User Manual

Silverstack LAB



Silverstack Lab Version 8.6



Table of Contents

Getting	Started
---------	---------

The Silverstack Lab Main Screen	6
Audio Sync	6
Dailies Grading	6
Transcoding	8
Export to Dailies Systems	8
Clip Library	
User Interface Overview	g
The Clip Library: Bins, Folders, Smart Folders and Volumes	10
The Information Panel (Right Sidebar)	13
Assets in Silverstack	16
Working with Smart Folders	17
Choosing Custom Thumbnail Images	19
The Copy and Verification Process in Silverstack: Verification Behavior	20
Suspend Verify Job	21
About Source Verification	21
Cascading Copy	21
Verification States (for File Resources, Clips and Bins)	22
Unregister a Project from Silverstack	25
Library Metadata Exchange	25
Color Controls and Grading Modes	27
Using the ACES CDL Grading Mode	34
The Silverstack Look Library	37
Look Matching	39
Audio Clips in Silverstack	44
How to Manually Sync Audio in Silverstack XT and Silverstack Lab	46
UI Layouts: Quick Configurations for the Silverstack User Interface	50
Second Display: Two Screen Working Environment in Silverstack	52
Transfer of Project Settings	54
Extracting LTC from Internal Audio in Silverstack and Silverstack Lab	57
Dynamic Metadata	59
Sending Job Notifications to Slack	63
Library Backups	64
Localization	66
Setting Up Stream Deck in Silverstack	66
Dailies Creation	
How to Automatically Sync Audio Based on Timecode in Silverstack Lab	69
Transcoding in Silverstack Lab	75
Combined Clip Transcoding in Silverstack Lab	86
Custom Burn In Wildcard Keys for Silverstack Lab	87
Grid and Wipe View in the Player	87
Prepare Editing for Avid Media Composer working with Silverstack Lab	90
Create and Transfer Editing Proxies for Avid Media Composer with Silverstack Lab	90

Transferring Metadata to Avid Media Composer	92
Crop Clips	93
Direct Dailies Upload	96
Exporting Clips and Metadata for the COPRA Dailies System	100
Preparing Clips and Metadata for Webgate.io	101
Editing Keyboard Shortcuts in Silverstack	104
Offload & Backup	
Offload Clips	106
Cascading Copy	109
Offload wizard templates	112
Backup Clips	113
Managing Jobs in the Jobs View	115
Jobs Summary	118
Use of path wildcards	121
Uploading Files to Amazon AWS/S3	123
Uploading Files to Sony's Ci Media Cloud	125
LIFS backup	127
Backup Data to SONY Optical Disk Archive	129
Analyzing and improving data-transfer performance	129
Adding Clips to the Library (Ingest without Copy)	131
File renaming on offload	133
Use Silverstack's clip library for EDL conform	134
MHL Checksum Verification	136
Sealing Drives in Silverstack	137
Understanding the Pomfort Seal	140
Quality Check	
Playback	143
HD-SDI Output in Silverstack	144
Multichannel Audio in Silverstack	148
Basic Color Control in Silverstack	149
Custom RAW Development	152
Visual Control Functionalities in the Playback Mode	154
Professional Video Scopes for Silverstack with ScopeBox	155
Frame Lines in the Playback View	156
Image transformation	158
Still Image Export	158
Volume playback priority	162
Quick Look Features	162
Creating Reports	
Creating Reports	164
Customising Clip Reports	166
Metadata Handling	
Metadata Handling: View, Organize, Add, and Filter Clips	170
Tips & Tricks: Quick metadata editing	173

Transfer metadata to FCP 7, FCP X, AVID Media Composer, and Adobe Premiere	175
Transferring Metadata to Final Cut Pro X	176
Transfer Clips to DaVinci Resolve Including Clip and Color Metadata	177
Transfer Color Metadata to Assimilate Scratch	184
Transfer Color Metadata to AVID Media Composer	188
EDL Export	190
Exporting Looks from Silverstack	191
Importing Looks (from LiveGrade)	193
Import metadata via MovieSlate	195
Import and Match Metadata from Drylab Set Report 3	196
Import Metadata from ZoeLog	199
Import Metadata From LockitNetwork	201
Preview Metadata Before Importing	203
Transferring Clips and Metadata to Adobe Premiere Pro	204
ZEISS CP.3 XD Lens Correction: Workflow Overview	207
ZEISS CP.3 XD Lens Correction in Silverstack	210
Camera Formats	
Generic file formats	215
ARRI ALEXA and AMIRA Looks in Silverstack	215
ShotHub Integration	
Connecting Silverstack to ShotHub	217
Clip Library Sync	218
ShotID as clip identifier	219
Troubleshooting	
Application Preferences	220
Operating Systems and Requirements	229
Reset Silverstack's Library and Preferences	230
How do I migrate a license from one computer to another?	230
Migrate a Silverstack project from one computer to another	231
How to Manually Migrate Silverstack 6 Projects to Silverstack 7 or Silverstack 7 Projects to Silverstack 8	233
How to Manually Migrate Silverstack Projects to Silverstack Lab	234
Incompatible Silverstack or Silverstack Lab Library Version	236
Why does Silverstack tell me my license is already activated?	236
How do Linstall a license for all users of a Mac?	237
Sample Project and Sample Footage	237
	201

Legal Disclaimer

The information in this document is subject to change without notice and should not be construed as a commitment by Pomfort. Pomfort assumes no responsibility for any errors that may appear in this document. Pomfort may also make improvements and/or changes in the software product described in this document at any time without notice. In no event shall Pomfort be liable for any special, indirect, or consequential damages or any damages whatsoever resulting from loss of use, data, or pro ts, whether in an action of contract, negligence, or other action, arising out of or in connection with the use or performance of this information.

Copyright

Copyright © 2022 Pomfort GmbH.



Getting Started

The Silverstack Lab Main Screen

General Introduction

Silverstack Lab extends the data management capabilities of Silverstack, with all the necessary functionality for dailies creation, and comes with:

- A high performance transcoding engine
- An automated audio sync function
- A powerful dailies grading engine
- The power to create Avid DNx, ProRes, and H.264/HEVC clips in various resolutions at the same time
- · A clip library extension that simplifies the management of transcodes
- · Direct integrations with common dailies systems
- 10bit HD-SDI output
- The complete data management feature set of <u>Silverstack XT</u>.

Silverstack Lab is an application running on macOS.

Main Screen



Main screen (click to enlarge)

- 1. Offload / Add Clips: Copy clips or simply add them to the library
- 2. Library: The library outline with folders, bins, clips and documents
- 3. Jobs View: Open the jobs view to monitor jobs (like transcoding or copy jobs)
- 4. Clips List / Player: Switch between player and clips list view
- 5. Transcode: Start a transcoding job
- 6. Grade Controls: Work on the look
- 7. Transcoding Presets: Create transcoding presets with detailed settings

Audio Sync

Silverstack Lab allows to sync externally recorded audio with corresponding video clips by timecode.

To enable this, Silverstack Lab supports the detection of Broadcast Wave (bwf, .wav) files as audio clips and automates the assignment to video clips by timecode.

You can also sync audio manually.

Dailies Grading

Silverstack Lab provides an advanced node based color grading engine.



Color Processing: Set the Look Source

Each clip has a "Look Source" that defines the color processing (see General Info tab, right bar).

Available look source options are:

- None: No color processing applied, clip shows no look.
- File: Clips from certain cameras contain look metadata (e.g. ARRI Alexa clips) that can be applied directly from file metadata.
- 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.

Basic Color Control in Silverstack

Create a Custom Look: Grading Modes

Multiple grading modes are available when a the look source is set to custom look. Each grading mode is targeted at a different color pipeline.

There are basically three different groups of grading modes:

- ASC-CDL + 3D LUT modes (typical color pipelines for a broad range of cameras and projects)
- ACES modes (for use in projects that choose the ACES pipeline),
- Freestyle modes (without any limitations in color pipeline, but reduced compatibility).

Grading Nodes

The grade controls for the currently selected grading mode are grouped in "nodes". A node can for example contain controls for a ASC-CDL transform, or for loading a 3D LUT preset.

Nodes are applied to the clip from top to bottom, the top node is applied first, and the following nodes subsequently.

If the grade node is reset or freshly added, it doesn't affect the image as it is set to neutral by default. Change the controls of a node to give the node effect to the image. Each control or group of controls in grade nodes has a button with a little arrow that resets the controls.

You can enable and disable single nodes by using the checkbox on the left of each node. Disabled nodes are greyed out.

Nodes can have names. Click on the small pen symbol that appears when you move the mouse over the column on the left of each node. You can use names to better identify nodes with different roles (e.g., "pre LUT" and "post LUT"). Node names are also used when applying node presets from the look library for identifying nodes to be updated.

Silverstack Lab supports the use of hardware grading panels to work on looks.

- Grading Controls in Silverstack
- Using the ACES CDL Grading Mode

Work with Looks

The current settings for grading modes and nodes form the technical configuration for what is referred to as a look of a clip.

There are different possibilities of working with looks in Silverstack Lab:

Matching Looks from LiveGrade

Pomfort LiveGrade allows to export looks that have been created during the shooting of a scene for the use in Silverstack Lab.

Those looks can be matched (added/linked) to their according clips in Silverstack Lab automatically, for example by timecode.

Like this the looks created live can be brought together with the actual camera clips when creating dailies.

Look Matching

Look Library

The look library tab in the right bar allows to manage looks. Looks can be saved, updated, applied, exported and organized in a folder structure.

You can easily copy and paste looks to multiple clips with shortcuts and using the clips list view.

<u>The Silverstack Look Library</u>

Video Scopes

The video scopes panel offers histogram, waveform, and vectorscope inspection tools with individual settings. The video scopes show the analysis of the current image of a slot with the current grade nodes applied.

The histogram and vectorscope also include a curve overlay that display the result curve of the combined transforms of all active grade nodes of a clip.

You can show and hide the video scopes from the main menu and from the toolbar. You can open the video scopes in a separate window by clicking on the "Toggle Windowed / Docked View" button in the bar above the video scopes.



Compare and Inspect Clips

Grid View / Wipe View

Silverstack Lab provides a grid view and a wipe view for displaying multiple clips at once on the playback view.

The grid view can show up to 12 clips in an optimized way next to each other to for example compare the look of an image across all clips of a scene.

The wipe view helps you to compare two clips side-by-side and wipe a splitter between them. You can select the orientation of the clips for a horizontal or vertical

Both, grid and wipe view, are also available via HD-SDI output to be displayed on a broadcast monitor.

Player Grid View for Multi Clip Selection

Inspect Clips

The visual controls help to inspect clips, offering focus and clipping assist, exposure tool, false color, and frame line options.

<u>Visual Control Functionality in the Playback Mode</u>

Transcoding

Silverstack Lab allows to convert video clips to proxy clips in common formats (DNx, ProRes, H.265/HEVC) and containers (Quicktime .mov, MXF .mxf, MP4 .mp4).

Create multiple independent transcoding presets ("Transcoding Presets" tab right bar). Settings include e.g. options for looks, overlays (watermarking), metadata burn ins, clip resizing and direct metadata export. You get a live preview of the settings of your preset in the transcoding preview.

Start a transcoding job and **add one or more multiple transcoding destinations in the transcoding wizard** (with toolbar "Transcode" button). You can **transcode to individual** (one file per clip) **or combined clips** (single file with multiple clips).

Transcoding jobs run in the background (monitoring possible in jobs view) and by default are intelligently paused during playback and offload.

Silverstack Lab supports external GPUs (eGPUs) for transcoding and allows to select the preferred GPU in the preferences.

- <u>Crop Clips</u>
- Transcoding in Silverstack Lab

Transcoded Clips in the Library

By default, all clips transcoded with Silverstack Lab are added to the library outline again in the "Transcoded Clips" Folder.

This allows you to use the general data management functionality of Silverstack for transcoded clips, like for example:

- · Secure backup of proxy clips to multiple, additional destinations
- · Playback of proxy clips
- · Create reports for proxy clips, or reports that include proxy clip information
- · Edit metadata and export to specific metadata file formats

The source clip and its transcoded clip are associated in the library. This association can be reviewed including jumping to the source/transcoded clip and copying metadata in the File tab of the right bar.

Export to Dailies Systems

Silverstack Lab can prepare metadata in file formats that are optimized in compatibility with common dailies systems.

You can create metadata files automatically by setting up the automatic metadata export in transcoding presets, or manually export it for transcoded clips from the library.



Clip Library 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 variousmetadata 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 Library selection switcher. It displays the name of the current project.

- 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.

The Clip Library: Bins, Folders, Smart Folders and Volumes







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:



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

The Information Panel (Right Sidebar)

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 <u>smart folders</u>.



1 2 3 4	5	6
0 9	0	5
General Info		
₩ Video Clip		
Name	A003C012_160205	Ø
Duration	41 sec	
Frames	977	
Source File Date	16/03/17 10:12:29	
Registration Date	01/04/17 15:52:54	
▼ Slate Info		
Episode	4	۲
Scene	3A-3	0
Shot		۲
Take	2	۲
Camera	A	Ø
Shot Descriptors	No mve cma	۲
Shooting Date	16/03/17 10:12:29	۲
▼ Timecode		
TC Start	01:34:49.17	Ø
TC End	01:35:30.10	
FPS of TC	24.00 (non-drop)	
Reel / Tape	A003R2VJ	0
▼ Edit		
TC In Point	01:35:00.01	۲
TC Out Point	01:35:16.05	۲
In/Out Duration	389	
Sync Slate TC	01:34:49.17	
Caption	A Caption	۲
Audio TC Offsets	00:00:00	
Audio Start Timecodes	01:34:49.17	
Audio End Timecodes	01:35:30.10	
Custom 1	Boom vsbl	۲
Custom 2	No issues	۲
Custom 3		۲
▼ Settings		
ASA	800	۲
Whitepoint	3600K	۲
Tint		۲
E-Stop		<i>(</i>)

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 <u>Tips & Tricks: Quick metadata editing</u> You can also apply <u>Image transformations</u> 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.



User Info			
Α	3A-3		2
Camera	Scene	Shot	Take
Flagged:	P		
Rating:	× ** · ·		
Comment:			
۵	My Comment		
Caption:	A Caption		
Shot Dsc.:	No mve cma		
Label:	• • • • • • •	Moderate	Take 💲
Custom 1:	Boom vsbl		
Custom 2:	No issues		
Custom 3:			
Cue Points	Position	Duration N	т
	01:34:49.17	0 S.	0
	++	51	. <u>)</u>

figure 2: User Information panel

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



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 <u>automatically during ingest</u> 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 <u>The Silverstack Look Library</u>.

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 <u>Transcoding in Silverstack</u>.

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 <u>Generic file formats</u>.

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 Movies **:
 - Canon C300 MK I & II
 - Canon C500
 - Canon C700
 - Canon C200
 - Canon R5
- Canon XF-HEVC **
 - Canon XF705
- Canon MPEG-4 AVC/H.264 (.mts)**
 - Canon C100



- Canon Cinema RAW Light (.crm):
 - Canon C200 and C200B
 - · Canon C500 MKII
- 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
 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

Working with 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 NameBin 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".



Choosing Custom Thumbnail Images

Silverstack offers a flexible way to experience a great asset preview of your projects, bins, folder and camera rolls. We incorporated a feature allowing you to define your own thumbnails to get a better oversight of your shots – scenes – takes and gives you the opportunity to navigate faster inside your library and locate clips with one click.

Usual behavior

By default, Silverstack analyzes the length of a clip and picks the thumbnail image from the middle of the take. You can customize the default behavior in the preference menu. The thumbnail position can be set to "Begin", "Middle" and "End" of a clip. If you want to recreate your thumbnails you can do so by making an asset selection and then click in the "Edit" menu "Recreate Thumbnails". All selected assets thumbnails will be recreated.

Default thumbnail position	~ 								
berduit thumbhan position.		- 90	(k)	(A)	Y	3	- 18	- W	
	Begin				Middle				En

Figure 1 : "Preferences for default thumbnails"

While this is suitable for most occasions, it might happen that the preferences of the clip is by coincidence a black frame, a meaningless moment like blue sky or a frame that is not in focus which won't help you to identify the right take from the table view, collection view or neither in the reports.

Customize your clip thumbnails

To <u>customize your reports</u> or Table/Clip View with a thumbnail that matches your criteria as a DIT simply mark the clip and switch into the Playback View to locate the right frame. From there you can scrub to the desired frame and set your thumbnail via the Main Menu entry in "Edit" – "Set Thumbnail Frame". You can alternatively use the Shortcut \Re + **T** to set the thumbnail.



Figure 2: "Switch to Playback View"

Undo	ЖZ
Redo	企業Z
Сору	第C
Paste	光V
Delete	
Select All	36A
Jobs	•
Clip	
File	•
Recreate Thumbnails	
Set Thumbnail Frame	жт
Start Dictation	H H
Special Characters	X#T

Figure 3: "Main Menu entry"

Note: You can only apply the "Set Thumbnail" feature to Assets that have advanced playback support in Silverstack. You can find more information about assets in this article.

Warning: If you recreate thumbnails with the function in the "Edit" menu all the previous thumbnail images will be erased and replaced with the actual setting of the preference.



The Copy and Verification Process in Silverstack: Verification Behavior

Silverstack and Silverstack Lab differentiate two basic types of verification behavior:

- Included in Copy Job:
 - Verification executed file per file
 - (One Job that copies and verifies [copying file 1, verifying file 1, copying file 2, verifying file 2])
- Separate (per Job):
 - Copy all files first in a distinct job and verify them afterwards in another job
 - (Copy Job [copying file 1, copying file 2], Verify Job [verifying file 1, verifying file 2]).

This leads to several improvements for the transparency of the copy and verification process in Silverstack that are outlined in this article.

The Verification Behavior in Detail

Included in Copy Job

The default verification behavior contains reduced options for the user. It is referred to as "Included in Copy Job" as the verification process happens file per file.

fication Behavior	zards Cascading Copy
Included in Copy Job Separate (per Job) copy and verification in one pot, verification Tile per file	Configure Verify All Destinations, Include Source Verification (included in Copy Job)
	n compare wo a soury, morey areas
Add Jobs to Que	sue: Append at the End As next Job (earliest execution)
	Offload

Fig.1: Verification behavior "Included in Copy Job"

It always verifies all destinations and the source ("Verify All Destinations, Include Source Verification"), therefore reduces options and makes sure the highest possible security is maintained.

Here are the facts in an overview:

- Verification Behavior: Included in Copy Job
- Verification Coverage: All destinations, with source
- Available Checksum Methods: xxHash64 (BE), MD 5, SHA 1

Separate (per Job)

The advanced verification behavior "Separate (per Job)" allows to complete the copy of all files first and verify them later. It is referred to as "Separate (per Job)" as it creates a separate copy and verify job.

Using the "Separate (per Job)" verification behavior, there are multiple options to choose from for the verification coverage. The verification coverage refers to the extent of verification that is performed.

Included in Copy Job Separate (per Job) Creater independent Verity Job, copy filer that than writy	parets Cascading Copy
erification Coverage All destinations, with source All destinations, no source verification No verification, file size check only Suspend verify job:	Configure Verify All Destinations, Include Source Verification (as separate Verify Job) a: Configure MD 5 (Slow, widely used) a: Append at the End As next Job (earliest execution)
	Offload

Fig.2: The offload wizard options for the verification coverage when verification behavior "Separate (per Job)" is selected

The following options are provided for the verification coverage (refer to fig. 2):

- All destinations, with source (default)
 - **Abstract:** Highest possible security.
 - $\circ\;$ The verify job verifies all copy destinations $\ldots\;$
- ... and also the copy source.
 All destinations, no source verification
 - Abstract: Still secure for destinations, but neglects the detection of source problems possible with "Source Verification".
 - The verify job verifies all copy destinations...
 - but does not verify the copy source.



• No verification, file size check only

- Abstract: No security, use with care! Only the size of copied files on destination is checked against the original.
 - No verify job is created. File size check is performed with copy job.
- Even if it will not be verified, Silverstack creates a checksum during the copy process that is stored in the library. Checksum Method is fixed to xxHash to avoid limiting copy speed e.g. using MD 5 as checksum method.

Suspend Verify Job

The first two selections for verification coverage have an additional option to suspend the created verify job (see also fig.2). This allows all other offload and copy jobs to be executed before the verification. The verify job suspends automatically once scheduled, and has to be resumed manually by the user.

About Source Verification

Learn more about "Source Verification" in the article <u>Checksum Verification Methods</u>. "Source Verification" or "verifying the source" refers to the process of reading the source once more after the copy process end as part of the verification process. This is done additionally to reading the destinations again to verify their checksums. The intention to do this is to make sure that the checksum still matches the one created during the initial read of the file for the copy process to detect e.g. broken source cards. The verification of the destination remains untouched by this setting.

Cascading Copy

When enabling cascading copy the verification coverage as well as the checksum methods can be selected per run:

		Official Crips	
	Templata	Previous Settings*	0
	Scan Volum	re and Collect Metadata	
	CH .	A003R2VJ Generic Clips, 292.0 MB	
	Ingest and	Create Thumbrialis - Found 5 duplicate files / Skippedd folders / Skipped 3 ignored files \dot{A} L	earn More
		A003R2VJ 7 with 5 clips (and 0 sidecar files, 0 documents)	Edit
	Copy and V	farify	
		2 Destinations SST Lab Trade Show 2 (Samsung T5), data_sne	Edit
	Choos	e Copy Destinations	
	Volume Ir	nfo 🥂 Free After Copy Destination path	
		POT LA TANK AND A PART	(* 18) 19
	2	SST Lab Trade Show 2 (Sa., 204.5 GB /Temp/ (Preserving Folder Structure)	1st Run 🔇
ication Behavior	N	SST Lab Trade Show 2 (Sa., 2045/GB //Temp/ (Preserving Folder Structure) 21.4 GB //Data/ Lemp/ (Preserving Folder Structure)	1st Run (2nd Run
ication Behavior Included in Copy Job 🧿 Separate (pe	r Job)	SST Lab Frade Show 2 (Sa., 204,5 GB //Temp/ (Preserving Folder Structure) 21.4 GB //Data/_temp/ (Preserving Folder Structure)	1st Run (2nd Run (
ication Behavior Included in Copy Job O Separate (pe ana independent Wirtly Job, copy files first that	r Job) n verify	SST Lab Frade Snow 2 (Sa., 204,5 GB /Temp/ (Preserving Folder Structure) 21.4 GB /Data/_temp/ (Preserving Folder Structure)	1st Run (2nd Run (
Tication Behavior Included in Copy Job Separate (pe uses independent Wirtly Joh, copy files find the tun Verification Coverage	r Job) n verify	SST Lab Trade Snow 2 (Sa., 204,5 GB /Temp/ (Preserving Folder Structure) 21.4 GB //Data/_temp/ (Preserving Folder Structure)	1st Run (2nd Run (
floation Behavior Included in Copy Job Separate (pe assa holgendent Wirty Joh, copy files first tha tun Verification Coverage All destinations, with source	r Job) n venty	SST Lab Trade Snow 2 (S8 204,5 GB /Temp/ (Preserving Folder Structure) 21.4 GB //Data/_temp/ (Preserving Folder Structure)	1st Run (2nd Run (
Included in Copy Job Separate (pe near independent Wathy Job, copy files first the un Verification Coverage All destinations, with source All destinations, no source verification	r Job) n venty	Ser Lab Frade Snow 2 (S8 204,5 GB /Temp/ (Preserving Folder Structure)	1st Run (2nd Run (
cation Behavior Included in Copy Job Separate (pe near independent Verity Job, copy files finit the un Verification Coverage All destinations, with source All destinations, no source verification No verification, file size check only	r Job)	Set Lab Frade Snow 2 (S8 204,5 GB /Temp/ (Preserving Folder Structure) 21.4 GB //Data/_temp/ (Preserving Folder Structure) ards Cascading Copy Configure 1st run: Verify All Destinations, Include Source Verification (as secentate)	1st Run (2nd Run (
cation Behavior Included in Copy Job Separate (pe- sea independent Verify Job, copy files first the un Verification Coverage All destinations, no source verification No verification, file size check only	r Job) A sutty	San Lab Frade Snow 2 (Sa., 204,5 GB /Temp/ (Preserving Folder Structure) 21.4 GB //Data/_temp/ (Preserving Folder Structure) 21.4 GB //Data/_temp/ (Preserving Folder Structure) configure 1st run: Verify AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destinations, include Source Verification (as separate 2nd nur. Wolf V) AI Destination (as separate 2nd nur. V) AI Destinatio	Verity Job)
Included in Copy Job Separate (pe assa indupendent Varify Joh, copy files first the un Verification Coverage All destinations, no source verification No verification, file size check only Ram Verification Coverage	r Job) n varity Suspend verify jel	b: Configure 1st run: Verify All Destinations, include Source Verification (as separate 2nd run: Verify All Destinations, include Source Verification (as separate 2nd run: Verify All Destinations, include Source Verification (as separate 2nd run: Verify All Destinations, include Source Verification (as separate 2nd run: Verify All Destinations, include Source Verification (as separate 2nd run: Verify All Destinations, include Source Verification (as separate 2nd run: Verify All Destinations, include Source Verification (as separate 3t configure 1st run: ND & (Slow, widely used), 2nd run: MD & (Slow, widely used)	Verity Job)
Included in Copy Job Separate (pe- sea indupendent Varify Joh, copy files first the un Verification Coverage All destinations, no source verification No verification, file size check only Run Verification Coverage All destinations, with source	C Job) a verity Suspend verify jol	SST Lab Trade Snow 2 (S8 204.5 G8 /Temp/ (Preserving Folder Structure) 500.1 GB 21.4 G8 /Data/_temp/ (Preserving Folder Structure) ards Cascading Copy Configure 1st run: Verify All Destinations, Include Source Verification (as separate to Configure	1st Run (2nd Run (Venty Job) Venty Job)
Included in Copy Job Separate (per sea independent Varity Job, copy files first the un Verification Coverage All destinations, no source verification No verification, file size check only Nu Verification, Coverage All destinations, with source All destinations, with source	r Job) n senty Suspend verify jel	SST Lab Famp/ (Preserving Folder Structure) 500.1 GB 21.4 GS 21.4 GS (Data/_temp/ (Preserving Folder Structure) ards Cascading Copy Configure 1st run: Verify All Destinations, include Source Verification (as separate to 2nd run: Verify All Destinations, include Source Verification (as separate to 2nd run: Verify All Destinations, include Source Verification (as separate to 2nd run: Verify All Destinations, include Source Verification (as separate to 2nd run: VB 5 (Sow, widely used), 2nd run: MD 6 (Source Verification (as separate to 2nd run: MD 6 (Source Verification	tet Run (2nd Run (venty Job) Venty Job)
Included in Copy Job Copy Job Separate (pe asia Polyendent Wirly Job, copy files first the un Verification Coverage All destinations, no source verification No verification, file size check only Run Verification, Coverage All destinations, with source All destinations, ma source verification No verification, file size check only	C Job) a verity Suspend verify jol	SST Lab /Temp/ (Preserving Folder Structure) 500.1 GB 21.4 GB 21.4 GB /Data/_temp/ (Preserving Folder Structure) ards Cascading Copy Configure 1st run: Verify All Destinations, Include Source Verification (as separate to Configure	tet Run (2nd Run (venty Job) Venty Job)

Fig. 3: Selecting the verification coverage for both runs with cascading copy

More information about cascading copy can be found in the article <u>Cascading Copy</u>.

Additional Options

- Overwrite existing files: This option allows to overwrite already existing copies on the destination(s).
- Skip Copy Step: The option to skip the copy step and only ingest material has been removed in the Offload wizard to clearly separate the copy from the ingest functionality. To ingest material without copying use the "Add to Library..." entry in the "File" menu.



ilverstack Lab	File Edit View Clip	Look Playback Window Help
	Offload	#O
E	Add to Library	X#0
Offic	Import Library Folder	企業O Report Transcode
🝈 🛅 🚮	Export Library Folder	☆第E ■ 器 ■ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □
	Project Settings	iew Name
A003_C14	Import	► ≼ ≣ A003_C14
0.11.11.1	Export	A003_C13
	Seal	A003 C12
- 3	New Bin	#N
fps	New Folder	企 器N <mark><</mark> A003_C10
1 file with 1 k	New Project New Smart Folder	A003_C09

Fig. 4: Using the "Add to Library" option for ingest only

Job Scheduling Control

The Offload wizard allows to schedule jobs in the queue to be executed next, after the running job finishes. The default behavior, to add the job to the queue, will be restored after each copy job, as this is a hit and run choice before starting the jobs.

Charles on Mathe	ui: Configure. ND 5 ISta	ur uidelu ured)	contribution activities and a sold
Overwrite existing File	is: Contriguies: Timb o taid	w, where used	
Add Jobs to Queue:	Append at the End	🔿 As next Job (earliest	execution)
			Offloa

Fig.5: The job scheduling options

Learn more about reordering of jobs with drag & drop in the article Reordering and Suspension of Jobs.

Verification States (for File Resources, Clips and Bins)

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:





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



		📧 Migration Test 6.3.5 - 6.4 +	The strong of the local strong to the local st		(0)
6 🖞 🔁		078991, 15 (Descents (999) File Size Check Only, enabled 5V) (3 doctorents (453/er)	and the second s		
	Parine Rota	. Ve Entire.		Day A Hatten	
I vo ogrannic metadater support for this format Danarie excelety ser be entransit from Arithum, rich ar Song Anny sign	4007C003_170728_8163 4007C003_170728_8163			ADDF0052,170728,71%L Star: 5.50 0513,831772,795 (syles)	
				51421 2414095270054499568041 mmarid2	
The United States				Taburos, 3 backape	
ADDRESS VEDERAL MORE				 Welfication incomplete: 1 anwelfier file resolution 	arces.
MOD2_COD2.0105691 MIC V2 (File Size Verification Over, SV Enaced)				AD07R1KL	
ADUMIKI, VA (Register Criv)					
ROOMINE YS ICANAGE BRUTHA EA CHAR ON, BURBERT				Alexandre Alexandre II. Lines (Delive)	
ADDLCOOK STORLINGS VERSIONS IN WHICH WERE WITH SOUL				-Consent 18, 4,4 2022, 45(50)	
🛪 🔤 Bratt Fillers				Los Sectors 26, Mar 2018, NO.4	
Versions without Basings				p minister with	
Registered testar					
Paged					
				G-SPEED Shuttle TR3	anan -
				ALL ALL ALL AND THE AND THE ALL AND THE ALL AND ALL AN	
				Registered Bis Ver BYN, 1828	
				a well-caller, method	
					inter-
				Honora: A6070002,07, L may (Office)	
				THE REAL PROPERTY AND ADDRESS OF THE PARTY O	
- + 1400				Silverstock	7-

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
 o 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.

Unregister a Project from Silverstack

Unregister an old project

If you have several old projects in your library that you want to remove you can simply unregister them. All the clips/assets that are registered in the library will be removed.

Note: The files that are linked to the assets will stay on the Backup Volumes and will not be removed!

Steps to remove a project:

1. Open up Silverstack

2. Select the Project you want to remove from Project selector within the toolbar.



Figure 1: "Select a project from Toolbar"

3. Go to the Main Menu and press "Unregister Current Project"

New Bin	光N
New Folder	企 業N
New Project	₹₩N
New Smart Folder.	
Unregister	¥ 🗵
Unregister Current	t Project
Offload	жo
Relink	₹ ₩R
Backup	₩B
Import	•
Transfer	•
	005

Figure 2: "Unregister Project"

Silverstack will switch automatically to the next project. If there are no other projects within your library, Silverstack will automatically create a new one.

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 foler 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.

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





UI with Grading 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



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



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:





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:

						8
			•			
	A		•			
	8					
<u></u>			`	2.0 1		
8	0					

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 Preferences menu. 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
- <u>Tangent Wave setup</u>

Saturation Node

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



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.

-	Lood	No LLT loaded	Preset		
30 LI			ARRIELUTS Canon LUTS Panasonic LUTS	:	
			Gory Look Profiles	1	

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.



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.

33





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

	Black ("toe") 🦘	White ("knee") 🥎	
Knee	Limit: Offset:	0.033 i Limit: -0.101 i -0.049 i Offset: -0.008 i 0.245 i Threshold: 0.8 i	

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 recalculated 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.

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 Transform,", "ACES Ou

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

In the Silverstack preferences you can manage the available ACES versions and transforms:





ACES preference panel

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 0.7.0v 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.

The Silverstack 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



▼ Custom looks	() -
► Warm looks	
Cool looks	
New group	
 Best selection 	

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:

	Apply Look to Selected Clips
	Apply Look to Current Clip
	Update Look
	Set New Thumbnail from Current Clip
	Delete
-	

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



Look Details		
Name	Nightish	
Date	Monday 7 December 2015 10 h 43	
Camera	A	
Episode		
Shot		
Take		
Reel Name	A015R2EC	
Start TC	00:20:48.05	
End TC	00:21:20.06	

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:

Create New Look	₹%N
Update Selected Look	жu
Set Thumbnail from Cu	rrent Clip
Duplicate Look	
Delete Selected Looks	
Create New Look Fold	er 飞企器N
Apply Look to Selected	d Clips %P
Apply Look to Current	Clip 쇼울P
Switch to Previous Loc	k Node ℃#<
Switch to Next Look N	ode ∖C#>
Refresh Hardware Pan	els

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.

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 <u>Connecting Livegrade to ShotHub</u>)
- 2. Log in to ShotHub in Silverstack with your Pomfort Account credentials (more information please see the article <u>Connecting Silverstack to</u>
 - <u>ShotHub</u>)
- 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 articleParallel Offloading.

Image: Section Without Backup Source 10 Mark Devert 10 Mark	D D Bar Right B	Call Call Bar	Fulboren Guiokook	D Payar			atching Tests +	🗄 Look		nt Transcode	INCOME PLO	Export	(b) D	1 0 1
Num Nume Description Source TCont Spans Spans<			1 8 0 4 0	0		Costan Levist		Day 4	🗄 🛄 🔛 Library 📑 1	E 11 8				
Lens Lens Addication File A File A<			Ceneral Info	6	Look Source	s Shet Take	arca TC Out Episor Science	Source TC in	Name	Player				
24 17:53:02.05 - 17:53:07.08 File A Serve A0000082.16011.1,111.4 17:83:80.05 File A Berve A Berve A Berve Berve Berve A Berve Berve A Berve A Berve A Berve Berve A Berve A Berve A Berve A Berve A Berv			T Cip	•			53:07.08	17.53.02.05	A002C028_160111_R1KL	0.	A (BE)			<u></u>
100 17:53:02.05 17:53:02.05 17:53:02.05 17:54:28.01 17:54:58.00 17:51:17:18:11 17:54:58.00 17:51:17:18:11.05 17:51:17:18:11.05 17:51:17:18:11.05 17:51:17:18:11.05 17:51:17:18:11.05 17:51:17:18:11.05 17:51:17:18:11.05 17:51:17:18:11.05 17:51:17:18:11.05 17:51:17:18:11.05 18:51:17:17:17:17:18:11.05 18:51:17:17:17:17:17:17:17:18:11.05 18:51:17:17:17:17:17:17:18:11.05 18:51:17:17:17:17:18:11.05 18:51:17:17:17:17:17:17:18:11.05 18:51:17:17:17:17:17:17:17:17:17:17:17:17:17	0111	A002C026_16011	hinne	A	File		53:35:11	17:53:26.05	A002C027_160111_R1KL	E.	0.07.00	40.0	0.00.0F	24 4 7 1
800 ASA 5.600 /r /r /r.560 mov ProRes 422 /v 10 20 x 1080 index 0 00 A0000028_160111_RHX 17.54.52.02 17.58.14.05 File A0000028 index 0 00 A0000028_160111_RHX 17.54.52.02 17.58.14.05 File A0000028 index 0 00 /r index 0 00 /r index 0 00 /r index 0 00 /r index 0 00 /r 0 00 /r 0 0 /r 0 0 /r 0 0 /r 0 0 /r index 0 0 /r 0 0 /r 0 0 /r 0 /r 0 0 /r 0 /r index 0 /r <					File		54:09.08	17:53:56.01	A002C028_160111_R1KL	100	3:07.08	- 17:5	3:02.05	ni 173
600/28 500/2 1/			Episode Obrid	1	E)la		64-16-18	17-51-28-04	A0020020 1401111 D1KI		1000		E 000 V	
minu ProRes 422 10 1920 x 1080 Addx2036_16011_HKL 1724.32.02 1728.14.05 Pie A Addx2046_1011_HKL 1724.32.02 1728.14.05 Pie A Bound Dian Doug 1 Doug 1 <t< td=""><td></td><td></td><td>Taka</td><td></td><td>45</td><td></td><td></td><td></td><td>House of the second second</td><td></td><td>1/50S</td><td>1/</td><td>5.000 h</td><td>NUL Mark</td></t<>			Taka		45				House of the second second		1/50S	1/	5.000 h	NUL Mark
Items will be description Shouring failure			Camera	A	File		55:14.05	17:54:52.02	A002C030_100111_H1KL	0.4	0 x 1080	HD 192	e 492	w ProB
*** Libry 10 Bourt Fild Case * 0.001 Fild Case *	a of CET	11/01/16 18:52:01									o A loud.	Antesta		
■ Day 1 0 ■ Taesoration ■ Day 2 5 ■ Day 3 ■ Day 3 ■ Day 3 ■ Day 3 ■ Day 5 ■ Day 5 ■ Day 5 ■ Day 5 ■ Day 6 ■ Day 5 ■ Day 6 ■ Day 7 ■ Day 6	a.oi CET	11/01/16 18(53:01	Bource File Date											Librar,
Image: Second														🚮 Day
Ind To TASA PAID With Day 3 200 With Day 4 High STC 3.4.0.0 mod High STC 3.4.0.0 mod High STC 3.4.0.0 mod With Day 6 2 AdA 800 With Day 6 2 AdA 800 With Day 6 2 AdA 800 With Day 6 2 High STC 3.4.00 mod With Day 6 3 High STC 3.4.00 mod With Stands 5 High STC 3.4.00 mod With Stands		17:53:02:05	BINETO											Day
In Day 1 This 27 C 34.05 grad In Day 5 2 Day 6 4 In Day 7 5 In Day 6 4 In Day 6 4 In Day 6 4 In Day 6 4 In Day 7 5 In Day 6 4 In Day 6 4 In Day 6 5 In Day 6 6 In Day 6 6 In Day 6		17:53:07:08												12 100
Image:	op)	24.00 (non-drop)	Fps of TG											-
In Day 5 2 Day 6 4 Day 6 4 Day 6 4 Day 7 5 Day 7 6 Day 7 7 Day 7 </td <td></td> <td>ADCOST NO.</td> <td></td> <td>La rea</td>		ADCOST NO.												La rea
			T Esposure											Day
Image: Backage 8 Mining Mining 10 Image: Backage 10 2.500 2.500 Image: Backage 10 0.500 2.500 Image: Backage Status 10 0.500 2.500 Image: Backage Status 10 0.500 1000 Image: Backage Status 10 0.500 1000 Image: Backage Status 10 1000 1000 Image: Backage Status 10 1000 1000 Image: Backage Status 10 1000 1000 Image: Backage Status 1000 1000		(100) 220000	all and a second second											🖬 Day
Im mm		000.04	The										20	M Bac
In a sour out			- E Birro										lin.	- MM
Normality recents Shutter Shutter Under Vorde Con Silverson without Backup SS Same Pipe Sa Silverson without Backup SS Same Pipe Sa Silverson without Backup SS Same Pipe Sa Silverson without Backup SS Same Pipe Same Silverson Without Backup Same Same Same Silverson Without Backup Same Same Same Silverson Without Backup Same <t< td=""><td></td><td></td><td>Litters</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>			Litters											
10 Marinan without Backup 50 Kerver (Pm) 24 10 Address of the point of the point Marina Note 11 Fragged 0 Fragged Note 12 Fragged 0 Fragged Note 12 Fragged 1 Note Fragged 12 Fragged 1 Note Fragged 13 Fragged 1 Note Fragged 14 Fragged 1 Note Fragged 15 Fragged 1 Note Fragged 16 Fragged 1 Note Fragged 16 Fragged 1 Note Fragged 16 Fragged 1 Note Fragged 17 Fragged 1 Note Fragged 18 Fragged 1 Note Fragged 19 Fragged 1 Note Fragged 10 Fragged 1 Note Fragged 19 Fragged 1 Note Fragged 10 Fragged 1 Note Fragged 10 Fragged 1 Note Fragged <	172	1/50s (20 Drm 17	Shirtler										ooms	anan
Image find today 0 Lawr Lawr Image find goes 0 End table End table Image find goes 0 End table End table Image find goes 0 End table End table Image find goes 1 End table End table Image find goes End table End table End table Image find goes End table End table End table Image find goes End table End table End table Image find goes End table End table End table		- 94	Bernstr Fore									ackup:	one without Be	Variation Variation
													stared today	Reg
Walumas Film * Processing * Processing Lack Bucking File Provid Assemptive Norm File Norm Production * Production * Production *		1 Pécine											nd	Sel Fia
* Proceeding Laid Bords Animosphic Production Production Classion Production													100 C	Vistor
Loré Bourio Pie Krone Asemanyte: Kone Rij Production Production Production Production Production			* Processing											- Tunin
Alternative Nove Rig Production Circles Production		File [None]	Look Bource											
Rip Nove * Production Reduction Production		Nome												
* Production Defau Production		None												
Dinktor Production														
Padacha														
PECOP														
Centers Adalatant			Cartura Assistant											

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...".



	•	
hoose Look Archive (#O)	Fetch Looks from Cloud (#D)	Selected archive: Look Matching (B4) (9 shots)
Only use looks with labels		

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:

Choose Look Archive (第0)	Creation Time of Look	Selected archive: Look Matching (B4) (9 shots)			
Only use looks with labels	Episode, Scene, Shot, Take Clip Name				
Match looks with clips by	amera	chure Name	×		
		Mark Only Selec	ted • Unmark Selected •		
Library Clip Name	Apply	Look Clip Identifie	Look Name		
A004C001	2	A004C001	Cold Desat		
A004C002		A004C002	Light yellow light		
A004C003		A004C003	Yellow Burn		
A004C004		A004C004	Grey Goose		
A004C005		A004C005	Warm Skin		
look is unused			A Learn More		
 Take over metadata from I Import unused looks into I ? 	ooks to matched clips ook library		Continue		

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:

	Matchin	g Looks	
Choose Look Archive (#O)	Fetch Looks from Cloud (#D)	Selected archive: Look Matching (I	34) (9 shots)
Only use looks with labels			-1
Match looks with clips by	Creation Time of Look	C +1 Timezone offset of cam	era
Match looks with clips by ca	mera		
Match looks with clips by ca Match looks with clips by ca	mera	Mark Only Selected +	Unmark Selected +

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.

	Matc	ning Looks	
Choose Look Archive (%O)	Fetch Looks from Cloud (36	D) Selected archive: Look Match	ing (B4) (9 shots)
Only use looks with labels			
Match looks with clips by	Clip Name	✓ Entire Name	0
Match looks with clips by ca	mera	Only first 8 characters	
		Only first 9 characters Only first 10 characters Only first 11 characters	Unmark Selected
Library Clip Name	Apply	Only first 12 characters Only first 13 characters	Look Name
A004C001		Only first 14 characters Only first 15 characters	Cold Desat
A004C002	8	Only first 16 characters Only first 17 characters	Light yellow light
A004C003		Only first 18 characters Only first 19 characters Only first 20 characters	Yellow Burn

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

look is unused		A Learn More
Take over metadata from looks to match	ed clips	
Import unused looks into look library		
?		Continue

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:

	P 0 0		
₩ Ge	ineral		
	Clean Aperture	{(0, 0), (1920, 1080)}	
	Clean Presentation Size	{1920, 1080}	
	Pixel Aspect Ratio Horizontal		
	Pixel Aspect Ratio Vertical		
	Presentation Size	{1920, 1080}	
	QT Audio Number Of Tracks		
	QT Codec Name	Apple ProRes 422 (LT)	
	QT Codec Short Name	apos	
	QT CreateDate	Friday, 15. May 2020 at 14:33:55 Central European Summer Time	
	QT Duration In Frames	41	
	QT FileName	/Users/	F/B627C5F6-F221-4FD2
	QT Format Summary	Apple ProRes 422 (LT), 1920 × 1080, Millions	
	QT Height	1.080	
	QT Media Framerate	24	
	QT Source Reel	No Source Name	
	QT Source TC Drop Flag	non-drop	
	QT Source TC Framerate	24	
	QT Source TC Start	15:51:45.04	
	QT Width	1.920	
	QTAudioNumberOfChannels		
	QTAudioTrackInfo		
<u>, 1</u>	QTHasVideo	- 10	
T M	tched Look Details		
	Archive Name	Look Matching: 84	
	Camera		
i i	Caption	Another foo comment C003	
4	Creation Date	Tuesday, 11. August 2020 at 15:40:20 Central European Summer Time	
3	Flagged		
1	Føs	24	
j j	Image Decoding Level		
	Match Date	Tuesday, 11. August 2020 at 15:40:20 Central European Summer Time	
	Nd Filter		
	Project Fps		
	Public UID	D7858A1C-83FC-4A88-A1F0-4E13FE692835	
- 3	Rating		
	Remote Folder Name	B4	
	Remote Project Id	5f2a9e47d08786345132625a	
	Remote Project Name	Look Matching	
		0496C845-2DA8-4370-AE91-EBCB9D77E4C2	
	Updated At	Tuesday, 11. August 2020 at 15:40:20 Central European Summer Time	

Audio Clips in Silverstack

Silverstack offers advanced support for separately recorded audio files in the Broadcast Wave format (BWF, .wav).

Ingest of Audio Clips



Scan Volume and Collect Metad	ata				
TON Audio, 705.	28 MB				
Indest and Create Thumbnails	_	_	_	_	-
TON with 25	audio clips	(and 0 sidecar files, 0 c	ocuments)		Edit
Automatic detection				-	
Audio: Broadcast Wave (BWF)	0			Q Search	
Relative Patri	_	Creation Date	Size	Duration	
A006 C01.WAV		09/03/17 09:56	24,20 MB	56 sec	
A006_C02.WAV		09/03/17 09:56	29.39 MB	1:08 min	
A006_C03.WAV		09/03/17 09:56	15.99 MB	37 sec	
A006_C04.WAV		09/03/17 09:56	2.60 MB	6 sec	
A006_C05.WAV		09/03/17 09:56	21.18 MB	49 sec	
A006_C06.WAV		09/03/17 09:56	25.07 MB	58 sec	
A006_C07.WAV		09/03/17 09:56	24.63 MB	57 sec	
A006_C08.WAV		09/03/17 09:56	31.98 MB	1:14 min	
AU06_C09.WAV		09/03/17 09:56	58'85 WB	1:09 min	
Allow partial officiad					
Filter options					
Allow ingest of duplicates					
Copy and Verify	-		_	_	-
1 Destination					
T Destination	sample Projec	it Silverstack Lab			103
					_



To ingest audio files into Silverstack click the **"Offload"** button in the upper left corner of the UI and choose the card or folder with the audio files to be offloaded. Audio files can be backed up within the audio wizard just as any other file type. Learn more about it in the article <u>Parallel Offloading</u>.

After starting the offload process Silverstack will register the audio clips in the library:

00ad on Neda Devit Inger Tencode		Birthda	ıy Cake (S	ample Projec	21) + 💷	* 0 4	ng Secon	De la chaptey	AutoKowi Bi	atero -
0 🖪 🛛 🔿		8 123 🚺		SCUND SD	GastienLag	ar : _				
A005_C03 15 Mar 2017	Preview	A005_C08	Durator 1:16 min	Linear PCM,	file Type wav	Auto Tracka 5 tracks in 1 files	TC 814 07:54:50	General Info * Audie City		
\oplus Officad 1, Officad 2, Sample Project Silverstack Lab \mathbb{P}^{-}		A005_C02 A005_C01	36 eec 53 sec	Linear PCM,	wav wav	5 tracks in 1 files 5 tracks in 1 files	07:54:07 07:53:02	Name Ouration	A005_C05	
in] hanne	-	A004_C39	6 sec	Linear PCM,	way	5 tracks in 1 files	07:48:06	Registration Date	15/03/17 11:45:08.	
1 file with 3 backups 54,73 MB		A004_C38	40 sec	Linear PCM,	wav	5 tracks in 1 files	07:47:10	 Episode 		
2 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	A004_C37	51 eec	Linear PCM	WBV	5 tracks in 1 files	07)45:30	State	A005_	
Shooting Day 1 122	-	A004_C36	42 sec	Linear PCM,	wav	5 tracks in 1 files	07:43:44	Tain		
V Source Video 60	19	A004_C35	45 sec	Linear PCM,	MBA	5 tracks in 1 files	07:42:33	Witt Track	No	
A003R2VJ 11		A004_C34	1:01 min	Linear PCM	wav	5 tracks in 1 files	07:31:54	Bhot Descriptors Recording Date	05/02/10 17:45:54	
A004R2VJ 39		A004_C33	58 sec	Linear PCM,	WHY,	5 tracks in 1 files	07:30:28	* Timecode		
🔜 A005R2VJ 🔅 🤤	(#E	A004_C32	57 sec	Linear PCM,	wav	5 tracks in 1 files	07:23:31	TC Start	07:54:50.00	
📲 Audio 🛛 🖏		A004_C31	38 sec	Linear PCM	WBV	5 tracks in 1 files	07:21:54	(PS of TC	24.00 (ren-dron)	
30UND 5D 1 00		A004 C30	1:09 min	Linear PCM	way	5 tracks in 1 files	07:19:54	Taps	160205	
V 📷 Shooting Day 2 50								Smp since Midnight	1367620001	
T Source Video 25										
A006R2VJ 16				1 mm				Custom 1		
A007R2VJ 9	Metter			iee 🕨	() (M)			Guatom 2		
* 🖬 Audo 25	¥ A005_C08			181 1	N.			Preduction		
50UND SD-2 25	OF MAL			1. INC 10.				Director		۰
Transcolled Cline 1										
T Smart Exiden	Well			. 162 182				Reducer		۰
Debesses & Contest				Sector and and the second	-		_	Chematographer		
	H TNA			. 180 180				2nd Carters Assistant		
Second Auto Caps	00000			the set of the						
No All YIGHD CIIDS IS	. ma							Deta Manager		
A A AUGIO CALLER OF	TNC			- NO 100				Script Supervisor		•
Versions without Backup 0					1			Sound Miller		
E-E Hegistered today 0								Conservations informations		
a Jobs									Silverstack	700

Fig. 2: Audio clips in the Silverstack library

Silverstack will automatically detect .wav files that belong to the same clip and merges them together to an audio clip containing several audio tracks.

By opening the audio panel with the "Audio&Color" button in the toolbar all the audio tracks including waveform will be visible for the selected audio clip.

You can play audio clips back by clicking the play button.

The audio panel offers the following controls:



- Master Volume: Controls the output signal level of the mix.
- Audio meters: Represent the audio signal level during playback. There is a stereo Master meter and additional 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 mixers: The sliders control the signal level for each track. You can mute specific «Left» and «Right» tracks by disabling the check boxes on the right of the channel mixers.
- Mute button: Mutes the according audio channel or the complete audio clip section
- Solo button: Solos the according audio channel, as long as the button is pressed
- Pan control: Sets the panorama to left, middle or right

The audio tracks panel can be opened from the small play button on the left side of the track name. It enables the playback of a single audio channel*:



Fig. 3: The audio tracks panel with single audio track playback

Audio Clips Metadata

Audio clips in Silverstack own a special set of metadata that is shown in the General Info tab of the right bar. The following metadata will be pulled from the audio file metadata:

- Scene Shot Take
- Wild Track
- Recorder Model
- Recorder Device ID
- Samples since Midnight
- FPS of TC
- TC Start
- TC End
- Tape
- Recording Date
- Audio Track Names

Adding Audio Clips as External Audio to Video Clips

Once ingested audio clips can be added to video clips as external audio either manually (Silverstack XT) or automatically (Silverstack Lab):

- Manual Audio Sync: How to Manually Sync Audio in Silverstack XT and Silverstack Lab
- Automatic Audio Sync: How to Automatically Sync Audio Based on Timecode in Silverstack Lab

*only available in Silverstack XT and Silverstack Lab

How to Manually Sync Audio in Silverstack XT and Silverstack Lab

Silverstack XT and Silverstack Lab offer functionality to manually sync audio clips to video clips.



Basic Principles: Audio Sync with Slate Markers

The process of manually syncing audio in Silverstack is divided into two basic steps: matching the according audio clip to a video clip, and subsequently 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 clip. 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 will automatically align the video clip and the according audio clip at the specified positions.

The article will describe in detail how to set the slate markers in the UI of Silverstack 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 based on timecode that is available in Silverstack Lab. You can learn more about automatic audio sync in Silverstack Lab in the article "How to Automatically Sync Audio Based on Timecode in Silverstack Lab".

Manual Audio Sync: Step-by-Step

Overview

- 1. Have all needed assets available in the Silverstack Library (audio and video clips have to be available for playback).
- 2. Open the video clip you want to manually sync audio in the Silverstack player and go to the frame you want to set the video slate marker (e.g. the frame where the slate visually closes).
- 3. Open the "Audio&Color" panel in the lower center of the UI and switch to the audio tab (or hit the "QC" UI Layout button in the toolbar).
- 4. Add the fitting audio clip to the current video clip by clicking the "+" button in the upper right corner of the audio panel
- 5. Browse to the position of the audio clip you want to set the audio slate marker and hit the "Slate a+v: Video + Audio" button to set the slate in the video and the audio at the current position of the playheads.
- 6. Click "Add Clip" to add the audio clip as external audio to the video clip and sync at the position of the slate markers.

Please note: You can also set audio and video slate markers independently and in any order.

In Detail

1. Register All Needed Assets in the Silverstack Library

Make sure to have the video clips and their according audio clips registered in the Silverstack Library. Learn about audio clips in Silverstack in the article Audio Clips in Silverstack.

2. Open the Video Clip You Want to Manually Sync Audio With



Fig.1: The video clip at the slate position.

Move the video clip to the frame the slate goes down. If no slate is present you can choose any other significant position you want 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.

3. Open The "Audio&Color" Panel in the Lower Center of the UI

The audio panel can be opened by clicking the "Audio&Color" button on the right side of the toolbar. Make sure to show the audio panel (see Fig.1).

The right configuration for adding manual audio clips can also be achieved by clicking the **"QC"** UI layout button in the toolbar (you can learn more about UI layouts in the article "<u>UI Layouts: Quick Configurations for the Silverstack User Interface</u>").



4. Hit The "+" Button in the Upper Right Corner of the Audio Panel to Add an Audio Clip

The "+" button in the upper right corner of the audio panel opens a popover that lets you select an audio clip that should be added to the video clip:



Fig. 2: Choose an audio clip to be added

2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Source Video Audio		A001_7	88T_HDD 88T_HDD	Auc r in Vic	A001_ lio Clips: 8 ecorded: 09 to: 09 ed Clips: 4 leo Bins: A0	788T_H //03/17 09: //03/17 09: /03/17 09:	DD 54 55
Audio Clip Duration Format	a; TFS_T1_T0 a: 2:30 min b: 5 ch, 48000Hz	6 , 24bit		C Oni	/ show unus	ad audio c	lps	
MixL MixR	-			A. <u>1</u> 4.	اهانی. سان بر			للہ۔ معن
TrkA		أستختف	anter i	A			h.	ال
TrkB		J.m.	أرا للاست.	ALC: ML		.	المغمل	J.
TrkC			*	<u>i. 1. 1</u>	. 4	L		16

Fig. 3: The "Add Audio Clip" popover in detail

Select the intended audio clip from the "Audio Clip" dropdown.

Move the playhead of the audio clips to the position you want to set the audio slate to. Click the buttor divideo + Audio to set both, the audio and the video slate at the positions of the according playheads.

The button Audio will set a slate only in the audio clip.

Please note that 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.



6.Click "Add Clip" to add the audio clip as external audio

Now click "Add Clip". The specified audio clip will now be added to the video clip and all tracks will now be available in the audio panel. The video and audio clip sync at their slate positions.



Fig. 4: External audio in the audio panel

Multiple Audio Slate Markers

When adding one audio clip to more than one video clip, it is possible to set an individual audio slate maker 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 Clip" 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 Slate Markers

Audio

You can relocate the audio slate marker for an external audio clip by opening the audio tracks playback panel. That can be done by clicking the play button that can be found on the left of the track name labels in the audio panel:



Fig 5: The audio tracks panel to listen to a single audio track

Move the detail indicator (red box) to a new position and click the button Audio to set the audio slate to the position indicated by the playhead in the detail view at the bottom right of the popover.

Video

You can relocate the video slate marker within the cue points section of the User Info tab of the right bar:



	n [®] 04:49:13.12			1 8 0	ø		C) *
					21.0			
NEL				A	3A-6		<u></u>	
SAPL -				Camera	Scene	Shot	Take	
	10 miles			Flagged:	2			
	200			Rating:	ine stelle			
Manager and a			100	Comment:				
44- BA-6								
CAUPA	12			Caption				
And the second sec	No.	4000		Shot Osc.:				
		ACTION 101	1.1	Label:		No Le	bal	
			1	Custom 1:				
		-		Custom 2:				
				Custom 3:				
A0 A A A A A A A A A A A A A A A A A A		AAAA		Cue Pointe				
<. ⊙		운곳 Sync Audio			04:49:11.03	0 Slate	Slate \$	•
-48 (24 -112 -1 0) Mantae	1.00	-						
▼ A004_C03	*							
🕑 MixL 💡 🖡	81 81							
S MixB	80 mg 51							
	1 d							
🕒 TrkA 🔤	80 (8)							
N 740	an an All							
F TrkC	8. 6							
		and a second	the state of the			6.		0

Fig.5: The video slate marker is a special cue point in the cue points section

Move the playhead of the video clip to a new position and click the "set video slate" button in the cue points section of the User Info tab. Alternatively you can use the shortcut **Ctrl + Cmd + Enter** to set the video slate marker at the current position of the playhead.

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 external audio existing you will not be able to remove it as a video clip will with external audio will always have a slate marker. Learn more about cue points from the article <u>Metadata Handling: View, Organize, Add and Filter Clips</u>.

Removing External Audio Clips

External audio clips can be removed by clicking on the gear menu in the header bar of the external audio clip:

Master	-48 -24 -12 -6 0		18 X
A003_C16		* *	Remove Reveal
D MixR	<u>-</u>	K S	Mid/Side ►

Fig. 6: Remove an audio clip from from inside the gear menu

- Remove: Removes the audio clip attached to the video clip.
- **Reveal:** Reveals the audio clip in its audio bin
- · Mid/Side: Select the channels that should be used for mid/side stereophony

Audible Frame Stepping

When stepping through a video clip with audio frame by frame with the arrow keys you will be able to hear audio for every frame.

UI Layouts: Quick Configurations for the Silverstack User Interface

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:



Project) 🔻		*	\odot	۶		
	Manage			Config		
A010R2VJ (2 do	ocuments	hidden)			0	

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

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

UI Layouts	•	Manage	^₩M
Minimize Zoom	жм	Quality Control Color Transcoding	へ第Q へ第C へ第T

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

Cfload Line Made Expert	Birth	idaProject) 👻 📰	H DC Chiw Curring			AudicECrys	C. Sitebore
🗧 🔢 🖽 🛄 🖬 Ubrary 👪 Shooting	Day 6 🔚 Bource Video 🖌 🔳 A015R2VJ	J 01:35:11.11					
				User Info			
				-			
				A	3A-3		Z
	24			Canses Pappet: Reling:	Boene F		
	9		Les :	Commont:	My Connect		
A WINES	I A DA	and the second		Caption	AGaption		
		The second se		Ehnt Dec.:			
	120	100000		Custom 12	Boon viti	- Mischera	10 2014
				Cuntom 2:			
				Custom III			
	97.3511.11						
COCC111 100000 P3 Accordate 100203, H2V2	AUGRECOM HIL AUGRECOM HERTE HOVE	ADDRESSOON HADDRE ROAD	Apt20011_160210_ROAD		Deather	Denting	4 T.
1030011, 100201, F2 40000016, 100200, H2VJ 19 (5)	AUGUCOUL HUI AUGUCOUL HEIZE HEIZE	Addition Harte Roya	Apridicitiers, received, ROAJ 853, Sync Audio	Cue Points	Institut	Duration	N Tur
NATORIA LANDA RAT ACTORETATION REVIS		ADDRESSON HADDRE FORM	Abrizooni neone Roxu 1991 Syne Audo	Cue Pointe	Position Position	Curation	N Tu.
Manatar Across of the State of	ANSWEDEN THE ADDICTOR THEORE NEW	ARGROOM FROM	Adriatolini, nacinal sexui 853, Syne Audio i+ ⊟	Cue Pointe	Position	Durantion	N T
Machel Hade Fair According House Mather Math		ARSECTOR FRANCE ROLL	Antacors, Interna, Solut Bill Synt: Audio + =	Cue Points	Praetion	Directory	N 10-
ADDOCH (1999) 199 ADDOCH (1999) 1993 D D Mater ADDOCH 2 Mater		A0060000 140000 2000	And Softer, THIOPES, PROVI BES Same Audio	Cue Points	Practices	Durnston	N 3
ADDOCTION DE ADDOCTION TROPIN PARA D D Matter Matte		ABAGONE HATYE HAT	Andadari, teksne, soval Gigi Synte Austo i∳ ≡	Cue Points	Poeton	Diretor	N 300

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

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

																C1096
miles .	Nacco	Duration	Codec	File Type	Autio Tisoka	TC Stat	ResiTore	Source File Date	Shooting/Record	Registration Date		Boots		Take	Recorder Model	Recorder ID
La	A001000.5	2:08 (18)	Арріе Ртонев.	- 100V	o ext. tracks tro	01:0698.55	AUUTR	06/03/17 06:57	02/02/16 10:41	15/03/17 11:42		- 18-44		04	Nexa	REVJ
2.0	ADDICUD	2:25 min	Арры Монаш.	. mov	5 ant. tracks fro	01:22540.15	A001H	04/03/17 04:57	02/02/16 10:54	15/03/17 11:42				05	Auta	HZYJ
-	A001C00	2:22 min	Apple ProRes.	, mov	5 ext. tracks fro	01:33:57.00	ADDIRG	09/03/17 09:58	02/02/16 11:05	16/03/17 11:42		1		05	Alexa	HZYJ
	AD01C00	224 min	Apple ProRes.	1000		01;43:14.05	A001R	09/03/17 09:59	02/02/16 11:14	15/03/17 11:42		The		07	Nexa	R2VJ
10	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
1.	A001C00	2.36 min	Apple Profiles	. 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					Nexa.	R2VJ
8. II.	AD02C00	2:18 min	Apple ProRes.	mov	5 ext. tracks fro	04:22:62.07	AD02R	08/03/17 10:01	02/02/16 13:54	15/03/17 11:42					Alexa.	RZVJ
17	Ab02C00	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				05	Alexa	R2VJ
24	A002C00	2:29 min	Apple Profiles	mov	5 ext. tracks fro	64:47:43.00	A002R	08/03/17 10:03	02/02/16 14:19	15/03/17 11:42				05	Alexa.	REVJ
1.0	A002C09	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					Nexa.	R2VJ
Here is	A003C00	39 mmc	Apple ProRea	mov		00:04:35.22	A0038	09/03/17 10:05	05/02/16 09:58	15/03/17 11:43					Alexa	R2VJ
	A003C00	41 sec.	Apple Profiles.	mov		00:05:19.00	A003R	08/03/17 10:05	05/02/16 10:01	15/03/17 11:43					Alexa.	REVJ
10	A003C00	30 560	Apple ProRes.	mov	5 ext. tracks fro	00:24:21.13	A003R	09/03/17 10:05	05/02/15 10:17	15/03/17 11:43			B-1		Nexa	R2VJ
-	A063C00	30 sec	Apple ProRes	. may		00:24:21.13	A003R	16/03/17 10:11	05/02/16 10:17	16/03/17 10:19			8-1		Alexa.	R2V.)
	A003C00	31 sec	Apple ProRes.	mav		00:27:35.04	A003R	09/03/17 10:06	05/02/16 10:20	15/03/17 11:45					Alexa	R2VJ
-	A003C00	28 sec	Apple ProRes	. mov		00:53:49.11	A003R	08/03/17 10:06	06/02/16 10:47	15/03/17 11:43					Naxa.	R2VJ
1.0	A003C00	29 eec	Apple ProRes	max		00:55:31.09	A009R	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	08/03/17 10:06	05/02/16 10:50	15/03/17 11:45					Nesa	R2VJ
	A003C00	29 sec	Apple ProRes	mov		01:07:10.01	ADOSR	09/03/17 10:07	05/02/16 11:00	15/03/17 11:43					Nexa	R2VJ
	A003C00	33 sec	Apple ProRes_	mov		01:10:32.14	ADCOR	09/03/17 10:07	05/02/16 11:03	15/03/17 11:43					Alexa	REVU
	A003C01	48 sec	Apple Profiles			01:31:57:00	A000R	08/03/17 10:07	05/02/16 11:25	15/03/17 11:45					Alexá	R2VJ
8 F.	ADG3C01	8 980	Apple ProRes	may		01:34:20.09	ADOSR	08/03/17 10:08	06/02/16 11:27	15/03/17 11:43					Nexa	R2VJ
	A003C01	41 mag	Apple ProRes	mey	5 est, tracks fro	01:34:49.17	A003R	09/03/17 10:08	05/02/16 11:28	15/03/17 11:43		8	A-3	÷.	Alexa	RIVI
	ADDGCD1	41 840	Apple ProBes	mov		01:34:49.17	ADDOR	16/03/17 10:12	05/02/16 11:28	16/03/17 10:19		A0	A-3	12	Alexa	PDV.I
	ANDIGHT	41.000	Annia PinRes	TON	5 aut tracks tro	01:34:49.17	A0038	16/03/17 10/12	16/03/17 10:12	03/04/17 15/52	-	24.2		26	No.	10000
1.68	4002001	15 200	Acels Declar			01/97/98 01	A000R	00/02/17 10:00	06/02/18 11:31	1009/17 11/49	_				Mana	011/1
- 9	Annacas	17	Annia Basllas			01-61-07-00		0000207.0000	08/00/08 17:44	1600007 11-05					-	0111
1. E	Annacat	10 100	Apple Flatter			00.10.00.10	400000	00/00/17 10:00	000027101104	1003/17 11:63					Alaria	Date: 1
11	AutosCu1	000 900	Appe Prohas			02.10.22.13	ADO3H	00/03/17/10:09	00/02/16 12:09	10/03/17/11:43					Priced.	neve out
	THE R. P. LEWIS CO., LANSING MICH.	COLUMN STREET	Grante March 19	and the second sec	A staff interview from	1000000110	THE R. LEWIS CO., LANSING MICH.	10200000000 100000	050000008 10108	CONTRACTOR OF A DESCRIPTION OF A DESCRIP			1000		A COLUMN TO A C	100000

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.

Transfer of Project Settings

Silverstack allows to export and import project settings to transfer them to new projects or different machines. This can e.g. help to move project settings from established projects to new projects to avoid setting up from scratch. Other use cases involve the transfer of transcoding presets from Silverstack XT or Lab to new projects or other machines.

Which Settings Can Be Transferred ?

The settings transfer involves certain project based settings as well as global settings. Find the settings that can be transferred 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



Export and Import of Project Settings

To export or import project settings go to the Silverstack Main Menu and select "File > Project Settings > Export... / Import..."



Fig. 1: Export and Import of Project Settings

You can choose the content to be exported after clicking on "Export...":

Save As:	Birthday Cake (Sample Project).psconfig
lags:	
Where:	SilverstackImportExport
elect Settings f	or Export
🖲 Project Se	attings
🕨 🔽 Folder	Structure
🕨 🗹 Smart	Folders
🕨 🗹 Transc	oding Configurations
🕨 🗹 Copy J	ob Templates
🔽 Label N	Names
🗹 Titles f	or Custom Fields
🖲 Global Se	ttings
🕨 🔽 Table \	/iew Presets
V Format	t Options
	Cancel

Fig. 2: 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 <u>custom transcoding presets</u> to a new project*
- 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 <u>custom filed titles</u>.

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 of the "Format Options" in the Silverstack preferences to a new project.



	Save	
Save As:	Birthday Cake (Sample Project).psconfig	~
Tags:		
Where:	ProjectImportExport	
elect Settings for Expe	ort	
🔻 🖸 Project Setting	IS	
🔻 🙆 Folder Stru	cture	
😡 Shooting	g Day 1	
🛃 Shooting	g Day 2	
🕨 🕜 Smart Folde	ers	
🔻 🛃 Transcodin	g Configurations	
💟 720p		
🖸 DNxHD :	36	
<table-cell> Editorial</table-cell>		
💟 H.264s		
🛛 Mobile		
		Cancel Export

Fig. 3: 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 information to the selected destination.

The export and import settings windows are symmetrical hence you can choose which content to write to the .psconfig file as well as which content to import from a .psconfig file.

Favorites	Name		Size		Kind	Date Mo
Applications	🔒 Birt	hday Cake (Sample Project).psconfig		36 KB	Pomforion File	Today a
Recents						
macApps						
M Documents						
i ait						
The fba						
O Downloads						
Deckton						
Desktop						
Movies						
Logs						
Preferences						
Footage						
🛅 fba-temp						
Select Settings for Import						
T Project Settings						
Folder Structure						
Smart Folders						
🕨 🗾 Transcoding Con	figurations					
🕨 💋 Copy Job Templa	ates					
💟 Label Names						
Titles for Custom	Fields					
🔻 🚍 Global Settings						
Table View Prese	ts					
Format Options						
Options					Cancel	nport
Options					Cancel	mport

Fig. 4: Example of the project settings import window

Setting a Default Template for New Projects

Additionally to the export and import of project settings you can define a .psconfig file that should be used as a template to create new projects.

First export a project settings file as described above and include all the settings the default template for new projects should contain.

Then go to the Silverstack preferences by choosing "Silverstack/Silverstack Lab > Preferences..." in the Main Menu.

In the "General" tab of the preferences you can click "Choose..." to select the default .psconfig file for new projects:



Label N	ames								
0	No Label				B Roll				
	Best Take			0	Alternate	Shots			
۲	Average Take				Interview	8			
	Moderate Take			. 0	Pamforti	onös			
1:	myCustomTitle	2:	Custom 2			3: Cu	stom 3		
4:	Custom 4	5:	Custom 5			6: Cu	stom 6		
New Projec	ts								
Load	default Project Settings f	rom file:							

Fig. 5: Choose the .psconfig file the default project settings for new projects should be loaded from.

When you now create a new project in the toolbar or from the "File" menu ("File > New Project...") all contents of the selected .psconfig file will be loaded as default for the new project.

Additionally to the manual process of loading the default .psconfig file in the preferences you can copy a .psconfig file named"defaults.psconfig" to the library folder to be taken as the default template:

For Silverstack 8: ~/Library/Application Support/Pomfort/Silverstack8

For Silverstack Lab 8: ~/Library/Application Support/Pomfort/SilverstackLab8

Attention: Please be aware that the .psconfig file in this location will overrule the UI settings.

The .psconfig files are generally compatible throughout the different Silverstack versions Silverstack, Silverstack XT and Silverstack Lab. Please be aware though, when importing transcoding presets from Silverstack Lab into Silverstack XT that restrictions due to incompatible features such as e.g. DNx transcoding only available in Silverstack Lab might apply.

*Only available for Silverstack XT and Silverstack Lab as the basic version of Silverstack does not support custom transcoding presets.

Extracting LTC from Internal Audio in Silverstack and Silverstack Lab

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:

Extraction Finished	Mar	k Only S	elected • Unm	ark Selected *
Clip	Clip TC	Apply	Extraction Status	Extracted LTC
MVI_6537 2 ch. Linear PCM, ABODD Hz	00/40/81/01 25/00/os			00:40:33,11 25.00fps
2 ch, Linear PCM, 48000 Hz	00:43:13.20 23.98fps		ETC in ch 1	00:43:13.20 23.98fps
WVI_6541 2 ch, Unwar PCM, 48000 hz	00:46:13.30 50.00fps	12	🐐 LTC in ch 1	00:46:13.30 50.00fps
MVI_6544 2 cft, Unear PCM, 48000 Hz	00:52:56.04 29.97fps		ETC in ch 1	00:52:56.04 29.97fps
MVI_6545 2 ch, Linear PCM, 48000 Hz	00:53:39.19 29.97fps (drop)		ETC in ch 1	00:53:39.19 29.97fps (drop)
2 cft, Linear PCM, 48000 hz	00:55:47.12 23.98fps	Ø	🔮 LTC in ch 1	00:55:47.12 23.98fps
2 cft, Linear PCM, #8000 Hz	00:58:32.12 59.94fps		LTC in ch 1	00:58:32.12 59.94fps
Detected LTC for all 7 clips				
Mute LTC Channels				
2 Basissian Olio TO with Estimated I TO a				Apply ITC
Thepacing cip to with Extracted Lic of	an not be undone.			Apply LTC

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:

-				-	FPS of TC	25.00 (non-drop)	
C. C	MVI_6537	00:40:31.11	00:40:42.18	11 s	TC Start	00:40:31.11	۲
100 M	MVI_6539	00:43:13.20	00:43:27.01	13 s	TC End	00:40:42.18	
	100 0544	00-50-56 04	00:53:13.04	10 .	Reel / Tape	MVI_6537	۲
ALC: NO.	MVI_6544	00:52:55.04	00:53:12.04	10.5	Ext. Audio TC Start		
100	MVI_6547	00:55:47.12	00:56:12.17	25 s	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:

Extraction Finished	Ma	rk Only S	elected • Unma	ark Selected *
P	Clip TC	Apply	Extraction Status	Extracted LTC
MVL6536				00:38:25.04
MVI_6537 2 ch. Linear PCM, 48000 Hz	00:40:31.11 25.00fps		LTC in ch 1	00:40:31.11 25.00fps
2 ch, Linear PCM, 48000 hz	00:00:00.00 23.98fps		😑 type mismatch	00:42:14.17 24.00fps
2 cft, Linest PCM, 48000 Hz	00:43:13.20 23.98fps		LTC in ch 1	00:43:13.20 23.98fps
MVI_6540 2 ch. Linear PCM, 48000 Hz	00:00:00.00 23.98(ps		🔴 type mismatch	00:44:29.22 29.97fps (drop
2 cth, Linear PCM, 48000 Hz	00:00:00.00 50.00fps	2	LTC in ch 1	00:46:13.30 50.00fps
2 ch, Linear PCM, 48000 Hz	00:00:00.00 29.97tps		🗧 type mismatch	00:51:20.15 30.00fps
Detected LTC for 7 of 15 clips				00.00.00.00
Mute LTC Channels	r can pat be update			Apply ITC

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.

Dynamic Metadata

Silverstack XT and Silverstack Lab come with a "**Dynamic Metadata**" panel that allows to extract dynamic metadata for supported clip formats. Dynamic metadata refers to certain metadata information that changes over the time span of a clip (e.g. like TC which can also be considered dynamic). It is stored differently in diverse formats and therefore needs a special process to be accessed.



Fig. 1: The dynamic metadata panel in the upper left corner of the Silverstack UI



Supported Clip Formats

The following clip formats are currently supported for the extraction of dynamic metadata in Silverstack XT and Lab:

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

Available Dynamic Metadata

The main part of dynamic metadata is dynamic lens metadata:

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

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

- Camera Tilt
- Camera Roll

How to Extract Dynamic Metadata

Select the third icon displaying a horse in the left sidebar above the library (see fig. 1)

To extract dynamic metadata for the selected clip press the "Extract Dynamic Metadata" button in the middle of the dynamic metadata panel.

You can start the extraction of dynamic metadata for multiple clips by selecting an entry from the gear menu in the toolbar:



Fig. 2: Extract dynamic metadata for multiple clips

The extraction process for all clips can be monitored in the popover that reveals the current extraction state for every started clip:



Fig.3: Extracting dynamic metadata from multiple clips

After a successful extraction the dynamic metadata panel reveals the extracted dynamic lens and camera metadata:





Fig. 4: The dynamic metadata panel with successfully extracted metadata

The metadata can now be inspected during playback or while scrubbing through a clip.

For completeness concerning lens metadata three additional static fields have been added to the lower section of the panel:

- Lens
- Filter
- ND Filter

They mirror data from the library and can also be edited in the General Info of the right sidebar.

Using Extracted Dynamic Metadata for Reports

For clips that support the extraction of dynamic metadata Silverstack extracts the dynamic metadata of the first frame already on ingest. That also allows Silverstack users to benefit from the dynamic metadata functionality and receive lens and other dynamic metadata for the first frame.

The additional lens fields can be exported to clips reports to enhance their information.

Silverstack XT and Silverstack Lab provide an extended functionality to leverage the dynamic metadata for generic clips reporting.

In the "Media" preferences it is possible to make sure that the static representation of the extracted dynamic metadata, that is used for the General info and table view library, follows the thumbnail frame:

8 🗖 🔛			40	di la	Media		\odot	(ACES)	÷22	0	
General Projects Media	a Copy&Jobs	Playback	Formats	Ingest	Backups	External Vide	o Grading	ACES	Slating	Accounts	Updates
Thumbnails											
Default thumbne Creation on Offic	ail position: bad	Begin	7.4	C.	,	Middle	54		,	4));	End
🕑 Thumbnai	ils for Clips					🕑 Thun	nbnails fo	Sideca	ars & Do	ocuments	
Focus Distance Use extracte Still Image Export	Unit: Impe d dynamic m	erial (f thumb	nail fra	me for re	eports					
Use Still Image	Settings from	n: OG	obal Pref ill Image	lerences Export T	ranscodir	ig Preset					
Store Exported 5	Still Images To										
/Users/fba/Pi	ctures/Silver	stack Still	Image	Exports					C	Choose	
Naming Scher	ne: Clip Na	ame & Fran	ne Inde	c	0						
Image Form	at: TIFF -	16-Bit, Un	compre	ssed							
Color Mo	de: As Cur	rently Sho	own in P	layer	0						

Fig. 5: Using the extracted dynamic metadata of the thumbnail frame for reports

Like this you can make sure that the metadata that is referenced in the reports goes along with the shown thumbnail.

The focus distance unit can also be changed at the same position and allows to choose the display of the focal length in the dynamic metadata panel and the General Info to be imperial (inches/feet) or metric (millimeters/meters).



Export of Dynamic Metadata to a CSV File

After successfully extracting the dynamic metadata from a clip, you can export the per frame metadata to one csv file per clip.

To trigger the export select the entry "Dynamic Metadata (CSV)..." in the Export menu of the toolbar:



Export dynamic metadata to a CSV file

In the subsequent step only the clips are shown that have successfully extracted metadata. You can check in the table view column "Dynamic Metadata" if a clip has extracted dynamic metadata successfully:

Name	🔨 Dynamic Metadata
A004C001_190521XN	
V063C001_210219LI	
V063C002_210219LW	
V063C003_210219AD	

The two clips on top have successfully extracted metadata, the two on the bottom don't

Here's an example of a dynamic metadata CSV file where you can also see the available columns:

0 0				A004C00	1_190521	W.csv		(Open with Numbers	đ
Timecode	Cip Name	Lens Nodel	Lons Serial	Focal Length (mm)	Aperture	Focus Distance (ft)	Camera Tilt	Camera Roll	Camera Model	
00:01:13:04	A004C001_190521XN	250081735		25	T 4	5.492			MPC-3610	
00:01:13:05	A004C001_190521XN	250081735		25	T4	5.492			MPC-3610	
00:01:13:06	A004C001_190521XN	250081735		25	T4	5.492			MPC-3610	
00:01:13:07	A004C001_190521XN	250081735		25	т.4	5.492			MPC-3610	
00:01:13:08	A004C001_190521XN	250081735		25	T-4	5.492			MPC-3610	
00:01:13:09	A004C001_190521XN	Z50081735		25	т4	5.49Z			MPC-3610	
00:01:13:10	A004C001_190521XN	Z50081735		25	τ4	5.492			MPC-3610	
00:01:13:11	A004C001_190521XN	Z50081735		25	T-4	5.492			MPC-3610	
00:01:13:12	A004C001_190521XN	250081735		25	т4	5.492			MPC-3610	
00:01:13:13	A004C001_190521XN	Z50081735		25	т4	5.492			MPC-3610	
00:01:13:14	A004C001_190521XN	Z50081735		25	Τ4	5.492			MPC-3610	
00:01:13:15	A004C001_190521XN	250081735		25	T.4	5.492			MPC-3610	
00:01:13:16	A004C001_190521XN	250081735		25	T 4	5.492			MPC-3610	
00:01:13:17	A004C001_190521XN	250081735		25	Τ4	5.492			MPC-3610	
00:01:13:18	A004C001_190521XN	250081735		25	T 4	5.492			MPC-3610	
00:01:13:19	A004C001_190521XN	250081735		25	T.4	5.492			MPC-3610	
00:01:13:20	A004C001_190521XN	250081735		25	T4	5.492			MPC-3610	
00:01:13:21	A004C001_190521XN	250081735		25	т4	5.492			MPC-3610	
00:01:13:22	A004C001_190521XN	250081735		25	T 4	5.492			MPC-3610	
00:01:13:23	A004C001_190521XN	Z50081735		25	т.4	5.492			MPC-3610	
00:01:13:24	A004C001_190521XN	Z50081735		25	T.4.	5.49Z			MPC-3610	
00:01:14:00	A004C001_190521XN	Z50081735		25	T 4	5.492			MPC-3610	
00:01:14:01	A004C001_190521XN	250081735		25	T d	5.492			MPC-3610	
00:01:14:02	A004C001_190521XN	250081735		25	T 4	5.492			MPC-3610	
00:01:14:03	A004C001_190521XN	Z50081735		25	Τ4	5.492			MPC-3610	
00:01:14:04	A004C001_190521XN	Z50081735		25	T4	5.492			MPC-3610	
00:01:14:05	A004C001_190521XN	Z50081735		25	T 4	5.492			MPC-3610	
00:01:14:06	A004C001_190521XN	Z50081735		25	T 4	5.492			MPC-3610	
00:01:14:07	A004C001_190521XN	250081735		25	т4	5.492			MPC-3610	
00:01:14:08	A004C001_190521XN	250081735		25	τ4	5.492			MPC-3610	
00:01:14:09	A004C001_190521XN	Z50081735		25	T4	5.492			MPC-3610	
00:01:14:10	A004C001_190521XN	250081735		25	T 4	5.492			MPC-3610	
00:01:14:11	A004C001_190521XN	Z50081735		25	T.4.	5.492			MPC-3610	
00:01:14:12	A004C001_190521XN	Z50081735		25	T 4	5.49Z			MPC-3610	
00:01:14:13	A004C001_190521XN	Z50081735		25	τ4	5.49Z			MPC-3610	
00:01:14:14	A004C001_190521XN	Z50081735		25	τ4	5.492			MPC-3610	
00:01:14:15	A004C001_190521XN	250081735		25	T.4	5.492			MPC+3610	

The unit of the column "Focus Distance" depends on the setting available in the application preferences.



Dynamic Metadata Burn Ins

Silverstack Lab supports the functionality of adding burn ins of dynamic lens data when transcoding clips.

A "Dynamic Lens Info" string that contains focal length, aperture and focus distance can be selected from the burn in options to be transcoded to the clips.

Sending Job Notifications to Slack

Silverstack, Silverstack XT and Silverstack Lab allow to transmit all notifications appearing in the macOS notification center also to a connected Slack channel.

How to Connect Silverstack to Slack

You can connect Silverstack to Slack executing all steps directly in Silverstack:

- 1. In the application preferences select the "Accounts" tab
- 2. Via the "+" button on the left side select "Add Slack Notifications..."
- 3. A browser sheet opens where you can log in to your Slack workspace
 - 1. Add your workspace
 - 2. Enter credentials
- 3. Select Slack channel or private message conversation to send notifications from Silverstack to
- 4. You successfully connected your Silverstack project to Slack
 - 1. You can see the Slack app "Pomfort Notifier" appear in the Slack workspace in the section "Apps"





Slack notifications set up in the Silverstack "Accounts" tab of the preferences

Available Actions

- Send a Test Message
 - Via the button "Send Test Message" you can send a test text to the connected channel to verify the working connection
- This action sends the following string: "Test message from Silverstack Lab."
- Enable/disable sending permissions globally or per project
 - You can choose to
 - Enable notifications for all projects
 - Enable notifications for the current project
 - By default only sending for the current project is enabled

Notifications

After a successful connection, all notifications that are appearing 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:

- Offload Jobs
- Copy Jobs
- Transcoding Jobs
- Verify Jobs
- Upload Jobs



Relink Jobs

Basic Information (also in macOS notification):

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

Extend Information (included in message to Slack):

- Source Card name / Folder name
- Destination drive name
- Start date of job
- Machine Name (Host Name)

Here are two examples of messages sent to Slack for an offload and a transcoding job:



Pomfort Notifier APP 17:21 Uhr Silverstack Lab: Offload Complete (A004R2VJ to ProductionRAID, ShuttleDisk1) Copied 2 files, 2 successful, 0 failed Started 08.06.2021 - 17:21 on DIT's Macbook Pro



Pomfort Notifier APP 17:23 Uhr Silverstack Lab: Transcoding Complete (A004R2VJ to H.264(720p), DNxHD 36) Transcoded 3 files, 3 successful, 0 failed Started 08.06.2021 - 17:22 on DIT's Macbook Pro

Library Backups

Silverstack allows to enable an automatic backup of its library in the "Backups" tab of the application preferences.

			Ba	ckups					
8	Q	04	· 😃			\odot	ACES	0	-
neral Projects	Copy&Jobs P	layback Forma	ts ingest	Backups	External Video	Grading	ACES	Accounts	Update
5 😒 last r	egular backu	ips are stored							
Database Bacl	kups								
Database Bacl Date	kups	~ Ve	rsion	Туре					
Database Bacl Date Today 15:14	kups	~ Ve	rsion 130	Type	ar				
Database Back Date Today 15:14 Today 13:38	kups	∼ Ve	rsion 130 130	Type regul regul	ar lar				
Database Back Date Today 15:14 Today 13:38 Today 12:58	kups	≁ Ve	rsion 130 130 130	Type regul regul regul	ar Iar Iar				
Database Back Date Today 15:14 Today 13:38 Today 12:58 Today 12:18	kups	~ Ve	rsion 130 130 130 130	Type regul regul regul regul	ar Iar Iar Iar				
Database Back Date Today 15:14 Today 13:38 Today 12:58 Today 12:18 Today 11:36	kups	∽ Ve	rsion 130 130 130 130 130 130	Type regul regul regul regul regul	ar Iar Iar Iar Iar				

Options

- Select how many last regular backups should be stored
 - 2
 - 5
 - ° 20
- Available backup types:
 - regular: Automatic Backup
 - manual: Manual Backup (created with button "+")
 pre restore: Created automatically before a restore is triggered

Restore a Library Backup

There are situations where your system is not capable any more of correctly saving the latest changes to the Silverstack library database.





This is usually related to a more general system problem. When this case occurs the Silverstack library can become corrupted and Silverstack helps you to restore the latest available backup:



Troubleshooting

If you should have any issues in the process of restoring a library backup please get in touch with support@pomfort.com .

We always recommend to keep a Time Machine backup of your system disk, so you can also always access older backups.



How to Manually Restore a Silverstack Library Backup

- 1. Locate the **project folder** of the project you want to restore
- Either reveal the project folder of your currently selected project through Silverstack's main menu bar: Silverstack [Lab]>Show Library in Finder
 - Or, in case you need to navigate to the project folder manually:
 - 1. Close Silverstack
 - 2. Open Finder, select Go>Go To Folder...
 - 3. Paste the project folder root path:
 - Silverstack and Silverstack XT (8.x.x) projects are located in the hidden folder ~/Library/Application
 - Support/Pomfort/Silverstack8
 - Silverstack Lab (8.x.x) projects are located in ~/Library/Application Support/Pomfort/SilverstackLab8
 - 4. Find the project that you want to restore:
 - Each project has its own folder named Project-[uniqueIdentifier]
 - The project folder that was changed most recently has the most recent *Date Modified* timestamp in Finder
 - To make sure you navigated to the correct project folder, check its Project.plist file in a text editor, it contains project information, including the project's name
- 2. Locate the backup files
 - In each project folder, there is a sub folder Backup, that contains backup snapshots of your project library
- 3. Unzip the most recent backup snapshot and rename it to ${\tt Silverstack.psdb}$
- 4. Close Silverstack
- 5. Replace your current library database with the backup
 - 1. In the project folder rename the file Silverstack.psdb to _old_Silverstack.psdb (keep the original database file for safety reasons) 2. Copy the unzipped and renamed backup file Silverstack.psdb from the backup folder to the project folder's top level [where you just
 - renamed the original file project database to _old_Silverstack.psdb]
- 6. Start Silverstack

Localization

Silverstack offers to switch the language of the user interface in the "General" tab of the application preferences.

0.0						0	Seneral						
U	-	*	£.		400	D			I (C	ACES	22	0	-
eneral	Projects	Media (Copy&Jobs	Playback	Formats	Ingest	Backups	External V	lideo Gradi	ng ACES	Slating	Accounts	Updates
Appe	arance												
	Always s	how ov	erview for	projects									
	Hide ver	ification	n state ind	icator for	bins								
	Use 60 (@ 30 fo	r Timecod	e display									
Dec	cimal Pla	ices for	File Size	/alues:	2 🖸								
	Back	up Stat	istics in Re	eports:	Verified	Backup	05	0					
Unre	ad Failed .	Jobs											
	Warn me	e about	unread fa	iled jobs	on every	new o	ffload						
	Remind	me abo	ut unread	failed jol	os every:		Min		0				
Lang	uage												
		Pret	erred Lan	guage:	✓ Auto	b							
-					Japan	iese							
					Chine	se							

The following languages are available for Silverstack, Silverstack XT and Silverstack Lab:

- English
- Japanese
- Chinese

In addition you can choose the option:

Auto

When set to "Auto", the language is selected according to the language of the operating system.

In order to change the language of the user interface, the software will need to quit and restart.

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.

ADD4R2VJ	F Transc	Report	Backup	Files	Manage	* ac	O Calor
Parent,	Prev	11 Taple	Collect	May	CT Sync	PFLA	(f) \$3
Sub	Next	J	K	L			
	* Nevesi	KK	Ħ			91000	D
	Slate	Cue	Cour la	Files	Hanage	* ac	O Color
Decr Rating	Siate Prev Label	Cue Cue Filissi	Out Single	Files	Manage Decr Scene	x QC Decr Take	Ocolor Decr Take
Decr Rating Incr Rating	Prev Label	Cue Euiser	Cout Sinsie	Files	Manage Decr Scene	C QC Decr Take	Ocolor Decr Take

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.



Dailies Creation

How to Automatically Sync Audio Based on Timecode in Silverstack Lab

Overview

In a scenario where audio is recorded separately of the image it is common to use a collective timecode to later sync the audio clips to the video clips. Silverstack Lab enables you to perform this automatic sync operation. Therefore the following steps have to be executed:

- 1. Ingest the video clips and the audio clips separately into Silverstack Lab
- 2. Open the "Audio Sync" wizard to start the sync process
- 3. Open the player and audio panel to playback clips with audio that has been connected to the video clips

Getting Video Clips and Audio Clips into Silverstack

Please refer to the article Parallel Offloading to learn how to offload media in Silverstack. Alternatively you can read Adding Clips to the Library (Ingest without Copy) if you only want to register footage and audio.

It is important to register the audio Broadcast Wave files separately from the video files into a separate bin. When you ingest a folder containing audio files Silverstack Lab will automatically detect the format:

•	Offioad Clips			
Previous Settings*				K
can Volume and Collect Metadata	_	-	-	-
west and Create Thumbhalls.		_	_	-
dan mu annu i un mun				
TON with 25 audio c	lips (and 0 sidecar files, 0 c	locuments)		Edit
Automatic detection			0.000	
Audio: Broadcast Wave (BWF)			Q Settico	
Relative Path	 Creation Date 	Size	Duration	
A006_C01.WAV	09/03/17 09:56	24.20 MB	56 sec	
A006_C02.WAV	09/03/17 09:56	29.39 MB	1:08 min	
A006_C03.WAV	09/03/17 09:56	15.99 MB	37 sec	
A006_C04.WAV	09/03/17 09:56	2.60 MB	6 sec	
A006_C05.WAV	09/03/17 09:56	21.18 MB	49 sec	
A006_C06.WAV	09/03/17 09:56	25.07 MB	58 sec	
A006_C07.WAV	09/03/17 09:56	24.63 MB	57 sec	
A006_C08.WAV	09/03/17 09:56	31.98 MB	1:14 min	
A006_C09.WAV	09/03/17 09:56	29.82 MB	1:09 min	
Allow partial offload				
Filter options				
Allow ingest of duplicates				
M		_	_	-
opy and veny				
1 Destination Sample Pr	oject Silverstack Lab			Edit
	_	_	_	
			Off	load

Fig. 1: Automatic detection of audio files in the offload wizard

Please refer to the article Audio Clips in Silverstack to learn more about the handling of audio in Silverstack.

After registering your video clips and the according audio files your library should look similar to this:

🔻 📷 Library	153
🔻 🚞 Shooting Day 1	94
Video	47
🔀 A003R2VJ	
🔀 A004R2VJ	39
🔀 A005R2VJ	
🔻 🚞 Audio	47
🧮 788T 01	
788T 02	

Fig. 2: A library structure with video and audio bins



Automatic Audio Sync

Select the video bin or folder you want to sync audio clips to.

Access the audio panel that shows in the lower center of the interface either by clicking the "Audio&Color" button in the toolbar or by going to the "QC" UI Layout:



Now start the audio sync wizard. You can do that by clicking on the "Sync Audio..." button in the header bar of the audio panel:



Fig. 4: The "Sync Audio" button

Alternatively you can access the audio sync wizard from the "Media" button in the toolbar or the context menu of a bin or a selection of bins.

In the upper section of the audio sync wizard you can choose the location of your audio that should be synced with the video:

Shooting Day 1		Source Video	SOUND SD 2	
Shooting Day 2		Audio	•	000ND 0D 2
Shooting Day 3	•			Audio Clips: 62
Shooting Day 4				recorded: 09/03/17 09:55 to: 09/03/17 09:56
Shooting Day 5				used Clips: 6
Shooting Day 6				in Video Bins: A003R2VJ, A00

Fig. 5: Select the right audio bin according to your video bin

The wizard will now show you the video clips on the left side and the according audio clips on the right side:

Choose Audio Bin/Folder	E -								
Ubrary Smart Folders	Shootin Shootin Shootin Shootin Shootin Shootin Shootin	g Day 1 F g Day 2 F g Day 3 F g Day 4 F g Day 5 F g Day 6 F	Source Video	• EQUINE	180 2	BOUND SD 2 Aster Chys. 62 wooded: 0x4547 08:55 web Chys. 62 web Chys. 62 whet Chys. 62			
🔁 Hide already synoed v	ideo clips							Mark Only Selected *	Unmark Selected
Library CL., S	hooting Date	Timecode in	Timecode Out	Slate Info		Audio Clip	Timecode In-	Timecode Out	State info
A003C0 0	6/02/16 11:31	01:37:39.01	01:38:24.12	5	0	A003_C13	01:37:25.00	01:38:27.23	A003_:-13
A003CO 0	5/02/18 11:00	01:07:10.01	01:07:38.17	*		A003_C08	01:07:02.00	01:07:44.23	A003_:-09
A003CO 0	5/02/16 10:20	00:27:35.04	00:28:06.13	*	10	A003_C04	00:27:26.00	00:28:08.23	A003_:-04
A003C0 0	5/02/16 09:58	00:04:35.22	00:05:15.01	*		A003_C01	00:04:33.00	00:05:14.23	A003_>01
A003C0 0	5/02/16 10:47	00:53:49.11	00:54:17.04	*	ø	A003_C05	00:53:34.00	00:54:21.23	A003_:-05
A003C0 0	6/02/16 11:27	01:34:20.09	01:34:28.01	*		A003_C11	01:34:15.00	01:34:29.23	A003_:-11
A003C0 0	5/02/16 11:03	01:10:32.14	01:11:05.09	*	0	A003_C09	01:10:10.00	01:11:07.23	A003_:-09
A003CD 0	6/02/16 12:37	02:44:12.16	02:45:07.11		122	A003_C18	02:44:04.00	02:45:13.23	A003_:+18
A003C0 0	5/02/16 11:44	01:51:27.22	01:52:10.15	60	123	A003_C14	01:51:16:00	01:52:14.23	A003_:=14
A003C0 0	6/02/16 10:01	00:08:19.00	00:09:00.09	*	100	A003_C02	00:08:10.00	00:09:01.23	A003_:=02
15 of 15 video clips will I	be synced, 3 airead	y have external audio.							Learn More
Papiace State Info	of synced Video Cilj	as with State into from	Audio Clips						
								Go Back	Sync

Fig. 6: The audio sync wizard shows the matching video and audio clips

The wizard shows two checkboxes which grant you the following options:

- The enablement of the checkbox "Hide already synced video clips" will exclude all video clips from the display in the list view that already have external audio. If the checkbox is disabled the video clips that already have external audio attached will be shown in red letters.
- The checkbox "Replace Slate Info of synced Video Clips with Slate Info from Audio Clips" will take over the slate info from the metadata of the audio clips to the video clips. That includes scene, shot and take information.

In case of an error the audio sync wizard gives you detailed information about the status of all involved media in the "Learn More..." panel. Click the "Learn More..." button at the right end of the information stripe to access the details:



			nu	aio Sync	a AARSaluta				
Choose Audio Bir/Fol	der:								
Library Smart Folders	 Shootin Shootin Shootin Shootin Shootin Shootin Shootin 	ng Day 1 Ing Day 2 Ing Day 3 Ing Day 3 Ing Day 4 Ing Day 5 Ing Day 6	Audio	*	A001_768	T_HDD T_HDD			
Hide already synce	nd video clips						Mark Only Selected *	Unmark Selected	•
Library Cl	Shooting Date	Timecode In	Timecode Out	Sate	Into		Audio Clip Timecode In	Timecode Out	Slat
A003C0	05/02/16 11:31	01:37:39.01	01:38:24.12	14					
A003CO	05/02/16 12:28	02:35:21.19	02:36:21.08	3A-6	et:				
A003C0	05/02/16 11:00	01:07:10.01	01:07:38.17						
A003C0	05/02/16 10:20	00:27:35.04	00:28:06.13						
A003C0	05/02/16 09:58	00:04:35.22							
A003CO	05/02/16 10:47	00:53:49.11	Detailed Log:						
A003C0	05/02/16 11:28	01:34:49.17	The following video c A003C013_160 24tos	lips have 205_R2V	no matches: J01:37:39.01	01:38:24.12	÷	6:20.23	TES
A003C0	05/02/16 11:27	01:34:20.09	A003C016_160 24fps	205_R2V	J02:35:21.19	02:36:21.08	3A-5-1	6:20.23	TE
A003C0	05/02/16 11:03	01:10:32.14	A003C008_160 24/ps	205_R2V	J01:07:10.01	01:07:38.17	*	2:06.23	TE
			A003C004_160 24/ps	205_R2V	J00:27:35.04	00:28:06.13	*		
HUUSUU.	00/02/10 12:37	01-31199-310	A003C001_160 24/ps	205_H2V	100:04:35.22	00305:15.01		A Lawrence Line	
a or to video clips wit	i de synced, 15 wandu	n matching audio.	24/ps	205_927	JUU:53:49.11	00:54:17.04	·	A Count NO	ile.a
Replace Slate In	to of synced Video Clip	as with Slate Info fro	A003C018_160 24/ps	205_R2V	J02:44:12.16	02:45:07.11	3		
			A003C014_160 24/ps	205_R2V	J01:51:27.22	01:52:10.15	>		
			A003C002_160 24/ps	205_R2V	J00:08:19.00	00:09:00.09	3 	Sync	
1.000			A003C017_160 24fos	205_R2V	J02:40:55,21	02:41:59.22	2		
			A003C015_160	205_R2V	J02:16:22.13	02:17:14.19	*		

Fig. 7: Audio sync wizard with non matching items and the "Learn More.." panel opened

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

After completing the process go ahead and click "Sync" to execute the audio sync as displayed in the wizard.

Completed Sync and Review of External Audio in the Audio Panel

After the sync is executed the external audio clips appear in the audio panel in the lower center of the user interface:



Fig. 8: Player and opened audio panel with external audio



You will be able to check the sync by playing back the video clip in the player.

Audio Details & Options

After you're done with the audio sync process the global audio clip options in the audio panel enable you to:

- Reveal Audio Details: The audio details panel for external track allows to zoom into the waveform for a visual sync check.
- Slip Audio: Slip external audio tracks to adapt for audio/video offsets.
- Re-Sync Audio: Re-sync single audio clips or all audio clips in a bin again.
- Transfer "Audio TC offsets": Transfer Audio TC Offsets to other timecode-synced audio clips. The "Audio TC offsets" describe the offset of an external audio clip to its TC synced position.
- Lock Audio Tracks: Lock single audio clips to save them from being altered.
- Transfer Mix Settings: Apply a mix to all audio clips in a bin.
- Remove External Tracks: remove single external audio clips or all external audio clips in a bin or selection.

Here's an overview of the audio panel and where to find the most important functionalities:



Fig. 9: Global Audio Clip Options

Here are the details for the different functionalities:

Audio Details with Waveform Zoom

You can open the audio details with the "Audio Details" button in the toolbar of the audio panel.

40 O			+∆ ∆→ 1 frame \$	Audio Details		ES Sync Audio) 🗄 🔹 =
Master	-48 +24 -02 -6 0						
T A007_C01		HI H	A 00:00:00:00				
MxL		. III III					
MxR		H H 44					
🕒 TrkC		80.00			a de hum		

It reveals the audio details panel:



It offers the following functionalities and controls (see screenshot above for references):


- 1. Slip buttons: The slip buttons allow to slip audio to the left or right relative to the video to compensate for audio offsets.
- 2. Frame selection for audio slip: You can select the amount of frames to slip from the dropdown. It will affect the slip quantity when pressing the slip buttons.
- 3. Audio Details/Close: Reveals and conceals the audio details
- 4. Audio Track: Select the audio track to be displayed from the pop up menu
- 5. Audio TC Offset: Specified the offset between the identical audio and video timecode. The offset is displayed in TC and its equivalent in seconds.
- 6. Re-Sync: Click the re-sync button to re-sync audio and video by timecode. By its nature this resets the Audio TC Offset.
- 7. VTC and ATC: Shows the current Video TC (VTC) and Audio TC (ATC) at the current frame position.
- 8. Set Audio Slate Marker: Sets an audio slate marker at the current playhead position to manually sync audio and video based on slate positions.
- 9. Set Video Slate Marker: Sets a video slate marker at the current playhead position to manually sync audio and video based on slate positions.
- 10. Detail Area and Playhead: The white rectangle shows the zoomed waveform below covers.
- 11. Timeline Rulers Video & Audio: The video TC ruler shows in pink and the audio TC ruler shows in blue below.
- 12. Zoom In and Out Buttons: You can zoom in and out of the waveform with the + and buttons .
- 13. Amplify Slider: With the slider on the right you can amplify the height of the waveform.

You can drag the playhead around with the mouse to change the inspected area.

Slipping of External Audio Tracks

External audio clips that have been synced via TC can easily be slipped frame-wise to each side to alter their position relatively to the video clip. The slipping position is stored in timecode format in the "Audio TC Offsets" field, viewable in the General Info, and describes the offset of the audio clip from its sync position (sync position: where the audio timecode equals the video timecode).

Indication I in fig. 9 shows the buttons that can be used to slip the audio one frame to the left or right proportional to the video track. This will basically alter the "Audio TC Offset" (see V in fig. 9) for the external audio clip. The "Audio TC Offsets" are also available in the "Edit" section of the General Info and can be exported to reports and as metadata for source video clips and transcoded clips.

Transfer Offsets to Other Timecode-Synced Clips

To apply an Audio TC Offset to other clips go to the gear menu on the right of the audio header bar (see II in fig. 9) and from the menu (see fig. 10) select "Apply Offset to All Timecode-Synced Clips (Entire Bin)" to apply the offset to all clips in the bin or select "Apply Offset to All Timecode-Synced Clips (Selected Clips)" to apply it to a selection of clips.

Apply Offset to All Timecode-Synced Clips (Entire Bin) Apply Offset to All Timecode-Synced Clips (Selected Clips)
Apply Mix to All Clips in Bin
Re-Sync Audio (Entire Bin) Re-Sync Audio (Selected Clips)
Lock/Unlock All External Audio Clips (Entire Bin) Lock/Unlock All External Audio Clips (Selected Clips)
Remove All External Audio Clips (Entire Bin) Remove All External Audio Clips (Selected Clips)

Fig. 10: The audio panel gear menu

Re-Sync External Audio

Timecode-synced external audio clips can easily be re-synced again by selecting"Re-Sync Audio (Entire Bin)" or "Re-Sync Audio (Selected Clips)" from the gear menu opening from the button indicated in II in fig. 9 and shown in fig. 10.

This functionality will basically reset the Audio TC Offset that has been applied with the slipping procedure described above.

Single timecode-synced external audio clips can also be re-synced from the gear menu of the external audio clip:



Fig. 11: The gear menu for a single external audio clip

Lock/Unlock External Audio Clips

You can lock and unlock external audio clips of a selection of clips or for all clips in a bin by selecting"Lock/Unlock All External Audio Clips (Entire Bin)" or "Lock/Unlock All External Audio Clips (Selected Clips)" in the gear menu (see fig. 10).

The locking prevents the following actions:

- Removal of external audio clips
- Slipping of external audio clips
- Application of Audio TC Offsets



- Re-Sync of timecode-synced external audio clips
- · Application of a mix

To lock a single external audio clip you can click the lock icon that also indicates the locking status of the audio clip (see also III in fig. 9):



Fig. 13: An unlocked external audio clip

Apply Mix to All Clips in Bin

To apply the mix for the current clip to all video clips in the bin select "Apply Mix to All Clips in Bin" from the gear menu (see II in fig.9 and fig. 10). The mix consists of

- Channel volume
- Channel mute setting
- Channel routing

The transmission of the settings bases on the audio track names. That means that the audio settings will be taken over to channels with the same name in other audio clips.

Remove External Audio Clips

You can remove external audio clips from an entire bin of video clips or from selected video clips by selecting the entries "Remove All External Audio Clips (Entire Bin)" or "Remove All External Audio Clips (Selected Clips)" (see fig.10).

Single external audio clips can be removed by clicking on the gear menu in the header bar of the external audio clip (see IV in fig. 9 and fig. 11).

Additional Functionality

Additional functionality for the external audio clips involves (see fig. 11):

- Reveal: Reveals the audio clip in its audio bin.
- Mid/Side: Select the channels that should be used for mid/side stereophony.

Timecode-Synced vs. Manually Synced External Audio Clips

Silverstack Lab generally differs between a sync by TC and a manual sync via slate positions. While you can slip both types of external audio with the slip buttons (see I, fig.9) some functionality is not available for manually synced clips like e.g. applying a Audio TC Offset of a manually synced audio clip to other audio clips.

When an external audio clip has been synced via timecode you can easily transition to a manual sync via slate markers that can be set in the audio track popover. To return to an automatic sync just re-sync the audio clip as described above (see fig. 10 or fig. 11).

Learn more about manual audio sync in the article How to Manually Sync Audio in Silverstack XT and Silverstack Lab and more about Audio Clips in Silverstack here.

Audible Frame Stepping

When stepping through a video clip with audio frame by frame with the arrow keys you will be able to hear audio for every frame. To deactivate audible frame stepping go to the "**Playback**" menu in the Main Menu and deselect "**Audible Frame Stepping**"

Adding Audio Clips Manually that Qualify for Timecode Sync

If you add audio clips manually that have timecode in common with the current video clip you have the option to sync them automatically by timecode:



Choose Audio Bin or Folder:		and the second se
Source Video	► 🐸 788T 03	788T 03
- Hudio		Audio Cipte 25 moorded 09.0317 09:56
		10 09.03.17 09:56
		in Video Bina: A007R2VJ, A006
		1120.2
Audio Clio: A007 C03		the show unused surficielles
Duration: 1:52 min		ny snow unused addio crips
Format: 3 ch, 48000Hz	z, 24bit	02.11
Mixi		
O MixL	<u></u>	Land the second
MixL	<u></u>	ب ب بهدهم
MixL MixR	. د ملت	and a state of the
		مرتب ور المدينية مرتب ور المدينية
MixL MixR TrkC		baran
Mixt MixR TrkC		backs
MixL MixR Tric		
Mixt MixR TrkC	A TC: 163	

Fig. 14: Add an external audio clip manually and sync it by TC

You can either choose to sync the audio clip based on TC or leave the checkbox empty to sync based on slate positions in the audio and video clip. Tags: audio details, waveform zoom, slip audio, adjust audio, zoom audio

Transcoding in Silverstack Lab

Individual Clip vs Combined Clips Transcoding

Silverstack Lab offers two different basic transcoding options:



The two main transcoding options in Silverstack Lab

- Individual Clips (one file per clip): The Individual Clips "standard" transcoding option creates one transcoded clip per source clip.
- Combined Clip (single file with multiple clips): The Combined Clip transcoding option is able to create one transcoded clip for multiple source clips.

The **Combined Clip** transcoding option **has restrictions** compared to the **"standard" Individual Clips** option. Please refer to the article <u>Combined</u> <u>Clip Transcoding in Silverstack Lab</u> to learn more about this special transcoding option.

Continue with this article below to learn more about the standard case of transcoding to individual clips.

Transcoding Configuration vs Starting a Transcoding Job

Silverstack Lab separates the configuration of the transcoding settings from the actual starting of a transcoding job:

- The section "Transcoding Configurations" will explain how to adjust the settings for your transcoding job.
- The section "Starting a Transcoding Job" will explain how to execute a transcoding job.

Transcoding Configurations

The transcoding settings can be found in the transcoding tab of the right bar. Click the transcoding icon settings can be found in the transcoding tab of the right bar.



i P D 💠	830	\odot	
Presets		Name 0	+
16:9 DNxHD	DNxHD 36 DNxHD LB 1080p 36 8-Bit, 1920 Stereo Mixdown, As in Library	⊄)) ⊙ × 1080,	
16:9 ProRes 422	Editorial ProRes 422, 1920 x 1080, All Tr 1080 (Full HD), As in Library	⊄)) ⊙ ∎cks, 1920 x	
	Mobile	⇒ ⊙	
Settings	H.264, 960 x 544, Stereo Mixdo	wn, 960 x	ദ്
Video			
Video: Codec Container Size Colorspace Tag Set Tape/Reel hea		o o o xport" settin	
Duration Audio: Codec Channel Layout Source	 Limit to In/Out Points Linear PCM All Tracks 	0	
Decoding Color depth	 Auto Select Chosen according to ratio of s Always use full color depth Forces "Full Resolution" for so 	ource / tran t decoding me non-RA	
	Silver	stack	

Configure the transcoding settings in the transcoding tab of the right sidebar

The upper part of the transcoding tab shows the custom transcoding configurations. The lower part shows the detailed settings for the selected configuration. The settings will be applied and stored to the configurations immediately.

Locking Transcoding Configurations

16:9	roxy roRes 422 (Proxy), 1920 x 1080 920 x 1080 (Fuil HD), As in Libr	් ා ා Stereo Mixdown, ary
16:9 н н.264	V 264, 1920 x 1080, Stereo Mixd ull HD), As in Library	⊲ • ⊙ own, 1920 × 1080
Settings		<u>_</u>
🔻 Audio & Video		
Video:		
Codec	ProRes 422 (Praxy)	÷
Size	1920 × 1080 (Full HD) 1920 × 1080	•
Duration	: 🖉 Limit to injour Points	

Locking transcoding configurations

Transcoding configurations can be locked to avoid changes to them by clicking the lock icon on the right side of the "Settings" header bar. Locked configurations will be shown with a white lock icon in the table*.

Transcoding Settings



Audio & Video

Video

- Codec: Select the output codec depending on your requirements. There are different options available (also shown in Fig. 3):
 - ∘ H.264
 - $\circ~$ H.265 / HEVC (available starting from macOS 10.13)
 - ProRes 4444
 - ProRes 422
 - ProRes 422 (HQ)
 - ProRes 422 (Proxy)
 - DNxHD LB 1080p 36 8-bit
 - DNxHD SQ 1080p 145/120/115 8-bit
 - DNxHD HQ 1080p 145/120/115 8-bit
 - DNxHD HQX 1080p 220/185/175 10-bit
 - DNxHD SQ 720p 145/120/75/60 8-bit
 - DNxHD HQ 720p 220/185/110/90 8-bit
 - DNxHD HQX 720p 220/185/110/90 10-bit
 - DNxHR LB 8-bit
 - DNxHR SQ 8-bit
 - DNxHR HQ 8-bit
 - DNxHR HQX 10-bit



Fig. 3: Available transcoding options

- Container: Select the container for the file. The following options are available:
 - Quicktime (.mov): Available for all codecs (ProRes, H.264, HEVC and DNx codecs)
 - MXF OP-Atom (.mxf): Available for DNx codecs.
 - MP4 (.MP4): Available for H.264 and HEVC codecs.
- Size (for H.264 and ProRes): This drop down menu allows you to select the final resolution of the transcoded clips:



Fig. 4: Available frame sizes

• H.264 Bitrate Options:



16:9 н н.264	ly 720p .264, 1280 x 720, All Tracks (Skip acks), 1280 x 720 (720p), As in L	d) ① 🛄 Muted ibrary,
Settings		2
🔻 Audio & Video		
Video:		
Codec	H.264	÷
Size	: 1280 x 720 (720p)	÷
	1280 × 720	
H.264 Bitrate	Automatic	
	Manual 6.443 kbps	
H.264 Bitra	ate Calculator	
Format:	1280x720 pixels at 2	5 fps ≎
Quality:	· · · · · · · · · · · · · · · · · · ·	
	poor good	Dest
= Bitrate:	6.443 kbps	
	Cancel Ar	ply

Fig. 4b: The H.264 bitrate calculator

The H.264 manual bitrate options allow you to enter a **specific bitrate in the textfield** or provide help for a **choice of quality in the "H.264 bitrate calculator"** (see fig. 4b).

The bitrate calculator lets you choose the intended quality from "**poor**" through "good" to "best" and calculates the resulting bitrate based on the selected resolution and the intended frame rate.

• Duration (Limit to In/Out points): By enabling this option Silverstack only transcodes the part of the clip between the in and out points set in the library.

Audio

Tick the checkbox to include audio in your transcoded clips.

- Format:
 - Linear PCM (48000 Hz, 24 bit)
 - ACC Good Quality *
 - ACC High Quality
- Channel Layout:
 - All Tracks: All available audio tracks (separate tracks, no mute/solo/level taken into account) **
 - All Tracks (Skip Muted Tracks): Transcodes all available audio tracks but includes neither muted audio tracks nor muted audio clips. **
 - Stereo Mixdown: The custom audio mix created in the audio panel

Source

Many source formats allow lower-quality decoding to speed up the decoding process (e.g., $\frac{1}{8}$ 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 $\frac{1}{8}$ res. decoding mode \rightarrow transcoding will automatically switch to $\frac{1}{4}$ res. decoding).



Selection of the preferred decoding resolution



Per default, Silverstack is configured to use the "Auto Select" mode, which **automatically** chooses the preferred decoding resolution for each transcoding task individually, based on the source resolution and the target resolution (e.g., source resolution 8k, target resolution $2k \rightarrow automatically$ chooses "¼ res. decoding" – if supported for source format). Some non-RAW formats implicitly decrease color bit depth when using lower decoding resolutions. To prevent this behavior, the "Always use full color depth decoding" option automatically forces full resolution decoding in those situations.



"Auto Select" mode and full color depth option

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.

Compositing

- Resizing:
 - Fitting Strategy:
 - The zoom to fit (Adding black bars/Without black bars) option will adjust the horizontal resolution of the clip to fit in the selected final size.
 - Zoom to fill will affect the vertical resolution of the footage to the final size, cropping the sides.
 - 1 to 1 will zoom the footage to 100% in the center of the image to adjust to the final selected size, cropping everything else.



zoom to fit (adding black bars)



zoom to fit (without black bars)



Resizing example results

• Grading:

- Look Source: Choose how to manage the color data for the clip:
 - As set in Library: enable this setting to include the looks applied to the clip in the Library. For more information on how to apply looks, please check the article <u>The Silverstack Look Library</u>.
 - 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.
- Frame lines: You can enter a custom aspect ratio to apply it as frame lines to the transcoded clips. Additionally, choose from different appearances in the "Appearance" dropdown.



Enter a custom aspect ratio in the combo box

All entered **aspect ratios will be saved** in the dropdown and sorted in alphabetical order:



2,39:1 (Cinemascope)	~
2,39:1 (Cinemascope)	
2:1	
4:3	
5:3 (1.66:1)	
5:6	
The list of oustom 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 transcoding configurations (as explained here), in Crop, and in the Visual Controls for framing assistance.

Overlays

• Burn Ins: Choose from different options to burn in metadata in the transcoded clip:

1	None
	Clip Name
	Scene-Take
	Scene-Shot-Take
	Camera
	Video TC
	Audio TC
	Framenumber
	Framenumber Since Midnight
	Reel / Tape
	Caption
	Flagged
	Comment
	Custom Text
-	

Burn in options

Note: The «Custom Text» burn in option (Silverstack Lab only) allows to add metadata wildcards into the custom text field. For instance, it's possible to display «Scene: [scene value]-[shot value]» as shown in the following figure by writing «Scene: \$scene\$-\$shot\$» in the custom text field.

Find a list of all available keys in the article Custom Burn-In Wildcard Keys.



Custom text wildcards for metadata burn ins

- Burn in Parameters: The following parameters can be adjusted for the burn ins:
 - Margins: A horizontal and vertical margin to position the burn ins in the frame.
 - Font: Sets the font style for the burn ins.
 - Font Size: Sets the font size in pt.
 - Transparency: Sets the transparency level for the burn ins.
 - Text Color: Sets the text color to "White" or "Black"
 - Background: Sets the background to a "Box" shape or adds an "Outline" to the text.

• Image Overlay: Choose an image overlay (.png, .jpg, .tiff) to be burned into the transcoded clips. • Overlay parameters:

- - Size: Sets the size of the image (0 -100 %)
 - Position X: Sets the position in horizontal direction
 - Position Y: Sets the position in vertical direction
 - Transparency: Sets the transparence (0 100 %)

Metadata Export

Choose a target application to automatically export a metadata file to transfer detailed clip information to different 3rd party systems.

Choose from the following export tools and formats:

- Adobe Premiere Pro (.XML)
- <u>AVID Media Composer</u> (.ALE)



- Final Cut Pro 7 (.XML)
- Final Cut Pro X (.FCPXML)
 COPRA Dailies System (.XML)
- <u>COPRA Dailies System</u> (.XML)
 Pomfort XML Metadata (.XML)

Select the destination tool and click the "**Configure...**" button to define the detailed settings for the metadata file export. Click the links to the tools above to learn more about the configuration of the metadata exports.

The Transcoding Preview

When the transcoding tab in the right bar is showing Silverstack automatically switches to a transcoding preview to be shown in the playback view:



The transcoding preview

The transcoding preview displays a preview of the transcoding configurations applied to the currently selected clip.

Starting a Transcoding Job



The «Transcode» button

In order to start transcoding the clips, first select a folder or bin in the Library panel. Then click on Transcode to open the wizard. There you will be able to select the clips you want to transcode. Click on continue to select the destination and transcode settings.



		22	
	Choose Media Files from Volume 👻	Mark Only Select	ed * Unmark Selected * Q Search
	Name	Label Flag	Media File Path
2	A004C012_160205_R2VJ	No Label	Sample Project Silverstack Lab — BILD — A004C012_160205_R2VJ.mov
2	A004C011_160205_R2VJ	No Label	Sample Project Silverstack Lab - BILD - A004C011_160205_R2VJ.mov
8	A004C010_160205_R2VJ	No Label	Sample Project Silverstack Lab - BILD - A004C010_160205_R2VJ.mov
	A004C009_160205_R2VJ		Sample Project Silverstack Lab — 🔤 BILD —
8	A004C008_160205_R2VJ	No Label	Sample Project Silverstack Lab - BILD - A004C008_160205_R2VJ.mov
a	A004C007_160205_R2VJ	No Label	Sample Project Silverstack Lab - BILD - A004C007_160205_R2VJ.mov
2	A004C006_160205_R2VJ	No Label	Sample Project Silverstack Lab - BILD - A004C008_180205_R2VJ.mov
2	A004C005 160205 R2V.I	No I shel	Sample Project Silverstack Lab - BILD -
3	9 Clips selected		Go Back Continue

Clip selection wizard

Now you are able to select where the transcoded clips will be stored. You can add and remove destinations by using the «+» and «-» buttons. Alternatively, it's also possible to modify each destination path and path wildcards. You can select from the configurations previously configured in the transcoding configurations tab:

Use Ce	onfiguration		
	16:9	DNxHD 36 rd9 (DNxHD L8 1080p 36 8-Bit, 1920 x 1080, Stereo Mixdown, 1920 x 1080 (Full HD), As in Library	0
0	Disers/	Sh HD (249.70 GB, 76.61 GB free) sne/Movies/Silverstack Exports/ Shooting date (yyyy-mm-dd) / Bin Name / rany	
2	16:9	720p 석아 (ProRes 4444, 1280 x 720, Stereo Mixdown, 1280 x 720 (720p), As in Library	ອ
o	Difference of Add to Lib	osh HD (249.70 GB, 76.61 GB free) sne/Desktop/Temp/ProjectImportExport/MyProjectSettings/ mary	
+ -	N Path wildcards	The render job will run all configurations in parallel	

The transcoding destination step

Click the current configuration to open the list of all available transcoding configurations:



16:9	720p d∂ ⊙ H.264, 1280 x 720, Stereo Mixdown, 1280 x 720 (720p), As in Library
16:9	다. 네이지 1920 x 1080, Stereo Mixdown, 1920 x 1080, Stereo Mixdown, 1920 x 1080 (Full HD), As in Library
16:9	Editorial 🕸 🔿 🗔 🖬 DNxHD HQ 1080p 145/120/115 8-Bit, 1920 x 1080, All Tracks, 1920 x 1080 (Full HD), As in Library, Burn-Ins, Watermark
	Mobile ⊲৩ ⊙ H.264, 960 x 544, Stereo Mixdown, 960 x 544 (Mobile), As in Library
16:9	Post () ProHes 4444, 2048 x 1152, 2048 x 1152 (2K 16:9), As in Library
1.90:1	ProRes 4444, 4096 x 2160, Stereo Mixdown, 4096 x 2160 (4K), As in Library, Framelines, Watermark
16:9	TV ද්∂ ල H.264, 1920 x 1080, Stereo Mixdown, 1920 x 1080 (Full HD), As in Library
16:9	_Custom-MyEditorial ProRes 422 (LT), 1920 x 1080, 1920 x 1080 (Full HD), None

The transcoding configurations dropdown

When the checkbox "Add to Library" is checked the transcoded clips will automatically be ingested into the Silverstack Lab Library after the transcoding job is done. Transcoding statistics will be available for the clips in the statistics view.

Click "Start Render Job" to start the render job. It can then be traced in the jobs panel.

Path Wildcards for Transcode Destinations

Path Wildcards can be used to customize the transcoding path with available metadata. Click the "Path wildcard" icon in the status bar (see fig. 13) to access the path wildcards settings for the selected destination:

		Choose Transcode Settings		
Path	/Users/sne/Movies/Silversta	ck Exports/ Shooting date (yyyy	-mm-dd) 🔹 / 🦲 Bin Name 🛛 /	
Example	/Users/sne/Movies/Silverst	ack Exports/2016-02-08/A007R2	2VJ/	
Wildcards	Token	Example	Availability	
	oouce manie	Abbie Linkes Harris	010	
	Resolution	2048x1152	9/9	
	Snooting date	2016-02-08	9/9	
	Shooting time	16_30_27	8/8	
	File extension	mov	9/9	
	File name	A007C001_160208_R2VJ	9/9	
	* User Into	100002000	2020	
	Label	No Label	9/9	
	Rating	Rating 0 of 5	9/9	
	Flagged	Not Flagged	9/9	
	Comment	No Comment	0/9	
	* Version		22227	
	Caption	No Caption	0/9	
	* Transcoded Clip		2.12	
	Preset Name	H.264s	9/9	
	Destination Co	H.264	9/9	
	Resolution of D	1920 x 1080	9/9	
	File Type of De	mp4	9/9	
7 Drag a	File Type of De	dcards" outline to the "Path" text field	9/9 Cancel OK	
7 Drag a	nd drop wildcards from the "Wil	dcards" outline to the "Path" text field	Cancel OK	
			Go Back Sta	irt Render J
	Path Example Wildcards	Path (Users/ane/Movies/Silversta Example (Users/ane/Movies/Silversta Wildcards Token Basolution Basolution Basolution Basolution File name User Info Label Rating Filegaed Comment Version Cestion Transcoded Clip Perset Name Destination cf. Resolution of De Resolution of De	Path //Jsers/ane/Movies/Silverstack Exports/ Shooting date (yyyy) Example //Jsers/ane/Movies/Silverstack Exports/2016-02-08/A007R Wildcards Token Example Resolution 2048x1152 Shooting dife 2016-02-08 Shooting dife 2016-02-08 Shooting dife 2016-02-08 Shooting dife 2007/2001_160208_R2VJ "User info Libel No Label Rating Rating Not Flagged Comment No Caprison "Transcoded Clip H284 Preset Name H264s Destination co H284 Resolution co H284 </td <td>Path Utsers/sne/Movies/Silverstack Exports/ Shooting date (yyy-mm-dd) • / Bin Name / Example /Users/sne/Movies/Silverstack Exports/2016-02-08/A007R2VJ/ Wildcards Token Example // Steers/sne/Movies/Silverstack Exports/2016-02-08/A007R2VJ/ Wildcards Token Example // Steers/sne/Movies/Silverstack Exports/2016-02-08/A007R2VJ/ Wildcards Token Example // Steers/sne/Movies/Silverstack Exports/2016-02-08 9 / 9 Shooting date 2016-02-08 9 / 9 Shooting date 2016-02-08 9 / 9 "Ble name A007C001_160206/R2VJ 9 / 9 "User Info 007C001_160206/R2VJ 9 / 9 "User Info 007C001_160206/R2VJ 9 / 9 "User Info 019 120 "User Info 019 120 "User Info 019 120 "User Info 019 19 "User Info 019 19 "Ble addition of Dum 120 x 1080 9 / 9 "Preset Name 120 x 1080 9 / 9 "Ble Type of Deum mp4 9 / 9 "Dreg and drop wildcards from the "Wildcards" outline to the "Path" text fied Cancel</td>	Path Utsers/sne/Movies/Silverstack Exports/ Shooting date (yyy-mm-dd) • / Bin Name / Example /Users/sne/Movies/Silverstack Exports/2016-02-08/A007R2VJ/ Wildcards Token Example // Steers/sne/Movies/Silverstack Exports/2016-02-08/A007R2VJ/ Wildcards Token Example // Steers/sne/Movies/Silverstack Exports/2016-02-08/A007R2VJ/ Wildcards Token Example // Steers/sne/Movies/Silverstack Exports/2016-02-08 9 / 9 Shooting date 2016-02-08 9 / 9 Shooting date 2016-02-08 9 / 9 "Ble name A007C001_160206/R2VJ 9 / 9 "User Info 007C001_160206/R2VJ 9 / 9 "User Info 007C001_160206/R2VJ 9 / 9 "User Info 019 120 "User Info 019 120 "User Info 019 120 "User Info 019 19 "User Info 019 19 "Ble addition of Dum 120 x 1080 9 / 9 "Preset Name 120 x 1080 9 / 9 "Ble Type of Deum mp4 9 / 9 "Dreg and drop wildcards from the "Wildcards" outline to the "Path" text fied Cancel

The path wildcard window

It is also possible to rename the transcoded clips by leaving out the "/" and optionally also adding a file extension. Here's an example:



Hint: It is also possible to copy and paste path wildcards like plain text.



Multi Destination Transcoding

Silverstack Lab is able to transcode to multiple destination formats at a time. In certain cases (see below), the transcoding of the configurations has to be run sequentially. The transcoding wizard will give you a hint if the transcoding will be run in parallel or sequentially:



In case of sequential transcoding you can open the "Learn More" panel to get details about the transcoding order.

The following settings can influence the parallel execution of the transcoding job:

- In/Out Points
- Debayer settings
- Decoding resolution

Make sure to set the above settings to the same value when transcoding to two different configurations to avoid sequential transcoding.

Management of Transcoding and Offload Jobs

Silverstack Lab is generally able to transcode and copy at the same time. Transcoding jobs as well as copy jobs run in the background while the app is still fully accessible.

Optionally you can choose to pause transcoding jobs when offloading and while playing back clips. To do so go to the **"Copy&Jobs"** tab in the Preferences and select the according checkbox "Automatically Interrupt Transcoding Jobs during Playback and Offload":

and the second sec	Copy&Jobs
[8] 🧧 🔅 🖸 🌆	i 🚺 📃 🔳 🕐 🚳 🥥 🐝
Seneral Projects Copy&Jobs Playback Forma	ats Ingest Backups External Video Grading ACES Accounts Update
Copy Performance	
Depending on your hardware setup you ma number of parallel copy tasks and jobs.	ly improve copy performance by increasing the
Number of parallel ta:	sks: 1 (Optimized, Recommended) 📀
Number of parallel jo	obs: 1
Read Buffer S	ize: 8 MB (Recommended)
Display of Copy and Verification Spe	ed: Combined Speed (Sum of T 📀
"Second Run" Jobs	
When using cascading copy, it may be user jobs independently, e.g. to let slow "Secon Run" offload jobs.	ful to control the execution of "Second Run" d Run" copies be executed in parallel to "First
🛛 Execute "Second Run" jobs indepe	endently
Parallel "Second Run" jobs:	1 2
Copy Options	
Documents:	Inherit Wildcard Metadata from Clips
Generate reel folder icons	3: Create legacy hash files:
Generate reel folder icons Colorize Finder labels	s: Create legacy hash files:
Generate reel folder icons Colorize Finder labels Transcoding	s: Create legacy hash files: Skip MHL-File creation:
Generate reel folder icons Colorize Finder labels Transcoding GPU Selection: Manual S Na	s: Create legacy hash files: Skip MHL-File creation: me
Generate reel folder icons Colorize Finder labels Transcoding GPU Selection: Manual 📀 Na If no GPU is selected or found, fallback 🧭 to system default.	s: Create legacy hash files: Skip MHL-File creation: AMD Radeon Pro 450
Generate reel folder icons Colorize Finder labels Transcoding GPU Selection: Manual If no GPU is selected or found, failback to system default.	s: Create legacy hash files: s: Skip MHL-File creation: me AMD Radeon Pro 450 no Jobs during Playback and Offload

The "Copy&Jobs" tab in the preferences

GPU Selection

In the preferences tab "Copy&Jobs" inside the "Transcoding" section you can select the preferred GPU for transcoding.



neral Projects Copy&Jobs Playback Formats Ing	gest Backups External Video Grading ACES Accounts Update
Copy Performance	
Depending on your hardware setup you may impr number of parallel copy tasks and jobs.	ove copy performance by increasing the
Number of parallel tasks:	1 (Optimized, Recommended) 📀
Number of parallel jobs:	1
Read Buffer Size:	8 MB (Recommended)
Display of Copy and Verification Speed:	Combined Speed (Sum of T 📀
"Second Run" Jobs	
When using cascading copy, it may be useful to c	control the execution of "Second Run"
jobs independently, e.g. to let slow "Second Run" Run" offload jobs.	copies be executed in parallel to "First
jobs independently, e.g. to let slow "Second Run" Run" offload jobs.	copies be executed in parallel to "First
jobs independently, e.g. to let slow "Second Run" Run" offloed jobs. Execute "Second Run" jobs independen Parallel "Second Run" jobs: 1	* copies be executed in parallel to *First tty
jobs independently, e.g. to let slow "Second Run" Run" offload jobs. Execute "Second Run" jobs independen Parallel "Second Run" jobs: 1 Copy Options	* copies be executed in parallel to *First
jobs independently, e.g. to let slow "Second Run" Run" offload jobs. Execute "Second Run" jobs independen Parallel "Second Run" jobs: 1 Copy Options Documents: Inf	* copies be executed in parallel to *First tty ? herit Wildcard Metadata from Clips
jobs independently, e.g. to let slow "Second Run" Run" offload jobs.	* copies be executed in parallel to *First tty entity entity tive control to the second secon
iobs independently, e.g. to let slow "Second Run" Run" offload jobs.	* copies be executed in parallel to *First tty tty triv triv triv triv triv triv triv triv
jobs independently, e.g. to let slow "Second Run" Run" offload jobs. ♥ Execute "Second Run" jobs independen Parallel "Second Run" jobs: 1 Copy Options Documents: Int Generate reel folder icons: Colorize Finder labels: Transcoding	* copies be executed in parallel to *First ttly ttly territ Wildcard Metadata from Clips Create legacy hash files: Skip MHL-File creation:
iobs independently, e.g. to let slow "Second Run" Run" offload jobs. Cepton Execute "Second Run" jobs independen Parallel "Second Run" jobs: 1 Copy Options Documents: Int Generate reel folder icons: Colorize Finder labels: Transcoding GPU Selection: Manual S Name	* copies be executed in parallel to *First htty referit Wildcard Metadata from Clips Create legacy hash files: Skip MHL-File creation:
iobs independently, e.g. to let slow "Second Run" Run" offload jobs.	* copies be executed in parallel to *First tity rerit Wildcard Metadata from Clips Create legacy hash files: Skip MHL-File creation: Radeon Pro 450

GPU Selection in the preferences

There are two options for the GPU selection:

- Auto: This setting is the default setting and uses the system default GPU.
- Manual: In this setting you can select the GPUs to be used from the available GPUs in the table (see screenshot above). If no GPU is selected or found, the usage falls back to the system default (like setting "Auto")

eGPU Support

Silverstack Lab also supports **eGPUs** (external GPUs) that can be attached to the machine the application is running on. Properly attached and installed eGPUs will show in the table when choosing the "Manual" GPU selection.

To setup the eGPU follow these steps:

- · Connect the eGPU while Silverstack isn't active
- · Select GPU selection "Manual" and the preferred GPUs in the preferences
- In case the eGPU isn't used, please switch to internal GPU and back to eGPU in the preferences.

During an active transcode job you can check usage and workload of CPU and GPU via the OS X activity monitor. This helps to test your setup and current settings.

eGPUs can provide speed advantages for formats that require a lot of GPU work. Please be aware that while some transcoding tasks could be faster using an eGPU, other tasks/formats could suffer in speed. This heavily depends on source formats and transcoding configurations.

Transcoding Functionalities Overview for Silverstack Lab

- Multi Destination Transcoding
- · Many custom transcoding preset
- All available burn in options
- Watermarking
- Transcoding resolutions higher than Full HD (1920 x 1080)
- Transcoding statistics
- Separate audio channels in transcoded clip
- Transcoding to DNx codecs (MXF, OP-Atom)
- Use of multiple GPUs for transcoding
- Frame lines burn-in for transcoded clips
- Automatic metadata companion file export

*Only available for ProRes and H.264

** Not available for AAC audio codecs

Keywords: dnx36, transcoding, dnx, AAF



Search Code: SL-T17

Combined Clip Transcoding in Silverstack Lab

With Combined Clip transcoding, Silverstack Lab can transcode multiple source clips to one single combined transcoded clip. This allows to create combined clips for complete scenes or more.

To learn more about the "standard" Individual Clips transcoding option please refer to the article Transcoding in Silverstack Lab.

Starting a Combined Clip Transcoding Job

Start the Combined Clip transcoding by clicking on the "Transcode" button in the toolbar and choose "Combined Clip (single file with multiple clips)":



Fig. 1: Start the Combined Clip transcoding

Clips Order Selection in the Source Selection Step

This will open the source selection step:

Choose	Media Flies fr	om Volume	Mari	k Only :	Selected •	Unmark Selected •	6	L Search
1	Name	Ception	Scene Take	b Shol	Camera	#Resources Label Rating	Flag	Shooting Date
	A007000							
	A007C003	Ę.		(8)	A	3 No La		08.02.16, 16:33
18	A007C003	i,		×	A	3 No La		08.02.16, 16:37
	A007C004	K.		8	A.	3 No La		08.02.16, 16:43
4 9	A007C008	i.		ē.	A	3 No La		08.02.16, 16:43
٤.	A007C006	l.		e.	٨	3 No La		08.02.16, 17:11
4	A007C007	Ę		÷	A	3 No Le		08.02.16, 17:14
9 Cips se	Nected					Go Back		Continue

Fig. 2: The source selection step indicating the order of clips

Please be aware that the order of clips in the source selection step reflects the order of clips in the combined transcoded clip. You can change the order by resorting the table columns.

Click "Continue".

Combined Clip Transcoding Settings

Choose your transcoding settings:

	TV		40 O	
16:9	H.264, 1920 x 1080, Stereo Mixdov	m, 1920 x 1080 (Full HD), As	in Library	ġ
Macint	DSh HD Isne/Movies/A007R2VJ			

Fig.3: Choose the transcode settings for the combined clip



Choose your transcoding preset from the transcoding configuration presets that you have created.

Select the transcoding destination path. Click "Start Render Job" to start the transcoding job.

Restrictions That Apply to Combined Clip Transcoding

Please be aware that the following restrictions apply to Combined Clip transcoding (compared to Individual Clips transcoding):

- Only H.264 and ProRes codecs can be used for combined clip transcoding
- Stereo mixdown will automatically be chosen for audio encoding
- The clips can not automatically be ingested into the library
- No automatic metadata export available
- Only one destination at a time
- No path wildcard options

Custom Burn In Wildcard Keys for Silverstack Lab

The «Custom Text» burn in option (Silverstack Lab only) allows to add metadata wildcards into the custom text field.

For instance, it's possible to display «Scene: [scene value]-[shot value]» as shown in the following figure by writing «Scene: \$scene\$-\$shot\$» in the custom text field.



Fig.1: Custom text setting in the burn in settings of transcoding configurations

Here are the keys that can be used (\$[key]\$) and the metadata they produce ("->"):

- \$shootingDate\$ -> shooting date in format "y-m-d"
- \$clipName\$ -> clip name of source clip
- \$projectName\$ -> project name
- \$rating\$ -> rating (1 to 5 stars)
- \$flagged\$ -> circled/flagged mark
- \$caption\$ -> caption metadata field (string)
- \$resolution\$ -> resolution of source clip
- \$take\$ -> take value
- \$comment\$ -> clip comment
- \$scene\$ -> scene
- \$camera\$ -> camera letter
- \$shootingTime\$ -> shooting time in format "h_m_s"
- \$codecName\$ -> source codec
- \$reelName\$ -> reel name
- \$shot\$ -> shot
- \$reelNameCharacters\$ -> the first characters of the reelname (example ARRI reelname: "A007R2VJ"; reelNameCharacters: "A007")
- \$label\$ -> label name set in User Info tab
- \$asa\$ -> ASA
- \$whitepointKelvinString\$ -> Whitepoint
- \$whitepointCCShift\$ -> Tint
- \$custom1\$ -> Custom 1
- \$custom2\$ -> Custom 2
- \$custom3\$ -> Custom 3

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:



mple Project 🛊	@	Grid View	Manage	* oc	O Colar	≯ Presets
02:12:03.03	010+		AB		۶	
		Single	Wipe			
		View	View			Prep Day
		View selection	menu			

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

a.	Open in Player Open in Finder	へ第5 で第5	a
	Preview in QuickLook	7.HL	
-	Show Miniplayer		No. AT & STA
	Multi Clip Selection		Single View
1.8	Chaus Fullescope Timescode 11110		✓ Grid View
	Show Visual Controls	Ser.	Wipe View
11	Show External Video Device Settings	101 11	
1112	Marsha Tella	- There are	
24			

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.

172C011_180210_R2VJ. A006C009_160208_R2VJ A004C033_160205_R2VJ A004C008_160 A003C016_160 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.

Prepare Editing for Avid Media Composer working with Silverstack Lab

This article provides an overview of the single steps of preparing proxy clips and metadata for editing in Avid Media Composer. It structures the two main activities of transferring clips and then transferring metadata and references articles that cover the single topics in more detail.

Overview

- 1. Create and Transfer Editing Proxies for Avid Media Composer with Silverstack Lab
 - 1.1 Create Editing Proxies for Avid Media Composer
 - Create DNx (OP-Atom) MXF clips. Find more information on Transcoding in Silverstack Lab here.
 - Additionally you can create AAF files that simplify the transfer workflow to Media Composer
 - 1.2 Transfer: Ingest editing proxies into Avid Media Composer
- 2. Transferring Metadata to Avid Media Composer
 - 2.1 Transfer clip metadata to Media Composer
 - Export an ALE from Silverstack Lab that contains clip metadata to be transferred to Media Composer
 - Add metadata to the proxy clips in Avid Media Composer via the ALE
 - 2.2 Transfer Color Metadata to Avid Media Composer also via the ALE

Take a look at the linked articles for more details.

Create and Transfer Editing Proxies for Avid Media Composer with Silverstack Lab

Create Editing Proxies in Silverstack Lab

Silverstack Lab allows to create DNxHD and DNxHR MXF clips (OP-Atom) that are optimized for editing in Avid Media Composer. Take a look at the article Transcoding in Silverstack Lab to learn more about transcoding in Silverstack Lab.

Creating AAF files

By enabling the checkbox in the transcoding configuration settings you can additionally create AAF files that enable an easier ingest workflow for Media Composer:



Fig. 1: Enable the checkbox "Create AAF" to create AAF files along with the MXF clips

Setting the Tape Name for Matching MXF and ALE

In order to make the matching of metadata from the ALE (Avid Log Exchange) file work, it is necessary to embed according metadata into the transcoded MXF clips.

In Silverstack Lab this is done via the Metadata Export option of a transcoding configuration. Configuring the Avid Media Composer metadata export as intended, not only makes sure that the ALE has the correct information to match it to the clips, but also influences the created DNx MXF clips to contain the right information to match the ALE when imported in Media Composer.

To set this up first select the transcoding configuration in the right bar and in the settings section scroll down to the "Metadata Export" section:



i P D 🚸			0 🔸
Configurations		Name	+ (+)
16:9 DN DNxHD	1xHD 36 (HD LB 1080p 36 8-Bit, 1920 x 1080, <i>i</i> n Library, Watermark		≰)) 🕑 🚺 80 (Full HD),
Ed 1.90:1 H.2 H.264	itorial 64, 4096 x 2160, All Tracks, 4096 x 2'	160 (4K), As in Libra	¢€ ⊙ ry
Settings			
None	₹ None ₹	None	
Margins: Font: Font Size:	H: 0 % • • • • • • • • • • • • • • • • • •		
Transparency:	0%		
Text Color:	White Black		
Background:	Outline None		
V Overlav			
lmage:			
		Choos	e Image
Size:	100 %		
Position X:	0%		
Position Y:	0%		
Transparency:	0%		
w Metadata Export	None		
Toront Application	Adobe Premiere Pro		onfiguro
Target Application	Final Cut Pro 7		singue
Will export ALE to t	Final Cut Pro X COPRA Dailies System ARRI Webgate		
	Pomfort XML Metadata	Z cancelle	rd 7 ok

Fig.1: Make sure that "AVID Media Composer" is set as target application

Click the "Configure..." button to control the settings for the ALE export and the MXF:

Second Second Second					
Content					
Q General Clip Info					
Slate Info Shot, Scene, Take, Reel Nam	e, atc.		File Info Summary File Path, File Size, Bin Name		
Exposure Info ASA, Whitepoint, F-Stop, Sh.	itter, Lens, Look Name		CDL Values in ASC_SOP & ASC_SAT column		
Format info Resolution, Fps, Filetype, Col	dec, Color Space		Source Video Clip Info Source Audio Clip Names, Video	Clip Name of Source, Source TC	
User/QC Info Flagged, Rating, Comment, L	abel, Cue Points, Custor	n 1, 2, 3			
Audio Info Audio Tracks, Audio Track Na	mes, External Audio Clip	s.,	Source Audio Info Audio TC Start, Audio TC End, Sou	undroll, Audio Track Names,	
Production Info Production, Director, Cinema Script Supervisor, Sound Mix	tographer, Camera Assis er, Copyright Info, 2nd A	tant, Location, C	Extended Info Shot Descriptors, Distance to Ob OPS position	gect, Camera Orientation,	Choose In
Format					
Scene-Take Export Format:	Scene, Take	0	Elip Name Export Information:	Clip Name	
Match clips based on					
Source File Name in Source	File column				
Reel Name in Tape column					Out
Source File Name in Tape C	mulo				Recons
Source Flie Name Without F	ile Extension in Tape col	umn			
Video Clip Name in Tape co	lumn				
		and the second s			

Fig. 3: Set the intended matching option

In the "Match clips based on..." section you can choose the matching criteria that will influence both, the MXF and the ALE, to fit together.

When you export an ALE afterwards from the re-ingested transcoded bin manually, make sure to choose the same export settings in order to match it to the created MXF files.



Transfer Editing Proxies to Avid Media Composer

To transfer editing Proxies to Avid Media Composer you have to move the created MXFs into a certain folder on an external volume to be detected:

/Volumes/[YourVolume]/Avid MediaFiles/MXF/

In this directory you have to create numbered folders the MXF clips have to go into, so e.g.:

- /Volumes/[YourVolume]/Avid MediaFiles/MXF/11
- or
- /Volumes/[YourVolume]/Avid MediaFiles/MXF/12

Going forward there are multiple ways of ingesting the created proxy clips into Media Composer. You can either:

- 1. Drag & drop the created AAFs into a Media Composer Bin
- 2. Have Media Composer create an .mdb file in the MXF structure and drag & drop it into a Media Composer bin:
 - 1. Open Avid Media Composer (AMC) and your project to have Media Composer detect the media
 - 2. Go back to the ../MXF/11 folder in Finder and drag & drop "msmMMOB.mdb" into a bin in AMC

Find more information on how to create an ALE from Silverstack and import it into Media Composer to transfer metadata, in the article<u>Transferring</u> Metadata to Avid Media Composer.

Transferring Metadata to Avid Media Composer

To transfer clips and their corresponding metadata information from Silverstack to Avid Media Composer the following two steps have to be performed:

- Create an Avid Log Exchange (ALE) file containing the metadata of the relevant clips in Silverstack
- The information from the ALE file has to be merged with available master clips in the Avid Media Composer.

Creation of an ALE file in Silverstack

1. Generating an ALE file can be done via the "Export" menu in Silverstack. Select the bin which contains the relevant clips, click on the "Export" button in the toolbar of the Silverstack window and choose "Avid Media Composer (ALE)".

2. Thereon select the clips you want to transfer in the wizard that opens up.

3. In the following you have to select the ALE export options including: (see screenshot of options below).

- Choose Project Format
- Select additional detailed information in this section.
- Set format of Scene-Take Export and Name
- Check if you prefer lower case letters for "Camera"

4. The metadata is transferred to the Avid Media Composer via the ALE file and is only there matched with the clips. The matching can be performed according to following metadata information:

• Source File Name in Source File Column

- Reel Name in Tape Column
- Source File Name in Tape Column
- Source File Name without File Extension in Tape Column
- Video Clip Name in Tape Column

5. Click on "Save ALE ... ".



1080p/25		
Content		
V General Clip Into		
Slate Info Shot, Scene, Take, Reel Nam	e, etc.	File Info Summary File Path, File Size, Bin Name
Exposure Info EI/ISO, White Balance, T-Sto	p, Shutter, Lens, Look Info, Focus Dist	CDL Values in ASC_SOP & ASC_SAT column
Format Info Resolution, Fps, Filetype, Co	dec, Rec. Color Space	Source Video Clip Info Source Audio Clip Names, Video Clip Name of Source, Source TC
User/QC Info Flag, Bating, Comment, Labi	al, Cue Points, Custom 1-6, Tags	ACES Look Information ACES Version, ACES Transforms, LMT Nodes
Audio Info Audio Tracks, Audio Track N	ames, External Audio Clips	Source Audio Info Audio TC Start, Audio TC End, Soundroll, Audio Track Names,
Production info Production, Director, Cinema Script Supervisor, Sound Mo Copyright Info, 2nd AC	itographer, Camera Assistant, Location er, Shooting Day, Crew Unit, Actors,	 Shot Descriptors, Distance to Object, Camera Orientation, GPS position
Format		
Soone-Take Export Format:	Scene, Shot, Take	Name: Scene - Shot - Take
Match clips based on		
Source File Name in Source	File column	Use Lower Case Letters for "Camera" Export
Reel Name in Tape column		
Source File Name in Tape C	olumn	
Source File Name Without F	ile Extension in Tape column	
Video Clip Name in Tape co	lumn	
Tracks column references:	Video & Audio Tracks 🚦	
3		Go Back Save ALE

Merging information from the ALE file with master clips

- 1. After having created the ALE file go to the Avid Media Composer and import the clips if not done so far. They should thereon be available as master clips.
- 2. Select the bin in the Avid Media Composer which contains the relevant clips.
- 3. Select those clips and choose "Input > Import Media..." from the context menu in the bin.
- 4. Open the "Options", then click on "Options..." navigate to the Shot Log tab and select "Merge events with known master clips".
- 5. Navigate to the ALE file you created before and click 'Open".

Avid Media Composer now matches master clips and metadata information from the ALE file according to their timecode and the criteria you selected during the transfer process within Silverstack .

The information from the ALE file is attached within additional columns in the bin table as in figure 2. Some of the columns are already known by the Avid Media Composer, all unknown information will be added as custom columns.

1.1	10					**	et Pastic Syna II	id.				
-												•
		Namo	Creation Date					Mark OUT				Physik
Total I		A0070001_00208_R2V3.mov A0070008_00208_R2V3.mov A0070008_300208_R2V3.mov A0070004_300208_R2V3.mov	12/17/18 4 30:30 PM 12/17/18 4 31:03 PM 12/17/18 4 33:01 PM 12/17/18 4 38:39 PM	36 05 110/22 1 35 10 1/24 08	Shuttle Shuttle Shuttle				6276713 16212201 163612201 16361218 163411212	10:37 07 13 15:31:22:01 15:30:14:19 16:31:12:12	DhaHD 38 (HD1085p) DhaHD 36 (HD1885p) DhaHD 36 (HD1885p) DhaHD 36 (HD1885p) DhaHD 38 (HD1885p)	
10		E 📰 annua 🗝	P	22								

Avid Media Composer: Extended metadata after the ALE import

If you cannot see any custom columns, perform the following steps:

- 1. Close and re-open the bin
- 2. Right-click in the free space of the bin window and click on "Choose columns..." in the context menu.
- 3. Then select and unselect columns, the custom columns from the imported ALE file you will find at the end of the list.

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.



▼ Processing		
Look Source	File	0
Look Source Name	None	
Grading Mode	Freestyle	
CDL Nodes		
SAT Nodes		
LUT Nodes	AlexaNeutral	
ACES Version		
Anamorphic	2.0x	۲
Сгор	2,39:1	۲
Flip	None	۲
ZEISS Lens Correction	N/A	ø

Fig. 1: Crop in the Processing section

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

The second	the second	Grading Mode		Freestyle	
		CDL Nodes			
	1.	SAT Nodes			
	Y	LUI Noces		AlexaNeutral	
1.2	Edit Cr	op			e
	01	iginal Value: Non	e .		
	None	Aspect Ratio	Custom R	esolution	ė
	Size	2048 🗘 =	1152 🗘 📔		
	offeet	0 (\$) x	00	ax %	NN Se
					0
					e
	Resulting	Resolution: 2048 Resolution: 2048	x1152 x1152px (100>	100%), 1,78:1	e
AD Some Audio		Crop			
Co avec Accine 1 1					a a
			Cancel	Apply	e
	-	Convright Inform	nation		
		Camera / Recor	der		

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



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
- 16:91.85:1
- 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 an 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

Direct Dailies Upload

Silverstack Lab allows to upload clips to supported cloud platforms from its library. The functionality uses the knowninfrastructure for jobs (like e.g. offload or transcoding jobs) in Silverstack Lab.

Supported Cloud Platforms

The following cloud platforms are supported for uploading clips:

- Frame.io (covered in this article)
- Webgate.io (covered in this article)
- Ci Media Cloud (see the related KB article: Uploading Files to Sony's Ci Media Cloud)
- AWS S3 (see the related KB article: <u>Uploading Files to Amazon AWS/S3</u>)

You can register for trials via the websites of the cloud platform providers to attain the login credentials that are used.

First Use: Log In to Your Account for a Platform

To start an upload for the first time follow these steps:

- 1. Select the bin or clips you want to upload in the library in the left bar
- 2. Open the"Media" menu and click the "Upload Clips" entry



"Upload Clips" in the Media menu



3. Select the platform you want to upload to:

Import Report Transcode	Select Platform for Upload	Files Manage OC
Preview Name A006c001_160208_R2V. A006c004_160208_R2V.	Tr Upload to: 1 1 1 You can configure accounts in the application preferences.	Sensor Føs ND Filter Le Ger bs 24
		Cancel 5 Cancel 6 S

Select to upload to "Frame.lo" or "WebGate"

4. Enter your platform credentials in the browser sheet that opens. The connected accounts can be managed in the Accounts tab of the application preferences (see also section "Accounts Tab in the Application Preferences" below).

import Heart Transcode))))))	Files Manage GC Color Preset
A006C001_16020E A006C003_16020E A006C003_16020E A006C004_16020E	Welcome Enter your email to get started. Email	Video Clip None Source Neine Source Neine Source Neine Duration Frame
	Let's go	Souries hie usaw Registration Slakta hifti Senson Lipisode Sene
		Soon Take Camra Shot Descriptors Ini/Est DayNight Shoting Date * Timesode PPS wit TC To first

Accounts Tab in the Application Preferences

The Accounts tab in the application preferences allows to manage the connected accounts.



"Accounts" tab in the application preferences

You can add and remove a platform account using the "+" and "-" buttons.



Removing An Account Connection Manually

The account logins are stored in the Keychain Access application on your Mac. In the unlikely event that an account is broken, you can remove it manually.

Account can be removed by following these steps

- Open the macOS Keychain Access Application
- Search for items labeled Silverstack Connected [platform] Account)
 - SST (with same name) that created it (see keychain item's Access Control-Tab) or
 - other named SSTs, when their name is added to the list in keychain item's Access Control-Tab
- $\circ~$ Open the context menu of the entry (with a right click) and then select "delete"

Start the Upload

After the wizard step that gives you the possibility to reselect the clips for the upload. The clips list is restricted to "suitable" clips which means in particular:

- clips with the following file endings:
 - .mov
 - .mp4
- clips that have at least one online resource

You can select where you want to upload the clips to the folder structure of the platform. This requires an individual selection that depends on the platform:

Frame.io

Frame.io	(@pomfort.com)		
You can con	figure accounts in the application prefere	nces.	
Upload Locati	on:		
Account:	My Projects		
Team:	Pomfort Dev Team		
Project:	Upload Frame.lo Dailies		
Folder:	Upload Frame.lo D • Day 3 Day 2 Day 1		
4 clips selected			Go Back Start Upload

Select:

Account

 Team
 Project
 Folder

to upload clips to.

Webgate.io



Select Acco	unt for Upload:				
ARRI W	ebgate (@por	mfort.com) 📴			
Upload Loca	ation:	nie application prei	prenues.		
Project;	Pomfort Demo	Project	0		
Folder:	Pomfort D.,. •	Dailies More Projects Project Y Test Room	CT Day 1 Playlist		
					Add Playlist
4 clips selecti	ed			Go Back	Start Upload

Select:

Project

 Folder
 Playlist

to upload clips to.

In Webgate you can only upload clips to a playlist. Therefore it is also possible to create a playlist from Silverstack Lab that is then selected automatically for the upload.

00100171000	AC	Id Playlist to "Pro	oject Y"			
You can co	ebgate (Na	ime: New Playlis	: Name	Cancel	Add	
Upload Loca	ation:				_	
Project:	Pomfort Demo	Project	٥			
Folder:	Pomfort D •	Dailies More Projects Project Y Test Room	 Day 1 Playlist 			
						Add Playlist
						- 30

Upload Job

After starting the upload the upload job can be monitored and managed in the jobs panel:



You can find more general information about managing jobs in the article Managing jobs in the jobs view



Create Reports Including Uploaded Clips' References

After the upload the remote resources are available in the Silverstack library at the following places:

- 1 Remote resource card in the files tab of the right bar includes remote location and direct link to remote clip
- 2 Column in table view "Remote Resources"
- A clips report with the "Remote Resource" column shows a clickable link to the uploaded clip
- 3 "With Remote Resource" in the "Workflow" table of the Project Overview
 - A shooting day report can include the "Workflow" summary that shows an overview of clips with looks, transcoded clips, clips with audio and clips that have been uploaded

Find more general information about creating reports in Silverstack in the article Creating Reports.

Exporting Clips and Metadata for the COPRA Dailies System

Silverstack Lab can provide transcoded clips as well as metadata from its library in a compatible format for the COPRA Dailies System. In Silverstack Lab you can export an XML file that accompanies the transcoded clips from Silverstack Lab and provides extended metadata. The proxy clips can then be uploaded together with the XML to the COPRA platform where the additional metadata is then visible.

There are two ways in Silverstack Lab to export a COPRA compatible metadata XML file:

- The automatic metadata export as part of the transcoding configuration can be set to automatically export a COPRA xml after the transcoding job finishes and the transcoded clips are reingested into the library
- 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 xml for the bin with already transcoded clips in the library

Exporting a COPRA Compatible XML with the Automatic Metadata Export Option

The metadata export option allows to automatically create a companion metadata file when a selected transcoding configuration is used for transcoding clips.

You can learn more about <u>Transcoding in Silverstack Lab</u> in the equally titled article.

To set the COPRA Dailies System 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.

i P D 🗘		0 💈
Configurations	Name	+ +
16:9 H.264)p 54, 1280 x 720, Stereo Mixe Jp), As in Library	⊄) ⊙ Iown, 1280 × 720
16:9 DNxHD Settings	xHD 36 HD LB 1080p 36 8-Bit, 192 Jown, 1920 x 1080 (Full HD	্বে)) ⊙ 0 x 1080, Stereo), As in Library -11 ে
None +	None	one ‡
Margins: Font: Font Size: Transparency: Text Color: Background: Overlay Image:	H: 0% • • • • • • • • • • • • • • • • • •	None
Size:	100 %	
Position X:	0%	
Position Y	None	
Transparency Metadata Export	Adobe Premiere Pro AVID Media Composer Final Cut Pro 7 Final Cut Pro X	
Target Application	COPRA Dailies System	Configure
Will export XML to	Pomfort XML Metadata	ilies System

Fig. 1: Automatic Metadata Export configured for the transcoding configuration



Content

Content

Content

Content

Shot, Scene, Take, Camera, Reel

Source Format, Source Width, Source Height

Configure...

C

Scroll down to the "Metadata Export" section. Select "COPRA Dailies System" and press the "Configure..." button to select its content.

Fig.2: Configure the content of the COPRA XML

When now transcoding to the adapted configuration you selected the metadata export for, the COPRA XML 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 library.

Manual Export of a COPRA Compatible XML

To manually export a COPRA Compatible XML select the intended bin inside the "Transcoded Clips" folder and choose "COPRA Dailies System" from the "Export" menu:



Fig.3 : Manually exporting a COPRA XML from a transcoded clips bin

The wizard leads you through the source selection (to select the clips that should be part of the XML) and the content selection (which metadata should be part of the XML).

Click the "Save COPRA XML.." button to export the xml to the intended directory.

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.

i P D <>			0 🗲
Configurations		Name	: +
72 16:9 H.2 H.264	2 0p 264, 1280 x 720, 20p), As in Librar	Stereo Mixdoi y	⊄)) ⊙ wn, 1280 x 720
DNxHD	NxHD 36 IxHD LB 1080p 3 xdown, 1920 x 10	6 8-Bit, 1920 980 (Full HD),	⊄» ⊙ x 1080, Stereo As in Library
Settings			9
None \$	None	Non	• •
Margins Font Font Size Transparency Text Color Background	: H: 0 % V: 0 % : Miso : 64 pt : : 0 % : : 0 % :	Black	None
Background	. 🕒 🗤 🤇		None
Overlay			
image			
		Choo	ose Image
Size Position X Position Y Transparency Metadata Export Target Application	None Adobe Premi AVID Media C Final Cut Pro Final Cut Pro COPRA Daillie ARRI Webgat	ere Pro Composer 7 X is System e	Configure
Will export ALE to t	Pomfort XML	Metadata	ate
Click on the	+ button to	start transco	ding

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.



Contraction of the second			HEVC	[720p), As in 1	
					k 1152 (1
Content					
(2) General Clip who					
Slate Info Shot, Spene, Take, Real Name	i, etc.		File Info Summary File Path, File Size, Bin Name		y y
Exposure Info ASA, Whitepoint, F-Stop, Shu	tter, Lens, Look Name		CDL Values In ASC_SOP & ASC_SAT column		wn, 192
Format info Resolution, Fps, Filetype, Cor	lec, Color Space		Source Video Clip Info Source Audio Clip Names, Video	Clip Name of Source	, Source TC
User/QC Info Flagged, Rating, Comment, L	abel, Cue Points, Custom	1, 2, 3			
Audio Info Audio Tracks, Audio Track Na	mes, External Audio Clips	8:	Source Audio Info Audio TC Start, Audio TC End, Soc	indroll, Audio Track F	Names,
Production Info Production, Director, Cinema Script Supervisor, Sound May	ographer, Camera Assist er, Copyright Info, 2nd AC	ant, Liocation,	Extended into Shot Descriptors, Distance to Ob GPS position	ject, Camera Orienta	rion,
Format					
Scene-Take Export Format:	Scene-Shot,Take	Ð	Clip Name Export Information:	Clip Name	
Metch clips based on					Con
O Dourise The Name In Source	l'he column				te
C Reef Manne In Tape solumn					
C bource File Name in Tape Co	Summ.				roding
Dource Clip Name Without C	le Extension in Tabe colu	mm.			

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



- EpisodeReel
- 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:

			121 Taggie carousei	🗣 Chi	inge biew -	O Add cip
1	Playlist		Runtime	Clips	Lasta	 Gender Settings Watermarks
		My Playtist	00.05.46:04	5	2018-	Add metadata (ALE)
		ADD6R2VJ PlayEst	00:02:28:17	4	2018-	Show and edit metadata
		With Flagged Clips	00:04:37:05	4	2018-	Notify
		Shooting Day 1	00:01:10:22	1	2019-1	Sort playist dips alphabetically
	0	playfat		0	2019-	Sort playlist clips by scene / take
	>	2019-03-18 File Sequences Test	00.01108/	3	2018-	Disapprove
						🖋 Roname playint
					_	🛓 Downloads
	* Filen	arre			w Las	Delete playlist

Upload the ALE to Webgate.IO

Find more details about uploading clips and the metadata workflow for Webgate.io in their guide.

Editing Keyboard Shortcuts in Silverstack

There are a variety of keyboard shortcuts available for commands in the main menu of **Silverstack**. Shortcuts can help greatly in boosting your productivity.

Many shortcuts are already predefined. You can also set shortcuts for selected commands that you perform quite often and that do not hold default shortcuts in order to memorize the interaction with Silverstack more easily.

To inspect the exact list of available keyboard shortcuts go to Silverstack > Keyboard Shortcuts...... This will open the Keyboard Shortcuts Editor (figure 1).

Map Keys	Press "Map Keys" to start mapping.	Q, Search
Location	Command	Modifier and Key
Silverstack	About Silverstack Lab Beta	
Silverstack	Check for Updates	
Silverstack	Preferences	36,
Silverstack	Keyboard Shortcuts	
Silverstack	Licenses	
Silverstack	Show Library in Finder	
Silverstack	Hide Silverstack Lab Beta	жн
Silverstack	Hide Others	√兆日
Silverstack	Show All	
Silverstack	Quit Silverstack Lab Beta	ЯQ
Silverstack	Quit and Close All Windows	N. Star
File	Offload	жo
File	Add to Library	-C36O
File	Import Library Folder	① 第 〇
File	Export Library Folder	①第E
File > Project Settings	Export	
File > Project Settings	Import	
File > Import	QTake Metadata (XML)	
File > Import	MovieSlate (XML)	7.361
File > Import	EDL (cmx3600)	
File > Import	Pomfort Looks (pfi)	

Figure 1: The Keyboard Shortcut Editor

Listing and Searching Keyboard Shortcuts

The keyboard shortcut editor shows a table with a list of all actions in the main menu and their currently set keyboard shortcut. You can search the list by typing into the search bar on top of the table.



Edit Keyboard Shortcuts

To edit a keyboard shortcut:

1. Select "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 or keys to use 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 ${\boldsymbol{\boxtimes}}$ (delete / backspace) button.

5. Close the Edit Keyboard Shortcuts window when you are done.

If you choose a shortcut already assigned to a command, a warning dialog box will be displayed that shows which command already used the chosen shortcut.



Figure 2: Alert showing used keyboard 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 (figure 2).

Restoring Default Keyboard Shortcuts

You can reset all keyboard shortcuts to latest version default by clicking "Restore Defaults...".

Note : Both of these steps executes an automatic restart.



Offload & Backup

Offload Clips

Offloading is the process of adding clips or files to the Silverstack Project Library, while copying them from a camera, field recorder or storage device to one or several backup drives. In order to make it possible you can follow these directions:

Prepare for Offloading

First of all you have to assign clips to a project. By default, clips are offloaded into the project currently selected. You can create a new project by using the project selection menu on the top center of the main UI window.

Additionally, it's possible to select a folder from the library tree on the left panel before starting. This way you will be able to set the folder on which the bin containing the new clips will be placed within the Project Library. That bin will have the same name as the source volume storing the footage. In case the current selection in the library tree is a bin, a new bin will be created as a sibling of the selected one.

Starting the Offload



Offload source selection

After mounting the storage device containing the clips that you'd like to offload, you have several options to start the offload process:

- Click on the 'Offload' icon on the toolbar and select the volume you'd like to offload from.
- Choose Library > 'Offload' from the Silverstack menu.
- Right click on a folder or bin in the Project Library tree (left panel) and choose 'Offload' from the context menu.
- Drag the folder or card from Finder onto Silverstack's icon in the Dock window.

When using options #2 and #3, a Finder directory browser will open and you'll need to select the volume or folder you'd like to offload from.

Offload Wizard

The 'Offload Wizard' is the popup window that appears after choosing the Offload source. At this stage, Silverstack will try to automatically detect the camera format by scanning the files. After scanning the chosen source drive, all found files will be shown in a table. If, in an exception, Silverstack should not choose the right camera format, you can set the correct format by clicking on the 'format selection button'. The import options for the multiple camera types can be found and edited in the <u>application preferences</u> menu, under the Formats tab.

		Official Clips			
	Augures to. 🖿 Library		Previo	us Settings* 0	
	Start Witama and Collect Webat	utu Tes. 291.96 MB			
Format	Ingest and Courts Transmitte	americ Clips white 5 Clips (and 0 sidecar films, 0 slocu	mental	Learn More	Mark and
Selection	Automatic detection	C Mark Drily Selected + Unit	npk Al 🔹	a seener	- Unmark
Button	Bartin Fail 22 - 322,400300 232,400300 - 322,400300 24 - 322,400300 25 - 322,400300 26 - 322,400300 27 - 322,400300 27 - 322,400300 27 - 322,400300 27 - 322,400300	Checkin Suke 9 (40235) EXVLINE: 18494/3071 11509 1 (40235) EXVLINE: 06494/2071 11509 260205 EXVLINE: 06494/2071 1150 260205 EXVLINE: 06494/2071 1150 360205 EXVLINE: 06494/2077 1150	533 0 8238 M8 54.60 M8 52.52 M8 51.46 M8 51.46 M8 66.01 M8	Mater 16 aac 16 sec 18 sec 18 sec 18 sec	Buttons
Allow Partial • Offload	Alter partia efficar Film option Alter input of challaster Concernent starts		_		
	D A SD	estinations are Maximum His In	instand.	50	
			_	Official	



Silverstack by default offloads all the clips and files contained in the scanned device. Additionally, if you just need to offload a subset of clips, you can check the 'Allow partial offload' checkbox. Clips can be marked and unmarked either by using the checkboxes or the 'mark' and 'unmark' buttons by the 'search' field. Therefore either select all clips you'd like to import and then click on 'Mark Only Selected' or select those clips of all already marked that shall not be imported and click on 'Unmark Selected'.

As you can see in the following image, there is a bunch of keyboard shortcuts for marking and unmarking clips to facilitate this task.

Mark Selected 🔹) 🗌 Uni	Unmark Selected 🔹	Q Se
Mark Only Selected	36 M	Unmark Selected	жu
Mark All	C M H	r Unmark All	UNES
Mark Selected	~ 36 M	1 Unmark Only Selected	~%U

'Allow partial offload' mode keyboard shortcuts

Additionally, Silverstack is prospecting for duplicates (clips already existing in the Project Library) when scanning a source drive and prevents them from being offloaded by default. If you need to include duplicates nonetheless, please enable the 'Allow import of duplicates' checkbox.

Sometimes Silverstack will skip some hidden files and empty folders during the copy process, as shown in the image below. If you click on 'Learn More', a popup window will show which files are ignored.



You are able modify this behavior in the application preferences menu, under the 'Ingest' section. In addition to the settings in the Preferences menu, the following files are always ignored:

- Mac OS X resource fork files (starting with ._)

- MHL, MD 5 and SHA 1 files that have been created by Silverstack on previous copy tasks

When you are done with your offload source choice, you can proceed to add the copy destinations.

Setting up the copy destinations



AD

Scar Volume and Collect Metadate Imposit	Hegman	ultrary		iampiata: Pre	vious settings - Q	Templat
Image: A003R2VJ 5 filles, 291:98 MB Image: Image: Image: Image:	Scan Vol	ume and Collect Metada	10 m			
Ingest @cnemic Clips with 5 clips (and 0 sidecar files, 0 documents) Ear Copy and Vority		A003R2VJ 6 fill	as, 291.98 MB			
Image: Standing Collips Generatic Clips with 5 clips (and 0 sidecar files, 0 documents) Entry Image: Collips Image: Collips Image: Collips Collips Image: Collips <td>Ingest</td> <td></td> <td>_</td> <td></td> <td>Learn More</td> <td></td>	Ingest		_		Learn More	
Copy and Verify Image: Structure Image: Structure <		A003R2VJ Ge	neric Clips th 5 clips (and 0 si	decar files, 0 documents)	Edit	
Image: Structure Reference of the structure Reference of the structure Reference of the structure Reference of the structure of	Copy and	d Verify	_		_	
Volume Info		📕 📕 3 De	stinations Macin	ntosh HD, SamplesSSD, Travel1	Edit	
MacIntach HD 499.90 GB 153.48 GB /Users/fba/Movies/Footage/ (Preserving Falce: Structure) SampleSSD 721.79 GB /tempOffload/ (Preserving Folder Structure) // Travel1 499.76 GB 499.02 GB / (Preserving Folder Structure) New Destination Path Path Wildcardd Cascading Copy Verification Behavior: Configure Verify All Destinations, include Source Verification (included in Copy Job) Checksum Method Configure Mob 5 (Slow, widely used) Mob 5 (Slow, widely used) Mob 5 (Slow, widely used) Mob 5 to Queue: Age or Append at the End As next Job (earliest execution)	Valum	e irifo	Free After Copy	Destination path		
SampleSSD 100 T8 721.79 GB /tempOffload/ (Preserving Folder Structure) Travel1 499.02 GB / (Preserving Folder Structure) New Destination Path New Destination Path Path wildcards Cascading Copy Verification Behavior: Configure Verify All Destinations, Include Source Verification (included in Copy Job) Checksum Method Configure Mob 5 (Slow, widely used) Mob 5 (Slow, widely used) Mob 5 to Queue: Append at the End As next Job (rarliest execution)	0 2	Macintosh HD 499.96 GB	153.48 GB	/Users/fba/Movies/Footage/ IPres	erving	
Travel1 499.02 OB / (Preserving Folder Structure) New Destination Path Path wildcards Cascading Copy Verification Behavior: Verify All Destinations, include Source Verification (included in Copy Job) Checksum Method: Configure MD5 (Slow, widely used) Verification Enterving: Original Filenome Overwrite existing Files: Add Jobs to Queue: Append at the End	2	SamplesSSD 1.00 TB	721.79 GB	/tempOfficad/ (Preserving Folder St	nucture)	
New Destination Path Path wildcarde Path wildcarde Cascading Copy Verification Behavior Configure Verification Schwide Configure Verification Configure MD 5 (Slow, widely used) Mpd(Mov File Renaming: Original Filenome Add Jobs to Queue: Append at the End	10 🦲	Travel1 499.76 05	499.02 GB	/ (Preserving Folder Structure)		
Path wildcards Cascading Copy Verification Behavior: Configure Verify All Destinations, Include Source Verification (included in Copy Job) Checksum Method: Configure MD 5 (Slow, widely used) Mod/Mov File Renuming: Original Fileneme Overwrite existing Files: Add Jobs to Queue: Append at the End As next Job (earliest execution)			New Destina	ation Path		
Wildcard Wildcard Cascading Copy Verification Behavior: Configure Verify All Destinations, Include Source Verification (included in Copy Job) Checksum Method: Configure MD 5 (Slow, widely used) Mod/Mov File Renaming: Original Filename Overwrite existing Files: Add Jobs to Queue: Append at the End As next Job (earliest execution)						Path
Cascading Copy Verification Behavior: Configure Verify All Destinations, Include Source Verification (included in Copy Job) Checksum Method: Configure MD 5 (Slow, widely used) Md/Mor File Renaming: Original Fileneme Add Jobs to Queue: Append at the End As next Job (earliest execution)	-					- Wildcards
Verification Behavior: Configure Verify All Destinations, include Source Verification (included in Copy Job) Checksum Method Configure MD 5 (Slow, widely used) Mpd/Mov File Renaming: Original Filenome Overwrite existing Files: Add Jobs to Queue: Append at the End As next Job (earliest execution)		Path wildcards	Cascading Copy			Cascading
Checksum Mathod Configure MD 5 (Slow, widely used) Mpd/Mov File Renumling: Original Filensme Overwrite existing Files: Add Jobs to Queue: O Append at the End As next Job (earliest execution)	Verific	cation Behavior: Configure.	Verify All Destination	s, Include Source Verification (included in	Copy Job)	
Mpd/Mov File Renuming: Original Filename Overwrite existing Files: Add Jobs to Queue: Add Jobs to Queue: Append at the End As next Job (earliest execution)	Che	cksum Method: Configure.	MD 5 (Slow, widely u	sed)		
Add Jobs to Queue: O Append at the End As next Job (earliest execution)	Mp4/Mos	File Renaming: Original File	ename	Overwi	ite existing Files:	
	Add Job	s to Queue: O Append at	the End 📀	As next Job (earliest execution)		
					Offload	

The Offload Wizard: the 'Copy and Verify' section

In this section you are able to choose the destination volumes to which Silverstack will copy the clips and files. To edit the import options, click on the 'Edit' button. The number of volumes that Silverstack can simultaneously offload to is only limited by your hardware.

Adding a new destination is done by pressing on the '+' button on the lower left of the table. Click the '-' button next to it to if you'd like to remove the selected destination drive.

In relation to the additional options under 'Verification Behavior' and 'Checksum Method', you can find a detailed description of each one of those settings in the article <u>The Copy and Verification Process in Silverstack: Verification Behavior</u>.

Silverstack offers the possibility of saving offload wizard templates. These templates can be chosen through the drop down menu on the top right of the Offload Wizard. For more information about the templates, please check the article <u>Offload wizard templates</u>.

For a detailed description of how the copy and verification process works in a cascading copy scenario (Silverstack XT and Lab), as well as other available settings for this mode, please check the knowledge base article <u>Cascading Copy</u>.

There is also the possibility of using the <u>Path Wildcards</u> feature, which offers users a way to create custom folder structures based on the metadata contained in clips.

A file renaming pattern can be selected to change the original file and clip names of selected camera devices during the offloading process. Check the KB article File Renaming on Offload to get a detailed guide on how to use this feature.

Path Wildcards

In the path wildcards window, the pull down menu button with the gear icon gives you the possibility to choose from recently used wildcards (see screenshot below). To work efficiently with wildcard paths it is also possible to copy and paste a path from the wildcard window including wildcards like regular text to and from a text document.


		Offload Clips			6R2VJ				м
Path	/ Bin Name / Folder Structure	©1	_		R2VJ				M
				84	IR2VJ				M
Example	/Day5267/A007R2VJ/A007R2VJ/			/\$sc	ourceMediat	BinName\$/\$s	ourceFolderStr	ucture\$/	
Wildcards	Token	Example	Availability	/\$sc	ourceMedial	BinName\$/\$s	ourceFolderStr	ucture\$/	
	▼ General			/\$50	ourceMediat	Sinhiame\$/\$9	ourceFolderStr	uctures/	
	Folder Structure	A007R2VJ/A007R2VJ	17/17	/Birt	thriavCake/S	sourceMedia	RinName\$/ter	urcaFoiderStru	cture\$/
	Source Folder	Day5267	17/17	Pir	hdayCake/	sourceMedia	BinName\$/\$sr	urceFolderStru	cture\$/
	Bin Name	Day5267	17/17	/Birt	hdavCake/S	sourceMedia	BinName\$/\$sc	urceFolderStru	cture\$/
	Bin Path	Shooting Day 2/Source Video/Day5267	17/17	/Birt	hdayCake/s	sourceMedia	BinName\$/\$sc	urceFolderStru	cture\$/
	Volume Name	Shuttle	17/17	/Birt	hdayCake/S	sourceMedia	BinName\$/\$sc	urceFolderStru	cture\$/
	Path Components	A007R2VJ	17/17	/Birt	hdayCake/s	sourceMedia	BinName\$/\$sc	urceFolderStru	cture\$/
	Submission Time	11_24_10	17/17	- 10	IR2VJ		-	-	N
	Submission Date	2020-04-27	17/17		0.911				W
	* Library				112.43				
	Project name	Birthday Cake (Sample Project)	17/17		R2VJ				M
	Library Folder Name	Source Video	17/17		0211				
	▼ Clip				RZXJ				N
	Episode	No Episode	0/17		R2VJ				M
	Scene	No Scene	0/17		100911				
	Shot	No Shot	0/17		nte va				
	Take	No Take	0/17		R2VJ				M

Recently used wildcards options in the pull down menu.

By default the original folder structure of the source is maintained. However keep in mind that you are able to influence that behavior by using path wildcards and can like this also dissolve the original folder structure on the destination.

Disk Full

If the disk is full the copy and verify step of the offload wizard shows if the disk doesn't have enough free space to copy to it. This is shown as below:

-						
C	ppy and	Verify			Volume 10_10 doesn't have	enough free space!
Γ		1 Destination	10_10			Edit
	Volume	Info-	~	Free After Copy	Destination path	
		10_10 (Full) 250.69 GB				1st Run 0
				New Destinat	ion Path	

Starting the Copy Process

After determining your copy destinations and settings, click on 'Offload' to register the clips to the library. Silverstack will ingest all the metadata from the clips and create thumbnails for them. Once that process is complete, the copy and verification job is going to sart. All the information about the offload process can be supervised in the <u>Jobs panel</u>.

• Note: if you just need to create references to video clips in the Project Library and skip the copy and verification processaltogether, please check the knowledge base article Adding Clips to the Library (Ingest without Copy).

Cascading Copy



Cascading Copy concept setup

The Cascading Copy offloading mode is designed to free up camera media storage as fast as possible. This can become convenient in working environments with small amounts of camera storage devices or in situations with only one docking station and multiple camera storage devices that have to be offloaded.



Silverstack makes it possible in a single job by offloading the camera media first to a very fast destination (called '1st run') and then to the slower backup drives from the first fast destination (the '2nd run'). Once the first run of the process is finished, the source camera media can be unmounted and is ready to be used again while the second run copy&verification takes place.

Starting to offload



Offload source selection

After mounting the storage device containing the clips that you'd like to offload, you have several options to start the offload process:

- Click on the 'Offload' icon on the toolbar and select the volume you'd like to offload from.
- Choose Library > 'Offload' from the Silverstack menu.
- Right click on a folder or bin in the Project Library tree (left panel) and choose 'Offload' from the context menu.
- Drag the folder or card from Finder onto Silverstack's icon in the Dock window.

When using options #2 and #3, a Finder directory browser will open and you'll need to select the volume or folder you'd like to offload from.

Offload Wizard

The 'Offload Wizard' is the popup window that appears after choosing the Offload source. At this stage, Silverstack will try to automatically detect the camera format by scanning the files. After scanning the chosen source drive, all found files will be shown in a table. If, in an exception, Silverstack should not choose the right camera format, you can set the correct format by clicking on the 'format selection button'. The import options for the multiple camera types can be found and edited in the <u>application preferences</u> menu, under the Formats tab.

	Stars Vetures and Collect Metabula		
Format	ADO3R2VJ Covers Class ADO3R2VJ Covers Class were 5 class (a	R Lean More	Mark and
Selection ●— Button	Automatic detection Generic City: Inflat.constraint Bit March	y Steched +) Unmark AI + O Insure Contrain State Contrain State Contreal State Contrain State Contreal State Contreal State Con	Unmark Buttons
Allow Partial - Offload	Alter pertie stituel Pere splere Anne loger at duplicate Codes and lynery Out and loger Anne loger Ane loger	#TB, Marinash HD, Transcent	

The Offload Wizard: the 'Ingest and Create Thumbnails' section

Silverstack by default offloads all the clips and files contained in the scanned device. Additionally, if you just need to offload a subset of clips, you can check the 'Allow partial offload' checkbox. Clips can be marked and unmarked either by using the checkboxes or the 'mark' and 'unmark' buttons by the 'search' field. Therefore either select all clips you'd like to import and then click on 'Mark Only Selected' or select those clips of all already marked that shall not be imported and click on 'Unmark Selected'.

As you can see in the following image, there is a bunch of keyboard shortcuts for marking (#1) and unmarking (#2) clips to facilitate this task.





'Allow partial offload' mode keyboard shortcuts

Additionally, Silverstack is prospecting for duplicates (clips already existing in the Project Library) when scanning a source drive and prevents them from being offloaded by default. If you need to include duplicates nonetheless, please enable the 'Allow import of duplicates' checkbox.

Sometimes Silverstack will skip some hidden files and empty folders during the copy process, as shown in the image below. If you click on 'Learn More', a popup window will show which files are ignored.

ngest ar	d Greate Thumbra	alls	Skipped 2 ignored folders / Skipped 1 ignored file.	A Learn More
×	A007R2EC	with 27 clips	(and 2 sidecar files, 1 document)	Edit

You are able modify this behavior in the <u>application preferences</u> menu, under the 'Ingest' section. In addition to the settings in the Preferences menu, the following files are always ignored:

- Mac OS X resource fork files (starting with ._)

- MHL, MD 5 and SHA 1 files that have been created by Silverstack on previous copy tasks

When you are done with your offload source choice, you can proceed to add the copy destinations.

Setting up the copy destinations



The Offload Wizard: the 'Copy and Verify' section

In this section you are able to choose the destination volumes to which Silverstack will copy the clips and files. To edit the import options, click on the 'Edit' button. The number of volumes that Silverstack can simultaneously offload to is only limited by your hardware.

Adding a new destination is done by pressing on the '+' button on the lower left of the table. Click the '-' button next to it to if you'd like to remove the selected destination drive.

Once all the drives have been added, you can select the order to which you'd like Silverstack to copy the clips to each drive. If '1st Run' is selected, the files will be copied to that drive first. If '2nd Run' is selected, the files will be copied from the 1st Run source drive to the 2nd Run destination drive, while the original source camera media can be unmounted and reused. For a detailed description of how the copy and verification process works in a cascading copy scenario, as well as other available settings for this mode, please check the knowledge base article <u>Cascading Copy Preferences</u>.

In relation to the additional options under 'Verification Behavior' and 'Checksum Method', you can find a detailed description of each one of those settings in the article <u>The Copy and Verification Process in Silverstack: Verification Behavior</u>.

There is also the possibility of using the Path Wildcards feature, which offers users a way to create custom folder structures based on the metadata contained in clips.



Additionally, Silverstack offers the possibility of saving offload wizard templates. These templates can be chosen through the drop down menu on the top right of the Offload Wizard. For more information about the templates, please check the article <u>Offload wizard templates</u>.

Starting the copy process

After determining your copy destinations and settings, click on 'Offload' to register the clips to the library. Silverstack will ingest all the metadata from the clips and create thumbnails for them. Once that process is complete, the copy and verification job is going to sart. All the information about the offload process can be supervised in the <u>Jobs panel</u>.

• Note: if you just need to create references to video clips in the Project Library and skip the copy and verification processaltogether, please check the knowledge base article Adding Clips to the Library (Ingest without Copy).

Related articles:

Parallel offloading

Backup Clips

Analyzing and improving data-transfer performance

Checksum verification process

Cascading Copy Preferences

Offload wizard templates

The offload wizard templates feature is designed to speed up the <u>offloading process</u> by **short-cutting** the steps needed to select **different copy destinations and settings**. It allows you to save a series of presets that can be recalled for every offload, either **automatically** triggered by an associated input device **or manually** by selecting it from the list of templates. Templates can contain multiple copy destinations with different path wildcards for each. Also, they can store further offload settings like checksum and verification methods and file renaming patterns.

Register to:		Official	lips		
Scan Volur	Elbrary	ta es; 23.23 GB		Template: Previous Settings Save as new Template Update current Templat Delete current Templat	o Offlo te e
ingest	A007R2VJ AR	RI Alexa Ih 9 Clips (and 2 side	car files, 0 docume	⚠े Leern More Edit	1
Volume I	Macintosh HD 499.96 GB	Stinations Macint Free After Copy 183.64 GB	osh HD, Master, Sh Destination path /Usors/Iba/Movie Folder Structi	uttie01 Edit a/BigProject/ Bin Name / rre /	
ø <u>–</u>	Master 1.00 TB Shuttle01 239.85 GB	2.79 GB 142.26 GB New Destinati	BigProject/ Sh Bin Name / Shooting date Folder Structu on Path	ooting date (yyyy-mm-dd) / Folder Structure / (yyyy-mm-dd) / Bin Name / re /	
+ - Verificat	Path wildcards	Cascading Copy	include Source Verific	cation (included in Copy Job)	
Add Jobs t	is Renaming Original Fill to Queue: O Append at	the End	a) © © s next Job (earliest ex	Overwrite existing Files:	

Manage offload wizard templates in the gear menu on the top right of the wizard



Creating a template

To start the creation of a template, open the offload wizard as usual. Once the wizard appears, you can select the copy destinations and optionally also adjust the checksum and verifications settings, path wildcards, and file renaming patterns. After you have finished setting up the offload, click the 'gear' button on the top right corner and select "Save as new Template...". At this point, a dialogue opens to name the template and optionally also **associate it with an input device**.

ttings	
ally for input device:	
Cancel Create	Learn
	attings cally for input device: Cancel Create

Finally, click on "Create" and the template will be saved.

Please Note: You can associate a template to only one input device. If you want more input devices to trigger the same offload settings, you need to save the same settings in multiple templates and associate each with a desired input device.

Applying templates

Once you have created a set of offload wizard templates, you can switch between them**manually** by clicking on the template name. An associated template is **automatically** applied once the offload wizard detects the linked input device or if you select the linked device from the input devices list. Templates show their association with an input device through an arrow symbol (\leftarrow) in the templates list.

Т	emplate:	✓ myAlexaOffloadSettings ← ARRI Alexa myAlternativeOffloadSettings
	_	myAudioOffloadSettings ← Audio

Updating a template

If you need to modify an existing template, you can do so by selecting the new settings. Once a template has been edited, it is marked with an asterisk (like "Template*"). If you want to save these changes, click the 'gear' button on the top right corner and select "Update current Template". Next, a dialogue appears that also allows you to (optionally) rename the template or change the device association. Click "Update", and the changes are saved.

Backup Clips

Silverstack offers the possibility to backup assets that already exist in your Project Library to additional backup drives. In order to start a backup job, just choose the Folder or Bin you'd like to backup from the Project Library panel and then select the 'Backup' command in the 'Media' menu:





Media Menu

Once the 'Backup' command is selected, the Backup Wizard launches:

•	Backing up Clips	from A00	D3R2VJ		
Choose Media Files from Volume ~)	Mark Only Sel	lected +	Unmark Selected •	Q Search	
Name	Label F	lag Med	ia File Path		1
A003C009_160205_R2VJ	Moderate '	Auc	Macintosh HD — dio-Sample-Material A003C009 160205	Silverstack-Lab-Video-and 	1000
A003C014_160205_R2VJ	No Label	Auc	tio-Sample-Material A003C014 160205 Macintosh HD —	Silverstack-Lab-Video-and R2VJ.mov Silverstack-Lab-Video-and	10 TO 10
A003C010_160205_R2VJ	No Label	Aud	tio-Sample-Material A003C010 160205 Macintosh HD —		200
A003C012_160205_R2VJ	Best Take	Auc	tio-Sample-Material A003C012 160205		
A003C013_160205_R2VJ	No Label	Auc	tio-Sample-Material A003C013 160205	R2VJ.mov	

Backup Wizard: Clip Selection

It's possible to choose the copy source volume in case the files have multiple backups registered in the Project Library. Selecting the fastest source volume generally increases the copy performance, depending on your hardware.

Silverstack by default copies all the clips and files contained in the Folder or Bin you previously selected to backup. If you just need to offload a subset of clips, you can check the 'Allow partial offload' checkbox. Clips can be marked and unmarked either by using the checkboxes or the 'mark' and 'unmark' buttons by the 'search' field. Therefore either select all clips you'd like to import and then click on 'Mark Only Selected' or select those clips of all already marked that shall not be imported and click on 'Unmark Selected'.

As you can see in the following image, there is a bunch of keyboard shortcuts for marking (#1) and unmarking (#2) clips to facilitate this task.



Once the source volume and the clips have been selected, you can press on 'continue', which leads to the Copy Destination Selection step:



418	
283.18	383.68 GB / (Preserving Bin Structure)
Transcend 64.26 GB	215 08 / (Preserving Sin Structure)
Path	New Destination Path
Wildcards	
+ Path withcards	ascading Copy
Verification Behavior: Configure	Verify All Destinations, Include Source Verification (included in Copy Job)
Checkson Method: Configure	MD 5 (Slow, widely used)
Overwrite existing Files:	
	Transcond ex.35 08 Path WildCards Verfloatin Sinukier Configure Overwrite edding Filez

Backup Wizard: Copy Destination Volumes selection

In this section you are able to choose the destination volumes to which Silverstack will copy the clips and files. To edit the import options, click on the 'Edit' button. The number of volumes that Silverstack can simultaneously offload to is only limited by your hardware.

Adding a new destination is done by pressing on the '+' button on the lower left of the table. Click on the '-' button next to it to if you'd like to remove the selected destination drive.

In relation to the additional options under 'Verification Behavior' and 'Checksum Method', you can find a detailed description of each one of those settings in the article <u>The Copy and Verification Process in Silverstack: Verification Behavior</u>.

There is also the possibility of using the <u>Path Wildcards</u> feature, which offers users a way to create custom folder structures based on the metadata contained in clips.

After determining your copy destinations and settings, click on 'Backup Files' to start the copy process. All the information about the backup process can be supervised in the <u>Jobs panel</u>.

Managing Jobs in the Jobs View

The jobs view in Silverstack can be reached by clicking on "Jobs" in the lower left corner of the main window. The jobs view shows an overview and extended details about every job that can be run in Silverstack.

In a Silverstack context the word "job" refers to copy and transcoding processes that Silverstack controls.

Overview

This article references all aspects of jobs in Silverstack including

Х

- Types
- Queues
- StatesActions

for and of jobs.

Job Types

The following job types are shown in the jobs view (see column "Job"):

- Offload (copy and verify): Runs copy and verification file per file; verification behavior "Included in Copy Job"
- Offload (copy only): Runs an unverified offload; verification behavior "Separate (per Job)"
- Copy: Backup copy job started from an asset in the library.
- Verify: Runs checksum verification for the included tasks.
- Transcoding: Clips can be transcoded to other formats via transcoding job.
- Relink: Files can be relinked to new locations via a relink job.

Job Queues

There are three job queues that are visualized in the "Queue" column with different colors:

- Primary copy queue (magenta)
- Secondary copy queue (green)
- Transcoding queue (blue)

The "Queue" column indicates the order of the completion of jobs. Jobs in a queue will be completed from top to bottom. Running jobs are always on top.



Danparti Ali Resurs Ali				🗟 Birthday C	ake (Sample Project) 🛊 🔹	ø				Cicce Jobs.
Queue Source	Jon	Configuration	Progress	State	Remaining Start Date	Scheduled	File Size	Clip Duration		
► 💽 📼 A007R2VJ	L Offload (copy and verify)	Citioad3		94.05 MIVs	7:37 min Today 11:03	Today 11:03		9345 min	A007R2VJ	
► 🖕 📰 A007R2VJ 1	Copy (copy and verify)	Shuitle		Waiting		Today 11:03	0.00 KB	0 sec	State: Running Start: Today 11:03	
> 🕒 📰 A007R2VJ 1	🗲 Transcode	🧧 Editorial		Weiting		Today 11:03	0.00 KB	9:45 min	Endl 10/A Duration: 24 sec	

Primary (magenta), secondary (green) copy queue and transcoding queue (blue), with the queue column indicating the order of completion.

Primary Copy Queue

Copy jobs are generally scheduled into the main primary copy queue where they will be executed from top to bottom.

You can set the number of parallel jobs for the primary copy queue in the preferences. Please see the article <u>Multiple Simultaneous Copy Jobs in</u> <u>Silverstack</u> for more information about the general copy preferences.

Secondary Copy Queue

The secondary copy queue holds "Second Run" jobs from Cascading copy jobs. Learn more about Cascading copy jobs in the article <u>Cascading</u> <u>Copy</u>.

Enabling a separate queue for "Second Run" copy jobs will automatically schedule them into the secondary copy queue. Learn more about the independent execution of "Second Run" copy jobs in the article <u>Cascading Copy Preferences</u>.

Transcoding Queue

The transcoding queue holds all transcoding jobs and will also be executed from top to bottom. Please see the articles <u>Transcoding in Silverstack and</u> <u>Silverstack XT</u> or <u>Transcoding in Silverstack Lab</u> for more information about transcoding.

Tasks of a Job

Each job can be expanded to reveal its tasks (single files to be processed) with the white triangle on the left. Details for each task can be revealed in the right bar by selecting the task in the table.

Job States

Active Jobs

The most important active job states are

- Running: A job is currently executed. "Progress" column shows progress as progress bar.
- Waiting: Job waits to be executed.
- Suspended: Job has been manually interrupted by user. See more details below in suspend jobs section.

Additionally the following job states exist:

• Has Failed Tasks (but running): One or more files of a job failed, but the job is still running



Job with failed tasks, indicated by yellow progress bar.

• Automatically Interrupted (Transcoding jobs only): Transcoding jobs can be configured to automatically pause while a copy job is running. See "Transcoding" section in "Copy&Jobs" preferences tab.



Finished Jobs

The active jobs are shown in the table in the upper half of the jobs view while the lower half shows thefinished jobs.

Finished jobs can have the following states (see "State" column):

- Complete
- Failed
- Cancelled

Job Actions

The user can execute certain actions for job. The available actions depend on the job state.

For Active Jobs

Cancel

- Cancelling a job will immediately stop the job and move it to the finished jobs at the lower half of the jobs window.
- The copy progress of the current task/file will be lost, the copy progress of completed tasks/files is preserved.
- Cancelled jobs can be re-queued and will continue the copy process after the last successful task/file.

Suspend

Suspending a job will stop the job after the next task (often being the next file) is finished. This enables the prioritization of an incoming job and avoids loss of copy or transcoding progress.

To suspend a running job select it and click the "Suspend" button in the right tab:



The suspend and resume buttons in the right bar of the jobs window

To resume the job again click the "Resume" button.

When suspending a job the following state transfers will be made:

- Running -> Will Suspend -> Suspended
- Waiting -> Suspended

When resuming a job it will again be queued with its former priority.

Suspended jobs are still visualized at the bottom of the queue but will not be executed.

Reorder

Waiting jobs in a job queue can be reordered with drag and drop. Select a waiting job and pull it over or under any other waiting jobs in the same queue:



Su	spend All Resume All	Job
Queue	Source	Uffload
	ARRIRAW_23976fps 6_Atexa_Mint_RAW_MXF 7_Alexa_Open_Gate	Uffload
r 🖕	6_Alexa_Mini_RAW_MXF	Uffload
> 🖕	ARRIRAW_23976fps	Сору
۶ ¢	6_Alexa_Mini_RAW_MXF	🚍 Сору

Reordering a copy job inside the queue by dragging it to the intended queue position

Please be aware that:

- Jobs cannot be moved between queues
- Suspended jobs cannot be reordered above waiting jobs. They stay at the bottom of the queue and will not be executed until they are resumed.
- Waiting jobs cannot be reordered above running jobs. Suspend running jobs for the next job in the queue to start.

For Finished Jobs

Retry (Failed Jobs)

Failed jobs can be tried one more time by hitting "Retry" in the right bar. Only the failed tasks of a job will be attempted again.

Re-Queue (Cancelled Jobs)

Cancelled jobs can be added to the copy queue of active jobs again (re-queued) to wait for execution.

Create Incomplete MHL file

In the context menu it is possible to create an incomplete MHL (.mhl) file for

- Cancelled jobs
- Failed jobs

An MHL file is written to all copy destinations of the respective job.

Mark as Read / Unread (Hide / Show in Jobs Summary)

In the context menu of a job. Mark jobs as read or unread which shows or hides them in the Jobs Summary. All jobs marked as unread show in the Jobs Summary.

Ingest Clips

In the context menu of a failed transcoding job. Helps to re-ingest successfully completed proxy clips as transcoded clips even if a job failed.

Jobs Summary

The jobs summary in Silverstack can be opened by clicking on the element located bottom right in the lower toolbar.

It provides an overview of all types of finished jobs in Silverstack directly in the main window, without the need to go to the full jobs view (accessible bottom left through "Jobs").

It is intended to help the user to keep a condensed overview of all jobs he is taking care of.

The view is grouped by the state of finished jobs and each job state has its delimited element showing the number of such jobs:

- Failed Jobs (red)
- Cancelled Jobs (grey)
- Complete Jobs (green)





The jobs summary accessible in the Silverstack main window

Mark as Read/Unread

Jobs in the jobs summary can be **marked as read**, which will hide them from the jobs summary. This is intended to have a simple and clear overview for the user about the general status of the jobs he is taking care of and for which jobs he still might have to take action.

All details about the jobs are still accessible in the jobs view. Jobs can be marked as unread again in the context menu (right click) of a job in the jobs view, which will show them again in the jobs summary.

More actions include:

- Mark as Read:
 - Completed: Marks all successfully completed (ok) jobs as read and hides them from the summary
 - All: Marks all jobs (independent of their state) as read and hides them from the summary
- Reveal: The icon besides the job name (>) allows to reveal the job in the jobs summary

Additionally, you can execute actions for the jobs directly from the jobs summary. Please see the article Managing Jobs in the Jobs View for more general information about actions for jobs.



Job Summary per Volume

With many jobs running from and to various volumes, it is helpful to have a condensed overview of the job status**per volume**, for example, to identify which volumes are "ready" and can be ejected and passed on. You can activate an enhancement of the offload menu that displays the count of related jobs per volume:

- running/queued: blue
- failed: red
- canceled: grey
- completed successfully: green

To avoid distraction from irrelevant information, Jobs marked as read are not shown in this overview.



You can activate the enhancement of the offload menu in the "General" tab of the application preferences (see the following screenshot).

Unread Failed Jobs Warnings and Reminders

Silverstack by default reminds you of unread failed jobs (jobs with errors that didn't complete successfully and show in the jobs summary) on every new offload, not to miss taking care of jobs that failed successful completion. This behavior can be turned off in the "General" tab of the preferences by unchecking:

• "Warn me about unread failed jobs on every new offload"

0.0						G	eneral						
General	Projects	Nedia	Q Copy&Jobs	Playback	Formats	Ingest	Backups	External Video	Orading	ACES	Stating	@ Accounts	Update:
Appear	rance												
O H	ide verific	ation sta	te indicator f	or bins									
	se 60 @ 3	30 for tin	necode displa	iy									
Deci	mal Place	s for File	Size Values:	2 🙆									
	Backup	Statistic	s in Reports:	Verified	Backups	6	10						
Unread	i Jobs ihow sum	mary of a	inread jobs ir	n offload r	nenu								
💟 V	Varn me a	bout unr	ead failed job	s on ever	y new offi	oad							
R	temind me	e about u	inread failed j	obs every	30 Mi	n.		0					
Langua	ige												
		Preferre	d Language:	English		e							
-	-	-		_	_	-				-	_		-

Unread failed jobs warnings and reminders in the "General" preferences.

Additionally, you can set a reminder notification that reappears within a certain time interval to remind you about unread failed jobs:



"Remind me about unread failed jobs every:"

- 10 min
- 20 min30 min
- ∘ 1h
- 0 2 h

Use of path wildcards

Silverstack offers you a very flexible folder renaming feature, which allows you to create a custom folder structure on your offload and backup destinations.

For every copy destination you can define individual folder structure options. If you start a copy process to different destinations, you can have different folder structures on every destination. Or you just can create a clone of your source material.

There are a variety of software tools in the postproduction process which require a specific folder structure. To simplify the organization of the clips related to the different folder structure requirements, Silverstack offers this useful feature that automatically helps you to structure the files.

To determine the names of folders you can add a various set of metadata placeholders - called wildcards - that will be replaced by the actual values of each clip during copy.

This means that Silverstack is able to automatically save your clips in a specific, individually determined folder structure. So for example your files can be stored in folders according to their submission date and carry the project name and submission time in their file names.

Wildcards can be added in the destination selection step (figure 1) of the "<u>Offload</u>" and "<u>Backup</u>" wizard. Therefore you first need to choose a drive and a folder (figure 1 #1).

Mofume I	nio	Free After Copy	Destination path
•	4TB 2.8 TB	1.3 TB	/ (Preserving Bin Structure)
	Path wildcards	Cascading Copy	More Dige
Copy Op	Path wildcards	Cascading Copy	More Dyc
Copy Op	Path wildcards	Cascading Copy	Wore Deer Overwrite existing Fles
Copy Op	Path wildcards tions Checksum meth	Cascading Copy	Overwrite existing Flee:
Copy Op	Path wildcards tions Checksum meth	Cascading Copy	Overwrite existing Files Source Verification: Skip Copy Step:

figure 1: the Backup wizard. Choosing the destination path

Document Wildcard Handling

You are able to decide if you want to preserve the original folder structure for the non-clip files or create your custom structure inheriting the metadata from the clips, having this way all the sidecar documents with their parent clips. By default, Silverstack will inherit metadata from clips. To choose between this two options, go to Preferences > Copy and choose your Document Wildcard Handling as *"Inherit metadata from clips"* or *"Always preserve folder structure"*:





Document wildcard handling

It is important to have in mind that when selecting the "Always preserve folder structure" option, all files not considered as clips by Silverstack (such as: non fully supported camera formats, image file sequences, sidecar documents, PDFs...) will be copied in the same path of the clips. All documents will preserve the same folder structure of the original medium – that means all clips are in the folders you have created.

Now, to make use of the helpful feature of wildcards, click on "Path wildcards" (figure 1 #2) and the wildcards wizard opens...

Important – Need to know

- Make sure that the path you have determined by choosing a drive and folder (figure 1 #1-3) is not changed or deleted unintentionally in the editable path field of the wildcard wizard (figure 2 #1). Just add wildcards to the already existing path components.
- In the path field you have to separate the single wildcard tokens by a slash ("/") if they are supposed to mark a folder structure. Separate them with a dash ("-") to combine different wildcards for one 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.





Path textfield and example label

The wildcard wizard (figure 2) at the top shows the full destination path (figure 2 #1) which is editable. You can either type path components in the text field directly or drag and drop wildcards there from the list below. Beneath the text field you can see an example of the pathname including wildcards using one of the clips you are going to copy.

Wildcard table

All available metadata fields are shown in the wildcard list. So you can name your files and folders according to information as submission date and time, project name, various clip information and others.

The tokens (figure 2 #2) can be drag&dropped into the path field (figure 2 #1). The next column (figure 2 #3) contains an example of every token as it will be seen in the final path- or filename. The third column (figure 2 #4) tells you how many of the previously selected files contain this metadata information.

Multi-optional wildcards

Some wildcards like the submission time (figure 3) offer several options. You can choose between those by clicking on the small triangle.

- For submission and shooting time you can choose between the formats: HH_MM_SS and HH_MM
- For submission and shooting date you can choose between the formats: yyyy-mm-dd, yy-mm-dd, yymmdd, yyyymmdd
- For the *path components* wildcard you can choose the amount of path components of the source folder structure of the clip this information will be include in the path of the newly generated folder structure. So if you choose "3", the last three levels of the folder structure of the original clip are included in the new clip's path.
- For reel characters it is possible to choose parts of the reel name as wildcards. You either can select the first or if applicable the last characters of the reel name.



Configure folder structures for Netflix production assets

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.

S3 Add AWS Acco	ount	
AWS Account		
Name:	My AWS Account	
Access Key ID:		
Secret Key:	••••••	0
ARN:		
	Successfully authenticated	
	Cancel Add A	count

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.

my A	WS account		0				
You can	configure acc	ounts in the applic	cation preferences				
Upload L	ocation:						
			Bucket	Endpoint URL			
	Bucket:	myBucket		🔽 Use S3 up	load acceleratio	on	
	Region:	eu-central-1	. 🖸)			
						Check Cor	figuration
	Key Prefix:	/myCustomFile	Prefix				1
5 clips sele	cted				Go Bac	<u>k</u>	itart Upload

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.

• •	• Su:	speed All Resume All				🖩 Birthday Ca	ake (Sample Project)† 🕰	
	Queue			Configuration	Progress	State	Remaining Start Date	Scheduled	
	Ð	A003R2VJ	upload Clips	AWS S3: pom/ort-dev1		1.29 MB/s	3m 6s Today 13:58	Today 13:58	291.98 MB
	¢	A003C009_160205				1.29 MB/s			
	4	A003C010_160205							
	4	A003C012_180205						Today 13:58	52.52 MB
		A003C013_160205						Today 13:58	
	¢.	A003C014_150205							

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<u>ShotID as</u> <u>Clip Identifier</u> 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.

		II S3 demo t 425	(*) (*) (*) (*) (*) (*)
Image: Contract of the	any -	Garantianat III 🤉 Incompany	A P B C
A0000014_10000 A0000000_10000 Clips Report-A003R2V Page 10/3	1.5021 AUGUSTU, BUCUE MASTR J 11.446.53 E.RTVI AUGUSTU, BUCUE MASTR J 11.446.53 E.RTVI AUGUSTU, BUCUE MASTR J 1.446.53	• É @ 4+ 2000	BACKUP Form: Days (Sector Assocration Florence: Days (Sector Assocration)
Name	Remote Resources		ingeneration Torby 08.60 Last overheit Teday 88.68 # Nethaation: wethet
A803C010_160205_R2	VJ AMS 53 (Bucket: pomfort-dev1, /53 demo/Day	81/A003R2VJ/A003R2VJ/A003C010_160205_R2VJ.mov)	Remarks Relations Reserve: myWRacound Remarks Location: Backet pointert, 0005, RDVJ mo
A003C012_160205_R2	VJ AWS S3 (Bucket: ponfort-dev1, /S3 demo/Dayd	81/A603R2VJ/A803R2VJ/A603C012_160205_R2VJ.mov)	come Topy 2011 Silverstack
	S2 Bomo	to Docoursoon	

Uploading Files to Sony's Ci Media Cloud

With Silverstack Lab, you can upload clips to Sony's Ci Media Cloud via a file request URL. Learn more about file requests and how to create them in the Sony's Ci Media Cloud user guide.

Starting the Upload wizard

In Silverstack's library, choose the bin or folder that contains the clips for upload.

Open the Media menu in the toolbar and select "Upload Clips to Ci Media Cloud...".



Open the upload wizard from the Media menu

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.

Enter and Validate the Ci Media Cloud File Request URL

Enter the Ci Media Cloud file request URL in the text field. The URL is checked, and - if valid - additional information is retrieved and displayed.



https://pomfort.cimediac	loud.com/file-request/VBJ394V5 Check 📀
File Request Details	
Name:	Pomfort's File Request
Message:	Please upload your clips after each shooting day through this link
Requester:	User (user@pomfort.com)
Link Expires:	6. May 2023 at 01:41:39
Upload Constraints:	Allowed file types: Video, Image, Audio, TimedText, Document, Other. Fulfillment of these constraints is not checked.
i clips selected	Go Back Start Upload

File Request Information

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 Silverstack's jobs panel. In addition, pausing and resuming upload jobs is possible in the context menu.

Queus			Configuration	Progress	State	Remaining Start Data	Schoduled	
•	ado3R2VJ	🐢 Upload Clips	Ci Media Cloud: Pomfort's File Request		2.02 MB/s	1m 37s Today 14:00	Today 14:00	291.98 MB
¢	A003C009_160205_R2VJ.mov							
¢.	A003C010_160206_R2VJ.mov				Complete		Teday 14:00	
¢	anonco12_180286_R2MAmor				2 02 Millio			
÷	A003C013_160206_R2VJimev						Today 14:00	51.48 MB
•	A003C014_160205_R2V2.mov							

Ci Media Cloud Upload Status

Reporting

The file panel stores a reference to the upload location as a remote resource. The information can also be added to reports.

noviene -	Harne	Vokaren	Remote Resources	
	A003C009_160	ros_rzvi Abolirzvi, o	TLOAD 1, OFFLOAD 2 Tx C Media Cloud	
	40030010_180	205 82V3 A00382V3 0	ELORD 3 CELORD 3 In Cliffed Class	5.cc 07.38 MB (87.381.599 Juvis)
	A003C013_100	205 8291 40018291 0	ITLOAD 1 CHILCAD 2 To Ci Media Cloud	
<u>.</u>	10010014_100	105 00V1 100000V1 0		Average from the MOS
	Construction 14 = 1000	and the second se	Tranto a un burgo a la citada burgo	
• D-	Clips Report A003R	2VJ-2023-04-05-1424.pdf	0 9 9 0 2 · C 0 9 mm	
				C OFFLOAD 1
	Aires	201,000	Sanita Resources	Finiterr /BirthdayCoke/A003R2VJA003R2VJ
See.				
				Frename: A003C008_N0205_A2x0max (OMIne)
Lease .	MINIMO 100001/07/	HERRICH, BITLOND L, OFFLAND 1	LL Netix Clear Instpr://app.clmetiariani.com/cl/Wdathourefiaiert=18189553848420a282084843838101	Filename: A003C008 N0205 A2vUmev (OMine) Challen: 34. Apr 2019 at 13.62
	MIRICHN9_160081_/07/J	WERROW, BITLOND I., OFFLAND 2	CL Note Cloud Integr//app.clandiartion.com/cl/WiteResemble.eta/CLORMSIB/64/NaS2/3646(IDDB)d	Filename: A003C009 (190255,425/Linev (OWNe) Oriselist: 31. Ap/ 2010 at 13-62 Registeroit: 34. Apr 2019 at 12162 Last Verifies: 24. Apr 2019 at 12162
	.MM3C000_100006_10743	485577, 871.000 L, 071.348 J	D. Neta Goal (https://gg.caetariait.co/ca/aetaritaite/DDP/DD449aa2/344010300	Flowane: A002C009 (N0235,525/Jnner (OMWe) Challen): 34. Apr 2019 at 15:62 Snepthron: 34. Apr 2019 at 15:15 East Verification: 34. Apr 2018 at 15:62 9. Verification: verified
	MARICON, 10000, 1001	40030243, 877.040 L, 677.040 L	Li Neta Coal Inter-regio antiarian' any Li Manhamban banco Distriction Analaban (2000). Li Neta Diari Unter-regio antiarian' any Li Manhamban banco di Analaban (1998).	Filename: A002/000/49206_A2/A2/AV
	9963099,19036,3093	HERBOY, BITUDO L. OFFLAR 3 HERBOY, BITUDO 1, OFFLAR 3	El Nella Clast (Hitp://ep.caetartad.cov/JAVianteenthaeta-Didt/MiddeAcabbeRCDDH) El Nella Clast (Hitp://ep.caetartad.cov/JAVianteethaethaetbiddacbbidtBacthecbDDM)	Treams, Addition, Yaddid, Aldrawy (diffing) Oracida 34, Apr 2014 of 15-61 Registrice, 24, Apr 2014 of 15-61 Early function: 34, Apr 2015 ar 15-62 # Wertlander: weited
	MARCHAR_LANDEL_POX1	MERCO, BILON L, OFLAN 2 MERCO, BILON L, OFLAN 2	 Nets fait Interpropp, and a second and a se Second and a second and an	Transe. Addition (Holder, Johnson (Offwar) Offware 34, Apr 2019 at 1912 Registrice 34, Apr 2019 at 1912 List where 34, Apr 2019 at 1912 If Ventucine: writed
	MACCON, 16001, (01)	MERCO, BILON L. OFLAN 2 MERCO, BILON L. OFLAN 2 MERCO, BILON L. OFLAN 2	 Ci. Netla Flant Hittps://eps.cientiaction/con/ci./Ministenctioners/CiCl/MinistenCochemBlantBlantBlantBlantBlantBlantBlantBlant	Teamer. Addition (Manuel Offmu) Offman 28.4 or 2014 at 102 State of the state of t
	MERCEN, JACOB, JOCO MERCEN, JACOB, JOCO MERCEN, JACOB, JOCO	489907, 97000 L, 07030 J 489907, 97080 L, 07030 J 489907, 97080 L, 07030 J	 Mella Flast Hittp://eps.com/actival.com/com/actival-to-com/collars/blasts/backbackbackbackbackbackbackbackbackback	Teamer, 200208; 490208; 490209; 60049 Characteria S. A. 92 2019 at 123 Example in the second seco
	1000,000,000,000 1000,000,000 000,000,00	HEROY, HILOR L, OFLAN J HEROY, HILOR I, OFLAN J HEROY, HILDR L, OFLAN J HEROY, JILOR L, OFLAN J	CL Neta Toar Inter-rep, centeriado avoi aviar exercicado e to data data data data data data data d	Teamer Add 2000 (1999) 2003 (2010 and 1004) Characteristic Stark (2010) 1997 Characteristic Stark (2010) 1997 Stark (1997) 1997 Stark (1997) 1997 (1997) 1997 Characteristic Stark (1997) Characteris
	NICOLOGIA, MICON LINE, MICON NICOLOGIA, LICONA LINE, MICOLOGIA LICOL, MICOLOGIA	HEROY, HYLDE L, O'FLAE 3 HEROY, HYLDE 1, O'FLAE 3 HEROY, HYLDE L, O'FLAE 3 HEROY, HYLDE L, O'FLAE 3	 Netta Toari Interni //epi-centariani.com/com/animeter/haisto-Districtionen/haist	Treame: A000009 A0056 A200 we (MMM) Chains: SA A2 029 at 1552 September SA A2 029 at 1552 Ear overhead SA A2 029 at 1552 Worthcarine: weithed Formetics Resources Cli Media Cloud The Insulat: Prestors Tile Respect (Researching on Services UR): triga Upop climater, all NHA 00183810

Ci Media Cloud Remote Resources in the Silverstack Library and Reports



LTFS backup



LTFS backup concept

Silverstack offers a feature to specifically backup to LTO tapes. Due to the nature of their hardware, LTO tapes need a different copy and verification process than other kinds of drives. The process used by Silverstack is to first copy all the files, then rewind the tape and perform the verification step afterwards. This way only one tape rewinding step is needed for each backup job.

Additionally, Silverstack supports any kind of LTO drive that creates an LTFS file system on macOS. Generally if the LTO drive can be accessed in Finder, it can be used by Silverstack. Have in mind that tape formatting has to be previously performed in the LTO drive utility before starting the backup process.

No data capacity information is offered for LTO tapes. For this reason, it is recommended to manually check that the backup size does not exceed the tape capacity to prevent failed backup jobs. Only copy jobs to a single LTO tape are currently supported.

Starting the backup process

In order to start a backup job to an LTFS drive, just select the 'Backup to LTFS' command in the 'Media' menu:



Media Menu

Once the 'Backup to LTFS' command is selected, the Backup Wizard launches:





Backup Wizard: Clip Selection

It's possible to choose the copy source volume in case the files have multiple backups registered in the Project Library. Selecting the fastest source volume generally increases the copy performance, depending on your hardware.

Silverstack by default copies all the clips and files contained in the Folder or Bin you previously selected to backup. If you just need to offload a subset of clips, you can check the 'Allow partial offload' checkbox. Clips can be marked and unmarked either by using the checkboxes or the 'mark' and 'unmark' buttons by the 'search' field. Therefore either select all clips you'd like to import and then click on 'Mark Only Selected' or select those clips of all already marked that shall not be imported and click on 'Unmark Selected'.

As you can see in the following image, there is a bunch of keyboard shortcuts for marking (#1) and unmarking (#2) clips to facilitate this task.





Once the source volume and the clips have been selected, you can press on 'continue', which leads to the Copy Destination Selection step.Add the LTFS drive to the destinations by pressing the + button:

	•••	Backing up 5 clips, 291.98 MB
	Choose Copy Destinat	tions
	Witzens Info	Free After Copy Destination path
	CI LTFS 250.79 08	250.50 GB / (Preserving Sin Structure)
		New Destination Path
	Path	
	Path Wildcards	
Add/Delete	Path Wildcards	
Add/Delete	Path Wildcards	ในกร
Add/Delete Destination	Path Wildcards	LTFS MD 5 (Slow, widely used)
Add/Delete Destination	Path Wildcards Path widcards Verification iterarise: Configure. Creaceaum Method: Configure. Overwrite calciting Files: Add Jobs to Guerer: Add Jobs to Guerer:	LTPS MD 5 (Store, widely used) he End As meet Job (sariiest execution)

LTFS Backup Wizard: destination selection



In relation to the additional options under 'Verification Behavior' and 'Checksum Method', you can find a detailed description of each one of those settings in the article <u>The Copy and Verification Process in Silverstack: Verification Behavior</u>.

There is also the possibility of using the <u>Path Wildcards</u> feature, which offers users a way to create custom folder structures based on the metadata contained in clips.

After determining your copy destinations and settings, click on 'Backup Files' to start the copy process. All the information about the backup process can be supervised in the <u>Jobs panel</u>.

In order to keep track of the clips copied to a certain tape, it's possible to generate a Volumes Report. For more information on how to generate these reports in multiple formats, please check the article <u>Creating Reports</u>.

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 <u>Backup Clips</u> 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:

Code	Character
U+0000 – U+001F	
U+0022	
U+002A	*
U+002F	1
U+003A	:
U+003C	<
U+003E	>
U+003F	?
U+005C	١
U+007C	T
U+007F	(DEL)

Table 4–1 Invalid Characters

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.

Analyzing and improving data-transfer performance

Data transfer performance can be a very important issue in time-pressing environments such as scenarios of on-set data wrangling.

For a general list of factors that influence the speed of data-transfers such as

- storage technology,
- RAID technology, and
- interfaces

please refer to the document "Factors for data-transfer performance".

How to analyze your setup for bottle necks

Every system is only as fast as the slowest component. So for example attaching a brand new, ultra-fast SSD to a computer via USB2 is no improvement in performance over a 5 year old HDD – the USB2 interface is the limiting factor. The following list helps you to find the bottleneck and to tune your setup for higher performance. Sometimes just using different connections (lots of devices have multiple, different connection ports) or replacing one component already can heavily improve the performance of an entire data-transfer system.

When for example copying data from e.g. a SxS card to an external RAID and a USB3 drive with Silverstack, a lot of components are involved – and the slowest one is slowing down the overall performance and thus all the other components.

In this example we can identify three data storage devices that are each consist of several components:

- SxS card
 - the SxS card itself
 - the card reader for the SxS card



- RAID system
 - the interface to the RAID system
 - the RAID system and its configuration
 - the drives in the RAID system
- External drive
 - the interface to the external drive
 the drive itself

1. Measure the maximum performance of each device

You can determine the speed of a device by measuring the read and write speed to that device individually and independently. On the Mac you can either use tools like <u>Blackmagic Disk Speed Test</u> or use command line tools such as "<u>dd</u>".

Note:

Please note that the operating system caches disk access in RAM. So if you write a small file to disk it is still in the cache and a directly following read test will retrieve that file directly from RAM, so that the disk is not used at all in your test! So make sure that your test files are large enough (e.g. larger than RAM). As a good measure you can always use "Activity Monitor" that comes with OSX to monitor drive usage and performance (use the "Disk Activity" tab). For example when accidentally retrieving data from cache during a test you will detect that as zero activity on the drives in Activity Monitor.

Comparing the performance values of the different devices, you now know the slowest device. This device will slow down the entire data transfer, so maybe you can improve that first.

2. Observe the overall performance during the copy process

Now find out if the expected performance can be observed during a real life test. Start a copy process to multiple destinations in Silverstack and use Activity Monitor as your instrument for measuring performance.

In Activity Monitor you will see the current overall performance. So if you let Silverstack copy the contents of a SxS card to two drives simultaneously, you should see a write performance that is twice as high as the read performance during copy. After copying a verify-phase follows that reads the files from the two destinations and the source again. So you should see a very high, combined overall read performance.

In our example take the read- or half of the write-performance value during copy and use this value as your current reference copy performance. Compare it to the measured performance value of each device. It should be around the speed of the slowest device. If the reference performance value is much lower than the speed of your slowest device, there might be problems with daisy chaining.

3. Analyze the slowest device

If the speed of your slowest device (and thus the observed reference copy performance) is much slower than the speed of the other devices it might be worth improving that.

- Determine the speed of the drive by estimating the theoretical performance of the used drives by technology (HDD, SSD, RAID).
- Determine the theoretical speed of the interface.

You can now relate these values to your measured values for the entire device. If you experience completely odd values, maybe something is configured wrong (attaching a USB3 drive to a USB2-only port) or a component is faulty.

If the interface is the limiting factor, maybe you can change that by switching the enclosure with a better interface. Maybe there is a card reader with a faster interface available. If the drive is the limiting factor, find out if the drive is exchangeable with a similar or newer drive with better performance.

Modifying the read buffer size settings

The read buffer size settings use «2MB, recommended» as default. However, increasing the read buffer size might help when copying to software raids on OS X. Decreasing below the 2MB recommended value is usually not advised. The 2MB size recommendation is only illustrative. The optimal size depends on your specific setup and format combination.



Copy Performance		
Depending on your hardware setup you may number of parallel copy tasks and jobs.	improve copy performance I	by increasing the
Number of parallel tasks:	1 (Optimized, Recomme	ended) 📀
Number of parallel jobs:	1 🖸	
Read Buffer Size:	2 MB (Recommended)	0
"Second Run" Jobs When using cascading copy, it may be usef jobs independently, e.g. to let slow "Second Run" officad jobs. Execute "Second Run" jobs idependent Parallel "Second Run" jobs:	256 KB 512 KB 1 MB 6 MB 8 MB 10 MB	ond Run" Ilei to "First
Copy Options		
Documents: Generate reel folder icons: Colorize Finder labels: Create legacy hash files:	Inherit Wildcard Metada	ita from Clips ≎

Preferences Menu: read buffer size

Adding Clips to the Library (Ingest without Copy)

There is a fast solution to create references to video clips in the Project Library in Silverstack. Instead of copying clips to another storage device, you can select to just ingest them. This process allows a faster way to have the clips in the Project Library for subsequent tasks such as backup, LTFS backup, quality check or metadata editing.

In order to add the clips, simply select "File > Add to Library..." or use the keyboard shortcut \Im #O:



After selecting the folder containing the clips, the ingest wizard opens:



gest and	Create Thumbralls		Skipped 1 Ignored file	a. 🛕 Leiarn More.
*	D001R00J with 25 clips	S (and 0 sidepar files, 0 c	(ocuments)	Edit
Automa ARRI Ami	i tic detection ra: QuickTime ProRes			Q. Search
	Balattya Path	Creation Date	Size	Duration
0				
9	D001C002_140222_R00J.mov	11/03/14 12:29	161.92 MB	5 500
	D001C003_140222_R00J.mov	11/03/14 12:30	191.28 MB	5 sec
	D001C004_140222_R00J.mov	11/03/14 12:31	164.02 MB	5 sec
6	D001C005_140222_R00J.mov	11/03/14 12:33	174,50 MB	5 690
6	D001C006_140222_R00J.mov	11/03/14 12:34	130.46 MB	4 sec
9	D001C007_140222_R00J.mov	11/03/14 12:35	233.22 MB	6 sec
	D001C008_140222_R00J.mov	11/03/14 12:38	164.02 MB	5 sec
	D001C009_140222_R00J.mov	11/03/14 12:37	178.70 MB	5 sec
	D001C010_140222_R00J.mov	11/09/14 12:38	161.92 MB	5 sec
	D001C011_140222_R00J.mov	11/03/14 12:39	184.99 MB	5 sec
9	D001C012_140222_R00J.mov	11/03/14 12:40	164.02 MB	5 sec
	D001C013_140222_R00J.mov	11/03/14 12:41	172.40 MB	6 sec
	D001C014_140222_R00J.mov	11/03/14 12:43	170.31 MB	5 sec
Allow p	artial acid			
Filter opt	lone			
IA 🖸	ow ingest of duplicates			

Fig 2: Ingest wizard

The ingest wizard allows you to check which clips are being ingested before proceeding. Once you click on «Add», Silverstack starts creating the references for the clips in the Project Library by reading the metadata and creating the thumbnails. After the thumbnail creation is finished, the clips will be available in the library to start working with them:



fig. 3: Project Library

Drag & Drop Clips

Alternatively, you can also ingest clips by drag and dropping the containing folder into the Silverstack dock icon or the Silverstack Library Folder. When using this functionality for the first time an alert will ask you what you want to do:





Fig. 5: Ingest warning message

If your intention is to only register the clips, please select the option «Open Add to Library Wizard». The process is the same as previously described. Otherwise, select «Open Offload Wizard» if you decide to copy the media to backup drives in addition to registering the clips in the Project Library.

In case you enable the checkbox «Don't show this message again», Silverstack will always use the selected option in the future.

File renaming on offload

Some camera types come with file naming mechanisms that can result in same filenames on different cards. It can be hard to manage these clips with identical filenames.

Silverstack has an option to **rename files** of selected camera devices by applying a renaming **pattern** during the <u>offloading</u> process. Using this feature leads to **consistent naming** of files on your **offload destinations** and **consistent clip and reel names** in Silverstack's **library** and **reports** throughout the project.



File Renaming: Related settings in the Offload Wizard

How to use file renaming on offload

- 1. Set a name for the card that you are offloading. This name will be used:
 - as bin name in Silverstack's library
 - as reel name in the clips' metadata
 - as part of the new filenames
 - Optional: as part of your offload destination path (see KB: <u>Offload Clips</u> \rightarrow Setting up the copy destinations)
- 2. Select a pattern to create new filenames. The new filenames will be used:
 - as clip names in Silverstack's library and in reports
- as filenames in all offload destinations
 Optional: <u>Save your offload settings in a template</u>
- 4. Start Offload

Note: If necessary, the original filename of a clip can still be found in the right side bar (File tab \rightarrow Source).



Predefined Patterns

You can choose one of the following patterns to apply new filenames to your offload:

- Original Filename (no changes to original filenames, feature deactivated)
- [BinName]_[0000]_[BaseName]
- [BinName]_C[000]_[BaseName]
- [BinName]_[BaseName]_[ShootingDate]
- [BinName]_[0000]_[BaseName]_[ShootingDate]
- [BinName]_C[000]_[BaseName]_[ShootingDate]

These placeholders will be translated into the new filenames:

- [0000]: File index counter with 4 digits (guarantees unique filenames if source holds files with same name in multiple folders)
- C[000]: File index counter with 3 digits and "C"-prefix
- [BaseName]: Original filename without extension
- [BinName]: Card name as specified in wizard
- [ShootingDate]: From clip 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.

Supported Cameras and File Formats

Silverstack automatically tries to identify the camera format of the files before offloading. To protect you from unintentionally renaming files from camera systems that provide proper naming out of the box, the feature is **only enabled** for these camera formats:

- GoPro Hero
- Nikon DSLR
- Sony A7s
- Canon DSLR
- "Generic Clips"

If another camera format is detected (e.g. ARRI Alexa), the renaming pattern is reset to Original Filename and the selection button is disabled.

At the moment, only files with extension **.mp4** and **.mov** are supported for renaming. If the offload source does not contain any supported file format for renaming, the renaming pattern is reset to *Original Filename* and the selection button is disabled.

Workflow Considerations

If you use **different camera devices** in your production, where one device enables the renaming feature while the other one disables it (e.g. *GoPro Hero* and *ARRI Alexa*) **the selected renaming pattern can be lost** between offloads of these devices.

When starting the Offload Wizard, 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.

For using the renaming feature in productions with **differing camera models**, we **recommend to** <u>create templates</u> for each device (e.g. *MyGoProOffloadSettings* and *MyAlexaOffloadSettings*) and load the appropriate template before the offload is started.

Use Silverstack's clip library for EDL conform

EDL files usually represent a timeline from editing systems such as Avid Media Composer and thus contain an ordered list of clips represented by timecode data and optional reel and clip information.

You can use an EDL in the CMX 3600 standard to consolidate clips from Silverstack's Library in a new Bin. From there you can for example copy all required clips from the EDL to a separate hard drive.

Use Case

As an example we assume that the editor used five clips which we now need to transfer to a VFX facility. Instead of shipping several hard drives with all the source footage, or manually searching them in huge folder structures, you can automatically collect them by using the EDL import feature in Silverstack.

Silverstack matches the timecode from the EDL with the source timecode of clips in the Library and creates a new Bin with the matched clips. From there it is easy to backup the clips to a single destination via the <u>backup function</u>.

Step By Step

We will describe briefly a typical workflow with Avid Media Composer 6.5.

- 1. Choose your timeline in AVID Media Composer
- 2. Then in the MainMenu press Output > EDL . The Avid EDL Manager will open as seen in figure 1
- 3. Press the "Get Sequence" Button to load the timeline
- 4. Make sure that the EDL settings are CMX3600 like in figure 2
- 5. Click in the MainMenu File > Save As... and export the file to your Desktop

Silverstack Part

- 6. Open up Silverstack and choose the corresponding project.
- 7. Press the "Import" Button in the Main Bar and choose the "Edit Decision List" option
- 8. Choose the EDL file from the Desktop
- 9. If not set automatically, make sure that you choose the same frame rate like in the metadata of your clips like in figure 3
- 10. Silverstack will match the clips and add them to a new Bin.





Figure 1: Avid EDL Manager



Figure 2: EDL Setting in the EDL Manager



Choose File (¥O)	F24 3X	23.98	AMES CLIPS FIN	AL.edi, 3 events	Mark Only Se	lected * Unmark	k Selected 🔹
nport EDL with latch with clips in cli	Norary b	25 29.97 30 50 59.94 50	Ĵ				
Library Clip	Shooting	23.98 drop	reocde In		EDL Event	Timecode In	Timecode Out
A036C0	6/12/1	29.97 drop 59.94 drop	00:00.00	- ₹			
				N N	001 003	00:00:00.00 00:00:33.07	00:00:47.19 00:00:48.01
A036C0	6/12/11	3:00 PM	00:16:08.05		002	00:16:08.05	00:17:04.18
A036C0	6/12/11	12:40 PM	00:00:48.01				
A036C0	6/12/11	12:44 PM	00:01:32.21				
A036CO.	6/12/11	12:48 PM	00:03:46.15				
102650	6/12/11	1-30 PM	00-04-31-04				

Figure 3: Import wizard for EDLs in Silverstack

This feature is available in Silverstack 3.1 and newer.

MHL Checksum Verification

Classic MHL

During offloads and Backups, Silverstack compares byte by byte the source file with all of its backup copies to ensure that no file has been corrupted during the copy process. If the verification process result is positive, Silverstack is configured per default to create a hash manifest file in the main folder of each backup destination. A hash manifest contains (among other information) the path and checksum of each copied file and serves as a seal of file integrity of all copied files and folders. It allows to to ensure completeness and consistency of a backup at a later point manually or with third party applications. You can find more information about hash manifests in our blog article "Completeness of Data with Manifest Files".

The default hash manifest in Silverstack is the **Media Hash List** (Classic MHL). For more information about the MHL project, you can visit its website at http://mediahashlist.org.

E873R1KL	•	2013-09-20 E873R1KL E873R1KL_2153824.mh	*	2013-09-20	•	in 17_38_19

The MHL file is created in the root folder of each backup path

ASC MHL

Silverstack 8.4 introduced support for the new ASC MHL standard. Among other useful additions, this standard allows to create and continue histories of hash manifests for many generations of file backups. For more information, please check the <u>ASC MHL One-Sheet page</u>. A command line tool is available via the <u>ASC MHL GitHub repository</u>. You can choose your preferred manifest type in the "Copy&Job" preferences.



0.0	Copy&Jobs	
neral Projects Media Copy&Jobs Playb	sck Formats Ingest Backups External Video Grading ACES Slating Accounts	Updates
Copy Options		
Read Buffer Size:	8 MB (Recommended)	0
Display of Copy and Verification Speed:	Combined Speed (Sum of Transfer Speeds)	0
Documents:	Inherit Wildcard Metadata from Clips	8
File System Hash Manifest	None Colorize Finder labels Classic MHL Create legacy hash files	
Primary Job Queue (for Copy and Verification)	ASC NPL	
Depending on hardware, copy and verification (erformance may improve by increasing the number of parallel tasks and jobs.	
Number of Parallel Tasks:	1 (Optimized, Recommended)	0
Number of Parallel Jobs:	1 0	
Secondary Job Queue (for Copy and Verification		
Separate verification jobs and "2nd run" jobs ()	configured below) are scheduled independent of the primary job queue.	
Number of Parallel Jobs:	1 💿	
Do not let "2nd run" jobs (e.g. to sic	run" jobs in secondary queue w destinations) block new "ist run" or ather jobs in the primary queue.	3
Graphics API		
🛛 Use Metal API for decoding and	encoding Parallel EXR Writers 1	0
Transcoding Options		
GPU Selection:	Auto 🕑 Uses system default GPU.	
Automatically interrupt transco	ling jobs during playback and offload	

Choose a hash manifest in the Copy&Job preferences

Offloading media

During offload of files without existing ASC MHL history on the source volume (i.e., when offloading camera cards), a new history is created on the destination volume.

If an ASC MHL history is already on the source volume, the history is continued on the destination volume. There are some cases where an existing history cannot be continued (for example, if the hash formats of the existing history and the offload settings don't match). In this case the fallback behavior is to start a new history on the destination.

Backing up media

During backup of already ingested material, Silverstack generally continues any existing history. Again there are some cases (for example, if clips from different cards / histories are backed up) when existing histories cannot be continued. In this case the fallback behavior is to start a new history on the destination.

Additional Features

- Silverstack indicates in the offload wizards if the source volume contains an existing ASC MHL history, checks if any files are missing and if a compatible checksum method is selected for offloading
- Cascading copy creates a first generation on the first run's destionation and an additional second generation on the second run's destination.
- There is always an option to create a new ASC MHL history on offload and backup.
- You can choose in Silverstack's preferences if ASC MHL histories or the classic MHL manifests shall be created.
- The job detail view shows which manifest format ("ASC MHL" or the previous Classic "MHL") has been created, and allows to reveal the manifest file in Finder.

Current limitations

- If during offload an existing history has a different hash format than the selected hash format in the wizard, a new history will be created without warning.
- Silverstack is currently not creating directory hashes.
- Currently there is no option to create ASC MHL collections and packing lists ("flattened" manifests).

Sealing Volumes

This feature was introduced before the new ASC MHL standard was developed. ASC MHL covers many of the use cases that Sealing was initially intended for.

Since version 5.2 Silverstack is able to "seal" volumes to ensure consistency and completeness even after multiple following copy generations. Learn more about the sealing functionality in Silverstack and the verification of seals and checksums with <u>Pomfort SealVerify</u> from the articles <u>Sealing Drives</u> in <u>Silverstack</u> and <u>Verifying Sealed Drives in Pomfort SealVerify</u>.

Sealing Drives in Silverstack



The sealing functionality allows Silverstack to make a full inventory list of a drive. This is important, not only to assure that the content of a drive is identical to the source material but also to make sure that the content on a drive is complete and reflects the intention of the sender. By sealing drives as well as directories the whole content becomes registered to notice any change inside the folder in the future. The sealing process enables you to use the free tool <u>Pomfort SealVerify</u> to verify the consistency and completeness of a drive at any generation later without having access to the original media.

Silverstack allows you to seal volumes as well as folders. For simplicity reasons we may only refer to "sealed volumes" or "sealed drives" below but want to make clear that the same procedure will work for sealed folders.

Please note: This feature was introduced before the new ASC MHL standard was developed.<u>ASC MHL</u> covers many of the use cases that Sealing was intended for.

What Does the Sealing Do ?

The sealing procedure bases upon the existing and widely used MHL technology and extends its functionalities. During the sealing process Silverstack writes a .pfsl file on the drive which we refer to as the "Seal". This seal keeps all content information together and ensures that every change to the seal itself or any referenced information can be detected at any time. The free application Pomfort SealVerify can be used to easily verify the integrity of a sealed drive.



Fig. 1: Finder screenshot showing the contents of a sealed drive

To learn more about the Pomfort Seal please visit the article Understanding the Pomfort Seal.

How to Seal a Drive or Folder

Please note: Sealing is not compatible with the latest hash algorithms introduced with Silverstack 8.4. Please do not use XXH3, C4ID, or XXH128 if you intend to use Sealing.

To seal a drive click on the "Seal" button in the Silverstack task bar and choose the drive you want to seal:

L.	Ø	6					
Offload	Seal	Media	Export	Import	Report 1	Transcode	

Fig. 2: The Silverstack header bar with the "Seal" button

The sealing wizard opens up and will guide you through the sealing process

To seal a folder go to the main menu and choose "File > Seal > Folder ... ".

[fig. 3 Main Menu File Seal Folder]

After choosing the intended folder the sealing wizard will guide you through the process.

The list shows all attached volumes that have been used as a destination in the current project. The button may be disabled if no such volume is attached.

Providing the Seal Info

In the first step of the sealing wizard you can enter the information that will afterwards be present in the Seal Info:



User Name:	John Doe
Contact Info:	Mobile +44 55 66 77, jd@johndos.com
Comment	This drive was sealed with <u>SilverStacks</u>
Additional Information:	Library Archive Associates a Library Archive Lotial Howton PDF Copy a PDF document with ventication instructions

Fig. 3: The first step of the sealing process.

With the two checkboxes you can choose to:

- Put a Sealed Library Archive on the sealed drive. Learn more about Sealed Library Archives from the article Importing Sealed Library Archives in Silverstack XT.
- Put a "How To Verify This Drive"-PDF on the drive. It contains information for the receiver of the sealed volume and explains how they will be able to verify the drive.

Additionally you can can enter information that will be transmitted along with the Seal Info and will e.g. be readable by Pomfort SealVerify or when Importing a Sealed Library Archive in Silverstack XT.

The Seal Info contains the following information:

- Name of the person who sealed the drive or folder
- Contact info like e.g. phone number or email address etc.
- Time
- UUID
- Comment
- Silverstack Version
- Host
- Username
- Operation System

Enter the information accurately to make sure the receiver of a sealed drive will be able to receive extensive information and can contact you in case of a problem.

The Sealing Procedure

The sealing procedure consists of several individual tasks. While some of them are self-explanatory others need detailed attention:

Lost and Found Items

Silverstack scans the drive for files that have not been copied with Silverstack and therefore are not referenced in any MHL file. Those files are collected and ingested into an automatically generated folder called "Lost and Found" inside the Silverstack library. Like this, the files will also be registered within an MHL file that will be placed on the drive.

Please note that the "Lost and Found" items will be referenced by file size only. It is recommended to copy all content with Silverstack to obtain maximum security with checksum verification.

Library Export

After as successful sealing process the Silverstack library will contain the complete content of the sealed drive or directory. The library export option will place a Silverstack library file (.psla) on the drive. By using the library import option in Silverstack XT, an identical Silverstack library containing the complete and verified content of a drive can be guaranteed. The verification of the content can be handled by the free application **Pomfort SealVerify**.

Verifying a Seal

Seals can be verified and checked for integrity with the free application **Pomfort SealVerify**. Please visit the <u>KnowledgeBase section about Pomfort</u> <u>SealVerify</u> for more information or <u>download here</u>.

If you are looking for a way to import sealed drives in Silverstack XT please refer to the article Importing Sealed Library Archives in Silverstack XT.

The Seal Info Panel for Sealed Volumes

You can open the seal info for a sealed volume from the Volumes panel. In the left bar of the Silverstack main window scroll the library down until you arrive at the "Volumes" entry. In the right bar you will then be able to open the Seal Info by clicking on the button "Seal Info" on the side of the volume showing the seal:





Fig. 4: The Silverstack volumes panel with the Seal Info.

From there several actions can be taken:

- Verify Seal: When you have Pomfort Seal Verify installed you will be able to verify the integrity of the seal. Click the button to open the drive in <u>Pomfort SealVerify</u>.
- Remove Seal: You can delete the Pomfort Seal file and the Seal Library Archive.
- Re-Seal: Delete the seal and recreate a new one with your own seal information.
- Import Library: Import the associated Sealed Library Archive (.psla) that populates a Silverstack Library containing the complete content of the sealed drive or folder.

Or click "Close" to leave the seal information again.

Importing Sealed Library Archives in Silverstack XT

The import of sealed Library Archives enables you to populate a content complete Silverstack Library into a new Silverstack XT project that includesall assets of the sealed drive or folder. You can benefit from that process by including a Library Archive export when sealing a drive in Silverstack. Additionally the free tool **Pomfort SealVerify** enables you to perform a completeness and consistency check of the present content. Learn about the process of sealing drives with Silverstack from the article <u>Sealing Drives in Silverstack</u>.

Importing a Sealed Library Archive

Open Silverstack. In the Main Menu go to "File > Import > Sealed Library Archive...":

Offload Add to Library	7.80 0%.7	
Import Library Folder Export Library Folder	· 쇼울O · 쇼울E	
Export Seal	4	GTake Metadata (XI/IL) MovieSlate (XI/IL) 70981 EDL (cmx3600)
New Bin New Folder New Project New Smart Folder	36N 1234N	Pomfort Looks (pfl) Match Pomfort Look Archive (pfla) Sea ed Library Archive
Backup Backup to LTFS Relink Verify	第B て第B て第R て第R	
Transcode		
Unregister Unregister Current Proj	送 영 ject	
Create Report	ЖE	

Fig. 1: Choose Import > Sealed Library Archive to import a Sealed Library Archive

In the open dialog that appears select the sealed folder that contains the Sealed Library Archive along with the Pomfort Seal you want to import .

After clicking "Open" the Seal Information panel opens up:



Sealed by:	John Doe	
Contact Info:	Mobile +44 55 66	77, jd@johndoe
Time:	Today 16:46	~
UUID:	8ADEF815-50A0-4	DC4-9BE9-3670429D6F45
Comment:	This drive was seal	ed with Silverstack!
Tool: Host:	Silverstack 5.2-b1 JDs-macbook-pro.1	5146 ocal
Username:	JD	
OS:	Version 10.10.5 (B	Build 14F27)
Actions:	Verify Seal	Open Seal in Pomfort SealVerif
Actions:	Verify Seal Remove Seal	Open Seal in Pomfort SealVerif Delete Seal File and Library Archive
Actions:	Verify Seal Remove Seal Re-Seal	Open Seal in Pomfort SealVerif Delete Seal File and Library Archive Delete Seal and recreate Seal

Fig. 2: The Seal Info for the opened volume

The seal information comes from the person who sealed the drive in Silverstack.

Several Actions can be taken from here:

- Verify Seal: When you have Pomfort SealVerify installed you will be able to verify the integrity of the seal. Click the button to open the drive in Pomfort SealVerify.
- Remove Seal: You can delete the Pomfort Seal file and the Sealed Library Archive.
- **Re-Seal:** Delete the seal and recreate a new one with your own seal information.
- Import Library: Import the associated Sealed Library Archive (.psla) that populates a Silverstack Library containing the complete content of the sealed drive or folder.

Click the button "Import Library" to start importing the Sealed Library Archive.

The standard library import wizard will guide you through the process of importing the library:

Learn more about this process from the article Library Metadata Exchange.

Sealed Library Archive vs. Library Archive

The Sealed Library Archive basically is a Silverstack Library Archive with additional benefits. As it can only be created in the process of sealing a drive or folder with Silverstack the library will always contain the complete content of the sealed volume. Additionally <u>Pomfort SealVerify</u> can verify the content of the library to assure consistency with the original data.

Understanding the Pomfort Seal

This article will help you understand the intention and background of the Pomfort Seal.

The Pomfort Seal

The Pomfort Seal complements the widely used and production-proven MHL standard for checksums and can only be produced by Silverstack. During the sealing process, Silverstack creates a seal file (.pfsl) that references all MHL files on the drive. An additional MHL file will be created for all data that was detected on the drive but was not copied onto it with Silverstack. The Pomfort Seal holds all this information together and is even secured against altering the seal itself. Any kind of change of the data on the drive will break the seal and will therefore be detected by Pomfort <u>SealVerify</u>.

Please note that the term of "sealing" has nothing to do with encryption of the data on a drive. The Pomfort Seal does not limit the access to your data. The sealing process aims for integrity, consistency and completeness of data. The term "sealing" is not used in a way that implies a "blocking" or "locking" of data.



Sealed vs Unsealed

The following table will show you the advantages of a drive sealed with Silverstack:

	consistency	consistency + completeness
MHL only (misc. copy tools)	YES	NO
MHL + Pomfort Seal (Pomfort Silverstack)	YES	YES

MHL files (or other hash files such as .md5 files) basically carry hash values and filenames. With this information, you can verify the consistency of files without access to the original source files. The appropriate tools can determine if the contents of the files mentioned in the MHL file still have the same content as at the time when the hash values have been created. The MHL files are usually created during a copy process.

For a drive with multiple folders copied with multiple copy processes (for examples on a film set, where multiple camera cards are copied to the same travel drive), you cannot verify if one entire folder together with its MHL file is missing. This means with MHL files alone you can verify consistency of single files, but not the completeness of an entire drive.

To solve this problem , the Pomfort Seal contains a list of all MHL files on a drive. With this information, a missing MHL file can detected very easily. This means that the Pomfort Seal together with the MHL files allows to verify consistency as well as completeness of a travel drive.

The sealing process in Pomfort Silverstack also searches for files on the drive that haven't been listed in MHL files yet. This ensures, that the Pomfort Seal together with the MHL files cover the entire content of the sealed drive.

Pomfort SealVerify is the free one-button process to verify the Pomfort Seal and the listed MHL files. This way a reliable copy chain can be built where both, consistency and completeness of media data can be verified at any time.



Quality Check

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.

Playback 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.

Playback Controls

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

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

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 + ->/<-

Playback Indicators

Player Toolbar

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



A 00	06R2VJ (2 documents h	11 AT 🔌 ► 4x 1⁄2 ⊙ 24 fp:	§ 14:48:27.04	
	Display Look: Decoding Resolution:	□1 ⊙ 1⁄2 (8bit)		
	Playback Mode:	Absolute Time Real time playbac	Every Frame k → Audio enabled	•

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

HD-SDI Output in Silverstack

This article is outdated

Silverstack XT and Lab already also support 4k SDI output with:

- Blackmagic 4k cards and
- AJA Kona 5 cards (requires 8k firmware installed)

Silverstack XT and Silverstack Lab come with HD-SDI output to play out ingested clips in best quality for QC on an HD-SDI broadcast monitor. The current clip in the player gets mirrored to the HD-SDI output showing the image in full-screen and 10 bit color depth.

Supported Devices

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

- AJA T-TAP
- AJA KONA series
- AJA lo 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 HD-SDI output of the device to the selected destination.




Figure 1: Schematic presentation of a Silverstack XT HD-SDI setup

Drivers

In order to use the supported devices you have to install all drivers and necessary software provided by the the manufacturer.

For Blackmagic Design devices that is the "Desktop Video" software you can download in their support area.

For AJA Devices that are the "AJA hardware drivers" included in the latest "AJA software installers" also available in their support area.

External Video Preferences

As soon as the HD-SDI device is connected, Silverstack XT requests permission to use it for playback. In case you decide to activate the SDI playback later, you can enable it through "**Preferences>External Video**". You can disable the use of the device from the same menu in case another application demands its use (i.e. parallel use of the hardware with other software). If you have multiple output devices attached, you can select which one to use by choosing it in the drop down menu:

0

Figure 2: External Video settings

For the "Video Format" you will be able to choose from two settings:

- 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 1080p25. In detail this means:
 - Frame rate supported / resolution not supported: Silverstack will keep the frame rate. The resolution will fall back to a 1920 x 1080 (HD).
 Frame rate not supported / resolution supported: Silverstack will fall back to 1080p25.
- Fixed : This setting will let you choose the output format manually.

Additionally you can choose to release the device when Silverstack XT is in background by enabling the checkbox "Release device when Silverstack is in background". By default it will be kept even if Silverstack XT is in background.

Please be aware that the support of SDI formats depends on the compatibility of the attached hardware device that the implementation in Silverstack bases on.



The HD-SDI Indicator

As soon as you enable the external video output in the preferences a little indicator in the toolbar of the Silverstack XT media player will give you hints on the status of the HD-SDI output:



Figure 3: The HD-SDI indicator will show up in the toolbar of the media player and the Miniplayer.

There are 3 statuses possible:

1. HD-SDI output enabled and working:



Figure 4: HD-SDI Indicator showing a working HD-SDI output.

Click on the indicator to reach the External video out settings with the settings for the HD-SDI output.

2. HD-SDI output enabled but no device attached:



Figure 5: HD-SDI indicator showing that no device is attached

Click on the indicator to reach the External video preferences to set up your attached device.

3. HD-SDI output has problems





Figure 6: HD-SDI indicator notifying about problems with the attached device

Click on the indicator to see details about the problem.

A usual case causing this status of the indicator would be another application that tries to use the same HD-SDI device as Silverstack XT. Deactivate the background use in the preferences of the application trying to use the same devices as Silverstack XT to avoid the problem.

Playback Modes

You can choose between two playback modes:

- 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.

To select the desired mode go to "Playback" in the main menu of LiveGrade and select the according entry right at the top:



figure 7: Select playback mode from the main menu

Image processing

There are different options when it comes to display the clips through the SDI device. You can modify these settings on the External Video Out window.

3 Exter	nal Video Out
Visual Controls:	 Image Analyses Framelines
Scaling:	Scale to Fit ‡
Position H:	
V:	

figure 8: External Video Out settings window

These are the available settings:

• Visual Controls: enable/disable the «Image Analyses» like False Color and Exposure Range, as well as Framelines. Learn more about frame lines from the article Frame Lines in the Playback View.



- 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.

Supported Frame Rates and Resolutions

Supported frame rates and resolutions are:

- 720p50
- 720p59.98
- 1080p23.98
- 1080p24
 1080p05
- 1080p251080p29.97
- 1080p20.

Silverstack XT has a fallback resolution (1920 x 1080 HD) and frame rate (25p) that is executed when the desired resolution and frame rate is not supported by your hardware device. That means if either frame rate or resolution is not a native SDI format the SDI output will fall back to 1080p25.

Interlaced formats are currently not supported.

HD-SDI Features and Quality Characteristics

Color Reproduction HD video matrix and gamma (ITU-R BT.709; ITU-R BT.1886)

Timing	Sync to next available video frame rates (see <u>Supported Frame Rates and Resolutions</u> and <u>Playback Modes</u>)
Code Values	10-bit legal range YCbCr output (internal 16-bit RGB processing)
Embedded Audio	Not supported
Metadata Output	Not supported

The Miniplayer

Additionally, you can enable the Miniplayer from the same menu, which enables to monitor the same image sent through the SDI output on the computer display, at the same time as you navigate across the Project Library.

When the HD-SDI Output is enabled it will automatically open the Miniplayer to keep the HD-SDI output though you switched to the list or table view etc. As soon as you close the Miniplayer the HD-SDI output will be disabled.

You can reopen the Miniplayer manually from the Main Menu. Go to "Playback > Show Miniplayer" to open it up again. You can also open it from the Miniplayer symbol in the header bar on the right.



figure 9: the Miniplayer

Multichannel Audio in Silverstack

Silverstack offers audio playback of audio data embedded in video clips for preview and quality check. Audio can also be transcoded in dailies and for the editorial department including a stereo mixdown or with the original audio tracks. The clips with embedded audio can be played back with sound and can be transcoded for the editorial department including all the audio tracks.



Silverstack supports audio features for these camera formats:

- Alexa ProRes
- Alexa SXT ARRIRAW (.ari)
- Amira ProRes
- Canon C300
- H264 from DSLRs (like e.g. Canon EOS 5D Mark II)
- Sony F55 XAVC
- Sony X-OCN
- Digital Bolex Cinema DNGVarious Red Camera models (.r3d movies)

The audio settings per clip are grouped in the "Audio" tab. There you can modify the sound settings for each clip while in Playback mode:

I				ĺ	🕀 Sync Au	tio +	=
Master	-48 -24 -12	-6 0					
▼ A001C011_1609	15_R10A	8	8	0			
Track 1		. 8	6 16 .				
Track 2		. 🖻	S S	-		la Nation Inc. 1 of	-

Fig. 1: Audio panel with audio tracks from ARRI Alexa SXT ARRIRAW (.ari)

The audio panel offers the following controls:

- Master Volume: controls the output signal level of the mix.
- Audio meters: represent the audio signal level during playback. There is a stereo Master meter and additional 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 mixers: the sliders control the signal level for each track. You can mute specific «Left» and «Right» tracks by disabling the check boxes on the right of the channel mixers.
- Mute button: Mutes the according audio channel
- Solo button: Solos the according audio channel
- Pan control: Sets the panorama to left, middle or right

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.



Serial					
Focal Length	2	Edit Look So	0000		
T-Stop		East Look Su	urce		6
F-Stop		Original Look	All and a set of the s		
Focus Distance		Look Source	None		26
Filter		Look Contract	Preset		
₹ Look			User selected LUT		
Look Source	Matche		Custom Look		
Look Source Name	Warm S		Matched Look		
Grading Mode	CDL an				
CDL Nodes	(0.994				
SAT Nodes	1.155				
LUT Nodes	AlexaN			Connert	
ACES Version				Cancer	
T Broombach					

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 <u>Grading Controls in Silverstack</u> and <u>The Silverstack Look Library</u>.

Decoding Color Space (only available in Silverstack XT)

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

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.

	ACES Input TransformID					
	Reference Gamut Compress					
	CDL Nodes	(1.0000 1.0000 1.0000) (0				
	SAT Nodes					
	LUT Nodes					
	LMT Nodes					
	ACES Output Transform					
	ACES Output TransformID			LOOK SOURCE:	Custom Look	
	ACES Version				Sony S-Log3 / SGamut3.Cine	
	Decoding Colorspace	Sony S-Log3 / SGamut3.C	0			ng module
	Processing			to convert from the s	elected decoding colorspace to the i display colorspace	intended
	Anamorphic	None	0		and a sense of the sense	
	Crop	None	0			
	Flip	None	0		Apply to Other Clips	
	Rotation	None	0			
1000 (***	ZEISS Lens Correction	N/A	0			
	El/ISO (current)	800				



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.

Look Name	3D_ext_day_01.eml	0		
Filter	ND 2.10	Edit Look Sc	UIREA	
Processing		Eun Look oc	10100	
Look Source	File ┥	Original Look:	File [3D_ext_day_01.aml]	
Look Source Name	3D_ext_day_01.ami	Look Source:	User-defined LUT	0 @
CDL Nodes	(1.0000 1.0000 1.00			
SAT Nodes		LUT File:	IMG_0001 1.cube	Load LUT File
LUT Nodes				
Anamorphio	None			
Flip	None			Coursel 3 Course
Production				Cancei Appiy
Camera		-		

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:

0.0		Formats			
ierarat Projects Martin	CopyMass Playback Termats Hy	ert Backage Colematy	nter Graning)	CES SWING Account	
ARRI Cameras (Quio QuickTime ProRes	skTime)				0
Import options					
		None	-		
	Look Source	Frant			
	Source Timecodic	Timecode track	1		

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.



16:9 Ec	ditorial 5Res 422, 1920 x 1080, All Trac 80 (Full HD), As in Library	⊄)) ⊙ ks, 1920 x
ProRes 422		
Settings		
Hesizing:		
Fitting Strategy:	Zoom to fit (Adding black	•
Grading:		
Look Source:	As in Library	\$
LOOK Source.	As in Library	

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).

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

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.

Settings	
·	4000 🕈
	32000
iain (glob.):	0.000 👆
Other Clips	2.000
Linear Gain (glob.)	5500 K 🔦
erature 📕 Tint	11000 1
	0 5
lip A003C001_220205NG can be ips in selection.	100
Apply Cancel	•
	500

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 v	oreus custom	RAW developm	ent parameters in a cli	n 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. 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

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 \rightarrow 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

Visual Control Functionalities in the Playback Mode



figure 1: visual controls in Silverstack

With the functionalities provided within the "Visual Controls" panel you can check the colors and quality of your video clip:

- 1. Channels: By selecting one of the three RGB-channels Silverstack shows the distribution of this color in the image of the video clip.
- 2. Focus Assist: The focus assist helps you to detect if your image is in focus by detecting the edges of the image. You can set the sensitivity.
- 3. Clipping: With the clipping functionality you can check which areas of your image clip are either in the whites or blacks.
- 4. Exposure Range: This option allows you to detect different ranged areas of luminance in your image.
- 5. False Color: You can use this option and active false color. The represented values can be found in figure 2
- 6. Framelines: add frame lines to visualize the clips with a different aspect ratio. More information 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
	52 - 56%	One stop over medium gray (Caucasian skin)
	38 - 42%	18% neutral gray
blue	2.5 - 4.0%	Just above black clipping/black slope
purple	0-2.5%	Black clipping

Note: You can change the unit for clipping and range in the application preferences.

Video Preview playback control

The Silverstack playback controls allow you to control the video preview with standard video controls (figure 3 #1) and the possibility to set IN- and OUT-points (#2) as well as to loop the video and zoom into it (#3). To show the original Log gamma instead to the Rec. 709 conversion, select the #4 check box.





figure 3: standard playback controls

For video files in the Red format and ARRIRAW sequences you have additional functionality to change the playback resolution (figure 4 #1): You can select various resolutions, choosing between full, 1/2, 1/4 and 1/8.



figure 4: playback controls for any video with multiple resolutions available

100% Zoom for Retina Displays

Silverstack is optimized to work with the "Default" settings for Apple retina displays which you can find under "System Preferences > Displays". Choosing this setting, Silverstack will map 1 media pixel to 1 physical pixel of the display.

This setting is best suited for visual image analysis such as focus or sharpness.

Professional Video Scopes for Silverstack with ScopeBox

You can use ScopeBox by Divergent Media for software-based waveform and video scopes for Silverstack's player. ScopeBox offers a variety of waveform monitors and video scopes that enable image analysis and color control of the clip assets of your Silverstack library.

You can receive information about how to download, setup and license ScopeBox software on Divergent Media's Website. To use the integration of Silverstack in ScopeBox you have to run version 3.5 or later of the ScopeBox application.

Connecting Silverstack and ScopeBox via ScopeLink

Silverstack sends the current image of the player directly to the ScopeBox application by DivergentMedia's ScopeLink technology.To enable ScopeLink open the ScopeBox application.

Click in the upper left area of the ScopeBox main window to set a new source. Choose "Add ScopeLink Source > Pomfort Silverstack" from the context menu:



Figure 1: Add Pomfort's Silverstack as a source

After that the source should show a pending image:





Figure 2: ScopeBox waiting for the Silverstack connection.

Now open Silverstack. Open a clip in the media player.

Make sure that in the preferences of Silverstack under "External Video" the checkbox "Connect to ScopeBox" is enabled. You reach the preferences from the Main Menu by choosing "Silverstack > Preferences...":



Figure 4: ScopeBox Preference in the External Video tab

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 image showing in Silverstack:



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

Because of Silverstack's internal RGB processing, signals from of YCbCr based clips sent to ScopeBox via ScopeLink don't contain code values outside the legal range (even if they might be present in the source files).

Tags: waveform, vectorscope, histogram, rgb parade

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:

1.66	Lines
/ 1.78 (15:9)	🖌 Darken Outside Areas
1.85:1	Lines & Darken
2.39:1	

figure 2: aspect ration an 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:

2,39:1 (Cinemascope)	~
2,39:1 (Cinemascope)	
2:1	
4:3	
5:3 (1.66:1)	
5:6	
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 <u>Crop</u>, 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 <u>HD-SDI output in Silverstack</u>.



Image transformation

The ability to de-squeeze footage recorded with anamorphic lenses and image flipping is available in Silverstack. This 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 (\Re 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 suites your needs and click on apply. The image will appear without distortions now.



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

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 <u>Choosing Custom Thumbnail Images</u>.

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:



							Media				100		
0 eneral	Projects	Media	Copy&Jobs	Piayback	Formats	Ingest	Backups	External Video	Grading	ACES	Slating	(@) Accounts	Updates
Thu	mbnails												
De	efault thu Creation o	imbnail n Offica	position: d	Begin	-38	C		Middle	34	0		17	End
	🖸 Thur	nbnails	for Clips					🛃 Thumb	onails for	Sideca	ars & Do	cuments	
Dyn Fo	amic Meta ocus Dist	idata ance U	nit: Impe	rial 🚺		noil fra	ma far r	aarta					
Dyn Fo	amic Meta ocus Dist Use ext	idata ance U racted	nit: Impe dynamic m	rial i etadata d	of thumb	nail fra	me for re	ports					
Dyni Fo Still	amic Meta ocus Dist Use ext Image Exp se Still In	idata ance U racted sort	nit: Impe dynamic m ettings fron	rial i etadata d n: o G	of thumb	nail fra	me for re	ports					
Dyni Fo Still Us	amic Meta ocus Dist Use ext Image Exp se Still In Store Expo	idata ance U racted port nage Se	nit: Impe dynamic m ettings fron	rial etadata c n: og s	of thumb lobal Pref	nail fra erences Export 1	me for re Transcodir	ports g Preset					
Dyni Fo Still Us	amic Meta Dicus Dist Use ext Image Exp se Still In Store Exp /Users/f	idata ance U racted port nage Se ported St ba/Pict	init: Impe dynamic m ettings fron III Images To cures/Silver	rial setadata o n: G S stack Stil	of thumb Hobel Pref till Image II Image I	nail fra erences Export 1 Exports	me for re Transcodir	ports g Preset	_		C	'hoose	
Dyni Fo Still Us	amic Meta ocus Dist Use ext Image Exj se Still In Store Exp /Users/f Naming S	ance U racted port nage Se prited St ba/Pict	nit: Impe dynamic m ettings fron III Images To tures/Silver e: Clip Na	rial setadata o n: g s stack Still me & Fra	of thumb Hobal Pref till Image II Image I me Index	nail fra erences Export 1 Exports	me for re Transcodir	ports g Preset			c	hoose	
Dyni Fo Still Us	amic Meta ocus Dist Use ext Image Exp se Still In Store Exp /Users/f Naming S Image	ance U racted sort nage Se orted St ba/Pict Scheme Forma	dynamic m dynamic m ettings fron III Images To III rmages To IIII rmages To III rmages To IIII rmages To III rmages To III rmages To III rmage	rial setadata o n: G S stack Stil me & Fra 16-Bit, Un	of thumb Nobal Pref till Image II Image I me Indep ncompre	nail fra erences Export 1 Exports c ssed	me for re Transcodir	ports g Preset	_		c	'hoose	

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.
 - Clip Name & Frame Index: Clip name Frame Index Clip Name & TC: Clip name - Timecode Clip name Full Slate: Camera - Scene - Shot - Take ✓ Custom: Clip name _ Frame Index

 - 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:

lame	Clip name _ Frame Index _ Scene									
ixample	A007C006_160208_R2VJ_	0_22								
Vildcards	Token	Example	Availability							
	* General									
	Bin Name	A007R2VJ	1/1							
	* Library		61							
	Project name	Birthday Cake (Sample Project)	1/1							
	Library Folde	Source Video	1/1							
	* Clip									
	Episode		1/1							
	Scene	22	1/1							
	Shot		1/1							
	Take	24	1/1							
	Camera	A	1/1							
	Clip name	A007C006_160208_R2VJ	1/1							
	Red	A007R2VJ	1/1							
	Reel characte	A007	1/1							
		Canc	el Sav							
1	Color Mode: As Currently	y Shown in Player 💲								
lew Projects										
Load d	efault Project Settings from	n file:								
		17 - 17 - 17 - 17 - 17 - 17 - 17 - 17 -								
			Choose.							
lustom Field	i Labels									
Audio Co	mment Cust	om 2 Comme	ent .							



- 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':

Use Still Image Settings from:		Global Preferences Still Image Export Transcoding Preset						
Store Exported Still I	nages To							
/Users/fba/Pictur	es/Silverstac	k Still Image Expor	ts		Choose			
Naming Scheme:	Clip Name	& Frame Index:	0					
Image Format:	TIFF - 16-Bit; Uncompressed		0					

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:

0 4	B	۲		0	1
Colar Presets					
1 2 5 0					
Presets				Name 2	
STILL EXPORT	Still Imag	pe Expor			
16:9	720p H.264, 120 1280 x 72	50 x 720, 1 0 (7206)	Sterec: Mixo Ao in Librac	dø⊙ town, v	
Settings					
🐨 Still Image Expo	rt Settings				
Active		or "Export	Still Image		
Et inte		20 ex			
Image Forms		a.a.			
Color Made	- DAN CUR	mathe Sho	un in Diava		
blowing Sobara	Contraction in the	ma R Long		10070 340	
Naming Schem			2000 L.200		
Savet	o: /Users/T	ba/PictII	inage Expo	nts 🗵 🖷	
V Framelines					
Pramennes:					
And and a second second					
Appearance	Lines				
W Overlays					
🔠 Burn In					
None	(Man)		Diara		
- Address -	00940		104905		
None	Nort	e 🧕	Nore		
Margin	a: H: 0.55				
	V: 0.96	•			
For	t: Mar				
Font Siz	e 64 pt				
Trensparenc					
Text Cold	rs 🥌 Whit	e 🔍 Bla	ick		
Backgroun	di 🥌 Box	- Ou	tline 🔍 N	lone	
Cvertay					
imege;					
1					
		Choos	se Image		
Size:		8)	-		
Paillion X:	0.%		2		
Position Y	0 %	-	•		
Transparency.	0%	9.)			
			Silver	stack	

Transcoding Configuration Menu: Still Image Export Transcoding Preset



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.

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 mxf4Mac 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.



Creating Reports

Creating Reports

A crucial feature in Silverstack is the **report creation** functionality. 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.

Therefore, in order to export a report, choose a project, folder or bin from the Silverstack library and open the **Report Wizard** from the button in the toolbar:



The Report Wizard



Different Report Types

Silverstack offers you the possibility to export different types of reports. Each one of them is designed for a different professional involved in the production process. Additionally, it's possible to customize what kind of information is shown in the reports (more information on that within the each report type article).

The different types of reports are:

- Shooting Day Report
- <u>Clips Report</u>
- Thumbnails Report
- <u>Contact Print Report</u>
- <u>Volume Report</u>

Report Destination

Location

Adjust the location the reports are exported to.

File Format

By default all reports are created in PDF format. You can change the report file format to HTML in the "File Format:" pop-up menu.

Since Silverstack version 7 the CSV report has moved to the "Export" menu you can also open from the toolbar.

Naming



Adjust the naming for the reports and set it to custom to use metadata path wildcards for customized naming. See the section "Report Naming Scheme" at the end of this article for more information.

Open After Creation

By default the created report will open after they have been exported automatically in the Preview macOS application. You can prevent that by disabling the checkbox in the lower left corner of the wizard.

Production Logo

The production logo that has been added in the Project Overview will automatically be included at the top right of all reports.

We recommend using logos that have a width of 130px. The containers carrying the logo in the reports are limited to that width but are not limited in height.

Report Naming Scheme

When saving reports the naming scheme option help to select a meaningful naming based on your project context.

There are preset options available for the naming of the reports:

Type-Bin-Date-Time: Date-Time-Type-Bin:	Report Type - Bin/Folder Name - Date (yyyy-mm-dd) • - Time (HHMM) • Date (yyyymmdd) • - Time (HHMM) • - Report Type - Bin/Folder Name
Bin-Type-Date-Time:	Bin/Folder Name - Report Type - Date (yyymmdd) - Time (HHMM) -
✓ Custom: Bin/Folder	Name _ Report Type

Report naming scheme preset options

In addition to the presets the "Custom:" option allows to build a file name based on available metadata. By clicking "Customize..." you can open the metadata wildcards panel and choose from the available wildcards to build a custom file naming scheme:



Available wildcards for naming the report

Export Multiple Report Types Simultaneously

It is possible to export multiple report types simultaneously by enabling the checkboxes on the left besides the entries per report report type. To customize a report type select it from the table and adjust the according settings that are revealed on the right. By default a Shooting Day and a Clips Report are created.

The quick export icon on the right of each report type table element lets you quickly export a single report for preview.

Include Report Note

Each report type allows to include a general report note. Enable the "Include Report Note" checkbox and add your custom report note. Report notes support <u>Markdown language</u>.





Related articles:

Customizing Clip Reports

Choosing custom thumbnail images

Customising Clip Reports

The *Clips Report* is the most customizable type of report. Silverstack offers a flexible and powerful reporting center, allowing users to customize Clips Reports made for production and post-production workflows. These reports include thumbnails and metadata in a well-arranged and accessible PDF document. Reports include all the metadata needed to document camera media traveling to different professionals involved in many stages across the production workflow.

Shooting Day Contains Information about file count, sizes, durations, beckurs, formata and more	G	Clip Tablo	Basic Ac	lvanced	
		Clip Table Layout:	Custom L	ayout	0
	E	Table contains of Table con	clips only clips and at	her files	
Thumbnails Contains 1 or 3 larger thumbnails per clip with a selected set of metaclata.	Đ	Ignors Audio Cli	ps nails:		
Contact Print Contains and large thumbhall per clip.	G	01 3 (requires onlin	ne media)		
Volume Conteins e las of al files on e santicular volume Including hach and location information.	G÷				
		🗌 include Report)	Note:		2
leport Dest halfon		🗌 Include Report I	Vote:		2
Report Desthution		include Report)	Vote: Be Format:	PDF	2
teport Desthation Location: Silverstack Reports C Naming: Type-Bn-Date-Time: Report Type)- (8n	Include Report 1 F Folder Name - Dat	Note: Re Pormat: Re (yyyy-mm	PDF -dd) • -	
Isport Desthution Location: Silverstack Reports C Naming: Type-Bin-Date-Time: Report Type Isport Citys Report(o) as PDF)- <u>8</u> n	include Report 1	Note: ile Pormat: e (yyyy-mm	PDF -dd) • -	8

Basic Options

- Clip Table Layout
- Table content: Clips only or clips and other files. Sidecar documents can be included in the report
 o Ignore Audio Clips
- Number of Thumbnails: 1 or 3 (see section "Three Thumbnails per Clip")

Advanced Options



	Basic	Advanced
Thumbealls		
Quality (in %):	100 0	
Include summarie	e of:	
Project		
Production I	nto	
Clips Overvi	ew	
Workflow		

Reporting Center – Clips Reports: Advanced menu

- Thumbnail Quality in %: setting to adjust the compression ratio of the images with its resulting data reduction.
 You can include the following summaries:
 - Project
 - Production Info
 - Clips Overview
 - Workflow

Clip Table Layout Customization: Metadata Columns

Users can apply their own Table View column layouts to customize the information needed in Clips Reports.

In order to create a Custom Layout for the Table View, users can select the small gear button and check/uncheck the metadata columns according to their workflow needs:

	Sample	e Project 🛊 🛛 🚳	Files Manage	QC Calor	Presets Minipleyer Sco	90es Audio&Color Sideber	3		
📑 Library 🔲 A(D01R2EC	Custom Layout		0	i P 🛛 🛇		*		
	Bin Name Au	dio			neral Info				
5_141024_R2EC	A001R2EC	Current Layout Custom Layo	wr 🖸 C	L Search	ideo Clip				
2_141024_R2EC	A001R2EC		Columns		ame	A001C006_141024	ø		
141024 R2EC	A001R2EC	Audio Track Names			uration	10 sec			
	10010050				rames	254			
_141024_R2EC	AUUTRZEC	Audio Tracks			ource File Date	27/04/2020 13:52:4			
141024_R2EC	A001R2EC	Backups			late info	27/04/2020, 13:02:4			
_141024_R2EC	A001R2EC	📴 Bin Name		pisoda					
		Burn-Ins		cene		۲			
		Comora			hot				
		Califera			ske				
		Camera Assistant			amera		2		
		Camera Assistant (2nd)			hot Descriptors	00/02/2016 11:29:2			
		Camera Orientation			imecoda	09/02/2010/11/38/3	. 67		
		Comera Boll (*)			PB of TC 25.00 (non-dro				
		C Gamera Roll []			O Dead	01140-00 40	-		

Clips Reports – Customizing the table view for a Clips Report

Once the layout contains the required columns and those are sorted correctly, it can be saved thorugh the 'Save...' menu:

01R2EC		Custom Layout 🛶 💽 🐰		C	
Bin Nama	Audio Tra., Bur	Prodefined	e Episode	Scene	Genera
A001R2EC		Audio Info	Ċ	-	Video
A001R2EC		Camera Info			Name
		Digital Imaging Technician			Durati
AUUTRZEC		Timecode Info	C		Frame
A001R2EC		Thumbnail Report	тс		Sourc
A001R2EC		User Into	10-m		Regist
		All			▼ Slate
A001R2EC		None	ïc		Episo
		Save			Scene
		Manage			Shot
					Take
					Came
					Shot I
					100 C

Table View layout - Clips Reports customization

Finally, proceed to the report center to create a Clips Report and choose the 'Custom Layout' as the Clip Table Layout. The resulting Clips Report will contain that exact layout:





Thumbnails in Clips Reports

Users can customize the thumbnails shown in their reports to get a better preview of the footage. Silverstack by default creates one thumbnail for each ingested clip that is saved in the library. This thumbnail is used for referencing clips in the Clips, Thumbnails and Contact Print Reports. As shown in the previous screenshots, it's possible to choose between 1 and 3 thumbnails for each clip in the report.

How To

When selecting the Clips or Thumbnails Report in the report wizard you can choose as "Number of Thumbnails:":

- 1
- 3 (requires online media)

During the export process Silverstack creates two thumbnails for the first and the last frame of the clip in addition to the custom thumbnail. In contrast to a single thumbnail Clips Report that accesses the custom thumbnail, the **three thumbnails Clips Report requires online media** for the ad hoc creation of the additional thumbnails.

Position of Thumbnails

The position for the creation of the additional thumbnails can be influenced by setting in and out points for a clip. The position of the custom thumbnail can be set in the Preferences menu. Additionally, thumbnail creation on ingest can be deactivated in the Preferences. For more information on how to select thumbnails, please refer to the article <u>Choosing custom thumbnail images</u>.

'Additional Thumbnails Failed to Create' Warning

If the thumbnail creation process fails it can have different reasons. One common, simple reason is offline media. If the report fails the following alert will be shown:



The alert when something went wrong with the creation of additional thumbnails.

Please be aware that if no custom thumbnails have been created the custom thumbnail will show a placeholder icon in the reports. Always take a look at your report to ensure its content.

Hiding Thumbnails in Clips Reports

Alternatively, 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:





Table View - Removing the 'Preview' column

Example of a Clips Report

Source Video																			
And the fact that the																			P '
Pulpan in hi	1																		
internet in the brother	ties.																		
American di American di Agricon di	1.4.9																		
			 -			-	-	-	-	 (eval) 			-	100.000		-	-	-	1.000
8	9995	**	*	-it			2	~	÷11	-	1000	$(m_1,m_2,\dots,m_{n-1},m_{n-1},\dots,m_{n-1},m_{n-1},\dots,m_{n-1},m_{n-1})$	100 T 100 T 100		1.01.01.000		τ.		100
301 -		14			(a))		6	-	20	i.	-					144	4		122
					-				01			- Palata and a							

Example of a Clips Report – click to get a closer look

A00	6 R2V	J Prejecti 1017, 54:00.23 1017, 54:00.23											
Production Info Birectary Vienna Bory Classification Dia STT. Jahn Die	Day John J	riskovi Tak Ka Alstine Studio	rhann E										
inport Santary													
	Clips	Duration	Size										
Bearce Sides Clips	38	\$1.57 min	27.352 10										
Audie Clips	4												
Sidecat filler	1		54.344.48										
Decumenta													
Decumenta Transcotted Eliges													
Decoments Transcoded Elians All Files	4 8 38		27.342 08										
Decompris Transconnel Elian All Pilen	4 4 31		27.342 08	104200					700	02000			- 124
Decoments Transcolled Elians All False Flatt Frame		Custon From	27.542 18	Let: Frame	-	Buratian	Tplcade	Scare	Take	Camera	Playticited	Service Pps	
Decoments Transconted ELips All False Fast Frame	4 3	Castas Pras	22.342 08	Last Fram	5.40	Beating	falsade	Loure	Take	Camera	Maptivital	berster Pps	- 464
Decements Transcored Claps All False	* * *	Castie Free	22.342 (8	Last Prime	Rader AlleRC401_5168208_82743	Betation 57 mm	Episode J	tore 2	Take	Саната А	PlayTivited	barnair Ppa 34	- A64 1380
Decements Transcored Elips All Files First Prace	: :: ::	Caster Fran	22. ME 18	Let Fram	Notes Addrescolo, Sarand, Jora	Newtine 57 Mil	Talaati J	2	Таке 1	Camera A	Playtlisted	kensar Apa 34	1380
Decoments Transcond Clips All Fyles First Frame	•	Caster Fran	22.342 (8)	Let Falls	Note Metricali, Isano (1271)	Belatios 57 sec	Talaak 7	toore 2	Take	Camera A	Magnitudea	kovador Pipe 24	A64
Denneris Transcond Clas All False		Gastan Fran	22.542.00	Let Fram	Nata: Additional (1997)	Beratian 57 mm	Talook 7	5.000 2	Take	Camera A	Maptivita	24	138
Decourse Tremoved time All Files All Files		Castan Prine	27.347 UI	Let nue	New	80081285 57 380 397 580	Tabain 2	5.000 2	тана 1 ⁻	Camera A X	Playting of the second	Балаат Ару 34 24	A64 120
Decoders Tremoved Lips All Files	*****	Castal Fran	27.343 W	Last Frame	NAMESCONEL_SAMESOM_JULYJ	boaties 57 mm	101008	2	таке 1	Camera A	Magnifictual pl	Service Type 24 24	464 138
Decompose Tremsconte titas All False	•	Costan Fran	27.50 10	ur Au	New (2001, 364,200, 507/)	57 mm	Falses 3	2	таке 1	Camera A A	Play Clustee pl	Sensor Pps 24 24	1200
Decements Transcoold Lips All Folse FAGS Frame			27.542 18	Last Frame	644	57 sec 39 sec	Falses	2	таке 1	Санита А А	Playtonia pl	Sensair Pps 34 34	128

Example of a Clips report with three thumbnails

For more information about this topic, please check the article <u>Creating Reports</u>.



Metadata Handling

Metadata Handling: 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 <u>offload</u> and <u>backup</u> 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.



		Reorganise c with drag&c	olums frop					Layout Manag presets colum	je ns
nport Report	Transcode	Cple Project	ct) 🗘 🕯) :: ns Mana 1006R2VJ	er OC	Color Prese	ts Millipinym Scopes Au	tio&Colar Sidebara
Preview		ShotD	Duration	Frames	Camera	EI/ISO	White 2200 Feb	ment Levinsh Charlet Imeging To	
- 28	A006C001_160208_R2VJ	262-3FW-75A	39 car	1358		1280	3201	Column	
	A006C003 160208 R2VI	A65-N9N-FUK	Asec	103	<u> </u>	1280	320	ACES Input Transform	
	A006C004 160208 82VI	(5N-93P-(T)	46 600	1116	2	1280	3201	ACES input TransformID	Filter list of
14 - C	A008C005 160208 R2VI	CLL-3WZ-0XP	Ad ear	1058	2	1280	3200	ACES Output Transform	
	A0060006 160208 P2VI	F38-78H-99G	1:54 min	1796	<u> </u>	1280	3201	ACES Output TransformID	Show/hide
	A0080007 160208 P2VI	6HN-FLK-HN4	57 ear	1384	2	1280	320	ACES Version	columns
	A006C008 160208 R2VI	748-60F-W77	53 sec	1283	਼	1280	320	Actors	
	A0080009 160208 P2VI	DVF-7FR-P5R	59 cm	1402	2 *	1200	2200	Added By	Scroll to
2	A008C010 160208 P2VI	104-767-780	55 cm	1010	Ĵ.	1200	220	Anamorphic	
	A008C010_100208_R2VJ	MUG-W75-109	43 cm	1042	÷.	200	220	Audio Bit Depth	
Barres	A000C0112 100200 REVU	484_5MV_TMX	0.9 cec	10.00		900	220	Audio Codec	
	A0060012 160208 02VI	PSN_2HK_RPR	0.0 sec		<u></u>	900	220	Audio Sample Rate	
	A006C013_100208_R2VJ	PAG_MEN_ 370	C1 con	****	2	800	320	Audio Timecode Offsets	
and the	A000CU14_100208_R2VJ	6UV-026-18W	ar sec	1220	2	800	3200 K	1000 172.0 0	
S.C.	A006C015_160208_R2VJ	010 166 200	40 580	1009	0	800	3200 K	1/505 172.8-1	2
642	AUVOLU 10_100206_R2VJ	R62-100-122	48 Sec	1142		800	3200 K	1/005 172.0-0	2 Zun 24
								S	Silverstack

Manage the table layout

Using the Quick Entry panels

In the <u>playback view</u> 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:

- 2. Comment ①+第+S
- 3. Label ①+光+D
- 4. Scene/Shot/Take ①+光+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".



mart rolder fille.	Latest Hagged Clips		
Flag	\$) is (on	ŧ)	$\overline{\bigcirc}$ $\overline{\bigcirc}$
(Registration [$ate \pm (after \pm)$	(One week ago 🔹	\ominus Θ
		Cancel) (or

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 show 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 <u>matching looks</u> created in Livegrade. Further information how to choose and validate imported metadata is provided in the article <u>Preview Metadata Before Importing</u>.

Tips & Tricks: 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
- LensLook 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 ①+光+A
- Comment ①+光+S
- Label ①+光+D
- Scene/Shot/Take ☆+₩+T



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

4. Keyboard shortcuts

Silverstack's metadata related keyboard shortcuts:

<u> </u>	 Increase rating 	
Ж –	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	
^Х	Decrease shot	
^D	Increase take	
^C	Decrease take	
٦æ	+ Increase label	
ĽЖ	 Decrease label 	
٦æ	0 No Label	
٦æ	1 Best Take	
٦æ	2 Average Take	
\mathcal{Z}	3 Moderate Take	
٦æ	4 B Roll	
\mathcal{Z}	5 Alternate Shots	
٦¥	6 Interviews	
\mathcal{Z}	7 Pomfortionös	



Transfer metadata to FCP 7, FCP X, AVID Media Composer, and Adobe Premiere

To process your clips in other Tools like Avid Media Composer, FinalCut or Adobe Premiere you can use transfer wizards.

Navigate to the level in your project tree that contains the clips you want to transfer and click "Export" in the actions bar. Now choose the desired program to transfer your clips and corresponding clip metadata.



Silverstack Export Options

After you have selected the proper program a corresponding "Export" wizard opens up.

Choo	se Media Files from Volume ~	Mark Only	Select	ed • Unmark All • Q Search
	Name	Cabel	Flag	Media File Path
	A003C009_160205_R2VJ	No Label	F	A003R2VJ - A003C009_160205_R2VJ \$
	A003C010_160205_R2VJ	No Label		A003R2VJ - A003C010_160205_R2VJ
	A003C012_160205_R2VJ	No Label		- A003R2VJ - A003C012_160205_R2VJ
	A003C013_160205_R2VJ	No Label		- A003R2VJ - A003C013_160205_R2VJ 3
2	A003C014_160205_R2VJ	No Label		- A003R2VJ - 🗟 A003C014_160205_R2VJ 5
? 5	Clips selected from Shooting Day 1			Continue

Choose the clips and then specify the export options



Content			
🗸 General Clip Into			
💟 Cue Points as Markers			
FCP Project Update Behavio			
O Add new Bin and Clips			
Replace existing Bin an	d Clips		
Open Behaviour			
	C	Open in Final Cut Pro 7	Save XML File O
			3.6.

In the transfer process Silverstack transfers the edited information relating to the particular clip along with a link to its original clip's storage location. It never overwrites the original clip's metadata.

If you want to transfer your clips to Final Cut Pro X, you find a short explanation of the menu items affecting the metadata in the *Export*" dialog in the article <u>Transfer metadata to FCP X</u>.

There is another article for transferring metadata into Avid Media Composer and one for Adobe Premiere.

If you want to export only metadata of one or several clips as a pdf/ cvs/ xml/ html, Silverstack provides you the Creating Reports" function for that case.

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".

The 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, El/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.



Content	
Add Scene - Sho	- Take to Clip Name
Camera, White Ba	alance. Colorspace. Lookname. El/ISO (ASA) as Keywords
Single-frame Cue	Points as Markers
Multi-frame Cue	Points as Keywords with Range
Clips with rating	**" (one star) as "Rejected"
Final Cut Pro Import	
	Open in Final Cut Pro X Save FCPXML File

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.

สิติ				Al Class	* B B 9	10800-40124a 😑 .A0034240	40% ~ View ~	BTO water		
Birthday Cake	I Street and the second	-						and the second second		
Shart Collections		-		123				Base TOR		
Shoeling Day 1	The second se		21/2	and a	and it			- Section III		
9, 3200K 9, ASA800									A0090010.560005.405	
	ADDICTOR_BECKTS_P241									
-F. maintumere bour	Alasma	Sour							My Domneti	
	· Projects (1)								1144	
	A10382V/			01:61:27:22	01:52:47:05					
	+ 11 A003C014_100205_R2VJ	A003_			01514215					
	► [] A005C013_180206_R2VJ	A005_		01:37:39/12	01:37:64:20	the supplication of the				
	► 11 A003C012_100206_R2VJ	4003_		01:34:69:17	01:35:05:22	C NUMBER	a state of the	Certain	Annual Product and Draw	
	► # A003C010_160205_R2VJ	A003_			01:32:16:01					
	₩ E A0010009_100206_R2VJ	A503_		011101340.03	01100119	IN STREET, I		Sandre Automatical Address	1 Marca	
	+ Favorita			01110-58308	01:10:51:19				Menalesco	
	- 3200K, ASAB00			01:10:36:03	01005109			and the second second		
	ar Used			01:10:38:03	01110/51119			AND CAPTURA FURS		
	Wark: 1st due point			01/10/20/19	01:10:36:20			APPE Carrorn Wedge		
	► 4 A003_C14			01:51:18:00	01:52:15:00			ARRI Carters Maria		
	► 4 A003_C13			01:37125:00	01/38/28:00				None	
								Table	2~10	
		0111040000	6.0.0			ц • х • 6 • В		- Builty	CONSCIENCTION AS A DESCRIPTION OF A DESC	12.24
	1 🛛 - t-					2V2 - 0140.00 >			** * * * *	
fleats/t								Effects	installed E	itteet
a Tage (inter-								VIDED	STREET, STREET,	-
								X	A CO	
	SECTOR DATE:	enna		Missing S	contexts (Manual Annual State		947	Concession of the local division of the loca	
				2 111				Berts	202 Noise 200 Fab	
		E 11.044			CALL IN A	THE LOCAL DRAFT PARTY				
	anut.								COLUMN TWO IS NOT	
	and the second se			O and the		Rent trail		Calify Presents	other Designation of the local division in which the local division in the local divisio	
				1011						

Handling Metadata: View, Organize, Add and Filter Clips

Transfer

Search Code: ST-FC1

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:

Timalina	
Conset Timeles (CCDV of 0 VMI Elle)	Evenet Timeline (ECDY ut E YM) Elles
Export timeline (FCFX VI.8 XME File)	Export (interne (FCFX VI.5 AMC File)
The FCPX XML file can be used to create a ne media files that are referenced in the timeline.	w timeline in Davinci Resolve. The XML file contains the full paths to the
Looks	
Z Export Look Metadata (EDL + CCC File)	
The two exported files can be used to automa using the "ColorTrace with CDL" functionality, file contains the look specific CDL and saturat	tically apply look information to an existing timeline of clips in DaVinci Resolve The EDL file matches the looks onto the clips in the timeline while the CCC ion values.
Metadata	
Z Export Clip Metadata (CSV File)	
The exported CSV file can be used to transfer	the metadata of the clips to Resolve.
Set CSV "Reel Name" column to	
O Reel Name	
Clip Name	
Source File Name	
?	Go Back Export

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:

Load XML	
	/Users/Shared/A003R2VJ copy.fcpxml
	A003R2VJ 🗸
	A003R2VJ
	01:00:00:00
	✓ Automatically set project settings
1	 Automatically import source clips into media pool
	Ignore file extensions when matching
	Link to source camera files
1	 Use sizing information
	Use color information
	Import log messages as 🔍 👻 murkers
	Import multi-channel audio tracks as linked groups
Set timeline resolution to:	1920 × 1080
	24 v frames per second
	Use drop frame timecode
	Enable interlace processing
	24 v frames per second
	Lise drop frame timecode.
Moled frame rate format:	Final Cut Pro X 😔
	Cancel Ok

Figure 3: Preferences for loading an XML in DaVince 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".



	A DESCRIPTION OF A DESC	THE REPORT OF TH			U10002 Project					and the second second
C 23 -	Wastle Rool 🛛 🚊 Athense Library				Untitled Proje	et				M solepper
E	Macter			129 00:00:00:00			00.02.02.00	32% - 000134.18		0210020200
v Master	_	_	_					H.:		
Statilies	Emp Em	Elec Ele	a Elen							
	Day 1									and the second second
			frecto Duration							
			1100819378 400000							
			ITTOTATIS BERRON							
			TITTITCE ADDIT							A DESCRIPTION OF
			(1)(22200 20:020							
	Address (HOTTL/HIGLING)		THIALEDE BEEDI-					22	- 10 Star	1 2 2 1
	A0000010_110111_014c.m		(15443044 10400))					22222222	E LINES	
	E DW1	00:00:02:09	00013418 02013-					CONTRACTOR OF THE OWNER	Tell	201
								Tank A Da		
								the second day of the second d		Course of
									0	
								H.		
				100 (ED)	144 4 8 1	E HR CD			A DE FRIS	сі и и
										8.5
							6 mm			
				00:00:00:00						000(43000)
				WT - Manual						
					manufacture in the second	the second second				
				1		FF F				
				1990 (1997)	Construction (Prince)					
0123300					also -					72.5 1.18
👗 DaVir	ici.Resolve 12			(CA) Methe	100	CORD DRIM				n 0
1										

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:

Metadata Import	
Source file:	/Users/selina/Topics/_fcpxml/test/A003R2VJ.csv
Import Options	
	✓ Match using filename
	Ignore file extensions when matching
	 Match using clip start and end Timecode
	Match using Reel Name
	Match using source file path
Merge Options	
	Only update metadata items with entries in the source file
	Update all metadata fields available in the source file
	Update all metadata fields available in the source file and clear others
	Cancel Ok

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] ٠
- 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:

Project Settings: Demo Impor	t	
	Conform Options	
Master Sentings Image Scaling Color Management General Options Camera RAW Capture and Playback Subtrities Fainlight		Embedded in the source clip Trom the source clip hame count Canform partial clips with black gaps Automatically conform moving clips added to media pool Assist using reel names from the Source clip file pathware Pattern Transform Mediapool holder name Embedding in source clip file S
	Manul Narme ratic Roman	Extract reel names from EDL comments Sort timeline using reel name and timecode Final Cut Pro X ->
		Automatically label gallery stills using: Clip frame Luminarioe mixer defaults to zero Use legacy. Log grading ranges and curve Use legacy. Log grading ranges and curve Use legacy. Log grading ranges and curve Use local version for contrast: Apply stereorscopic convergence to Windows and effects Use local version for new clips in timeline Automatically nucleic matter timeline with media pool Save timeline dhumboallis with project. Use Bodg inder dar DPK v2 Embed simecode in audio output.
		Cancel Save

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:



Clip I	Name			
EVI)	A003R2VI			
	Timelines			
	Create New Timeline Using Selected Clips		Starting Timecode	
	Create New Multicam Clip Using Selected Clips			>
	Convert Timeline to Multicam Clip		Export	
	Open in Timeline		Link Offline Reference Clip	> NA VA · VA
	Duplicate Timeline			Contraction of the second s
			Reconform From Media Storage	22 2 2 2
			ColorTrace™	> ColorTrace [™] from Timeline
		û@	Accession and the second	ColorTrace [™] from CDL
	Clip Color			and the second s
			- I	10 1 mp -
	Set Poster Frame			
	Clear Poster Frame	`∑P		Concession of the local division of the loca
		18 Se		

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

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:



Choose Media Files from Volume ~	Mark All + Unmar	rk All • Q. Search
Name	Label Fis	g Media File Path
		- A011R2EC / -
A011C001_141028_R2EC	No Label	 A011C001_141028_R2EC. \$
Contraction of the second s		mov
		- A011R2EC - / -
A011C002_141028_R2EC	No Label	A011C002_141028_R2EC. 3
		mov (
A0110000 141000 DOEC	No Lobal	A011H2EC - 7 -
AUT 10003_141020_H2C0	NO Laber	e-AU(16003_141026_H2EC. \
		A011B2EC - / -
A011C004 141028 R2EC	No Label	A0110004 141028 B2EC
		mov
		A011R2EC - / -
A011C005_141028_R2EC	No Label	A011C005_141028_R2EC. 3
		mov
		- A011R2EC / -
A011C006_141028_R2EC	No Label	 A011C006_141028_R2EC.
		mov
		A011R2EC - / -
A011C007_141028_R2EC	No Label	 A011C007_141028_H2EC.
		mov
A011C008 141028 825C	No (sha)	A0110200 141020 0200
20 Clips selected from A011R2EC		Go Back Continue

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:

	Choose ALE Expor	t Options
Project Format		
1080p/24		
Content		
General Clas Into		
🛃 Master Info (Shot, Scene, Tak	, Reel Name, etc.)	
Z Exposure Info (ASA, Whitepol	nt, F-Stop, Shutter, Lens, Look Nar	ma)
Format Info (Resolution, Fps,	Filetype, Codec, Color Space)	
🛃 User/QC Info (Flagged, Batin	, Comment, Label, Cue Point Sum	mary)
🖸 Production Info (Production, I	Director, Cinematographer, Camera	Assistant, Location)
🖸 File Info Summary (File Path,	File Size, Bin Name)	
CDL Values in ASC_SOP & AS	SC_SAT column	
Format		
Scene-Take Export Format:	Scene-Shot,Take	
Clip Name Export Information:	Clip Name	
Match clips based on		
O Source File		
Reel Name in Tape column		
O Source File in Tape column		
Source File Without Extensio	n in Tape column	
ALE should only reference vio	leo track	
2		Go Back Save ALE

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:

	ASC SAT		Elin Name	DemRoli	Cameral	Camera Asat.			
						 Import 			
								· · Remove	
	24.000 DF								
		Clear M							
	Tange Import@actude								

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.

			Elin Name	CamRoli	Camera	Genera Ass			
								and the second second	
	6,7831		ANIIFZEC	AQ11F07EC	A.				
								03-11-52-37 0ec. 100	
								and the second	R
								Carl Start	
								A0110082 541638 ROBC 10	1031
					Ú 1				
	24.000 OF								
	Weitla	Shoe	Some	Stop		uneni			

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 <u>Using Silverstack's Full Screen Mode</u>).

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 articleLook 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 <u>Transferring Metadata to Avid Media Composer</u>. 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:

•	Choose /	LE Export Op	tions
Project Format			
1090p/24			
2000 D			
Content			
- Genera Cipinto			
💟 Master Info (Shot, Scene, Tsio	s. Reel Name, etc.)		
Exposure into (ASA, Whitepol	int, F-Stop, Shutter, Lerr	t, Look Neme)	
C Format Info (Resolution, Fpa,	Filelype, Codec, Color S	(6080	
Liser/QC into (Flagged, Ratin)	g, Comment, Label, Gue	Point Summary)	
Production Info Production, I	Director, Cinerastograph	er, Carriera Assis	(tent, Location)
🖸 File Mo Summary (File Path,	File Size, Bin Name)		
COL Values in ASC_SOP & At	SC_SAT column		
Format			
Scene-Take Export Format:	Soone Shot, Take	•	
Glp Rame Export Information:	Clip Name	Ð	
Match clips based on			
G Source File			
Red Name in Tape column			
Source File in Tape column			
Source File Without Extensio	п іт Таря самал		
ALE should only reference vio	leo track		
			Go Back Save ALE

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 <u>Transferring Metadata to Avid Media Composer</u>. 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:

					CDLT	est Bin2			
		COL TEEL BINZ:			×				1
	Name	Creation Date	Duration	Drive	Lock	IN-OUT	ASC_SOP	ASC_SAT	
	A002C030_160111_R1KL	1/13/16 5:48:34 PM	22.03	TestRoleronces			(0.8070 0.8323 1.0785) (-0.1821 -0.2984 -0.0464) (1.0000 1.0000 1.0000)	0.6365	Ē
	E A002C029_160111_R1KL	1/13/16 5:48:28 PM	7:41	TestReferences			(0.9439 0.9646 1.0765) (-0.0464 -0.0778 -0.2964) (0.5002 0.5126 1.0000)	1.388	
	A002C028_160111_R1KL	1/13/16 5:48:18 PM	13:07	TestReterances			(1.0765 0.7330 0.7157) (-0.0464 -0.2736 -0.2964) (1.0000 1.0000 1.0000)	0.7882	
	A002C027_160111_R1KL	1/13/16 5:48:07 PM	9:05	TestReferences			(1.0785 0.9161 1.0376) (-0.0911 -0.2963 -0.0464) (0.9216 1.0000 0.9111)	1.2438	
	A002C026_160111_R1KL	1/13/16 5:22:32 PM	5.03	TestRelevances			(0.7543 1.0765 0.5765) (-0.1615 -0.0464 -0.2962) (1.0000 1.0000 1.0000)	0.3345	
									ł
1 and	子 语 Limited *		0.0111		_	_	12	10	ŝ

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:

calar Encocing	FramoFiex	Playback Bales	
			22
Source abor sp	20081	and the second second	
Columbus da		I VIDIO JOVDIA	7.
Sony 1. SLog	Leves scali	ng (tuli nange to vidoo levoie) 209	
Bony 1: SLog Bony 2: SLog Sony 3: SLog	Leves scale 2-Stemut to 10 2-Stemut to 10 2-Stemut to 210	ng (tur nanga to vildoo lovo ia) 200 2015 - Xosok 202 - Xos	
Sony 1: SLog Sony 2: SLog Sony 3: SLog Sony 4: SLog Sony 4: SLog Sony 3: SLog	Leves scall 2-Stemut to IC 2-Stemut to St. 2-Stemut to St. 2-Stemut to St.	10. (L.1. 1990) (o. 1990) (o. 1990) 703 703 Topok 703 Topok 703 Topok 703 Topok 10. (J. 708 10. (J. 708 10. (J. 708 10. (J. 708 10. (J. 708)	
60ny 1. 8Log 50ny 2. 8Log 50ny 3. 8Log 50ny 3. 8Log 50ny 3. 8Log 50ny 530 2. 50ny 530 2. 50ny 530 2. 50ny 530 2.	Leves scall 2-SGemut to 10 2-SGemut to 20 2-SGemut to 20 2-SGemut to 20 2-SG2 2-20 2-SG2 2-20 2-352 2-20 2-20 2-20 2-20 2-20 2-20 2-20 2-2	ts (LJI range to vidoo levele) 708 709 709 709 709 700 700 700 10 LC - 700 10 SLC 700 700	
Sony 1, Slog Sony 2, Slog Sony 4, Slog Sony 4, Slog Sony, Sic 2, Sony, Sic 2, Sony, Sic 3, Sony, Sic 3, Sony, Sic 4,	Leves scale 2-SGemut to LC 2-SGemut to SLC 2-SGemut to SLC 2-S	10 (LLI 1940): 10 41300 (948.6) 708 709 709 709 709 700 700 700 700 700 10 Content 700 10 Content 700 10 Content 700 10 Content 10 C	•
Sony 1, SLog Sony 2, SLog Sony 4, SLog Sony 4, SLog Sony, SSC 2, Sony, SSC 3, Sony, SSC 3, Sony, SSC 4, Sony, SSC 4, SSC 4	Leves scale 2-50emut to LC 2-56emut to Ste 2-56emut to Ste 2-5	10 (LL Tange to video lovele) 100 100 100 100 100 100 100 10	Root
Sony 1. SLog Sony 2. SLog Sony 3. SLog Sony 4. SLog Sony 53C 1. Sony 53C 4. Jony 53C 4.	Leves stall 2-SGenut to LC 2-SGenut to LC 2-SGenut to Co 2-SGEnut	te (ILI Tange to vidoo levee) 709 709 Took 709 Took 709 709 700 700 700 10 C-709 10	r Rovert

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 and additional LUT added to the CDL processing.

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 :



- 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
000	14
000.	36
	27 - SOMode>
	20 <ip>21 <ip>21 21 21 21 21 21 21 22 21 22 23 23 24 24 25 26 27 28 29 20</ip></ip>
	10 <sotnode></sotnode>
	31
	33

Exporting Looks from Silverstack

There are two ways to export looks from a Silverstack project. It is possible to export AMFs, CDLs, and 3D LUTs from selected clips in the library or from the Silverstack Look Library. To learn more about the Silverstack Look Library, please refer to the article <u>The Silverstack Look Library</u>.

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:





The export window with the different export options.

You can choose between three categories to export your look:

- Looks
- LUTs for Software
- LUTs for Devices

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)
- Alexa Look (.xml, for ARRI Alexa compatible look export)
 Amira Look (.aml, for ARRI Amira compatible look export)

LUTs for Software include:

- Pomfort LiveGrade (33x33x33, RGB order, .cube file)
- Pomfort Silverstack (33x33x33, RGB order, .cube file)
- Adobe Speedgrade (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:

- BlackmagicDesign HDLink Legal to Legal (17x17x17 .cube file)
- BlackmagicDesign HDLink Extended to Extended (17x17x17 .cube file)
- AJA Lut box (17x17x17 .cube file)
- Panasonic Varicam (17x17x17, rgb order .vlt 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 at 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":



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 3: 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 from that directory.

To learn how to import a Look Archive please refer to the article Importing Looks (from LiveGrade).

Importing Looks (from LiveGrade)



Silverstack's Look Library and grading controls enable you to **receive looks from LiveGrade** or **ACES Metadata Files (AMF)** created with other applications. More information about creating and managing looks in LiveGrade can be found in the articles <u>Grading Modes in LiveGrade</u> and <u>Create</u> <u>Clips</u>, <u>Stills and Looks</u>.

Importing a Look into Silverstack

Choose the Button "Import" or fo to the Main Menu and select

- "File>Import>Pomfort Looks (pfl)..." for looks exported from Livegrade
- "File>Import>ACES Metadata File (amf)..." for looks exported as ACES Metadata File (AMF) from other applications

File Edit View Clip Lo	iok Play	yback	Window	Help	Debug	Develop
Offload	жo					
Add Clips to Library	780	> scode				
Import Library Folder	0 X 0		Librari		imente hid	den)
Export Library Folder	☆ ¥E E		Elbiar)	, (4 000)		ucii)
Project Settings	>	OVER	VIEW			
Import	>	Silver	rstack Libra	ary Arch	ive (psla).	
Export	>	Pomf	ort Looks (ofl)		
ShotHub	>	Matc	h Pomfort I	_ooks fr	om Look A	Archive (pfla)
New Bin	9£ N	Matc	h Pomfort I	_ooks fr	om ShotH	ub
New Folder	公第 N	ACES	6 Metadata	File (am	nf)	
New Project		ZoeL	og CSV			
New Smart Folder		Movie	eSlate XML			
Close	₩W	Dryla	b CSV			
Seal	>	Mast	e XML erLockit Plu	us (xD L	ens Data).	
Packup	99 12	Edit [Decision Lis	st (CMX	3600 EDL	.)
Backup to LTES	\%B	Seale	d Library A	rchive		
Relink	\C # R					
Verify	∑₩V					
Transcode	\T # T					
Transcode to Combined Clip		N	Clips		Duration	Files
Move to Trash	жœ					
Unregister Current Project		o Clips	15	5	5:18 min	15
Create Report	жE		0		0 sec	0

Import Look File into Silverstack

An open dialog shows up. Navigate to the looks that should be import and select one or multiple files.

Make sure that Silverstack's Look Library in the right info bar is shown (for example toggle the right bar from the toolbar). Learn how to use the Look Library in Silverstack from the article <u>The Silverstack Look Library</u>. Go to the Look tab:



Looks		ন্দ্র +
Blueish DeSat	ACES 1_3 cot + dlf +	
Look Details		
Look Name	Blueish DeSat	۲
Description		0
Date	23. Sep 2022 at 15:59:22	
Grading M	ACES CDL Advanced	
CDL Nodes	(1.0096 1.0106 0.9720) (-0.0163 -0.0179 0.	(
SAT Nodes	1	
LUT Nodes		
ACES Versi	ACES 1.3.0 (working color space: ACEScct)	
Camera	A	Ø
Episode	2	0
Scene	5	0
Shot		Ø
Take		Ø
Reel Name		0
Start TC		
End TC		

Look Library showing details of the imported look

The imported looks will appear in the "Looks" section containing:

- Thumbnail
- Look name
- Grading Mode
- Additional Metadata

Looks imported from Pomfort Looks (pfl): 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.

Looks imported from ACES Metadata File (amf): AMFs are XML-based format specified by ACES for interchanging the entire setup of an ACES pipeline. Therefore the look created in the look library includes IDT, LMT and ODT, ACES version information, ASC-CDL values and the working color space for the ASC-CDL and the LMT. If the ACES Metadata File is referring to a CLF file (Common LUT Format), the CLF file is loaded into the LMT node.

To learn more about the grade controls in Silverstack please refer to the article Grading Controls in Silverstack.

Importing a Look Archive from Livegrade into Silverstack

Go to the looks tab in the Right Bar of Silverstack. In the Look Library perform a secondary click (right click)



Importing a Look Archive as a folder.

Select the desired .pfla (Pomfort Look Archive) file and click. The Looks from the Archive will then be available in the newly created folders in the Silverstack Look Library.

Import metadata via MovieSlate



Introduction

When importing metadata via MovieSlate XML you can use various methods to match the clips coming from MovieSlate with your offloaded Assets:

- Timecode
- File Name
- Creation Date

Timecode Mode

This mode is pretty straight forward, it will compare the timecode of your assets 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 to automatically set the in-point to the slate frame.

File Name Mode

The File Name mode works literally and compares the exact filenames of your offloaded assets with the clips from the imported MovieSlate XML. Even the smallest disparity will force Silverstack not to match the Assets with the MovieSlate metadata.

Creation Date

This mode matches the creation date of your assets with the creation date of your MovieSlate clip metadata. This mode is working with approximation. You have a "Tolerance" slider which can help you to adjust the time difference between the camera and MovieSlate clock. You have a range from 1sec up to two minutes. This method is fuzzy and a high tolerance can lead to misinterpretations.

Further articles:

Step-by-Step Tutorial: How to import via Filename Mode

Step-by-Step Tutorial: How to import via Timecode & Creation Date Mode

ChooseMovie Slate XML (300)			Mark Al	- Unmari	k Selected +
Aatch with clips in Library by 🥑 Timecode 🗌 File Name 📄 Creation I	t 1 Date Tolerance:		27 seconds		
Library Cilp Shooting Date	Timeoode In	11	MovieSlate Cl	p Timecode In	Creation date
A001C0 5/13/13 2:41 PM	00:05:45.02	2	A: 1 = 1	00:05:00.14	5/13/13 4:45 PM
A001CO 5/13/13 2:42 PM	00:06:25.00	Ľ	A: 1 - 2	00:06:40.05	5/13/13 4:48 PM
4001C0 5/13/13 2:47 PM	00:11:37.22	1	A: 1 - 3	00:11:43.06	5/13/13 4:51 PM
A001CO 5/13/13 2:48 PM	00:12:50.21	Z	A: 1 - 4	00:13:02.19	5/13/13 4:52 PM
A001C0 5/13/13 2:49 PM	00:13:45.01	N	A: 1 - 5	00.14 00.16	5/13/13 4.53 PM

Figure 1: "Movie Slate Import Wizard, showing 5 matched clips"

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

		area a			
Match with clips in library by Clip Cre	o Name ation Date	Date & Time w	् ith tolerance: 🔸	7 seconds	
Library Clip Name	Shooting (Date		Set Report Event	Creation date
A001C001_161024_R54M	28,11,18,	14:08			
A001C002_161024_R54M	28.11.18,	14:08		A001C002	28.11.18, 14:08
A001C003_161024_R54M	28.11.18,	14:09		A001C004	28.11.18, 14:09
A001C004_161024_R54M	28.11.18,	14:09		A001C005	28.11.18, 14:09
A001C005_161024_R54M	28.11.18,	14:10			
A001C005_161024_R54M	28.11.18,	14:10			
A0010007_161024_R54M	28.11.18,	14:10			
	ala:				

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



	Choose Drylab CSV II	mport Options	
Import			
🕜 Slate Info			
💟 Reel			
💟 Camera Settings			
Lens and Filter			
2 Production			
🖸 Comment and Caption	n		
👩 "circled" Tag (as Flag	ged)		
Append Tags			
💟 Day Number + Day Da	ite (as Custom 1)		
Insert / Update Behavior			
Insert if empty			
Overwrite			

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 Silvertack metadata section):

Drylab CSV	Silverstack	
Field	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	sComment 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



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

Library Clip. Shooting Date Camera Timecode Camera 31 seconds C + 0 Library Clip. Shooting Date Date & Time with tolerance: 31 seconds C + 0 Library Clip. Shooting Date Camera Timecode Creation date Clip B001C001 23.11.21, 12:35 C B 12:36:29:10, 23.11.21, 12:35 2 B001C0011 23.11.21, 12:36 C B 12:36:29:10, 23.11.21, 12:35 2 B001C0012 23.11.21, 12:53 C B 12:36:29:10, 23.11.21, 12:52 4) Timezone offset of camera
Lubrary Clip Shooting Date Camera Timocode Creation date Clip 8001C001 23.11.21, 12:35 C B 12:36:29:10, 23.11.21, 12:35 2 8001C0011 23.11.21, 12:36 C B 12:36:29:10, 23.11.21, 12:35 2 8001C0012 23.11.21, 12:36 C B 12:36:29:10, 23.11.21, 12:35 2 8001C0012 23.11.21, 12:53 C B 12:52:53.07 23.11.21, 12:52 4	
B001C001 23.11.21, 12:35 Image: Constraint of the state of the st	ip Scene Take
B001C0011 23.11.21, 12:36 B 12:36:29:10, 23.11.21, 12:35 2 B001C0012 23.11.21, 12:53 B 12:52:53.07 23.11.21, 12:52 4	2A 1
B001C001 2 23.11.21, 12:53 3 B 12:52:53.07 23.11.21, 12:52 4	2A 1
A0010001 2311/01/12:30	3A 1
A001C001 1 23.11.21, 12:54	
A001C001 2 23.11.21, 13:00	
Matching 3 of 6 clips, 3 have no match.	

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

mport	Preview	y of t	Changes							
Slate Info	Show C	lips:	🚓 All 🐽 Changes	Conflicts	• Un	change				Original
Circled	State	~	Name	Camera	Episode	Scene	Take	Reel/T	Comm	ent
Votes			A001C001	A		1	1	A1	First S	Shot
Camera Settings			A001C001 1	A	3	5	1	A1	And	
Volation Fields Rename one or more custom fields to map them with "Description", "LUT", "Lens Type", "Lens Height", or "Aspect Ratio".										
nsert / Update Behavior										
Insert if empty										
Overwrite										

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
 Ponamo any cust

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 Silvertack 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 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.

•••		Select Lockit	Netwo Cli	ick here to s	set up an acc	ount.	
Account:			-	0	ŧ		
Project:					0		
Day:					0		
				Mark	Only Selected	+ Unm	ark Selected 🕶
	Library Clip Name	Shooting Date	Generate	ed Name	Reel Name	Clip Name	Creation Date
00	A001C001	14.12.15, 16:27					





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.

Account:	user@pomfort.com			0	۲			
Project:	Testprojekt Pomfort				0			
Day;	Shooting Day 1 27.04.23				0			
					Mark (Only Selected	• Unm	ark Selected +
	Library Clip Name	Shooting Data		Generated Name		Reel Name	Clip Name	Creation Date
0_0	A001C001	14.12.15, 16:27		0001.104/02-1_NK_C	am A	A001	C001	27.04.23
31	A001C002	30.09.19, 10:17		0001.104/02-2_NK_C	am A	A001	C002	27.04.23
	A001C003	20.11.21, 10:00		0001.104/02-3_K_Ca	πA	A001	C003	27.04.23
	A001C004	07.07.22, 16:03		0001.105/01-1_NK_C	am A	A001	C004	27.04.23
	A001C005	07.07.22, 16:03		0001.105/01-2_K_Car	πA	A001	C005	27.04.23
tching 10 of	12 clips, 2 have no match.		-					
							-	

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 <u>support@lockitnetwork.com</u> 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.



Import	Preview of (Changes							
Slate Info	Show Clips	🕹 All 🐽 Changes	Conflicts	# Un	change	5			Origina
User Info	State ^	Name	Camera	Episo	Scene	Shot	Take	Shot Descript	Int/Ext
Generated Name		A001C001	Cam A	1	104	2	1	Totale	Int
1 ppr		A001C002	Cam A	1	104	2	2	Totale	Int
		A001C003	Cam A	1	104	2	3	Totale	Int
Camera Settings		A001C004	Cam A	1	105	1	1	Kamerafahrt	Ext
C Recorder	•	A001C005	Cam A	1	105	1	2	Kamerafahrt	Ext
		A001C006	Cam A	1	105	1	3PU	Kamerafahrt	Ext
Insert / Update Behavior		A001C007	Cam A		take		take4		
Insert if empty		B001_C001	Cam B	1	105	1	1	Halbnahe	Ext
Overwrite		B001_C002	Cam B	1	105	1	2	Halbnahe	Ext
	•	B001_C003	Cam B	1	105	1	3PU	Halbnahe	Ext
LockitNetwork project ma	ntches 10 clips	, changing information in 10	clips (10 with co	onflicts).		0	Go Ba	ick 🗍 🦳	Import

Clicking the import button will take over the previewed changes in the library.

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	Previ	Preview of Changes										
💙 Slate Info	Show	Clips:	👗 All	Changes	٠	Confli	cts	0 L	Jncha	anged	Original	
In/Out Points	State	Nam	e		^	Camera	Scen	e	Take	Reel/T	Flag/C	
Circled" Tag	0	AOC	1C001_16	1024_R54M	Г	A	5		8	No S	hu	
Comment and Cantion	•	AOC	1C002_16	1024_R54M		В	5		8	No S		
Annend Tags	•	AOC	1C004_16	1024_R54M		A	5		9	No S	*	
Camera Settinos	•	AOC	1C005_16	1024_R54M		A	5		6	No S	P	
Lens and Filter	•	AOC	1C006_16	1024_R54M		В	5		6 Up	dated value	· "7" → "6"	
Disduction	•	AOC	1C007_16	1024_R54M	L	Α	5		7	NO S		
Insert / Update Behavior	3								4			
Overwrite												
? CSV matches 6 clips, changi	ing inform	ation in	5 clips (2 v	vith conflicts).			Go	Bac	:k		Finish	

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

Transferring Clips and Metadata to Adobe Premiere Pro

Silverstack can create an .xml file compatible with Adobe Premiere Pro to transfer clips and clip metadata to the editing tool.

Exporting an Adobe Premiere Pro XML from Silverstack

The export option can be accessed from the "Export" button in the toolbar:



Fig. 1: The export menu

After the source selection step you can define content and format options for the exported XML:



Content				
General Olip Info				
Master Info (Scene,	Shot, Take, Reel Name, etc.)			
User/QC Info (Flags	ed, Comment)			
🖸 Custom 1, 2, 3 as N	aster Comment 1, 2, 3			
🔽 Labels as Clip Colo	5			
💟 Audio Info (Source	Audio Clip Names, # of Source A	Audio Tracks)		
Cue Points as Mark	ors			
Format				
Set Reel Name to				
Reel Name				
Source File Name				
Source File Name W	ithout File Extension			
Video Clip Name				
Fills "Tape Name" column	in Premiere.			
Audio				
🖸 Include audio sync	d sequences and referenced au	idio clips		
			Go Back	Save XML

Fig. 2: Content and format option for the XML export

Content:

- General Clip Info: Contains the basic information needed to transfer clips (file paths, etc.)
- Master Info: Contains Scene Shot Take info as well as the Reel Name.
 - Scene in Silverstack maps to "Scene" column in Premiere Pro
 - 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. InformationSensorFps, ShutterAngle, WhiteBalance,
- ExposureIndexAsa, ColorGamma) 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 Names column and the # of Source Audio Tracks Info 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.

• Format:

- Sets the Reel Name to
 - Reel Name: Sets the Reel Name of the XML as specified in the Silverstack "Reel Name" metadata field
 - Source File Name: Sets the Reel Name of the XML to the source file name of the clip in Silverstack (e.g. A003C012_160205_R2VJ.mov)
 - Source File Name Without Extension: Sets the Reel Name of the XML to the source file name without extension (e.g. A003C012_160205_R2VJ)
 - Video Clip Name: Sets the Reel Name of the XML as specified in the Silverstack "Name" metadata field (e.g. A003C012_160205_R2VJ)

In Premiere Pro the Reel Name of the XML will be taken over to the Tape Name column.

After defining the settings click "Save XML..." to export the Adobe Premiere Pro XML.

Creating Synced Sequences in Premiere with Audio Sync Information from Silverstack XT or Silverstack Lab

Overview and Use Cases

Silverstack can provide information about external audio clips that have been synced to Adobe Premiere to create synced sequences with correctly aligned video and audio tracks.

This feature helps e.g. to implement workflows where audio clips are not available before transcoding and are synced to the transcoded clips at the end of the day. Right after automatic audio sync the xml with audio sync information can be exported and provides synced sequences without transcoding again.

Another use case could be bringing camera native ProRes files into edit with synced audio from Silverstack.



How To

After syncing external audio clips with the video clips open the Premiere Export:

Content							
General Olip Info							
Master Info (Scene,	Shot, Take, Reel	Name, etc.)					
User/QC Info (Flagg	ed, Comment)						
Custom 1, 2, 3 as M	aster Comment 1	, 2, 3					
🔽 Labels as Clip Colo	3						
Audio Info (Source	Audio Clip Names	s, # of Source Aud	dio Tracks)				
Cue Points as Mark	ers						
Format							
Set Reel Name to							
Reel Name							
Source File Name							
Source File Name W	ithout File Extens	sion					
Video Clip Name							
Fills "Tape Name" column	in Premiere.						
Audio							
💟 Include audio sync	ed sequences and	d referenced audi	o clips				
				Go	Back	Save XML	

Fig. 3: The Audio option in the Adobe Premiere XML Export

Make sure to mark the checkbox "Include audio synced sequences and referenced audio clips". This will equip the XML with the necessary information.

After opening the XML in Premiere Pro you will obtain the following folders:

📃 - 🗰 A	.007R3	V) (Editorial)_demo						
🧾 v 🖬	A0	7R2VI (Editorial)						
	5	A007C001_160208_	24,00 fps	16:27:57:13	16:28:23:17	00:00:26:05		
		A007C007_160208_	24,00 fps	16:31:22:01	16:32:32:22	00:01:10:22	16:31:22:01	
		A007C003_160208_	24,00 fps	16:35:14:19	16:36:50:12	00.01:35:18		
	2	A007C004_160208_	24,00 fps	16:41:12:12	16:42:36:19	00:01:24:08	16:41:12:12	
		A007C005_160208_	24,00 fps	16:45:16:08	16:46:25:06	00:01:08:23	16:45:16:08	
.		A007C006_160208_	24,00 fps	17:09:09:18	17:10:31:03	00:01:21:10	17:09:09:18	
		A007C007_160208_	24,00 fps	17:12:34:02	17:13:07:08	00:00:33:07	17:12:34:02	
		A007C008_160208_	24,00 fps	17:14:08:18	17151311	00:01:04:18	17:14:08:18	
		A007C009_160208_	24,00 fps	17:19:13:18	17:20:13:07	00:00:59:14	17:19:13:18	
🧾 🛛 🖬	Au	ilo Clips						
		A007_C01	48000 Hz	16:27:44:00001	16:28:25:00000	00.00.41.00000		
		A007_C82	46000 Hz	16:31:12:00001	16:32:39:00000	00:03:27:00000		
		A007_C03	48000 He	16:35:04:00001	16:36:56:00000	00.01.52.00000		
		A007_C04	48000 Hz	16:40:54:00001	16:12:11:00000	00:01:47:00000		
		A007_C05	48000 Hz	16:45:07:00001	16:46:32:00000	00.01.25.00000		
		A007_C06	48000 Hz	17:09:05:00001	17:10:28:00000	00:01:23:00000		
		A007_C07	46000 Hz	17:12:27:00001	17:13:11:00000	00.00.44.00000		
		A007_C08	48000 Hz	17:13:59:00001	17:15:20:000:00	00.01.21.00000		
		A007_C09	48000 Hz	17:18:06:00001	17:20:16:00000	00:02:10:00000		
🧧 🛛 🖬	Syr	ced Clips Sequences						
	de:	A007C001_160208_	24,00 fps	16:27:57:13	16:28:23:17	00:00:26:05	16:27:57:13	
		A007C002_160208_	24,00 fps	16:31:22:01	16:32:32:22	00-01-10-22	16:31:22:01	
.		A007C003_160208_	24,00 fps	16:35:14:19	16:36:50:12	00:01:35:18	16:35:14:19	
		A007C004_160208_	24,00 fps	16:41:12:12	16:42:36:19	00.01/24.08	16:41:12:12	
		A007C005_160208_	24,00 fps	16:45:16:08	16:46:25:06	00.01:08:23	16:45:16:08	
		A007C006_160208_	24,00 fps	17:09:09:18	17:10:31:03	00:01:21:10	17:09:09:18	
		A007C007_160208_	24,00 fps	17:12:34:02	17:13:07:08	00:00:33:07	17:12:34:02	
	air:	A007C008_160208_	24,00 fps	17:14:08:18	17:15:13:11	00:01:04:18	17:14:08:18	
		A0077000 140000	24/00 fps	17101318	17:20 13:07	00.00-5914		

• One folder that contains all the video clips (e.g. A007R2VJ (Editorial), see fig. 4)

- One folder that contains all the audio clips synced with the video clips ("Audio Clips" in fig. 4)
- One folder that contains the "Synced Clips Sequences"

The "Synced Clips Sequences" are Adobe Premiere Pro editing sequences that have the audio in sync position to the clips:



6		8	•			M A007C001_160208_R2VJ
6		8	м	0		
6		81	м	9		
6		8		9		
6	Maste				H	

They can now be used for editing.

To learn more about audio sync with external audio clips in Silverstack Lab and Silverstack XT please take a look at the articles<u>How To Automatically</u> Sync Audio Based on Timecode in Silverstack Lab and How to Manually Sync Audio in Silverstack XT and Silverstack Lab.

Mention the "special setting" for editing ?

How to Open an XML in Premiere Pro

After saving the XML from Silverstack you can go ahead and open the XML file in Premiere Pro.

Open Premiere Pro. Go to the "File" menu and choose "Open Project...". Choose the previously exported XML file and click "Open".

The XML will import as a bin with all exported clips in Premiere:

				-	Assembly	= Editing	Color Effe	ects Austia	20	
			Project: A01582V)							
0158202.040	rd)									
		1 20								
• 🖿 A(1)										
8										
E /										
10 A										
H 2	0000033_16020									
E /										
8										

Fig. 4: The imported XML folder in Premiere Pro

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 <u>HD-SDI Setup for LiveGrade</u> as well as <u>SDI Recording and Framegrabs</u> 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:

	import CP.3	XU Lens D	ata from MasterLoc	KIC PIUS		
				Mark Only Se	ected *	Unmark Selected 🔹
Master Lockit Address: masteriockit.ic	ocal C	Finished	lens data import.			
Lens data queried by shooting da	sta: ≄2h ≎					
Library Clip Na 🔿 Shooting	Data Timacoda In		First Lens Data	Last Lons Data	Lens In	ito
A003C001_17 28.08.17	7, 12:02 10:16:17.06	0	10:16:17.06	10:16:17.06	Comp	act Prime CP.3 15/T2.9,
A003C002_17 28.08.17	7, 12:03 10:16:43.23	2	10:16:43.23	10:17:20.14	Comp	act Prime CP.3 16/T2.9,
		122	10:17:20 05	10-17-66 17	Comp	act Brime CB 2 15/172 0
A003C003_17 28.08.17	7, 12:04 10:17:29.05	3	10-17-22.05	10.17.30.17	Comp	activitie orta topizza
A003C003_17 28.08.17	7, 12:04 10:17:29.05	4	10-17-29.05	0.17-00.17	Comp	act Pline Groa haj 14.8
A003C003_17 28.08.17 Matching 3 of 3 clips. Import Options	X 12:04 10:17:29.05		10-17-29-09	0.17.30.17	Comp	
Metching 3 of 3 clips.	clip	U	10-17-23.03	10.17.30.17	Comp	aurrinie ur a laj rzie,
Metching 3 of 3 clips. Import Options Overwrite "Lens" Information of o Sensor Widthe Total min (based in	elip on Camera Info)	U	0-17-23.03	10. 7 30 H	Comp	eurrinne ur a laj raja
Metching 3 of 3 clips. Import Options Overwrite "Lene" Information of c Sensor Width: 1994 mm (based in	dip on Camera Info)	U	0.0.2303		Comp	su rane ura ny rae

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)
 - ResolutionThere 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 <u>Dynamic Metadata</u>.

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:

SAT Nodes	1		
LUT Nodes	Custom LUT		
ACES Version			
Anamorphic	None	۲	
Flip	None	۲	
ZEISS Lens Correction	Shad, Dist, 15.8mm	۲	
▼ Production			
Director		۲	
Production		۲	
Producer		0	

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. 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:





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:

Ch	oose Media Files from V	/olume ~	Mark All * Unmark All *	Q Smarch
	Name	👌 Media File	9 Path	Fla
2 [A003C001_170	0828_R271 🚊 Macir	ntosh HD — e A003C001_170828_R271.m	ov C
	A003C002_170	0828_R271 🚊 Macir	ntosh HD — a A003C002_170828_R271.m	ov ¢
- 1	A003C003_170	0828_R271 🚊 Macir	ntosh HD — 🍙 A003C003_170828_R271.m	ov 0
Display	ing 3 of 3 C <mark>li</mark> ps holding Z	EISS Lens Correction Da	ata	
201	no colocted		Go Back	Export

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 .zlcf (ZEISS lens correction file) will be exported. After clicking "Export..." the wizard points you to select a folder for the zlcf files to be placed.



Camera Formats

Generic file formats

Offloading all kinds of assets is possible with Silverstack's proven copy features, which offer secured backups with checksum verification. The Offload wizard scans the source folder and automatically selects the «Generic Copy» mode when non-supported files are detected. Not all media files are recognized as playable Clips by Silverstack, besides the supported advanced media formats that can be found in the article <u>Assets in Silverstack</u>.

gest and Greate Thumbnai	ta:	Ingesting NO clips / 5	Ripped 1 ignored file	A Learn Mor
Stills with	0 clips (and 0 s	decar files, 402 documen	ts)	Edi
Automatic detection	٥			Q Search
Generic: Any nes	10			-
T 000000 inc		19/05/06 20:38	34.8 KB	warmout i
5 000001.jpg		19/05/06 20:38	34.8 KB	
= 000002.ipg		19/05/06 20:38	34.8 KB	
= 000003.ipg		19/05/06 20:38	34.8 KB	
B 000004 ipg		19/05/06 20:38	34.8 KB	
= 000005.ipg		19/05/06 20:38	34.8 KB	
a 000006.jpg		19/05/06 20:38	34.8 KB	
= 000007.jpg		19/05/06 20:38	34.8 KB	
= 000008.jpg		19/05/06 20:38	34.8 KB	
B 000009.jpg		19/05/08 20:38	34,8 KB	
a 000010.jpg		19/05/06 20:38	34.8 KB	
9 000011.jpg		19/05/08 20:38	34,8 KB	
3 000012.jpg		19/05/06 20:38	34.8 KB	
B 000013.jpg		19/05/08 20:38	34,8 KB	
Allow partial offload				
Filter options				
Allow import of duplica	tas			
M	_		_	_
opy and verify				
-				
7 Linetineties	Donkey SSD			Edit
1 Dectination	Donkey SSD			Edi

Offloading wizard

You will get a yellow notification reading «Ingesting NO clips» in the offload wizard in case Silverstack didn't recognize the scanned files as a supported advanced camera format. However, you can go ahead and proceed to offload and check sum the files. Once the process is finished, the files will be registered in the Library, where you can continue to work with them. Just make sure to enable «Show Clips and Documents» in the View menu:



View menu

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, <u>ALEXA Looks</u> and <u>AMIRA Looks</u> 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 Sorce» 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.


ShotHub Integration

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 connectedSilverstack 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.
- In the last step, you choose the sync options. Select if you want to**upload thumbnails** with the metadata library.
 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: <u>Sync Clip Library</u>

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
- J sync is in progress, new library data, changes, or thumbnails are synced
- ✓ project is synced completely
- x 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 <u>application preferences</u>. 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.

Add Project from ShotHub	New Project
Untitled Project 5	O Cline
Untitled Project 4	U Cilps
Created at 24.03.22, 17:57	0 Clips
Created at 24.03.22, 17:57	0 Clips
Untitled Project 2 Created at 24.03.22, 17:57	0 Clips
Untitled Project 1	
Created at 24.03.22, 17:57 Untitled Project	0 Clips

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
- Thumbhails (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

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.



Troubleshooting

Application Preferences

Many general settings for Silverstack can be changed within the Application preferences and by doing so, working with Silverstack may become even easier to fit your workflow.

You get to the preferences menu by selecting 'Preferences..." in the "Silverstack" menu. The window that opens up contains following sections which will be described detailed in this article:

- General
- General
 Projects
 Media
 Copy&Jobs
 Playback
- Formats
- Ingest
- Backups
- External Video
- Grading
- ACES
- Slating
- Accounts
- Updates



Silverstack's preferences overview

General

Make decisions about appearance topics here.

0.0			G	eneral						
General Projects Media Copy&Jobs	Playbock	i formata	Ingest	Backups	External Video	Orading	ACES	Slating	() Accounts	Updates
Appearance										
Hide verification state indicator f	or bins									
Use 60 @ 30 for timecode displa	у									
Decimal Places for File Size Values:	2 🖸									
Backup Statistics in Reports:	Verified	Backups	0							
Unread Jobs										
🖸 Show summary of unread jobs in	offload r	nenu								
🖸 Warn me about unread failed job	s on ever	y new offi	oad							
Remind me about unread failed j	obs every	30 Mi	ir)		0					
Language										
Preferred Language:	English		E							

General preferences

Projects



Image: Second	eo Grading	CES ACES	Slating	Accounts	Updates
Settings for Project "Untitled Project 1" Label Names No Label No Label Bed Bed Atternate Atternate Notarage Take Noderate Take Pomfortion Titles for Custom Fields Titles for Custom Title Titles for Custom Title Custom 5 To automatically extract special metadata during ingest, use metadatum names from the he					
Jabel Names No Label Best Take Average Take Average Take Moderate Take Moderate Take Titles for Custom Fields 1: myCustomTitle 2: Custom 3 To automatically extract special metadata during ingest, use metadatum names from the here					
No Label No Label Beol Beol Average Take Average Take Noderate Take Pomfortio Titles for Custom Title 2: Custom 2 Custom Title Se Custom 5 To automatically extract special metadata during ingest, use metadatum names from the he					
No Label B Rol Atternate At					
Best Take Atternate Atternate Atternate Atternate Atternate Atternate Atternate Atternate Atternate Description Moderate Take Pomfortio Titles for Custom Title 2: Custom 2 4: Custom Title 3: Custom 5 To automatically estract special metadata during ingest, use metadatum names from the he					
Average Take Moderate Take Pomfortion Titles for Custom Fields myCustomTitle 2: Custom 2 Custom 4 5: Custom 5 To automatically extract special metadata during ingest, use metadatum names from the he	Shota				
Moderate Take Pomfortion Titles for Custom Fields 1: myCustomTitle 2: Custom 2 4: Custom 4 5: Custom 5 To automatically extract special metadata during ingest, use metadatum names from the here	di				
Titles for Custom Fields 1: myCustomTitle 2: Custom 2 4: Custom 4 5: Custom 5 To automatically extract special metadata during ingest, use metadatum names from the here	anös:				
Titles for Custom Fields 1: myCustomTitle 2: Custom 2 4: Custom 4 5: Custom 5 To automatically extract special metadata during ingest, use metadatum names from the here					
To automatically extract special metadata during ingest, use metadatum names from the he	3: Cu	ntom 3			
	neader Info tr	sb as title.		?	
New Projects					
Load default Project Settings from file:					
No Project Settings File Selected				Choose	

Project preferences

This section 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.

Project preferences

- You can set custom names for the color labels
- You can set titles for the custom fields for the active project. This can also be used to extract special metadata from clips (see KB article: Using Silverstack Custom Field Titles to Read Additional Metadata).
- Also, you can choose to apply a custom configuration to all newly created projects (see KB article: Transfer of Project Settings)

Media

In the "Media" section you can set options for the creation of thumbnails and still frames as well as the use of dynamic metadata.

📋 🧮 📩 General Projects Media Co	Q	ayback	Formats	Ingest	Backups	External V	Video (() Grading	ACES	Stating	(@) Accounts	Updates
Thumbnails												
Default thumbnail po	osition: - B	egin	3(4	K.		Mic	jdle	SA.		,	1); 1);	End
💟 Thumbnails fo	r Clips					IT 💟	numbn	ails for	Sideci	ars & Do	ocuments	
Dynamic Metadata Focus Distance Unit	: Imperia	I S	f thumh	mail fra	me for re	aports						
Still Image Export												
Use Still Image Setti	ings from:	O GI	iobal Prei	lerences Export 1	ranscodir	ng Preset						
Store Exported Still in	mages To											
/Users/fba/Picture	es/Silversta	ick Still	Image	Exports	e.					C	Choose	
Naming Scheme:	Clip Name	e & Fran	me Inde:	c	0							
Image Format:	TIFF - 16-	Bit, Un	compre	ssed	0							
inage i ormat.	As Currer	ntly Sho	own in P	layer	0							
Color Mode:												

Media preferences



You can choose the position in the clip from which the thumbnails are taken (see article <u>Choosing Custom Thumbnail Images</u>). In addition, you can disable the thumbnail creation on Offload jobs to speed up the process and create them afterwards from the «Edit» menu. It's also possible to export still frames from clips either with the Original Color, as shown in player or the two images at once. The process is described in the article <u>Still image export</u>.

Copy&Jobs

Here you can define all the settings related to the copy process and other jobs.

0.0	Copy&Jobs	
eneral Projects Media Copy&Jobs Playbo	ck Formets Ingest Backups External Video Grading ACES Slating Accounts	Update
Copy Options		
Read Buffer Size:	8 MB (Recommended)	0
Display of Copy and Verification Speed:	Combined Speed (Sum of Transfer Speeds)	0
Documents:	Inherit Wildcard Metadata from Clips	0
File System:	Generate reel folder icons Colorize Finder labels	
Hash Manifest:	None Create legacy hash files	
Primary Job Queue (for Copy and Verification)		
Depending on hardware, copy and verification p	rformance may improve by increasing the number of parallel tasks and jobs.	
Number of Parallel Tasks:	1 (Optimized, Recommended)	0
Number of Parallel Jobs:	1 😌	
Secondary Job Queue (for Copy and Verification)		
Separate verification jobs and "2nd run" jobs (if	configured below) are scheduled independent of the primary job queue,	
Number of Parallel Jobs:	1 😌	
Schedule cascading copy "2nd r Do not let "2nd run" jobs (e.g. to slow	un" jobs in secondary queue destinations) block new "1st run" or other jobs in the primary queue.	2
Transcoding Options		
GPU Selection:	Auto (Uses system default GPU.	
Automatically interrupt transcod	ng jobs during playback and offload	
Rendering Pipeline (for Playback and Transcoding		
Prefer CPU-based over hardware Can improve performance on certain	accelerated decoding for H.264/H.265-based formats ystems, for example on Intel systems with many CPU cores.	
Automatically interrupt transcoding Prefer CPU-based over hardware Can improve performance on certain	ng jobs during playback and offload accelerated decoding for H.264/H.265-based formats ystems, for example on intel systems with many CPU cores.	

Copy & Jobs preferences

Playback

Here you can edit some settings for playback Besides setting the color in which black- and white-clipping regions of a video image are indicated, you can also set the range color and clipping and range unit.

In addition, it's possible to disable the automatic application of ALEXA and AMIRA Looks used while recording. This way the footage will be displayed with the default Log-C to Rec.709 instead of the look.

In the "Playback" tab you can also select on which display the Playback Mode will be shown if you have more than one screen connected to your computer.



					P	ayback						
neral Projects	Media 0	Opy&Jobs	Piayback	Formats	Ingest	Backups	External Vio	deo Gradin	Q ACES	Stating	@ Accounts	Updates
Playback View	,											
Disable	ColorSy	nc and us	e video g	amma in	the Pla	ayback V	iew					
If Colors using vie	Sync is di deo gamn	sabled, the na (Rec. 70	monitor co 9).	lor profile	set in t	he OS X d	splay prefer	ences is by	bassed a	nd the vid	ieo is show	m
Control												
Interaction	Mode:	Default				1	Scroll: Zoom	1				
Positioning	for Dra	g-Scrubbi	ng:			H	Drag: Scru	ь				
Absolut	e 💮 Re	alative										
Visual Control	ls											
Clippin	ng and R	ange Unit	% of C	Code Vali	je Ra	0						
Whit	tes Clipp	oing Color				_						
Blac	cks Clipp	oing Color										
	Ra	nge Color	-									

Playback preferences

Formats

Within this section you can change settings regarding different cameras you may use for importing video clips. You can set those attributes for following cameras/recorders: AJA KiPro and Atomos, ARRI Alexa, Sony F5/F55/F65 XAVC, Canon C300, GoPro Hero and Nikon, R3D and Canon DSLR.

The options that are available 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. So 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 so much for the ARRI Alexa and AJA KiPro.

AJA KiPro and Atomos

- You can set the Look source which will be preselected for the ingested material. Learn more about this feature in the article Basic Color Control in Silverstack.
- Furthermore you can let Silverstack extract informations about scene and take from the filenames by selecting the according checkbox.
- 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.



figure 6: format options for AJA KiPro

ARRI Alexa

- You can set the Look source which will be preselected for the ingested material. Learn more about this feature in the article Basic Color Control in Silverstack.
- Silverstack provides the option to generate the timecode with different modes.



figure 7: format options for ARRI Alexa



Canon c300

• You can set the Look source which will be preselected for the ingested material. Learn more about this feature in the article Basic Color Control in Silverstack.



figure 8: format options for Canon C300

Canon DSLR

- You can set the Look source which will be preselected for the ingested material. Learn more about this feature in the article Basic Color Control in Silverstack.
- The source timecode can be defined by the Thumbnail Image file, the Quicktime header create date and the file create date.
- By selecting the according checkbox Silverstack will also copy any THM sidecar files from your Canon camera.



figure 9: format options for Canon DSLR

GoPro Hero and Nikon

- For any GoPro Hero and Nikon camera you can set only the option which defines the source timecode either to Quicktime header create date or file create date.
- You can set the Look source which will be preselected for the ingested material. Learn more about this feature in the article Basic Color Control in Silverstack.



figure 10: format options for GoPro Hero

R3D

- You can set the Look source which will be preselected for the ingested material. Learn more about this feature in the article Basic Color Control in Silverstack.
- The source timecode can be defined as absolute timecode, edge timecode, file create date or by user preference.
- Reel name generation mode.
 Use a Red Rocket card if available.







F5/F55/F65 XAVC

• You can set the Look source which will be preselected for the ingested material. Learn more about this feature in the article Basic Color Control in Silverstack.



figure 12: format preferences for Sony F5/F55/F65 XAVC clips

Generic File Sequence

Silverstack allows to import JPEG, TIFF and DPX image sequences as clips. You can Set the default playback speed in the Import Options menu:



figure 12.1: Generic File Sequence preferences

Ingest

Silverstack scans the volumes from which you want to offload. In this tab you can select what kind of files or patterns should be ignored in the ingest process. You can add or delete different file types and patterns.



agories below.				ou mode mas an	ouid be u	eated D	y auoing	ma harran	is to th
le pattern is a string which is mat	ched against the file	paths th	e scanne	r finds. It can co	ntain the :	special	characte	rs ? and * v	which
resent one arbitrary character or	any number of arbiti	rary chara	acters res	spectively.					
	-								
	Ignore P	atterns	Single	File Patterns					
Files matching this pattern will be	e ignored during sca	nning for	files in th	he Offload Wizar	d,				
File pattern	Comment	Ignore	Case						
*.DS_Store	Finder Thumb								
.app/	Application Bu	C	/						
.pfncopy/	Pomfort Copy								
*.fcpuser	Final Cut Pro I								
*.fcplock	Final Cut Pro I								
.fseventsd/	Mac OS X Inter.	a 10							
*/.VolumeIcon.icns	Mac OS X Volu	: IC							
.Trashes/	Mac OS X Disk		1						
.background/	Mac OS X Inter.	as 10							
*.hotfiles.btree	Mac OS X Inter	83 - NE							
*.localized	Mac OS X Inter	. (C							
*/.DocumentRevisions-V1	Mac OS X Inter	a (C							
/.Spotlight-V100/	Mac OS X Inter.	a (C							
*/.apdisk	Time Machine								
.TemporaryItems/	Time Machine	10	5						
						R	estore D	efault Patte	erns
+ -								a real and a second	

Ingest preferences

Backups

Here you can create and restore database backups of your current and past Silverstack states.

General Projects Media Copy&Jobs Playback Formats	Ingest Backups External Video	Grading ACES Stating	Accounts Update:
🗹 Enable automatic backups (requires restart)			
5 🔗 last regular backups are stored			
Database Backups			
Date	 Version 	Type	
Yesterday 19:22	135	regular	
Yesterday 18:24	132	migration	
L _ /* Destars this varsies in new emission			
+ - C Restore this version in new project			
+ - C Restore this version in new project			

Library Backup preferences

External Video

Here you can choose the settings for the external video output.



0.0						Exter	nal Video						
General	Projects	Media	Q Copy&Jobs	Playback	A Formats	ingest	Backups	External Video	Grading	(CES)	3 Slating	() Accounts	Updates
Extern	al Video												
Silve	rstack can o	utput the	player image	to video har	dware from	Blackma	gic Design a	ALA 10					
0	Enable exte	ernal vide	eo output										
	Out	put Devic	e: No devi	ce available	o. Please re	scan				• R	lescan		
		Lev	el: Legal F	lange						0			
RG	B-YCbCr C	onversio	on: Rec.70	9 Matrix						8			
	Vid	leo Form	at: O Try t Fixed	o Match C I	lip -			0					
lgr	nore Devices	í.											
	Release	Blackma	agic devices	when Silv	erstack is	in backs	round						
	Don't us	se AJA de	evices										
Video :	Scopes												
C Sc	Do not upd opeBox Inte	ate scop gration	es during pl	ayback (m	ay increa	se perfo	mance)						
s	соревок са	n be used	with Silversta	ck to show	advanced	video scos	es of the in	hage shown in the	s płayback	view.			
	Connec	t to Scop	еВох										

External Video preferences

Silverstack comes with the option to output an HD-SDI signal via compliant hardware. Learn more about it in the article<u>HD-SDI output in Silverstack</u>. You can use ScopeBox by Divergent Media for software-based waveform and <u>video scopes for Silverstack's player</u>.

Grading

These are the settings for the grading functionalities in Silverstack.

				G	rading						
Projects Media	Ç Copy&Jobs	Playback	AGe Formats	Ingest	Backups	External Video	Orading	(CES	Slating	() Accounts	Update:
rpolation											
olation Method:	Tetrahedra	I 🖸	Require	s restart t	o take effec	i.					
e Panels											
nsitivity:							-				
fine			me	dium			coarse				
sable Hardware C	Grading Pane	ls (require	s restart)								
n-Sat Curves											
ld primary curve	points for Hu	ie	Require	s node re:	iet to take e	ffect					
											?
d primary curve	points for Hu	ie	Require	s node re	iet to take e	flect					

Grading preferences

Silverstack comes with grading functionalities and an integrated look library. Learn more about it from the articles Grading Controls in Silverstack and The Silverstack Look Library.

ACES

These are the settings for the ACES grading mode functionalities in Silverstack:







Slating

- Slating System: Choose a "Slating System" to show only relevant menu items within the "Edit Scene/Shot/Take" menu for your preferred slating system:
 - "Standard" lets you work with continuous slating with scene / shot / take fields (e.g., Scene "56" / Shot "4" / Take "2")
 - "American" lets you work with American slating with scene / take fields (e.g., Scene "56C" / Take "2")
 - "All" lets you see all available menu items for full flexibility
- Scene Letter: The "Scene Letter" checkbox 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 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: You can also define specific characters to be skipped when incrementing letters in the scene/shot/take fields.

neral Projects Media	Copy&Jobs	Playback	Formats	Ingest	Backups	External Video	Grading	ACES	Slating	(@) Accounts	Updates
Slating											
Slating system:	Standard										
	Select a slatin preferred slati	g system t ng system	o show o Select "	nly relev All" to si	ant menu	items (in "Clips ailable menu ite	" -> "Edit ! ms.	Scene/S	ihot/Take	") for your	
Scene Letter:	Automati	cally app	end lett	er on "l	ncrease	Scene" action	s: A				
Skipped charact	ers in scene,	shot and	l take fie	elds:							
IOYZ											

Slating preferences

Accounts

You can manage the accounts to upload or share your library via <u>ShotHub</u>, for <u>direct dailies upload</u> via Webgate.io or Frame.io and for <u>sending job</u> <u>notifications to Slack</u> here.



ADDI Webset		othub				
user@pomlorLcom						
))) Frame.io	Q Po	omfort Account	t			
Slack		Email Address:	user@pomfort.com			
Pomlait: #myChannel	ad .	Password:	•••••	•••••		
			Successfully auti	henticated		

Accounts preferences

Updates

These are the settings for automatic updates, usage statistics and crash reports.

Auton	atic Updates	
	Update Interval: Daily 🔮 Last checked: 28. Sep 2021 at 15:03:56	
	The easiest way to get the latest Silverstack Lab 8.0 Beta features is by checking for updates automatically.	
Usage	Statistics and Crash Reports	
2	end anonymous usage statistics	
	The usage statistics includes anonymous information about features in Silverstack Lab 8.0 Beta that are used most frequent. It will help us to improve our products for the future.	
2	end crash reports automatically	
	The crash reports include information about the state of the program when it crashed and your machine. Crash reports help us with analyzing and fixing problems in our products.	

Update preferences

Operating Systems and Requirements

Our software Silverstack requires an Apple Mac machine with macOS 11 or higher operating system. Since we are using the latest of macOS technologies, we are not planning to support earlier versions of macOS, neither will we port Silverstack to another operating system in the near future.

So to run Silverstack you need an Intel Mac with macOS 11 or higher (such as any current Mac available in the MacStore).

You can find a list of supported formats in the article <u>Assets in Silverstack</u>. All formats with no specific detection will be handled as generic files. Please see the article <u>Generic File Formats</u> for more information.

For a realtime playback of your offloaded video files the usage of a fast hard drive as a SSD card is recommended.

If you have further question about supported hardware please let us know. If you would like to know more about<u>data performance</u> click <u>here</u>. You might be interested in <u>this article</u> for improving your performance.



Deprecated Operating Systems

Silverstack still works on the following macOS operating systems but a deprecation warning shows that support for those operating systems will likely to be removed soon:

• currently no deprecated macOS for latest Silverstack version

Reset Silverstack's Library and Preferences

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.Silverstack1.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.

How do I migrate a license from one computer to another?

You can move a license of a Pomfort product from one computer to another. This may be useful if you move from an older Mac to a new model. Basically, there are two different modes available:

Standard License Activation Mode (default)

The standard license activation mode is the default mode for all types of licenses, including our temporary licenses.

There are two activities involved:

- · Unregistering the license from the old computer and
- registering the license on the new computer.

Please note, that you need an internet connection for the following steps.

1. Unregistering the license from the old computer

You now have to perform the following steps:

- Open the License Panel by choosing "Licenses..." from the application menu.
- Click on "Deactivate License".

The Pomfort application will stop working on this machine and the license is free to use on another machine.

By logging into your <u>Pomfort Account</u> you can make sure that the deactivation of your license was successful. The license should now be shown as "Inactive".

2. Registering the license on the new computer

Let's assume you already have the application installed on your new computer.

You now have to perform the following steps:

- Open the program, the License Panel will appear. If not, choose "Licenses..." from the application menu.
- Click on "Add License..." and insert the license key you received after purchase.

In your Pomfort Account your license will now be shown as "Activated" with the name of the computer that your license is activated on.



Daily License Activation Mode

The optional "daily license activation mode" allows to use your license on different machines on different days. Hence, subscription-based licenses can be added to multiple computers at once via the license manager in the software. However, as in standard mode, it can only be activated on one machine at a time.

In this case, a license is then always active for 24 hours on a specific computer. After one day, it can be easily migrated back to another computer (on which it was already added before). To do this, however, the corresponding computers must be briefly connected to the Internet once a day. If no switch is attempted, the license is automatically renewed for another day on the current computer.

As soon as you start the desktop application on the computer on which a license is to be activated, a notification appears automatically, which allows you to activate it directly with one click. If this is successful, the license can be used on that computer for the next day.



If an activation cannot be carried out successfully, an error message appears, which at the same time provides information about the currently active computer. A new change can only be attempted the following day.



If a change has to be made before the 24 hours have passed, the standard activation/deactivation procedure described above can also be used at any time in daily mode.

Migrate a Silverstack project from one computer to another

Sometimes it's necessary to migrate an entire project from one computer to another – maybe even during a project. It's not that difficult – this article shows how this can be accomplished.

There are two activities involved:



- Migrating the license
- Migrating the Library

Migrating the License

Migrating the license is straight forward, it can be done in Silverstack . You need an internet connection and follow the steps described in the Tips & Tricks document "Migrate a Silverstack license".

Migrating the Library

Migrating the project with all it's information is basically moving the Library's database, the thumbnails and the application's preferences to the new computer.

If you want to migrate your Silverstack 7 projects to Silverstack 8 please learn how to do that from the article<u>"How to Manually Migrate Silverstack 7</u> Projects to Silverstack or Silverstack Lab 8"

In order to transfer files from one computer to another please have an external hard drive or a large USB stick at hand or establish a network connection with file sharing between the two computers.

Silverstack 8

If you are using Silverstack 8, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder Silverstack8 and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.Silverstack8.plist to the same destination on the new computer.

Silverstack 7

If you are using Silverstack 7, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder Silverstack7 and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.Silverstack7.plist to the same destination on the new computer.

If you are using Silverstack Lab 7, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder SilverstackLab7 and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.SilverstackLab7.plist to the same destination on the new computer.

NOTE: Since OS X Lion the Library folder in your home directory is hidden. In Finder use Command-Shift-G ($\Re \Upsilon G$) and enter-/Library to open the folder.

You can also use the Library Metadata Exchange feature present in Silverstack XT.

Silverstack 6

If you are using Silverstack 6, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder Silverstack6 and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.Silverstack6.plist to the same destination on the new computer.

If you are using Silverstack Lab 6, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder SilverstackLab6 and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.SilverstackLab6.plist to the same destination on the new computer.



NOTE: Since OS X Lion the Library folder in your home directory is hidden. In Finder use Command-Shift-G ($\Re \Omega G$) and enter-/Library to open the folder.

You can also use the Library Metadata Exchange feature present in Silverstack XT.

Silverstack 5

If you are using Silverstack 5, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder Silverstack5 and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.Silverstack5.plist to the same destination on the new computer.

NOTE: Since OS X Lion the Library folder in your home directory is hidden. In Finder use Command-Shift-G ($\Re \Omega G$) and enter-/Library to open the folder.

You can also use the Library Metadata Exchange feature present in Silverstack XT.

Silverstack 4

If you are using Silverstack 4, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder Silverstack4 and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.Silverstack4.plist to the same destination on the new computer.

NOTE: Since OS X Lion the Library folder in your home directory is hidden. In Finder use Command-Shift-G ($\Re \Omega G$) and enter-/Library to open the folder.

You can also use the Library Metadata Exchange feature present in Silverstack XT.

Silverstack 3

If you are using Silverstack 3, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder Silverstack3 and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.Silverstack3.plist to the same destination on the new computer.

NOTE: Since OS X Lion the Library folder in your home directory is hidden. In Finder use Command-Shift-G ($\Re \circ G$) and enter-/Library to open the folder.

Silverstack 2

If you are using Silverstack 2.2, you have to perform the following steps to migrate all thumbnails and the Library database:

- In Finder on your old computer navigate to ~/Library/Application Support/Pomfort in your home directory.
- Copy the folder SilverstackMaster and all of its contents to the same destination on the new computer.

You have to perform the following steps to migrate the application's preferences files:

- In Finder on your old computer navigate to ~/Library/Preferences in your home directory.
- Copy the file com.pomfort.SilverstackMaster.plist to the same destination on the new computer.

NOTE: Since OS X Lion the Library folder in your home directory is hidden. In Finder use Command-Shift-G ($\Re \Omega G$) and enter-/Library to open the folder.

How to Manually Migrate Silverstack 6 Projects to Silverstack 7 or Silverstack 7 Projects to Silverstack 8

If you are a user of Silverstack 6 you might want to migrate your projects to Silverstack 7 or Silverstack Lab 7. There is an easy process to perform this migration.

The instructions in this article can also be used for manually migrating Silverstack 7 to Silverstack 8 projects. Just replace the library path numbers with the according version numbers.

Locating the Library Folders

Silverstack 7, Silverstack Lab 7 and Silverstack 6, have different library folders that contain the projects. You will find them at the following paths on your Mac:

- ~/Library/Application Support/Pomfort/Silverstack7
- ~/Library/Application Support/Pomfort/SilverstackLab7
- ~/Library/Application Support/Pomfort/Silverstack6



You can also navigate to the folders from the Main Menu of Silverstack 6 or 7 or Lab 7. Select"**Silverstack-Show Library in Finder**" in the main menu bar at the top of the screen. This will open the project folder an bring you to the Silverstack.psdb file of your currently opened project. From there you can go two directories backwards to find yourself at the directory of the Silverstack library folders.

Migrating the Library

- 1. Close Silverstack 7 / Silverstack Lab 7
- 2. Rename the "Silverstack7" or "SilverstackLab7" folder in the directory /Users/[yourUser]/Library/Application Support/Pomfort/ to
- "Silverstack7_old"/"SilverstackLab7_old" (you will need that folder to keep new projects)
- 3. Open Silverstack 7 / Silverstack Lab 7
- 4. Just like when you started Silverstack 7 / Silverstack Lab 7 from scratch the first time you will be asked if you want to migrate your libraries from version 6 or want to start clean:



- 6. Choose "Copy Existing Projects" to migrate your Silverstack 6 libraries.
- 7. The library migration assistant will keep you updated on the process and tell you when the migration has finished:



Figure 2: The library migration assistant

8. You can now use Silverstack 7 / Silverstack Lab 7 with your projects from Silverstack 6.

Please note that for large libraries the process can take several minutes. During that time Silverstack will become unresponsive. Leave the system running and the migration process will come to a solid finish.

Keeping Projects from Before the Migration

If you want to keep projects you created in Silverstack 6 before the migration process you can do that by copying the project folders:

- 1. Close Silverstack.
- 2. Go to the previously renamed "Silverstack7_old"/"SilverstackLab7_old" folder.
- Select the projects you want to take over to your migrated Silverstack 7 / Silverstack Lab 7 library (projects folder usually are named like "Project-1F342874AF90")
- 4. Copy them to the Silverstack7 / SilverstackLab7 folder that was automatically created during the migration.
- 5. Start Silverstack 7 / Silverstack Lab 7

You will then have all your migrated and the previously created projects in Silverstack 6 together at one place.

If you want you can then delete the "Silverstack7_old"/"SilverstackLab7_old" folder because now your current Silverstack 7 / Silverstack Lab 7 library contains all your projects from Silverstack 6 and 7 respectively Silverstack Lab 7.

How to Manually Migrate Silverstack Projects to Silverstack Lab

If you are a user of Silverstack you might want to migrate your projects to Silverstack Lab. There is an easy process to perform this migration.



Locating the Library Folders

Silverstack and Silverstack Lab have different library folders that contain the projects. You will find them at the following paths on your Mac:

- ~/Library/Application Support/Pomfort/Silverstack7
- ~/Library/Application Support/Pomfort/SilverstackLab7

You can also navigate to the folders from the Main Menu of Silverstack or Lab. Select "Silverstack>Show Library in Finder" in the main menu bar at the top of the screen. This will open the project folder an bring you to the Silverstack.psdb file of your currently opened project. From there you can go two directories backwards to find yourself at the directory of the Silverstack library folders.

Migrating the Library

- 1. Close Silverstack
- 2. Rename the library folder (e.g. SilverstackLab7) in the directory ~/Library/Application Support/Pomfort/ to "SilverstackLab7_old" (you will need that folder to keep new projects)
- 3. Open Silverstack Lab
- 4. Just like when you started Silverstack Lab from scratch the first time you will be asked if you want to migrate your libraries from another version or want to start clean:

If you want to continue using your projects from Silverstack with Silverstack Laby you can copy all institutg projects and preferences use them with Silverstack Lab. Your original projects will not be altered in any case. NOTE: For large libraries this process can take several minutes dur which Silverstack Lab will be unresponsive.	-	Migrate Existing Projects and	I Preferences	
Your original projects will not be altered in any case. NOTE: For large libraries this process can take several minutes du which Silverstack Lab will be unresponsive.		If you want to continue using your pu Silverstack Lab you can copy all exist use them with Silverstack Lab.	rojects from Silverstack with sting projects and preferences to	
NOTE: For large libraries this process can take several minutes dur which Silverstack Lab will be unresponsive.		Your original projects will not be altered in any case.		
		NOTE: For large libraries this process can take several minutes during which Silverstack Lab will be unresponsive.		
Start with Empty Library Copy Existing Project		Start with Empty Library	Copy Existing Projects	

Fig. 1: The migration panel

5. Choose "Copy Existing Projects" to migrate your Silverstack libraries.

6. The library migration assistant will keep you updated on the process and tell you when the migration has finished:



Figure 2: The library migration assistant

7. You can now use Silverstack Lab with your projects from Silverstack .

Please note that for large libraries the process can take several minutes. During that time Silverstack will become unresponsive. Leave the system running and the migration process will come to a solid finish.

Keeping Projects from Before the Migration

If you want to keep projects you created in Silverstack before the migration process you can do that by copying the project folders:

- 1. Close Silverstack.
- 2. Go to the previously renamed "SilverstackLab7_old" folder.
- 3. Select the projects you want to take over to your migrated Silverstack Lab library (projects folder usually are named like "Project-1F342864AF90")
- 4. Copy them to the Silverstack Lab folder that was automatically created during the migration.
- 5. Start Silverstack Lab

You will then have all your migrated and the previously created projects in Silverstack Lab together at one place.



If you want you can then delete the "SilverstackLab7_old" folder because now your current Silverstack Lab library contains all your projects from Silverstack and Silverstack Lab.

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/Silverstack Lab.

We always recommend to use the latest version of Silverstack/Silverstack Lab which can be downloaded on the <u>Pomfort Downloads page</u>. Like this you avoid the situation this article takes care of.

Migration and Library Version States

The term "Library Version" basically refers to the state of the Silverstack 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 article "How to manually migrate Silverstack 5 projects to Silverstack 6 or Silverstack Lab 6"

After the migration your library is in a later/newer state and therefore not compatible anymore 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 with 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 Silverstack preferences' "Backups" tab 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

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 has been properly deactivated from the original computer.

You can do this check by logging into your Pomfort Account. The license status needs to be shown as "Inactive" for you 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 do I install a license for all users of a Mac?

You can register Offload Manager, Silverstack and Livegrade once on one machine and afterwards make the license available to all users.

After the activation just move the files in

~/Library/Application Support/Pomfort/Licenses

to /Library/Application Support/Pomfort/Licenses

(You will have to create the folders Pomfort/Licenses).

Please Note: Since OS X Lion the Library folder in your home directory is hidden. In Finder use Command-Shift-G ($\Re \circ G$) and enter-/Library to open the folder.

When restarting the application it will load the licenses from the system disk and every user should be able to use it. With that solution multiple users of this machine can use the Pomfort product license.

Sample Project and Sample Footage

Silverstack, Silverstack XT, and Silverstack Lab enable you to easily download a sample project and sample footage via the main menu. The sample project and according sample footage are a simple way of receiving a fully working sample project easily and quickly to evaluate Silverstack.

From the "Help" menu of the Silverstack main menu you can select:

- 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.

Window	Help				
		Search			
		Contact Support / Report Problem			
Library		Download Sample Project		Custo	m La
		Download Sample Footage		mera	Ep
53_2105179		PDF Manual			111278. 12 == 1
54_2105170		Online Help			00æ3
55_2105176	6S_C	3.5 sec	-		vizi-