

# V-Ray Next, Update 1

Official Release

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## New features

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### V-Ray

- Improved light sampling on scenes with thousands of lights
- Added memory tracking options to V-Ray Render Settings
- Added peak memory consumption in EXR metadata
- Added an option for consistent render elements for better compositing. Enabled by default on new scenes
- Faster translation of mesh geometry
- Added AppSDK with Python binding to installation
- Added Lighting Analysis Render Element
- Added efficient instancing for hair with "dynamic hair tessellation" and "stored in global hair tree" disabled
- Added matte backfaces output to the surfaceLuminance mode
- Added inverse exposure texture shader for compensating changes in physical camera
- Command line interface tool for selecting rendering devices
- Added an option to automatically exit vray -server if idle after a specified amount of time

### Cryptomatte/VRayProxy

- Cryptomatte support for V-Ray Proxy sub-objects

### V-Ray GPU/VRayAISurface

- AISurface support on GPU

### Chaos Cloud

- Cloud window allowing direct submit from Maya

### VRayLightSelect

- Added new light select indirect modes

### V-Ray GPU

- Resumable rendering with GPU bucket sampler
- VRayCurvature support on GPU
- Support of Glossy Fresnel feature on GPU
- Added support for CUDA-CPU rendering to the GLSL and MDL plugins
- Added subpixel mapping checkbox for GPU bucket rendering
- Support for multiple map channels for TexBitmaps in MtlGLSL
- Support for the frame offset of the Maya file node when an image sequence is used

### Cryptomatte

- Cryptomatte support for all deep merge modes

### vdnoise

- Ability to apply lens effects in vdnoise

### VRayMultiSubTex

- Added a random "Seed" and "Loop Textures" parameters to MultiSubTex

### VRayMtl

- Added the anisotropy axis and anisotropy derivation controls to the VRayMtl

### VRaySun

- Added the color mode option to the VRaySun

## VRayToon

- Added support for VRayToon in glossy refractions

## VRayFastSSS2

- Added "Color Mode" dropdown in the VRayFastSSS2 material

## VRayMtl/V-Ray GPU

- Self Illumination GI for VRayMtl now visible in GPU-dependent UI

## VRayToonMtl

- Added support for spline interpolation in VRayToonMtl ramps

## Misc

- VRayTriplanar/Viewport 2.0 Triplanar texture projections support for viewport 2.0
- VRayOSLMtl/VRayMDLMtl Material select support for MDL and OSL

## V-Ray IPR

- Faster updates in IPR when moving heavy geometry

## Modified features

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### VRayProxy

- Optimized proxy visibility list controls for better proxy node performance in Maya
- The VRayMeshPreview node will be created during the vrayCreateProxy command, not on an idle callback, making scripting easier
- Removed unnecessary file reads when loading scene
- Shader names list generation no longer happens on idle and is now more script-friendly
- Removed the deprecated "use Maya shader" option from the VRayMesh node
- Fixed slowdown and many warnings printed when instancing a VRayMesh with missing filename
- XML material assignment override will now appear in the filepath editor
- The vrayCreateProxy command will now return a string with the newly created node
- The Maya Archive cmd will now take into account .vmesh assets

### Cryptomatte/VFB

- Cryptomatte data channels will not be visible in the VFB, only the preview channel

### VRayAISurface

- Fixed AISurface GI contribution going into the SSS channel
- The global SSS toggle will now affect AISurface

### Chaos Cloud

- Pre/Post Render MEL scripts are now executed when exporting for Cloud

### V-Ray

- Faster time to first pixel with V-Ray Fur
- Changed the default frame number separator char to . in PTex baker
- Automatic conversion from Color to AColor when using -parameterOverride in V-Ray Standalone
- Added extra attribute for controlling 3dProjection's number of motion blur samples
- More informative error messages for image file errors
- In DR, automatically delete cache\_info\_portNum.txt on render end if VRAY\_LOCAL\_CACHE\_LIMIT\_VALUE=0
- Fixed inconsistencies with the merge by z-depth mode of deep rendering
- Temp files are now created with read/write permissions for all users
- Fixed VRayPlaceEnvTex Ground Projection not respecting Up Vector
- The Up Vector default value now respects Maya Preferences

- No longer force-switching to progressive sampler when changing the production engine to GPU CUDA
- Faster export of user attributes

## VRaySoftbox

- Fixed Softbox not having a swatch preview

## VRayMultiSubTex

- MultiSubTex indexing will start from 1 for new scenes, making randomization work correctly

## VFB

- Save current channel from VFB no longer appends the channel name to the user-defined file name

## VRayMtl

- Fixed some VRayMtl attributes not being listed in the channel box

## V-Ray GPU/VRayEdgesTex

- Show the "Show subtriangles" option in VRayEdges texture on GPU

## V-Ray GPU

- Dome lights will contribute to ZDepthRE

## V-Ray IPR

- More responsive IPR for heavy scenes

## Bug fixes

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### V-Ray IPR

- Fixed crash when stopping IPR while compiling geometry
- Fixed crashes when switching the viewport subdivisions ON/OFF while rendering
- Fixed a crash and wrong subdivision of geometry in specific cases
- Fixed changed material on instanced object not reflected in IPR
- Fixed a crash with IPR if rounded edges attribute is added to a mesh-clipper
- Fixed changing the "Use Image Sequence" parameter in IPR crashing Maya
- Fixed slowdown with viewport IPR caused by an animation rig
- Fixed flickering in IPR
- Fixed unhandled exception in IPR when VRayPlane is shaded with direct VRayLightMtl

### VRayAlSurface

- Fixed incorrect render of AlSurface if lighting render element is enabled

## V-Ray

- Fixed Streak particles having wrong transformation
- Maya on remote desktop crashes on loading specific file
- Fixed last user attribute not exported correctly in some cases
- Maya drag'n'drop: added a special case for Windows file share paths
- Fixed V-Ray not saving output image when data region is empty
- Fixed wrong export of referenced render elements in batch
- Fixed fatal error in some cases when starting DR if the host is not found
- Fixed V-Ray printing an incorrect success message for writing output image with a missing asset in DR
- Fixed noisy reflections with V-Ray Next for objects with cast shadows on, but visible in reflections/refractions off
- Fixed refractive objects rendering darker with photon caustics from a dome light
- Set a min limit of 1.0 to the AA Filter size
- Fixed incorrect reporting of primitives with embree hair
- Fixed crash when enabling/disabling reference scenes while running IPR
- Fixed OSL crashes on post-Haswell processors
- Fixed EXR files loaded in the VFB not having their integer REs displayed
- Fixed slowdown on many-core machines with light linking
- Fixed flickering of distant light sources with the adaptive lights and many light sources

- Fixed slower adaptive lights with V-Ray Next compared to V-Ray 3.6
- Fixed incorrect full light select element with VRayFastSSS2
- Fixed -velocityAttrName parameter of ply2vrmesh not working for Alembic input files
- Fixed resuming a bucket render resetting the progress to zero
- Fixed artifacts with matte (matte for refl/refr = off) and adaptive dome light
- Fixed super bright lens effects when using the NVidia AI denoiser
- Fixed crash when enabling Bloom/Glare in the VFB while A/B compare is also enabled
- Fixed bucket artifacts with adaptive lights
- Fixed error with AI denoiser "Optix does not support cross-frame denoising"
- Fixed DR may have watermarks if licenses are unstable
- Fixed transparent objects with "cast shadows"=off rendering black when there is a VRayDomeLight behind them
- Fixed "Direct visualization" option for caustics not working
- Fixed aborting render after the last bucket skips saving img\_file, keeping unfinished resume file

## Misc

- SamplerInfo Fixed Sampler Info relative coordinate system not working correctly

## V-Ray GPU

- Fixed crash when baking textures with GPU
- Fixed wrong rendering of rounded edges in Next GPU
- Fixed wrong Cryptomatte in animation with V-Ray GPU
- Fixed Volume Grid crashes with VRayFastSSS2 on GPU
- Fixed missing secondary reflections on CUDA CPU with Stochastic flakes
- Fixed VRayClipper not working correctly with disabled clip lights geometry and dome light
- Fixed buckets different in sampling (noise level) with bucket sampling enabled
- Fixed unhandled exception loop on specific scene when rendering with IPR and turning off lights
- Fixed wrong worldNormals RE for SSS material hits in V-Ray GPU
- Fixed a crash when a V-Ray Fast SSS2 material is used inside a V-Ray Override material
- Fixed wrong normals of VRayLight Plane in V-Ray GPU normals render element
- Fixed hybrid rendering failing with AI denoiser
- Fixed Environment ZDepth color not matching V-Ray CPU
- Fixed crash on render end
- Fixed DiffuseFilter render element for FastSSS2 rendered incorrectly with V-Ray GPU
- Fixed crash with XGen

## VRayLightSelect

- Fixed Light select not respecting alpha of a textured light when the texture is constant

## VRayProxy

- Fixed crashes in proxy export of multiple meshes caused by missing UVs
- Fixed crash when loading huge alembic file with many color sets
- Fixed a crash when importing alembic with degenerate faces
- Fixed XML material assignment file not getting transferred in DR
- Fixed crash when opening a scene with alembic layers
- Fixed preview bugs with multiple proxies with different settings pointing to the same file

## VRayLightDome

- Fixed error when using Resumable rendering with Adaptive Dome light

## VRayMtl/VRayAISurface

- Fixed compositing with BlendMtl not matching Beauty

## Viewport IPR

- Fixed slowdown when Hypershade is opened
- Fixed slowdown when the "Selection Mode" is set to "Box"

## VRayMeshLight

- Fixed artifacts with LightMesh and LightMtl with EnvironmentFog

## VFB

- Fixed Lens effects settings not resetting on a new scene

## VRayScene

- Fixed crash when V-Ray accesses UV-coordinates from an imported .vscene