Release Notes for Nuke and Hiero 10.0v6

Release Date

31 January 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 (see below and the Blink API documentation for caveats on CPU/GPU result consistency on Mac Pros).

Late 2013 and Mid 2015 Mac Pros Only

Nuke 10.0 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 159942 - Monitor Output: Switching between 8-bit and 10-bit output produced precision and scaling inconsistencies.
- 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 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 clicking sounds 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 241833 - Monitor Out: 8-bit and 10-bit output was inconsistent between the compositing and timeline Viewers for non-grayscale images.
- 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 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 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 250041 - Monitor Output: Output was incorrect on the monitor for images containing color outside the 0-1 range in the Timeline environment.

Known Issues and Workarounds

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

Known Issues Specific to Nuke 10.0

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

    As a workaround, in the Blackmagic **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**.
- BUG ID 228258 - Calling **fromScript()** on a knob that has not been added causes Nuke to crash.

- BUG ID 216806 - The public DD::Image interface for the OCIOColorSpace node cannot initialize certain values, and occasionally causes Nuke to crash.
- BUG ID 201193 - OCIO: Read node **Metadata** tabs occasionally include irrelevant **in** and **out** colorspace controls.
- BUG ID 201156 - Flipbook: 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 199990 - Linux only: 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 198430 - Windows only: Nuke cannot read DNxHD **.mxf** files that have spaces in the file name.
- BUG ID 196455 - Smart Vector Toolset: 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 195051 - RayRender: The Wireframe shader node, located in **3D** > **Shader** > **Wireframe**, is not supported by RayRender.
- BUG ID 195004 - RayRender: Custom lens shaders/projection modes are not currently supported.
- BUG ID 175605 - Smart Vector Toolset: Entering a partial file path in the SmartVector **file** control and then clicking the file browser button does not open the file browser.

  As a workaround, click **OK** on the error message and then click the file browser button again.
- BUG ID 174849 - RayRender: The Displacement shader node, located in **3D** > **Shader**, is not currently supported by RayRender.
- 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 163543 - Mac OS X 10.11 only: Dragging handles in the 3D Comp Viewer can be slow to respond.
- BUG ID 154342 - ModifyMetaData: Adding a ModifyMetaData node to the node tree breaks concatenation.

Known Issues Specific to Nuke Studio and Hiero 10.0

- BUG ID 219603 - OCIO: 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 200015 - Selecting multiple bin clips can cause the right-click menu to respond slowly.
- 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 167919 - Localization: Re-importing clips into the Node Graph or project bin multiple times retains the original localization policy settings.
- 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.

- BUG ID 155479 - Export: The **{projectroot}** token adds **//** (forward slashes) to the path when chosen from the file browser.

  As a workaround, manually delete a **/** (forward slash) before exporting.

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 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/macosx-cuda-6.5.18-driver.html.

• 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.

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 plug-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')

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 .**exr**s 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.

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 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 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 **Iop::sample()** call to get input pixels, such as LensDistortion, perform poorly when they are downstream of nodes using PlanarIop, 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 track items 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

• 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**.

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 **.exr**s 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 50442 - TimeWarp: Applying a TimeWarp to a track item occasionally causes the associated sequence bin item to display an error.
- BUG ID 50441 - TimeWarp: Applying a TimeWarp to track items 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 track item below them in the timeline.
- BUG ID 42401 - Renaming a soft effect does not update the track item 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 track items from the locked track to the Viewer input buffers. You can still open track items in the various right-click **Open In** options and access track item 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 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.

> NOTE: Node **Class()** names occasionally change between major releases, such as Nuke 9 to Nuke 10. 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 10.0v5

Release Date

17 November 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)

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 (see below and the Blink API documentation for caveats on CPU/GPU result consistency on Mac Pros).

Late 2013 and Mid 2015 Mac Pros Only

Nuke 10.0 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 132922 - DeepRead: A new check box, **black outside**, has been added to prevent streaking in the Viewer where the bounding box touches non-black pixels at edges.

Bug Fixes

- BUG ID 159600 - OCIO: Colorspace preferences were not saved correctly.
- BUG ID 176557 - Read: Drop Frame timecode metadata was incorrect for **.dpx** files, when compared to other applications.
- BUG ID 195992 - Write: The mov64 **Photo - JPEG** codec did not match the source file color output.

- BUG ID 227287 - OCIO: Loading a customer script containing Python callbacks displayed **ValueError: A PythonObject is not attached to a node** on Read nodes.
- BUG ID 229438 - RayRender: The **near clip** value for the AmbientOcclusion shader node was not zero by default.
- BUG ID 233363 - OCIO: Updating the **default LUT settings** with **Project Settings** > **Color** > **color management** set to **Nuke**, only affected Read nodes once. Subsequent changes were ignored.
- BUG ID 240116 - Timeline: New tracks were occasionally assigned duplicate or inconsistent names.

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.

> NOTE: Node **Class()** names occasionally change between major releases, such as Nuke 9 to Nuke 10.
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> node class names and is located in **<install_directory>/plugins/nukescripts/** for reference.
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> 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 228076 - Mac OS X only: The PySide QtUiTools library was missing from the Nuke build.

Release Notes for Nuke and Hiero 10.0v4

Release Date

24 August 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)

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 (see below and the Blink API documentation for caveats on CPU/GPU result consistency on Mac Pros).

Late 2013 and Mid 2015 Mac Pros Only

Nuke 10.0 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

- BUG ID 225172 - Analytics: In an effort to further improve quality and reliability, from this release onward we'll ask you to allow us to collect usage statistics from the machines on which you license Nuke, NukeX, Nuke Studio, Hiero, and HieroPlayer. This usage information also assists our engineering team to resolve issues more quickly.

> 📝 NOTE: The port number used to communicate with The Foundry is 443, the same one used for uploading crash reports.

The first time you start an application, and on every major release, a dialog displays asking for permission for us to collect this information. You can enable or disable collection at any time in the **Preferences** under **Behaviors** > **Startup**.

> 📝 NOTE: This information is only collected for interactive sessions. Running applications in terminal mode or under render licenses does not upload data to The Foundry.

The following list shows the information we'll collect, if you give us permission to do so:

- Unique session ID
- Anonymous user key
- Application version string

- Application name
- If the session exited cleanly
- Operating system
- CPU Name
- Amount of GPU RAM
- Amount of RAM

- Session start time (GMT)
- Peak memory usage
- System OS version
- CPU Cores
- OpenGL driver version
- Memory speed

- Session duration (in seconds)
- Model
- MAC address
- GPU model name
- GPU driver version

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

- BUG ID 146829/171547 - Preferences: The **Panels** > **Script Editor** > **clear input window on successful script execution** option was missing.
- BUG ID 153082 - Timeline: Exporting offline track items did not create an **.nk** script.
- BUG ID 158090 - Windows only: Exporting with non-ASCII characters in file paths created incorrectly named folders.
- BUG ID 159236 - BlinkScript: Kernels that don't write to every pixel in the output filled the space with random values.
- BUG ID 161489 - Timeline: Exporting audio with handles did not include the requested frames.
- BUG ID 163989 - MatchGrade: Using **Match Graded Source** with different source and target resolutions caused Nuke to crash.
- BUG ID 176563 - ReadGeo: UV projection on to **.abc** geometry did not match projections on to Nuke primitives or **.fbx** geometry.
- BUG ID 176618 - Disconnecting a Constant node in a customer script caused Nuke to crash.
- BUG ID 177968 - OFlow: Adding animated transforms downstream of OFlow nodes caused Nuke to crash.
- BUG ID 195083 - Tracker: Setting **pre-track filter** to **median** caused Nuke to crash during tracking.
- BUG ID 195424 - Monitor Output: The last two frames were not displayed through the output device when the playhead passed over a cut on the timeline.
- BUG ID 196942 - RayRender: Textures connected to the **src** input of ModelBuilder were not rendered correctly.
- BUG ID 198422 - BlinkScript: A customer kernel that ran correctly on Windows did not run on Mac OS X.
- BUG ID 199072 - Mac OS X only: The **Copy Exporter** displayed an error when exporting to server locations.
- BUG ID 199702 - OFX: Undoing the deletion of an OFX plug-in, such as F_RigRemoval, caused Nuke to crash.
- BUG ID 199942 - ReadGeo: Entering a file path in the node properties and then undoing the action caused Nuke to crash.

- BUG ID 201166 - Soft Effects: Adding effects to blend track items that overlapped other track items caused Nuke Studio to crash.
- BUG ID 208346 - Timeline: The **Frame Rate** setting on an existing sequence was cleared after opening a new sequence.
- BUG ID 209024 - RayRender: Applying high **skew** values to geometry occasionally produced artifacts or grainy output.
- BUG ID 209025 - Running a customer script on dual-CPU machines with many cores caused Nuke to crash.
- BUG ID 215724 - Localization: Updates to source files were not rendered in the Viewer.
- BUG ID 215773 - Export: Sequence exports did not use the latest Nuke script for comp containers if the updated script had not been rendered to the timeline.
- BUG ID 216811 - Using all available threads on certain machines caused Nuke to become unresponsive or crash.
- BUG ID 217360 - Linux only: Nuke Studio and Hiero could not read a QuickTime ProRes 4444 (XQ) **.mov** file that loaded into Nuke correctly.
- BUG ID 217830 - RayRender: Certain scripts rendered pixels incorrectly, when compared to ScanlineRender output.
- BUG ID 218208 - Exporting a sequence containing offline clips and selecting **Export Offline** did not render black for missing frames.
- BUG ID 218238 - Create Comp: Importing a customer project caused Nuke Studio to crash.
- BUG ID 218513 - RayRender: The camera **near** and **far** clipping planes caused scaling issues in a customer scene.
- BUG ID 218558 - RayRender: Rendering beauty passes for geometry without UVs produced incorrect output.
- BUG ID 218656 - RayRender: The FillMat node did not produce the same results, when compared to ScanlineRender.
- BUG ID 219579 - RayRender: Adding a TimeOffset node to a scene rendered motion vectors incorrectly for static geometry.
- BUG ID 219582 - Export: Certain **.nk** scripts created by **Process as Sequence** did not render correctly in terminal mode.
- BUG ID 219585 - RayRender: Including a Normals node in the node tree produced inconsistent output, when compared to ScanlineRender.
- BUG ID 219912 - RayRender: Output didn't match ScanlineRender motion blur with high **shutter** values.
- BUG ID 219919 - RayRender: The **shutter offset** modes did not work as expected when **samples** was set to **0** or **1**.
- BUG ID 221283 - RayRender: Setting **projection mode** to **orthographic** did not render as expected.
- BUG ID 221604 - RayRender: Scaling geometry with **spherical** projection produced artifacts or black pixels.
- BUG ID 221606 - RayRender: Camera **scale z** controls did not work as expected.
- BUG ID 221915 - RayRender: Using Nuke's default camera with Project3D rendered geometry pink.
- BUG ID 224956 - RayRender: Rendering certain scripts containing overlapping geometry caused Nuke to become unresponsive.
- BUG ID 225006 - RayRender: Cameras set to **spherical** projection into Project3D nodes differed from ScanlineRender and PrmanRender output.

- BUG ID 225164 - RayRender: Motion blur rendered as if one fewer **sample** was used, when compared to ScanlineRender.
- BUG ID 225486 - Compositing environment: Nuke could not read file names that included hashes (#) when they were unrelated to frame padding.
- BUG ID 225730 - RayRender: Motion vectors generated from RayRender appeared inverted when the moving object was not clamped against the **near** plane.
- BUG ID 226856 - RayRender: The **depth** channel was calculated incorrectly.
- BUG ID 227093 - RayRender: Rendering motion vectors that depend on camera motion produced noise in the output.
- BUG ID 227469 - RayRender: Disabling **interpolate animation**, with motion blur **shutter** set to **3** and **samples** set to **5**, removed motion vector information from the output.
- BUG ID 228650 - RayRender: Disabling a FillMat node with a light in the scene caused Nuke to crash.
- BUG ID 228664 - RayRender: Using a FillMat node in combination with a Phong node produced inconsistent output, when compared to ScanlineRender.

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.

> **NOTE:** Node **Class()** names occasionally change between major releases, such as Nuke 9 to Nuke 10.
> 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 215232 - Python API: Calling **Clip.setPosterFrame()** didn't refresh the bin view.

Release Notes for Nuke and Hiero 10.0v3

Release Date

30 June 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)

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:

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With graphics drivers capable of running CUDA 4.2 or above.

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>
> - 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 145439 - Spreadsheet: Switching to a workspace that contains a spreadsheet now automatically populates the spreadsheet, when appropriate.
- BUG ID 148467 - Export: A new **{filepath}** token has been added to the shot template, which resolves the path to the media used in the export.

Bug Fixes

- BUG ID 152155 - Roto/RotoPaint: Creating, cusping, and then smoothing points on B-Splines produced poor results.

- BUG ID 155626 - Roto/RotoPaint: Copying and pasting a Roto or RotoPaint node and then adjusting a shape created keyframes automatically, even when autokey was disabled.
- BUG ID 157439 - Roto: Using the arrow keys to change frame, with splines selected in the Viewer, caused Nuke to crash.
- BUG ID 158696 - Export: Track items set to **Type** > **Disabled** in the timeline **Properties** panel created **.nk** scripts with the wrong format applied, if the **collate** options were enabled in the **Export** dialog.
- BUG ID 158893 - OCIO: Exporting bin items failed when **Use OCIO nodes when exporting in Nuke** was enabled in the **Project Settings** > **Color Management** tab.
- BUG ID 161633 - Convolve: Rendering scripts containing Convolve nodes from the command-line did not render the first frame.
- BUG ID 162171 - Alembic: Cameras imported from **.abc** files calculated **win_translate.y** incorrectly using the vertical aperture instead of the horizontal aperture.
- BUG ID 163183 - Export: Transcoding ProRes 4444 or ProRes XQ files to **.dpx** resulted in a one frame offset.
- BUG ID 163313 - Alembic: Replacing file paths referencing **.abc** file in an Axis node **Properties** panel caused Nuke to crash.
- BUG ID 163526 - Roto/RotoPaint: Feather handles in the Viewer were scaled proportionally to the downrez or proxy mode setting, resulting in large handles for some settings.
- BUG ID 163554 - Conforming: Importing certain **.aaf** files caused Nuke to crash.
- BUG ID 167265 - Versioning: Updating track items on long timelines to **Max Version**, without first **Scanning For Versions**, caused Nuke to crash.
- BUG ID 168785/176070 - Create Comp: Using a custom preset with **Create Comp Special** displayed an **unsupported operand type(s) for +=: 'int' and 'NoneType'** error in a customer project.
- BUG ID 174808 - RayRender: No motion vectors were generated for geometry animated using methods other than Nuke's transform controls.
- BUG ID 175375 - VectorGenerator: Viewing the **motion** channel from a VectorBlur node downstream of a Roto node caused Nuke to crash.
- BUG ID 176243 - Export: Timelines containing sequence-level annotations did not export correctly.
- BUG ID 194854 - OCIO: Setting the **gamma space** control to **REDLog** in Read nodes referencing **.r3d** files caused the Read node to error unretrievably.
- BUG ID 194880 - Soft Effects: Saving **none** in a **Preset** for the Burn-In effect did not work as expected.
- BUG ID 195638 - OCIO: Family names in OCIO nodes were serialized.
- BUG ID 196670 - RayRender: Adding lights with **cast shadows** enabled on scene geometry created artifacts.
- BUG ID 196684 - Timeline: Executing **New Track from XML** with certain **.xml** files caused Nuke to crash.
- BUG ID 197066 - Loading a customer Nuke Studio project referencing **.r3d** and **.arri** clips caused Nuke to crash.
- BUG ID 197564 - OCIO: Opening non-OCIO scripts occasionally applied the OCIO config specified in the **Preferences**.
- BUG ID 198247 - RayRender: Loading a customer script containing a RayRender node caused Nuke to become unresponsive.

- BUG ID 198311 - EXR: Reading in an **.exr** sequence occasionally altered or corrupted the channel order when using custom channel names.
- BUG ID 198361 - Soft Effects: Razoring track items and then retiming them allowed you to add effects that overlapped track item cuts, causing Create Comp to fail.
- BUG ID 198401 - RayRender: Using the Camera **skew** on the Y/Z axes produced incorrect output when compared with ScanlineRender.
- BUG ID 198562 - OFlow: Scrubbing the Viewer in scripts containing OFlow nodes reading extremely high frame ranges caused Nuke to crash.
- BUG ID 198588 - RayRender: Using combinations of transforms, such as **rotate/scale** and **rotate/skew**, rendered the scene at the wrong scale.
- BUG ID 198829 - OCIO: An **Illegal lut requested (270), maximum lut index is 100** error was occasionally printed in the terminal when opening and closing scripts.
- BUG ID 199031 - Monitor Output: Disabling audio before playback caused Nuke to crash.
- BUG ID 199173/201795 - Soft Effects: Adding multiple Text or OCIO effects occasionally caused dissolves between track items to playback incorrectly.
- BUG ID 199498 - Import: Using certain include and exclude patterns in the **Import Options** dialog caused Nuke to crash.
- BUG ID 199512 - RayRender: Setting the xyz transform **scale** to 0 produced incorrect output.
- BUG ID 199514 - RayRender: The transform order didn't match ScanlineRender output.
- BUG ID 199549 - Spreadsheets: Certain **.xml** files caused Nuke to crash on import.
- BUG ID 199681 - Soft Effects: Cutting and pasting effects did not work as expected.
- BUG ID 199951 - Keyboard Shortcuts: The timeline editing tool shortcuts (**Q**, **W**, **E**, **R**, and **T**) only worked in the first timeline view created.
- BUG ID 200161 - Export: Closing the **Additional Nodes** dialog and then adjusting other **Export** dialog controls occasionally caused Nuke to crash.
- BUG ID 200206 - OCIO: Read node controls were not set up correctly when the **colorspace** for the input file could not be found, even after choosing a different **colorspace** manually.
- BUG ID 200812 - MatchGrade: Clicking **Align Target to Source** caused Nuke to crash.
- BUG ID 200908 - Create Comp: Opening a comp, while rendering out a Write node in another comp, caused Nuke to crash.
- BUG ID 201150 - Localization didn't work as expected on bin clips if they were reconnected using the right-click **Clip** > **Reconnect Media** option.
- BUG ID 201153 - MatchGrade: Clicking **Analyze Reference Frames** occasionally caused Nuke to crash.
- BUG ID 201214 - Localization: Scripts containing multiple Read nodes pointing to very long image sequences were occasionally slow to open with certain localization settings.
- BUG ID 201222 - NVIDIA Multi-GPU: Convolve and ZDefocus performance did not improve when using two GPUs.
- BUG ID 201837 - Roto: Using the Zoom keyboard shortcuts **+** and **-** caused Nuke to become unresponsive.
- BUG ID 202068 - Soft Effects: Creating an effect with in and out markers active did not fill the entire marked range.

- BUG ID 202136 - Stereo: Correlating points between views in Roto or RotoPaint did not work as expected in downrez mode.
- BUG ID 207908 - Monitor Output: Setting the timeline Viewer playback to **Bounce** mode dropped frames in the monitor output.
- BUG ID 208029 - RayRender: Black, wireframe-like lines were rendered with a point Light in the scene and **cast shadow** enabled.
- BUG ID 208193 - Export: Exporting sequences from the Project bin with **Start Frame** set to **Custom** in the **Export** dialog did not include soft effects in the output.
- BUG ID 208209 - Soft Effects: Exporting using In/Out points failed when a soft effect outside the selected range was in an error state.
- BUG ID 208296 - Passing command-line arguments without spaces between them caused Nuke to crash.
- BUG ID 208353/208373 - RayRender: Enabling or disabling **cast shadow** and **receive shadows** for scene objects had no effect on the rendered output.
- BUG ID 208524 - RayRender: Interpolated motion blur occasionally contained gaps.
- BUG ID 208624 - Localization: Loading a customer **.nk** file with localization enabled caused Nuke to crash.
- BUG ID 208817 - Export: Animated soft effect keyframes were not respected during export.
- BUG ID 208933 - RayRender: Dark, horizontal lines appeared in the output of RayRender in a customer script.
- BUG ID 215268 - RayRender: Orthographic projection output didn't match ScanlineRender output when the **rotate z** control was set to 90.
- BUG ID 215474 - RayRender: Setting **projection mode** to **perspective** did not generate motion vectors.
- BUG ID 215478 - RayRender: Scripts containing VectorBlur nodes produced incorrect output.
- BUG ID 215479 - RayRender: Incorrect motion vectors were generated for geometry animated using methods other than Nuke's transform controls.
- BUG ID 215845 - Mac OS X: Sequences output through the built-in **Floating Window** monitor option exhibited tearing.
- BUG ID 216554 - RayRender: The green and blue channels were not output seperately in AOVs.
- BUG ID 216594 - Export: Track items exported using the Apple ProRes 4444 **.mov** codec occasionally rendered fewer frames than specified in the export.
- BUG ID 217010 - RayRender: Rendering geometry with no UVs and an image as texture did not work as expected.

Developer Notes

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www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

> NOTE: Node **Class()** names occasionally change between major releases, such as Nuke 9 to Nuke 10.
> 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")
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> 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 155088 - Adding a custom PySide panel occasionally caused Nuke to crash on exit.
• BUG ID 161320 - Dragging the contents of custom Python panels out of the panel bounds caused Nuke to crash.
• BUG ID 215774 - Roto/RotoPaint: **ShapeControlPoint()** was not accessible for B-Splines using Python.

Release Notes for Nuke and Hiero 10.0v2

Release Date

08 June 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)

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:

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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.

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• 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.

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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:

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• 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

• Windows only: Nuke no longer requires a local installation of QuickTime to work correctly.

Feature Enhancements

There are no feature enhancements in this release.

Bug Fixes

• BUG ID 146791 - Windows only: Nuke would not start without QuickTime installed.

Developer Notes

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www.thefoundry.co.uk/products/nuke/developers/100/ndkdevguide/appendixc/index.html for more information.

> NOTE: Node **Class()** names occasionally change between major releases, such as Nuke 9 to Nuke 10.
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> class has been modified. The **toolbars.py** file, used to create Nuke's node toolbar, contains all the current
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> As an example, between Nuke 9 and Nuke 10, the CameraShake node **Class()** changed from
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> icon="CameraShake.png")
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> ```

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 10.0v1

Release Date

27 April 2016

Qualified Operating Systems

• Mac OS X 10.9 (Mavericks) or 10.10 (Yosemite)

• Windows 7 or Windows 8 (64-bit only), with the latest version of QuickTime installed

• CentOS/RHEL 5 or CentOS/RHEL 6 (64-bit only)

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- 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 (see below and the Blink API documentation for caveats on CPU/GPU result consistency on Mac Pros).

Late 2013 and Mid 2015 Mac Pros Only

Nuke 10.0 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

AMD GPU Support

Similar to the work done for the late 2013 MacPro 6,1, Nuke now supports AMD OpenCL-only GPUs for mid 2015 MacBook Pros 11,5 or later.

ARRIRAW SDK

The ARRI SDK third-party library has been updated to version 5.1, which adds some new **color space** options and ADA-5 debayer controls.

Audio Scrubbing

Nuke Studio and Hiero's timeline now supports audio scrubbing, allowing you to synchronize audio and video more easily. Audio scrubbing is disabled by default, but you can enable it by right-clicking in the timeline tab and clicking **Audio** > **Audio Scrubbing** or by pressing **Ctrl**/**Cmd**+**Alt**+**S**.

ChromaKeyer

ChromaKeyer is a green and blue screen keyer developed for use as a soft effect in Nuke Studio's timeline environment. It can also take advantage of modern GPUs and multi-core CPUs to accelerate the keying process when used for compositing in Nuke's Node Graph.

Use the **screen color** selector to choose a color from the Source input to use as the blue/green screen color. To remove blue/green spill from the foreground object, use the **despill** controls to pick skin tones from the source. Use the **matte** parameters to improve the matte.

Multi-NVIDIA GPU Support

Nuke now supports multiple identical GPUs on a single machine. For example, if you have two GPUs in your machine that both have the name **Quadro K5000**, Nuke can use both of them for GPU-accelerated nodes, sharing the work equally between them if **enable multi-GPU support** is turned on in the Preferences.

> NOTE: If, for example, you have a **Quadro K5000** and a **GeForce GTX 580** on your machine, you can still choose which one to use for GPU acceleration, but the **enable multi-GPU support** option is hidden.

Most GPU-accelerated nodes utilize all the identical GPUs that they find, but the following nodes are limited to using no more than two identical GPUs only:

• MotionBlur

• Kronos

• VectorGenerator

• OFlow

RayRender (Beta)

Nuke now ships with another render node, RayRender, a ray-tracing renderer that traces a path from the camera, or virtual eye, to the light source pixel-by-pixel, rather than row-by-row, advancing down the picture like ScanlineRender.

RayRender generally produces very accurate reflections, but at the cost of processing time. You can use RayRender in the same way as ScanlineRender, it has the same inputs and shares some of the same controls as ScanlineRender.

> NOTE: RayRender does not support Nuke's Deep toolset, so use ScanlineRender if your script calls for Deep data. Additionally, RayRender cannot render sprite-based particles from NukeX's Particles system.

RayRender isn't quite as stable as we would like, but we still want to give you a chance to try it out, so we have included it as an unsupported feature in Nuke 10.0v1. We'll keep working on this feature, so keep an eye out for fixes in an upcoming maintenance release.

Please keep in mind that the RayRender node is in the beta phase and should not be used in production. Send any comments or feedback to the Nuke team at nuke-prerelease-private@thefoundry.co.uk.

Smart Vector Toolset

The Smart Vector Toolset allows you to work on one frame in a sequence and then use motion vector information to accurately propagate the paint throughout the rest of the sequence. The vectors are generated in the SmartVector node and then piped into the VectorDistort node, so you only need to render the motion vectors once.

The basic workflow is as follows:

1. Connect the SmartVector node to your footage and specify a file path in the node's **Properties** panel.

> NOTE: You can only write motion vectors to the **.exr** format.

2. Click **Render** to generate the necessary motion vectors.

> NOTE: The **vector detail** control defaults to 0.3, which should be fine for basic sequences with low detail, but you can adjust the slider as required. Higher values take longer to render, but can improve the result.

3. Locate a good reference frame in the sequence and add the required paint to the frame.
4. Add a VectorDistort node downstream from your corrections and then connect the SmartVector node to the **SmartVector** input.
5. Merge the alpha output of the VectorDistort node over the original footage to complete the comp.

Soft Effects

Nuke Studio and Hiero now include three new soft effects: BlinkScript, ChromaKeyer, and ColorCorrect. The BlinkScript and ColorCorrect effects work in the same way as the existing Nuke nodes. ChromaKeyer is a new Nuke luminance keyer with GPU acceleration. See ChromaKeyer for more information.

> NOTE: The BlinkScript effect has limited functionality compared to the full BlinkScript node from Nuke's Node Graph. The soft effect version only supports one input source and produces only one output, and you cannot publish kernels.

Transcode Performance Improvements

A new option, **Read All Lines (Where Possible)**, has been added to Nuke Studio and Hiero's **Export** dialog when transcoding from **.dpx** to **ProRes 4444** and **422**. The new option, enabled by default for **.dpx** to **ProRes 4444** and **422**, can improve performance for I/O heavy exports by reading whole **.dpx** files in one chunk, rather than line-by-line.

Feature Enhancements

Faster RotoPainting

The Paint tools in Nuke's RotoPaint node have been improved, including performance in general and iterative optimizations on multiple paint strokes.

Localization System Improvements

Nuke, Nuke Studio, and Hiero now employ the same improved localization workflow, controlled initially from the **Performance** > **Localization** preferences and then on a file-by-file basis. Improvements include:

• The localization process has been moved onto a background thread, meaning you can now continue to work while localization carries on in the background.

• When localizing Read nodes, the orange localized indicator bar on the node now updates in real-time, 'filling up' as the localization process is carried out.

• The **Cache** > **Localization** menu has been rewritten for clarity and now includes the following controls:

  • **Pause** - pauses all localization actions. All currently localized files are used during playback, and any localization actions in progress are paused.

  • **Always Use Source Files** - forces Nuke to use the source file from the original location, regardless of whether the file has been localized or not. All currently localized files remain on disk.

  • **Force Update** > **All** - forces all localized files to be checked against source files, and (where appropriate) re-localized if the source is newer than the localized versions.

  • **Force Update** > **Selected** - forces selected localized files to be checked against source files, and (where appropriate) re-localized if the source is newer than the localized versions.

  • **Delete Unused Local Files** - deletes any files from your localization directory that are not being used in the current session, freeing up useful space on disk.

• BUG ID 157070 - The Preferences now include an option to **never check for updated files**, forcing Nuke to use the localized versions of your source clips.

• BUG ID 160828 - Dragging localized bin clips to the Node Graph now reads the localized files, rather than the source files.

OpenEXR 2.2

The OpenEXR library that ships with Nuke, Nuke Studio, and Hiero has been updated to version 2.2, which includes the addition of DWAA/DWAB compression.

OpenColorIO

You can now apply OpenColorIO color transforms directly to Read inputs and before Write outputs, without the need to add OCIOColorspace nodes to your Node Graph. The **Color Management** options in the **Project settings** have been updated to govern this functionality. When **Nuke** is selected, Reads and Writes work the same as in previous versions of Nuke, with no integrated OCIO transforms.

When **OCIO** is selected:

• Reads and Writes use OCIO transforms, with no Nuke built-in LUTs applied to the image.

• Read and Write colorspace controls are populated with the list of colorspaces defined in your currently selected OCIO config.

• The **default LUT settings** menus are also populated with the list of colorspaces or display transforms defined in your OCIO config. The default value for each menu matches the defaults in a Nuke Studio project with the same config. These defaults can be overridden by Python callbacks.

• A new **working space** option has been added to the Project Settings. The **working space** allows you to change the colorspace that Nuke uses internally for its image processing. This automatically sets the 'in' colorspace of Write nodes and Viewer Processes, and the 'out' colorspace for Read nodes. This defaults to the scene **linear** role defined in your OCIO config.

• Nuke Studio-created comps no longer include automatically injected OCIOColorspace nodes. Instead, OCIO color management is automatically set in the comp's **Project Settings**, and the correct OCIO colorspace is set directly into the Read and Write nodes.

In addition, whether using **Nuke** or **OCIO** color management, it's now possible to override the default colorspace used for any Read or Write node using Python callbacks. See Developer Notes for more information.

Timeline Performance Improvements

Various performance improvements have been made to enhance customer experience when working with Nuke Studio and Hiero's timeline:

• Significant improvements in interactivity when performing edits in large or complex sequences, including major optimizations in the spreadsheet view.

• Improved memory handling, which previously tended to increase in the course of a session when working with large projects.

• The load time of large projects has been reduced.

• Improvements to the stability of playback. These improvements address causes of intermittent drops in performance, some cross-platform and others specific to Linux.

VectorBlur

Nuke's VectorBlur node has been re-implemented to provide GPU acceleration and improved CPU performance. Additionally, improvements have been made to the algorithm to reduce the hard edge artifacts that were common

between regions with different motion when using the existing VectorBlur node.

Miscellaneous

- BUG ID 130455 - The CameraShake node's class has been incremented to CameraShake3 to allow expressions to access the **seed** control for Y axis transforms.
- BUG ID 145082/173220 - The BlinkScript node and soft effect now support float3x3 and float4x4 matrix constructors.
- BUG ID 148433 - Conform: Nuke Studio and Hiero's **Conform Options** dialog now includes a **Split sequences** checkbox. When enabled, any non-contiguous file sequences found by the conform are split into separate clips, similar to the file browser's **split seq** option.
- BUG ID 156286 - Nuke Assist: Blur has been added to the white list of nodes available within Nuke Assist.
- BUG ID 160221 - Documentation: The descriptions for the various preferences under **Performance** > **Caching** have been improved.
- BUG ID 162077 - MXFReader: Nuke can now read YUV jpeg-compressed **.mxf** files.
- BUG ID 169843 - BlinkScript: In addition to the initial dialog describing compilation errors, BlinkScript now displays an error in the Viewer.

Bug Fixes

> **NOTE:** The more eagle-eyed among you may notice a jump in bug identification numbers in these release notes. This is due to internal bug logging and tracking process improvements. There is some overlap between the two systems, so we'll provide both bug numbers, where appropriate.

- BUG ID 132535 - Stereo: Caching and rendering views from the SideBySide node was not working as expected.
- BUG ID 135551 - RotoPaint: Setting the **proxy mode** dropdown to **format** in the **Project Settings** caused selected points in the Viewer to translate incorrectly.
- BUG ID 135955 - Roto: A customer script containing certain Roto nodes caused Nuke to crash.
- BUG ID 145290 - Scripts containing a Read and DeepRead did not distribute channels in layers correctly.
- BUG ID 146860 - Windows only: Accessing Nuke using remote desktop/VNC caused text in the Node Graph to render upside down.
- BUG ID 146958 - Export Dialog: Audio **.wav** files were one frame short when **Process as Sequence** was selected in the **Export** dialog.
- BUG ID 147343 - Soft Effects: Adding multiple Text effects to the timeline occasionally caused **GL error at line 1746: 500 (invalid enum)** messages to display in the Viewer.
- BUG ID 149345 - Localization: Read and DeepRead nodes referencing relative file paths never localized files.
- BUG ID 150060 - Viewers: Closing the **Preferences** dialog caused Nuke to discard the playback cache, if **clear cache when the application goes to the background** was enabled under **Preferences** > **Performance** > **Caching**.
- BUG ID 151632 - The **Pause** button was missing in the **Export Queue** panel.

- BUG ID 152389 - Export Dialog: Controls set to the default value in the **Content** tab were overridden by Nuke's Write node defaults.
- BUG ID 152584 - DeepRead/DeepWrite: The version up and version down hotkeys didn't work as expected in the **Properties** panel.
- BUG ID 154900 - QuickTime: Rendering ProRes using the mov64writer failed for certain formats.
- BUG ID 155356 - Attaching a Viewer to a heavy node tree in a customer script caused Nuke to crash.
- BUG ID 155602 - Timeline: Editing track items in long timelines with many cuts was noticeably slow or unresponsive.
- BUG ID 156103 - Comp Viewer: Changing the **Frame Silder Range** from **Global** to **Input** stopped cached frames playing back at the required frame rate.
- BUG ID 156118 - XML: Timelines imported from Final Cut Pro did not allow track items to be retimed or reversed.
- BUG ID 156171 - Export: Writing sequences to **.mov** using the **h264** codec caused Nuke Studio to crash.
- BUG ID 156334 - Expressions: Node Graphs containing multiple expressions occasionally caused some expressions to be evaluated at the wrong frame.
- BUG ID 156349 - RotoPaint: The bounding box was calculated incorrectly in proxy and downrez modes.
- BUG ID 156898 - Export: Attempting to export a 48 fps **.mov** to **.mov** using the **Apple ProRes 4444** codec caused Nuke Studio to crash.
- BUG ID 157013 - Export: Setting **Colorspace** to **raw** when transcoding produced comps with the wrong colorspace.
- BUG ID 157377 - Importing a large number of files caused Nuke Studio to leak memory during thumbnail generation.
- BUG ID 157556 - Performance: Playback never reached 24 fps when the frame slider range was set to **Input**.
- BUG ID 157636 - Write: Custom Write nodes now support extensions beginning with non-alpha characters.
- BUG ID 158191 - Tcl expressions produced unexpected results in a customer script.
- BUG ID 158509 - Mac OS X and Windows only: Importing certain customer JPEG2000 **.mxf** files caused Nuke to crash.
- BUG ID 158921 - Export: Writing sequences to **.mov** using the **h264** codec occasionally produced a 1 KB file or caused Nuke Studio to crash.
- BUG ID 159009 - Stereo: Switching views in A/B mode occasionally caused buffer output to disappear and reappear.
- BUG ID 159216 - Soft Effects: Adding Burn-In effects printed GL errors on the command-line.
- BUG ID 159854 - BlinkScript: Publishing BlinkScripts inside a Group did not work as expected.
- BUG ID 160112 - Reading image files with no extension using reader prefixes (**jpg:**, **dpx:**, and so on) did not work the same as in previous versions of Nuke.
- BUG ID 160408 - VectorBlur: A customer script that rendered correctly interactively, failed to render from the command-line.
- BUG ID 160563 - Soft Effects: Adding an effect to a comp clip stopped you switching between versions of the comp.

- BUG ID 160739 - RotoPaint: Setting the **proxy mode** dropdown to **format** in the **Project Settings** caused selected points in the Viewer to translate at the wrong scale.
- BUG ID 161325 - Writing **.mov** files using the **mov64** encoder and **Avid DNxHD** codec at certain resolutions caused Nuke to crash.
- BUG ID 161461 - SplineWarp: Adjusting a selection bounding box in a customer script caused Nuke to crash.
- BUG ID 161508 - Localization: Selecting **Delete Unused Local Files** and then re-opening a project without relaunching Nuke Studio caused auto-localize to stop working.
- BUG ID 161612 - IDistort: Processing vertical gradients in UV channels did not work as expected.
- BUG ID 161630 - QuickTime: Rendering certain Apple ProRes 422 clips created corrupt **.mov** files.
- BUG ID 161714 - Localization: Comp container output could not be localized.
- BUG ID 161747 - The Tcl **version** command returned the wrong version.
- BUG ID 161805 - Export Dialog: Creating or modifying export presets occasionally caused Nuke Studio to crash.
- BUG ID 161840 - Localization: Clicking **Clear unused files** didn't work when localization was disabled.
- BUG ID 161969 - ARRIRAW: Previewing a customer **.ari** file in the file browser caused Nuke to crash.
- BUG ID 162064 - Export: Transcodes in a customer project failed when **Render with** > **Single Render Process** was selected for certain export presets.
- BUG ID 162149 - Timeline: Copying and pasting a clip into the timeline failed to display an image in a customer project.
- BUG ID 162162 - Export: Transcoding track items with audio to Apple ProRes 4444 locked at 98% in a customer project.
- BUG ID 162254 - ZDefocus: Switching **filter type** to **image** caused Nuke to crash.
- BUG ID 162306 - Rendering Apple ProRes **.mov** files at resolutions containing odd numbers displayed an **unable to open video codec** error.
- BUG ID 162324 - **Build Track from Export Structure** occasionally failed due to an extra **/** (backslash) before the **{projectroot}** token in the **Export** dialog.
- BUG ID 162417 - Export: Attempting to export a customer sequence containing a **.dpx** track item caused Nuke Studio to crash.
- BUG ID 162420 - Copying nodes from earlier versions of Nuke into Nuke 10 occasionally caused QuickTimeHelper processes to become unresponsive, freezing the application.
- BUG ID 162516 - Multi-GPU: Contexts were created for all GPUs, including those unused, resulting in unnecessary memory usage.
- BUG ID 162522 - A customer script spawned a large number of threads when rendered from the command-line, when compared to rendering the same script interactively.
- BUG ID 162582 - Export: It was not possible to write **.mov** files at 48 fps.
- BUG ID 162679 - Export Dialog: The **.jpg** exporter's **quality** control was positioned at **0.1** by default, but the actual value was set at **0.75** during export.
- BUG ID 162717 - Reading file sequence clips (such as **.exr** and **.jpg**) on the timeline failed if the first frame contained a different number of channels to subsequent frames.
- BUG ID 162741 - PSD: The **rgba** channels in certain **.psd** files were not readable.

- BUG ID 163061 - The version string printed to the Terminal or command-line on start-up didn't adhere to the new versioning format.
- BUG ID 163108 - ARRIRAW: Reading in certain anamorphic Arri Alexa XT RAW files displayed a **Scaling mode Native 2880px not available for input image size 2592 x 2160** error.
- BUG ID 163234 - MotionBlur: Nuke attempted to find motion vectors on frames before the first frame of the clip, resulting in a CUDA error. This bug occasionally caused Nuke to crash on multi-GPU machines.
- BUG ID 163255 - R3D: Changing the **Gamma Space** in the **Media** tab displayed **QObject: Cannot create children for a parent that is in a different thread** errors on the command-line.
- BUG ID 163307 - Writing **.exr** files from a DeepEXR input upstream with **all metadata** enabled failed.
- BUG ID 163331 - PlanarIop nodes employing large bounding boxes caused malloc failures.
- BUG ID 163422 - Timeline Viewer: Toggling track visibility in certain timelines caused the Viewer to display incorrect frames.
- BUG ID 163478 - Keyboard shortcuts in the Viewer mouse-over context did not behave consistently.
- BUG ID 163554 - Conform: Importing certain **.aaf** files caused Nuke Studio to crash.
- BUG ID 163561 - Mac OS X 10.11 only: Mousing-over the compositing Viewer stopped the Viewer updating.
- BUG ID 163597 - Sequences with no file extension were not collapsed in the file browser when **sequences** was enabled.
- BUG ID 163606 - Connecting an OFX node, such as F_Regrain, to a Dilate node with a non-zero **size** setting caused Nuke to crash.
- BUG ID 163609 - Soft Effects: Clicking in the Viewer and then undoing the action with a soft effect's **Properties** panel open, caused Nuke Studio to crash.
- BUG ID 163628 - Disabling a Read node and then modifying its **file** control displayed an exception in the Script Editor.
- BUG ID 163636 - Soft Effects were occasionally not applied on the first frame of track items directly after a cut.
- BUG ID 163641 - The timeline was occasionally rebuilt unnecessarily after loading a project.
- BUG ID 163800 - RotoPaint: Moving the **Brush** tool produced trails when proxy mode was enabled.
- BUG ID 164825 - Documentation: There was no information on the compositing Viewer's info bar in the online help.
- BUG ID 165147 - Windows only: Enabling the **Stroke** > **pressure alters** controls caused blobby strokes when using Wacom tablets.
- BUG ID 166235 - Mac OS X 10.11 only: Using a Wacom tablet to resize brushes or adjust Viewer widgets did not redraw the UI until the cursor motion ceased.
- BUG ID 166728 - Exporting **.xml** sequences from Nuke Studio and then re-importing them resulted in incorrect timecodes.
- BUG ID 167728 - VectorBlur: Connecting a VectorBlur downstream of ZDefocus and Defocus nodes caused Nuke to crash.
- BUG ID 167795 - Passing infinite values into the HistEQ node caused Nuke to crash.
- BUG ID 167982 - Dynamic knobs weren't added to panels unless the panel was closed and re-opened.

- BUG ID 168305 - Disabling nodes within a Backdrop node in a customer script caused Nuke to crash if nodes existed outside the Backdrop.
- BUG ID 168868 - Export: A customer sequence containing audio exported incomplete **.wav** files.
- BUG ID 168924 - Import: Importing multiple sequences disconnected the linking behavior between the timeline, Viewer, and spreadsheet panels.
- BUG ID 169022 - Timeline Viewer: The **gamma** control did not affect the alpha channel.
- BUG ID 170469 - Copying nodes in a second instance of Nuke caused the application to crash.
- BUG ID 170921 - VectorGenerator: Scripts containing sequences with varying bounds caused Nuke to crash.
- BUG ID 171395 - Opening a script containing a connected Viewer from the command-line displayed a **No render channels - fetching plane direct from input** error message.
- BUG ID 172625 - Export: Selecting **Apple ProRes 422** as the codec for exports was slow to transcode.
- BUG ID 173415 - Project Settings: Clicking **Script Directory** in the **Root** tab, followed by the folder file browser icon, caused Nuke to crash.
- BUG ID 173616 - Write: The **colorspace** control in Write nodes did not update after changing LUT in the **Project Settings**.
- BUG ID 173728 - Soft Effects: Keyframes on TimeWarp effects were not updated correctly after the effect was moved on the timeline.
- BUG ID 173965 - Stereo: View selection stopped working when **Project Settings** > **Views** > **View selection uses buttons?** was disabled.
- BUG ID 174510 - Linux only: The font in BlinkScript's **Kernel Source** dropdown was incorrect.
- BUG ID 175319 - Documentation: Links to the OpenColorIO website were out of date in the online help.
- BUG ID 175609 - Editing a customer script printed **Channels changed - invalidating old unused channels** on the command-line.
- BUG ID 176234 - OCIO: The colorspace 'family' was ignored in some Nuke Studio **colorspace** menus.
- BUG ID 176331 - Connecting a non-zero Erode (fast) or Dilate node to a Denoise node occasionally caused Nuke to crash.
- BUG ID 176369 - Deep: Shuffling mismatched channels downstream of a DeepHoldout node caused Nuke to crash.
- BUG ID 176409 - OCIO: The **Export** dialog only listed **nuke-default** colorspaces, regardless of which config was specified in the **Project Settings** or **Preferences**.
- BUG ID 191909 - Certain **.exr** clips displayed incorrectly in the timeline Viewer.
- BUG ID 191951 - Certain **.exr** clips caused a drop in read performance on the timeline.
- BUG ID 194982 - Selecting views from the overflow menu was not working as expected.
- BUG ID 195290 - The SideBySide node produced inconsistent output.
- BUG ID 195629 - OCIO: The **Colour Space** dropdown in the **Media** tab displayed Nuke-native colorspaces when an OCIO config file was specified.
- BUG ID 196650 - OCIO: The **viewer** color transform was not set after Flipbooking with the **aces_1.0.1** OCIO config file selected.

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.

> NOTE: Node **Class()** names occasionally change between major releases, such as Nuke 9 to Nuke 10.
> 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

PySide

The PySide library that ships with Nuke has been upgraded to version 1.2.2.

OpenColorIO

You can now override the default colorspace used for any Read or Write node using Python callbacks. See **<install_
directory>/plugins/nuke/colorspaces.py** for the default implementation. Additionally:

• Two new functions, **nuke.addDefaultColorspaceMapper** and **nuke.removeDefaultColorspaceMapper** , have
  been added to the Nuke Python API.

• The expected callback function signature is **functionName(colorspace, dataTypeHint)** where:

    • **colorspace** - the name string of the initial colorspace.

- **dataTypeHint** - whatever the Read/Write node has detected as the data type for that particular file. For example, sometimes Readers/Writers request the default for a particular data type, such as **nuke.INT8**, **nuke.INT16**, **nuke.FLOAT**, and so on. If no data type is specified, this is -1.

- Each of the registered functions are called in turn.

- You can now access **nuke.thisNode()** functionality so that you can transform the colorspace name based on data on a certain node.

- You can use the **nuke.usingOCIO** function to determine if a **.nk** script is using OCIO.

Miscellaneous

- BUG ID 140640 - The Python API for Viewer playback has been improved, including the following methods:

  ```
  goToPrevEdit
  goToNextEdit
  goToPrevTag
  goToNextTag
  goToTag
  goToInTime
  goToOutTime
  goToTrackItemStart
  goToTrackItemEnd
  goToTrackItemMiddle
  ```

- BUG ID 159255 - The **AxisOp::matrixAt** call is now a virtual function.

- BUG ID 196133 - Two new functions have been added to the Nuke Python API to control **.r3d** and **.ari** clip colorspace programmatically:

  - **setCameraColourTransform** - sets the OCIO color transform for a clip from those available.
  - **getAvailableOcioColourTransforms** - returns a list of OCIO color transforms that can be set on a clip.

Bug Fixes

- BUG ID 154195 - SplineWarp: Generating B-splines Pythonically did not work as expected.

- BUG ID 158544 - Documentation: The NDK Dev Guide listed an error for **ImagePlane::writableAt()** arguments.

- BUG ID 162948 - Linux only: The call to **malloc_trim(0)** from **CompositeDecodeFrame** slowed playback down significantly.

- BUG ID 163056 - Calling **nuke.env["NukeVersionString"]** did not return the new versioning format.

- BUG ID 163059 - Calling **nuke.NUKE_VERSION_STRING** did not return the new versioning format.

- BUG ID 163446 - Removing the **SLIDER** flag from an **Array_Knob** did not allow the knob to expand to the width of the **Properties** panel.

- BUG ID 163535 - Setting **nuke.knobDefault("Root.views_button", "false")** caused Nuke to crash on startup.

- BUG ID 163611 - Hiero API: The **VersionMajor**, **VersionString**, **VersionMinor**, and **VersionRelease** keys were missing.

- BUG ID 164615 - PySide: Custom PySide widgets caused Nuke to crash on exit.
- BUG ID 171492 - NDK: Plug-ins using the Python CAPI caused Nuke to become unresponsive in terminal mode.
- BUG ID 195154 - Roto: Calling **featherCenter** did not return the correct vector position value.