud.com/additional-downloads/#serversync
2. After successfully downloading the app, extract the zip file fcserversync_linux_amd64.zip.

   To extract files using the terminal, use the following command:

   ```
   unzip fcserversync_linux_amd64.zip
   ```

   Now, you will have several files in the extracted location.
3. Give execute permission to the fssyncservicestart.sh and fssyncservice files.

   ```
   chmod +x fssyncservicestart.sh
   chmod +x fssyncservice
   ```

4. For a headless (non-GUI) setup, edit the config file fsserviceconfig.xml, and add the necessary parameters for your configuration. For an installation with GUI you can use the ServerSync gui interface to configure the synchronization parameters. A table showing how to format the parameters follows.

   ```
   <?xml version="1.0" encoding="UTF-8" ?>
   <variantrow>
       <rowentry>
           <name>url</name>
           <type>string</type>
           <value>HERE TYPE SERVER URL ADDRESS</value>
       </rowentry>
       <rowentry>
           <name>account</name>
           <type>string</type>
           <value>USER NAME</value>
       </rowentry>
       <rowentry>
           <name>password</name>
           <type>string</type>
           <value>PASSWORD</value>
   ```

```
    </rowentry>
    <rowentry>
        <name>limit_folder_count</name>
        <type>string</type>
        <value>2</value>
    </rowentry>
    <rowentry>
        <name>limit_folder_1</name>
        <type>string</type>
        <value>REMOTE_FOLDER_PATH|HERE_TYPE_LOCAL_FOLDER_PATH|0|0|0</value>
    </rowentry>
        <rowentry>
                <name>limit_folder_2</name>
                <type>string</type>
                <value>REMOTE_FOLDER_PATH|HERE_TYPE_LOCAL_FOLDER_PATH|0|0|0</
value>
        </rowentry>
</variantrow>
```

5. Open the terminal, go to the location where the FileCloud ServerSync files were extracted, and run fssyncservicestart.sh

```
./fssyncservicestart.sh
```

Format of parameters in fsserviceconfig.xml

Supported parameters for FileCloud ServerSync. All parameters are optional. Add one of more of these parameters (as XML tags) in the <fssync> tags in the XML.

XML Tag	Value	Example
limit_folder_count	Number of folders to sync. If key is not specified, then there are no folders to sync.	<limit_folder_count>0</limit_folder_count>

XML Tag	Value	Example
limit_folder_1 limit_folder_2 limit_folder_3 ...	Depending upon the number of folders specified in the limit_folder_count, you will need to have the appropriate number of entries. The folder value is specified using 5 parameters using the following format ***<REMOTE FOLDER>|<LOCAL FOLDER>|<PERMISSIONS>|<SYNC TYPE>|<SYNC DISABLED>*** ***<REMOTE FOLDER>*** = E.g.: /john/folder1 ***<LOCAL FOLDER>*** = E.g: C:\data\localfolder ***<PERMISSION>*** = 1 - Allow NTFS permissions to be applied to local folder as per permissions of the folder on the remote Server, 0 - Deny NTFS permissions to be applied ***<SYNC TYPE>*** = 0 (2-way sync) or 1 (remote to local sync). ***<SYNC DISABLED>*** = 0 (enabled) or 1 (disabled).	<limit_folder_1>/john/folder1|C:\data\local|0|1|0</limit_folder_1>
disablenotifications	0/1 - Enable or Disable sync notifications	<disablenotifications>1</disablenotifications>
syncfrequency	number - Number in seconds to sync to the server (default is 120 seconds)	<syncfrequency>100</syncfrequency>
checkmodtime	0/1 - Advanced: check modification time in addition to size when checking for changes. Default is disabled.	<checkmodtime>1</checkmodtime>
checkcrc	0/1 - Advanced: check CRC in addition to size when checking for changes. Default is disabled.	<checkcrc>1</checkcrc>
deleteapprovalpct	Number from 0 to 100, which indicates what % of files being deleted requires approval. Default is 10. This applies only to file deletions in the local sync folder.	<deleteapprovalpct>20</deleteapprovalpct>
skipdeleteapproval	0/1 - Whether approvals are needed for bulk sync deletions. Default is disabled. When set to 1, approval is required if > 50 files are deleted AND percent of files being deleted is > **deleteapprovalpct**. This applies only to file deletions in the local sync folder.	<skipdeleteapproval>1</skipdeleteapproval>
currentlanguage	Allows changing the current language of the Server sync app	<currentlanguage>dutch</currentlanguage>

What If I'm Using Ubuntu 18.10 or Ubuntu 22.04?

For Ubuntu 18.10 or 22.04, follow these steps:

1. Unzip the Linux Sync app package (fcserversync_linux_amd64.zip) to any folder
2. cd to the above folder
3. Give execute permission to fssyncinstall-linux.sh:

```
chmod 777 ./fssyncinstall-linux.sh
```

4. Open the terminal, go to the location where the FileCloud ServerSync files were extracted and then run

```
apt-get update
./fssyncinstall-linux.sh install
```

5. After you complete these steps, the ServerSync app appears with your other desktop apps. Double-click the app to open it.

> If ServerSync shows the message "There appears to be no system tray support in your current environment", enable system tray support by downloading the necessary extensions.

6. To download the necessary extensions, head to the TopIcons Plus extensions page on the official GNOME site. From here, click **Click here to install browser extension**, then click **Allow** and **Add**.
7. Return to the GNOME extensions page and refresh it. You may see the following message: **Although GNOME Shell integration extension is running, native host connector is not detected. Refer documentation for instructions about installing connector.**
   If so, click on the **documentation** link in the message. Here, choose your Linux version, and execute the corresponding command in the terminal.
8. Again, return to the GNOME Extensions page and refresh. Click the **Off/On** button to set it to On state. Then, click download and install option.
9. Once all the steps above have completed successfully, start the ServerSync app by double-clicking the ServerSync icon in the desktop apps.

Install ServerSync as a Service on Linux

Beginning with FileCloud Version 21.1, ServerSync supports SUSE Linux versions 12 and 15. To use SUSE Linux version 12 with storage application programs such as Dell Unity VSA, enable LAN file sharing.

How to Install FileCloud ServerSync as a Service on Linux

1. Download **FileCloud ServerSync Service for Linux (Ubuntu 18.04)** from https://www.filecloud.com/additional-downloads.
2. Extract the contents of the zip file **fcserversyncservice_linux_amd64.zip**.

   To extract files using the terminal, use the following command:

```
unzip fcserversyncservice_linux_amd64.zip
```

3. Give execute permissions to the fssyncstart.sh and fssync files:

```
chmod +x fssyncstart.sh
chmod +x fssync
```

4. Edit the config file **fsserviceconfig.xml**, and add the necessary parameters for your configuration. The following example shows how to format the parameters.

```
<?xml version="1.0" encoding="UTF-8" ?>


<variantrow>
    <rowentry>
        <name>url</name>
        <type>string</type>
        <value>HERE TYPE SERVER URL ADDRESS</value>
    </rowentry>
    <rowentry>
        <name>account</name>
        <type>string</type>
        <value>USER NAME</value>
    </rowentry>
    <rowentry>
        <name>password</name>
        <type>string</type>
        <value>PASSWORD</value>
    </rowentry>
    <rowentry>
```

```
        <name>limit_folder_count</name>
        <type>string</type>
        <value>2</value>
    </rowentry>
    <rowentry>
        <name>limit_folder_1</name>
        <type>string</type>
        <value>REMOTE_FOLDER_PATH|HERE_TYPE_LOCAL_FOLDER_PATH|0|0|0</value>
    </rowentry>
        <rowentry>
                <name>limit_folder_2</name>
                <type>string</type>
                <value>REMOTE_FOLDER_PATH|HERE_TYPE_LOCAL_FOLDER_PATH|0|0|0</
value>
        </rowentry>


</variantrow>
```

5. Edit **syncclientconfig.xml** and set the value of the field **syncclientlocation** to the folder path where log files and database files will be created by the app.
6. Open the terminal, go to the location where the FileCloud ServerSync files were extracted, and then run fssyncstart.sh

```
./fssyncservicestart.sh
```

Format of parameters in fsserviceconfig.xml

Supported parameters for FileCloud ServerSync. All parameters are optional. Add one of more of these parameters (as XML tags) in the <fssync> tags in the XML.

XML Tag	Value	Example
limit_folder_count	Number of folders to sync. If key is not specified, then there are no folders to sync.	<limit_folder_count>0</limit_folder_count>

XML Tag	Value	Example
limit_folder_1 limit_folder_2 limit_folder_3 ...	Depending upon the number of folders specified in the limit_folder_count, you will need to have the appropriate number of entries. The folder value is specified using 5 parameters using the following format ***<REMOTE FOLDER>|<LOCAL FOLDER>|<PERMISSIONS>|<SYNC TYPE>|<SYNC DISABLED>*** ***<REMOTE FOLDER>*** = E.g.: /john/folder1 ***<LOCAL FOLDER>*** = E.g: C:\data\localfolder ***<PERMISSION>*** = 1 - Allow NTFS permissions to be applied to local folder as per permissions of the folder on the remote Server, 0 - Deny NTFS permissions to be applied ***<SYNC TYPE>*** = 0 (2-way sync) or 1 (remote to local sync). ***<SYNC DISABLED>*** = 0 (enabled) or 1 (disabled).	<limit_folder_1>/john/folder1|C:\data\local|0|1|0</limit_folder_1>
disablenotifications	0/1 - Enable or Disable sync notifications	<disablenotifications>1</disablenotifications>
syncfrequency	number - Number in seconds to sync to the server (default is 120 seconds)	<syncfrequency>100</syncfrequency>
checkmodtime	0/1 - Advanced: check modification time in addition to size when checking for changes. Default is disabled.	<checkmodtime>1</checkmodtime>
checkcrc	0/1 - Advanced: check CRC in addition to size when checking for changes. Default is disabled.	<checkcrc>1</checkcrc>
deleteapprovalpct	Number from 0 to 100, which indicates what % of files being deleted requires approval. Default is 10. This applies only to file deletions in the local sync folder.	<deleteapprovalpct>20</deleteapprovalpct>
skipdeleteapproval	0/1 - Whether approvals are needed for bulk sync deletions. Default is disabled. When set to 1, approval is required if > 50 files are deleted AND percent of files being deleted is > **deleteapprovalpct**. This applies only to file deletions in the local sync folder.	<skipdeleteapproval>1</skipdeleteapproval>
currentlanguage	Allows changing the current language of the Server sync app	<currentlanguage>dutch</currentlanguage>

Import NTFS Permissions to ServerSync

When you initially import files into a FileCloud site, it is recommended that you also import existing NTFS permissions on files and folders. This allows the administrator to manage permissions centrally in FileCloud and ensures that the permissions are applied on synchronized local folders.

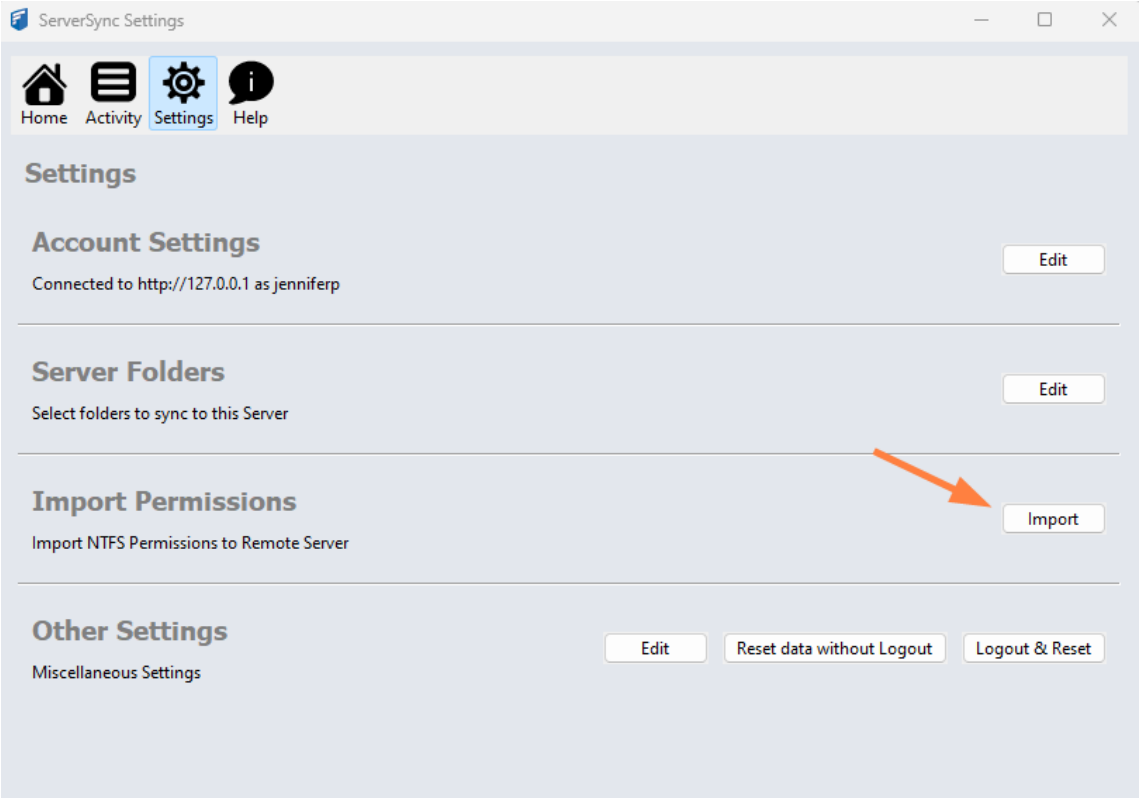
- During permissions sync, the user and group names specified in the NTFS permissions must exactly match the names in the FileCloud site.

> Any existing FileCloud folder permissions defined on the server side will be overwritten by the NTFS permissions after import.

Importing NTFS permissions

To import permissions:

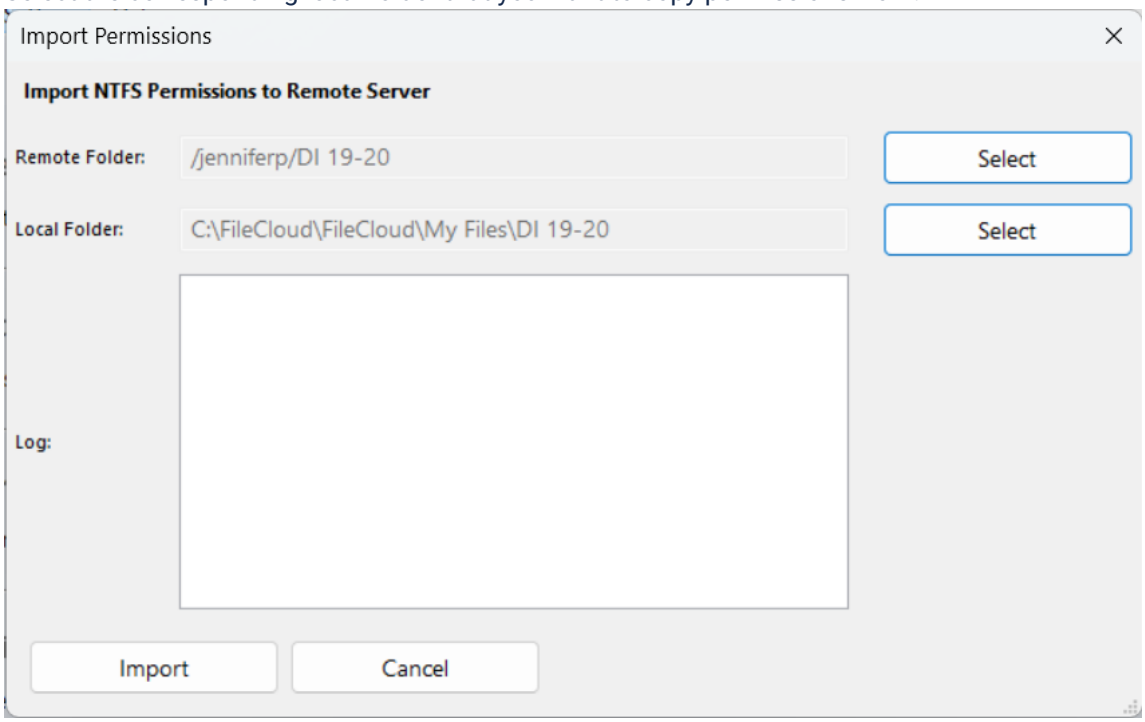
1. From the system icon tray, right-click the ServerSync icon, and then select **Settings**.
2. On the **Settings** screen, in the **Import Permissions** section, click **Import**.



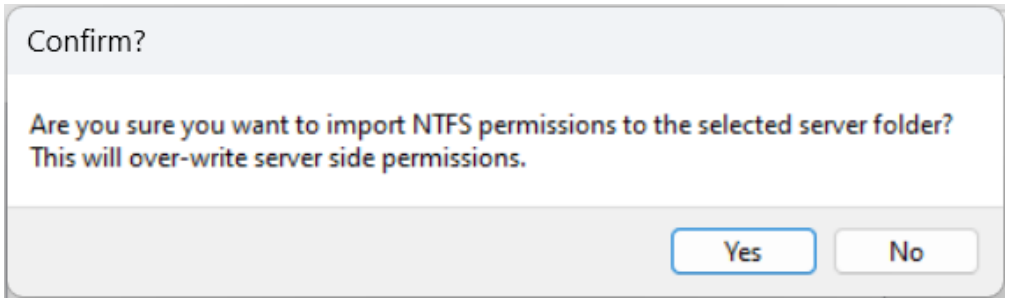
Note: You cannot import permissions from shared folders.

3. In the **Import Permissions** window, click **Select** for **Remote Folder**.
4. Select the remote folder that you want to copy permissions to.

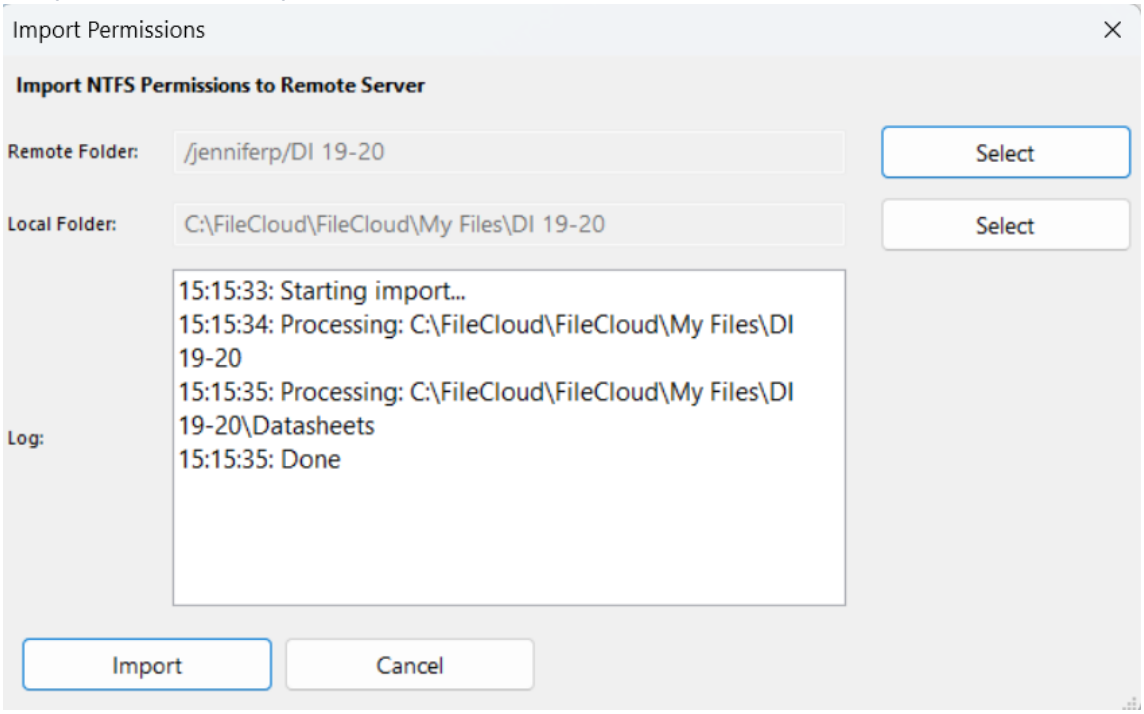
5. Then click **Select** for **Local Folder**.
6. Select the corresponding local folder that you want to copy permissions from.



7. On the **Import Permissions** window, click **Import**.
   A prompt asks you to confirm import and warns you that NTFS permissions will overwrite existing server side permissions.



8. Click **Yes** if it is okay to overwrite the permissions on the server.
   The permissions are imported.



NTFS/FileCloud permission conversions

When a file or folder with NTFS permissions is imported into FileCloud, the NTFS permissions are converted into comparable FileCloud permissions, as shown in the following chart:

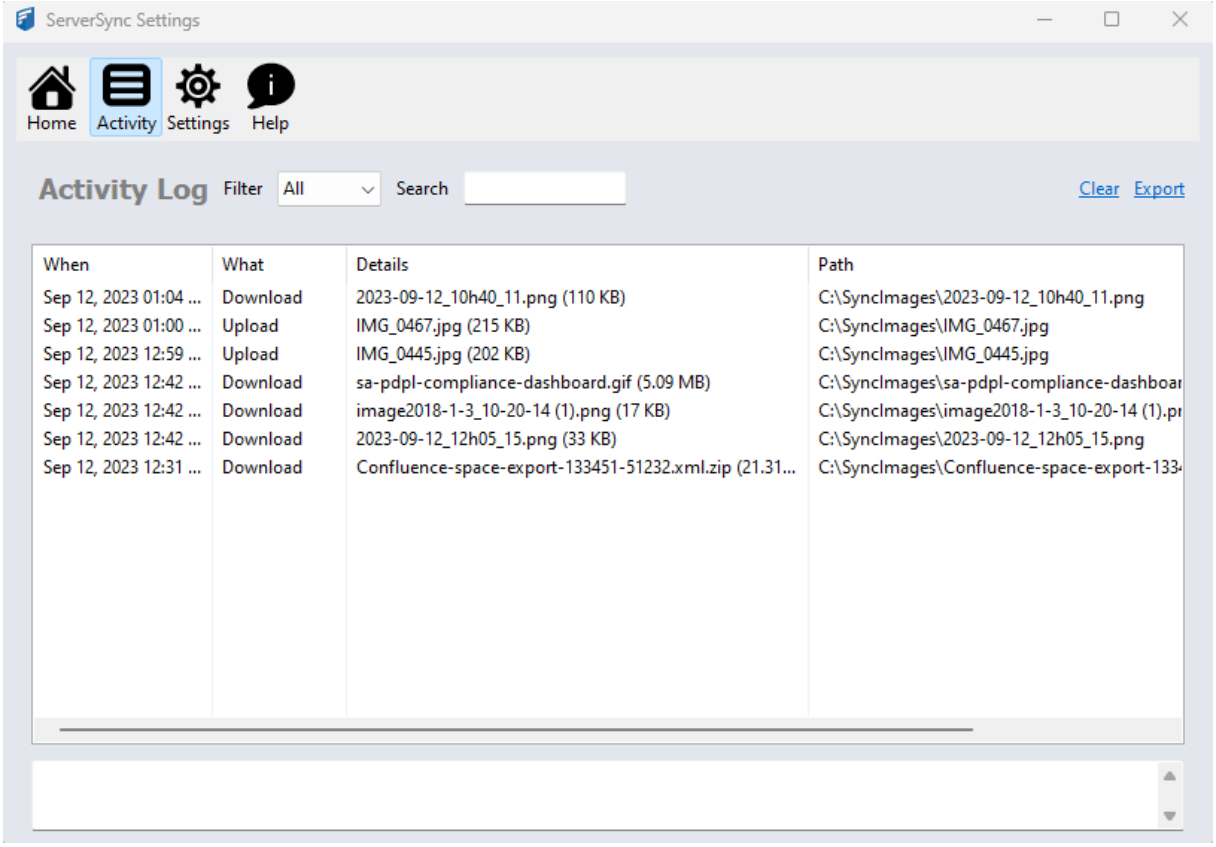
NTFS permission	FileCloud permission
Read/List folder contents/Read & execute	Read
Write	Read + Write
Modify	Read + Write + Delete
Full Control	Read + Write + Delte + Share + Manage

Troubleshoot ServerSync

If you encounter issues while using ServerSync, you can troubleshoot issues using the Sync Activity Log.

- This log shows you all of the actions that ServerSync is trying to complete, and if there were problems.
- You can also resolve file conflicts using the Activity log.

Sync Activity Log



To open the Activity log:

1. From the system tray icons, right-click ServerSync, and then select Settings.
2. On the Home screen, click Activity.

By default, all activities are shown.

You can filter activities.

- On the Activity screen, in Filter, use the drop-down to select either "Errors" or "Skipped" files.

You can also search activities.

- On the Activity screen, in Search, type in fragments of the filename or path for which you are searching.

Activity logs can be cleared or exported.

- On the Activity screen, to the right of the Search field, use the Clear or Export links.

File Conflict Management

If two people change the same file at the same time, FileCloud Sync app won't try to merge the changes.

- Instead, ServerSync will save the original file as well as a second version.
- The second version has the same name but is appended with "Conflict_," the name of the person or computer responsible, and the date and time the conflict occurred.
- By creating a conflicted file, ServerSync ensures that all changes are preserved and no one will overwrite another person's work.

When Does a Conflict Occur?

Conflict can arise under the following conditions:

- When two users save the same file at approximately the same time.

In this case the first person's changes are saved to the server and when the second person's sync app tries to save the file, it realizes there is a new version and will prevent the second person's changes from uploading and overwriting the first person's changes. In this case the first person's file is downloaded instead and saved locally adjacent to the original file with the "Conflict_" appended to it.

- When one user edits a file offline, and during the same time, the file was modified by another user.

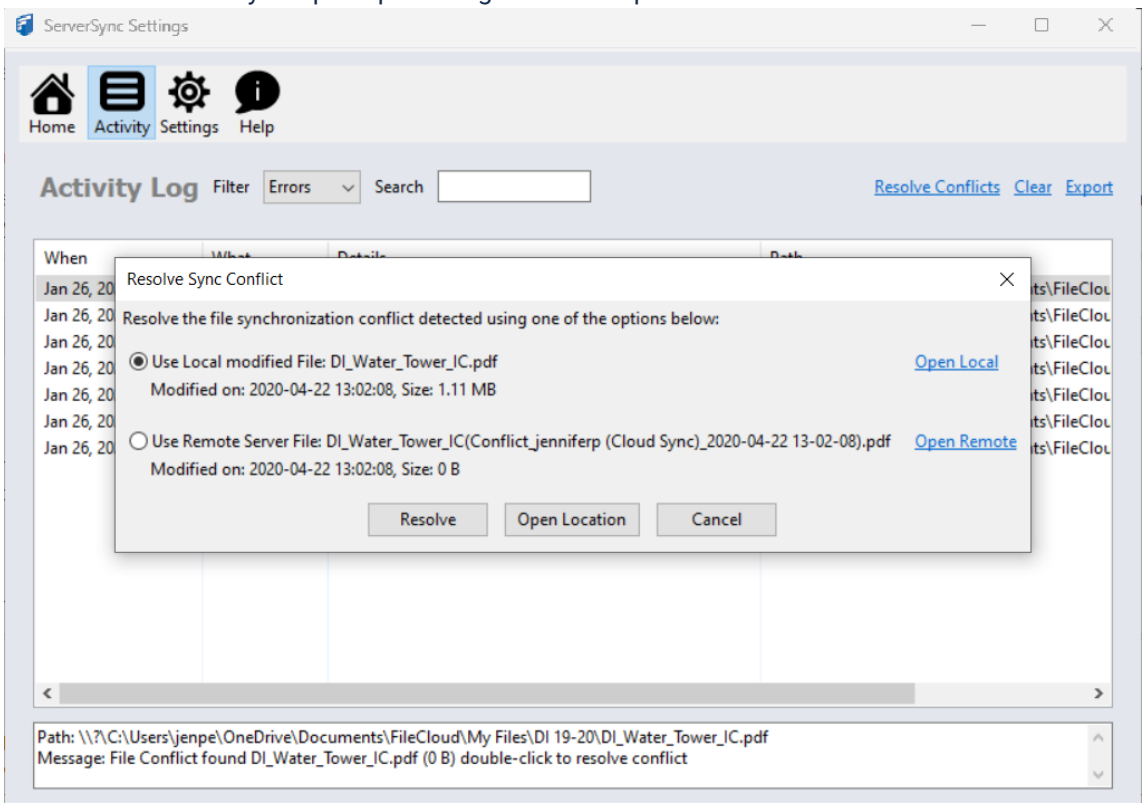
When the person who was offline comes back online and the sync app tries to upload the edited version to the server, it will detect that there is a new version available and instead of overwriting the changes on the server, it will download the server file locally and mark it as a "Conflict" file.

How Do I Resolve a Conflict?

You can resolve the conflict by deleting the file that you don't want any more.

To view all the conflicting files:

1. On the Activity screen, in Filter, use the drop-down to select **Errors**.
2. **Double click** the entry to open up a dialog that will help resolve the conflict.



For example, if you want to use the file in the server and discard local changes, select **Use Remove Server File: [filename]** and click **Resolve**.

Files That Don't Sync

As in FileCloud Sync, ServerSync may not sync some files because of their file types or names. in the FileCloud Sync section of this documentation, see Files that don't sync for information about which files do not get synced.

See the **allowedfilelist** entry in XML Options for Sync for instructions on allowing some of these files to sync.

Increase ServerSync Scanning Speed

You can reduce the time ServerSync takes to scan your local sync folders by changing the single-threaded logic used by default to run ServerSync to multi-threaded logic.

To configure ServerSync to scan more quickly:

1. Open the following file for editing:

```
%APPDATA%\FileCloudServerSync\syncclientconfig.xml
```

2. Add the following code:

```
<rowentry>
    <name>fsscantype</name>
    <type>string</type>
    <value>multi</value>
</rowentry>

<rowentry>
     <name>fsscanmaxthreads</name>
     <type>string</type>
     <value>15</value>
 </rowentry>
```

> In most cases, optimal speed is achieved by setting the parameter **fsscanmaxthreads** in the code above to **15**.

3. Save your changes and close the file.
4. For the changes to take effect, restart ServerSync.

To revert back to single threaded, logic:

1. Set the **fsscantype** parameter to **single**.
2. Remove or comment out the second variable.
3. Save your changes and close the file.
4. For the changes to take effect, restart ServerSync.

```
<rowentry>
    <name>fsscantype</name>
    <type>string</type>
    <value>single</value>
```

```
</rowentry>

<!-- <rowentry>
     <name>fsscanmaxthreads</name>
     <type>string</type>
     <value>15</value>
 </rowentry> -->
```

FileCloud ServerSync Stages

Bandwidth, options, and limitations:

- FileCloud ServerSync will sync a maximum of 50,000 files per sync cycle.
- The amount of CPU and bandwidth used by ServerSync highly depends on the amount of files/ folders scanned, uploaded, and downloaded.
- You can control the bandwidth allocated to ServerSync as well as the days and time syncing occurs.
- FileCloud ServerSync will be unable to Sync files if the file path exceeds 260 characters or if the file contains special characters.
- You can reduce the time ServerSync takes to scan your local sync folders by changing the single-threaded logic used by default to run ServerSync to multi-threaded logic.
- FileCloud ServerSync can be configured to automatically resolve conflicts either using the local version of a file or the server version of a file.
- FileCloud ServerSync can be run as a service.

> To modify ServerSync's default configuration, access the **syncclientconfig.xml** file located under **%AppData%\Roaming\FileCloudServerSync**.
> Restart ServerSync for the new settings/configurations to apply.
> **IMPORTANT**: When modifying **syncclientconfig.xml**, follow the exact steps stated within our documentation. If a configuration is not added or modified correctly FileCloud ServerSync will not start.

FileCloud ServerSync Cycle

Stage 1: Server to Local Synchronization

- ServerSync initiates synchronization by pulling changes from the FileCloud server.
- ServerSync checks if it has records of the changed files in its local sync database, and creates them if they don't exist. It checks if the file exists in the local folder, and downloads it to a cache location if it does not. Then it goes on to the next file.
- As a final step of stage 1, it moves the files from the cache location to the local folder. Then it add these records to the local ServerSync database file. During this stage, ServerSync displays

the message **Moving to Sync folder** when a file is download and **Processing changes** when files are added to the local sync database file.

Stage 2: Local to Server Synchronization

In the second stage, ServerSync monitors local sync folders for changes. Any modified files (added, updated, or deleted) are then uploaded to the FileCloud server. No new records are added to the local database during this stage.

Stage 3: Validation and Conflict Check

- FileCloud ServerSync does a final sync from the FileCloud server to validate that the information on the local sync folder and the FileCloud server are the same.
- It creates a record on the local sync database for any file/folder that has been uploaded during Stage 2.
- FileCloud ServerSync checks for conflicts. By default, ServerSync requests manual user input to resolve conflicts; however, conflict resolution can be automated to always resolve conflicts using the local version of a file or the server version of a file.
- Finally, FileCloud ServerSync downloads any new files from the server to the local sync folder and adds the new records to the FileCloud ServerSync database. During this stage, ServerSync displays the message **Moving to Sync folder** when downloading a file and **Processing changes** when adding records to the local sync database.

Once stage 3 is complete FileCloud ServerSync begins a new cycle.