Filmworkz®
Create Incredible

LOKI

TECH DECK

V 2026.1

LOKI TECH DECK V2026.1 - CONTENTS

1 ABOUT LOKI

1.1 WHAT IS LOKI?

Loki is a file-based software application that opens the gateway to 30 years of Image Science Technology, in a simple and easy to use solution that can be customized to minimize the need for specialist knowledge and training.

Whatever your image needs, Loki will most likely have a solution!

1.2 WHAT CAN LOKI DO?

Loki addresses a very wide variety of image processing tasks, through a simple interface and automated workflow. By accessing a huge range of Emmy award-winning **DVO Tools** designed to meet any conversion, finishing or restoration challenge, you can simplify and automate your workflows to achieve top end results while saving time on manual work. Here are some typical example uses:

- Digital Camera image repair
- Transcoding from and to a variety of file formats
- Colour Space Conversion and LUT application
- Film Restoration
- Video Tape Restoration
- Image Enhancement
- Up/Down/Cross conversions
- Camera RAW file De-bayering (future release)

Please also see section 3 for the Loki DVO and Codec options.

1.3 LOKI FEATURES & BENEFITS

Feature	Benefit
Set up a **watchfolder** triggered workflow	*Easy to use by anyone*
Use the in-built **preview window** to see the results in advance of processing	*Saves time, improves quality*
Batch time-consuming & repetitive tasks in bulk	*Saves time and frees up creative skills for better use*
Access to **DVOs** & requires no specialist knowledge e.g. of core Filmworkz products (such as Phoenix)	*Lower cost of entry to DVOs, so enhance/monetise more content & combine tools for the ultimate results*
Automated processing - fully configurable, or use presets to apply multiple effects in a single pass	*Ease of use, saves time and doesn't require skilled operators for automated work*
Deploy multiple nodes to **boost capacity** & speed	*Increase output, monetise more content*
Easily **scale up/down** your environment to match your throughput requirements, only paying for what you need	*Adapt to technical challenges and business needs, manage costs*
Transcode from and to a variety of file formats	*Meet standards, monetise more content*
Great **Support** included in base price	*Minimise downtime, request new features…*
Available on **flexible, modular subscription**	*No up-front capital investment*
Airgap licensing (offline activation)	*Maintains studio security, meaning can be used for all types of content*
Loki API with a range of calls which operate Loki's key features	*Enables seamless integration with other tools in your workflow, or automation platforms e.g. Cinedeck*

1.4 FUTURE UPDATES

Feature	Benefit
User privileges/setup	*Allows you to control access to vital settings and presets, which can be set up by skilled operators for simple deployment by anyone*
De-Bayer Camera RAW files	*Go back to source material to optimise output quality; workflow shortcut*
Floating Licence – jobs can be created and monitored on any system on the network	*Manage resources efficiently and avoid capital costs*
Job scheduling – set start times and prioritisation	*Maximise efficient use of your network (bandwidth, processing & storage), e.g. by utilising downtime*
Various **format enhancements**	*Keeping pace with industry standards*

1.5 IS LOKI COMPLIANT WITH LATEST FILM AND TV STANDARDS?

Yes, Loki is resolution independent and is compliant with the latest HDR specifications as well as ACES color space.

For supported input/output file types, just ask Juno.

1.6 WHO SHOULD USE LOKI?

Simply, anyone who deals with the repair, enhancement or conversion of moving images. From Post-Production facilities, Restoration houses, Camera rental companies to Broadcast Services providers, Loki will reduce your workload, improve quality and free up your time to focus on the specialist elements of your craft.

1.7 HOW EASY IS LOKI TO USE?

Loki has been designed specifically to make operation as simple as possible. Simply browse your media to select a file(s) requiring processing, select the tools and settings required (or from a predefined template), enter your destination file format and location and let Loki do the rest. Loki allows for full monitoring during processing and notifies you when the job is complete.

Once configured to your requirements, Loki can be operated by anyone, with routine tasks automated yet with the ability to apply specialist knowledge and skills to the DVOs and other settings where necessary.

What's more, you can now get help from Juno ready to help you get up and running and then handle any questions on all of Filmworkz's tools and much more besides, always on hand to give you an immediate response 24/7. Anything you need – just Ask Juno!

1.8 WHAT OPERATING SYSTEM DOES LOKI RUN ON?

The Loki server runs on Windows 10/11 but can be easily used with a browser on any operating system within a facility or a VPN connection.

1.9 HOW'S LOKI INSTALLED AND CONFIGURED?

Loki comprises three software modules: Client (a Graphical User Interface), Server (a Master Controller) and Node (Processing Node). If the software modules can communicate, either internally within the same workstation or over a network, they can be installed on any available hardware.

Please see Section 2 for the possible Loki configurations

1.10 HOW MANY LOKI RENDER NODES CAN BE CONTROLLED?

Loki is completely scalable and there's no limit to how many nodes you can use.

Please see section 2 for the possible Loki configurations.

1.11 WHAT CHANGES ARE NEEDED TO EXISTING INFRASTRUCTURE?

Loki is purely a software solution and can be tailored to match the scale and specification of your existing setup. So, no up-front capex, no upheaval, just a more efficient and effective workflow allowing you to improve productivity and focus your resources. What's more Loki comes with an API to offer a streamlined way to drive Loki and achieve the best results, whether you're integrating directly into a MAM environment, adding to a workflow orchestration engine or building your own front end.

1.12 IS LOKI COST EFFECTIVE?

Yes, out-of-the-box it's an affordable solution to which you can add extra nodes and individual processes in a flexible and modular way as and when you require. Loki Core comes packed with features, including an incredible set of powerful DVO Tools and offers the following capabilities:

- Transcoding
- Colour Space Conversion
- LUT Application (Future Release)
- Blanking
- Cropping
- Scaling
- Interlacing tools
- Retiming

See Section 3 for the full range of DVO Packs and Section 4 for various workflow examples.
For supported input/output file types, just ask Juno which is regularly refreshed as formats are updated.

Loki also runs on your existing infrastructure and offers you the chance to have your business running round the clock doing meaningful work without the need for 24/7 supervision.

1.13 CAN I JUST USE LOKI AS A RENDER ENGINE?

Yes, and if you're a Phoenix Restoration & Color user, you can send render jobs straight to Loki, or the new Loki Render, direct from the Phoenix UI.

Loki Render is a stripped-down version of Loki which works seamlessly with Phoenix's new 'Send to Loki' export button, 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.

Loki Render doesn't require any additional DVO licences, it will simply recognise any DVOs used in your Phoenix timeline; furthermore it doesn't need any additional input, once you've set up your export presets. Refer to the Loki Render section of the Loki User Guide for more information.

1.14 LOKI VS LOKI RENDER – WHAT'S THE DIFFERENCE?

Feature	LOKI	LOKI RENDER
Integrated with Phoenix	✅ Yes – 'Send to Loki' available in v. 2025.2 onwards	
Watch-folders	✅ Yes	❌ No
Preset Management	✅ Create/edit DVO & Export presets	✅ Save Export presets (codecs, containers, resolution, etc.)
Variable Export Settings	✅ Yes	❌ Controlled in Phoenix UI
Preview Window	✅ Yes	❌ No
UI Controls	Full control panel	Monitoring only
Ideal For:	Anyone in restoration, post-production, archive or distribution looking for automated workflow	Phoenix users looking to minimise downtime

1.15 IN SHORT…

Loki will enable you to:

- Make more content monetizable;
- Unlock trapped value in your library;
- Achieve top-end results with minimal manual intervention;
- Reduce manual processing time;
- Devote your time and skills where they matter most;
- Avoid the need for costly up-front capex and system upheaval.

All of which means you can save time, allocate your resources for maximum results, generate more revenue from the same infrastructure and improve your profit margins.

2 CONFIGURATION

Deployment is incredibly easy whether installing on a single system or over an enterprise network setup. Thanks to its Service Orientated Architecture, jobs can be created and monitored on any system on the network, providing multiple users access to the tools they need, anywhere, any time.

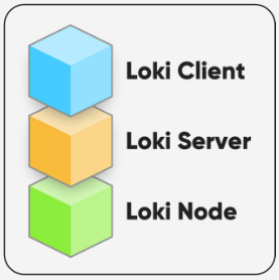
The components deployed are:

Client	The Loki app & user interface: intuitive, simple to use & configure
Server	The master controller – works in the background, translating instructions from the client into processing actions
Node	A processing or render node: single or multiple instances to drive productivity

2.1 EXAMPLE CONFIGURATIONS:

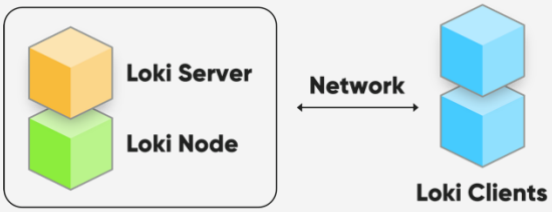
Standalone

The simplest configuration is to use one workstation connected to Local storage, with all components being deployed on that single workstation



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.



3 DVO SOLUTIONS

Loki provides easy access to the **Filmworkz DVOs** – a set of industry-leading and award-winning image processing algorithms which meet any conversion, finishing or restoration challenge. This enables you to simplify and automate your workflows to achieve top end results while saving time on manual work. What's more, by presenting these DVOs in a simple UI, depending on the user's experience and skill levels you can choose the presets for each tool and hit 'go', or fine-tune the settings to suit your needs.

We've assembled convenient DVO Packs which suit a variety of workflows and can be subscribed to flexibly, meaning Loki is versatile, scalable and easily configured to create the right solution at the right time. You can also customize your Loki setup by selecting up to 10 DVOs of your choice for a fully bespoke setup.

3.1 DVO PERFORMANCE PACKS

DVO Film

Optimised for film restoration workflows

Chroma
Magically fix any chromatic aberration, fringing & color bleeding

Despeckle ★NEW★
Auto removal of flashing/moving specks due to sensor defects & digital speckling artifacts

Dirt Map
Our legendary Auto Repair tool

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

Print Align
Will auto align RGB separation prints

Print Align Sequential
Auto combine and align sequential RGB separation prints

Regrain RGB
Magically match any film grain look

Scratch Target
Easily remove vertical scratch

Steady 2
Our fully automated image stabilizer

Warp
Removes warping associated with line scanners

DVO Video

Optimised for video restoration workflows

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

Cross-colour
Remove Chroma or dot crawl from video

Decompress
Reduce banding, remove macro blocking and deal with several other compression artifacts

De-interlace
Highly accurate creation of progressive frames from any interlaced material

Despeckle ★NEW★
Auto removal of flashing/moving specks caused by sensor defects & digital speckling artifacts

Dropout
Easy auto drop-out and random artifact concealment

Grain GT
Super fast grain management

Line-Sync

Noise

Pixel

Velvet

Correct shifted and/or stretched lines due to synchronization errors - who knew?	Motion-compensated video noise reduction	Dead pixel trouble? Not any more... Auto locate & remove here	Remove extreme noise, manage low light shots & unlock unusable footage

DVO Convert

Perfect for frame rate conversion inc. upscaling to any resolution

De-interlace
Highly accurate creation of progressive frames from any interlaced material

Scala
Our intelligent image upscaler with unparalleled quality

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

Zoom
Our super high quality up-converter and down-converter

DVO Finish

Apply the ultimate final touches & image enhancement to content fixed in any of the above

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
It's simply the best grain and noise reducer in the world - nuff said

Decompress
Reduce banding, remove macro blocking and deal with several other compression artifacts

Grain GT
Super fast grain management

Pixel
Dead pixel trouble? Not any more... Auto locate & remove here

Regrain RGB
Magically match any film grain look

Sharpen
Sharpen the image without magnifying the noise - unbelievable!!!

Velvet
Remove extreme noise, manage low light shots & unlock unusable footage

3.2 CUSTOM DVO CONFIGURATION

As well as making the DVOs available in the above packs, we also allow you to customize your Loki setup by selecting up to 10 DVOs of your choice for a fully bespoke setup.

For more details on all the DVOs and to access the DVO User Guides see the Filmworkz website.

4 LOKI API

4.1 OVERVIEW

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.

The API documentation is included in the Loki 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.

Current API calls cover tasks such as job status, loading/rendering presets, job cancellation.

5 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.

5.1 COLOR GRADING ENHANCEMENT

Empowers you to do your best work

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.

5.2 FILM RESTORATION

Efficient workflow while maintaining quality

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.

5.3 VIDEO TAPE RESTORATION & ARCHIVING

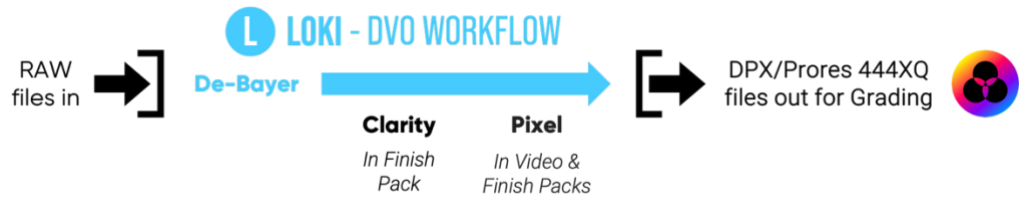
Do your archive justice while powering through the collection

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.

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

Free yourself from manual tasks, applying your skills where they're truly needed

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.



5.5 ULTIMATE UPSCALING

Automated advanced upscaling to revive footage while saving time

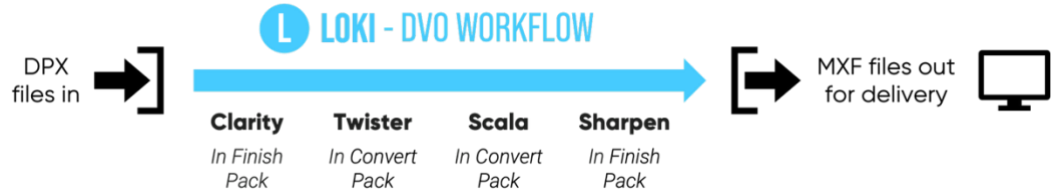
It's not uncommon to have to produce scaled deliverable versions of master files. Hand this task over to Loki and scale to any spatial resolution required with DVO Scala; include DVO Clarity and DVO Sharpen to guarantee the cleanest and sharpest results possible.

5.6 CROSS CONVERSIONS

Automate your conversion workflow and unleash your creativity

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.



5.7 TRANSCODING

Easily operated for reliable results, saving time and money

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.

5.8 LOKI RENDER

Free up your grading/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.

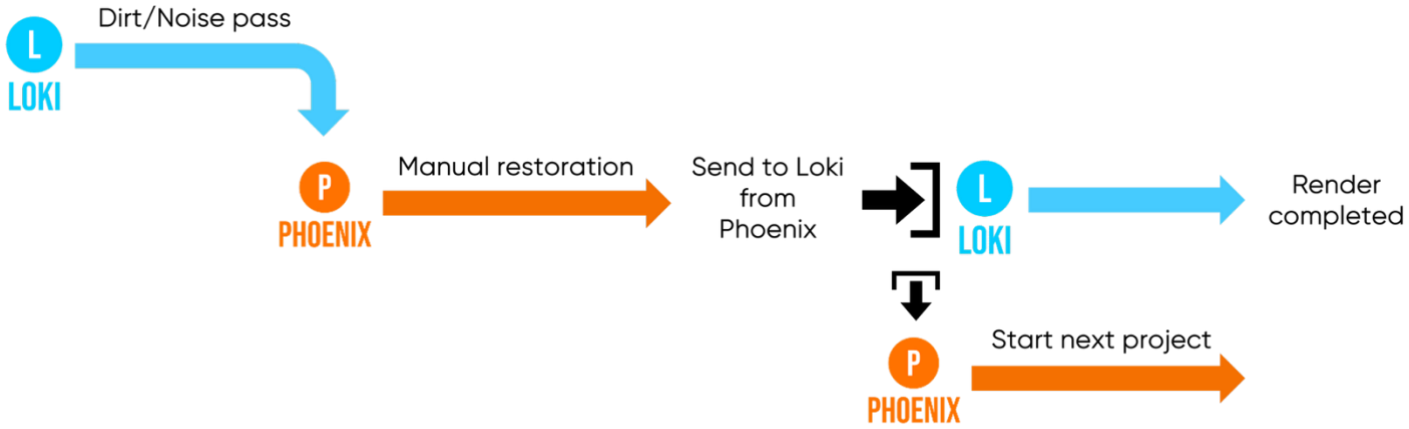
This dramatically reduces grading or restoration suite downtime, enabling greater productivity and allowing your craft to shine through.

5.9 PHOENIX + LOKI (FULL VERSION)

Supercharge your restoration workflow

Combine Phoenix & Loki, using the full version of Loki to run batch processing of volume tasks such as a dirt pass, then import the result into Phoenix for manual work, from where you can use 'Send to Loki' to offload the final render and free up your workstation for the next project.

This could accelerate your restoration workflow, while also removing down-time/bottlenecks.



6 HARDWARE REQUIREMENTS

The beauty of Loki with its flexible, modular & scalable configuration, is that you can tailor it to suit your current setup and content needs, without upheaval or investment in new kit.

The **Client** can be opened using a browser on any operating system, but we recommend Google Chrome and Microsoft Edge due to extensive compatibility with web standards and fast playback.

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).

However, if you're looking for help with the optimal setup for your circumstances, here are some suggestions:

For content up to 2K:

- Windows 10/11 Pro 64-bit
- AMD Ryzen™ Threadripper™ Pro 3000 and 5000 series (16 to 32-Cores) or dual processor Intel Xeon 12 to 16-core (Icy Lake family and newer)
- 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

For 4K content and up:

- Windows 10/11 Pro 64-bit
- AMD Ryzen™ Threadripper™ Pro 3000 and 5000 series (32-Cores, 64 cores recommended) or 2x Intel Xeon 20-core (2x 28-core recommended, Icy Lake family and newer)
- 64 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

For Loki Render, 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.

WANNA KNOW MORE?

JUNO

WEBSITE

SALES