ConformAll Script User Guide for DaVinci Resolve
Version 1.2

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Intro

During this manual we will use the term Mog to refer to the video servers because the ConformAll script was developed based in those video servers. But the principles used can be applied to other video servers as well. The main concern it's the way as the server configures the filenames of the recorded files. We use a field separator and a field count to get a reel name from the filename. We use the Mog servers to create both high resolution and low-resolution files. The high-resolution files are encapsulated with op1a and the low resolution in op-atom. This wrapper simplified the ingest operations in the Avid Media Composer. We also create a custom metadata field in the low-resolution op-atom files named "Tape Name". This will help to relink low resolution media to high resolution media in the Avid Media Composer if needed. Relinking media in Avid Media Composer it's not a requirement to conform media with the ConformAll script, because the script itself will do it for you, but if for some reason the conform fails, it is a good practice to have some alternative way to relink the media. When the op-atom files are created by the Mog server, they have a hash added as suffix (the package ID), plus the channel number. For example, if the high resolution op1a file it's saved as

20230502_131900_AUX1_TESTE_mDeck01.mxf

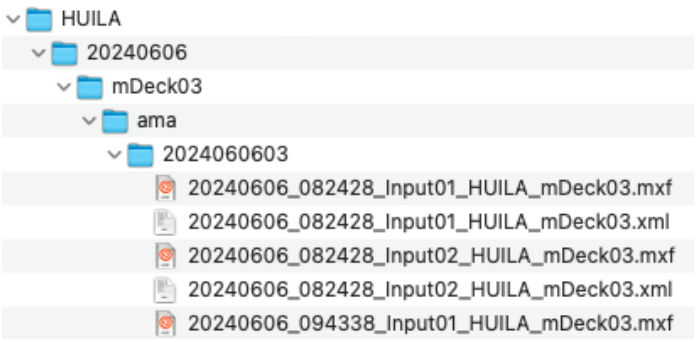
the low-resolution op-atom files are saved as

20230502_131900_AUX1_TESTE_mDeck01_9ec371f0e8ef11_0.mxf

Have in mind that the op-atom wrapper saves the video and the audio files in separated files. The example above refers only to the video file, identified by the zero at the end of the filename. Audio files are saved as …_1.mxf, …_2.mxf, etc. The ConformAll script does not import audio files to the DaVinci Resolve Media Pool, because they are not needed and will add more time to the import process.
In the file names above, you can notice that the names are similar, just the suffix it's different. The filenames do have 5 identifiable fields separated by underscores:

1. Creation date: 20230502
2. Creation time: 131900
3. Channel name: AUX1
4. Project name: TESTE
5. Server name: mDeck01

This are the unique identifier for the file and will be used by the ConformAll to relink de low-resolution media to the high-resolution media. The field separator and the number of fields can be different, but the field counting it's always performed from the begin of the filename (left side) to the end (right side). Refer to Mog Settings section to learn who to configure that. The folder structure for the Mog files must include a "ama" folder for high-resolution files. It can have subfolders. Follows an example used by us.



As shown in the picture, we use the following folder structure:

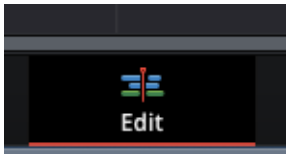
PROJECT_NAME/YYYYMMDD/SERVER_NAME/ama/YYYYMMAASS

Where **YYYYMMDD** is the creation date of the files and **SS** is the number of the server. At the same level of the **ama** folder, we have a **proxy** folder to store the op-atom low-resolution media, but the media in that folder it's manually copied to the Avid MediaFolder and placed online in the Avid Media Composer using AAF files (one per channel), the script does not use the media in that folder.

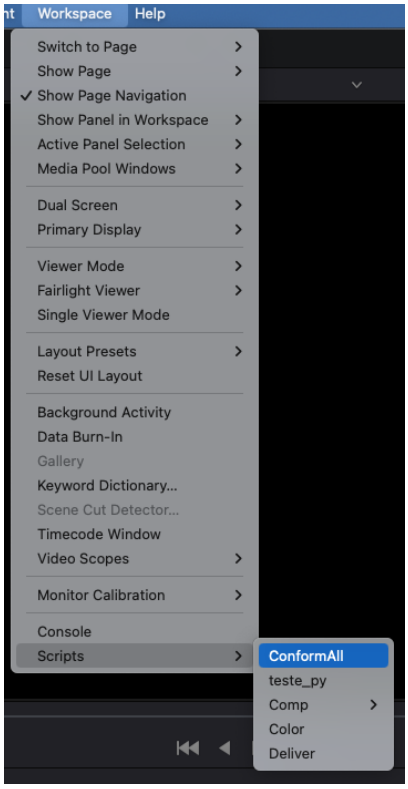
If your workflow includes the creation of proxies using Avid Media Composer, the only requirement is that the Clip Name (metadata, not filename) of the created proxy it's the same as the high-resolution filename. This works for any media origins, like Sony F55 cameras. The file names must be unique, to avoid relinking crips to the wrong media. If you are using cameras that do not create unique file names, take a look at my ReelMyFiles application in Python (https://github.com/c0ntact0/REEL_MY_FILES).

Open the ConformAll script

Open the Davinci Resolve project you want to work on and select the “Edit” page.



In the DaVinci Resolve menu, go to “Workspace->Scripts” and choose “ConformAll”



Advantages of using the ConformAll script

The purpose of this script is to facilitate the relink between the proxy media used in editing and the high-resolution material that is used in grading. The high resolution media can be ingested to a nearline storage (high density, more space and lower cost), proxy can be generated from the nearline to the editing storage (less density, less space and more costly) to edition with a NLE (e.g. Avid Media Composer). After edition a AAF file can be exported from the NLE and imported with the ConformAll script to the DaVinci Resolve for grading (or other operations).

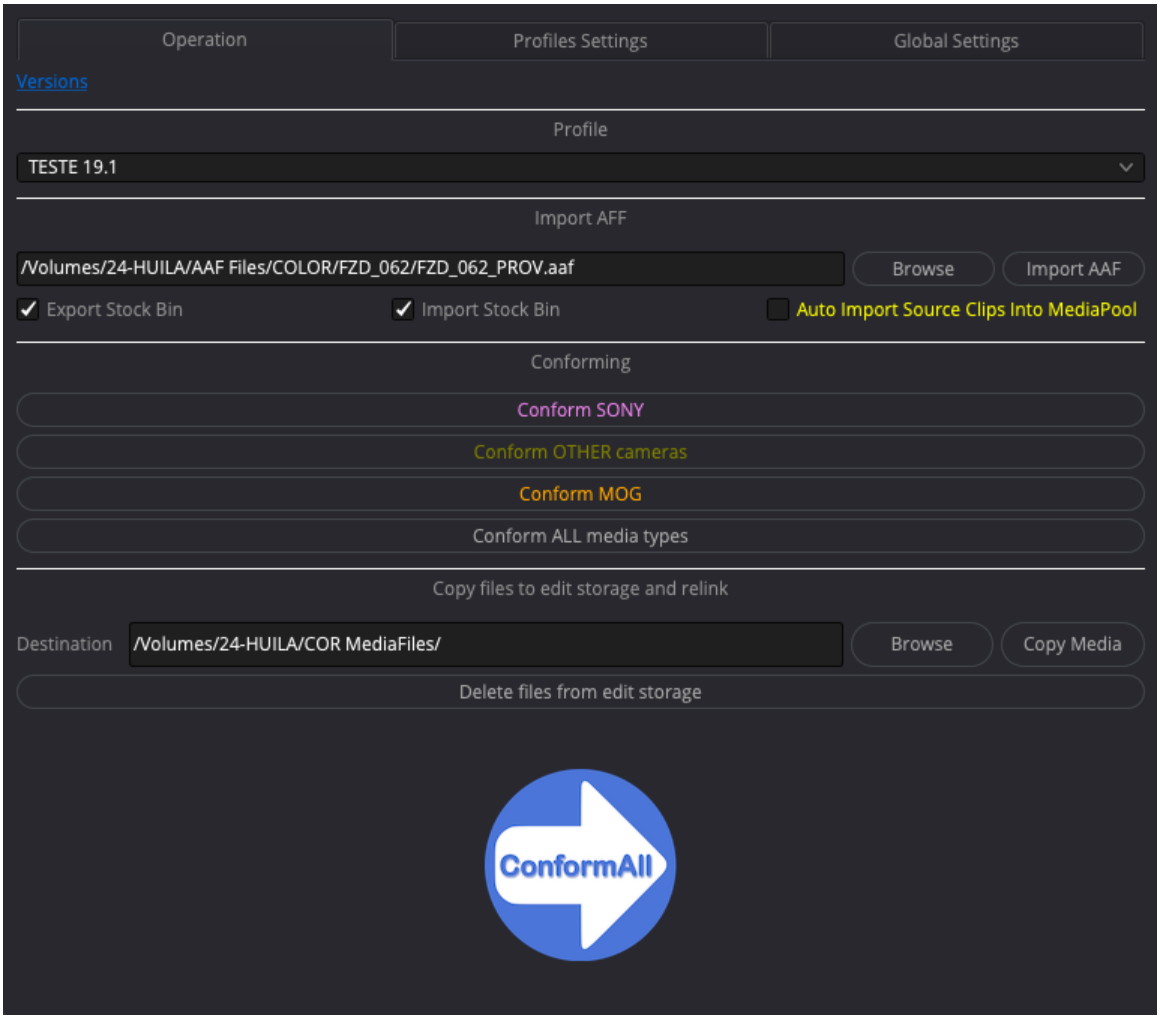
The main advantages of using this script are:

- There is no need for any configuration to conform in DaVinci. You only need to activate Reel Name.
- Conforming media recorded on Mog servers (or another server that follows the same or similar nomenclature of file names, e.g. EVS), conforming of media recorded on SONY F-55 cameras (or others that have unique filenames) or both materials at the same time.
- Script settings can be saved in profiles per project, which makes it possible to use a DaVinci project for each episode of the same production or series season.
- A bin folder called “stock” is automatically created or updated when an AAF is imported. This bin contains all the clips on the shared edit storage (e.g. Avid Nexis).
- The process of conforming the medi to high resolution is carried out by comparing the metadata of the clips in the timeline imported from the AAF and the names of the files in the “Mog Path” and “SONY/OTHER” folders that contain the high-resolution media. This makes conform process quite fast.
- An MXF file and a WAV file with reference video and audio can be placed in the same folder where the AAF is located. These files are automatically imported into the timeline. The files must have the same name as the AAF except the extension.
- During conform, colors are automatically added to media types in the timeline:
    - **Orange**: MOG media
    - **Violet**: SONY media
    - **Olive**: OTHER tyes of media
    - **Yellow**: Media imported using the “Auto import source clips” function
    - **Navy**: High Res and Low Res (proxy) codecs are de same
    - **Blue**: Original media (from AAF)
    - **Apricot**: Used when the proxy from AAF is not imported, e.g. error importing, and the high resolution it’s loaded instead.
    - **Red**: Offline media
- After conforming, a bin folder called “media” is created with the clips that are part of the timeline and already linked to the high resolution media.
- Copying the media from the nearline storage to the editing storage is done only once. If an AAF with clips that contain links to media already on the editing storage is imported, only media files that do not exist on the editing storage are copied.

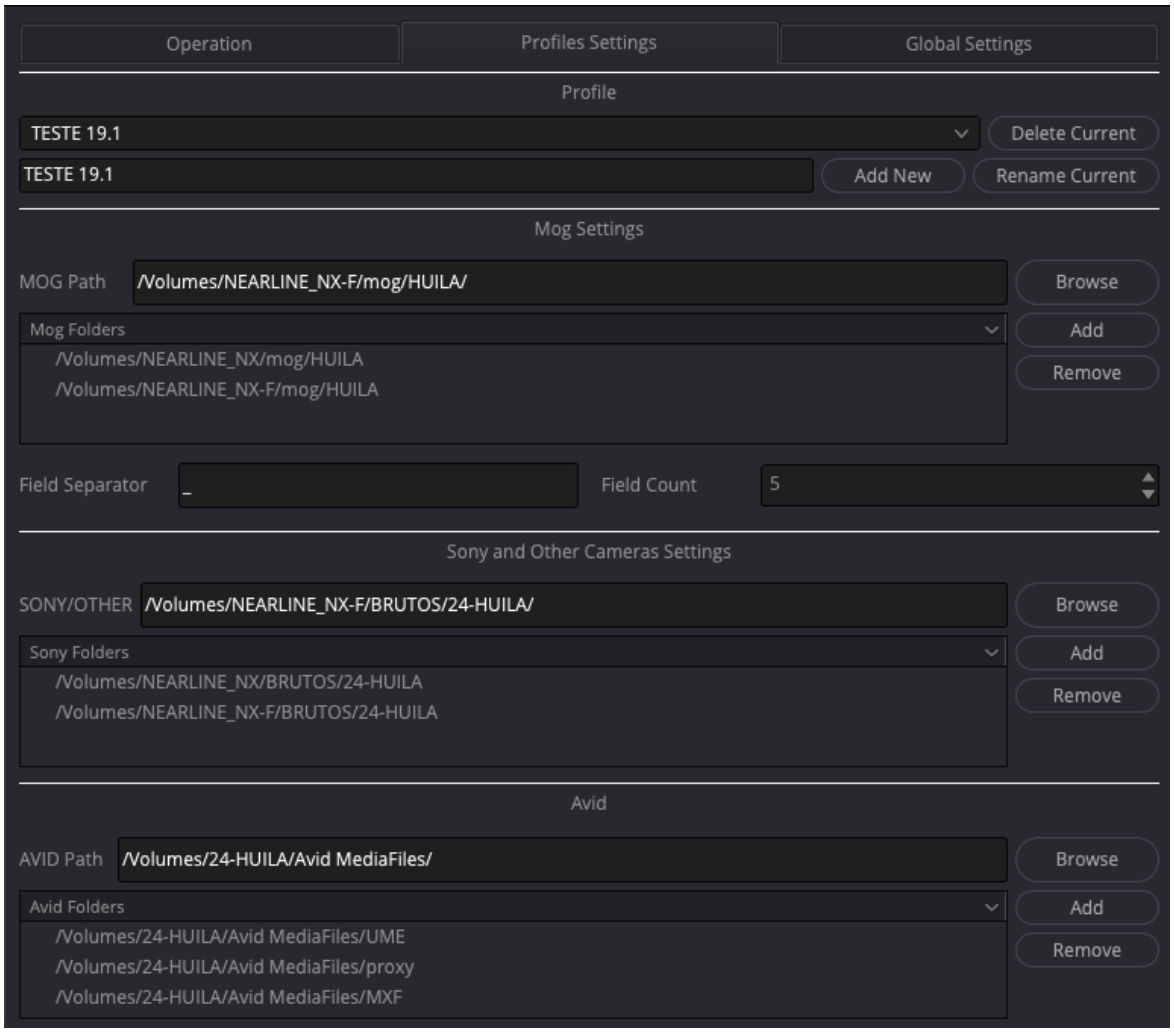
The ConformAll GUI

The ConformAll GUI have three tabs:

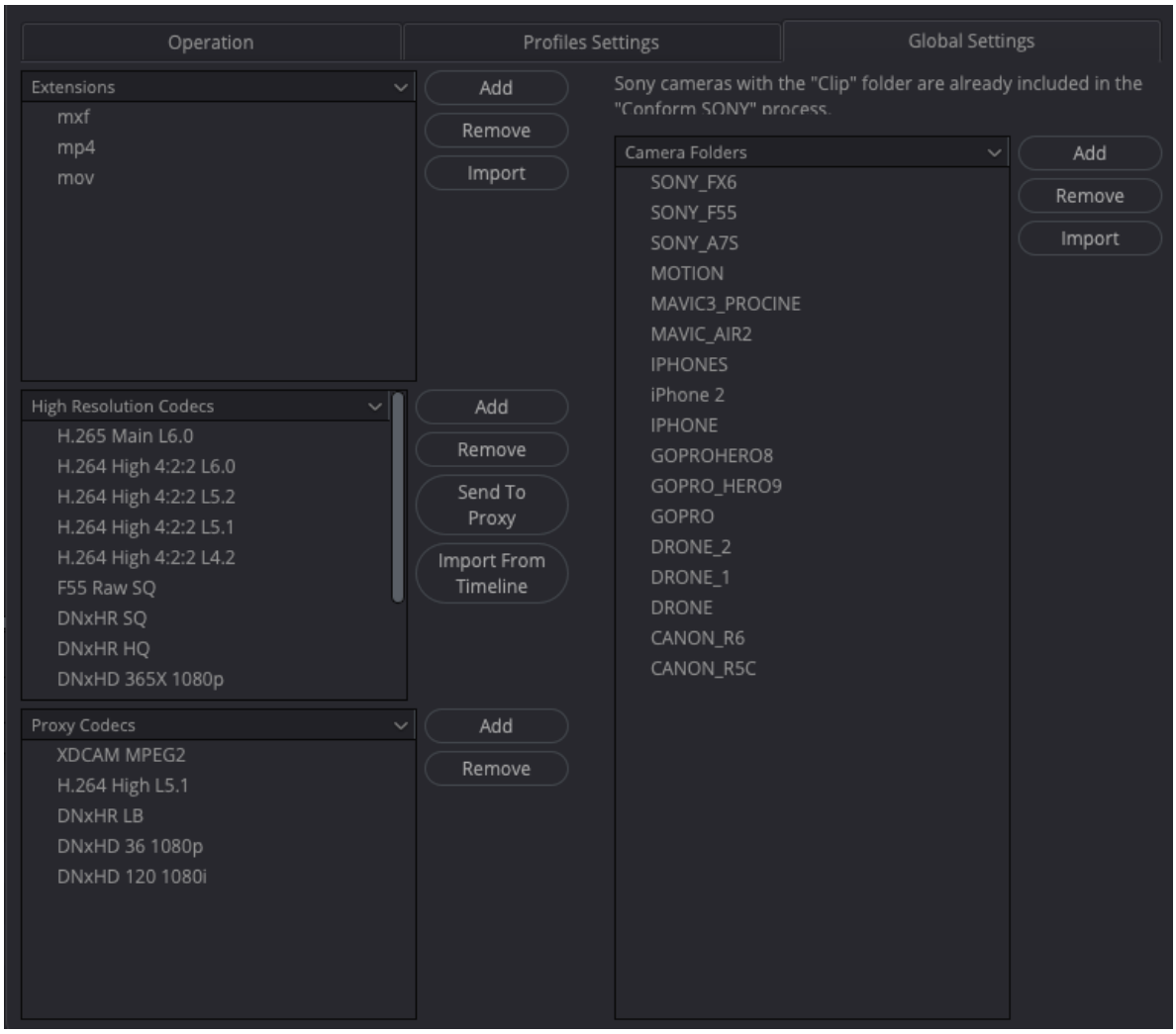
- Operation: this is the main operation tab. Here is where import AAF, conforming and copy media operations are performed. All the modifications on this tab are saved in the profile.



- Profile Settings: here is where the paths must be configured. All the modifications on this tab are saved in the profile.



- Global Settings: this tab it’s for global settings, that are cross projects settings.



Saving configuration

All configurations are saved when the GUI it’s closed in the close window button (X button).

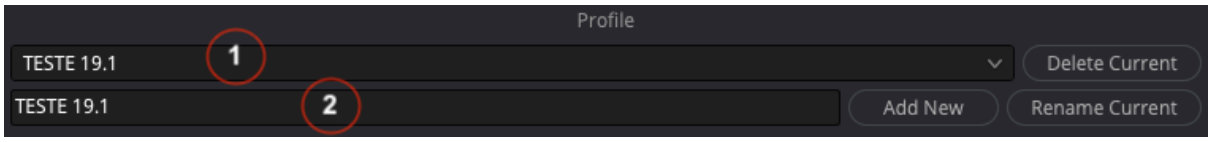
DaVinci Resolve Console

The DaVinci Resolve console it’s automatically opened when the script starts and closes when the script terminates.

The ConformAll GUI Profile Settings tab

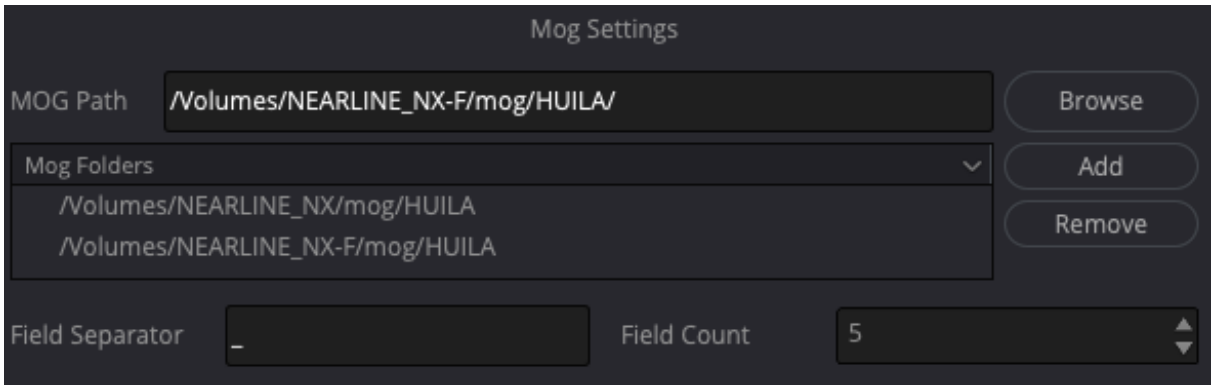
I will talk about this tab first because you need to configure these sections before performing any operation. You would like to look at the Global Settings tab chapter before perform operation tasks.

Profile section



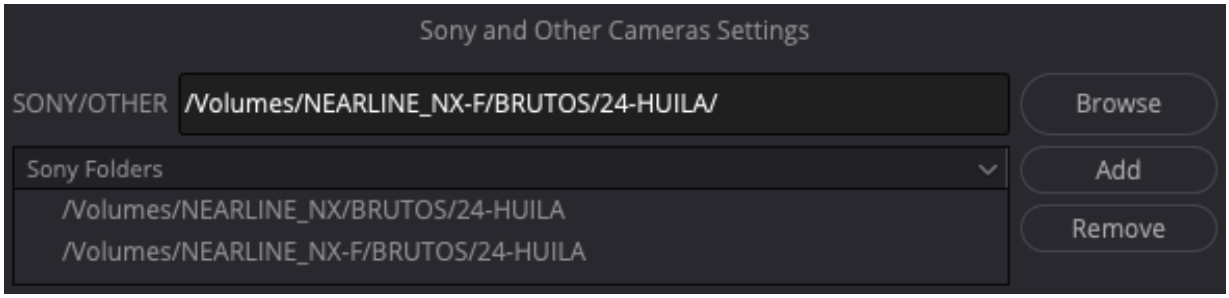
Here it's possible to manage the profiles. Select the current profile in the pulldown (1). Press the "Delete Current" to delete the profile. To create a new profile write the desired profile name in the text field (2) and press "Add New". To rename the current profile (the one selected in the pulldown), enter the desired name in the text field (2) and press "Rename Current".

Mog Settings section



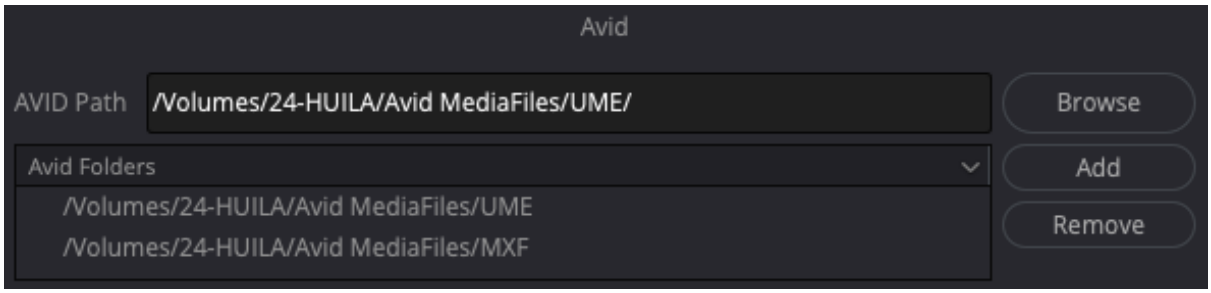
Here you can enter the path to the folder where the Mog high-resolution files are stored. After that press "Add" to add the folder to the list. The ConformAll script will scan all subfolders of the folders in the list. As explained in the Intro, the filename can have a nomenclature or template that can be used as unique identifier of the media to relink operations. Here you can specify the field separator (by default is an underscore) and the number of fields to use.

Sony and Other Cameras Settings section



Here you can enter the paths to folders where the files for SONY and OTHER types of files are stored. The subfolders where the media are stored must be specified in the Global Settings tab at the Cameras Folders list. This avoid scanning for folders that do not have relevant media.

Avid section



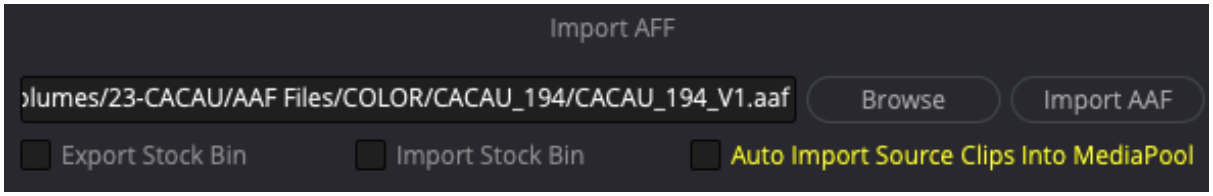
Here you can specify the folders where the Avid MediaFiles are stored, normally the <Some Volume>/Avid MediaFiles/MXF. The ConformAll will scan all subfolders. If you have a UME folder, add it to the list. In the case of op-atom files, only some suffixes will be scanned to avoid reading audio media. The current version of the script has the suffixes hardcoded in the **fileEndings** variable. Feel free to search for and modified it if you needed.

The ConformAll GUI Operation tab

Profile section

You can change the current profile here without the need to go at the Profiles Settings tab to do it.

Import AAF section

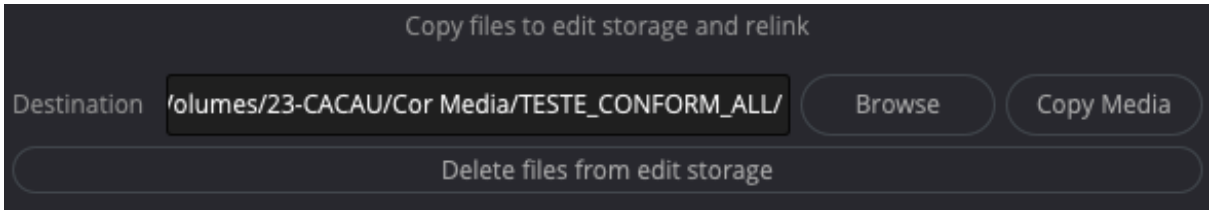


This is where all import process begins. You must enter or browse for a AAF file to import and press “Import AAF”. If the “Import Stock Bin” is checked, the stock bin file (drb file) saved in the Avid Media File location is loaded into the Media Pool. If the stock bin already exists in the Media Pool, will be deleted and replaced with the one stored in the stock bin file. After that, the contents of the stock bin will be compared with the Avid Media FIles content and updated. At the end of the update, if the “Export Stock Bin” is checked, the stock bin will be exported and the old drb replaced. When the import of the media into the stock bin is completed, the AAF will be imported using the stock bin as media source. This feature is one of the main features of the ConformAll, and have a huge impact in the import time, because, if you use one project per episode, this accelerates the process of importing the media to the Media Pool, by loading the drb file. At the end of the import AAF process, a new timeline it’s created using the name of the AAF file and the references files are imported, if any, are imported into the timeline. The timeline is create in a new bin with the same name.

Conforming section

After (and only after) the AAF it’s imparted and the timeline created, you can conform the media from low to high-resolution. Can be done by type or all together. After the conform, all media clips that are related to the timeline, are moved from the stock bin to the media bin inside the bin where the timeline was created.

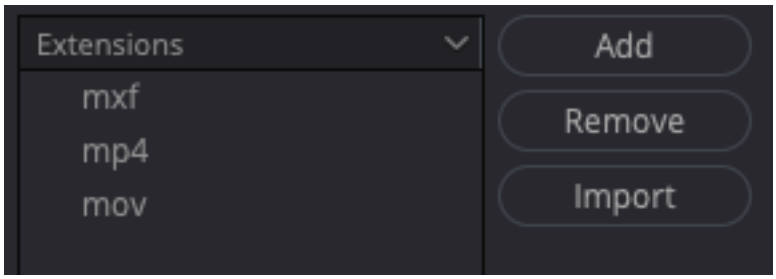
Copy files to edit storage and relink section



If you have the high-resolution media in a nearline storage, that storage it's not suitable to read media for grading. You will need to transfer the media to a faster storage. At the making of this script, we used an Avid Nexis E4 engine with the media packs configured as HIGH PERFORMANCE (instead of SCALE-OUT) to do grading of HD and UHD media. Later, we acquire a F5 SSD engine for that role. In this section, it's possible to choose a destination for the media to be copied. The script will get the media files that are referred by the media clips in the media bin inside the timeline bin. That way, only the media related with the timeline clips are copied. Existing media already in the destination does not be copied. If you want to clean the edit storage, you may press "Delete files from edit storage", and only the files related with the media clips on the media bin will be deleted. The timeline will be relinked to the original low-resolution media.

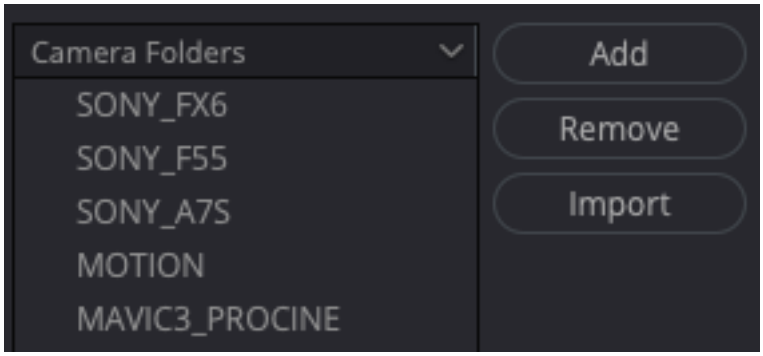
The ConformAll GUI Global Settings tab

Extensions list



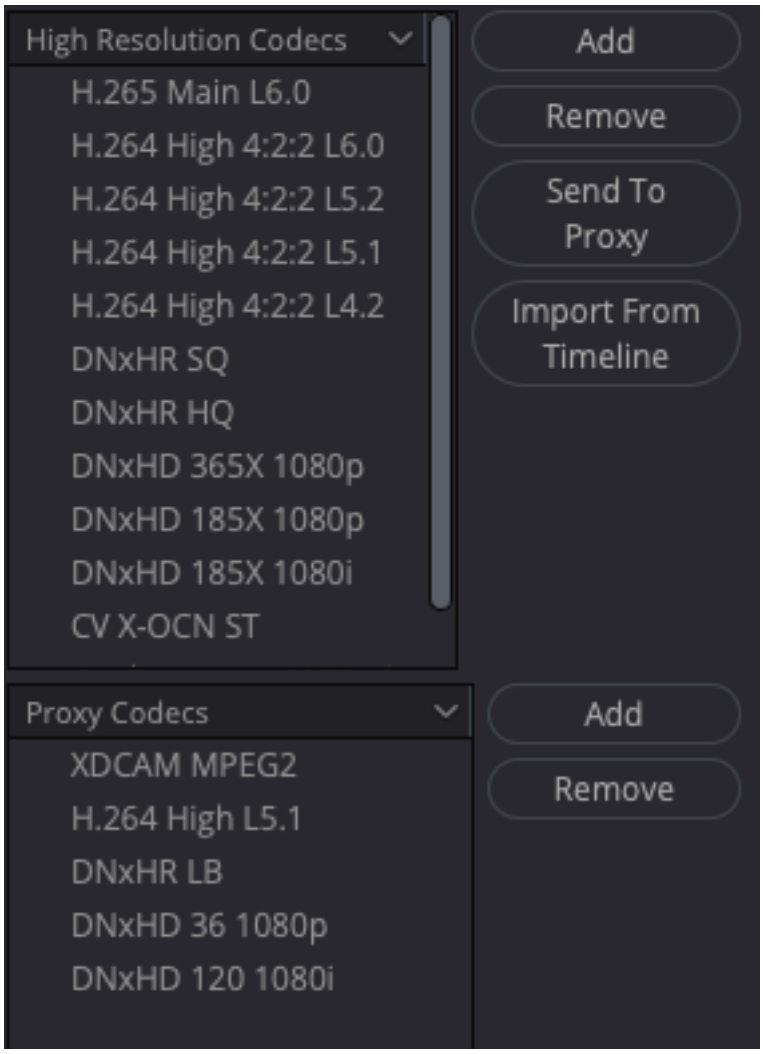
Here you must specify the file extensions that you want the script to scan at the high-resolution locations. You can use the "Import" button to import a list of extensions from the ReelMyFiles application.

Camera Folders list



Here you must specify the subfolders to consider when the script scans for high-resolution files at SONY/OTHER location. You can use the “Import” button to import a list of folders from the ReelMyFiles application.

High Resolution Codes list and Proxy Codecs list



Here you can specify the codecs you consider as high-resolution and the ones you consider low-resolution (proxy). The codecs definitions can be imported from the timeline or added manually. To use a codec definition imported from the timeline as proxy codec, select the codec from the high-resolution list and press “Send To Proxy”.

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Who am I?

I have a degree in computer science and multimedia by the Instituto Superior de Engenharia de Lisboa (ISEL). At present time, I'm working in Plural Entertainment Portugal as post-production IT manager. We produce mainly soap operas and TV series.

Any questions about ConformAll please contact me at the e-mail above.