Davinci Resolve Workflow Scripts
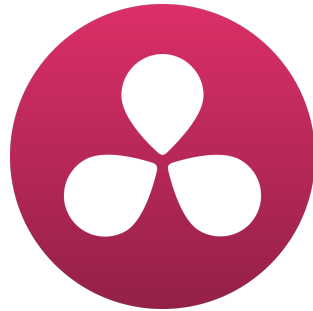
Created by
Glenn Venghaus
glennv@tachyon-consulting.com

current scripts version
- resolve_sql_queries.sh 11-01-2018
- resolve_fc_to_nuke.sh 18-05-2017

Davinci Resolve SQL explorer

Description

This script can be used to directly query (read-only so absolutely safe !!!!) any Davinci Resolve PostgreSQL database to extract information about the media assigned to any project. If a project is used as input a full listing is made of all media and type assigned to this project (audio/video/fusion connect clips) as well as optional check if these media are physically accessible from the workstation that this script is ran from.
The output can be directly to the screen and or send to a .csv file for administrative purposes.
If a single media clip name is used as input, the whole database is scanned and reported where (in which projects) this clip is used and its expected file path. (very useful for missing fusion connect clips)
Next to these, there are several other option to list all projects in a database, all database on a server etc.

Installation

- Copy the script to a destination of your choosing and make sure it is executable (chmod +x <scriptname>)
- Edit the user parameter section of the script to set database connection parameters and the location to the PSQL binary installed on the workstation/server you run this from. If you run it from a client not hosting the DB server , install a PSQL client for free from :
  https://github.com/PostgresApp/PostgresApp/releases/download/v2.0.2/Postgres-2.0.2.dmg
- Create a .pgpass file with permissions 0600 (chmod 0600 .pgpass) in your user home directory to allow password-less access from the script to your Resolve database.
  Example contents (one line per Database)
      # <db-ip>:<db-port>:<db-name>:<db-user>:<db-pass>
      # example for default install
      127.0.0.1:5432:resolve:postgres:DaVinci

Usage

Usage: <path>/resolve_sql_queries.sh [options] [--clip=<clipName> | --project=<projectName>]
        options:
            --h   show help
            --menu   interactive menu for selecting db/project
            --csv   output csv compatible
            --audio   scan project for audio clips only
            --video   scan project for video clips only
            --vfx   scan project for fusion connect based vfs clips only
            --list   list all project in the database
            --dblist   list all databases on postgresql server
            --db=<db>   change database from default

            Below option tests physical access to the scanned clips from local workstation.
            So will only work if local workstation has/is supposed to have access to these clips
            and also has either the postgreSQL database hosted or has remote client connection
            setup to the database.
            You can download a remote client pack for MacOS for free (see install section) to install in
   case not the database host.
            --check   scan for and show clip access status and for vfx check if render version exists

Example output

```
./resolve_sql_queries.sh --project=Multichan protools test --check

----------------------------------------------------------------------------
Wed May  3 13:32:18 CEST 2017
Davinci Resolve database lookup for Project "Multichan protools test"
----------------------------------------------------------------------------
PROJECT                TYPE   STATUS          NAME                      PATH
Multichan protools test  Video  MISSING          The wave premiere export.mov    /Volumes/DATA/final_renders/
Multichan protools test  Audio  OK               White Dreams corrected final.wav  /Volumes/SAN/PROD/Red installation.fcp-
media/
Multichan protools test  Audio  OK               dutch_audio_master_v3.wav      /Volumes/SAN/PROD/Dutch/
Multichan protools test  Audio  MISSING          0009 Record MIC.wav            /Volumes/SAN/PROD/dutch
Project/Samples/Recorded/
Multichan protools test  Vfx    RENDER MISSING  VFX-CLIP-007
/Volumes/SAN/PROD/TEST/007/Compositions/d45e7752-98ea-4696-8cc2-53463cfc16b1/fusion/VFX-CLIP-007_v01.mov
----------------------------------------------------------------------------
```

Davinci Resolve Fusion Connect to NUKE converter
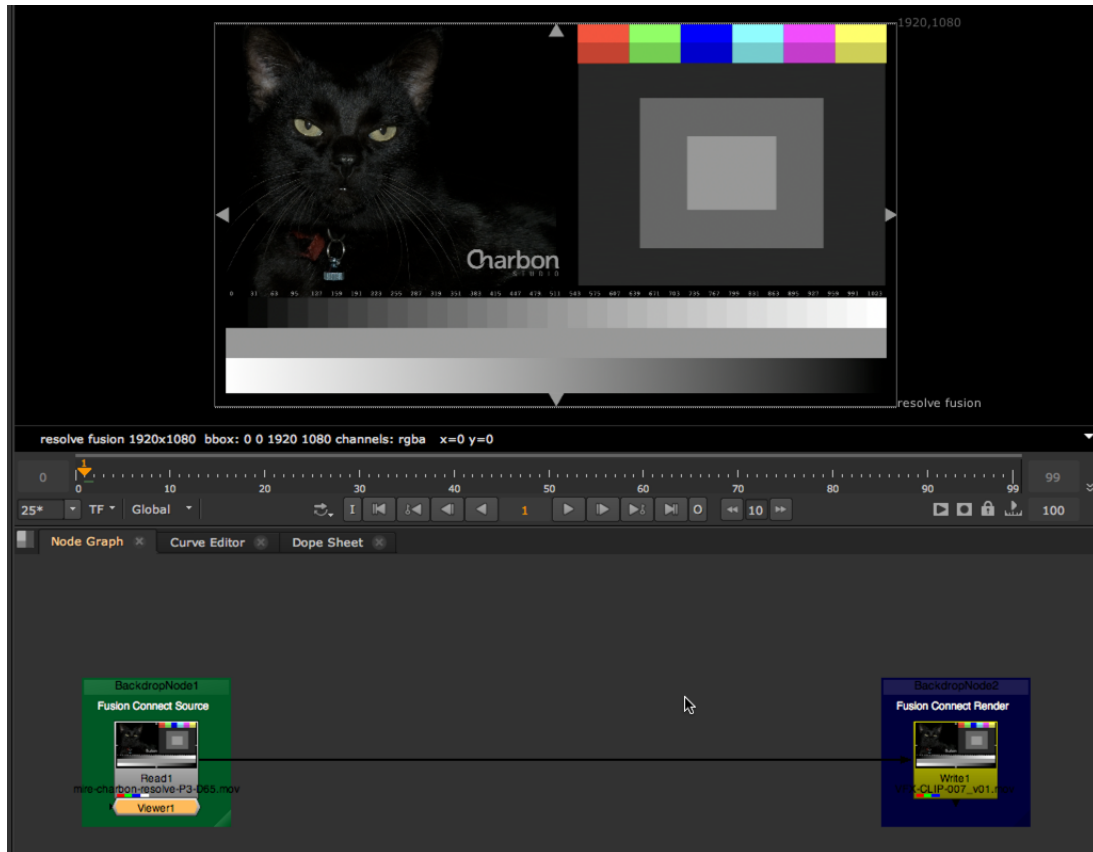
Description

This script is intended to fully automate the workflow between Davinci Resolve and Nuke.
It uses the fusion connection functionality of Resolve and hijacks it for Nuke.
The 2 basic functions are:

- When passed with an OS path as single command line input, It will deep scan for any fusion connect files and create matching Nuke scripts when they are not already existing and when the fusion connect comp is created by Resolve.
- When passed with a full path to a single fusion connect clip it will again create a Nuke script if not exists but also open Nuke with this script as input. If used in conjunction with a custom Automator created application, this can be triggered directly from Resolve when calling the "open in fusion" function, creating a fully integrated Resolve to Nuke pipeline.

The Nuke script created uses all the (limited) info available in the fusion connect comp created by Resolve, but can be extended easily by adding nuke python code to the python section of this bash wrapper script. An example would be to set colorspace info, add custom LUTS , etc. Colorspace info is not passed by the fusion connect comp but could be passed by adding specific strings to the fusion comp filename and evaluating these from within the script (not included in this base version as local and specific to each facility/workflow).
Your imagination (and scripting skills) are the limit.

Installation

- Put the script resolve_fc_to_nuke.sh in any location of your choosing and make suer it is executable (chmod +x <script>)
- Change the user parameter section of the script and specify the full path to the Nuke binary
- Open Mac Automator and create/save an application named Fusion.app in the Application directory, with the following contents (adjust for your script path) :
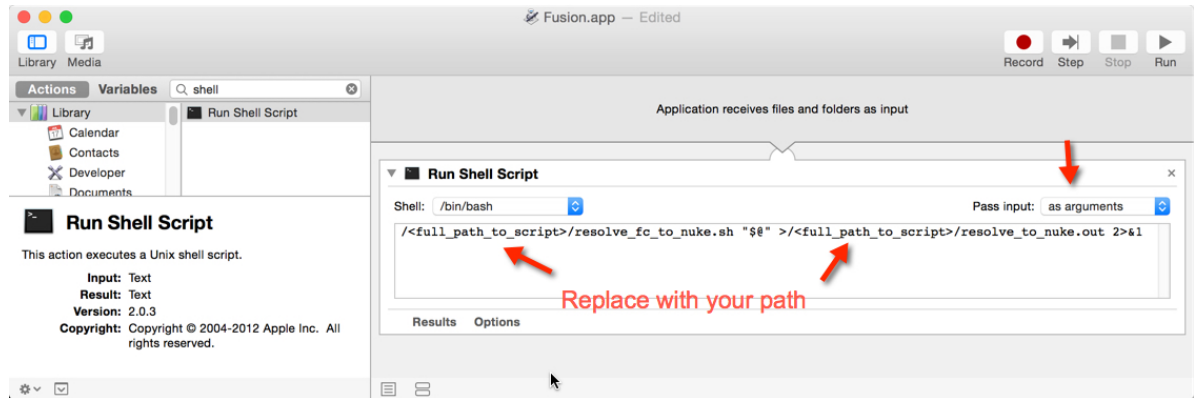
Usage

Once installed the script can be called directly or for example from the crontab scheduler to run at fixed intervals to (deep) scan a high level directory for any fusion connect comps to convert to nuke scripts. Alternatively you can call it directly from Resolve by using the "open in fusion connect" function. It will open Nuke with the created Nuke script.
You can even use the "create new version" function from Resolve, which will create a new Nuke version script and open it in Nuke.

Example crontab setup for 2 comp team members with their own directories and mai feedback on Nuke script creation (if outbound mail is properly setup on this computer/server, which is not part of script)

```
### FUSION CONNECT TO NUKE
MAILTO=john_doe_the_nuke_guy@company.com
*/3 * * * *  /Users/theboss/scripts/resolve_fc_to_nuke.sh /Volumes/SAN/PROD/RESOLVE_FC/project_a

MAILTO=jane_doe_the_nuke_girl@company.com
*/3 * * * *  /Users/theboss/scripts/resolve_fc_to_nuke.sh /Volumes/SAN/PROD/RESOLVE_FC/project_b
```

Example output from direct calls

```
MBPGlennV:fusion glennv$ ./resolve_fc_to_nuke.sh /Volumes/SAN/PROD/VFX/test_project
-----------------------------------------------------------------------------------------
FOUND  : /Volumes/SAN/PROD/VFX/test_project/007/Compositions/d45e7752-98ea-4696-8cc2-53463cfc16b1/fusion/VFX-CLIP-007_v01.comp
NUKE   : /Volumes/SAN/PROD/VFX/test_project/007/Compositions/d45e7752-98ea-4696-8cc2-53463cfc16b1/nuke/VFX-CLIP-007_v01.nk
-----------------------------------------------------------------------------------------
FOUND  : /Volumes/SAN/PROD/VFX/test_project/008/Compositions/954fbac7-5f9d-4a88-b73f-f242c34d9931/fusion/VFX-CLIP-008_v01.comp
NUKE   : /Volumes/SAN/PROD/VFX/test_project/008/Compositions/954fbac7-5f9d-4a88-b73f-f242c34d9931/nuke/VFX-CLIP-008_v01.nk
-----------------------------------------------------------------------------------------
FOUND  : /Volumes/SAN/PROD/VFX/test_project/009/Compositions/20044919-27b8-4b2d-be1f-f99f39059a99/fusion/VFX-CLIP-009_v01.comp
NUKE   : /Volumes/SAN/PROD/VFX/test_project/009/Compositions/20044919-27b8-4b2d-be1f-f99f39059a99/nuke/VFX-CLIP-009_v01.nk
-----------------------------------------------------------------------------------------
FOUND  : /Volumes/SAN/PROD/VFX/test_project/300/Compositions/07df48cb-f89e-49a7-ac95-c06e62ee1dfe/fusion/VFX-CLIP-300_v01.comp
NUKE   : /Volumes/SAN/PROD/VFX/test_project/300/Compositions/07df48cb-f89e-49a7-ac95-c06e62ee1dfe/nuke/VFX-CLIP-300_v01.nk
-----------------------------------------------------------------------------------------
FOUND  : /Volumes/SAN/PROD/VFX/test_project/300/Compositions/07df48cb-f89e-49a7-ac95-c06e62ee1dfe/fusion/VFX-CLIP-300_v10.comp
NONE   : Not a Davinci Resolve comp. Skipping
```

Recommendations

Always use a custom, per project/clip and organized location for creating your fusion connect clips.
Save a new Nuke version for each render version to the same directory as set in the generated nuke script and use/stick to the proper naming conventions if changing version names by hand (_v01, _v02, _v03 etc) for Resolve to recognize new versions.