V-Ray Next, Update 3

V-Ray Next, Update 3.1

Official Release

Date - Apr 09, 2020

Download - Build 4.30.02

New features

V-Ray

- Support for 3ds Max 2021
- Support for "Bake to Texture" in 3ds Max 2021

Modified features

V-Ray

- Improve performance scaling with 2nd gen Epyc dual 64-core setups 128 and more threads
- Look for the XML file with the view graph for viewport IPR relative to the vrenderNNNN.dlr file location

VRayScene

- Matte and Visibility control;

VRayOSL

- Add the ability to connect an OSL triple float output to a OSL single float input

VFB

- Add MaxScript control for Test resolution through vfbcontrol

.vrscene exporter

- Update SettingsPresenZ export

Bug fixes

V-Ray

- 3ds Max frame buffer has the same resolution as VFB regardless of the "Get resolution from Max option"
- Any click on the Light Cache preset dropdown changes the mode
- Crash after baking to texture in 3ds Max 2021
- EXR metadata in the VRayOptionRE is not saved with deep images
- Fume FX render elements are missing in V-Ray renders
- Random crash when rendering scene with VRayFur
- Tiled EXR textures cause specific scene to render considerably slower compared to 4.1
- VRayRenderID by node handle is not saved correctly in deep EXR output
- Wrong 3ds Max Render output JPEG image with Test resolution

V-Ray, V-Ray GPU

- Incorrect internal reflection in glass when glossy Fresnel is enabled

V-Ray IPR

- Deleting/updating VRayInstancer or assigned materials won't cleanup material-clones-bindings and would lead to crash

V-Ray GPU/V-Ray Cloud

- Anima AXYZ no animation when exported to vrscene
- BerconMapping doesn't render properly when exported to Standalone
- Different result for BerconNoise in Standalone with some combinations of Noise Function and Fractal
- Tile UV mapping of the Bercon tile is not rendered properly
- VRayMtlID render element renders black

V-Ray GPU

- Bucket rendering produces black output when AA Filter size drops below 1.41
- Crash when rendering VRMesh files with more than 16 mapping channels
- Crash with VRayLightMtl with Direct illumination enabled, applied to tySpline
- Crash with VRayEnvironmentFog when switching from bucket to IPR between consecutive renderings
- Rendering on GPU with NVLink spanning more than 2 cards results in a crash
- VRayMtl is missing glossy reflections on the back side if "Reflect on back side" is enabled

V-Ray Standalone

- -skipExistingFrames breaks file output to current directory
- -skipExistingFrames creates extra files in animation

VRayEnvironmentFog

- Artifacts with custom geometry fog gizmo in a specific scene
- Can not render with VRayNoiseTex used as density map
- Renders significantly slower with Scatter GI in V-Ray Next

VRayFastSSS2

- Material does not compose back to beauty properly
- VRayLightSelect in full mode does not match beauty pass when diffuse amount is above 0

VRayGLSL

- Float to int vector casts in shaders lead to crashes
- Incorrect matrix multiplication results
- Missing return statements in non-void GLSL functions lead to crashes

VRayMtl

- 100% white Opacity Map affects material Reflections

VRayOSL

- Crash in material editor preview rendering after editing OSL texture from MaxScript
- Crash with Bitmap texture vrayattached to VRayOSLTex while exporting for V-Ray GPU

VRayScene

- Compiling geometry time is increasing with each frame in animation rendering with V-Ray Standalone

VRayVolumeGrid

- Volumetric rendering slow-down with Volume Light Cache enabled with V-Ray memtracker

V-Ray Next, Update 3.1

Official Release

Date - Dec 19, 2019

Download - Build 4.30.01

Modified features

V-Ray

- Print a warning when having memory frame buffer disabled and no output directory set

.vrscene exporter

- Export Check for missing assets option

Installer

- Update Chaos License Server to 5.3.0 if needed

Bug fixes

V-Ray

- Artifacts with the Adaptive dome and trace sets
- Bitmaps are not loaded for VRayInstancer in IPR if its source object is hidden
- Thousands of warnings for invalid geometric normal flood on geometry shaded with hair material

V-Ray GPU

- Bitmaps are uploaded on every IPR update
- Crash in IPR with On-demand mip-mapping mode when a Bitmap is linked to VRayMtl's Self-illumination
- Crash with RTX in IPR mode when VRayFur source geometry is deleted
- CUDA error 700 with UDIM textures for the last tiles
- High CPU usage when rendering with RTX on
- Incorrect VRaySpecular render element with VRayHairNextMtl (regression since 4.30.00)
- IFL textures do not load properly in IPR when OptiX on demand textures are used
- Incorrect normals calculation with VRayMtl's Displacement
- Show "Camera Map Per Pixel" map as compatible
- Square artifacts in specular element in bucket mode with specific scene
- Square artifacts with adaptive dome light
- V-Ray Light Lister causes IPR to render black in specific scene with Skylight

V-Ray GPU/V-Ray Cloud

- VRayALSurfaceMtl General and Diffuse bump maps render the illuminated parts darker

VFB

- Main window closes after IPR stop with 3ds Max 2016 and older (since 4.30.00)

VRayHDRI

- The "Filter mult" parameter has no effect on bump maps

VRayOrnatrixMod

- Crash with motion blur and dynamic tessellation

VRayALSurfaceMtl

- No Caustics received when sss mix is set to 1
- Artifacts with Adaptive lights and Caustics

V-Ray Next, Update 3

Official Release

Date - Nov 19, 2019

Download - Build 4.30.00

New features

V-Ray

- Add a renderer parameter "options_useColorSpaceForBitmaps" that tells all VRayHDRI maps to determine the color space from the file name

V-Ray GPU

- Add support for RT cores of NVIDIA RTX cards
- Add support for disabled "Memory frame buffer"
- Support for Deep EXR output

V-Ray Cloud

- Add the Chaos Cloud client app installer to the V-Ray for 3ds Max installer

VRayHDRI

- Add a sharp isotropic texture filtering method
- Allow UVW coordinates to be controlled through another map
- Add a "Filter mult" parameter to control the blur separately when mapping coordinates are taken from another texture

VRayOSL

- Add the ability for normal texture maps to be a part of a shading graph in OSL for 3ds Max

VRayVolumeGrid

- Added support for Volumetric and Mesh mode rendering of the new TexUVW Phoenix FD channel

vrscene exporter

- Export material IDs of materials used in VRayBlendMtl

Modified features

VRayLight

- Improved sampling of directional lights

V-Ray

- Adaptive dome VRayLight support for Light Cache from file
- Add "Animation" and "Still" presets for the Light cache
- Change the default values of the Progressive image sampler: Render time - 0; Noise threshold - 0.01
- Multi-threaded execution of OpenEXR compression and decompression to improve performance
- Update Embree to v3.2.0
- Update OpenEXR to v2.3.0
- Render Raytrace material as black to mitigate problems with it

V-Ray IPR

- Add GI contribution to the Isolate Selected objects in Debug Shading

V-Ray GPU

- Implement pre-multiplied Light cache that enables optimization of shading calculations on some scenes
- Implement debug shading for selected sub-materials
- Improved user-defined shaders (GLSL, MDL etc.) compilation
- Optimize mesh transfers to multiple devices

V-Ray Cloud/V-Ray Standalone

- Optimize rendering of Multi/Sub-Object material

VRayALSurfaceMtl

- Implement bump shadowing
- SSS is not computed for materials seen through glossy refraction

VRayStochasticFlakesMtl

- Stochastic flakes are not visible through glossy refraction

VRayCompTex

- Add "Mix amount" option to control texmap mix ratios

VRayDiffuseFilter/VRayReflectionFilter/VRayRefractionFilter

- Remove the "color mapping" option

VRayExtraTex

- Add an option to disable lossy DWAA/DWAB compression for a render element

VRayMtl

- Rearrange the texmap slots

VRayOSL

- Add tooltips on texmap buttons, spinners and combo boxes for shader tweaks
- Show shader description and help URL button if either is present

VRayProxy

- Improve errors logging

VRaySamplerInfo

- The render element should always be saved with lossless compression

VRayVolumeGrid

- Speed up loading of VDB caches by reading their min-max channel ranges from metadata instead of calculating them
- Equalize UVW coordinates of Phoenix Isosurfaces with those of the corresponding Meshes

VFB

- Add "Save in image" option to OCIO color corrections, to save the corrected image
- Add sliders for Lens effects' "Intensity" and "Threshold" parameters
- Enable setting of the render region via MAXScript outside the default resolution before rendering
- Read the saved window position only for the initial render and use the last valid position afterwards
- UI improvements for the VFB Lens Effects panel

V-Ray scene converter

- Convert Raytrace maps to VRayColor

Bug fixes

V-Ray

- Artifacts and flickering with "Hash map" Light cache in certain situations
- Artifacts when using Adaptive dome light and VRayFur with VRayMtl on it
- Artifacts with Adaptive dome and VRayToon
- Crash in scenes with meshes with Point Cache modifier that are used in Forest Pro in animated mode
- Bright spots in VRayGlobalIllumination render element with Falloff map in Shadow/Light mode
- Compositing results don't match with matte reflections if "Consistent lighting elements" is enabled
- Lighting elements are not propagated through refractions with "Consistent lighting elements" enabled
- Matte objects are present in the alpha channel when rendered through refractive objects
- Memory tracking "GI" tag replaces "Misc." when rendering with Global illumination
- Physical Material with black reflections has dark outlines
- The UI menus are active during rendering in 3ds Max 2020
- Unhandled exception when having a PF Source with Mapping Object operator
- Using camera clipping planes makes the dome light invisible
- VRayEdgesTex always draws hidden edges when used as displacement texture
- Wrong 3ds Max Render output JPEG image with Test resolution

V-Ray/V-Ray GPU

- Artifacts with Adaptive dome light with "affect reflections" disabled

VRayProxy

- Wrong defocusAmount denoise element on proxy objects leading to artifacts when denoising
- Face/Material IDs are offset with one when loading Alembic files

VFB

- Wrong resolution when rendering a sequence with Test resolution and DR
- Certain integer render elements are not displayed when loading EXR files
- Crash when changing OCIO settings (View transform, Input colorspace) during Viewport IPR
- History details comment is drawn over the previous one if changed via MAXScript
- The scrollbar in the Color Corrections window hides some of the text
- UI is not responsive with ICC color correction during IPR with V-Ray GPU

V-Ray IPR

- Crash when adding materials with VRayHDRI to a material library
- Crash while scrubbing the timeline with VRayLightMtl in the scene
- Crash with VRayOSL shading graph and VRayLightMtl with Direct illumination on
- Crash with VRaySky texmap and Hair and Fur
- Debug Shading's Isolate Selected mode doesn't work correctly for objects with opacity
- Loops on building Light cache in a scene with VRayDistanceTex and Forest Pro
- Starting production rendering during Viewport IPR causes endless Light cache phase
- Unhandled exception with a Free Light and VRayLightMtl with Direct Illumination

V-Ray GPU

- Artifacts when using Metalness with Glossy Fresnel
- Artifacts with Adaptive dome when objects are excluded from shadow casting in the light
- Artifacts with VRayALSurfaceMtl and Adaptive lights v2
- Bounding Box artifacts when rendering a VRayVolumeGrid
- Crash with hidden faces on subdivided geometry
- Crash during render with volumetrics
- Crash on stop during Light cache phase
- Crash when cancelling the render for scene with lights include/exclude lists
- Crash when using VRayClipper on an object with material containing VRayCurvature map

- defocusAmount denoise element is not generated with a standard cameras
- Gaussian image filter doesn't match the CPU one
- Hidden edges of VRayEdgesTex is always on with VRayProxy
- Hidden faces are being rendered during Light cache preview, creating wrong lighting
- IPR with multiple GPUs produces CUDA_ERROR_INVALID_HANDLE on stop
- Light cache doesn't work with DOF and perspective camera
- Nested refractive volumes are rendered wrong
- Noisier results with Adaptive lights compared to Light tree
- NVLink GPU allocations only done for Dynamic geometry
- Optimized distance estimation for geometry heavy scenes
- Random crash with tiled bitmaps
- Refractions are rendered darker since V-Ray Next, Update 2
- Unhandled exception when baking texture of a mesh with degenerate UVs
- VRayVolumeGrids are not rendered correctly in VRayNormals render element

V-Ray Cloud/V-Ray Standalone

- Extremely slow light cache for scenes with displacement texmaps
- Matte reflections are not rendered

VRayALSurfaceMtl

- Artifacts around geometries intersections and SSS density scale close to 0

VRayClipper

- Holes in the clipped geometry when rendering with motion blur and the clipping mesh has animated skin modifier

VRayDisplacementMod

- Cracks with 3D Displacement and Keep continuity
- Memory leak with 2D displacement
- Tangent Vector displacement mode clamps the texture's X and Y between 0 and 1 regardless of the Texmap min/max values

VRayGLSL

- Function vr_textureSize returns (0,0) always

VRayHairFarmMod

- Duplicated IDs in VRayCryptomatte element with more than one Hair Generate modifier

VRayHairNextMtl

- Artifacts in raw render elements with Consistent lighting elements
- Diffuse component should go in it's respective render elements
- Shade data is stored in VRayGlobalIllumination when Consistent lighting elements is on

VRayLight

- Different specular reflections when rendering directional disc light with V-Ray Cloud/V-Ray Standalone

VRayOCIO

- Error in V-Ray messages when creating new instance
- No scroll bar in the map color space selector

VRayOrnatrixMod

- Some VRayOrnatrixMod hairs have wrong velocity data with "dynamic tessellation"

VRayOSL

- Broken OSO bytecode export of a shader via MAXScript
- Bucket artifacts with user attributes
- Crash in microfacet("ggx") when roughness is greater than 0.0
- Crash when detach and reattach a sub-texmaps
- Custom shaders cannot access user attributes with V-Ray Cloud/V-Ray Standalone
- OSL string mapper widgets should be displayed as dropdown choices
- Tooltips for combo boxes and extra texture buttons can become too wide
- Tweak's min/max metadata inhibits changing parameter values
- Wrong channel index read from the UV attribute

VRayOverrideMtl

- Vignetting along concave edges with Light cache and many lights

VRayPluginNode

- Crash when rendering with TexSurfaceLuminance

VRayScannedMtl

- Crash when loading a scene while the compact material editor open
- Difference in the VRayBumpNormals render element when rendering with VRayBumpMtl

VRaySwitchMtl

- Crash with undefined sub-material when displacement map is used in another sub-material

VRayToonMtl

- Toon effect missing on non-excluded geometry when the excluded object is hidden

VRayVolumeGrid

- Displacement scale in Isosurface mode is not the same as in Mesh mode
- Empty grids filled with density using the opacity curve render with different density in V-Ray Cloud/V-Ray Standalone
- Mesh mode with a 2D scalar Displacement map renders with artifacts

VRayZDepth

- Refractive objects are white regardless of the Affect channels value with V-Ray GPU

V-Ray Toolbar

- MAXScript error in vrutils.ms when trying to create a physical camera from a camera view without target

.vrscene exporter

- Animated FOV on standard cameras is not exported correctly
- Crash when exporting Forest Pro multiple instances with the same Surface with Boundary checking set to Edge
- Disabled VRayVolumeGrids in Volumetric mode are still exported
- Forest Pro object with VRayDisplacementMod is not exported to .vrscene file
- Negative displacement through textures is not exported properly
- OSL texmaps are flipped with V-Ray Cloud/V-Ray Standalone
- Random velocity data is exported for Forest Pro instances when camera is specified
- Some VRayMDL asset paths are not exported
- Support for animated visibility range of VRayAerialPerspective
- The VRayVolumeGrid's "lightsmultself", "gridreduct" and "mbgrid" parameters are not exported to *.vrscene
- VFB Color Corrections are exported even when disabled
- Wrong UVWs in scenes with OSL

Installer

- VRAY4_FOR_3DSMAXXXXX_PLUGINS environment variable should be modified instead of overridden