

User Manual

Silverstack^{XT}



Silverstack XT Version 9.0

POMFORT^{fn}

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Getting started

Data management

Silverstack 9 supports secure, multi-destination and automated backups of any digital file format. Industry-standard hash formats like XXH64 guarantee highest security for your data and with the support of Classic and ASC media hash lists, you can even store those hashes from Silverstack within external files for handover to other systems.

Using the workflow configuration window, you can automate tasks by combining multiple activities (offload, backup, transcode, upload, etc.) into a workflow that can be executed in one run on a resource like a camera magazine, or other media files. Backups and workflows can be configured very flexibly, helping you setup paths, extract file metadata, manage the verification behaviour and handle execution queues easily.

Your learning guide

The learning guide below contains recommended articles that help you learn the fundamentals of data management in Silverstack.

1. Offload and backup

Many of the activities in Silverstack like backup and transcoding must be started from the [workflow configuration window](#). Therefore, we encourage you to get familiar with it's concept and user interface. The article about [configuring a workflow](#) gives you an in-depth insight how you can create and manage workflows. Following parts 1.1 till 1.2 will already give you a good overview on how to offload camera cards with Silverstack. [Path wildcards](#) are a fundamental concept in Silverstack and help you quickly configure destination paths based on metadata.

2. Jobs view

After you started an offload workflow, Silverstack registers the data in the library and starts executing the job. You can view and manage all activities/jobs from the [jobs view](#). If you start a workflow, it is automatically sorted into the jobs view where you can monitor active and finished jobs.

3. Advanced workflows

As previously mentioned, automation in Silverstack works via workflows. When you got familiar with the basics on activities and workflows, you can dive deeper by reading the articles on [workflow activities](#) and [post steps](#).

4. Summary

- All activities are triggered via the [workflow configuration window](#) which is used for [configuring a workflow](#).
- [Path wildcards](#) help you build consistent folder structures easily.
- All workflows can be managed via the [jobs view](#).
- Improve Silverstack's automation by using [workflow activities](#) and [post steps](#).

Library

Silverstack's library helps you manage all your registered assets with ease. After offloading, clips and other files become part of your library automatically and can be viewed in the library outline.

In the library you can organize and sort your assets, manage your metadata, view file resources and start jobs which makes it the heart of Silverstack.

Your learning guide

The learning guide below contains recommended articles that help you learn the fundamentals of Silverstack's library.

1. Getting to know Silverstack's library and user interface

Start by getting to know the [library outline](#) and it's logic for organizing assets. For metadata handling, it is important to know the [general info](#) as well as to learn how to [work with metadata](#) in general.

The [quick metadata editing](#) feature is a very comfortable way to edit metadata for multiple clips at once.

2. Library and metadata handling

Silverstack uses bins to group clips together since a camera card usually represents a single bin. Within library folders you can further organize the bins, e.g. by shooting days.

Beyond that, [smart folders](#) are another very convenient feature to group clips by applying specific rules. If you need to store custom metadata values for your production, [custom metadata fields](#) allow you to define your own metadata fields (which then are also shown in the [general info](#)).

You can further enrich your library with metadata by using [dynamic metadata](#) that can be extracted for specific clips.

3. Library and metadata transfer

Silverstack offers different ways to exchange libraries and their metadata between multiple workstations. Having several options to share metadata gives you more flexibility in scenarios where different Silverstack libraries are used along the production workflow: on-set for fast and secure offloading, near-set for metadata handling and in post-production houses as well.

It is possible to store your configured project settings, transfer them between workstations or use them as default for new projects. Learn more about that in the according article about [transferring project settings](#).

Furthermore, you have different options to export or sync your Silverstack libraries by using [Silverstack library archives](#) or [ShotHub](#).

4. Further import and export features

You can import and export metadata from/to 3rd party applications using Silverstack's import/export features in the toolbar.

If you need to deliver metadata to post-production and editorial, you can follow the articles below to learn more about the individual application exports:

- [Avid media composer](#)
- [Adobe Premiere Pro](#)
- [Apple Final Cut Pro X \(FCPX\)](#)
- [Blackmagic DaVinci Resolve](#)

5. Summary

- The [library outline](#) helps you organize your clips, while the [general info](#) shows their belonging metadata.
- Quickly edit metadata for multiple clips using [quick metadata editing](#).
- [Smart folders](#) group clips based on specific rules.
- You can configure default [project settings](#) for new projects.
- Libraries can be exchanged using [library archives](#) or [ShotHub](#).

Playback & QC

Silverstack offers a wide range of options to playback, view and assess clips by using the playback and QC views. You can open the playback view via the main window's center view by clicking the little playback icon or enabling the QC layout via the "QC" button in the toolbar.

Moreover, you can control playback using the industry-standard JKL controls, or scrub through clips, zoom in and out, alter the display resolution for RAW clips, and much more.

Your learning guide

The learning guide below contains recommended articles that help you learn the fundamentals of playback in Silverstack.

1. The basics of playback

Start with learning the basic [playback](#) controls. Silverstack also supports HD-SDI output to display clips in best quality on an external monitor with HD-SDI capabilities.

Read the article about [HD-SDI output in Silverstack](#) to learn more about it.

2. Overlay and transformation features

A lot of functions that help you check the colors, luminance, focus and overall quality of your video clips are bundled within the [visual controls](#) and scopes.

On top of that, you have the ability to configure overlays for playback as well as for SDI output, for example [frame lines](#).

In the general info's processing section you find options for [image transformations](#) to de-squeeze clips recorded with anamorphic lenses, flip or rotate clips, and apply [crops](#).

3. Advanced features

In case your assets have resources on multiple volumes, it is possible to set the [playback priority](#) for a volume and potentially improve the performance by this.

When grading dailies, it might be necessary to compare clips in the playback view using the [gride and wipe functions](#).

Grading

Silverstack Lab provides an advanced color grading engine.

Your learning guide

The learning guide below contains recommended articles that help you learn grading with Silverstack.

1. How Silverstack works with color

Each clip has a look source that defines its color processing (see the general info). You have several options to choose from which are explained in detail in our principles article on [color processing](#).

When grading, you will mainly work using the color view that contains all important features, including [grading controls and modes](#) that support ASC-CDL, 3D LUTs, or [ACES](#) pipelines.

Footage shot in RAW can be processed with [custom RAW development](#). Silverstack Lab also supports the use of hardware grading panels to work on looks.

2. Manage looks

The current settings for a grading mode and its nodes form the technical configuration for what is referred to as a clip's look in Silverstack. You have a lot of different options to work with looks. In general, looks can be saved, applied and managed via the [look library](#) within the right sidebar.

Moreover, Silverstack Lab offers a seamless import of looks from [Livegrade](#) using [look matching](#), e.g. by timecode. This feature allows you to import looks created live and apply them to the actual camera clips again.

Learn more about [importing](#) and [exporting looks](#).

3. Assisting features for grading

The [grid and wipe view](#) can be very helpful when comparing clips or matching their looks as well as the ability to output the video signal via [HD-SDI](#) to an external monitor.

Silverstack also offers useful tools to analyze the luminance and colour of your clips which is essential in grading.

One of these tools are Silverstack's scopes which offer waveforms, histograms and vectorscopes to inspect the image. Moreover, the [visual controls](#) contain additional features such as exposure and focus assist, clipping overlays, and frame lines.

4. Summary

- A clip's look source defines how Silverstack [processes its color](#).
- The [grading controls](#) allow you create custom looks.
- Looks are managed in the [look library](#).
- There are different ways to [match looks](#).
- Clips can be analyzed using scopes and the [visual controls](#).

Reports



Silverstack enables you to export advanced, customizable reports that can serve as a proof or log of all data that has been managed and provide information about clips, volumes, and metadata.

Your learning guide

The learning guide below contains recommended articles that help you learn the extended options of Silverstack's reports.

1. Silverstack's report types

Silverstack offers you the following report types which are tailored to specific needs:

- [Shooting day](#)
- [Clips](#)
- [Thumbnails](#)
- [Contact print](#)
- [Volume](#)

The reports above can be exported using the classic or updated style. The updated style is available in light and dark mode. On top of that, you can decide between the formats PDF and HTML.

2. Creating reports

Reports can be created in two ways:

- Automatically, as an activity's [post step](#) within a [workflow](#)
- Manually, via using the [report wizard](#)

Either way, you need to use the report wizard in order to create reports or report presets (for workflows).

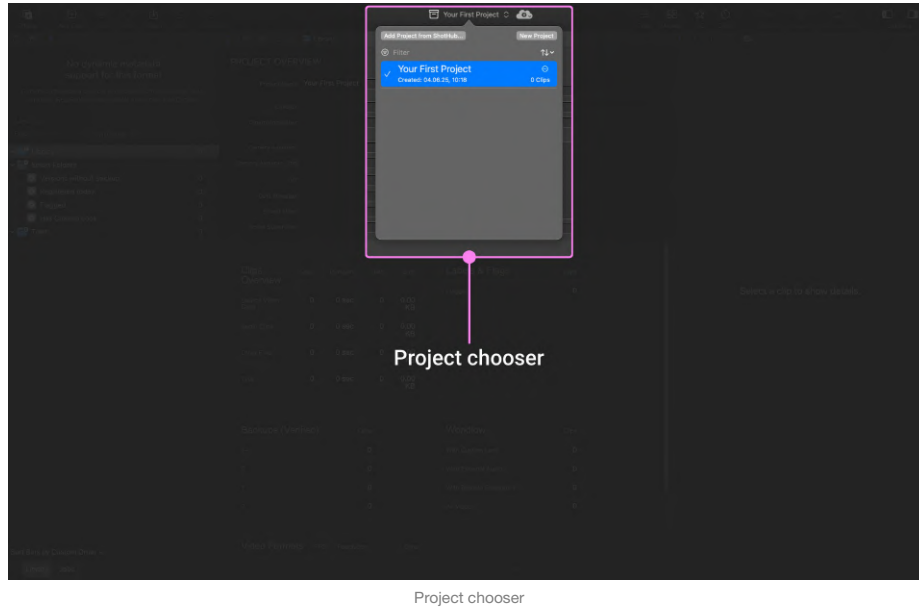
The knowledge base contains a detailed article that explains everything you need to know about [creating reports](#).

Reference

Library

Project chooser

The project chooser allows you to create, delete, rename, add, search or switch projects. The feature can be found in the top center of Silverstack's toolbar.



If you have old projects in your library that you want to remove, you can simply unregister them from the database via:

- Right-click the project in the project chooser and select "Delete Project..."
- The menu: File > Delete Current Project...

All the references that are registered in that specific project will be removed afterwards. Silverstack will automatically switch to the next available project. If there are no other projects, Silverstack will automatically create a new one.

Note: The files linked to the assets in the Silverstack project won't be removed.

Dynamic metadata panel

Silverstack has a dynamic metadata panel that can display dynamic metadata for supported clip formats after it was extracted using the [workflow configuration window](#). Dynamic metadata refers to information that changes over a clip's time span (e.g., focus distance). It is stored in various formats and consequently needs a specific process to be accessed. Please note that this feature is only available for supported clip formats which are listed below.

Supported clip formats

- ARRIRAW (.ari sequences and in .mxf container)
- ARRI Prores
- REDRAW
- SONY XAVC
- SONY X-OCN
- SONY RAW

Available dynamic metadata

Dynamic metadata consists mainly of dynamic lens information:

- Focal Length
- Aperture (T-Stop)
- Focus Distance

For ARRI ProRes and ARRIRAW clips, Silverstack XT / Lab also support:

- Camera Tilt
- Camera Roll

User interface

The dynamic metadata panel is located in the top left corner of Silverstack's main screen and you can access it by clicking on the running man icon. You must first extract dynamic metadata using the [workflow configuration window](#) so the panel can display the data.

FPS

Shows the frames per second.

Focal Length

Shows the current focal length.

Aperture

Shows the current aperture value in T-Stop.

Focus Distance

Shows the current focus distance.

Lens

Shows the lens model.

Filter

Shows the filter.

ND Filter

Shows the ND filter value.

Lens, filter and ND filter mirror data from the library and can also be edited in the general info.

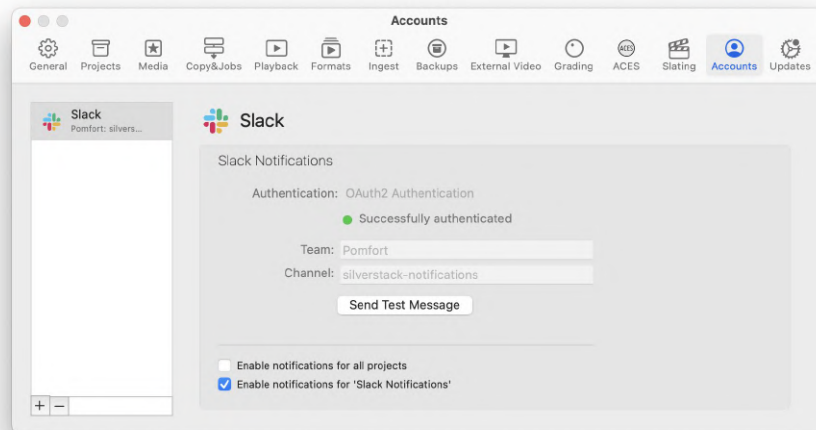
Sending job notifications to Slack

Silverstack allows you to transmit all notifications that appear in the macOS notification center to a connected Slack channel as well. Visit the reference page for Silverstack's [account settings](#) for more information.

Connecting Silverstack to Slack

Follow the steps below:

1. Head to Silverstack's account settings
2. Click the (+) button on the left side and press [Add Slack Notifications...](#)
3. A browser sheet opens allowing you to connect your Slack workspace
 1. Add your workspace
 2. Enter credentials
 3. Select Slack channel or private message conversation to send notifications from Silverstack
4. You have successfully connected your Silverstack project to Slack
5. The "Pomfort Notifier" should appear in the Slack workspace in the section "Apps"



Slack is enabled in the account settings

Available actions

Send Test Message

Sends a test text with content "Test message from Silverstack" to the connected channel to verify a working connection.

Enable notifications for all projects

Enables notifications for all projects.

Enable notifications for 'Current Project'

Enables notifications for the current project. By default, only the current project is enabled.

Notifications

After a successful connection, all notifications that appear on macOS will also be sent to the connected Slack channel. The notification messages to Slack include extended information. Notifications are available for all job types in Silverstack.

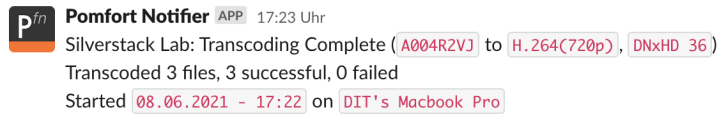
Basic Information (also in macOS notification):

- Application Name
- Job Type
- Complete (successful) / Failed
- File count and successful/failed files

Extend Information (included in messages to Slack):

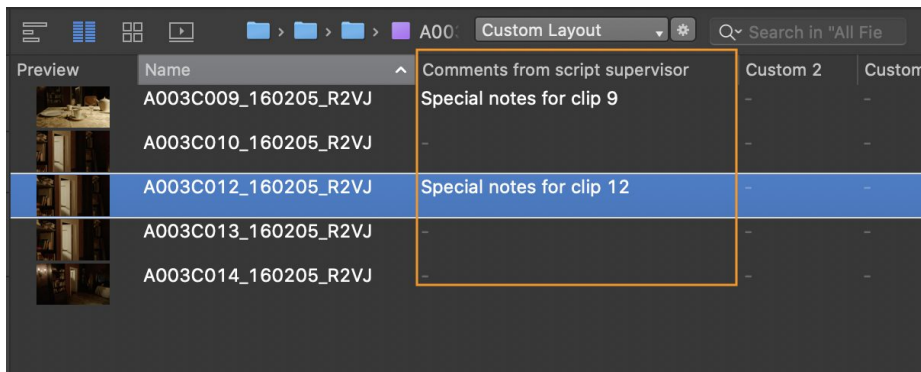
- Source card name / folder name
- Destination drive name
- Start date of job
- Machine name (host name)

Below, you can see an example message sent to Slack triggered by an offload job:



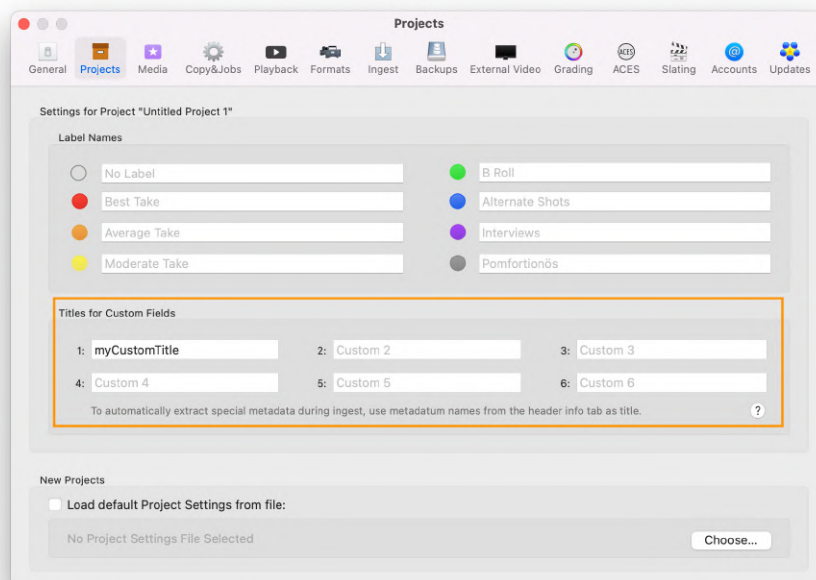
Custom metadata fields

Silverstack offers a set of six outstanding flexible metadata fields. Like most of the available metadata fields in the Silverstack library, the fields *Custom 1...6* can be used freely to add information to the clips. However, these special fields also allow an individual title to reflect their intent, e.g. "Comments from script supervisor". The custom titles are displayed in the Silverstack library's main table header and the general info and help stay organized.



Custom Field in the Silverstack library

The default titles "Custom 1", "Custom 2", ... can be adjusted in the projects preferences and can be set for each project individually.



Custom Field Titles in the Project prefs

Using custom fields to read additional metadata

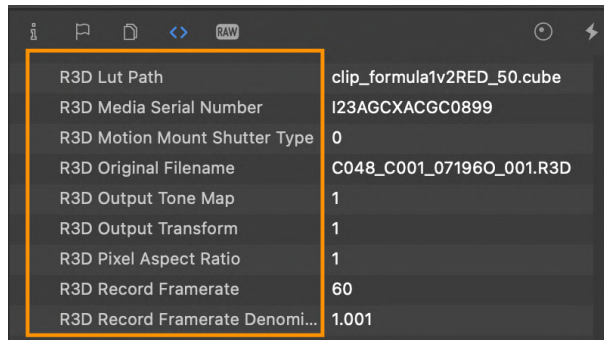
Renaming the custom field titles in the Silverstack preferences with certain keywords will make them receive indicated metadata from supported clips.

Special keywords

- “TC UBits” or “UBITS”
 - Gets the timecode user bits information from audio clips
- “Audio Comment”
 - Gets the audio note/comment from audio clips
- “ISO”
 - Additionally read ISO value from Sony clips

Generic keywords

Besides the special keywords, you can use **any** metadatum name as specified in the header info tab to automatically extract the correspondent data of clips during ingest.



R3D Lut Path	clip_formula1v2RED_50.cube
R3D Media Serial Number	I23AGCXACGC0899
R3D Motion Mount Shutter Type	0
R3D Original Filename	C048_C001_071960_001.R3D
R3D Output Tone Map	1
R3D Output Transform	1
R3D Pixel Aspect Ratio	1
R3D Record Framerate	60
R3D Record Framerate Denomi...	1.001

Use exact metadatum names from the header info tab as title for custom fields to extract special metadata automatically.

For example, naming a custom field “R3d Media Serial Number” will automatically populate the custom field with the corresponding value during ingest (if the metadatum is available in the clip header).

Import metadata

When importing metadata renaming the custom fields is helpful to get additional metadata, see also [Import Metadata from Zoelog](#)

Search Code: ST-CM1

Verification states

Since Silverstack 6.4 file resources (all registered file copies and the source) have a verification state that is displayed in the “File” tab of the right bar.

The verification state helps the user to identify the current verification status of the file resource of a clip. This is especially necessary with the possibility to copy files first and verify them later in a separate job: With verification states it is explicitly identifiable if the resource has been verified.

3 Verification states

A file resource can have 3 different verification states:

-  **Verified** (green)
-  **Defect** (red)
-  **Not Verified** (grey)

Here’s more details about the 3 states and what they mean:

- **Verified:** The hash of the destination file matches the hash created during the initial copy of the file. For source (source file resources) a green verified state means that they passed “Source Verification” (if enabled), which means a second read and hash check of the source and comparison to the the initially created hash.
- **Defect:** The file resource has a different hash than the one created during the initial copy. This can be identified by any type of verification Silverstack performs (e.g. as part of a copy job or with a separate verify job).
- **Not Verified:** The file resource has not been verified. Silverstack did not attempt to do a verification due to settings of the user. This can be the case e.g. for the source file resource when “Source Verification” has been disabled, or for copy destinations when choosing to copy without verification (which we do not recommend).

You can learn more about how the Silverstack copy process works in the following article:

- [How does the copy process in Silverstack work?](#)
- [The copy and verification process in Silverstack](#)

Verification states in the file tab

The file resources in the file tab show the verification state per resource and as a summary for the clip:

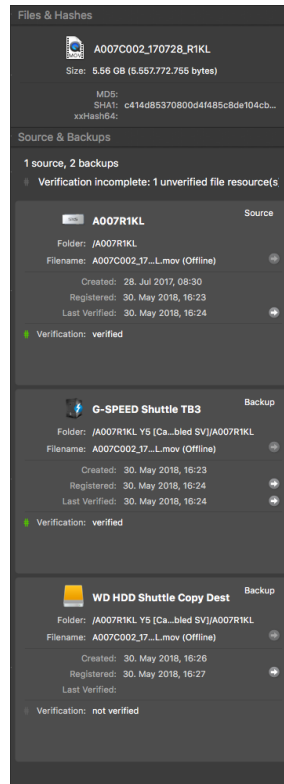


Fig. 1: The file tab with verification indicators

We can see that the clip has 3 file resources:

- Source: Verified
- Backup 1: Verified
- Backup 2: Not Verified

The summary about the clip tells us that the verification is incomplete because at least 1 file resource is not verified. We will take a closer look at this behavior in the next section.

Escalation of verification states

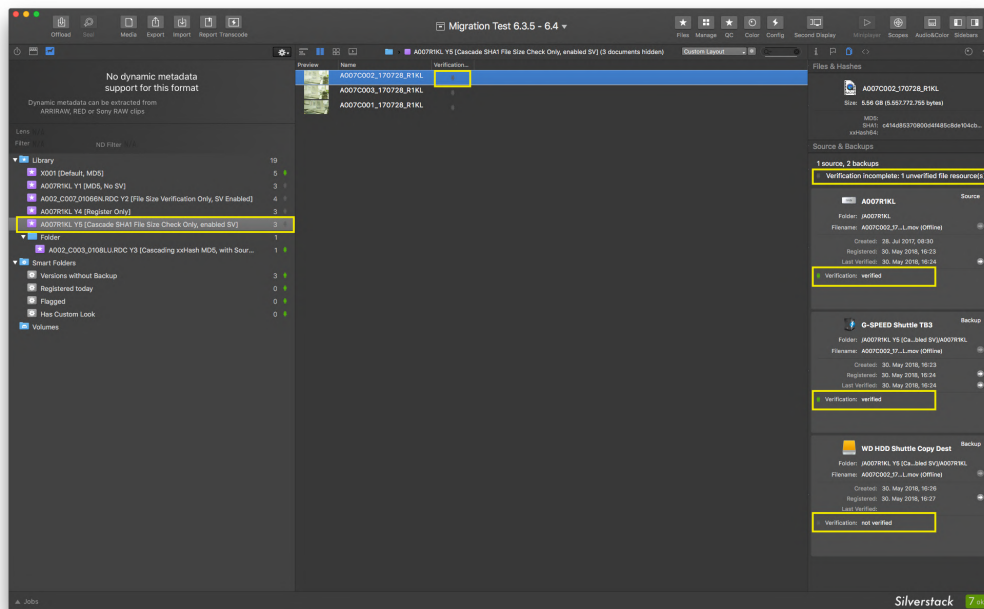


Fig. 2: Tracing the indicators from the bin to the file resource in the file tab

To make the user aware of the verification state of all clips resources already on a bin level, the verification state is escalated from the file resource to the library outline:

As multiple file resources can belong to a clips, a clip is inside a bin, and bins can be grouped in folders that can be ordered in the hierarchy inside the Library outline the following escalation is performed:

- **File Resource** verification state
 - *escalates to...*
- **Clip** verification state
 - *escalates to...*
- **Bin** verification state
 - *escalates to...*
- **Folder** verification state
 - *escalates to...*
- **Library** verification state

There's a clear hierarchy of severity of states that overrule and therefore define the state of the level above:

- **Defect**
 - overrules...
- **Not Verified**
 - overrules...
- **Verified**

Understanding both cascades will help you already identify folders and bins containing problematic clips. Using the verification state column (see fig. 2) you can trace the problem down from the bin to the file resource that might be defect or not verified.

Folders only show the verification state when collapsed to avoid confusion with containing states.

Running jobs for bins

Due to their nature, the verification state icons on bin level do not necessarily give meaningful feedback while copy jobs are running for the bin (as running copy jobs naturally lead to a change of the verification state). This is the case because new file resources are registered and verification processes are on the run.

To address this a "Running Jobs" indicator has been introduced. Installed in the library on bin level, it shows in form of a little progress bar and tells the user that this bin currently has jobs running in the background:



Fig. 3: The Running Jobs indicator in the library outline

Furthermore, the "running jobs" indicator for bins also brings other benefits such as e.g. already seeing on bin level if no job is running anymore for a bin and a report can be created with a steady state of the library.

Migration

Please be aware that library versions of Silverstack prior to the 6.4 update do not include information about verification states. Therefore a migration to 6.4 will place verification states based on the existing job information. You can verify resources based on the existing hash information afterwards at any time.

Also PSLAs (Pomfort Silverstack Library Archives) exported with 6.3 and earlier do not include information about jobs or verification states. Opened with 6.4 or later all file resources will receive an "unverified" state.

Crop clips

Silverstack allows to crop clips to a custom aspect ratio. Cropping is non-destructive as long a crop setting is not used for transcoding.

Cropping can be set via the "Crop" popover in the General Info tab on the right side of the main window. Learn more about the right sidebar in the article [The Information Panel](#).

Crop clips to a custom aspect ratio

Go to the "General Info" Tab and scroll down to the "Processing" section where you can find the "Crop" entry.

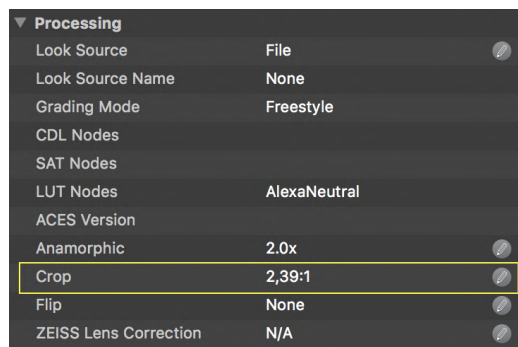


Fig. 1: Crop in the Processing section

Click the little grey button with the pencil to open the popover:

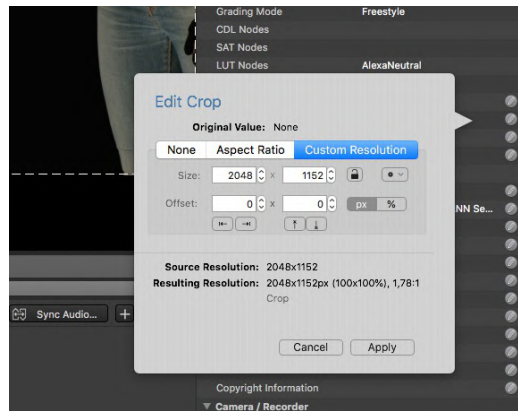


Fig. 2: The Crop popover in the General Info

Crop options

There are 3 tabs and therefore 2 crop options available:

- Selecting **“None”** and clicking **“Apply”** will make sure to remove all crop settings from the selected clip.
- Crop to an **Aspect Ratio**
- Crop to a **Custom Resolution**

Crop to an aspect ratio

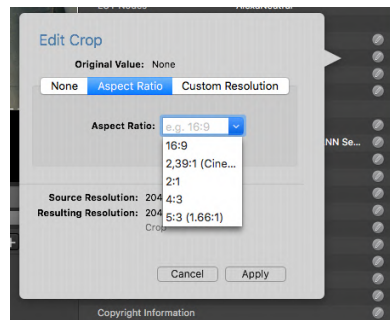


Fig.3

Select the second tab **“Aspect Ratio”** and enter a custom aspect ratio into the combo box or select one from the list of presets.

The by default available aspect ratios are:

- 4:3
- 16:9
- 1.85:1
- 2.39:1 (Cinemascope)
- 2:1
- 5:3 (1.66:1)

Crop to a custom resolution

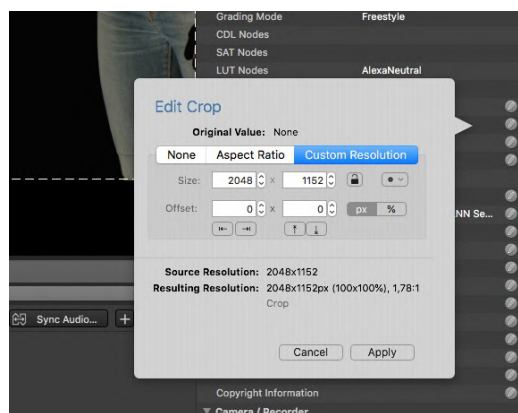


Fig.4

Select the third tab **“Custom Resolution”**.

The following controls are available:

1. **Size:** You can enter a custom pixel resolution to crop to. The specified pixel resolution will be cropped out by default from the center of the image.
2. **Aspect Lock:** You can lock the resolution to a certain ratio when changing horizontal or vertical size.

3. **Recents:** The gear menu shows recently used sizes for a quick selection
4. **Offset:** Specify a horizontal and vertical offset from the center cropped size
5. **Quick Offset Buttons & Re-Center:** The quick offset arrow keys enable a one-click shift of the cropped area to the respective image margins. If an offset is entered the “0” button appears and helps to remove the offset to re-center the cropped area.
6. **px/% Switch:** You can switch between specifying a custom crop resolution in pixels or percentage values.

Click **“Apply”** to crop the current image to the specified crop.

Source and resulting resolution

The **“Source Resolution”** and **“Resulting Resolution”** give you information about the original and the resulting image resolution:

- **“Source Resolution”:** Native resolution of the clip. Also displayed in the General Info in the right tab under **“Format -> Resolution”**
- **“Resulting Resolution”:** The cropped and/or desqueezed resolution.
 - The factors relevant for the calculation of the Resulting Resolution are displayed below (e.g. “Desqueeze (2.0) and Crop”).
 - The resulting percentage of the original image is displayed in brackets. The resulting aspect ratio follows.

Please be aware that the decoding resolutions of the player do not affect the calculations of resolutions in the “Crop” popover.

Highlighting of cropped area in the playback view

While setting the crop in the popover the area that will be cropped is highlighted in the playback view and updates live while changing crop settings.

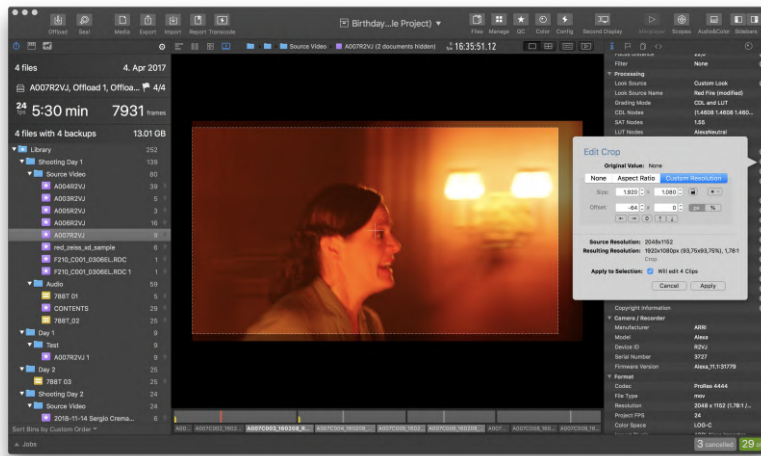


Fig 5: The crop area shows in the image

Apply crop to multiple clips

To apply a crop to two or more clips select multiple clips from the table view and open the “Crop” popover:

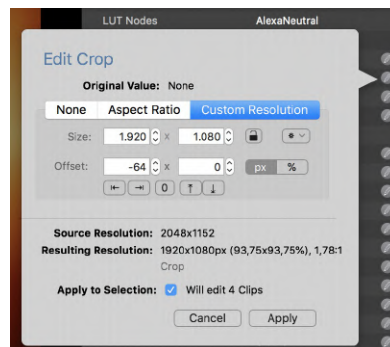


Fig. 6: Multi edit for crop

The number of altered clips is displayed in the popover (see “Will edit 4 Clips” in Fig. 6) . Click **“Apply”** to apply the set crop factor to all selected clips.

Tags: crop, multi edit, multiedit, aspect ratio, custom resolution

UI window layouts

Silverstack comes with 3 to 4 options * to automatically configure the user interface in a steadily defined way. Like this you will be able to switch to a certain UI configuration that is convenient for a particular task with one click.

Accessing the UI layouts

The UI Layouts include the following configurations:

- Manage
- QC (Quality Control)
- Color
- Config (Transcoding Configurations) *

The UI Layouts can be configured from the shortcut buttons on the right side of the Silverstack toolbar:

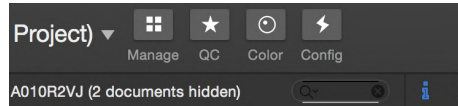


Fig. 1: The UI Layout shortcut buttons in the toolbar

Alternatively the UI Layouts can be accessed from the **"Window"** menu:

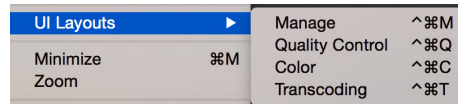


Fig. 2: The UI Layout shortcuts in the "Window" menu

UI layouts with one display

- **Manage:** Configures the UI in a convenient way for all kinds of management tasks.
 - Left bar: Shown (Library)
 - Center: Collection View
 - Right bar: General Info
 - Audio & Color panel: Hidden
 - Mini Player: Open

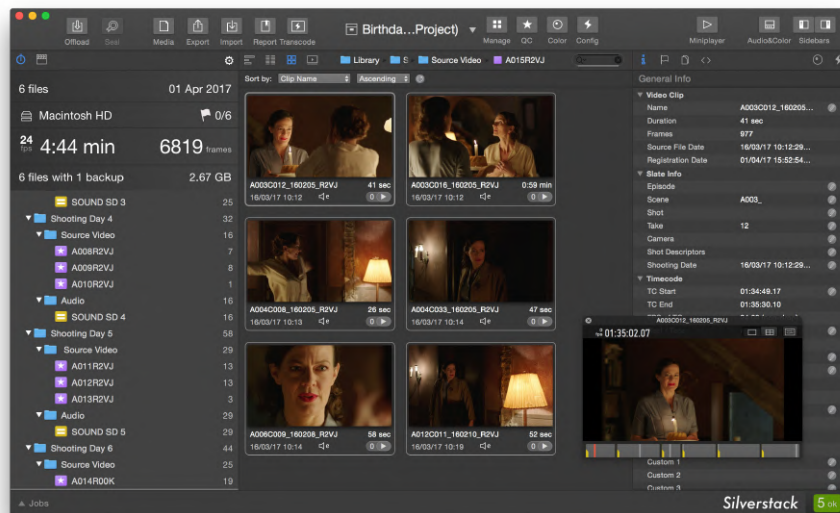


Fig. 3: UI Layout: Manage

- **QC (Quality Control):** Configures the UI in a convenient way for all kinds of quality control tasks.
 - Left bar: Hidden
 - Center: Player
 - Right bar: User Info tab
 - Audio & Color Panel: Audio

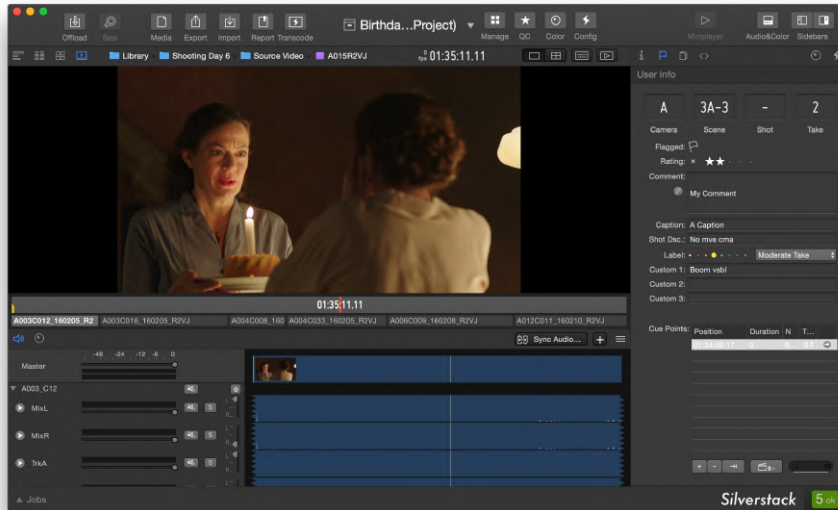


Fig. 4: UI Layout: QC

- **Color:** Configures the UI in a convenient way for color grading.
 - Left bar: Hidden
 - Center: Player
 - Right bar: Look Library
 - Audio & Color Panel: Color

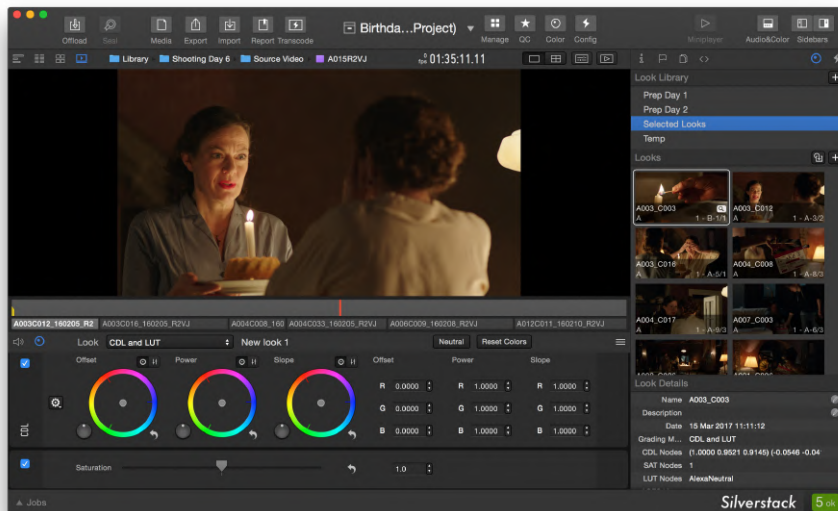


Fig. 5: UI Layout: Color

- **Config (Transcoding Configurations)*:** Configures the UI in a convenient way for adjusting transcoding configurations.
 - Left bar: Hidden
 - Center: Transcoding Preview
 - Right bar: Transcoding configurations
 - Audio & Color Panel: Hidden

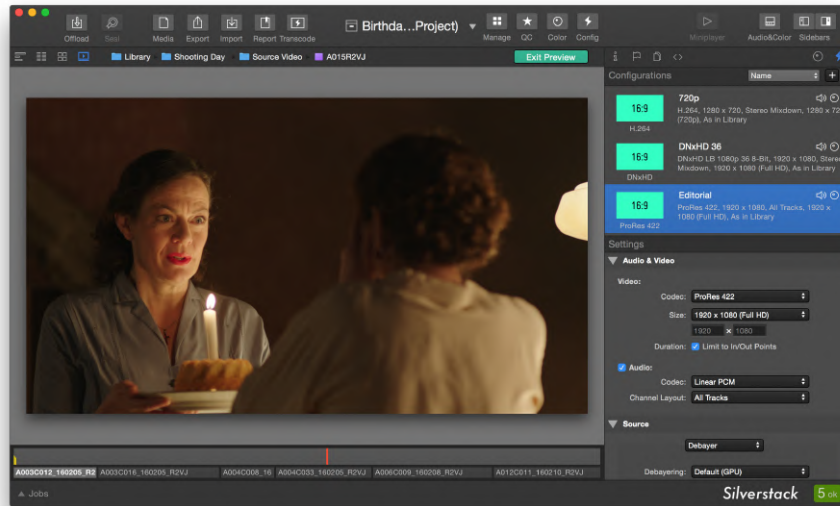


Fig. 6: UI Layout: Config

UI layouts with two displays

The UI Layouts establish different configurations of the user interface when the second display is activated.

Please refer to the article [Second display: Two screen working environment](#) for more information about using a second display for the Silverstack UI.

*UI Layout "Config" (Transcoding Configurations) only available in Silverstack Lab.

Search Code: ST-UI1

Quick metadata editing

The clip library is the core of Silverstack. With this guide we would like to give you some tips to speed up the metadata editing process. During offload and backup all clips and files are registered in the library and metadata can be added while still copying the files.

Here are some features that might improve your metadata workflow in Silverstack:

1. Batch metadata editing

Silverstack offers the possibility to add metadata to multiple clips at a time. Simply select the different clips in the table and list view and click the edit button from the metadata field on the right panel (figure 1 #1). Make sure to check the «Apply to selection» check box (figure 1 #2) to modify all the selected clips.

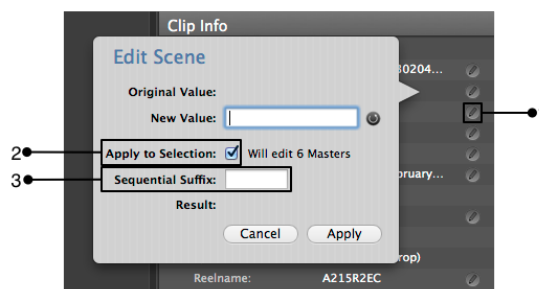


figure 1: Batch metadata entry and sequential suffix

2. Sequential suffix

Silverstack lets you add a sequential suffix to certain clip metadata fields:

- Clip name
- Scene
- Shot
- Take
- Reel name
- Lens
- Look name
- Filter

To use this feature, simply write the fixed element of the name in the «New value» and the starting value of the sequence (integer number, letter) in the «Sequential suffix» box (figure 1 #3). For example enter: New Value: “Reel” and Sequential Suffix: “1” and the result is “Reel1”, “Reel2”, “Reel3”, etc.

3. Quick entry

In the Playback View the «Quick Entry» panels allow you to easily set metadata for the current clip via keyboard shortcuts in a very fast way. Here is an overview of the available commands:

- Rating ⌘+⌘+A
- Comment ⌘+⌘+S
- Label ⌘+⌘+D
- Scene/Shot/Take ⌘+⌘+T

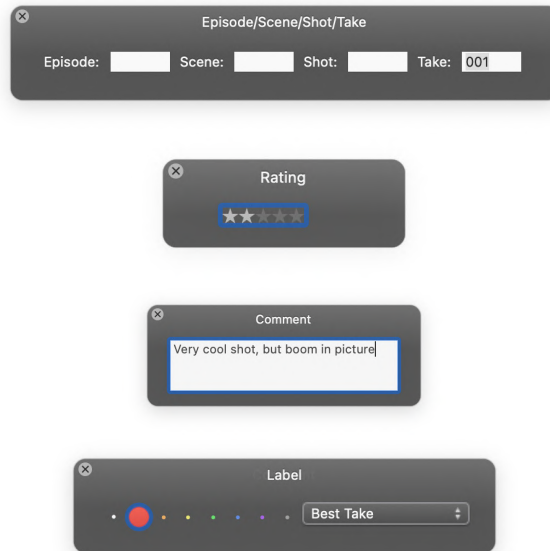


figure 2: Quick Entry panels You can also trigger the panels from the Silverstack menu: Edit > Clip > Quick Entry

4. Keyboard shortcuts

Silverstack's metadata related keyboard shortcuts:

- ⌘ = Increase rating
- ⌘ - Decrease rating
- ^ 0 Clear
- ^ 1 Set rating to 1
- ^ 2 Set rating to 2
- ^ 3 Set rating to 3
- ^ 4 Set rating to 4
- ^ 5 Set rating to 5
- ^ A Increase scene
- ^ Z Decrease scene
- ^ S Increase shot
- ^ X Decrease shot
- ^ D Increase take
- ^ C Decrease take
- ⌘ + Increase label
- ⌘ - Decrease label
- ⌘ 0 No Label
- ⌘ 1 Best Take
- ⌘ 2 Average Take
- ⌘ 3 Moderate Take
- ⌘ 4 B Roll
- ⌘ 5 Alternate Shots
- ⌘ 6 Interviews
- ⌘ 7 Pomfortionös

Image transformation

The ability to de-squeeze footage recorded with anamorphic lenses and image flipping is available in Silverstack. These features are helpful to check the quality of the clips without distortions. Image transformations will be also applied if you decide to transcode the clips.

Anamorphic de-squeezing



figure 1: Anamorphic transformation

The de-squeezing option can be applied to a single or multiple clips in the Clip Info tab (⌘1) from the right panel. Scroll down to Processing info and an Anamorphic option will be shown. Click on the edit button and a panel will pop up as in figure 2. The available settings are 1.3x and 2.0x distortion, select the one that suits your needs and click on apply. The image will appear without distortions now.

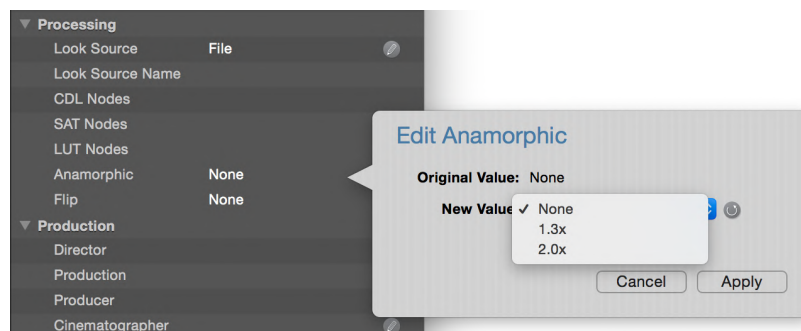


figure 2: de-squeeze settings

Image flipping

Some production workflows demand the use of mirrors, such as 3D productions. When the moment of quality check arrives, Silverstack offers the ability to flip the image vertically, horizontally or both at the same time as shown in figure 3. This feature can also be applied to multiple clips at a time.

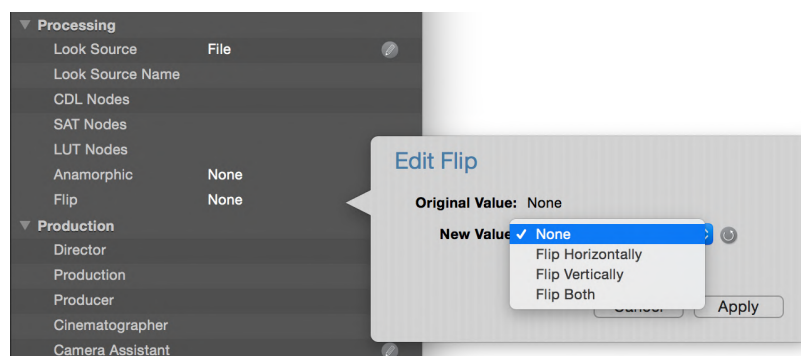


figure 3: image flipping settings

Tags: desqueeze, anamorph, anamorphic

General info

The Information Panel displays all the information (metadata) embedded in your clips. It consists mostly of editable and some read-only fields (not editable). You can edit the fields marked with a small «pencil» icon, as well as flags, ratings, labels and cue points.

By editing and adding your own information to the clips you can simplify managing tasks like searching clips, varying the shown clip order or filter the library for clips with a certain attribute, which you can do by using [smart folders](#).

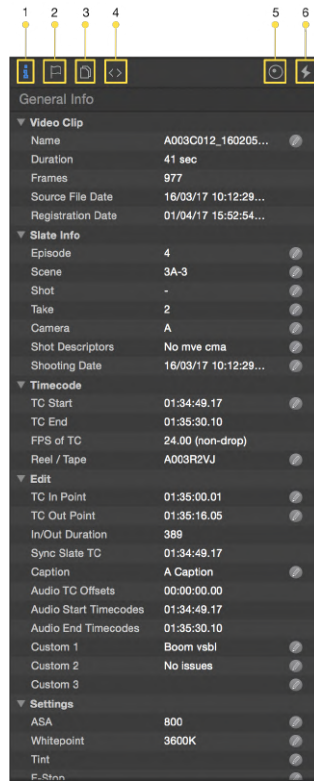


Fig. 1: The information panel

The tabs

The information panel is subdivided into six tabs: General Info, User, File, Header, Look Library and Transcoding.

1 General Info tab: It encloses the clip information extracted from the metadata like the timecode, exposure, production info, camera and format information. Additionally, there are some tips for a faster metadata editing available in the article [Tips & Tricks: Quick metadata editing](#). You can also apply [Image transformations](#) like anamorphic de-squeezing and image flipping. You can edit the fields marked with a small «pencil» icon.

2 User Info tab: It is fully editable. There you can set the camera letter, edit scene shot and take metadata, flag, rate and label the selected clip. Besides, you can add a comment and cue points to it.

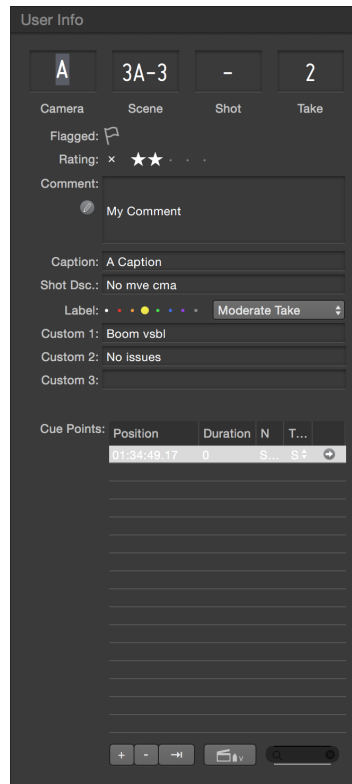


figure 2: User Information panel

3 File tab: The “File” tab provides you an overview of all file resources of the selected clip.

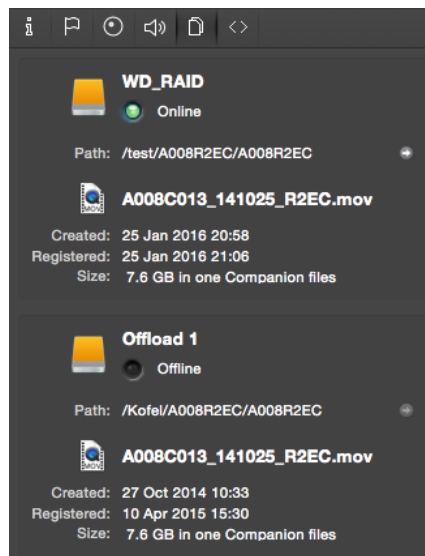
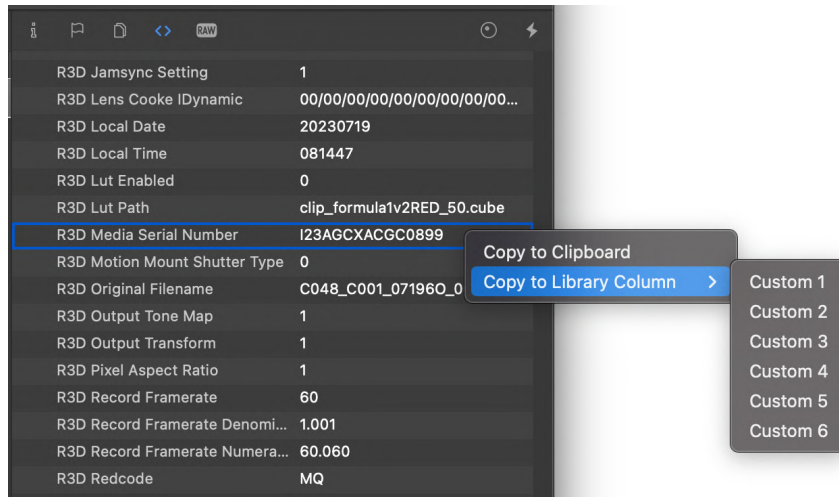


figure 3: the File tab

4 Header tab: The “Header” tab contains read-only detailed technical information metadata—in a raw format—of the selected clip. If needed, this information can be taken over into custom fields in the library, either [automatically during ingest](#) or manually by right clicking on the info field:



Take over additional metadata from the header info to a custom field.

5 Look Library tab: Silverstack enables you to manage looks within Silverstack in a look library in order to keep a proper overview of all the looks in your project. The look library allows you to store new looks, edit their metadata, apply looks to one or multiple clips, as well as to import looks from LiveGrade. For more information, please check the article [The Silverstack Look Library](#).

6 Transcoding tab: Silverstack allows to manage transcoding configurations and their transcoding settings in the Transcoding tab. A transcoding preview of the current image is automatically shown in the player view when the transcoding tab is opened. For more information about the transcoding tab and transcoding in Silverstack please read the article [Transcoding in Silverstack](#).

Library outline

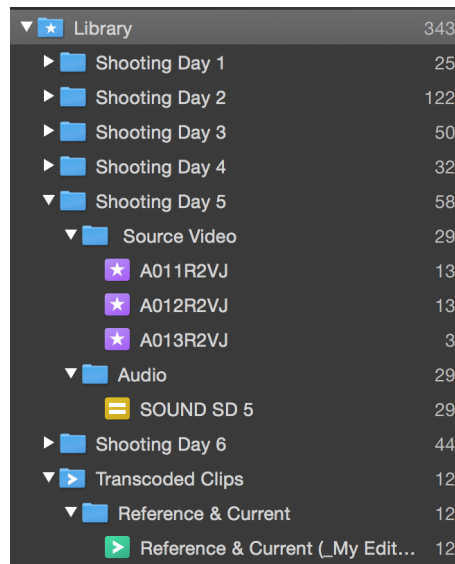


figure 1: The library panel part 1

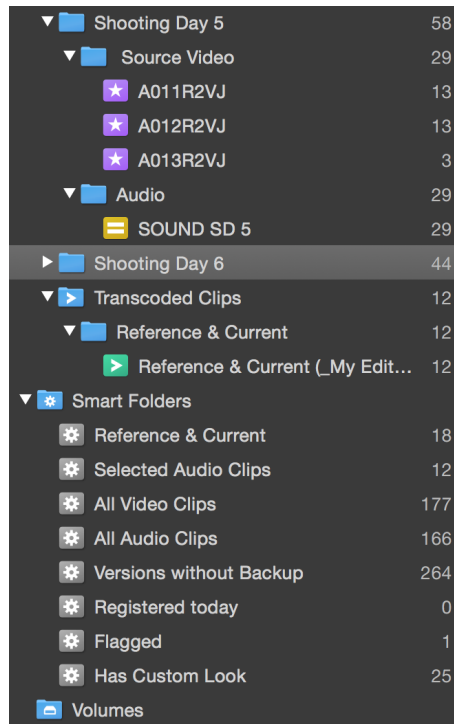


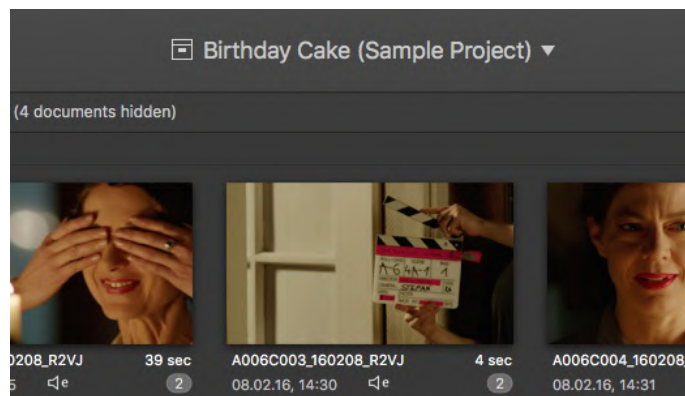
figure 2: The Library panel part 2

The basic building blocks of the Silverstack library are projects, bins and folders. Every project you create in Silverstack contains by default different kinds of “Smart Folders” and a “Volumes” sub-item. Based on that you can add an unlimited number of folders, bins and smart folders by right-clicking on any item of the project tree.

Project

A “Project” groups all information and data of a single project. In Silverstack all clips, jobs, volumes and destinations are assigned to one project. It may additionally contain information like the producer, name of the DIT or a production logo, which you can edit in the Statistics overview of the selected project.

The number behind every element of your project tree indicates the number of versions it contains, whereby duplicates are not counted. The number behind your “Project” item indicates the number of versions contained by it, with only counting one version of each referred clip.



Bin

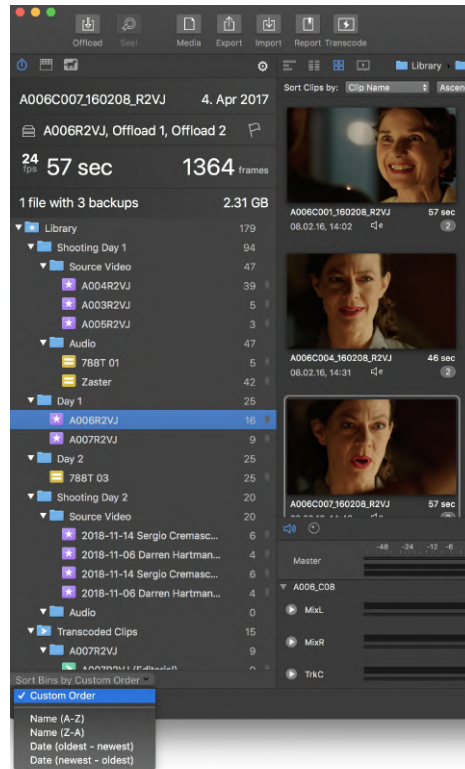
A bin contains clip versions, but no other bins or folders. It is the smallest container unit in Silverstack. Bins are the only element to contain versions directly, folders and projects only group a set of bins.

There are two different types of Bins:

- Video Bins:  A006R2VJ 16 #
- Audio Bins:  788T 03 25 #

Sorting of bins & folders

You can organize the library by dragging and dropping bins and folders in a custom order or selecting a certain criteria to sort them by:



The bin sorting options in detail:

- **Custom Order:** Reflects and stores the custom order the user created with drag & drop.
- **Name (A-Z):** Sorts bins and folders by Name from top to bottom from 0 to Z.
- **Name (Z-A):** Sorts bins and folders by Name from top to bottom from Z to 0.
- **Date (oldest – newest):** Sorts bins and folders by creation date, oldest date first, newest date last.
- **Date (newest – oldest):** Sorts bins and folders by creation date, newest date first, oldest date last.

Folders stay on top. Audio bins are automatically sorted separately at the bottom of video bins.

Folder

Folders are used to create logical project structures like shooting days. A folder can contain bins and other folders but not clips directly since clips always have to be enclosed by a bin.

Folder structure can easily be duplicated by choosing “**Duplicate Folder Structure**” from the context menu:

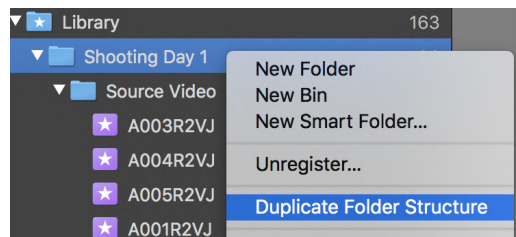


Fig. 3: Duplicating the folder structure of a folder

Smart folder

Additionally there is an element called “*Smart Folders*” in the Silverstack library, which describes a folder with integrated filtering function. Using smart folders you can find clips with a certain attribute in the dedicated project very easily. The default smart folders filter the library for clips without backups, with a high rating, a flagging or clips that are registered today. For a closer look to the smart folder section go to the [Working with smart folders](#) article.

Volumes

By selecting “*Volumes*”, Silverstack outlines all used storage devices and their according information. You can also reveal the files in the finder by clicking the reveal button. Additional information about your volumes can be found in the right sided panel. There you have the possibility to:

- see status of your free disk space
- make comments
- give your hard-drive a playback priority
- get “Last Seen” information: which user was the last one to have a drive connected and when (only when the clip library is synced with ShotHub)

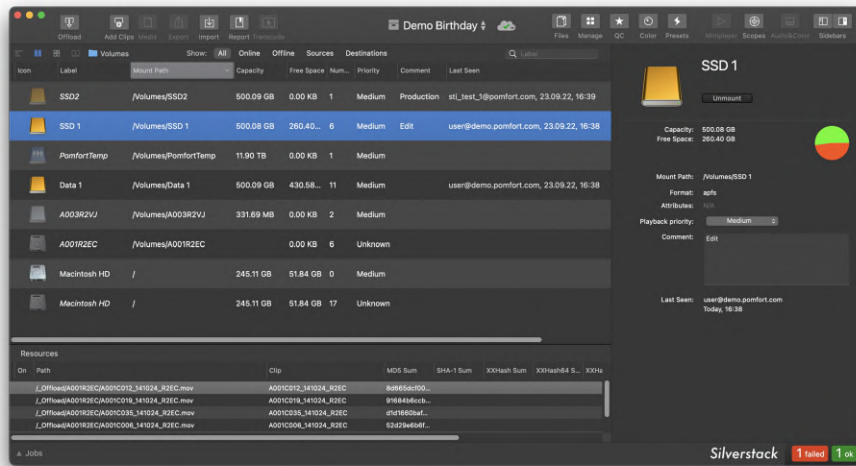


figure 4: The Silverstack "Volumes" window

Smart folders

In the Silverstack library you find an element called "Smart Folders" below the camera rolls section. Smart folders provide the opportunity to filter all your clips for certain metadata information. Using smart folders you can find clips with a certain attribute in the dedicated project very easily.

The default smart folders filter the library for clips without backups, with a high rating, a flagging or clips that are registered today.

Create a new smart folder

You can create Smart Folders with an individually set filter in the "Add" wizard menu in the bottom left corner of your Silverstack window. By creating a new Smart Folder the panel you can see in figure 2 will appear.

Name the folder and set the rules by which the Smart Folder will add video clips. You do this by applying filters which you can add and delete by the "+" and "-" buttons (figure 1 #1). For each filter you can choose the kind of metadata information (figure 1 #2), a filter mode (figure 1 #3) and enter specified information (figure 1 #4) for which the video clips will be filtered. Additionally you can decide if any, all or none (figure 1 #5) of this filtering criteria have to be fulfilled by a clip which then will be added to this Smart Folder.

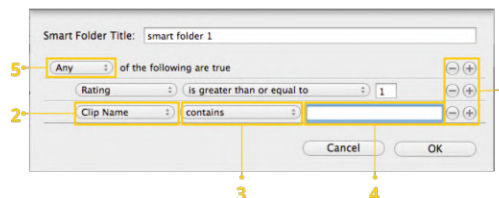


figure 1: Panel for creating a new smart folder in the Silverstack library

Filter attributes

For the below mentioned attributes you have to type characters into the text field (figure 1 #4) to get a result. If you leave the text field empty, no video clips will be filtered out – even if the according attribute field of video clips may be empty.

- Clip Name
- Version
- Comment
- Scene
- Shot
- Take
- Camera
- Reel Name
- File Type
- Codec
- Look Name
- Bin Name

If you want to filter clips for a date, you can select: today, yesterday, one week ago or any specific date.

- Registration Date
- Shooting Date

For the below listed attributes you have to enter a number in the text field (figure 1 #4) for getting a result. If you leave the text field empty, there will be no video clips filtered – even if the according attribute-field of some clips is empty.

- Number of Frames
- Pixel Width

- Pixel Height
- Rating
- ASA
- Number of File Representations
- Number of Cue Points
- Playable
- Missing
- Frames per Second
- F-Stop
- Whitepoint
- Sensor Fps
- Fps of TC
- In/ Out
- In Point
- Out Point
- Flag: You can choose between flagged/ not flagged
- Label: You can choose any of the provided labels.
- Colorspace: With the colorspace attribute you can filter video clips which are recorded in the Rec.709, LogC (with or without Film Style Matrix), Dci P3, Cinestyle, SLog
- Volume Name: all the clips with a copy/backup in the specified volume or volumes will be shown in the smart folder.

Note:

- Besides creating a new smart folder you can edit existing ones by right-clicking on the relevant smart folder and choosing *Edit...* from the drop-down menu.
- A nice feature is furthermore the possibility to create a new bin that contains the video clips which are included in the current smart folder. Therefore right-click on the relevant smart folder and choose *New Bin from Smart Folder*.

User interface overview



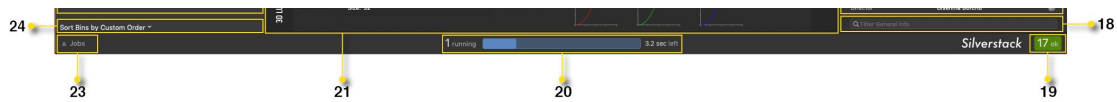


figure 1: User Interface overview

1 Video Preview

2 Playback control

3 Action wizards in Toolbar are [Offload](#), Add Clips, Media, [Seal](#), Export, Import, [Report](#), [Transcode](#):

- **Offload:** Choose a source to offload it in your library.
- **Add Clips:** Add clips to the library without starting a copy job.
- **Media:**
 - **Sync Audio:** Sync video clips with audio files from an external audio recorder.
 - **Extract LTC:** Extract longitudinal timecode from clips in the library.
 - **Relink:** Relink clips in the library to new media resources.
 - **Backup:** Backup clips in the library to new locations.
 - **Backup to LTFS:** Backup clips from the library to an LTO via LTFS.
 - **Verify:** Verify clips in the library.
 - **Seal:** Seal drives for subsequent workflow steps.
- **Export:** Export metadata files to use in editorial and post production.
- **Import:** Import metadata and match it to the clips from different sources.
- **Report:** Create various report types in the Report wizard.
- **Transcode:** Transcode clips to different available formats (create dailies).

4 Switch between View modes like Summary, Table, Collection, Playback.

- **Summary:** shows statistics and details for the selected object in your library.
- **Table view:** useful for sorting and grouping clips by certain criteria. It is also a great way to get an overview of the various [metadata](#) of a set of clips. Some of the fields are editable and you can jump from field to field by pressing the TAB key. Here you can also load and save custom view presets which are the foundation of your clip reports.
- **Collection view:** it gives you a visual overview over the clips in your library.
- **Playback:** shows the currently selected clip in the video preview and all clips from the active library object in a timeline.

5 Navigation through your Projects, Jobs, Volumes. Folders and Bins with bread crumbs. This feature is specially useful when you hide your library view and clip information view.

6 Project chooser. It displays the name of the current project and allows to switch to another one.

7 Cloud status. The production information stored in ShotHub cloud projects can be accessed through a web application.

8 Timecode of playhead and current playback speed in fps.

9 External video status and video out settings.

10 Different video preview modes: Single, Grid or Split View.

11 Visual Controls for in depth Image Analysis and Full Screen Player.

12 Work spaces such as Files, Manage, QC, Color and Transcode Config to speed up specific tasks.

13 Miniplayer shows the video preview in a floating window.

14 Video Scopes such as Waveform, Vectorscope, Histogram.

15 Toggle View Controls to hide or show the Library panel, the Grading Controls, Audio Controls panel and the Clip Info panel to have more work space for example on small laptop screens.

16 Toggle between Clip information, User Information, File Resources, Clip Header, RAW development settings (*Silverstack Lab only*), Look Library and Transcoding configurations.

17 Clip information for supported advanced camera formats.

18 Search box to filter file metadata.

19 Successful/Failed jobs count.

20 Progress bar for running copy and transcoding jobs. Shows number of jobs in queue, progress and time left.

21 Grading Controls.

22 Switch between the audio and the grading panel in the lower “Audio&Color” section.

23 Jobs panel: Job or Copy Status, like successful or failed copy jobs, duration and file destination. More information in the article Managing Jobs.

24 Different sorting options for the library.

25 Library Panel

26 Info Display: it provides the most important information of the selected clip and cannot be edited. It contains two different view parameters: one for the Digital Image Technician and another one with relevant information for the Data Wrangler.

Collection view – Icon explanations

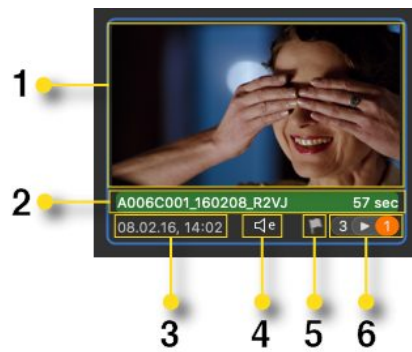


figure 3: Collection view: Clip icon

- 1 Clip Thumbnail (user selectable).
- 2 Clip name and duration. If the clip has been labeled, this part is colored.
- 3 Description of the ingest date and time.
- 4 Icon indicates that clip has audio. Either external, internal or both.
- 5 Indicates that this clip is marked with a flag and can be searched and filtered for this criterion.
- 6 Indicates the number of connected storage devices concerning this clip's storage locations. The number colored in red shows the number of storage locations that miss the source file.

AJA KiPro metadata mapping

The AJA KiPro records only a limited amount of metadata. For RED cameras and certain Canon XF cameras, the KiPro transfers timecode information, reel name, and clip name. For all other cameras, the only metadata recorded is the timecode track generated by the KiPro according to its internal clock and the Scene, Shot, Take and Camera (A/B) information manually entered by the user.

Within Silverstack there are four metadata mapping options

- Colorspace
- Source Timecode
- Extract Scene, Shot and Take information from filename
- Treat Alpha Append character as camera information

The Colorspace can be specified manually as either *Rec.709* or *Slog*. The Colorspace option *Rec. 709* is the default.

The Source timecode can either be extracted from the [File create date](#), the [Quicktime header create date](#) or the *Quicktime timecode track*. The *Quicktime timecode track* is the default, since it offers the highest precision.

The KiPro offers the possibility to automatically create a folder structure according to Scene, Shot and Take information. If you'd like to know to enable this option, please refer to the AJA KiPro manual available at the [AJA website](#). The option *Extract Scene, Shot and Take information from filename* within Silverstack SET is enable by default.

The KiPro also offers the possibility to append a character to each clip name specifying the letter of the connected camera. If you'd like to know to enable this option, please refer to the AJA KiPro manual available at the [AJA website](#). The option *Treat Alpha Append character as camera information* within Silverstack SET is enable by default.

Canon metadata mapping

Canon cameras store metadata in Quicktime movie files and [Thumbnail image files \(THM\)](#). When recording a Quicktime movie a THM file with the same name is automatically generated and placed alongside the Quicktime movie.

For Canon cameras there are two metadata mapping options:

- Colorspace
- Source timecode

The Source timecode can either be extracted from the [File create date](#), the [Quicktime header create date](#) or the [Thumbnail image file \(THM\)](#). The [Thumbnail image file](#) is the default, since it offers the highest precision.

The Colorspace can either be extracted from the [Thumbnail image file \(THM\)](#) or can be specified manually as either *Rec.709* or *Cinestyle*. The [Thumbnail image file](#) is the default, since Canon cameras create a [Thumbnail image file](#) containing the correct setting automatically.

Workflow configuration

Workflow configuration window

The workflow configurator allows you to combine and concatenate multiple activities like backup, transcode, or upload into a workflow, which then can be executed in one run on a resource like a camera magazine, or other media files. This procedure gives you more overview in the “Job & Volumes” view as the jobs of multiple activities are grouped by the workflow that started it. Additionally, this allows Silverstack to focus on optimizing the execution of the job’s tasks, e.g., by beginning the transcode of a clip as soon as the offload task for that clip finished – while other clips of the same card are still being offloaded.

The following article describes the workflow configurator in detail, including information about activities, post steps, and errors. Supplementary articles cover the topics [configuring a workflow](#), [workflow activities](#) and [post steps](#).

If you run any activity, you are automatically redirected to the workflow configurator. There are different ways to access the feature:

- By clicking one of the toolbar buttons like **Offload** in the top left corner
- Via the menu, e.g., File > Backup...
- Via the context menu of a library item: Right-Click > Backup...
- Drag & drop a folder onto Silverstack’s user interface

Within the workflow configurator, all activities can be selected to be part of a workflow. Specifically these are:

- Register in Library
- Resource Selection
- Backup
- Verify
- Transcode
- Upload
- Checksum Creation

The activities of a workflow always work on clips from the Silverstack library. If the clips are not yet known to Silverstack (for example, when offloading a camera card), the workflow’s activities are preceded by a “Register in Library”. In case the clips have multiple file resources, you need to define on which path or volume the workflow should look for files to work with. In that case, the workflow’s activities are preceded by a “Resource Selection” step.

Activities can also contain [post steps](#) which are executed after the associated activity finished. The following post steps are applicable:

- Report Step

The workflow configuration window

The user interface is divided into two areas. The activity outline on the left contains individual activities while the activity configuration on the right contains the associated settings for the selected activity on the left. The concatenation of input/output or source/destination is the main concept of a workflow configuration.

An activity’s output is used as input for the next activity. In case an activity has multiple outputs (e.g., multiple backup destinations within one backup activity), you can choose which output from the previous activity should be used in the next activity. The indentation of the activity outline reflects this relation between activities. By default, the workflow configurator always loads your last configured workflow. But you can also save and recall workflows as preset (see the preset dropdown menu in the top right corner of the workflow configurator).

Activity outline

Shows all activities of a workflow. Every workflow needs to have a source on which to perform the individual activities on (e.g., a camera magazine). A workflow’s source is either defined by an activity called “Register in Library” (the files are not yet registered in the library) or a “Resource Selection” activity (the files are already registered in the library). One of the two types is always the first activity of a workflow since it allows you to select a workflow’s input.

Add activity dropdown menu

Adds an activity to the outline. The selected activity defines the hierarchy level of the added activity. You can also do this via the context menu of an individual activity by Right-Click.

Indentation

Indicates the source relation (input/output) between the activities. Indented activities take the output of the previous, less indented activity as their source.

Activity configuration

Contains the configuration of the selected activity. An activity’s configuration differs between the various activity types but also shares elements like source, error, destinations or post steps that are the same for all activities.

< > Buttons

Navigates between the activities of the activity outline.

Preset dropdown menu

Allows to save a workflow as preset, load an existing preset or reset the preset to default values.

Source dropdown menu

Sets the source for the activity. A selection is only possible when the previous activity has multiple outputs (e.g., a transcode activity).

Error, warning and info messages

Every activity may display an error, warning or info message at the top of an activity’s configuration:

- Errors do not allow you to start a workflow. They are highlighted with a round warning sign and red text.
- Warnings allow you to continue but may result in an unexpected output. They are highlighted with a triangle warning sign and yellow text.
- Info messages allow you to continue. They are highlighted with an info sign and blue text.

Details button

Shows details about the associated message.

Quick fix button

Offers a solution to an error, warning, or info.

Configuration**Add destination button**

Adds a destination to the activity. You can disable or delete destinations with the UI elements on the right. The path and wildcard concept of Silverstack is explained in [path wildcards](#).

Individual configuration

Please view [workflow activities](#) to learn more about the configuration for each individual activity.

Post steps

The activity outline indicates if an activity contains a post step by showing the post step name underneath the individual activity. Learn more about the individual [post steps](#).

Add post step dropdown menu

Adds a post step to the activity (e.g., a report step). You can delete a post step by clicking the  icon on the right.

Bottom bar**Error summary button**

Shows a summary of errors that are present in the current workflow. Click the button to navigate to the first error in the workflow.

Cancel button

Closes the workflow configurator.

Start workflow button

Starts the workflow. The button is greyed out if there is an unsolved error in one of the activities.

Workflow activities

Workflows are a very efficient and flexible way of managing media data in Silverstack. They consist of individual activities that you can combine to create your own custom workflow.

This article is related to the [workflow configuration window](#) where you can find more general information about the feature. If you want to learn how to configure workflows, please visit the article [configuring a workflow](#).

Below, you will find detailed information about the configuration options for each activity:

- [Register in Library](#)
- [Resource Selection](#)
- [Backup](#)
- [Verify](#)
- [Transcode](#)
- [Upload](#)
- [Checksum Creation](#)

1. Register in library

Shows the scanning result and registers data in the Silverstack library.

1.1 Files and clips**Importer pop-up menu**

Selects the importer to register the files. Learn more about **importers**.

Partial ingest checkbox

Enables the option to select only a part of the files.

Mark Only Selected button

Enables only the selected resources in the table. Right-Click on the button to change the function to “Mark All” or “Mark Selected”.

Unmark Selected button

Unmarks only the selected resources in the table. Right-Click on the button to change the function to “Unmark All” or “Unmark Only Selected”.

1.2 Ingest metadata**Bin name textfield**

Allows to edit the bin name. The  button allows you to select a bin name based on the files' metadata.

Shooting date textfield

Sets the shooting date value. The value can be entered by keyboard or selected by calendar.

Shooting day textfield

Sets the shooting day value. The value can be entered by keyboard.

Crew unit textfield

Sets the crew unit value. The value can be entered by keyboard.

Episode textfield

Sets the episode value. The value can be entered by keyboard.

Camera textfield

Sets the camera value. The value is extracted automatically and can be changed manually. The  button allows you to select a letter based on the files' metadata.

Tip: The small M/A values underneath the textfields indicate if a value was entered manually by the user (M) or extracted from the files automatically (A).

Bin will be registered at preview

Shows a preview of the path where the bin will be registered in the library. Click it to open the settings for the registration path mentioned below.

1.3 Configuration

Allow ingest of duplicates checkbox

Enables you to ingest duplicates into the Silverstack library.

Ingest bin at dropdown menu

Allows you to define where the bin should be registered in the library. Multiple options are available, including wildcards. The default is "Selected Library Position". When that option is selected, "Position" is revealed.

Position dropdown menu

Allows you to change the registration path manually.

Renaming Pattern dropdown menu

Sets the renaming pattern for offloading. "Original Filename" does not change the filenames. This feature is only enabled for specific file types.

2. Resource selection

Shows the selected bin from the Silverstack library and defines which resources to use for the workflow.

Choose media files from volume... dropdown menu

Sets the volume or source to use for the resource selection. If files have multiple resources you can define which of those should be used for the workflow.

By changing the source volume, the media file path in the table does also change (not applicable when files only have one resource available).

Mark only selected button

Enables only the selected resources in the table. Right-Click on the button to change the function to "Mark All" or "Mark Selected".

Unmark selected button

Unmarks only the selected resources in the table. Right-Click on the button to change the function to "Unmark All" or "Unmark Only Selected".

Search

Performs a search within the resources table.

Table

Shows the elements of the selected bin. You can adjust the table with Right-Click to open the context menu.

3. Backup

Verify dropdown menu

Defines the destinations to consider for verification. The options are:

- Destinations + Source: Verify all destinations and the source.
- Destinations Only: Verify all destinations without the source. This setting cannot detect source issues.
- LTFS: Sets a behavior that considers the specific linear access characteristics of LTO tape.
- No Verification: File size check only. Creates internal hashes for the library without verifying. Please use with care.

Checksum dropdown menu

Sets the checksum method. XXH64 is the default. You have the following options: MD5, SHA1, XXH128, XXH3, XXH64 and C4ID.

Job execution dropdown menu

Sets the verification handling. The options are:

- Included in Copy Job: The verification is executed file per file (e.g., a single file is copied and then verified).
- Separate Verification Job: One job copies all files first, then one separate job verifies all files.

Type dropdown menu

Sets the manifest type. The options are:

- None: Does not create a manifest.
- Classic MHL: Creates a media hash list.
- ASC MHL: Creates an ASC media hash list. See also **Hashing Data with ASC MHL**.

History chain dropdown menu

Decides if the ASC MHL chain of custody is continued or started from scratch. The options are:

- Start New: Always starts a new ASC MHL history.
- Continue if Possible: Continues the ASC MHL history if possible. If you want to continue the ASC MHL history for files that have not yet been registered in Silverstack, the source and destination hash formats must match.

Create at Source dropdown menu

This option is only visible when the backup is appended to a transcode activity. When set to "ASC MHL", it creates a manifest at the source (for the transcodes) as well as the destination. That is useful for sealing.

Existing files dropdown menu

Determines if existing files should be overwritten or not. The options are:

- Overwrite: Automatically overwrites existing files.
- Abort Job and Fail: Aborts the job and displays an error.



MHL errors dropdown menu

Defines how to treat MHL errors. The options are:

- Ignore: Does not consider MHL errors.
- Abort Job and Fail: Aborts the job and displays an error.

4. Transcode

Add preset pop-up menu

Opens a pop-up menu to select a transcoding preset. The presets can be searched and sorted.

Add to library checkbox

Registers transcodes in the library. Enabled by default. If disabled, the activity cannot have child activities.

Transcode to combined clip checkbox

Transcodes multiple source clips into one single combined clip. This allows to create combined clips for complete scenes, etc.

Please note that the following restrictions apply to the combined clip transcoding:

- You can only use H.264 and ProRes codecs
- Stereo mixdown is automatically applied as channel layout
- Clips cannot be ingested automatically into the library
- No automatic metadata exports are available
- Only one destination at a time is possible
- You have no options for path wildcards

5. Dailies upload



Dailies upload is only available in Silverstack Lab.

Choose Account... dropdown menu

Sets the upload service (e.g., Frame.io or Webgate).

Frame.io

Account dropdown menu

Determines which account is used for uploading.

Team dropdown menu

Allows to set the desired team.

Project dropdown menu

Defines the project in which the files are uploaded.

Folder

Defines the folder within the project to upload the files into.

Webgate

Project dropdown menu

Defines the project in which the files are uploaded.

Folder

Defines the folder within the project to upload the files into.

Add Playlist... button

Adds a playlist and starts uploading.

6. AWS S3 upload

Select Account for Upload dropdown menu

Determines which account is used for uploading.

Bucket textfield with dropdown menu

Selects the available bucket.

Region textfield with dropdown menu

Sets the region for the upload configuration.

Use S3 upload acceleration checkbox

May improve the upload performance.

Key Prefix textfield

Allows to enter the key prefix.

Check Configuration button

Performs a pre-check of your current configuration.

Endpoint URL textfield

Allows to enter the endpoint URL.

7. Sony Ci upload

LAB

Sony Ci upload is only available in Silverstack Lab.

Ci Media Cloud File Request URL textfield

The field to enter the file request URL. If the URL is valid, additional information will be fetched and displayed.

Check button

Tests if the entered request link is valid.

8. Checksum creation

Checksum Method dropdown menu

Sets the checksum method used to generate hashes.

Create Manifest dropdown menu

Defines if a hash manifest is created at the source or not. Option "None" creates hashes for the library only.

9. Verify

The Verify activity does not have any special options to configure. It cannot have subordinate activities.

10. Dynamic metadata extraction

The Dynamic Metadata Extraction activity does not have any special options to configure. It cannot have subordinate activities.

Post steps

Workflow post steps are independent tasks that can be appended to an activity. The report creation within a workflow is a typical post step.

Post steps are executed after the job is complete but may finish or fail independently from the job itself which helps distinguishing and troubleshooting potential issues.

Post steps are strongly tied to the [workflow configuration window](#) and it's [workflow activities](#). Below, you will more information about the individual post steps.

1. Report creation

You can use post steps within workflows to create one or more reports after any activity you like.

Report Input dropdown menu

Sets the source input for which the report should be created.

Preset dropdown menu

Defines which report preset should be used.

... Button

Opens the report wizard.

Save To / On options

Defines the path at which the report will be saved.

The options are:

- Destination path: Uses the destination path of the current activity.
- Absolute path: Defines an absolute path to save the report to.
- Source: Saves the report to the source.

Tip: For the options "Destination Path" and "Source", you may additionally define a relative path using "/Reports" (extending the path) or "../Reports" (excluding a directory above).

Preview / Path labels

Shows a preview of the path at which the report will be saved.

Note: To create a report using a post step, you need to have a report preset.

2. MHL

Manifests of Classic MHL and ASC MHL are also created using a post step. However, this handled automatically by Silverstack and you do not need to configure this manually.

When errors occur during the MHL post step, you can open the jobs view, select the corresponding job and check the completion step status within the details bar on the right.

For further troubleshooting, select the workflow, click on [Show State History...](#) and then on [Log File...](#) which opens the log files.

Path wildcards

Silverstack offers you a very convenient feature to rename folders and build entire folder structures easily from scratch. The **Path Wildcards** feature allows you to define individual folder structures per destination, organize your files and is a very useful tool in general. Path Wildcards can be set for **Backup** and **Transcode** activities within the [Workflow Configurator](#).

A wildcard is simply a placeholder that gets substituted by the actual (metadata) value of the clip during the backup or transcode process. You can determine the folder names by selecting the individual wildcards from a broad set of options. Silverstack uses these wildcards to save your files automatically at the dedicated paths, as specified by you. For example, your clips can be stored in folders according to their submission date while each clip's name carries the project title and submission time.

Wildcard locations

Wildcards are an essential concept in Silverstack and can be found in many places:

- Backup and Transcode activities: Building the destination paths.
- Burn Ins: Building burn ins from metadata.
- Still Exporter: Creating destination folders and file names.
- ALE files: Creating the name column.
- Report Wizard: Creating the report names.

Document wildcard handling

You can decide how to handle non-clip files in your folder structures. It is possible to preserve the source folder structure or create a custom one (inheriting the metadata from the clips). By default, Silverstack inherits metadata from clips. This setting can be changed under Settings > Copy & Jobs > Documents:

- Inherit metadata from clips: Documents have the same paths like clips.
- Always preserve folder structure: Documents have the same paths like clips from the source.

When the option **Always preserve folder structure** is set, all files not considered as clips by Silverstack (e.g., image file sequences, sidecar files, etc.) are copied in the path of the source clips. Therefore, all documents preserve the same folder structure as the source medium while all clips are located in the custom folders you have created.

User interface

Path

Sets the destination path. You can either directly enter path components or drag & drop wildcards into the textfield. Double-click a wildcard to transform it into plain text. Click the folder icon on the right to open a dialog which allows you to choose a path.

Example

Shows an example of the destination path.

Wildcards

Shows all available wildcards to choose from and drag & drop into the path field.

- Token: Displays the wildcard name.
- Example: Shows an example value using a clip from the library.
- Availability: Views the proportion between clips that have actual values for the wildcard and all (selected) clips.

Important

- Make sure the path you have set in the path field is not changed or deleted unintentionally. Simply add wildcards to the already existing path components.
- In the path field, single wildcard tokens are separated by a slash (/) if they are supposed to define a folder. Separate them with a dash (-) to combine different wildcards for the same folder level.
- Filenames should contain some wildcards in order to make them unique. Silverstack checks the uniqueness of all created file paths and warns you if necessary.

Multi-optional wildcards

Some wildcards have multiple options which can be selected by clicking the small triangle next to the wildcard name:

- Submission Time and Shooting Time
- Submission Date and Shooting Date
- Path Components ¹
- Reel Characters ²

¹ You can choose the amount of path components of the clips' source folder structure which will be included in the path of the newly generated folder structure (e.g., if you choose 3, the last three levels of the source clip's folder structure are included in the new clip's path).

² For reel characters it is possible to choose parts of the reel name as wildcards. You can either select the first or the last characters of the reel name (if applicable).

Playback

Playback

The Silverstack playback view allows to play movie clips back. Please refer to the "Playback" menu in Silverstack for a list of available functionality and shortcuts.

1. Modes

Silverstack has two playback modes that can be permanently set in the "Playback" menu:

- **Absolute time playback:** *Real time playback -> Audio enabled*
 - **Description:** This playback mode attempts to play the clip in real time (1s in the clip will be displayed in 1s realtime). This might lead to frame drops if performance of the machine or I/O might not allow real time playback. Playing back in real time is necessary to enable audio playback.

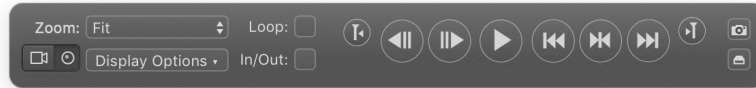
- **Every frame playback:** *Play every frame -> Audio disabled*

- **Description:** This playback mode makes sure that every frame of the clip will be displayed. This might lead to a non real time display and therefore audio playback is not possible in this playback mode.

When using JKL playback controls Silverstack automatically enables Every Frame Playback and therefore disables audio.

2. Controls

2.1 Playback HUD



The playback HUD (Head Up Display)

The playback HUD enables the following functionality:

- **Zoom:** Select a zoom setting for the current clip
- **Loop:** Enable loop playback for the selected clips in a timeline
- **Display with look:** Allows to toggle between display of the clip with look or with original color
- **Display options:** Select decoding resolution for playback (and debayer options for certain formats)
- **In/Out:** Makes playback respect in and out points
- **Set in-point:** Set in point at current playhead position
- **Frame backward:** Step one frame backward
- **Frame forward:** Step one frame forward
- **Play:** Play the clip back
- **Jump to clip start and previous clip:** Moves playhead to the first frame of the clip and if playhead is on the first frame to the previous clip
- **Jump to middle of clip:** Sets playhead to the middle of the clip
- **Jump to clip end:** Sets playhead to the last frame of the clip
- **Export still image:** Exports a still image, see also in main menu “Clip > Export Still Image”
- **File playback info:** Shows the current location of the clip used for playback

2.2 JKL controls

Playback can be controlled with J, K and L keys in a manner typical to many for example editing applications. It allows for faster playback, slower playback, reverse playback and frame stepping also known as Playback, Shuttle and Jog:

- **Playback :** Press L to play forward, K to stop and J to play reverse (“Play Reverse (Faster)”; “Play Forward (Faster)”; “Stop”)
- **Shuttle play:** Pressing the keys L or J two or multiple times increases the playback speed by factors 2x up to 64x
- **Jog:** Holding K and pressing L or J allows users to frame-step through a clip forwards (L) and backwards (J) (“Next frame”, “Previous frame”)

The following more specific functionality is available in conjunction with JKL:

- **Fast reverse:** Plays in reverse with same speed as currently playing forward
- **Fast forward:** Plays forward with same speed as currently playing backward
- **Play slower:** Slows down playback below 1x speed

2.3 Frame stepping

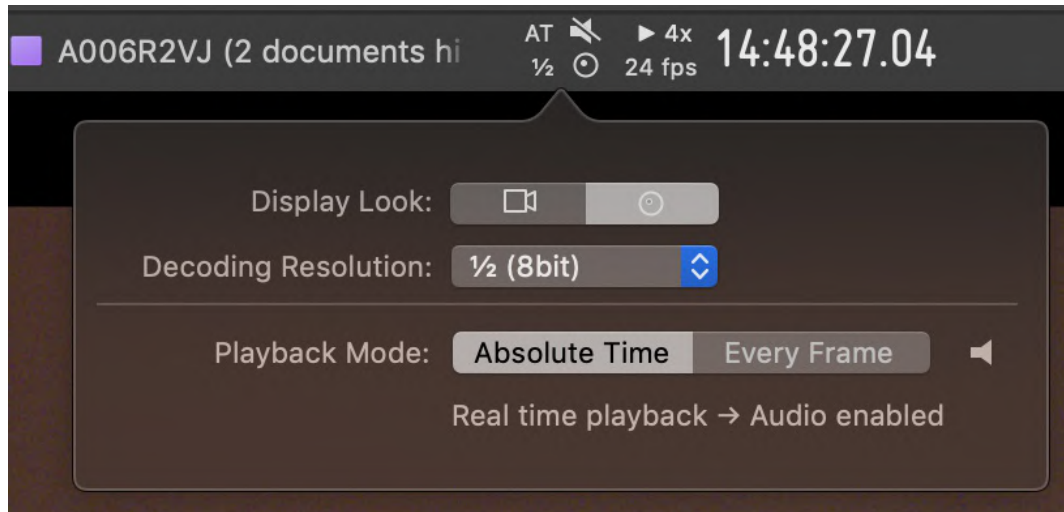
Additionally to JKL, frame stepping is also available with the arrow keys. There are additional option keys to enable larger steps:

- **Step 5 frames:** Shift + ->/<-
- **Step 2 seconds:** Shift + Ctrl + ->/<-

3. Playback indicators

Player toolbar

The player toolbar contains different elements to inform about the current status of the clip.



Player Toolbar

The following indicators are displayed in the toolbar (from left to right, top to bottom):

- **AT/EF:** Playback Mode, Absolute Time (AT) or Every Frame (EF) playback
- **Audio enabled/disabled:** Speaker symbol indicates if audio playback is currently enabled or disabled
- **Playback direction and speed:** The play symbol indicated the playback direction, the number (1x / 2x / .../64x) indicates the playback speed
- **Full / 1/2 / etc. :** Indicates current decoding resolution
- **Camera original / look:** Indicates if camera original color is displayed or look is applied
- **FPS:** Show the current playback speed in frames per second
- **Timecode:** Current timecode of clip

The following controls are available in the popover:

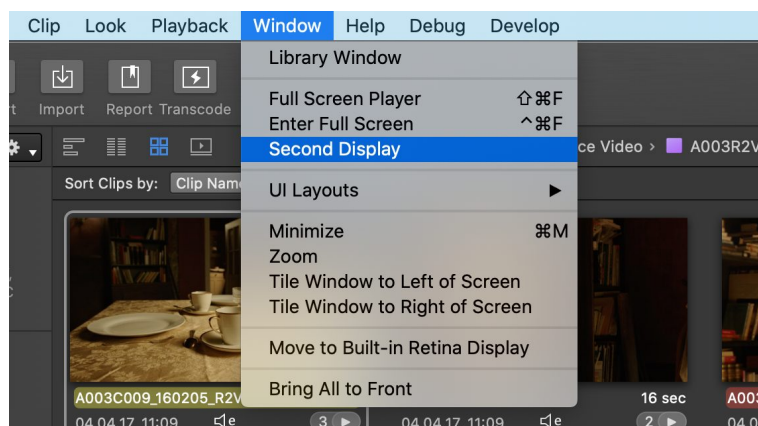
- **Display look:** Allows to toggle between display of the clip with look or with original color (see also playback HUD)
- **Decoding resolution:** Select decoding resolution for playback (and debayer options for certain formats; see also playback HUD)
- **Playback mode:** Switch between Absolute Time and Every Frame Playback Mode; more details see above please

Second display: Two screen working environment in Silverstack

Silverstack XT and Silverstack Lab offer the possibility to extend the Silverstack user interface to two screens.

Accessing the second display

When a second display is attached to your machine, you can show an additional user interface by selecting **Second Display** from the **Window** menu.



Second display user interface options

The second display opens automatically on the screen that does not hold the Silverstack main window.

There are 3 content options for the second display:

- **List view of clips**

Preview	Name	Duration	Codec	File Type	Audio Tracks	TC Start	Rew/Tape	Source File Data	Shooting/Record...	Registration Data	Epis...	Scene	Shot	Take	Recorder Model	Recorder ID	Close	
	A001C00...	2:08 min	Apple ProRes...	mov	5 ext. tracks fro...	01:09:50.22	A001R...	09/03/17 09:57	02/02/16 10:41	15/03/17 11:42	TF...	04		Alexa		R2VJ		
	A001C00...	2:25 min	Apple ProRes...	mov	5 ext. tracks fro...	01:22:49.15	A001R...	09/03/17 09:57	02/02/16 10:54	15/03/17 11:42	TF...	05		Alexa		R2VJ		
	A001C00...	2:22 min	Apple ProRes...	mov	5 ext. tracks fro...	01:33:57.00	A001R...	09/03/17 09:58	02/02/16 11:05	15/03/17 11:42	TF...	06		Alexa		R2VJ		
	A001C00...	2:24 min	Apple ProRes...	mov		01:43:14.05	A001R...	09/03/17 09:59	02/02/16 11:14	15/03/17 11:42	TF...	07		Alexa		R2VJ		
	A001C00...	2:28 min	Apple ProRes...	mov	5 ext. tracks fro...	03:46:40.00	A001R...	09/03/17 10:00	02/02/16 13:18	15/03/17 11:42	TF...	01		Alexa		R2VJ		
	A001C00...	2:36 min	Apple ProRes...	mov	5 ext. tracks fro...	03:56:29.14	A001R...	09/03/17 10:01	02/02/16 13:27	15/03/17 11:42	2	02		Alexa		R2VJ		
	A002C00...	2:18 min	Apple ProRes...	mov	5 ext. tracks fro...	04:22:52.07	A002R...	09/03/17 10:01	02/02/16 13:54	15/03/17 11:42	TF...	04		Alexa		R2VJ		
	A002C00...	2:34 min	Apple ProRes...	mov	5 ext. tracks fro...	04:35:51.16	A002R...	09/03/17 10:02	02/02/16 14:07	15/03/17 11:42	TF...	05		Alexa		R2VJ		
	A002C00...	2:29 min	Apple ProRes...	mov	5 ext. tracks fro...	04:47:43.00	A002R...	09/03/17 10:03	02/02/16 14:19	15/03/17 11:42	TF...	06		Alexa		R2VJ		
	A002C00...	2:41 min	Apple ProRes...	mov	5 ext. tracks fro...	04:59:16.16	A002R...	09/03/17 10:04	02/02/16 14:30	15/03/17 11:42	TF...	07		Alexa		R2VJ		
	A003C00...	39 sec	Apple ProRes...	mov		00:04:35.22	A003R...	09/03/17 10:05	05/02/16 09:58	15/03/17 11:43				Alexa		R2VJ		
	A003C00...	41 sec	Apple ProRes...	mov		00:08:19.00	A003R...	09/03/17 10:05	05/02/16 10:01	15/03/17 11:43				Alexa		R2VJ		
	A003C00...	30 sec	Apple ProRes...	mov	5 ext. tracks fro...	00:24:21.13	A003R...	09/03/17 10:05	05/02/16 10:17	15/03/17 11:43	1	3	B-1	1	Alexa		R2VJ	
	A003C00...	30 sec	Apple ProRes...	mov		00:24:21.13	A003R...	16/03/17 10:11	06/02/16 10:17	16/03/17 10:19	1	AD...	B-1	03	Alexa		R2VJ	
	A003C00...	31 sec	Apple ProRes...	mov		00:27:35.04	A003R...	09/03/17 10:06	05/02/16 10:20	15/03/17 11:43				Alexa		R2VJ		
	A003C00...	28 sec	Apple ProRes...	mov		00:53:49.11	A003R...	09/03/17 10:06	05/02/16 10:47	15/03/17 11:43				Alexa		R2VJ		
	A003C00...	29 sec	Apple ProRes...	mov		00:55:31.09	A003R...	09/03/17 10:06	05/02/16 10:48	15/03/17 11:43				Alexa		R2VJ		
	A003C00...	33 sec	Apple ProRes...	mov		00:57:06.17	A003R...	09/03/17 10:06	05/02/16 10:50	15/03/17 11:43				Alexa		R2VJ		
	A003C00...	29 sec	Apple ProRes...	mov		01:07:10.01	A003R...	09/03/17 10:07	05/02/16 11:00	15/03/17 11:43				Alexa		R2VJ		
	A003C00...	33 sec	Apple ProRes...	mov		01:10:32.14	A003R...	09/03/17 10:07	05/02/16 11:03	15/03/17 11:43				Alexa		R2VJ		
A003C00...	48 sec	Apple ProRes...	mov		01:31:57.00	A003R...	09/03/17 10:07	06/02/16 11:26	15/03/17 11:43				Alexa		R2VJ			
A003C00...	8 sec	Apple ProRes...	mov		01:34:20.09	A003R...	09/03/17 10:08	05/02/16 11:27	15/03/17 11:43				Alexa		R2VJ			
A003C00...	41 sec	Apple ProRes...	mov	5 ext. tracks fro...	01:34:49.17	A003R...	09/03/17 10:08	05/02/16 11:28	15/03/17 11:43	1	3	A-3	2	Alexa		R2VJ		
A003C00...	41 sec	Apple ProRes...	mov		01:34:49.17	A003R...	16/03/17 10:12	05/02/16 11:28	16/03/17 10:19	1	AD...	A-3	12	Alexa		R2VJ		
A003C00...	41 sec	Apple ProRes...	mov	5 ext. tracks fro...	01:34:49.17	A003R...	16/03/17 10:12	16/03/17 10:12	01/04/17 15:52	3A-3	-	2						
A003C00...	45 sec	Apple ProRes...	mov		01:37:39.01	A003R...	09/03/17 10:08	05/02/16 11:31	15/03/17 11:43				Alexa		R2VJ			
A003C00...	43 sec	Apple ProRes...	mov		01:51:27.22	A003R...	09/03/17 10:08	05/02/16 11:44	15/03/17 11:43				Alexa		R2VJ			
A003C00...	52 sec	Apple ProRes...	mov		02:16:22.13	A003R...	09/03/17 10:09	05/02/16 12:09	15/03/17 11:43				Alexa		R2VJ			
A003C00...	0:59 min	Apple ProRes...	mov	5 ext. tracks fro...	02:35:21.19	A003R...	09/03/17 10:09	05/02/16 12:28	15/03/17 11:43	1	3	A-5	1	Alexa		R2VJ		

Fig. 2: The List View on the Second Display

- Collection view of clips

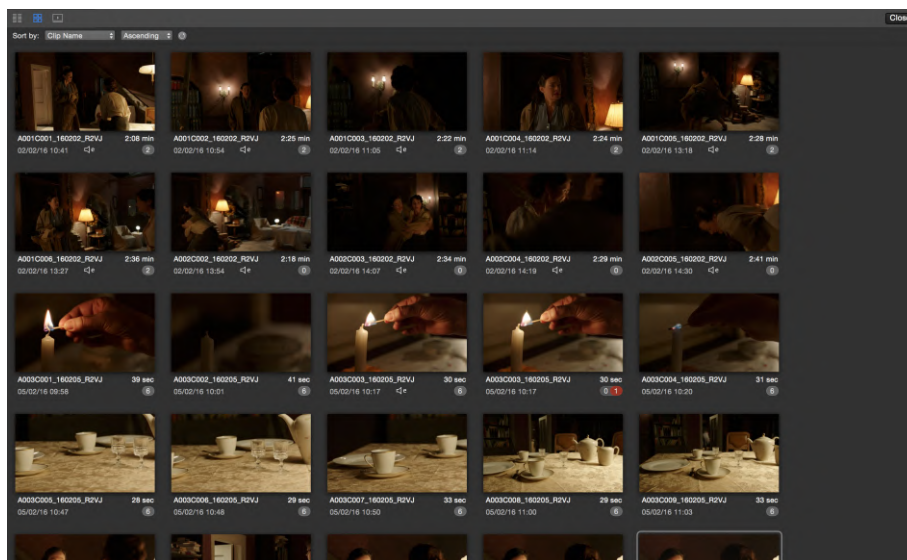


Fig. 3: The Collection View on the Second Display

- Player view

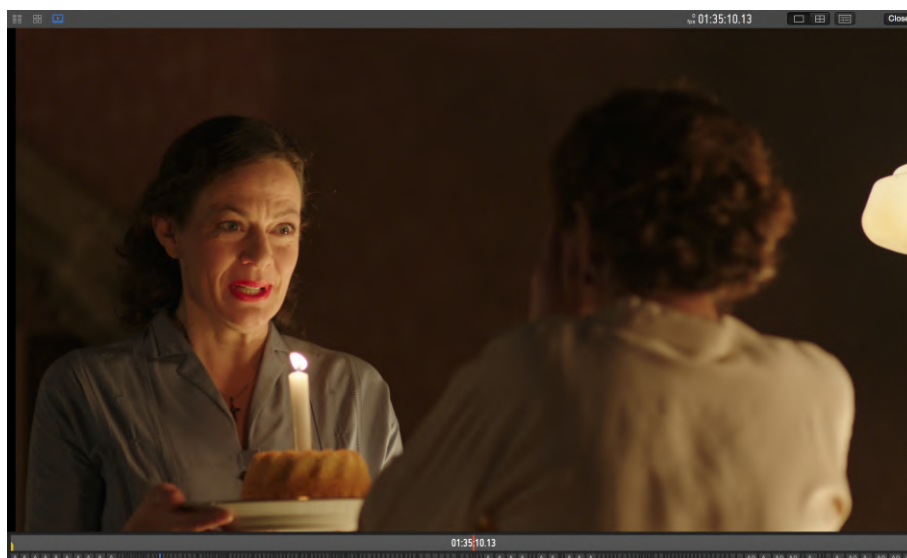


Fig. 4: The Player View on the Second Display

Silverstack automatically adapts the interface to avoid a simultaneous display of the same element (List View, Collection View, Player View) in both the main window and the second screen. When an element is accessed that is already shown in the other display it is automatically flipped with the previously shown element on the first screen.

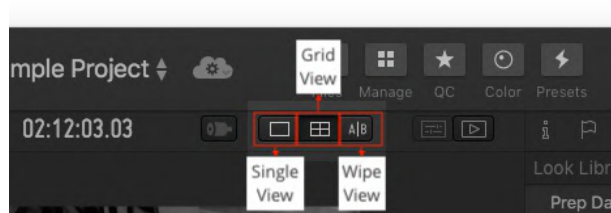
Grid and wipe view in the player

While all Silverstack versions offer the single view playback mode, Silverstack XT and Silverstack Lab include the **Grid View** and Silverstack Lab the **Wipe View** modes:

- The **Grid View** mode allows to display **multiple clips side-by-side**.
- The **Wipe View** mode lets you share the playback window between 2 clips, activating an **adjustable splitting slider** in the image.

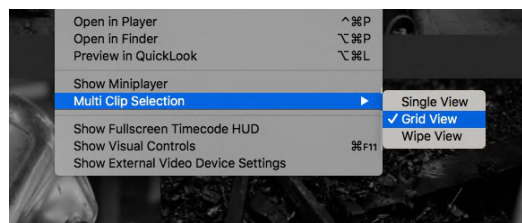
Both modes can be active in the **Silverstack Player** and on the [HD-SDI output](#).

The Grid View and Wipe View modes can be accessed from the view controls in the header bar of the Playback UI:



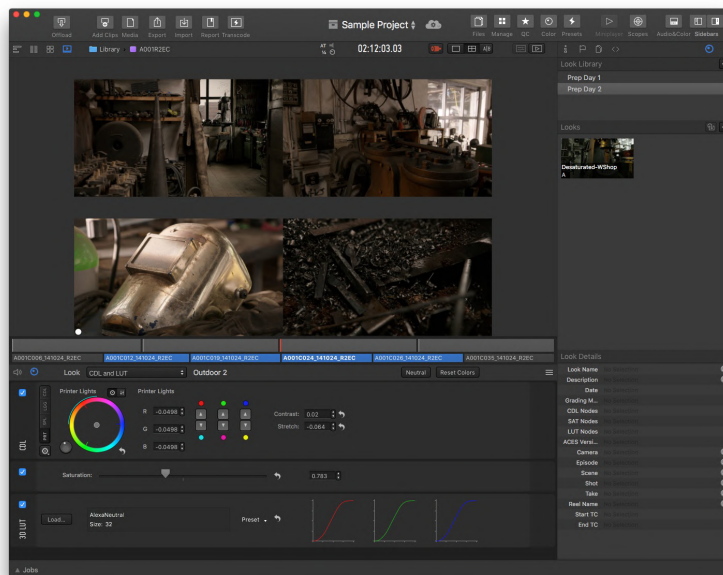
View selection menu

Alternatively, you choose the different view modes from the 'Playback' Main Menu bar:



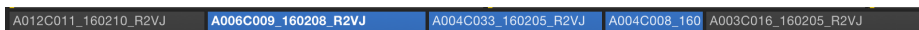
Playback Menu: Multi Clip Selection

The grid view mode



Grid View playback mode

After accessing the Grid View you have to select multiple clips in the timeline to show them in the grid. This can be done with the usual macOS modifier keys for multiple and continuous selection. Hold **shift** while clicking to select a range of clips and **cmd** to select and deselect single clips.

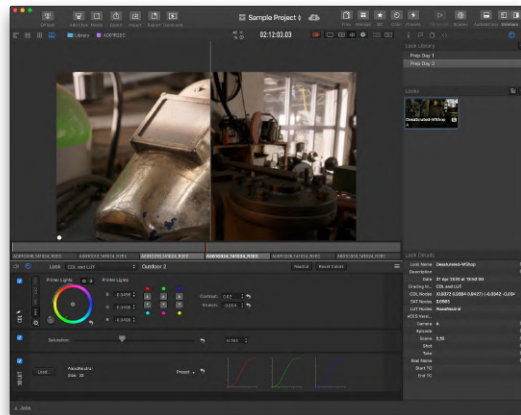


Timeline with three selected clips

The timeline in the previous screenshot shows a selection of three clips. The first clip (A006C009_160208_R2VJ) in bold white font is the primary current clip. Editing metadata and adjusting the grade will affect the current clip only. It's also marked in the image with a little white dot in the lower left corner.

The current clip part of a selection can be changed by **clicking on another clip of the selection or by clicking on the image in the player**. To deselect clips from the selection, just hold the *cmd* key while clicking. Click a non selected clip to dissolve the selection.

The wipe view mode



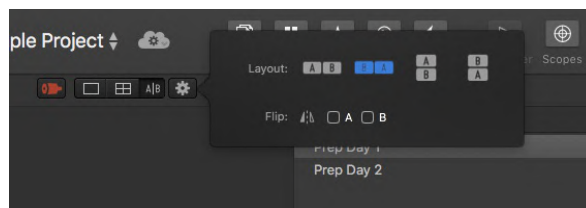
Wipe View mode in the Player

The Wipe View playback mode enables users to accurately compare **2 clips** side-by-side with the help of a slider. You can move the image splitter (e.g. shown in “Left – Right” mode) by dragging it over the clips in the player.

In order to access the Wipe View, you have to select 2 clips in the timeline. This can be done with the usual macOS modifier keys for multiple and continuous selection: Hold *shift* while clicking to select a range of 2 clips and *cmd* to select and deselect single clips.

Settings

There’s the possibility to switch the **layout of the clips**, as well as flipping them, through the gear button in the view controls:



Wipe View Layout menu

In the reference options you can choose which compositing mode should be used for displaying the clips. Options are:

- Left – Right
- Right – Left
- Top – Bottom
- Bottom – Top
- Flip (mirror vertically) the image for improved arrangement

The order of clips depends on the order in the timeline. “A” always refers to the first/left clip in the selection from left to right, “B” always to the last/right clip in the selection.

Lightweight copy of looks

The Grid View and Wipe View playback modes can be useful to reference and compare grades. Therefore it can be handy to easily copy grades. By using the Look library in the right bar looks can be easily created and applied to one or multiple clips. All necessary functionality can be found in the “Look” menu of the Silverstack Main Menu:

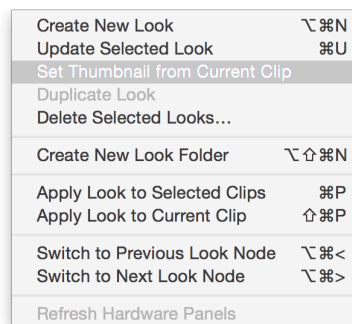


Fig. 5: The “Look” menu with functionality to create and apply looks

Learn more about the Silverstack Look Library in the article [The Silverstack Look Library](#).

Grid view functionality per Silverstack product version

The Grid View functionality differs for different Silverstack versions:

- **Silverstack:** No Grid View available.
- **Silverstack XT:** Grid View limited to 2 clips.
- **Silverstack Lab:** Grid View limited to 12 clips (only due to performance reasons).

Wipe view functionality per Silverstack product version

The wipe view is only available in Silverstack Lab.

Frame lines in the playback view

It is usual to record footage with an aspect ratio different to the one used in the final product, which makes the quality checking of the clips a bit more challenging. For this reason, Silverstack offers the possibility to overlay frame lines over the clips in the playback window, as well as for the SDI output.

The frame lines can be activated through the «Visual Controls» menu. You can open the visual controls from the **Main Menu**. Choose **“Playback>Show Visual Controls”**:

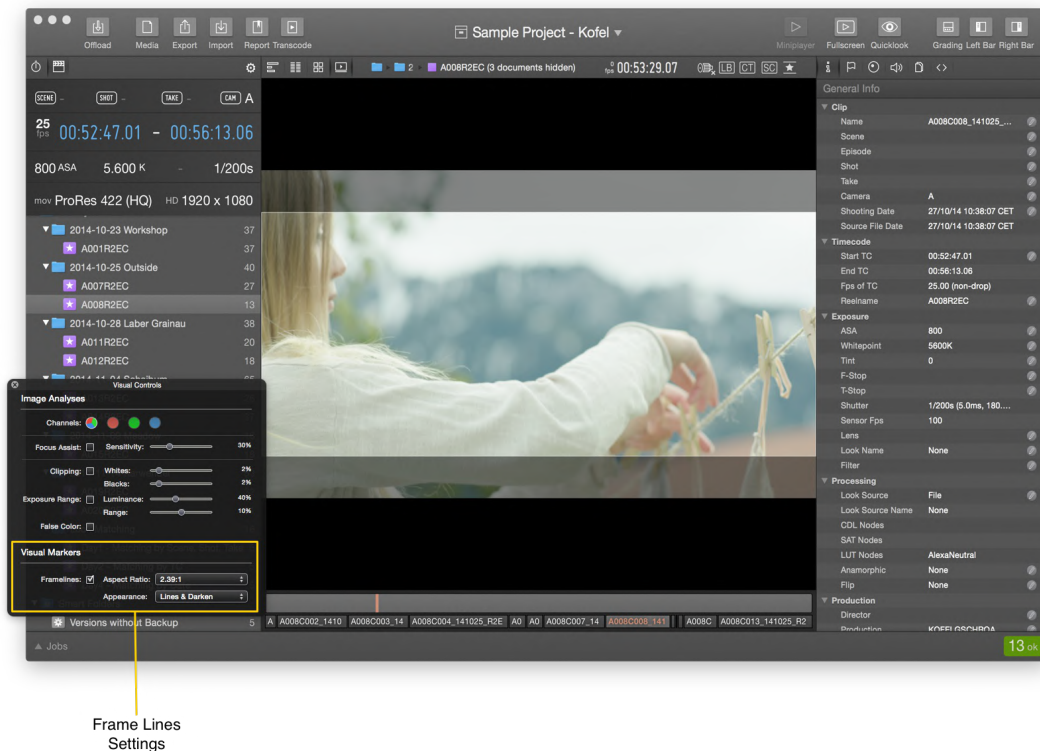


figure 1: frame lines settings

Once in the Visual Controls window you can activate the frame lines with the checkbox. You can then select the aspect ratio and appearance of the frame lines:



figure 2: aspect ratio and appearance settings

You can enter a custom aspect ratio to apply it as frame lines. All entered **aspect ratios will be saved** in the dropdown and sorted in alphabetical order:

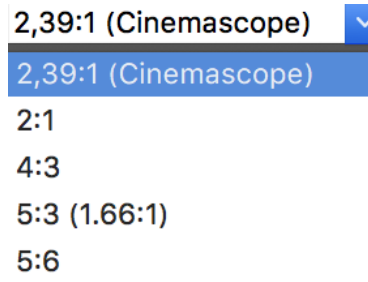


figure 3: The list of custom aspect ratios

Comments to the aspect ratios can be added in brackets after the aspect ratio (see example “2,39:1 (Cinemascope)”).

The list of aspect ratios is shared between all three places in Silverstack Lab where aspect ratios can be set: In the Visual Controls for framing assistance, in [Crop](#), and in the transcoding configurations.

Frames lines are available for normal playback and SDI output. For more information about how to setup the SDI output in Silverstack, please refer to the article [HD-SDI output in Silverstack](#).

SDI output

Silverstack XT and Silverstack Lab feature 4K SDI output, enabling high-quality playback of ingested clips for QC on an SDI broadcast monitor. The currently selected clip in the player is mirrored to the SDI output, displaying the image in full-screen with 10-bit color depth.

Supported devices

To enable the SDI output, you need one of the following devices:

- AJA T-TAP
- AJA KONA series
- AJA Io series
- Blackmagic Design Ultrastudio Products
- Blackmagic Design Mini Monitor
- Blackmagic Design Decklink Cards

Attach the according interface to your Mac (Thunderbolt or PCIe) and connect the SDI output of the device to the selected destination.

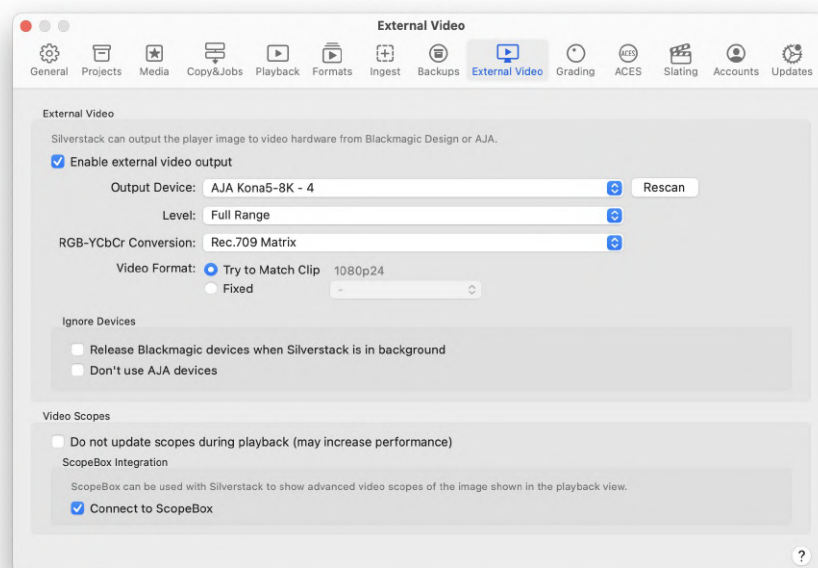
Drivers

To use the supported devices, you must install all necessary drivers and software provided by the manufacturer:

- For Blackmagic Design devices, this means installing the “Desktop Video” software, available in their support section.
- For AJA devices, you’ll need the “AJA Desktop Software”, which can also be downloaded from their support area.

External video settings

As soon as the SDI device is connected, Silverstack requests permission to use it as an external video device. In case you decide to activate the SDI playback later, you can enable it through “Settings > External Video”. You can disable the feature from the same menu in case another application demands its use. If you have multiple output devices attached, you can select which one to use by choosing it in the drop down menu:



- Level: Switch between Legal and Full Range
- RGB-YCbCr Conversion: Choose the color space Rec. 709 or Rec. 2020 for the outgoing signal.
- Video Format:
 - Try to Match Clip: This setting will try to match the output format of the SDI to the settings of the clips. Silverstack will try to keep the frame rate and fall back to HD if the resolution is not supported. If the frame rate is not supported it will fall back to 1080p24.
 - Fixed : This setting will let you choose the output format manually.

Additionally, you can choose to release a Blackmagic device when Silverstack is in background by enabling the checkbox “Release Blackmagic device when Silverstack is in background”.

You can ignore AJA devices via the checkbox: Don’t use AJA devices

Note: Please be aware that the support of SDI formats depends on the compatibility of the attached hardware device that the implementation in Silverstack is based on.

The SDI indicator

Once you enable external video output in the settings, a small indicator in the Silverstack media player header bar will display the current status of the SDI output:



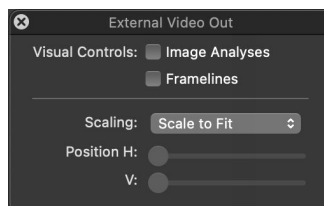
Playback modes

You can choose between two playback modes via the main menu > Playback:

- Absolute Time Playback: Tries to play back footage in sync with audio. Silverstack XT will skip frames to stay in sync with audio when video processing or I/O is too slow.
- Every Frame Playback: Aims to play back frame exact which leads to loosing audio. Silverstack XT will play back frame exact even if that leads to non-realtime playback.

Image processing

There are several options for displaying clips via the SDI device, which can be adjusted in the “External Video Out” window:



- Visual Controls: Enable/Disable the “Image Analyses” (False Color and Exposure Range), as well as Framelines.
- Scaling and Position:
 - Scale to fit: fills the output display with the image to compensate for a difference in the resolution.
 - 1:1 Pixels: displays the image in full resolution, which can crop the image id the output display has less resolution than the source.

Volume playback priority

High data rate video playback is very hardware demanding. As Silverstack offers a multiple destination backup option, your valuable clips will be stored in different volumes. Different types of volumes may have variant interface connections. To increase playback performance in Silverstack it is possible to select the playback priority.

To accomplish that you will have to go to the *Volumes* tab, select the volume you want to set its playback priority and adjust it on the right panel (figure 1 #1).

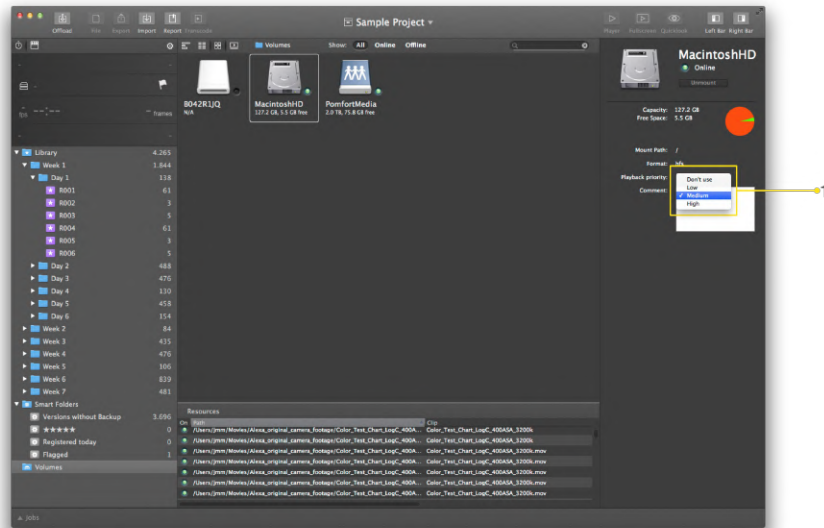
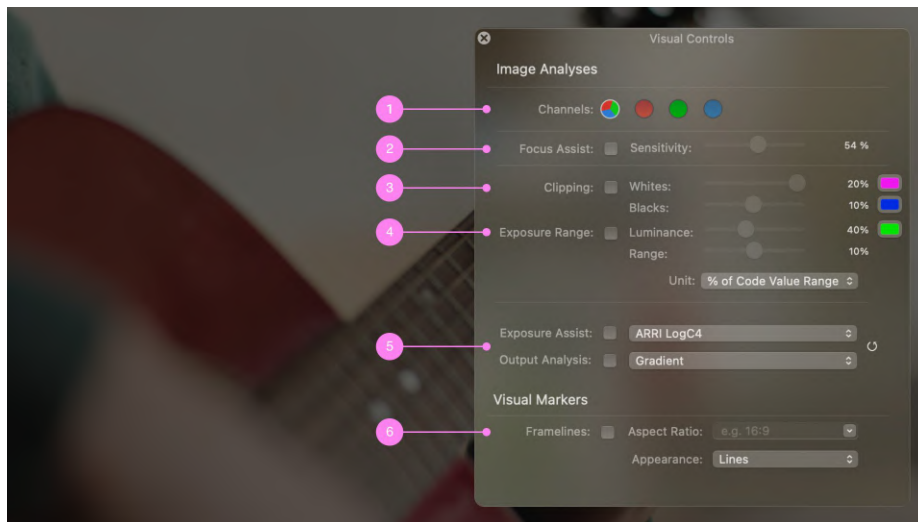


figure 1: playback priority

If your main playback volume is offline, Silverstack will automatically select another volume in the order of your playback priority. **If no priority is selected, Silverstack will randomly select the playback source volume.**

Visual controls

The visual controls are part of the playback view and offer functionalities to check the colors and quality of a video clip. When being in the playback mode, the interface can be opened via Playback > Visual Controls.



Visual controls

1. Visual control features

① Channels

Allows you to view only one of the clip's RGB-channels.

② Focus Assist checkbox

Enables the focus assist which helps you to detect if your image is in focus by detecting edges in the image. The sensitivity is adjustable.

③ Clipping checkbox / slider

Enables the clipping view for blacks and whites. The percentage values define the threshold for clipping the blacks and whites. For example, 0% means clipping is only shown when the actual RGB pixel values in the image are cut off (0/100).

④ Exposure Range

Allows you to detect different luminance ranges in your image.

⑤ Exposure Assist / Output Analysis

Enables the exposure assist or output analysis view. Exposure assist is applied to the original image (e.g., log) while output analysis is applied to the playback view and it's current settings. It's recommended to use the exposure assist view for analyzing the image.

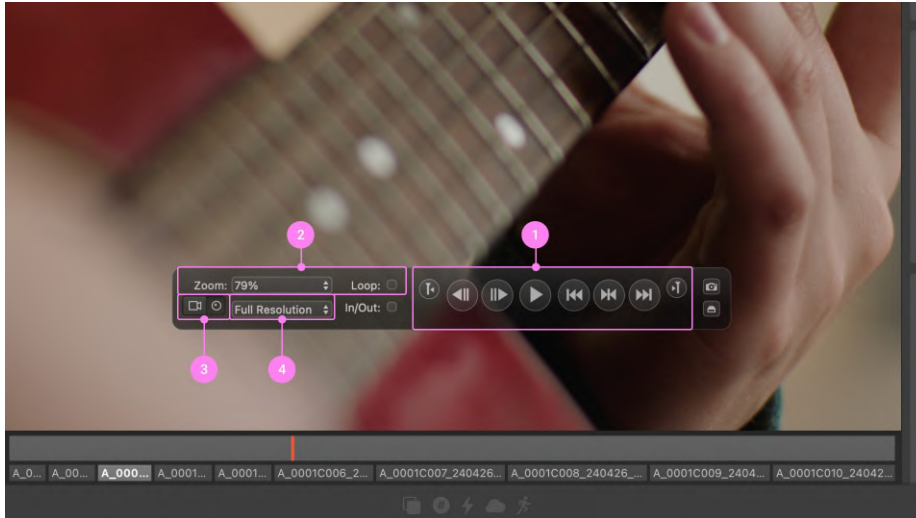
⑥ Framelines

Add frame lines to visualize the clips with a different aspect ratio. More information can be found in the article [Frame Lines in the Playback View](#).

Color	Level	Description
red	99 – 100%	White clipping
yellow	97 – 99%	Just below white clipping/white shoulder
pink	52 – 56%	One stop over medium gray (Caucasian skin)
green	38 – 42%	18% neutral gray
blue	2.5 – 4.0%	Just above black clipping/black slope
purple	0 – 2.5%	Black clipping

Clipping values

2. Playback control features



Playback control

① Playback control

Allows you to adjust the video preview and set in- and out-points

② Zoom / Loop

Allows you to zoom in or out and set a loop for playback.

③ Look mode

Switches between the original (e.g., log) and graded (e.g., Rec. 709) preview.

④ Playback resolution

Allows you to adjust the resolution used for playback. Lower resolutions than full are only available for specific formats like RED or ARRI where you can choose between resolutions of full, 1/2, 1/4 and 1/8.

ARRI ALEXA and AMIRA looks in Silverstack

Silverstack can playback and transcode ProRes clips recorded with ARRI ALEXA and AMIRA cameras with the looks applied on set. This feature lets DITs check the Log-C footage in real time with the final look and feel without the need of transcoding.

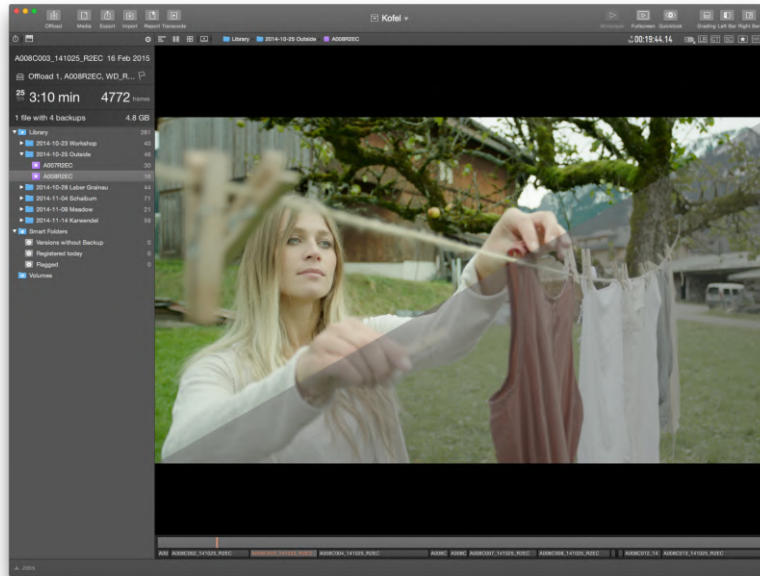


figure 1: AMIRA look application on and off

In order to use this functionality, [ALEXA looks](#) and [AMIRA looks](#) have to be applied in the camera before recording. Then the camera will write color metadata into the QuickTime ProRes clips. Once the clips have been added to the library, Silverstack will read this metadata from the file and apply the color changes along with the standard Rec.709 conversion by default. After the clips have been checked for quality, Silverstack will let you transcode them to a lighter codec with the same look applied.

This feature is active by default, but it can be disabled through Silverstack's Preferences menu, by setting the «Look Source» to None:

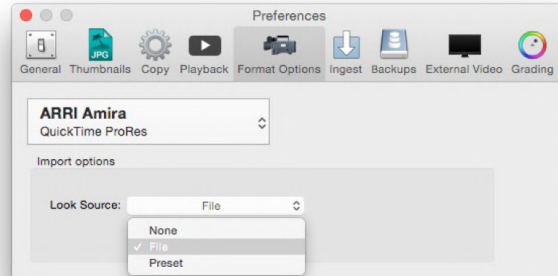


figure 2: visual controls preferences menu

Even if the look application is disabled, the footage can be displayed with the standard Log-C to Rec.709 conversion if you select «Preset» and choose one of the Alexa or Amira LUTs.

Full screen player mode

Silverstack offers a full screen player mode, which can be used with both single-monitor and multi-monitor setups.



Enter full screen player

To enter full screen, press “Shift-Command-F” or select “Window > Full Screen Player” from the main menu while in the player view.

When in full screen, you can access the timeline by moving the mouse cursor to the bottom of the screen. To hide the timecode HUD, click the small X in the top left corner. To show it again, select “Playback > Show Fullscreen Timecode HUD” from the menu.

Single monitor setup

In single monitor setups the full screen mode hides all other user interface elements and only shows the clip and control overlays.

Multiple monitor setup

When you have more than one display attached to your Mac you can display the clips on one screen while you can browse the Silverstack library on another one. For more information, please check the article [Second display: Two screen working environment in Silverstack](#).

SDI output

Silverstack also comes with an external video option to play out ingested clips in best quality for QC on an SDI reference monitor. The current clip in the player gets mirrored to the SDI output showing the clip in full resolution and 10 bit color depth. For more information, please check the article [SDI output in Silverstack](#).

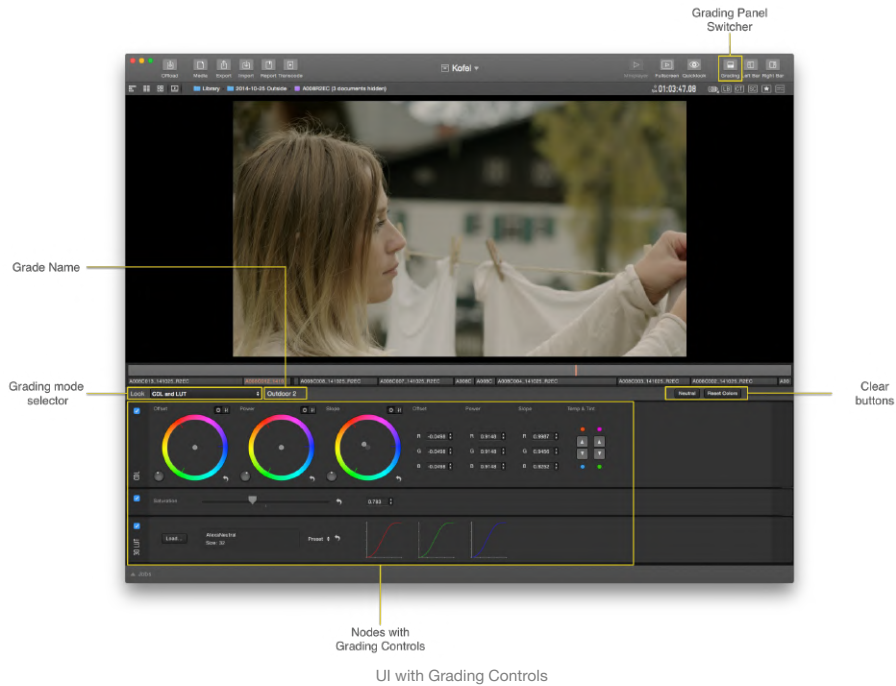
Color

Color controls and grading modes

Color correcting clips is possible in the grade control tab of the Audio&Color panel.

Grade controls are separated in grading nodes, a grading node can be understood as one image filter with one or more parameters. A certain set of grading nodes belong to a grading mode. A grading mode is a predefined set of nodes and also helps to work inside certain boundaries concerning the type and order of grading nodes by setting limitations (e.g. CDL and LUT).

Grade controls



The grade control tab in Silverstack consists of all controls for manipulating the image filtering :

- **Grading mode selector:** Switch between the different grading modes available on the drop down menu
- **Grade controls with nodes:** Here you find all the nodes for a certain grading mode such as CDL color controls, 3D LUT loading node, saturation etc. Each node can be individually disabled by un-marking the blue check box.
- **Look Source Name:** The name of the currently applied look
- **Look actions:** The look action menu contains actions ...
 - **Clear buttons:** Clear either all grading nodes ("Neutral") or just the creative color manipulation nodes (e.g. CDL node) and not LUTs or tone mapping curves (Reset Colors)
 - Using the «Neutral» button you can reset all settings (color and LUT) to a «neutral» state.
 - Using the «Reset Colors» button you can reset the color settings to a "neutral" state.
 - **Match Looks**
- **Clear buttons:** You can clear either the entire look or just the color manipulation (and not LUTs or tone mapping curves)
 - Using the «Neutral» button you can reset all settings (color and LUT) to a «neutral» state.
 - Using the «Reset Colors» button you can reset the color settings to a "neutral" state.

The **grade controls** consist of the following elements:

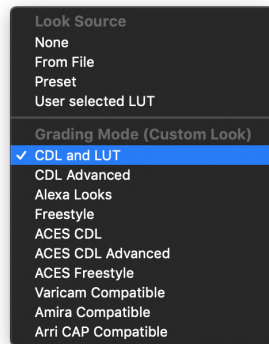
- **Grading node:** Grouping element containing the actual grade controls
- **Node enabling:** Enable or disable the effect of a grading node
- **Edit node structure:** Some grading nodes can have variable grading nodes, you can add and reorder grading nodes in the edit mode.
- **Control panels:** The control panels button and indicator shows the attached grading panel. You can disable / lock the attached grading panel to prevent unwanted changes.
- **Result curve:** The video scopes shows the resulting curves for all enabled grading nodes in the three RGB channels.

Grading modes

Silverstack supports different grading modes designed for specific camera setups and workflow environments.

The node-based design allows you to disable and reorder individual filter nodes to have greater grading freedom. You can disable a certain node by unchecking the blue check box. Have in mind that the processing order is from «top to bottom» when reordering the nodes.

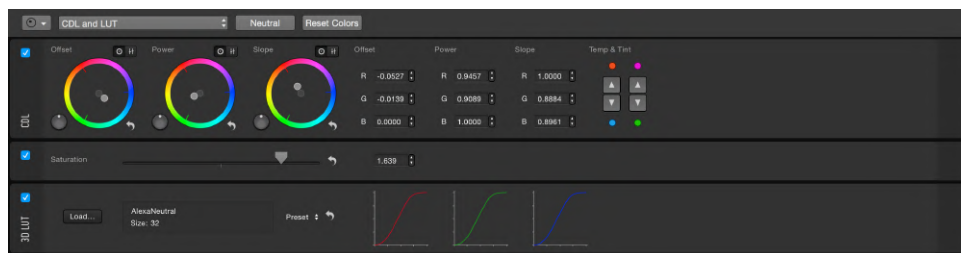
Each grading mode allows different levels of grade customization, as the compatibility of the grades down the workflow creates some restrictions on how the color information has to be processed. For example, the camera compatible grading modes can have the nodes locked in a certain position to ensure the compatibility of the grade.



The different grading modes to choose from.

The grading modes allowing the greatest level of customization are the Advanced and Freestyle modes.

CDL and LUT



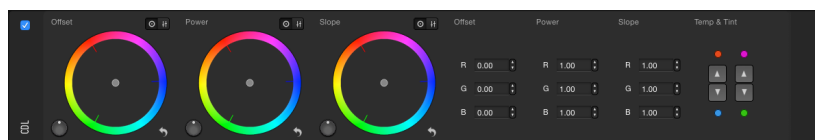
The CDL and LUT grading mode

The CDL and LUT grading mode offers ASC-CDL controls for the use in a wide range of workflows. For clips recorded in Log color spaces, Silverstack allows to **import 3D LUTs** or choose from **3D LUT Presets**.

In order to support workflows that apply CDL in log gamma as well as in video gamma, the **order of LUT and CDL filters can be changed** when using the CDL Advanced grading mode. The CDL and LUT mode can also be used with **Rec.709 clips** without adding a 3D LUT.

The color controls for the CDL and LUT grading mode consist of:

- **ASC-CDL controls** node:
 - RGB **Shadows, Mid-tones and Highlights** color wheels



ASC-CDL color wheels

- **Saturation** slider node



Saturation node

- **Import of 3D LUT** node: The CDL and LUT grading mode can import 3D LUTs and CDL files and can export ASC-CDL files.
 - **3D LUT Import options** with averaged curve displays for each channel



3D LUT node

CDL Advanced

Allows you to add and reorder multiple nodes on advanced workflows.

Alexa Looks (Deprecated)

This mode is designed to create .xml ALEXA Looks compatible with ARRI ALEXA cameras. More information in the article [Using the ALEXA Looks grading mode](#).

Freestyle

This grading mode has been created to allow complete grading freedom. For this reason, there are some limitations on the available export formats for looks created on this mode.

ACES CDL

A mode adapted to the ACES standard. More information in the article [Using the ACES grading mode](#).

ACES CDL Advanced

A mode adapted to the ACES standard. Allows you to add and reorder multiple nodes on advanced workflows.

ACES Freestyle

This grading mode has been created to allow complete grading freedom inside an ACES pipeline.

Varicam Compatible

This mode is designed to create 3D LUTs and looks compatible with Panasonic Varicam 35 cameras.

Amira Compatible

This mode is designed to create .aml AMIRA Looks compatible with ARRI AMIRA cameras.

ARRI CAP Compatible

This mode is designed to create .aml Looks compatible with ARRI CAP (Camera Access Protocol).

FilmLight BLG Mode

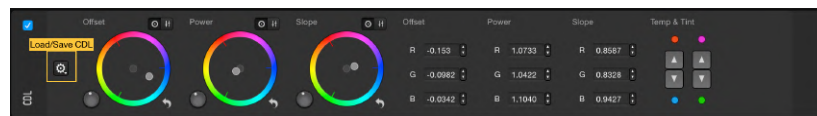
This mode is designed to apply .blg Looks created with Livegrade Studio.

Note: The FilmLight BLG mode is only available when looks were imported via PFL/PFLA from Livegrade, and limited to CDL or Saturation node changes.

Grading Nodes

CDL Node

The CDL node contains a color wheel for Offset, Power and Slope. It can be used to adjust the color on the image.



CDL grading node

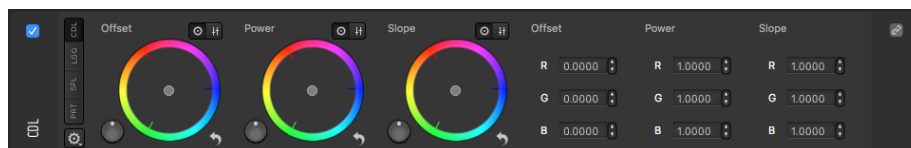
ASC-CDL files can be directly loaded and saved to/from the CDL node (supported format: *.cdl). Click the gear button on the left side of the CDL node and select if you want to load or save a CDL.

Please be aware that the ASC-CDL specification always includes a saturation value. When one saturation node is present CDLs will be loaded and saved from/to the present saturation node. When multiple CDL and saturation nodes are present you will be pointed choose the saturation node you want to load the saturation to (indicators A,B,C etc.).

The CDL node has several interaction types with different controls for different interaction styles. The interaction types of one CDL node all work on the same set of CDL values, so changing controls in one interaction type might change control positions also in the other interaction types.

The available interaction types:

CDL interaction type:

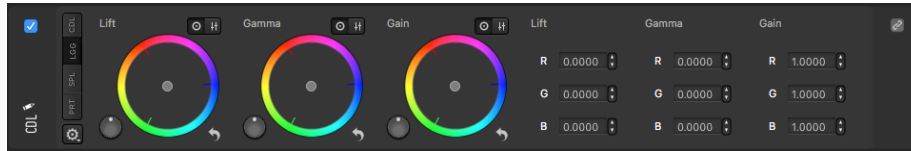


CDL node – CDL interaction type

The CDL interaction type allows to manipulate the nine values of the SOP triples (for each color channel R, G, B) of the CDL. The values in the nine text fields are the same values as in an exported ASC-CDL file.

The color wheels have a global control (in the bottom left of each wheel), an indicator around the ring shows if the global control is modified. Changing the wheel control doesn't change the global luma of that control, e.g. the channels are balanced and the global control doesn't change by changing the wheel position.

Lift, Gamma, Gain (LGG) interaction type:



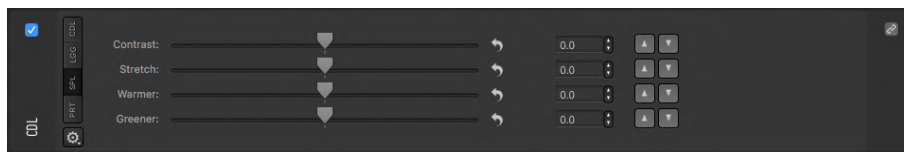
CDL node – LGG interaction type

The LGG interaction type allows to manipulate lift, gamma, and gain (LGG) values as known from other grading systems. These control values are mapped to CDL values in the background. The nine text fields show lift, gamma, and gain values (not ASC-CDL values) – switch back to the CDL interaction type to see the CDL values of a certain setting of LGG values.

Note: Although ASC-CDL doesn't specify limits of its values, some 3rd party software products limit values in their ASC-CDL grade controls. An indicator ("i") on the very right of the grade UI Silverstack indicates that values are out of the range that is commonly accepted.

The color wheels have a global control (in the bottom left of each wheel), an indicator around the ring shows if the global control is modified. Changing the wheel control doesn't change the global luma of that control, e.g. the channels are balanced and the global control doesn't change by changing the wheel position.

Simplified (SPL) interaction type:

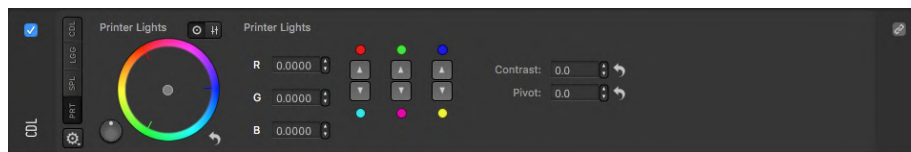


CDL node – SPL interaction type

The SPL interaction type allows to manipulate the values of the CDL filter with the controls Contrast, Stretch, Warmer and Greener.

Increasing the contrast control makes the resulting curve steeper by clipping black and white. Increasing the stretch control increases contrast in the highlights, while decreasing stretch increases contrast in the shadows. Increasing the warmer control gives the image a warmer appearance by giving the shadows a warmer tint while the whites stay unmodified. Increasing the greener control gives the image a greener appearance by giving the shadows a greener tint while the whites stay unmodified.

Printer Lights (PRT) interaction type:



CDL node – PRT interaction type

The PRT interaction type allows to simulate a color correction based on printer lights. Printer lights can be approximated by an offset in camera log encodings. Additional buttons for each color channel allow for changes in fixed steps.

ASC-CDL files can be directly loaded and saved to/from the CDL node (supported format: *.cdl). Click the gear button on the left side of the CDL node and select if you want to load or save a CDL.

Please be aware that the ASC-CDL specification always includes a saturation value. When one saturation node is present CDLs will be loaded and saved from/to the present saturation node. When multiple CDL and saturation nodes are present you will be pointed choose the saturation node you want to load the saturation to (indicators A,B,C etc.).

The size of the color wheels can be adjusted in the menu under Look > Color Control Size. Just choose a size that fits your display resolution.

The CDL node can be controlled by an external hardware grading panel. To have more information on how to use it, please check the following articles:

- [Tangent Element setup](#)
- [Tangent Wave setup](#)

Saturation node

Just drag the slider to either side to increase or decrease the saturation on your look.



Saturation node

3D LUT node

The 3D LUT node is designed to load your own 3D LUTs by pressing the «Load...» button. Alternatively, you can also use one of the available preset 3D LUTs to convert the image to a Rec.709 color space.



3D LUT node

Supported formats for loading into the 3D LUT node are:

- Adobe Speedgrade (.cube; size 32,33, 65)
- Assimilate Scratch (.3dl; size 32)
- Panasonic Varicam (.vlt)
- Autodesk Lustre (.lut)
- Truelight (.cub)

1D LUT node

The 1D LUT lets you load your own 1D LUT file. Click the **“Load...”** button and select the 1D LUT you want to load to the node.



1D LUT Node

In contrast to the curve node the LUT in the 1D LUT node can not be edited afterwards.

Supported formats are:

- *.txt
 - channels: 3
 - range: 0.0 ... 1023.0 (float)
 - header: “R G B – HDLINK GAMMA TABLE”
 - entries: 1024
 - row example: “221.37 221.37 221.37”
- *.data
 - channels: 4
 - range: 0 ... 16383 (integer)
 - entries: 16384
 - row example: 15040,15040,15040,15040
- *.lut
 - channels: 3 (4 columns with leading index (0...65535, R, G, B)
 - range: 0 ... 65535 (integer)
 - header: “LUT16”
 - entries: 65536
 - row example: 45490 58366 58366 58366

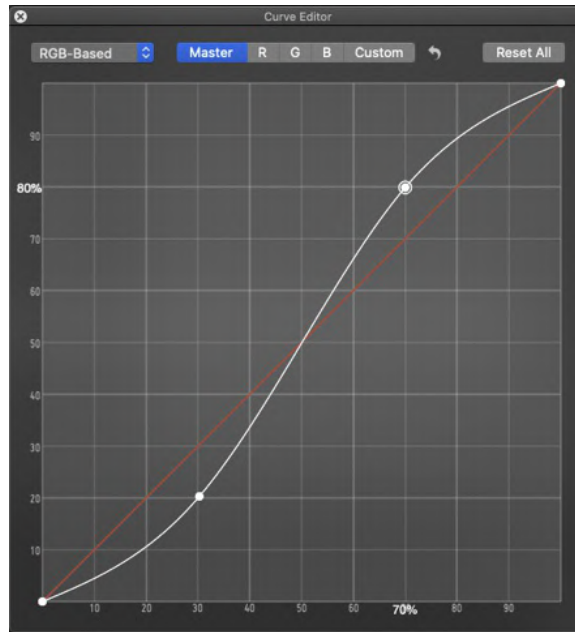
RGB curves node



RGB Curves node

The RGB Curves node lets you apply precise curve adjustments to master RGB values or to individual luma, red, green, blue and/or custom color channels. Click on **“Edit”** to open the RGB Curves Editor window, which allows you to precisely grade your footage:

- There are two modes to choose from:
 - “RGB-Based” adjusts the selected color channel including its luma and saturation values, while the “Master” curve is a ganged RGB curve influencing the red, green and blue channel at the same time
 - “Luma-Based” adjusts the colors red, green, blue and/or the custom set color without influencing their luma and saturation values, while the “Luma” curve can be adjusted independently
- In the “Custom” color curve you can pick a custom target hue, for adjusting a certain color in your image precisely
- To add a curve point just click on a curve, and in order to modify it’s value just drag and drop. You can adjust curve points using the left/right and up/down arrow keys as well.
- To remove a point, select the point and press Backspace.
- When you move your mouse over the curve editor, the graph shows you the value of the exact point where it is. When the mouse pointer is not moving or it is outside of the curve editor window the values of the currently selected curve point are being displayed.



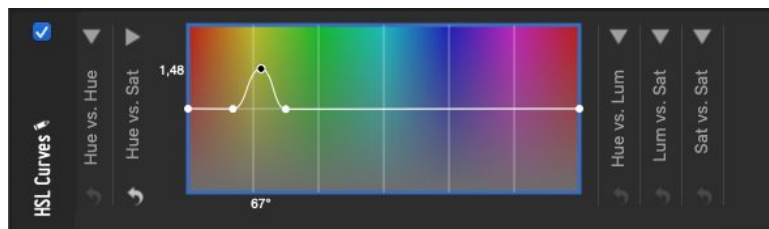
RGB Curves editor window

More information on how to use the editor can be found in the article [Using the RGB Curves Editor](#).

Hue-Sat-Lum curves node

The Hue-Sat-Lum (HSL) Curves node lets you apply precise secondary curve adjustments based on hue vs. hue, hue vs. saturation, hue vs. luma, luma vs. saturation and saturation vs. saturation values. The associated tabs in the HSL Curves node allow you to precisely grade your footage:

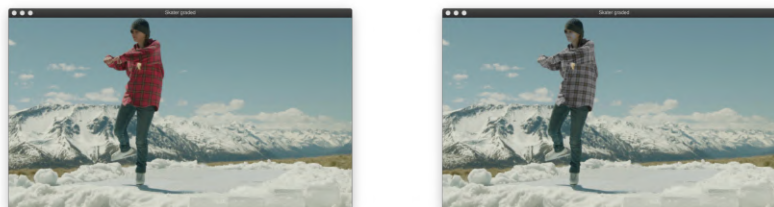
- The graphs on the x-axis in the individual mode windows (Hue vs. Hue, Hue vs. Sat, Hue vs. Lum, Lum vs. Sat, Sat vs. Sat) represent the target values of the associated mode. Added curve points can be dragged to change the values accordingly along x and y-axis.
- To add a curve point just click on a curve, and in order to modify its value just drag and drop. You can adjust curve points using the left/right and up/down arrow keys as well.
- To remove a point, select the point and press Backspace.
- When you move your mouse over the curve window, the graph shows you the value of the exact point where it is. When the mouse pointer is not moving or it is outside of the curve editor window the values of the currently selected curve point are being displayed.



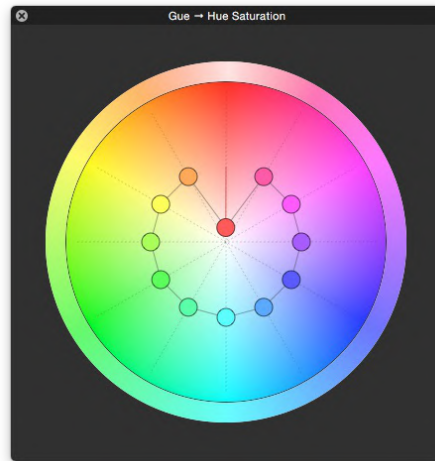
HSL Curves nodes

HHS node

The HHS node –Hue to Hue and Saturation– is a new kind of node that allows you to map a certain hue on the image and replace it by another color with different hue and saturation. Here is an example where the red has been desaturated, but the other colors remain the same:



The HHS editor allows you to drag and drop the hue circles to another location on the color space to replace the original color with another one.



HHS editor

Knee curve node

The Knee Curve node lets you create simple technical curve adjustments with three parameters for “Black (toe)” and “White (knee)”:

- **Limit:** Increases/decreases the limit for white or black on the curve’s y-axis
- **Offset:** Increases/decreases the offset between limit and knee or toe curve point
- **Threshold:** Increases/decreases the x + y coordinates of the knee or toe curve point



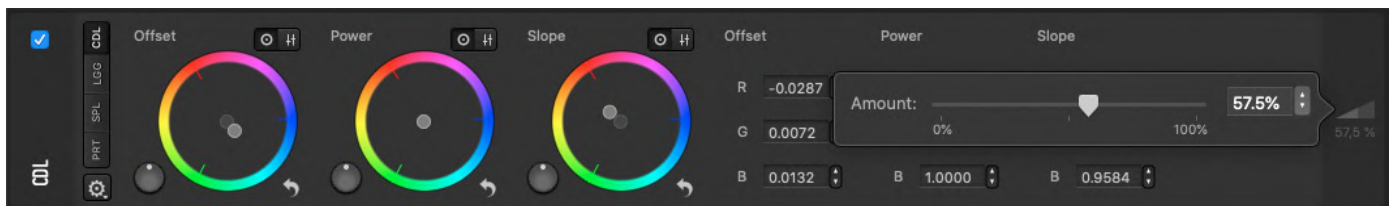
figure 14: Knee Curve Node

You can save your curve correction as a 1D LUT (.cube) file (or the inverse 1D LUT) for loading the adjustment in other color grading systems.

Amount Slider

CDL nodes, RGB curve nodes, HSL curve nodes and HHS nodes have an amount slider which allows to fine-tune the effect of the associated grading node. There is an intensity level indicator on the right hand side of the node. When clicking on it, you can adjust the intensity in a popover window, either with a slider or by typing in a value from 0-100%.

Note: The initially set values in CDL nodes remain the same when changing the intensity. When you create a shot, the values of the grade are re-calculated with the applied intensity amount and saved as new resulting values in the shot table.



CDL node with amount slider

Grading panel support

Silverstack supports the use of hardware grading panels for the grading functionalities. The following panels are supported:

- Tangent Element Tk
- Tangent Ripple
- Tangent Wave
- Tangent Wave2

Connect the hardware panels to Silverstack to precisely and physically manipulate your grades.

Custom RAW development

Silverstack Lab allows you to set custom development parameters for processing selected RAW formats:

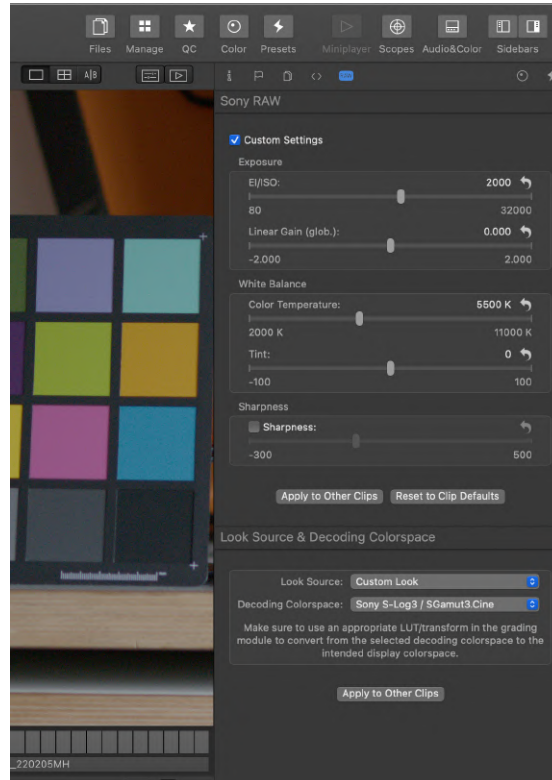
- ARRIRAW
- REDCODE RAW
- Sony X-OCN
- Canon CRM
- DJI CinemaDNG

- ProRes RAW (currently only supported for custom selection of decoding colorspace)

Formats and manufacturer SDKs

With the new RAW tab in the right sidebar, Silverstack Lab provides a customizable interface to the camera manufacturers' RAW SDKs, which are in charge of transforming the proprietary RAW data into a processable image. The application of the development parameters in the manufacturers' RAW SDKs guarantees that the result is of the best quality and in line with the manufacturers' reference tools.

Each of the mentioned RAW formats allows customizing standard settings like ISO, color temperature, or tint. Depending on the different SDKs or clips, special parameters like sharpness or noise reduction might also be available.



RAW settings for Sony X-OCN footage

Custom settings and clip defaults

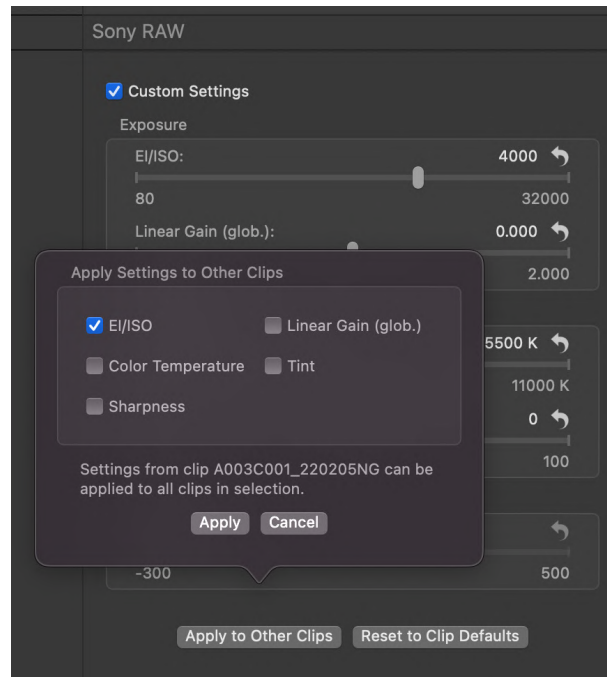
Per default, each clip is processed with the “clip default” parameters. These are extracted from the clip metadata and usually reflect the settings selected in the camera at the time of the recording.

Activating the “Custom Settings” checkbox allows you to manipulate the RAW processing parameters of the currently selected clip. It is possible to drag the sliders or click on the parameter value and type in directly. Changing a parameter instantly updates the clip’s playback view; the corresponding clip thumbnail is updated after a short delay. A click on the arrow symbol on the right side of a control resets it to the clip default (as shot) parameter. The “Reset to Clip Defaults” button on the bottom resets all controls to the clip defaults.

Deactivating the “Custom Settings” checkbox takes you back to the clip default processing but remembers the changed parameters in the background. Toggling the checkbox allows you to compare the custom against the default processing.

Apply to other clips

Custom settings are stored for each clip individually; changing the parameters modifies the active clip only. It is possible to take over a custom configuration to other clips in the selection with the “Apply to Other Clips” button.



Apply custom raw settings to other clips

The button reveals a panel that allows one to granularly specify which parameters to take over. It is only possible to apply the settings to clips of the same format (a set of ARRIRAW parameters can only be applied to other ARRIRAW clips).

Main table, general info, and reports

Custom RAW parameters, as well as the clip default (as shot) parameters, are available as columns or fields in in the main table and general info tab. The fields “EI/ISO”, “WB”, and “Tint” with suffix “(clip)” refer to the clip default parameters, while the fields with suffix “(current)” show the value that is currently used for processing in Silverstack Lab. If the “Custom Settings” checkbox is checked, these fields show the custom settings.

Including both set of parameters in your reports makes the changes transparent.

Name	EI/ISO (clip)	WB (clip)	Tint (clip)	EI/ISO (current)	WB (current)	Tint (current)
A003C001_220205NG	800	5500 K	0	12800	7500 K	1.5

Clip default versus custom RAW development parameters in a clip report

Decoding color space

Some RAW formats allow selecting the decoding color space and gamma. This specifies the result of the manufacturers’ SDK RAW development and is the working color space for Silverstack Lab’s grading module. The decoding color space and gamma can only be specified when switching to Silverstack Lab’s “Custom Look”, “Preset”, or “User selected LUT” modes.

The decoding color space can be set in the RAW tab in the right sidebar or via General Info > Look > Decoding Colorspace.

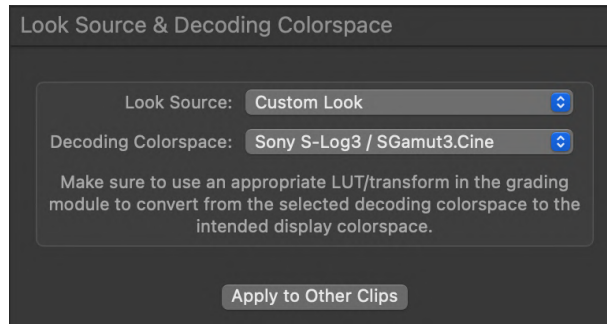
Currently, these options are available:

- ARRIRAW (Mini LF): LogC3/AWG3 or LogC4/AWG4
- Sony X-OCN: S-Log3/SGamut3 or S-Log3/SGamut3.Cine
- Canon RAW: Log 2/Cinema Gamut, Log 3/Cinema Gamut, Log 2/Rec. 709 or Log 3/Rec. 709
- DJI CinemaDNG: Rec. 709/Rec. 709, sRGB/sRGB, DJI D-Log/Rec. 709, DJI D-Log/DJI D-Gamut
- ProRes RAW*: HLG / Rec. 2020, Canon Log 2 / Cinema Gamut, DJI D-Log / DJI D-Gamut, Fujifilm F-Log2 / Rec. 2020, Nikon N-Log / Rec. 2020, Panasonic V-Log / Panasonic V-Gamut, Sony S-Log3 / SGamut3, Sony S-Log3 / SGamut3. Cine

**ProRes RAW decoding color space only selectable in “General Info” tab > Look > Decoding colorspace*

Please note that changing the decoding color space requires manually selecting an appropriate transformation LUT in the grading module. (E.g., changing the decoding color space of an Alexa Mini LF clip from LogC3 to LogC4 requires manually changing the LUT node to “LogC4 → Rec.709”)

The “Apply to Other Clips” button allows transferring of this configuration to all clips of the same format in the current selection.



Options for decoding color space of Sony RAW clips

Look library

Silverstack enables you to manage looks within Silverstack in a look library in order to keep a proper overview of all the looks in your project. The look library allows to store new looks, edit their metadata, apply looks to one or multiple clips, as well as to import looks from Livegrade.

The look tab

The look tab in the right bar of Silverstack is marked with a specific icon:



Click the icon to reach the look tab. The tab itself consists of three sections:

- **Look Library**
- **Looks**
- **Look Details**

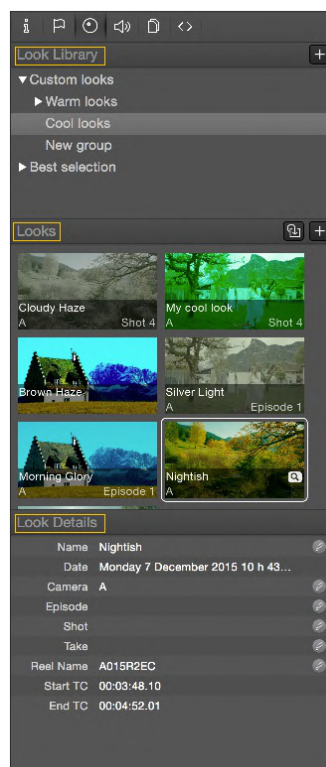


Figure 1: The Silverstack look tab containing the Look Library.

In detail those sections enable you to:

Look library

- Create new folders by clicking the “+” button on the top right
- Create sub folders by holding “alt” plus clicking the “+” button
- Edit the structure by dragging folders out of or into each other
- Rename folders by selecting and single clicking them or hitting enter

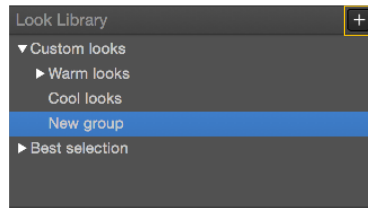


Figure 2: Organize folders containing looks

Looks

- Create a new look by clicking the “+” button on the top right
- Update a look by selecting one and clicking the update button next to the “+” button
- Preview a look by selecting it and clicking plus holding the loupe icon
- Apply a look to the current clip in the player by double-clicking the intended look
- Apply looks to multiple clips by selecting the desired clips and double clicking the intended look
- Move one or multiple Looks to other folders by dragging and dropping it to a different Looks folder in the Look Library*

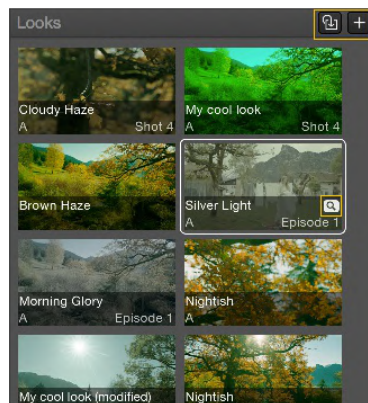


Figure 3: The looks section with highlighted add, update and preview look buttons

The context menu for looks can be reached by right clicking a look. It enables you to:

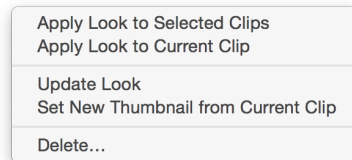


Figure 4: The context menu can be reached with a right click on a look

- Apply a look to the selected clips (one or multiple clips)
- Apply a look only to the current clip shown in the player (even if multiple clips are selected)
- Update the look with the current grade
- Set a new thumbnail from the current clip but leaving the look identical
- Delete one or multiple looks.

To learn how to use the Silverstack grading controls please refer to the article [Grading Controls in Silverstack](#).

Look details

When importing looks from Livegrade, the information fields in the Look Details receive the values from the look edited in Livegrade. In the Look Details it is possible to:

- Edit the look name
- Edit metadata of the look including Date, Camera, Episode, Shot, Take and Reel Name
- Display Start and End Timecode

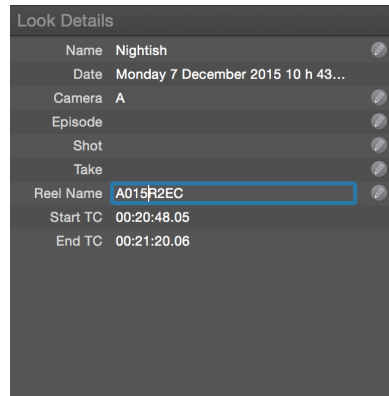


Figure 5: The Look Details section

Importing and exporting looks

You can import a look from Livegrade by selecting **'File>Import>Pomfort Looks (pfl)...'** from the main menu. You can learn about the process of transferring looks from Livegrade to Silverstack in the article [Importing Looks \(from Livegrade\)](#).

Read about exporting looks from Silverstack in the article [Exporting Looks from Silverstack](#).

Look functions in the main menu

You can find most of the functions concerning the Look Library in the Main Menu. Go to **'Main Menu>Look'** and choose from the following actions:

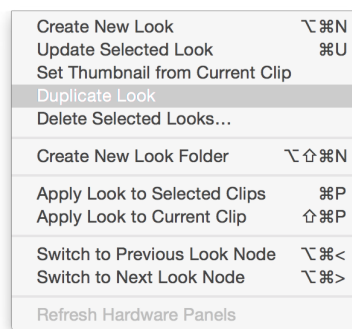


Figure 6: The "Look" section of the Main Menu

- Create a new look
- Update a selected look
- Set the thumbnail from the current clip
- Duplicate Look
- Create a new look folder
- Apply a look to all selected clips
- Apply a look only to the current clip
- Switch to the previous look node (useful for working with grading panels in more advanced grading modes)
- Switch to the next look node (useful for working with grading panels in more advanced grading modes)
- Refreshing hardware panels

Please refer to the shortcuts at the end of the entries for faster access of the functions.

* Please be aware that you have to click and hold the selected look(s) to see the transparent thumbnails pop out to enable the drag & drop function. Trying to move a look while immediately pulling it will leave you with the multi select function of the collection view.

Matching looks wizard

The "Matching Looks Wizard" is opened via the [color panel](#) or the menu. Go to File > Import > Match Pomfort Looks from Look Archive (pfla)... and select the Pomfort look archive file you want to use for matching looks. Files with the extension .pfla are used to exchange looks between Pomfort applications, e.g. Livegrade and Silverstack.

User interface

Choose Look Archive...

Opens a dialog to select a Pomfort look archive file.

Fetch Looks from Cloud...

Opens a dialog to select a Pomfort look archive file via ShotHub.

Only use looks with labels

Limit the selection to looks with a specific label.

Match looks with clips by

Sets the criteria for matching the looks with the clips. You can choose between “Creation Time of Look”, “Timecode”, “Episode/Scene/Shot/Take”, “Clip Name”, “Clip Identifier (with Clip Name)”.

The clip options allow you to specify if the entire name or only some characters of the name are used for matching. When using “Creation Time of Look”, you can set a timezone offset.

Match looks with clips by camera

Enable this option if you want to take the camera metadata value into account.

Mark Only Selected

Enables only the selected file in the table for relinking. Right-click on the button to change the function to “Mark All” or “Mark Selected.”

Unmark Selected

Unmarks only the selected file in the table for relinking. Right-click on the button to change the function to “Unmark All” or “Unmark Only Selected.”

Table

The table shows all items with information depending on the matching criteria. The table can show the following columns: “Library Clip Name”, “Camera”, “Apply”, “Look Name”, “Look”, “Clip Identifier”, “Shooting (End) Date”, “Creation Date”.

Underneath the table you are informed about the current state of the look matching, e.g. if looks match or if they are used. Click on an apply checkbox to enable or disable the look matching for a specific clip.

Take over metadata from looks to matched clips

Ingest the metadata values from the looks into the clips.

Import unused looks into look library

If not enabled, only looks that match with clips are imported.

Apply Looks

Starts the look matching process and imports the looks into the library.

Professional video scopes for Silverstack with ScopeBox

You can use ScopeBox to add software-based waveform monitors and video scopes to Silverstack’s player. It provides a range of tools for image analysis, allowing you to closely evaluate and adjust the clips in your Silverstack library.

You can receive information about how to download, setup and license ScopeBox on the [ScopeBox Website](#).

Connecting Silverstack and ScopeBox via ScopeLink

Silverstack sends the current image of the player directly to the ScopeBox application via ScopeLink. To enable ScopeLink open the ScopeBox application and follow the instructions.

In the menu bar of ScopeBox choose: “Source > Add ScopeLink Source > Pomfort Silverstack”

After that, the Pomfort Silverstack source appears in the sidebar. The screen will remain black until you play a clip in the Silverstack viewer.

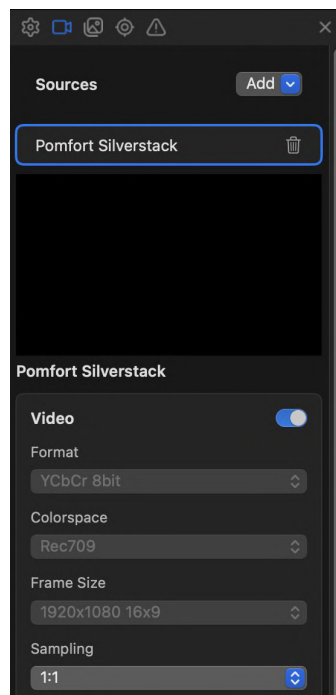


Figure 1: ScopeBox waiting for the Silverstack connection.

Open Silverstack and start playing a clip in the media player.

Make sure that in the settings of Silverstack under “External Video” the checkbox “Connect to ScopeBox” is enabled. You reach the settings from the main menu by choosing: “Silverstack > Settings...”

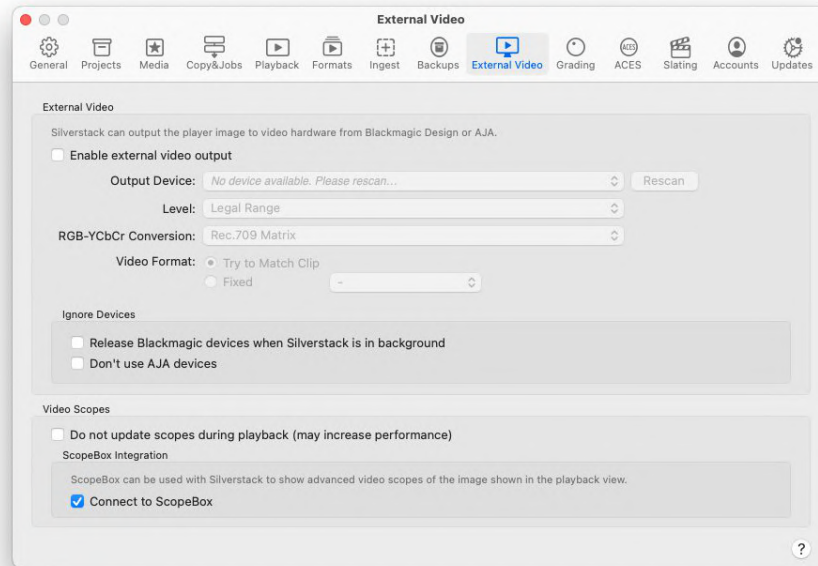


Figure 2: Silverstack “External Video” settings.

There you can also choose if you want to update the frames in ScopeBox during playback in Silverstack. Checking this box may increase performance, but Silverstack only updates ScopeBox when being paused.

When you switch to ScopeBox, you should then see the default view including an image preview of the clip in Silverstack:



Figure 3: The ScopeBox UI with a preview of the Silverstack clip and scopes.

Note: Due to Silverstack’s internal RGB processing, YCbCr-based clips sent to ScopeBox via ScopeLink do not retain code values outside the legal range, even if such values exist in the original source files.

Tags: waveform, vectorscope, histogram, rgb parade

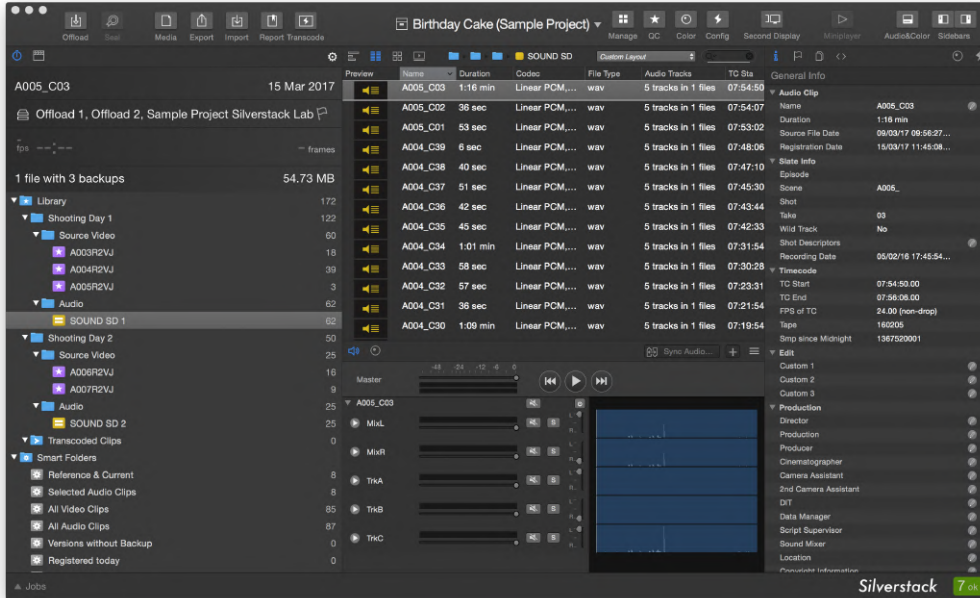
Audio

Audio panel

Silverstack offers audio playback of external or embedded audio for preview and quality check. Audio can also be transcoded in dailies and for editorial, including stereo mixdown or original audio tracks.

This article explains the audio panel which is the main interface for audio processing in Silverstack. It is also related to the [audio sync wizard](#) that is used for [automatic audio syncing](#). If you want to learn more about supported audio formats, please view the article about [assets in Silverstack](#). Below you will find all audio settings that are available in the audio panel, which can be opened by a simple click on the [Audio & Color](#) button in the top right corner of the main screen.

Audio panel in detail



The audio tracks are grouped into three (expandable) sections:

- Master
- Intern
- Extern

Intern vs. Extern

These groups represent the internally vs. externally recorded sound. The external group is named by the external audio clip when synced.

Master fader

Controls the output signal level of the overall stereo mix.

Audio meters

These represent the audio signal level during playback. There is a stereo master meter and individual channel meters — one for each audio track. The scale on top of the meters indicates the audio level in dB (dBFS). Peaking is represented by a bar in the according color of the peaking level that remains at the maximum position. You can reset the peak bar by clicking on the audio meters.

Channel mixer fader

The volume faders control the signal level for each track.

Play button

Opens a sub view and enables the playback of a single audio channel (XT / Lab).

Mute button

Mutes the entire group or individual audio track.

Note: When transcoding clips with audio and using the combination Linear PCM and All Tracks (Skip Muted Tracks), the muted tracks won't be exported.

Solo button

Solos the according audio track.

Pan switch

Sets the panorama to left, center or right. For each track the panorama alternates between left and right.

Lock audio tracks button

Locks single audio tracks so they are not altered when applying an audio offset.

Gear button

- Reveal: Reveals the audio clip in its audio bin
- Re-Sync: Syncs single audio clips or all audio clips in a bin again
- Mid/Side: Select the channels that should be used for mid/side stereophony
- Remove: Removes single external audio clips or all external audio clips in a bin or selection

Slip (Audio offset) buttons

Sets an audio offset to the left or right which is determined by the amount of frames to slip.

Amount of frames to slip dropdown menu

Defines how many frames are slipped when applying an audio offset. You can set 0.5, 1 or 5 frames step precision.

Tip: Stepping through a clip frame by frame using the arrow keys, you will be able to hear audio for every frame. To disable audible frame stepping, go to the menu and toggle Playback > Audible Frame Stepping.

Audio details / Close button

Opens and closes the audio details panel for external audio clips and allows to zoom into the waveform for a visual sync check.

Sync audio... button

Opens the audio sync wizard. Only visible when no audio sync was applied yet.

Add audio button

Opens a new sub view to add and sync external audio to the clip. You can search for specific audio clips and listen to individual tracks.

Audio settings (...) button

Enables quick access to the following commands:

- Apply Offset to All Timecode-Synced Clips
- Apply Mix to All Clips in Bin
- Re-Sync Audio
- Lock/Unlock All External Audio Clips
- Remove All External Audio Clips
- Create Audio-Waveform-Data For Internal Audio Tracks in Entire Bin
- Sync Audio...

Entire Bin vs. Selected Clips

Determines whether the command is applied to the entire bin or the selected clips only.

Audio details panel



The audio details panel is only available in Silverstack Lab.

You can open the audio details panel with the [Audio Details](#) button in the top toolbar of the audio panel. This panel enables a better view of the waveform of each audio track. The top timeline shows the playhead position (red line) within the complete audio clip while the bottom timeline is a magnification of the area highlighted by the white rectangle above. You can drag the playhead around with the mouse to change the inspected area. Besides the already mentioned buttons, the audio details panel additionally shows the following UI elements:

Audio Track dropdown menu

Defines the audio track to be displayed.

Audio TC Offset

Displays the offset (delta) between the identical audio and video timecode. The value is shown as timecode with its equivalent in seconds (also viewable in General Info > Edit/User > Audio TC Offsets).

Re-Sync button

Syncs audio and video by timecode again. By default, this resets the "Audio TC Offset." Only available after having applied an offset.

VTC / ATC

Shows the current video timecode (VTC) and audio timecode (ATC) at the current frame position.

Set audio slate marker button

Sets an audio slate marker at the current playhead position to manually sync audio and video based on slate positions.

Set video slate marker button

Sets a video slate marker at the current playhead position to manually sync audio and video based on slate positions.

AV Timeline rulers

The video TC ruler shows in pink and the audio TC ruler shows in blue below.

Zoom In / Out buttons

Zooms in and out on the waveform.

Amplify slider

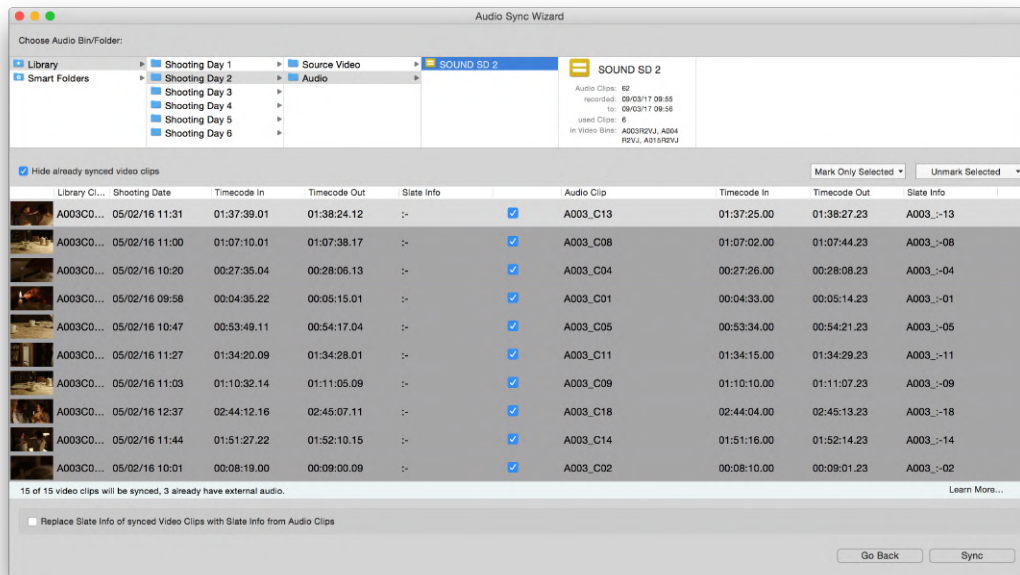
Amplifies the height of the waveform.

Audio sync wizard

The Audio Sync Wizard is part of the [Audio Panel](#). You can open it via the quick access button **Media** or via the user interface of the Audio Panel itself. Depending on whether you want to transfer audio metadata or not, the process has one additional step:

1. Clip selection
2. Metadata import preview
3. Automatic audio sync

User interface



1. Clip selection

Choose Audio Bin/Folder

In the upper section of the Audio Sync Wizard you can choose the location of your audio that should be synced with video.

Hide already synced video clips

Prevents already synchronized elements from being displayed. When disabled, video clips already synced to external audio appear in red.

Mark Only Selected

Enables only the selected clip in the table for synchronization. Right-click on the button to change the function to **Mark All** or **Mark Selected**.

Unmark Selected

Unmarks only the selected file in the table for synchronization. Right-click on the button to change the function to **Unmark All** or **Unmark Only Selected**.

Table

The table shows all available clips for syncing with information on Library Clip Name, Shooting Date, Timecode In / Out, Slate Info and Audio Clip Name. Click on a clip's checkbox to enable or disable the sync process for a specific file. Underneath the table you are informed about how many files will be synced according to the current selection.

Import metadata from audio clips to video clips

Transfers the slate info from the audio clip's to the video clip's metadata. That includes Scene, Shot and Take. When enabled, you can proceed to the metadata import preview window. Otherwise, you can start the sync process immediately.

Learn More

Opens the detailed logs. In case of an error the audio sync wizard gives you detailed information about the status of all involved media. The window defines in detail:

- All video clips that do not sync to any audio clip
- All selected audio clips that do not sync with a video clip
- All video and audio clips that have duplicate matches

Continue

Proceeds to the next step.

Sync

Starts the synchronization process.

2. Metadata import preview

Show Clips

Filter clips by one of the following criteria:

- All: Shows all clips
- Changes: Shows only clips that are affected by changes
- Conflicts: Shows only clips that are affected by conflicts (metadata will be replaced)
- Unchanged: Shows only clips that are not changed

Original

Shows the metadata state before the import.

Go Back

Goes back to the previous step.

Finish

Starts the synchronization process and imports the audio metadata.

See also

[Audio panel](#)

[How to manually sync audio in Silverstack XT and Silverstack Lab](#)

[How to automatically sync audio based on timecode in Silverstack Lab](#)

Presets panel

Still image preset panel

The still image preset panel is strongly tied with the [transcoding preset panel](#) and can be opened by clicking the presets button in the toolbar. It allows you to create advanced still image presets to export stills from clips.

Still image preset options**1. Presets****+ Button**

Creates a new preset. The default is 8-Bit JPEG.

... Button

Allows to duplicate, delete, lock or sort the presets.

Right-Click

Allows to add, duplicate, rename, delete, lock or sort presets.

2. Settings

Your current settings for a preset are also indicated by little icons in the top right corner of each preset. This applies for framelines, burn-ins, and overlay settings.

2.1 Still image export settings**Active**

Enables the preset for the export still image function found under Clip > Export Still Image. When multiple presets are enabled, all presets will be exported.

Image Format

Allows you to set the image format. The options are JPEG 8-Bit, TIFF 8-Bit (uncompressed), or TIFF 16-Bit (uncompressed).

Color Mode

Sets the color mode for the still export. The options are:

- Original Color: Uses the original color settings.
- As Currently Shown in Player: Uses the current color settings as shown in the player.
- Both: Exports both modes as separate files.

Color Profile

Sets the color profile for the exported still image. The options are:

- None: Does not embed any color profile (default).
- Rec. 709: Embeds a profile matching Rec. 709 standard.

Naming Scheme

Sets a naming scheme for the exported still.

Save To

Sets the destination path for the exported still. The → button opens the still location in Finder.

2.2 Further settings

The remaining settings are identical to the ones of the transcoding preset panel:

- [Resizing](#)
- [Source](#)
- [Framelines](#)
- [Burn in](#)
- [Overlay](#)
- [ShotID](#)

Transcoding preset panel

The transcoding preset panel is one of the core features of Silverstack Lab and can be opened by clicking the presets button in the toolbar. It allows you to create advanced transcoding presets which can then be applied to clips via the [workflow configuration window](#).

Learn more about supported audio and video formats [here](#).

Transcoding preset options

By default, the user interface is split into two areas: On the left you see a visual representation of your current transcoding configuration on the right (applied to the clip that is currently selected). This is also indicated by the **Exit Preview** button above the **Preview Window**. The preset panel on the right is divided into two sections: **Presets** and their associated **Settings**. You can choose to create presets for **Videos** or **Stills** by clicking the dedicated tab. The underlying settings for the presets follow the same rules. Silverstack ships with different already configured presets for the most important use cases. You can use these presets straightaway or as a starting point to create your own customized ones.

1. Presets

+ Button

Creates a new preset. By default, the basic settings are H.264, 1920x1080p, Stereo Mixdown.

... Button

Allows to duplicate, delete, lock or sort the presets.

Right-Click

Allows to add, duplicate, rename, delete, lock or sort presets.

2. Settings

Your current settings for a preset are also indicated by little icons in the top right corner of each preset. This applies for Audio, Grading, Framelines, Burn In, Overlay settings.

Note: Which of the following options are visible, depend on the selected preset.

2.1 Video

Codec

Defines the output video codec. DNx and Apple ProRes4444 codecs as well as option “Original (as Source)” are only available in Silverstack Lab.

Container

Defines the container for the file. The following options are available:

- Quicktime (.mov): Available for all codecs
- MXF OP-Atom (.mxf): Available for DNx codecs
- MP4 (.MP4): Available for H.264 and HEVC codecs

Size

Sets the resolution of the transcoded clips. You can select a pre-defined resolution or set a custom value. Original uses the resolution of the source file. For DNxHD, the size is defined by the codec and restricted to a maximum of 1920x1080px.

LAB

H.264 / HEVC Profile

Sets the profile that is used for encoding. The default is “Auto” and will define the profile automatically based on the current configuration. The option is only available for H264 and HEVC.

H.264 / HEVC Bitrate

Determines if an automatic or manual bitrate is used. The manual bitrate option allows you to enter a custom bitrate or get help by clicking the $f(x)$ button to open the H.264 Bitrate Calculator. You may define the quality on a range between “Poor” and “Best” and the calculator recommends a bitrate based on the selected resolution and the intended frame rate. The option is only available for H264 and HEVC.

Key Frames

Defines the amount of frames before a new key frame is set (interval). The option is only available for H264 and HEVC.

LAB

File Header

Adjusts the file’s header for streaming purposes. The option is only available for H264 and HEVC.

Duration

Limits the transcoded clip to the in and out points set in the library.

Create AAF checkbox

Creates an AAF file for each clip after transcoding. The option is only available for DNx codecs.

2.2 Color Tagging

Note: Color tagging is only available for H.264, HEVC and Apple ProRes codecs. Customizing the settings is only possible in Silverstack Lab.

Preset dropdown menu

Automatically sets the configuration needed for Rec. 709 or Rec. 2100 (PQ).

Color Primaries dropdown menu

Defines the color primaries needed for a specific color gamut.

Transfer Curve dropdown menu

Defines the transfer curve (gamma curve).

YCbCr Matrix dropdown menu

Defines the matrix used for luminance and color separation.

2.3 Audio

Audio checkbox

Enables audio for transcoding.

Codec

Defines the output audio codec. You can choose between Linear PCM and AAC. DNx codecs always use Linear PCM.

Channel layout

Defines the audio channel layout. The options are

- All Tracks: Transcodes all audio tracks (internal and external). *
- All Tracks (Skip Muted): Transcodes all audio tracks except the muted ones. *
- Stereo Mixdown: Applies a stereo mixdown of all tracks (without considering the muted ones).

LAB

* Only available when using “Linear PCM” codec (available in Silverstack Lab).

2.4 Source

Decoding

Sets the decoding resolution. Many source formats allow lower-quality decoding to speed up the decoding process (e.g., 1/8 resolution decoding) or extra high-quality modes for the best image quality results. You can **manually** configure your preferred decoding resolution in the transcoding presets' source section. If the preferred decoding resolution is not available for the source format that is to be transcoded, the next best available mode will be used (e.g., Sony X-OCN does not support the 1/8 res. decoding mode → transcoding will automatically switch to 1/4 res. decoding). Per default, Silverstack uses the **Auto Select** mode, which automatically chooses the decoding resolution for each transcoding task individually, based on the source resolution and the target resolution (e.g., *source resolution 8k, target resolution 2k → automatically sets 1/4 res. decoding – if supported for source format*). It is possible to check the transcoding quality parameters that were actually used for each transcoding task in the **Task Details** section of the job view.

Color depth

As described above, some non-RAW formats implicitly decrease color bit depth when using lower decoding resolutions. To prevent this behavior, this option automatically forces full resolution decoding in those situations.

2.5 Framelines

Framelines checkbox

Enables framelines for transcoding.

Aspect ratio

Sets the aspect ratio for the framelines. You can select values from the dropdown menu or create custom ones by clicking the + button.

Appearance

Sets the appearance of the framelines.

2.6 Resizing

Fitting strategy

Defines how the resizing is applied. You can select one of the following options:

- Zoom to Fit (Adding Black Bars): Adjusts the horizontal resolution of the clip to fit the output resolution.
- Zoom to Fit (Without Black Bars): Adjusts the horizontal resolution of the clip to fit the output resolution and cuts off the black bars.
- Zoom to Fill: Adjusts the vertical resolution of the clip to fit the output resolution and crops the sides.
- 1 to 1: Zooms the footage to 100% (actual size) to fit the output resolution, cropping everything else.

Processing

Bypasses the anamorphic desqueeze or crop options set in the library.

2.7 Grading

Look source

Sets the source for the look. The options are:

- As in Library: Includes the looks applied in the library (see also [The Silverstack Look Library](#)).
- None: Disables the color processing and transcodes the clips unmodified (as recorded).
- From File: Reads the clip metadata and applies the color processing described in the embedded looks. In case there is no look embedded, Silverstack applies the default Log to Rec. 709 conversion for the specific format.

2.8 Burn In

Burn In checkbox

Enables burn ins for transcoding.

Dropdown menus

The six dropdown menus allow you to select various metadata values and represent the positions in the image. The **Custom...** burn in option (Silverstack Lab only) makes it possible to add metadata wildcards into the custom fields.

Margin H / V

Sets the horizontal and vertical margins to position the burn ins in the frame.

Font and Font Size

Sets the font style (Miso, Helvetica, Courier and Verdana) and the font size in pt.

Transparency

Sets the transparency for the burn ins.

Text Color

Allows to set the text color to White or Black.

Background

Sets the background to Box, Outline or None.

2.9 Overlay

Overlay checkbox

Enables the overlay for transcoding.

Choose Image... / Drop image here

Allows you to choose an image or to drag & drop an image onto the drop area. Accepted file types are JPEG, PNG and TIFF.

Size

Sets the size of the image (0 -100 %).

Position X / Y

Sets the position in horizontal and vertical direction.

Transparency

Sets the transparency (0 – 100 %).

2.10 ShotID QR code

ShotID QR code checkbox

Enables the QR Code for transcoding.

Size

Sets the size for the QR code. Small, Default, Big are the options to choose from.

Position X / Y

Sets the position in horizontal and vertical direction (-50 to 50%).

2.11 Metadata export



Metadata export after transcoding is only available in Silverstack Lab.

Target application

Sets a target application to automatically export a metadata file after transcoding to transfer information to various 3rd party systems. You have the following options:

- [Adobe Premiere Pro](#) (XML)
- [AVID Media Composer](#) (ALE)
- [Final Cut Pro 7](#) (XML)
- [Final Cut Pro X](#) (FCPXML)
- [COPRA Dailies System](#) (XML)
- Webgate.io (ALE)
- Pomfort XML Metadata (XML)
- None

Select the target application and click the ... button to define the settings for the metadata file. Learn more about the configuration of the metadata exports by clicking the links above.

Still image export settings

Active

Enables the preset for the **Export Still Image** function found under Clip > Export Still Image. When multiple presets are enabled, all presets will be exported.

Resizing

Enables resizing of the image to the defined width in px.

Image Format

Sets the image format for the still export. The options are JPEG (8 Bit), TIFF (8 Bit) or TIFF (16 Bit).

Color Mode

Sets the color mode for the still export. The options are:

- Original Color: Uses the original color settings.
- As Currently Shown in Player: Uses the current color settings as shown in the player.
- Both: Exports both modes as separate files.

Naming Scheme

Sets a naming scheme for the exported still.

Save To

Sets the destination path for the exported still. The **Arrow** button opens the still location in Finder.

Media interfaces

Sealing wizard

The sealing wizard creates seals based on ASC MHL which are used to ensure the completeness and data integrity of files within volumes and folders throughout the digital production pipeline from set to post. During the sealing process, all files will be hashed and registered in the ASC MHL history so they can be verified in post-production using [MediaVerify](#) or other applications that use this standard.

Below, you will find detailed information on working with the sealing wizard. If you want to learn more about the sealing workflow itself, read the article about [sealing drives in Silverstack](#).

There are two ways to start sealing:

- Click the **Media** button in the top left corner and select **Seal**
- File > ASC MHL > Seal

The sealing process is divided into three steps, which are also reflected in the user interface:

1. Scanning & configuring
2. Sealing
3. Completion step

1. Scanning & configuring

After selecting the path, the wizard immediately starts scanning the disk. This includes a comparison of the available files on the disk with the assets in your library as well as the ASC MHL history.

At the top, you can view the scan result with coloured messages informing you about the state of the files.

1.1 Header

There is a color coding system that will guide you through the wizard and helps you to evaluate the severity of each file's case. The logic is as follows:

- Silverstack and ASC MHL are used to track and monitor each file
- The state of each file on the disk is defined by both instances (e.g., is it available or missing according to the instance)
- The disk and the tabs share the same colours (states) as the messages

These messages always refer to the Silverstack library and/or ASC MHL and summarize the content shown in the table:

- Green means that all referenced files are available
- Blue means that there are files not referenced
- Yellow means files do not have any hash available in the library
- Red means files are reported as missing

As long as you see two green confirmation messages for both instances, sealing is possible. Missing files are blocking errors which need to be solved manually by the user.

Target Summary

In the top right corner, you see a summary of the selected path for sealing. Depending on whether you selected a volume or folder, you see a different icon with the target name and path.

The icons allow you to open the path in Finder or reload the target with the current seal settings.

1.2 Volume / Folder Summary

The summary section lists all files with their individual state: missing, new, passed, all and ignored. The columns carry the following information:

- Name: The file name and the path relative to the path shown in the top right target summary
- Disk: Shows whether the file is available on disk or not. Color coded like the messages
- Library: Shows whether the file is registered in the library or not. Yellow means the library does not contain a hash for this file
- Hashes (Library): The hash format stored in the library (e.g., XXH64)
- ASC MHL: Shows whether the file is referenced in the ASC MHL history or not
- Hashes (ASC MHL): The hash format stored in the ASC MHL history (e.g., XXH128)

Context Menu

Enables additional options via Right-Click:

- Copy Library Hashes
- Copy Path
- Reveal in Finder

Selected Items

Shows the amount of selected files in the current tab.

Search

Allows to search the table for specific files and accepts expressions like *.mov

1.3 Seal Settings

The seal settings have two sections, one to configure the ASC MHL seal options and one to enable additional export files.

Checksum Method dropdown menu

Sets the checksum method used to generate hashes during sealing for files that do not yet have a hash.

Comment dropdown menu

Allows to enter a default or custom comment for the root ASC MHL history. The default is "Write Sealing Path" which will use the seal path.

Ignore dropdown menu

Sets and shows the applied ASC MHL ignore patterns. There are two types: regular and adaptive patterns. The regular patterns are applied globally while the adaptive patterns are used to ignore missing files to continue sealing.

If you want to apply custom ignore patterns, switch to custom mode. Doing this the first time will import all patterns into the custom field where you can edit, add, or remove patterns.

Open ASC MHL Settings button

Enables you to quickly access the global ASC MHL settings that can also be found under Settings > Copy&Jobs > ASC MHL > Settings

Sealing Logs checkbox

By checking this option, a flattened ASC MHL manifest (containing all sealed files) will be created after sealing at the specified location.

Create Library Archive checkbox

Creates a .psla file at the sealing target, containing all library assets.

Note: The library archive created during sealing only contains the assets from the library, not the volume/folder. Sealing with ASC MHL does not create a "Lost & Found" folder (auto-ingest). If you want all files at the sealing target to be part of the library, register them first.

Create Library Archive checkbox

Creates a .psla file at the sealing target, containing all library assets.

Close button

Closes the sealing wizard (also works with **(esc)**)

Seal button

Starts sealing (also works with **(Enter)**). When errors exist, sealing is not allowed.

2. Sealing

During sealing itself, you will see a progress bar and three sections below informing you about the progress:

- Hashing Progress: This section refers to data that needs to be processed and hashed during sealing.
- Sealing Progress: This shows the overall sealing progress, including the files that already contain an ASC MHL history.
- Duration: An estimation on how long the process will take.

Cancel button

Allows to cancel sealing.

Back button

Allows to return to the scanning & configuration step.

3. Completion step

Open in MediaVerify... button

The button is only visible when MediaVerify is installed. It opens the path in MediaVerify.

Close and Eject button

The option is only shown for volumes. It unmounts the volume and closes the sealing wizard.

Close without Eject button

The option is only shown for volumes. It closes the sealing wizard without unmounting the volume.

Close button

The option is only shown for folders. It closes the sealing wizard.

Relink

The Relink Wizard allows you to relink files to another destination. Access it by clicking on the quick access button **Media** in the top left corner of the Silverstack main screen or by right-clicking on a bin in the Library outline and selecting **Relink...**

In case the file locations of an offloaded card have been modified after offloading, Silverstack displays a missing resource warning for affected clips in the [file tab](#) of the right bar.

User interface

Files

Opens a dialog to select the folder to relink the files to. You need to select a folder to enable the other options.

Items

Separates between all and missing files.

Mark Only Selected

Enables only the selected file in the table for relinking. Right-click on the button to change the function to **Mark All** or **Mark Selected**.

Unmark Selected

Unmarks only the selected file in the table for relinking. Right-click on the button to change the function to **Unmark All** or **Unmark Only Selected**.

Table

The table shows all items with Library Item Name, File Size, Missing Count and Relative File Path. Underneath the table you are informed about the amount of valid files for relinking, e.g. Matching 7 of 7 items.

Click on a checkbox to enable the relinking for a specific file.

Matching Criteria

Enable the checkbox to choose how many folder names and levels above the resource path of the file are considered as matching criteria.

Options

Replace any missing file resources from the Library for the selected items

When enabled, this will replace the missing file resources with the relinked ones. Otherwise, both file resources (missing and relinked) will be stored in the library. Go to the files tab to view the effect.

Verify files after relink

Runs a verification process for the relinked files by comparing the hashes of the relinked files with the hashes stored in the library.

Input Device

Manually select the recording format of the files. The options are Generic (Any files) and ARRI Cameras.

Start Relink

Starts the relinking process. When no matching clips were found, the process cannot be started.

Advanced camera support

Generic file formats

Offloading all kinds of assets is possible with Silverstack's proven copy features, which offer secured backups with checksum verification. Silverstack scans the source and automatically selects the generic importer mode when non-supported files are detected.

Not all media files are detected as playable clips, besides the supported advanced media formats that can be found in the article about [assets in Silverstack](#).

You will receive a warning message in the workflow configuration window in case Silverstack didn't detect files that match the supported advanced camera formats. However, you can proceed to offload and check the files. Once the process is finished, the files will be registered in the library, where you can continue working with them. Just make sure to view those files by clicking View > Show Clips and Documents since Silverstack (by default) only shows clips. After that, it's possible to add some metadata to the generic files via the [general info](#).

Assets in Silverstack

Assets in Silverstack can be video clips (e.g., an Alexa or RED media file), audio clips (WAV), sidecar files accompanying clips (for example, XML or RMD files), or any other document such as photos or even a PDF. However, not all media files are recognized as clips by Silverstack. In that case, we are talking about [Generic file formats](#).

Advanced camera support

Silverstack provides advanced support for a wide range of camera formats, which maximizes the efficiency of relevant on-set tasks such as playback, metadata management, color grading, quality control, and more.

The supported Advanced Camera Formats are:

- ARRIRAW (.ari and .mxf) **:
 - ARRI Alexa (.ari)
 - ARRI Alexa LF (.ari)
 - ARRI Alexa Mini (.mxf)
 - ARRI Alexa Mini LF (.mxf)
 - ARRI Alexa 35 (.mxf)
 - ARRI Amira (.mxf)
 - ARRI Alexa 65 (.ari)
- CODEX HDE (compressed ARRIRAW) (.arx)**
- CODEX HDE (compressed Alexa 35 ARRIRAW) (.mxf)**¹ [Silverstack XT and Lab only]

¹ Ingesting/offloading Alexa 35 clips through the Codex VFS extracts thumbnails and metadata from the original, uncompressed clips rather than their HDE representation.

- Blackmagic RAW (.braw) **:
 - Blackmagic URSA Mini Pro & 4.6K
 - Blackmagic Pocket Cinema Camera 4k/6k
- Canon XF-AVC / XF-HEVC (.mxf) **:
 - Diverse Cameras
- Canon XF-AVC S / XF-HEVC S **:
 - Diverse Cameras
- Canon MPEG-4 AVC/H.264 (.mts)**
 - Canon C100
- Canon Cinema RAW Light (.crm):
 - Diverse Cameras
- Canon Uncompressed RAW (.rmf) [Silverstack XT and Lab only]:
 - Canon C700 and C700 FF
 - Canon C300 Mk II
- CinemaDNG (.dng):
 - BMCC
 - DJI Inspire and Zenmuse Series [Silverstack XT and Lab only]
 - Bolex D16 **
 - Ikonoskop
 - IndieCam
- Generic Image Sequences:
 - JPG
 - TIFF
 - DPX
- H.264 Quicktime Movies:
 - Canon DSLR **
 - GoPro Hero **
 - Nikon DSLR **



- KineRAW (.krw):
 - Kinefinity TERRA 4K / 5K / 6K
 - Kinefinity KineMINI 4K
 - Kinefinity KineMAX 6K
- Panasonic DNG RAW [Silverstack XT and Lab only]:
 - Panasonic Varicam LT (with Convergent Design Odyssey7Q+)
- Panasonic AVC-Intra **:
 - Panasonic Varicam
- Panasonic V-RAW [Silverstack XT and Lab only]:
 - Panasonic Varicam
- Phantom Cine Vision Research (.cine) [Silverstack XT and Lab only]:
 - Phantom Flex/Flex4K/Miro/VEO/v2640 Onyx
- ProRes Quicktime Movies ** (.mov):
 - AJA KiPro
 - ARRI Alexa / Alexa Mini **
 - ARRI Amira **
 - ARRI Alexa LF **
 - RED cameras **
 - Panasonic Varicam **
 - Atomos Ninja and Samurai
 - Codex Action Cam
 - Convergent Design Odyssey
 - DJI Inspire and Zenmuse Series
- ProRes (.mxf)
 - ARRI Alexa Mini LF
 - Sony Venice
 - Sony Venice 2
- ProRes RAW (.mov, .mp4) [Silverstack XT and Lab only]
 - Diverse Cameras
- REDCODE ** (.red):
 - Red V-Raptor 8K
 - Red Weapon Monstro 8K VV , Red Weapon Helium 8K S35 , Red Weapon Dragon 6K
 - Red Raven 4.5K
 - Red Komodo
 - Red Scarlet-X , Scarlet Dragon , Scarlet-W 5K
 - Red Epic-X , Epic Dragon , Epic-W 8K
 - Red One , Red One MX
- SONY RAW** [Silverstack XT and Lab only]:
 - Sony F5
 - Sony F55
 - Sony F65
 - Sony Venice
- X-OCN LT**, X-OCN ST**, X-OCN XT ** [Silverstack XT and Lab only]:
 - Sony F5 (with AXS-R7 recorder)
 - Sony F55 (with AXS-R7 recorder)
 - Sony Venice (with AXS-R7 recorder)
 - Sony Venice 2
- XAVC **:
 - Sony F5
 - Sony F55
 - Sony Venice
- XAVC-S **:
 - Sony a7S
 - Sony FX-3

Furthermore Silverstack offers extensive support for broadcast wave (BWF) audio wave files (.wav). Learn more in the article [Audio clips in Silverstack](#).

** with audio support

Import & export

Exporters

The Silverstack exporters enable you to transfer data to the Pomfort ecosystem and various other 3rd party applications, including many non-linear editing softwares (NLE).

You can find useful information about the exporter's user interfaces and the data formats they handle:

1. Silverstack library archive (psla)
2. Generic CSV metadata (CSV)
3. Dynamic metadata (CSV)
4. Final Cut Pro X (XML)
5. Adobe Premiere Pro (XML)
6. Avid Media Composer (ALE)
7. DaVinci Resolve Export

Resource selection step

Most exporters open the resource selection window first where you need to select the media for which you want to export data.

Choose Media Files from Volume... button

Allows you to select the volume where the resource is located.

Mark Only Selected button

Enables only the selected resources in the table. Right-Click on the button to change the function to “Mark All” or “Mark Selected”.

Unmark Selected button

Unmarks only the selected resources in the table. Right-Click on the button to change the function to “Unmark All” or “Unmark Only Selected”.

Search textfield

Enables you to search the resources.

Continue button

Opens the exporter's next configuration step (usually the exporter's essential configuration options).

5. Adobe Premiere Pro (XML)

The ALE exporter for Adobe Premiere Pro can be opened by clicking the **Export** button in Silverstack's toolbar and selecting the according menu item.

Content checkboxes

Allow you to enable/disable the export of specific information in the XML file. All content is enabled by default and usually does not require changes.

Set Reel Name to... radio buttons

Defines which value is set as the reel name:

- Reel Name: Sets the XML's reel name to Silverstack's clip reel name.
- Source File Name: Sets the XML's reel name to Silverstack's clip source file name.
- Source File Name Without Extension: Sets the XML's reel name to Silverstack's clip source file name but without file extension.
- Video Clip Name: Sets the XML's reel name to Silverstack's clip name.

In Adobe Premiere Pro the XML's reel name will be taken over to the tape name column.

Set Take to... radiobuttons

Defines if the “Shot” value in Premiere Pro will be filled in with “Take” or “Shot-Take” information from Silverstack.

Include audio synced sequences and referenced audio clips checkbox

Creates Premiere Pro sequences that are synced with audio clips.

Go Back button

Returns to the previous configuration step.

Save XML... button

Opens the saving dialog to save the XML file.

5.1 XML metadata content

General Clip Info

Contains the basic information needed to transfer clips (file paths, etc.)

Master Info

Contains scene, shot and take info as well as the reel name. Scene in Silverstack maps to the scene column in Premiere Pro while shot and take in Silverstack map to the “Shot” column in Premiere Pro in the format “Shot – Take”.

User/QC Info

Contains flag/circled info as well as comments (maps to “Description” column in Premiere Pro).

General clip settings as Master Comment 1

Maps general clip settings (e.g. information, sensor FPS, shutter angle, white balance, exposure index, ASA, color gamma) to the “Master Comment 1” column in Premiere Pro.

Tags as Master Comment 2

Maps the tags in Silverstack to the “Master Comments 2” in Premiere Pro.

Custom 1, 2 as Master Comment 3,4

Maps the custom comment fields 1 and 2 in Silverstack to the master comments 3 and 4 in Premiere Pro.

Labels as Clip Colors

Maps the labels in Silverstack to clip colors in Premiere Pro.

Audio Info

Takes over the source audio clip name's column and the “# of Source Audio Tracks” value to “Clip Comment A” and “Clip Comment B” in Premiere.

Cue Points as Markers

Maps the cue points in Silverstack to the markers in Adobe Premiere Pro.

6. Avid Media Composer (ALE)

The ALE exporter for Avid Media Composer can be opened by clicking the **Export** button in Silverstack's toolbar and selecting the according menu item.

Project Format dropdown menu

Sets the project format for the ALE file.

Content checkboxes

Allow you to enable/disable the export of specific information in the ALE file. All content is enabled by default and usually does not require changes.

Scene-Take Export Format dropdown menu

Defines which and how the according metadata values are written into the ALE file.

Name dropdown menu

Sets the "Name" column in the ALE which results in the clip name that is shown in the target application.

Match clips based on... radio buttons

Defines which value is written into either the tape or the source file column.

Track column references dropdown menu

Defines if video & audio, only audio or no tracks are referenced in the ALE's dedicated "Tracks" column.

Use Lower Case Letters for "Camera" Export checkbox

Sets the camera letter to lower case.

Go Back button

Returns to the previous configuration step.

Save ALE... button

Opens the saving dialog to save the ALE file.

7. DaVinci Resolve**Export Timeline (FCPX v1.9 XML File)**

Enables the creation of a timeline containing the clips for Resolve with FCPXML version 1.9.

Export Timeline (FCPX v1.5 XML File)

Enables the creation of a timeline containing the clips for Resolve with FCPXML version 1.5.

Export Look Metadata (EDL + CCC File)

Enables the color metadata (ASC-CDL settings) for the clips in Resolve (via Colortrace).

Export Clip Metadata (CSV File)

Enables the clip metadata for the clips in Resolve.

Set CSV "Reel Name" column to...

Sets the reel name column to one of the displayed options (reel name, clip name or source file name).

Go Back button

Returns to the previous configuration step.

Export button

Opens the saving dialog to save the files.

Report wizard

An essential feature in Silverstack is the report wizard. It is a flexible and powerful reporting tool, offering users the opportunity to share clip information and thumbnails in well-arranged PDF documents. Reports can include all the metadata needed to document camera media traveling to different professionals involved in many stages across the entire film production pipeline. You can access the report wizard in different ways:

- By clicking the toolbar button 
- Via the menu: File > Create Report...
- Via the context menu of a Library item: Right-Click > Create Report...

Different report types

You can export different types of reports that target specific needs:

- Shooting Day
- Clips
- Thumbnails
- Contact Print
- Volume

All report types are customizable and allow you to choose which information is shown.

Report settings

The user interface is divided into three main areas:

1. Report types (left)
2. Report settings (right)
3. Report Destination (bottom)

Hereafter, we explain the different report types together with their dedicated settings. The report destination follows at the end.

→ Icon (Quick Export Report)

By clicking the icon, the report is exported immediately using the current settings.

1. Shooting day

The shooting day report gives you production information about the clips you have offloaded. Production information like director, cinematographer and DIT entered in the production field of “Project Overview” is shown in this report. You can include the following summaries:

- **Project:** Production info, clips overview and relations
- **User Info:** Backups and bins
- **Audio:** Audio tapes and audio formats
- **Library:** Labels, flags and ratings
- **Video:** Video reels, camera sums and video formats

2. Clips

Reports of type clips, thumbnails and contact print have basically the same UI elements but can be set individually.

Basic / Advanced

Switches between basic and advanced settings.

Layout

Sets a predefined layout for the report (similar to the library’s table view layouts). Layouts can be customized.

Table Contains

Defines if only clips or also other files are included.

Number of Thumbnails

Sets the amount of thumbnails in the report. When the option 3 is selected, Silverstack creates two thumbnails for the first and last frame of the clip in addition to the custom thumbnail. These three thumbnails are then shown in the report. In contrast to option 1, the option 3 requires online media since the additional thumbnails are created during the export process.

Thumbnail Quality

Adjusts the compression ratio of the thumbnail images (reduces file size).

Include Summaries

Enables including the following information into the report: “Production Info”, “Clips Overview” and “Relations”.

3. Thumbnails

The thumbnails report is similar to the clips report but has bigger thumbnails to help identify clips better. The UI and settings elements of the thumbnails report are identical to the ones from the clips report (above).

4. Contact print

The contact print report shows only the thumbnails available in the library for the selected clips. The UI and settings elements of contact print reports are identical to the ones from “Clips” (above).

5. Volume

The volume report summarizes the information regarding the source and current location of the clips’ different copies registered in Silverstack. This report type can include checksums of different methods like XXH64 to confirm data integrity.

Select Volume

Determines the drive for which the report should be created.

Export the selected information

Defines the information to include in the report.

Include Summaries

Can additionally include Production Info.

6. Report Style

Include Report Note

Allows to add and create a general report note by clicking the pen icon. Accepts plain text or [Markdown](#).

Location

Sets the export location for the report.

File Format

Sets the file format for the report. Options are PDF and HTML. The default is PDF.

Naming

Defines a naming scheme for the file name. When “Custom” is selected, click the pen icon to open the wildcards editor. Learn more about [path wildcards](#).

Overwrite existing reports with same file name

When enabled, automatically overwrites reports with identical file names.

Open after creation

Opens the reports automatically after export.

Preset

Loads configured presets. Additionally, saves, deletes and updates report presets.

Cancel

Closes the Report Wizard.

Export

Creates the reports with the applied settings.

Good to know

- By default, Silverstack creates one thumbnail for each ingested clip and stores it in the library.
- The position for the creation of additional thumbnails can be influenced by setting in and out points for a clip.
- The [Settings](#) allow to change the position of custom thumbnails and disable thumbnail creation on ingest.
- It's possible to completely hide or skip thumbnails in clips reports. In order to accomplish that, just remove the "Preview" column from the table view custom layout.

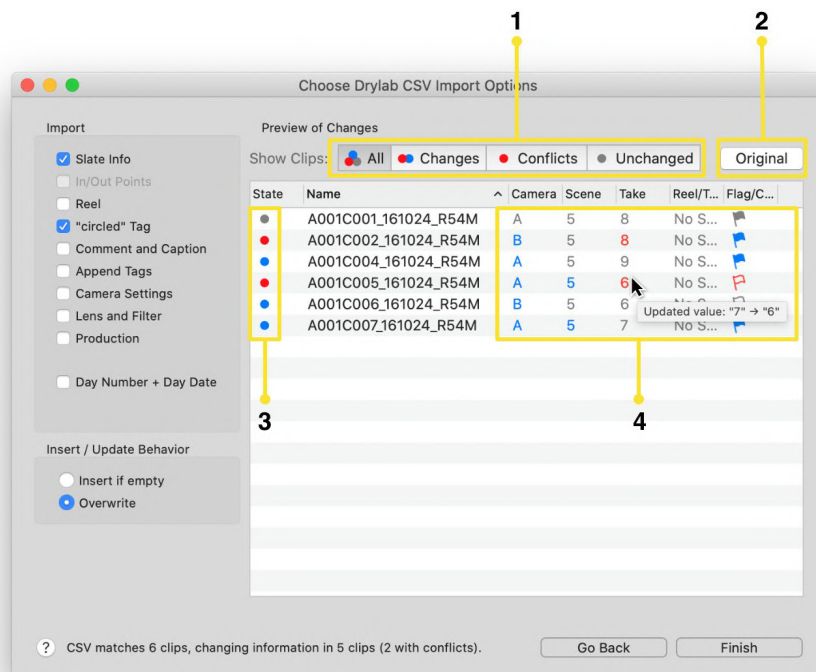
Preview metadata before importing

Silverstack supports importing metadata from other on-set applications, such as *ZoeLog*, *Movieslate*, *Drylab*, *QTake* or *Pomfort Livegrade*. These import wizards are complemented by a **preview window**, that allows you to **check the impact** of the imported metadata files and adapt the import options – **before applying the import to your library**.

Import preview window

Each import wizard consist of two steps:

- First Step: Select the file to import and match with the clips in your library
- Second Step: Select what metadata fields you want to take over. **New: Preview Window in this step**



Import Options Step With Metadata Preview Window

1. **Show Clips** filter buttons: Filter the preview table
 - *Unchanged* – show only clips that are not changed by the import
 - *Conflicts* – show only clips with metadata that is overwritten by import
 - *Changes* – show clips with metadata that is overwritten by import or that get additional metadata
 - *All* – show all clips that were matched in the previous wizard step
2. **Original** button: Toggle display of values in table to show value after/before import
3. **Clip state indicator**:
 - *Grey* – no changes to metadata of this clip
 - *Red* – metadata in this clip is overwritten
 - *Blue* – new Metadata is added to this clip (but no metadata overwritten)
4. **Preview of metadata fields after import**
 - *Grey* – value not changed
 - *Red* – original value is overwritten
 - *Blue* – value is added (no original value)
 - Hover values with cursor to see tooltip with additional information

Changes to the Import Options and the Insert/Update Behaviour (on the left side of this wizard step) are displayed instantly in the preview window.

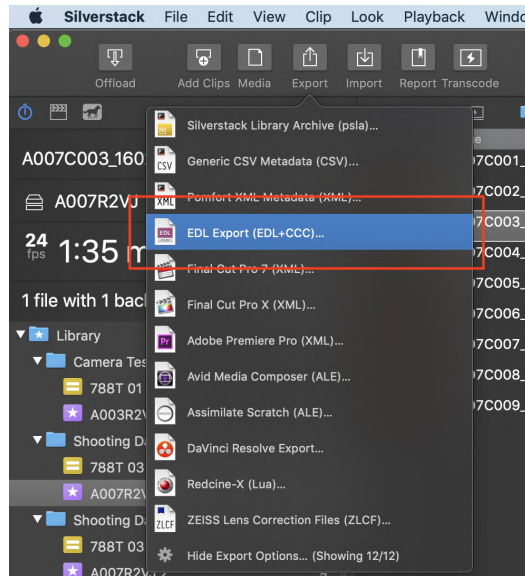
For further details about the import wizards, please check the KB articles

- [Look Matching](#)
- [Import Metadata from ZoeLog](#)
- [Import Metadata via Movieslate](#)
- [Import and Match Metadata From Drylab Set Report](#)
- [Import Metadata from LockitNetwork](#)
- Import Metadata from QTake

EDL export

Silverstack allows to export an EDL (“edit decision list”) file in the CMX 3600 standard. ASC-CDL information from the library can be included either directly inside the file or via an additional .ccc (“color correction collection”) file that is referenced in the .edl file. The EDL file can be used for different purposes in consecutive production steps.

To export an EDL for specific clips, select a folder or bin in the library and click the “EDL Export...” entry shown in the Export menu of the toolbar:



After selecting the clips to be included in the file in the source selection step you have two options available for the EDL export:

- Export EDL with Embedded Look Metadata (EDL File only)
 - This option exports a single EDL file (.edl) that included the associated CDL values from the library directly in the file.

Here’s an example screenshot of the file :

```
14
15 004 A007C004_160208_R2VJ V C 16:41:12:12 16:42:36:19 00:02:07:12 00:03:31:20
16 *ASC_SOP (0.912989 1.044982 0.810629) (0.028798 -0.014821 0.062012) (1.183196 0.933810 1.116230)
17 *ASC_SAT 0.877196
18
```

- Export EDL with References to Look Metadata in CCC File (EDL + CCC File)
 - This option exports an EDL file with references to CDL values exported into a separate but linked CCC (“color correction collection”) file.

Here’s an example screenshot of the files:

- EDL:

```
11
12 004 A007R2VJ V C 16:41:12:12 16:42:36:19 00:02:07:12 00:03:31:20
13 *ASC_CC_XML cc00004
14
```

- CCC:

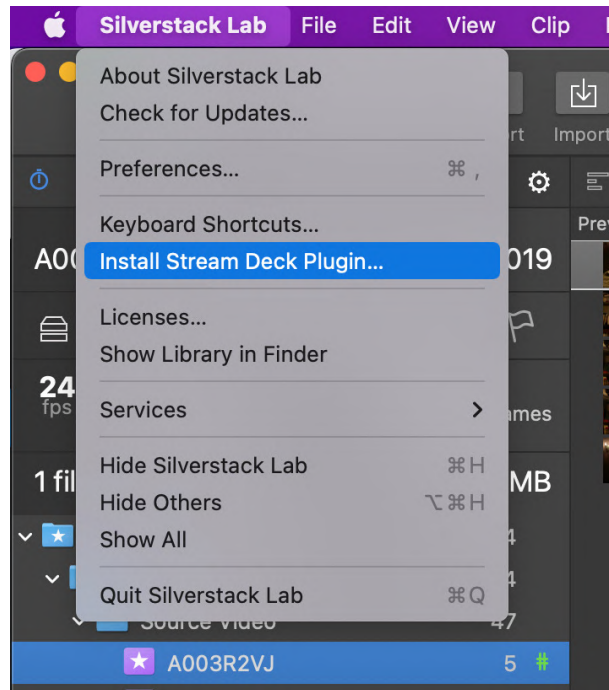
```
26 <ColorCorrection id="cc00004">
27 <SOPNode>
28 <Slope>0.9130 1.0450 0.8106</Slope> <Offset>0.0288 -0.0148 0.0620</Offset> <Power>1.1832 0.9338 1.1162</Power>
29 </SOPNode>
30 <SatNode>
31 <Saturation>0.8772</Saturation>
32 </SatNode>
33 </ColorCorrection>
```

Integrations

Setting up Stream Deck in Silverstack

Silverstack Lab integrates with Elgato Stream Deck so that you can map Silverstack actions using the Stream Deck app and trigger those actions from your Stream Deck USB controllers.

Once you have installed Elgato’s latest Stream Deck app, install the Stream Deck plugin in Silverstack Lab by choosing “Install Stream Deck Plugin...” from the “Silverstack Lab” Menu.



The Silverstack Lab Stream Deck Plugin has pre-defined profiles for Stream Deck devices of different sizes. For the Stream Deck XL, the first page consists of controls to navigate through the library and trigger frequent actions like offloads, reports, and backups; The second page focuses on playback controls and QC.



Special actions

Any action from Silverstack Lab's main menu is available for mapping in the Stream Deck app. Some additional actions are specifically designed to control Silverstack Lab with a Stream Deck device even more conveniently:

- **Quick Offload (last mounted volume)**
The button shows the name of the volume that was last mounted. One keypress opens the offload wizard for the indicated volume, and a second press on the same button will trigger the offload with default configuration.
- **Quick Transcoding, Report and Backup**
Like the quick offload button, those actions allow you to open and step through the wizards with the same button. No additional mouse or keyboard interaction is required to trigger the indicated action with the default configuration.
- **Navigate Folders (customizable)**
This action is for navigating through the library tree. Yiz can configured it to
 - directly jump to the **newest media bin** in the library (the one that was offloaded last)
 - to the **previous or next folder** or
 - to a **parent or subfolder**.

- **Navigate Clips (customizable)**

It can be set to jump to the next or previous clip in the *library* (e.g., to check different metadata in the General Info panel). For convenient navigation *during playback*, we recommend the (orange) buttons in the Playback section.

Your feedback

Let us know how you use your Stream Deck device to control Silverstack Lab and what further actions we should add next for even smoother workflows. We're looking forward to receiving your feedback at support@pomfort.com.

ShotID as clip identifier

The ShotID is a short code to reference clips across multiple work places and make their metadata easily accessible.

ShotID to Share Clip metadata

The ShotID is an identifier, created for each clip individually when added to the Silverstack library. It consists of 9 characters in a unified format, that is easy to read and pass along, e.g. *A1C-D2F-G3H*.

When the library is uploaded to ShotHub, typing-in the ShotID into ShotHub's search field reveals a **detail overview page with all available clip information**. Wrapped as ShotID link (e.g. *shotid.net/A1C-D2F-G3H*) in emails or text messages, all of the clip's information it is just one click away.

Precondition to access clip information via ShotID link is that you are a member of the ShotHub project. Learn more: [Manage Members and Invitations](#)

ShotID in Silverstack

Just like other metadata fields, the ShotID is displayed in Silverstack's clips table and in the general info tab of the right sidebar. It can be included with its link in PDF reports as well as in CSV- and ALE-exports. When the clip's information is uploaded to ShotHub, a *Remote Resource* shows up in the file tab, that lists the name of the connected cloud project, the ShotID and offers buttons to copy or open the ShotID link. In transcodes, the ShotID can be burned-in as text or QR-code link to reference it's source clip information in the corresponding ShotHub cloud project.

Installation

Operating systems and requirements

You can find the latest information on system requirements for our products on our [general system requirements page](#).

Note: All desktop applications run on macOS only. There are no plans to port our products to other operating systems in the near future.

Silverstack trial version

All Silverstack products can be evaluated in a 10 days trial period.

Trial restrictions

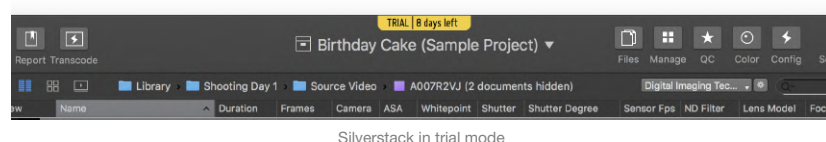
The following restrictions apply to the trial version:

- 1. The trial version can be used without a license for 10 days. After installing a purchased license the content and state of the library remain and can be adopted for further use.
- 2. During the trial period all file and folder names on offload destinations will be extended by “_trial”.
- 3. All clips transcoded with Silverstack will show a watermark.

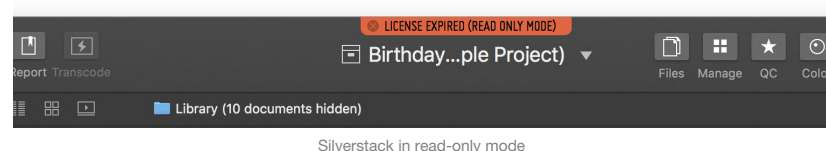
A valid Silverstack license can be purchased through [our web store](#). After purchasing a license you can enter the key directly in the license manager of your Silverstack trial version. Go to the main menu selecting “*Silverstack > Licenses...*”.

Trial status

The status of your trial can be easily identified with the “TRIAL” badge in the upper toolbar of Silverstack (see figure 1).



If you do not enter a license key, after the 10 days trial period the Silverstack version on your computer will be restricted to a read-only mode from then on (figure 2).



Trial download

You can download the .dmg to install the software on our website:

- [Download Silverstack and Silverstack XT](#)
- [Download Silverstack Lab](#)

While the basic version of Silverstack and Silverstack XT share the same .dmg image to be installed Silverstack Lab requires a separate .dmg to be downloaded. You can switch between trialing Silverstack or Silverstack XT in the application main menu selecting “Silverstack > Trial Mode > Basic / XT”.

Tags: How can I test Silverstack, test, trial

Sample project and sample footage

Silverstack allows you to download a sample project, including footage, via the help menu, which is an easy and quick way to evaluate Silverstack if no footage is available.

In Silverstack’s help menu, you can find the following options:

- Download Sample Project: This will directly download a sample project that can give you an impression of how a project library could look in Silverstack.
- Download Sample Footage: This will download sample footage in a .dmg that can be mounted and then directly used for first experiences with clips in Silverstack.

Silverstack products running on Apple Silicon (M1) or in the Rosetta 2 translation environment

Last updated: May 30th, 2025

The latest versions of Silverstack, Silverstack XT, and Silverstack Lab^[1] are running fully natively on Apple Silicon (M1) Macs.

Full native support on Apple Silicon (M1)

- Silverstack, Silverstack XT, Silverstack Lab^[1] **version 8.1 and newer**
- Offload Manager **version 1.4 and newer**

^[1] DNx transcoding mainly native: A non-performance-critical part of the transcoding process will automatically run in Rosetta 2 translation environment. If Rosetta is not installed, a popup appears with the install option.

Support for Apple Silicon (M1)

- Offload Manager **version 1.3** ^[2]
- Silverstack, Silverstack XT, Silverstack Lab **version 7.4** ^[2]

^[2] While **Silverstack 7.4 – 8.0.x** and **Offload Manager 1.3** are running natively, some features and formats (including Cinema DNG, Panasonic Varicam, Vision Research Phantom, and Canon C300) are only supported when running Silverstack in the Rosetta 2 translation environment. You can select “Open using Rosetta” in the application’s “Get Info” window (in the application icon’s context menu or via Cmd+I). This is not necessary for Silverstack version 8.1 and newer.

Third-party software and hardware components

Please ensure that all third-party software and hardware components (e.g. card readers, drivers, virtual file systems) in your Silverstack workflow support Apple Silicon (M1) systems. Please check the vendor websites or contact their support for the latest information.

Some incompatibilities that were brought to our attention:

- Some [Codex Compact Drive Reader USB-C](#) models
- Some Blackmagic devices (as of [Desktop Video 12.2](#))

Settings

Settings

The **Settings** allow to make many adjustments to Silverstack and by doing so, your daily work may become even easier. You can access the settings via the menu by clicking Silverstack > Settings... or using the shortcut Command-Comma. It is also possible to transfer project settings. You can learn more about it in the article [Transfer of Project Settings](#).

Settings

1. [General](#)
2. [Projects](#)
3. [Media](#)
4. [Copy&Jobs](#)
5. [Playback](#)
6. [Formats](#)
7. [Ingest](#)
8. [Backups](#)
9. [External Video](#)
10. [Grading](#)
11. [ACES](#)
12. [Slating](#)
13. [Accounts](#)

14. [Updates](#)

1. General

Hide verification state indicator for bins

Hides the verification indicators for bins in the library's outline (green/grey hash icons).

Decimal Places for File Size Values

Defines the amount of decimal places to show.

Backup Statistics in Reports

Determines if all or only verified backups are shown in reports. The default is Verified Backups.

Warn me about unread failed jobs on every new offload

The default is enabled.

Remind me about unread failed jobs every

Defines the time slot to remind you about unread failed jobs.

Preferred Language

Sets the language for Silverstack's user interface. The default is Auto.
Silverstack 9 is currently only available in English.

2. Projects

This tab contains settings that are applied to new projects or a specifically set for the active project. Switch the active project to see another project's settings.

Label names

Sets custom names for the color labels.

Titles for custom fields

Sets titles for the custom fields of the current project. This setting can also be used to extract special metadata from clips (see: [Using Silverstack Custom Field Titles to Read Additional Metadata](#)).

New Projects

Applies a custom configuration to all newly created projects (see: [Transfer of Project Settings](#)). Click to load the configuration file.

3. Media

In this section you can set options for the creation of thumbnails and still frames as well as the use of [Dynamic Metadata](#).

Default thumbnail position

Sets the position for the automatic thumbnail creation. You can change the position in the clip that is used to create the thumbnails (see: [Choosing Custom Thumbnail Images](#)).

Thumbnails for clips

Disables the thumbnail creation for clips during Offload jobs to speed up the process. You can still create the thumbnails later via the clip menu.

Thumbnails for sidecars & documents

Disables the thumbnail creation for sidecars & documents like the previous option.

Focus distance unit

Switches between imperial and metric units for the according values in the library. The default is Metric.

Use extracted dynamic metadata of thumbnail frame for reports

Links the extracted dynamic metadata (in the General Info and Library's Table View) to the thumbnail frame. By enabling this option, you can ensure that the referenced (static) metadata in the reports matches the shown thumbnails.

Still Image Export

Still images are exported via the [Transcoding Preset Panel](#).

4. Copy & Jobs

Read buffer size

Sets the read buffer's size. The default is 8 MB (Recommended).

Documents

Defines the handling of non-clip files in your folder structures. See section Document Wildcard Handling in [Path Wildcards](#).

Hash manifests

Sets the preferred hash manifest to be created after a copy process. ASC MHL is the default and allows further adjustments using the... button. The option None does not create hash manifests at all.

GPU selection

Defines which GPU to use. Auto uses the system default while Manual allows you to define it yourself.

Automatically interrupt transcoding jobs during playback and offload

Automatically interrupts transcoding jobs during playback and offload to improve performance. Enabled by default.

Prefer CPU-based over hardware accelerated decoding for H.264/H.265-based formats

This option can improve performance on certain systems, such as Intel systems with many CPU cores.

5. Playback

Disable ColorSync and use video gamma in the Playback View

If ColorSync is disabled, the monitor color profile set in the macOS display settings is bypassed and the video is shown using video gamma (Rec. 709).

Interaction mode

Allows you to choose from different interaction modes for playback.

Positioning for Drag-Scrubbing

Sets the positioning mode for Drag-Scrubbing. **Absolute** refers to the absolute position on the timeline.

Force to Apply False Color On

Allows you to define the look mode to force the application of False Color.

False Color LUT for Original

Sets the False Color LUT to apply to the Original look mode.

False Color LUT for Graded

Sets the False Color LUT to apply to the Graded look mode.

Clipping and Range Unit

Sets the unit to calculate the clipping and range. By default, a percentage value is used.

Whites Clipping Color

Allows you to choose a custom color for whites clipping.

Blacks Clipping Color

Allows you to choose a custom color for blacks clipping.

Range Color

Allows you to choose a custom color for the range.

6. Formats

In this tab you can adjust the settings of the individual input devices. The available options for defining the timecode are mostly the same for the different cameras. They are useful if you need a different timecode source than the one you got from your camera. Instead of the camera's timecode track you can use the Quicktime header create date or file create date. Most times, this option is only necessary for the Canon DSLR and GoPRO Hero, not for the ARRI Alexa and AJA KiPro.

All input devices

Look source

Sets a preselected Look Source for the ingested clips. Learn more about this feature in the article [Basic Color Control in Silverstack](#).

AJA KiPro and Atomos

Source timecode

Sets a default import option for the source timecode.

Extract scene and take information from filename

Extracts scene and take information from the filenames when enabled.

Treat Alpha append character as camera information

For the AJA KiPro Silverstack provides the opportunity to use the Alpha Append character of a clips name to assign the clip accordingly to a camera.

ARRI cameras

Ignore underscore (_) character in camera index

Ignores the underscore for the camera's index.

Canon C300

Extract Camera from Clip Identifier

Extracts the camera information from the clip identifier.

Canon DSLR

Source Timecode

Allows to define the source timecode either by the Thumbnail Image file, the Quicktime header create date, the Timecode track or the file create date.

Generic file sequence

Default playback speed

Sets the default playback speed for the file sequence.

Enabled file types

Defines which file types are considered for the detection of file sequences. If you don't want a file type to be considered, disable one of the checkboxes accordingly.

GoPro Hero

Source Timecode

Allows to define the source timecode either by the Quicktime header create date or the File create date.



Panasonic RAW / Varicam

Clip name

Defines where the value for the clip name is taken from.

RED cameras

Source Timecode

Allows to define a format for the source timecode.

Reel Name

Sets the reel name generation mode.

GPU

Uses the GPU for decoding when enabled (and applicable).

ProRes Clips

Ingests ProRes Clips as documents when enabled.

RAW Development

Reads the information in the .RMD sidecar files and sets it as RAW parameters.

RAW Enhancements

Enables the extended highlights processing (beta).

Sony cameras (RAW and ProRes)

Color processing

Ignores the Exposure Index when enabled.

Sony cameras (XAVC-S)

Enable deep metadata scanning

Extracts more metadata (ISO, aperture, shutter) out of the files but also increases processing time when enabled.

Vision research Phantom

Source Timecode

Allows to define a format for the source timecode.

Fallback Project FPS

Sets a custom fallback Project FPS.

Enable dead pixel correction

Enables the dead pixel correction.

7. Ingest

Silverstack scans all volumes you want to offload. This tab allows you to define which files should be ignored or considered as single files (rather than file sequences/clips) during the process.

File pattern

Defines the file (or folder) type.

Comment

Allows you to enter a comment or note for the pattern.

Ignore Case

Disables case sensitivity (when checked).

+ / -

Adds or removes a pattern.

Restore Default Patterns

Restores the default patterns.

8. Backups

Here you can create and load database backups of your current and past Silverstack states.

Enable automatic backups

Configures Silverstack to create backups regularly.

Last regular backups

Defines how many regular backups are stored.

+ / -

Adds or removes a backup.

Restore this version

Loads the selected backup version.

Create new library

Creates a new library in the current project (the library is empty afterwards).

9. External video

Enable external video output

Activates the output to an external video device.

Output Device

Allows you to select an available output device.

Level

Allows you to set the levels to Legal or Full Range.

RGB-YCbCr Conversion

Allows you to set a conversion matrix.

Video Format

Defines if Silverstack tries to match the clip's format or uses a fix format.

Release Blackmagic devices when Silverstack is in background

When enabled, Blackmagic devices are only accessed if Silverstack is actively used. This option is useful when multiple applications try to use the same device.

Don't use AJA devices

Explicitly tells Silverstack not to use AJA devices.

Do not update scopes during playback

Freezes scope updates during playback.

Connect to ScopeBox

Enables a connection to ScopeBox.

10. Grading

(LUT) Interpolation Method

Allows to set the interpolation method for LUTs to Tetrahedral or Trilinear.

Printer Lights

Adjusts the sensitivity for the printer lights' adjustments.

Contrast / Stretch

Adjusts the sensitivity for the contrast and stretch adjustments.

Warmer / Greener

Adjusts the sensitivity for the adjustments for warmer/greener.

Saturation

Adjusts the sensitivity for the saturation adjustments.

(Hardware Panels) Sensitivity

Adjusts the sensitivity for grading panels.

Disable Hardware Grading Panels

Silverstack does not consider hardware grading panels when enabled.

Add primary curve points for Hue

Enables predefined points to edit the adjustment curves of the hue nodes.

11. ACES

These are the settings for the ACES grading mode.

ACES Version for New Looks

Allows you to choose a default ACES Version for newly created looks.

Available ACES Transforms

You can download different ACES versions from the table.

Check for New Versions...

Checks if new ACES versions are available.

12. Slating

Slating system

Sets the slating system to use. This defines the options within the following menu: Clip > Edit Scene/Shot/Take. You can select one of the following slating systems:

- **Standard** lets you work with continuous slating: Scene / Shot / Take, e.g., Scene 56 / Shot 4 / Take 2
- **American** lets you work with American slating : Scene-Shot / Take, e.g., Scene 56C / Take 2
- **All** lets you see all available menu items for maximum flexibility.

Custom Reset Values

Allows you to define custom reset values for scene, shot and take, which are applied when resetting the slating values.

Scene Letter

Allows you to enable/disable the behavior to append a letter on **Increase Scene** actions automatically (e.g., increment 5 to 5A). **Scene Letter** is enabled automatically when switching to the **American** slating system and vice versa disabled when switching to the **Standard** slating system.

Note: Incrementing letters in the scene/shot/take fields use the overflow system (e.g., “Z” to “AA”, etc.)

Skipped Characters

Defines specific characters to be skipped when incrementing letters in the scene/shot/take fields.

13. Accounts

You can manage the accounts to upload or share your library via [ShotHub](#), for [direct dailies upload](#) via Webgate.io or Frame.io and for [sending job notifications to Slack](#) here.

+ / –

Adds or removes an account.

14. Updates

These are the settings for automatic updates, usage statistics and crash reports.

Automatically check for updates

Enables a regular check for updates.

Update Interval

Determines the time interval to check for updates.

Send anonymous usage statistics

Sends anonymous usage statistics when enabled (used for improving our products).

Send crash reports automatically

Sends crash reports automatically after a crash occurred (when enabled).

Transfer of project settings

Silverstack allows to transfer project settings between projects or workstations. This can help to move custom settings from established projects to new ones without the need to set up everything from scratch. Other use cases involve transferring transcoding presets from Silverstack XT / Lab to new projects or other machines.

Which settings can I transfer?

Transferring settings involves certain project based as well as global settings. Please find them listed below.

Project settings:

- Folder Structure
- Smart Folders
- Transcoding Presets
- Copy Job Templates
- Label Names
- Titles for Custom Fields

Global settings:

- Table View Presets
- Format Options

Exporting and importing project settings

Go to File > Project Settings > Export... / Import... in order to start the process. You can choose the content to be exported after clicking on **Export...**

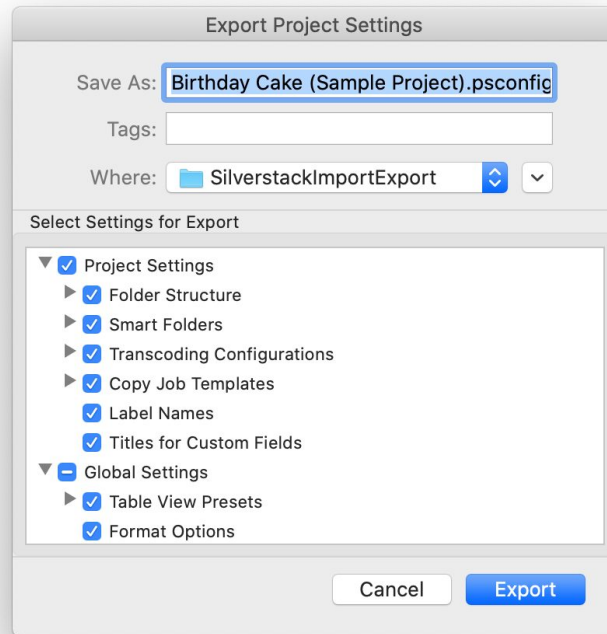


Fig. 1: Export project settings options

Here are the details about the different export options:

Project settings:

- **Folder Structure:** Transfer the folder structure of your Silverstack library to a new project. All top level folders can be selected for the export.
- **Smart Folders:** Transfer your custom [smart folders](#) to a new project.
- **Transcoding Presets:** Transfer your [custom transcoding presets](#) to a new project (only for Silverstack XT / Lab).
- **Copy Job Templates:** Transfer your [custom copy job templates](#) saved in the offload wizard to a new project.
- **Label Names:** Transfer the custom names for the color labels.
- **Titles for Custom Fields:** Transfer your [custom filed titles](#).

Global settings:

- **Table View Presets:** Transfer your [table view presets](#) (of the main table of clips and metadata) to a new project.
- **Format Options:** Transfer the settings from the [Format tab of Silverstack's settings](#).

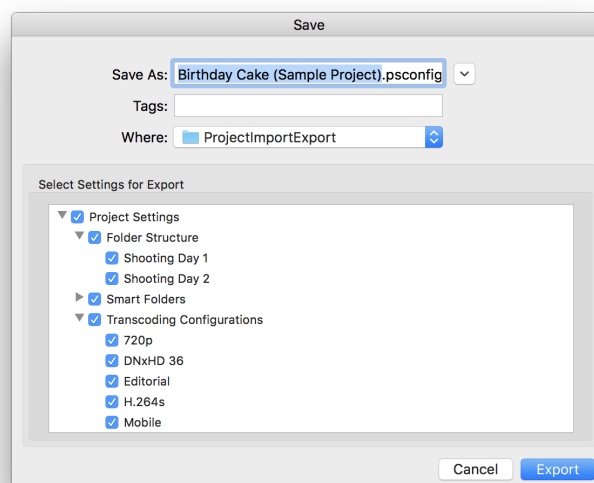


Fig. 2: Example of the project settings export wizard including folders and transcoding presets

Click **Export** to save the .psconfig (project settings configurations) file containing the project settings to the selected destination. The export and import window options are identical. Hence, you can choose which content to include in the .psconfig file and which content to import from a .psconfig file.

Setting a default template for new projects

Besides the export and import of project settings, you can define a .psconfig file that may be used as a template to create new projects. First, export a project settings file (as described above) and include all the necessary settings for the new project's default template. Then, go to Silverstack's settings and within the **General** tab, click **Choose...** to select the default .psconfig file for new projects:

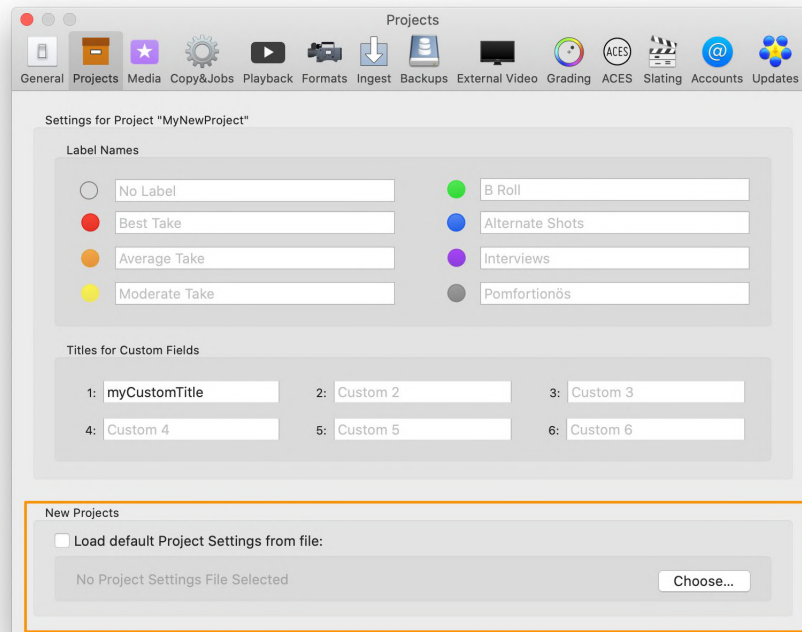


Fig. 3: Choose the .psconfig file the default project settings for new projects should be loaded from.

If you now create a new project, all contents of the selected .psconfig file will be loaded as default for the new project. You can do this either on a per-project basis or you copy a .psconfig file named **defaults.psconfig** into the library folder to be taken as the default template. Depending on your Silverstack version, the library paths are:

- Silverstack X: ~/Library/Application Support/Pomfort/SilverstackX ¹
- Silverstack Lab X: ~/Library/Application Support/Pomfort/SilverstackLabX ¹

¹ Replace X with your current major version of Silverstack.

Note: Be aware that the .psconfig file in this location will overrule the UI settings.

The .psconfig files are generally compatible throughout all versions of Silverstack. Please be aware that restrictions might apply due to incompatible features (e.g., transcoding presets with DNx codecs that are only available in Silverstack Lab).

Keyboard shortcut editor

The keyboard shortcut editor shows a table with a list of all possible actions and their currently defined keyboard shortcuts. You can use the feature to view, search and edit keyboard shortcuts.

To inspect the exact list of available keyboard shortcuts, go to "Silverstack > Keyboard Shortcuts...". This will open the keyboard shortcuts editor as shown below.

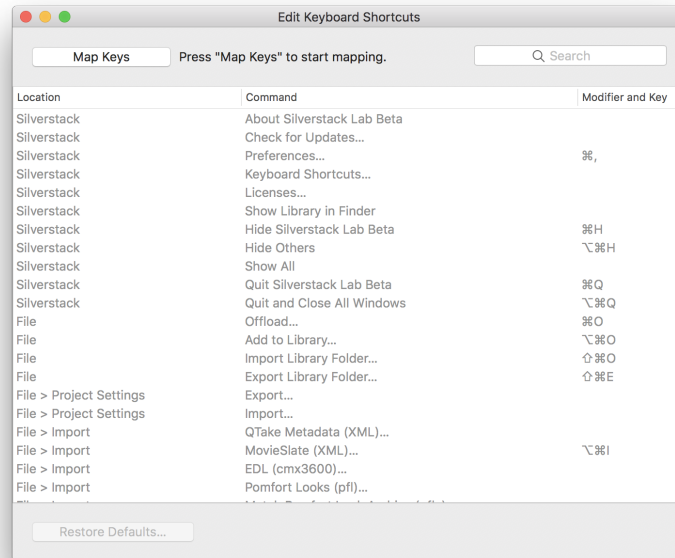


Figure 1: The Keyboard Shortcut Editor

Note: Both of the steps in section 1 and 2 execute an automatic restart.

1. Editing keyboard shortcuts

In order to change a keyboard shortcut, execute the following steps:

1. Click **Map Keys** to allow changes on the key mapping list.
2. Choose the row with the command.
3. To set or modify a shortcut, press the key(s) which should be set as the new keyboard shortcut. You can use modifiers, numbers, letters and characters individually or in combination.
4. To remove the associated shortcut permanently press the delete/backspace button.
5. Close the keyboard shortcut editor when you are done.

1.1 Already assigned shortcuts

If you choose a shortcut already assigned to a command, a dialog will appear that shows which command is already assigned by the chosen shortcut. Select **Cancel** and choose another key for your current command, or select **Reassign** which removes the shortcut from the old command and sets it for the selected command.

2. Restoring default keyboard shortcuts

You can reset all keyboard shortcuts to the latest version's default by clicking the button **Restore Defaults...**

Hands on

Configuring workflows

Configuring a workflow

LAB

This hands on article contains features that are only available in Silverstack Lab. The basic principles work both for Silverstack XT / Silverstack Lab.

A workflow is a sequence of activities that Silverstack applies in one run to any data that is configured as a source. The possibility to combine and group multiple activities helps you work in an efficient and structured manner while maintaining a consistent data management.

This article will guide you through the task of creating a tailored workflow. It requires some knowledge about the [workflow configurator](#), [workflow activities](#), [completion steps](#), the [transcoding preset panel](#), and the [report wizard](#).

A workflow contains usually two or more activities:

1. An activity that defines the source data (e.g., “Register in Library” or “Resource Selection”)
2. An activity that defines the actions to perform (e.g., backup or transcode)

The general process of applying workflows contains the following steps:

1. Creating workflow presets for different sources
2. Applying the previously configured workflow presets on data

The main idea is to configure a tailored workflow (preset) for a specific source medium and apply this preset repeatedly for the same type of source.

1. Creating workflows

To explore this task, it is recommended to having some kind of test data to work with (e.g., by downloading Silverstack’s [sample project and footage](#)). Ideally, you have a camera magazine available that is identical to the data you need to work with. For this task, let’s assume you work with audio and video clips and want to apply two different workflows for the two different source types. You start with configuring a workflow by putting together an overview of what you want to achieve:

1. Register clips in the library
2. Create two copies of the source card on two drives using a backup activity
3. Transcode the source clips
4. Create reports
5. Upload the transcoded files

1.1 Register in library

Click the **Offload** button in the top left toolbar and select the desired camera magazine or folder to open the workflow configuration window (WCW). The first activity is automatically set to “Register in Library” and Silverstack immediately scans the source to set the correct importer (e.g., “ARRI Cameras”). By default, all available clips on the source medium will be registered. At this point, we can make use of the ingest metadata feature, add valuable information already during ingest, and use that data to build the library or folder structure using wildcards. In case Silverstack finds metadata within the clips, the fields will be filled in automatically. Otherwise, you may enter the information manually. When you are finished, head to the registration path section, select any pre-configured wildcard preset, or create one on your own. Silverstack now shows you a preview of the registration path (the location where your bin is registered in the library).

1.2 Backup

Since the offload button was used to open the workflow configuration window, a backup was automatically added as a second activity to the workflow. Select it, and add the first volume as a destination path for the backup. The error message will inform you that a missing destination path has disappeared.

Depending on how you organize your actual data on the file system compared to your library, you can set the [path wildcards](#) for that destination as you like. You could use the same configuration like before for the registration path or create a custom one.

Now, you can configure the second copy for the source card. There are two possible ways of doing that: Either you simply add another destination (path) to the first backup activity by clicking the **+ Add Destination** button or you add another backup activity to create a cascading copy, for example. For the latter, select the first backup activity and add another one with **+ Add Activity**.

The second backup activity should appear as a subordinate activity of the first one – which is visible by the indentation in the activity outline.

In the following steps, the further process is explained with a single backup activity that contains two backup destinations.

Note: Any copy activity is based on the backup activity. By combining several backup activities, you have a wide range of options and are able to recreate operations like cascading copy easily. A cascading copy is a “copy of a copy”. In that case, you first offload onto a fast drive and then run your second backup from that fast drive onto a slower one. A cascading copy is helpful to free up camera media storage as fast as possible. This can become convenient in working environments with small amounts of camera magazines or in situations where only one docking station is available and multiple camera magazines have to be offloaded quickly.

1.3 Transcode

You can find detailed information about transcoding in the articles [transcoding preset panel](#) and [transcoding workflow](#).

Start with creating a transcode activity as a child of the backup activity with the **+ Add Activity** dropdown menu in the bottom left corner. Since the parent backup activity has two destination paths, it consequently has two outputs. Therefore, you need to define the source for the downstream transcode activity from its **Source** dropdown menu at the top.

Next, apply a transcoding preset (e.g., the “TV” preset) and set the transcode destination paths with the help of [path wildcards](#). If you want to transcode two different presets from the same backup path, just add another preset to the transcode activity.

Alternatively, if you want to run separate transcodes from both outputs of the backup activity or you need to make an additional combined clip transcoding, just add another (child) transcode activity and change the source respectively. Your activity outline may now look like this:

- Register in Library
 - Backup
 - Transcode 1
 - (Transcode 2)

1.4 Reports

Reports are created in a “Post Step” of an individual activity. To create a report as a post step, you first need to create a report preset, which defines the report’s type and settings. Learn more about that in our article about [creating reports](#). Select the activity to which you want to add a post step, click **+ Add Post Step** and then choose **Add Report Step** from the dropdown menu. Select the desired preset from the preset menu of the report post step configuration and set the path where the report should be saved.

Note: Post steps are bound to the individual activities. That means the reports contain information for the activities they have been added to as a post step. For example, if you want to create clip reports for both transcode activities, you need to add the report post steps to both.

1.5 Upload

As the final step of our example task, we want to upload transcodes to a cloud service. To be able to configure an upload activity, you first need to configure an account for that in Silverstack’s accounts settings. The article about **uploading** explains this in detail. Select the first transcode activity (the one that contains the “TV” preset) and add an upload activity as a subordinate activity (e.g., “Dailies Upload”). Only MP4 or MOV containers are allowed for uploading, that’s why you configured the TV preset earlier. Configure the upload activity as needed and explained in **upload**.

2. Saving and applying workflows

2.1 Saving a workflow as preset

Let’s save the configured workflow as a preset, so you can apply it to a camera magazine or use it as a starting point for other workflows. Go to the top right corner and select **Save as new preset...** from the **Preset** dropdown menu. This opens a dialog which allows you to enter a preset name and additional options.

Enable **Apply automatically** and set the input device to the importer that you want to automatically associate the workflow with (i.e., “ARRI Cameras”). If you want to manually select the correct workflow from the preset list every time the workflow is started, do not check that option. The workflow presets show their association with an input device through an arrow symbol ← in the preset list. If you are ready, click **OK**.

In a similar manner, you could now create a workflow for audio clips by using the already configured workflow for video clips. Simply remove redundant activities (e.g., transcode activities) and adapt the existing ones to the requirements of the audio source (i.e., adapt the path wildcards, etc.). As soon as a preset was edited, it shows an asterisk (e.g., “Workflow*”). Then, save the newly configured workflow as a new preset and associate it with an audio input device as explained earlier.

Note: You can associate a workflow preset to only one input device. If you want more input devices to trigger the same workflow preset, you need to save the same configuration in multiple presets and associate each with the desired input device.

2.2 Applying a workflow to an input device

If you now open a source detected as an input device of the defined type, the associated workflow is loaded automatically. Of course, you can still adapt your workflow and add, remove, or edit activities. Via the **Preset** menu in the top right corner, you can update your previously configured preset with the new changes made by clicking **Update Preset**.

Click on **Start Workflow** to start the process.

Managing data

Sealing

Sealing means ensuring all data referenced in the Silverstack library and the ASC MHL history is available and hashed at a specific target, like a volume or folder. This process results in a seal that helps you document your work and allows you and others to ensure data integrity and completeness by verifying the dataset at different steps in the production pipeline, e.g., with MediaVerify.

This article will guide you through the task of creating such a seal. To learn more about the specific options, read the article about the [sealing wizard](#).

Sealing is usually the last step after all data management activities have been executed in Silverstack, e.g., after a production day when a volume needs to be transferred to post-production. We will explain this common scenario in two cases: with all files available and with some files missing. In order to follow the steps described below, you need some data that was offloaded onto a volume using Silverstack. The article on [configuring workflows](#) explains in detail how you could create such a dataset.

1. Volume sealing

Open the sealing wizard for the volume used to offload the data. The volume is scanned immediately, and the result is shown at the top of the sealing wizard.

If you see two green messages with checkmarks for both the library and ASC MHL comparison, all files referenced on the volume were found. This acts as a confirmation that the volume is ready to be sealed.

In case the sealing wizard finds files that are not referenced in the library or ASC MHL history, you are informed with blue info messages. Files that are not yet referenced in the ASC MHL history are not critical since they will be included during sealing.

For files on the volume that are not referenced in the library, you need to decide if you want those files to be part of the exported library archive (in case you enabled this option in the seal settings).

By clicking the message’s **Reveal** button, you are forwarded to the associated tab in the summary table where the “Library” and “ASC MHL” columns indicate with a checkmark the instance in which the file is referenced. “New” in this context means either new to the library or ASC MHL history. If files are referenced in both instances, they are sorted into “Passed.”

Note: The library archive created during sealing only contains the assets from the library, not the volume/folder. Sealing with ASC MHL does not create a “Lost & Found” folder (auto-ingest).
If you want all files at the sealing target to be part of the library, register them first.

1.1 Seal settings

The default seal settings are sufficient in most cases. We recommend entering basic information in the ASC MHL creator info, which can be accessed quickly via the [Open...](#) button in the seal settings. Enable the sealing logs if you would like to create a flattened ASC MHL manifest, which acts as an inventory list of the sealed volume that can be sent via email, for instance.

After checking the files and configuring the seal settings, you may now start the sealing process by clicking [Seal](#).

1.1 Sealing process

Silverstack now calculates hashes for all files that are not yet referenced in the ASC MHL history, as you can see in the “Hashing Progress” section. The duration section shows you how much time has elapsed since the start and how long the overall process might take.

When the sealing process has been completed successfully, this is highlighted with the message “Sealing completed” and a green seal checkmark. You can use the little go-to icon in the top right corner of the sealing wizard to reveal the path in Finder, where you will see a new root ASC MHL history. You can now eject the volume, close the sealing wizard, or open the path in MediaVerify (if the application is installed) for a double-check.

2. Handle missing files

Files referenced in the library or the ASC MHL history but unavailable on the selected volume are considered missing. They appear as blocking errors, clearly marked red in the sealing wizard. When they appear, the sealing wizard automatically opens the missing tab in the summary table. How to handle missing files depends on which instance reports a file as missing. For example, an OCF file was offloaded using ASC MHL and got missing for some reason. Silverstack and ASC MHL will report the file as missing since neither can find the file on the volume.

To continue sealing, you first need to unregister the missing resource in the library (to solve the library error) and then tell the ASC MHL history to ignore the missing file by applying ignore patterns (to solve the ASC MHL error).

Select the missing file in the table and use Right-Click > Copy Path to copy the file path (e.g., copy and paste it as a reference for unregistering the file in the next step). Close the sealing wizard, find the missing asset in the library using the reference, and select it.

Head to the general info and select the “Files & Hashes” tab. Find the resource that matches your reference and unregister it from the library with Right-Click > Unregister Resource...

Open the sealing wizard again. The library error is solved, leaving only the ASC MHL error, which you can fix using the quick

fix [Add to ASC MHL Ignore Patterns](#).

Sealing is now enabled again.

3. Workflow considerations

Hashing large amounts of data may take a lot of time during sealing. The [checksum creation](#) activity allows you to create hashes for files without offloading them first. For example, in the workflow configuration window, you may append a checksum creation to a transcode activity.

This allows you to hash your transcodes immediately after transcoding, reducing the time needed for sealing later. Depending on your workflow, this can be beneficial, e.g., using idle time for hashing files.

Checksum Creation vs. Backup

When using a workflow for offloading camera cards that is configured as follows:

- Register in Library (Camera Card)
 - Backup (Offload)
 - Transcode (Create Dailies)
 - Backup (Backup Dailies)

We recommend to use the “Create at Source” feature in the backup activity instead of a checksum creation. It becomes selectable when a backup is appended to a transcode activity and allows you to create an ASC MHL manifest at the source (in-place for the transcodes) and for the backup.

LTFS backup

Silverstack enables media backups to LTO tapes using the LTFS (Linear Tape File System) format. Because of the sequential nature of tape storage, LTO backups require a specific copy and verification approach. Silverstack handles this by first copying all files to the tape and then performing a verification pass after rewinding, ensuring a single tape seek is needed per backup job, which saves time and wear on the hardware. Silverstack supports any LTO drive that mounts as an LTFS volume on macOS. If the volume is accessible through Finder, it can be used for backups in Silverstack.

You need some knowledge about the [workflow configuration window](#) to follow the tutorial below.

Starting backups to LTFS

Note: Tape formatting must be completed using your LTO drive’s utility tool before starting a backup in Silverstack.

Tip: Silverstack supports backups to a single LTO tape per job. Since no data capacity information is available for LTO tapes, we recommend confirming manually that your backup size fits within the tape’s capacity to prevent jobs from failing.

1. Ensure the LTFS volume is mounted correctly.
2. In Silverstack, select the bins in the library you want to backup using LTFS and open the workflow configuration window via Media > Backup.
3. If the assets have multiple resources on different volumes, we recommend to select the fastest volume to increase the general performance.
4. In the backup activity, Silverstack asks you to define the volume type. Click the button [LTFS](#) to flag the volumes as LTFS.
5. Ensure the job execution is set to “Separate Verification Job”.
6. Configure the other options as needed, e.g. the checksum method.
7. Click [Backup](#) to start the backup.

Silverstack will automatically handle the backup and verification process optimized for LTFS tapes:

1. Copying all files first
2. Verifying after a single rewind

You can monitor the backup progress and result via the [jobs view](#).

Tip: Within the jobs view, you can also flag volumes as LTFS in the details bar of a selected volume.

Handling file sequences

Silverstack can handle file sequences for you. Explicit file sequences are sequences whose filenames all end with a numeric or alphanumeric suffix at the end (excluding the file extension):

A001C001_130508_R1KL.92072-93840#####.ari

The names of image sequences in Silverstack are represented with the number of the first filename (in our example above it is 92072) separated with a dash, and the last frame (in our case 93840). The hash signs represent the length of the file count in the asset name.

In the example above, we have seven hash characters, so the counter has 7 digits.

This results in the first frame's actual file name:

A001C001_130508_R1KL0092072.ari

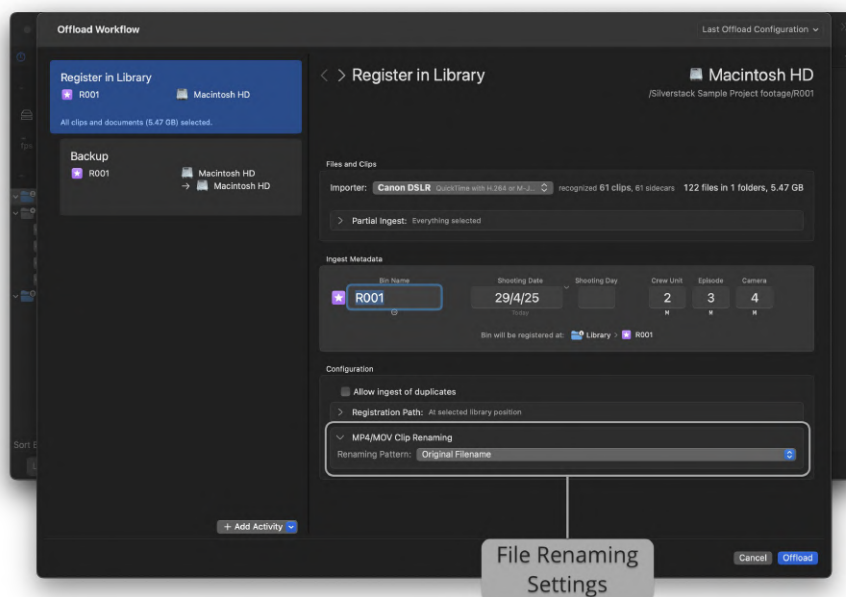
Silverstack automatically truncates the first leading zeros so you see "93840" instead of "0093840."

Tip: You can define which file patterns are automatically interpreted as file sequences in the ingest settings of Silverstack.

File renaming on offload

Some camera models store clips using file naming patterns that can result in having the same file names across different cards. This creates the difficulty of managing files with identical names in post-production.

Silverstack offers an option to rename files recorded in selected camera models by applying a renaming pattern during [offloading](#). This feature can help achieve a consistent naming scheme for files in the offload destinations and consistent clip and reel names in the Silverstack library and reports throughout the project.



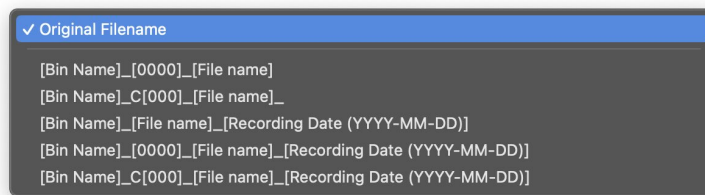
Using the File Renaming feature in Silverstack

1. How to use the file renaming feature

1. Set a name for the card that you are offloading in the "Ingest Metadata" section of the wizard. This name will be used as:
 - Bin name in the Silverstack library
 - Reel name in the clip metadata
 - Part of the new file names
 - Optional: as part of your offload destination path (see the knowledge base article [Offload Clips](#) → Setting up the copy destinations)
2. Select a pattern to create new filenames. The new filenames will be used as:
 - Clip names in the Silverstack library and reports
 - File names in all offload destinations
3. Optional: [Save your offload settings as a template](#)
4. Start the offload by clicking ([Offload](#)).

Note: If needed, the original file name of a clip can still be found under file tab → source.

2. Predefined patterns



File renaming predefined patterns

You can choose one of the following patterns to apply new file names to your offload:

- Original Filename (no changes to original file names, the feature is deactivated)
- [Bin Name]_[0000]_[File name]
- [Bin Name]_C[000]_[File name]_
- [Bin Name]_[File name]_[Recording Date (YYYY-MM-DD)]
- [Bin Name]_[0000]_[File name]_[Recording Date (YYYY-MM-DD)]
- [Bin Name]_C[000]_[File name]_[Recording Date (YYYY-MM-DD)]

These **placeholders** will be translated into the new file names:

- [0000]: File index counter with 4 digits (it guarantees unique file names if the source holds files with the same name in multiple folders).
- C[000]: File index counter with 3 digits and the "C"-prefix.
- [File name]: Original file name without extension.
- [Bin Name]: Card name as specified in the "Ingest Metadata" section of the wizard.
- [Recording Date (YYYY-MM-DD)]: The date in which the clip was recorded, taken from the metadata, in format YYYY-MM-DD.

When selecting a pattern that includes a file index counter, you have the option to sort clips by name, timecode or creation date to make sure the counter reflects the shooting order of your clips.

3. Supported camera models and file formats

Silverstack automatically tries to identify the camera format of the files before offloading them. In order to prevent the unintentional rename of files from camera models that already provide a proper naming scheme, the feature is only enabled for these camera formats:

- GoPro Hero
- Nikon DSLR
- Sony A7s
- Canon DSLR
- "Generic Clips"

Note: Only files with the **.mp4** and **.mov** extensions are currently supported for renaming. If any other camera format is detected (for example ARRI Alexa), the renaming pattern is reset to "Original Filename" and the selection button is disabled.

4. Workflow considerations

If your production uses multiple camera models with different support status for the renaming feature (for instance GoPro Hero and ARRI Alexa, where a specific format detection enables and the other disables the feature), the selected renaming pattern can be lost between the offloads of the different formats.

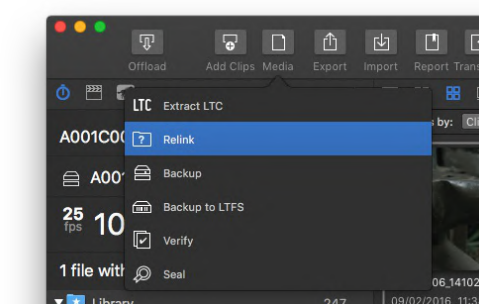
When starting the workflow configurator, the previous offload settings are restored (including the renaming pattern). However, if the camera format of the current offload does not enable the renaming feature, the pattern is automatically reset to "Original Filename", thus the selected renaming pattern of the previous offload is lost. Changes to previous settings are visualised with an asterisk (*), that is appended to the template name on the top right.

If you plan on using the renaming feature in productions with multiple camera models, we recommend to [create templates](#) for each device (e.g. MyGoProOffloadSettings and MyAlexaOffloadSettings) and load the appropriate template before the offload is started.

Relink to new file locations

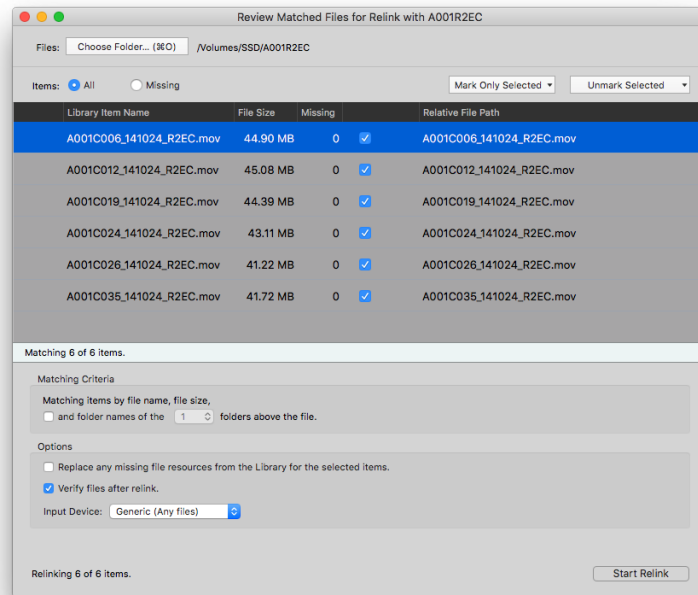
In case the file locations of an offloaded card have been modified after the offload, Silverstack displays a 'missing resource' warning for affected clips in the "File" tab of the right bar. In order to point Silverstack to the correct new file paths, you can use the Relink feature.

Select the bin or folder with the files you want to relink new file locations with, in the library outline. Select "Relink" from the Media menu:



Relink menu selection

Once in the Relink wizard, you have to locate the new file location through the ‘Choose Folder...’ button.



The Relink wizard

Providing that the files match, Silverstack is going to list them in the relink wizard as shown in the image above.

Options

Under ‘Matching Criteria’ there’s the option to include a number of folder names above the file. This allows you to expand the matching to include the specified number of folder names before the file name in the resource path.

The additional options are:

- *Replace any missing file resources from the Library for the selected items:* This setting can be useful when the file have been move between physical locations. The effect of adding and removing resources can be monitored in the “Files” tab of the right bar, where resources for files are displayed.
- *Verify files after relink.* When the checkbox is selected, Silverstack is going to run a verification process to ensure the data integrity of the relinked files against the checksums stored in the Library for those resources.
- *Input Device.* Lets users manually select the recording format of the files.

Backup data to SONY optical disk archive

Silverstack offers the functionality of backing up data to SONY’s Optical Disk Archive technology. You can use the backup function of Silverstack to write assets to the SONY ODA (Optical Disk Archive). Take a look at the article [Backup Clips](#) to learn more about the backup function.

It is also possible to use the Silverstack Offload functionality to directly copy data to an ODA.

Silverstack will automatically detect if the backup will be made to a SONY ODA and will therefore adapt its settings to optimize the copy process.

Important aspects while backing up to SONY ODA

You have to avoid certain letters in file and folder names that will cause problems while backing up to the ODA. The next table represents the list of invalid characters:

Table 4 – 1 Invalid Characters

Code	Character
U+0000 – U+001F	
U+0022	"
U+002A	*
U+002F	/
U+003A	:
U+003C	<
U+003E	>
U+003F	?
U+005C	\
U+007C	
U+007F	(DEL)

Fig.2: List of invalid characters for backing up to Sony ODA.

Do not use the “Backup to LTFS” function to backup to a SONY ODA. There are certain constraints based on that particular backup function that e.g. will make it impossible to read clips quickly from the ODA again after backing them up. Stick with the regular Backup functionality in Silverstack when working with ODAs.

Use Silverstack's clip library for EDL conform

EDL files generally represent a timeline from editing systems such as Avid Media Composer and contain a clip list including timecode data and (optionally) reel and clip information.

You can use an EDL in the CMX 3600 format to consolidate clips from the Silverstack library in a new Bin. From there, you could then copy all required clips from the EDL into a separate hard drive for the post production process.

Use case

As an example, we can assume that the editor used five clips. We now need to transfer those clips to a VFX facility. Instead of shipping several hard drives with all the source footage, or manually searching them through a huge folder structure, you can automatically collect the clips by using the EDL import feature in Silverstack.

Silverstack matches the timecode from the EDL with the source timecode of clips in the project library and creates a new bin with the matched clips. From there it's easy to backup the clips to a single destination using the backup feature.

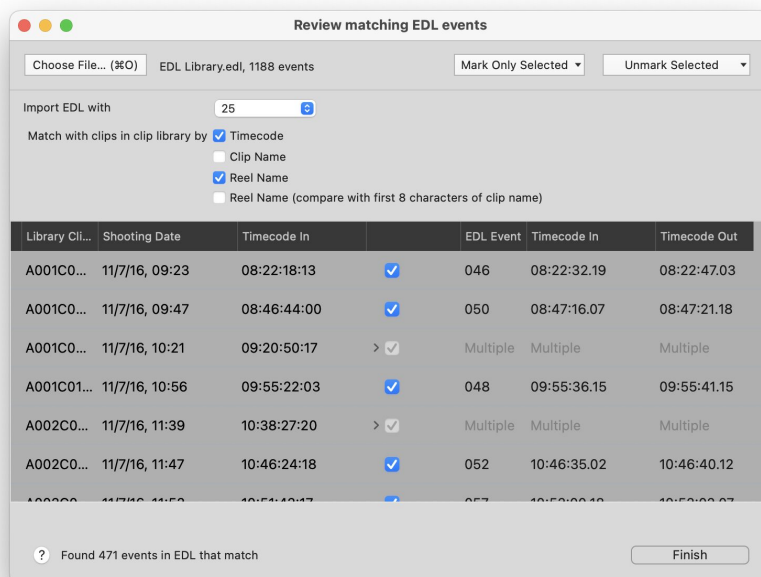
Step by step

Here's an example of a typical workflow with Avid Media Composer:

1. Choose the timeline in AVID Media Composer.
2. In the main menu, press Output > EDL. The Avid EDL Manager will open.
3. Press the “Get Sequence” Button to load the timeline.
4. Make sure that the EDL settings are CMX3600.
5. In the main menu, select File > Save As... and export the file to your Desktop.

Silverstack part

6. Launch Silverstack (and select the respective project).
7. Press the **Import** button and choose the “Edit Decision List (CMX3600 EDL)” option.
8. Choose the .EDL file from your Desktop folder.
9. Make sure that the correct frame rate setting for your project is selected. It must be the same as the clip metadata.
10. After reviewing the match is correct, press **Finish** and Silverstack will add the clips to a new Bin.



EDL matching metadata in Silverstack

Quick look features

In Silverstack you are able to preview all of your Assets that are natively supported by the Quick Look feature of MacOSX and offloaded/registered to your library. This is especially useful if you would like to review those Assets which don't have advanced camera support. Assets like any PDF document or image (i.e. a screenplay, storyboard, etc.)

There are also some situations where it can be handy to preview advanced camera support Assets. We will briefly review some different scenarios that might be useful on the film set.

General

Quick Look lets you browse files — photos, Pages documents, Keynote presentations, QuickTime movies, Microsoft Word and Excel files — without having to launch an application or leave Silverstack.

Assets that are fully supported in Silverstack are playable via the regular playback function in the Playback view, in addition to the Quick Look feature.

You can access the Quick Look feature from by going to the Main Menu: **"Playback > Preview in QuickLook"**. To improve your workflow you can also use the keyboard shortcut command **"Alt + Cmd + L"**.

Case 1: Review supported assets

The Quick Look feature helps you to review an Asset without changing into the Playback view. This could be especially useful when you are reviewing shots in a camera roll with the director but still want to give him a glimpse overview (via thumbnails in the collection view) of the camera roll of the entire shooting today.

Or if you would like to review the take with recorded scratch sound from the camera. If the recorded scene includes audio it will automatically playback with the Quick Look feature.

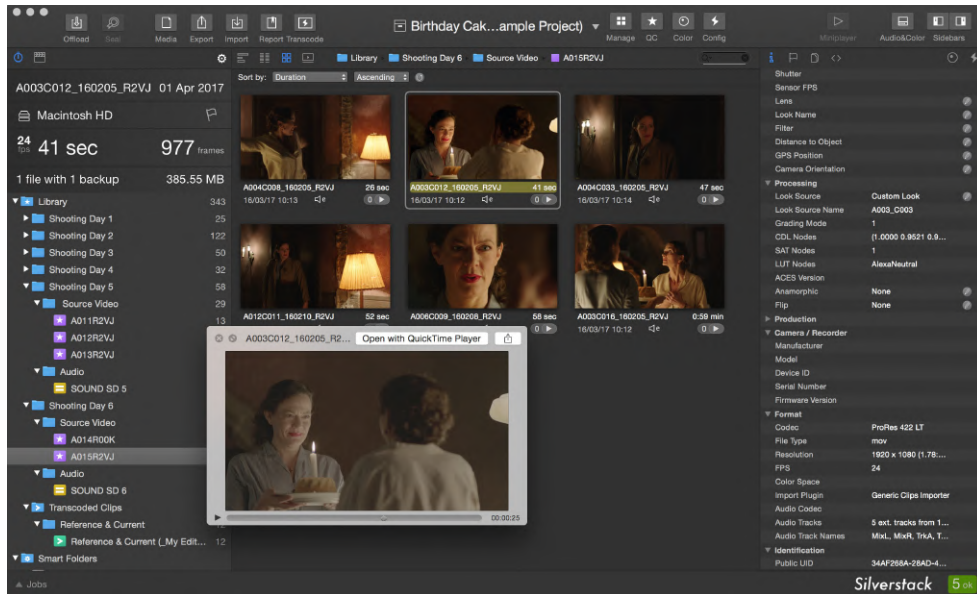


Figure 3: "Collection View with Quick Look"

Case 2: Review assets without extended camera support

With the use of 3rd party software it is possible to preview footage and Assets that are not natively supported by Silverstack neither with MacOSX. These can be for example formats like XDCAM HD with help of tool [mx4Mac Import](#) plugin and Final Cut Pro.

Also some other 3rd plugins are out there. Please review [this article](#) to have a list of possible 3rd plugins.

Case 3: Review storyboards, images, sounds and PDFs

You can also give the director or the camera man the ability to review storyboards (like in figure 4.) or listen to some audio files that you offloaded from the sound department.



Figure 3: "Quick Look Storyboard"

Case 4: Review multiple assets (non consecutive)

With the Quick Look option you can also quickly watch a selection of takes from your camera roll. This is useful when you have many takes in one roll. You are still able to stay within your current view like in figure 3 but you are able to watch multiple clips and discuss those with the script continuity, the director or camera man and simple change clips with back and forward arrow within the Quick Look window.

To make a non consecutively selection in the Collection-View (like in figure 3) you simple need to press the command key. If you like to make consecutive selection you simple press the Shift key. These simple command also applies for the Table-View.

Editing metadata and attributes

Utilizing dynamic metadata

This article requires some knowledge about the [dynamic metadata panel](#), the [workflow configuration window](#) and [configuring a workflow](#). It explains how to:

1. [Extract dynamic metadata](#)
2. [Use the extracted information in reports](#)
3. [Export the data to CSV files](#)

1. Extracting dynamic metadata

Dynamic Metadata needs to be extracted with the associated “Dynamic Metadata Extraction” activity in the workflow configurator. You can either extract the information with a workflow that contains only one activity or as part of a sophisticated workflow with several concatenated activities as explained in [configuring a workflow](#). Assuming you already have some clips in the library for which you want to extract the metadata, click on the toolbar button **Media**, then on **Extract Dynamic Metadata**. This opens the workflow configuration window with the dynamic metadata extraction activity. Click on **Extract Dynamic Metadata** in the bottom right corner to start the process.

2. Using dynamic metadata for reports

Silverstack extracts the dynamic metadata of a clip’s first frame already on ingest, so you can benefit from the extended information without extra effort. It is possible to include the additional lens fields in clips reports. In the settings’ media tab, there is a checkbox to make sure that the extracted dynamic metadata (which is shown in the general info and library’s table view) is linked to the thumbnail frame. By enabling this option, you can ensure that the referenced (static) metadata in the reports matches the shown thumbnails. The focus distance unit can also be changed within the media tab and determines which unit is used for display in the “Dynamic Metadata Panel” and the “General Info”. You can choose between “Imperial” (inches/feet) or “Metric” (millimeters/meters).

3. Exporting dynamic metadata to CSV files

After successfully extracting the dynamic metadata from a clip, you can export the metadata on a frame to frame basis into one CSV file per clip. To trigger the export, select the entry “Dynamic Metadata (CSV)...” in the export menu of the toolbar. In the subsequent step, you only see the clips containing successfully extracted metadata. If a clip contains extracted dynamic metadata, is indicated by the horse icon in the “Dynamic Metadata” column of the library’s table view.

Tip: Silverstack Lab supports adding burn ins of dynamic metadata when transcoding clips. Within the wildcards group “Dynamic Metadata” of the “Custom...” option, you can find all the wildcards needed.

Extracting LTC from internal audio

Linear (or Longitudinal) timecode (LTC) is an encoding of SMPTE timecode data in an audio signal.

The process of feeding LTC into the audio channel of a camera from external sources (such as timecode devices), is often used for cameras that either cannot handle external TC sync and/or do not provide proper timecode to the recorded clips. It offers the possibility to include such cameras in a workflow that requires synchronous timecode.

The timecode data existing in internal audio tracks of video clips can be extracted in Silverstack and Silverstack Lab to be applied to the metadata of the video clip. This enables subsequent processes that leverage timecode, such as e.g. providing detailed clip metadata for editing, transcoding clips with embedded timecode metadata, creating detailed clip reports or automatic audio sync based on timecode.

How to extract LTC and Apply it to clips

To extract LTC in Silverstack first make sure to ingest all clips with LTC into the Silverstack library.

Choose the bin or folder containing the LTC clips and from the **“Media”** button menu in the toolbar choose **“Extract LTC”**:

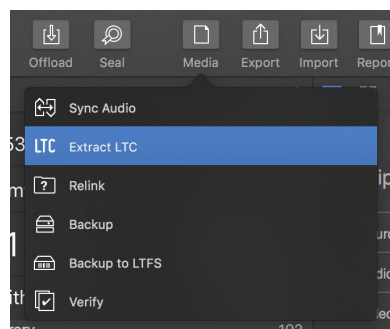


Fig. 1: Extract LTC in the “Media” menu

A wizard window opens that immediately extracts LTC for all selected clips:

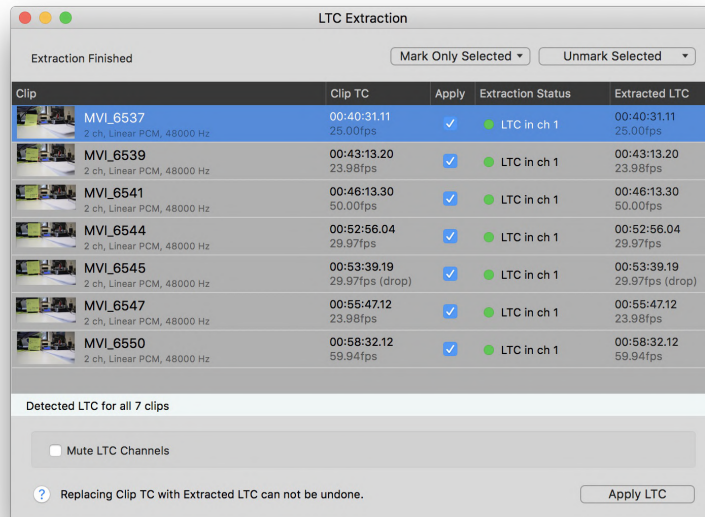


Fig.2: The LTC wizard finished the extraction of LTC for all selected clips

The following information is visible to the user in the wizard:

- Selected clip and audio information
- Original Clip TC
- Extraction status with channel information
- Extracted LTC and fps of LTC info

Silverstack attempts to read the LTC at the beginning of a clip. If no LTC is found the application iterates into the clip's timespan in several steps searching for an LTC in the whole clip. This also indicates that an LTC only has to exist for the beginning of a clip to be read out properly.

By checking the **"Mute LTC Channels"** checkbox you can make sure that after applying the LTC timecode to the clips the channels with LTC will become muted in Silverstack.

Click **"Apply TC"** to replace the Clip TC with the extracted LTC.

Please be aware that the process of applying the extracted LTC to the clip is not reversible and cannot be undone. Once you have taken over the extracted LTC to the clip you cannot go back to the original TC from the clip.

After taking over the extracted LTC to the clips each clips will have the regular **"TC Start"** and **"TC End"** in the General Info metadata on the right and in the table view:

	MVL_6537	00:40:31.11	00:40:42.18	11 s	FPS of TC	25.00 (non-drop)
	MVL_6539	00:43:13.20	00:43:27.01	13 s	TC Start	00:40:31.11
	MVL_6544	00:52:56.04	00:53:12.04	16 s	TC End	00:40:42.18
	MVL_6547	00:55:47.12	00:56:12.17	25 s	Reel / Tape	MVL_6537
					Ext. Audio TC Start	
					Ext. Audio TC End	
					Soundroll	

Fig. 3: The extracted LTC now is handled as the regular Clip TC in the Silverstack library

Now the timecode can be used for all subsequent task that involve the need of timecode for clips like e.g. transcoding or automatic audio sync based on timecode.

. Learn more about it in the article [How to Automatically Sync Audio based on Timecode in Silverstack Lab.](#)

Error cases and troubleshooting when extracting LTC

When extracting LTC from video clips there are different possible error cases that are displayed in the LTC extraction wizard:

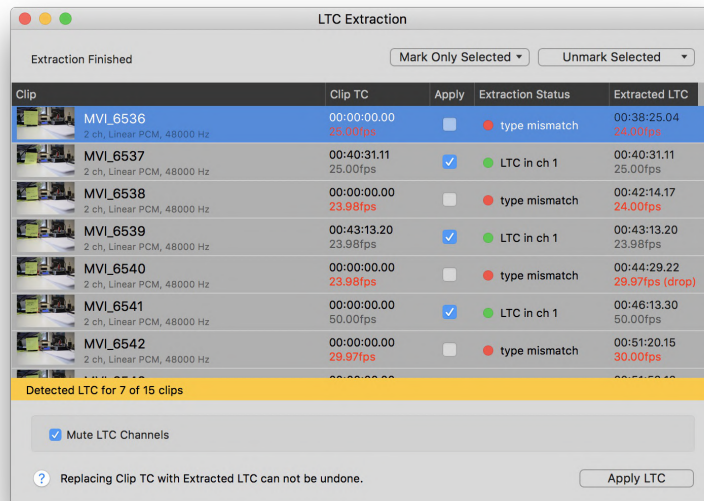


Fig. 4: The LTC extraction wizard with error messages

The **“Extraction Status”** column gives you insights about the following error cases:

- **“No LTC track found”**: No LTC track was found for the clip. Check the clips audio in the audio tab of the **“Audio&Color”** panel.
- **“Type mismatch”**: The fps of the LTC do not fit the LTC of the clip and the clip TC can therefore not be calculated correctly. This could especially become a problem with certain DSLR camera types that display 24fps as user selection in the menu but record in 23.976fps. Make sure clip TC and LTC match for a proper extraction.
- **“Clip offline”**: Clip is offline. Bring clips online to extract LTC.
- **“Extraction error”**: An unknown extraction error occurred.
- **“Clip has no audio”**: The clip has no audio. Check the clips audio in the audio tab of the **“Audio&Color”** panel.

Please be aware that LTC in the audio track does usually not survive compressed codecs such as e.g. MP3.

As the drop flag only affects the way of counting timecode and not its actual speed it is possible to apply drop-frame LTC on non-drop clips and vice versa.

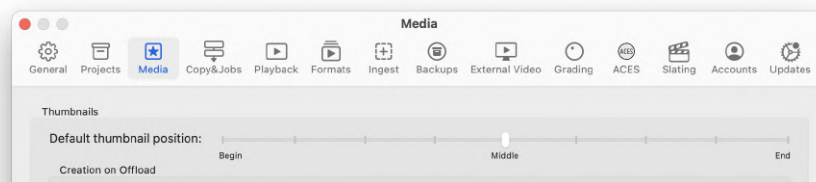
As the bounds of an image frame are not necessarily the bounds of an LTC-audio frame, an error of up to a half frame can accumulate when synchronizing audio to LTC.

Choosing custom thumbnail images

Silverstack offers a mechanism to define custom thumbnails to get a better overview of your shots – scenes – takes and allow you to navigate faster within your project library to visually locate clips.

Default behavior

Silverstack analyzes the length of a clip and picks the thumbnail image from the middle of the take by default. It's possible to customize the default thumbnail position in the Settings > Media menu. The thumbnail position can be set to 'Begin', 'Middle' and 'End' of a clip:



The Media Settings menu

While this works correctly for most situations, it might happen by coincidence that a black frame, a meaningless moment or an out of focus frame is automatically picked for the thumbnail image, which would not be helpful when trying to quickly identify the right take from the table view, collection view or in the reports.

It's also possible to change the automatic thumbnail selection in those situations.

Customizing clip thumbnails

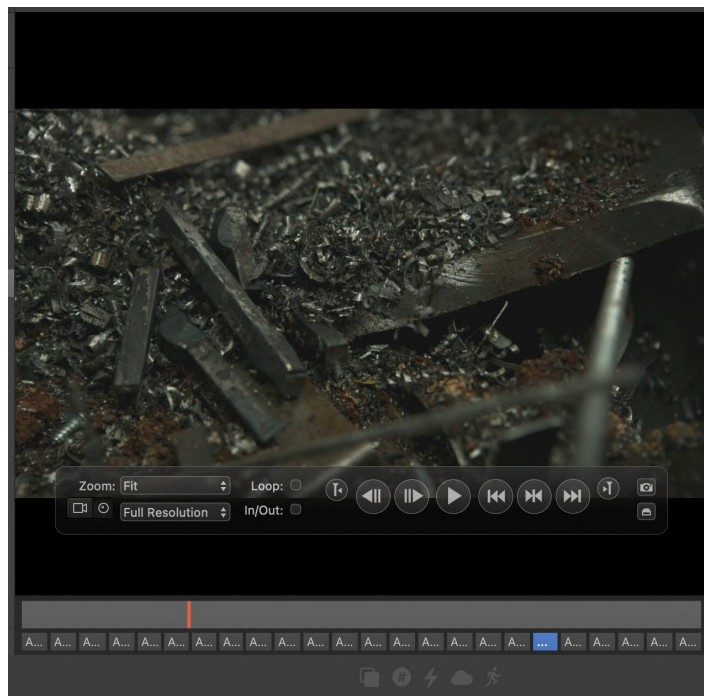
Recreating thumbnails

If you would like to recreate the thumbnails for a group of clips in your project library at once, you can do so by selecting the clips and then choosing Edit > Recreate Thumbnails. All the thumbnails for the selected clips will be then recreated.

Note: Once the function Recreate Thumbnails is used, all the previous thumbnail images will be erased and replaced with the current Default thumbnail position determined in the Settings > Media menu.

Choosing a specific frame as a thumbnail for a clip

In order choose a relevant frame for a clip or to [customize your reports](#) with a thumbnail that matches your criteria, simply select the clip in question, switch into the Playback View and locate the right frame. From there you can scrub to the desired frame and set your thumbnail via Edit > Set Thumbnail Frame. You can alternatively use the Shortcut $\mathbb{A} + T$ to set the current frame as the thumbnail for the clip.



Playback view in Silverstack

Editing metadata: View, organize, add, and filter clips

The clip library is the core of Silverstack. It easily enables you to inspect all the metadata of your clips and let you organize all your clips by these metadata. During [offload](#) and [backup](#) all clips and files plus their file copies are registered in the Silverstack's clip library. Over time using Silverstack in your production you always have access to these clip metadata which refer to your project based media files. During all organizing and editing tasks Silverstack never modifies the data of the original and their backups but saves all changes separately.

We will give you a short overview about how to modify and add metadata in the clip library:

Enter metadata

Metadata (metacontent) is defined as data providing information about one or more aspects of your clips, for example such as:

- Timecode
- Resolution
- Sensor
- Frame Rate
- Take, Shot, Scene
- Reel name

A lot of clip metadata like resolution, reelname, or exposure is already added to your clips by the camera and is therefore not editable. Non-technical metadata like scene/shot/take information however can be edited but is not stored within the original video files. Instead Silverstack saves this editable information and links it to the corresponding clip file. You can add a lot of this supplementary metadata very easily in Silverstack.

You can edit metadata in the Silverstack [Information panel](#), in the "General" (figure 1 #1) and "User" tab (figure 1 #2). Information edited in the "General" tab can be applied to several selected clips. For doing so, click on the small pen symbol (figure 1 #3) right to the metadata field. Make your desired changes and enter the information by clicking "Apply".

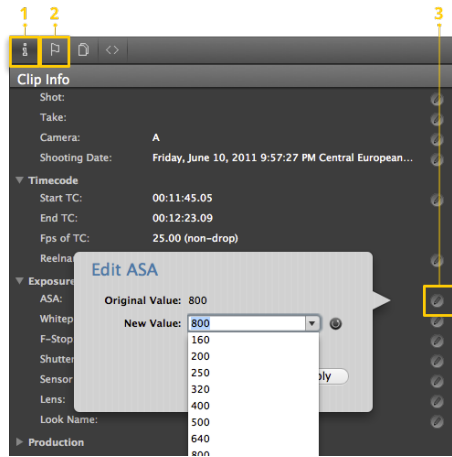


figure 1: Information panel

Metadata like slate information, comments, ratings, flaggings etc. can be edited in the “User” partition (figure 2) and affect exclusively the currently active clip.

- Slate Info: Enter Scene/Shot/Take information, use the arrow keys to increase or decrease a value.
- Flag: By flagging a clip (figure 2 #1) you brand it with a flag symbol which can be interpreted individually.
- Rating: You can rate each clip (figure 2 #2) by assigning a range of zero to five stars to it.
- Comment: Save important information regarding a clip by commenting (figure 2 #3) it.
- Label: Each clip can be labelled (figure 2 #4) and thus be categorized. Each label in the drop-down menu can be edited in the [application preferences](#). You get there pretty fast by clicking on “Edit..” in the drop-down menu as you can see in figure 2 #5.

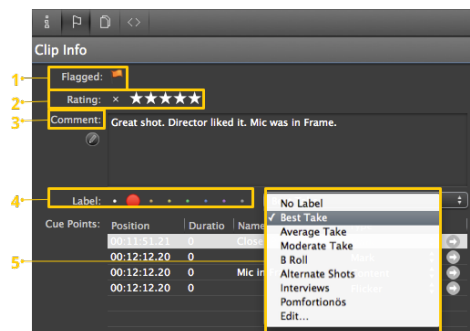


figure 2: Information panel – “User” section

- Cue Points: The cue points table (figure 3) shows all set markers for this clip (#1). For a better overview of your markers, within a clip you can assign each marker to one of a set of predefined categories (#2) and also search for them (#4). You can add new markers, delete existing and jump to the next by the buttons in the lower left corner (#3).

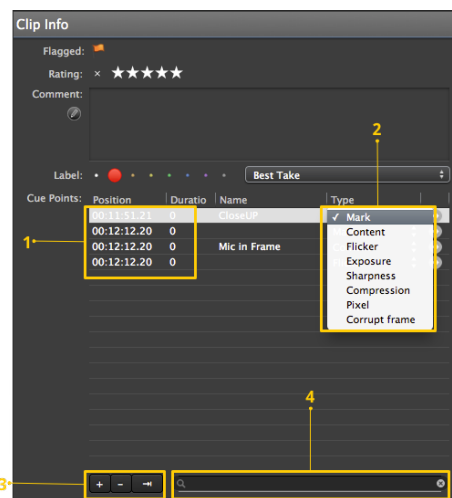


figure 3: Information panel – “User” section: Cue points

Using the clip information view

To inspect, edit, and add metadata you can use the information view shown in the right sidebar.

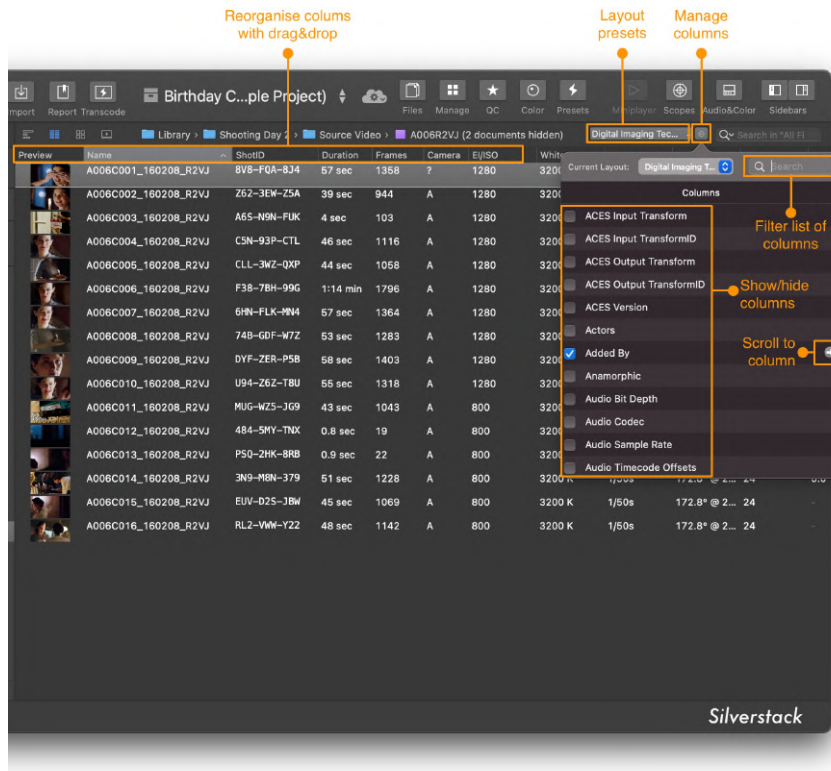
The Information view provides several subviews:

- General Info – Overview of the clip’s metadata
- User Info – Additional metadata like slate information, ratings, comments, and cue-points
- File Info – List of file resources, showing the different disk the clip was copied to
- Header Info – Detailed information of all metadata extracted from the clip

Using the table view

Silverstack’s clip table view is a great way to get an overview of the various metadata of a set of clips. Some of the fields are editable and you can jump from field to field by pressing the TAB key.

Custom table layouts can be saved and restored. You can re-arrange columns by dragging their table headers. Clicking the gear button reveals a user interface with a list of all available columns. Via the checkbox, each column can be shown or hidden. The arrow button which appears only near activated columns, allows to automatically scroll the main window to a position where the specific column is in the visible area.



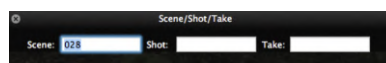
Manage the table layout

Using the quick entry panels

In the [playback view](#) the “Quick Entry” panels allow you to easily set metadata for the current clip via keyboard shortcuts in a very fast way. Here is an overview of the available commands:

1. Rating ⌘+⌘+A
2. Comment ⌘+⌘+S
3. Label ⌘+⌘+D
4. Scene/Shot/Take ⌘+⌘+T (figure 4)

You can also trigger the panels from the Silverstack menu: *Edit > Clip > Quick Entry*



Quick Entry panel for Scene/Shot/Take information

Filter by metadata

The more metadata you have added to your library the better you can use it to organize your clips using some metadata attributes.

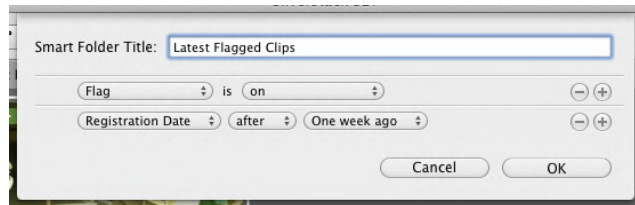
Search

You can query all metadata fields by using the search field in the upper right of Silverstack. To search for cue points use the search field at the bottom of the “User” tab within the information panel (figure 3 #4).

Smart folders

Smart folders are folders that show all clips that match some criteria. Silverstack creates some smart folders by default like “Registered today” a folder that contains all clips that were added to the library today.

To create your own smart folders, just click on the “+” button in the lower left and choose “Add Smart Folder”.



Adding a smart folder showing the flagged clips of the last week

You can now specify the criteria a clip has to fulfill in order to be added to the smart folder. If you are adding more than one filter option, you have to choose if the clip has to fulfill only one or all of it. The example above shows a simple smart folder showing all the clips that are flagged and that were registered during the last week.

Export metadata

To really leverage your metadata you might want to export the information for usage in other tools of your digital cinema workflow, Silverstack provides the following export options:

- **Reports** – Create a report that contains an overview on all clips and save it as pdf/html.
- **CSV, XML** – Create files that you can import in spreadsheet applications like Excel or Numbers. Or write your own scripts to process the data.
- **Transfer to Final Cut Pro** – Get your clips and the metadata into Final Cut Pro 7 and X.
- **Transfer to AVID Media Composer** – Get clips and metadata into AVID using ALE files

For further information about the Silverstack “Transfer” function go to the respective article [Transfer](#).

Note: Not every transfer format can carry the same amount of information. That is why metadata workflows differ from format to format and thus from tool to tool.

Import metadata

You can import certain metadata file formats from 3rd party applications to get additional clip metadata in the Silverstack library via the Import menu in the toolbar. Additionally, you can take over metadata when syncing audio clips or when [matching looks](#) created in Livegrade.

Further information how to choose and validate imported metadata is provided in the article [Preview metadata before importing](#).

Working with color

Basic color control in Silverstack

Each clip has a “Look Source” that defines its color processing (see General Info tab, right bar).

Available look source options are:

- **None:** No color processing applied, clip shows no look.
- **From File:** Clips from certain cameras contain look metadata (e.g. ARRI Alexa clips) that can be applied directly from file metadata. In case there is no look embedded, Silverstack applies the default Log to Rec.709 conversion for the specific format.
- **Preset:** Select a LUT transform from the available LUT presets integrated in Silverstack Lab.
- **User-defined LUT:** Load a custom LUT to be applied to the clip.
- -----
- **Custom Look:** Create a custom look with node based grade controls.

This feature allows users to display “Log” clips in a different color space by applying preset LUTs, user predefined custom 3D LUTs or color metadata (looks) embedded in clips (for selected formats¹).

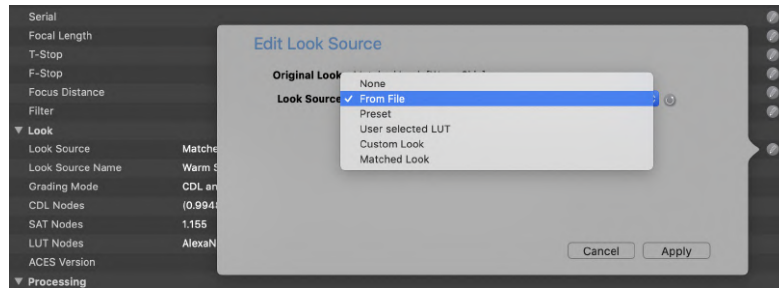
The color processing enables you to create thumbnails, playback and transcode the clips with a look applied.

The default look source on ingest for certain clip types can be set in the format preferences (see section “Setting the Look Source for the Ingest of Clips”)

Editing the look source in the general information tab

It’s possible to modify the color processing of a certain clip or group of clips by setting a different Look Source in the General Information metadata tab, in the “Look” section.

In order to edit the Look Source of multiple clips, just select them from the library, click on the «edit» button and select an option from the list. Once you click on «Apply» all the selected clips will have the same Look Source.



Setting a custom look for multiple clips

From the Look Source selection you can choose the processing “**Custom Look**” to enable a custom look for a clip. Select multiple clips and select the processing to enable it for all of them.

In the Silverstack player view you will then see the grade controls being opened up. You can learn more about the grading controls and the look library from the articles [Grading Controls in Silverstack](#) and [The Silverstack Look Library](#).

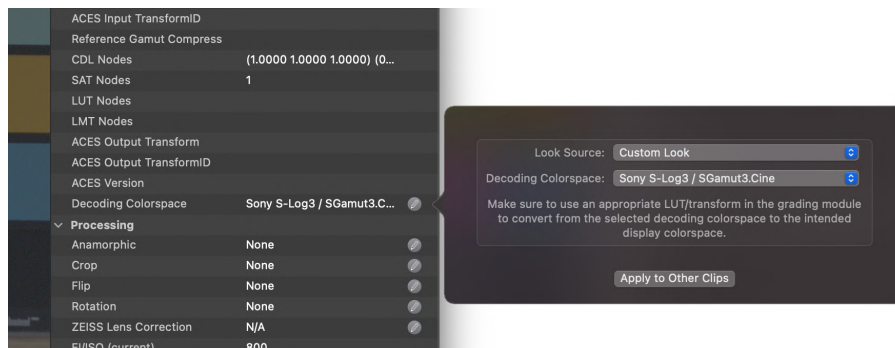
Decoding color space

Some RAW formats allow selecting the decoding color space and gamma. This specifies the result of the manufacturers’ SDK RAW development and is the working color space for Silverstack Lab’s grading module. The decoding color space and gamma can only be specified when switching to Silverstack Lab’s “Custom Look”, “Preset”, or “User selected LUT” modes. Currently, these options are available:

- ARRIRAW (Mini LF): LogC3/AWG3 or LogC4/AWG4
- Sony X-OCN: S-Log3/SGamut3 or S-Log3/SGamut3.Cine
- Canon RAW: Log 2/Cinema Gamut, Log 3/Cinema Gamut, Log 2/Rec. 709 or Log 3/Rec. 709
- DJI CinemaDNG: Rec. 709/Rec. 709, sRGB/sRGB, DJI D-Log/Rec. 709, DJI D-Log/DJI D-Gamut
- ProRes RAW: HLG / Rec. 2020, Canon Log 2 / Cinema Gamut, DJI D-Log / DJI D-Gamut, Fujifilm F-Log2 / Rec. 2020, Nikon N-Log / Rec. 2020, Panasonic V-Log / Panasonic V-Gamut, Sony S-Log3 / SGamut3, Sony S-Log3 / SGamut3. Cine

Please note that changing the decoding color space requires manually selecting an appropriate transformation LUT in the grading module. (E.g., changing the decoding color space of an Alexa Mini LF clip from LogC3 to LogC4 requires manually changing the LUT node to “LogC4 → Rec.709”)

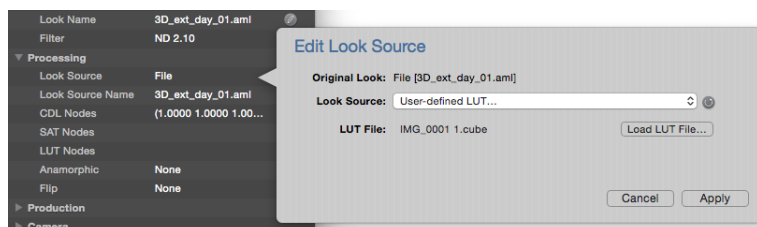
The “Apply to Other Clips” button allows transferring of this configuration to all clips of the same format in the current selection.



Select the decoding color space in the general info

How to apply and manage custom LUTs

One of the features related with the look control in Silverstack is the ability to apply custom LUTs to one or multiple clips. Users can load custom 3D LUTs generated by other software applications – such as LiveGrade Pro. When a custom LUT is used, Silverstack displays the thumbnails and playback with that look applied. Transcoding of the clips with that LUT is also possible.



Custom LUTs loading

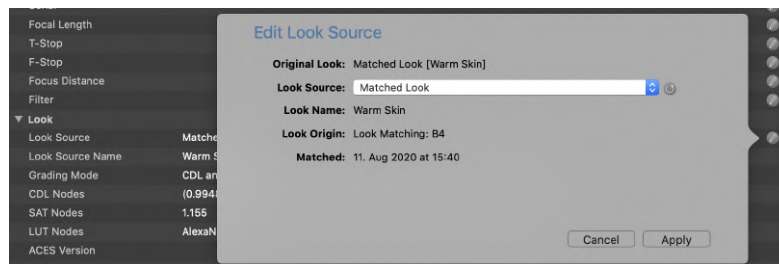
The supported 3D LUT formats are:

- .cube (32x32x32, 33x33x33 and 65x65x65)
- .3dl (32x32x32)

In order to load them, just select the Look Source to be «User-defined LUT...» and click on the «Load LUT File...». Then navigate through Finder to the LUT file, select it and choose «Open». Finally, click on «Apply» in the Edit Source pop up to apply the LUT to the clip.

Look source “Matched Look”

When looks from Livegrade have been matched to clips via Look Matching a new look source is available named “Matched Look”.

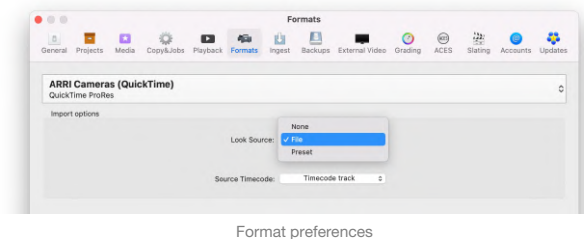


You can start and customize the matched look by pressing “Edit Look...” in the color panel. You can always return to the matched look by setting the look source back to Matched Look.

Setting the look source for the ingest of clips

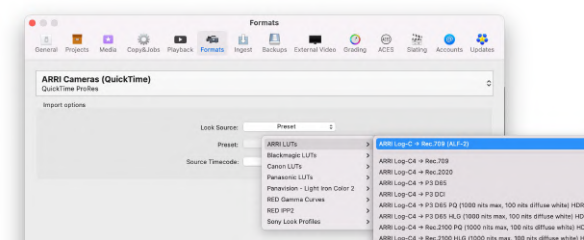
The color processing can take place automatically when ingesting the clips by reading their metadata or using a preset LUT. In addition, the look applied can be modified or disabled for each clip individually.

In order to automatically apply a look to the clips while being ingested, you have to go to the «Format Options» section on the «Preferences» menu:



Each format allows you to define a different color processing. You can choose the format using the «Format Selector». Once the desired format is selected you can set the Look Source as:

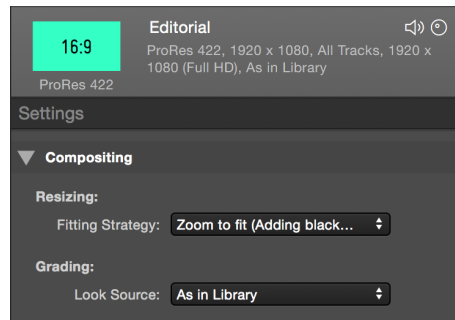
- **None:** Disables the color processing and displays the clips and thumbnails unmodified (as recorded).
- **File:** Reads the clip’s metadata and applies the color processing described in the embedded looks. In case there is no look embedded, Silverstack applies the default Log to Rec.709 conversion for the specific format.
- **Preset:** with this option you can choose the color processing used from a list of preset LUTs:



Setting the look for transcoding

While transcoding clips you can choose the look the clips will be transcoded with. You can change the settings for the Look source in the transcoding tab in the right bar (see figure 5):

- **As set in Library (“As in Library”):** Applies the look that is currently selected for the specific clip in the Library. In case you need to transcode the clips with a custom look applied, this is the right option.
- **No Look (“None”):** Transcodes the clips with no look applied (as they were recorded, with no color processing in the camera acquisition color space).
- **Look from File (“From File”):** Reads the clip’s metadata and applies the color processing described in the embedded looks. In case there is no look embedded, Silverstack applies the default Log to Rec.709 conversion for the specific format.



Choose the look settings for transcoding

¹ The selected formats with Look Metadata reading are Alexa ProRes, ARRIRAW, Amira ProRes, RED Raw and Panasonic Varicam 35. If no look metadata is embedded in the file, a default log-to-video conversion is chosen for the specific format (e.g. XAVC with S-Log).

Look matching

While using **Silverstack together with Livegrade** on set to manage clip data and looks hand in hand, you surely want to combine the created information afterwards.

Silverstack offers a solution to avoid assigning looks to clips manually. You can connect them based on the metadata you already created while generating them.

The looks/shots can be transmitted

- via an exchange file format (.pfla) or
- via [Pomfort ShotHub](#).

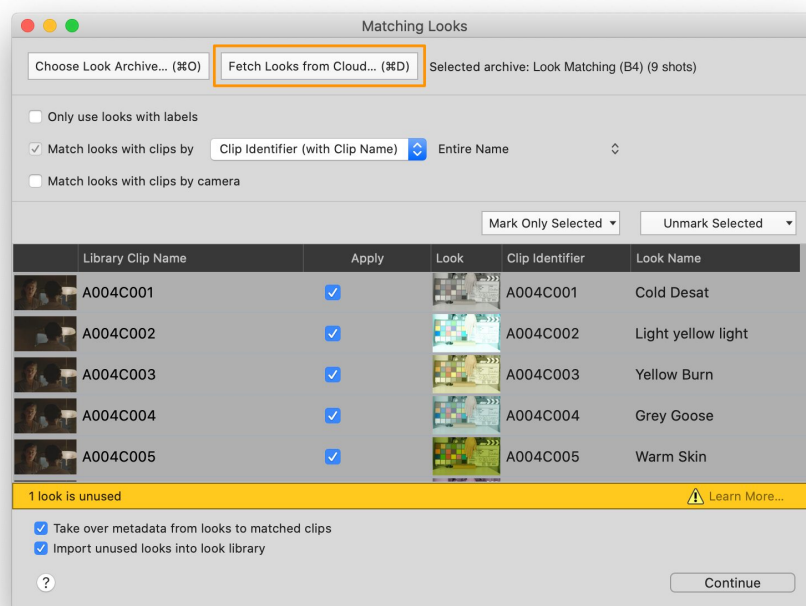
Get looks via ShotHub

You can retrieve shots from Pomfort ShotHub that have been created and uploaded with Livegrade to match them to clips in Silverstack.

NOTE: If you are not using the same Pomfort account in Livegrade and Silverstack, you need an invitation of the admin to the Shothub project containing the grading information that you want to access for look matching.

The steps to match looks from Livegrade to Clips in Silverstack via ShotHub are:

1. Upload shots from Livegrade to ShotHub (more information please see the article [Connecting Livegrade to ShotHub](#))
2. Log in to ShotHub in Silverstack with your Pomfort Account credentials (more information please see the article [Connecting Silverstack to ShotHub](#))
3. Click the “Match Looks...” button in the color panel toolbar or select “Match Pomfort Looks” from the Import menu in the main toolbar.
4. Click “Fetch Looks from Cloud” and select the bin with shots to be fetched:



5. Match by desired criteria and apply looks (and metadata)

Get looks via file

It is possible to automatically match a package of looks created with Livegrade Pro to the according clips in Silverstack. A Look Archive (.pfla) containing several different looks can be exported from Livegrade Pro.

This Look Archive can be imported into Silverstack to then match the looks to the according clips based on different metadata.

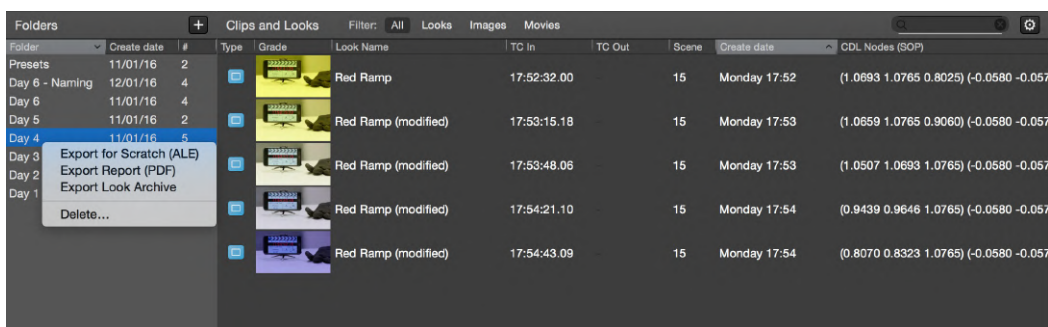
The steps to match looks from Livegrade to Clips in Silverstack via a Pomfort Look Archive File are:

1. Export a Look Archive from Livegrade Pro
2. Import the Look Archive into Silverstack
3. Match by desired criteria and apply looks (and metadata)

1. Export a look archive from Livegrade Pro

A Look Archive can contain one or multiple looks along with all the further metadata acquired in Livegrade Pro.

To export a Look Archive put all the desired looks into one folder in the Livegrade Look Library. Perform a right click on that folder and choose “Export Look Archive” from the context menu:

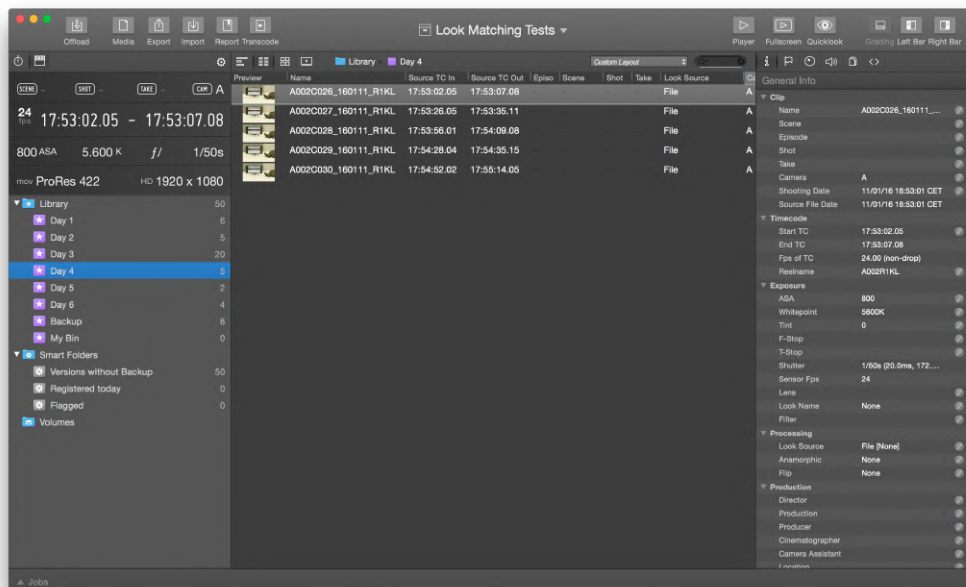


Exporting a Look Archive from LiveGrade Pro

Save the resulting .pfla (Pomfort Look Archive) file to the desired destination.

2. Import a look archive into Silverstack

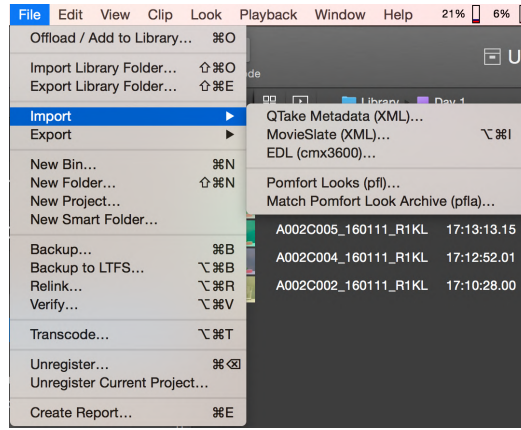
Make sure you ingested all the clips that will get a look into one bin in Silverstack. Learn about offloading media from the article [Parallel Offloading](#).



Bin with clips that should receive matching looks

Make sure to have the according bin selected prior to starting the import.

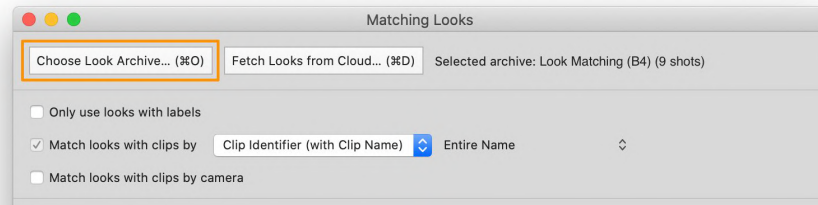
To import a Look Archive into Silverstack go to the Main Menu. Choose “**File > Import > Match Pomfort Look Archive (.pfla)**”:



Importing a Look Archive for Matching

3. The look matching wizard

After that a wizard window will open. Select “Choose Look Archive...”.

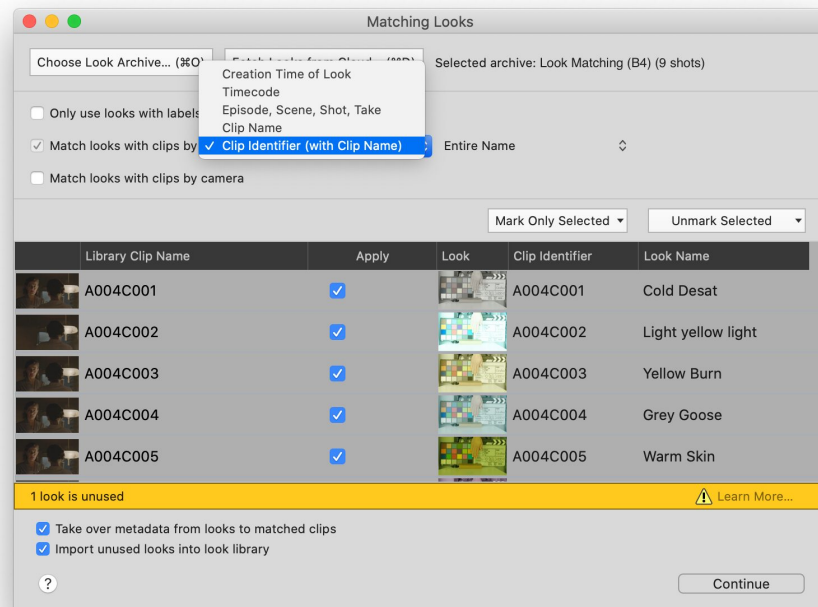


Navigate to the .pfla file you saved from LiveGrade Pro, select it and click “Open”.

4. Match by desired criteria and apply looks

From this step on the process is identical whether the looks come from a file or via the cloud.

You can choose between different matching criteria:



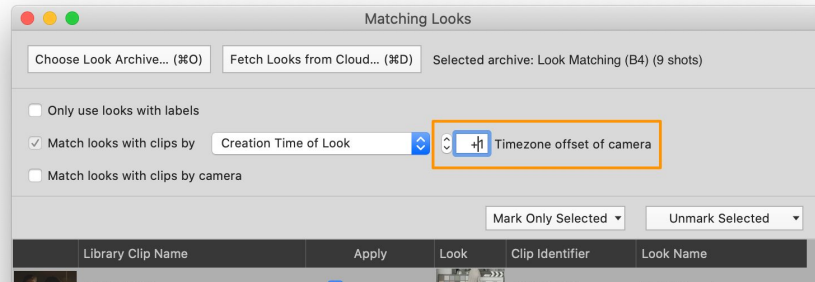
Set the look matching criteria

• Match by timecode

This criterion will match the looks by timecode. The look will match to a clip if its *TC In* is before or within the range of the *TC* of the clip. Additionally the looks will be applied to all clips that follow until the next look with a subsequent *TC In*. If a new look has a *TC In* that is inside of the *TC range* of a clip (so the look before ends within the clip) the matching wizard will suggest two looks but preselects the latter by default.

• Match by creation time of look

This criterion will match the looks by their creation time. The look will match to a clip if its creation date is before the time range of the clip. It will match to all following clips until a new creation date of a look is found that is placed inside the time range of a clip. Additionally you can shift the timezone if the camera setup was wrong at the time of recording:



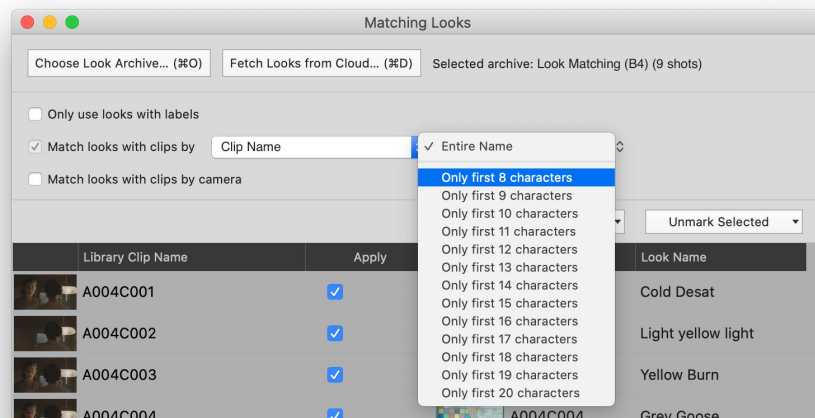
Adapt the timezone offset if needed

• Match by episode, scene, shot, take

This criterion will match the looks by the episode, scene, shot and take metadata values. The look will match to a clip if the metadata for episode, scene, shot or take is equal.

• Match by clip name

This criterion matches the looks by Clip Name. The Clip Name of the look has to be equal to the Clip Name in Silverstack or you can select to only match by the first characters of the Clip Name.



Match only the first 8 characters of the clip names

• Match by clip identifier (with clip name)

This criterion matches the looks by Clip Identifier. The Clip Identifier of the look has to be equal to the Clip Name in Silverstack or you can select to only match by the first characters of the Clip Name.

Additionally to the three different matching criteria, for each of them you can:

• Match with camera

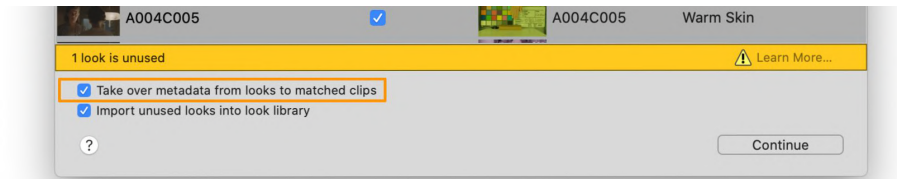
Additionally to the selection of your criterion among the three criteria you can choose if the looks should be matched to the clips by the camera metadata value.

Example:

If you have Camera A and B and match looks by timecode the looks may apply to both of the cameras if they have the same TC. If you then enable the checkbox "Match with camera" the camera value will be considered on top of the TC and will then match the correct looks to the camera specific clips.

Taking over metadata from looks to matched clips

The PFLA (Pomfort Look Archive) enables you to take over metadata from the Livegrade Pro looks (from the Shot Library) to the matched clips in Silverstack



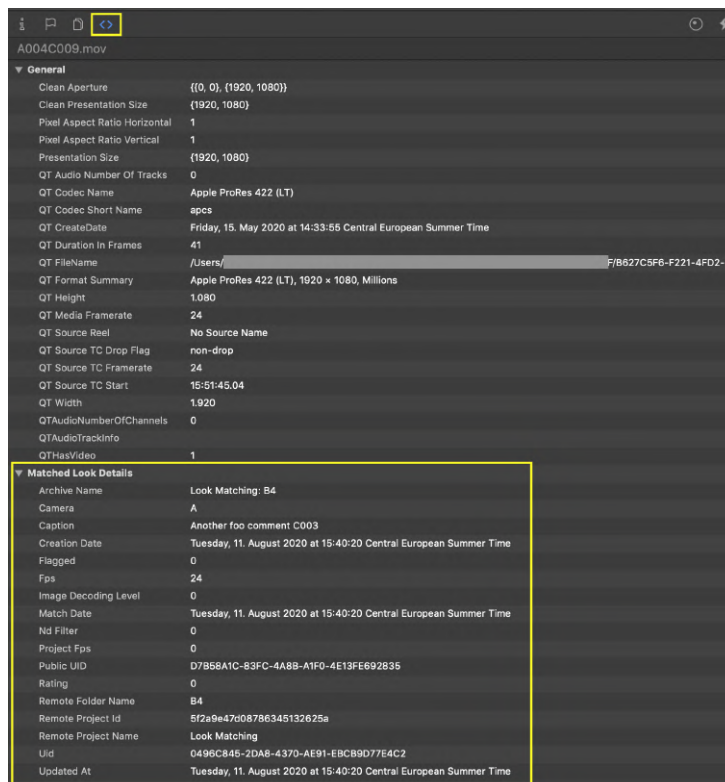
In the lower section, the option to take over metadata from Looks to matched clips is enabled by default via its checkbox. If checked, the “Continue” button will lead you to the next wizard page, where you have several options for importing of the metadata. Also, you can [preview the metadata import](#).

- **Insert / Update Behavior:** *Insert if empty only* fills metadata in Silverstack if it is not set and prevents metadata to be overwritten. *Overwrite* forces the metadata from the Look in the PFLA to be written in the according Silverstack metadata field.
- **Import Content:** You can deselect certain metadata categories that you do not want to be imported. The tooltip of the label shows the concrete metadata fields that are included within each category.
 - *Slate Info:* Camera, Season, Episode, Scene, Shot, Take, Reel Name, Int/Ext, Day/Night
 - *User/QC Info:* Flag, Rating, Comment, Caption, Distance to Object, Custom 1-6
 - *Exposure Info:* ASA, Whitepoint, Tint, ND Filter
 - *Lens Info:* Lens Model, Focal Length, T-Stop, Focus Distance, Filter
 - *Production:* Shooting Day, Crew Unit, Location

To learn how to simply transfer looks from LiveGrade to Silverstack please refer to this article [Transferring Looks from LiveGrade Pro to Silverstack](#).

Matched look details in header tab

More details about the matched look can be found in the header tab of the right bar:



Transferring looks from Livegrade to Silverstack

The Look Library and grading controls in Silverstack enable you to send and receive looks from Livegrade. You can choose to export a single look or multiple looks. A single look is saved as a Pomfort Look (.pfl) file, while multiple looks are combined into a Pomfort Look Archive (.pfla) file.

To transfer looks from Livegrade, including all grading nodes and their settings, you can follow these steps:



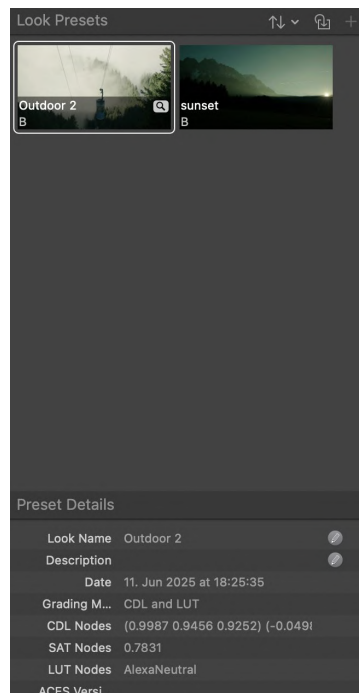
Exporting a look from Livegrade

1. Select the look(s) in the Livegrade library. Then go to File > Save Current Look As...
2. After that, a save dialog appears.
3. Export Look: select “Pomfort Look (.pfl)”.
4. Finally, choose the name and destination to save the file.

More information about creating and managing looks in Livegrade can be found in the articles [Grading Modes in LiveGrade](#) and [Create Clips, Stills and Looks](#).

Importing a look into Silverstack

1. Open Silverstack.
2. Go to the Main Menu and select File > Import> Pomfort Look Presets (pfl)...
3. An open dialog shows up. Navigate to the previously saved .pfl file from Livegrade.
4. Please make sure that the Look Library in Silverstack is shown on the right Info panel. You can learn more on how to use the Look Library in the article [The Silverstack Look Library](#).
5. Go to the Look tab:



The Looks section with the imported look

The look imported from Livegrade will appear in the “Look Presets” section containing:

- Thumbnail
- Look name
- Metadata

The settings of the grading nodes reflect those of the look in Livegrade. After applying the look to the desired clip you will be able to modify it in Silverstack from the point where you left off in Livegrade.

For more details about the grade controls in Silverstack, please refer to the article [Grading Controls in Silverstack](#).

Exporting a look archive from Livegrade

A Look Archive can contain one or multiple looks along with all the metadata acquired in Livegrade.

You can export a Look Archive via “File > Export as Look Archive”.

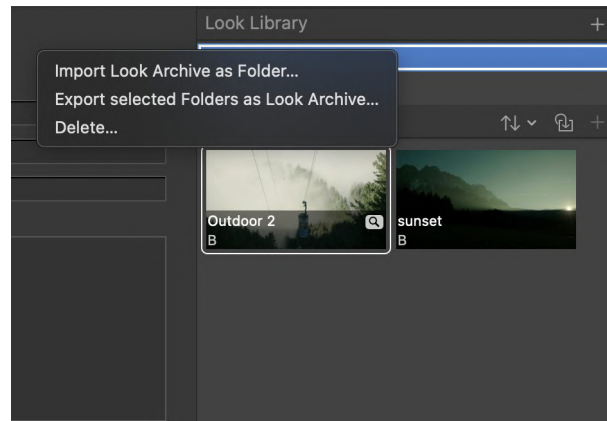
Save the resulting .pfla (Pomfort Look Archive) file to the desired destination.

Importing a look archive into Silverstack

1. First go to the Looks tab on the right panel of the Silverstack UI.



2. Right click on the Look Library:



Importing a Look Archive as a folder.

3. Select the desired .pfla (Pomfort Look Archive) file.

The looks from the archive will then be available in the newly created folders in the Silverstack Look Library.

Exporting looks from Silverstack

Export your custom Looks from Silverstack with ease to various applications and devices. Whether from selected clips or the Look Library, Silverstack lets you export in formats like AMF, CDL, and LUT. To learn more about the Silverstack Look Library, please refer to the article [The Silverstack Look Library](#).

Looks from clips

The export option “Looks from Clips” can be accessed from the **Export** button in the toolbar or via File > Export > Looks from Clips. As soon as one or multiple clips in the library are selected both options will point to a save dialog to choose from different formats for the export:

Looks include:

- ACES Metadata File (.amf for Grading Mode “ACES CDL”)
- ACES Metadata File + CLF [combo] (.amf + .clf for Grading Mode “ACES CDL Advanced”)
- ASC-CDL (.cdl, for all grading modes where possible)
- ASC-CDL + 3D LUT [combo] (.cdl + .cube file)
- Pomfort Look Exchange Format (.pfl, for Look Exchange with LiveGrade Pro)

LUTs for software include:

- Pomfort LiveGrade (33x33x33, RGB order, .cube file)
- Pomfort Silverstack (33x33x33, RGB order, .cube file)
- Adobe (32x32x32 3D LUT, .cube file)
- Assimilate Scratch (32x32x32 .3dl file)
- Autodesk Lustre (33x33x33 .lut file)
- Colorfront OSD (17x17x17 .3dmesh file)
- [Convergent Design Odyssey](#) (17x17x17 .cdlut file)
- DaVinci Resolve (33x33x33 3D LUT, .dat file)
- DigitalVision Nucoda (17x17x17 .cms file)
- Filmlight Baselight (32x32x32 .cube file)
- REDCINE X PRO (33x33x33, rgb order .cube file)

LUTs for devices include:

- [AJA Lut box](#) (17x17x17 .cube file)
- Novastar (.cube file)
- Panasonic Varicam (17x17x17, rgb order .vlt file)
- Sony F65 (.cube file)
- Teranex Mini (.cube file)

Choose the desired Look format, a naming scheme, and the intended directory, and hit **Save**. You can then use the exported Look in the intended destination software or device.

Note: If you decide to export looks as AMFs (ACES Metadata File), you can create an ALE that references the clips to the exported AMFs.

Looks from the look library

To export the desired information, choose one or more Looks in the Silverstack Look Library. Perform a secondary click (right-click) on one of the selected Looks, and from the context menu, choose “Export selected Looks”:

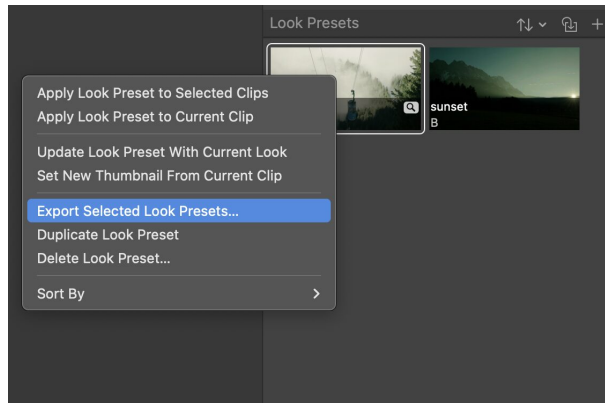


Fig.1 Select one or multiple looks for export and with a secondary click open the context menu.

The export window described in the section above (“Looks from Clips”) is opened to select the name, file type, and naming scheme for the exported Looks.

Exporting Look archives from Silverstack

You can export complete folders with Looks directly from the Silverstack Look Library into a Look Archive (.pfla). To do that select one or multiple folders from the Silverstack Look Library. Then, perform a secondary click (right click) and select “Export selected Folders as Look Archive” from the context menu:

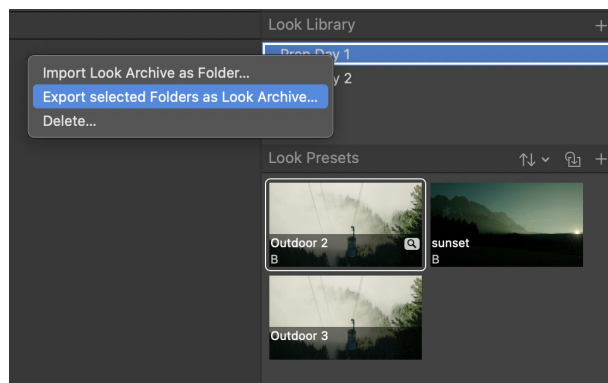


Figure 2: Exporting a Look Archive from a folder in the Silverstack Look Library.

In the following wizard, select the directory you want to save to and click **Save**. The .pfla file will then be available for further use in that directory.

To learn how to import a Look Archive please refer to the article [Importing Looks \(from LiveGrade\)](#).

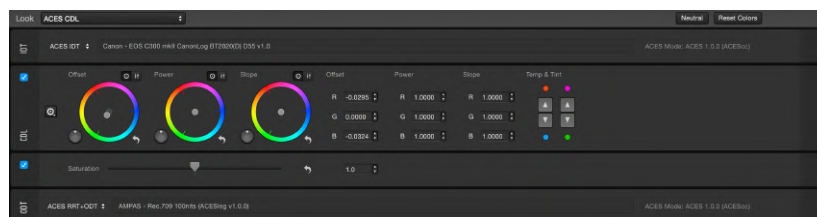
Using the ACES CDL grading mode

Silverstack XT and Lab have the capability of reproducing ACES workflows.

All ACES versions support different IDTs (Input Device Transforms) and ODTs (Output Device Transforms). Please, make sure that the ACES version used in Silverstack matches the one used during the post production process for maximum color accuracy.

ACES grading modes

Silverstack implements this pipeline in the ACES (Academy Color Encoding System) grading modes. You can see the nodes and controls of the “ACES CDL” grading mode in the screenshot below. On every interaction with the color controls of the ACES grading mode (e.g. change of IDT, modify of ASC-CDL) all transforms are baked together automatically and are applied to the image.



Grading controls in the “ACES CDL” grading mode.

Silverstack also offers the “ACES CDL Advanced” grading mode. This grading mode lets you add multiple grading nodes between the IDT and ODT and LMTs for advanced workflows.

The CDL controls behave the same way as in the CDL Grade mode and can also be exported as usual from a saved grade. ACES grades can also be exported as 3D LUTs, including the CDL values, IDT and ODT.

From ACES version 1.3 you can enable the “Reference Gamut Compress” parameter within the IDT node of ACES grading modes. The ACES Reference Gamut Compression achieves better accuracy with extreme color ranges and replaces the LMT “Blue Light Artifact Fix” that was widely used in previous ACES versions.

The metadata fields “ACES Input Transform”, “ACES Input TransformID”, “ACES Output Transform”, “ACES Output TransformID”, “Reference Gamut Compress” and “LMT Nodes” allow inspecting ACES look metadata in the shot library and communicating relevant info in PDF reports.

Look modification transforms (LMTs)

You can add a “LMT” node in Silverstack (in the ACES CDL Advanced grading mode) that supports the official, predefined LMT transforms shipping with the respective ACES version as well as custom 3D LUTs.

Note: LMTs are specified by the ACES specification as a transform from and to ACES AP-0 (the linear ACES color space). When using 3D LUTs as a way to exchange “LMTs”, these 3D LUTs are usually intended to be applied in a typical grading working color space such as ACEScct (3D LUTs cannot properly represent transforms to be applied in linear color encoding as they would not be able to provide the necessary fidelity in all brightness levels). So in Silverstack, the “LMT” node is applied in the working color space (for instance ACEScct).

Managing ACES versions

Silverstack supports multiple versions of ACES, ranging from 0.7.1, 1.0, to the latest ACES version 1.3. For compatibility with the post production workflow please choose the right ACES version, as the transforms can be slightly different in different versions, and newer version usually include more and more recent input (IDT) and output (ODT) transforms, including RRT+ODT transforms for HDR in ACES version 1.1 or higher.

Note: Transforms for ACES version 1.3 can be downloaded from Silverstack v8.2 or higher

You can manage the available ACES versions and transforms via Silverstack’s [ACES settings](#). The dropdown lets you select the ACES version for new looks. Every new look will be initialized with the ACES version selected in the dropdown in the preferences.

That means that every look in the library made with an ACES grading mode has an associated ACES version (you can find that version in the “**ACES Mode**” column in the Silverstack library). Saving looks with different ACES versions to the library will make it easy to compare the look of different ACES versions effortlessly.

The icon in the status bar will either signalize an available set of transforms (green checkmark) or a set of transforms that can be downloaded from the servers (download icon with downwards arrow).

Click the button “**Check for New Versions**” at the bottom of the preferences window to see if new ACES versions are available to download from the Pomfort servers.

Available ACES versions

Different versions of the ACES are available from the application preferences (see also section “Managing ACES Versions”) :

- v 1.3.0 (Working Color Space: ACEScct and ACEScc)
- v 1.2.0 (Working Color Space: ACEScct and ACEScc)
- v 1.1.0 (Working Color Space: ACEScct)
- v 1.0.3 (Working Color Space: ACEScc and ACEScct)
- v 1.0.2
- v 1.0.1
- v 1.0.0
- v 0.7.1
- v 0.7.0
- v 0.2.0

ACES grades can also be exported as 3D LUTs, including the CDL values, IDT and ODT.

Exporting ACES-based looks as AMF

Silverstack can export the current look of a clip using “File > Export > Looks from Clips...” to export looks from all selected clips or stored looks in the look library as AMF files (“ACES Metadata Files”, .amf). Currently the export of AMF is limited to the ACES CDL grading mode.

For more information about exporting Looks from the Silverstack Look Library see the article [Exporting Looks from Silverstack](#).

Supported ACES IDT and ODT transforms

Silverstack offers all officially (in the Academy’s repository) available IDT and ODT transforms, as well as a few custom transforms by Pomfort. Please take a look at the available transforms in Silverstack’s preferences in the “ACES” tab.

ACES landing page

See <http://pomfort.com/workflow/aces/> for an overview of ACES related topics with Pomfort’s products.

Working with audio

How to sync audio manually

Silverstack allows you to manually sync audio clips to video clips. The process of manually syncing audio in Silverstack is divided into two basic steps:

1. Matching the according audio clip to a video clip.
2. Syncing the audio and video clip at the right position.

The basic idea of the sync at the right position bases on the functionality of setting slate markers in the video and audio clips. By setting slate markers, the user defines a sync position in both audio and video to be used to link the audio and video clips. Silverstack automatically aligns the video and associated audio clip at the defined positions. The article explains in detail how to set the slate markers to attain a sync at the intended position as well as how to move the sync position if needed. The counterpart of the manual sync is the [automatic sync by timecode](#) that is available in Silverstack Lab. This article requires knowledge about the [Audio Panel](#) and [Offloading](#).

1. Ingest audio and video clips

Please refer to the articles **Workflow Configurator** and **How To Configure A Workflow** to learn the essentials on offloading audio and video data. It is important to register the audio files separately from the video files into separate bins. Assuming you have registered or offloaded at least one video and audio card, find the video clip you want to manually sync audio with. Please note you can set audio and video slate markers independently from each other and in any order.

2. Open the Audio & Color panel

Click on the **Audio & Color** or the **QC** button on the top right side of the toolbar to open the Audio Panel.

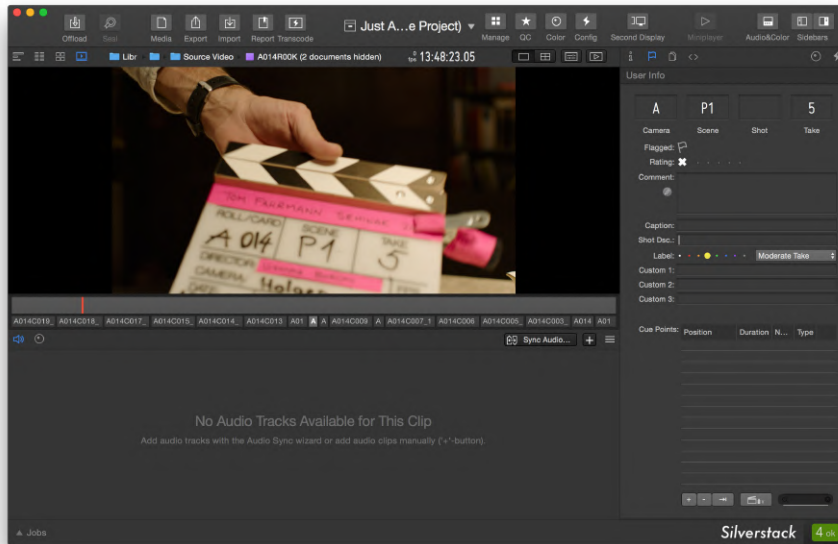
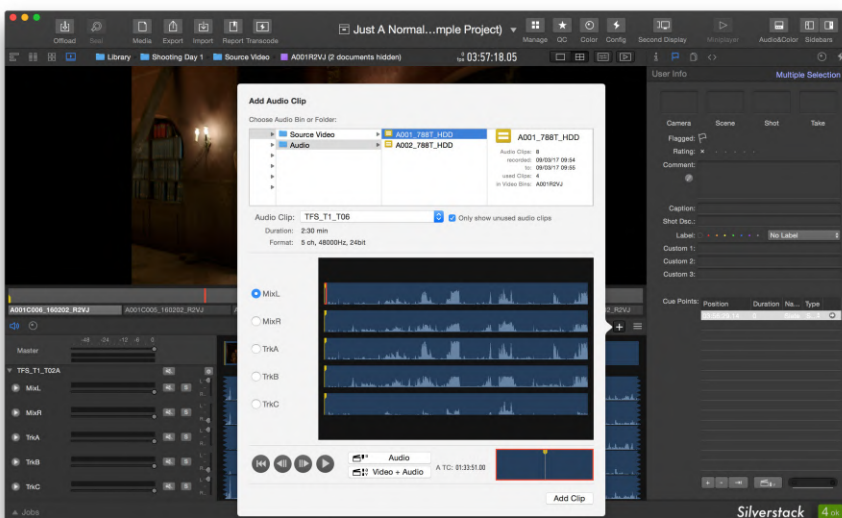


Fig.1: The video clip at the slate position.

3. Find the slate position

In the selected clip you need to find the position at which the slate goes down. If no slate is present, you can choose any other significant position to sync to. In this example, the slate will be set in the next steps together with the audio slate. It is also possible to already set the video slate at this point. Read more about **Relocating Slate Markers** in the according section below.

4. Add an audio clip



Click the **+** (**Add Audio**) button in the audio panel to open a popover allowing you to select an audio clip that should be added to the video clip. Select the intended audio clip from the **Audio Clip** dropdown menu (in this case TFS_T1_T06). Move the playhead of the audio clips to the position you want to set the audio slate to. You now have two options:

- Click the **Video + Audio** button to set the audio and video slate at the positions of the according playheads in the audio and playback view.
- Click the **Audio** button to set a slate only at the position of the audio playhead.

A video clip that has an external audio clip assigned to it will in any case contain a slate marker. If the slate marker is not specified it will be set to the current playhead position of the video clip and will accordingly be used as the sync position.

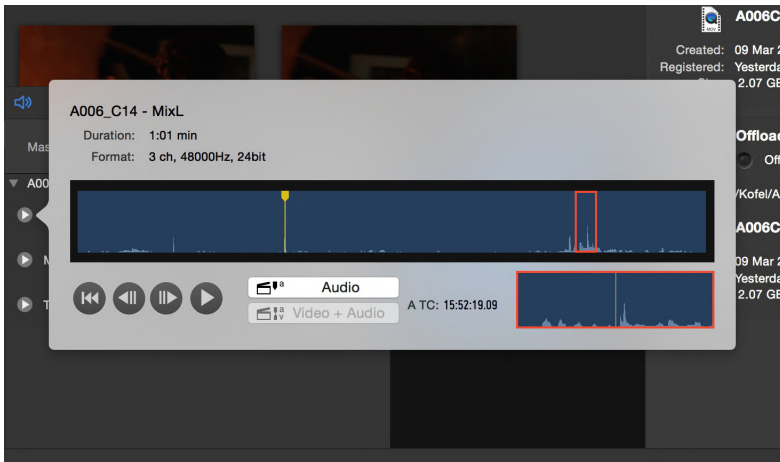
5. Add and sync clips

Finally click **Add and Sync Clip**. The specified audio clip is added to the video clip, and all tracks are available in the audio panel. The video and audio clip sync at their slate positions.

Multiple audio slate markers

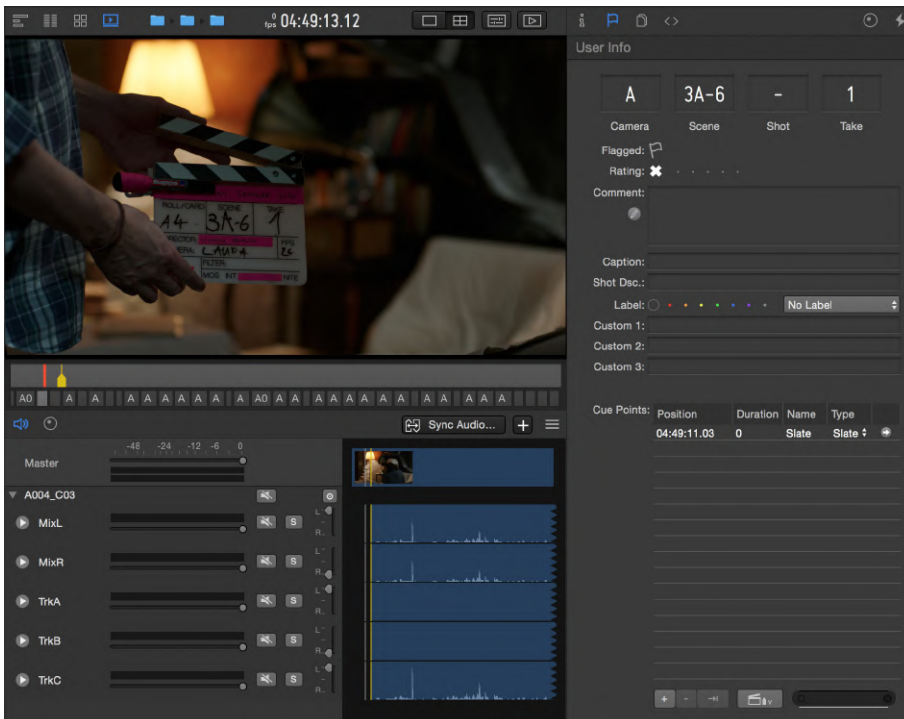
When adding one audio clip to more than one video clip, it is possible to set an individual audio slate position for each video. This allows you to sync each video to different positions on the same audio clip, e.g. if there are individual claps for each camera or if two takes are recorded on the same audio clip. If you open the **Add Audio** popover for one audio clip that is already synced to another video clip, the first (already set) audio slate marker is automatically restored in this view for your convenience.

Relocating audio slate markers



You can relocate the audio slate marker for an external audio clip by opening the audio tracks playback panel. To do so, click the **Play** button. Move the detail indicator (red box) to a new position and click the **Audio** button to set the audio slate to the position indicated by the playhead in the detail view at the bottom right of the popover.

Relocating Video Slate Markers



You can relocate the video slate marker within the cue points section of the **User Info** tab in the right bar. Move the playhead of the video clip to a new position and click the **Set Video Slate** button (shortcut Control-Command-Enter).

Please note that the video slate marker is a special kind of cue point. You can remove the video slate marker like removing a cue point. In case of existing external audio you will not be able to remove it since a video clip with external audio always has a slate marker. Learn more about cue points from the article [Metadata Handling: View, Organize, Add and Filter Clips](#).

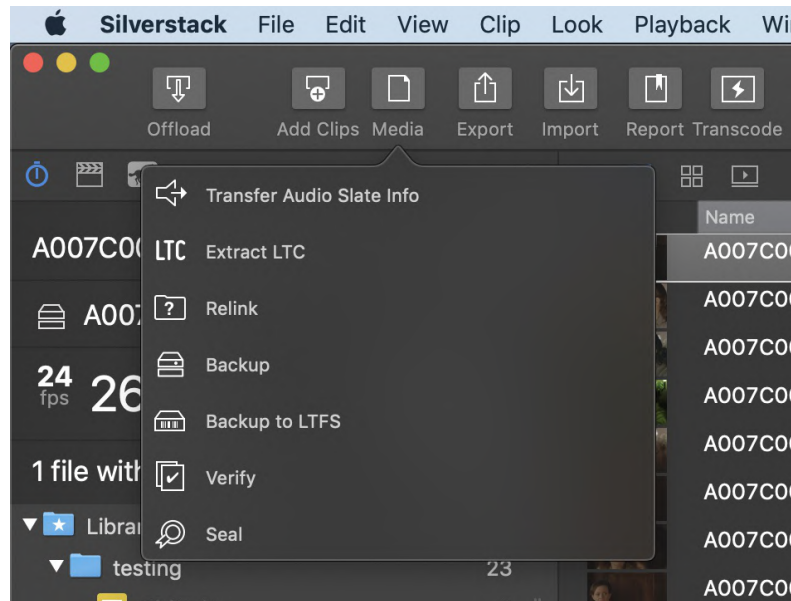
Removing external audio clips

External audio clips can be removed by clicking on the gear button in the header bar of the external audio clip and selecting **Remove**.

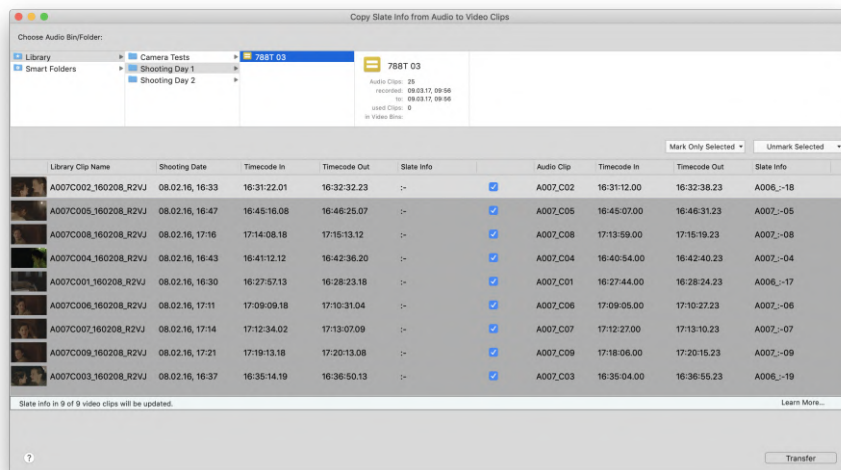
Transfer slate info from audio clips to video clips

Silverstack XT allows to transfer slate information stored in audio clips to the video clip metadata in the library. Similar to the [automatic audio sync functionality in Silverstack Lab](#), associated audio and video clips are detected by a TC match and slate metadata can then be transferred.

To start the process select the video bin/folder in the library you want to transfer slate metadata from the audio clips to, and click the “Transfer Audio Slate Info” entry in the Media menu located in the toolbar:



Select the audio bin you want to transfer slate metadata from in the slate info transfer wizard. It then shows the video clips on the left side of the checkbox in the table, and the matching audio clips on the right side:



Note the “Slate Info” columns in the wizard. The left one shows the current slate info of the video clip, and the right one the slate info of the audio clip that will be transferred (and overwrite the video clip slate info) as soon as you click “Transfer”.

List of metadata you can transfer

The following metadata fields will be transferred in the process:

- Scene
- Shot
- Take

Additionally the following metadata can be detected on ingest and transferred by using certain keyword namings for custom fields (see also [Using Silverstack Custom Field Labels to Read Additional Metadata](#)):

- Audio notes via naming a custom field “Audio Comment”
- TC Ubits information via naming a custom field “TC UBits” or “UBITS”

Please note to adapt the custom field name before the ingest of the audio clips to trigger the pull of the right metadata to the field. Comments or info added to audio clips in the library afterwards, will be taken over on transferring slate metadata.

Creating dailies

Export to Adobe Premiere Pro

Silverstack can create XML or ALE files to transfer clips and their metadata to Adobe Premiere Pro. To follow this tutorial, you need some basic knowledge about the [transcoding preset panel](#), [transcoding workflows](#) and the export features.

1. [XML Workflow](#)
2. [ALE workflow](#)

1. XML workflow

1.1 Creating an XML file

In general, you can create XML files for Adobe Premiere Pro in two ways:

- Manually export metadata via the dedicated exporter without creating transcodes
- Automatically create XML files during transcoding by setting the target application accordingly (Silverstack Lab only)

The configuration steps are the same for both options, so the task is explained using the dedicated exporter. Ensure you have some footage in your library to work with, select a bin, click the **(Export)** button and select the Adobe Premiere Pro exporter.

In the resource selection step, select all the clips that should be covered by the XML file and click **(Continue)**.

The preconfigured options should already suit your needs but feel free to adapt them as you need. The options are explained in detail in our [Adobe Premiere Pro exporter](#) article.

Finally, save the XML file at a location where you can retrieve it easily for import in Adobe Premiere Pro.

1.2 Creating synced sequences

Silverstack can create sequences with correctly aligned video and audio tracks (synced from external sound). This feature helps to implement workflows where audio clips are not available before transcoding and need to be synced at the end of the production day.

Right after automatic audio sync, the XML can be exported and provides synced sequences without transcoding again. Bringing camera native ProRes files with synced external audio from Silverstack into editorial, would be another use case.

By enabling the checkbox “Include audio synced sequences and referenced audio clips”, the synced sequences become part of the XML and will be available in Adobe Premiere Pro after import as follows:

- One bin containing all the OCF clips
- One bin containing all the synced (external) audio clips
- One bin named “Synced Clips Sequences” containing the sequences

1.3 Importing the XML

Open Adobe Premiere Pro and simply drag & drop the previously saved XML file into Premiere Pro’s project panel. Alternatively, you can import the XML file via the file menu.

All clips including metadata will be available as described above.

2. ALE workflow

Adobe Premiere Pro accepts ALE files which can be exported in Silverstack using the Avid Media Composer ALE exporter including a hidden setting:

1. Close Silverstack
2. Open the Terminal
3. Enter the following line depending on your installed Silverstack version:
 1. Silverstack Lab:
`(defaults write com.pomfort.SilverstackLab9 forcePremiereALEHeader -bool YES)`
 2. Silverstack:
`(defaults write com.pomfort.Silverstack9 forcePremiereALEHeader -bool YES)`
4. Open Silverstack again
5. If you want to disable the behaviour again, simply replace “YES” with “NO”

You can now export an ALE the usual way, drag & drop the file into Adobe Premiere Pro, and it will be recognised. Via a link operation the clips can be relinked to make them online again.

Transfer clips to DaVinci Resolve including clip and color metadata

Silverstack offers a solution to export clips to DaVinci Resolve including clip metadata as well as ASC-CDL color metadata. Additionally it is possible to set up Resolve with the according LUTs to reflect the exact node based color processing done in Silverstack.

How to transfer clips from Silverstack to a DaVinci Resolve timeline

For transferring a bin from Silverstack to a Resolve timeline, including clip and color metadata, these steps are necessary:

1. Export FCPXML as well as additional clip and color metadata from Silverstack
2. Import FCPXML into DaVinci Resolve
3. Use the CSV import function in DaVinci Resolve to add clip metadata
4. Use the Colortrace function in Resolve to add ASC-CDL color data

Export FCPXML and additional clip and color metadata from Silverstack

To export to Resolve select the desired bin from the Silverstack Library. Either perform a secondary (right) click on the bin and select **“Export to > Davinci Resolve Export”** or from the **“Export”** button in the title bar of Silverstack choose **“DaVinci Resolve Export”**.

You will be presented with a window where you can select or deselect clips from the bin that should be exported:

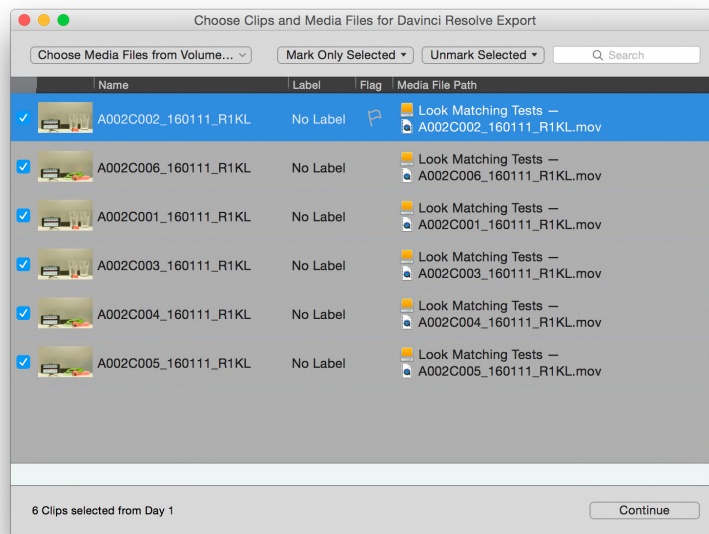


Figure 1: Choose clips and media files for Davinci Resolve export

After making your selection click **“Continue”**.

A further dialog window opens up:

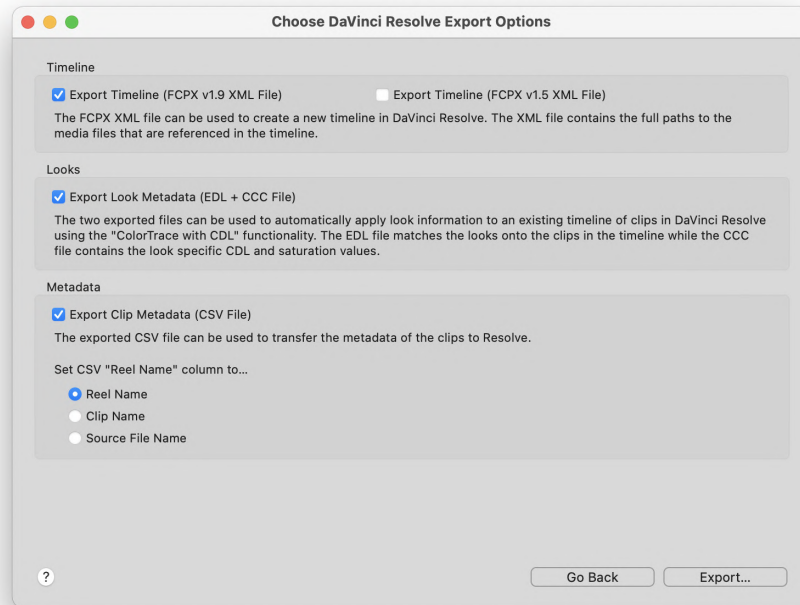


Figure 2: Davinci Resolve export options

It lets you choose from three export options :

- **Timeline (.fcpxml):** This export item is responsible for creating the timeline and populating the clips in Resolve.
- **Color metadata/Looks (.edl and .ccc):** These export items are responsible for adding the color metadata (ASC-CDL settings) to the clips in Resolve (via Colortrace functionality).
- **Clip metadata (.csv):** This export item is responsible for adding the clip metadata to the clips in Resolve. It includes the option to configure data set in column "Reel Name" (Reel Name, Clip Name or Source File Name).

To result with a **timeline, clip and color metadata** activate all three checkboxes and click "**Export...**". Select the desired destination for the files. The FCPXML, EDL, CCC and CSV file will be put in the same directory automatically.

Import FCPXML into DaVinci Resolve

Open up DaVinci Resolve and create a new project.

From the Main Menu choose "**File > Import > Timeline...**". Navigate to the path where you saved the FCPXML from Silverstack select it and click open.

You will be presented with an option window for loading XMLs:

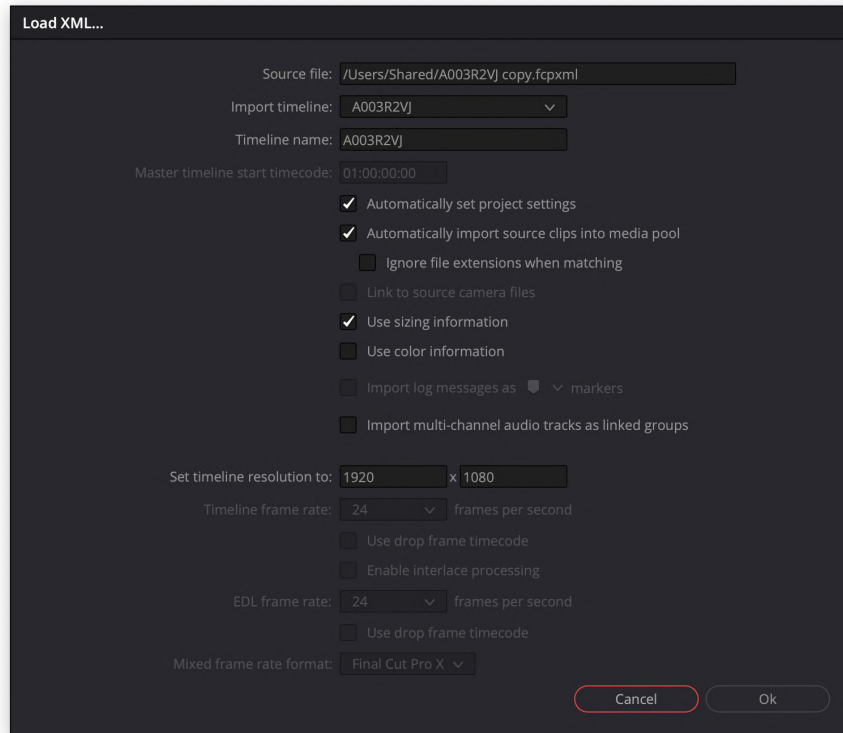


Figure 3: Preferences for loading an XML in DaVinci Resolve

Check to have the checkbox **“Automatically set project settings”** enabled which should be the case by default. That makes sure all settings will be adapted to match the clips from the FCPXML.

Click **“OK”**.

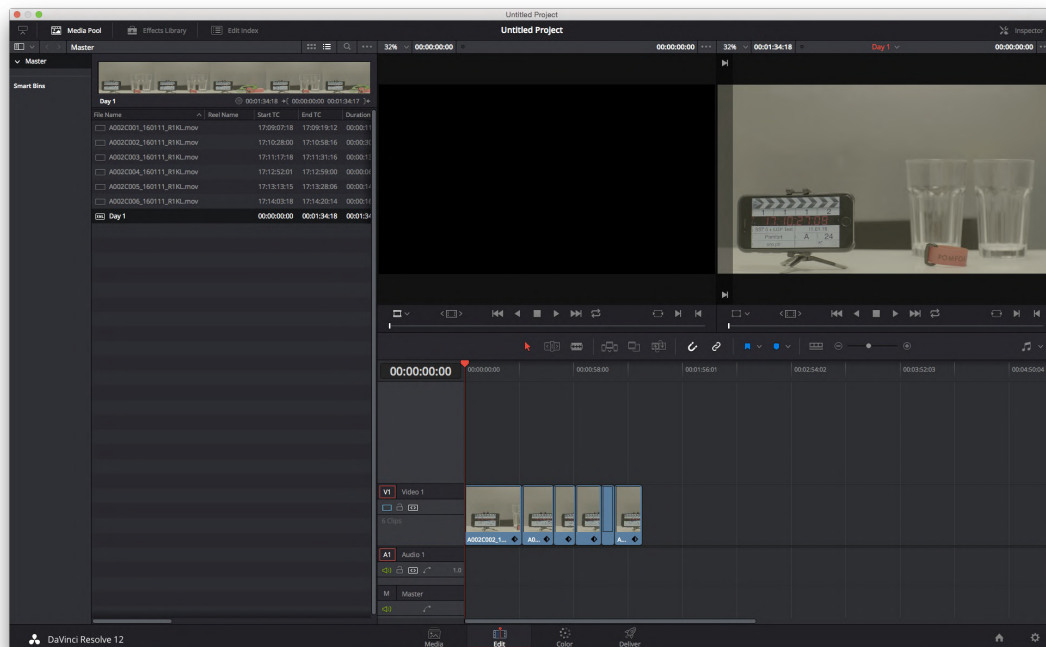


Figure 4: The main window of Resolve with the imported timeline

You should be presented with the **“Edit”** tab in Resolve that shows the Media Pool on the left and a timeline containing all the clips from the Silverstack bin you formerly exported.

How to add clip metadata to the clips in the timeline

This process will only work in Resolve 12.5 or later.

Go to the “**Edit**” tab in Resolve. From the Main Menu choose “**File > Import metadata to... > Media Pool**”:

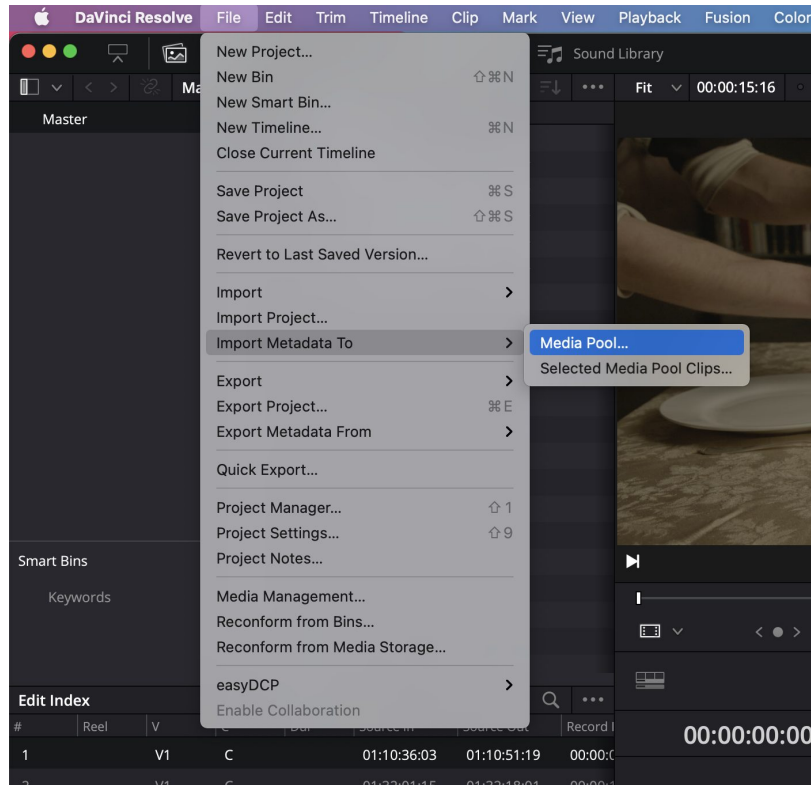


Figure 5: Import metadata from the csv

In the following opening dialog choose the .csv file that you exported from Silverstack and click open.

A metadata import window will follow:

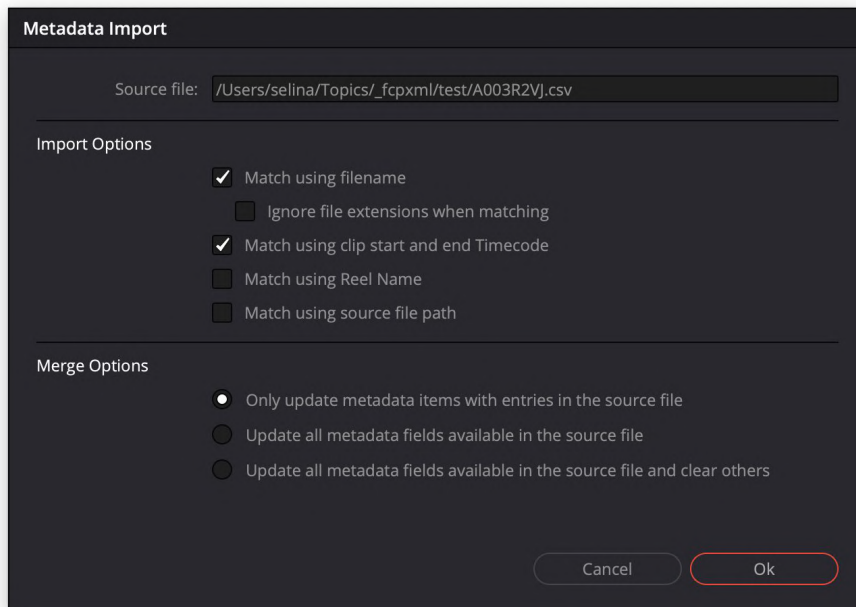


Figure 6: Metadata import options

Choose a meaningful combination of Import Options and Merge Options for your use case. Hit “**Ok**”.

All matching clips in the bin should now have received the new metadata. Select a clip and check the metadata section on the right side of the Resolve window for the results.

The FCPXML will already transfer a basic set of metadata. The additional metadata that can be transferred from Silverstack via the .csv file is in detail :



- Camera ID [Camera #]
- Scene [Scene]
- Shot [Shot]
- Take [Take]
- Episode [Episode Name]
- Label [Clip Color]
- Flagged [Good Take]
- Comment [Comments]
- Caption [Description]
- Custom 1 [Lens Notes]
- Custom 2 [Audio Notes]
- Custom 3 [VFX Notes]
- Tags [Keywords]
- Shot Descriptors [Shot Type]
- Cue Points [Reviewers Notes]
- Shutter [Shutter]
- ASA/ISO [ISO]
- White Balance [White Point (Kelvin)]
- Tint [White Balance Tint]
- LUT Nodes [LUT Used]
- CDL SOP [CDL SOP]
- CDL SAT [CDL SAT]
- Director [Director]
- Cinematographer [DOP]
- Production [Production Name]
- Producer [Producer]
- Camera Assistant [Camera Assistant]
- 2nd Camera Assistant [2nd Asst]
- Data Manager [Data Wrangler]
- DIT [Digital Technician]
- Script Supervisor [Script Supervisor]
- Sound Mixer [Sound Mixer]
- Location [Location]
- Shooting Day [Shoot Day]
- Lens Model [Lens Type]
- Lens Serial [Lens Number]
- T-Stop [Camera Aperture]
- Focus Distance [Distance]
- Filter [Filter]
- ND Filter [ND Filter]
- Color Space [Color Space Notes]
- Camera Orientation [Angle]
- Camera Model [Camera Type]
- Camera Manufacturer [Camera Manufacturer]
- Camera Serial [Camera Serial #]
- Camera Firmware Version [Camera Firmware]
- External Audio Clips [Audio Media]
- Soundroll [Sound Roll #]
- TC Start (Ext Audio) [Audio Start TC]
- TC End (Ext Audio) [Audio End TC]
- External Audio Track Names (multiples in column "Audio Track Names") [Track 1 to Track 8]

The labels in the brackets reflect the naming of the Resolve metadata fields the Silverstack metadata is mapped to.

Setting the Reel name

To attain a proper match of the CDL values per clip you have to make sure that the Reel Names of the clips and the Reel Names in the Silverstack EDL match.

In the Project Settings go to **"General Options"** and inside of that to **"Conform Options"**. Make sure to check **"Assist using reel names from the:"** checkbox:

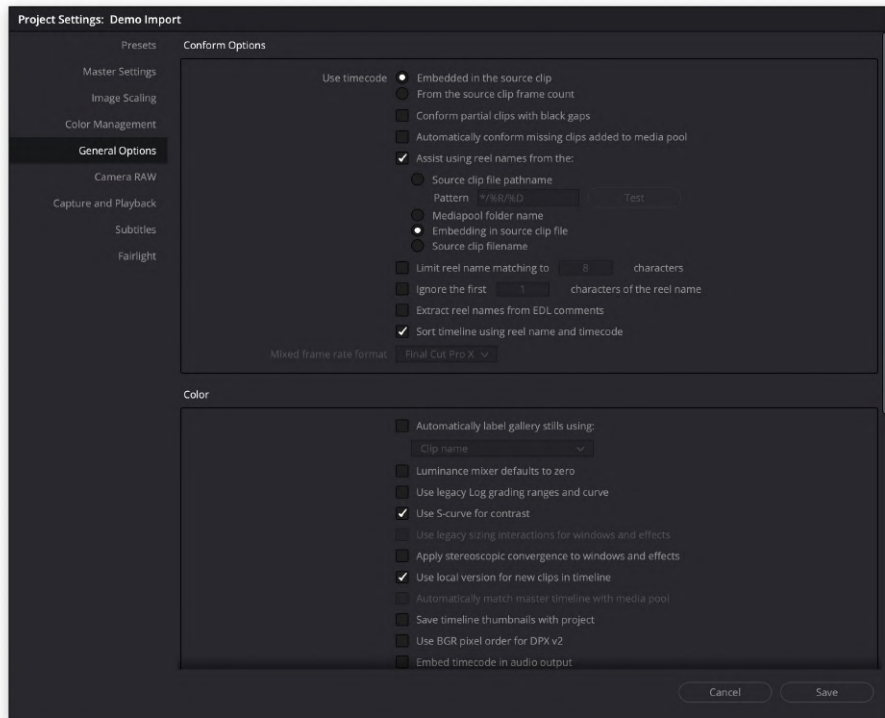


Figure 7: Set the Project Settings Conform Options for the right reel name handling for Color Trace matching

Based on your clip types as well as path structure and clip file names the settings that match your workflow could differ.

Selecting **“Embedding in Source clip file”** as an option should work for QT ProRes and ARRIRAW workflows.

Search the DaVinci Resolve manual for **“extraction pattern operators”** to learn how to use extraction patterns to pull reel names from your media paths.

Please be aware that the ColorTrace matching wizard will also give you the opportunity to **“Ignore Reel Names”** (see also Fig. 9) .

How to add color metadata to the clips in the timeline

Use the Colortrace function to add ASC-CDL color metadata.

After creating the timeline you will be able to add the color information.

Select the timeline from the media pool. It should be marked with a little XML indicator on its lefthand side. Perform a secondary (right) click on it and choose **“Timelines > ColorTrace > ColorTrace from CDL”** from the context menu:

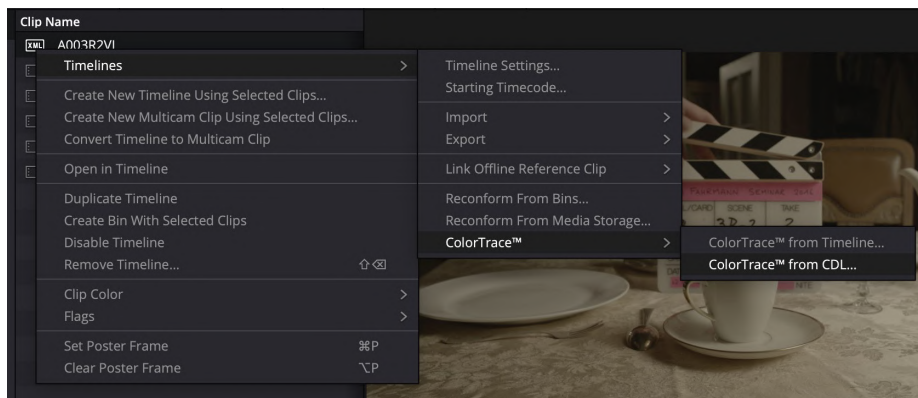


Figure 8: Select ColorTrace from CDL

You will be presented with an open dialog where you will first have to choose the exported EDL file. Right after that you will have to choose the exported CCC file.

After opening both of them you will be presented with the ColorTrace option window:

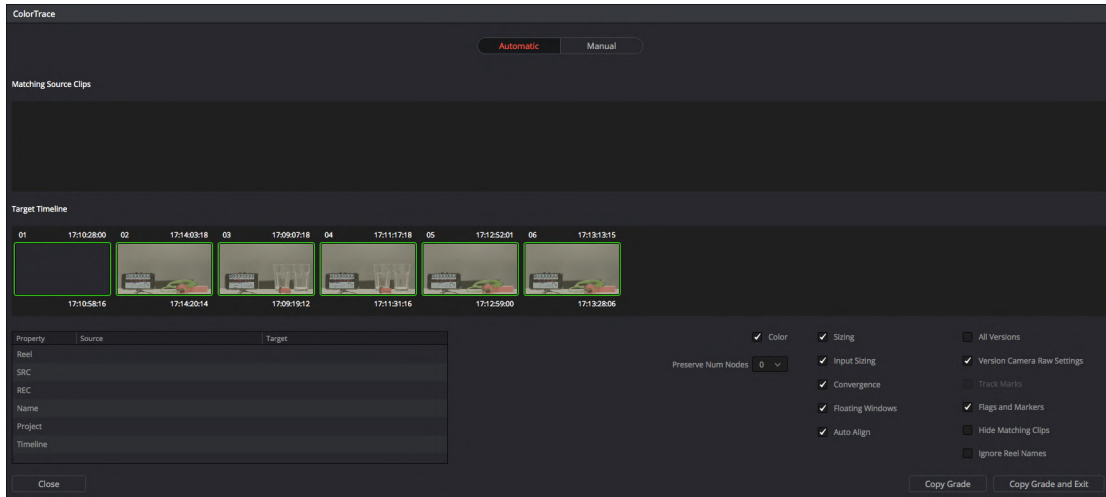


Figure 9: The ColorTrace option window

If all the clips have green borders everything matches fine. Click **“Copy Grade and Exit”** to copy the according grades to the clips. This is important as you can also “Copy Grade and Exit” without applying any look if all of the clips are marked with a red border.

You can check the “Ignore Reel Names” box to make sure that the Reel Name is not taken into account. Please see the section about setting the Reel Name above to be able to handle multiple reels in parallel with distinct Reel Names.

Switching to the Color tab presents you with the clips that now have the ASC-CDL color metadata from Silverstack added:



Figure 10: Switch to the color tab to see the clips with added color metadata

Transferring metadata to Final Cut Pro X

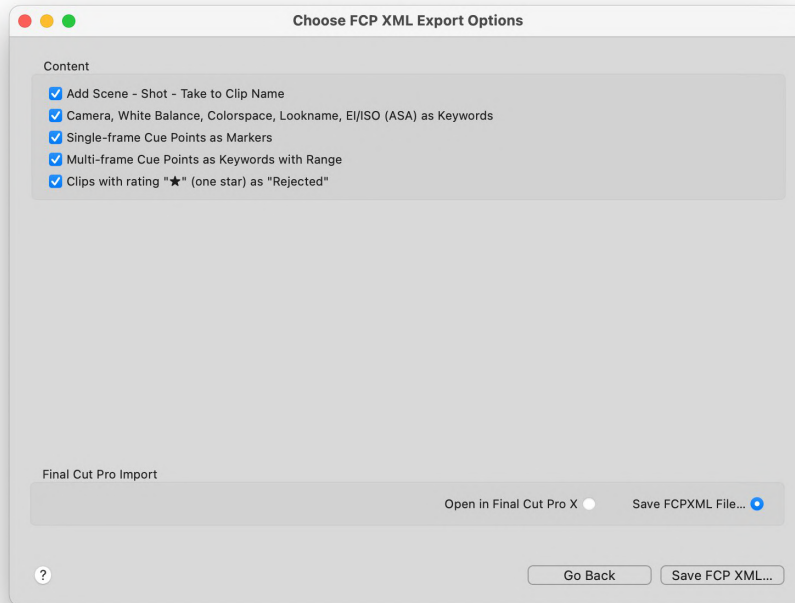
Silverstack offers to export clips to Final Cut Pro X, including clip metadata and additional information.

Export FCPXML from Silverstack

Select the desired bin or multiple bins or folders from the Silverstack Library to export to Final Cut Pro X. Choose **“Export to > Final Cut Pro X”** via right click or use the **“Export”** button in the title bar of Silverstack to select **“Final Cut Pro X”**.

This will open a window where you can select or deselect clips from the bin that should be exported, followed by a dialog with export options:

- Scene, shot, and take name can be added to the name of the clip in Final Cut Pro X
- Camera, White Balance, Colorspace, Lookname, EI/ISO (ASA) as keywords
- Single-frame cue points from Silverstack are mapped to markers in Final Cut Pro X
- Multi-frame cue points from Silverstack are mapped to a clip range marked with a keyword in Final Cut Pro X
- Clips with rating “★” (one star) in Silverstack are marked as rejected in Final Cut Pro X.



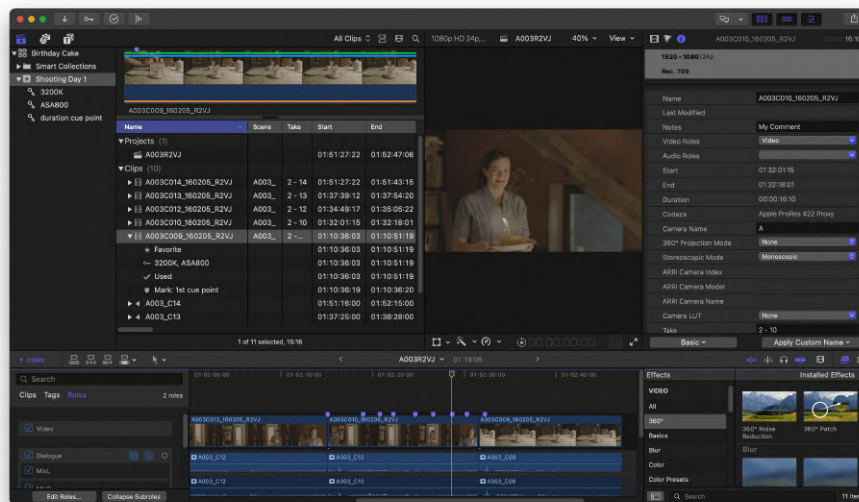
The [transfer](#) via Final Cut Pro XML files (.fcpxml) always includes:

- Clip metadata for reel, scene, shot and camera name (if set in Silverstack)
- Clips marked as flagged in Silverstack are marked entirely as favorites in Final Cut Pro X
- “Comments” of clips will be taken over as “Notes” in Final Cut Pro X

You can either immediately open the selected clips in Final Cut Pro X or save them first as Final Cut Pro XML files.

Import FCPXML into Final Cut Pro X

When importing the XML file in Final Cut Pro X, a new event is created with one project for each bin accompanied by the source video and audio clips. Please note that audio clips are only exported via FCP XML if they were synced to video in Silverstack before.



[Handling metadata: View, organize, add and filter clips](#)

[Transfer](#)

Search Code: ST-FC1

Exchanging data

Uploading files to Amazon AWS/S3

With Silverstack XT and Lab you can upload clips to an AWS S3 Bucket, or other service that implements the S3 API.

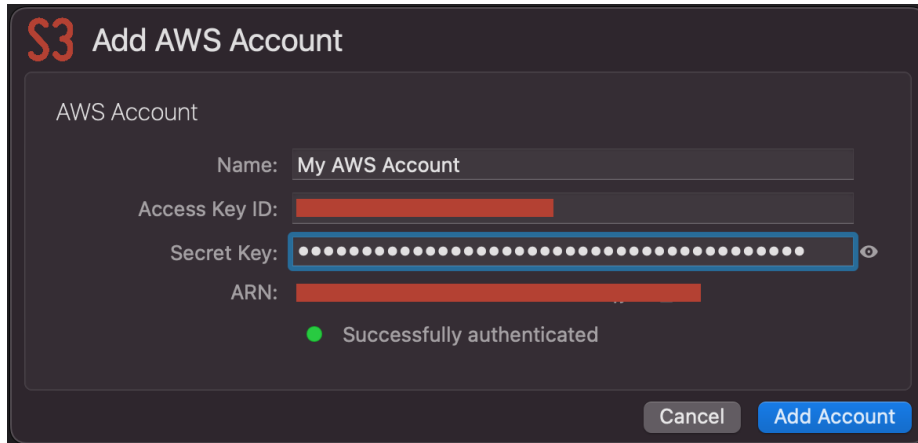
Starting the upload process and entering account information

In Silverstack's library choose the bin or folder that contains the clips for upload.

Open the Media menu in the toolbar and choose "Upload Clips to AWS S3 Bucket..."

If no AWS account is configured in Silverstack yet, enter your

- "Access Key ID" and
- "Secret Key" of your AWS account.
- You can also enter an additional (human-readable) name to better identify that account.



Add an AWS account to Silverstack

You can configure additional AWS accounts and manage accounts in the "Accounts" panel of the application's Preferences.

Choosing file locations

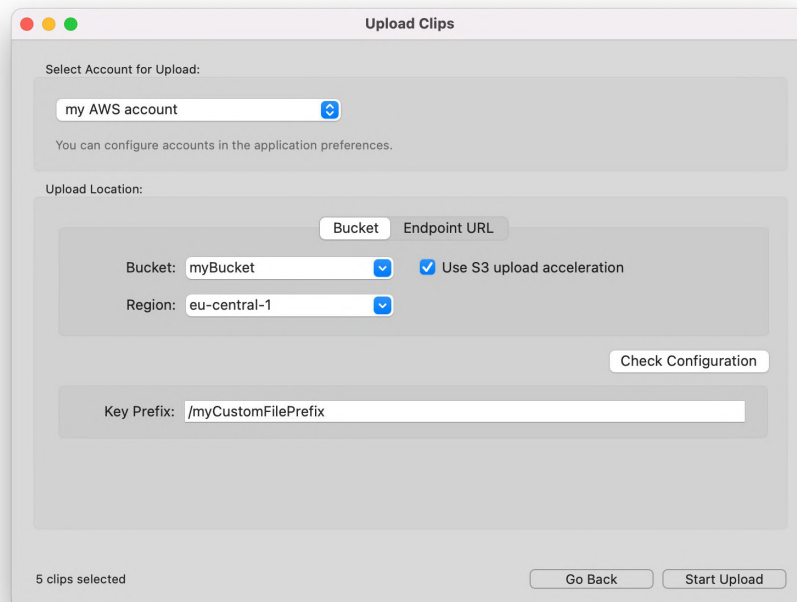
In the first step of the upload wizard you can choose which clips will be uploaded and from which volumes the files shall be read.

Configuring the AWS S3 destination

In the second step of the upload wizard you configure the bucket or endpoint location.

If more than one AWS S3 account is configured in Silverstack you can choose the account to be used.

You can either specify the location by bucket or with an endpoint URL.



Configure the upload

For the bucket you choose

- the bucket name (either from a list or entered manually),
- the region (from a list or entered manually), and
- if S3 upload acceleration should be used for the bucket.

For an endpoint URL you choose

- the endpoint URL (entered manually), and
- the region (from a list or entered manually).

You can set a key prefix for each uploaded file. This prefix will be prepended before the folder information and filename of each file. The key prefix can thus be used to define a custom “root folder” of the uploaded files within the bucket.

Testing the configuration

By clicking on the “Check Configuration” button the connection is tested as configured. A result panel will be presented that displays the result status of the checks.

Starting the upload job

Click “Start Upload” to start the upload job.

You can review the status of upload jobs in the bottom bar, and in Silverstack’s jobs panel.

Queue	Source	Job	Configuration	Progress	State	Remaining	Start Date	Scheduled	File Size
	A003R2VJ	Upload Clips	AWS S3: pomfort-dev1	1.29 MB/s		3m 6s	Today 13:58	Today 13:58	291.98 MB
	A003C009_160205_...			1.29 MB/s			Today 13:58	Today 13:58	67.38 MB
	A003C010_160205_...						Today 13:58	Today 13:58	54.60 MB
	A003C012_160205_...						Today 13:58	Today 13:58	52.52 MB
	A003C013_160205_...						Today 13:58	Today 13:58	51.46 MB
	A003C014_160205_...						Today 13:58	Today 13:58	66.01 MB

Track the upload

S3 Metadata

For retrieving Silverstack’s clip metadata, the upload process adds a ShotID and a ShotID link as S3 metadata to each file. See the article [ShotID as Clip Identifier](#) for more information about ShotIDs.

Reporting

A reference to the upload location is stored as remote resource in the resources panel. The information can also be added to reports.

Name	Remote Resources	Verified Back
A003C010_160205_R2VJ	AWS S3 (Bucket: pomfort-dev1, /S3 demo/Day01/A003R2VJ/A003C010_160205_R2VJ.mov)	2
A003C012_160205_R2VJ	AWS S3 (Bucket: pomfort-dev1, /S3 demo/Day01/A003R2VJ/A003C012_160205_R2VJ.mov)	2
A003C013_160205_R2VJ	AWS S3 (Bucket: pomfort-dev1, /S3 demo/Day01/A003R2VJ/A003C013_160205_R2VJ.mov)	2
A003C014_160205_R2VJ	AWS S3 (Bucket: pomfort-dev1, /S3 demo/Day01/A003R2VJ/A003C014_160205_R2VJ.mov)	2
A003C009_160205_R2VJ	AWS S3 (Bucket: pomfort-dev1, /S3 demo/Day01/A003R2VJ/A003C009_160205_R2VJ.mov)	2

S3 Remote Resources

Preparing clips and metadata for webgate.io

Silverstack Lab can provide transcoded clips as well as metadata from its library in a compatible format for Webgate.io cloud services. In Silverstack Lab you can export an ALE file that accompanies the transcoded clips and provides extended metadata to be available on the Webgate.io platform. The proxy clips can be uploaded together with the ALE where the additional metadata is then available.

There are two ways in Silverstack Lab to export an Webgate.io compatible ALE:

- **Automatic:** The automatic metadata export as part of the transcoding configuration can be set to automatically export a Webgate.io ALE after the transcoding job finishes and the transcoded clips are reingested into the library
- **Manual:** The manual export can be reached from the “Export” menu in the toolbar and in the context menu of the bin. It allows to manually trigger the export for the ALE for the bin with already transcoded clips in the library

Creating an webgate.io compatible ALE when transcoding

The automatic metadata export option allows to automatically create a companion metadata file when set up in a transcoding configuration that is used for transcoding clips.

You can learn more about [Transcoding in Silverstack Lab](#) in the equally titled article.

To set Webgate.io as target application for the automatic metadata export, first go to the transcoding configurations tab of the right sidebar. Select the transcoding configuration from the list that you would like the export to happen for.

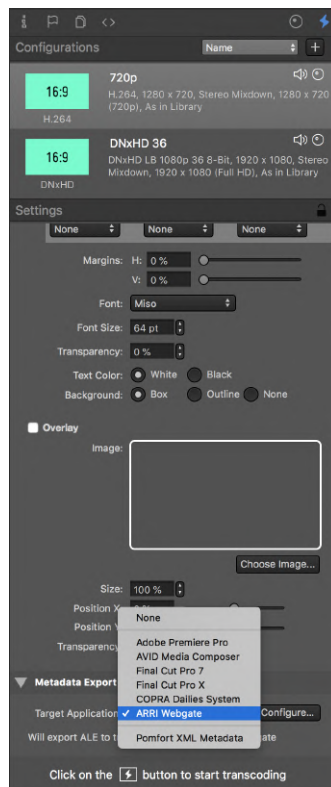


Fig. 1: Automatic Metadata Export configured for the transcoding configuration

Scroll down to the “Metadata Export” section. Select “Webgate.io” and press the “Configure...” button to select its content.

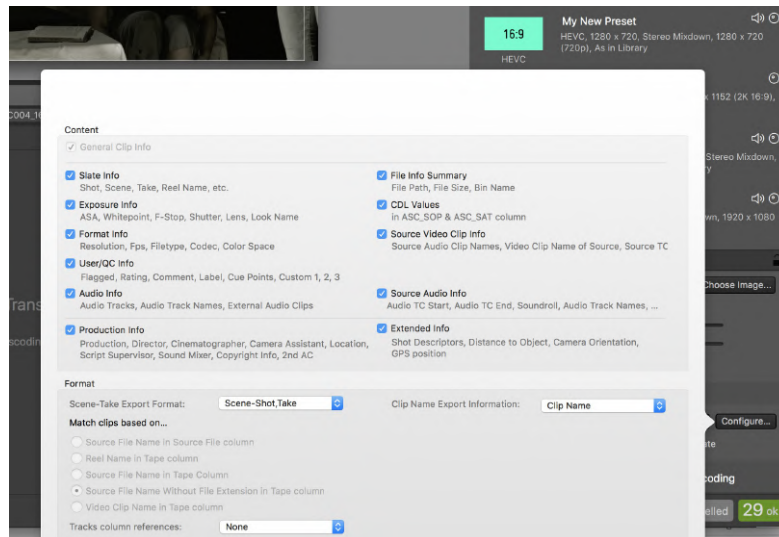


Fig.2: Configure the content of the Webgate.io ALE

When now transcoding to the adapted configuration you selected the metadata export for, the Webgate.io ALE is automatically exported to the same folder as the clips after the job finishes and the transcoded clips are automatically ingested into the “Transcoded Clips” folder of the Silverstack library.

Manual export of an webgate.io compatible ALE

To manually export an Webgate.io compatible ALE select the intended bin inside the “Transcoded Clips” folder and choose “Webgate.io” from the “Export” menu:

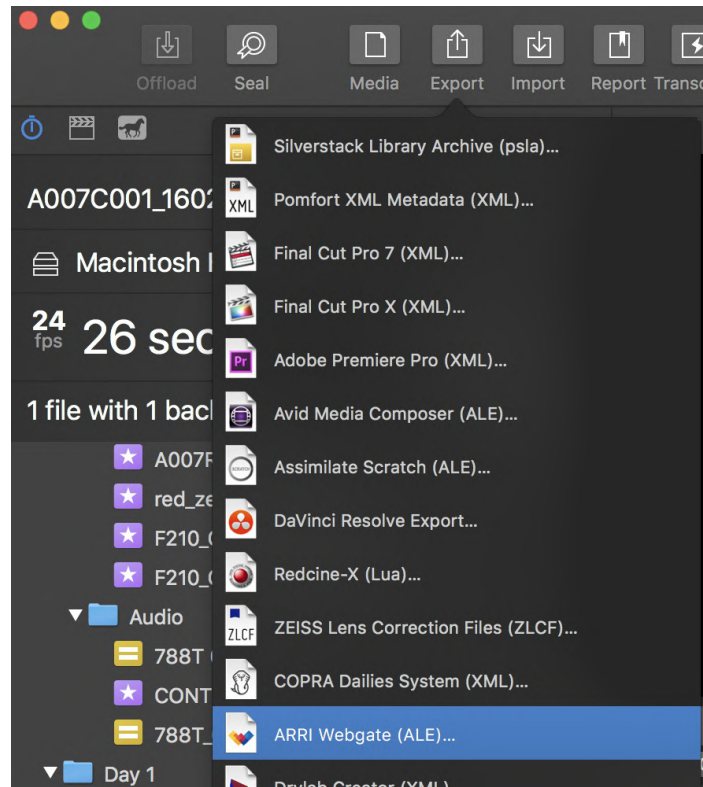


Fig.3 : Manually exporting an Webgate.io ALE from a transcoded clips bin

The wizard leads you through the source selection (to select the clips that should be part of the ALE) and the content selection (which metadata should be part of the ALE).

Click the “Save ALE...” button to export the ALE to the intended directory.

Supported structural metadata of webgate.io

Some columns of the ALE file need to have a certain syntax to correctly translate the metadata into the structural metadata of Webgate.io. You can read more about the [metadata workflow for Webgate.io in their guide](#).

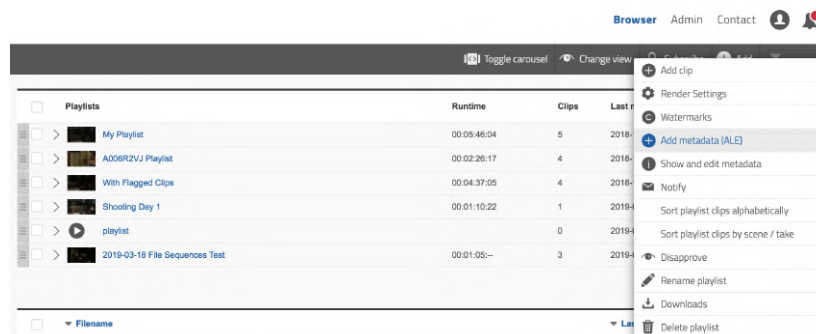
The following structural metadata is supported by the Silverstack Lab ALE:

- Scene / Scene- Shot
- Take
- Episode
- Reel
- Shoot Date
- Circled Take / Good Take
- Clip Comments
- Start (Start TC)

All other metadata from the ALE will also be displayed in Webgate.io but does not form part of the structural metadata.

Upload metadata to webgate.io

Use the “Add metadata (ALE)” option to add metadata via an ALE to the selected playlist:

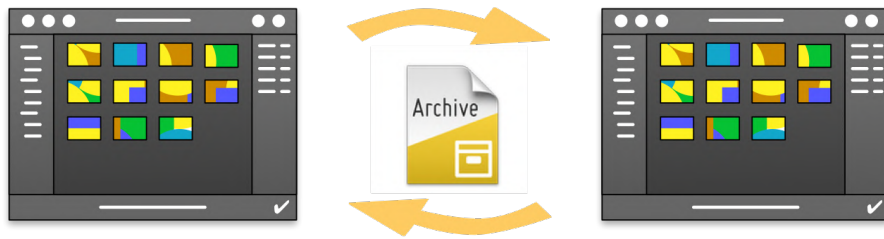


Upload the ALE to Webgate.IO

Find more details about uploading clips and the [metadata workflow for Webgate.io in their guide](#).

Library metadata exchange

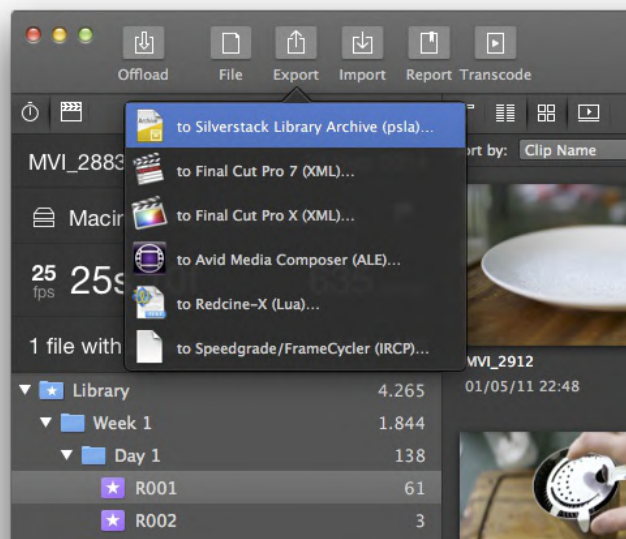
Export or import Silverstack Library Archives (psla) from one Silverstack project to another



Metadata exchange between workstations

Exporting library metadata

Whole libraries, folders or bins can be exported using this feature. To start the process, simply select the item from the Library Panel and click on Export>to Silverstack Library Archive (psla)...:



Export menu

The Library Export wizard will appear, letting you select again which library folder to export. In addition, you can add a comment to describe the metadata content of the file.

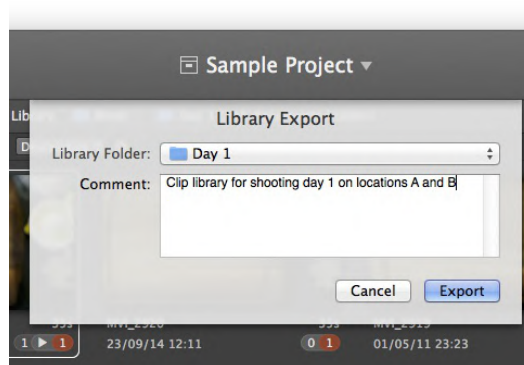
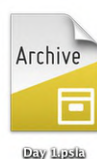


figure 4: library export wizard

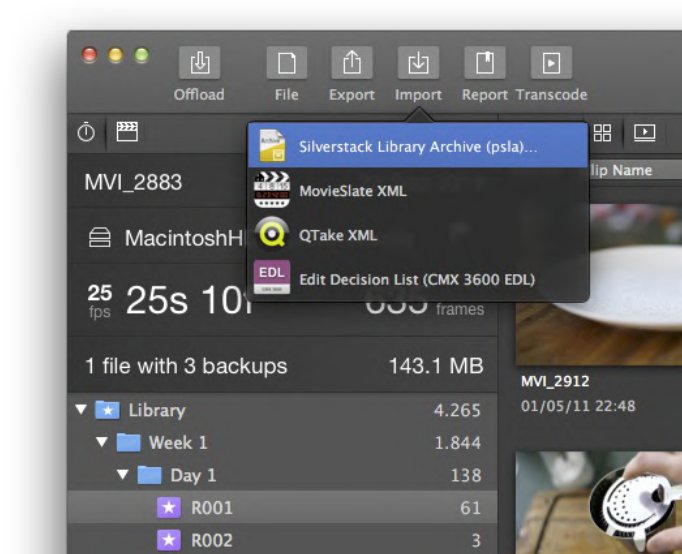
After selecting «Export», a destination selection dialogue will be shown. Once the file has been saved, it should look like this:



Silverstack library metadata file

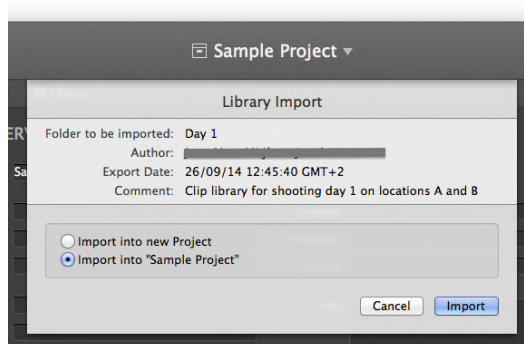
Importing library metadata

In order to import metadata from the previous process into another computer, you can just double click the «Day 1.psla» file. Otherwise you can select **Import>Silverstack Library Archive (psla)...**:



import menu

Once the file has been selected, the Library Import wizard will appear. Here you can see the name of the folder that is going to be imported, the author, the export date and the comment describing its content. You are able to choose between importing the metadata as a new project or into the current project:

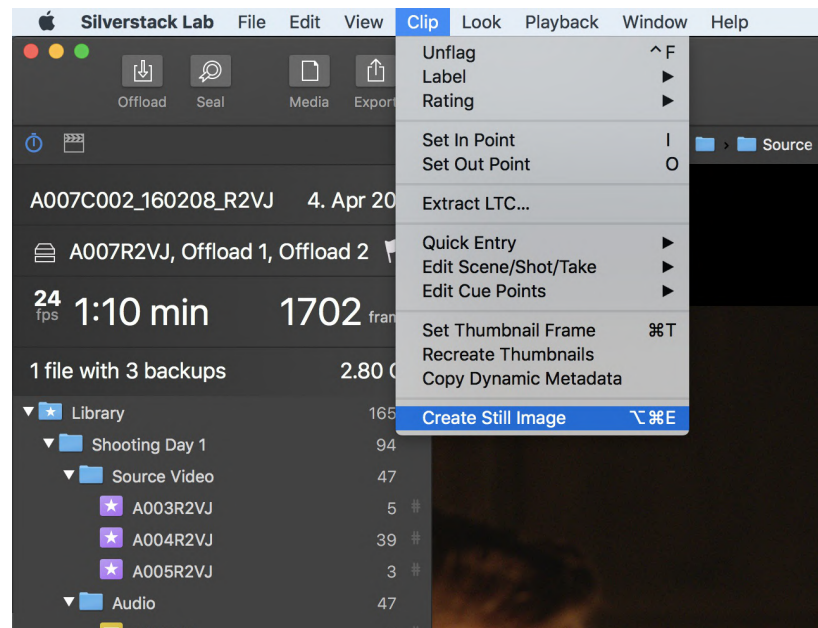


metadata import wizard

Please bear in mind that an active license is needed to use this feature. You will need to migrate the license in case only one license key has been purchased.

Still image export

In order to export a still from a clip, simply move the playhead to the desired frame within the clip and select **Clip > Create Still Image** from the main menu as shown in here:



Clip menu: Still Image Export

Batch export of still images for multiple clips

Additionally, Silverstack can export multiple still images at once. That's possible by either selecting multiple clips in the timeline from the Playback View or within the Table or Collection Views.

Depending on the context in the software, the still frame position used is different:

- **Playback and Timeline View:** Silverstack exports the **Current frame** in the playhead of each selected clip (indicated by the timeline ruler).
- **Table & Collection View:** Silverstack exports the same **Thumbnail image** displayed in the Table and Collection View.

Note: Have in mind that it's possible to set the position for the creation of thumbnail images through the Preferences menu. That is going to allow the export of still images based on the same position while the **Table & Collection View** is active. Learn more about setting the position for the creation of thumbnail images in the article [Choosing Custom Thumbnail Images](#).

Still image export settings

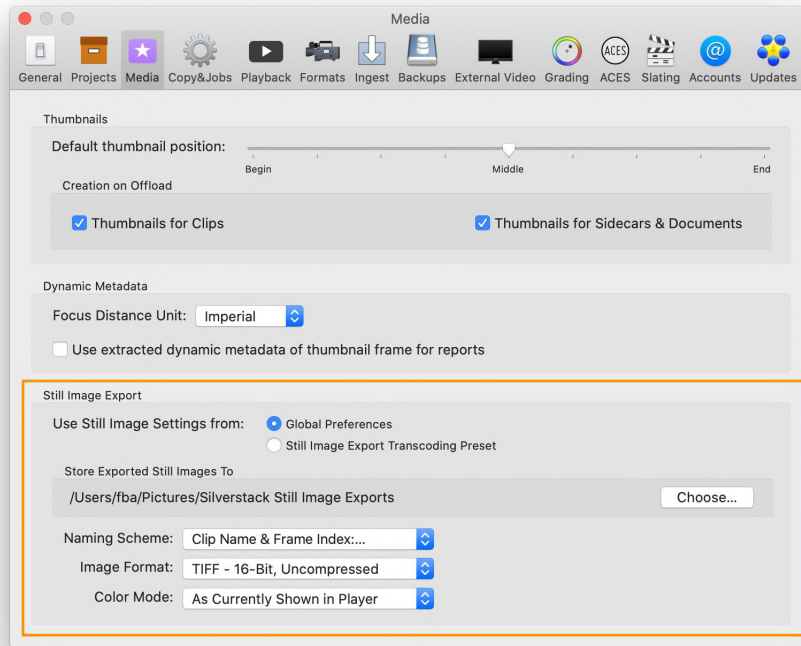
Global preferences vs. still image export preset

Silverstack offers two methods for exporting still images:

- 1. Using the still image settings from the **Global Preferences** (default)
- 2. Using the still image settings from the **Still Image Export Transcoding Preset** (Silverstack XT only)

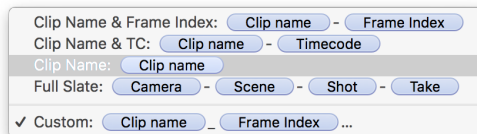
1. Using the settings from the global preferences

There are multiple settings and formats available for the still image export feature in the [Preferences menu](#), under the Media tab:

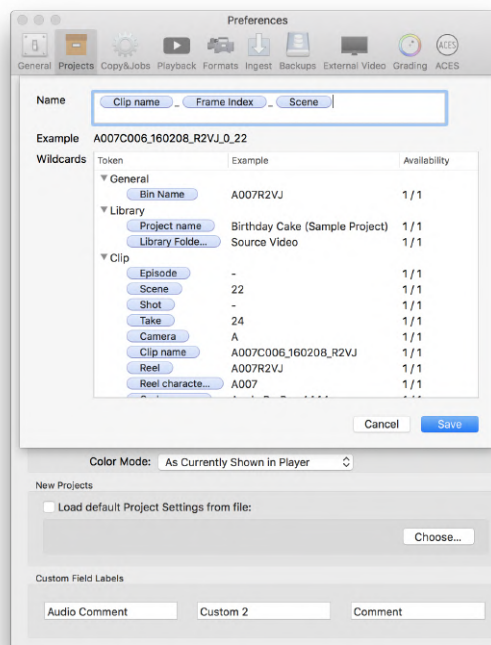


The following options and actions are available:

- **Store Exported Still Images To:** Choose the directory to store your still grabs on your system by clicking the “Choose...” button.
- **Naming Scheme:** With the naming scheme you can define the naming for the exported still image files.



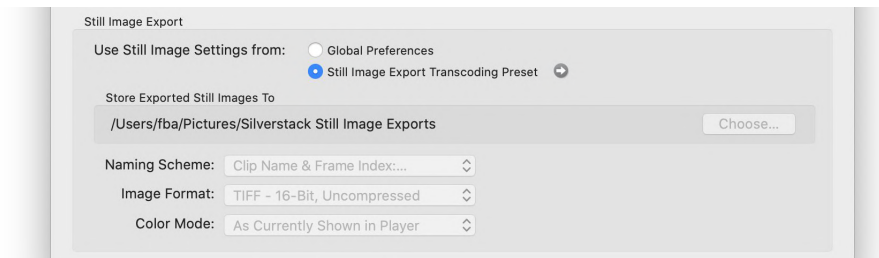
- There are multiple preset options available:
- In addition, the “Custom:” option allows users to build a file name based on the metadata of the clip the still is exported from. By clicking “Customize...” you can open the metadata wildcards panel and choose from the available wildcards to build a custom file name scheme:



- **Image Format:** The available image formats for exporting frames are:
 - JPEG – 8-Bit, 90% Quality
 - TIFF – 8-Bit, Uncompressed
 - TIFF – 16-Bit, Uncompressed
- **Color Mode:** The different color modes are:
 - As currently shown in player
 - Original color
 - Both: Exports two images with both of the above settings – one as shown in player and the other with the original color.

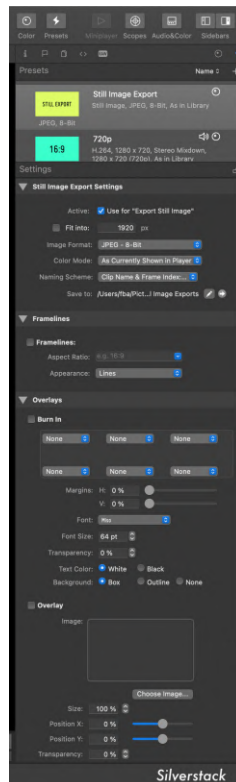
2. Using the settings from the still image export transcoding preset

In order to activate that mode, users have to select the option 'Use the still image settings from: **Still Image Export Transcoding Preset**':



Media Menu: Still image export settings

Once that setting is enabled, the '**Still Image Export**' preset is going to appear in the Presets panel of the Transcoding Configuration menu:



Transcoding Configuration Menu: Still Image Export Transcoding Preset

MovieSlate metadata import

When importing metadata via a MovieSlate XML file, you can use different methods to match it to the clips in Silverstack:

1. [Timecode](#)
2. [File name](#)
3. [Creation date](#)

1. Timecode mode

This mode will compare the timecode of your footage and look for the corresponding values in the imported MovieSlate file. If the timecode of MovieSlate is synced with the camera, each asset automatically matches with a clip from the MovieSlate XML. Matching by timecode also offers the possibility of automatically setting the in-point to the slate frame.

Syncing the timecode of the MovieSlate application with the camera is required to use this mode. The timecode sync doesn't have to be frame exact, but too much deviation may lead to mismatched clips.

Steps to match a MovieSlate XML file via timecode

1. In Silverstack, go to the Import menu and select the MovieSlate XML option.
2. Enable the "Timecode" checkbox to match the metadata via timecode.
3. Silverstack then shows the matched MovieSlate clips next to the clip names. It's possible to choose which clips you would like to match.
4. Press **Continue**
5. Choose the metadata that you would like to sync with the the clips.
6. Select if you would like to overwrite the existing clip metadata or instead just fill metadata fields that are empty.

Note: If you choose to overwrite, all existing metadata in the selected fields will be overwritten. **This cannot be undone.**

2. File name mode

The file name matching mode works literally and compares the exact file names of the clips in the Silverstack project with the clips from the imported MovieSlate XML file.

Please keep in mind that even the smallest disparity in file names will prevent Silverstack from matching the clips with the MovieSlate metadata.

Make sure the settings of MovieSlate Field Input Styles match those of your camera.

Steps to match a MovieSlate XML file via file name

1. In Silverstack, go to the import menu and select the MovieSlate XML option.
2. Enable the "File Name" checkbox.
3. Silverstack then shows the matched MovieSlate clips next to the clip names. It's possible to choose which clips you would like to match.
4. Press **Continue**
5. Choose the metadata you would like to sync with the clips.
6. Select if you would like to overwrite the existing clip metadata or instead just fill metadata fields that are empty.

Note: If you choose to overwrite, all existing metadata in the selected fields will be overwritten. **This cannot be undone.**

3. Creation date

This mode matches the creation date of your clips in Silverstack to the creation date of the MovieSlate clip metadata. This mode is working with approximation.

Please select if you'd like to match clips based on just the date or the date&time metadata.

There's a 'tolerance' slider for the date&time option, which can help you adjust the time difference between the camera and MovieSlate clock. The adjustment range goes from 1 second to 2 minutes. This method is the least precise one and a high tolerance range can lead to mismatches.

Steps to match a MovieSlate XML file via creation date

1. In Silverstack, go to the Import menu and select the MovieSlate XML option.
2. Enable the "Creation Date" checkbox.
3. Silverstack then shows the matched MovieSlate clips next to the clip names. It's possible to choose which clips you would like to match.
4. If not all expected clips offer a match, you then need adjust the tolerance slider
5. Press **Continue**
6. Choose the metadata that you would like to sync with the the clips.
7. Select if you would like to overwrite the existing clip metadata or instead just fill metadata fields that are empty.

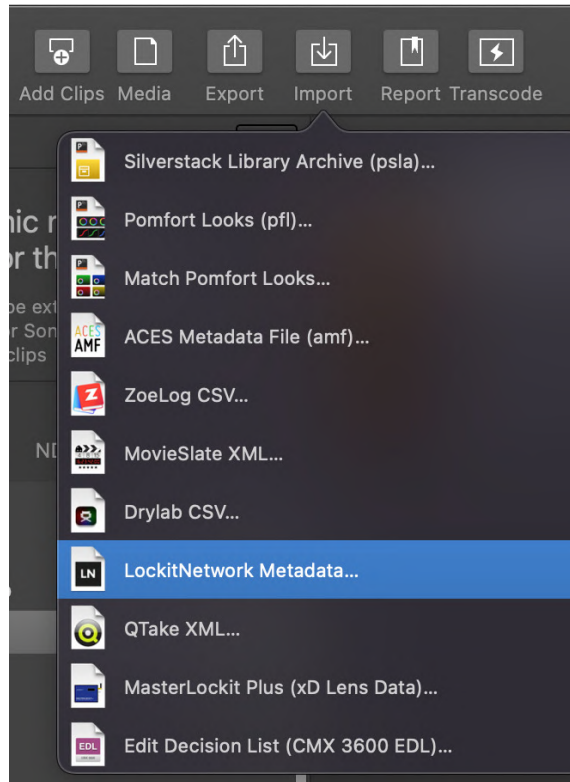
Note: If you choose to overwrite, all existing metadata in the selected fields will be overwritten. **This cannot be undone.**

Import metadata from LockitNetwork

Metadata captured with the Lockit Script App can be imported via the LockitNetwork cloud service.

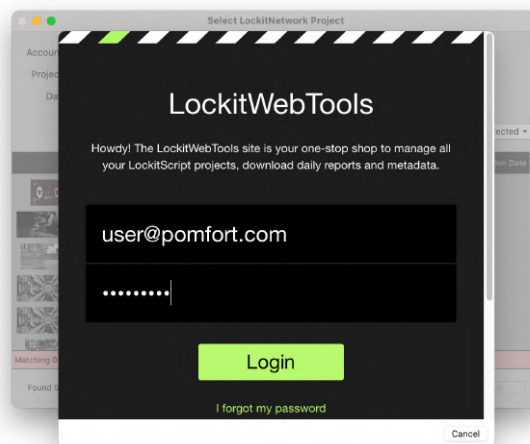
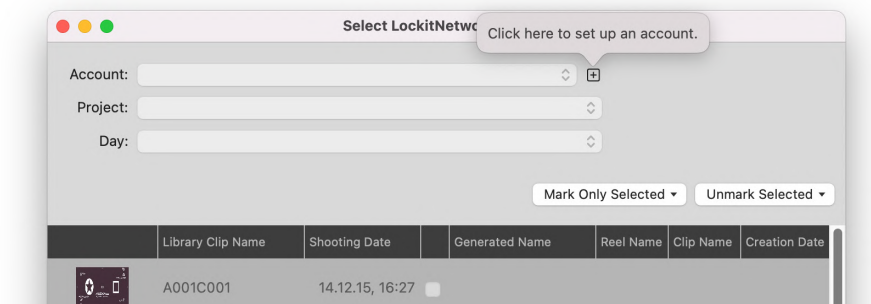
Import metadata from LockitNetwork into Silverstack

First, select the folder or bin in the library that you want to import metadata for. Then, select the option "LockitNetwork Metadata..." in the "Import" menu in the toolbar, and an import dialogue appears.



First use: Setup the LockitNetwork Account

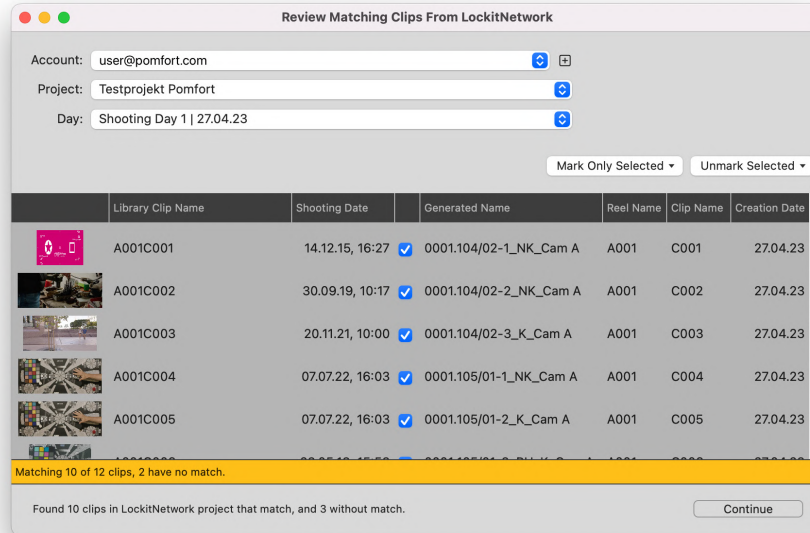
On the first use, you will be asked to configure your LockitNetwork account. The “+” button will bring you to the LockitNetwork login page. Type in your credentials and confirm twice.



You can configure additional LockitNetwork accounts and manage accounts in the “Accounts” panel of the application’s preferences.

Select LockitNetwork project details

If an account is already set up, you can choose the LockitNetwork project and shooting day to import metadata from. With this information, Silverstack requests from the LockitNetwork API information for the selected clips – The API returns what clips were matched and what information is available for them. The import wizard allows you to check the matched clips’ details and optionally deselect those for which information should not be imported. The continue button brings you to the import options and preview.



Metadata import options & preview

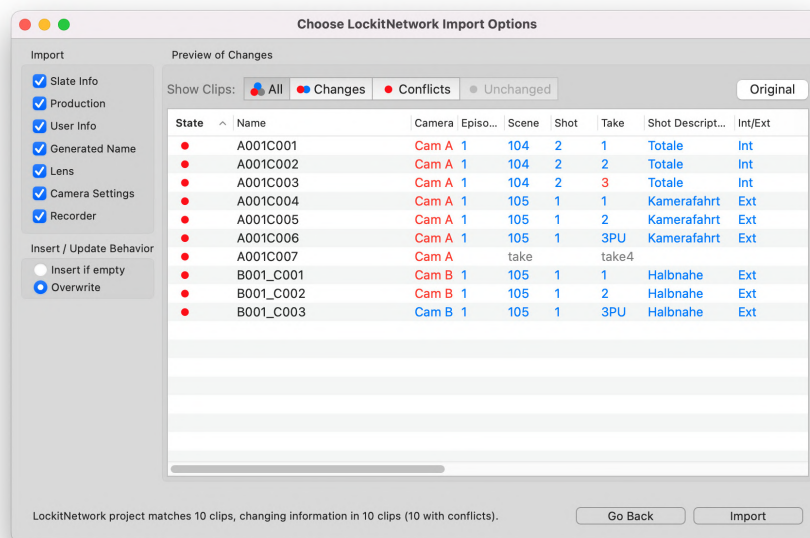
The next step allows you to configure and preview the import. It consists of three sections:

Import Section: Select or unselect the metadata that should be imported from the CSV to the Silverstack library.

Silverstack’s “Custom 1-6” fields can be filled with customizable data from LockitNetwork. Please contact support@lockitnetwork.com to setup these fields individually.

Insert/Update Behavior: Choose if you only want to insert new metadata if a field is empty or to force an overwrite.

Preview of changes: Review the changes that would be applied with the current settings. For more details about this view, please check the article [Preview metadata before importing](#).



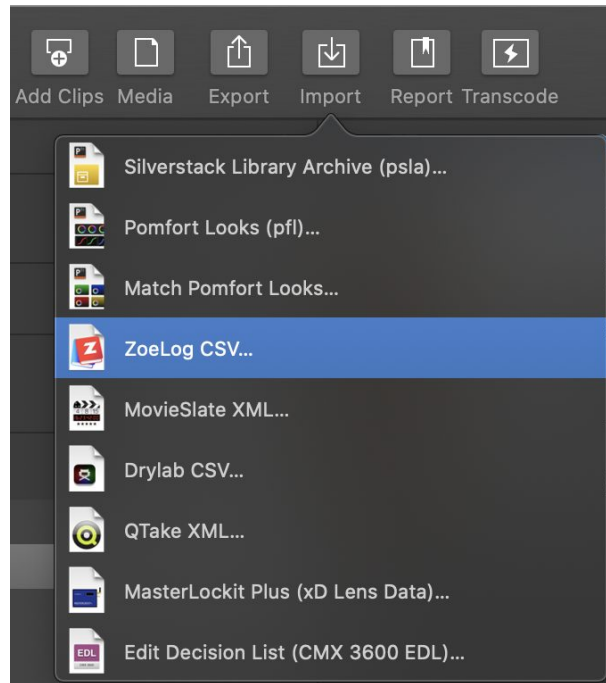
Clicking the import button will take over the previewed changes in the library.

Import metadata from ZoeLog

For transferring metadata captured in ZoeLog to Silverstack, a CSV can be exported from the ZoeLog app, imported into Silverstack, and matched to clips in the Silverstack library.

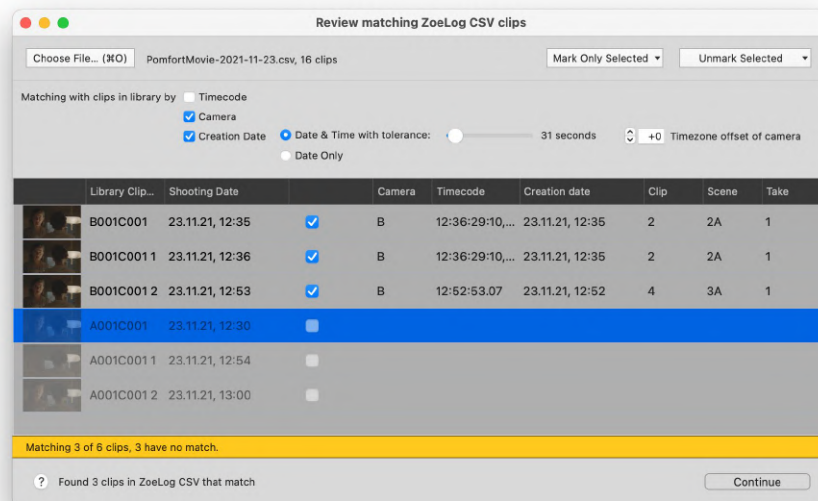
Import a CSV file from ZoeLog into Silverstack

First, select the folder or bin in the library that you want to import metadata for. Then, select the option “ZoeLog CSV...” in the “Import” menu in the toolbar:



A file selection dialogue appears. Select the CSV file exported from ZoeLog and click “Open”.

Matching options



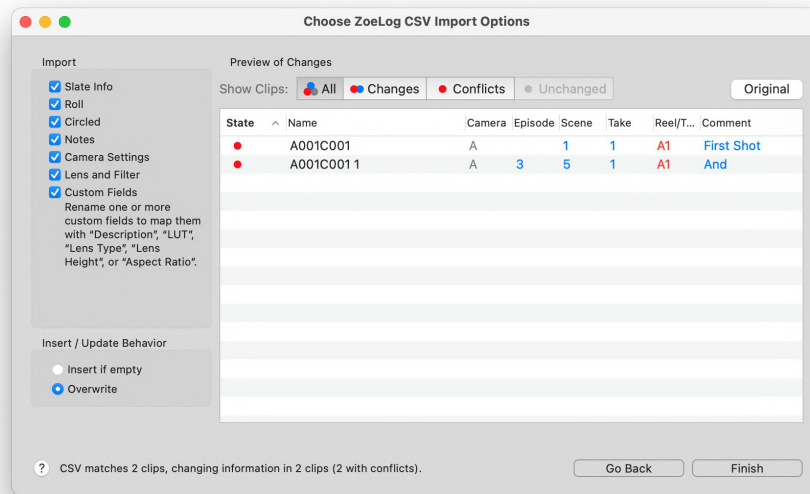
These options can be combined to match the events from the CSV to the clips in the library:

- by **Timecode** matches the “timecode” column from the CSV with the timecode of the clip in the Silverstack library. If there are multiple timecode entries in the CSV, all entries are used for matching with the timecode of a clip.
- by **Camera** looks for a match between the “camera” column in the CSV and “camera” in the Silverstack library.
- by **Creation Date (Time of Day)** matches the “Origin Date” column in the CSV with the “Shooting/Recording Date” of the clips in the Silverstack library refined by these options:
 - **Date&Time with tolerance:** You can adjust a slider to set the desired tolerance for the matching by Creation Date.
 - **Timezone offset of camera:** You can set an offset up to 23hours to compensate time offsets between the CSV and the clip metadata for the matching by Creation Date.
 - **Date only:** Matches the clips by the date only and neglects the time part of the timestamp.

The matches are displayed in the table of clips with a blue checkbox. The left side shows the Silverstack library clip name event and the right side the event from the Set Report csv.

As soon as you obtained a proper matching, click “Continue”.

Metadata import options & mapping



Import section: In this step you can select or unselect the metadata that should be imported from the CSV to the Silverstack library.

Insert/Update Behavior: Choose if you only want to insert new metadata if a field is empty or you want to force an overwrite.

The following import sections are available:

- Slate Info
- Roll
- Circled
- Notes and Descriptions
- Camera Settings
- Lens and Filter
- Custom Fields

Rename any custom field in the user preferences to “Description”, “Lens Height”, “Lens Type”, “LUT” and “Aspect Ratio” in the preferences in order to map these fields with the corresponding values.

Mapping

This is the list of importable metadata from the CSV and to which fields it maps in the Silverstack library (sorted by Silverstack metadata section):

ZoeLog CSV	Silverstack	
Field	Section	Field
Camera	Slate Info	Camera
Episode	Slate Info	Episode
Scene	Slate Info	Scene
Take	Slate Info	Take
Roll	Reel	Reel / Tape
Circled	Circled	Flagged
Notes	Notes	Comment
ISO	Camera Settings	EI/ISO
Color Temp	Camera Settings	White Balance
Shutter	Camera Settings	Shutter Angle
Tilt	Camera Settings	Camera Orientation
Lens	Lens and Filter	Lens Model
Stop	Lens and Filter	T-Stop
Filters	Lens and Filter	Filter
Focus	Lens and Filter	Focus Distance
Description	Custom Fields	Custom
Lens Height	Custom Fields	Custom
Lens Type	Custom Fields	Custom
LUT	Custom Fields	Custom
Aspect Ratio	Custom Fields	Custom

Import and match metadata from Drylab set report 3

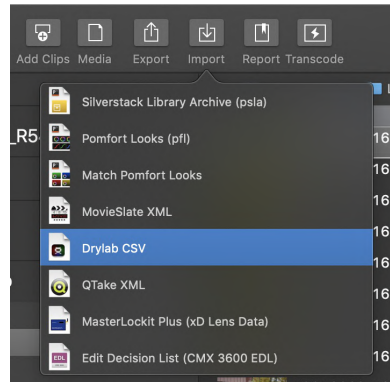
Drylab Set Report 3 app can export a .CSV file that can be imported into Silverstack to match to clips and add metadata captured in Set Report to the Silverstack library.

- Consult Drylab documentation for export of CSV from Set Report
- Matching Options
- Metadata Import Options & Mapping

Import a CSV file from Drylab set report 3 into Silverstack

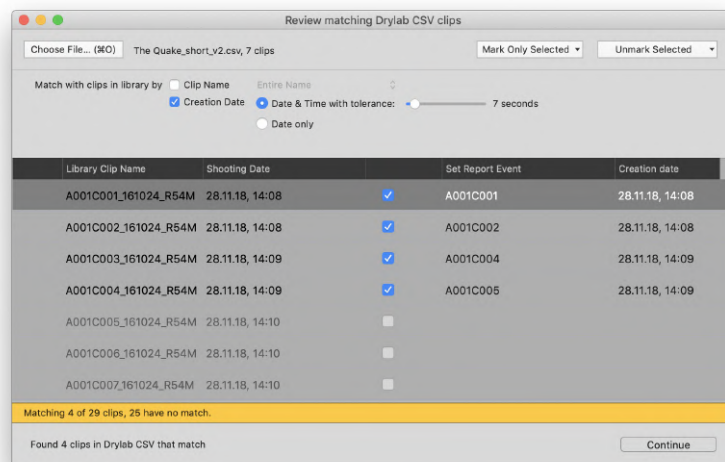
First select the folder or bin in the library that you want to import metadata for.

Then, in the “Import” menu button in the toolbar select the option Drylab CSV:



When the Finder dialog points you to select a file, choose the CSV file exported from Drylab SetReport and select “Open”.

Matching options



There are two options to match the events in the CSV to the clips in the library:

- by **Clip Name**
- by **Creation Date**

Matching by clip name

Enabling the Clip Name option, looks for a match between the “filenameBase” column in the CSV and the Video Clip Name (Library Clip Name) in the Silverstack library.

Options

The pop up menu on the right side of the checkbox offers the option to take only a certain amount of characters of the clip names into account for matching.

Matching by creation date (Time of Day)

Enabling the Creation Date option, looks for a match between the “createdAt” column in the CSV and the Shooting/Recording Date (Library Clip Name) in the Silverstack library.

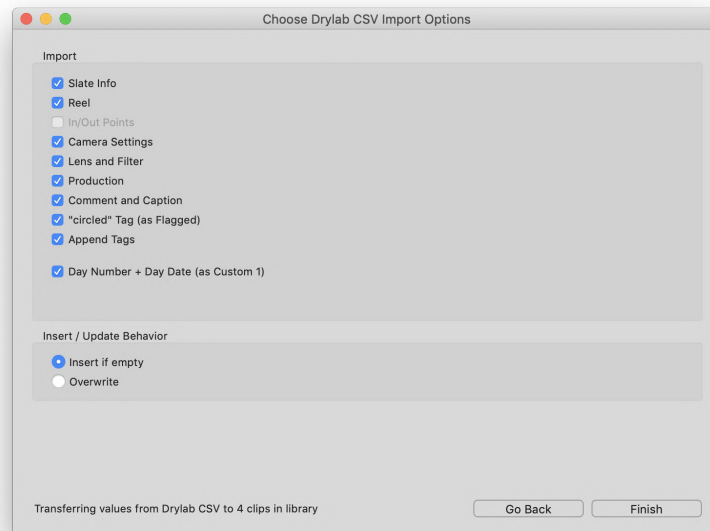
Options

- **Date&Time with tolerance:** You can adjust a slider to set the desired tolerance for the matching by Creation Date
- **Date only:** Matches the clips by the date only and neglects the time part of the timestamp

The matches are displayed in the table of clips with a blue checkbox. The left side shows the Silverstack library clip name event and the right side the event from the Set Report csv.

As soon as you obtained a proper matching, click “Continue”.

Metadata import options & mapping



Import Section: In this step you can select or unselect the metadata that should be imported from the CSV to the Silverstack library.

Insert/Update Behavior: Choose if you only want to insert new metadata if a fields is empty or you want to force an overwrite.

The following import sections are available:

- Slate Info
- Reel
- Camera Settings
- Lens and Filter
- Production
- Comment and Caption
- “circled” Tag (as Flagged)
- Append Tags
- Day Number + Day Date (as Custom 1)

Mapping

This is the list of importable metadata from the CSV and to which fields it maps in the Silverstack library (sorted by Silverstack metadata section):

Drylab CSV Field	Silverstack Section	Field
cameraLetter	Slate Info	Camera
episodes	Slate Info	Episode
scenes	Slate Info	Scene
shot	Slate Info	Shot
take	Slate Info	Take
reel	Reel	Reel / Tape
tStop	Camera Settings	T-Stop
distanceToObject	Camera Settings	Distance To Object
iso	Camera Settings	ISO
colorTemperature	Camera Settings	White Balance
pan	Camera Settings	Camera Orientation
tilt	Camera Settings	Tilt
latitude	Camera Settings	GPS Position
longitude	Camera Settings	GPS Position
cameraName	Camera Settings	Model
filters	Lens and Filter	Filter
lens	Lens and Filter	Model
ac	Production	Camera Assistant
ac2	Production	Camera Assistant 2nd
dop	Production	Cinematographer
dataWrangler	Production	Data Manager
director	Production	Director
dit	Production	DIT

producer	Production	Producer
scriptSupervisor	Production	Script Supervisor
soundMixer	Production	Sound Mixer
shotNotes	Comment and Caption	Comment
cameraTakeNotes	Comment and Caption	Comment
tags	"circled" Tag (as Flagged)	Flagged
tags	Append Tags	Tags
dayDate	Day Number + Day Date (as Custom 1)	Custom 1
dayNumber	Day Number + Day Date (as Custom 1)	Custom 1

ZEISS CP.3 XD Lens correction: Workflow overview

The CP.3 eXtended data (CP.3 XD) lenses by ZEISS provide extended metadata for digitally correcting images concerning optical shading and distortion deviations. Pomfort's applications LiveGrade Pro and Silverstack provide functionality to leverage this extended metadata for **on-set preview (LiveGrade Pro)** and **data management (Silverstack)**.

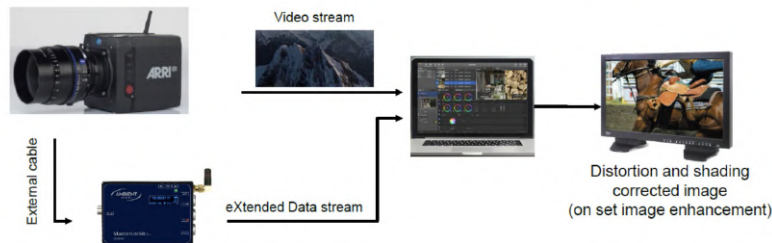
Use of eXtended Data in LiveGrade Pro and Silverstack XT / Silverstack Lab

The ZEISS eXtended data can be used for:

- **On-set preview with LiveGrade Pro**
- **Extraction of recorded lens data** and consolidation with clips in **Silverstack XT and Silverstack Lab**

The schematic overviews give you an idea of the on-set preview and lens data extraction use cases:

On-set preview of Lens correction with Livegrade Pro



LiveGrade Pro is able to receive realtime lens correction information from a ZEISS CP.3 XD lens that is connected to an Ambient MasterLockit Plus.

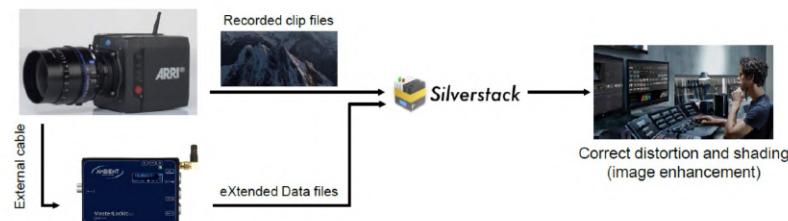
Functionality

The live signal of the camera is connected to a hardware capture device that is connected via Thunderbolt to the Mac running LiveGrade Pro in order to receive a live image in the application. Read the articles [HD-SDI Setup for LiveGrade](#) as well as [SDI Recording and Framegrabs](#) for more information about live image capturing in LiveGrade.

LiveGrade Pro connects via Wifi or a tethered network connection to the MasterLockit Plus that receives live lens correction data from the ZEISS CP.3 XD lens. The live lens correction data can be applied to the captured live signal from the camera.

Learn more about the process in LiveGrade Pro in the article [ZEISS CP.3 XD Lens Correction in LiveGrade Pro](#) that offers a detailed description of the features.

Extraction and display of recorded Lens data in Silverstack



Silverstack XT and Silverstack Lab allow to import, display and export lens correction data from ZEISS CP.3 XD lenses.

Functionality

The lens correction data is recorded in the MasterLockit Plus. Clips offloaded in Silverstack hold timecode information that matches the recorded lens data from the CP.3 XD lens. Silverstack can connect to the MasterLockit Plus via Wifi or a tethered network connection to receive the recorded lens data and to consolidate it with the clips in the Silverstack database. After that step, the lens correction can be reviewed in the Silverstack player.

Furthermore the correction data can be exported into ZLCFs (ZEISS Lens Correction Files) for consecutive production steps as e.g. the use in the **"ZEISS Lens Correction"** plugins ZEISS provides for third party applications.

Learn more about the process in Silverstack in the article [ZEISS CP.3 XD Lens Correction in Silverstack](#) that offers a detailed description of the functionalities.

Hardware overview

ZEISS eXtended data can be recorded via an external LEMO compatible plug onto an Ambient MasterLockit Plus:

Recording ZEISS eXtended Data via external
LEMO® compatible plug



* LEMO is a registered trademark of INTERLEMO HOLDING S.A.

Exemplary setup using an ARRI Alexa Mini



1. Connect the ZEISS CP.3 XD lens via the metadata cable to the grey ACN port of the MasterLockit Plus
2. Connect the timecode cable from the TC port of the MasterLockit Plus to the TC port of the camera



Hardware components for Livegrade Pro workflow

The following hardware components are involved:

- ZEISS CP.3 XD lens
- Camera
- Ambient MasterLockit Plus
- Cables
 - Lens data cable
 - Power cables
 - Metadata cables
 - Timecode cables
- Apple Mac / Macbook (Pro)
- Blackmagic Design UltraStudio Mini Recorder or similar recording device
 - Thunderbolt cable
 - HDMI or SDI cable
- Software
 - Pomfort LiveGrade Pro

Hardware components for Silverstack workflow

The following hardware components are involved:

- ZEISS CP.3 XD lens
- Camera
- Ambient MasterLockit Plus
- Cables
 - Lens data cable
 - Power cables
 - Metadata cables
 - Timecode cables
- Apple Mac / Macbook (Pro)
- Software
 - Pomfort Silverstack XT or Silverstack Lab

Additional information

What is eXtended data?

ZEISS eXtended Data is a newly developed lens data technology. It is based on the Cooke /i technology and extends the functionality with additional information about the lens characteristics such as distortion and shading. The characteristics are calculated in real time for every focal point and effective T-stop. The lens data are transferred either directly to camera through 4-pin Cooke /i interface (PL mount) and / or to any supported equipment via external cable.

ZEISS CP.3 XD Lens correction in Silverstack

Silverstack XT and Silverstack Lab allow to import, display and export dynamic lens correction data from ZEISS CP.3 XD lenses. In particular this involves shading and distortion correction of the recorded image.

Overview

The following steps can be executed in Silverstack:

- **Import lens correction data** directly from Ambient Master Lockit Plus to consolidate it with the according clips in the library.
- **Display and review shading and distortion correction** via the ZEISS lens correction panel in Silverstack.
- **Export .ZLCF lens correction files** to transport lens correction data to consecutive applications
 - More info about ZLCF plugins and supported applications on the [ZEISS Website](#).

To learn more about the general workflow please visit the article [ZEISS CP.3 XD Lens Correction: Workflow Overview](#).

Prior to importing lens correction data, clips have been recorded in the camera with the MasterLockit Plus attached to camera and lens.

Import Lens correction data from ambient master Lockit Plus

The lens correction data saved in the MasterLockit Plus holds a timecode relation to the clips recorded in the camera. The lens correction data be pulled via a network connection from the MasterLockit Plus and then be consolidated with the clips via timecode

1. Offload the clips that have been recorded with lens correction data into the Silverstack Library

2. Open the Import wizard through the “**Import**” button in the toolbar:

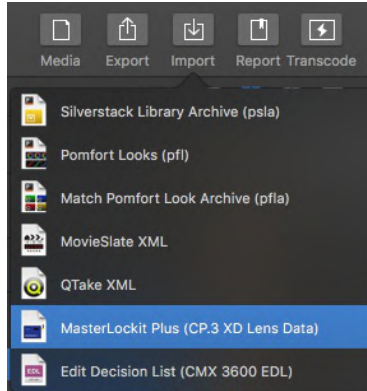


Fig. 1: Choose MasterLockit Plus (CP.3XD Lens Data) from the Import menu

3. The lens data import wizard opens. Enter the MasterLockit Plus IP Address to the “**Master Lockit Address**” address field to connect to the Master Lockit Plus. After a successful connection the lens data events have been connected to the clips:

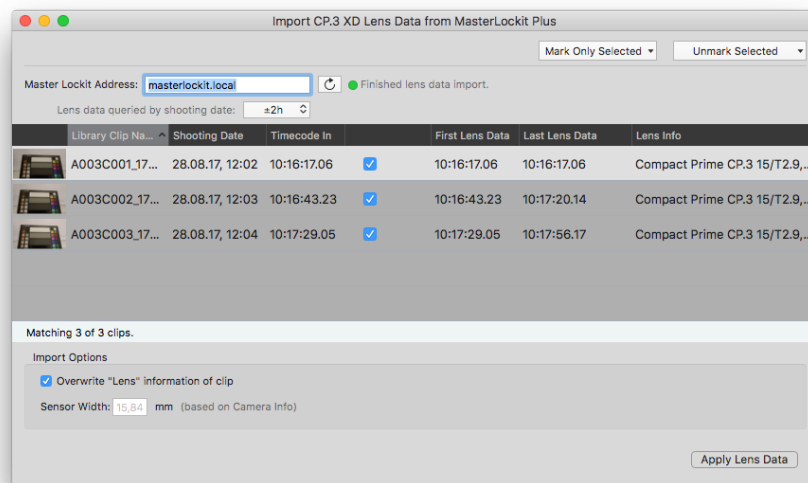


Fig.2: The lens data import wizard

Be aware that only clips that do not hold lens correction data will be displayed in the import wizard. Learn how to remove lens correction data in the sections below.

4. Options:

- **Lens data queried by shooting date:** The lens correction data saved in the MasterLockit Plus will be queried for a certain time range around the shooting date of the clips. You can set a wider time frame for the query with this dropdown. By setting the time and date of the camera correctly you can initially make sure that the shooting date and time of the clips matches the timestamp of the lens correction data.
- **Import Options**
 - **Overwrite “Lens” information of clip:** The lens info coming from the MasterLockit Plus can be taken over to the “**Lens**” metadata field in Silverstack.
 - **Sensor width:** The sensor width is required to be able to display the lens corrections. Silverstack can determine (look up) the sensor width based on the following metadata of the clips (displayed as columns in the clips table):
 - Camera manufacturer
 - Camera model
 - Sensor model
 - Format description (only in cases where the above does not provide a unique sensor width)
 - Resolution There are **cases when an automatic detection is not possible** (most probable caused by the lack of metadata of the clips). In this case you have to specify the sensor width manually to be applied to all clips where an automatic determination was not possible.

You can change the sensor width later in the General Info (right sidebar) under “ZEISS Lens Correction” (see details below).

5. To take over the lens correction data to the clips click the “**Apply Lens Data**” button.

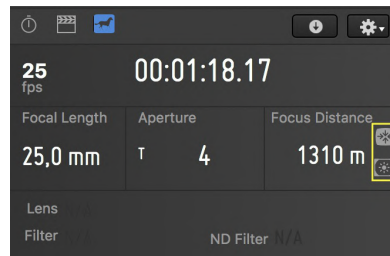
Extract Lens correction data from clips

There are cameras that are capable of including the xD lens correction data directly in their recorded clips. Currently the following formats and cameras support the integration of eXtended Data in the recorded clips:

- REDRAW clips from RED DSMC2 cameras (firmware version 7.1 and above)
- X-OCN from SONY Venice cameras (firmware version 4.0 and above)

To extract the eXtended Data from the video clips you have to use the generic dynamic metadata extraction functionality. Learn more about how to extract dynamic metadata in Silverstack XT and Lab in the article [Dynamic Metadata](#).

If eXtended Data is present in the clips, it will automatically be extracted along with the dynamic metadata. Please see the screenshot below for indicators if distortion and shading metadata is present, marked with a yellow rectangle.



The indicators on the right show if shading and/or distortion data are available.

Display and review shading and distortion correction

The clips now hold lens correction data. The **“ZEISS Lens Correction”** entry in the General Info shows the enabled correction data:

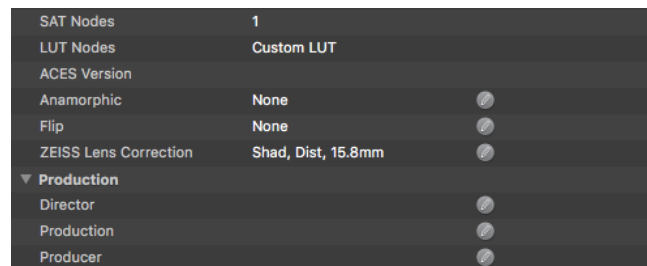


Fig. 3: ZEISS Lens Correction entry in the General Info

Click the pen icon to open the ZEISS lens correction popover:

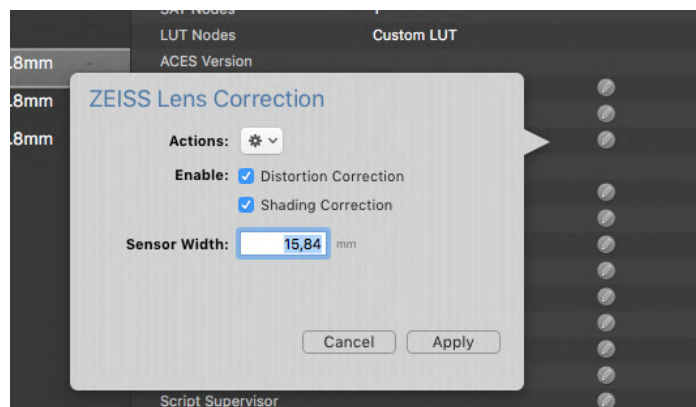


Fig.4: The ZEISS Lens Correction Popover in the General Info

- The ZEISS Lens Correction Popover in the General info allows for
 - two different **“Actions”**:
 - removal of lens data (for single and multiple clips)
 - import of ZLCF file (only if no lens correction data is available for the clip)
 - multi edit of shading and distortion correction activation
 - multi edit of sensor width

The ZEISS lens correction panel can be opened from the **“Look”** section of the main menu:

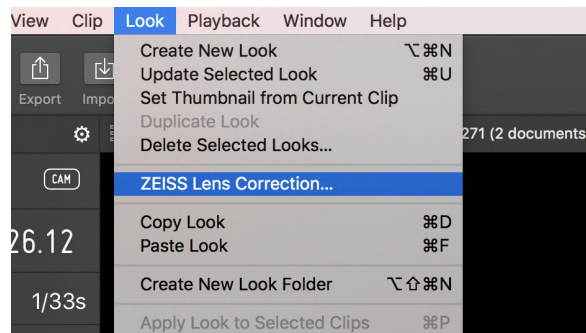


Fig.5: Open the ZEISS lens correction panel

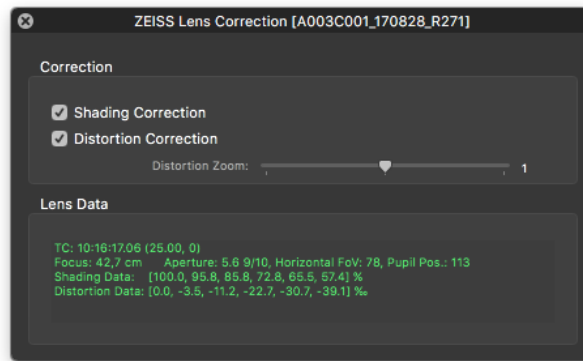
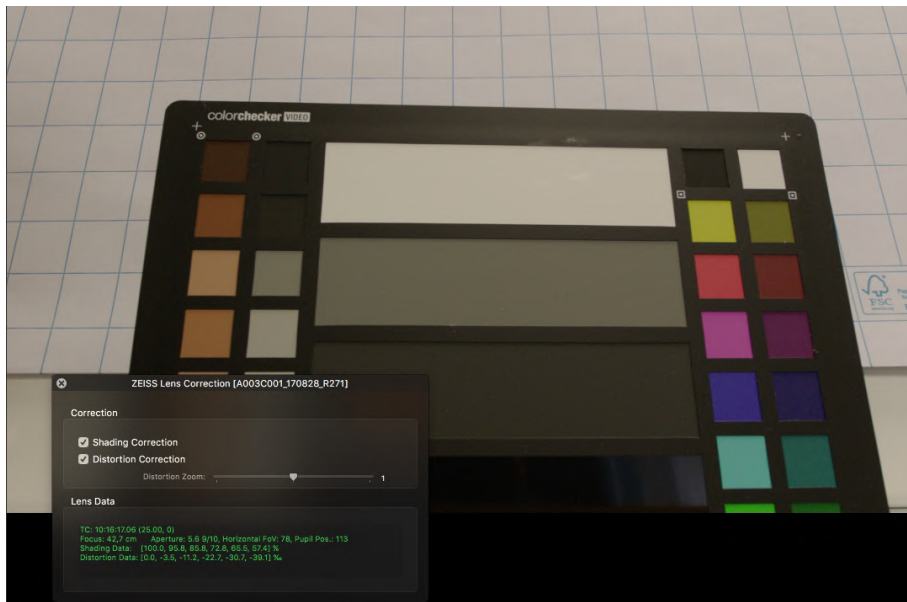


Fig. 6: The ZEISS lens correction panel

- The ZEISS Lens Correction panel allows for
 - separate activation and deactivation of shading and distortion correction for display in player
 - entry of distortion zoom factor
 - dynamic lens data review per clip

The lens correction data will be displayed in the Silverstack player:



To export the status of the lens correction data into a clips report please activate the **“ZEISS Lens Correction”** column in the table view:

Preview	Name	ZEISS Lens Correction
	A003C001_170828_R271	Shad, Dist, 15.8mm
	A003C002_170828_R271	Shad, Dist, 15.8mm
	A003C003_170828_R271	Shad, Dist, 15.8mm

Fig. 8: The ZEISS lens correction column in the clips table view

Export ZEISS Lens correction files

The acquired lens correction data can now be exported per clip for consecutive productions steps. To open the export wizard go to the **“Export”** button menu in the toolbar and select the **“ZEISS Lens Correction Files (ZLCF)”** entry from the list:

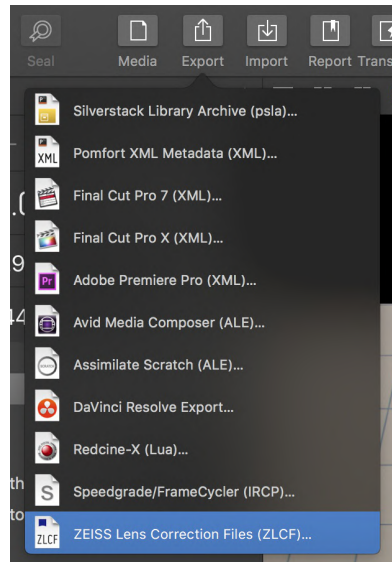


Fig. 9: Open the ZLCF export wizard

This opens the ZLCF export wizard:

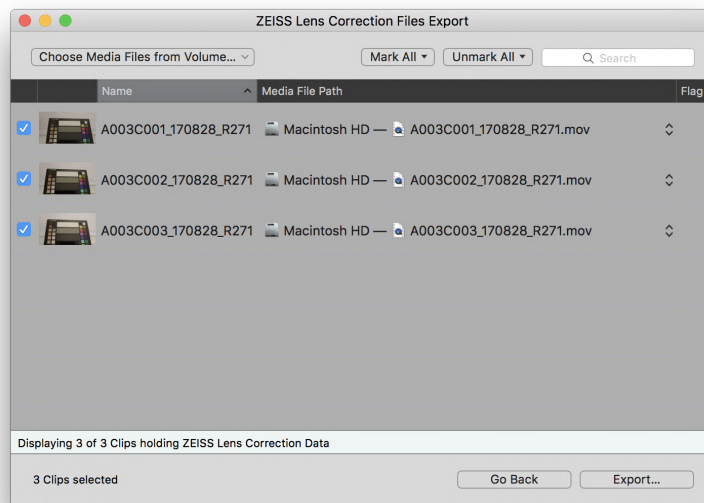


Fig. 10: The ZLCF export wizard

Please be aware that the wizard only shows clips that hold lens correction data. All others will not be shown and are reflected in the status line at the bottom.

Per clip one .zlc (ZEISS lens correction file) will be exported. After clicking **“Export...”** the wizard points you to select a folder for the zlc files to be placed.

Transfer color metadata to assimilate scratch

You can export an .ale from Silverstack to transfer ASC-CDL color metadata to Assimilate Scratch. Assimilate Scratch matches the according CDL values to the loaded clips and translates them into looks.

Exporting an ALE from Silverstack including ASC-CDL color information

To export an .ale file from Silverstack go to the header bar and choose **“Export”** :

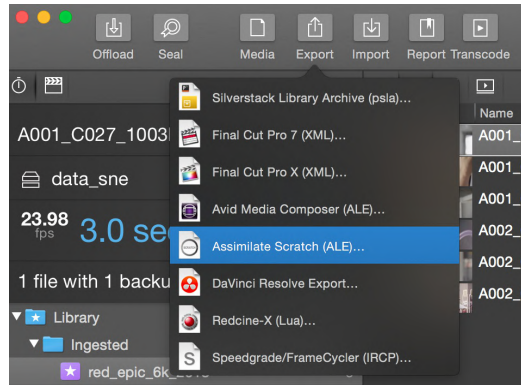


Fig.1: Choose Assimilate Scratch from the Export options.

Choose “**Assimilate Scratch (ALE)**” and a wizard window will open:

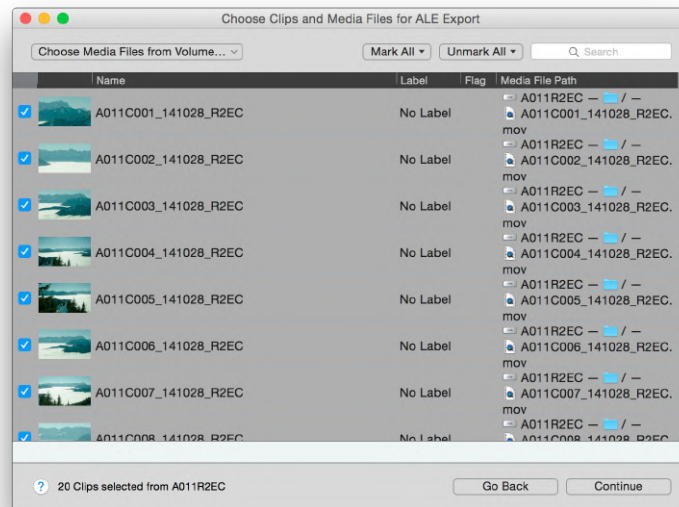


Fig. 2: Choose the clip you want to export in the ale.

Select the clips you want to export and click “**Continue**”.

In the next window choose your configuration:

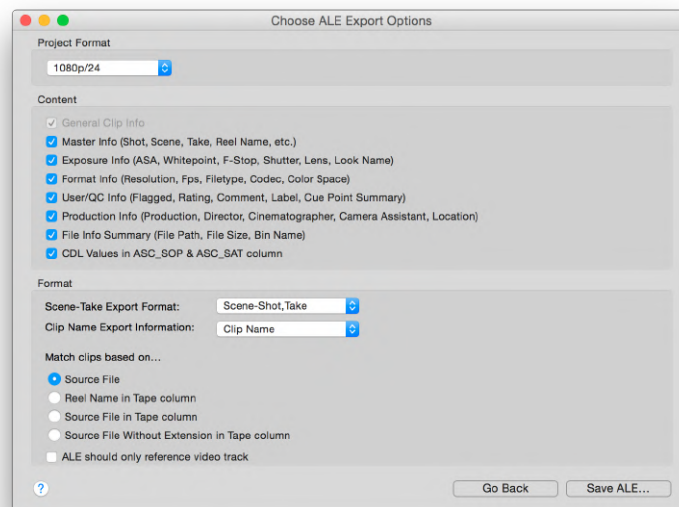


Fig. 3: Choose the ALE export options

Make sure the “**CDL Values in ASC-SOP & ASC-SAT column**” checkbox is checked to transfer color data to Assimilate Scratch.

Click **“Save ALE...”** to save the .ale file to the intended destination.

Importing an ALE in assimilate scratch and matching color metadata

To import .ale files that contain color information in Scratch you have to follow 4 consecutive steps:

1. Import the clips into Scratch that you want to apply color information to.
2. Import the .ale file.
3. Check settings for matching and import.
4. Go to the clip view and find the ASC-CDL values affect the clips accordingly.

Let’s break the steps down into detail:

Importing the clips

Click the **“Load Clips”** button from the lower left side of the interface:

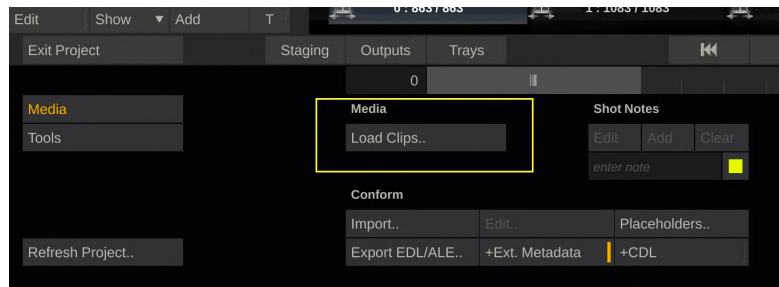


Fig.4: Click the Load Clips button to add clips to Scratch.

Choose the clips you exported the ALE for to add them to the Scratch project:

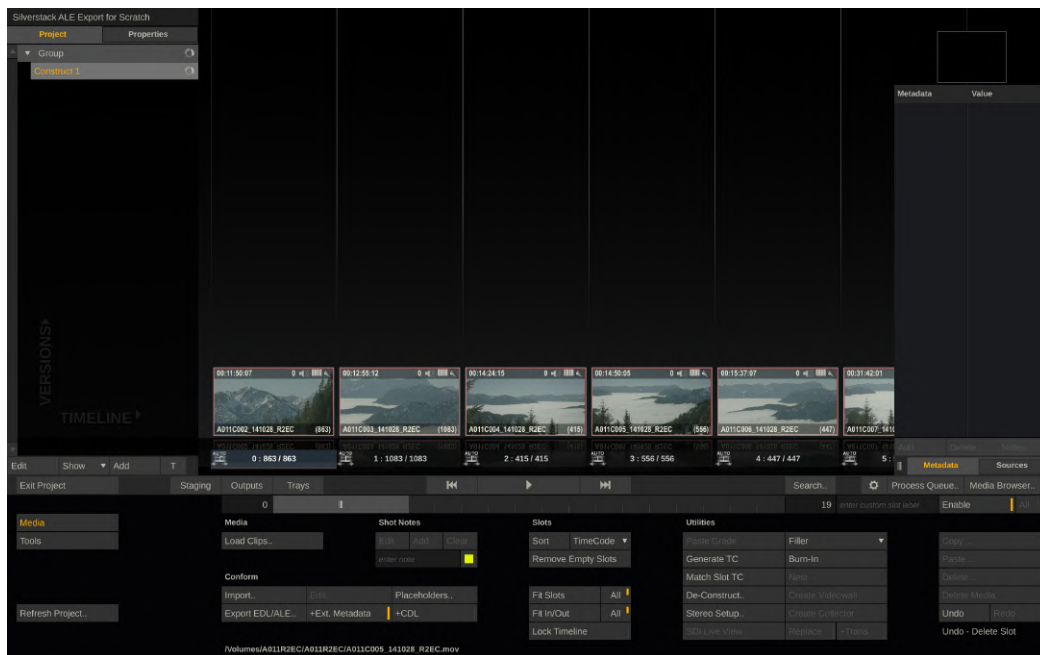


Fig. 5: Clips have been added to the project

Importing the ALE file

Go to the **“Conform”** section which you will find slightly below the **“Load Clips”** button you just used. Click the **import** button to open the ALE:

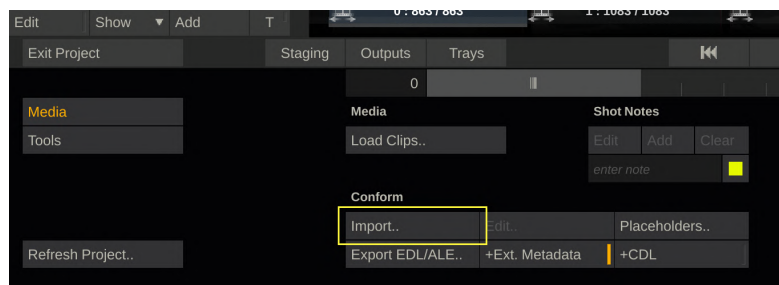


Fig. 6 : Choose “Import” from the conform options

Navigate to the exported ALE and click **“Open”**.

Check settings for matching and import

You will see the matching user interface where now the ALE data will be matched to the clips:

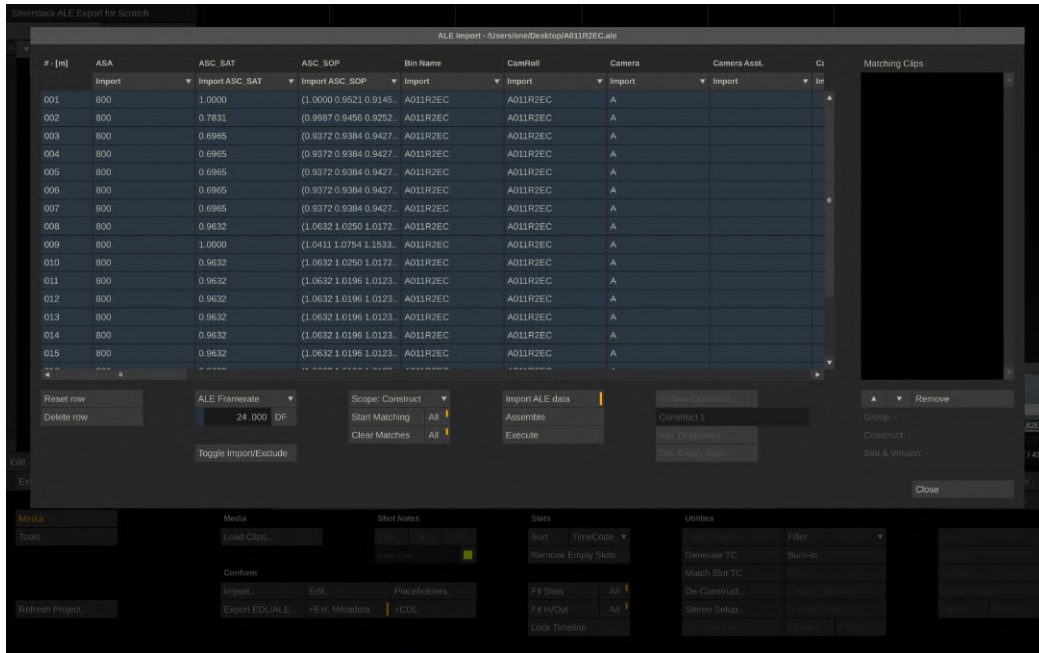


Fig. 7: The ale matching user interface.

At the top of the the columns from the .ale you can select the action that should be performed for each column. Make sure you have the **ASC-SOP** and **ASC-SAT** columns set to **Import**. Matching on TC or File Name will be easiest so make sure to that at least one of those columns, or any other you want to match based on, is set to **Match on...**. You can make that selection from the drop down on top of every column.

Click **Start Matching** to match the metadata (including the ASC-CDL data) to the clips according to your settings.

While then selecting the different rows in the ALE you will see the clips the data will be matched to in the right bar of the wizard.

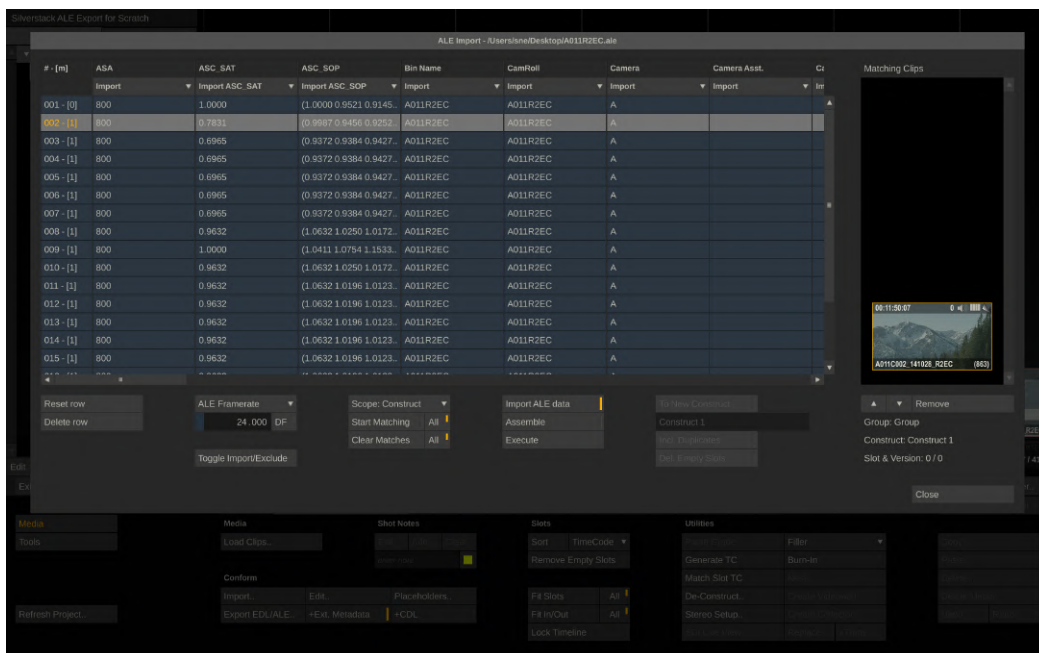


Fig. 8: The metadata has been connected to the clips.

Click **Execute** when you are happy with the match and want the metadata to be taken over to the clips.

Go to the clip view and find the ASC-CDL values affect the clips accordingly

Double click a clip to reach the clip detail view:



Fig. 9: The detailed view of the clip in Scratch

Select **“Matrix”** from the display options on the right side and **“Numeric”** from the panel on the left side. You will then see how the color settings have been affected by the imported ASC-CDL data.

If working in Assimilate Scratch on a PC monitor you have to set the right gamma to match the look of the clips to the perception inside Silverstack. Go to the Assimilate Scratch global settings to change the gamma if needed. Please be aware of the ColorSync settings in Silverstack as well (read about the setting in the article [Using Silverstack's Full Screen Mode](#)).

Maintaining grades and clip metadata throughout production

The use of Pomfort's LiveGrade and Silverstack in combination with Assimilate Scratch allows for an integrated workflow that involves the preservation of clip and grade metadata throughout the process.

Looks generated with LiveGrade can easily be matched to the clips inside Silverstack. This workflow is also described in the article [Look Matching](#).

Silverstack can then export an ALE that contains information about the LUT in the grade for each clip. By using the LUT files along with the ASC-CDL data and the automatic matching process inside Assimilate Scratch, unique grades can easily be transferred for each individual clip.

Transfer color metadata to AVID Media Composer

To learn about the basic process of transferring metadata to AVID please refer to the article [Transferring Metadata to Avid Media Composer](#). The article will help you through the process of matching metadata from an ALE file generated from Silverstack to master clips in Avid.

Adding color metadata to the ALE export

When exporting your ALE file from Silverstack make sure you have the checkbox **“CDL Values in ASC-SOP & ASC-SAT column”** checked:

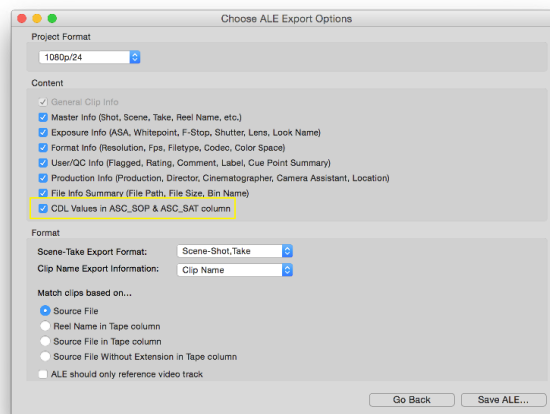


Figure 1: Include the CDL Values in the according columns of the ale file.

After the values are included in the ALE file perform the same steps as pointed out in the article [Transferring Metadata to Avid Media Composer](#). The result will be clips that have the CDL values from Silverstack in the ASC_SAT and ASC_SOP metadata columns in AVID Media Composer.

Transforming the color metadata information into Looks in AVID

We will now use the color metadata information from the ASC_SAT and ASC_SOP column to apply them to the clips.

Select all clips in the bin you merged the metadata with. Perform a right click on the film reel icon on the left of an arbitrary clip:

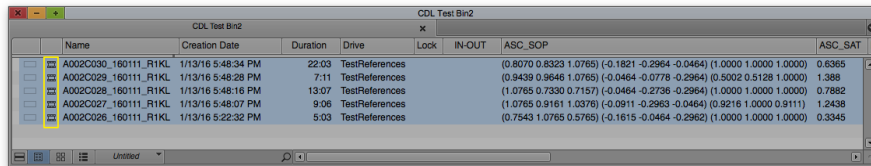


Figure 2: The bin with selected clips and the reel icons marked.

From the context menu choose **“Source Settings”**. You will see the following window:

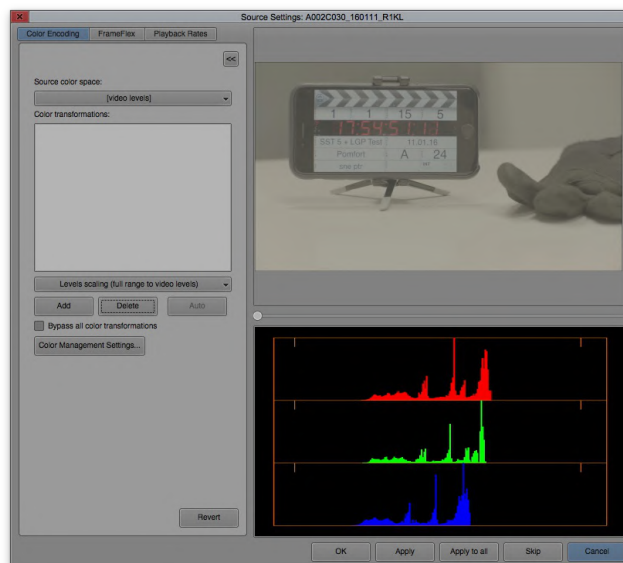


Figure 3: The Source Settings with the Color Encosing tab selected.

Make sure to have the tab **“Color Encoding”** selected at the top left of the window. Click the dropdown indicator in the menu where it says **“Levels scaling (full range to video levels)”** below the **“Color transformations”** list.

You will see a list of transformations to choose from:

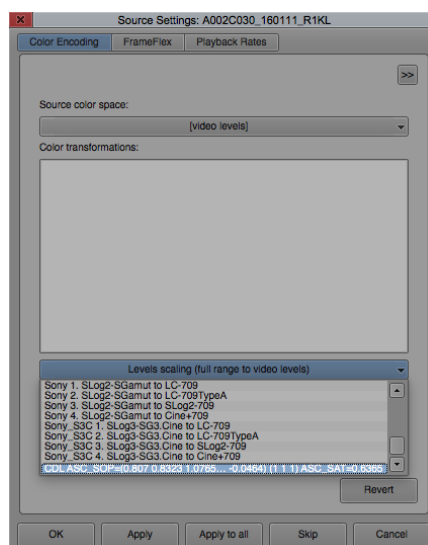


Figure 4: Choose the CDL ASC_SOP and ASC_SAT values from the bottom of the dropdown list.

Scroll down to the bottom of the list and select the **“CDL ASC_SOP ASC_SAT”** entry. Click **“Add”** right below and it will appear in the **“Color transformations”** list:

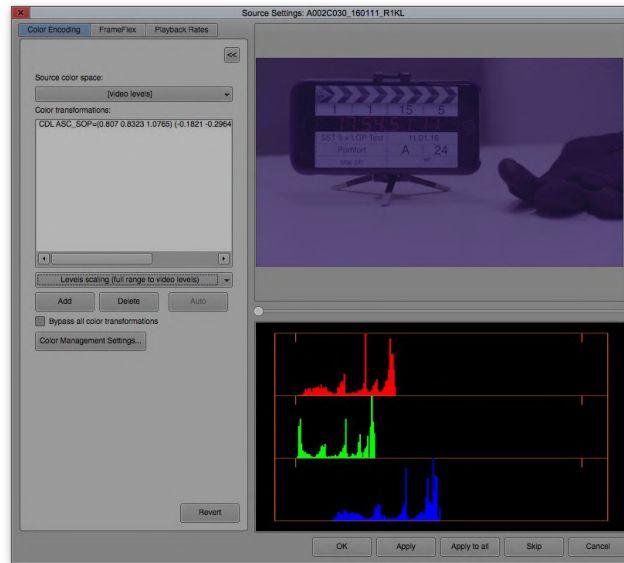


Figure 5 : The Source Settings with CDL values in the Color transformation list.

Now click **“Apply to All”** on the bottom of the window to apply the according CDL values to every clip. Click **“OK”** to leave the wizard. Every clip will now receive the look that is generated from its associated values in the ASC_SAT and ASC_SOP columns.

Adding a 3D LUT to the color processing

To add a 3D LUT again select all the clips you want to apply a LUT to. Perform a right click on the film reel icon on the left of an arbitrary clip and from the context menu choose **“Source Settings”**.

Instead of choosing **“CDL ASC_SOP ASC_SAT”** from the dropdown **select the desired LUT** and click **“Add”** to put it into the **“Color transformations”** list above:

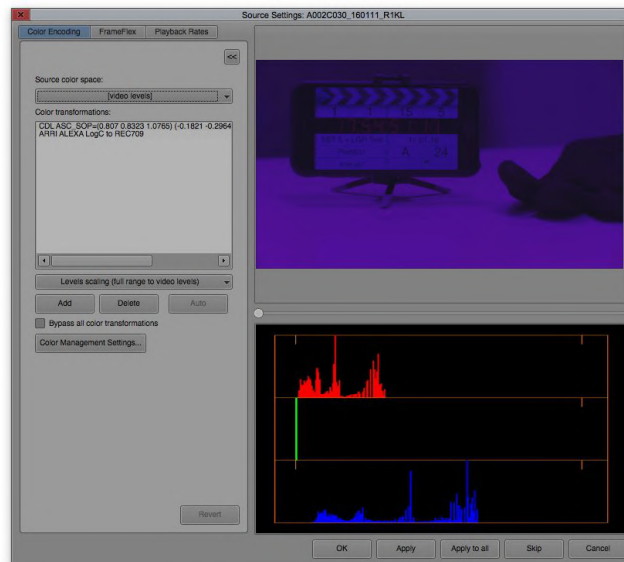


Figure 6: The source settings with CDL and LUT in the right order in the Color transformations list

Make sure that the CDL entry is on top of the LUT entry in the list. They will be applied in order from top to bottom as in the nodes in Silverstack.

Now click **“Apply to All”** to add the LUT to all the selected clips. Then click **“OK”** to leave the wizard. The clips will now all have an additional LUT added to the CDL processing.

Creating reports

Creating reports

A crucial feature in Silverstack is the report creation. For this reason, Silverstack offers a flexible and powerful reporting center, offering users the opportunity to share clip information and thumbnails in a well-arranged and accessible PDF document. Reports can include all the metadata needed to document camera media traveling to different professionals involved in many stages across the production workflow.

This article requires knowledge about the clip library and the [report wizard](#). Let's summarize what this tutorial covers:

1. [Creating and customizing reports](#)
2. [Adjusting the thumbnails for the reports](#)
3. [Including a report note with Markdown](#)
4. [Saving the adjustments within a preset](#) for [configuring a workflow](#)

The following explanations assume that you already have some clips available in your Silverstack library. To have some footage to work with, you can use Silverstack's [sample project and footage](#). The workflows for shooting day, thumbnails, contact print and volume reports are not explained in detail in this tutorial since the settings are self-explanatory. The individual settings are explained in the article about the [report wizard](#).

1. Customizing reports

Open the "Report Wizard" by clicking the [Report](#) button in the top left of the toolbar.

Creating a custom layout for the clips report

For the clips report you can use a predefined or custom layout. Let's create a custom preset. Close the report wizard for now, head to the library's table view and click the gear icon next to the table view's layout dropdown menu. As a starting point, you can use one of the predefined layouts like "All", "None" or "Digital Imaging Technician." Use the checkboxes in the dropdown menu to enable or disable metadata columns as you like. You can also rearrange the columns within the table view using drag & drop. The option "Current Layout" switches to "Custom Layout" and by clicking the button [Save...](#), you can store your adjustments within a new layout. For example, you could use the layout "None" to begin with, add three scene, shot, take columns and name the preset "Basic Clips Report." You can now open the report wizard again and set the layout of the clips report to the custom layout called "Basic Clips Report."

Tip: It's possible to completely hide thumbnails in clips reports. To accomplish that, just remove the preview column from the table view's custom layout.

2. Adjusting the thumbnails

If you would like to adjust the thumbnail positions and shift them more to the beginning, middle or end of the clips, that's possible. Go to Settings > Media > Thumbnails and change the slider to the beginning, middle, or end. Close the settings, select the desired clips to change the thumbnails for and click Clip > Recreate Thumbnails to generate new thumbnails. In case this created an undesirable result for one of the clips, you can open the playback view, set the clips' playhead to a specific frame and click Clip > Set Thumbnail Frame to set the thumbnail to that chosen frame.

3. Including a report note with Markdown

Each report type allows you to add an individual report note that can be formatted using the markup language [Markdown](#). For example, you can enable the [Include Report Note](#) checkbox within the clips report settings and click the pen icon to open the editor.

You may use the following Markdown code to test the function:

```
# Header
## Subheader
* Bullet Point 1
* Bullet Point 2
```

If you enter the code above into the Markdown editor, it shows you a preview of the result.

4. Saving the report adjustments within a preset

Saving the configured reports as preset helps you to provide consistent data management. On top of that, to automatically create reports as post steps using the [workflow configuration window](#), you need to make a report preset first. You can do this by clicking [Save as new preset...](#) in the preset dropdown menu in the bottom bar of the report wizard. Apply a name to your preset and click [OK](#). The preset stores the settings of the entire report configuration, including which report types are enabled or disabled.

Tip: You can embed your own logo within Silverstack's reports. Head to the library outline, select the main library folder at the top and drag & drop your logo onto the associated logo field within the section "Project Overview". Transparency is also supported.

5. Create the reports

There are two ways to create reports from your assets:

- Manually using the report wizard
- Automatically while running a workflow (using [post steps](#))

After having saved a report template, you can create reports after each activity within a workflow. Learn how to do this in our article about [configuring workflows](#).

To manually export reports (e.g. because you want to create a report of the entire library after you finished your entire work), select one or multiple bins in the [library outline](#), open the report wizard and click [Export Reports](#).

Tip: When selecting multiple bins or folders, Silverstack will export one report for each selected bin/folder. If you want to create single report for multiple bins, group the bins within a folder and use that folder to export your reports.

Syncing via ShotHub

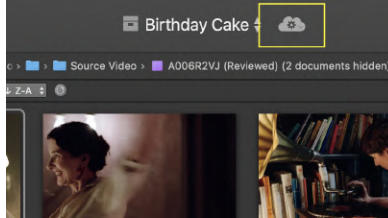
Connecting Silverstack to ShotHub

Sync the local Silverstack clip library with ShotHub

Make sure you are working with Silverstack or Silverstack Lab version 8.0 or higher with the Silverstack Library Sync Feature. Please note: You can use the Library Sync Feature across several computers with Silverstack OR Silverstack Lab, that means there is no need to have Silverstack Lab installed on all computers.

Follow the steps below to make your clip library available online and merge clip metadata and file information bi-directionally with connected Silverstack desktop applications.

1. Click the cloud button in the toolbar to start the setup process:



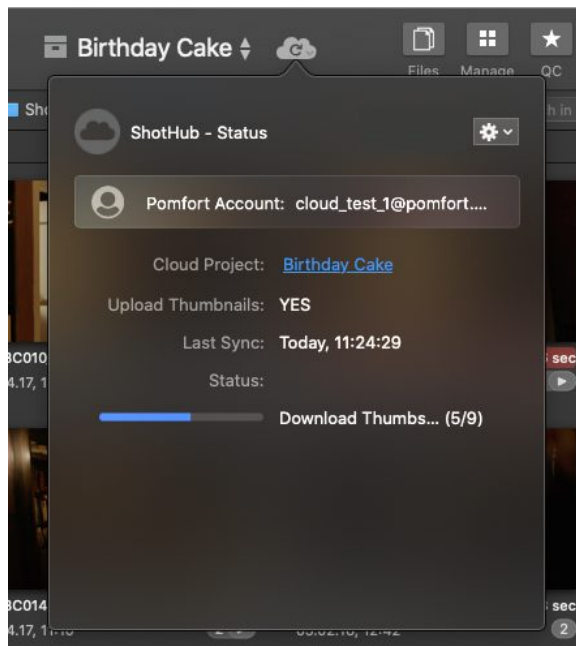
2. In the first step, you **sign in to ShotHub** with your Pomfort Account credentials to connect your project with ShotHub.
3. Optional: Select your Pomfort Account if you use more than one Pomfort Account (which can managed in the application preferences)
4. In the next step, **select a ShotHub team and choose the Silverstack cloud project** that you want your current local Silverstack project to appear in. You have two options:
 - Create a **new cloud project** and give it a custom name in the "Project Name:" text field (cloud project names are forced to be unique).
 - Merge the Silverstack library with an existing Silverstack cloud project, which you can choose from the "Cloud Project:" pop-up button.
5. In the last step, you choose the sync options. Select if you want to **upload thumbnails** with the metadata library.
6. Click "Start Sync" to start the sync process of your local library to a Silverstack cloud project in ShotHub.

Sync the clip library of another Silverstack application with the cloud project

Generally, there are two ways to sync another library with an existing cloud project in ShotHub. You can either **create a new local clip library** by adding a synced library from ShotHub or you can **merge the local clip library** with the cloud project. More details of both ways can be found in this article: [Sync Clip Library](#)

ShotHub project status and sync options

After the setup is completed successfully, you can monitor the ShotHub project status in the popover that shows from the cloud button in the toolbar (see screenshot below).



The cloud button indicates the following sync status or ongoing sync processes:

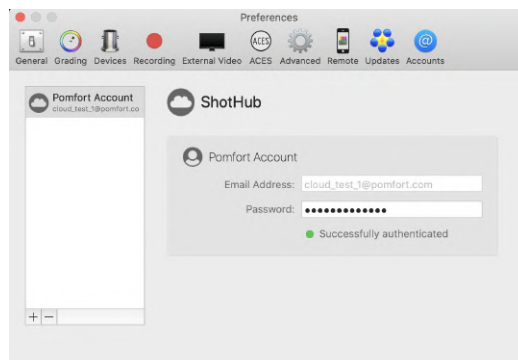
- ... new library data, changes, or thumbnails in the synced libraries are available to be synced
- ☁ sync is in progress, new library data, changes, or thumbnails are synced
- ✓ project is synced completely
- ✕ project is disconnected from cloud project or temporarily taken offline
- ! sync error (for example, if you are not connected to the internet or the cloud project was deleted)
- ⚙ project is not connected to ShotHub (library is not uploaded or disconnected from ShotHub)

The elements displayed in the popover are the following:

- **Gear menu button:** Provides access to the following functionalities:
 - **Take the project offline temporarily.** This temporarily prevents new library data from being uploaded to the cloud project.
 - **Take the project online.** Restarts uploading new library data to the cloud project if taken offline before.
 - **Sync Changes Now.** Trigger the sync process manually.
 - **Disconnect the project from ShotHub.** This will disconnect the local project and the cloud project permanently. By default you can sync your library again to the existing cloud project by setting up the sync process again.
- **Pomfort Account:** This shows the Pomfort Account that is used to sign into ShotHub for this project.
- **Cloud Project:** The name of the Silverstack cloud project that the local Silverstack project is connected with. You can click the link to the cloud project to open it directly in your default web browser.
- **Include Thumbnails:** Shows YES if thumbnails are also synced and NO if they are not synced. You can change this setting by disconnecting the project and setting it up again.
- **Last Sync:** Time and date of the previous complete sync.
- **Progress bars:** When changes are made to the library or the cloud project, there are two progress bars. One for the sync of library metadata and one for respective thumbnails.

Accounts tab in the preferences

Your Pomfort Account(s) can be managed in the Accounts tab of the [application preferences](#). Configured accounts show up in the connection dialog when starting the upload of a new project and can also be edited in the keychain.



Clip library sync

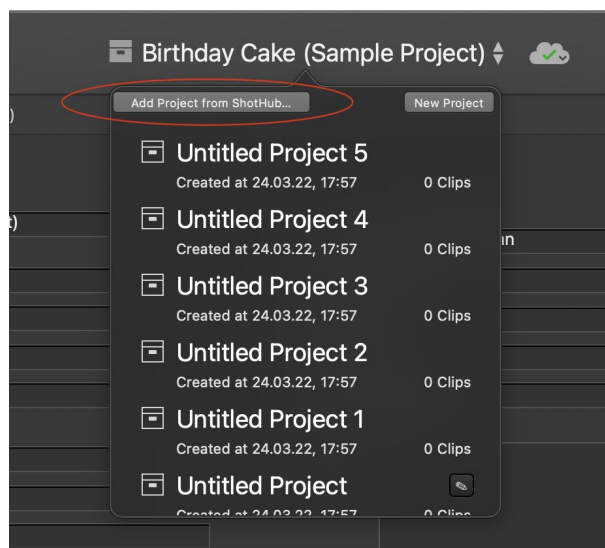
Share the clip library of Silverstack via ShotHub to keep clip metadata and file information synced across computers.

In order to use the clip library sync feature a Silverstack cloud project should be created first. You can either [sync a project from Silverstack](#) with ShotHub or create a new project on the [ShotHub](#) web page.

Then, there are generally two ways to connect another Silverstack application to the synced cloud project. **Create a new Silverstack project (1)** by syncing the clip library from a Silverstack cloud project or **merge the local clip library (2)** with a Silverstack cloud project. For both ways, make sure that you have added your Pomfort Account in the application preferences to be able to access the Silverstack cloud project.

(1) Create a new local Silverstack project means that connecting the Silverstack desktop application with a ShotHub project creates a new local project that is “synced”. Further changes in the clip library are bi-directionally synced with the cloud project and connected Silverstack applications.

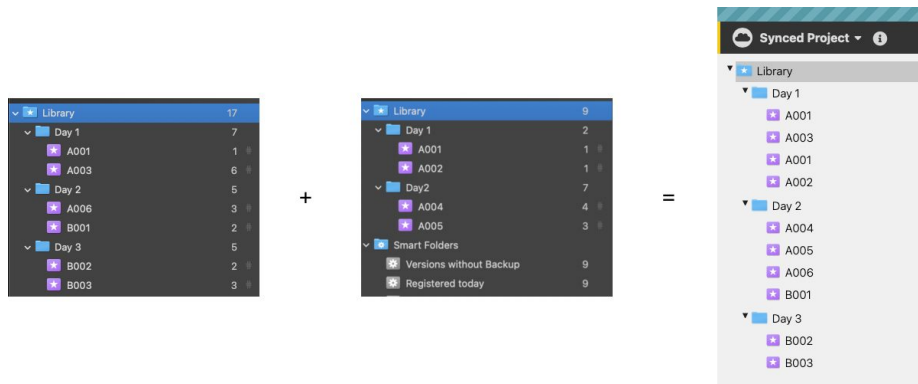
1. Click the “Sync from ShotHub” button in the Project Chooser (next to the button “New Project”)
2. Choose your account or sign in to ShotHub with your Pomfort Account credentials (for first usage only)
3. **Choose the Silverstack cloud project** that you want to sync with to create a new Silverstack project
4. Click “Start Sync” to start the sync process of your local library with the selected ShotHub project.



Create new local Silverstack project from ShotHub

(2) Merge local clip libraries means that you can merge a local Silverstack library with one cloud project, which makes especially sense when you started two Silverstack projects independently. That way, folders with the same name in both local libraries are merged (e.g. “Shooting Day 1”) into the synced clip library, bins are **never** merged, even if they have the same name.

1. Click the cloud button in the toolbar
2. Choose your account or sign in to ShotHub with your Pomfort Account credentials (for first usage only)
3. **Choose the Silverstack cloud project** that you want your current local Silverstack project to appear in
4. Click “Start Sync” to start the sync process of your local library to a Silverstack cloud project in ShotHub.



Local Silverstack clip libraries merged into one Silverstack cloud project

NOTE: If you are not using the same Pomfort Account on the other device or want to authorize other persons to sync with your project, you should invite them as project admins or project members to your ShotHub cloud project. Learn more about Managing Project Members [here](#).

Clip library sync details

Syncing your Silverstack library via ShotHub to other instances of Silverstack includes:

- Complete library with all folders and bins
- All clips, sidecars and documents
- General Info with metadata
- User Info with slate and rating information
Note: Sync option works per metadata entry, that way you can edit slate info and comments on two computers simultaneously
- File Info with overview of file resources and link to clip in ShotHub
- Summary showing statistics and details
- Relation of source and transcoded clips
- Look info and grading information
Note: Sync option works per look including all grading nodes
- Thumbnails (if enabled for initial cloud project)
- Project Settings: Labels and Custom Field Labels
- Cue points
- Synced audio clips
- Audio Panel adjustments

Metadata created in synced projects

- **ShotID and ShotID link:** Clip Identifier to retrieve a clip in ShotHub or Silverstack
- **Added By:** Metadata field to indicate the Pomfort account that was used to sync a clip with ShotHub. In Silverstack “Added By” is available as column in the clips table, as filter or smart folder criteria and shown in the file tab. When accessing the cloud project in ShotHub “Added By” is also available as column or search filter.

Related articles:

[Exchange Library Metadata:](#) Import and Export Silverstack Library Archives

Search Code: SH-CL1

Troubleshooting

Frequently asked questions

General technical topics

Which cameras and formats are supported?

Silverstack provides general and advanced support for a lot of different media formats. Learn more about supported formats for [Silverstack XT](#) and [Silverstack Lab](#).

What kind of technical support is available?

If you experience a problem with the software or don’t understand a specific feature, please get in touch with us through our [contact form](#).

Errors and warnings

What can I do when Silverstack hangs or crashes repeatedly?

In the rare case that Silverstack hangs or crashes repeatedly, you can automatically send reports to our support team:

- Choose the menu Help > Contact Support
- Please enter your personal information (name and email) so we can contact you
- Enter a short description:
- What steps do you perform in the software that cause the issue?
- What happens when you perform these steps?
- What would you expect the software to do instead? In addition to your message, the form will include crash reports, log files, and system information that will help our support team trace potential bugs.

Silverstack 8: Why do I see the warning that Silverstack XT / Lab is required?

Certain camera formats require Silverstack XT or Silverstack Lab. When trying to work with those camera formats in a Silverstack Basic project, you get a warning. To be able to ingest all the metadata for those clips and view them, you will have to upgrade your Silverstack license. Please visit the [Silverstack Upgrade](#) site for more information. Once the upgraded license is installed, you need to re-ingest the clips to read the metadata and work with them as usual. For a detailed list of the supported formats, please check the article [Assets in Silverstack](#).

Updates

How do I update Silverstack?

Silverstack updates will be delivered automatically through the built-in update mechanism. If you disabled automatic updates, you can start a manual update via the Silverstack > Check for Updates... menu.

On how many computers can I install my Silverstack license?

One license allows you to use one copy of the Software on one single computer. But you can transfer a single seat license from one computer to another. In order to move your license to a different computer, you first have to deactivate the license on the original computer. Now the License Key is free to be activated on the software download on the second computer.

I want to move my license to another computer, but I can't unregister it on my old computer.

Please reinstall Silverstack on your old computer and activate the software again. After Silverstack is activated, please go to the license menu and deactivate your license from the computer. You can now activate the license on another computer. If this is not possible, please send an email to support@pomfort.com. Sign into to your Pomfort account to check whether your license is activated and on which computer it is enabled. More information about the Pomfort Account can be found [here](#).

Why does Silverstack tell me my license is already activated?

Each Silverstack license key can be activated on one computer at a time. If an error message appears when you try to activate your license on a new computer, please check if the license was deactivated properly from the original computer. You can do this by signing into your Pomfort account. The license status needs to be shown as "Inactive" to activate the license on another computer. If this is not the case, please deactivate your license from the computer that it's shown as "in use on". Find more information about the Pomfort Account [here](#).

How can I recover my license?

Just send an email to support@pomfort.com and we'll send you your license again.

Can I keep my data from the trial version when I upgrade to the licensed version?

Yes, the library and all settings created during the trial will remain the same in the licensed versions of Silverstack or Offload Manager

How do I submit feedback?

There are two ways to submit feedback on our products. For bug and crash reports, please use the Silverstack integrated bug report mechanism available via the **Help > Send Bug Report...** menu. The bug report incorporates run logs, crash logs, preferences and information about your system. The information you submit via the bug report mechanism will not be used for any means other than identifying and fixing the submitted bug. For feature requests and questions about our products, please use our [contact form](#).

I have a problem with the license

The activation of the license doesn't work

The license is already activated

According to our software license agreement, each Silverstack license can be active in one computer at a time. However, the license key can be deactivated and reactivated as many times as needed. The article [Migrate a license from one computer to another](#) will help you in the process.

The license key has a wrong format

If the key has a wrong format, you won't be able to activate it. Generally, the license key has the following format:

Sist-xxxxxxxx-xxxx-xxxx-xxxxxxxxxxxx.

Make sure that no spaces are left when entering the key. We recommend to copy and paste the license key directly from the purchase email to avoid any error.

Alternatively you can also log in to your [Pomfort Account](#) to look up your license key and copy it from there.

No internet connection

Silverstack needs an internet connection in order to activate and deactivate licenses. Once the license key is active, you can use Silverstack without a connection.

Using a wrong Silverstack version

Each Silverstack version needs a certain license. The license purchase email we have sent you should show for which Silverstack version the license is issued. Your Silverstack subscription license will always work with the latest version of Silverstack which currently is Silverstack 7. Your subscription will also allow you to work with Silverstack 6 and Silverstack 5.

Additionally your Silverstack Lab 7 subscription will allow you to work with Silverstack 7, 6 and Silverstack 5.

For older versions see:

[Silverstack 3 download link](#)

[Pomfort download section](#)

The license is expired

A temporary license is expired

Silverstack is available as temporary licenses (e.g. for 1 month). Maybe your license simply expired.

You can check the expiration date of your license either directly in the software, or by logging into your [Pomfort Account](#).

Visit <http://pomfort.com/store/silverstack> for a new license.

System time is wrong

When the system time on your computer is wrong, the license may not work. Make sure that time and date is set properly in macOS's System Preferences.

The trial version message is shown

For any questions related to the trial version, please read the article [Trial version](#).

If none of the solutions described above have solved your licensing issues, please contact our [support team](#).

Incompatible Silverstack or Silverstack Lab library version

The Silverstack and Silverstack Lab library versions advance over time across software releases. This is a natural process when a software application advances but inevitably leads to incompatible library version when opening projects with outdated versions of Silverstack.

We always recommend to use the latest version which can be downloaded on the [Pomfort downloads page](#). By doing that, you avoid the situation this article takes care of.

Migration and library version states

The term "library version" basically refers to the state of Silverstack's database and which information it can currently store.

When updating Silverstack to a newer version, the existing library is migrated to the latest version. That process establishes compatibility of the existing library with the new library version.

You can learn more about the migration of libraries in the [dedicated article](#).

After the migration, your library is in a newer state and, as a result, is no longer compatible with older versions of Silverstack. If you are forced by any circumstance to move back to an outdated library version of Silverstack, you can restore a backup that has automatically been created during the migration process.

Restoring a library backup

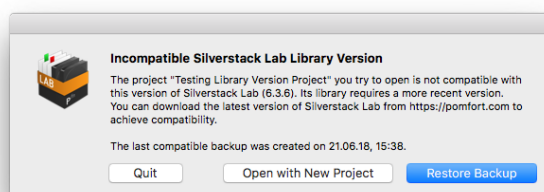


Fig. 1: The "Incompatibly Silverstack Lab Library Version" Alert, applies also to Silverstack

When you open a project that has been created with a later version of Silverstack in an older version the alert from Fig. 1 shows.

At this point you have three options that you can choose from using the buttons:

- **Restore Backup:** Silverstack automatically offers the possibility to restore the last state for which a backup was created that is compatible with the opened version of Silverstack. Backups are automatically created during migration. Automatic backups can be enabled in the backup tab of Silverstack's settings as well as manually triggered.
- **Open with New Project:** To be able to access Silverstack even though the particular project can't be opened, you can create a new project to start with. You can again change to other projects from within the application then.
- **Quit:** You can quit the application to open the project again with a later version of Silverstack that is compatible with the library version.

In the very rare case that no backup is available, you see the following alert that indicates that there is no compatible backup and therefore gives less options:

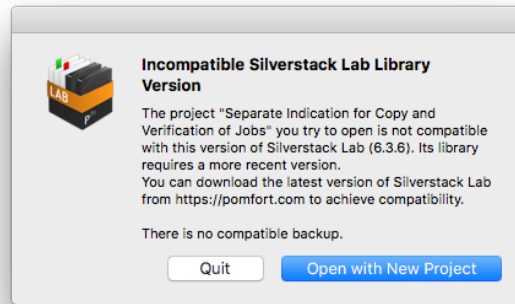


Fig.2: The alert in case there is no available backup that can be restored

Silverstack does not launch

In case that Silverstack doesn't launch on your computer, you can revert to the default settings for a clean restart of Silverstack.

1. Locating files

Depending on your Silverstack version, you need to locate different folders and files:

- Silverstack XT: ~/Library/Preferences/com.pomfort.Silverstack[Version].plist
- Silverstack Lab: ~/Library/Preferences/com.pomfort.SilverstackLab[Version].plist

Tip: By default, the library folder is hidden. You can open it in Finder by selecting menu "Go", holding down the option key and clicking the library entry. The library folder will be opened.

2. Reset Silverstack's settings

1. Quit your Silverstack version
2. Create a backup of the .plist file that is located as described in [section 1](#). This step is optional.
3. Open the Terminal application (type terminal in your spotlight or navigate within the utilities folder of your application folder)
4. Type the following command in your terminal window and replace [Version] with your current Silverstack major version (e.g., 9)
 1. For Silverstack use: `defaults delete com.pomfort.Silverstack[Version]`
 2. For Silverstack Lab use: `defaults delete com.pomfort.SilverstackLab[Version]`
5. When starting Silverstack again, the application should start as usual

If you still experience issues, then Silverstack's library might be corrupted. The article on [resetting Silverstack's library and settings](#) explains how to create a new library in addition to the setting reset. If the problems persist, please contact our [support team](#).

Reset Silverstack's library and settings

In the unusual event of Silverstack not being able to launch, you might have to consider resetting the preferences and/or deleting Silverstack's library.

Warning: This can't be undone, deleting the library will delete all custom metadata, clip references and thumbnails. The actual clips won't be deleted.

Deleting Silverstack's preferences

- Quit Silverstack
- Create a copy/backup of the following file **matching your Silverstack version** (optional):
 - Silverstack 8:** ~/Library/Preferences/com.pomfort.Silverstack8.plist
 - Silverstack Lab 8:** ~/Library/Preferences/com.pomfort.SilverstackLab8.plist
 - Silverstack 7:** ~/Library/Preferences/com.pomfort.Silverstack7.plist
 - Silverstack Lab 7:** ~/Library/Preferences/com.pomfort.SilverstackLab7.plist
- Open up the Terminal application (type terminal in your spotlight or navigate within the Utilities folder of your application folder)
- Type the following command in your terminal window **matching your Silverstack version**:
 - Silverstack 8:** `defaults delete com.pomfort.Silverstack8`
 - Silverstack Lab 8:** `defaults delete com.pomfort.SilverstackLab8`
 - Silverstack 7:** `defaults delete com.pomfort.Silverstack7`
 - Silverstack Lab 7:** `defaults delete com.pomfort.SilverstackLab7`
- Start Silverstack

Deleting Silverstack's library

- Quit Silverstack



- Rename the folder **matching your Silverstack version** in your home directory:
Silverstack 8: ~/Library/Application Support/Pomfort/Silverstack8
Silverstack Lab 8: ~/Library/Application Support/Pomfort/SilverstackLab8
Silverstack 7: ~/Library/Application Support/Pomfort/Silverstack7
Silverstack Lab 7: ~/Library/Application Support/Pomfort/SilverstackLab7*The Library folder is hidden by default. You can open the Library folder in Finder when opening the "Go" menu and holding the "alt" key. You will see an extra entry "Library" in the "Go" menu. Choose this entry and a Finder window will open with the Library folder.*
- Start Silverstack again, it will automatically create a new library.

Now Silverstack should start as usual with a fresh library. If you still experience issues, please contact our [support team](#).