

# What's New in ChronoSync v11

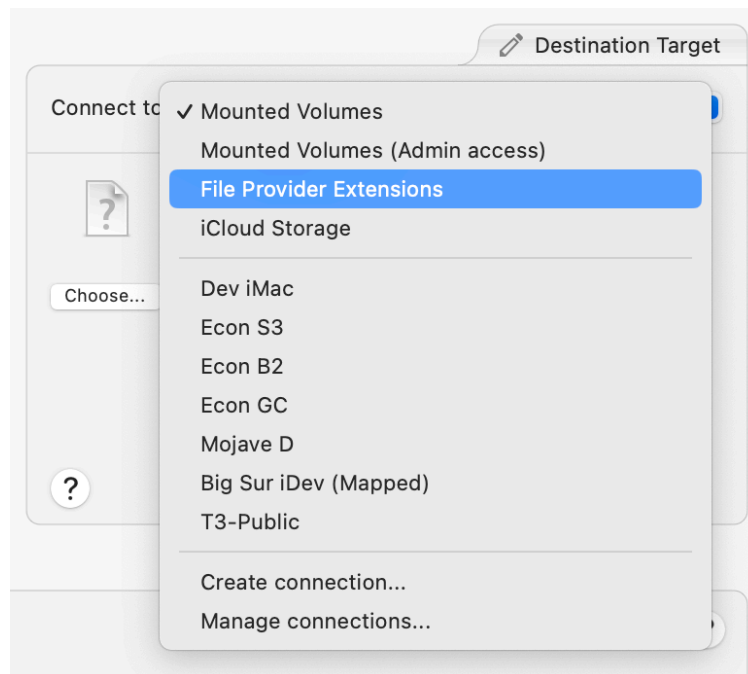
ChronoSync v11 introduces many significant new features. This document provides a quick overview of what is neat, new and different.

## File Provider Support

**Important Note: The macOS 13.6 and macOS 12.7 updates have broken File Provider support in ChronoSync v11. Please update to macOS 13.6.1 or 12.7.1 (or later) to fix this problem.**

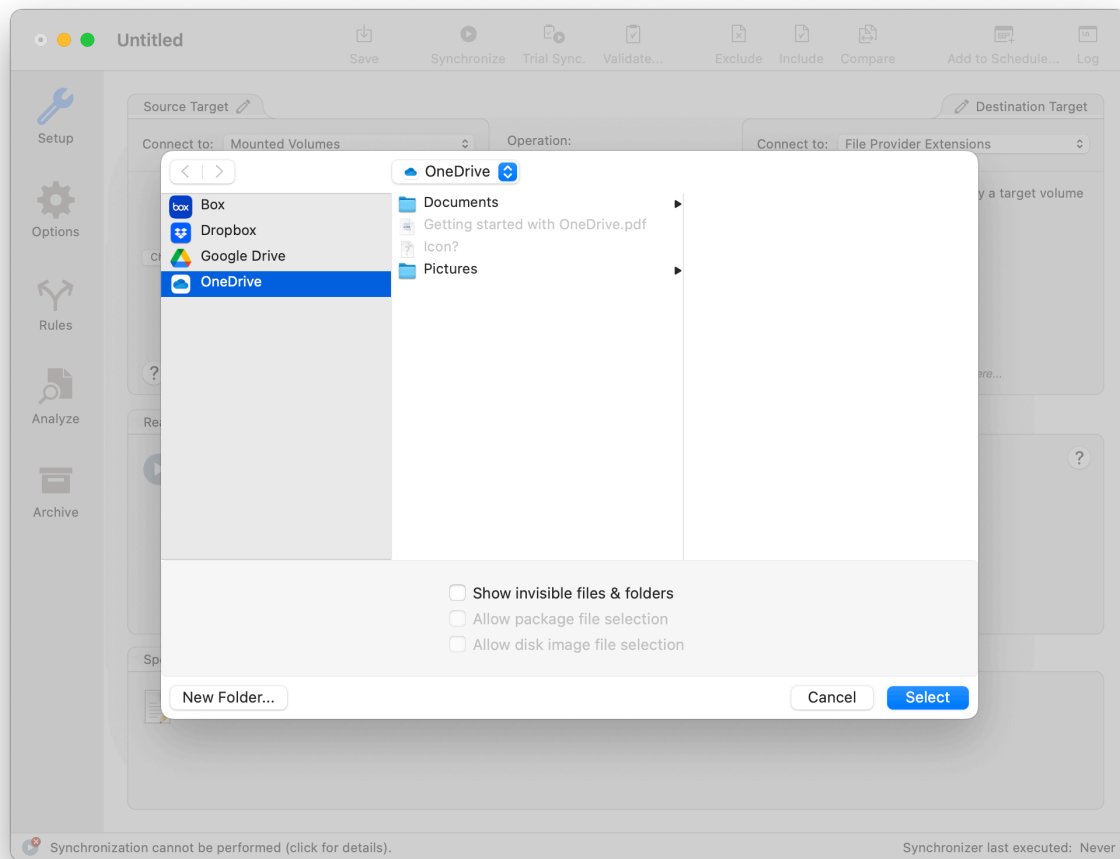
The File Provider mechanism was introduced by Apple in macOS 11 and refined over subsequent OS releases. In macOS 13 it has become the defacto standard mechanism for implementing integrated cloud storage services on macOS. Major vendors such as Box, DropBox, Google Drive and Microsoft OneDrive are implemented as file provider extensions. Apple has made it clear that this is the only approved mechanism for offering this capability, so eventually all cloud storage services will be implemented as file providers.

ChronoSync v11 is explicitly aware of all file provider extensions installed on a system. It identifies each cloud “drive” as a separate volume that can be selected as a target volume. To begin, you choose “File Provider Extensions” from the “Connect to:” popup menu for the desired target:



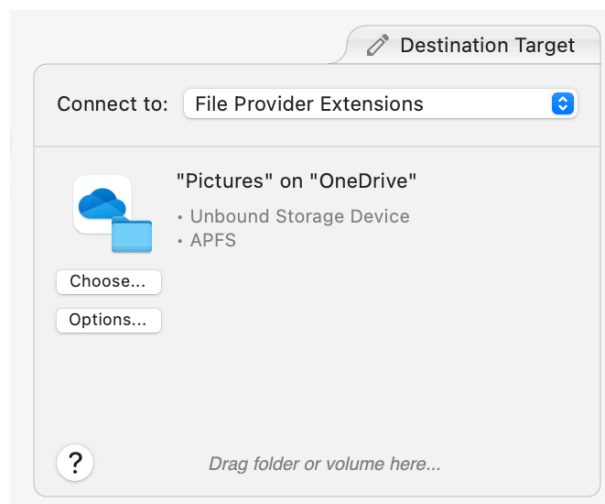
Note: if “File Provider Extensions” is dimmed, you do not have any installed on your system.

Once “File Provider Extensions” is selected, you can “Choose...” your target folder just like you would for any other storage device. This brings up a custom folder selection dialog:

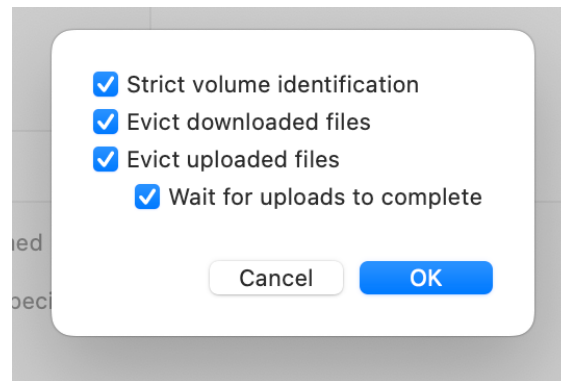


All the File Provider Extensions installed (and configured) on your system appear in the left column. These are analogous to “Volumes.” Choose a volume (aka cloud service) and then navigate to the folder you want to choose as your target. You can create new folders as necessary. The process is identical to choosing targets on your local storage device.

Once chosen, it will appear in your target sub-pane just like any other local folder would:



The unique aspects of ChronoSync's File Provider support comes in the optional behaviors you can configure for a File Provider target. Click the "Options..." button to be presented with a few choices:



The "**Strict volume identification**" option has the same meaning as it always has for all types of targets. Refer to the online help if you need more information.

The following settings are where the real power lies and are what makes ChronoSync's File Provider support unique among all macOS backup and synchronization applications.

**"Evict downloaded files"** indicates that any file that ChronoSync needs to download from cloud storage to your local storage will be purged from local storage when ChronoSync is finished with it. Thus if you are backing up many photos in the cloud to an external storage device, ChronoSync will need to download each one before it can copy them to external storage. With this option ON, ChronoSync will purge (or evict) the local copy when it is finished copying it. The file still exists in the cloud, it just won't unnecessarily consume local storage space.

**"Evict uploaded files"** is the opposite setting. With this setting ON, any file that ChronoSync copies to cloud storage will be marked for eviction so that the file provider software will purge the local copy once it has finished uploading. This prevents an extraneous copy of the file laying around and consuming local storage space. Thus if you are backing up a lot of photos on an external device to cloud storage, you won't have to worry about completely filling up local storage while the uploads are taking place.

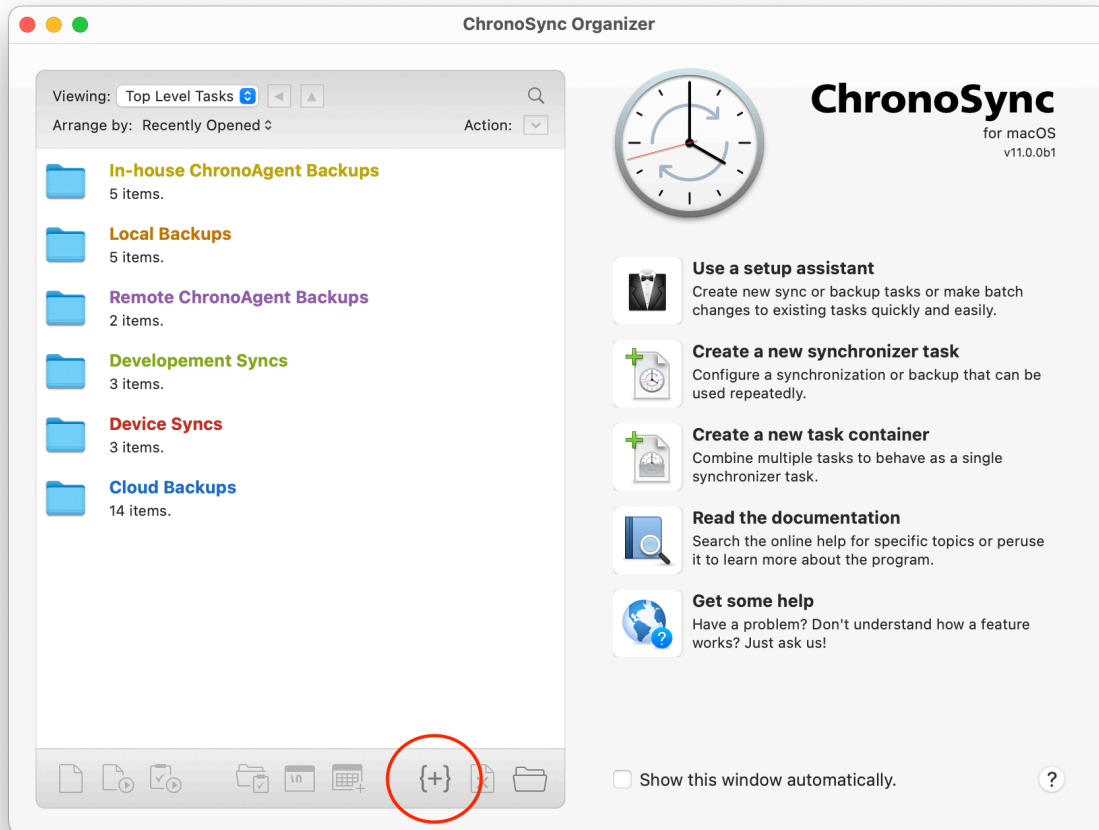
**"Wait for uploads to complete"** is only available if "Evict uploaded files" is ON. This setting has significant implications. Normally, when copying files to cloud storage, they will reside in a folder managed by the cloud storage file provider until they are uploaded. This is why you generally want "Evict uploaded files" turned ON so that these files can be purged when upload is complete. However, what many people overlook is that the upload to cloud storage is not instantaneous. The time required to upload is directly proportional to the size of the files and the speed of your internet connection. In many cases, it can take quite a while to actually complete!

Copying files to a folder on cloud storage can give the appearance of near instantaneous completion but it may actually take several seconds... minutes... or even longer to complete. If you don't wait for the uploads to actually finish, you might shutdown your computer or disconnect from the local network before they have been uploaded. This gives the appearance that you have backed up to the cloud but, in reality, the backup has not finished. Imagine doing this before leaving for a flight, losing your laptop on that flight, and finding out your precious backup did not complete before you left for the airport! The "Wait for uploads to complete" setting prevents this from happening. It will slow your backups/syncs down noticeably, but it is the only way to be sure your data is fully backed up to the cloud.

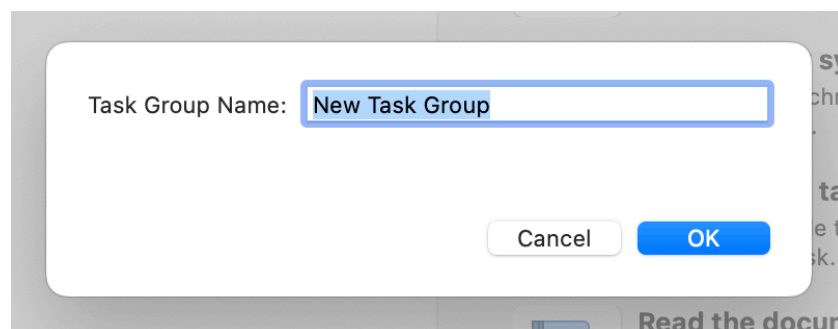
## Task Groups

The ChronoSync Organizer window is the main user interface for creating and organizing Sync Task documents. Unfortunately, when you have a large number of sync tasks, they can become rather unmanageable. Enter “Task Groups”, a new feature that basically equates to Folders for Sync Tasks.

To create a Task Group, click the new “{+}” command icon that appears at the bottom of the task list:

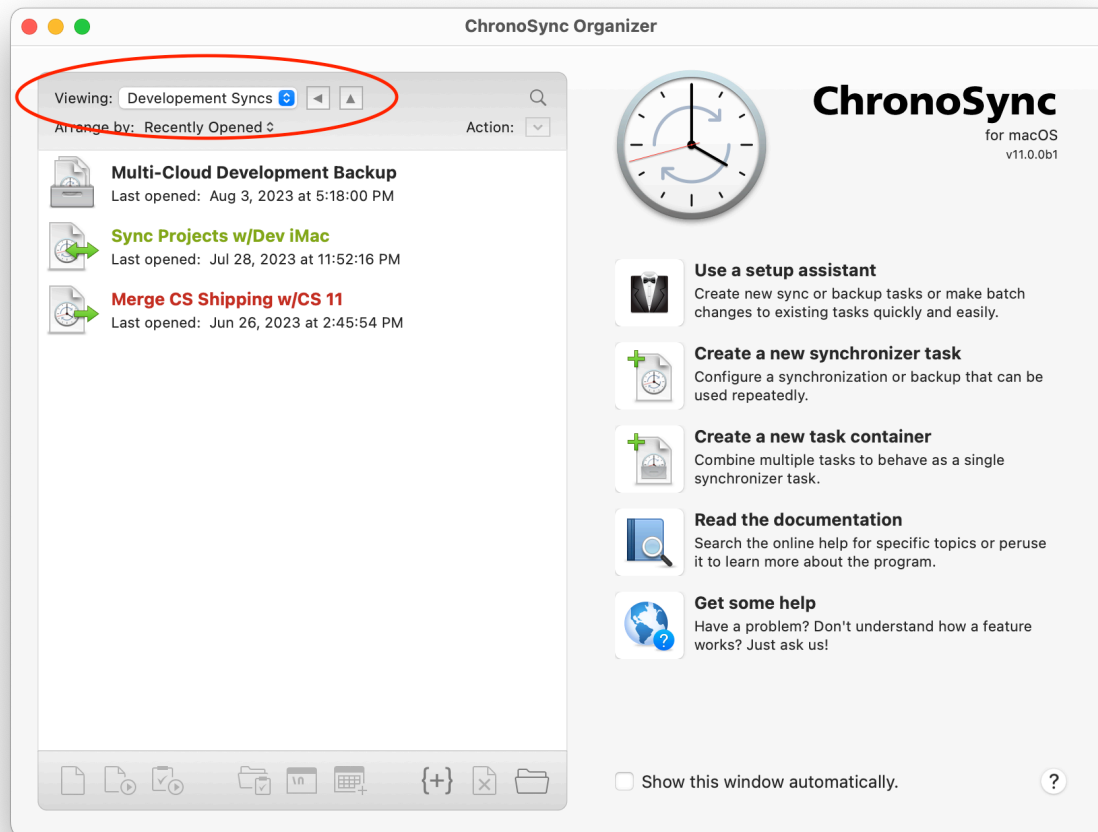


This will open a sheet dialog that allows you to name the group that you want to create:



Once created, you can double-click the task group to reveal its contents, just like you would in Finder when navigating a folder hierarchy of files. Just like Finder, you can create task groups within task groups and create a hierarchy as deep as you'd like.

When a task group is being viewed, new controls at the top of the task list allow you to further navigate the task group hierarchy:




The pop up menu shows every element of the hierarchy and allows you to jump to a specific level. The left-pointing arrow button takes you up one level while the up-pointing arrow button takes you to the top of the hierarchy.

When a task group is open, any new sync task that you create is implied to belong within that task group. You can move sync tasks to a deeper task group via drag & drop. To move a sync task up to its parent task group, you will need to right-click the task in the task list and choose "Move to Parent" in the contextual pop-up menu.

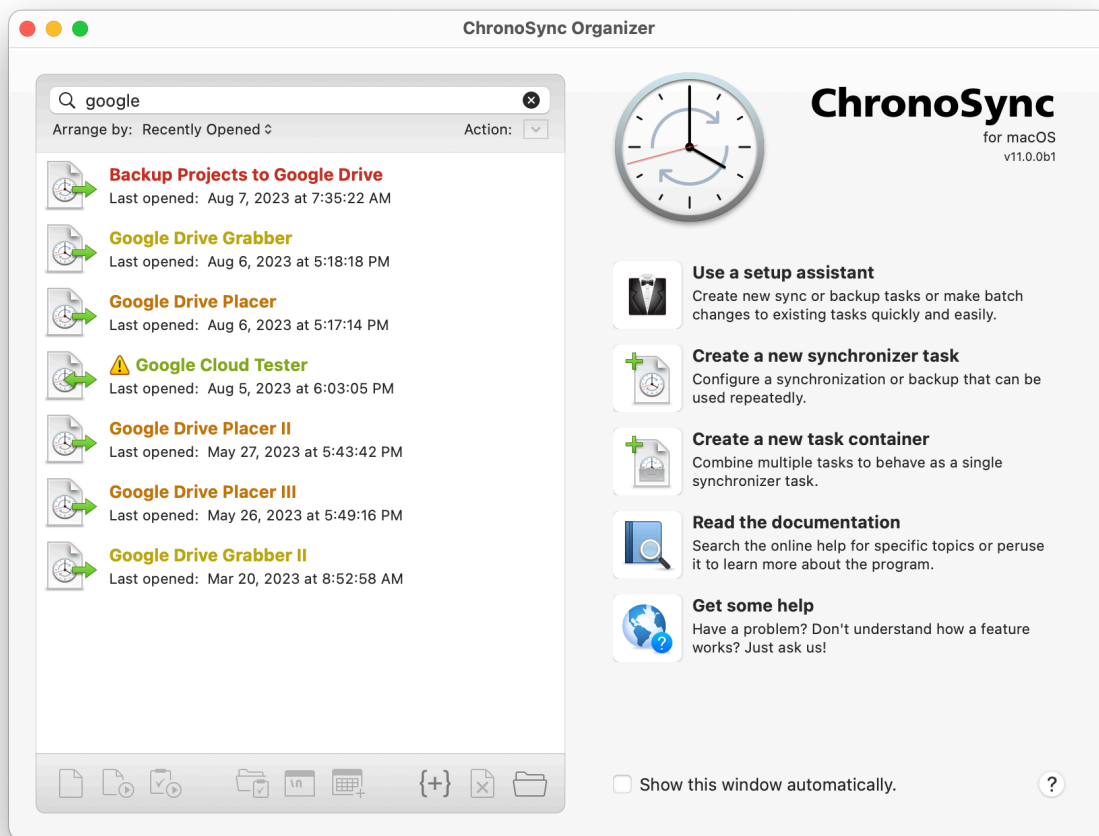
Note: deletion of task groups is purposefully tedious. You must remove all contained tasks before a task group can be deleted. Since there is no undo on deletion, we did not want to make it too easy to accidentally wipe out a large group of sync tasks!

- Open
- Open & Synchronize
- Open & Trial Sync.
- Open & Validate
- Schedule...
- View Log
- Rename...
- Duplicate...
- Move to Parent**
- Remove...
- Reveal in Finder
- Get Info in Finder

## Task Search

In addition to task groups, ChronoSync v11 includes the ability to search for tasks based on name. At the upper right of the task list there's a  icon that can be clicked to invoke the search function. When activated, you can type any portion of the task name you are searching for and a filtered list of tasks will appear. The list is refined as you type. You can interact with the displayed tasks just as you normally would i.e. you can invoke a sync operation, schedule it, delete it, etc.

Note that the entire library of sync tasks is searched, not just the tasks within the task group you may be viewing at the time. When the search function is dismissed, you'll return to the task group you were viewing when the the search function was first invoked.

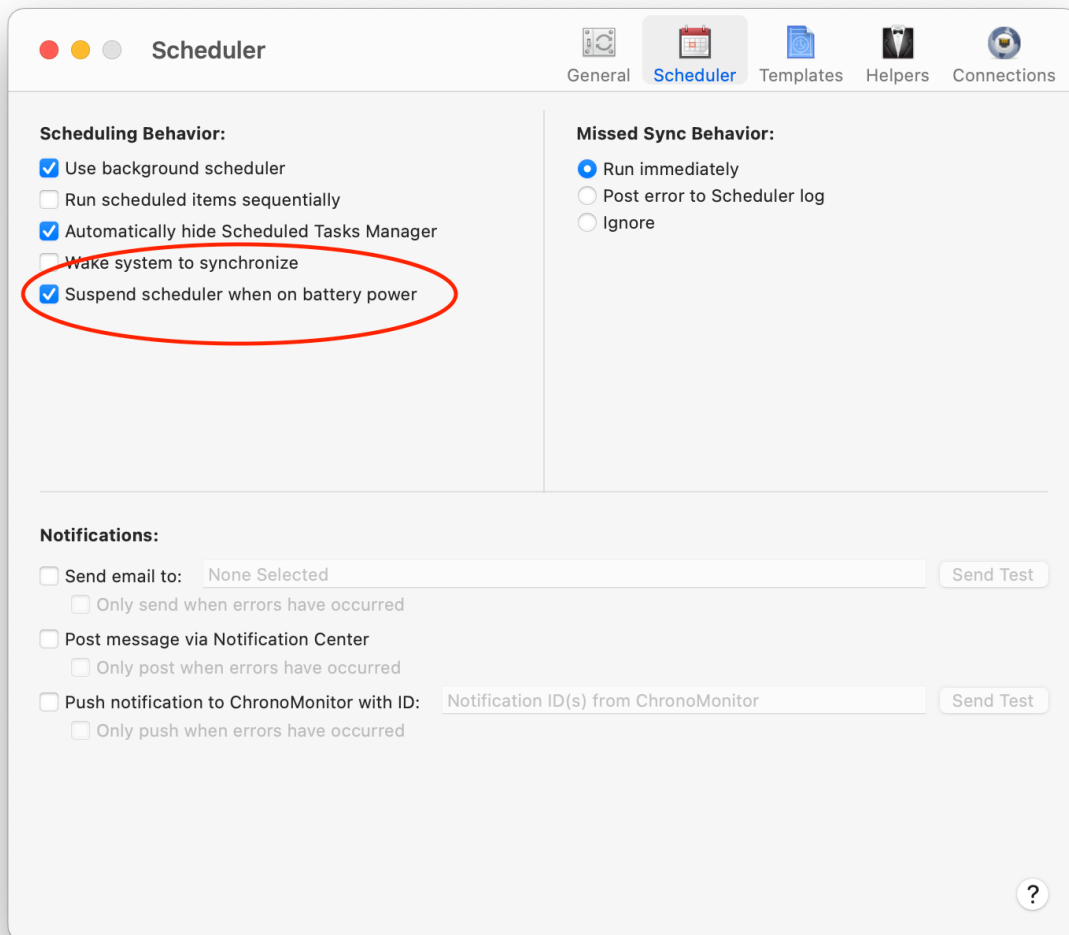


To dismiss the search function, click the "x" icon at the right of the search field, or just press RETURN with no text typed into the field.

## Battery Saver

If you've configured ChronoSync to perform scheduled synchronizations and backups on a laptop, a new setting allows you to disable the scheduler when you are running on battery power. When you reconnect to a power source, your scheduled tasks will run as they normally do. Thus you no longer have to worry about a battery consuming scheduled task kicking in when you're on the go!

To access this setting, open the "Scheduler" pane in the ChronoSync Settings dialog:



## Higher Performance Cloud Storage Transfers

The Amazon S3 and Google Cloud file managers now have a setting to control the size of some internal buffers used to communicate with these cloud services. The setting is called “Data exchange size” and it can be controlled in the connection profile editor for any Amazon S3 or Google Cloud connection profile you’ve created. Larger values help significantly with faster internet connections. Slower internet connections will see little benefit, so it is generally better to leave this setting disabled for internet connections less than 40 mbps.

The screenshot shows a macOS-style window titled "Connections" with tabs for General, Scheduler, Templates, Helpers, and Connections. The "Connections" tab is active, displaying the configuration for a connection profile named "Econ S3" of type "Amazon S3". The "Advanced" sub-tab is selected, showing various settings. The "Data exchange size" option, which is checked and set to "10 MiB", is circled in red. Other settings include "Caching" set to "Full", "Metadata" set to "Intrinsic", "Storage Class" set to "Standard", and "Direct Bucket" set to "Leave blank to select from all available buckets". Under "Options", "Custom request timeout" is set to 45 seconds, "Limit upload throughput" and "Limit download throughput" are both set to 5 Mbps, "Multi-part upload block size" is set to 10 MiB, "Cleanup failed multi-part uploads" is checked and set to every 15 days, and "Server-side encryption" is set to "SSE-S3".

Unique Profile Name:

Connection Type:

General Advanced

Caching:

Metadata:

Storage Class:

Direct Bucket:

Options:

- ☐ Use path-style URLs
- ☒ Custom request timeout:  seconds.
- ☐ Limit upload throughput to:  Mbps
- ☐ Limit download throughput to:  Mbps
- ☐ Multi-part upload block size:
- ☒ Data exchange size:
- ☒ Cleanup failed multi-part uploads every  days.
- ☐ Server-side encryption:

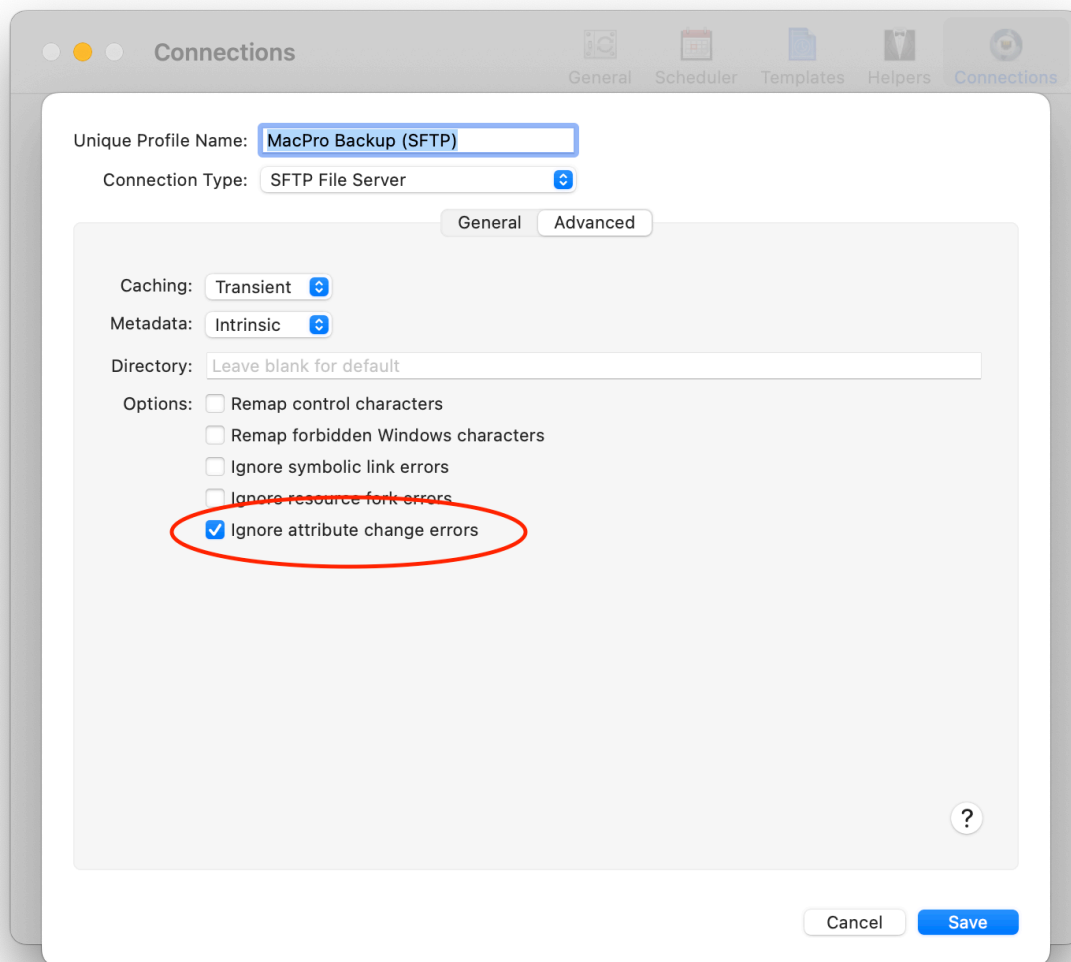
Cancel Save



## More Robust SFTP

The SFTP file manager has been updated to use the latest version of the libssh2 library for communication with SFTP servers. In general, more cryptographic protocols and authentication mechanisms are supported, making it compatible with a wider variety of servers. There are also bug fixes and performance enhancements as well.

ChronoSync also adds a new setting to the SFTP connection profile to increase compatibility with some SFTP servers. It is called “Ignore attribute change errors” and, when ON, will enable synchronization and backups to continue when the SFTP server rejects ChronoSync’s attempts to update file metadata. Some servers simply won’t allow these kind of changes, so this setting lets you at least copy data to the SFTP server at the expense of accurate metadata.



## Numerous Behind-the-Scenes Changes

There have been quite a few architectural changes that control how ChronoSync functions behind the scenes. For instance, ChronoSync v11 now uses the latest version of the OpenSSL libraries for secure network communication when connected to remote ChronoAgent or InterConneX devices. Use of deprecated APIs has been reduced and there have also been quite a few bug fixes and performance enhancements. These changes set the stage for future enhancements to your favorite sync and backup application!

