

Release Notes for Nuke and Hiero 12.0v6

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Release Date

26 March 2020



Warning: As a result of the current COVID-19 lockdown here in the UK, Foundry is unfortunately not able to perform all of its usual QA tests for Nuke's monitor output, including VR headset support. As such, there may be some reduction in related functionality in this release.

Qualified Operating Systems

- macOS High Sierra (10.13) or macOS Mojave (10.14)
- Windows 7 or Windows 10 (64-bit)
- CentOS 7.4 (64-bit), or later



Note: The VFX Platform 2019 upgrade includes library versions that are only compatible with CentOS 7.4, or later. Nuke 12 is qualified on the Centos 7.4, 7.5, and 7.6 distributions.

Other operating systems may work, but have not been fully tested.

Requirements for Nuke's GPU Acceleration

If you want to enable Nuke to calculate certain nodes using the GPU, there are some additional requirements.

NVIDIA

An NVIDIA GPU with compute capability 3.0 (Kepler) or above. A list of the compute capabilities of NVIDIA GPUs is available at <https://developer.nvidia.com/cuda-gpus>



Note: The compute capability is a property of the GPU hardware and can't be altered by a software update.

With graphics drivers capable of running CUDA 10.1 or above. On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Driver versions 418.96 (Windows) and 418.39 (Linux), or above are required. See <https://www.nvidia.com/Download/Find.aspx> for more information.



Note: We recommend using the latest graphics drivers, where possible, regardless of operating system.

AMD



Note: Bit-wise equality between GPU and CPU holds in most cases, but for some operations there are limitations to the accuracy possible with this configuration.

- On Windows and Linux, an AMD GPU from the following list:



Note: Other AMD GPUs may work, but have not been fully tested.

- Radeon™ RX 480
- Radeon™ Pro WX 7100
- Radeon™ Pro WX 9100
- Radeon™ Pro SSG
- Radeon™ Pro WX 8200



Note: For information on the recommended driver for each GPU, see <https://www.amd.com/en/support>

- On Mac, AMD GPUs are supported on any late 2013 Mac Pro, mid 2015 MacBook Pros onward, and late 2017 iMac Pros.



Warning: Although AMD GPUs are enabled on other Mac models, they are not officially supported and used at your own risk.

Multi-GPU Processing

Nuke's GPU support includes an **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



Note: Multi-GPU processing is only available for identical GPUs in the same machine. For example, two NVIDIA GeForce GTX 1080s or two AMD Radeon™ Pro WX 9100s.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 410531 - macOS only: Changing knob values on a cloned soft effect caused the Viewer to behave erratically.
- BUG ID 411328 - Timeline Editing: Switching between sequences occasionally caused Nuke Studio to crash.
- BUG ID 414089 - DeepMerge: Deep samples that intersect and have an alpha equal to 1 produced artifacts in the Viewer.

- BUG ID 416381 - macOS only: Selecting **file type** > **mov** and a **mov32** codec and then clicking **Advanced** > **codec options** caused Nuke to become unresponsive.
- BUG ID 417109 - Monitor Output: Enabling **Stereo Mode** > **Flicker** caused the monitor to flicker in blue.
- BUG ID 417111 - Linux only: Floating Window monitor output resized the image instead of alternating between the left and right views in stereo **Flicker** mode.
- BUG ID 420459 - DeepExpression: Changing channel set to **rgb** caused Nuke to crash in certain scripts.
- BUG ID 422298 - High DPI: The icons in the first sub-menu of Nuke's node toolbar were too small.
- BUG ID 422421 - Viewer: Holding **Alt** and right-clicking and dragging in the Viewer rotated the camera, rather than panning, when the camera was locked.
- BUG ID 422729 - Monitor Output: Stereo monitor output **A/B** mode did not work as expected.
- BUG ID 422874 - Create Comp: Changing the file type to **mov** in the Node Graph occasionally caused Nuke Studio to crash.
- BUG ID 423288 - Flipbook: Specifying a custom OCIO config with defined roles that match the default LUT settings inside Nuke and then launching a flipbook reverted all the default LUT settings back to the **nuke-default** values.
- BUG ID 425362 - DeepMerge rendered artifacts or crashed in a customer script.
- BUG ID 425378 - DeepToImage produced incorrect results in a customer script.
- BUG ID 425665 - Monitor Output: The safe zone guides did not work as expected when Blackmagic 8-bit **video mode levels** was set to off.
- BUG ID 426284 - DeepMerge: Referencing a custom channel in a Read node caused Nuke to crash.
- BUG ID 426501 - DeepMerge2 and DeepToImage2 were slower to render than legacy versions of the nodes.
- BUG ID 426583 - LensDistortion: Disabling **use GPU if available** in the node **Properties** panel did not calculate distortion on the CPU as expected.
- BUG ID 427468 - LensDistortion: Results from the CPU and GPU where not identical.

New Known Issues Specific to Nuke 12.0

This section covers new known issues and gives workarounds for them, where appropriate.



Note: NVIDIA GPUs with compute capability of 3.0 (Kepler) cannot process **.r3d** files due to a known issue in the R3D SDK preventing decoding and debayering. Nuke defaults to CPU processing when reading **.r3d** files with these cards installed. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

- BUG ID 429293 - Launching HieroPlayer with only Nuke, NukeX, and Nuke Studio local licenses displays the **Licensing** dialog and causes HieroPlayer to crash on exit.
- BUG ID 429245 - UI: Using / (slashes) or spaces in path substitutions in the **Preferences** pads table rows incorrectly, making the UI unusable.
- BUG ID 427913 - Monitor Output: Looping a sequence on a monitor out device causes playback to skip frames.
- BUG ID 427420 - Windows only: **libeay32.dll** and **ssleay32.dll** are currently missing from the Nuke bundle, which can cause PySide2 networking errors.
As a workaround, add a location to your PATH environment variable that contains **libeay32.dll** and **ssleay32.dll** files.
- BUG ID 425201 - Python: Using lambda functions inside a PySide2/Qt Signal currently returns a boolean rather than the argument passed.
- BUG ID 423515 - Windows only: Launching Nuke in **--safe** mode causes the application to become inaccessible, even though it is running.
- BUG ID 422181 - macOS only: Moving the Curve Editor panel to second monitor displays a blank image.
- BUG ID 420676 - Python: The **KnobChanged** callback does not update **Colorspace** knobs correctly.
- BUG ID 420675 - Linux only: The RotoPaint ripple edit outline in the Viewer does not draw correctly.
- BUG ID 420671 - macOS only: Monitor output from AJA cards at 4K / 10-bit causes the playhead to redraw incorrectly and lag behind playback.
- BUG ID 420354 - Workspaces: Node panels do not update correctly if the **Properties** panel is open on a second monitor.
- BUG ID 420326 - Viewers: Using an OCIO config other than **nuke-default** with **use GPU for Viewer** enabled stops the Viewer **clip_warning** working as expected.
- BUG ID 419010 - Timeline Editing: Enabling and disabling track visibility is slow compared to legacy versions of Nuke Studio.
- BUG ID 418369 - C_Blur: The transition between values using **Bilinear** filtering is not smooth.
- BUG ID 418303 - macOS only: **Colorspace** controls in the node **Properties** panel are sized incorrectly.
- BUG ID 417443 - macOS only: HieroPlayer UI scaling does not work as expected.
- BUG ID 414939 - macOS only: The dock does not always display the correct icon for the Nuke product launched.
- BUG ID 414482 - macOS only: The Nuke Studio and NukeX launch shortcuts do not work as expected.
As a workaround, launch the required application from the command line. See the [Nuke Online Help](#) for more details.
- BUG ID 410829 - Linux only: Creating nodes Pythonically from the OS command line causes the Python interpreter to crash.

- BUG ID 410015 - Windows only: Monitor output from AJA Kona 4 cards using HDMI is split incorrectly in to four images on the monitor.
- BUG ID 409910 - macOS only: Monitor output playback is not smooth towards the end of certain clips using AJA cards.
- BUG ID 409909 - macOS only: Switching between monitor output devices in Nuke Studio occasionally causes the device selection dropdown to disappear.
- BUG ID 404189 - Bin View: Disparity channels are not displayed consistently in clip thumbnails.
- BUG ID 403804 - Linux only: Switching resolution on the HTC Vive HMD occasionally displays black output in the headset. As a workaround, update the Viewer by changing frame or press **F5** to refresh the headset output.
- BUG ID 403337 - High DPI: Changing the primary monitor causes the UI to update incorrectly.
- BUG ID 403210 - High DPI: Swapping between fullscreen and regular workspaces does not retain the UI scale.
- BUG ID 402564 - Windows only: The installer currently overwrites the default install directory without warning.
- BUG ID 401946 - High DPI: F_WireRemoval on-screen controls are draw incorrectly.
- BUG ID 400506 - High DPI: F_Align's bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400445 - High DPI: F_WireRemoval's controls are smaller and the icon is different to older versions of Nuke.
- BUG ID 400389 - High DPI: The F_Steadiness node controls are thinner than in older versions of Nuke.
- BUG ID 400268 - High DPI: F_Align's controls and outlines are smaller and thinner than in older versions of Nuke.
- BUG ID 399232 - Python: Declaring **TimeBase(None)** causes Nuke to crash.
- BUG ID 399228 - High DPI: Moving Nuke between monitors with different scaling ratios causes GLWidgets to draw incorrectly.
- BUG ID 398978 - GridWarpTracker: Selecting grids Pythonically does not update the node **Properties** correctly.
- BUG ID 398213 - macOS only: Switching to a Retina display and then drag-selecting nodes in the Node Graph causes the interface to flicker.
- BUG ID 397516 - DNxHR: Certain **.mov** file **transfer_function** metadata in Nuke does not match when compared to nclc atom.
- BUG ID 394789 - macOS only: Scrolling in properties panels that contain a curve widget, such as ColorCorrect, occasionally causes the interface to flicker.
- BUG ID 393373 - GridWarpTracker: Dragging multiple grid vertices and holding **Shift** does not snap points to the grid.
- BUG ID 393052 - macOS only: Tooltips occasionally don't display correctly.

- BUG ID 392223 - macOS only: The installer window is slightly blurred. As a workaround, resize the window to improve the resolution.
- BUG ID 392143 - GridWarpTracker: Moving keyframes created by autokey in the Curve Editor or Dope Sheet adds another keyframe at the current frame.
- BUG ID 392127 - GridWarpTracker: The magnifying window displayed over grid vertices during mouse-over changes position if you press **Ctrl/Cmd**.
- BUG ID 390551 - GridWarpTracker: Enabling **Invert** stops the preview working as expected.
- BUG ID 389356 - GridWarpTracker: Attempting to use GridWarpTracker in vanilla Nuke only displays a license error once.
- BUG ID 388836 - GridWarpTracker: Toggling grid visibility does not affect the transform widget.
- BUG ID 386719 - Windows only: AJA Kona 4 12-bit dual link 1080p50a, 1080p59.94a, and 1080p60a output is incorrect.
- BUG ID 386517 - Timeline Playback: Clicking the **skip to start button** and clearing the playback cache simultaneously causes Nuke Studio to crash.
- BUG ID 383542 - GridWarpTracker: Adding a NoOp downstream of a GridWarpTracker with linked knobs occasionally causes Nuke to crash.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or <https://learn.foundry.com/nuke/developers/120/ndkdevguide/appendixc/index.html> for more information.

As Nuke develops, we sometimes have to make changes to the application programming interface (API) and application binary interface (ABI) under the hood. We try to keep these changes to a minimum and only for certain releases, but from time to time API and ABI compatibility is not guaranteed. See the following table for the situations when you may have to recompile your plug-ins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	11.2v1 to 11.2v2	API and ABI		
Point	11.1v1 to 11.2v1	API	●	
Major	11.0v1 to 12.0v1	-	●	●

Additionally, node **Class()** names occasionally change between major releases. While these changes do not affect legacy scripts, you may not get the results you were expecting if a node class has been modified. The **toolbars.py** file, used to create Nuke's node toolbar, contains all the current node class names and is located in **<install_directory>/plugins/nukescripts/** for reference.

As an example, between Nuke 9 and Nuke 10, the CameraShake node **Class()** changed from CameraShake2 to CameraShake3. In the **toolbars.py** file for the two releases, the entries for the CameraShake node appear as follows:

```
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake2\")",
icon="CameraShake.png")
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake3\")",
icon="CameraShake.png")
```

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 422568 - PySide2: Adding **QApplication.instance()** or **QCoreApplication.instance()** to **init.py** or **menu.py** returned the wrong type.
- BUG ID 423136- Python: Calling **nuke.scriptSave()** twice in the same session caused Nuke's Python interpreter to crash.
- BUG ID 423935 - Python: Calling **nukescripts.create_read()** produced incorrect ordering of multiple Read node outputs.
- BUG ID 424326 - **RIPFramework.lib** was missing from Nuke 12.0 builds.

Release Notes for Nuke and Hiero 12.0v5

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Release Date

13 February 2020

Qualified Operating Systems

- macOS High Sierra (10.13) or macOS Mojave (10.14)
- Windows 7 or Windows 10 (64-bit)
- CentOS 7.4 (64-bit), or later



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Note: Multi-GPU processing is only available for identical GPUs in the same machine. For example, two NVIDIA GeForce GTX 1080s or two AMD Radeon™ Pro WX 9100s.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 422859 - Tracker: Exporting **Transform (stabilize)** and **Transform (match-move)** from a Tracker node caused Nuke to crash.

New Known Issues Specific to Nuke 12.0

This section covers new known issues and gives workarounds for them, where appropriate.



Note: NVIDIA GPUs with compute capability of 3.0 (Kepler) cannot process **.r3d** files due to a known issue in the R3D SDK preventing decoding and debayering. Nuke defaults to CPU processing when reading **.r3d** files with these cards installed. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

- BUG ID 421491 - Timeline Editing: Playback of certain **.mxf** shots with multiple cut edits occasionally displays an error.
- BUG ID 421318 - Timeline Editing: Disabling and enabling shots with transitions or burn-ins applied occasionally displays artifacts in the Viewer.
- BUG ID 420676 - Python: The **KnobChanged** callback does not update **Colorspace** knobs correctly.
- BUG ID 420675 - Linux only: The RotoPaint ripple edit outline in the Viewer does not draw correctly.
- BUG ID 420671 - macOS only: Monitor output from AJA cards at 4K / 10-bit causes the playhead to redraw incorrectly and lag behind playback.
- BUG ID 420354 - Workspaces: Node panels do not update correctly if the **Properties** panel is open on a second monitor.
- BUG ID 420326 - Viewers: Using an OCIO config other than **nuke-default** with **use GPU for Viewer** enabled stops the Viewer **clip_warning** working as expected.
- BUG ID 419842 - PlanarTracker: Tracking without a NukeX license displays an **ExecuteDialog** error.
- BUG ID 419010 - Timeline Editing: Enabling and disabling track visibility is slow compared to legacy versions of Nuke Studio.
- BUG ID 418831 - Export: Projects with multiple versions and burn-in applied cause the **Export** dialog to appear sluggish.
- BUG ID 418369 - C_Blur: The transition between values using **Bilinear** filtering is not smooth.
- BUG ID 418303 - macOS only: **Colorspace** controls in the node **Properties** panel are sized incorrectly.
- BUG ID 417443 - macOS only: HieroPlayer UI scaling does not work as expected.
- BUG ID 416614 - Linux only: Viewing **.r3d** files in the file browser preview panel causes one CPU thread to run at 100% utilization.
- BUG ID 414939 - macOS only: The dock does not always display the correct icon for the Nuke product launched.
- BUG ID 414482 - macOS only: The Nuke Studio and NukeX launch shortcuts do not work as expected.
As a workaround, launch the required application from the command line. See the [Nuke Online Help](#) for more details.
- BUG ID 414087 - Deep: Connecting a DeepExpression node to a DeepMerge node occasionally causes Nuke to crash.
- BUG ID 410829 - Linux only: Creating nodes Pythonically from the OS command line causes the Python interpreter to crash.
- BUG ID 410531 - macOS only: Changing knob values on a cloned soft effect causes the Viewer to behave erratically.
- BUG ID 410015 - Windows only: Monitor output from AJA Kona 4 cards using HDMI is split incorrectly in to four images on the monitor.

- BUG ID 409910 - macOS only: Monitor output playback is not smooth towards the end of certain clips using AJA cards.
- BUG ID 409909 - macOS only: Switching between monitor output devices in Nuke Studio occasionally causes the device selection dropdown to disappear.
- BUG ID 409507 - High-DPI: The Viewer overlays for GridWarpTracker display incorrectly on 4K displays.
- BUG ID 408079 - GridWarpTracker: Using SmartVector tracking data does not work as expected if the Viewer **downrez** control is set to anything other than **1:1**.
- BUG ID 404189 - Bin View: Disparity channels are not displayed consistently in clip thumbnails.
- BUG ID 403804 - Linux only: Switching resolution on the HTC Vive HMD occasionally displays black output in the headset. As a workaround, update the Viewer by changing frame or press **F5** to refresh the headset output.
- BUG ID 403337 - High DPI: Changing the primary monitor causes the UI to update incorrectly.
- BUG ID 403210 - High DPI: Swapping between fullscreen and regular workspaces does not retain the UI scale.
- BUG ID 402564 - Windows only: The installer currently overwrites the default install directory without warning.
- BUG ID 401946 - High DPI: F_WireRemoval on-screen controls are draw incorrectly.
- BUG ID 401168 - High DPI: The DeepCrop Viewer widget is thinner than in older versions of Nuke.
- BUG ID 400816 - High DPI: Preview of frame in Viewer when moving cuts not scaled correctly or in correct position.
- BUG ID 400599 - High DPI: Double line around integer knobs in the **Preferences**.
- BUG ID 400579 - High DPI: Double line highlight around file browser path knobs.
- BUG ID 400543 - High DPI: The Wipe controls in Nuke Studio are smaller and thinner than in older versions of Nuke.
- BUG ID 400508 - High DPI: The Wipe bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400506 - High DPI: F_Align's bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400504 - High DPI: The AdjustBBox Viewer overlays are smaller and thinner than in older versions of Nuke.
- BUG ID 400476 - High DPI: C_Tracker's points are thinner than in older versions of Nuke.
- BUG ID 400465 - High DPI: C_CameraSolver's outline and points are thinner than in older versions of Nuke.
- BUG ID 400463 - High DPI: Double line highlight around the maximum permissible nodes in the **Properties** panel.

- BUG ID 400445 - High DPI: F_WireRemoval's controls are smaller and the icon is different to older versions of Nuke.
- BUG ID 400389 - High DPI: The F_Steadiness node controls are thinner than in older versions of Nuke.
- BUG ID 400387 - High DPI: F_RigRemoval's controls are smaller and the default removal area is more square than in older versions of Nuke.
- BUG ID 400268 - High DPI: F_Align's controls and outlines are smaller and thinner than in older versions of Nuke.
- BUG ID 400232 - High DPI: CameraTracker's thumbnails bar is not scaled to fit the width of Viewer.
- BUG ID 400101 - High DPI: The Sparkles node bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 399232 - Python: Declaring **TimeBase(None)** causes Nuke to crash.
- BUG ID 399228 - High DPI: Moving Nuke between monitors with different scaling ratios causes GLWidgets to draw incorrectly.
- BUG ID 398978 - GridWarpTracker: Selecting grids Pythonically does not update the node **Properties** correctly.
- BUG ID 398880 - High DPI: Changing the scaling of 4K monitors while in fullscreen mode doesn't close the fullscreen window when exiting, causing Nuke Studio to become unresponsive.
- BUG ID 398862 - High DPI: Changing the scaling on a monitor causes the controls to disappear.
- BUG ID 398213 - macOS only: Switching to a Retina display and then drag-selecting nodes in the Node Graph causes the interface to flicker.
- BUG ID 397516 - DNxHR: Certain **.mov** file **transfer_function** metadata in Nuke does not match when compared to nlc atom.
- BUG ID 397218 - Inpaint: The **Stretch > Amount** control can be unstable when animated over a number of frames.
- BUG ID 394789 - macOS only: Scrolling in properties panels that contain a curve widget, such as ColorCorrect, occasionally causes the interface to flicker.
- BUG ID 394019 - macOS only: Enabling **Fullscreen** mode changes the depth of floating windows, resulting in some windows being obscured.
- BUG ID 393373 - GridWarpTracker: Dragging multiple grid vertices and holding **Shift** does not snap points to the grid.
- BUG ID 393052 - macOS only: Tooltips occasionally don't display correctly.
- BUG ID 392223 - macOS only: The installer window is slightly blurred.
As a workaround, resize the window to improve the resolution.
- BUG ID 392143 - GridWarpTracker: Moving keyframes created by autokey in the Curve Editor or Dope Sheet adds another keyframe at the current frame.

- BUG ID 392127 - GridWarpTracker: The magnifying window displayed over grid vertices during mouse-over changes position if you press **Ctrl/Cmd**.
- BUG ID 390551 - GridWarpTracker: Enabling **Invert** stops the preview working as expected.
- BUG ID 389356 - GridWarpTracker: Attempting to use GridWarpTracker in vanilla Nuke only displays a license error once.
- BUG ID 388836 - GridWarpTracker: Toggling grid visibility does not affect the transform widget.
- BUG ID 388455 - High DPI: Hovering down a menu list leaves orange highlight outlines around items.
- BUG ID 386719 - Windows only: AJA Kona 4 12-bit dual link 1080p50a, 1080p59.94a, and 1080p60a output is incorrect.
- BUG ID 386517 - Timeline Playback: Clicking the **skip to start button** and clearing the playback cache simultaneously causes Nuke Studio to crash.
- BUG ID 383542 - GridWarpTracker: Adding a NoOp downstream of a GridWarpTracker with linked knobs occasionally causes Nuke to crash.
- BUG ID 379710 - GridWarpTracker: Pressing **Esc** during tracking does not stop tracking or create a keyframe at the current frame.

Developer Notes

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m.addCommand("CameraShake", "nuke.createNode(\"CameraShake2\")",
icon="CameraShake.png")
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake3\")",
icon="CameraShake.png")
```

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

There are no bug fixes in this release.

Release Notes for Nuke and Hiero 12.0v4

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Release Date

22 January 2020

Qualified Operating Systems

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Multi-GPU Processing

Nuke's GPU support includes an **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



Note: Multi-GPU processing is only available for identical GPUs in the same machine. For example, two NVIDIA GeForce GTX 1080s or two AMD Radeon™ Pro WX 9100s.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 149839 - Scopes: Resizing a scope occasionally caused the waveform to disappear.
- BUG ID 374029 - TimeOffset: Deleting two TimeOffset nodes connected in series caused Nuke to crash.
- BUG ID 390816 - LiveGroups: Reloading a LiveGroup containing a cloned node displayed an error.
- BUG ID 392942 - macOS only: The out of range warnings were always active in Nuke's scopes.
- BUG ID 394531 - Exposure: The documentation was missing information about the **Adjust In** dropdown.
- BUG ID 398210 - ParticleBounce: Connecting the **geometry** input stopped bounce affecting all particles.
- BUG ID 404490 - OCIO: A conflict between **nuke-default** and OCIO defaults assigned colorspaces incorrectly.
- BUG ID 409888 - macOS only: Enabling monitor output during playback occasionally caused Nuke Studio to become unresponsive.

- BUG ID 410240 - macOS only: Scrubbing the timeline with the Curve Editor docked below the sequence did not update the playhead correctly.
- BUG ID 410552 - Soft Effects: Editing an effect that was open in another sequence did not update the Viewer correctly.
- BUG ID 411424 - Monitor Output: Audio only clips did not update the playhead during playback with monitor output enabled.
- BUG ID 411719 - macOS only: Changing **%04d** notation to an invalid file path caused Nuke to crash.
- BUG ID 413971 - Node Graph: The bottom-right zoom window displayed outside its bounds when errors were displayed on certain nodes.
- BUG ID 414087 - Deep: Connecting a DeepExpression node to a DeepMerge node occasionally caused Nuke to crash.
- BUG ID 414089 - DeepMerge: Deep samples that intersect and have an alpha equal to 1 produced artifacts in the Viewer.
- BUG ID 414494 - Linux only: Creating another CaraVR node after a C_Blender node caused Nuke to crash.
- BUG ID 414608 - Nuke Non-Commercial: Creating OFX nodes, such as Furnace plug-ins and Keylight, displayed an error.
- BUG ID 414826 - Windows only: Rendering frames from the command prompt did not work as expected.
- BUG ID 414827 - QuickTime: The **mov32** encoder wrote PhotoJPEG **.mov** files incorrectly.
- BUG ID 415007 - Windows only: Adding a C_Stitcher to a script caused the interface to update more slowly.
- BUG ID 415221 - Creating new sequences in Nuke Studio did not always increment the sequence number correctly.
- BUG ID 416382 - macOS only: The Nuke executable could not be attached to Xcode debugger with **SIP** enabled.
- BUG ID 416581 - Using **** (backslashes) in UNC paths in the **NUKE_PATH** environment variable prevented icons loading for menus and menu items.
- BUG ID 417069 - LUTs: ProRes **.mov** files exported from Nuke Studio displayed an error in Nuke Read nodes.
- BUG ID 418044 - macOS only: The `/Contents/Framework/Python.framework/Version/2.7/include` directory was missing.
- BUG ID 418933 - Node Graph: Setting the size of the Node Graph map to 0,0 caused the interface to flicker.
- BUG ID 418939 - Navigating to **Help > Nuke Plug-ins** displayed an error.
- BUG ID 419838 - Documentation: The **/D** option in the Windows installer did not work if the path included quotes as specified in the online help.

- BUG ID 420680 - macOS only: The monitor output of Blackmagic cards used incorrect colors when the pixel format was set to 8 bit 4:4:4 output.

New Known Issues Specific to Nuke 12.0

This section covers new known issues and gives workarounds for them, where appropriate.



Note: NVIDIA GPUs with compute capability of 3.0 (Kepler) cannot process **.r3d** files due to a known issue in the R3D SDK preventing decoding and debayering. Nuke defaults to CPU processing when reading **.r3d** files with these cards installed. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

- BUG ID 421491 - Timeline Editing: Playback of certain **.mxf** shots with multiple cut edits occasionally displays an error.
- BUG ID 421318 - Timeline Editing: Disabling and enabling shots with transitions or burn-ins applied occasionally displays artifacts in the Viewer.
- BUG ID 420676 - Python: The **KnobChanged** callback does not update **Colorspace** knobs correctly.
- BUG ID 420675 - Linux only: The RotoPaint ripple edit outline in the Viewer does not draw correctly.
- BUG ID 420671 - macOS only: Monitor output from AJA cards at 4K / 10-bit causes the playhead to redraw incorrectly and lag behind playback.
- BUG ID 420354 - Workspaces: Node panels do not update correctly if the **Properties** panel is open on a second monitor.
- BUG ID 420326 - Viewers: Using an OCIO config other than **nuke-default** with **use GPU for Viewer** enabled stops the Viewer **clip_warning** working as expected.
- BUG ID 419842 - PlanarTracker: Tracking without a NukeX license displays an **ExecuteDialog** error.
- BUG ID 419010 - Timeline Editing: Enabling and disabling track visibility is slow compared to legacy versions of Nuke Studio.
- BUG ID 418831 - Export: Projects with multiple versions and burn-in applied cause the **Export** dialog to appear sluggish.
- BUG ID 418369 - C_Blur: The transition between values using **Bilinear** filtering is not smooth.
- BUG ID 418303 - macOS only: **Colorspace** controls in the node **Properties** panel are sized incorrectly.
- BUG ID 417443 - macOS only: HieroPlayer UI scaling does not work as expected.
- BUG ID 416614 - Linux only: Viewing **.r3d** files in the file browser preview panel causes one CPU thread to run at 100% utilization.
- BUG ID 414939 - macOS only: The dock does not always display the correct icon for the Nuke product launched.

- BUG ID 414482 - macOS only: The Nuke Studio and NukeX launch shortcuts do not work as expected.
As a workaround, launch the required application from the command line. See the [Nuke Online Help](#) for more details.
- BUG ID 414087 - Deep: Connecting a DeepExpression node to a DeepMerge node occasionally causes Nuke to crash.
- BUG ID 410829 - Linux only: Creating nodes Pythonically from the OS command line causes the Python interpreter to crash.
- BUG ID 410531 - macOS only: Changing knob values on a cloned soft effect causes the Viewer to behave erratically.
- BUG ID 410015 - Windows only: Monitor output from AJA Kona 4 cards using HDMI is split incorrectly in to four images on the monitor.
- BUG ID 409910 - macOS only: Monitor output playback is not smooth towards the end of certain clips using AJA cards.
- BUG ID 409909 - macOS only: Switching between monitor output devices in Nuke Studio occasionally causes the device selection dropdown to disappear.
- BUG ID 409507 - High-DPI: The Viewer overlays for GridWarpTracker display incorrectly on 4K displays.
- BUG ID 408079 - GridWarpTracker: Using SmartVector tracking data does not work as expected if the Viewer **downrez** control is set to anything other than **1:1**.
- BUG ID 404189 - Bin View: Disparity channels are not displayed consistently in clip thumbnails.
- BUG ID 403804 - Linux only: Switching resolution on the HTC Vive HMD occasionally displays black output in the headset. As a workaround, update the Viewer by changing frame or press **F5** to refresh the headset output.
- BUG ID 403337 - High DPI: Changing the primary monitor causes the UI to update incorrectly.
- BUG ID 403210 - High DPI: Swapping between fullscreen and regular workspaces does not retain the UI scale.
- BUG ID 402564 - Windows only: The installer currently overwrites the default install directory without warning.
- BUG ID 401946 - High DPI: F_WireRemoval on-screen controls are draw incorrectly.
- BUG ID 401168 - High DPI: The DeepCrop Viewer widget is thinner than in older versions of Nuke.
- BUG ID 400816 - High DPI: Preview of frame in Viewer when moving cuts not scaled correctly or in correct position.
- BUG ID 400599 - High DPI: Double line around integer knobs in the **Preferences**.
- BUG ID 400579 - High DPI: Double line highlight around file browser path knobs.
- BUG ID 400543 - High DPI: The Wipe controls in Nuke Studio are smaller and thinner than in older versions of Nuke.

- BUG ID 400508 - High DPI: The Wipe bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400506 - High DPI: F_Align's bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400504 - High DPI: The AdjustBBox Viewer overlays are smaller and thinner than in older versions of Nuke.
- BUG ID 400476 - High DPI: C_Tracker's points are thinner than in older versions of Nuke.
- BUG ID 400465 - High DPI: C_CameraSolver's outline and points are thinner than in older versions of Nuke.
- BUG ID 400463 - High DPI: Double line highlight around the maximum permissible nodes in the **Properties** panel.
- BUG ID 400445 - High DPI: F_WireRemoval's controls are smaller and the icon is different to older versions of Nuke.
- BUG ID 400389 - High DPI: The F_Steadiness node controls are thinner than in older versions of Nuke.
- BUG ID 400387 - High DPI: F_RigRemoval's controls are smaller and the default removal area is more square than in older versions of Nuke.
- BUG ID 400268 - High DPI: F_Align's controls and outlines are smaller and thinner than in older versions of Nuke.
- BUG ID 400232 - High DPI: CameraTracker's thumbnails bar is not scaled to fit the width of Viewer.
- BUG ID 400101 - High DPI: The Sparkles node bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 399232 - Python: Declaring **TimeBase(None)** causes Nuke to crash.
- BUG ID 399228 - High DPI: Moving Nuke between monitors with different scaling ratios causes GLWidgets to draw incorrectly.
- BUG ID 398978 - GridWarpTracker: Selecting grids Pythonically does not update the node **Properties** correctly.
- BUG ID 398880 - High DPI: Changing the scaling of 4K monitors while in fullscreen mode doesn't close the fullscreen window when exiting, causing Nuke Studio to become unresponsive.
- BUG ID 398862 - High DPI: Changing the scaling on a monitor causes the controls to disappear.
- BUG ID 398213 - macOS only: Switching to a Retina display and then drag-selecting nodes in the Node Graph causes the interface to flicker.
- BUG ID 397516 - DNxHR: Certain **.mov** file **transfer_function** metadata in Nuke does not match when compared to nlc atom.
- BUG ID 397218 - Inpaint: The **Stretch > Amount** control can be unstable when animated over a number of frames.

- BUG ID 394789 - macOS only: Scrolling in properties panels that contain a curve widget, such as ColorCorrect, occasionally causes the interface to flicker.
- BUG ID 394019 - macOS only: Enabling **Fullscreen** mode changes the depth of floating windows, resulting in some windows being obscured.
- BUG ID 393373 - GridWarpTracker: Dragging multiple grid vertices and holding **Shift** does not snap points to the grid.
- BUG ID 393052 - macOS only: Tooltips occasionally don't display correctly.
- BUG ID 392223 - macOS only: The installer window is slightly blurred. As a workaround, resize the window to improve the resolution.
- BUG ID 392143 - GridWarpTracker: Moving keyframes created by autokey in the Curve Editor or Dope Sheet adds another keyframe at the current frame.
- BUG ID 392127 - GridWarpTracker: The magnifying window displayed over grid vertices during mouse-over changes position if you press **Ctrl/Cmd**.
- BUG ID 390551 - GridWarpTracker: Enabling **Invert** stops the preview working as expected.
- BUG ID 389356 - GridWarpTracker: Attempting to use GridWarpTracker in vanilla Nuke only displays a license error once.
- BUG ID 388836 - GridWarpTracker: Toggling grid visibility does not affect the transform widget.
- BUG ID 388455 - High DPI: Hovering down a menu list leaves orange highlight outlines around items.
- BUG ID 386719 - Windows only: AJA Kona 4 12-bit dual link 1080p50a, 1080p59.94a, and 1080p60a output is incorrect.
- BUG ID 386517 - Timeline Playback: Clicking the **skip to start button** and clearing the playback cache simultaneously causes Nuke Studio to crash.
- BUG ID 383542 - GridWarpTracker: Adding a NoOp downstream of a GridWarpTracker with linked knobs occasionally causes Nuke to crash.
- BUG ID 379710 - GridWarpTracker: Pressing **Esc** during tracking does not stop tracking or create a keyframe at the current frame.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or <https://learn.foundry.com/nuke/developers/120/ndkdevguide/appendixc/index.html> for more information.

As Nuke develops, we sometimes have to make changes to the application programming interface (API) and application binary interface (ABI) under the hood. We try to keep these changes to a minimum and only for certain releases, but from time to time API and ABI compatibility is not guaranteed. See the following table for the situations when you may have to recompile your plug-ins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	11.2v1 to 11.2v2	API and ABI		
Point	11.1v1 to 11.2v1	API	●	
Major	11.0v1 to 12.0v1	-	●	●

Additionally, node **Class()** names occasionally change between major releases. While these changes do not affect legacy scripts, you may not get the results you were expecting if a node class has been modified. The **toolbars.py** file, used to create Nuke's node toolbar, contains all the current node class names and is located in **<install_directory>/plugins/nukescripts/** for reference.

As an example, between Nuke 9 and Nuke 10, the CameraShake node **Class()** changed from CameraShake2 to CameraShake3. In the **toolbars.py** file for the two releases, the entries for the CameraShake node appear as follows:

```
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake2\")",
icon="CameraShake.png")
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake3\")",
icon="CameraShake.png")
```

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 416984 - Python: The **sendToViewer()** function did not work as expected.
- BUG ID 419903 - Windows only: Importing Nuke as a Python library did not work as expected.

Release Notes for Nuke and Hiero 12.0v3

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Release Date

14 November 2019

Qualified Operating Systems

- macOS High Sierra (10.13) or macOS Mojave (10.14)
- Windows 7 or Windows 10 (64-bit)
- CentOS 7.4 (64-bit), or later



Note: The VFX Platform 2019 upgrade includes library versions that are only compatible with CentOS 7.4, or later. Nuke 12 is qualified on the Centos 7.4, 7.5, and 7.6 distributions.

Other operating systems may work, but have not been fully tested.

Requirements for Nuke's GPU Acceleration

If you want to enable Nuke to calculate certain nodes using the GPU, there are some additional requirements.

NVIDIA

An NVIDIA GPU with compute capability 3.0 (Kepler) or above. A list of the compute capabilities of NVIDIA GPUs is available at <https://developer.nvidia.com/cuda-gpus>



Note: The compute capability is a property of the GPU hardware and can't be altered by a software update.

With graphics drivers capable of running CUDA 10.1 or above. On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Driver versions 418.96 (Windows) and 418.39 (Linux), or above are required. See <https://www.nvidia.com/Download/Find.aspx> for more information.



Note: We recommend using the latest graphics drivers, where possible, regardless of operating system.

AMD



Note: Bit-wise equality between GPU and CPU holds in most cases, but for some operations there are limitations to the accuracy possible with this configuration.

- On Windows and Linux, an AMD GPU from the following list:



Note: Other AMD GPUs may work, but have not been fully tested.

- Radeon™ RX 480
- Radeon™ Pro WX 7100
- Radeon™ Pro WX 9100
- Radeon™ Pro SSG
- Radeon™ Pro WX 8200



Note: For information on the recommended driver for each GPU, see <https://www.amd.com/en/support>

- On Mac, AMD GPUs are supported on any late 2013 Mac Pro, mid 2015 MacBook Pros onward, and late 2017 iMac Pros.



Warning: Although AMD GPUs are enabled on other Mac models, they are not officially supported and used at your own risk.

Multi-GPU Processing

Nuke's GPU support includes an **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



Note: Multi-GPU processing is only available for identical GPUs in the same machine. For example, two NVIDIA GeForce GTX 1080s or two AMD Radeon™ Pro WX 9100s.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 161075 - Monitor Output: Playback of stereo RGB footage using YUV conversion did not work as expected on Blackmagic 4K Extreme 12g cards.
- BUG ID 373633 - Linux only: Setting monitor output to 2160p30 stopped Hiero achieving realtime playback.
- BUG ID 388835 - Timeline Playback: Enabling monitor output occasionally caused the Viewer to drop frames during playback with Blackmagic Decklink 4K Extreme cards.
- BUG ID 393610 - CaraVR: Standard Nuke Write nodes included a new **CaraVR** tab.
- BUG ID 399741 - Monitor Output: Opening a project set to 4K output and immediately enabling monitor output through an AJA Kona 4 card displayed garbage on the monitor.
- BUG ID 399908 - Deep: Using DeepRecolor with **target input alpha** enabled on a single channel created artifacts in the other channels.
- BUG ID 400497 - High DPI: The Crop node bounding box outline was thinner and smaller than in legacy versions of Nuke.

- BUG ID 400505 - High DPI: The CornerPin node bounding box outline was thinner and smaller than in legacy versions of Nuke.
- BUG ID 402095 - macOS only: Monitor output stuttered or jumped when playback began.
- BUG ID 402331 - CameraShake: The Viewer controls remained after deleting the node.
- BUG ID 403116 - Linux only: Opening large projects with multiple Read nodes was slow compared to legacy versions of Nuke Studio.
- BUG ID 403141 - Monitor Output: Colorspace in A/B mode did not match the Viewer.
- BUG ID 403962 - Monitor Output: Setting the monitor to A/B mode after changing the Nuke Viewer process did not match the Viewer output.
- BUG ID 406897 - Node Graph: The bottom-right zoom window did not always display all nodes in the node tree.
- BUG ID 407125 - macOS only: Double-clicking on the Viewer annotation color palette caused the application to lose focus.
- BUG ID 407173/408220 - Linux only: The numpad **Num Lock** function was always disabled.
- BUG ID 407751 - OCIO: Setting the **Project Settings > color management** dropdown to **Nuke** and the **OCIO config** dropdown to anything other than **nuke-default** displayed an error in OCIOFileTransform nodes.
- BUG ID 408019 - Navigating to **Help > Documentation > Foundry Online Help** directed you to the wrong page.
- BUG ID 408135 - Monitor Output: Switching device using a Kona 4 card in Nuke Studio and Hiero did not initially display output correctly.
- BUG ID 409069 - Deep: Using DeepRecolor with **target input alpha** enabled on **all** channels removed deep samples incorrectly.
- BUG ID 409887 - Monitor Output: Enabling monitor output from a Viewer in a stereo mode, such as **Flicker**, occasionally caused Nuke Studio to crash.
- BUG ID 409907 - macOS only: Enabling monitor output from AJA cards occasionally displayed images in the wrong quadrants of the monitor.
- BUG ID 409992/410655 - Soft Effects: Cloning a Transform effect and then moving a position in the originating shot reset the effect in the clone.
- BUG ID 410209/410259/410659 - Soft Effects: Moving, deleting, or copy/pasting shots on the timeline did not always update keyframes in the Curve Editor correctly.
- BUG ID 410662 - Node weighting and favorites took priority over exactly matching a sub-string in the Node Graph's **Tab** menu.
- BUG ID 411676 - Monitor Output: The **None** and **sRGB** colorspaces were identical.
- BUG ID 411809 - Monitor Output: Enabling **floating** monitor output with a mask applied in the Viewer caused Nuke to crash.
- BUG ID 412035 - Monitor Output: Headsets did not work as expected with high resolution monitors.

- BUG ID 413480 - Toolsets: Checking **Enable Tail** in the P_Sparks toolset's **Properties** panel did not work as expected.

New Known Issues Specific to Nuke 12.0

This section covers new known issues and gives workarounds for them, where appropriate.



Note: NVIDIA GPUs with compute capability of 3.0 (Kepler) cannot process **.r3d** files due to a known issue in the R3D SDK preventing decoding and debayering. Nuke defaults to CPU processing when reading **.r3d** files with these cards installed. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

- BUG ID 414089 - DeepMerge: Deep samples that intersect and have an alpha equal to 1 produce artifacts in the Viewer.
As a workaround, enable **drop hidden samples** to remove the artifacts.
- BUG ID 414087 - Deep: Connecting a DeepExpression node to a DeepMerge node occasionally causes Nuke to crash.
- BUG ID 413971 - Node Graph: The bottom-right zoom window displays outside its bounds when errors are displayed on certain nodes.
- BUG ID 411719 - macOS only: Changing **%04d** notation to an invalid file path causes Nuke to crash.
- BUG ID 410829 - Linux only: Creating nodes Pythonically from the OS command line causes the Python interpreter to crash.
- BUG ID 410552 - Soft Effects: Editing an effect on a shot with the same shot open on second sequence does not update the Viewer correctly.
As a workaround, mouse over the Viewer to force the update.
- BUG ID 410531 - macOS only: Changing knob values on a cloned soft effect causes the Viewer to behave erratically.
- BUG ID 410240 - macOS only: Scrubbing the timeline with the Curve Editor docked below the sequence does not update the playhead correctly.
- BUG ID 410015 - Windows only: Monitor output from AJA Kona 4 cards using HDMI is split incorrectly in to four images on the monitor.
- BUG ID 409910 - macOS only: Monitor output playback is not smooth towards the end of certain clips using AJA cards.
- BUG ID 409909 - macOS only: Switching between monitor output devices in Nuke Studio occasionally causes the device selection dropdown to disappear.
- BUG ID 404189 - Bin View: Disparity channels are not displayed consistently in clip thumbnails.

- BUG ID 403804 - Linux only: Switching resolution on the HTC Vive HMD occasionally displays black output in the headset. As a workaround, update the Viewer by changing frame or press **F5** to refresh the headset output.
- BUG ID 403337 - High DPI: Changing the primary monitor causes the UI to update incorrectly.
- BUG ID 403210 - High DPI: Swapping between fullscreen and regular workspaces does not retain the UI scale.
- BUG ID 402330 - High DPI: The **Denoise** Viewer analysis message is truncated.
- BUG ID 401946 - High DPI: F_WireRemoval on-screen controls are draw incorrectly.
- BUG ID 401168 - High DPI: The DeepCrop Viewer widget is thinner than in older versions of Nuke.
- BUG ID 400816 - High DPI: Moving cuts on the timeline does not scale or position the Viewer frame preview correctly.
- BUG ID 400543 - High DPI: The Wipe controls in Nuke Studio are smaller and thinner than in older versions of Nuke.
- BUG ID 400508 - High DPI: The Wipe bounding box outline thinner and smaller than in older versions of Nuke.
- BUG ID 400506 - High DPI: F_Align's bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400476 - High DPI: C_Tracker's points are thinner than in older versions of Nuke.
- BUG ID 400465 - High DPI: C_CameraSolver's outline and points are thinner than in older versions of Nuke.
- BUG ID 400445 - High DPI: F_WireRemoval's controls are smaller and the icon is different to older versions of Nuke.
- BUG ID 400389 - High DPI: The F_Steadiness node controls are thinner than in older versions of Nuke.
- BUG ID 400387 - High DPI: F_RigRemoval's controls are smaller and the default removal area is more square than in older versions of Nuke.
- BUG ID 400268 - High DPI: F_Align's controls and outlines are smaller and thinner than in older versions of Nuke.
- BUG ID 400232 - High DPI: CameraTracker's thumbnails bar is not scaled to fit the width of Viewer.
- BUG ID 400101 - High DPI: The Sparkles node bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 399232 - Python: Declaring **TimeBase(None)** causes Nuke to crash.
- BUG ID 399228 - High DPI: Moving Nuke between monitors with different scaling ratios causes GLWidgets to draw incorrectly.
- BUG ID 398978 - GridWarpTracker: Selecting grids Pythonically does not update the node **Properties** correctly.

- BUG ID 398880 - High DPI: Changing the scaling of 4K monitors while in fullscreen mode doesn't close the fullscreen window when exiting, causing Nuke Studio to become unresponsive.
- BUG ID 398862 - High DPI: Changing the scaling on a monitor causes the controls to disappear.
- BUG ID 397516 - DNxHR: Certain **.mov** file **transfer_function** metadata in Nuke does not match when compared to nclc atom.
- BUG ID 394720 - macOS only: Exiting **Fullscreen** mode causes the Viewer to lose focus.
- BUG ID 394019 - macOS only: Enabling **Fullscreen** mode changes the depth of floating windows, resulting in some windows being obscured.
- BUG ID 393373 - GridWarpTracker: Dragging multiple grid vertices and holding **Shift** does not snap points to the grid.
- BUG ID 393052 - macOS only: Tooltips occasionally don't display correctly.
- BUG ID 392223 - macOS only: The installer window is slightly blurred.
As a workaround, resize the window to improve the resolution.
- BUG ID 392143 - GridWarpTracker: Moving keyframes created by autokey in the Curve Editor or Dope Sheet adds another keyframe at the current frame.
- BUG ID 392127 - GridWarpTracker: The magnifying window displayed over grid vertices during mouse-over changes position if you press **Ctrl/Cmd**.
- BUG ID 390885 - GridWarpTracker: Changing **Output** from **Warp** to **Morph** occasionally disables the **Morph Amount** control.
- BUG ID 390551 - GridWarpTracker: Enabling **Invert** stops the preview working as expected.
- BUG ID 389356 - GridWarpTracker: Attempting to use GridWarpTracker in vanilla Nuke only displays a license error once.
- BUG ID 388836 - GridWarpTracker: Toggling grid visibility does not affect the transform widget.
- BUG ID 388455 - High DPI: Hovering down a menu list leaves orange highlight outlines around items.
- BUG ID 386719 - Windows only: AJA Kona 4 12-bit dual link 1080p50a, 1080p59.94a, and 1080p60a output is incorrect.
- BUG ID 386517 - Timeline Playback: Clicking the **skip to start button** and clearing the playback cache simultaneously causes Nuke Studio to crash.
- BUG ID 383542 - GridWarpTracker: Adding a NoOp downstream of a GridWarpTracker with linked knobs occasionally causes Nuke to crash.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or <https://learn.foundry.com/nuke/developers/120/ndkdevguide/appendixc/index.html> for more information.

As Nuke develops, we sometimes have to make changes to the application programming interface (API) and application binary interface (ABI) under the hood. We try to keep these changes to a minimum and only for certain releases, but from time to time API and ABI compatibility is not guaranteed. See the following table for the situations when you may have to recompile your plug-ins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	11.2v1 to 11.2v2	API and ABI		
Point	11.1v1 to 11.2v1	API	●	
Major	11.0v1 to 12.0v1	-	●	●

Additionally, node **Class()** names occasionally change between major releases. While these changes do not affect legacy scripts, you may not get the results you were expecting if a node class has been modified. The **toolbars.py** file, used to create Nuke's node toolbar, contains all the current node class names and is located in **<install_directory>/plugins/nukescripts/** for reference.

As an example, between Nuke 9 and Nuke 10, the CameraShake node **Class()** changed from CameraShake2 to CameraShake3. In the **toolbars.py** file for the two releases, the entries for the CameraShake node appear as follows:

```
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake2\")",
icon="CameraShake.png")
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake3\")",
icon="CameraShake.png")
```

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 384664 - Python: Forcing the TimeOffset node's **Properties** panel to close automatically using the **hideControlPanel()** function caused Nuke to crash.
- BUG ID 414020 - NDK Documentation: The **exrReader.cpp** example displayed an error during compilation.

Release Notes for Nuke and Hiero 12.0v2

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Release Date

18 October 2019

Qualified Operating Systems

- macOS High Sierra (10.13) or macOS Mojave (10.14)
- Windows 7 or Windows 10 (64-bit)
- CentOS 7.4 (64-bit), or later



Note: The VFX Platform 2019 upgrade includes library versions that are only compatible with CentOS 7.4, or later. Nuke 12 is qualified on the Centos 7.4, 7.5, and 7.6 distributions.

Other operating systems may work, but have not been fully tested.

Requirements for Nuke's GPU Acceleration

If you want to enable Nuke to calculate certain nodes using the GPU, there are some additional requirements.

NVIDIA

An NVIDIA GPU with compute capability 3.0 (Kepler) or above. A list of the compute capabilities of NVIDIA GPUs is available at <https://developer.nvidia.com/cuda-gpus>



Note: The compute capability is a property of the GPU hardware and can't be altered by a software update.

With graphics drivers capable of running CUDA 10.1 or above. On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Driver versions 418.96 (Windows) and 418.39 (Linux), or above are required. See <https://www.nvidia.com/Download/Find.aspx> for more information.



Note: We recommend using the latest graphics drivers, where possible, regardless of operating system.

AMD



Note: Bit-wise equality between GPU and CPU holds in most cases, but for some operations there are limitations to the accuracy possible with this configuration.

- On Windows and Linux, an AMD GPU from the following list:



Note: Other AMD GPUs may work, but have not been fully tested.

- Radeon™ RX 480
- Radeon™ Pro WX 7100
- Radeon™ Pro WX 9100
- Radeon™ Pro SSG
- Radeon™ Pro WX 8200



Note: For information on the recommended driver for each GPU, see <https://www.amd.com/en/support>

- On Mac, AMD GPUs are supported on any late 2013 Mac Pro, mid 2015 MacBook Pros onward, and late 2017 iMac Pros.



Warning: Although AMD GPUs are enabled on other Mac models, they are not officially supported and used at your own risk.

Multi-GPU Processing

Nuke's GPU support includes an **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



Note: Multi-GPU processing is only available for identical GPUs in the same machine. For example, two NVIDIA GeForce GTX 1080s or two AMD Radeon™ Pro WX 9100s.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 397668/404902 - Windows only: Reconnecting media referencing .exr clips caused Nuke Studio/Hiero to become unresponsive.
- BUG ID 404248 - Windows only: Command line silent installs using `/D="" /ACCEPT-FOUNDRY-EULA` did not work as expected.
- BUG ID 404501 - OCIO: Certain exports failed with incorrect Colorspace errors, despite being valid.
- BUG ID 406520/407640 - Documentation: The **Properties** panel **?** button did not open the Nuke help as expected.
- BUG ID 407044 - Monitor Output: Disabling monitor output in **--safe** mode caused Nuke Studio to crash.
- BUG ID 407144 - macOS only: Nuke Non-Commercial did not work as expected.
- BUG ID 407670 - Preferences: The **foundry host** path to the documentation was incorrect.
- BUG ID 407994 - macOS only: Opening more than one instance of Nuke did not work as expected.

- BUG ID 408047 - Non-Commercial: Nuke Studio Non-Commercial incorrectly required a full Nuke Studio license to run.
- BUG ID 408354 - macOS only: Certain scripts containing Convolve and ZDefocus nodes caused Nuke to crash.
- BUG ID 408772 - Linux only: Changing the OS locale to a numeric system that uses , (comma) for decimal points displayed an **unexpected '.' in "5.2000"** error message.
- BUG ID 408911 - Nuke closed on start up and did not display an error message if a fatal error was detected in the **menu.py** or **init.py** files.

New Known Issues Specific to Nuke 12.0

This section covers new known issues and gives workarounds for them, where appropriate.



Note: NVIDIA GPUs with compute capability of 3.0 (Kepler) cannot process **.r3d** files due to a known issue in the R3D SDK preventing decoding and debayering. Nuke defaults to CPU processing when reading **.r3d** files with these cards installed. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

- BUG ID 410015 - Windows only: Monitor output from AJA Kona 4 cards using HDMI is split incorrectly in to four images on the monitor.
- BUG ID 409910 - macOS only: Monitor output playback is not smooth towards the end of certain clips using AJA cards.
- BUG ID 409909 - macOS only: Switching between monitor output devices in Nuke Studio occasionally causes the device selection dropdown to disappear.
- BUG ID 409907 - macOS only: Enabling monitor output from AJA cards occasionally displays images in the wrong quadrants of the monitor.
As a workaround, change to another 1080p format to refresh the monitor.
- BUG ID 409888 - macOS only: Enabling monitor output during playback occasionally causes Nuke Studio to become unresponsive.
- BUG ID 409887 - Monitor Output: Enabling monitor output from a Viewer in a stereo mode, such as **Flicker**, occasionally causes Nuke Studio to crash.
- BUG ID 408220 - Linux only: The numpad **Num Lock** function is always disabled.
- BUG ID 408079 - GridWarpTracker: Using SmartVector tracking data does not work as expected if the Viewer **downrez** control is set to anything other than **1:1**.
- BUG ID 408019 - Navigating to **Help > Documentation > Foundry Online Help** directs you to the wrong page.
As a workaround, go to <https://learn.foundry.com/nuke/>

- BUG ID 405246 - High DPI Hiero: Launching Nuke from a timeline comp draws the UI incorrectly.
- BUG ID 404490 - OCIO: Comps do not always respect changes to the Read node's **Colorspace** control in the timeline environment when opened in the comp environment.
- BUG ID 404189 - Bin View: Disparity channels are not displayed consistently in clip thumbnails.
- BUG ID 403804 - Linux only: Switching resolution on the HTC Vive HMD occasionally displays black output in the headset. As a workaround, update the Viewer by changing frame or press **F5** to refresh the headset output.
- BUG ID 403337 - High DPI: when changing primary monitor the UI gets messy.
- BUG ID 403210 - Qt Mac: Swapping between full-screen and regular workspaces does not retain the UI scale.
- BUG ID 403141 - Monitor Output: Colourspace in A/B mode does not match the Viewer.
- BUG ID 402331 - CameraShake: The Viewer controls remain after deleting the node.
- BUG ID 402330 - High DPI: The **Denoise** Viewer analysis message is truncated.
- BUG ID 402095 - macOS only: Monitor output currently stutters or jumps when playback begins.
- BUG ID 401946 - High DPI: F_WireRemoval on-screen controls are drawn incorrectly.
- BUG ID 401936 - Timeline Editing: Audio is not currently muted if the Viewer frame rate is different to the sequence frame rate.
- BUG ID 401168 - High-DPI: The DeepCrop Viewer widget is thinner than in older versions of Nuke.
- BUG ID 400816 - High DPI: Moving cuts on the timeline does not scale or position the Viewer frame preview correctly.
- BUG ID 400543 - High DPI: The Wipe controls in Nuke Studio are smaller and thinner than in older versions of Nuke.
- BUG ID 400508 - High DPI: The Wipe bounding box outline thinner and smaller than in older versions of Nuke.
- BUG ID 400506 - High DPI: F_Align's bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400505 - High DPI: CornerPin's bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400504 - High DPI: AdjustBBox's bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400497 - High DPI: Crop's bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 400476 - High DPI: C_Tracker's points are thinner than in older versions of Nuke.
- BUG ID 400465 - High DPI: C_CameraSolver's outline and points are thinner than in older versions of Nuke.
- BUG ID 400445 - High DPI: F_WireRemoval's controls are smaller and the icon is different to older versions of Nuke.

- BUG ID 400389 - High DPI: The F_Steadiness node controls are thinner than in older versions of Nuke.
- BUG ID 400387 - High DPI: F_RigRemoval's controls are smaller and the default removal area is more square than in older versions of Nuke.
- BUG ID 400268 - High DPI: F_Align's controls and outlines are smaller and thinner than in older versions of Nuke.
- BUG ID 400232 - High DPI: CameraTracker's thumbnails bar is not scaled to fit the width of Viewer.
- BUG ID 400101 - High DPI: The Sparkles node bounding box outline is thinner and smaller than in older versions of Nuke.
- BUG ID 399741 - Monitor Output: Opening a project set to 4K output and immediately enabling monitor output through an AJA Kona 4 card displays garbage on the monitor. As a workaround, switch to another format or send a different image to the monitor to correct the image.
- BUG ID 399232 - Python: Declaring **TimeBase(None)** causes Nuke to crash.
- BUG ID 399228 - High DPI: Moving Nuke between monitors with different scaling ratios causes GLWidgets to draw incorrectly.
- BUG ID 398978 - GridWarpTracker: Selecting grids Pythonically does not update the node **Properties** correctly.
- BUG ID 398880 - High DPI: Changing scaling of 4K monitor while in full-screen mode doesn't close the full-screen window when exiting the mode, causing Nuke Studio to become unresponsive.
- BUG ID 398862 - High DPI: Changing the scaling on an SDI monitor causes controls to disappear.
- BUG ID 398213 - macOS only: Dragging the interface to or from a Retina display to a second screen causes the Node Graph to flicker.
- BUG ID 397516 - DNxHR: Certain **.mov** file **transfer_function** metadata in Nuke does not match when compared to nclc atom.
- BUG ID 394789 - macOS only: The boundaries of the **Properties** panel flicker when scrolling up and down through the controls.
- BUG ID 394720 - macOS only: Exiting **Fullscreen** mode causes the Viewer to lose focus.
- BUG ID 394480 - SonySDK: Comps exported from Nuke Studio including disabled **.mxf** shots produce Read nodes with no MXF options in the **Properties** panel.
- BUG ID 394286 - Audio is incorrectly cut off for certain shots referencing **.mp4** files.
- BUG ID 394019 - macOS only: Enabling **Fullscreen** mode changes the depth of floating windows, resulting in some windows being obscured.
- BUG ID 393373 - GridWarpTracker: Dragging multiple grid vertices and holding **Shift** does not snap points to the grid.
- BUG ID 393052 - macOS only: Tooltips occasionally don't display correctly.

- BUG ID 392143 - GridWarpTracker: Moving keyframes created by auto-key in the Curve Editor or Dope Sheet adds another keyframe at the current frame.
- BUG ID 392127 - GridWarpTracker: The magnifying window displayed over grid vertices during mouse-over changes position if you press **Ctrl/Cmd**.
- BUG ID 390551 - GridWarpTracker: Enabling **Invert** stops the preview working as expected.
- BUG ID 389356 - GridWarpTracker: Attempting to use GridWarpTracker in vanilla Nuke only displays a license error once.
- BUG ID 388836 - GridWarpTracker: Toggling grid visibility does not affect the transform widget.
- BUG ID 388835 - Timeline Playback: Enabling Monitor Output can cause the Viewer to drop frames during playback with Blackmagic Decklink 4K Extreme cards.
- BUG ID 388455 - High DPI: Hovering down list in menu is leaving orange highlight outlines around items.
- BUG ID 386719 - Windows only: AJA Kona 4 12-bit dual link 1080p50a, 1080p59.94a, and 1080p60a output is incorrect.
- BUG ID 386517 - Timeline Playback: Clicking the **skip to start button** and clearing the playback cache simultaneously causes Nuke Studio to crash.
- BUG ID 383542 - GridWarpTracker: Adding a NoOp downstream of a GridWarpTracker with linked knobs occasionally causes Nuke to crash.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or <https://learn.foundry.com/nuke/developers/120/ndkdevguide/appendixc/index.html> for more information.

As Nuke develops, we sometimes have to make changes to the application programming interface (API) and application binary interface (ABI) under the hood. We try to keep these changes to a minimum and only for certain releases, but from time to time API and ABI compatibility is not guaranteed. See the following table for the situations when you may have to recompile your plug-ins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	11.2v1 to 11.2v2	API and ABI		
Point	11.1v1 to 11.2v1	API	●	
Major	11.0v1 to 12.0v1	-	●	●

Additionally, node **Class()** names occasionally change between major releases. While these changes do not affect legacy scripts, you may not get the results you were expecting if a node class has been modified. The **toolbars.py** file, used to create Nuke's node toolbar, contains all the current node class names and is located in **<install_directory>/plugins/nukescripts/** for reference.

As an example, between Nuke 9 and Nuke 10, the CameraShake node **Class()** changed from CameraShake2 to CameraShake3. In the **toolbars.py** file for the two releases, the entries for the CameraShake node appear as follows:

```
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake2\")",
icon="CameraShake.png")
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake3\")",
icon="CameraShake.png")
```

New Features

- BUG ID 393974 - Python: A new method, **Node.parent()**, has been added to return a GroupNode Python object for the current parent Group.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

There are no bug fixes in this release.

Release Notes for Nuke and Hiero 12.0v1

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Release Date

27 September 2019

Qualified Operating Systems

- macOS High Sierra (10.13) or macOS Mojave (10.14)
- Windows 7 or Windows 10 (64-bit)
- CentOS 7.4 (64-bit), or later



Note: The VFX Platform 2019 upgrade includes library versions that are only compatible with CentOS 7.4, or later. Nuke 12 is qualified on the Centos 7.4, 7.5, and 7.6 distributions.



Warning: Nuke 12.0v1 Non-Commercial is not supported on Mac. The software will launch but will not be fully functional.

Other operating systems may work, but have not been fully tested.

Requirements for Nuke's GPU Acceleration

If you want to enable Nuke to calculate certain nodes using the GPU, there are some additional requirements.

NVIDIA

An NVIDIA GPU with compute capability 3.0 (Kepler) or above. A list of the compute capabilities of NVIDIA GPUs is available at <https://developer.nvidia.com/cuda-gpus>



Note: The compute capability is a property of the GPU hardware and can't be altered by a software update.

With graphics drivers capable of running CUDA 10.1 or above. On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Driver versions 418.96 (Windows) and 418.39 (Linux), or above are required. See <https://www.nvidia.com/Download/Find.aspx> for more information.



Note: We recommend using the latest graphics drivers, where possible, regardless of operating system.

AMD



Note: Bit-wise equality between GPU and CPU holds in most cases, but for some operations there are limitations to the accuracy possible with this configuration.

- On Windows and Linux, an AMD GPU from the following list:



Note: Other AMD GPUs may work, but have not been fully tested.

- Radeon™ RX 480
- Radeon™ Pro WX 7100
- Radeon™ Pro WX 9100
- Radeon™ Pro SSG
- Radeon™ Pro WX 8200



Note: For information on the recommended driver for each GPU, see <https://www.amd.com/en/support>

- On Mac, AMD GPUs are supported on any late 2013 Mac Pro, mid 2015 MacBook Pros onward, and late 2017 iMac Pros.



Warning: Although AMD GPUs are enabled on other Mac models, they are not officially supported and used at your own risk.

Multi-GPU Processing

Nuke's GPU support includes an **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



Note: Multi-GPU processing is only available for identical GPUs in the same machine. For example, two NVIDIA GeForce GTX 1080s or two AMD Radeon™ Pro WX 9100s.

New Features

CaraVR in NukeX

The majority of CaraVR's nodes have been integrated into NukeX, giving you access to tools for VR and stereo workflows and improvements to traditional 2D workflows.

- C_Solver and C_Stitcher improve results for non-traditional camera setups and can help remove artifacts on different types of footage. Multiple camera setups become a lot easier to manage with CaraVR's tools, allowing you to toggle between custom camera setups and solve to generate a single image.
- C_CameraIngest enables you to work with cameras in Nuke's 3D space to easily match your rig and camera offsets.
- C_SphericalTransform offers a more varied toolkit than Nukes own SphericalTransform node with GPU accelerated results.
- C_STMap node provides more options for artists working with STMaps, including GPU acceleration for quicker results and the ability to read position passes generated by C_GenerateMap to help reduce artifacts in extreme cases.
- C_DisparityGenerator creates disparity maps for stereo images. C_DisparityGenerator differs from the Ocula version in that it can also map in latlong space, meaning disparity vectors are mapped as they pass the edge of the frame when the image wraps around.

DNxHR

Nuke now reads Avid DNxHR footage encoded with the following compression levels in the **.mxf** container format:

- **DNxHR LB** - Low Bandwidth (8-bit 4:2:2) Offline Quality
- **DNxHR SQ** - Standard Quality (8-bit 4:2:2) (suitable for delivery format)
- **DNxHR HQ** - High Quality (8-bit 4:2:2)
- **DNxHR HQX** - High Quality (12-bit 4:2:2) (UHD/4K Broadcast-quality delivery)
- **DNxHR 444** - Finishing Quality (12-bit 4:4:4) (Cinema-quality delivery)

EdgeExtend

EdgeExtend uses in-painting to provide a GPU accelerated way to approximate correct, unpremultiplied foreground colors in the soft boundary regions of keyed and roto'd objects. The node **Properties** allow you to erode and dilate the sample region and includes the ability to recover the original high-frequency detail and noise.

Inpaint

The Inpaint node provides smooth GPU accelerated in-painting, which can be used for fast marker removal, beauty work, and object replacement.

The **Stretch** controls allow you to bias the in-painting in a defined direction and the **Detail** controls allow the cloning of high-frequency textures from another part of the source, or even a different image.

GridWarpTracker

GridWarpTracker builds on Nuke's original GridWarp node with an improved, user-friendly interface. If you have a NukeX license, you can track your grids using the optional **SmartVector** input and add animated **Adjustment Grids** to refine the results of the warp.

Using a combination of the **Adjustment Grids** and GridWarpTracker's new ability to quickly link the **From** and **To** grids, you can easily create a tracked warp.

Interaction Performance Improvements

We have overhauled the way that Nuke redraws its UI to improve performance at scale. Previously, as a script's node count passed 1000 nodes, the framerate of the UI would begin to drop, causing Nuke's UI to feel unresponsive. We now expect the UI frame rate to be approximately 30 fps with node counts well above 10000, maintaining interactivity and responsiveness for large scripts.

Monitor Output SDK Updates

We have updated our monitor out plug-ins to support the latest AJA and BlackMagic SDKs. AJA now supports 15.0.1 drivers, or later, and BlackMagic now supports 10.11.4, or later.

OCIO Roles

OCIO roles allow you to set custom role names for different colorspace to make it easier for artists to instinctively know which LUT to use for any given piece of footage. For instance, if an element is coming from your matte painting department and should always be brought into Nuke as sRGB, you can create a **matte painting** role, which is associated with the sRGB colorspace for your artist to select.

This feature introduces a new colorspace knob that makes OCIO roles the primary method for selecting colorspace. All of the colorspace in the OCIO config file are still accessible, but they have been grouped together into a colorspace menu beneath the roles. OCIO roles are set up within your config file. Have a look at the aces 1.1 **config.ocio** file shipped with Nuke for some examples:

```
<install_dir>/plugins/OCIOConfigs/configs/aces_1.1/config.ocio
```

Error handling has also been improved, so that when artists switch between shows, there is no mishandling of the roles and LUTs available.

OpenEXR Optimization

OpenEXR has been upgraded to version 2.3 and is compiled with SSE4 (Streaming SIMD Extensions 4) to take advantage of certain OpenEXR optimizations. In addition, Nuke's ExrReader memory management and image initialization has been optimized.

Playback Performance Improvements

The new playback improvements are aimed at supporting higher resolutions, higher frame rates, and consistency in the playback engine.

RED SDK

The R3D SDK has been updated as part of the VFX Platform 2019 work. The new library version is R3D 7.1.0.



Note: Nuke does not currently support GPU accelerated decoding and debayering of **.r3d** files on NVIDIA GPUs with compute capability 3.x (Kepler), due to a known issue in the R3D SDK. A list of the compute capabilities of NVIDIA GPUs is available at: <https://developer.nvidia.com/cuda-gpus>

Sony OpenCL Support

Sony footage processing on OpenCL-enabled GPUs has been improved.


Sony SDK 3.3

Sony support has been upgraded to version 3.3, supporting v4 of the VENICE camera and introducing X-OCN XT.

VFX Platform 2019 Compliance

This is a significant update to Nuke's core libraries and numerous third-party libraries, with the aim to provide a common target platform for building software for the VFX industry. For more information on the library versions shipped with Nuke 12, see [Third-Party Libraries](#).

Viewer Soft Selection

A new **Soft Selection** mode  has been added to Nuke's 3D Viewer. When you select a vertices or faces in the Viewer, the new mode makes additional selections according to a **Falloff Radius** and **Falloff Curve** in the Viewer's node **Properties** > **3D** tab under **Soft Selection**.

Feature Enhancements

DeepMerge

The DeepHoldout node has been combined with the DeepMerge node to avoid duplication of controls. Enabling the new **volumetric holdout** control allows you to remove only the volume of depth specified by the holdout, leaving any 'deeper' samples unaffected.

Expressions

Cloned nodes containing knob expressions or knob links no longer draw connecting arrows to the originating node or nodes. For clarity, only the clone link is drawn in the Node Graph.

ParticleEmitter

- ParticleEmitter now uses the correct frame range of its inputs for emitted geometry particles, rather than using the default geometry frame range of 1-1 and ignoring any animation in the texture applied to the geometry.
To update legacy scripts to run with the new ParticleEmitter, add a FrameRange node after the geometry to set its frame range correctly. For example, if you have an clip with frame range 1-50 used as a particle input and wanted to change this to a Card textured with the same clip, you need to add a FrameRange node with range 1-50 after the Card node, because geometry has its own frame range and doesn't inherit the frame range from its texture(s).
- The random numbers generated by ParticleEmitter have changed to make them more stable for use in downstream nodes.
- Particle rotation velocity has been corrected so that it rotates around the initial velocity vector.

Feature Enhancements

- BUG ID 142939 - GridWarp: Holding **Cmd/Ctrl** to offset the transform handle did not work as expected.
- BUG ID 146852 - GridWarp: Setting the center of rotation for multiple point selections did not work as expected.
- BUG ID 215644 - Vertex selection mode for 3D Viewer that allows you to hit **F** to orbit around the center of the selected vertices instead of the entire model.
- BUG ID 325821 - Add active_views functionality to Nuke OCIO configurations.

- BUG ID 355465 - Allow the **Holdout** setting in **DeepMerge** to only take out the area in the deep volume where **Holdout** is in place, but not anything behind it.
- BUG ID 394132 - EdgeExtend: Adding **input is premultiplied** checkbox.
- BUG ID 394139 - EdgeExtend: Adding subpixel values to **Erode**.
- BUG ID 394370 - EdgeExtend: Adding checkbox to **Output Extended Edge Mask to Mask a Channel**.
- BUG ID 395216 - Qt: Add floating window pane name to title bar.

Bug Fixes

- BUG ID 130524 - Deep: Overlapping point samples were not handled correctly.
- BUG ID 141800 - UI: Changing the Viewer node name didn't immediately update the **Viewer** tab.
- BUG ID 142948 - GridWarp: The **Warp** slider had the same effect on the source and destination grids.
- BUG ID 142977 - GridWarp: Selecting both grids and then rotating the transform handle could not be undone.
- BUG ID 143467 - GridWarp: A Tracker-linked grid followed the track incorrectly in a customer script.
- BUG ID 144283 - ARRIRRAW: Interaction with ARRIRRAW footage in Nuke was sluggish.
- BUG ID 145143 - GridWarp: Selections between **src** and **dst** points did not work as expected.
- BUG ID 147032 - Windows only: Playback of **.exr** files was slower on Windows than on Linux and macOS.
- BUG ID 147303 - GridWarp: Pasting previously copied frames into the Dope Sheet did not work as expected.
- BUG ID 147480 - GridWarp: Right-clicking in the **Properties** panel and selecting **No animation on all knobs** created a keyframe on the **center** controls.
- BUG ID 149388 - Windows only: Importing **.mxf** files was sluggish when compared to other OS.
- BUG ID 153281 - Particles: **ParticleSpawn** alters the position of original particles.
- BUG ID 153512 - **Random order** start option not working with 3D particles.
- BUG ID 154998 - GridWarp: Single point selections incorrectly displayed a transform/selection box when selected straight after a multi-selection.
- BUG ID 156788 - UI: Reloading a script discarded font changes applied to node labels.
- BUG ID 158140 - Expression/MergeExpression: Command line renders referencing **.exr** channel information in expressions displayed an error in the Viewer.
- BUG ID 181176 - Windows only: Reading **.exr** and **.dpx** files over a network in the Node Graph was slower than expected.
- BUG ID 207540 - Merge: Connecting the **mask** input with multiple **A** inputs caused Nuke to crash.

- BUG ID 217619 - OCIO: Conforming a sequence relying on OCIO colorspaces displayed an **out of range** error in the Viewer.
- BUG ID 233144 - NDK: The **DD::Image::Quaternion::slerp()** function did not work as expected.
- BUG ID 277578 - macOS only: Clicking **Detect** in the LensDistortion node's **Properties** panel caused Nuke to crash.
- BUG ID 305280 - Node Graph: Nodes upstream of Transform nodes were incorrectly evaluated when the Viewer was not attached to the node tree.
- BUG ID 306249 - macOS only: Expression links between nodes in the Node Graph did not always draw correctly.
- BUG ID 306256 - macOS only: Toggling **Fullscreen** mode (**Alt + S**) placed the interface under the menu bar.
- BUG ID 309568 - Windows only: Adding a GridWarp to a multi-view script displayed an error.
- BUG ID 309790 - Linux only: Text in the Viewer was hard to read.
- BUG ID 309793 - Linux only: Attempting to dock floating panels occasionally caused them to disappear.
- BUG ID 313056 - Monitor Output: Nuke Studio did not playback 4K **.dpx** clips at 25 fps on some machines.
- BUG ID 324897 - macOS only: Graphs in Node properties are overlapping, not re drawing and turning black while Scrolling in properties.
- BUG ID 332224 - ARRIRAW: Certain **.ari** files did not load settings from metadata as expected.
- BUG ID 332302 - macOS only: Qt 5.6.1 build is missing QtWebEngine.
- BUG ID 334119 - macOS only: Adding text to a Text soft effect occasionally caused Nuke Studio to crash.
- BUG ID 347416 - Deep: Writing output containing Deep data using the standard Write node caused Nuke to crash.
- BUG ID 352216 - OCIO: Certain **.config** files did not work as expected in Nuke Studio.
- BUG ID 352422 - Read/Write: Importing a previously exported **.mov** clip displayed a PAL format warning.
- BUG ID 352820 - Node Graph: Copying and pasting nodes duplicated any user knobs in the copies.
- BUG ID 353576 - macOS only: Editing shots on Hiero's timeline with certain NVIDIA GPUs installed caused macOS to log out.
- BUG ID 355263 - Monitor Output: Changing Viewer settings, such as downrez and proxy mode, did not always update the monitor correctly.
- BUG ID 357332 - Expressions: Rendering a script from the command line using expressions containing **channels()** (Python) or **layers** (Tcl) did not work as expected.
- BUG ID 357643 - VectorToMotion: The gizmo displayed an error when input channels were missing from the first and last frames of a sequence.

- BUG ID 358000 - Soft Effects: Adjusting effect properties caused flickering between blended layers.
- BUG ID 362835 - Linux only: The implementation of the method **DD::Image::ReadWriteLock::readLock()** did not check for possible errors.
- BUG ID 366386 - Playback: The framerate in Hiero varied between 23-25 fps during playback of 24 fps sequences.
- BUG ID 370232 - VectorCornerPin: Selecting all vertices using **Ctrl/Cmd+A** and then dragging a point caused the transform widget to disappear.
- BUG ID 371300 - Particles: colour values differ when geo nodes are used.
- BUG ID 371664 - macOS only: Calculating certain ZDefocus nodes on Macs with certain AMD FirePro GPUs caused Nuke to crash.
- BUG ID 373241 - Viewer: The **gain** control did not work as expected when **use GPU in viewer when possible** was enabled.
- BUG ID 373244 - Viewer: Adjusting the **gain** control produced slightly different output on the CPU and GPU.
- BUG ID 374129 - GridWarp: Creating a new grid using the **Draw Boundary** tool and then holding **Shift** to gang the x and y bounds of the grid caused Nuke to crash.
- BUG ID 376078 - CameraTracker: Clicking **Update Track** or **Update Solve** displayed a **'Node' object is not iterable** error.
- BUG ID 377964 - VectorCornerPin: Scaling the points transform widget in the Viewer and then holding **Shift** to gang the x and y scale amount did not work as expected.
- BUG ID 379017 - Linux: Reading in a multilayered EXR's compressed using PIZ will cause a memory crash when down-rezzing in the viewer.
- BUG ID 379165 - GridWarp: Shift-dragging multiple points caused Nuke to crash.
- BUG ID 380231 - Viewer Stereo Modes: Multi-view comp playback in Nuke Studio was unreliable.
- BUG ID 381686 - Viewers: The playback range control's tooltip was incorrect.
- BUG ID 382024 - Multi-View Projects: Expanding or collapsing split knobs on a Grade soft effect changed the view selected in the Viewer.
- BUG ID 382912 - GPU Acceleration: On machines with three of the same type of GPU installed, creating a ZDefocus node with **enable multi_GPU support** enabled occasionally caused Nuke to crash.
- BUG ID 384363 - Node Graph: Force cloning (**Ctrl/Cmd+Alt+Shift+K**) more than two nodes simultaneously displayed a blank error message.
- BUG ID 384660 - Linux only: Switching workspaces occasionally redrew the Node Graph panel incorrectly.
- BUG ID 385582 - Timeline Multi-View: Rendering multi-view comps in new projects did not work as expected.
- BUG ID 386104 - UI: Switching workspace resized the window incorrectly.

- BUG ID 386331 - Monitor Output: The monitor out plug-ins did not load as expected, displaying **error code: 126** on the command line.
- BUG ID 386609 - Dope Sheet: Saving, clearing, and reloading a script and then adjusting a keyframe caused Nuke to crash.
- BUG ID 387102 - macOS only: Calculating certain BlinkScript nodes on Macs with certain AMD FirePro GPUs caused Nuke to crash.
- BUG ID 387269 - Soft Effects: The OCIOColorspace and OCIOFileTransform effect's error messaging was ambiguous.
- BUG ID 387272 - OCIO: Missing LUT errors were ambiguous.
- BUG ID 387392 - Applying the **HDR2084** colorspace in **ApplyLUT** nodes in legacy scripts did not work as expected.
- BUG ID 387788 - Export: H.264 **.mov** files could not be exported at 4K resolution.
- BUG ID 388485 - Documentation: The Shot Manager Example in the Hiero Python Dev Guide did not write to the database if the timeline contained a soft effect.
- BUG ID 389961 - Comp Viewer: Setting the clip warning to **exposure** disabled GPU acceleration.
- BUG ID 390403 - The Pixel Analyzer displayed incorrect values when using BIT data and comparing it to the Viewer channel data.
- BUG ID 390629 - DEEP: The Min Range is not changing the deep front position.
- BUG ID 391378 - BlinkScript node has very bad performance when sampled.
- BUG ID 391649 - preferences close when you change color management the first time.
- BUG ID 391884 - Nuke NDK GeoOp crash with FrameHold.
- BUG ID 391897 - After reopening a Nuke Studio project, copying and pasting soft effects no longer works.
- BUG ID 392029 - Cloning **Write** nodes continually makes CaraVR parameters.
- BUG ID 392167 - ST2084: Selecting the ST2084 does not correctly display colorspace.
- BUG ID 392348 - Message text is displayed incorrectly when expressions result in unicode characters in a Text2 node.
- BUG ID 392523 - **Viewer Selection Mode** has no tool Tip.
- BUG ID 392678 - ST2084: **ApplyLUT** is not correctly outputting ST2084 colorspace.
- BUG ID 392685 - ST2084 appearing in viewer process.
- BUG ID 392694 - PySide2: The **QSound** module was missing.
- BUG ID 392719 - Mac: Studio Ram Cache starting Caching in the wrong place in timeline for Stereo EXR's.
- BUG ID 392740 - Particles: Random numbers for particles change if another emitter is added.
- BUG ID 392798 - LensDistortion Detection: When detecting a grid the detection was not accurate and produced incorrect undistorted output.
- BUG ID 392990 - Naming conventions for cloned nodes has changed since 11.3.

- BUG ID 393293 - Nuke NDK: The **DD::Image::Quaternion** inverse method actually returned inverse squared.
- BUG ID 393519 - Artefacts appear when using **DeepHoldout** operations on multi-sample deep images.
- BUG ID 393556 - LensDistortion: Features were not detected in the whole frame.
- BUG ID 393560 - Nuke crashes on script clear when Node Panel is open and has a **Table_Knob**.
- BUG ID 394039 - **DeepHoldout** produced incorrect results when Deep pixels intersected.
- BUG ID 394469 - Sony Studio: Unable to export a MOV file type out when Relative Resolution knob is set to 1:1.
- BUG ID 394743 - Timeline Playback: Shuttle tool plays back fast when near center of viewer.
- BUG ID 395148 - Qt Mac: Full-screen display preference not working.
- BUG ID 395326 - DNxHD Linux: Crash when reading in a particular MOV DNxHD clip.
- BUG ID 395954 - Opening a clip in the Finder will cause Nuke Studio to hang (macOS 10.14).
- BUG ID 396037 - Qt Mac: Icons and checkboxes stay highlighted.
- BUG ID 396313 - VectorCornerPin: **Delete All Keys** button has disappeared.
- BUG ID 396407 - Project settings not displaying custom config set in preferences.
- BUG ID 396498 - Reading 720p 100 DNxHD clips will look incorrect in viewer.
- BUG ID 398312 - Evaluating **SmartVectors** for stereo views throws an error in the **right** view.
- BUG ID 399350 - LIN: Terminal Nuke requires **Pulseaudio** library, when it shouldn't.
- BUG ID 399470 - VectorCornerPin: **TransformJack** missing from main.
- BUG ID 399879 - ARRI ADA-5: Fine-tuning controls missing.
- BUG ID 399956 - ARRI: Improve Arri Reader slow performance.
- BUG ID 400953 - Playback stops when changing monitor output while playing back.
- BUG ID 400970 - ARRI: Copying and pasting when ADA-5 options are expanded will be collapsed with pasted read node.
- BUG ID 400991 - ARRI ADA5: Fine-tuning knobs options are missing after copying and pasting / Legacy scripts/ Loading a project/ Creating a comp.
- BUG ID 401265 - BlinkScript: Can't do member access on sampler in BlinkScript.
- BUG ID 403697 - Reading in Avid MXF clips will look incorrect in viewer.
- BUG ID 403904 - QFileDialog automatically closes when opened via a context menu.
- BUG ID 407130 - Localization of clips in Project Bin crashing Nuke Studio.

New Known Issues Specific to Nuke 12.0v1

This section covers new known issues and gives workarounds for them, where appropriate.



Note: NVIDIA GPUs with compute capability of 3.0 (Kepler) cannot process **.r3d** files due to a known issue in the R3D SDK preventing decoding and debayering. Nuke defaults to CPU processing when reading **.r3d** files with these cards installed. A list of the compute capabilities of NVIDIA GPUs is available at: www.nvidia.co.uk/object/cuda_gpus_uk.html

Other Known Issues

- BUG ID 405246 - High DPI Hiero: Launching Nuke via comp redraws anything part of the desktop in the UI.
- BUG ID 404902 - Nuke Studio stops responding after reconnecting media **Hiero::ThreadPool**.
- BUG ID 404501 - OCIO: Unable to export from Nuke Studio due to error that incorrect Colorspace has been used but the user has in fact chosen a valid one.
- BUG ID 404490 - OCIO: Comps do not always respect changes to the Read node's **Colorspace** control in the timeline environment when opened in the comp environment.
- BUG ID 404248 - Windows only: Cannot silently install if **/ACCEPT-FOUNDRY-EULA** is after **/D**.
- BUG ID 404189 - Bin View: Disparity channels are not displayed consistently in clip thumbnails.
- BUG ID 403804 - Linux only: Switching resolution on the HTC Vive HMD occasionally displays black output in the headset. As a workaround, update the Viewer by changing frame or press **F5** to refresh the headset output.
- BUG ID 403337 - High DPI: when changing primary monitor the UI gets messy.
- BUG ID 403210 - Qt Mac: Swapping between full screen and non full screen workspaces are not holding their previous scale.
- BUG ID 403141 - Monitor out colourspace when set to A/B is not matching Viewer.
- BUG ID 402331 - **CameraShake** viewer controls remaining after the node is deleted.
- BUG ID 402330 - High DPI: **Denoise** noise analysis message being cut off in viewer.
- BUG ID 402095 - macOS only: Monitor output currently stutters or jumps when playback begins.
- BUG ID 401946 - High DPI: **F_WireRemoval** on screen controls are smaller.
- BUG ID 401936 - Timeline Editing: Audio is not currently muted if the Viewer frame rate is different to the sequence frame rate.
- BUG ID 401168 - High-DPI: **DeepCrop** lines are thinner than 11.3.
- BUG ID 400816 - High DPI: Preview of frame in Viewer when moving cuts not scaled correctly or in correct position.
- BUG ID 400599 - High DPI: Double line around integer knob in Preferences.
- BUG ID 400579 - High DPI: Double line highlight around file browser path knob.
- BUG ID 400543 - High DPI: Viewer Wipe controls in Studio are smaller and thinner.
- BUG ID 400508 - High DPI: Wipe bounding box outline thinner and smaller than in 11.3.

- BUG ID 400506 - High DPI: **F_Align** node bounding box outline thinner and smaller than in 11.3.
- BUG ID 400505 - High DPI: **Cornerpin** node bounding box outline thinner and smaller than in 11.3.
- BUG ID 400504 - High DPI: **adjustBBox** node bounding box outline thinner and smaller than in 11.3.
- BUG ID 400497 - High DPI: **Crop** node bounding box outline thinner and smaller than in 11.3.
- BUG ID 400476 - High DPI: **C_Tracker** points are thinner than in 11.3.
- BUG ID 400465 - High DPI: **C_CameraSolver** outline and points are thinner.
- BUG ID 400463 - High DPI: Double line highlight around how many properties can be opened in the **Panel**.
- BUG ID 400445 - High DPI: **F_WireRemoval** controls smaller and icon is different on default.
- BUG ID 400389 - High DPI: **F_Steadiness** controls are thinner.
- BUG ID 400387 - High DPI: **F_RigRemoval** controls smaller and default is more square.
- BUG ID 400268 - High DPI: **F_Align control** and outlines are smaller and thinner.
- BUG ID 400232 - High DPI: Camera Tracker Thumbnails bar not scaled to fit width of Viewer.
- BUG ID 400101 - High DPI: Sparkles Bounding box outline thinner and smaller than in 11.3.
- BUG ID 399741 - Monitor Output: Opening a project set to 4K output and immediately enabling monitor output through an AJA Kona 4 card displays garbage on the monitor.
As a workaround, switch to another format or send a different image to the monitor to correct the image.
- BUG ID 399232 - Python: Declaring **TimeBase(None)** causes Nuke to crash.
- BUG ID 399228 - High DPI: Moving Nuke between monitors which have different scaling ratios causes GLWidgets to draw incorrectly.
- BUG ID 398978 - GridWarpTracker: Selecting grids Pythonically does not update the node **Properties** correctly.
- BUG ID 398880 - High DPI: Changing scaling of 4K monitor while in full screen mode doesn't close full screen window when exiting the mode and Studio hangs.
- BUG ID 398862 - High DPI: All knobs disappear if scaling on monitor is changed while Nuke is open.
- BUG ID 398213 - macOS only: Dragging the interface to or from a Retina display to a second screen causes the Node Graph to flicker.
- BUG ID 397668 - Windows only: Nuke Studio stops responding after reconnecting media - OpenEXR default threadpool.
- BUG ID 397516 - DNxHR: Certain **.mov** file **transfer_function** metadata in Nuke does not match when compared to nclc atom.
- BUG ID 397218 - Inpaint: The stretch amount knob is temporally unstable.
- BUG ID 394789 - macOS only: The boundaries of the **Properties** panel flicker when scrolling up and down through the controls.
- BUG ID 394720 - macOS only: Exiting **Fullscreen** mode causes the Viewer to lose focus.

- BUG ID 394480 - SonySDK: Comps exported from Nuke Studio including disabled **.mxf** shots produce Read nodes with no MXF options in the **Properties** panel.
- BUG ID 394458 - Viewer Selection: Add ability to display / work in an 'isolated selected area' - Feature Request.
- BUG ID 394286 - Audio is incorrectly cut off for certain shots referencing **.mp4** files.
- BUG ID 394019 - macOS only: Enabling **Fullscreen** mode changes the depth of floating windows, resulting in some windows being obscured.
- BUG ID 393373 - GridWarpTracker: Dragging multiple grid vertices and holding **Shift** does not snap points to the grid.
- BUG ID 393052 - macOS only: Tooltips occasionally don't display correctly.
- BUG ID 392223 - macOS only: The installer window is slightly blurry on launch. As a workaround, resize the windows manually to sharpen the image.
- BUG ID 392143 - GridWarpTracker: Moving keyframes created by auto-key in the Curve Editor or Dope Sheet adds another keyframe at the current frame.
- BUG ID 392127 - GridWarpTracker: The magnifying window displayed over grid vertices during mouse-over changes position if you press **Ctrl/Cmd**.
- BUG ID 329885 - GridWarpTracker: **Morph Amount** will get greyed out when going from **Warp** to **Morph**.
- BUG ID 390551 - GridWarpTracker: Enabling **Invert** stops the preview working as expected.
- BUG ID 389356 - GridWarpTracker: Attempting to use GridWarpTracker in vanilla Nuke only displays a license error once.
- BUG ID 388836 - GridWarpTracker: Toggling grid visibility does not affect the transform widget.
- BUG ID 388835 - Timeline Playback: Enabling Monitor Output can cause the Viewer to drop frames during playback.
- BUG ID 388455 - High DPI: Hovering down list in menu is leaving orange highlight outlines around items.
- BUG ID 387848 - Alembic: Loading **.abc** files into Nuke and then closing the application prints error messages on the command line.
- BUG ID 387314 - BMX-DNxHR: BMX returns 0 for component_depth for DNX_444_COMPRESSION_ID.
- BUG ID 386719 - Windows only: AJA Kona 4 12-bit dual link 1080p50a, 1080p59.94a, and 1080p60a output is incorrect.
- BUG ID 386517 - Timeline Playback: Clicking the **skip to start button** and clearing the playback cache simultaneously causes Nuke Studio to crash.
- BUG ID 383542 - GridWarpTracker: Adding a NoOp downstream of a GridWarpTracker with linked knobs occasionally causes Nuke to crash.
- BUG ID 379710 - GridwarpTracker: **ESC** key not canceling gridwarp track.
- BUG ID 352534 - Comps turning black in sequence.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or <https://learn.foundry.com/nuke/developers/120/ndkdevguide/appendixc/index.html> for more information.

As Nuke develops, we sometimes have to make changes to the application programming interface (API) and application binary interface (ABI) under the hood. We try to keep these changes to a minimum and only for certain releases, but from time to time API and ABI compatibility is not guaranteed. See the following table for the situations when you may have to recompile your plug-ins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	11.2v1 to 11.2v2	API and ABI		
Point	11.1v1 to 11.2v1	API	●	
Major	11.0v1 to 12.0v1	-	●	●

Additionally, node **Class()** names occasionally change between major releases. While these changes do not affect legacy scripts, you may not get the results you were expecting if a node class has been modified. The **toolbars.py** file, used to create Nuke's node toolbar, contains all the current node class names and is located in **<install_directory>/plugins/nukescripts/** for reference.

As an example, between Nuke 9 and Nuke 10, the CameraShake node **Class()** changed from CameraShake2 to CameraShake3. In the **toolbars.py** file for the two releases, the entries for the CameraShake node appear as follows:

```
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake2\")",
icon="CameraShake.png")
m.addCommand("CameraShake", "nuke.createNode(\"CameraShake3\")",
icon="CameraShake.png")
```