

# What's New

## Chaos Vantage, v2.3.0

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*Official Release*

Date - March 27, 2024

[Download Chaos Vantage, 2.3.0 Build](#)

### New Features

#### Materials

- Support for rendering V-Ray Blend Material (BRDFLayered).

#### Render element

- Support for the Multi Matte render element. [Details](#)

#### UI/UX

- Added viewport toggle filter for the light gizmos. [Details](#)
- Added option to improve desktop responsiveness while rendering. [Details](#)
- Added information, in the status bar, for the host application used for Live Link.
- Added ability to rename of objects created inside Vantage (Fur, Scatter, Lights, Multi Matte) with a context menu or double-click on object name.

#### Output

- Added AV1 codec for video encoding, enabled by default (if supported by GPU). [Details](#)

### Modified

#### Displacement

- Improved memory used for displacement by varying tessellation level within a mesh.

#### Denoiser

- Updated Intel Open Image Denoise to version 2.2.

#### Light Cache

- Improved Light Cache to slightly better preserve low intensity samples.

#### UI/UX

- Chaos Cosmos Browser UI responsiveness.

### Fixes

#### Displacement

- Random displacement when using unsupported secondary UV channel of the geometry object.

## Scene states

- Broken sub-states after dropping Environment texture.

## Live Link

- Wrong Live Link update for Nodes with unsupported materials.
- Wrong rendering of Glossy Refraction with rotated texture during Live Link with Rhino

## Lights

- Sun azimuth rotation values to match geographical azimuth. Old saved .vantage files will be automatically updated to use new values on **Save**.

## Collision

- Missing "Height ratio" update when collision "Height tolerance" is changed.

## Clouds

- Wrong cloud shading with sun slightly under the horizon.

## Lighting

- Wrong lighting when rendering using direct light reservoir resampling and the scene contains a normal map.
- Refraction artifacts when rendering with direct light reservoir resampling.

## UI/UX

- Disappearing toolbar in the Debug Log window after second opening.
- Hiding of the HQ rendering dialog while "Always on top" is enabled.

## Denoiser

- Streak artifacts with Optix denoiser and multi GPU setup.
- Broken temporal ("reduce flickering") denoising in multi GPU mode.

# Chaos Vantage, v2.2.3

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*Official Release*

Date - February 21, 2024

## New Features

### Chaos Scatter

- Support for scattering lights.
- Support for V-RayMultiSubTex.

## Modified

### Geometry

- Improved loading speed of .vrscenes with a small number of very detailed meshes.

## Fixes

### Geometry

- Slow mesh loading in Chaos Vantage 2.2.2.

### Material

- Crash when a texture is set as bump amount in a material.

### Live Link

- Artifacts on Chaos Scatter instances after changing the material of their source model.
- Missing sun properties in Chaos Vantage during Live Link in version 2.2.2. Now sun properties are available only when the scene in the host app does not contain a sun light.
- Incorrect lighting when an object is turned into mesh light during.

### Camera

- Resetting of "Aperture size" when reopening a scene.

### Animation editor

- Animation trim not taken into account in the Render setup dialog.

## Chaos Vantage, v2.2.2

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*Official Release*

Date - February 8, 2024

## New Features

### Chaos Scatter

- Support for Chaos Scatter in V-Ray 6 for Maya, V-Ray 6.2 for SketchUp/Rhino.
- Support for Edge Trimming in Chaos Scatter and Forest Pack in V-Ray 6.2 for 3ds Max.
- Added **Include models' children**, **Edge trimming**, **Altitude limitation**, **Preserve model rotation/scale** and **Look at target** options in scatter object inside Chaos Vantage. [Details](#)

## Modified

### Camera

- Improved camera imported from SketchUp - now view matches when using **Two-Point Perspective**.
- increased camera limit from 100 to 1000.
- Now Field of view does not change between cameras with different focus distance when **Lens mode** is set to **Field of View**.
- Film Gate and Zoom settings are now hidden when **Lens mode** is **Field of View**.

### Environment

- Improved physical sky responsiveness.

## Fixes

### Denoiser

- Brightness flicker issue when using a combination of **DLSS Ray Reconstruction** as Primary and **NVidia Optix AI** as Secondary denoisers
- Ghosting in offline camera animation with Optix denoiser
- DLSS preset not getting restored properly on Vantage startup
- Motion blur not working with the DLSS modes that have upscaling different from 2x
- Artifacts with "**only final pass**" denoising

### Camera

- Crash caused by reordering cameras in Camera lister.
- Crash caused by leveling camera and then saving .vantage file.

### Scene states

- Crash when using sub state with deleted objects.

### Displacement

- Geometry gaps when using stochastic tiling and displacement.
- Wrong displacement amount caused by object scaling.

### Live Link

- Wrong update of V-Ray Light mesh.
- Flipped instanced geometries during Render animation with Chaos Vantage from Cinema 4D.

### Chaos Cosmos

- Slow scene load when download of missing Cosmos assets is canceled.

### Scattering fog

- Incorrect GI caused by Scatter fog with "affect secondary" on and "scatter GI" off.

### UX/UI

- Wrong size of checkbox size on high dpi displays.

## Chaos Vantage, v2.2.1

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*Official Release*

Date - December 15, 2023

## New Features

### Geometry

- Support for material ID for displacement.

## Fixes

### Geometry

- Crash with mesh file with thousands of voxels.
- Displacement UV scale issue in SketchUp.
- Crash with empty geometry with added displacement.
- Broken displacement continuity with SketchUp scenes.

### Materials

- Clay mode removing displacement.
- Clay mode removing light textures.

### Live Link

- Crash with animated ForestPro objects in 3Ds Max Live Link.

## Chaos Vantage, v2.2.0

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*Official Release*

Date - December 7, 2023

## New Features

### Geometry

- Support for V-Ray Fur, Ornatrrix, Hairfarm, and XGen hair.
- Support for V-Ray Displacement.
- Support for new V-Ray 6.2 Forest pack and Rail clone instancing.

### Materials

- Support for V-Ray Hair Next material.

### Hardware

- Support for Intel Meteor Lake iGPU.

### Batch rendering

- Render Setup options and render queue items are now stored in the .vantage file.

### Live Link

- Added Vantage Live Link settings dialog in 3Ds Max Vantage toolbar. [Details](#)

### UI/UX

- Implemented a warning and error count indicator in the status bar.

### Rendering

- Implemented a Firefly filter. [Details](#)

## Modified

### Geometry

- Improved GPU peak memory usage when loading the geometry for a scene.
- Improved check for failed geometry allocations.

### DLSS

- Improved DLSS - added 2.25x and 3x upscale modes (available when **Secondary (when static)** denoiser is set to **Same as Primary**).
- Reduced memory usage.

### Denoiser

- Improved OptiX denoiser quality. Added a Legacy mode option to revert to old OptiX behavior. [Details](#)
- Improved Intel denoiser: upgraded to 2.1.0, enabled GPU acceleration on Intel devices.

### Scene States

- Properly update the Scene States helper message on undo/redo.
- Update scene state button now creates necessary sub-states if ORIGINAL SCENE or SAVED SCENE is currently chosen.
- Detected changes for scene states when modifying a New file.

### Navigation

- Improved Orthographic camera navigation. Now **Navigate around cursor ray hit** and **Navigate around selection** work properly.

### UX/UI

- Improved Viewport Fill - now filter is disabled when sharpness is set to 0.
- Improved DPI scaling on 150% and similar ratios.

## Fixes

### Geometry

- Crash when loading invalid Instancer2 with missing node reference.

### UI/UX

- Bug with wrong UI slider ranges.
- Wrong trimming of the scene animation track.
- Auto-exposure and noise mask overlay while using Intel GPUs for rendering.
- Wrong reloading of a saved .vantage file, with imported .vrscene.
- Animated cameras from imported vrscenes are not loaded with animation after reload of .vantage file.
- Wrong camera grouping on import.

### Textures

- Missing texture UVs if their UVW generator is missing.

### Output

- Wrong baking of Exposure bias in EXR when exposure correction is disabled.
- Camera white balance not getting saved in EXR.

Official Release

Date - October 10, 2023

## New Features

### View modes

- Implemented viewport view modes: *Beauty, Atmosphere, Background, Diffuse Filter Global Illumination, Lighting, Reflection, Refraction, Specular, Self-Illumination, Bumped Normals, Z-Depth, Material Mask, Object Mask* . [Details](#)

### UI/UX

- Implemented status messages *Info, Modified, Created, Switched* for sub-states and scene states.

## Modified

### Textures

- Support for `mix_amount` parameter for 3ds Max's Composite texture.

## Fixes

### Live link

- Sequence from animated camera in Vantage not rendering when in Live Link.

### Installation

- Possible crash after downgrading Vantage.

### Scene States

- Incorrect Undo action on moved objects after applied scene state.

## Chaos Vantage, v2.1.0

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Official Release

Date - September 21, 2023

## New Features

### DLSS

- Implemented NVIDIA DLSS 3.5 with Ray Reconstruction for interactive upscaling and denoising. GPU driver 537.13 or newer is required. Accessible from **Edit > Preference > Render Defaults > Primary (when moving) > DLSS Ray Reconstruction**. [Details](#)

### Material

- Support for refraction glossiness.

## Hardware

- Support for discrete Intel Arc GPUs (*experimental*).

## Modified

### Batch rendering

- Render queue items are now stored between offline rendering sessions.

### UI/UX

- Camera thumbnail now updates automatically when scene states are changed for the camera.

## Fixes

### UI/UX

- Crash when clicking the new version notification button in the menu bar.
- Incorrect render resolution settings when adding multiple cameras using the Group enqueue mode and the <from camera> resolution preset.

### Scene States

- Incorrect Undo action on moved objects after applied scene state.
- Incorrect NONE sub-state for Objects and Materials
- Incorrect camera scene state in the camera scene states dropdown menu when editing render queue item.

## Chaos Vantage, v2.0.1

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*Official Release*

Date - August 03, 2023

## New Features

### Scene states

- Smooth transition between scene states attached to cameras in the animation timeline.

### Rendering

- Added global self-illumination and emissive multiplier. [Details](#)
- Support for 'crop' bitmap option where shading graphs are not supported.

### Textures

- Support for Bercon tiles texture.

### Animation editor

- Added 'Delete all' context menu command in animation editor. [Details](#)

## Auto-exposure

- Added auto-exposure clamp value option. [Details](#)

## Modified

### UX/UI

- Improved the  'Update textures and meshes for current frame' button - now it is a toggle and when enabled automatically updates meshes and animated textures in the interactive viewport, when playback is not active.
- Rearranged the rollouts in the Environment tab UI. Renamed Environment rollout to Sky, Cloud settings rollout to Clouds, Sun light rollout to Sun.
- Moved Sky model settings from Sun rollout to Sky rollout, visible only when Environment mode is Physical sky.
- The render progress dialog is now movable.

### Performance

- Improved memory usage when using a single GPU (around 30MB per megapixel) to not use double buffering.

### Scene states

- Renamed '<chosen scene state>' to '<current scene state>' in sequence rendering, keeping current changes during the offline rendering.
- Added a SAVED SCENE state, updated on each "Save scene" or "Save Scene As..." action, preventing the previous accumulation of Auto Saved sub-states.
- Improved the  'Create scene state' button - now it automatically creates all necessary sub-states where needed and is added in the top toolbar.
- Renamed the 'DEFAULT' scene state to be 'ORIGINAL SCENE'

### Output

- Improved the output filename when Render elements are enabled in sequence rendering to be better recognized by external applications.

### Gizmos

- Improved the rendering of the navigation and placement helper objects.

## Fixes

### Batch rendering

- Crash when updating Render queue cameras that to have same output file name.

### Cloning

- Crash when cloning scene objects multiple times.

### Scene States

- Crash when renaming a scene state to a specific name.
- Missing scene state button in the camera widget when the scene is opened as a config only.

### Live Link

- Crash when opening home screen during Live Link. Now the  'Home screen' button is disabled during Live Link.
- Wrong overwriting of the -linkPort console argument by the INI file.

### Denoiser

- Crash when rendering high quality images/sequence with Intel denoiser selected but disabled.
- Wrong results when rendering on AMD GPUs.
- Missing denoiser when rendering with 'Only final pass' and pressing 'Stop and Save'.

- Bug with the denoiser when rendering high quality images/sequences with dynamic textures.
- Bug with NVIDIA AI temporal upscaling denoising in offline mode.

## Lights

- Wrong loading of mesh lights from vrscenes exported from SketchUp/Rhino/Revit.

## Render elements

- Wrong Normal render element, when "Scattering fog" and "scatter gi" are enabled.
- Alpha not stored in EXR and PNG when using Intel denoiser or 'Separate files' is enabled. Now Alpha is always generated.

## UX/UI

- Frame scene/selection when using Orthographic camera.
- Cinemascope resolution presets.
- Wrong cropping of the light names in the UI.

## Geometry

- Double applying of the VRayScene transformation for Instance objects within a VRayScene.
- Wrong rendering of imported VRayScene in C4D

## Tools

-  "Export static scene" and  "Export animated scene to Chaos Vantage" now work regardless of V-Ray render engine type in 3ds Max.

## Motion blur

- Motion blur not applied to whole image when using an upscaler.

## Chaos Cosmos

- Wrong redirection for the Cosmos login page.

## Camera

- Fixed the camera position in new empty scene.
- Strange roll when switching cameras in specific scene.

# Chaos Vantage, v2.0.0

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Official Release

Date - June 27, 2023

## New Features

### Scene States

- Implemented a Scene States system for creating, modifying and switching lights, materials, and objects variations. Each tab, that can utilize the states system has a **Scene sub-state** rollout and a new **Scene States** tab is added in the right side panel. [Details](#)

### Render Elements

- Implemented render elements(*Lighting, Specular, Global Illumination, Reflection, Refraction, Self-Illumination, Atmosphere, Background, Diffuse Filter, Bumped Normals, Z-Depth, Velocity, Object Mask, Material Mask, Raw RGB*) for compositing and masks. [Details](#)

- Option for saving render elements as separate .png and .jpeg images.

## Fog

- Implemented light scattering( volumetric) fog. [Details](#)

## Textures

- Support for multiple UV channels.
- Support for Vertex Color.
- Support for all options of the Advanced mode of the Color Correction texture from 3ds Max.
- Support for repeat/offset U/V for UVWGenMaya when not using shading graphs (e.g. for bump maps).

## Animation

- Support for .vrscene file with animated: vertices, vrmeshes, materials, textures and UV parameters, light parameters.
- Support for animations outside the imported .vrscene range.

## Denoiser

- Implemented Intel Open Image Denoise denoiser (OIDN) for interactive [Details](#) and HQ rendering [Details](#) .

## Performance

- Implemented NVIDIA upscaling denoiser in interactive mode, requires driver 530 or newer. [Details](#)
- Implemented reservoir resampling algorithm for direct lighting (RTXDI). [Details](#)
- Render resolution scale option in interactive mode. [Details](#)

## Chaos Scatter

- Implemented Chaos Scatter for populating objects in the scene. [Details](#)

## Hardware

- Support for HDR displays.
- Support for AMD GPUs (*experimental*).

## Subdivision

- Support for statically subdivided geometry objects from .vrscene.

## Lights

- Support for mesh lights (improved with reservoir resampling enabled).
- Creation of lights(Point, Spot, Directional, Rectangle, Disc, Sphere, IES) from inside Vantage. [Details](#)
- Support for instanced lights via Forest pack and Railclone.

## Materials

- Support for VRmat materials.
- Support for V-Ray override material (MtlOverride).

## UI/UX

- Helper onscreen text for gizmo manipulators.
- Rendering quality presets slider with 4 predefined presets.

## Cloning

- Implemented object cloning functionality with *Ctrl+D*.

## Camera

- Support for camera render resolution from .vrscene file.
- Support for orthographic camera. [Details](#)
- Camera grouping functionality.

## Tools

- Support for Vertex snapping when moving objects. [Details](#)
- Added functionality to quickly place the pivot on the object's bounding box boundaries.

## Home Screen

- Implemented a Home Screen dialog with quick links, recent file and sample scenes. [Details](#)

## Rendering

- Implemented interval and specific frames or frames list for sequence rendering. [Details](#)

## Geometry

- Support for embedded vrscene nodes (VRayScene).

## Modified

### UX/UI

- Revamped user interface and user experience with reorganized and regrouped parameters.

## Fixes

### Live Link

- Double frame sequence rendering during Live Link with 'Render animation with Chaos Vantage'.

### Geometry

- Wrong placement of meshes at the origin when instanced by an Instancer in an animated .vrscene file.
- Artifacts near the scene origin caused by self intersection.

## Chaos Vantage, v1.8.6

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*Official Release*

Date - June 1, 2023

## Fixes

### Live Link

- Wrong first frame and duplicate frames during Live Link sequence rendering.
- Reverted IPR render state to be enabled automatically when in Live Link

### Texture

- Bug when trying to load RawBitmapBuffer of an image above 16k resolution.

### UX/UI

- Fixed random crash when closing Vantage
- Wrong denoiser description
- Inconvenient soft range for the environment lighting intensity parameter
- Camera panel width issue when "Enlarge font" is enabled

## Chaos Vantage, v1.8.5

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*Official Release*

Date - April 20, 2023

### New features

#### Materials

- Basic support for VRmat materials.

#### Textures

- Support for alpha from bitmaps used in V-Ray material's opacity, exported from Maya.
- Support for all options of the Advanced mode of the Color Correction texture from 3Ds Max.

#### UX/UI

- Separated environment related properties from Lights tab into a dedicated Environment tab. [Details](#)
- Added 'Open Scene Location' to File menu. [Details](#)

#### Geometry

- Support for Edge trimming option introduced in Chaos Scatter with V-Ray 6 for 3ds Max, update 1.1.

### Modified

#### UX/UI

- Added scrollbar to Lights and Camera tabs.
  - Fixed snapping manipulation precision.
- Live Link UI mode - hides unusable tools and tabs when in Live Link session.
- Delete button's icon changed.
- Moved camera properties to default Undo Queue.
- Allow the Delete key to be used in the viewport for deleting selected objects.
- Remove 'Advanced Scene Settings' dialog from File menu, its settings are scattered in more convenient places(Camera tab, Render tab, Preferences dialog).
- Merged 'Render animation with Chaos Vantage' and 'Render animation with Chaos Vantage, using Vantage UI' into a single 'Render Animation with Chaos Vantage' workflow. [Details](#)

### Fixes

#### Clouds

- Tiling artifacts for thin layer of clouds.

#### Live Link

- Wrong undo actions for camera parameters during Live Link.

## Lights

- Textured rectangle lights don't match V-Ray when the light units are not set to default.

## UX/UI

- Deleting parent object in a hierarchy messes children's transformation and Undo history.
- Render resolution not updating automatically when render Setup dialog is opened.

# Chaos Vantage, v1.8.4

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*Official Release*

Date - January 25, 2023

## New features

### Textures

- Support for repeat/offset u/v for 2D Placement texture from Maya when used in bump.

## Modified

### Rendering

- Improved the metalness of a material to better match V-Ray.
- Improved reflective caustics. [Details](#)
- Improved the calculations for light power by area.

## Fixes

### Import/Load

- Crash when importing/loading with animated proxy containing hair geometry.

### Texture

- Crash with EXR file loaded as a V-Ray Normal map in Bump slot material.
- Texture blurriness when W coordinate is different than 0.

### Lights

- New Default Vantage sun being created each time a non-vrscene is appended.
- Light intensity to accept only positive values.

### Auto-exposure

- Difference in image brightness when using Auto-exposure and different rendering resolutions.
- Visual artifacts with fog and Auto-Exposure.

## UX/UI

- Restoring of maximized main window.
- Active pixels overlay not showing active pixels.
- Stereo Spherical and Stereo Cube camera types not updating correctly render resolution based on aspect ratio.

## Command line

- Command line rendering with video output file generates separate files.

## Rendering

- Camera types not taken into account, when using sequence rendering.

## Batch rendering

- Wrong FOV for cameras of the render Queue.

## Live Link

- Render animation with Chaos Vantage, from 3Ds Max, doesn't start rendering when a Live link connection is not established.

# Chaos Vantage, v1.8.3

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*Official Release*

Date - October 26, 2022

## Modified

### Performance

- Improved performance on the RTX 4090 GPU

### UX/UI

- Increased default value of "Max. sec. ray intensity" from 20 to 200.
- Grouped exposure, highlight burn and contrast in Exposure group.

## Fixes

### Live Link

- Crash related to bump/normal mapping in a live link from V-Ray 6 for SketchUp.

### Lights

- Choppy sun and clouds animation for animated geolocation.

### Materials

- Wrong rendering of scenes that contain V-RayOverride material.

### Path resolver

- Incorrect assets being loaded when resolving paths.

### UX/UI

- Wrong resolution for 720p preset in the HQ dialog
- Missing startup scene.

## Render elements

- Missing render elements in EXR file.

# Chaos Vantage, v1.8.2

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*Official Release*

Date - October 13, 2022

## New Features

### NVidia AI Denoiser

- Option to denoise only final sampling pass in offline rendering. [Details](#)

## Modified

### Environment

- Implemented a default Vantage sun so Physical Sun and Sky option is available in the Environment mode drop-down.

### UX/UI

- Added "Always On Top" button in the top toolbar and shortcut (*Ctrl+Alt+T*). [Details](#)
- Added outlines to rollouts.
- Improved the snapping behavior for manipulation gizmos.
- Added sliders below parameters with soft range and *CTRL* (snaps to 1/1000 of the slider's soft range value), *SHIFT* (snaps to 1/10 of the slider's soft range value) and *CTRL+SHIFT* (snaps to 1/100 of the slider's soft range value) modifier keys for finer control.
- Synchronized value defaults and ranges between Vantage UI and "Render animation via Live Link" dialog in 3Ds Max .

### Path resolver

- Improved path resolver now searches every subfolder next to the imported file, for assets.

### Motion blur

- Reduced artifacts from motion blur

### Denoiser

- Improved Vantage denoiser result in refraction and flickering object edges.
- Improved refraction quality when switching between Vantage and NVidia AI in Combined denoiser mode.
- Improved reflection detail with NVidia AI denoiser.

### Auto-exposure

- Improved auto-exposure that accumulate samples in dark areas (single GPU only).

## Fixes

## Rendering

- Visual popping of textures with "Dynamic textures" option enabled.
- Wrong blending of the sun disk with the ground albedo.
- Wrong alignment of the sky texture's horizon line .
- Temporal denoiser and postprocessing passes breaking with dynamic textures.
- Reduce flickering being used when disabled in High quality rendering.

## Auto-exposure

- Crash when starting an offline render with "Auto exposure" enabled on systems with 2 GPUs.

## Command line

- Crash when rendering with -denoiser=0.

## Live Link

- Hang when the Live Link drops during a sequence rendering.
- Random abort while rendering sequence using "Render animation using Chaos Vantage".
- Live Link in 3ds Max doesn't start with the first click on the Start/Stop button.
- Distributed rendering in 3ds Max to always deactivate when the Live Link stop button is pressed.

## Motion blur

- Not applying to moving objects when using "Render animation using Chaos Vantage".
- Not rendering in "Render animation using Chaos Vantage" Maxscript.

## Import/Load

- Errors caused by loading empty string texture filenames.
- Scene animation range one frame shorter when loading .vantage file.

## UX/UI

- UI bug when switching between 'Focal length' and 'Field of view'.
- Transform manipulation and snapping windows not being disabled in Live Link.
- Inconsistent spinner value changes on secondary monitor .
- Wrong rotation range for transform type-ins.
- Chaos Vantage starting at invalid coordinates when monitor layout changes between sessions .

## Render elements

- Missing velocity in EXR.
- Alpha getting lost in EXR when motion blur is enabled.

# Chaos Vantage, v1.8.1

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*Official Release*

Date - July 19, 2022

## New Features

### Color Corrections

- Implemented Chromatic aberration effect in the **Post** tab. [Details](#)

## Modified

### License server

- Updated to latest Chaos License Server 6.0.0

### Cloud system

- Reduced distortion of the contrails used in the cloud system.

## Fixes

### Live Link

- 3ds Max hangs during Live Link caused by the cryptomatte render element.
- Motion blur not rendering offline animation through Live Link from 3ds Ma.

### Motion blur

- Not rendering in offline renders when dynamic textures are enable.
- Not rendering in "Render animation using Chaos Vantage" Maxscript.

### UX

- Weird dialog placement on secondary monitor

## Chaos Vantage, v1.8.0

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*Official Release*

Date - July 14, 2022

## New Features

### Clouds

- Implemented Cloud system to the **Physical Sky** environment model. [Details](#)

### Color Corrections

- Implemented **Filmic Tonemapper**(Hable, AMPAS), **Hue/Saturation** and **Contrast** color corrections in the **Post** tab. [Details](#)

### Textures

- Support for animated textures(image sequences)files. Have to manually update on desired frame using **Update sequence** button() when not in Live Link or offline rendering. [Details](#)

### Performance

- Option for dynamic textures to reduce GPU memory usage. [Details](#)
- Experimental option to increase FPS by decreasing sampling quality. [Details](#)
- Option to pause rendering after reaching a certain sample level. [Details](#)

## Overlays

- Added composition grid overlays: *Rule of Thirds*, *Central Cross*, *Golden Spiral*, *Golden Ratio* and *Diagonals*. Available from the **Composition guides overlay** ( button in the top toolbar. [Details](#)

## Modified

### Output

- EXR files now store camera exposure.

### UX/UI

- Shortcut for HQ render dialog opening. Default is *Ctrl+R*.
- Functionality to copy the viewport to the clipboard with *Ctrl+C* shortcut.
- Implemented sliders for Color Corrections in the **Post** tab.
- Improved the UI responsiveness while the HQ **Render setup** dialog is open.
- Separated Bump and Normal mapping render options.
- Disabled file actions (e.g. **Open Scene**, **Reload Scene**) while in Live Link session.
- Misleading error message when a scene file is corrupted.
- Wrong reporting of geometry statistics in various cases (live link, deleting objects, V-Ray Proxy).

### Tools

- Render Animation with Chaos Vantage UI** shows the correct FPS from Max.

## Fixes

### .vantage file

- 'Original camera' thumbnail not being properly displayed after loading file.

### Performance

- GPU memory for a V-RayProxy not being freed after the proxy is deleted.

## Chaos Vantage, v1.7.4

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*Official Release*

Date - June 13, 2022

## Modified

### UX

- Improved scroll handling for debug log window

## Fixes

### Output

- Crash when saving to EXR files.

## UX

- Strange symbols in debug log after filter search.
- Duplicate file close confirmation dialog.

## Chaos Vantage, v1.7.3

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*Official Release*

Date - June 08, 2022

## Modified

### Live Link

- Added support for V-Ray 6 (beta) builds.

### Exposure

- Auto-exposure smoothing over time in High Quality sequence rendering. It is determined from **FPS** and **Auto exposure time**. Set **Auto exposure time** to 0 for previous behavior.

## UI

- Improved message log UI:
  - Added button in the status bar for easier access.
  - Search filter now filters and shows only lines that have the input string.
  - Added Filter menu to specify the type of message to show in the log window.
  - Added Wrap lines button.
  - Added Clear log widow button.
  - Added Open log location button.

## Fixes

### Performance

- CPU memory leak when uploading textures.
- Potential delay in version check during startup

### Live Link

- Files not saving with Non-ascii filename characters when using 'Render animation with Chaos Vantage'

## Chaos Vantage, v1.7.2

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*Official Release*

Date - May 19, 2022

## New feature

### Exposure

- Implemented Auto-exposure functionality. Can be toggled via the  button in top toolbar. [Details](#)

### Texture

- Support for negative values for textures.

## Fixes

### Installer

- Embedded Chaos Cosmos installer downgrades newer installed version

### Lights

- Crash when deleting grouped lights

### Live Link

- Camera type is not consistent throughout the entire animation sequence when using 'Render animation with Chaos Vantage, using Vantage UI'

## Chaos Vantage, v1.7.1

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*Official Release*

Date - April 13, 2022

## New feature

### Texture

- Partial support for V-Ray Edges texture - rounded corners are not implemented

## Modified

### .vantage

- Geolocated sun animation is saved in the .vantage file

### Navigation

- Support for mapping Chaos Vantage shortcuts through the SpaceMouse/3DConnexion controller

## UX

- 'Render setup' dialog retains settings when closed and between sessions. 'Save defaults' checkbox is removed from UI
- Light gizmos now have consistent line width and size at different render resolution and viewport size

## UI

- Upper limit for the number of light tree samples is increased to 16

## Fixes

### Environment

- Wrong overriding of the current environment texture when using "Open Scene as Config Only..."

## Chaos Vantage, v1.7.0

---

*Official Release*

Date - March 30, 2022

## New Features

### Textures

- Support for normal maps

### Clay mode

- Added white/clay mode override in the Material tab with options to preserve original material's reflection, refraction, bump, opacity and self illumination [Details](#)

### Ambient occlusion

- Added global ambient occlusion option in the Lights tab [Details](#)

### Sun animation

- Implemented Animated Geolocated sun and Sun track in the animation editor for easy sun time lapse animation [Details](#)

### Menu

- Added **New option in the File** menu to create a new empty scene [Details](#)

### Navigation

- Support for 3DConnexion SpaceMouse controller

### Supported output formats

- Implemented .jpg/.jpeg file type output

## Modified

## Ambient light

- Added ambient light color swatch [Details](#)
- Increased ambient light intensity limit to 1000000

## UX

- Implemented 'Camera enqueue mode' in **Render setup** dialog to add all scene cameras at once in the render queue [Details](#)
- Shows .vantage file name in recent file list and title bar after saving scene
- Camera clipping planes are now taken into account when determining the dolly/orbit/zoom pivot point
- Abort button now aborts the entire render queue
- Render dialog retains render queue when closed
- Sequence mode is not allowed when no sequence is available

## Fixes

### .vantage file

- The .vrscene environment texture is not used when loading a .vrscene with an associated .vantage file

### Memory

- Memory leak when HQ rendering with denoiser

### Live link

- Changing a VRayLight from Plane to Dome not updating correctly

### Camera

- Crash when renaming a camera

### Geometry

- Crash when deleting objects

## Chaos Vantage, v1.6.2

---

*Official Release*

Date - January 11, 2022

## New feature

### Texture

- Support for the "auto" color space transfer function of VRayBitmap

## Modified

### .vantage

- When the root .vrscene is not found with its absolute path it's searched for in the folder containing the .vantage file

## Fixes

### Multi GPU

- Line artifacts in interactive mode when using multiple GPUs

### UI

- Duplicate objects showing up in object list (with scenes from Maya)

### Memory

- Crash when out of GPU memory and the scene has a rectangle light with a texture

### Tools

- Issues in "Import changes from Vantage" MAX script:
  - Importing cameras from a .vantage file does not set the frame rate
  - Unexpected values for the "Exposure value" keys

### Live Link

- Live link failing to start when "Save strings in legacy non-scene files using UTF8" is enabled in 3ds Max

### .vantage

- Error when using "Save scene settings as default"

### UX

- Undo action not working properly after a select-all(CTRL+A) action in the objects list

## Chaos Vantage, v1.6.1

---

*Official Release*

Date - December 16, 2021

## Modified

### UX

- Place tool now locks the selected object's current orientation while SHIFT key is pressed
- A sample HDR file is loaded when opening non-vrscene files

### UI

- Added progress indication when importing FBX, OBJ, 3DS, PLY, STL, TER, DAE, GLTF file formats

### Textures

- Better parity when using the V-RayUVWRandomizer in V-Ray for Cinema4D

## Non-vrscene files

- Default up direction (now Y) for OBJ and 3DS files

## Fixes

### Live Link

- Animation rendering started with Vantage UI renders the same frame over and over
- Animation synchronization bug in 3ds Max

### .vantage file

- Deleting an instance of an appended scene resulting in an incorrectly saved .vantage file

### Memory

- Excessive shared GPU memory usage with certain large .OBJ scenes

### Environment

- HDR rotation not importing with vrscene generated from Revit

## Non-vrscene files

- TerraGen (.ter) files doesn't import

## UX

- Camera view getting reset to the original camera after placing an asset
- Pressing ESC while using Place tool makes selected object to be unselectable
- Issues when switching between Still and Sequence in the Render setup dialog

## Chaos Vantage, v1.6.0

---

*Official Release*

Date - December 06, 2021

## New Features

### Cosmos materials

- Support for Cosmos materials
- Remove unused cosmos materials option in the Material list [Details](#)

### Batch rendering

- Support for batch rendering. Still image and Sequence jobs can be added to a render queue [Details](#)

## UX

- Import option in the **File** menu for easier importing of supported file formats

## Supported formats

- Experimental support for opening and importing FBX, OBJ, 3DS, PLY, STL, TER, DAE, GLTF file formats

## Modified

### UX

- The Snapshot and Sequence dialogs are now united in a single Render dialog [Details](#)
- Animation frame range setting in the Render dialog
- Render time estimation in the Progress window
- Non-zero default values for transform snapping. New defaults are:
  - Translate 10 scene units
  - Rotate 15 degrees
  - Scale 0.1
- Object list improvements:
  - CTRL + A selects all objects, including children
  - SHIFT + Expand/Collapse applies to children too
  - DELETE key deletes the selected object
  - SHIFT + DELETE key deletes the selected object and its children
  - All selected items are expanded/collapsed with the item currently expanding/collapsing

### Performance

- Optimized GPU memory usage:
  - Light Cache is now several times smaller
  - Unused textures are unloaded from the GPU

### Live Link

- Creation and updating of textures for lights

## Fixes

### Textures

- V-RayMultiTexture and V-RayTriplanar randomization options not working with scenes from V-Ray 5, update 2

### Memory

- Crash after loading a new scene after a failed memory allocation

### Multi GPU

- Line artifacts with multi GPU after opening the material browser

## Chaos Vantage, v1.5.3

---

*Official Release*

Date - November 11, 2021

## New Features

### Material tab

- Material name searching, type filtering and sorting(name and creation)
- Select the material of the selected object button

### UX

- Drag-and-drop material assignment with preview
- Alt+drag-and-drop replaces material on all object with same material
- Ctrl+drag-and-drop assigns material to objects and its children

### Import

- Support for ply, obj, bin, geo, hclassic, bgeo, bhclassic, prt, and partial (**no** animation, hair and particles) support for alembic files

## Modified

### UX

- Cosmos browser doesn't show importer choice inside Chaos Vantage when multiple importers are running
- Motion blur is not allowed for non-perspective (Cube 6x1, Spherical and stereo) cameras.

### Performance

- Optimized memory usage of texture files with a single color
- Optimized memory usage for material previews

### Live Link

- Implemented HDRI environment and dome light creation and updating

## Fixes

### Live Link

- Several parameters not working in the **Render Animation via Live Link** dialog in 3ds Max

### Console

- Incorrect frame rate when rendering through console

### .vantage file

- Animation editor settings not getting saved to .vantage file

### Material tab

- Wrong material thumbnails after loading a new scene

## Chaos Vantage, v1.5.2

---

*Official Release*

Date - October 21, 2021

## Fixes

### Snapshot

- "Render High Quality Snapshot" not showing progress bar

### Camera

- Crash with overwritten vrs scene camera when used in animation

## Chaos Vantage, v1.5.1

---

*Official Release*

Date - October 20, 2021

## Fixes

### Animation editor

- Render sequence renders only current frame
- Pause element not exported properly
- Scene camera in camera animation track cancelling other object animations

### Live Link

- Incorrect transformation of objects, lights and cameras from Cinema 4D

## Chaos Vantage, v1.5.0

---

*Official Release*

Date - October 19th, 2021

Please note that `.vantage` files saved with version 1.5.0 and newer are not compatible with older versions.

## New Features

### Place tool

- Implemented Place tool mode for the Move tool with center cube to place objects on surface based on its normals [Details](#)

## Camera

- Support for per camera resolution

## Command Line

- Command line arguments using *vantage\_console.exe* wrapper [Details](#)

## Environment

- **Flip horizontally** option for the environment texture.

## Material tab UI

- Material tab with thumbnails: [Details](#)
  - Render materials thumbnails
  - Preview scene settings
  - Number of columns option

## Output

- Top/Bottom option for Stereo Cube 6x1 and Stereo spherical outputs
- FOV X and FOV Y have now decimal values instead of single integer

## Modified

### Live Link

- Render animation in Live Link session from 3ds Max (requires **V-Ray for 3ds Max** upcoming update)

### Lights

- Save all lights parameters in *.vantage* file

### UI

- Replaced denoiser slider in toolbar with an On/Off button when using the **Nvidia AI** denoiser or **Combined** denoiser

### Camera

- Enable imported cameras to be drag-able to Camera animation track

### Animation editor

- Improved animation editor: [Details](#)
  - Shot editor mode
  - Auto transition
  - Time format - min, frames, combined
  - Force camera resolution for animation
  - Loop button
  - Create button before, after of selected elements, after the last element in the track, and on the play head line on transitions with options

### Installer

- Removed Install **V-Ray for 3ds Max Live link** scripts option and from ||Customize|| > **Customize User Interface** > **Toolbars** > **Chaos Vantage** in 3ds Max
- Added option to associate . Vantage files so that they can be opened with Chaos Vantage from the explorer

## Fixes

### UI

- Wrong display of object hierarchy
- UI font bug when in non-latin OS
- Closing Cosmos Browser from 'X' doesn't update UI

## Camera

- Automatic vertical tilt doesn't work correctly with scenes with Y-up axis

## Lights

- Environment map is flipped from Cinema 4D
- Environment map not importing when "TexRGBTintMax" is used to color correct it

## Multi GPU

- Black spots in denoised offline render on multi-GPU

## vrscene file

- Incorrect transforms import of meshes in a hierarchy from Cinema 4D when using Cloner in Multi Instance mode
- Incorrect node visibility animation when some frames don't have a keyframe from Cinema 4D

## Crash

- Crash on app launch with external GPUs

# Chaos Vantage, v1.4.2

---

*Official Release*

Date - July 21st, 2021

## New Features

### Camera

- Support camera near and far clipping planes [Details](#)

### Output

- Support for saving EXR (16-bit) images - the main image is linear, without color corrections and post-effects. Available channels: Bumped Normals, Depth, Screen Velocity, Albedo, Additional (Background & Lights)

### Materials

- Basic support for the V-Ray Car Paint 2 Material

## Modified

### Materials

- Improve support for the V-Ray Car Paint Material

## Fixes

### Output

- Light gizmos are rendered in final sequence
- Chaos Vantage renders different frame number compared to Max
- Chaos Vantage renders 1 frame less than the full timeline

### Animation editor

- Animation timeline cannot display more than 1 transient clips on the right
- Cannot select transient clip on the right of the timeline

### Vantage file

- Can't save vantage file when path contains non-Latin characters

### Crash

- Crash on app launch with external GPUs

## Chaos Vantage, v1.4.1

---

*Official Release*

Date - July 2nd, 2021

## New Features

### Textures

- Support for Substance textures
- Support for SketchUp native textures and colorization

### UX

- Implemented UI to specify rendering device(s) [Details](#)

### Geometry

- Support for animated object visibility from a .vrscene file

## Modified

### UX

- Improved snapping and transforms windows:
  - Added 'S' as shortcut to toggle snap on/off
  - Don't hide the dialogue when exiting free look mode and the window has been opened beforehand
  - Spinboxes display scene units
- Improved Offline render UI:
  - Added resolution preset
  - Added aspect ratio control

### Geometry

- Support for Edge boundary checking in Forest Pack

### Tools

- Support for importing camera parameters(static and animated) with 'Import changes from Vantage' tool in 3ds Max
- Imported cameras are now named [VANTAGE FILE NAME]\_[CAMERA NAME]\_###

## Fixes

### Camera

- Auto vertical tilt doesn't keep vertical lines in camera transitions
- Camera rolls while transitioning between two upright positions

### UX

- Collision detection regression
- "Orbit" and "Look around" navigation are uncontrollable when on second monitor and >150% dpi scale
- Scene up vector is not applied correctly to merged .vrscenes/cosmos assets

### Materials

- 2-Sided material doesn't work correctly in SketchUp/Rhino/Revit/Cinema4D

### Textures

- Crash with TexMulti when it has an unsupported sub-texture connected to it
- Vantage doesn't match V-Ray when TexMulti has an empty textures list and random hue/sat/gamma

### Tools

- "Overwrite existing" in "Import changes from Vantage" doesn't work for Chaos Vantage animated camera
- Camera Interpolations imported with "Import changes from Vantage" don't match camera interpolations in Chaos Vantage

## Chaos Vantage, v1.4.0

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*Official Release*

Date - June 17th, 2021

## New Features

### Textures

- Support for the V-Ray MultiSubTex
- Support for MultiTexture(CGSource)
- Support for ForestColor

### UX

- Transforms manipulation window
- Transform snapping

## Modified

### Textures

- Extended support for V-Ray Triplanar texture - Random texture offset, Random texture rotation, Random frame rotation, Random axis, Random mode
- Extended support for V-Ray UVWRandomizer texture - Randomize by name, face ID, render ID, element, instance ID, object ID, particle ID, node handle

## Fixes

### Camera

- Difference in FOV and Focal length values between Max and Vantage
- Film gate and Focal length not importing correctly with multiple cameras
- Merged cameras get their focal length set from scene Home camera

### UX

- Drag-n-drop gizmo isn't placed correctly with dedpi > 100%
- Inconsistency in Transparency overlay between NVIDIA AI and Combined/Vantage denoisers
- Focus distance shortcut functions like Pick focus tool - now behaves as a virtual focus distance slider by moving the mouse left and right.

### Denoiser

- Super bright pixels become black with NVIDIA AI denoiser

### vrscene

- Wrong position of objects with merged vrscenes with different meters\_scale
- Light gizmos scale depending on .vrscene's scale

## Chaos Vantage, v1.3.0

---

*Official Release*

Date - May 20th, 2021

## New Features

### Materials

- Support for the V-Ray 2 Sided Material

### Denoiser

- Implemented NVIDIA AI denoiser

### Objects

- Support for object camera/reflection/refraction/overall visibility and cast/receive shadows properties

### Camera

- Support for animated camera parameters from .vrscene - Focus distance, FOV, Focal length, Zoom factor, ISO, F-number, Shutter speed, Vertical/Horizontal Tilt/Shift

## Modified

### UX

- Implemented customizable shortcuts
- Moved Mouse and Keyboard Shortcuts menu under Edit menu
- Moved Navigation preset in Mouse and Keyboard Shortcuts menu
- Statistics for required additional memory in High Quality Snapshot and High Quality Sequence windows
- Input validation of input fields in UI with Enter, Tab or Space keys

## Fixes

### Live Link

- Incorrect update of materials when enabling/disabling certain features

### Lights

- Mesh lights imported as point lights with incorrect intensity - they are now ignored instead

### Output

- Wrong alpha channel when Light Cache is enabled

## Chaos Vantage, v1.2.1

---

*Official Release*

Date - April 27, 2021

## New Features

### Materials

- Support for the "Reflect on back side" option in the V-Ray Material
- Support for the "Double-sided" option in the V-Ray Material

## Modified

### UX

- Enabled focus picker while in Live Link

## Fixes

### Materials

- Refract IOR affects reflections when Fresnel IOR is unlocked
- Glossy fresnel is not correct when using texture for Fresnel IOR

### Chaos Cosmos Browser

- Wrong scaling of Chaos Cosmos assets when imported to a scene with non-centimeter scale

## Chaos Vantage, v1.2.0

---



## New Features

### Materials

- Support for Clear coat in V-Ray Material
- Support for glossy Fresnel reflections

### Camera

- Support for importing multiple cameras from one .vrscene file

### Environment

- Background override option to affect refraction and mirror reflection rays

### Output

- Support for saving .PNG files with alpha channel

## Modified

### UX

- Animation FPS in Vantage is set based on .vrscene
- Asset filtering options in the merge scene dialogue on import
- Disabled tools in the UI that can't be used during Live Link
- Added specific gizmo shapes for lights depending on their type

### .vrscene

- Improved performance when loading animated .vrscene

## Fixes

### Live Link

- Layer and object visibility changes breaking multi-materials in Live Link

### Lights

- Broken disc and rectangle light when loading a new scene after disabling lights

### Animation

- Precision issues with animation of rotating objects

## Chaos Vantage, v1.1.1

---

*Official Release*

Date - March 04, 2021

## Fixes

### .vrscene

- Drop-Merge .vrscene doesn't place it to origin
- Freeze with .vrscenes containing multiple Nodes with same full name

### Navigation

- Camera orbiting and transitions are incorrect for scenes from V-Ray for Cinema 4D

### Sun

- Fixed Sky is not set correctly for scenes with Y up vector

### UX

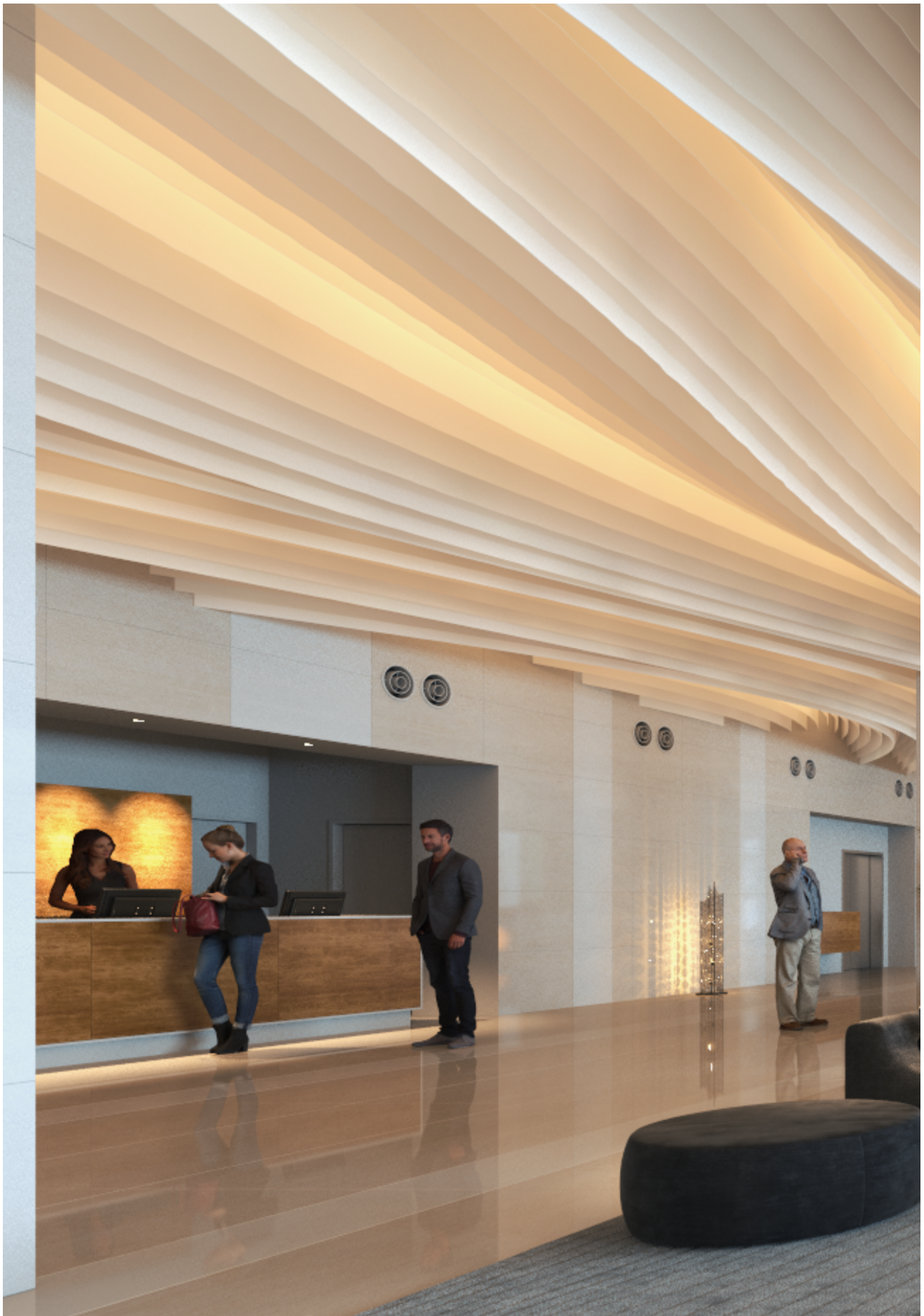
- Strange artifacts in viewport when using 'Flip Up Axis Y'
- Camera tab widens when opening 'Advanced Resolution Settings'

## Chaos Vantage, v1.1.0

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*Official Release*

Date - March 04, 2021





## New Features

### Chaos Cosmos

- Initial [Chaos Cosmos](#) asset library integration

### Sun

- [Geolocated Sun](#) positioning

## Improvements

### .vrscene

- Improved support for `.vrscenes` coming from Cinema 4D

### Materials

- Support for MtlMulti IDs larger than 31

### UX

- [Option to display advanced camera parameters as rollouts instead of popups](#) (now default)
- Removed limited object translation distance
- Light source gizmos now visualize rotation

## Fixes

### Live Link

- Very rare case where Live Link may start with missing objects

### High Quality Render

- Motion blur not working on multiple GPUs
- First frame of a HQ sequence having big motion blur

### Textures

- Scenes from V-Ray for Sketchup 5.1 failing to render any textures

### UX

- Viewport selection not working at specific resolutions
- Transform tools not respecting the single/group select mode
- Geometry disappearing after scaling it down to zero scale
- Advanced camera parameter popup not hiding when Camera tab is hidden

- Overlapping advanced camera parameter popups

## Chaos Vantage, v1.0.2

---

*Official Release*

Date - February 02, 2021

### New Features

#### UI

- Added [Fog max opacity](#) option

### Fixes

#### Live Link

- Refractive materials render completely black with live link in Maya
- Update logic issues

#### High Quality Render

- Performance regression when high quality rendering is paused and resumed

#### Driver

- ColorCorrection texture and UVWGenChannel issues caused by 46x.xx series drivers

## Chaos Vantage, v1.0.1

---

*Official Release*

Date - January 19, 2021

### New Features

#### UI

- Added option for [larger UI font](#)

### Modified

#### UI

- Tweaks of camera's Advanced parameters windows pop up behaviour
- Disabled video "Output file type" when rendering sequence with non-perspective camera

## Fixes

### Live Link

- Textures coming from V-Ray for Maya not working correctly

### CPU

- Crash when working with CPU with very high thread count

### Multi GPU

- Performance regression with noise threshold

## Chaos Vantage, v1.0.0

---

*Official Release*

Date - December 02, 2020

## New Features

### Environment Fog

- Added two environment fog layers with individual settings

### UX

- Support for deleting objects in the scene
- Added "Place" functionality when drag and dropping `.vrscene`

### Live Link

- Added option for installation of 3Ds Max live link scripts in installer

### UI

- Added toggle opacity button in top toolbar
- Added option to make Chaos Vantage window always on top

### Video

- Record the viewport to an `.mp4` file in real time
- Added `.mp4` and `.mkv` export type for animation

### Offline Render

- Added denoising and motion blur option in render high quality snapshot or sequence

### Post

- Added color space setting for LUT files

### Texture

- Added support for UVWGenRandomizer

## Motion blur

- Support for motion blur in offline rendering

## MAX Scripts

- Included in installer [Initiate Live Link to Chaos Vantage](#), [Export and send the current scene as static .vrscene to Chaos Vantage](#), [Export and send the current animation range as a .vrscene to Chaos Vantage](#) as well as the Import Changes from Chaos Vantage tools compatible with 3ds Max versions 2019, 2020 and 2021.

## Modified

### Material

- Improved bump support with scenes generated from V-Ray 5
- Improved bump parity between Chaos Vantage and V-Ray

### Live Link

- Improved Live link support with all V-Ray 5 plugins supporting DR

### UI

- Reworked Camera tab parameters layout
- Improved icon and camera thumbnail rendering for hi dpi monitors
- Increased environment "Intensity" cap to 1000
- Replaced EDITOR, LUT and BLOOM buttons with icons
- Added Feedback Program tab in Preferences menu
- Improved Shortcuts menu layout

## Fixes

### Material

- Bump does not render behind refractive objects

### Camera

- Crash when deleting camera while in "Recording camera movement" mode
- "Level Camera" does not reset correctly camera roll with an Y scene\_upDir

### Multi GPU

- Creeping artifacts with 2 GPUs

Project Lavina is now Chaos Vantage.

## Project Lavina Beta, v0.6.0

---

*Beta Release*

Date - November 04, 2020

## New Features

### Live Link

- Experimental 3ds Max to Lavina live link

## Texture

- Support for Triplanar texture

## UI

- Light gizmos for easy selection of non-area lights when a transform tool is selected

## Config .vrdx

- Loading saved Lavina files(.vrdx) now loads associated .vrscenes

## Modified

### GPU

- Improved out-of-memory protection for GPU resources

### UI

- Improved indicator for render state - RENDERING, PAUSED, CAM REC., LIVE LINK

## Fixes

### Camera

- Issue when saving camera slot shortcut
- 'Fill' option squashing image when using a portrait aspect ratio

### Lights

- Non top level lights in a hierarchy can not be disabled

### UI

- App window not returning to proper size after a spherical or cube offline render

### Texture

- Opacity map not working when the texture's alpha channel is used

## Project Lavina Beta, v0.5.1

---

*Beta Release*

Date - October 08, 2020

## New Features

### Camera

- Added Rotation Focus method to Stereo Spherical and Stereo Cube 6x1 camera types
- Add support for import of Exposure value in Physical Camera

## Modified

### .vrscenes

- Improved handling of back face materials from V-Ray 5 for SketchUp .vrscenes

## Fixes

### UI

- Cloning selected objects also duplicate scene lights in Lights tab

### CPU

- D3D error on machine with large cpu thread count

## Project Lavina Beta, v0.5.0

---

*Beta Release*

Date - September 03, 2020

## New Features

### Camera

- Added Cube 6x1, Spherical and Spherical Stereoscopic camera types to render images and sequences

## Modified

### NVLink

- Improved performance with GPUs set with NVlink connection

## Fixes

### Animation Editor

- Camera thumbnails in timelines are squashed with different aspect ratio

### Camera

- Camera jolts when navigating from a stored camera with a roll
- Frame selected/scene shortcut doesn't work
- Home camera not loading correct FOV

### Texture

- Forest color texture importing black.

## Project Lavina Beta, v0.4.4

---

*Beta Release*

Date - August 19, 2020

### New Features

#### Camera

- Tilt and shift corrections for Physical Camera

### Modified Features

#### UX

- Color picker dialogue can be moved around

### Fixes

#### .vrscene

- Incorrect scaling when merging .vrscenes exported with different meter scale

#### Camera

- Switching between stored cameras with different FOV results in a jump

## Project Lavina Beta, v0.4.3

---

*Beta Release*

Date - August 03, 2020

### New Features

#### Lights

- Support for texture in V-Ray Plane/Rectangle light
- Support for V-Ray Disk/Ellipse light

#### License Server

- License server as part of the installation

#### GPU

- GPU driver check for currently unsupported and recommended drivers

## Modified Features

### Camera

- Improved Camera roll navigation action

### UX

- "Check for updates" button in Help menu
- Build date and time info in About dialog

## Fixes

### Animation Editor

- Transient clip in animation editor cannot be selected or modified
- Pivot point not moving with object when animated from imported *.vrscene*

### Denoiser

- Artifacts around very bright light source
- Reflection artifacts when using two GPUs

## Project Lavina Beta, v0.4.2

---

*Beta Release*

Date - July 22, 2020

## Fixes

### Video Driver

- Startup error (D3D error) with 450 series NVidia drivers

## Project Lavina Beta, v0.4.1

---

*Beta Release*

Date - July 10, 2020

## Fixes

### Camera

- Physical camera parameters not syncing when switching camera slots
- Physical camera parameters scaling erroneously when loading from *vr dx* file

### Animation Editor

- Physical cameras not interpolating correctly in animation editor when using FoV
- 'Aperture size' interpolation in animation editor

## Denoiser

- Denoiser issue when using more than one GPU

## Project Lavina Beta, v0.4.0

---

*Beta Release*

Date - July 09, 2020

[Download V-Ray\\_LavinaImportChanges.mzp](#)

## New Features

### Camera

- Physical camera parameters
- Camera roll functionality

### Material

- Support for metalness (BRDFVrayMtl)

### UI

- Pivot point selection button to top toolbar
- Mouse precision toggle button

### MAXScript

- Import Changes from Lavina MAX script reimporting multiple cameras and animations from Project Lavina back to 3Ds Max. [Details](#)

## Modified Features

### Denoiser

- Improved denoiser:
  - Details from small objects and shadows are less blurry
  - Reduced halo/bloom effect around objects

### Animation Editor

- Improved UX :
  - Increase the pickup radius for selecting thin areas - timeline marker, clip edges.
  - Make the rightmost 20px of a clip with two drag-able controls.
  - Transient clips are not resizable when dragged, only their position change.
  - Transient clips have a better thicker line indicator
  - Increase the limit of the "Def. duration" spinner to 1000 (approx. 10 sec @ 90fps )

## Project Lavina Beta, v0.3.1

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*Beta Release*

Date - July 01, 2020

## Fixes

- Imported animated sun from .vrscene not being animated in Lavina

## Project Lavina Beta, v0.3.0

---

*Beta Release*

Date - June 26, 2020



## New Features

- Added Animation Editor (experimental)
- Added Light grouping(instance) on imported lights
- Added support for V-Ray Sun and Sky models
- Added Noise threshold option
- Added Support for Simple(environment) light portal
- Added support for CommonTexture and MappedTexture set of texture parameters: Crop, Place, AlphaSource, MonoChannelOutput, RGBChannelOutput, Invert, OutputAmount, Clamp, RGBOffset, RGBLevel

## Modified Features

- Improved Color Picker - interactive updates, color temperature, color presets, color range options

- Improved UI:
  - Last snapshot render time information
  - Selecting a light focuses it in the light lister
- Improved visual parity between Lavina and V-Ray

## Project Lavina Beta, v0.2.3

---

*Beta Release*

Date - May 07, 2020

### New Features

- Added new Camera list with thumbnails and set, delete and reorder functionality
- Added support for Directional, Omni and Spot lights from 3Ds Max
- Added support for Instanced objects from Maya/Modo/Houdini
- Added "Display to render ratio" control in the toolbar

### Modified Features

- Improved navigation - Selection Pivot Type
- Improved denoiser - Artifacts with motion blur with fast moving objects are reduced
- Improved denoiser - textures behind refractive objects are less blurry
- Improved UI - RMB to reset value to default

## Project Lavina Beta, v0.2.2

---

*Beta Release*

Date - April 09, 2020

### New Features

- Support for IES lights
- Support for Spot lights from Maya/Modo/Katana/Cinema4D/Sketchup/Rhino
- Object pivot import and manipulation
- Move Pivot tool
- Navigation target type option - Ray hit or Camera target

### Modified Features

- Improved navigation - gizmo for orbit pivot and zoom point

### Bug Fixes

- Fixed bug with rotation and scaling in local space

## Project Lavina Beta, v0.2.1

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*Beta Release*

Date - March 26, 2020

## Modified Features

- Improved denoiser blending - added simple adaptivity to raw/denoised blending to filter out extreme noise
- Improved camera navigation
- Improved camera transitions with quadratic interpolation function instead of linear
- Improvement: Environment image is now cleared when loading a new scene
- Improvement: Removed automatic cycle back to first camera when in "Camera" animation mode
- Improved UI - removed Modifier key option and include them in navigation preset
- Improved UI - Shortcuts update according to navigation preset

## Project Lavina Beta, v0.2.0

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*Beta Release*

Date - March 12, 2020

## New Features

- Support for opacity maps in "clip" mode. Only bitmaps are supported
- Separate background option for camera rays instead of the "environment" color/image
- Importing of Dome light texture as Environment
- Navigation presets: Max, Maya, Sketchup
- "Run" when in Free-Look mode

## Modified Features

- Improved rendering of refractive objects on reflective surfaces
- Improved light cache - it is cleared when a render setting is changed
- Improved animation experience: Scene, Walkthrough and Cameras mode
- Improved scene navigation experience
- Improved status bar

## Bug Fixes

- Fixed denoiser silhouette artifacts
- Fixed collision enabled only in Free-Look mode
- Fixed undo action for some local space rotations