

Release Notes for Nuke and Hiero 10.5v8

Copyright © 2018 The Foundry Visionmongers Ltd.

Release Date

21 September 2018

Qualified Operating Systems

- Mac OS X Mavericks (10.9) or Yosemite (10.10)
- Windows 7 or Windows 8 (64-bit only)
- CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

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. You need to have:

- an NVIDIA GPU with compute capability 2.0 (Fermi) or above. A list of the compute capabilities of NVIDIA GPUs is available at www.nvidia.co.uk/object/cuda_gpus_uk.html.



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 4.2 or above.



NOTE: In order to use R3D GPU debayering in the Compositing environment, CUDA 6.0 (or higher) is required.

- On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Drivers from April 2012 onward support CUDA 4.2.

Go to <http://www.nvidia.com/Download/Find.aspx?lang=en-us> for more information.

- On Mac, the CUDA driver is separate from the NVIDIA graphics driver and must be installed, if you don't have it already. The minimum requirement for CUDA 4.2 is driver version 4.2.5, which can be downloaded from www.nvidia.com/drivers.



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

- an AMD FirePro GPU on late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5, running OS X 10.9.3 'Mavericks', or later.

Late 2013 and Mid 2015 Mac Pros Only

Nuke supports GPU-enabled nodes on the late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5 (running OS X 10.9.3 'Mavericks', or later), including a new **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



NOTE: To ensure you get the best performance from OpenCL GPUs on late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5, we recommend updating Mavericks to 10.9.5, or above for full functionality. However:

- If you're running an earlier version of Mac OS X than 10.9.5 and processing images greater than 4 mega pixels resolution, VectorGenerator, Kronos, and MotionBlur do not support GPU acceleration.
- If you're running an earlier version of Mac OS X than 10.9.4, Kronos and MotionBlur do not support GPU acceleration.

New Features

There are no new features in this release.

Feature Enhancements

- BUG ID 352907 - Write: You can now specify which channel is written first in multi-channel **.exr** files using the **first part** dropdown in the Write node's **Properties** panel. All subsequent channels are written in alphanumeric order.

Bug Fixes

There are no bug fixes in this release.

Known Issues and Workarounds

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

Known Issues Specific to Nuke 10.5

- Some links to the developer documentation are not working as expected. Please use the local copy of the documentation included in the installer where possible:

```
<install location>/Nuke10.5v8/Documentation/
```

Known Issues Specific to Nuke Studio and Hiero 10.5

- BUG ID 239672 - Linux only: Reading files from NTFS disks/partitions can be extremely slow, particularly for large files. This is a limitation of Linux NTFS file systems, rather than Foundry products.

We recommend avoiding timeline playback that relies on source footage from NTFS disks/partitions.

- BUG ID 235327 - Linux only: CPU usage can reach 100% on a single thread during flipbooking, causing Nuke to become unresponsive.
- BUG ID 230536 - Soft Effects: The Burn-in effect does not maintain a constant text baseline for all characters when the format is changed.

Other Known Issues

Known Issues Specific to Nuke

AudioRead

- BUG ID 18924 - Changes to the **rate** control value are not honored when **ratesource** is toggled between **file** and **custom**.
- BUG ID 18666 - Changing the sample rate has no effect on playback in a Flipbook.
- BUG ID 18465 - The **time range** control doesn't limit the range when an **endtime** is specified.
- BUG ID 18451 - Flipbooking doesn't honor the time range knob.
- BUG ID 18217 - Redo keyframe generation doesn't replace the keys.
- BUG ID 18213 - Changing **Draw Style** in the Curve Editor or Dope Sheet doesn't redraw the curves correctly.

BlinkScript/CUDA

- BUG ID 43319 - CUDA: Scripts containing GPU accelerated nodes, such as ZDefocus, display a CUDA error when the OS wakes up from sleep mode.

As a workaround, close and reopen Nuke to reactivate the CUDA drivers.

CameraTracker

- BUG ID 40798 - Centering a track in the Viewer does not work as expected in proxy or downrez modes.
- BUG ID 37411 - Sequences containing alpha channels display the alpha premultiplied by the image in reference thumbnails, rather than just the RGB values.

Deep

- BUG ID 40145 - Nuke occasionally reads and writes Deep **.exr** files with a pixel aspect ratio of 1.

As a workaround, preview the **.exr** in the file browser before reading it into Nuke.

Dope Sheet

- BUG ID 43463 - Scripts containing Ocula's O_VerticalAligner plug-in cause Nuke to crash when you execute **Analyze Sequence** with the Dope Sheet open.
- BUG ID 40206 - Adding a curve to the Dope Sheet and then deleting it causes Nuke to crash.
- BUG ID 39426 - Undoing individually animated text characters removes their keys completely from the Dope Sheet.
- BUG ID 39156 - Keys remapped with descending TimeWarp lookup curves don't snap to frames when **frame snap** is enabled.
- BUG ID 38910 - Keys from Viewer buffers not currently being viewed are still visible.
- BUG ID 38630 - Read and TimeClip representations disappear in the Dope Sheet if they are set to have a non-empty frame expression.
- BUG ID 37869 - The Dope Sheet is not updated correctly when a Retime's **speed** control is animated.
- BUG ID 37815 - Multiple instances of the same clip within one AppendClip are only represented once in the Dope Sheet.

EditGeo

- BUG ID 38954 - The transform handle of selections in the Viewer is not updated between frames on geometry with animation baked into its vertices.

To update the transform handle, toggle the axis alignment control between **object** and **average normal**.

- BUG ID 38699 - Changing the visibility of objects within an Alembic Scene Graph causes geometry to ignore the EditGeo node.
- BUG ID 38670 - Setting a keyframe can be slow to update the Viewer with the appropriate keyframe marker.
- BUG ID 36094 - Setting **axis alignment** to **average normal** displays the axis incorrectly on edge and corner vertices.

Flipbook

- BUG ID 201156 - Nuke's flipbook defaults to the Write node's colorspace, which can result in different output when compared to the Viewer.

As a workaround, either flipbook the node upstream of the Write node, or enable **Burn in the LUT** in the **Flipbook** dialog.

- BUG ID 47005 - In the Flipbook Viewer, clicking the **Go to start** button always goes to frame 0, even if the clip doesn't start at 0.
- BUG ID 47005 - Enabling **Burn in the LUT** in the Flipbook dialog uses the **rec709** LUT for both **rec709** and **rec1886**.

GPU

- BUG ID 45018 - R3D: Only half float linear gamma space works with GPU debayering.

Import Nuke

- BUG ID 40131 - Importing Nuke in a Python script destroys **sys.argv**, making command-line arguments unavailable.

As a workaround, preserve **sys.argv** in another variable before you import Nuke.

- BUG ID 39836 - Importing Nuke hangs when there are Qt conflicts between Nuke and other applications.
- BUG ID 38963 - Calling **import nuke** terminates the Python session if no applicable license is available.

Linux Only

- BUG ID 49262 - Scrubbing in the timeline in large projects can force memory use to hit 100%, causing Nuke to become unresponsive.

- BUG ID 43766 - Calling **uuid.uuid4()** causes Nuke to crash due to a bug in **libc**.

As a workaround, launch Nuke from the command-line using:

```
LD_PRELOAD=/lib64/libuuid.so.1 ./Nuke8.0
```

- BUG ID 42581 - Keyboard Shortcuts: Using **Ctrl+C** to quit Nuke from the command-line when a dialog box is open displays an error.
- BUG ID 39537 - Using a Blackmagic Decklink Extreme 2 card causes Nuke to become unresponsive.

Mac OS X Only

- Installation - If you're running Mac OS X 10.10 "Yosemite", you may need to install alternative NVIDIA CUDA drivers so that Nuke can detect your GPU correctly. You can obtain the required drivers directly from NVIDIA here:

<http://www.nvidia.com/object/macosex-cuda-6.5.18-driver.html>.

- BUG ID 50182 - Nuke cannot be launched from the Finder if it has already been launched from the Terminal.
- BUG ID 43343 - Modifying the label of a Python user knob causes Nuke to crash.
- BUG ID 39429 - Crash Reporting: The 'save to' dialog is hidden behind the crash report dialog when you click **Save Report**.
- BUG ID 38686 - Enabling **Use GPU if available** on supported nodes, such as Kronos, in more than one instance of Nuke at the same time, can cause display corruption and/or entire system freezes. This seems particularly likely to occur on GPUs with low amounts of RAM, such as the GeForce GT 650M.

As a workaround, upgrade your NVIDIA drivers, or if this is not possible, only enable GPU acceleration in one instance of Nuke at a time.

- BUG ID 35123 - PrmanRender: If you're using Mac OS X 10.8 (Mountain Lion) or above, make sure X11 is installed on your system. Unlike previous versions of OS X, 10.8 and above do not have X11 installed by default.

For more information, see <http://support.apple.com/kb/HT5293>.

- BUG ID 34697 - Launching Nuke from a network shared drive causes Nuke to crash on launch.

As a workaround, either:

- tarball the installation from Mac OS X and unzip it on the alternate file system (using NFS or Samba, depending on source), or
- using the command-line, copy the installation from Mac OS X to the network location using the same file system as the destination.
- BUG ID 33970 - Using a node, such as Grade, as a custom viewer process outputs a blank Viewer.

As a workaround, adjust the Viewer **gain** control to refresh the Viewer.

- BUG ID 22062 - Nuke doesn't currently give the option to restore the autosave of an unsaved script, except when Nuke is run from the command-line.
- BUG ID 13638 - The following graphics cards are not currently supported for Mac:
 - ATI Radeon X1600
 - ATI Radeon X1900

Users with these cards are able to render from the command-line, but in GUI sessions, the Node Graph renders incorrectly due to a requirement of OpenGL 2 drivers.

- BUG ID 12048 - Nuke crashes if you activate screen sharing when there is no screen plugged in.
- BUG ID 11776 - Node text appears aliased, unclear, or garbled at certain zoom levels.

ModelBuilder

- BUG ID 41352 - Setting the **segments** control to a negative number causes Nuke to crash.
- BUG ID 41148 - Editing geometry UVs and then switching the Viewer to look at the geometry through a ScanlineRender node causes Nuke to crash.

Monitor Out

- BUG ID 40942 - AJA Io Express: Enabling monitor output causes Nuke to crash.
- BUG ID 37700 - AJA Kona LHe+ 2k formats are not displayed correctly.

OCIO

- BUG ID 216806 - The public DD::Image interface for the OCIOColorSpace node can not initialize certain values, and occasionally causes Nuke to crash.

Particles

- BUG ID 41259 - ParticleCache: Setting **emit from > points** and connecting the **emit** input to geometry, does not render all frames to the **.nkpc** file.
- BUG ID 39796 - ParticleCache nodes upstream of ScanlineRender nodes display **ParticleCache is out-of-date** errors for negative frame numbers.
- BUG ID 39210 - ParticleCache: Error messages displayed when **read from file** is toggled on and off are not reliably cleared when rendering through ScanlineRender.
- BUG ID 37254 - The progress bar does not cancel if you scrub to a frame that has already been calculated within the particle system.
- BUG ID 18268 - Enabling **color from texture** always renders a solid white alpha for the texture.

- BUG ID 17520 - Geometry representation textures are displayed even when **display** is set to **off**.
- BUG ID 17243 - Using sprites instead of geometry representations causes particles to render behind the 3D grid lines.

Pixel Analyzer and Scopes

- BUG ID 44176 - PixelAnalyzer: The **full frame** sampling **mode** doesn't work immediately in the timeline Viewer when the analyzer is initially added to the layout.
- BUG ID 39180 - Scopes: Switching to a layout with a scope window, while rendering, forces the Viewer bounding box to 1x1 for that frame.
- BUG ID 36508 - Scopes do not currently update when zooming into the Viewer.
- BUG ID 36491 - Scopes clip color values between 0 and 1 when **Preferences > Scopes > Include viewer color transforms** is enabled.

PrmanRender

- In the Nuke camera, the **window roll** control is not yet mapped to RenderMan.
- BUG ID 27648 - After a security update for Mac OS X, Nuke is unable to load the PrmanRender plugin in the environment.plist file when in GUI mode.

See <http://support.apple.com/kb/TS4267> for more information.

Python

- BUG ID 44296 - Running **nuke.scriptOpen()** at the same time as creating a Python panel causes Nuke to crash.
- BUG ID 40994 - Rendering an Alembic camera using a Python script produces incorrect values when run from the command-line.

Run the script from Nuke's **Script Editor** to avoid this issue.

- BUG ID 40645 - Using **setInput()** within an **onCreateCallback** doesn't work as expected.
- BUG ID 40534 - Using Python to set metadata in ModifyMetadata nodes does not work from the command-line.

To work around this issue, run the Python script from Nuke's Script Editor.

- BUG ID 39308 - Accessing a node's x and y positions using the **xpos** and **ypos** controls reports incorrect values.

As a workaround, either call **nuke.Node.xpos()** or **nuke.Node.ypos()** first, or ensure no nodes are currently selected in the Node Graph.

- BUG ID 38994 - **nuke.Node.screenWidth()** and **screenHeight()** are incorrect when a node is first created if it has an autolabel.
- Nuke sometimes reports errors in Groups and Gizmos, appearing similar to the following:

groupName.NodeName.knobname: unexpected 'k' in '0.knobname'

The problem is most likely that there is an expression using the input TCL command and doesn't validate that there is an input connected. An example expression:

[input parent 0].translate.x

The input command returns 0 when it can't find the requested input, which generates an expression of '**0.knobname**' that doesn't refer to anything. The fix is to restructure the expression to use the value TCL command and specify a default value to return in the case that the expression is invalid. It takes the form:

[value [input parent inputnumber].knob defaultValue]

Here is the modified example:

[value [input parent 0].translate.x 0]

The modified example returns 0 in the event that there is no input 0, and no longer results in an error message.

- There is a Python syntax conflict when assigning knob names on the fly with **nuke.nodes.<node>()** if the knob is called 'in'.

For example, this gives a syntax error:

nuke.nodes.Shuffle(in = 'depth')

while this works because 'in' is a string here and not a keyword:

sh = nuke.nodes.Shuffle()

sh['in'].setValue('depth')

RayRender

- BUG ID 230256 - Soft Shadows are not currently supported.
- BUG ID 197294 - Reflection occlusion is not currently supported.
- BUG ID 196980 - Clipped alpha shadows are not currently supported.
- BUG ID 196776 - Multiple bounce reflecton is not currently supported.
- BUG ID 196124 - RayRender does not currently support refraction.

- BUG ID 195051 - The Wireframe shader node, located in **3D > Shader > Wireframe**, is not supported by RayRender.
- BUG ID 195004 - Custom lens shaders/projection modes are not currently supported.
- BUG ID 194819 - RayRender does not currently support Deep workflows.
- BUG ID 191108 - Particle sprites are not currently supported.
- BUG ID 174849 - The Displacement shader node, located in **3D > Shader**, is not currently supported by RayRender.

Read and Write

- BUG ID 50046 - The default colorspace values when writing using **.mov** codecs differ in command-line and GUI modes.
- BUG ID 47256 - MXF: Super whites are currently displayed as white in the Timeline Viewer.
- BUG ID 47248 - MXF: Setting **debayer quality** to **High Quality** on some Sony RAW files displays an **error decoding frame** message in the Comp Viewer.
- BUG ID 42717 - Certain **.exr** files rendered from Modo display the **alpha** channel rather than the **rgba** channels by default.
- BUG ID 41006 - The last audio frame of a QuickTime encoded with AAC compression is muted.
- BUG ID 40684 - Rendering certain **h264** encoded **.mp4** files using the **mov32** encoder results in color shifts using QuickTime 10.3 codecs.
- BUG ID 40533 - There are slight differences in color and sharpness when rendering Alexa footage to ProRes 4444.
- BUG ID 40074 - Writing out stereo **.sxr** files with additional channels does not write out both eyes correctly.
- BUG ID 39165 - ReadGeo: When reading in **.fbx** files, the transform/scale state can become incorrect while toggling the **read transform from file** in combination with **all objects** and/or **read on each frame**.
- BUG ID 35611 - Writing **.exrs** with the Write node's **interleave** control set to **channels** adds a superfluous **main** view.
- BUG ID 33863 - FBX geometry: Faces on geometry read in from **.fbx** files are not connected to neighboring faces, leaving gaps in certain circumstances.

This issue is particularly visible when using the EditGeo node, which should not allow you to remove faces from the geometry.

- BUG ID 31424 - Sub-sampling in **.exr** files is not currently supported.
- BUG ID 27211 - Alembic: The state of the Viewer **Lock Frame** control is not always honored for **.abc** files.

As a workaround, ensure that **ReadGeo > read on each frame** is enabled.

- BUG ID 21663 - Read: After reading in a stereo/multiview **.exr** file and choosing not to add new views to the project, subsequent reads of any stereo/multiview **.exr** files won't give the option to add new views.
- If you have trouble with FBX files, it may be because they were written with an older version of FBX. If they load very slowly, it is also possible that they are ASCII rather than binary. To get around these problems, you can use the FBX converter on the Autodesk website. It converts between various different formats, including older FBX versions, ASCII, and binary, and is available on Windows, Mac OS X, and Linux.

To download the FBX converter:

1. Go to <http://usa.autodesk.com/adsk/servlet/pc/item?siteID=123112&id=10775855>.
2. Scroll down to FBX Converter and click on one of the links to start the download.

Render codecs

Rendering with certain codecs occasionally causes Nuke to crash. Due to this, we recommend the following:

- If you're using the Sorensen Video codec, it's recommended you use the Sorensen Video 3 codec instead. If you're unable to switch to Sorensen Video 3, try using a format smaller than 2K for better performance.
- If you're experiencing crashes with Cineform HD, try updating your Cineform codec to version 5 or above. You may need to download the Neoplayer at <http://estore.cineform.com/neoplayer.aspx>.
- If you're using Avid Meridien, you should only write out in NTSC and PAL.

Roto/RotoPaint Open Splines

- BUG ID 42997 - Rendering artifacts can occur if the **feather** control is used in conjunction with the feather handles in the Viewer.
- BUG ID 42995 - Stereo: Adding an open spline creates the spline in the left view only by default.

As a workaround, select the shape and then manually change the Properties **view** control to include both views.

- BUG ID 42991 - Python API: Moving points on an open spline using Python causes Nuke to crash.
- BUG ID 42932 - Rendering artifacts can appear where the spline hull crosses over itself with negative **feather** values.
- BUG ID 42422 - Rotating the tangent of an end point occasionally causes the hull to behave erratically.
- BUG ID 42413 - Holding **Ctrl/Cmd** to move a point's tangent handles independently causes defects in the hull or feather.

- BUG ID 42412 - Changing the Viewer overlay visibility, such as from **always** to **never**, occasionally produces artifacts in the spline's hull.
- BUG ID 42390 - It is not possible to increase the **width** for individual points if the overall **width** is set to **0**.
- BUG ID 42387/42310 - Cusped points occasionally cause hull rendering artifacts.
- BUG ID 40962 - Animated splines with **varying** width and **feather** occasionally contain slight rendering glitches inside the hull.
- BUG ID 40433 - Roto Open Splines - Shape of hull/feather curve can look incorrect when width changes greatly from one point to the next
- BUG ID 36219 - The **Select Feather Points** tool does not work consistently between the **Open Spline** and **Bezier** tools.

Other Roto/RotoPaint Bugs

- BUG ID 41917 - RotoPaint shape colors don't change when expression linked to another RotoPaint color.
- BUG ID 32459 - RotoPaint: Undoing a point move that created a keyframe doesn't currently undo the keyframe creation.
- BUG ID 31552 - Point handles for paint strokes, whose lifetime doesn't extend to the current frame, disappear when drag-selected.

As a workaround, select the shape in the **curves** list to re-display the points.

- BUG ID 30920 - Expression linking extra matrices in the **Transform** tab doesn't work as expected.



NOTE: This also applies to SplineWarp matrices.

- BUG ID 30551 - Several levels of smoothing applied to one shape are carried over to subsequent shapes for a single smooth operation.
- BUG ID 29170 - The cut, copy, and paste keyboard shortcuts don't work for entries in the **curves** list.
- BUG ID 26855 - The **undo** and **redo** buttons in the Properties panel didn't work as expected and have been disabled.

The workaround is to use the undo (**Ctrl/Cmd+Z**) and redo (**Ctrl/Cmd+Y**) keyboard shortcuts or the **Edit** menu instead.

- BUG ID 21361 - Artifacts are produced until mouse up when painting over a stroke on another frame.
- BUG ID 11524 - Adding strokes/shapes in RotoPaint is slow when there is another RotoPaint after it.
- BUG ID 9238 - Painting on Mac OS X and Linux is slower when the paint cursor is near the edges of the screen.

- The foreground onion skin overlay updates as you paint, rather than only updating with the new stroke on pen up.
- It is not currently possible to clone RotoPaint nodes.
- Interactivity of laying down strokes/shapes in the Viewer may be faster when motion blur is disabled on the layer you are working in.

ScanlineRender

- BUG ID 38329 - Deep renders from ScanlineRender currently ignore the ScanlineRender's **bg** input.
- BUG ID 38205 - Deep: Depth, motion, position, and normals information is occasionally incorrect in semi transparent areas.
- BUG ID 37967 - Deep: Geometry with alpha 0 renders black when the deep output is converted to an image.

SmartVector Toolset

- BUG ID 196455 - Rendering vectors after correcting the **file** control in the SmartVector node occasionally displays a spurious **No such file or directory** error.

As a workaround, scrub to a different frame to remove the message.

- BUG ID 175605 - Entering a partial file path in the SmartVector **file** control and then clicking the file browser icon does not open the file browser.

As a workaround, click **OK** on the error message and then click the file browser icon again.

Text

- BUG ID 48418 - Different operating systems handle the **Shadows** tab **shrink/expand** control differently, producing inconsistent output.
- BUG ID 39556 - In **text edit** mode, it is not currently possible to edit text attributes when the Viewer overlay is disabled.
- BUG ID 39552 - Transforming animation groups using an expression-linked Transform node does not work as expected.

As a workaround, expression link the **translate x** and **y** controls separately.

- BUG ID 39291 - Splitting the **transform** control on the **Group** tab splits all controls.
- BUG ID 39239 - Transforming a character generated from an expression, and then going to a frame where the character no longer exists, results in the transformation being lost.
- BUG ID 39130 - Splitting the **message** field does not work as expected.
- BUG ID 38789 - Viewer toolbar controls steal cursor focus.

- BUG ID 38425 - The undo history becomes unreliable when the panel focus changes.
- BUG ID 36372 - Selecting a TCL expression in the **message** field doesn't always select the result in the Viewer.

Tracker

- BUG ID 40542 - After tracking and centering a track, the Viewer no longer caches when playing back the tracked frames.

As a workaround, you can enable full frame processing, though this may increase render times.

- BUG ID 40038 - **Ctrl/Cmd** clicking in the Viewer to select a pixel and then adding a track, sets the tracking anchor coordinates to 0,0.
- BUG ID 39225 - Moving tracking anchors is occasionally unresponsive and jerky.
- BUG ID 39200 - Holding **Shift** and clicking tracks in the Viewer doesn't add to the current selection.
- BUG ID 38356 - The zoom window occasionally doesn't update correctly when scrubbing between frames.
- BUG ID 32359/32353 - Right-clicking on a point in the Viewer doesn't always update the available **Link to > Tracker linkingdialog** or **Tracker** options.

As a workaround, close and re-open the Roto/RotoPaint properties panel to update the **Link to** menu.

- BUG ID 29382 - Tracking keyframes with different sized patterns doesn't work as expected.

As a workaround, keyframe patterns should, where possible, be of comparable sizes.

Warpers

- BUG ID 32340 - SplineWarp: Using **Ctrl/Cmd**+drag to create rectangles and ellipses doesn't display an overlay until pen-up.
- BUG ID 32083 - SplineWarp: Deleting all but one point on a curve resets its correspondence points to 0,0, which cannot be undone.
- BUG ID 32082 - SplineWarp: Correspondence points are too sensitive when control points are removed.
- BUG ID 32079 - SplineWarp: Moving correspondence points on curves with no keyframes cannot currently be undone.
- BUG ID 30429 - SplineWarp: Transform links are not maintained when the source curve is moved to a new layer.
- BUG ID 31322 - SplineWarp/GridWarp: Preview doesn't handle upstream transforms correctly.

- BUG ID 20000 - GridWarp: When using cropped input, moving control points causes the Viewer to display the cropped image and the black area between the crop box and the format when merged over a background.
- BUG ID 19995 - GridWarp: Locked source and destination grids still allow adding and removing grid lines.
- BUG ID 19835 - SplineWarp/GridWarp: The Viewer LUT is incorrect in **morph** mode, when **mix** is set at an intermediate value.
- BUG ID 19755 - SplineWarp: Placing correspondence points at each end of an open spline causes rendering problems.
- BUG ID 19565 - GridWarp: The Viewer does not show the correct mix amount when in **morph** mode with **mix** set at an intermediate value.
- BUG ID 19386 - GridWarp: All keyframes are removed from the Dope Sheet after undoing, rather than just the latest, and the keyframes remain on the timeline and in the properties.
- BUG ID 19148 - SplineWarp: Rendering fails if a curve is reduced to a single point.
- BUG ID 19079 - SplineWarp: The **C** keyboard shortcut does not currently select the **Add Correspondence Point** tool.
- BUG ID 18712 - GridWarp: The timeline currently shows both source and destination keyframes, even if a grid is not visible in the Viewer.
- BUG ID 18709 - GridWarp: Rotating the transform jack with both grids selected, but in different positions, does not undo as expected.
- BUG ID 18342 - SplineWarp: The spline keyframe + button does not add keys to the Curve Editor or Dope Sheet.
- BUG ID 18304 - GridWarp: Existing control point keyframes are not cleared when you draw a new grid using the **Draw Boundary** Viewer button.
- BUG ID 18019 - GridWarp: You cannot select all grid points in the Curve Editor using **Ctrl/Cmd+A** shortcut.
- BUG ID 18012 - GridWarp: The grid can flicker between white and gray when zooming in and out of the Viewer, particularly when the grid is subdivided.
- BUG ID 17697 - GridWarp: In stereo mode, the right view is labeled as **default** when you split controls into separate views.

Windows Only

- Nuke Non-commercial: Navigating to **Help > License**, clicking **Deactivate** or **Deauthorize**, and then clicking **Quit**, causes Nuke Non-commercial to crash on exit.

As a workaround, change the **mode** a few times until it work as expected.

- BUG ID 198430 - Nuke cannot read DNxHD **.mxf** files that have spaces in the file name.

- BUG ID 46759 - File Browser: Location defaults (such as Home, Root, etc.) may not display if you have a previously saved **FileChooser_Favorites.pref** file in your **~/nuke** directory.

As a workaround, move or rename the **FileChooser_Favorites.pref** file, and re-launch Nuke.

- BUG ID 40407 - When using a tablet, Nuke does not automatically switch to **Eraser** mode when you use the erase end of the pen.
- BUG ID 39636 - QuickTime: The **Blackmagic 10 bit (v210)** codec defaults to the **YCbCr 8-bit 422 (2vuy) pixel format** due to a bug in the codec, resulting in solid green frames.

As a workaround, manually set the pixel format to **b64a RGB** to preserve image fidelity.

- BUG ID 35800 - Scopes: The alpha channel doesn't update correctly when modified through a node, such as Primatte or Shuffle, even after the node is removed from the Node Graph.
- BUG ID 28921 - Changing the 3D selection mode does not update until you click in the Viewer.

Miscellaneous

- BUG ID 226394 - Preferences: There are currently duplicate **Script Editor** controls under **Other** in the **Preferences** dialog.
- BUG ID 169458 - Compositing Viewer: Setting the **gamma** control to **0** with **Panels > Viewer (Comp) > use GPU for Viewer when possible** enabled in the preferences, renders the alpha channel black.
- BUG ID 49803 - AJA Monitor Output: Setting the **NUKE_AJA_CHANNEL** environment variable to 4 when the **NUKE_AJA_DUALOUTPUT** environment variable is set, streams the output to SDI3, rather than SDI4.
- BUG ID 49186 - ColorCorrect: Adding an expression to the curves on the **Ranges** tab and then changing a value, such as **Gain**, causes Nuke to crash.
- BUG ID 46488 - Switching between certain workspaces displays black in the Viewer until the frame is changed.
- BUG ID 46441 - ParticleBounce: Using custom geometry as the bounce object in a particle system occasionally allows particles to pass through the bounce surface.
- BUG ID 42339 - The **Modo** Viewer control scheme (**Preferences > Panels > Viewer Handles > 3D control type**) does not work as expected.
- BUG ID 42240 - Setting a channel with a non-standard name to use as the Viewer's **alpha** channel doesn't work as expected.
- BUG ID 42159 - Nodes that use the **lop::sample()** call to get input pixels, such as LensDistortion, perform poorly when they are downstream of nodes using Planarlop, such as Denoise.
- BUG ID 41450 - AppendClip forces upstream nodes to re-evaluate on every frame.
- BUG ID 41411 - Loading a script from a disconnected network drive creates an empty script with the same name as the file path to the original.



WARNING: If you save this empty script when the network drive is reconnected, the original is overwritten.

- BUG ID 41122 - MatchGrade: **Match Different Clip** mode does not allow you to set keyframes on the **Target** for **.mov** clips with a frame range offset.
- BUG ID 40617 - Some filter nodes, such as Erode (fast), are caching more slowly than in previous versions.
- BUG ID 39459 - Virtual Sliders: Clicking the left-mouse button, while holding down the middle-mouse button, pastes values into the control.
- BUG ID 39407 - Project3D: The node class name has changed to **Project3D2**. As a result, the Nuke<>Mari bridge won't work unless all instances of Project3D are renamed appropriately in the **mari_bridge.py** file.
- BUG ID 39365 - The Viewer **headlamp** control can not currently be managed using expression links.
- BUG ID 39287 - Plug-ins: Loading scripts with plug-ins compiled against older versions removes the nodes from the Node Graph.
- BUG ID 39260 - Custom knobs on Groups and NoOp nodes cannot be retimed.
- BUG ID 39122 - Switching the Viewer to **wipe** mode and wiping between inputs with different format sizes causes corruption and constant refreshing in the Viewer.
- BUG ID 38713 - Capture: Roto opacity and feather settings are not included in captured images.
- BUG ID 35661 - Capture: Capturing the Viewer with a custom file path saves the file path in the script, resulting in error when the path doesn't exist:

```
Flipbook render failed: viewerCaptureOp: Cannot write to specified path
```

- BUG ID 35659 - Capture: Capturing a 3D scene containing lights produces Viewer flashes in the captured images.
- BUG ID 32856 - PositionToPoints: Textures occasionally disappear during playback or when mousing over the Viewer.
- BUG ID 32666 - FrameHold nodes have no effect on Deep nodes.
- BUG ID 32628 - DeepToPoints: Command-line rendering appears to calculate renders even when render is set to **off**.
- BUG ID 32497 - The R3D parameter labels in Nuke aren't entirely consistent with REDCINE-X and Hiero.
- BUG ID 32219 - DepthToPosition: Reading depth information from the same layer as the **output** layer produces corrupt output.

As a workaround, shuffle the depth information to an alternate layer.

- BUG ID 32118 - Card3D: When **motionblur** is enabled in the properties, FrameHold and TimeOffset nodes are ignored when connected to the **cam** or **axis** inputs.

- BUG ID 31714 - In the Viewer settings, enabling **3D > show_prim_bbox** does not display individual bounding boxes for polymesh primitives.
- BUG ID 31310 - TimeOffset: Checking **reverse input** doesn't affect cameras, lights, or axes.
- BUG ID 31238 - RAM cache: Any action that changes a frame's hash value, it's unique identifier, causes the cache to release. Actions such as adjusting the Viewer **Gamma, Gain, or channels** dropdown affect the frame hash.
- BUG ID 30502 - Copying and pasting spline keys does not work as expected in the Dope Sheet.



NOTE: This known issue only applies to Roto and SplineWarp keys.

- BUG ID 30256 - Script Editor: Flagging a control as invisible using **setFlag()** is not honored when the node is copy/pasted in the Node Graph.
- BUG ID 30173 - Manipulating 3D handles in the 2D Viewer is unreliable.
- BUG ID 29677 - Connecting a FrameHold node to an animated Camera and connecting both to a Scene node only displays the animated Camera in the Viewer. There should be two cameras: one static and one animated.
- BUG ID 29083 - Using **Create Camera** in the 3D Viewer only sets position and rotation. The **focal length** of the new camera does not match that of the Viewer camera.
- BUG ID 28291 - Nuke crashes on start up if the **disk cache** location set in the **Preferences** is no longer available.
- BUG ID 20431 - CameraTracker: It's not possible to pick colors in the Viewer with the control panel open.
- BUG ID 20204 - Multitexturing: When **Preferences > Viewers > Multiframe** is enabled, increasing **downrez** in the Viewer toolbar can cause textures to flicker in the 3D Viewer.

You can switch back to **Classic** mode or avoid using proxy in 3D to workaround this issue.

- BUG ID 19933 - ReadGeo: Geometry occasionally doesn't display as a solid until you click in the Viewer.
- BUG ID 18649 - The transform jack is currently scaling incorrectly from the corner pivot point.
- BUG ID 12505 - Motion Vector output has been improved, but still doesn't work properly because some large polygons are clipped by the front camera plane.

You can minimize this effect by increasing the geometry **tessellation max** parameter.

- BUG ID 12424 - Ultimatte: Overlays are not updating correctly or reverting when panning or zooming.
- BUG ID 11620 - In the 3D Viewer, there is currently a conflict between 3D geometry selection and points drawn with RotoPaint. This only occurs if you have two Viewers open, one in 2D mode and the other in 3D mode, and you have the panel for the RotoPaint visible.

- BUG ID 9521 - Currently, the Nuke Viewer cannot cache very large plate sequences in float. The limit per frame is 50MB. If your frames are larger than this, you may need to switch to proxy mode for the caching to work.
- BUG ID 5922 - At the moment, cloning does not work properly with all OFX nodes. This affects, but is not restricted to, any nodes that have an analysis pass.
- BUG ID 5690 - Windows run-time libraries are not packaged properly with Nuke.

Nuke runs correctly from a network install on Windows without specifically installing the run-time libraries, though we still recommend that you do so as there are still some minor problems without them.

- BUG ID 5083 - Flipbooking the output of the Anaglyph node asks which view you want to render. This question is unnecessary as the result is an anaglyph image. Irrespective of what view you choose, the flipbook output is the same.
- File types in Windows and Mac OS X are associated with the standard version of Nuke by default, so if you save a script on NukeX using features that are only included in NukeX (such as CameraTracker or FurnaceCore) and then double-click on the script icon to open it, it opens in standard Nuke instead of NukeX.
- CameraTracker: Canceling lens distortion initialization results in corrupt tracks.
- 3D Camera: If you want to navigate through the 3D point cloud created by the CameraTracker node when using **Create Scene**:
 - Select the Camera that was created in the 3D view when using the **Create Scene** button.
 - Press **F** to focus on the selected Camera. You can now navigate around the cloud. Do not try to focus (using **F**) on the point cloud. The resulting tumble camera movement is likely to be jumpy.
- Plug-ins installed using the Nuke Plug-in Installer may not work correctly as they were compiled against an earlier version of Nuke.

Known Issues Specific to Nuke Studio and Hiero

Create Comp

- Multi-view, such as stereoscopic, is not supported for clip instances created using right-click **Effects** > **Create Comp**.
- BUG ID 47044 - Inserting scripts into comps containing Text nodes using unsupported fonts causes Nuke Studio to crash when the Text nodes are disabled.
- BUG ID 46470 - Create Comp: Enabling **Collate Shot Name** in the comp export preset offsets the comp frame range compared to the annotations precomp frame range.
- BUG ID 41665 - There are currently no options to load or overwrite an existing script when you select **Create Comp**.

Exporting

- BUG ID 49024 - Enabling the **Collate...** options in the **Export** dialog when exporting ignores the **Media** tab **Output Resolution** setting for the track above, and produces output with incorrect formatting.
- BUG ID 47828 - Exporting retimed or reversed clips as **.xml** does not work as expected when imported into Final Cut Pro.
- BUG ID 46403 - Controls set in the **Export** dialog **Content** tab occasionally default to the values from the **Nuke Write Node** Content preset.

Linux Only

- BUG ID 167058 - Linux only: PulseAudio (ALSA) can cause Nuke Studio to crash or impair playback.

As a workaround, you can stop the **pulseaudio** daemon:

1. Open **/etc/pulse/client.conf**
 2. Set **autospawn = no** and **daemon-binary** to **/bin/true**. Ensure these lines are not commented out.
 3. Call **ps -e | grep pulse** to check the process is still running.
 4. Call **pulseaudio --kill**
 5. Call **ps -e | grep pulse** again to check the process has stopped.
- Linux only: Nuke Studio does not currently support any QuickTime audio reading. Support for audio on Linux is scheduled for a later release.
 - BUG ID 32613 - Dragging clips to the timeline with certain older NVIDIA drivers occasionally causes Nuke Studio to crash.

As a workaround, ensure that you have the latest NVIDIA drivers installed, available from:

www.nvidia.com/Download/index.aspx?lang=en-us

Mac OS X Only

- BUG ID 39113 - QuickTime ProApps Codecs v1.0.3 break HDV and XDCAM on Mac OS X 10.7.5, and earlier.

This is a codec issue rather than an application issue.

- BUG ID 34779 - The shortcut for **Clear In/Out Points (Alt+U)** is not always triggered correctly due to a conflict with the combination for the umlaut symbol.

To work around this, press **U** momentarily before **Alt+U**.

OCIO

- BUG ID 219603 - Nuke Studio doesn't load the individual default LUT settings when using the OCIO environment variable to declare a custom configuration file.

As a workaround, manually force the load by changing the **color management** setting from **Nuke** to **OCIO**.

- BUG ID 198348 - Saving and closing a project that uses an OCIO config, and then relocating the Nuke install path, causes a **Could not load OpenColorIO config** error on reload.

Preferences

- The **Preferences > Path substitution** table for cross platform compatibility currently only comes into effect at project load, not EDL/XML import.

As a workaround, import your sequence and set the **Path substitution** rule, then save the project and reload to force the conversion.

Python API

- BUG ID 50113 - QActions are not added to the **Edit** menu in the menu bar when finding the menu action by name.

As a workaround, use the **objectName (foundry.menu.edit)**, where possible.

- BUG ID 44394 - Calling **hiero.core.addPathRemap()** does not work for soft effect file paths.

Read and Write

- BUG ID 46174 - XML: Shot names are occasionally not imported correctly from Adobe Premiere **.xml** files.

- BUG ID 46100 - Exporting: Export speeds may be slower than expected. This may be due to the **Rendering** preference set to **limit renderer**.

As a workaround, you can change the preference **Performance > Threads/Processes > Rendering > export renders** to **no renderer limits** to improve rendering speeds. You can also experiment with the custom renderer limits to adjust performance on your machine.

- BUG ID 39897 - Importing and playing back very large format **.tif** files causes Nuke Studio to crash.
- BUG ID 39557 - Writing **.exrs** with 200+ layers, when **interleave** is set to **channels**, can be sluggish.
- BUG ID 36726 - Executing **Clip > Rescan Clip Range** displays frame read errors if the rescan adds frames to the clip.

- BUG ID 35080 - QuickTime: Certain files read into Nuke Studio with a different start timecode to other applications, such as Premiere or Resolve.
- BUG ID 31549 - Single layer exports from multi-pass clips fail if the selected layer is not a default Nuke layer, such as **depth** or **motion**.
- BUG ID 18880 - R3D: The aspect ratio of anamorphic **.r3d** footage is not displayed correctly when added to the timeline.

Soft Effects

- BUG ID 175574 - Soft Effects: Undo and redo of **Properties** panel changes can be unreliable if a soft effect delete is in the same undo stack.
- BUG ID 50442 - TimeWarp: Applying a TimeWarp to a clip instance occasionally causes the associated sequence bin item to display an error.
- BUG ID 50441 - TimeWarp: Applying a TimeWarp to clip instances retimed to values other than 100% does not work as expected.
- BUG ID 49771 - Text/Burn-in: Nuke Studio doesn't warn you if the font used in an effect could not be found.
- BUG ID 49298 - Burn-in: The Burn-in effect does not auto-update when switching between sequences until the playhead is moved.
- BUG ID 49112 - Dissolve transitions do not work as expected in Custom soft effects, based on the examples provided here:

```
<install_directory>/pythonextensions/site-packages/hiero/examples/custom_soft_effect.py
```

- BUG ID 48970 - Burn-in: Burn-in elements are not updated automatically when the underlying metadata is updated.

As a workaround, either change the frame displayed in the Viewer or choose an alternate element from the dropdown controls.

- BUG ID 48878 - Burn-in: The Burn-in effect is currently a gizmo and cannot be cloned on the timeline.
- BUG ID 48098 - Adding a transition when a Text effect containing an expression is on a track above, causes text rendering to fail during the transition.
- BUG ID 48097 - Adding a transition when a Text effect containing an expression is on a track above, causes the text size to reset.
- BUG ID 47075 - Exporting sequences containing clip-level Text effects using the **[frame]** expression writes incorrect frame numbers.
- BUG ID 45835 - Expression links are incorrectly allowed between node and soft effect controls in the Properties panel, if the node and effect names are identical.

- BUG ID 42438 - Effects are only visible in the Viewer if there is a clip instance below them in the timeline.
- BUG ID 42401 - Renaming a soft effect does not update the clip instance until you click in the timeline.
- BUG ID 42307 - Adding soft effects at clip level, using **Open In > Timeline View**, is only available using the toolbar button on the timeline panel. The right-click **Effects** menu is currently disabled.

Timeline

- BUG ID 43913 - Locking a track currently prevents adding clip instances from the locked track to the Viewer input buffers. You can still open clip instances in the various right-click **Open In** options and access clip instance metadata.
- BUG ID 41745 - It is not currently possible to drag-and-drop a clip to a new track between or below existing tracks.

As a workaround, drag the clip to a new top-level track and then manually move the track to the required position.

- BUG ID 27484 - It is not currently possible to alter the **Output Resolution** of clips opened using the right-click **Open in Timeline** option.

Windows Only

- BUG ID 49339 - Soft Effects: The background on Burn-in effects, when enabled, alters size depending on the timecode displayed.
- BUG ID 28701 - Nuke Studio cannot currently parse Unicode characters during export.

Miscellaneous

- BUG ID 200015 - Selecting multiple bin clips can cause the right-click menu to respond slowly.
- BUG ID 167919 - Localization: Re-importing clips into the Node Graph or project bin multiple times retains the original localization policies settings.
- BUG ID 50490 - Audio: Zooming in on a waveform displays a **Failed to decode audio** error in the timeline.
- BUG ID 50102 - Adding a custom Hiero window to a workspace and then saving it as the Nuke default workspace causes Nuke to crash on start up.
- BUG ID 46235 - Comps with relative paths are not currently working when imported into the project.
- BUG ID 42462 - Cache pausing stops working if any change is made to the timeline.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

As Nuke develops, we sometimes have to make changes to the API and 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 plugins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	10.0v1 to 10.0v2	API and ABI		
Point	10.0v1 to 10.5v1	API	●	
Major	10.0v1 to 11.0v1	-	●	●

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

There are no bug fixes in this release.

Release Notes for Nuke and Hiero 10.5v7

Copyright © 2018 The Foundry Visionmongers Ltd.

Release Date

15 November 2017

Qualified Operating Systems

- Mac OS X Mavericks (10.9) or Yosemite (10.10)
- Windows 7 or Windows 8 (64-bit only)
- CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

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. You need to have:

- an NVIDIA GPU with compute capability 2.0 (Fermi) or above. A list of the compute capabilities of NVIDIA GPUs is available at www.nvidia.co.uk/object/cuda_gpus_uk.html.



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 4.2 or above.



NOTE: In order to use R3D GPU debayering in the Compositing environment, CUDA 6.0 (or higher) is required.

- On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Drivers from April 2012 onward support CUDA 4.2.

Go to <http://www.nvidia.com/Download/Find.aspx?lang=en-us> for more information.

- On Mac, the CUDA driver is separate from the NVIDIA graphics driver and must be installed, if you don't have it already. The minimum requirement for CUDA 4.2 is driver version 4.2.5, which can be downloaded from www.nvidia.com/drivers.



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

- an AMD FirePro GPU on late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5, running OS X 10.9.3 'Mavericks', or later.

Late 2013 and Mid 2015 Mac Pros Only

Nuke supports GPU-enabled nodes on the late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5 (running OS X 10.9.3 'Mavericks', or later), including a new **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



NOTE: To ensure you get the best performance from OpenCL GPUs on late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5, we recommend updating Mavericks to 10.9.5, or above for full functionality. However:

- If you're running an earlier version of Mac OS X than 10.9.5 and processing images greater than 4 mega pixels resolution, VectorGenerator, Kronos, and MotionBlur do not support GPU acceleration.
- If you're running an earlier version of Mac OS X than 10.9.4, Kronos and MotionBlur do not support GPU acceleration.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 241846/267282 - Monitor Output: Selecting **Full Resolution Stereo** mode in the Monitor Output panel caused Nuke Studio to crash.

- BUG ID 253321 - EXR: A customer **.exr** file did not display black frames outside the frame range when a Reformat node was added downstream.
- BUG ID 316252/316253 - macOS/Linux only: Rendering with a fresh cache directory specified by the NUKE_TEMP_DIR environment variable displayed errors in the first instance.

Monitor Output Only



NOTE: The fixes for these bugs rely on a version of the AJA monitor output driver that is not yet available commercially. Please contact [AJA Support](#) for details of the correct driver required for Linux distributions.

- BUG ID 229381 - AJA Io4K/IoXT cards were not discoverable with certain legacy drivers.
- BUG ID 251542/271817 - Selecting **Full Resolution Stereo** mode in the **Monitor Output** panel produced inconsistent results in the left and right views.
- BUG ID 253659 - Selecting **Full Resolution Stereo** mode in the **Monitor Output** panel did not output the correct color values.
- BUG ID 281752 - Selecting **Full Resolution Stereo** mode in the **Monitor Output** panel occasionally displayed a **CNTV2Card: IOCTL_NTV2_AUTOCIRCULATE_CONTROL failed** error.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

As Nuke develops, we sometimes have to make changes to the API and 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 plugins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	10.0v1 to 10.0v2	API and ABI		
Point	10.0v1 to 10.5v1	API	●	
Major	10.0v1 to 11.0v1	-	●	●

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 270405 - Python: Setting the MAGNITUDE flag using **setFlag(0x00000001)** on compatible nodes, such as Constant, caused Nuke to crash.

Release Notes for Nuke and Hiero 10.5v6

Copyright © 2018 The Foundry Visionmongers Ltd.

Release Date

21 September 2017

Qualified Operating Systems

- Mac OS X Mavericks (10.9) or Yosemite (10.10)
- Windows 7 or Windows 8 (64-bit only)
- CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

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. You need to have:

- an NVIDIA GPU with compute capability 2.0 (Fermi) or above. A list of the compute capabilities of NVIDIA GPUs is available at www.nvidia.co.uk/object/cuda_gpus_uk.html.



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 4.2 or above.



NOTE: In order to use R3D GPU debayering in the Compositing environment, CUDA 6.0 (or higher) is required.

- On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Drivers from April 2012 onward support CUDA 4.2.

Go to <http://www.nvidia.com/Download/Find.aspx?lang=en-us> for more information.

- On Mac, the CUDA driver is separate from the NVIDIA graphics driver and must be installed, if you don't have it already. The minimum requirement for CUDA 4.2 is driver version 4.2.5, which can be downloaded from www.nvidia.com/drivers.



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

- an AMD FirePro GPU on late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5, running OS X 10.9.3 'Mavericks', or later.

Late 2013 and Mid 2015 Mac Pros Only

Nuke supports GPU-enabled nodes on the late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5 (running OS X 10.9.3 'Mavericks', or later), including a new **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



NOTE: To ensure you get the best performance from OpenCL GPUs on late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5, we recommend updating Mavericks to 10.9.5, or above for full functionality. However:

- If you're running an earlier version of Mac OS X than 10.9.5 and processing images greater than 4 mega pixels resolution, VectorGenerator, Kronos, and MotionBlur do not support GPU acceleration.
- If you're running an earlier version of Mac OS X than 10.9.4, Kronos and MotionBlur do not support GPU acceleration.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 137014 - DeepRead: Setting the **missing frames** control to **black** did not render any missing frames black.

- BUG ID 158689 - EXR: Setting the last frame **after** dropdown to **black** was ignored for certain **.exr** files.
- BUG ID 182509 - Expressions: Linking two ColorLookup **master** curves caused images containing negative values to display as **nan** (not a number) in the linked curve.
- BUG ID 218316 - ARRIRAW: The arriReader did not support the full range of integers (-12 to +12) for the **tint** control.
- BUG ID 225493 - Windows only: Installing QuickTime 7.7.6, or earlier, removed certain **.mov** codecs from the Write node's **Properties** panel.
- BUG ID 239752/270592 - ZDefocus: Rendering a script containing two or more ZDefocus nodes from the command line caused Nuke to crash.
- BUG ID 246403 - Monitor Output: The Blackmagic Desktop Video Utility and Nuke Studio Monitor Output panel did not always display the same data rate output.
- BUG ID 248914 - Compositing Viewer: The **Properties** panel **mask mode** dropdown had no effect on the Viewer.
- BUG ID 250718 - WriteGeo: The **window scale uv** values were ignored during export of **.abc** and **.fbx** cameras.
- BUG ID 252765 - Export: Exporting an updated shot (light green) incorrectly displayed a dialog asking you to re-render the shot.
- BUG ID 253647 - Monitor Output: 12-bit 4:4:4 output was incorrect for AJA Kona 3G cards.
- BUG ID 266338 - Audio: Playing audio backwards in a source Viewer caused the application to become unresponsive and the audio to play forwards as normal.
- BUG ID 267027 - Monitor Output: Working in the **linear** colorspace caused the monitor to display colors incorrectly until the colorspace was changed.
- BUG ID 267674 - BlinkScript: Default values could not be changed for **float4x4** matrix and **float3x3** matrix in BlinkScript kernels.
- BUG ID 269361 - Monitor Output: 12-bit 4:4:4 output did not work as expected with a single BNC cable for AJA Kona 3G cards.
- BUG ID 275703 - Monitor Output: Selecting the video legal range option did not limit output in 10-bit mode for Blackmagic 4K Extreme 12G cards.
- BUG ID 278106 - Audio: Retiming and then slipping audio shots past the start of the shot caused Nuke Studio to crash or rendered the waveform incorrectly.
- BUG ID 281177 - Monitor Output: Setting the LUT to **none** or **custom** in the **Monitor Output** panel displayed artifacts in the monitor.
- BUG ID 281179 - Monitor Output: Switching to Full Resolution Stereo output during playback with Blackmagic cards caused Nuke Studio to crash.
- BUG ID 283921 - Export: Transcoding Sony F5 - 5500K **.mxf** files to Apple ProRes 4444 **.mov** displayed an **error decoding frame** error.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

As Nuke develops, we sometimes have to make changes to the API and 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 plugins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	10.0v1 to 10.0v2	API and ABI		
Point	10.0v1 to 10.5v1	API	●	
Major	10.0v1 to 11.0v1	-	●	●

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 270405 - Python: Setting the MAGNITUDE flag using **setFlag(0x00000001)** on compatible nodes, such as Constant, caused Nuke to crash.

Release Notes for Nuke and Hiero 10.5v5

Copyright © 2018 The Foundry Visionmongers Ltd.

Release Date

22 June 2017

Qualified Operating Systems

- Mac OS X 10.9 (Mavericks) or 10.10 (Yosemite)
- Windows 7 or Windows 8 (64-bit only)
- CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

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. You need to have:

- an NVIDIA GPU with compute capability 2.0 (Fermi) or above. A list of the compute capabilities of NVIDIA GPUs is available at www.nvidia.co.uk/object/cuda_gpus_uk.html.



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 4.2 or above.



NOTE: In order to use R3D GPU debayering in the Compositing environment, CUDA 6.0 (or higher) is required.

- On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Drivers from April 2012 onward support CUDA 4.2.

Go to <http://www.nvidia.com/Download/Find.aspx?lang=en-us> for more information.

- On Mac, the CUDA driver is separate from the NVIDIA graphics driver and must be installed, if you don't have it already. The minimum requirement for CUDA 4.2 is driver version 4.2.5, which can be downloaded from www.nvidia.com/drivers.



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

- an AMD FirePro GPU on late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5, running OS X 10.9.3 'Mavericks', or later.

Late 2013 and Mid 2015 Mac Pros Only

Nuke supports GPU-enabled nodes on the late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5 (running OS X 10.9.3 'Mavericks', or later), including a new **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



NOTE: To ensure you get the best performance from OpenCL GPUs on late 2013 Mac Pro 6,1 and mid 2015 MacBook Pro 11,5, we recommend updating Mavericks to 10.9.5, or above for full functionality. However:

- If you're running an earlier version of Mac OS X than 10.9.5 and processing images greater than 4 mega pixels resolution, VectorGenerator, Kronos, and MotionBlur do not support GPU acceleration.
- If you're running an earlier version of Mac OS X than 10.9.4, Kronos and MotionBlur do not support GPU acceleration.

New Features

There are no new features in this release.

Feature Enhancements

- BUG ID 271330 - Monitor Output: A new preference, **Panels > Viewer (Monitor Out) > use video legal range for monitor out**, has been added to automatically set Monitor Output to the legal video range.

Bug Fixes

- BUG ID 253309 - Export: Empty folders in the shot template were converted to file entries after reloading a project.
- BUG ID 263073 - Soft Effects: A Text effect referencing clip and frame metadata on a different track did not render correctly.
- BUG ID 263710 - Export: Importing frames from a sequence with **sequences** disabled, and then creating and exporting a sequence from those frames, only rendered the first frame.
- BUG ID 281159 - Windows only: Rendering scripts containing two ZDefocus nodes from the command line caused Nuke to crash.

Known Issues and Workarounds

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

Known Issues Specific to Nuke 10.5

- Some links to the developer documentation are not working as expected. Please use the local copy of the documentation included in the installer where possible:

```
<install location>/Nuke10.5v5/Documentation/
```

- BUG ID 250107 - Monitor Output: 10-bit output from Blackmagic DeckLink HD Extreme 3D+ cards at the extents of color ranges is incorrect.

As a workaround, using the **Desktop Video Setup** utility, ensure that the **SDI Settings 4:4:4 RGB** checkbox is enabled and the **SDI Configuration** is set to **Single Link**.

Known Issues Specific to Nuke Studio and Hiero 10.5

- BUG ID 239672 - Linux only: Reading files from NTFS disks/partitions can be extremely slow, particularly for large files. This is a limitation of Linux NTFS file systems, rather than Foundry products.

We recommend avoiding timeline playback that relies on source footage from NTFS disks/partitions.

- BUG ID 235327 - Linux only: CPU usage can reach 100% on a single thread during flipbooking, causing Nuke to become unresponsive.
- BUG ID 230536 - Soft Effects: The Burn-in effect does not maintain a constant text baseline for all characters when the format is changed.

Other Known Issues

Known Issues Specific to Nuke

AudioRead

- BUG ID 18924 - Changes to the **rate** control value are not honored when **ratesource** is toggled between **file** and **custom**.
- BUG ID 18666 - Changing the sample rate has no effect on playback in a Flipbook.
- BUG ID 18465 - The **time range** control doesn't limit the range when an **endtime** is specified.
- BUG ID 18451 - Flipbooking doesn't honor the time range knob.
- BUG ID 18217 - Redo keyframe generation doesn't replace the keys.
- BUG ID 18213 - Changing **Draw Style** in the Curve Editor or Dope Sheet doesn't redraw the curves correctly.

BlinkScript/CUDA

- BUG ID 43319 - CUDA: Scripts containing GPU accelerated nodes, such as ZDefocus, display a CUDA error when the OS wakes up from sleep mode.

As a workaround, close and reopen Nuke to reactivate the CUDA drivers.

CameraTracker

- BUG ID 40798 - Centering a track in the Viewer does not work as expected in proxy or downrez modes.
- BUG ID 37411 - Sequences containing alpha channels display the alpha premultiplied by the image in reference thumbnails, rather than just the RGB values.

Deep

- BUG ID 43383 - Executing a script in command-line mode that reads in a deep image and then writes it to disk, causes Nuke to crash.

As a workaround, run the script from the Script Editor inside Nuke.

- BUG ID 40145 - Nuke occasionally reads and writes Deep **.exr** files with a pixel aspect ratio of 1.

As a workaround, preview the **.exr** in the file browser before reading it into Nuke.

Dope Sheet

- BUG ID 43463 - Scripts containing Ocula's O_VerticalAligner plug-in cause Nuke to crash when you execute **Analyze Sequence** with the Dope Sheet open.
- BUG ID 40206 - Adding a curve to the Dope Sheet and then deleting it causes Nuke to crash.
- BUG ID 39426 - Undoing individually animated text characters removes their keys completely from the Dope Sheet.
- BUG ID 39156 - Keys remapped with descending TimeWarp lookup curves don't snap to frames when **frame snap** is enabled.
- BUG ID 38910 - Keys from Viewer buffers not currently being viewed are still visible.
- BUG ID 38630 - Read and TimeClip representations disappear in the Dope Sheet if they are set to have a non-empty frame expression.
- BUG ID 37869 - The Dope Sheet is not updated correctly when a Retime's **speed** control is animated.
- BUG ID 37815 - Multiple instances of the same clip within one AppendClip are only represented once in the Dope Sheet.

EditGeo

- BUG ID 38954 - The transform handle of selections in the Viewer is not updated between frames on geometry with animation baked into its vertices.

To update the transform handle, toggle the axis alignment control between **object** and **average normal**.

- BUG ID 38699 - Changing the visibility of objects within an Alembic Scene Graph causes geometry to ignore the EditGeo node.
- BUG ID 38670 - Setting a keyframe can be slow to update the Viewer with the appropriate keyframe marker.
- BUG ID 36094 - Setting **axis alignment** to **average normal** displays the axis incorrectly on edge and corner vertices.

Flipbook

- BUG ID 201156 - Nuke's flipbook defaults to the Write node's colorspace, which can result in different output when compared to the Viewer.

As a workaround, either flipbook the node upstream of the Write node, or enable **Burn in the LUT** in the **Flipbook** dialog.

- BUG ID 47005 - In the Flipbook Viewer, clicking the **Go to start** button always goes to frame 0, even if the clip doesn't start at 0.

- BUG ID 47005 - Enabling **Burn in the LUT** in the Flipbook dialog uses the **rec709** LUT for both **rec709** and **rec1886**.

GPU

- BUG ID 45018 - R3D: Only half float linear gamma space works with GPU debayering.

Import Nuke

- BUG ID 40131 - Importing Nuke in a Python script destroys **sys.argv**, making command-line arguments unavailable.

As a workaround, preserve **sys.argv** in another variable before you import Nuke.

- BUG ID 39836 - Importing Nuke hangs when there are Qt conflicts between Nuke and other applications.
- BUG ID 38963 - Calling **import nuke** terminates the Python session if no applicable license is available.

Linux Only

- BUG ID 199990 - In some situations NVIDIA Quadro Linux drivers 319.23 can cause Nuke to hang during start up.

As a workaround, update your drivers to 361.42.

- BUG ID 49262 - Scrubbing in the timeline in large projects can force memory use to hit 100%, causing Nuke to become unresponsive.
- BUG ID 43766 - Calling **uuid.uuid4()** causes Nuke to crash due to a bug in **libc**.

As a workaround, launch Nuke from the command-line using:

```
LD_PRELOAD=/lib64/libuuid.so.1 ./Nuke8.0
```

- BUG ID 42581 - Keyboard Shortcuts: Using **Ctrl+C** to quit Nuke from the command-line when a dialog box is open displays an error.
- BUG ID 39537 - Using a Blackmagic Decklink Extreme 2 card causes Nuke to become unresponsive.

Mac OS X Only

- Installation - If you're running Mac OS X 10.10 "Yosemite", you may need to install alternative NVIDIA CUDA drivers so that Nuke can detect your GPU correctly. You can obtain the required drivers directly from NVIDIA here:

<http://www.nvidia.com/object/macosx-cuda-6.5.18-driver.html>.

- BUG ID 228076 - The PySide QtGuiTools library is currently missing from the Nuke build.
- BUG ID 163543 - Mac OS X 10.11 only: Dragging handles in the 3D Comp Viewer can be slow to respond.
- BUG ID 50371 - Script corruption can occasionally occur on Mac OS X 10.9 (Mavericks), and above, when writing to SMB 2.1 and SMB 3 Sharepoint locations.
- BUG ID 50182 - Nuke cannot be launched from the Finder if it has already been launched from the Terminal.
- BUG ID 43343 - Modifying the label of a Python user knob causes Nuke to crash.
- BUG ID 39429 - Crash Reporting: The 'save to' dialog is hidden behind the crash report dialog when you click **Save Report**.
- BUG ID 38686 - Enabling **Use GPU if available** on supported nodes, such as Kronos, in more than one instance of Nuke at the same time, can cause display corruption and/or entire system freezes. This seems particularly likely to occur on GPUs with low amounts of RAM, such as the GeForce GT 650M.

As a workaround, upgrade your NVIDIA drivers, or if this is not possible, only enable GPU acceleration in one instance of Nuke at a time.

- BUG ID 35123 - PrmanRender: If you're using Mac OS X 10.8 (Mountain Lion) or above, make sure X11 is installed on your system. Unlike previous versions of OS X, 10.8 and above do not have X11 installed by default.

For more information, see <http://support.apple.com/kb/HT5293>.

- BUG ID 34697 - Launching Nuke from a network shared drive causes Nuke to crash on launch.

As a workaround, either:

- tarball the installation from Mac OS X and unzip it on the alternate file system (using NFS or Samba, depending on source), or
 - using the command-line, copy the installation from Mac OS X to the network location using the same file system as the destination.
- BUG ID 33970 - Using a node, such as Grade, as a custom viewer process outputs a blank Viewer.

As a workaround, adjust the Viewer **gain** control to refresh the Viewer.

- BUG ID 22062 - Nuke doesn't currently give the option to restore the autosave of an unsaved script, except when Nuke is run from the command-line.
- BUG ID 13638 - The following graphics cards are not currently supported for Mac:
 - ATI Radeon X1600
 - ATI Radeon X1900

Users with these cards are able to render from the command-line, but in GUI sessions, the Node Graph renders incorrectly due to a requirement of OpenGL 2 drivers.

- BUG ID 12048 - Nuke crashes if you activate screen sharing when there is no screen plugged in.
- BUG ID 11776 - Node text appears aliased, unclear, or garbled at certain zoom levels.

ModelBuilder

- BUG ID 41352 - Setting the **segments** control to a negative number causes Nuke to crash.
- BUG ID 41148 - Editing geometry UVs and then switching the Viewer to look at the geometry through a ScanlineRender node causes Nuke to crash.

Monitor Out

- BUG ID 40942 - AJA Io Express: Enabling monitor output causes Nuke to crash.
- BUG ID 37700 - AJA Kona LHe+ 2k formats are not displayed correctly.

OCIO

- BUG ID 216806 - The public DD::Image interface for the OCIOColorSpace node can not initialize certain values, and occasionally causes Nuke to crash.
- BUG ID 201193 - Read node **Metadata** tabs occasionally include irrelevant **in** and **out** colorspace controls.

Particles

- BUG ID 41259 - ParticleCache: Setting **emit from > points** and connecting the **emit** input to geometry, does not render all frames to the **.nkpc** file.
- BUG ID 39796 - ParticleCache nodes upstream of ScanlineRender nodes display **ParticleCache is out-of-date** errors for negative frame numbers.
- BUG ID 39210 - ParticleCache: Error messages displayed when **read from file** is toggled on and off are not reliably cleared when rendering through ScanlineRender.
- BUG ID 37254 - The progress bar does not cancel if you scrub to a frame that has already been calculated within the particle system.
- BUG ID 18268 - Enabling **color from texture** always renders a solid white alpha for the texture.
- BUG ID 17520 - Geometry representation textures are displayed even when **display** is set to **off**.
- BUG ID 17243 - Using sprites instead of geometry representations causes particles to render behind the 3D grid lines.

Pixel Analyzer and Scopes

- BUG ID 44176 - PixelAnalyzer: The **full frame** sampling **mode** doesn't work immediately in the timeline Viewer when the analyzer is initially added to the layout.
- BUG ID 39180 - Scopes: Switching to a layout with a scope window, while rendering, forces the Viewer bounding box to 1x1 for that frame.
- BUG ID 36508 - Scopes do not currently update when zooming into the Viewer.
- BUG ID 36491 - Scopes clip color values between 0 and 1 when **Preferences > Scopes > Include viewer color transforms** is enabled.

PrmanRender

- In the Nuke camera, the **window roll** control is not yet mapped to RenderMan.
- BUG ID 27648 - After a security update for Mac OS X, Nuke is unable to load the PrmanRender plugin in the environment.plist file when in GUI mode.

See <http://support.apple.com/kb/TS4267> for more information.

Python

- BUG ID 44296 - Running **nuke.scriptOpen()** at the same time as creating a Python panel causes Nuke to crash.
- BUG ID 40994 - Rendering an Alembic camera using a Python script produces incorrect values when run from the command-line.

Run the script from Nuke's **Script Editor** to avoid this issue.

- BUG ID 40645 - Using **setInput()** within an **onCreateCallback** doesn't work as expected.
- BUG ID 40534 - Using Python to set metadata in ModifyMetadata nodes does not work from the command-line.

To work around this issue, run the Python script from Nuke's Script Editor.

- BUG ID 39308 - Accessing a node's x and y positions using the **xpos** and **ypos** controls reports incorrect values.

As a workaround, either call **nuke.Node.xpos()** or **nuke.Node.ypos()** first, or ensure no nodes are currently selected in the Node Graph.

- BUG ID 38994 - **nuke.Node.screenWidth()** and **screenHeight()** are incorrect when a node is first created if it has an autolabel.
- BUG ID 8063 - Creating many new nodes with **nuke.createNode()** and the in-panel argument at default (**True**) may crash when too many node control panels are created too quickly. The

workaround is to pass the in-panel argument as **False** or else use **nuke.nodes.NodeClass()** (where NodeClass is the type of node to create) to create the node and then connect it to the currently selected node manually.

- BUG ID 6455 - You should not call the Python command **nuke.restoreWindowLayout()** from the Script Editor as that can cause Nuke to crash. Instead, you can use the same command from your **menu.py**, restore layouts by selecting **Layout > Restore Layout**, or use a custom menu or toolbar item.
- Nuke sometimes reports errors in Groups and Gizmos, appearing similar to the following:

groupName.NodeName.knobname: unexpected 'k' in '0.knobname'

The problem is most likely that there is an expression using the input TCL command and doesn't validate that there is an input connected. An example expression:

[input parent 0].translate.x

The input command returns 0 when it can't find the requested input, which generates an expression of **'0.knobname'** that doesn't refer to anything. The fix is to restructure the expression to use the value TCL command and specify a default value to return in the case that the expression is invalid. It takes the form:

[value [input parent inputnumber].knob defaultValue]

Here is the modified example:

[value [input parent 0].translate.x 0]

The modified example returns 0 in the event that there is no input 0, and no longer results in an error message.

- There is a Python syntax conflict when assigning knob names on the fly with **nuke.nodes.<node>()** if the knob is called 'in'.

For example, this gives a syntax error:

nuke.nodes.Shuffle(in = 'depth')

while this works because 'in' is a string here and not a keyword:

sh = nuke.nodes.Shuffle()

sh['in'].setValue('depth')

RayRender

- BUG ID 230256 - Soft Shadows are not currently supported.

- BUG ID 197294 - Reflection occlusion is not currently supported.
- BUG ID 196980 - Clipped alpha shadows are not currently supported.
- BUG ID 196776 - Multiple bounce reflecton is not currently supported.
- BUG ID 196124 - RayRender does not currently support refraction.
- BUG ID 195051 - The Wireframe shader node, located in **3D > Shader > Wireframe**, is not supported by RayRender.
- BUG ID 195004 - Custom lens shaders/projection modes are not currently supported.
- BUG ID 194819 - RayRender does not currently support Deep workflows.
- BUG ID 191108 - Particle sprites are not currently supported.
- BUG ID 174849 - The Displacement shader node, located in **3D > Shader**, is not currently supported by RayRender.

Read and Write

- BUG ID 50046 - The default colorspace values when writing using **.mov** codecs differ in command-line and GUI modes.
- BUG ID 48935 - MXF: Importing a certain JPEG2000 file causes Nuke to crash or display the file incorrectly.
- BUG ID 47256 - MXF: Super whites are currently displayed as white in the Timeline Viewer.
- BUG ID 47248 - MXF: Setting **debayer quality** to **High Quality** on some Sony RAW files displays an **error decoding frame** message in the Comp Viewer.
- BUG ID 42717 - Certain **.exr** files rendered from Modo display the **alpha** channel rather than the **rgba** channels by default.
- BUG ID 41006 - The last audio frame of a QuickTime encoded with AAC compression is muted.
- BUG ID 40684 - Rendering certain **h264** encoded **.mp4** files using the **mov32** encoder results in color shifts using QuickTime 10.3 codecs.
- BUG ID 40533 - There are slight differences in color and sharpness when rendering Alexa footage to ProRes 4444.
- BUG ID 40074 - Writing out stereo **.sxr** files with additional channels does not write out both eyes correctly.
- BUG ID 39165 - ReadGeo: When reading in **.fbx** files, the transform/scale state can become incorrect while toggling the **read transform from file** in combination with **all objects** and/or **read on each frame**.
- BUG ID 35611 - Writing **.exrs** with the Write node's **interleave** control set to **channels** adds a superfluous **main** view.
- BUG ID 33863 - FBX geometry: Faces on geometry read in from **.fbx** files are not connected to neighboring faces, leaving gaps in certain circumstances.

This issue is particularly visible when using the EditGeo node, which should not allow you to remove faces from the geometry.

- BUG ID 31424 - Sub-sampling in **.exr** files is not currently supported.
- BUG ID 27211 - Alembic: The state of the Viewer **Lock Frame** control is not always honored for **.abc** files.

As a workaround, ensure that **ReadGeo > read on each frame** is enabled.

- BUG ID 21663 - Read: After reading in a stereo/multiview **.exr** file and choosing not to add new views to the project, subsequent reads of any stereo/multiview **.exr** files won't give the option to add new views.
- If you have trouble with FBX files, it may be because they were written with an older version of FBX. If they load very slowly, it is also possible that they are ASCII rather than binary. To get around these problems, you can use the FBX converter on the Autodesk website. It converts between various different formats, including older FBX versions, ASCII, and binary, and is available on Windows, Mac OS X, and Linux.

To download the FBX converter:

1. Go to <http://usa.autodesk.com/adsk/servlet/pc/item?siteID=123112&id=10775855>.
2. Scroll down to FBX Converter and click on one of the links to start the download.

Render codecs

Rendering with certain codecs occasionally causes Nuke to crash. Due to this, we recommend the following:

- If you're using the Sorensen Video codec, it's recommended you use the Sorensen Video 3 codec instead. If you're unable to switch to Sorensen Video 3, try using a format smaller than 2K for better performance.
- If you're experiencing crashes with Cineform HD, try updating your Cineform codec to version 5 or above. You may need to download the Neoplayer at <http://estore.cineform.com/neoplayer.aspx>.
- If you're using Avid Meridien, you should only write out in NTSC and PAL.

Roto/RotoPaint Open Splines

- BUG ID 42997 - Rendering artifacts can occur if the **feather** control is used in conjunction with the feather handles in the Viewer.
- BUG ID 42995 - Stereo: Adding an open spline creates the spline in the left view only by default.

As a workaround, select the shape and then manually change the Properties **view** control to include both views.

- BUG ID 42991 - Python API: Moving points on an open spline using Python causes Nuke to crash.
- BUG ID 42932 - Rendering artifacts can appear where the spline hull crosses over itself with negative **feather** values.
- BUG ID 42422 - Rotating the tangent of an end point occasionally causes the hull to behave erratically.
- BUG ID 42413 - Holding **Ctrl/Cmd** to move a point's tangent handles independently causes defects in the hull or feather.
- BUG ID 42412 - Changing the Viewer overlay visibility, such as from **always** to **never**, occasionally produces artifacts in the spline's hull.
- BUG ID 42390 - It is not possible to increase the **width** for individual points if the overall **width** is set to **0**.
- BUG ID 42387/42310 - Cusped points occasionally cause hull rendering artifacts.
- BUG ID 40962 - Animated splines with **varying** width and **feather** occasionally contain slight rendering glitches inside the hull.
- BUG ID 40433 - Roto Open Splines - Shape of hull/feather curve can look incorrect when width changes greatly from one point to the next
- BUG ID 36219 - The **Select Feather Points** tool does not work consistently between the **Open Spline** and **Bezier** tools.

Other Roto/RotoPaint Bugs

- BUG ID 41917 - RotoPaint shape colors don't change when expression linked to another RotoPaint color.
- BUG ID 32459 - RotoPaint: Undoing a point move that created a keyframe doesn't currently undo the keyframe creation.
- BUG ID 32450 - RotoPaint Stereo: Attempting to undo multiple split-control transforms on the same shape reverts the shape to its original position.
- BUG ID 31552 - Point handles for paint strokes, whose lifetime doesn't extend to the current frame, disappear when drag-selected.

As a workaround, select the shape in the **curves** list to re-display the points.

- BUG ID 30920 - Expression linking extra matrices in the **Transform** tab doesn't work as expected.



NOTE: This also applies to SplineWarp matrices.

- BUG ID 30551 - Several levels of smoothing applied to one shape are carried over to subsequent shapes for a single smooth operation.
- BUG ID 29170 - The cut, copy, and paste keyboard shortcuts don't work for entries in the **curves** list.

- BUG ID 28838 - Gizmos from Nuke 6 containing Roto/RotoPaint nodes should be recreated in Nuke 8, but bear in mind that they won't be backwards compatible with Nuke 6 once converted, unless you follow the instructions below:

Nuke 6 scripts containing Roto display a conversion prompt when you open them in Nuke 8:

- Click **Save As** to convert the script to the Nuke 8 Roto format, or
- Click **Ignore** to load the Nuke 6 format into Nuke 8. You might select this option if:
 - You don't intend to make any changes, or
 - You want to overwrite the file with a Nuke 7 and 8 only Roto format when saving.

If you want Nuke 8 scripts to load in Nuke 6, use the **convertToNuke6** or **convertDirectoryToNuke6** Python functions when running Nuke 8 in command-line only mode:



NOTE: The conversion functions cannot convert stereo-split curves as they are not supported by Nuke 6.

- To convert individual **.nk** scripts:


```
convertToNuke6(fromScript, toScript, overwrite = False)
```
- To convert all **.nk** scripts in a given directory:


```
convertDirectoryToNuke6(fromDir, toDir, matchPattern =.*\.nk, overwrite = False)
```



NOTE: The pattern is a regular expression.

An example single script conversion and rename to the same directory, from the command-line (or Terminal):

```
$ <NukeInstallDir>/Nuke8.0v1 -t
>>> import nuke.rotopaint
>>> nuke.rotopaint.convertToNuke6(/tmp/myRoto8.nk, /tmp/myRoto6.nk)
```

- BUG ID 26855 - The **undo** and **redo** buttons in the Properties panel didn't work as expected and have been disabled.

The workaround is to use the undo (**Ctrl/Cmd+Z**) and redo (**Ctrl/Cmd+Y**) keyboard shortcuts or the **Edit** menu instead.

- BUG ID 21361 - Artifacts are produced until mouse up when painting over a stroke on another frame.
- BUG ID 11524 - Adding strokes/shapes in RotoPaint is slow when there is another RotoPaint after it.
- BUG ID 9238 - Painting on Mac OS X and Linux is slower when the paint cursor is near the edges of the screen.
- The foreground onion skin overlay updates as you paint, rather than only updating with the new stroke on pen up.

- It is not currently possible to clone RotoPaint nodes.
- Interactivity of laying down strokes/shapes in the Viewer may be faster when motion blur is disabled on the layer you are working in.

ScanlineRender

- BUG ID 38329 - Deep renders from ScanlineRender currently ignore the ScanlineRender's **bg** input.
- BUG ID 38205 - Deep: Depth, motion, position, and normals information is occasionally incorrect in semi transparent areas.
- BUG ID 37967 - Deep: Geometry with alpha 0 renders black when the deep output is converted to an image.

SmartVector Toolset

- BUG ID 196455 - Rendering vectors after correcting the **file** control in the SmartVector node occasionally displays a spurious **No such file or directory** error.

As a workaround, scrub to a different frame to remove the message.

- BUG ID 175605 - Entering a partial file path in the SmartVector **file** control and then clicking the file browser icon does not open the file browser.

As a workaround, click **OK** on the error message and then click the file browser icon again.

Text

- BUG ID 48418 - Different operating systems handle the **Shadows** tab **shrink/expand** control differently, producing inconsistent output.
- BUG ID 39556 - In **text edit** mode, it is not currently possible to edit text attributes when the Viewer overlay is disabled.
- BUG ID 39552 - Transforming animation groups using an expression-linked Transform node does not work as expected.

As a workaround, expression link the **translate x** and **y** controls separately.

- BUG ID 39291 - Splitting the **transform** control on the **Group** tab splits all controls.
- BUG ID 39239 - Transforming a character generated from an expression, and then going to a frame where the character no longer exists, results in the transformation being lost.
- BUG ID 39130 - Splitting the **message** field does not work as expected.
- BUG ID 38789 - Viewer toolbar controls steal cursor focus.
- BUG ID 38425 - The undo history becomes unreliable when the panel focus changes.

- BUG ID 36372 - Selecting a TCL expression in the **message** field doesn't always select the result in the Viewer.

Tracker

- BUG ID 40542 - After tracking and centering a track, the Viewer no longer caches when playing back the tracked frames.

As a workaround, you can enable full frame processing, though this may increase render times.

- BUG ID 40038 - **Ctrl/Cmd** clicking in the Viewer to select a pixel and then adding a track, sets the tracking anchor coordinates to 0,0.
- BUG ID 39225 - Moving tracking anchors is occasionally unresponsive and jerky.
- BUG ID 39200 - Holding **Shift** and clicking tracks in the Viewer doesn't add to the current selection.
- BUG ID 38356 - The zoom window occasionally doesn't update correctly when scrubbing between frames.
- BUG ID 32359/32353 - Right-clicking on a point in the Viewer doesn't always update the available **Link to > Tracker linkingdialog** or **Tracker** options.

As a workaround, close and re-open the Roto/RotoPaint properties panel to update the **Link to** menu.

- BUG ID 29382 - Tracking keyframes with different sized patterns doesn't work as expected.

As a workaround, keyframe patterns should, where possible, be of comparable sizes.

Warpers

- BUG ID 32340 - SplineWarp: Using **Ctrl/Cmd**+drag to create rectangles and ellipses doesn't display an overlay until pen-up.
- BUG ID 32083 - SplineWarp: Deleting all but one point on a curve resets its correspondence points to 0,0, which cannot be undone.
- BUG ID 32082 - SplineWarp: Correspondence points are too sensitive when control points are removed.
- BUG ID 32079 - SplineWarp: Moving correspondence points on curves with no keyframes cannot currently be undone.
- BUG ID 30429 - SplineWarp: Transform links are not maintained when the source curve is moved to a new layer.
- BUG ID 31322 - SplineWarp/GridWarp: Preview doesn't handle upstream transforms correctly.
- BUG ID 20000 - GridWarp: When using cropped input, moving control points causes the Viewer to display the cropped image and the black area between the crop box and the format when merged over a background.

- BUG ID 19995 - GridWarp: Locked source and destination grids still allow adding and removing grid lines.
- BUG ID 19835 - SplineWarp/GridWarp: The Viewer LUT is incorrect in **morph** mode, when **mix** is set at an intermediate value.
- BUG ID 19755 - SplineWarp: Placing correspondence points at each end of an open spline causes rendering problems.
- BUG ID 19565 - GridWarp: The Viewer does not show the correct mix amount when in **morph** mode with **mix** set at an intermediate value.
- BUG ID 19386 - GridWarp: All keyframes are removed from the Dope Sheet after undoing, rather than just the latest, and the keyframes remain on the timeline and in the properties.
- BUG ID 19148 - SplineWarp: Rendering fails if a curve is reduced to a single point.
- BUG ID 19079 - SplineWarp: The **C** keyboard shortcut does not currently select the **Add Correspondence Point** tool.
- BUG ID 18712 - GridWarp: The timeline currently shows both source and destination keyframes, even if a grid is not visible in the Viewer.
- BUG ID 18709 - GridWarp: Rotating the transform jack with both grids selected, but in different positions, does not undo as expected.
- BUG ID 18342 - SplineWarp: The spline keyframe + button does not add keys to the Curve Editor or Dope Sheet.
- BUG ID 18304 - GridWarp: Existing control point keyframes are not cleared when you draw a new grid using the **Draw Boundary** Viewer button.
- BUG ID 18019 - GridWarp: You cannot select all grid points in the Curve Editor using **Ctrl/Cmd+A** shortcut.
- BUG ID 18012 - GridWarp: The grid can flicker between white and gray when zooming in and out of the Viewer, particularly when the grid is subdivided.
- BUG ID 17697 - GridWarp: In stereo mode, the right view is labeled as **default** when you split controls into separate views.

Windows Only

- Nuke Non-commercial: Navigating to **Help > License**, clicking **Deactivate** or **Deauthorize**, and then clicking **Quit**, causes Nuke Non-commercial to crash on exit.

As a workaround, change the **mode** a few times until it work as expected.

- BUG ID 198430 - Nuke cannot read DNxHD **.mxf** files that have spaces in the file name.
- BUG ID 46759 - File Browser: Location defaults (such as Home, Root, etc.) may not display if you have a previously saved **FileChooser_Favorites.pref** file in your **~/nuke** directory.

As a workaround, move or rename the **FileChooser_Favorites.pref** file, and re-launch Nuke.

- BUG ID 40407 - When using a tablet, Nuke does not automatically switch to **Eraser** mode when you use the erase end of the pen.
- BUG ID 39636 - QuickTime: The **Blackmagic 10 bit (v210)** codec defaults to the **YCbCr 8-bit 422 (2vuy) pixel format** due to a bug in the codec, resulting in solid green frames.

As a workaround, manually set the pixel format to **b64a RGB** to preserve image fidelity.

- BUG ID 35800 - Scopes: The alpha channel doesn't update correctly when modified through a node, such as Primatte or Shuffle, even after the node is removed from the Node Graph.
- BUG ID 28921 - Changing the 3D selection mode does not update until you click in the Viewer.

Miscellaneous

- BUG ID 228258 - Calling **fromScript()** on a knob that has not been added causes Nuke to crash.
- BUG ID 226394 - Preferences: There are currently duplicate **Script Editor** controls under **Other** in the **Preferences** dialog.
- BUG ID 169458 - Compositing Viewer: Setting the **gamma** control to **0** with **Panels > Viewer (Comp) > use GPU for Viewer when possible** enabled in the preferences, renders the alpha channel black.
- BUG ID 168350 - AMD GPUs are reported as ATI GPUs in the node properties and **--gpulist** on the command line.
- BUG ID 50715 - ZDefocus: Switching the **filter type** to **image** causes Nuke to crash in a customer script.
- BUG ID 49803 - AJA Monitor Output: Setting the NUKE_AJA_CHANNEL environment variable to 4 when the NUKE_AJA_DUALOUTPUT environment variable is set, streams the output to SDI3, rather than SDI4.
- BUG ID 49186 - ColorCorrect: Adding an expression to the curves on the **Ranges** tab and then changing a value, such as **Gain**, causes Nuke to crash.
- BUG ID 46488 - Switching between certain workspaces displays black in the Viewer until the frame is changed.
- BUG ID 46441 - ParticleBounce: Using custom geometry as the bounce object in a particle system occasionally allows particles to pass through the bounce surface.
- BUG ID 42339 - The **Modo** Viewer control scheme (**Preferences > Panels > Viewer Handles > 3D control type**) does not work as expected.
- BUG ID 42240 - Setting a channel with a non-standard name to use as the Viewer's **alpha** channel doesn't work as expected.
- BUG ID 42159 - Nodes that use the **lop::sample()** call to get input pixels, such as LensDistortion, perform poorly when they are downstream of nodes using Planarlop, such as Denoise.
- BUG ID 41450 - AppendClip forces upstream nodes to re-evaluate on every frame.
- BUG ID 41411 - Loading a script from a disconnected network drive creates an empty script with the same name as the file path to the original.



WARNING: If you save this empty script when the network drive is reconnected, the original is overwritten.

- BUG ID 41122 - MatchGrade: **Match Different Clip** mode does not allow you to set keyframes on the **Target** for **.mov** clips with a frame range offset.
- BUG ID 40617 - Some filter nodes, such as Erode (fast), are caching more slowly than in previous versions.
- BUG ID 39459 - Virtual Sliders: Clicking the left-mouse button, while holding down the middle-mouse button, pastes values into the control.
- BUG ID 39407 - Project3D: The node class name has changed to **Project3D2**. As a result, the Nuke<>Mari bridge won't work unless all instances of Project3D are renamed appropriately in the **mari_bridge.py** file.
- BUG ID 39365 - The Viewer **headlamp** control can not currently be managed using expression links.
- BUG ID 39287 - Plug-ins: Loading scripts with plug-ins compiled against older versions removes the nodes from the Node Graph.
- BUG ID 39260 - Custom knobs on Groups and NoOp nodes cannot be retimed.
- BUG ID 39122 - Switching the Viewer to **wipe** mode and wiping between inputs with different format sizes causes corruption and constant refreshing in the Viewer.
- BUG ID 38713 - Capture: Roto opacity and feather settings are not included in captured images.
- BUG ID 35661 - Capture: Capturing the Viewer with a custom file path saves the file path in the script, resulting in error when the path doesn't exist:

```
Flipbook render failed: viewerCaptureOp: Cannot write to specified path
```

- BUG ID 35659 - Capture: Capturing a 3D scene containing lights produces Viewer flashes in the captured images.
- BUG ID 32856 - PositionToPoints: Textures occasionally disappear during playback or when mousing over the Viewer.
- BUG ID 32666 - FrameHold nodes have no effect on Deep nodes.
- BUG ID 32628 - DeepToPoints: Command-line rendering appears to calculate renders even when render is set to **off**.
- BUG ID 32497 - The R3D parameter labels in Nuke aren't entirely consistent with REDCINE-X and Hiero.
- BUG ID 32219 - DepthToPosition: Reading depth information from the same layer as the **output** layer produces corrupt output.

As a workaround, shuffle the depth information to an alternate layer.

- BUG ID 32118 - Card3D: When **motionblur** is enabled in the properties, FrameHold and TimeOffset nodes are ignored when connected to the **cam** or **axis** inputs.

- BUG ID 31803 - Using **Shift**+drag on a control's animation icon only copies the value for the current frame, not the entire expression.
- BUG ID 31714 - In the Viewer settings, enabling **3D > show_prim_bbox** does not display individual bounding boxes for polymesh primitives.
- BUG ID 31310 - TimeOffset: Checking **reverse input** doesn't affect cameras, lights, or axes.
- BUG ID 31238 - RAM cache: Any action that changes a frame's hash value, it's unique identifier, causes the cache to release. Actions such as adjusting the Viewer **Gamma**, **Gain**, or **channels** dropdown affect the frame hash.
- BUG ID 30502 - Copying and pasting spline keys does not work as expected in the Dope Sheet.



NOTE: This known issue only applies to Roto and SplineWarp keys.

- BUG ID 30256 - Script Editor: Flagging a control as invisible using **setFlag()** is not honored when the node is copy/pasted in the Node Graph.
- BUG ID 30173 - Manipulating 3D handles in the 2D Viewer is unreliable.
- BUG ID 29677 - Connecting a FrameHold node to an animated Camera and connecting both to a Scene node only displays the animated Camera in the Viewer. There should be two cameras: one static and one animated.
- BUG ID 29083 - Using **Create Camera** in the 3D Viewer only sets position and rotation. The **focal length** of the new camera does not match that of the Viewer camera.
- BUG ID 28291 - Nuke crashes on start up if the **disk cache** location set in the **Preferences** is no longer available.
- BUG ID 20431 - CameraTracker: It's not possible to pick colors in the Viewer with the control panel open.
- BUG ID 20204 - Multitexturing: When **Preferences > Viewers > Multiframe** is enabled, increasing **downrez** in the Viewer toolbar can cause textures to flicker in the 3D Viewer.

You can switch back to **Classic** mode or avoid using proxy in 3D to workaround this issue.

- BUG ID 19933 - ReadGeo: Geometry occasionally doesn't display as a solid until you click in the Viewer.
- BUG ID 19185 - Attaching an FBX ReadGeo to the Viewer occasionally causes a slight graphical glitch in the **Properties** panel.
- BUG ID 18649 - The transform jack is currently scaling incorrectly from the corner pivot point.
- BUG ID 12505 - Motion Vector output has been improved, but still doesn't work properly because some large polygons are clipped by the front camera plane.

You can minimize this effect by increasing the geometry **tessellation max** parameter.

- BUG ID 12424 - Ultimatte: Overlays are not updating correctly or reverting when panning or zooming.

- BUG ID 11620 - In the 3D Viewer, there is currently a conflict between 3D geometry selection and points drawn with RotoPaint. This only occurs if you have two Viewers open, one in 2D mode and the other in 3D mode, and you have the panel for the RotoPaint visible.
- BUG ID 9521 - Currently, the Nuke Viewer cannot cache very large plate sequences in float. The limit per frame is 50MB. If your frames are larger than this, you may need to switch to proxy mode for the caching to work.
- BUG ID 5922 - At the moment, cloning does not work properly with all OFX nodes. This affects, but is not restricted to, any nodes that have an analysis pass.
- BUG ID 5690 - Windows run-time libraries are not packaged properly with Nuke.

Nuke runs correctly from a network install on Windows without specifically installing the run-time libraries, though we still recommend that you do so as there are still some minor problems without them.

- BUG ID 5083 - Flipbooking the output of the Anaglyph node asks which view you want to render. This question is unnecessary as the result is an anaglyph image. Irrespective of what view you choose, the flipbook output is the same.
- File types in Windows and Mac OS X are associated with the standard version of Nuke by default, so if you save a script on NukeX using features that are only included in NukeX (such as CameraTracker or FurnaceCore) and then double-click on the script icon to open it, it opens in standard Nuke instead of NukeX.
- CameraTracker: Canceling lens distortion initialization results in corrupt tracks.
- 3D Camera: If you want to navigate through the 3D point cloud created by the CameraTracker node when using **Create Scene**:
 - Select the Camera that was created in the 3D view when using the **Create Scene** button.
 - Press **F** to focus on the selected Camera. You can now navigate around the cloud. Do not try to focus (using **F**) on the point cloud. The resulting tumble camera movement is likely to be jumpy.
- Plug-ins installed using the Nuke Plug-in Installer may not work correctly as they were compiled against an earlier version of Nuke.

Known Issues Specific to Nuke Studio and Hiero

Create Comp

- Multi-view, such as stereoscopic, is not supported for clip instances created using right-click **Effects > Create Comp**.
- BUG ID 47044 - Inserting scripts into comps containing Text nodes using unsupported fonts causes Nuke Studio to crash when the Text nodes are disabled.
- BUG ID 46470 - Create Comp: Enabling **Collate Shot Name** in the comp export preset offsets the comp frame range compared to the annotations precomp frame range.

- BUG ID 41665 - There are currently no options to load or overwrite an existing script when you select **Create Comp**.

Exporting

- BUG ID 49024 - Enabling the **Collate...** options in the **Export** dialog when exporting ignores the **Media** tab **Output Resolution** setting for the track above, and produces output with incorrect formatting.
- BUG ID 47828 - Exporting retimed or reversed clips as **.xml** does not work as expected when imported into Final Cut Pro.
- BUG ID 46403 - Controls set in the **Export** dialog **Content** tab occasionally default to the values from the **Nuke Write Node** Content preset.

Linux Only

- BUG ID 167058 - Linux only: PulseAudio (ALSA) can cause Nuke Studio to crash or impair playback.

As a workaround, you can stop the **pulseaudio** daemon:

1. Open **/etc/pulse/client.conf**
 2. Set **autospawn = no** and **daemon-binary** to **/bin/true**. Ensure these lines are not commented out.
 3. Call **ps -e | grep pulse** to check the process is still running.
 4. Call **pulseaudio --kill**
 5. Call **ps -e | grep pulse** again to check the process has stopped.
- Linux only: Nuke Studio does not currently support any QuickTime audio reading. Support for audio on Linux is scheduled for a later release.
 - BUG ID 32613 - Dragging clips to the timeline with certain older NVIDIA drivers occasionally causes Nuke Studio to crash.

As a workaround, ensure that you have the latest NVIDIA drivers installed, available from:

www.nvidia.com/Download/index.aspx?lang=en-us

Mac OS X Only

- BUG ID 39113 - QuickTime ProApps Codecs v1.0.3 break HDV and XDCAM on Mac OS X 10.7.5, and earlier.

This is a codec issue rather than an application issue.

- BUG ID 34779 - The shortcut for **Clear In/Out Points (Alt+U)** is not always triggered correctly due to a conflict with the combination for the umlaut symbol.

To work around this, press **U** momentarily before **Alt+U**.

OCIO

- BUG ID 219603 - Nuke Studio doesn't load the individual default LUT settings when using the OCIO environment variable to declare a custom configuration file.

As a workaround, manually force the load by changing the **color management** setting from **Nuke** to **OCIO**.

- BUG ID 198348 - Saving and closing a project that uses an OCIO config, and then relocating the Nuke install path, causes a **Could not load OpenColorIO config** error on reload.

Preferences

- The **Preferences > Path substitution** table for cross platform compatibility currently only comes into effect at project load, not EDL/XML import.

As a workaround, import your sequence and set the **Path substitution** rule, then save the project and reload to force the conversion.

Python API

- BUG ID 50113 - QActions are not added to the **Edit** menu in the menu bar when finding the menu action by name.

As a workaround, use the **objectName (foundry.menu.edit)**, where possible.

- BUG ID 44394 - Calling **hiero.core.addPathRemap()** does not work for soft effect file paths.

Read and Write

- BUG ID 49912 - HieroPlayer: Projects created in version 1.9, or earlier, are not editable in HieroPlayer 9.0.
- BUG ID 46174 - XML: Shot names are occasionally not imported correctly from Adobe Premiere **.xml** files.
- BUG ID 46100 - Exporting: Export speeds may be slower than expected. This may be due to the **Rendering** preference set to **limit renderer**.

As a workaround, you can change the preference **Performance > Threads/Processes > Rendering > export renders** to **no renderer limits** to improve rendering speeds. You can also experiment with the custom renderer limits to adjust performance on your machine.

- BUG ID 39897 - Importing and playing back very large format **.tif** files causes Nuke Studio to crash.
- BUG ID 39557 - Writing **.exrs** with 200+ layers, when **interleave** is set to **channels**, can be sluggish.

- BUG ID 36726 - Executing **Clip > Rescan Clip Range** displays frame read errors if the rescan adds frames to the clip.
- BUG ID 35080 - QuickTime: Certain files read into Nuke Studio with a different start timecode to other applications, such as Premiere or Resolve.
- BUG ID 31549 - Single layer exports from multi-pass clips fail if the selected layer is not a default Nuke layer, such as **depth** or **motion**.
- BUG ID 28067 - Certain formats produce no monitor output, such as 2K 23.98 and 720P 25.
- BUG ID 18880 - R3D: The aspect ratio of anamorphic **.r3d** footage is not displayed correctly when added to the timeline.

Soft Effects

- BUG ID 175574 - Soft Effects: Undo and redo of **Properties** panel changes can be unreliable if a soft effect delete is in the same undo stack.
- BUG ID 50442 - TimeWarp: Applying a TimeWarp to a clip instance occasionally causes the associated sequence bin item to display an error.
- BUG ID 50441 - TimeWarp: Applying a TimeWarp to clip instances retimed to values other than 100% does not work as expected.
- BUG ID 49771 - Text/Burn-in: Nuke Studio doesn't warn you if the font used in an effect could not be found.
- BUG ID 49298 - Burn-in: The Burn-in effect does not auto-update when switching between sequences until the playhead is moved.
- BUG ID 49112 - Dissolve transitions do not work as expected in Custom soft effects, based on the examples provided here:

```
<install_directory>/pythonextensions/site-packages/hiero/examples/custom_soft_effect.py
```

- BUG ID 48970 - Burn-in: Burn-in elements are not updated automatically when the underlying metadata is updated.

As a workaround, either change the frame displayed in the Viewer or choose an alternate element from the dropdown controls.

- BUG ID 48878 - Burn-in: The Burn-in effect is currently a gizmo and cannot be cloned on the timeline.
- BUG ID 48098 - Adding a transition when a Text effect containing an expression is on a track above, causes text rendering to fail during the transition.
- BUG ID 48097 - Adding a transition when a Text effect containing an expression is on a track above, causes the text size to reset.
- BUG ID 47075 - Exporting sequences containing clip-level Text effects using the **[frame]** expression writes incorrect frame numbers.

- BUG ID 45835 - Expression links are incorrectly allowed between node and soft effect controls in the Properties panel, if the node and effect names are identical.
- BUG ID 42438 - Effects are only visible in the Viewer if there is a clip instance below them in the timeline.
- BUG ID 42401 - Renaming a soft effect does not update the clip instance until you click in the timeline.
- BUG ID 42307 - Adding soft effects at clip level, using **Open In > Timeline View**, is only available using the toolbar button on the timeline panel. The right-click **Effects** menu is currently disabled.

Timeline

- BUG ID 43913 - Locking a track currently prevents adding clip instances from the locked track to the Viewer input buffers. You can still open clip instances in the various right-click **Open In** options and access clip instance metadata.
- BUG ID 41745 - It is not currently possible to drag-and-drop a clip to a new track between or below existing tracks.

As a workaround, drag the clip to a new top-level track and then manually move the track to the required position.

- BUG ID 27484 - It is not currently possible to alter the **Output Resolution** of clips opened using the right-click **Open in Timeline** option.

Windows Only

- BUG ID 49339 - Soft Effects: The background on Burn-in effects, when enabled, alters size depending on the timecode displayed.
- BUG ID 28701 - Nuke Studio cannot currently parse Unicode characters during export.

Miscellaneous

- BUG ID 200015 - Selecting multiple bin clips can cause the right-click menu to respond slowly.
- BUG ID 167919 - Localization: Re-importing clips into the Node Graph or project bin multiple times retains the original localization policies settings.
- BUG ID 50490 - Audio: Zooming in on a waveform displays a **Failed to decode audio** error in the timeline.
- BUG ID 50102 - Adding a custom Hiero window to a workspace and then saving it as the Nuke default workspace causes Nuke to crash on start up.
- BUG ID 46235 - Comps with relative paths are not currently working when imported into the project.
- BUG ID 42462 - Cache pausing stops working if any change is made to the timeline.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

As Nuke develops, we sometimes have to make changes to the API and 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 plugins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	10.0v1 to 10.0v2	API and ABI		
Point	10.0v1 to 10.5v1	API	●	
Major	10.0v1 to 11.0v1	-	●	●

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

There are no bug fixes in this release.

Release Notes for Nuke and Hiero 10.5v4

Copyright © 2018 The Foundry Visionmongers Ltd.

Release Date

4 May 2017

Qualified Operating Systems

- Mac OS X 10.9 (Mavericks) or 10.10 (Yosemite)
- Windows 7 or Windows 8 (64-bit only)
- CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

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. You need to have:

- an NVIDIA GPU with compute capability 2.0 (Fermi) or above. A list of the compute capabilities of NVIDIA GPUs is available at www.nvidia.co.uk/object/cuda_gpus_uk.html.



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 4.2 or above.



NOTE: In order to use R3D GPU debayering in the Compositing environment, CUDA 6.0 (or higher) is required.

- On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Drivers from April 2012 onward support CUDA 4.2.

Go to <http://www.nvidia.com/Download/Find.aspx?lang=en-us> for more information.

- On Mac, the CUDA driver is separate from the NVIDIA graphics driver and must be installed, if you don't have it already. The minimum requirement for CUDA 4.2 is driver version 4.2.5, which can be downloaded from www.nvidia.com/drivers.



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

- an AMD FirePro GPU on late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5, running OS X 10.9.3 'Mavericks', or later.

Late 2013 and Mid 2015 Mac Pros Only

Nuke supports GPU-enabled nodes on the late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5 (running OS X 10.9.3 'Mavericks', or later), including a new **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



NOTE: To ensure you get the best performance from OpenCL GPUs on late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5, we recommend updating Mavericks to 10.9.5, or above for full functionality. However:

- If you're running an earlier version of Mac OS X than 10.9.5 and processing images greater than 4 mega pixels resolution, VectorGenerator, Kronos, and MotionBlur do not support GPU acceleration.
- If you're running an earlier version of Mac OS X than 10.9.4, Kronos and MotionBlur do not support GPU acceleration.

New Features

There are no new features in this release.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 132856 - OCIO CDLTransform: The **read from file** and **cccid** controls did not work as expected.

- BUG ID 148383 - Expressions: Holding **Shift** and then dragging the animation icon in a node's **Properties** panel did not copy expressions correctly.
- BUG ID 154814 - Timeline: Importing multiple EDL tracks using **New Track > New Track(s) from EDL** created the tracks in reverse order.
- BUG ID 164572 - DeepWrite: Leaving the **file type** control blank caused Nuke to crash.
- BUG ID 208545 - OCIO CDLTransform: CDLs with no ColorCorrection **id** value set caused Nuke to become unresponsive.
- BUG ID 253481 - Export: Adding additional nodes to an export track did not work as expected.
- BUG ID 270344 - Switch: Disabling a Switch node did not pass the default input down the node tree.
- BUG ID 271332 - Monitor Output: Blackmagic Decklink Studio 2 cards distributed colors slightly differently between the 8-bit and 10-bit modes.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

As Nuke develops, we sometimes have to make changes to the API and 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 plugins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	10.0v1 to 10.0v2	API and ABI		
Point	10.0v1 to 10.5v1	API	●	
Major	10.0v1 to 11.0v1	-	●	●

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

There are no bug fixes in this release.

Release Notes for Nuke and Hiero 10.5v3

Copyright © 2018 The Foundry Visionmongers Ltd.

Release Date

4 April 2017

Qualified Operating Systems

- Mac OS X 10.9 (Mavericks) or 10.10 (Yosemite)
- Windows 7 or Windows 8 (64-bit only)
- CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

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. You need to have:

- an NVIDIA GPU with compute capability 2.0 (Fermi) or above. A list of the compute capabilities of NVIDIA GPUs is available at www.nvidia.co.uk/object/cuda_gpus_uk.html.



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 4.2 or above.



NOTE: In order to use R3D GPU debayering in the Compositing environment, CUDA 6.0 (or higher) is required.

- On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Drivers from April 2012 onward support CUDA 4.2.

Go to <http://www.nvidia.com/Download/Find.aspx?lang=en-us> for more information.

- On Mac, the CUDA driver is separate from the NVIDIA graphics driver and must be installed, if you don't have it already. The minimum requirement for CUDA 4.2 is driver version 4.2.5, which can be downloaded from www.nvidia.com/drivers.



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

- an AMD FirePro GPU on late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5, running OS X 10.9.3 'Mavericks', or later.

Late 2013 and Mid 2015 Mac Pros Only

Nuke supports GPU-enabled nodes on the late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5 (running OS X 10.9.3 'Mavericks', or later), including a new **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



NOTE: To ensure you get the best performance from OpenCL GPUs on late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5, we recommend updating Mavericks to 10.9.5, or above for full functionality. However:

- If you're running an earlier version of Mac OS X than 10.9.5 and processing images greater than 4 mega pixels resolution, VectorGenerator, Kronos, and MotionBlur do not support GPU acceleration.
- If you're running an earlier version of Mac OS X than 10.9.4, Kronos and MotionBlur do not support GPU acceleration.

New Features

There are no new features in this release.

Feature Enhancements

- BUG ID 266967 - Monitor Output: A new **use video legal range** control has been added to the compositing Viewer **Properties** panel. Enabling the checkbox transforms monitor output to the legal video range.

Bug Fixes

- BUG ID 143352 - Denoise: Moving the analysis region outside the frame bounding box caused Nuke to crash.

- BUG ID 163170 - Custom panels docked in the wrong pane when added using the button in the top-left of the pane.
- BUG ID 240564 - Calling node **dependencies()** from the Script Editor sometimes failed with expression-linked nodes.
- BUG ID 241829 - Create Comp: Retimed clip instances produced comps with a one-frame offset.
- BUG ID 242150/264672 - Timeline: The keyboard shortcuts to nudge a clip instance between tracks (**Alt+** and **Alt+,**) did not work as expected.
- BUG ID 249050 - PositionToPoints: Connecting a Viewer to a PositionToPoints node in a customer script caused Nuke to crash.
- BUG ID 253488 - Export: Track names containing hyphens did not export correctly.
- BUG ID 266188 - Export: The **Version token number** control only allowed a two-digit maximum, rather than the expected four digits.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

As Nuke develops, we sometimes have to make changes to the API and 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 plugins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	10.0v1 to 10.0v2	API and ABI		
Point	10.0v1 to 10.5v1	API	●	
Major	10.0v1 to 11.0v1	-	●	●

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

There are no bug fixes in this release.

Release Notes for Nuke and Hiero 10.5v2

Copyright © 2018 The Foundry Visionmongers Ltd.

Release Date

17 February 2017

Qualified Operating Systems

- Mac OS X 10.9 (Mavericks) or 10.10 (Yosemite)
- Windows 7 or Windows 8 (64-bit only)
- CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

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. You need to have:

- an NVIDIA GPU with compute capability 2.0 (Fermi) or above. A list of the compute capabilities of NVIDIA GPUs is available at www.nvidia.co.uk/object/cuda_gpus_uk.html.



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 4.2 or above.



NOTE: In order to use R3D GPU debayering in the Compositing environment, CUDA 6.0 (or higher) is required.

- On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Drivers from April 2012 onward support CUDA 4.2.

Go to <http://www.nvidia.com/Download/Find.aspx?lang=en-us> for more information.

- On Mac, the CUDA driver is separate from the NVIDIA graphics driver and must be installed, if you don't have it already. The minimum requirement for CUDA 4.2 is driver version 4.2.5, which can be downloaded from www.nvidia.com/drivers.



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

- an AMD FirePro GPU on late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5, running OS X 10.9.3 'Mavericks', or later.

Late 2013 and Mid 2015 Mac Pros Only

Nuke supports GPU-enabled nodes on the late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5 (running OS X 10.9.3 'Mavericks', or later), including a new **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



NOTE: To ensure you get the best performance from OpenCL GPUs on late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5, we recommend updating Mavericks to 10.9.5, or above for full functionality. However:

- If you're running an earlier version of Mac OS X than 10.9.5 and processing images greater than 4 mega pixels resolution, VectorGenerator, Kronos, and MotionBlur do not support GPU acceleration.
- If you're running an earlier version of Mac OS X than 10.9.4, Kronos and MotionBlur do not support GPU acceleration.

New Features

There are no new features in this release.

Feature Enhancements

- BUG ID 233227 - Monitor Output: The AJA driver version has been updated to 12.x on all platforms.

Bug Fixes

- BUG ID 152981 - SplineWarp: Flipping a spline and moving some points corrupted the undo stack in a customer script.
- BUG ID 159942 - Monitor Output: Switching between 8-bit and 10-bit output produced precision and scaling inconsistencies.

- BUG ID 161916 - Windows only: Reading some **.mov** files multiple times caused Nuke to become unresponsive.
- BUG ID 163561 - Mac OS X only: Mousing over the compositing Viewer stopped it updating under El Capitan (10.11).
- BUG ID 174710 - Audio: Moving In and Out points on the timeline produced audio scrubbing errors.
- BUG ID 183288/200196 - Mac OS X only: Moving the cursor over the Viewer or frame slider caused a drop in frame rate under El Capitan (10.11).
- BUG ID 217352 - Roto/RotoPaint: Cusping and smoothing B-Spline points did not work as expected.
- BUG ID 217365 - Mac OS X only: Zooming using a Wacom tablet was unpredictable under El Capitan (10.11).
- BUG ID 217906 - Mac OS X only: Entering / (forward slash) in **Project Settings > Export > Project Root** corrupted the path mapping in the **Export** dialog.
- BUG ID 224244 - Write: The mov64 writer encoded DNxHD metadata incorrectly.
- BUG ID 224645 - Linux only: Disabling a Monitor Output audio device in the **Preferences** caused Nuke to crash on playback.
- BUG ID 224801 - ScanlineRender/RayRender: Adding a FrameHold or TimeOffset node after a Scene node disabled any lights within that scene.
- BUG ID 228369 - Monitor Output: The color range was incorrect for some inputs with video mode enabled in Nuke Studio's Monitor Output controls.
- BUG ID 228388 - Monitor Output: The color range in 10-bit output was incorrect.
- BUG ID 232230 - Linux only: Monitor Output from AJA Kona 3G and Kona 4 cards produced audible clicking during playback.
- BUG ID 232743 - Monitor Output: 10-bit output from Blackmagic 4K Extreme cards was incorrect.
- BUG ID 233213 - Mac OS X only: Kona 3G cards were not recognized under Yosemite (10.10.5) with the latest AJA driver installed.
- BUG ID 235438 - Track Blending: Slipping a clip instance below a blended track displayed an **input color space index out of range** warning in the Viewer.
- BUG ID 240120 - Write: The mov64 writer encoded DNxHD files as **Video Range** when **Full Range** was specified in the Write **Properties**.
- BUG ID 241528 - Create Comp: Adding a Transform soft effect to a blended track occasionally cropped the blended output incorrectly.
- BUG ID 241786 - Soft Effects: Keyframes were misplaced in exported **.nk** scripts when the timeline contained negative retimes and dissolves.
- BUG ID 241833 - Monitor Out: 8-bit and 10-bit output was inconsistent between the compositing and timeline Viewers for non-grayscale images.
- BUG ID 241908 - Linux only: Enabling **Performance > Caching > clear timeline Viewer cache when the application goes to the background** in the **Preferences**, occasionally caused Nuke

Studio to freeze when switching application if the playback cache contained a large amount of frames.

- BUG ID 242147 - Monitor Out: Blackmagic cards produced inconsistent results for 8-bit output.
- BUG ID 243096 - Licensing: Hiero did not launch with a Nuke Studio license.
- BUG ID 244661 - Roto/RotoPaint: Pressing the cusp keyboard shortcut (**Shift+Z**) after a control point has been cusped already caused the maximum step counter to overflow, resulting in more presses to smooth (**Z**) the point to its original state.
- BUG ID 245442 - Export: Shot templates containing multiple Write nodes placed all Writes vertically with overlapping connections in the resulting Nuke script.
- BUG ID 245458 - Linux only: The frame rate of **.exr** clip instances on the timeline was unreliable during playback.
- BUG ID 246166 - Export: Batch export of comps occasionally didn't tag all the items correctly.
- BUG ID 246172 - The first frame of **.avi** clip instances was black until you scrubbed through the timeline and then returned to the first frame.
- BUG ID 246933 - Timeline: The track height adjustment cursor was incorrect.
- BUG ID 246942 - Export: Certain clip instances were retimed incorrectly after export from the timeline.
- BUG ID 248113/248294 - Monitor Output: Blackmagic DeckLink Mini cards produced flickering or striped output on playback.
- BUG ID 248443 - Monitor Output: Blackmagic DeckLink Mini and 4K Extreme cards produced incorrect color output.
- BUG ID 248497 - Monitor Output: 10-bit output from Blackmagic DeckLink 4K Extreme and AJA Kona 3G cards did not appear as expected in the Compositing environment.
- BUG ID 248755 - Monitor Output: 10-bit output from Blackmagic DeckLink 4K Extreme cards produced gray spots in the Compositing environment.
- BUG ID 249380 - Export: **Process as Shots** using the **Basic Nuke Shot** preset occasionally didn't tag all shots correctly.
- BUG ID 249433 - Curve Editor: Deleting a keyframe and then undoing the action didn't work as expected.
- BUG ID 249763 - Export: Metadata was written incorrectly when exports contained negative retimes.
- BUG ID 249921 - Monitor Output: Blackmagic DeckLink 4K Extreme output from the Compositing environment caused Nuke to become unresponsive after a few minutes.
- BUG ID 250041 - Monitor Output: Output was incorrect on the monitor for images containing color outside the 0-1 range in the Timeline environment.
- BUG ID 250180 - Export: Tags were not added to clips after export and **Build Track > From Export Tag** was disabled.

- BUG ID 250510 - Create Comp: Exporting a modified comp and skipping the option to render the latest comp displayed a **Track_Alpha.a is not a layer or channel name** error message.
- BUG ID 252418 - Hiero only: Some Nuke Studio functions were enabled incorrectly in Hiero.
- BUG ID 262809 - Export: Shot templates containing multiple Write nodes did not append an index number to the Write nodes, resulting in a **Duplicate write node name** error.
- BUG ID 263002 - Export: Copying and pasting multiple Write nodes into the shot template placed all Writes vertically with overlapping connections in the resulting Nuke script.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

As Nuke develops, we sometimes have to make changes to the API and 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 plugins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	10.0v1 to 10.0v2	API and ABI		
Point	10.0v1 to 10.5v1	API	●	
Major	10.0v1 to 11.0v1	-	●	●

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 243563 - The **knob.splitView()** function changed incorrectly between Nuke 9 and Nuke 10 when passing a view in as an index (passing a string was unaffected). In Nuke 10, an index 0 referred to the first view in a script, whereas in Nuke 9, an index of 1 referred to the first view. As a result, in Nuke 10, **knob.splitView()** could create a value for an extra view that didn't exist. From Nuke 10.0v6 onward, **knob.splitView()** will behave the same as the Nuke 9 implementation.

The following Python functions are affected:

Array_Knob		
setSingleValue(b, view)	splitView(view)	unsplitView(view)
setValue(value, index, time, view)	setValueAt(value, time, index, view)	value(index, view, time)
valueAt(time, index, view)	setKeyAt(time, index, view)	removeKey(index, view)
removeKeyAt(time, index, view)	isKey(index, view)	isKeyAt(time, index, view)
setAnimated(index, view)	isAnimated(index, view)	clearAnimated(index, view)
setExpression(expression, channel=-1, view=None)	animations(view)	animation(chan, view)
copyAnimation(channel, curve, view)	copyAnimations(curves, view)	splitView(view)
unsplitView(view)		
Node		
metadata(key, time, view)		
RootNode		
addView(name, color)	deleteView(name)	setView(name)

Release Notes for Nuke and Hiero 10.5v1

Copyright © 2018 The Foundry Visionmongers Ltd.

Release Date

07 December 2016

Qualified Operating Systems

- Mac OS X 10.9 (Mavericks) or 10.10 (Yosemite)
- Windows 7 or Windows 8 (64-bit only)
- CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

Requirements for Nuke's GPU Acceleration

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

- an NVIDIA GPU with compute capability 2.0 (Fermi) or above. A list of the compute capabilities of NVIDIA GPUs is available at www.nvidia.co.uk/object/cuda_gpus_uk.html.



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 4.2 or above.



NOTE: In order to use R3D GPU debayering in the Compositing environment, CUDA 6.0 (or higher) is required.

- On Windows and Linux, CUDA graphics drivers are bundled with the regular drivers for your NVIDIA GPU. Drivers from April 2012 onward support CUDA 4.2.

Go to <http://www.nvidia.com/Download/Find.aspx?lang=en-us> for more information.

- On Mac, the CUDA driver is separate from the NVIDIA graphics driver and must be installed, if you don't have it already. The minimum requirement for CUDA 4.2 is driver version 4.2.5, which can be downloaded from www.nvidia.com/drivers.



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

- an AMD FirePro GPU on late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5, running OS X 10.9.3 'Mavericks', or later.

Late 2013 and Mid 2015 Mac Pros Only

Nuke supports GPU-enabled nodes on the late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5 (running OS X 10.9.3 'Mavericks', or later), including a new **Enable multi-GPU support** option. When enabled in the preferences, GPU processing is shared between the available GPUs for extra processing speed.



NOTE: To ensure you get the best performance from OpenCL GPUs on late 2013 Mac Pro 6,1 and mid 2015 Mac Pro 11,5, we recommend updating Mavericks to 10.9.5, or above for full functionality. However:

- If you're running an earlier version of Mac OS X than 10.9.5 and processing images greater than 4 mega pixels resolution, VectorGenerator, Kronos, and MotionBlur do not support GPU acceleration.
- If you're running an earlier version of Mac OS X than 10.9.4, Kronos and MotionBlur do not support GPU acceleration.

New Features

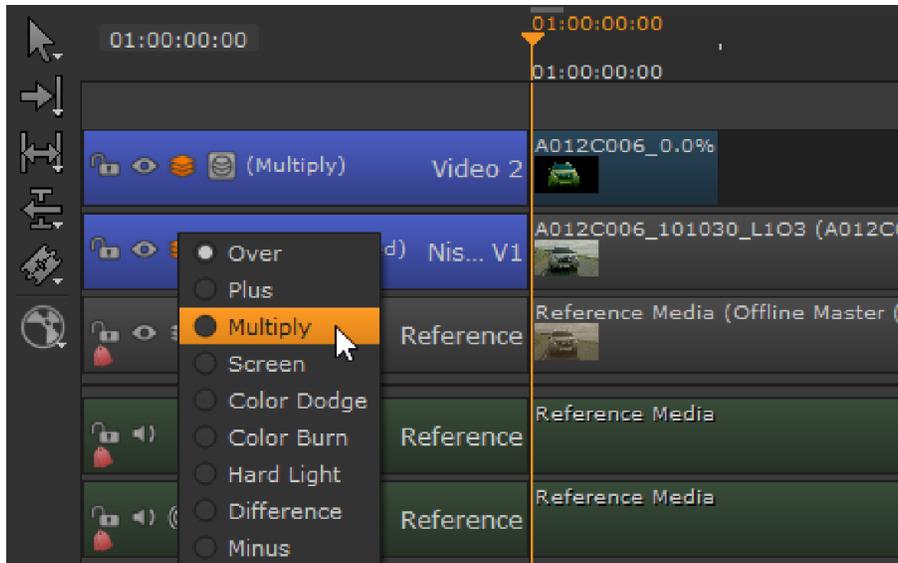
Blend Tracks

Nuke Studio's track blending feature now allows you to apply several new blend modes, as well as the existing **over** blend. Additionally, a new masking feature has been implemented to limit the selected blend function to only those areas covered by the image's alpha channel.

See <https://youtu.be/DUTdW6CyDwM> for more information.

You can still designate blend tracks using the right-click **Editorial** menu, but track headers now feature buttons to turn blending on and off without using the menu.

- Click the **Blend**  icon to toggle blending on and off.
- Click and hold the **Blend**  icon to select the blend mode.



- Click the **Mask**  icon to toggle alpha masking on and off. The **Mask** feature limits the effect of the blend to just those areas covered by the alpha channel in the blend image.

Create Comp

Nuke scripts created from the timeline now maintain concatenation, and are laid out more neatly. The total number of nodes is also reduced as we have removed Constant and Copy nodes, and swapped the FrameRange and AppendClip nodes for TimeClip and Merge nodes.

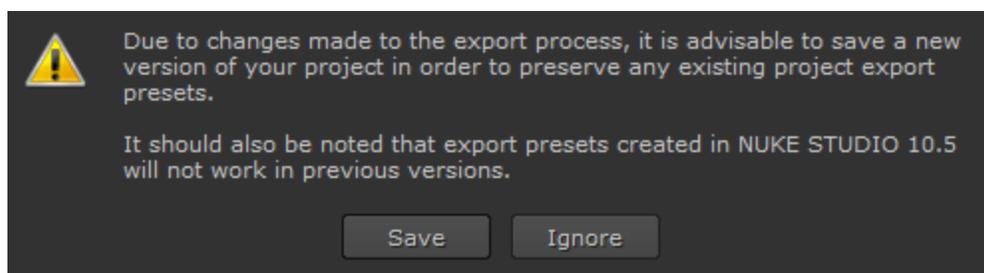
See <https://youtu.be/W&uFhsvtaug> for more information.

Export

- Nuke Studio's **Export** dialog has been re-arranged for clarity and ease of use. The core functionality is unchanged, but the new layout improves visibility and uses the available space more efficiently.

See <https://youtu.be/AGUDo1sCUCw> for more information.

- BUG ID 234898 - Export: Loading a project from an earlier version of Nuke Studio displays a warning, suggesting you save a new version of the project before continuing.





NOTE: The new version is not compatible with earlier versions of Nuke Studio.

- 153233 - Versioning: Writing a new version of a clip instance now creates a corresponding new folder in the export path, if the folder doesn't already exist.

Format and Resolution Improvements

Working with multiple formats and resolutions is now much easier. Now you can easily change the resolution format of your timeline and maintain any transforms or crop soft effects to match the new timeline resolution.

We have also changed the options for the interpretation of clip instances on the timeline to be more intuitive, using the timeline **Properties** panel, which defaults to **None**, maintaining the timeline resolution. These options also carry over to the **Export** dialog where you can decide at what resolution you want to render your comps.

See <https://youtu.be/DgRxgKQvbsQ> for more information.

RayRender

- BUG ID 233034 - A new Transmission shader has been added, found under **3D > Shader**, which adds support for transparent shadows.

Feature Enhancements

- BUG ID 152134 - Write: Rendering now creates the necessary directories as specified in the Write node's **file** control, if they don't exist.
- BUG ID 153528 - Nuke, Nuke Studio, and Hiero now support Apple ProRes 4444 XQ encoding.
- BUG ID 177736 - Export: The **Export** dialog now includes the **do not attach prefix** option for **.exr** files.
- BUG ID 177737 - Export: The **Export** dialog now includes the **interleave** option for **.exr** files.
- BUG ID 198597 - Timeline: Nuke Studio now includes reformatting controls for clip instances on the timeline in the **Properties** tab. You can also set the behavior for new clip instances at **Project Settings** level and **Preferences** level. The **Project Settings** determine how clips are formatted in new sequences, and the **Preferences** determine how clips are formatted in new projects.
- BUG ID 215257 - Channels: Nuke now sorts the RGBA layer first by default. To process channels using the legacy method, set the `NUKE_LEGACY_CHANNEL_SORTING` environment variable.
- BUG ID 239202 - Export: You can now define which Write node in your export structure you want to use as your main output for the timeline using the **Content** menu > **Timeline Write Node**

dropdown. The Write node selected is connected to the Viewer in the resulting script and is also used to render any comp containers in the sequence.

Bug Fixes

- BUG ID 140401 - Roto: Enabling **downrez** caused B-spline points to jump to the lower-left corner of the Viewer when the Roto node was disconnected.
- BUG ID 144541 - Roto: Drawing/editing a spline in downrez mode, with the Roto node disconnected from the Viewer, produced unexpected results.
- BUG ID 150101 - Gizmos/Groups: Enabling **downrez** caused handles to jump to the lower-left corner of the Viewer.
- BUG ID 150935 - Export: Shot exports did not apply clip instance reformat size changes by default.
- BUG ID 151049 - Versioning: Selecting **Version > Version Up/Down** on an empty sequence caused Nuke Studio to crash.
- BUG ID 151907 - RotoPaint: Drawing or editing a spline in **downrez** mode when the RotoPaint node was not connected directly to a Viewer, produced unexpected results.
- BUG ID 152695 - Monitor Output: 8-bit and 10-bit color conversion was sometimes inaccurate, causing a slight color shift.
- BUG ID 154342 - ModifyMetaData: Adding a ModifyMetaData node to the node tree broke concatenation.
- BUG ID 155479 - Export: The **{projectroot}** token added **//** (forward slashes) to the path when chosen from the file browser.
- BUG ID 161910 - Windows only: Rendering **.mov** files from the timeline was very slow in projects with multiple cuts.
- BUG ID 162519 - mov64: The first frame of files containing the **moov** atom were not read correctly.
- BUG ID 162892 - QuickTime: Certain files written with both the mov32 and mov64 writers appeared offset by 20 frames when compared.
- BUG ID 162950 - Playback speed occasionally dropped significantly, jumping to an un-cached region of the timeline.
- BUG ID 163120 - Export: Tags were added to exported clips when they were added to the render queue, rather than when the export was completed successfully.
- BUG ID 172943 - Deep: Changing a DeepExpression while the node was attached to a Viewer caused Nuke to crash.
- BUG ID 176330 - Blend Tracks: Tracks in Viewer buffer B were not blended as expected.
- BUG ID 185405 - OCIO: Closing a comp using **File > Close Comp** discarded any OCIO config settings that were applied in the **Project Settings**.
- BUG ID 194899 - Export: The DWAA/DWAB **compression** controls were not displayed correctly.

- BUG ID 196651 - QuickTime: Reading **.mov** files containing annotation (not those created by Nuke Studio exports) caused Nuke to crash.
- BUG ID 201436 - Export: Nuke Studio added an extra **/** (forward slash) in export paths specified using the **Choose** button.
- BUG ID 202140 - Adding a ModifyMetadata node occasionally caused unexpected cropping in the compositing Viewer.
- BUG ID 207336 - Python: Opening a sequence created through Python in the Script Editor caused Nuke Studio to crash.
- BUG ID 215394 - Export: Using the **{ext}** token to create or save an export structure for two exports of different formats in the same folder with same name did not work as expected.
- BUG ID 216023 - Windows only: Using the root of a drive for the **{projectroot}** variable was ignored for Create Comp operations.
- BUG ID 217362 - Write: Setting the **file type** control to **mov** did not enable the **Advanced** controls for the default **Apple ProRes 4444** codec.
- BUG ID 228379 - Monitor Output: Video mode limited colors in RGB space, rather than in the expected colorspace.
- BUG ID 229556 - RayRender: Rebuilding AOVs from beauty passes did not match the **rgba** output of RayRender.
- BUG ID 229597 - RayRender: Color information was missing from the **direct diffuse** AOV.
- BUG ID 229734 - Monitor Output: 12-bit output was incorrect with some cards.
- BUG ID 230994 - Text: Adjusting a transform Pythonically caused Nuke to crash.
- BUG ID 231019 - Timeline: Playback was muted incorrectly if mute was active when playback stopped previously.
- BUG ID 231443 - ModifyMetaData: Groups containing ModifyMetaData nodes caused Nuke to crash on exit.
- BUG ID 232553 - Timeline Viewer: Certain rows of pixels were not decoded correctly for some **.tiff** files.
- BUG ID 233744 - Monitor Output: The selected output resolution changed when playback started.
- BUG ID 233797 - Create Comp: Non-blended track items with a **Fade In** transition applied, faded from the track below, rather than from black.
- BUG ID 234744 - Blend Tracks: The default track header size was too small to contain the new blend buttons and the track name.
- BUG ID 235451 - Linux only: The **mov32 encoding not available on Linux** warning appeared too often when creating **.mov** export presets.
- BUG ID 235545 - Create Comp: Track-level soft effects did not include Backdrop nodes in the comp.
- BUG ID 235583 - Create Comp: Not all nodes associated with a disabled track item were disabled in the resulting comp.

- BUG ID 235693 - TimeClip: Values of **1** for the **frame rangelast** or **original rangelast** controls were reset to **100** when a script was reloaded.
- BUG ID 239079 - Create Comp: Scrubbing the playhead on comps containing retimed blend tracks caused Nuke Studio to crash.
- BUG ID 239212 - Export: Some **Process as Clips** export presets were merged together in the **Export** dialog.
- BUG ID 239291 - Soft Effects: Loading a legacy project that employed the deprecated **Flip, Flop**, or **Turn** options added multiple copies of soft effects, when the project was saved and then loaded in Nuke Studio 10.5.
- BUG ID 239295 - RayRender: Adding motion blur when using the AmbientOcclusion shader produced wireframe artifacts on the geometry.
- BUG ID 239341 - Create Comp: Disabled clip instances or tracks occasionally caused **Create Comp** to fail.
- BUG ID 239383 - QuickTime: The mov32 encoder did not present the correct timestamp for repeated frames when compared to mov64.
- BUG ID 239493 - Create Comp Special: Using the **Motion** retime method in the **Export** dialog produced incorrect results when compared to earlier versions of Nuke Studio.
- BUG ID 239964 - Export: The **Preview** file path under the shot template did not resolve folder paths, only file paths.
- BUG ID 241290 - Create Comp: Creating a comp with no Write node selected in the **Export** dialog failed, displaying an unclear error message.
- BUG ID 241297 - HieroPlayer: Left- or right-clicking on a track header caused HieroPlayer to crash.
- BUG ID 241492 - Create Comp: Metadata nodes in disconnected soft effect track layouts were connected to nodes in the previous track.
- BUG ID 241525 - Export: Enabling **Collate Shot Name** duplicated soft effects on the collated clip instance.
- BUG ID 241829 - Create Comp: Comps containing retimes were offset by one frame.
- BUG ID 241932 - Timeline: Attempting to delete empty spaces on the timeline caused Nuke Studio to crash.
- BUG ID 242111 - Mac OS X only: Adding dissolves to blended tracks occasionally dropped frames during the transition.
- BUG ID 242281 - Create Comp: Projects containing duplicated tracks or tracks with the same name displayed errors when creating comps.
- BUG ID 242521 - Create Comp: Adding multiple Transform effects to tracks in a comp did not fill the format correctly, resulting in lower tracks being visible in the comp.
- BUG ID 242895 - Localization did not work for clips with multiple versions.
- BUG ID 243335 - Export: Footage was rendered black when rendering with Apple ProRes (HQ, LT, PROXY) and several other codecs.

- BUG ID 243442 - Create Comp: The Burn-in effect occasionally displayed incorrect values for **hiero/clip** and **input/frame**.
- BUG ID 245022 - Mac OS X only: When building a track, all exported clips were separated rather than being compiled together, and only one track was created.

Developer Notes

Here are the changes relevant to developers. See **Help > Documentation** from the Nuke menu bar or www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

As Nuke develops, we sometimes have to make changes to the API and 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 plugins and/or make changes to the source code.

Release Type	Example	Compatibility	Recompile	Rewrite
Version	10.0v1 to 10.0v2	API and ABI		
Point	10.0v1 to 10.5v1	API	●	
Major	10.0v1 to 11.0v1	-	●	●

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

There are no bug fixes in this release.