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LOKI

USER GUIDE

LOKI USER GUIDE

V 2026.3

Thanks for downloading Loki from Filmworkz.

This document will guide you through the installation process, interface functionality and basic usage examples, plus details of the API commands for key tasks and the new Loki Render version.

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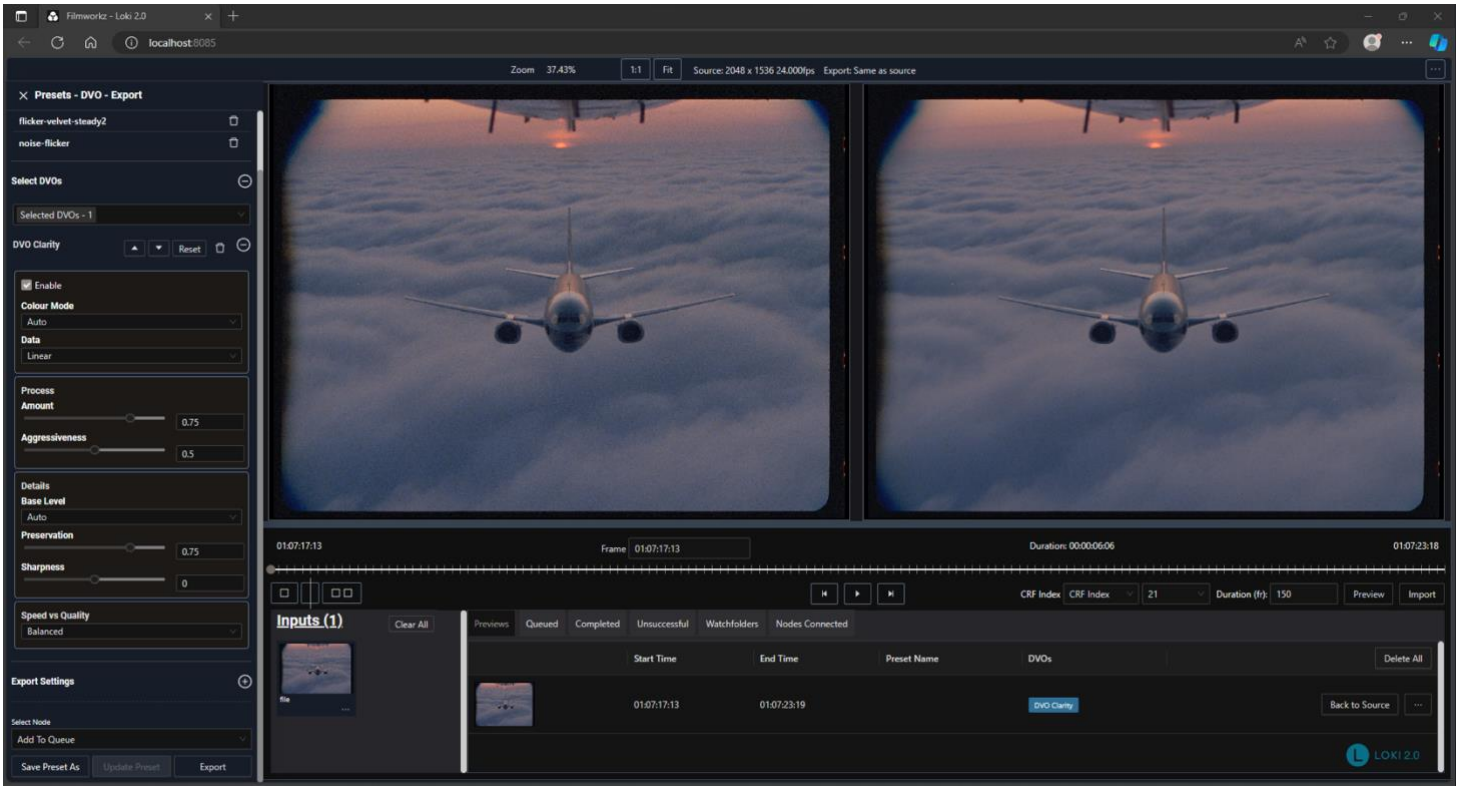
INTRODUCTION

Loki 2 is the latest generation of Loki, which we've specially designed to help users achieve the best quality image enhancement, upscaling and frame rate conversions by combining workflow automation with Filmworkz's **unique range of DVO's** – our best-in-class moving image correction & enhancement software.

These tools save you time and money by easily correcting a vast range of image problems without sacrificing quality. By using the **DVO tools in Loki**, you can easily preview files, apply different tools, and get fast results with minimum interaction.

The **DVOs** have several parameters, offering a high level of manual adjustments when customized settings are necessary, with easy preset creation, burn in capabilities and a large variety of export options, including full Prores support on Windows.



Loki main interface using a web browser

ARCHITECTURE & CONFIGURATION

Loki consists of 3 main components, which can be configured to suit your requirements.

Client

Loki Client is the front-end editor and monitor of the system. It needs to be installed on the same computer as the Loki Server. Typical Loki Client functionalities are:

- Create and delete jobs
- Create and edit presets & watchfolders
- Monitor current and completed jobs
- Monitor nodes on the network (multiple nodes will be supported in a future release)

Server

Loki Server is the coordinator of the system, containing the database and delegating the jobs to the available nodes

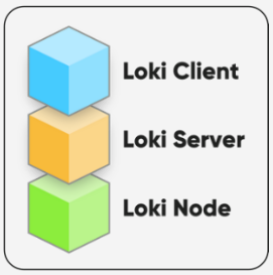
Node

Loki Node is the processing engine, also known as a render node. Multiple nodes can be installed to process the queue of jobs faster.

Depending on your needs, different Loki components can be installed across multiple PCs. The options are:

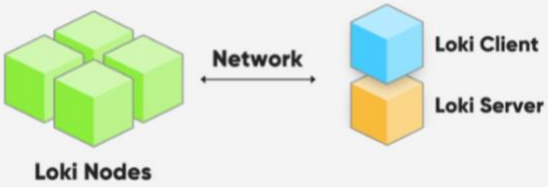
STANDALONE

The simplest configuration is to use one workstation connected to Local storage, with all Loki components installed on that single machine.



NETWORK

As long as the various software and hardware elements are detectable over a network (LAN), the Server and Node, plus the source & output files can all be at independent locations. The Client and Server need to be installed in the same system.



RECOMMENDED HARDWARE

All DVO tools are currently CPU-based, optimized to use the latest technologies and fully multi-core aware. Core speed is also important, so, when choosing your CPU configuration try to balance the number of cores and base speed.

For dual CPU setups, we strongly recommend turning off NUMA (for information on NUMA, please read this article https://en.wikipedia.org/wiki/Non-uniform_memory_access).

We also recommend turning off HyperThreading (HT)/ Simultaneous Multithreading (SMT). Please consult your motherboard's manual for specific instructions on how to turn off these features. The **Server** & **Node** must be installed in a Windows-based system and on a local network (if the **Client** is set up on a different system).

For content up to 2K:

- Windows 11 Pro 64-bit
- AMD Ryzen™ Threadripper™ Pro 3000 series or newer (24 to 32-Cores) or Intel Xeon 16 to 32-core (Icy Lake family or newer); dual processor configurations are also compatible with Loki.
- 32 GB of RAM (follow processor specifications for memory setup)
- 1 TB M.2 Gen 3 PCIe SSD (O/S)
- Storage setup based on type of media to be used, 4TB or higher NMVE for manual paint caching

For 4K content and up:

- Windows 11 Pro 64-bit
- AMD Ryzen™ Threadripper™ Pro 3000 series or newer (32-Cores, 64 and 96 cores recommended) or Intel Xeon 28-core and higher (2x 28-core recommended, Icy Lake family or newer)
- 128 GB of RAM (follow processor specifications for memory setup)
- 1 TB M.2 Gen 3 PCIe SSD (O/S)
- Storage setup based on type of media to be used, 8TB or higher NMVE for manual paint caching

We don't recommend processors with Performance and Efficiency cores from Intel; general performance is affected due to uneven processing capabilities.

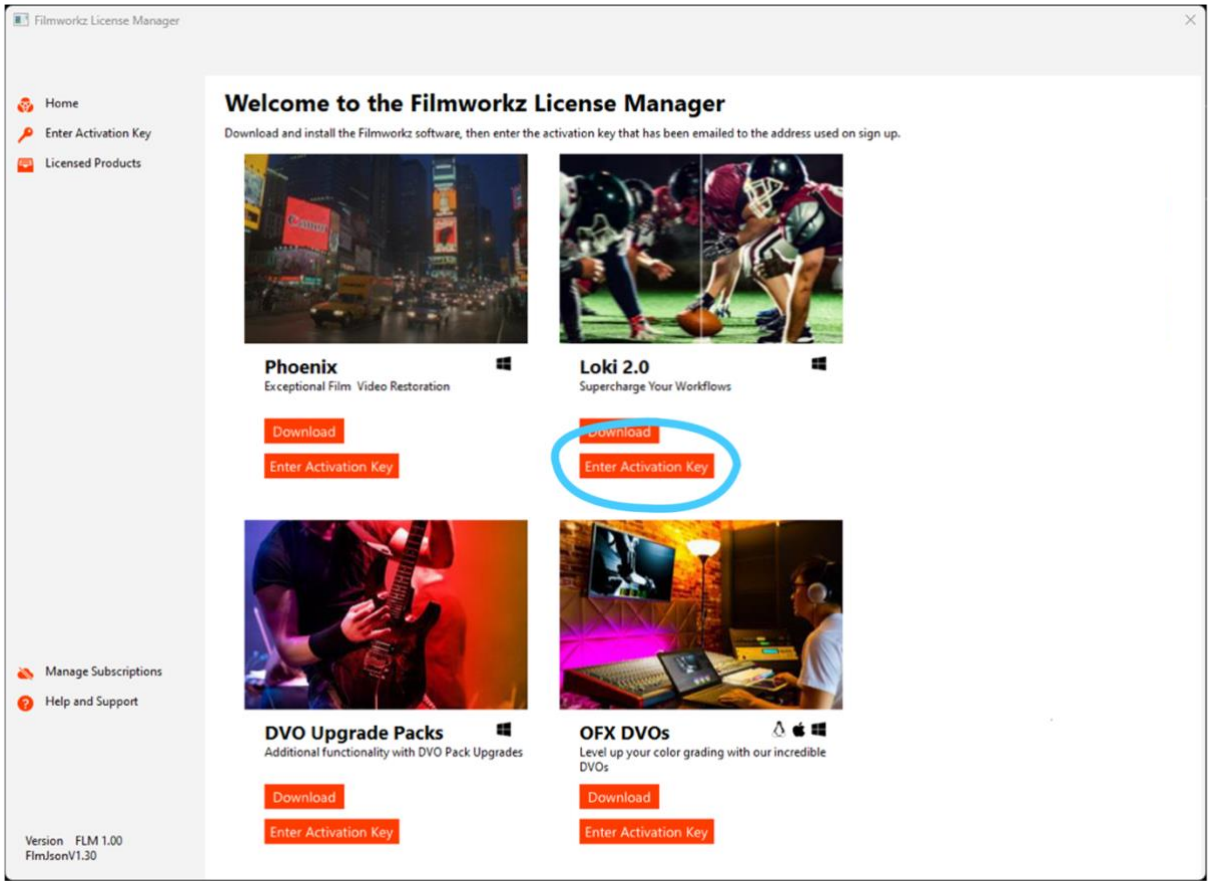
The Client works using a browser, and we recommend Google Chrome and Microsoft Edge due to extensive compatibility with web standards and fast h.264 playback (the Viewer uses h.264 files when creating preview files). Make sure to have Hardware acceleration "On" to improve performance.

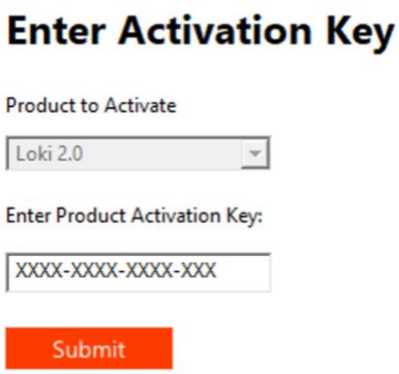
INSTALLATION & GETTING STARTED

Before installing Loki, we need to install the Filmworkz License Manager software. Here we'll be able to activate a license for our range of products, including Loki and DVO packages. After subscribing to the software, an Activation Key will be sent to your email.

To activate, download the Filmworkz License Manager (FLM) by logging in to Juno and asking for the latest FLM installer.

Run the FLM installer, open it and click on "Enter Activation Key" for Loki:





Paste the activation key and click on "Submit" to activate the software.

To install Loki, download and run the installer from Juno as well. The installation process now offers new options, making the process easier if you already have Loki installed, but also significantly improving setup of Loki Render.

CORE COMPONENTS

Loki consists of four main parts that run in the background:

- **Server (LokiServer.exe)**
  Manages all processing on the network. It holds the job queue, watch folders, and presets. There is exactly one Server per Loki network. It listens for nodes on TCP 8081 and for browsers on TCP 9092. Every 2 seconds, it broadcasts its presence to the network.

- **Node (LokiNode.exe):**
  Provides processing power and performs the actual rendering. It finds the Server, connects on TCP 8081, and requests work. The main machine also runs a Node so it can render.

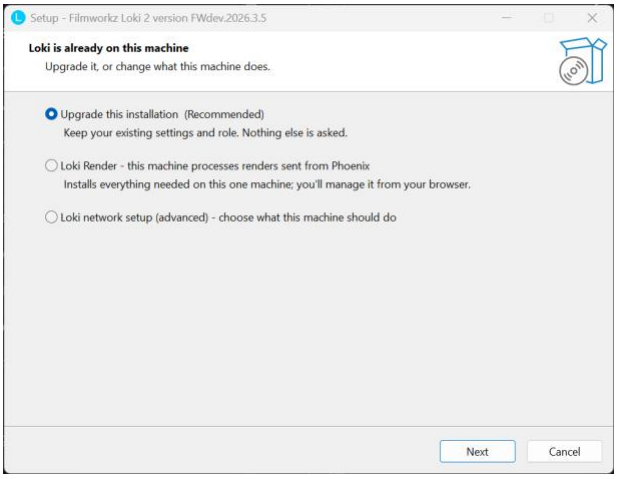
- **Web Interface (WebServerTest.exe):**
  Serves the browser interface on port 8085. Every role has its own copy of the page, which communicates directly with the main machine.

- **Tray (LokiTray.exe):**
  The icon is located next to the system clock. It starts the other programs silently in the background, opens the browser, and monitors services. The tray menu allows users to view logs, restart services, or manually change the target processing machine.

INSTALLING LOKI (2026.3 ONWARDS)

Loki installs its data to C:\Loki 2.0 and its programs to C:\Program Files\Loki 2.0\FW2026_*. Before presenting your installation options, the installer performs a hidden 6-second network scan to detect the presence of any existing Loki Server; the default installation options presented are then tailored to your circumstances.

Step 1: Choose Installation Type



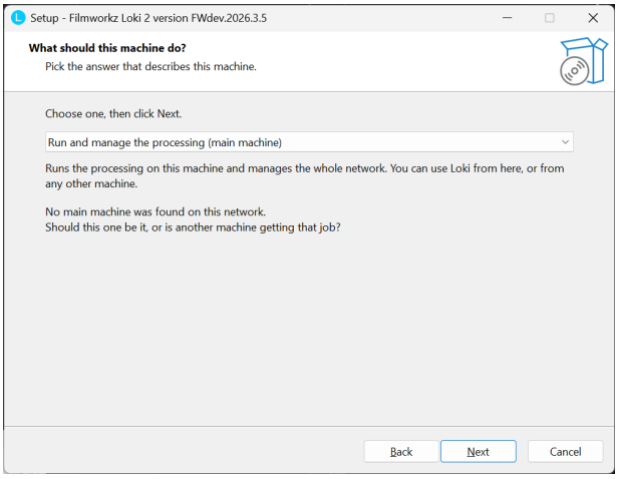
On the **"What are you installing?"** page, select one of the following:

- **Upgrade this installation (Recommended)**
  Replaces program files while keeping existing settings, roles, presets, and jobs.

- **Loki Render - this machine processes renders sent from Phoenix**
  Installs the Server, Node, Web Interface, and Tray on a single machine. If the network scan detects another main machine, a warning will appear because two servers will compete for the same work.

- **Loki network setup (advanced) - choose what this machine should do**
  Moves to the next page to assign a specific network role.

Step 2: Choose Network Role (Advanced)



If you chose the advanced setup, the **"What should this machine do?"** page offers three roles:

- **Run and manage the processing (main machine)**
  Installs the Server, Node, Web Interface, and Tray. It opens firewall ports for TCP 8081, 8085, 9092, and UDP 11000.

- **Add this machine's power to the processing**
  Installs the Node, Web Interface, and Tray. It opens UDP 11000 for the firewall. The node calls out to the main machine; no inbound traffic is required.

- **Just use Loki from this machine**
  Installs only the Web Interface and Tray. It does not open any firewall ports.

Step 3: Installation and Background Tasks

During the **Installing** page, the setup automatically:

- Installs the required .NET Desktop Runtime 7.0.10 and Visual C++ runtimes silently.
- Configures the Windows firewall for the chosen role.
- Repairs settings files if missing necessary entries.
- Creates the necessary folder tree for presets, jobs, and caches.

When the installation is complete, the Loki tray will be added to the Taskbar and a browser window will open and connect to the web interface.

UNINSTALLING LOKI

Uninstalling will stop the programs, remove the firewall rules, and delete the program files. It intentionally keeps your data, settings, presets, and jobs located in C:\Loki 2.0\root.

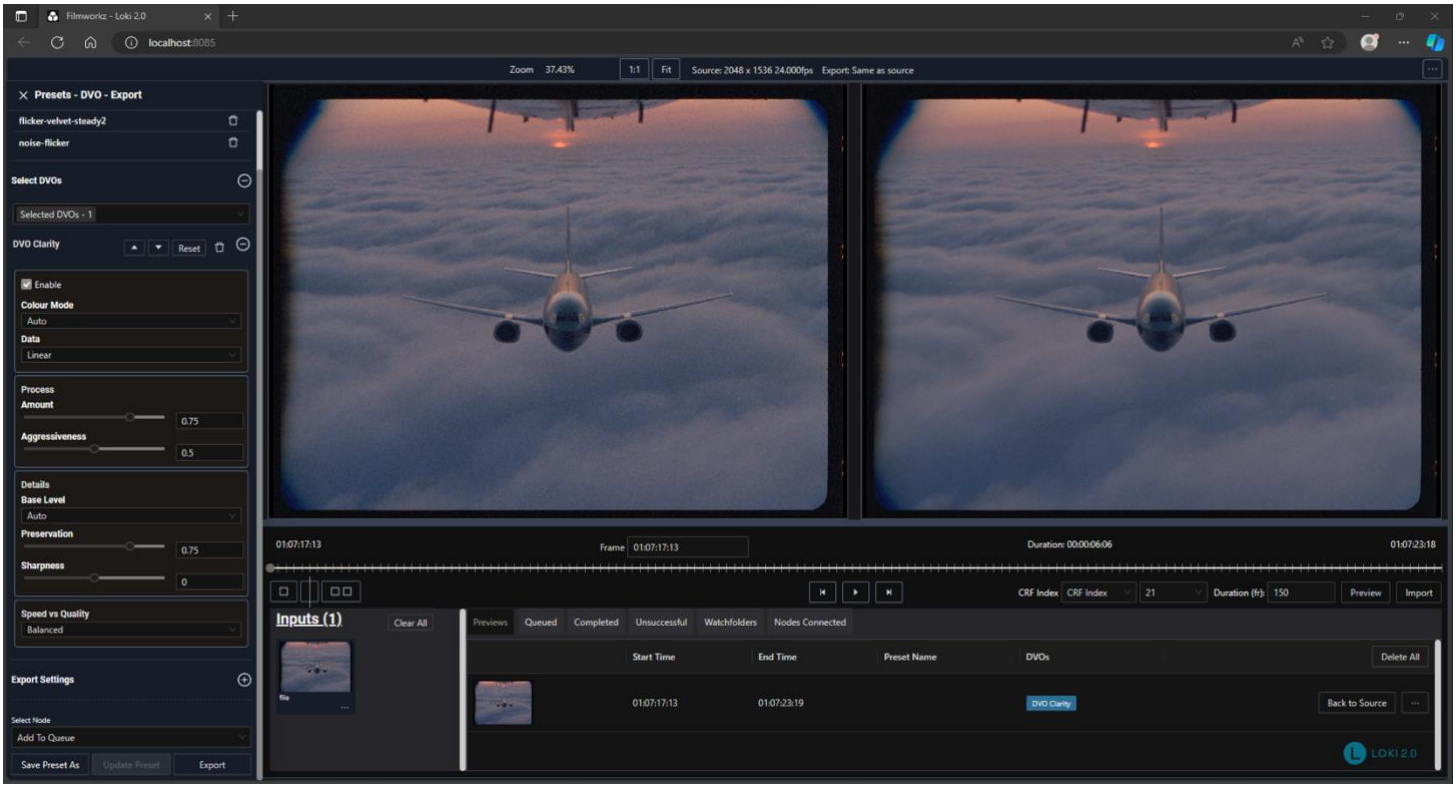
LOKI TRAY

The Loki Tray sits on the Task bar and includes several options:

- Open Loki: Opens a browser window and starts the web interface
- View Logs: Opens the Windows Explorer folders where logs are located
- Change the machine that runs the processing: Type the name of the system that will run the jobs
- Restart Services: restart all services
- Exit: closes all services

INTERFACE EXPLAINED

Loki was designed to be easy to set up and use, with a clean interface, easily identifiable options, and a large, customizable viewer. From the main window, you can import a variety of files, including common MPG2-based formats (XDCAM, AVC Intra, etc.), image sequences and Prores files.



Loki main interface using a web browser

The interface consists of 3 main sections:

- Viewer, occupying the center of the screen, with playback controls, compare modes, Zoom features, timeline and easy Preview duration and bit rate choices
- Preset, DVO and Export settings
- File Input and Information Tabs, showing job information and Preview selection

VIEWER

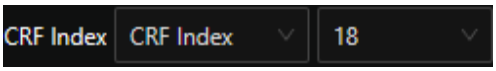
The new addition to Loki 2 compared to the previous version is the Viewer. After importing a file, you can click on different points of the timeline to get to that point.

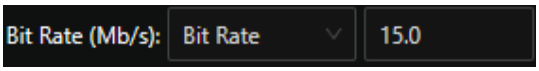
Viewer and timeline, with an In point selected

After selecting an In point, you can create a Preview of the section; use the duration box to define a duration (number of frames) and either bit rate (in Mb/s) or CRF value and click on the Preview button.

You can choose to use either bit rate or a CRF (Constant Rate Factor) value to create your Preview; CRF offers a higher preview quality, and an 18-23 value is good enough for most cases. For more information about CRF please visit this website: https://trac.ffmpeg.org/wiki/Encode/H.264

If a bit rate is too low (or a CRF value that's too high), your preview will have artifacts; the default value is good enough in most cases, but for clips with a finer grain or high detail level, we recommend using higher bit rates (or lower CRF) values.





After the Preview is rendered, you can use the Playback controls and Compare modes.

Playback controls

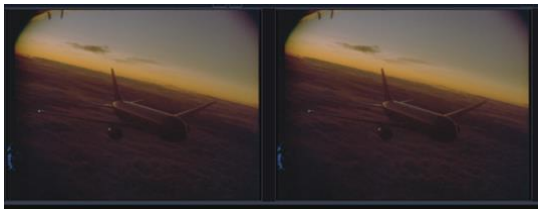
You can go Back & Forward 1 frame and play the rendered number of frames.

Compare modes

The Compare modes include Cut, Split and Dual views:

Cut View

Split View



Dual View

You can expand the Viewer by closing the left tab and click-dragging the bar separating the top and bottom section of the interface:

Left tab closed and bottom section hidden showing a bigger Preview window

The image can be moved by left clicking and dragging; you can also zoom in and out using the mouse wheel up and down. You can also use the Fit and 1:1 button to automatically adjust the size of the image.

Current zoom level, 1:1 and Fit buttons

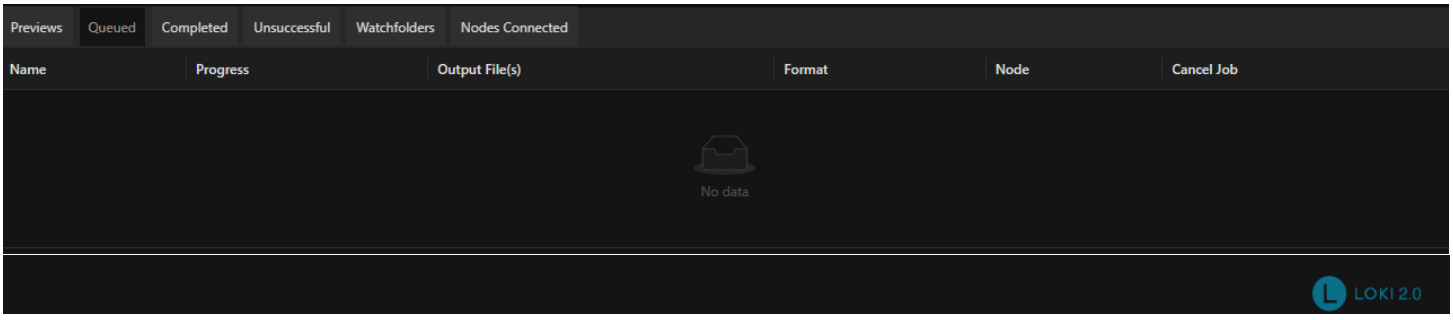
INFORMATION TABS

Below the Timeline control section, we have tabs that show information about rendered Previews, Queued, Completed, and Unsuccessful jobs. We also have a tab for **Watchfolders** that will be explained in a later section of this manual.

Queued When you submit a job for export, a new job is added to the Queued tab. It shows basic info about the export and a progress bar. You can add many files to the queue, and Watchfolder renders will also be automatically added to the Queued tab.

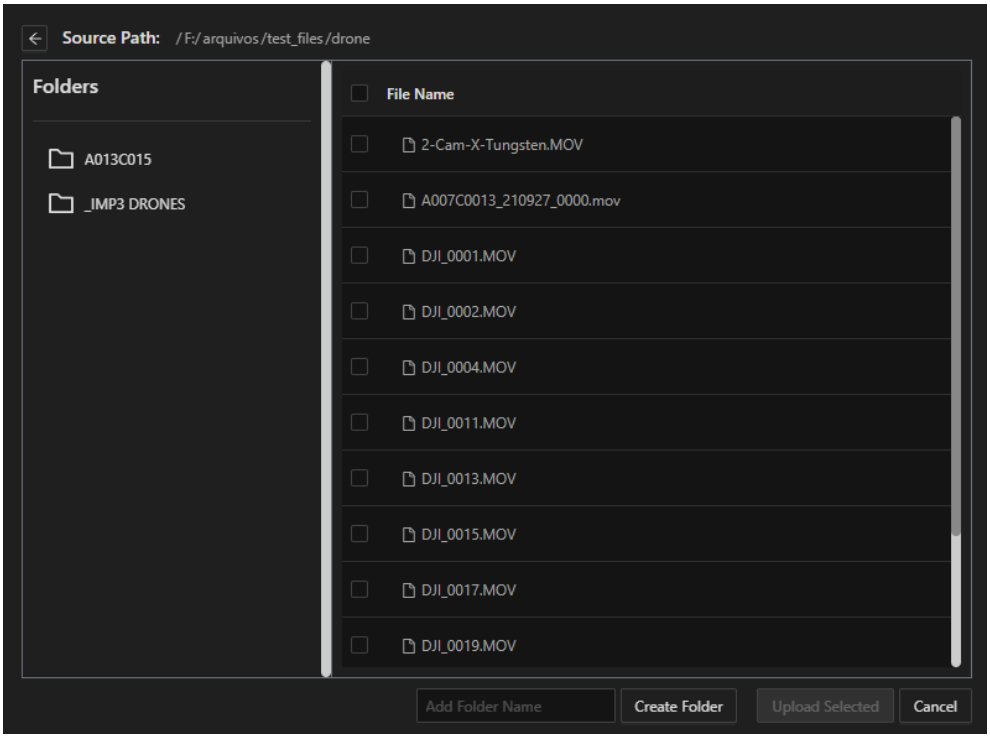
Completed Completed files will be added to this tab.

Unsuccessful Any files that can't be rendered will be shown in this tab.



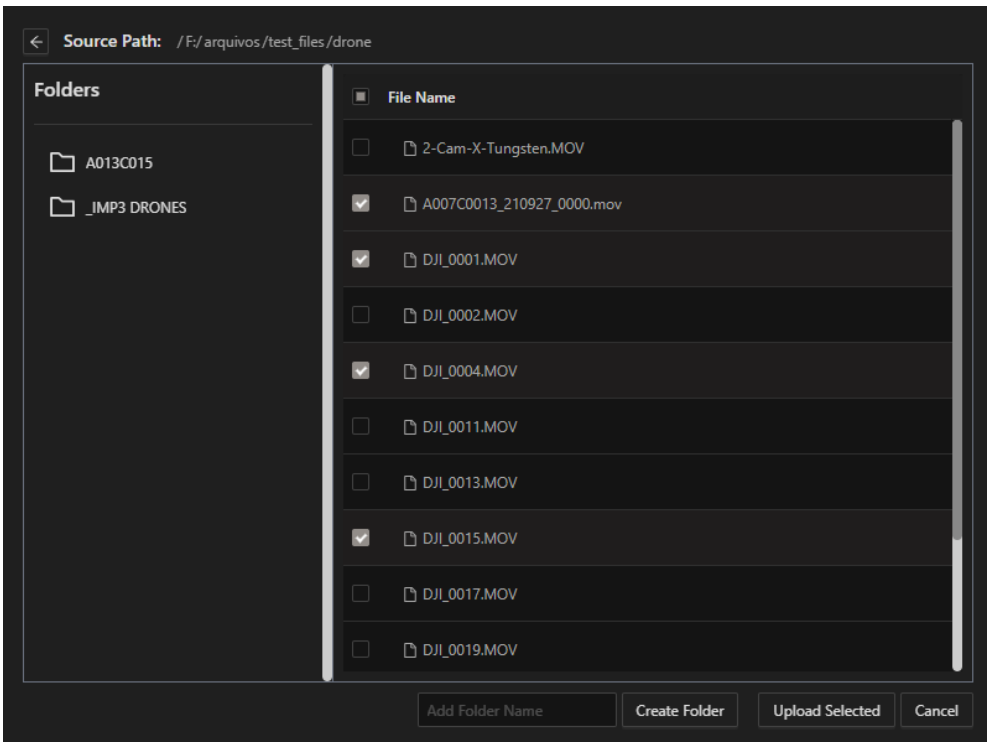
IMPORTING AND PREVIEWING CLIPS

Importing clips is very simple, just click on the **Import** button of the right side of the interface, next to the **Bit Rate** box. A new window will appear with a folder selection on the left, and clips contained in the selected folder on the right.



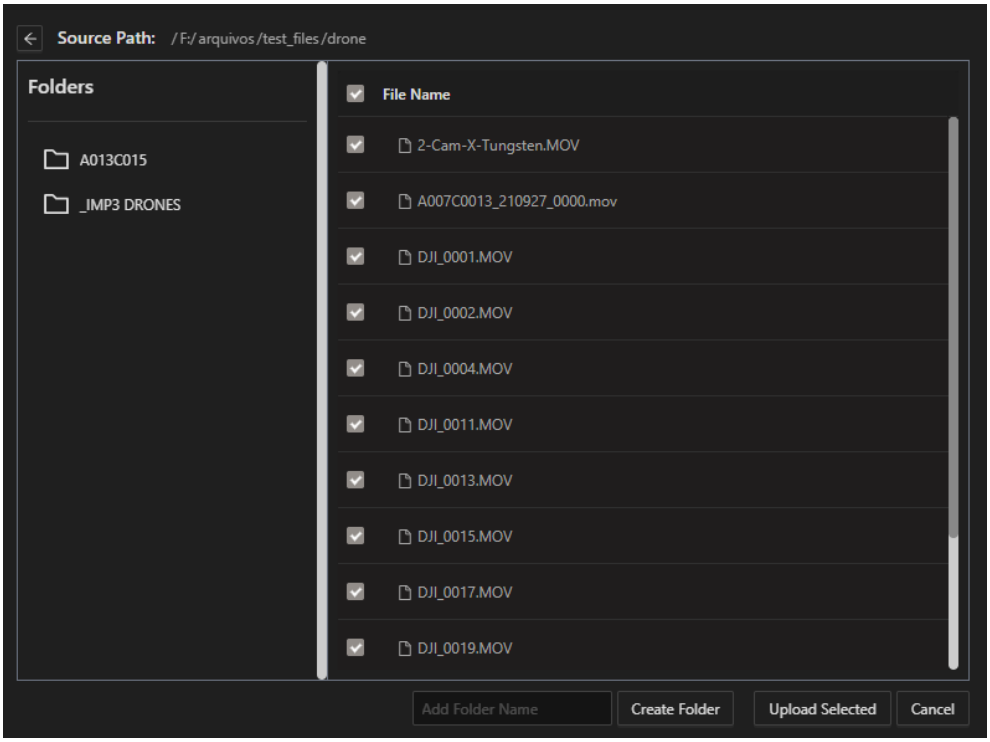
File import window

To select a file or folder, click on the selected item.



Multiple files selected

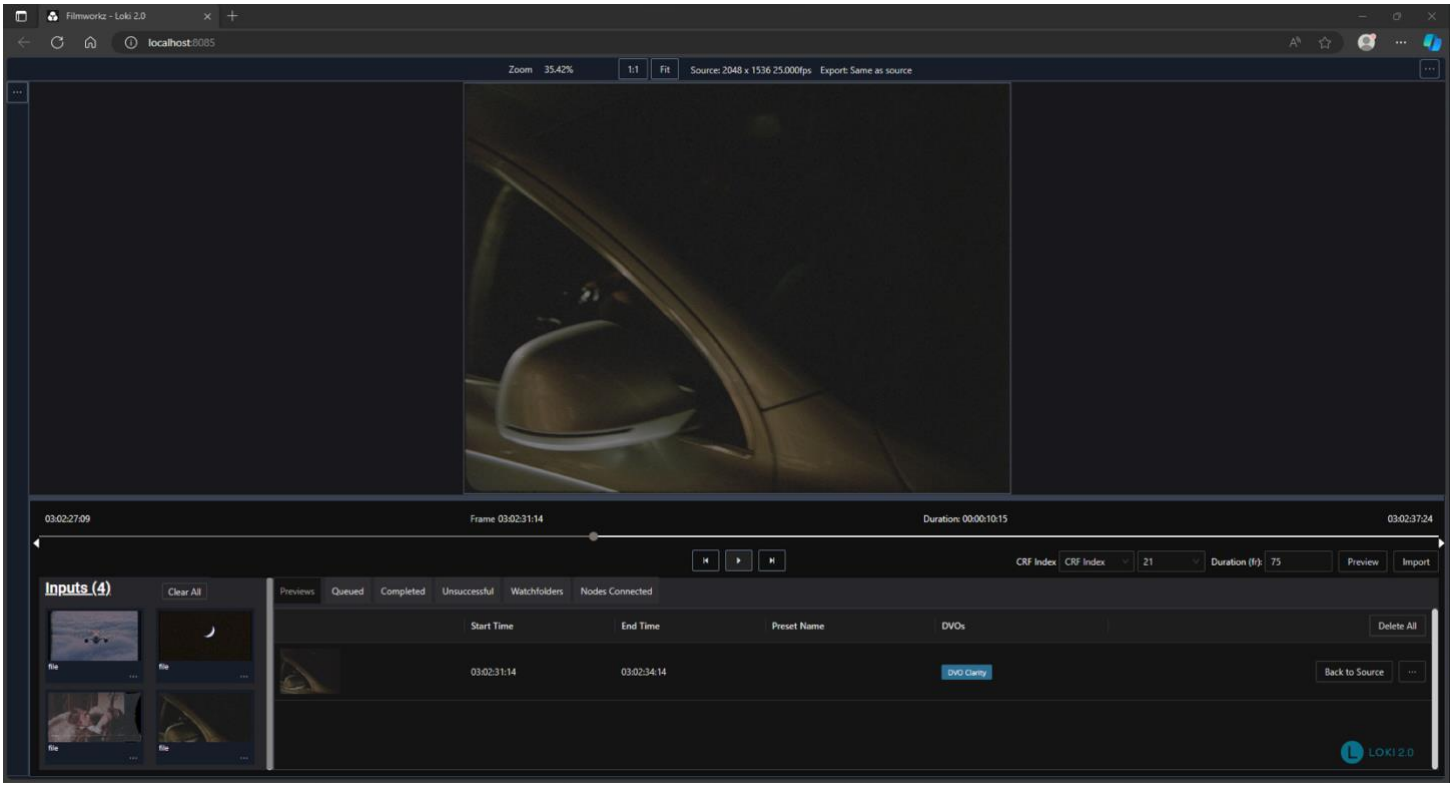
To select multiple files, click on the box to the left of the files; to select all files within a folder, click on the checkbox at the top of the window next to **File name.**



File import window with all files selected

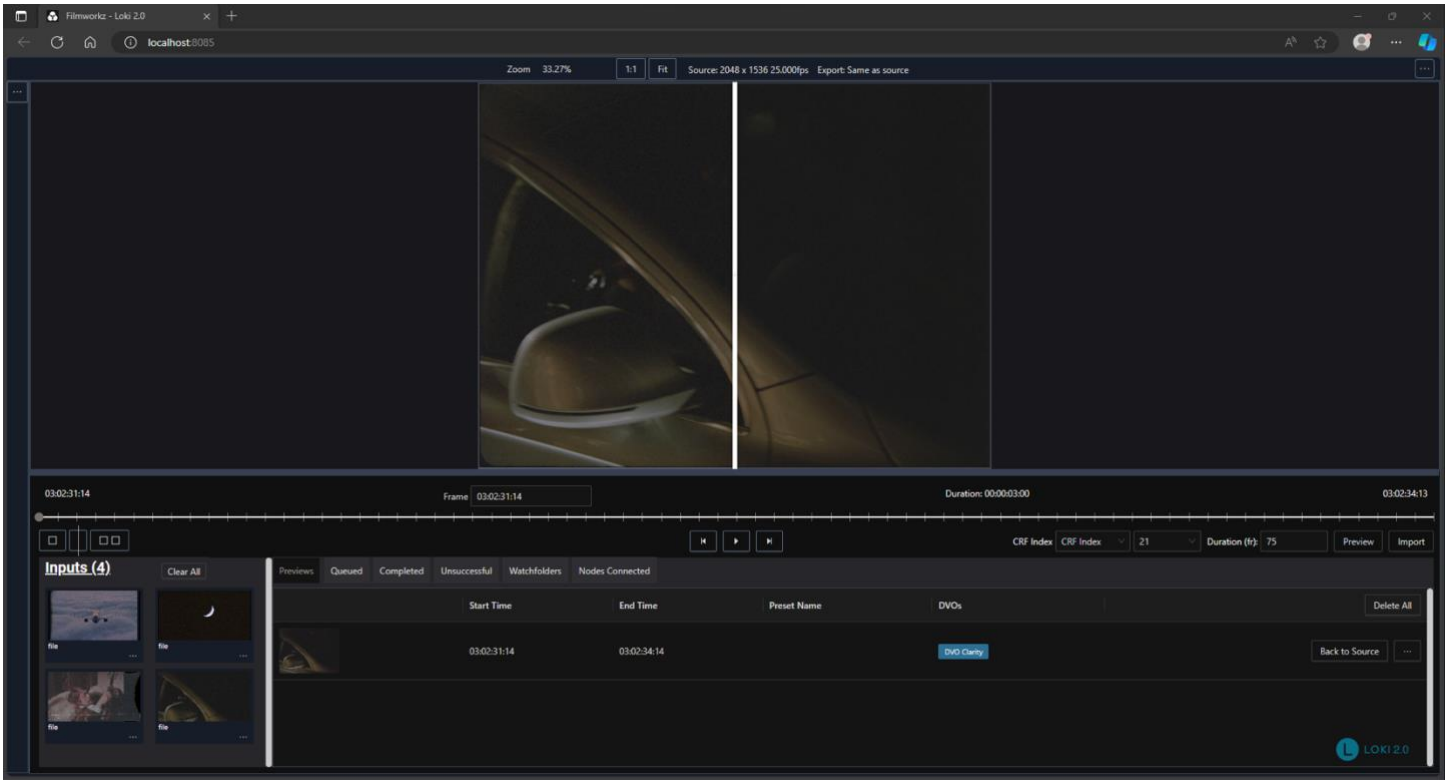
After selecting your files, click on **Upload Selected;** the files will appear in the **Input** section of the Interface. With the files loaded, you can click on the thumbnail to select the clip to open it on the **Preview Window.**

With the clip loaded to the **Preview Window**, you can click on different points of the timeline to see a frame preview of the section; it's also possible to type the frame number or timecode in the box below the **Preview Window.** After selecting the desired point, select the Bit rate and the duration of the preview, then click on the Preview button. A file is created and the "Previews" tab below the playback controls is populated.



Clip selected and loaded; timeline point selected to create preview

You can now use the playback controls to play back the preview in a loop or see it frame by frame. A new timeline will load that matches the selected duration.



Previews tab populated with a new clip

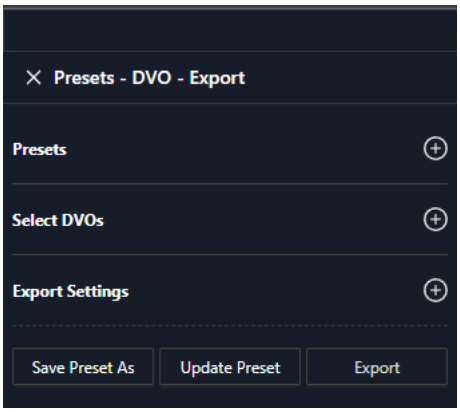
The interface also shows the timecode point selected and the duration of the shot; when a clip is loaded, the full duration is shown, but if a preview is created, it will show the duration of the preview.

Multiple Previews can be created using different settings and selected easily, just click on the thumbnail and play the file. If you want to remove the file from the list, click on the three-dot button on the right side of the thumbnail and select the “Close File” option. You can also click on the “Back to Source” button on the right to go back to the In point selected for the selected preview.

Previews are created by default at “C:\Loki.0\root\.cache”, but you can configure the location by clicking on the cog-wheel button on the top-right of the interface.

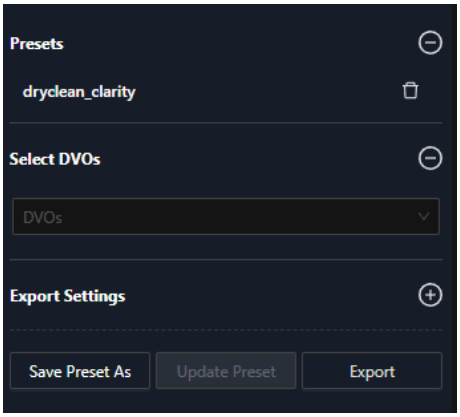
PRESETS, DVO AND EXPORT

On the left side of the Interface, you'll find a window with options to select saved Presets, choose DVOs and change parameters, and select Export settings, like frame rate, codec, resolution, and many other options.



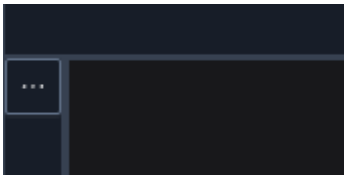
Basic view of the Options menu

To open each section, click on the section title:



Presets and DVO sections open

You can also close the left tab and expand the Viewer section by clicking on the "X" next to Presets on the left side of the Interface, as shown in the previous chapter. To open again, click on the three-dot icon on the top-left side of the Interface.



PRESETS

Users can easily create and save presets to be used on different clips and watchfolders, helping workflows to be easily repeated with expected results. Presets include selected DVOs, Effects, and Export settings, making batch-processing large amounts of footage extremely easy.

Presets can be created as just a transcoding process as well; selecting only Export settings (resolution, frame rate, codec, container, etc.) can be saved as a Preset to create a common format before a conform/restoration/color grading.

To create a Preset, select any DVOs and Effects, then select your Export settings. After approving the settings click on the "Save Preset As" button; a new window will open to create a preset name and save it.

The saved Preset will now be available in the Presets section; to use it, just click to select it. Any new export and previews will use the Preset until you deselect it.

DVO'S

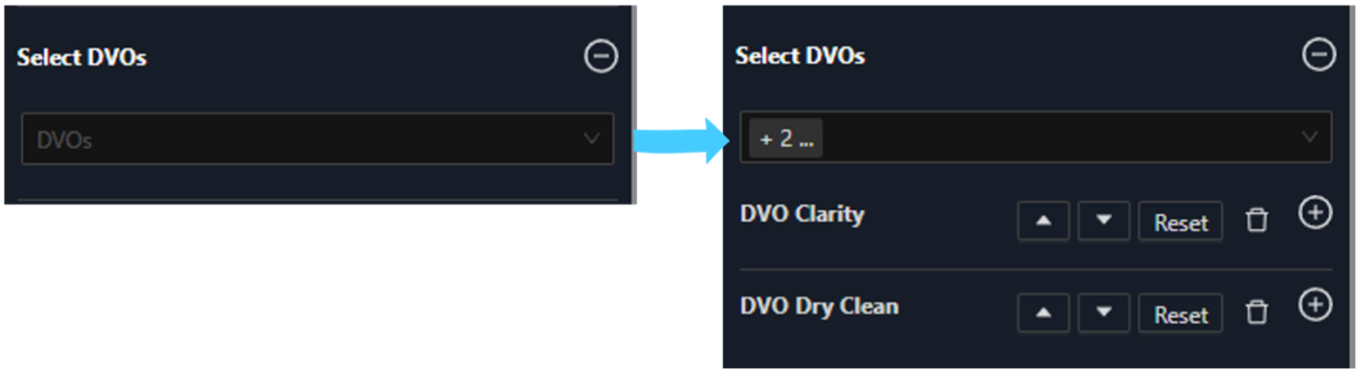
DVO's are a unique collection of best-in-class, moving image correction & enhancement software, accessed & optimized through the Filmworkz platforms Phoenix Restoration & Color and of course Loki for automation.

Several DVO tools are available to help users get the most from their content by automating tasks such as removing scratches, dirt, flicker, dead pixels, upscaling, and much more.

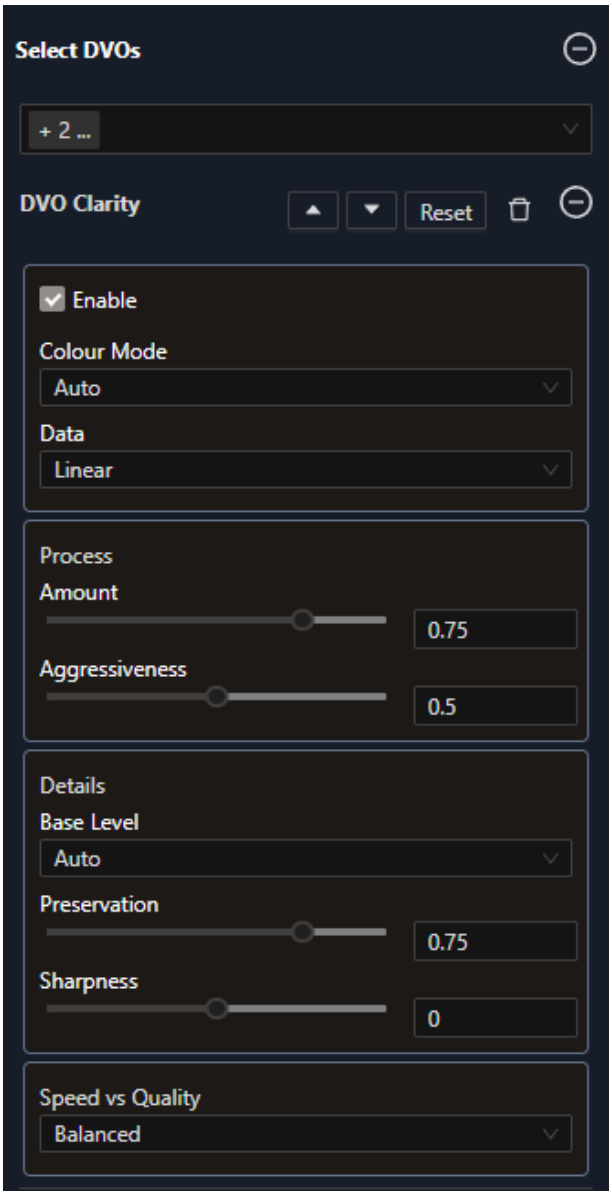
You can Ask Juno what they do and how they work, plus each DVO has its own User Guide (see the Quick Reference section below or the Filmworkz website).

Some of the DVO parameters in Loki differ or are excluded due to different interface capabilities. However, using Loki in tandem with Phoenix offers a powerful solution by automating common tasks in Loki while enabling manual refinement work using expanded DVO functionality in Phoenix.

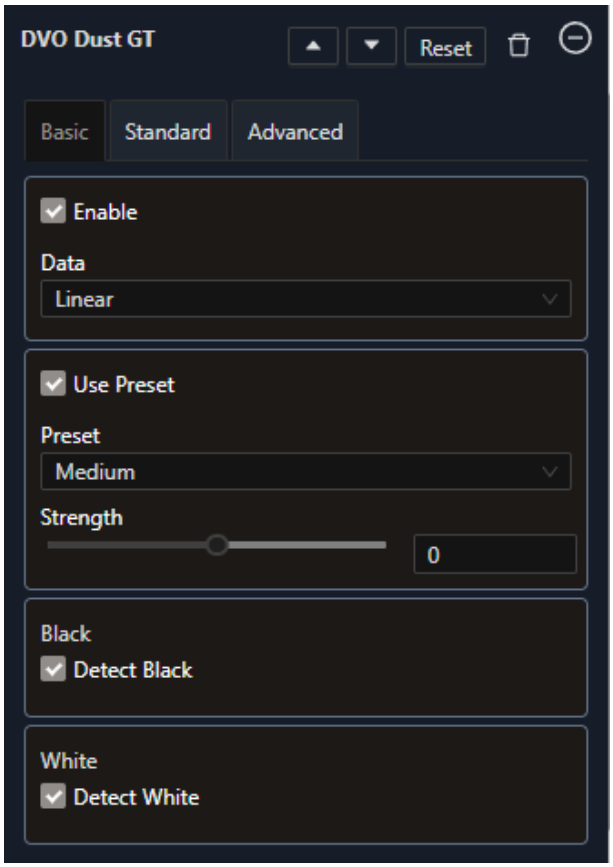
To use a DVO on a clip or to create a preset, click on the box and select one or more tools to add them to the list.



With DVOs selected, you can change the order of operations by using the arrows next to the tool name. To change the settings of each tool, click on the DVO name to open the parameters window as shown overleaf. Each DVO has its own set of parameters, with some having multiple tabs with additional/advanced settings.



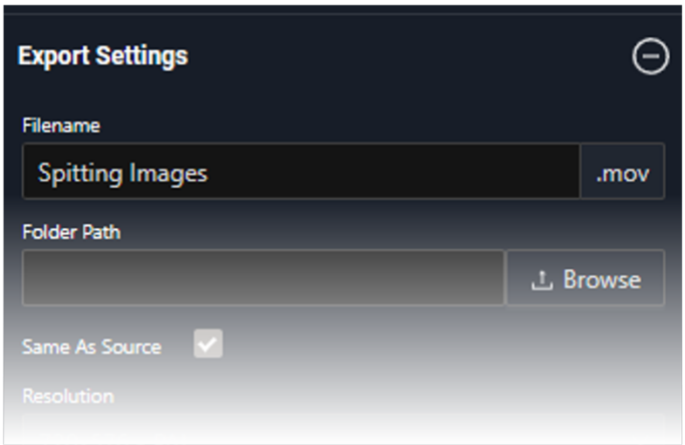
DVO Parameters



Multiple tab setup example - Dust GT

Loki also includes a set of general effects to deal with basic issues like resizing and blur, for example. They can be used the same way as DVOs and are found in the "Select DVOs" section of the interface.

EXPORT SETTINGS



Export defines settings for the Preview alongside the selected effects.

It's important to choose the correct output settings to get the desired result when rendering previews, creating presets, and rendering files.

It's also important to understand the connection between certain DVO and the export settings; for example, when using a DVO to upscale your file to a different resolution and aspect ratio of the original, it's essential to correctly choose the output aspect ratio and fit mode in the DVO parameters and match them in the Export settings.

The Export section includes options related to file name, resolution, frame rate, containers, etc. The available options are:

Filename

Enter a file name for the exported file. Enter filename only, without the file extension (for example: file1, not file1.mov).

Output Folder

Define the folder where to export the file.

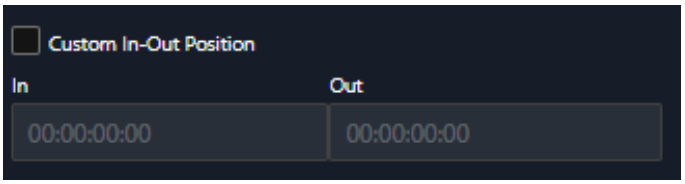
Scene Detect

Use this option if you have a longplay/mixdown file. Loki will detect the cuts while processing to improve results on a shot basis.

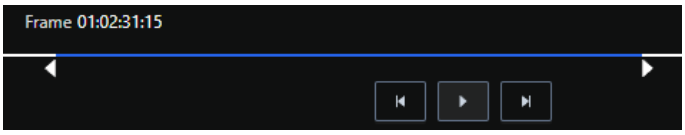
Custom Timecode

This option will overwrite the existing timecode with a new timecode. Check the option and type the new timecode in the box.

Custom In-Out Position



Select this option if you need to export just a section of the file. When the checkbox is selected, the timeline bar will become blue, and you can use the triangles to make a rough selection of a section of the file.



In-Out selection using the timeline icons

Same as source

Uses the original file(s) metadata, like resolution, frame rate, scan type and timecode. If DVO Twister is used to process a frame rate conversion, it will use the output framerate setting selected in DVO Twister.

Resolution

Select from a range of common resolutions or add a custom size

Frame Rate

Select a frame rate or choose same as input to use the same as the input file

Drop Frame

Select if the Timecode will be a Drop or Non-Drop Frame format

Scan type

Select Progressive or Fields

Working Bit Depth

Choose the bit depth used for the processing of the files. The exported bit depth will depend on the file format/codec chosen.

Aspect Ratio

This sets the output file aspect ratio. If the source file has a different aspect ratio than the output file, this may add letterboxing or pillarboxing depending on the fitting option above.

Fitting (Aspect Ratio Preserve)

If the source images are a different resolution to your defined output, you can choose if and how they are scaled and/or cropped for output. Loki provides three options:

Fit: Scales the source image to the size of the output format. This is the default setting.

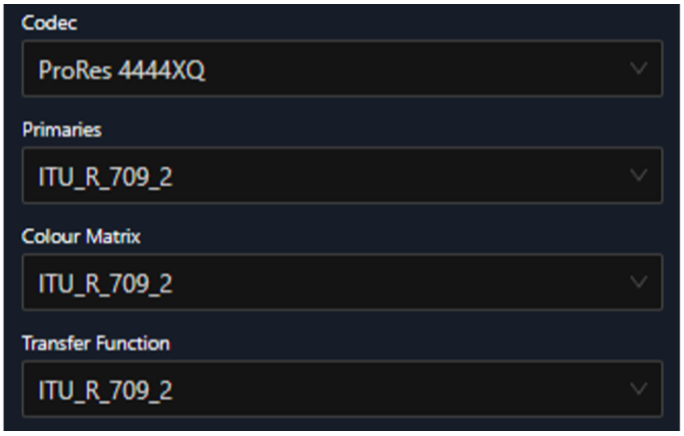
Crop: Crops the source image and scales it to the size of the output format.

Center: The center of the source image is mapped to the center of the output format, maintaining the source image aspect ratio. This may result in a cropped or blanked image, depending on the difference between the source and output resolution and aspect ratio.

Container

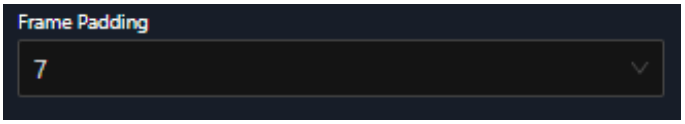
Select the file wrapper: CIN, DPX, EXR, JP2, JPEG, MKV, MOV, MPG, MP4, MXF, PIC, SGI, TGA, TIF.

Codec



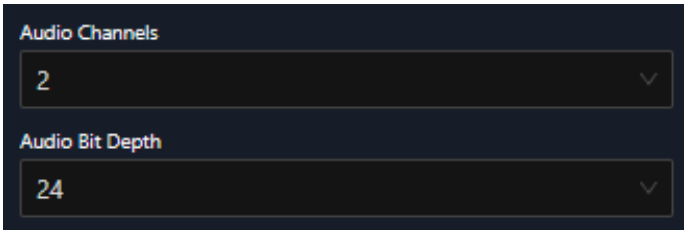
Several codecs are available depending on the selected container. For a list of compatible please refer to our list of supported formats. Certain codecs will offer several other choices, like color primaries, matrix and transfer functions.

Frame Padding



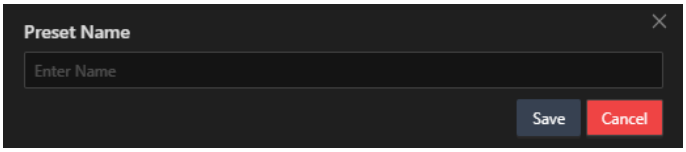
If an image sequence is selected as an output option, you can choose the frame padding added for the frame range. Values go from 1 to a maximum of 10.

Audio



When certain containers and codecs are chosen, up to 8 audio tracks can be exported. Certain codecs have limitations related to the number of tracks, so make sure your settings are correct before exporting the file(s). Bit depth can also be selected, with 16,24 and 32-bit options.

After selecting your preferred settings, you can choose to save as a new preset, update an existing preset, or just export a file. To save as a preset, select your DVO and export settings and click on “Save Preset as” and type a name:

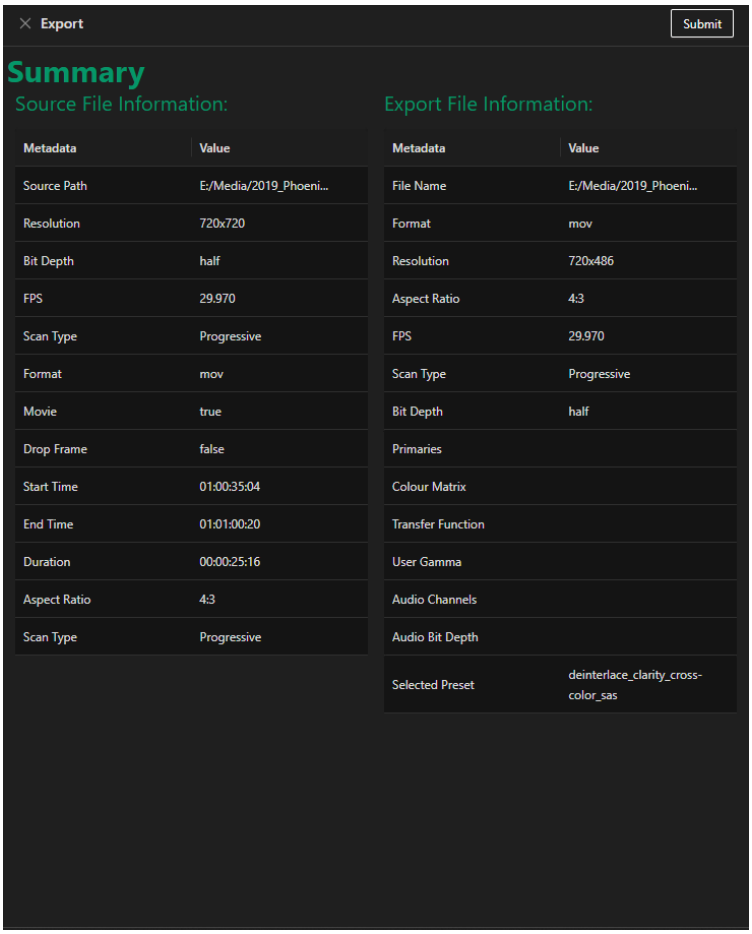


Preset name window

It’s not necessary to add any DVOs to create a preset, changing only Export settings will create a transcoding preset. When used in combination with “Same as Source” option, files can be easily exported using different codecs.

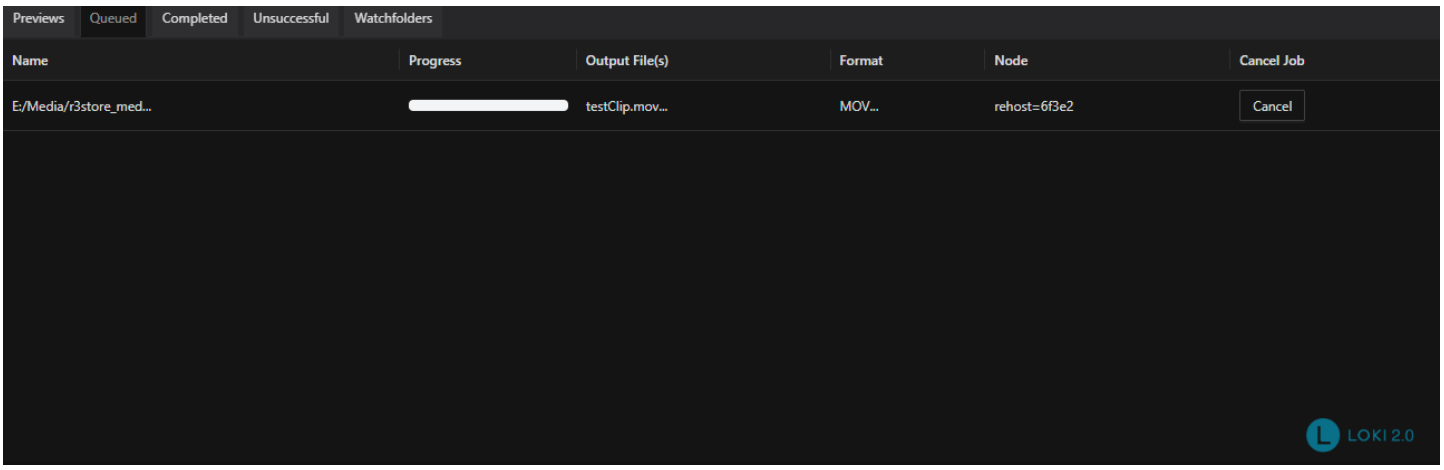
To update a preset, just select the preset, add or remove DVOs, change export settings and click on the “Update Preset” button.

Click on the Export button to open the tab on the right side of the interface; here you can check your settings. After confirming your settings, click on the “Submit” button to add the file to the queue.



Export Settings Summary

You'll then be able to see the status of the job in the Information Tabs:



Queue tab

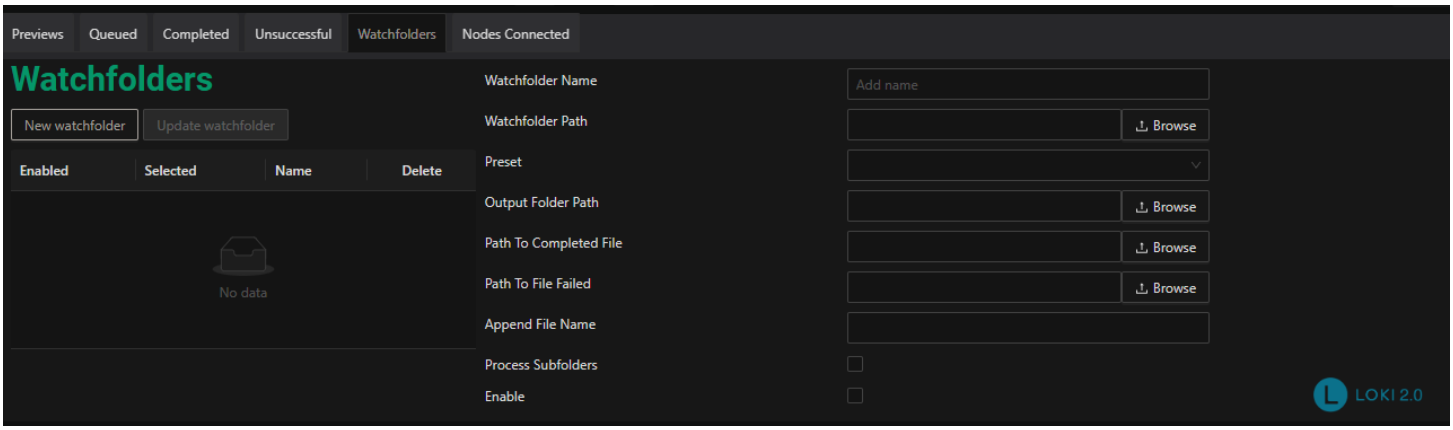
WATCHFOLDERS

Watchfolders, also known as hot folders, or drop folders, provide a way to automatically process multiple files using user created presets.

Video files (mov, mxf, etc) and sequential files (dpx, exr, etc) are both supported.

Watchfolders use rules to determine when to start processing the file/files. Some rules are fixed, and some are user-defined. For example, if transferring a large video file into a watchfolder, the file will not be processed until it is fully copied into that folder.

HOW TO CREATE A WATCHFOLDER



Watchfolder Name

Enter the Name of the Watchfolder you want to create.

Watchfolder Path

Enter the folder path where the watch folder will monitor files.

Preset

Select the Preset that will be applied to the files in the watch folder. Presets can be created in the Create Job tab and Preset Editor.

Output Folder Path

Enter the folder where the processed watch folder files will be exported to.

Path to Completed File

Enter the folder where the processed files will be moved to. For image sequences, the folder containing the files will be moved following the original folder structure.

Path to Failed File

Enter the folder where the files that failed processing will be moved to.

Append File Name

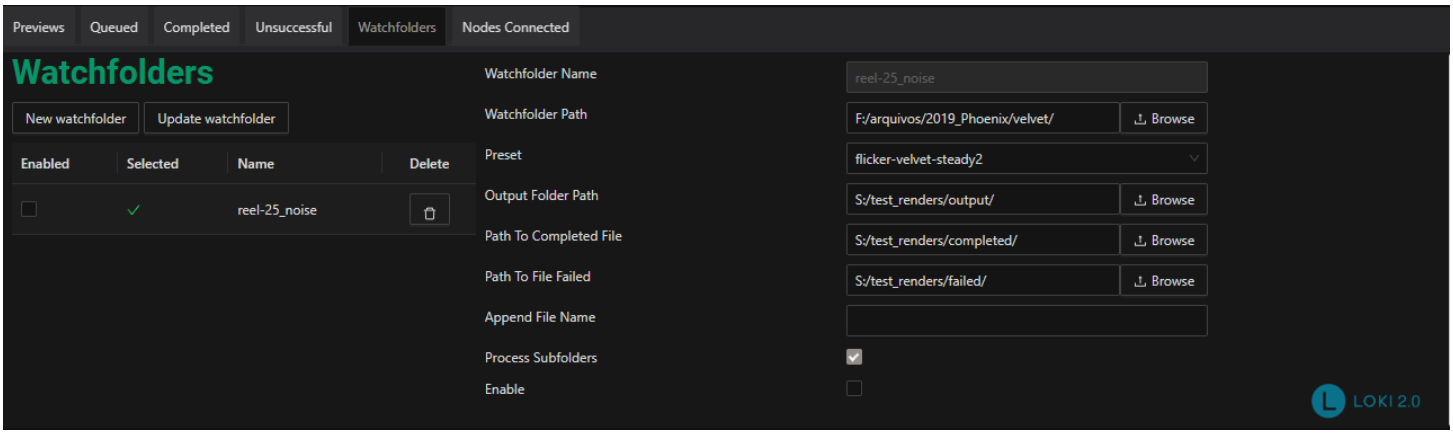
Use this function to append text to the end of the processed file name. For example, if the input file is “file1.mov”, and the word “processed” is appended, the exported file will be named “file1processed.mov”.

Process Subfolders

When this option is enabled, Loki will look inside any subfolders of the main watch folder. The sub folders will be processed with the folder structure replicated on the output.

Enable

Enable or disable the selected watchfolder. When enabled, all files in the selected watchfolder will be processed; when disabled, all files will be ignored.



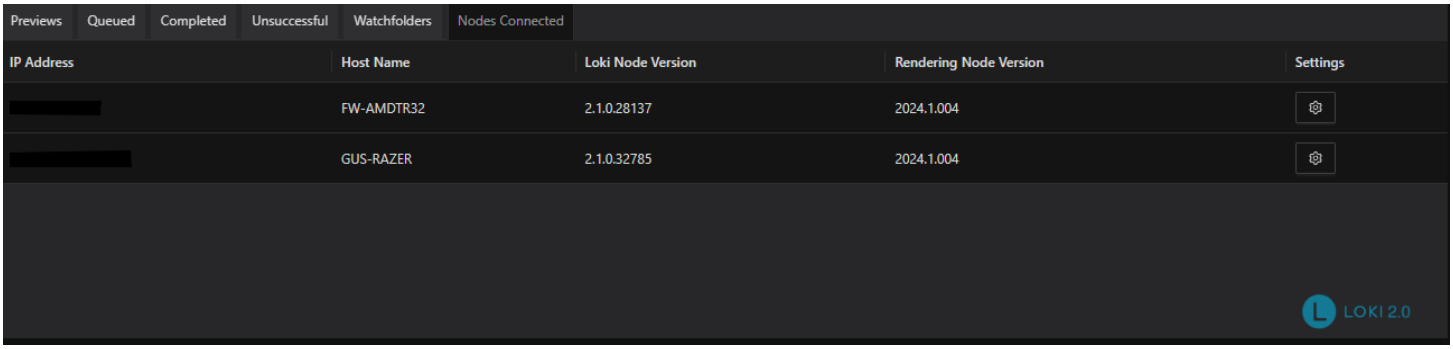
After setting up the Watchfolder, click on “New Watchfolder” on the left side to save your configuration.

To select it, just click on the watchfolder and a checkmark will be shown next to the name.

To enable it just click on the checkbox and start adding files to the folder. Multiple Watchfolders can be enabled at the same time. Files will be rendered as soon as they’re added to the folder and will then appear in the Queued tab.

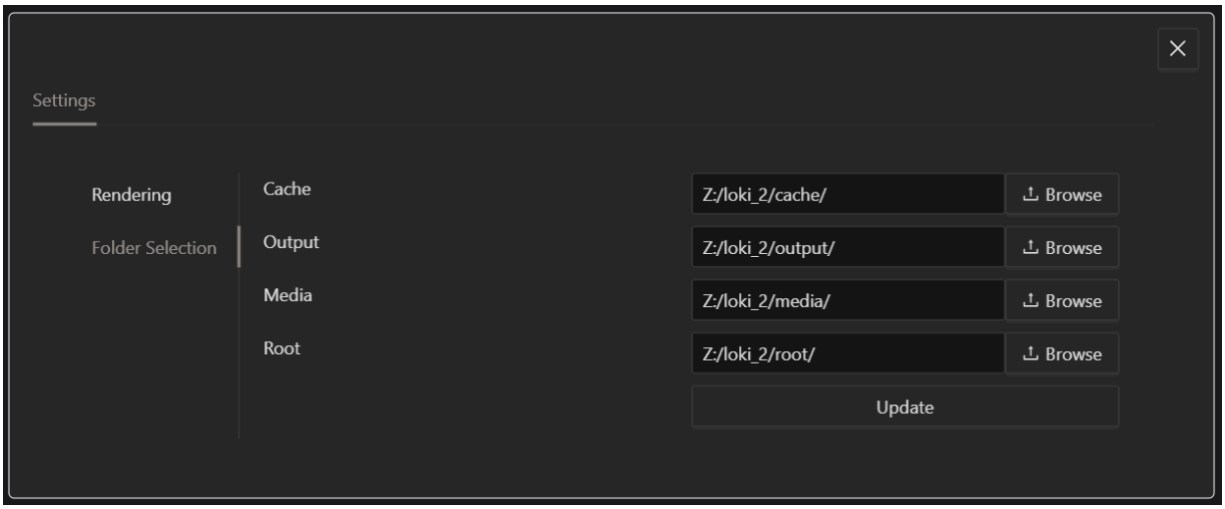
NODES CONNECTED

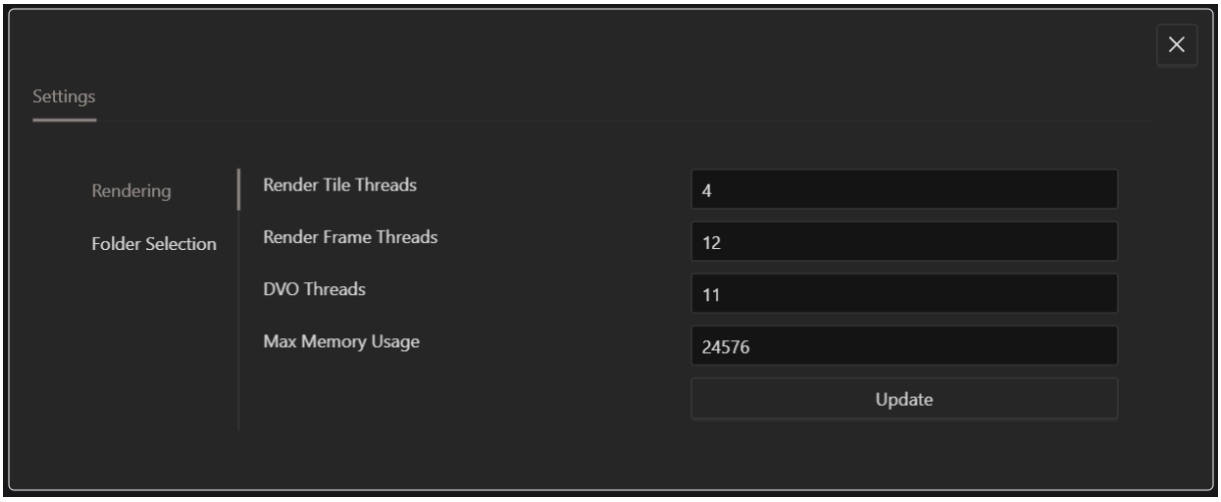
Loki 2 can use multiple computers on the same network to distribute render tasks. To use this feature, you'll need to install the render node on the computer(s) that will be available to process files and have a valid license per node (computer).



Multiple nodes available

The Nodes Connected tab offers information about the nodes available, with IP, Host Name and Node and Rendering versions to quickly identify mismatched software versions. The Settings windows is now presented per node; clicking on the cogwheel on the right opens the Settings window, where you can select Output and Cache folders and change Rendering options.





Rendering options are:

Render Tile Threads: Splits images into parts and works on them simultaneously. It's only significant when doing high-resolution projects. Set around 4 to 6 for the best results.

Render Frame Threads: The number of threads we use to render frames. It should be set as close to the number of physical cores as possible. Leave around 2 cores free for Windows tasks

DVO Threads: Number of threads used to render DVOs. Like Render Frame Threads, it should be set as close as possible to the number of physical cores. Leave around 2 cores free for Windows tasks.

Memory Pool: How much memory is allocated for handling images internally, like caching. It's very dependent on source image size and project resolution; for SD projects, we recommend lower values (around 2048 to 4096) but, in general, the first run will set the proper amount. Always keep an eye on memory usage using Task viewer. If it gets close to the max amount of memory, lower the value in Loki.

Change settings, type the values then click on the “Update” button; it will restart the Node and use the new values. While it restarts, some delays will be noticed until the Node is fully functional.

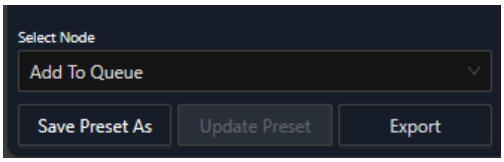
The Folder Selection window lets you choose your Cache, Output, Media and Root folders. Caches are created when you scrub the Timeline and create Previews; these files can be easily deleted and will not affect source files.

The Output folder is where renders will be created if no specific folder is selected when doing an Export. If a new folder is selected, this path will be ignored.

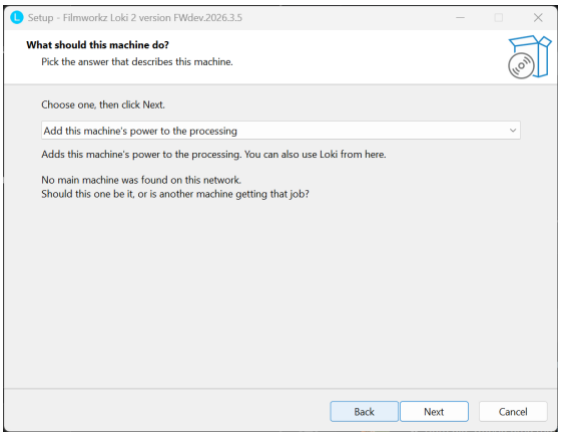
The Media and Root folders are necessary for the "Send to Loki" functionality and provide a location for manual paint caches and temporary composition placement during the rendering process. These folders must be set up in a drive with plenty of space depending on the amount of manual painting and media resolution.

HOW TO CONNECT TO MULTIPLE NODES

If you have multiple computers available on your network, you can get more Loki 2 licenses to add computers to your render queue. Renders can be either automatically assigned, or a specific node can be selected.



To add render nodes to your setup, run the Loki 2 installer and, when prompted to choose options, you can either install just the Loki node and use the system as a render node, or do a full installation.



Make sure to use a location where all computers in your network have correct permissions, network drives are shared, match drive letters, and can properly read and write files. If the network blocks discovery (VPN, guest Wi-Fi, different VLAN), use the tray menu "Change the machine that runs the processing…" and type the main machine's **name.**

After the setup is complete, new nodes will appear on the Nodes Connected tab. Make sure to click on the cogwheel of each new node to properly setup your render settings and make sure that the computers all share the same file locations to render previews and files.

HOW TO USE MULTIPLE NODES

After the installation and setup is complete, you can use any of the available nodes to render your shots and Watchfolders. When you’re ready to export or save a new preset, you can either let Loki 2 automatically send renders to the queue by selecting the available system, or manually choose the node you want to do the job.

By using the “Select Node” dropdown, all available nodes can be selected. When a node selection is made, render operations will use that node until another one is selected. In the case of preview creation, it'll be added to the Queue.

LOKI API

NEW FEATURE

INTRODUCTION

The Loki API provides developers with the knowledge to integrate Loki into media supply chain workflows, therefore offering improved content restoration potential and easier monetisation of assets previously considered inaccessible. Whether you're integrating directly into a MAM environment, adding to a workflow orchestration engine or building your own front end, our API offers a streamlined way to drive Loki and achieve incredible results.

API OVERVIEW

The API documentation is included at the end of this User Guide, where you'll find detailed information on how to build requests, handle responses and manage your job queue. You'll also learn about the various endpoints, data structures, and error codes, ensuring a smooth integration process.

The Loki API is accessed via WebSocket at the following endpoint:

http://ip_address:9092

API CALLS

Each API call is shown at the end of this document, on a separate page for each call/response for ease of usage. The list of calls is as follows:

API	Task	Page
1. GetPresets	Returns a list of presets currently deployed	36
2. RenderPresets	Submits a render request to Loki for input content using a specified preset	37
3. GetJobStatus	Retrieves the status of a specific job using the JobID	38
4. GetQueuedJobs	Fetches a list of all jobs in the queue	40
5. GetInProgressJobs	Obtains a list of all active jobs that are currently in progress	42
6. GetCompletedJobs	Retrieves a list of all completed jobs	43
7. GetFailedJobs	Gets a list of all failed jobs so they can be resubmitted	44
8. CancelJob	Cancels a specific job by its JobID	46
9. CancelAllJobs	Cancels all jobs in the job queue	47

If there's an API call you'd find useful that isn't listed here, let us know by emailing getstarted@filmworkz.com.

NEW LOKI RENDER

NEW VERSION

INTRODUCTION

Launched in Summer 2025, Loki Render is a perfect companion to Phoenix which syncs with the new 'Send to Loki' export option in Phoenix v. 2025.3 onwards. The Loki Render node offers the ability to hand off the export of a composition to a remote Loki instance within your network, freeing up your Phoenix instance to pick up the next grading or restoration job in the queue.

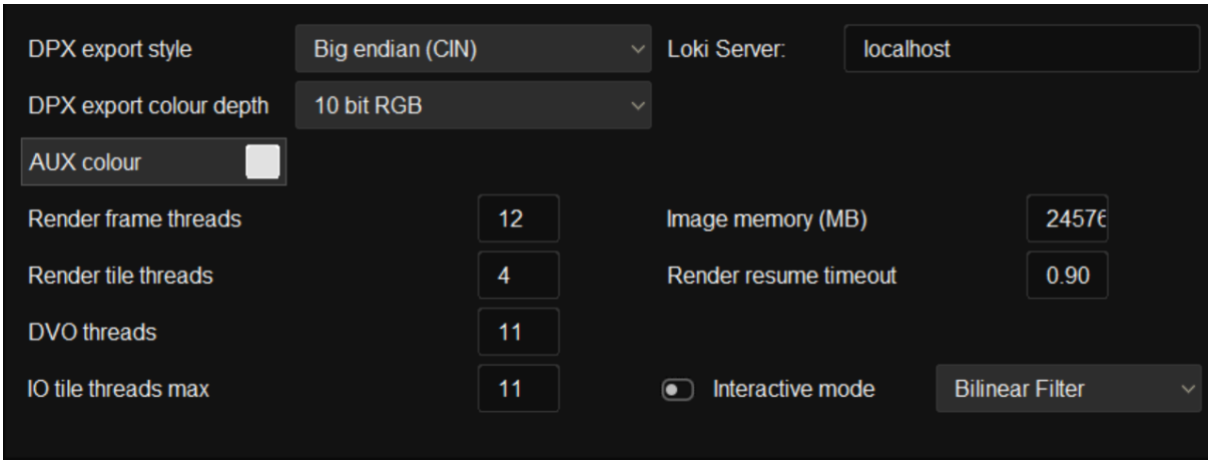
This removes grading or restoration suite downtime, allowing better resource planning and productivity.

A single Loki server instance can manage multiple render nodes from a single job entry point, so the environment can be scaled to provide as much capacity as you need.

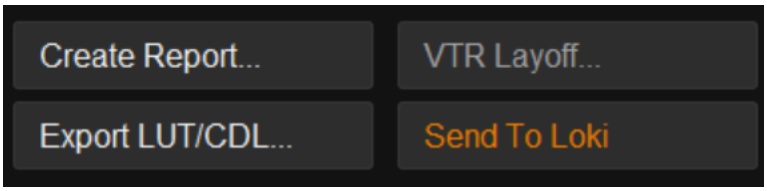
PHOENIX INTERFACE – SEND TO LOKI

There are a few interface updates to reflect the introduction of 'Send to Loki', both in the Phoenix Preferences and in the Project page.

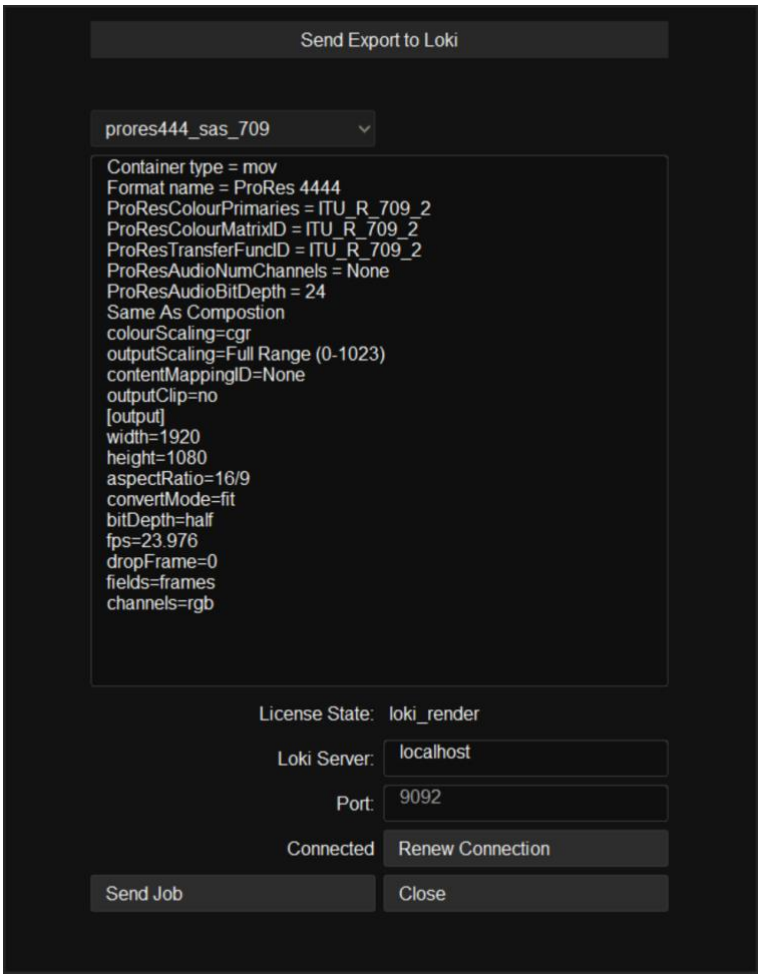
Within the Application Preferences>Rendering tab, a new Loki Server option is available, this allows the input of the Loki Server IP address, this will be read by any project and used as the default IP address to pass any render to an external Loki instance.



Within in the Project windows, the interface now shows a 'Send to Loki' button beside the Export button, this initiates the job handover to the remote machine.

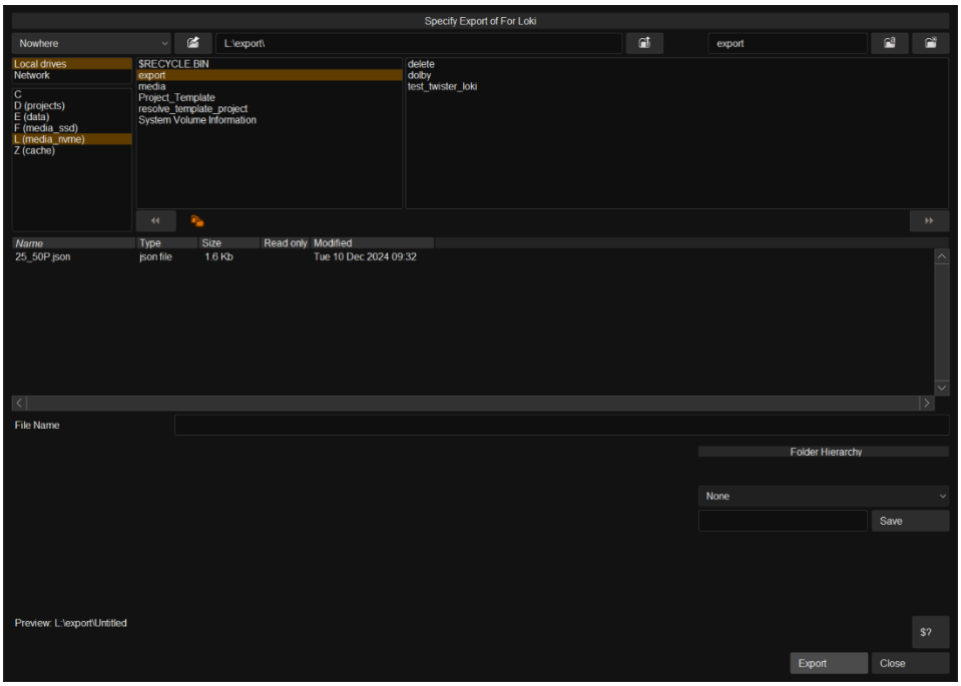


Clicking this button will open a new window, Send Export to Loki. This window shows the current Loki status (connection and licence validity) and it also allows the selection of any preset saved in the remote Loki instance, displaying the breakdown of the export settings so they can be reviewed ahead of export.



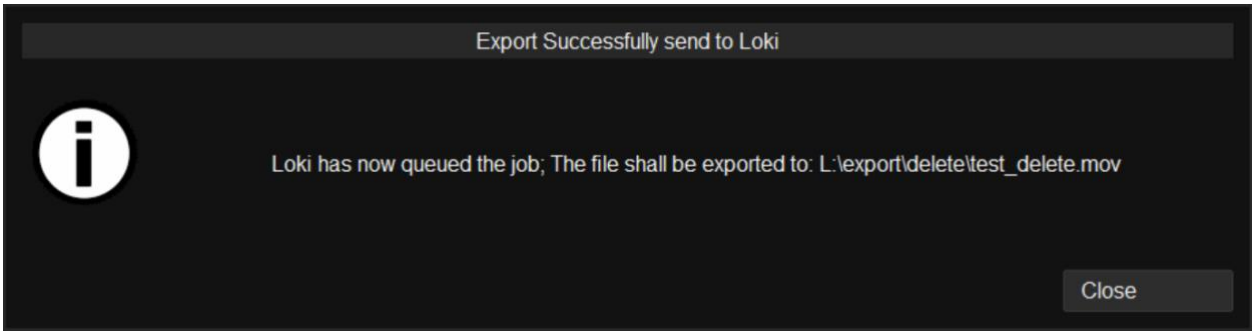
Send Export to Loki

Clicking 'Send Job' will result in a window familiar to any Phoenix user – the browse folders window where the output location for the exported content can be selected. The same folder and file name variables provided in Phoenix remain usable in this new workflow.



Specify Export for Loki

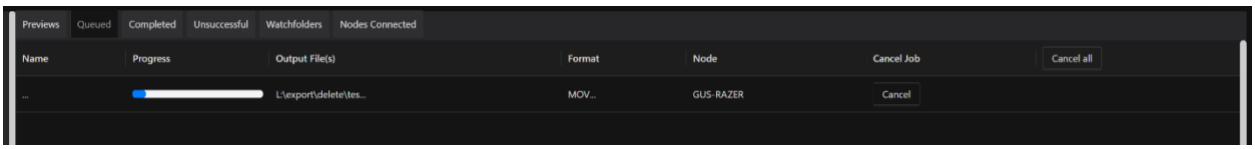
After choosing the folder and name, click on the "Export" button on the lower right; if you want to cancel, click on the "Close" button.



Export successfully sent to Loki window

LOKI RENDER INTERFACE

Once the job has been sent to Loki, open the Loki interface on your web browser to see the render status on the "Queued" tab.



Render running on Loki

You can also use in and out points in your composition.

EXPORT SETTINGS IN LOKI RENDER

When creating presets in Loki, it's important to understand certain limitations in the current implementation:

- The current version of Send to Loki Render will only render presets with Export settings, meaning codecs, containers, resolution, etc; no DVOs or other effects are included.
- Leaving the "Same as Source" box selected in Loki will keep the settings of the selected output mode as set up in Phoenix.
- You can't use a custom timecode; the composition timecode will always be used.
- When creating a Loki preset, it's important to understand any limitations of the container/codec related to the frame rate and resolutions.

HARDWARE REQUIREMENTS

Loki is a scalable solution which can be run on commodity hardware to help drive down the cost of content delivery by removing the need to invest in new, high spec, and expensive hardware to produce the content.

The *recommended* hardware requirements are the same as Phoenix, but any computer with AVX2 compatible processors and at least 64GB of RAM and an 8GB Nvidia card can be used. If the composition has many Raw camera files, 16GB of video RAM is still recommended.

Media drives must be shared across the Phoenix and Loki systems with matching paths. Any custom LUT files must be added to the Loki computer using this path: C:\Loki 2.0\version-number\root\cms

EXAMPLE 'SEND TO LOKI' WORKFLOWS

PHOENIX + LOKI RENDER

Free up your restoration workstation

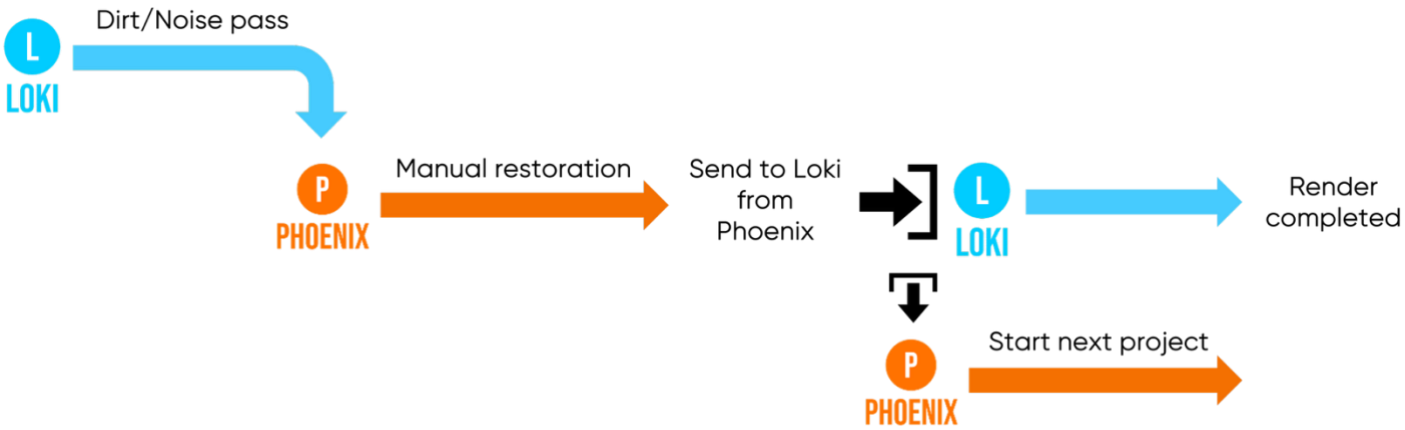
Use the new 'Send to Loki' export button in Phoenix to offload render tasks to a remote machine and free up your workstation for the next project.

This dramatically reduces grading or restoration suite downtime, enabling greater productivity and allowing your craft to shine through.

1. Set up your Loki Render IP address in Phoenix Preferences>Rendering.
2. Use the new "Send to Loki" button to export the project.
3. Select from export presets and define output path.
4. The job runs in the background while you get on with the next Phoenix project; monitor progress in Loki Render UI.

PHOENIX + LOKI (FULL VERSION)

Supercharge your restoration workflow



1. Set up your Loki IP address in Phoenix Preferences.
2. Use Watchfolders in Loki to bulk process content (e.g. dirt pass with DVO Dry Clean, noise removal with DVO Clarity) and export results to nominated folder
3. Add the processed file(s) to Phoenix to undertake manual restoration work/fine-tuning and add a final grade
4. Use the new "Send to Loki" button when ready to export.
5. Select from existing export presets and define output path.
6. The job runs in the background while you get on with the next Phoenix project; monitor progress in Loki UI.

DVO QUICK REFERENCE

A huge selection of the best award-winning tools available there's a DVO perfectly matched to any grading, correction, restoration or conversion challenge. Here's where to access them in DVO Performance Packs for Loki:

DVO	DETAILS	DVO FILM	DVO VIDEO	DVO CONVERT	DVO FINISH
ALIAS	Fix image aliasing caused by high frequency patterns		●		●
APERTURE	Introduce incredible sharpness to your image		●		●
BRICKWALL	Enables you to Pre-master video for compression and fix digital camera sensor issues		●		●
CHROMA	Magically fix any chromatic aberration, fringing & color bleeding	●	●		●
CLARITY	The most advanced grain and noise reduction—delivering pristine images without compromise.				●
CROSS-COLOUR	Remove Chroma or dot crawl from video		●		
DECOMPRESS	High-compression, artifact infested cleaner which improves bad gradients and macroblocking issues		●		●
DE-INTERLACE	Highly accurate creation of progressive frames from any interlaced material		●	●	
DESPECKLE	Auto removal of flashing & moving specks caused by sensor defects & digital speckling artifacts	●	●		
DIRT MAP	Our legendary Auto Repair tool	●			
DROPOUT	Easy auto drop-out and random artifact concealment		●		
DRY CLEAN	The go-to solution for fast, intelligent dust and blemish removal	●			
DUST	Excellent auto motion-compensation dust removal	●			
DUST GT	A super fast dust management tool	●			
FLICKER	Automatic flicker removal	●			
FRAME LOCK	Fast, automatic frame stabilization	●			
GRAIN GT	Super fast grain management		●		●
LINE-SYNC	Correct shifted and/or stretched lines due to synchronization errors - who knew?		●		
NOISE	Motion-compensated video noise reduction		●		
PIXEL	Dead pixel trouble? Not any more... Auto locate & remove here		●		●
PRINT ALIGN	Will auto align RGB separation prints	●			
PRINT ALIGN SEQ.	Auto combine and align sequential RGB separation prints	●			
REGRAIN RGB	Magically match any film grain look	●			●
SCALA	Our intelligent image upscaler with unparalleled quality			●	
SCRATCH TARGET	Easily remove vertical scratch	●			
SHARPEN	Sharpen the image without magnifying the noise - unbelievable!!!				●
STEADY 2	Our fully automated image stabilizer	●			
THREE TWO	Our auto mixed cadence correction tool			●	
TWISTER	Our advanced software standards conversion tool			●	
UPSCALE	Need to up-convert SD to HD? Do it here			●	
VELVET	Remove extreme noise, manage low light shots & unlock unusable footage		●		●
WARP	Removes warping associated with line scanners	●			
ZOOM	Our super high quality up-converter and down-converter			●	

You can also **customize your Loki setup** by selecting individual DVOs of your choice for a fully bespoke setup.

WORKFLOW EXAMPLES

Hands-free image processing excellence is the clear purpose of Loki; however, its versatility presents an abundance of workflow possibilities and options to different users. Here are some typical ways in which Loki can enhance and simplify many image processing tasks. These are illustrative examples and of course there are many variables with any content workflow, so if you need help with some specific cases, **please chat to Juno**.

COLOR GRADING ENHANCEMENT

DVO Clarity for noise reduction and DVO Sharpen offer the perfect complement to color grading by giving a sound base from which to produce the cleanest, sharpest images possible, without painstaking manual effort. Using it on a scene-by-scene basis, the colorist can easily use Loki Essentials plus DVO Film Pack to clean and repair problems restricting their creative vision.

While noise and sharpness are among the most common issues faced by colorists, Loki also offers the ability to fix other problems such as flicker, lens aberration and dead pixels to enhance, equalize and convert the footage to any standards.

FILM RESTORATION

Many restoration workflows use a variety of tools from different software providers to allow the Restoration specialist to cherry pick the best tool(s) from each to create a streamlined processing pipeline.

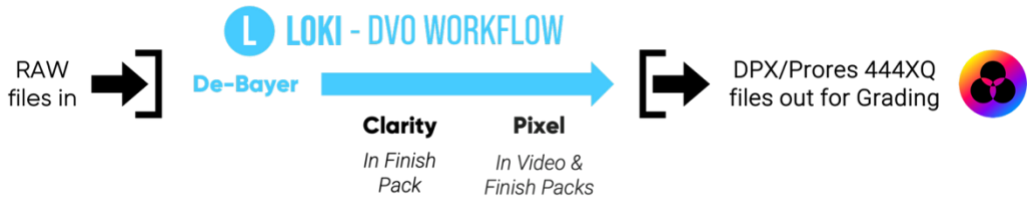
Loki enhances this approach and offers the user the cost-effective option of cherry-picking from the award winning and comprehensive DVO Restore Pack to fill in the gaps in their workflows or improve on existing processes. DVO Dry Clean is the leading dust and dirt tool, and this tool alone will greatly enhance quality and project speed.

VIDEO TAPE RESTORATION & ARCHIVING

Video tape archiving can be greatly enhanced and simplified by using Loki's watch folder feature in tandem with the DVO Video Pack. Once the watch folder, DVO tools and desired broadcast/archive format are selected the process of video tape digital restoration and archiving becomes essentially automated, meaning you can devote precious time where it's needed, for example by using the option to fine-tune the settings in Loki where the content demands more artistry.

RAW FILE DE-BAYERING WITH DIGITAL CAMERA CLEAN-UP (Future Release)

De-Bayer camera files for grading while fixing any known camera issues such as de-Bayer colour fringing, flicker, noisy lowlights, chromatic lens aberration and dead pixels, all in one pass. Offloading these tasks to Loki to render in the background, or in downtime, frees up the operator to grade as opposed to waiting for RAW data de-Bayering and image clean up.



ULTIMATE UPSCALING

It's not uncommon to have to produce scaled deliverable versions of master files. Hand this task over to Loki and scale to any spatial resolution required with DVO Scala; include DVO Clarity and DVO Sharpen to guarantee the cleanest and sharpest results possible.

CROSS CONVERSIONS

Let Loki with DVO Twister and DVO Scala deal with deliverables for resolutions and frame rates different to your master file. Adding further complementary DVOs such as Clarity & Sharpen will guarantee the best image possible.

DVO Twister has been the OEM choice of standards converters for many years and has been integrated into industry leading products for broadcast services.

TRANSCODING

At its heart Loki functions as an effective transcoding device. The inclusion of DVO Brickwall will make any compression codec more efficient by increasing quality, decreasing file size or a combination of both.

As a Windows based application, it's important to note that the Loki ProRes I/O is fully Apple certified for performance and quality.

API CALLS

1. GetPresets

Description:

This command returns a list of presets currently deployed on the Loki instance, this preset name can then be used in the construction of an API call to submit a job.

Request:


```
{
   "commandName": "GetPresets"
}
```


Response:


```
{
   "data": "[{"name":"25_50P","locked":false},{"name":"Brickwall","locked":false},{"name":"Chroma","locked":false},{"name":"Clarity","locked":false},{"name":"Cleanup","locked":false},{"name":"Decompress","locked":false},{"name":"Pixel","locked":false},{"name":"test_write_test_ian","locked":false},{"name":"Velvet and Steady II","locked":false}]",
   "id": null,
   "command": 22,
   "error": false,
   "job": null,
   "nodeId": "",
   "commandName": "GetPresets",
   "humanReadable": true
}
```

2. RenderPresets

Description:

This is the only command to submit or trigger a job via the API, provide the input file name, the preset name and a priority along with the output location and filename. The response to this API call is in the form of a unique jobID which can be used for progress tracking or job cancellation.

Request:


```
{
  "data": "{\
    \"output\":\"S:/Output/output.mov\",\
    \"source\":\"S:/Input/input.mov\",\
    \"presetId\": \"clean_up\",\
    \"priority\": 1\
  }",
  "commandName": "RenderPreset"
}
```


Response:


```
{
  "data": "{\"jobId\":\"dc70d789-e4d8-4d95-9494-b2a30769367e\"}",
  "id": null,
  "command": 7,
  "error": false,
  "job": null,
  "nodeId": "",
  "commandName": "RenderPreset",
  "humanReadable": true
}
```


---

3. GetJobStatus

Description:

Submission of this API call will return the current status of a single job based on the unique job id provided when the job was submitted. The response will be either, Queued, In Progress or Complete.

Request:


```
{
   "data": "{\
      \"jobId\":\"dc70d789-e4d8-4d95-9494-b2a30769367e\",\
      \"statusLevel\":\"statusOnly\"\
   }",
   "commandName": "GetJobStatus"
}
```


StatusLevel options:

statusOnly: Minimal job information

statusBasic: Minimal job information including job timings

statusFull: Detailed job information

statusOnly Response:


```
{
   "data": "{\
      \"JobStatus\": \"Completed\"\
   }",
   "id": null,
   "command": 52,
   "error": false,
   "job": null,
   "nodeId": "",
   "commandName": "GetJobStatus",
   "humanReadable": true
}
```


statusBasic Response:


```
{
   "data": "{
  "JobStatus": "Processing",
   "CreateTime": "Friday, 14 February 2025 15:42:22",
   "StartTime": "Friday, 14 February 2025 15:42:22",
   "EndTime": null
}",
  "id": null,
"command": 52,
```

"error": false,
"job": null,
"nodeId": "",
"commandName": "GetJobStatus",
"humanReadable": true
}

statusFull Response:

{
"data": "{
"Job": {
"id": "0075da0e-7c01-432c-9d0e-f934cd37124a",
"jobState": 3,
"command": 7,
"isWatchFolderJob": false
},
"PresetId": "Brickwall",
"Source": "S:/Media/input.mov",
"InternalSource": "S:\\Media\\input.mov",
"Output": "S:/Ouput/output2.mov",
"NodeId": "Loki_host1",
"NodeExclusive": false,
"Priority": 1,
"OutputFolder": "",
"MoveFolder": "",
"MoveFailFolder": "",
"SourceFolder": "",
"InPosition": "",
"OutPosition": "",
"JobStatus": "Processing",
"CreateTime": "Friday, 14 February 2025 15:42:22",
"StartTime": "Friday, 14 February 2025 15:42:22",
"EndTime": null
}",
"id": null,
"command": 52,
"error": false,
"job": null,
"nodeId": "",
"commandName": "GetJobStatus",
"humanReadable": true
}

4. GetQueuedJobs

Description:

Submission of this API call returns a list of jobs in the job queue, providing the unique JobID along with the input and output file names.

Request:


```
{
   "commandName": "GetQueuedJobs"
}
```


Response:


```
{
   "data": "[\
      {\
         \"Job\": {\
            \"id\": \"4dba88e1-ccae-4f1d-9102-d0a323d1bb7d\",\
            \"jobState\": 1,\
            \"command\": 7,\
            \"isWatchFolderJob\": false\
         },\
         \"PresetId\": \"Brickwall\",\
         \"Source\": \"S:/Media/input.mov\",\
         \"InternalSource\": \"S:\\Media\\input.mov\",\
         \"Output\": \"S:/Ouput/output.mov\",\
         \"NodeId\": \"\",\
         \"NodeExclusive\": false,\
         \"Priority\": 1,\
         \"CreateTime\": \"Friday, 14 February 2025 13:15:00\"\
      },\
      {\
         \"Job\": {\
            \"id\": \"13637799-ef59-435d-ae09-ac0a01030804\",\
            \"jobState\": 1,\
            \"command\": 7,\
            \"isWatchFolderJob\": false\
         },\
         \"PresetId\": \"Brickwall\",\
         \"Source\": \"S:/Media/input.mov\",\
         \"InternalSource\": \"S:\\Media\\input.mov\",\
         \"Output\": \"S:/Ouput/output1.mov\",\
         \"NodeId\": \"\",\
         \"NodeExclusive\": false,\
         \"Priority\": 1,\
         \"CreateTime\": \"Friday, 14 February 2025 13:15:05\"\
```

```
      }\
   ]"
}
```

---

5. GetInProgressJobs

Description:

This returns a list of jobs currently in progress including the unique JobID along with the input and output file names.

Request:


```
{
   "commandName": "GetInProgressJobs"
}
```


Response:


```
{
   "data": "[\
      {\
         \"Job\": {\
            \"id\": \"3ee2d794-bfc1-463d-aba5-f1dcc4b738f0\",\
            \"jobState\": 3,\
            \"command\": 7,\
            \"isWatchFolderJob\": false\
         },\
         \"PresetId\": \"Brickwall\",\
         \"Source\": \"S:/Media/input.mov\",\
         \"InternalSource\": \"S:\\Media\\input.mov\",\
         \"Output\": \"S:/Ouput/output2.mov\",\
         \"NodeId\": \"Loki_host1\",\
         \"NodeExclusive\": false,\
         \"Priority\": 1,\
         \"CreateTime\": \"Friday, 14 February 2025 13:21:46\",\
         \"StartTime\": \"Friday, 14 February 2025 13:21:46\"\
      }\
   ]"
}
```

6. GetCompletedJobs

Description:

Returns a list of completed jobs along with their unique JobID along with the input and output file names.

Request:


```
{
   "commandName": "GetCompletedJobs"
}
```


Response:


```
{
   "data": "[\
      {\
         \"Job\": {\
            \"id\": \"02c3603a-f0dd-4c5e-8242-fe625d185178\",\
            \"jobState\": 4,\
            \"command\": 6,\
            \"isWatchFolderJob\": false\
         },\
         \"PresetId\": \"\",\
\"Source\": \"S:/Media/input.mov\",\
         \"InternalSource\": \"S:\\Media\\input.mov\",\
         \"Output\": \"S:/Ouput/output2.mov\",\
         \"NodeId\": \"Loki_host1\",\
         \"Priority\": 1,\
         \"CreateTime\": \"Wednesday, 18 December 2024 15:44:57\",\
         \"StartTime\": \"Wednesday, 18 December 2024 15:44:57\",\
         \"EndTime\": \"Wednesday, 18 December 2024 15:45:34\"\
      }\
   ]"
}
```


---

7. GetFailedJobs

Description:

Returns a list of failed jobs so they can be investigated or re-submitted, the response includes the unique JobID along with the input and output file names.

Request:


```
{
   "commandName": "GetFailedJobs"
}
```


Response:


```
{
   "data": "[
  {
      "Job": {
         "id": "940fa47f-242a-438f-88fe-1dd0fb182b9d",
         "jobState": 5,
         "command": 7,
         "isWatchFolderJob": false
      },
      "PresetId": "Brickwall",
      "Source": "C:/Media/2019_Phoenix/Pixel/shark.mov",
      "InternalSource": "C:\\Media\\2019_Phoenix\\Pixel/shark.mov",
      "Output": "G:/Media/Ouputt/shark.mov",
      "NodeId": "DESKTOP-VHUOUAH",
      "NodeExclusive": false,
      "Priority": 1,
      "OutputFolder": "",
      "MoveFolder": "",
      "MoveFailFolder": "",
      "SourceFolder": "",
      "InPosition": "",
      "OutPosition": "",
      "JobStatus": "",
      "CreateTime": "Friday, 14 February 2025 17:06:35",
      "StartTime": "Friday, 14 February 2025 17:06:35",
      "EndTime": "Friday, 14 February 2025 17:06:46"
   }
]",
  "id": null,
"command": 13,
"error": false,
"job": null,
"nodeId": "",
"commandName": "GetFailedJobs",
```

"humanReadable": true
}

---

8. CancelJob

Description:

This API command allows for the cancellation of a single job based on unique JobID.

Request:


```
{
   "data": "{ \"jobId\": \"bb6dba58-6505-4a47-9684-ca2c9938628f\" }",
   "commandName": "CancelJob"
}
```


Response:


```
{
   "data": "Job cancelled",
   "id": null,
   "command": 9,
   "error": false,
   "job": null,
   "nodeId": "",
   "commandName": "CancelJob",
   "humanReadable": true
}
```


---

9. CancelAllJobs

Description:

Cancels all jobs in the queue including those currently in progress.

Request:


```
{
  "commandName": "CancelAllJobs"
}
```


Response:


```
{
  "data": "All jobs cancelled",
  "id": null,
  "command": 10,
  "error": false,
  "job": null,
  "nodeId": "",
  "commandName": "CancelAllJobs",
  "humanReadable": true
}
```

Error Codes

- 400 Bad Request: The request was invalid or malformed.
- 404 Not Found: The requested job was not found.
- 500 Internal Server Error: An error occurred on the server.

Authentication

No authentication is required for these endpoints.

WANNA KNOW MORE?

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