

V-Ray 6

V-Ray 6, Update 2, hotfix 3 (6.20.03)

Official release

Date - Apr 5, 2024

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Improvements & bugfixes

- Added support for SketchUp 2024
- Entering sleep mode no longer severs the communication between V-Ray and SketchUp
- A warning message is now shown when attempting to save a SketchUp model while V-Ray Vision or Vantage is linked. Performing the save action while in live-link mode is not possible due to a SketchUp-side limitation
- The file path verification in the Export V-Ray Scene and Export V-Ray Proxy windows is improved
- Fixed an issue preventing Cloud rendering job name from being populated when restarting the submit process
- Fixed an error appearing when Cloud jobs are submitted multiple times in a row
- Attempting to upload an image via the Chaos Cloud Collaboration window before rendering no longer produces an error. A warning is shown instead
- Improved notification for missing Chaos Cloud application
- Canceling a Cloud job submittal shortly after launch no longer causes an error
- An issue causing the NVIDIA AI Denoiser's Upscale option to be enabled for each Denoiser type is resolved
- An issue with enabled NVIDIA AI Denoiser's Upscale option breaking the preview of a Cloud job and a Viewport rendering is resolved
- An issue preventing Hue from being set to 0 or 1 in the Color Picker is now resolved
- Deleting multiple maps of the same texture type simultaneously no longer causes a crash
- An issue preventing the Dirt texture's Ignore Self-occlusion option from functioning correctly is resolved
- An issue caused by undoing an Enmesh creation leading to a blank Asset Editor is now resolved
- An issue preventing the update of the Scatter's preview when changing guests probability, is now resolved
- Deletion of a Mesh Light during interactive rendering no longer causes its host object to also disappear
- An issue with importing Proxy scenes more than once during Interactive rendering is fixed
- Deletion of groups or component instances during interactive rendering is now handled in a more reliable way
- Fixed a crash on Proxy Scene import or export in models containing Scatter assets with enabled viewport preview
- Making scene changes while saving specific SketchUp models no longer leads to a crash
- macOS: Attempting to render specific scenes containing Fur in RTX mode no longer causes a crash
- macOS: Starting a CUDA render while the secondary GI engine is set to Light Cache no longer leads to a crash
- An issue preventing V-Ray Vision's user interface from functioning on macOS Sonoma 14.2.1 (and later) is resolved

V-Ray 6, Update 2, hotfix 2 (6.20.02)

Official release

Date - Jan 24, 2024

Improvements & bugfixes

- Adaptivity Clamp control is introduced in the Render Parameters' Optimizations section. The default value of 1.5 avoids excessive sampling of overexposed areas while a value of 100 disables this optimization
- 'Viewport Texture Resolution' option is implemented (Extensions > V-Ray > Preferences > Viewport Texture Resolution). It controls the size of all viewport texture previews of materials using the Bake binding mode
- Bake Binding Texture Mode is now enabled by default for newly created materials
- Fixed an issue with the V-Ray File Path Editor causing baked textures to lose their names and fail to render properly
- An issue preventing the V-Ray File Path Editor from archiving Raw Bitmap Buffer textures is resolved
- Scatter tool information is now displayed in the SketchUp Instructor tray and status bar
- Scatter Area Modifiers are now inactive when using '1D - On Splines' scattering mode to reflect that they have no effect on it
- Scatter's 'Normal Alignment' rotation option now accepts negative values. As a result Scatter instances can be aligned towards the vertical down (-Z) axis
- Scatter's UV Grid surface mode no longer ignores the size of the host's group or component material
- Editing a Scatter guest's group or component no longer causes its instances to appear misaligned in the viewport
- An issue preventing interactive updates when deleting a Scatter widget is resolved
- An issue preventing interactive updates when adding an additional Scatter host is resolved
- Instances of Scatter objects duplicated during interactive rendering no longer disappear from the rendered image
- Fixed an issue preventing the update of Scatter asset's Guest list after deleting and reapplying a component as a guest twice in a row
- Fixed a crash caused by undoing and redoing the creation of a Scatter asset with enabled Scatter Viewport preview
- Added a 'Submit New' button to the Chaos Cloud window. Submitting consecutive Cloud rendering jobs is now possible without having to close and reopen the window each time

- An issue preventing the Cloud window from reloading automatically after updated Chaos Cloud application is resolved
- An issue causing updates of the Chaos Cloud application to produce errors is resolved
- Implemented safeguard logic which prevents the V-Ray log files from reaching abnormal size
- An issue causing an incorrect state of the Export button in the Export V-Ray Proxy window is resolved
- Export V-Ray Scene window now correctly sets the current project's name in its File Path field
- Export V-Ray Proxy window now consistently provides the same output file name when being opened multiple times
- An issue preventing V-Ray windows from closing when opening a new file is resolved
- An issue causing the Animation Frame sliders to disappear in specific situations is resolved
- An issue causing the V-Ray UI to crash in rare situations is resolved
- Canceling the opening of a new SketchUp model no longer closes the Asset Editor
- The V-Ray Log window now correctly filters errors not caused by V-Ray and no longer pops up for such encounters
- The Adaptive lights optimization no longer causes artifacts in scenes containing Subsurface Scattering materials
- The Environment Background multiplier now affects the Sky texture's procedural clouds when rendered with V-Ray GPU
- The VFB no longer prints a localization error when rendering for the first time in a new session
- Removal of a V-Ray modifier from a Scatter's guest no longer deletes all instance previews from the viewport
- Opening scenes with missing Cosmos or Enmesh asset files no longer leads to errors
- An issue causing a crash after undoing and redoing a V-Ray Light creation during interactive rendering is resolved
- macOS: Fixed an error prompted by import of assets with auto-generated UI
- macOS: Entering sleep mode no longer severs the communication between V-Ray and SketchUp

V-Ray 6, Update 2, hotfix 1 (6.20.01)

Official release

Date - Dec 18, 2023

Improvements & bugfixes

- The behavior of the 'Auto' texture binding mode is restored to its V-Ray 6.10.03 state. In this mode, a bitmap texture connected directly or indirectly to the diffuse material slot is used as the primary viewport preview. Procedural textures and corrections are disregarded.
- A new 'Bake' texture binding mode is implemented. In this mode complex texture networks are baked to a single image used as a viewport preview. Differences between the rendered result and the viewport preview may occur due to the fact that only the texture confined within the 0 to 1 UV square is baked. This affects most procedural patterns and textures with custom UV placement configuration. Raytraced and Tri-planar textures are not supported
- A critical issue causing texture networks connected to the diffuse slot of specific materials to get deleted on scene activation is resolved. This was affecting projects saved with older V-Ray versions. Materials from such projects now open with the 'Auto' texture binding mode enabled. To enable the new procedural viewport texture preview navigate to the Binding rollout in the material properties and change the Texture Mode to 'Bake'
- SketchUp materials promoted to V-Ray automatically use the 'Auto' texture binding mode which ensures that its raw bitmap buffer texture stored in SketchUp is rendered correctly. Changing the mode to 'Bake' will replace the buffer with the baked preview. It is recommended to save all raw bitmap buffers to disk before activating the Bake mode to preserve them
- An issue causing SketchUp to crash when closing down is resolved
- Fixed a number of issues with hiding a Scatter asset during interactive rendering
- Using any link in the About window no longer produces errors
- Fixed a number of typos and a missing label in the Asset Editor
- Scatter's random rotation transform step now correctly uses degrees instead of radians
- An error in the File Path Editor prompted by missing files is resolved

V-Ray 6, Update 2 (6.20.00)

Official release

Date - Dec 7, 2023

Scatter

- The scattering toolset is extended in a number of ways. Major workflow changes like the new scattering modes, area modifiers, and lights scattering are combined with numerous small improvements
- Bounding box scattering mode is implemented. Note that it uses the object's bounding box instead of the actual volume boundaries
- Curve scattering implemented. Scatter objects along a path with additional control over the instances' spacing and positioning to help produce organic results
- UV Grid surface scattering mode is implemented. In this mode instances are distributed on the surface in a grid pattern. The grid position is determined by the texture/UV mapping of the host surface
- Area modifiers implemented. Limit the scattering area based on mesh or curve proximity. Note that the modifier's projection onto the host's surface is used instead of its actual physical location
- New transformation settings implemented. The new random transformation parameters provide finer offset, rotation, and scaling controls

- Light Scattering is implemented. Light sources can now be added as guests to Scatter and instantiated around the scene. Note that a big increase in the scene lights count may significantly increase render times
- The way Scatter is handled internally is updated. V-Ray scenes with scattering are now significantly smaller in size and can be uploaded for Cloud rendering in an optimal way

Cloud one-click submit workflow

- Cloud submit window is implemented. It enables a new and more intuitive workflow for submitting scenes to be rendered on the Chaos Cloud. There is no longer need to navigate to an external web browser window to submit the project for rendering
- The export and render steps from the Cloud submit process are no longer separated by a manual action

VFB

- Chromatic aberration effect implemented. This new feature is part of the Lens Effects and simulates the real-world phenomenon of light rays being focused at different points depending on their wavelength
- A shortcut that helps with enabling the VFB history feature is implemented
- Folders can now be added to the layers stack even when in Standard / RGB source mode. This helps with the layer organization and unlocks new compositing possibilities
- A plain color can now be specified in the Background layer
- Mask previews can be now copied from VFB to the clipboard
- A number of additional small UX improvements streamline the compositing workflow

IES Light improvements

- Cosmos light sources containing IES lights can now be imported
- IES Light intensity is now automatically derived from the .ies file at creation time or when the profile is changed
- The UI of the IES Light is simplified. The Intensity value is always enabled. Resetting its value (via the right-click menu) sets the intensity back to the one from the .ies file
- Light shape menu implemented. It specifies which aspects of the light emission and shadow casting are affected by its area shape and size

V-Ray GPU

- Enmesh assets can now be rendered with V-Ray GPU
- Animation texture caching is implemented. Bitmap files no longer have to be reloaded for each animation frame resulting in lower render times
- An issue preventing the rendering of Bitmap Image Sequences is resolved
- An issue preventing the render process from starting when specific materials are present in the project is resolved

Integration

- SketchUp 2023: The Scatter Viewer tool is no longer used. Instead a new Scatter Viewport Preview is available in the SketchUp Overlays tray
- SketchUp 2023: Both the Viewport Render and Scatter Viewer buttons on the toolbar now show a notification that the respective SketchUp overlay should be used
- The V-Ray Scene Importer converts all raw bitmap buffers to regular image files on disk before importing which speeds up the process significantly
- Decals can now be imported by the V-Ray Scene Importer. This feature can be disabled in the importer options
- An issue causing SketchUp to randomly crash on closing down is resolved
- The preview of Proxy Meshes contained within a Proxy Scene is no longer scaled incorrectly
- The Enscape to V-Ray material conversion logic is improved in a number of ways
- An issue causing the top parts of an Enmesh module to be incorrectly cut is resolved
- Scatter can now be applied to a selection of edges in one click - they are automatically welded and grouped for optimal results

Improved viewport materials

- A way for displaying most procedural textures as well as procedural texture corrections in the SketchUp viewport is implemented. This new default behavior substitutes the generic texture helpers previously employed for mapping adjustments. Differences between the rendered result and the viewport preview may occur due to the fact that only the texture confined within the 0 to 1 UV square is baked. This affects most procedural patterns and textures with non-default UV placement configuration. Raytraced textures are not supported

Curve editing enhancements (Spline and Bezier curves)

- An issue preventing the single-click selection of a curve point is resolved
- The Value tab of the Spline curve is now selected by default since it is the most commonly used one
- Points that precisely overlap in the corners are automatically merged. This avoids accidental stacking
- Spline and Bezier curve points are no longer deleted on right-click. Instead they can be selected and removed using the 'Delete' keyboard key or the new context menu option

- The Interpolation of the Spline curve points as well as the Tangent Type of the Bezier curve points can now be changed from the new context menu
- Continuously dragging a curve point or clicking in fast succession within the Spline and Bezier curve editors no longer causes slowdowns and lagging during interactive rendering
- Keyboard navigation between points is implemented in the curve editors. Use the Left and Right keys to change the selection

Infrastructure

- gRPC communication implemented. The protocol used for synchronizing scene changes between the integration and the UI is updated. This improves performance and reliability

Other Improvements & Bug Fixes

- Added support for Cubic Projection Mode of the Tri-Planar texture. It provides further control by introducing an optional division between positive and negative directions of each axis
- Chaos Cosmos materials can now be dragged and dropped in the Asset Editor
- The range selection between tagged assets in the Asset Outliner is improved. The range selection between members of the same group/tag is possible while range selection across groups and hierarchy levels is disallowed
- The Gamma texture user interface is improved. Note that this texture may appear after a Cosmos import or as a result of a V-Ray scene import
- An issue preventing the procedural clouds from appearing in the Sun/Sky asset preview in specific situations is resolved
- Clearing the V-Ray Log window no longer prevents it from displaying any further info
- An issue preventing the window resize arrow from showing up when using non-standard OS display scaling is resolved

V-Ray 6, Update 1, hotfix 3 (6.10.03)

Official release

Date - Oct 16, 2023

Improvements and bugfixes

- Cosmos is updated to version 2023.10.09
- macOS: An issue preventing V-Ray from being used on macOS 14 Sonoma is resolved
- macOS: An issue causing the last imported Enscape asset to override all other Enscape assets in the V-Ray rendering is resolved
- Raw texture buffers stored in a vrscene file are now correctly imported by the V-Ray Scene Importer. This significantly improves the import of V-Ray Scenes exported from Enscape
- Fixed an issue with Decal assets causing abnormal render times
- An issue with SketchUp's colorization and materials assigned to faces is resolved
- The auto-generated UI of unsupported materials and textures is improved in a number of ways. The number slider range and step is updated to allow more flexible edits, string parameter values are now handled, parameter labels are better constructed, etc. Note that unsupported items can be imported using the V-Ray Scene Importer or in a number of other unconventional ways
- Enscape asset file paths are now successfully resolved on macOS
- V-Ray GPU: An issue causing colorful artifacts when rendering scenes containing multiple objects with a Subsurface Scattering material with RTX engine is resolved

V-Ray 6, Update 1, hotfix 2 (6.10.02)

Official release

Date - Aug 28, 2023

Improvements and bugfixes

- Cosmos is updated to version 2023.8.15
- V-Ray GPU: An issue causing incorrect background texture placement when the environment texture multiplier is set to a value different from 1 is resolved
- macOS: An issue leading to a crash on startup and/or shutdown in specific situations is resolved

V-Ray 6, Update 1, hotfix 1 (6.10.01)

Official release

Date - Aug 3, 2023

Improvements and bugfixes

- The procedural Sky Contrails can now be animated. Ensure that the Dynamic Clouds option is enabled in the Sun light source
- An issue causing specific adjustable Enscape asset to not be rendered correctly in V-Ray is resolved
- All helper textures are now colorized based on the SketchUp-side material color
- An issue that prevents the rendering of Fur assets mapped with a Distance texture in specific situations is resolved
- Converting SketchUp materials to V-Ray ones during interactive rendering now produces accurate results
- The camera position is now always updated correctly during viewport rendering with the Overlays in SketchUp 2023
- An issue causing the viewport rendering overlay to stop working after starting and stopping the interactive process multiple times is resolved
- An issue causing SketchUp 2023 to hang when closed while the interactive rendering process is still running is resolved
- An issue causing the top parts of a Proxy Mesh to not appear when used as an Enmesh module is resolved
- An issue causing the VFB window to sink behind SketchUp on Windows is resolved
- An issue preventing SketchUp's texture colorization feature from working is resolved
- An issue with incorrectly constructed paths in custom Enscape asset files is resolved
- An issue leading to a crash when aborting the render process in specific projects is resolved
- macOS: Parent Frame Buffer option is implemented. It is located in Extensions / V-Ray / Preferences / Parent Frame Buffer. The option is enabled by default, which ensures that the V-Ray Frame buffer window stays on top of the SketchUp window. The new option can be disabled in situations when the default parenting causes issues. One such example is viewing the VFB on a secondary display
- macOS: Applying the Enscape settings no longer leads to a crash
- macOS: The V-Ray for SketchUp installer is now universal and does not require Rosetta 2 to be installed on ARM-based systems
- macOS: An issue leading to a crash when interactive render is started before initializing V-Ray in SketchUp 2023 is resolved
- The automatic user interface generation for non-native V-Ray materials and textures, lights and other special objects is improved. In the common case such items are imported from a vrscene file created in a different V-Ray integration (V-Ray for 3ds Max for example). There are no longer errors displayed in the user interface or in the log window
- An issue causing the asset preview of auto-generated Assets to hang is resolved
- The user interface of the Multi-Sub Texture is updated. The random variation modes are moved outside the 'Get ID from' menu and presented as checkboxes. As a result multiple random ID sources can now be activated simultaneously
- Contrails Pace (%) parameter added to the Sun light. It controls the speed at which jets move across the sky.
- The value of the internal Low Thread Priority parameter is now set to 2. This applies to both new and existing projects. The new value ensures there is no delay when zooming in the VFB during bucket rendering
- A new, more optimized file format is internally used when submitting projects for Cloud rendering
- Warning messages are no longer logged when opening the Asset Editor for the first time
- An issue leading to unintended collapse or expansion of the tag sections during tag renaming is resolved

V-Ray 6, Update 1 (6.10.00)

Official release

Date - May 31, 2023

Enscape compatibility (Chaos bridge)

- Added support for the new adjustable assets introduced in Enscape 3.5
- Some of Enscape's visual settings can now be transferred to V-Ray. This helps with matching Enscape's environment and illumination - Sunlight, Sky, and Camera exposure. The synchronization is done by manually performing the 'Apply Enscape Settings' action from the V-Ray / Tools menu
- Improved performance when loading and rendering Enscape assets in V-Ray
- An issue leading to incorrect transfer function of normal map textures in specific Enscape materials is resolved. This fixes many visual artifacts when rendering both Enscape materials and assets
- The conversion and rendering of emissive Enscape materials is improved
- An issue causing incorrect transparency of some Enscape assets is resolved
- Added support for Enscape's Linked Models (.skp references)

Decal

- Decal 'Auto Resize' button is implemented. Clicking on the button shows a menu with three possible actions - Fit to Mask, Fit to Material and Fit to Bitmap. All three ensure that the Decal aspect ratio matches the one of the corresponding image file. Fit to Mask only works when there is a texture in the mask slot. Fit to Material finds the first eligible bitmap in the Decal's material shader while Fit to Bitmap can set the aspect ratio based on any file from disk
- Decal Length lock toggle is implemented. It allows the aspect ratio between Width and Length to be preserved while resizing. The ratio lock is automatically disabled when the Width or Length value is set to 0
- Decal Displacement is implemented. For fine control over the displacement appearance and quality a Displacement modifier has to be added to the base geometry
- Decal Bump control is implemented. Disable the 'Decal Bump Only' option to use the base surface bump. Use the Amount slider to blend between the base and decal bump effects

- Decal Bend implemented. Materials can now be projected onto curved surfaces with the help of the new Bend parameter. This for example allows for stickers to be added to cylindrical objects like bottles
- Decal's default Normal Angle value is updated to 90 degrees
- Decal 'Projection Offset' parameter is implemented. It offsets the projection away or towards its target
- Decal's mask can now be disabled by toggling the checkbox on the right of the map slot
- Decal's Height parameter is renamed to Depth. In addition the parameter's tooltip is improved

Procedural clouds

- Contrails added to the procedural clouds. Select the Sun Light in the project to change the appearance of the contrails
- The procedural clouds are now, by default, visually similar to the ones in Enscape (when configured the same way). Legacy projects can be migrated by enabling the 'Enscape Compatibility' checkbox in the Clouds parameter section of the Sun. Note that once enabled the checkbox will disappear

Cosmos (Enmesh patterns)

- Enmesh patterns can now be browsed and imported from Cosmos. If a scene object is selected the pattern is automatically applied on import

VFB (V-Ray frame buffer)

- Masking for Lens Effects and Denoiser layers in the VFB is implemented. Use the standard masking workflow to utilize the feature
- A new Color transformation configuration is added to the Background layer in the VFB. Use it to apply a separate display correction to the Background layer
- Viewing stereo panorama images in the VFB using the Panorama View mode is now possible. Note that even though only the left-eye image is displayed in this mode, the stereo properties are preserved

V-Ray GPU

- Mesh Clipper support is added. Create complex section cuts fully renderable with both CUDA and the RTX (OptiX) engines
- Compressed Textures mode is implemented. When active all textures are loaded with compression to decrease their memory footprint without degrading their quality
- An issue leading to a crash when rendering specific Cosmos assets is resolved
- An issue causing a crash when rendering scenes with normal displacement and using CPU as a CUDA device is resolved

Installation

- The Chaos Cloud Client application is now always installed with V-Ray
- macOS: Minimum required macOS version bumped from Mojave (10.14) to Catalina (10.15)

Integration

- V-Ray Viewport Render overlay is implemented in SketchUp 2023. The legacy viewport rendering feature is no longer available in the main V-Ray toolbar and menu (only applies to SketchUp 2023). Start interactive rendering and activate the 'V-Ray Viewport Render' overlay to initiate viewport rendering. Note that the VFB can be closed at any point which does not interfere with the VPR. Note that the opacity of the overlay is dynamic and depends on the progressive quality of the rendered image. Use the new V-Ray / Preferences / Viewport Render Opacity configuration to change the maximum overlay opacity
- The notification that a Batch Rendering process is initiated without an output image path is restored
- An issue causing specific SketchUp library materials to be rendered incorrectly in the Asset Preview Swatch and during interactive rendering is fixed
- An issue causing material assignment problems related to a naming conflict to occur during interactive rendering is resolved
- An issue leading to incorrect view on the last frame of an animation is resolved
- An issue leading to a crash when merging a Cosmos Asset while the asset's geometry is selected is resolved
- macOS: Pasting a text in the VFB's history notes using keyboard shortcuts no longer leads to a crash

SketchUp animations

- SketchUp section plane transitions are now supported when rendering animations. Currently only available on Windows
- The rotation of Always face camera components containing regular SketchUp objects is now supported when rendering animations
- Animation support for object and tag visibility states is added. Dynamically hide camera obstructions, such as roofs, floors or surrounding buildings during your flythrough animations

Other Improvements & Bug Fixes

- Self-illumination parameters are added to the V-Ray Material. The use of the Emissive material layer is no longer required when shading light emitting surfaces
- The term Contours is replaced with Outlines in all its UI occurrences. This applies to both the global effect as well as the material override

- The Interactivity slider is now correctly disabled when Interactive Light Cache is enabled
- Interactive Light Cache is now active by default
- The Trace Depth option is removed from the Interactive Parameters in the V-Ray Asset Editor's Settings
- Changes of the Brute Force GI Depth now affect both interactive and production rendering
- NVIDIA AI Denoiser Upscaling option is implemented. When enabled the image is rendered at half size to speed up its calculation while the image displayed in the VFB is at full resolution. Note that render elements without the 'Denoise' option enabled are upsampled using standard interpolation
- Denoise option is added to the Extra Texture render element
- Single File Output option is implemented. Set a file path in the Asset Editor / Render Output / Save Image / File Path field and enable the Single File Output to autosave only the main image channel (RGB color or effectResult)
- The UI theme configuration in the Asset Editor now automatically changes the initial UI theme of the Cosmos Browser
- Right-click action behavior in the Outliner is updated. A right-click on an item now automatically selects it. Any consecutive context menu actions are applied to the active selection only. Note that to apply an action to multiple items at once, they have to be selected and the right-click should be performed on top of any selection member
- Distance texture's Distance value is now correctly respected when a distance texture map is also used
- The Sky texture now uses the Sun Light preview swatch scene which fixes the overexposed sky preview
- Right-clicking on a color variation in the Color Assistant now correctly sets it as a current color
- An issue with reapplying an already selected Light Gen scenario is resolved
- An issue causing multiple Asset Editor, Chaos Cosmos or Light Gen windows to appear on macOS is resolved
- Rectangle light's U Size parameter label is now correctly displayed in Chinese
- An issue preventing a Light Gen regeneration after a scenario has been applied is resolved

V-Ray 6, hotfix 3 (6.00.03)

Official release

Date - Apr 18, 2023

Other Improvements

- The End User License Agreement (EULA) is updated.

V-Ray 6, hotfix 2 (6.00.02)

Official release

Date - 17 Feb, 2023

Improvements and bugfixes

- Added support for SketchUp 2023
- A new 'Rebuild All Viewport Widgets' menu action is added. It redraws all V-Ray viewport widgets in the scene eliminating discrepancies caused by accidental or manual widget geometry manipulation
- Textured Cosmos materials with no Diffuse texture not get their size set correctly with a Helper Texture
- License error messaging now redirects to the Chaos License Server web interface
- A viewport preview for the camera clipping planes is implemented. Enable Clipping and change any of its parameters to see the viewport guides. Left-click anywhere in the scene while the clipping preview is visible to move the near clip plane
- The performance of the Purge Unused Assets V-Ray feature is improved
- Using the native SketchUp material purge action no longer affects merged Cosmos asset
- Interactive rendering support for 'Always face camera' components is implemented. Note that this functionality remains disabled during live link with V-Ray Vision and Chaos Vantage
- A number of issues related to SketchUp materials converted to V-Ray ones are resolved
- An issue causing plain color materials used in Enscape library assets to be rendered with an incorrect gamma curve in V-Ray is resolved
- Loading V-Ray in combination with multiple 3rd-party plugins (Skatter & FlexTools) no longer hinders SketchUp
- Improved compatibility with a selection of 3rd-party plugins that were incorrectly modifying a specific V-Ray constant
- An issue leading to an incorrect migration of projects created with V-Ray 3.6 and then imported in the current version is resolved
- Light intensity changes done with the Interaction tool are now respected during interactive rendering
- Picking a Depth of Field focus point can now be done during interactive rendering
- Bump effects no longer disappear during CPU interactive rendering when material parameters are adjusted
- V-Ray's dynamic-link library load order is improved to guarantee correct initialization under all circumstances
- An issue preventing V-Ray Fur from growing correctly on a displaced surface in specific situations is resolved
- Fixed an issue preventing V-Ray from being installed correctly for Windows users with specific non-Latin characters in their name
- Loading a configuration file for silent installation no longer overwrites it after the process is completed
- Hovering with cursor over the 'Extensions > V-Ray > Tools' menu label no longer causes SketchUp to become unresponsive
- V-Ray GPU: Fixed an issue causing increased render time of specific scenes with the V-Ray CUDA GPU engine
- macOS: An issue preventing SketchUp from quitting properly is fixed
- macOS: The first use of the Interaction Tool for a light no longer activates the Paint Bucket tool
- Script access: the legacy LiveScene class is removed and functionality transferred to VRay::Context

- Added native Apple silicone (M1) support for the proprietary V-Ray UI components like the Asset Editor and Light Gen
- Mathematical calculations can now be performed in all number field inputs. This includes basic operations like addition, subtraction, multiplication, and division (example: $100 \cdot 0.2 = 20$) but also more advanced operations like modulus, power, root, permutation, factorial, sine, cosine, etc.
- The Pick Focal Point button no longer enters an active state when clicked. Instead it activates the tool for picking the distance once and then returns to its initial state
- Errors caused by missing textures being replaced by raw bitmap buffers during Swarm rendering no longer cause the Log window to pop up
- Errors caused by an attempt to save a Host Material to a custom Asset Library in the left fly-off panel no longer cause the Log window to pop up
- Tag names are now respected when inputting a string in the outliner's search box
- The GPU device selection is no longer reset each time its dropdown is expanded
- An issue causing all color slot sliders to move with an offset when the Sliders Color Space is set to Screen(sRGB) in the Configuration settings rollout is resolved
- The Collaboration window is no longer blank when opened with no internet connection. A 'Try again' screen is shown instead
- The Chinese version of the Sky's Phase X and Phase Y parameter labels are now listing the correct unit of measure which is percent (%)

Vision

- Chinese translation is implemented. This new translated version of the Vision UI is automatically selected when the Chinese version of V-Ray is active

V-Ray 6, hotfix 1 (6.00.01)

Official release

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Language Localization

- Chinese translation is implemented. This new translated version of the V-Ray UI is automatically selected when the Chinese version of SketchUp is used. Alternatively, the language can be manually changed in the following menu - Extensions / V-Ray / Language

Improvements and bugfixes

- Chaos Cloud is updated to its latest version
- All host application materials now have a preview in the Asset Editor matching the one in SketchUp
- A function that converts any V-Ray material back to a host application material is implemented. It is located in the Extensions / V-Ray / Tools menu and is called 'Remove V-Ray Properties from Material'. A 'Convert to V-Ray Material' function is also available in the same menu. It can be used as an alternative to the previously available workflow
- An alternative method to converting Host Materials to V-Ray ones is available in the context menu that appears by right-clicking such material in the Asset Editor. This action allows conversion of multiple Host materials with a single click
- The Transfer Function of Enscape materials' Reflection Roughness map is now correctly set to None
- A number of issues related to purging and renaming materials in specific projects are resolved
- An issue causing rotated Enscape textures to be rendered incorrectly in V-Ray is resolved
- An issue preventing specific vrscene file to be imported via the V-Ray Scene Importer is resolved
- An issue preventing the import of Cosmos assets right after updating the Cosmos Browser is resolved
- An issue causing a crash when rendering specific projects with the CUDA engine is resolved
- Converting a Host Material to a V-Ray one no longer changes the selection in the Asset Editor
- Automatically updating specific materials from scenes made with older V-Ray versions no longer cause migration errors
- A new way for ordering assets in the outliner is implemented. The new default method orders items based on their type first and only then alphabetically. This avoids mixing assets of different types and improves the project organization in some situations. There is a new configuration option that controls this behavior - Advanced Settings / Configuration / Order Assets
- An issue preventing shadow catcher materials set up using the Wrapper shader and its Matte option from being rendered with V-Ray GPU is resolved. Note that such materials saved with the beta or initial V-Ray 6 versions have to be re-created for the issue to be resolved
- Saving and loading .lighset profiles in Light Gen is once again possible
- The logic that orders tags in the outliner based on their names is improved. Tags using the same base name plus a number suffix are now ordered more intuitively
- Asset and tag names are no longer spell-checked during editing
- Creating an Asset tag now automatically selects the tag name for editing
- An issue preventing specific library assets from being imported to the scene using drag and drop is resolved
- An issue preventing Light Gen from working correctly after a manual modification to the Cosmos download folder is resolved. Note that under no circumstances should the user alter the contents of this folder
- Copying colors by drag and dropping one color slot into another no longer produces an imprecise result

Vision

- Procedural clouds support is implemented
- Clouds animation support is implemented
- A cap of 60 frames per second is reintroduced to Vision's frame rate

V-Ray 6 (6.00.00)

Official release

Date - 04 Oct, 2022

Enscape Compatibility

- Enscape compatibility. Scenes set up using Enscape will now render in V-Ray. Materials, lights and even the Enscape assets will be automatically handled by V-Ray providing a great starting point when transitioning from the Enscape design stage to the high-end visualization in V-Ray
- A global Enscape Compatibility toggle is implemented. It disables the special handling for Enscape materials, assets and lights
- * Note that Enscape assets provided by 3D PEOPLE are currently not supported

Rendering

- Resumable Rendering implemented. Incomplete renders can now be resumed where they left off from the previous session. Ensure that an output image path is specified to take advantage of the feature
- The interactive rendering workflow is updated. The Interactive UI toggle is removed and the production render settings remain visible at all times. Interactive rendering is enabled by using the Render Interactive button on the toolbar, the one in the asset editor or in the VFB
- Interactive Parameters rollout added to the Advanced Settings/Render Parameters section. A few parameters specific to interactive rendering can be changed there. One example is the Interactivity slider, another the toggle for Interactive Light Cache
- Interactive Light cache implemented. Toggle the 'Advanced Settings/Interactive Parameters/Allow Interactive LC' option and ensure that Light Cache is selected as a secondary GI engine to use it. When enabled the Automatic Exposure, Automatic White Balance and Adaptive Lights features will work in interactive sessions
- All rendering-related icons on the toolbar and in the Asset Editor are updated

Unified Login

- Chaos Unified Login implemented. This is a system that ensures a single Chaos login enables all Chaos products, services and product features that require authentication

Cloud Collaboration

- Chaos Cloud Collaboration implemented. This is an image-sharing platform available for free for all V-Ray users. Use the shortcuts in the VFB for a quick image upload. Note that the platform is still in beta

Cosmos

- Cosmos is updated to its latest version
- Cosmos is the new central and only remote assets provider. The legacy remote contents downloader is deprecated and is no longer part of V-Ray
- Material Library in Cosmos. The built-in V-Ray material library is no longer available in the Asset Editor. Use Cosmos to browse and import preset materials in your project. Note that the vrmal library panel will remain as part of the Asset Editor mainly for managing custom asset libraries
- A shortcut that opens the V-Ray Material Library in Cosmos is now available in the left fly off pane of the Asset Editor. Select the default Materials entry to see it in the contents pane
- The logic used for importing Cosmos materials is improved in numerous ways to accommodate the new library workflow
- Light Gen environments from Cosmos. Light Gen no longer uses a proprietary system for downloading its HDR environments and instead gets the images from Cosmos. Note that saving and loading .lightset files is temporarily disabled
- Cosmos assets are now automatically selected after import
- The Cosmos browser is automatically reopened after an asset is placed in the project and the SketchUp tool is changed

Procedural Clouds

- Procedural clouds can now be enabled in the V-Ray Sky. Select the Sun Light in the project to change the clouds parameters
- Dynamic Clouds implemented. Enable the option in the sunlight parameters and the clouds will automatically move when the time of day changes. Use the Wind Speed, Direction as well as the Phase Velocity parameters to control the movement

Enmesh

- V-Ray Enmesh Implemented. Apply the Enmesh modifier to an object and then pick an item to cover the object's surface forming a 3D pattern. Note that the base object's UV texture coordinates determine the items positioning

Asset Tagging

- A new Tags system used for grouping the scene assets in the Asset Editor is implemented. Use the tags to organize and work more efficiently in complex projects
- Tag entry added to the assets context menu in the Outliner. Use it to create new tags, change the asset's tag assignment or add multiple assets to a tag all at once
- Tag assignment via a drag and drop of an asset is implemented. Note that only a single asset can be added to a tag this way

Camera Clipping

- Camera Clipping options added to the Advanced Camera Parameters rollout. Use the feature to clip nearby objects in tight spaces

Material and Texture Improvements

- Distance Texture implemented. The texture outputs color values based on object proximity and can be utilized for restricting Fur generation or even be used as a displacement map
- Dirt texture Exclude and Affected By options implemented. Exclude objects from the dirt effect or make sure they are ignored when calculating the proximity
- GTR energy compensation is enabled for all V-Ray Materials. The option ensures more accurate reflection values for most blurry reflective materials using the Microfacet GTR (GGX) BRDF model
- Thin Film parameters added to the V-Ray Material. Toggle the advanced parameters to see the Thin Film rollout
- Car Paint 2 material implemented. It replaces the legacy Car Paint in the UI and comes with an improved flakes and coating layers
- The rendered appearance as well as the UI of V-Ray Materials using the SSS Translucency are improved
- The Bitmap texture's parameter previously known as Color Space is now correctly renamed to Transfer Function. It determines the gamma correction curve applied to the bitmap
- Automatic Transfer Function mode added to the Bitmap texture. It automatically determines the color transfer function. If a bitmap file name contains the suffix '_srgb' the transfer function is sRGB. If a bitmap file name contains the suffixes '_lin_srgb' or 'raw', no correction is applied. For bitmap files with 8 bits per color component and 3 or 4 color components (like png, jpg and other), the transfer function is set to sRGB. In all other cases, no correction is applied
- Mix Amount parameter is added to the Mix (Operator) texture. It specifies the degree to which the two input textures are blended
- The slider precision for the Reflection Glossiness, Metalness and refraction Glossiness parameters of the V-Ray Mtl is increased
- Local Space Bump mode is added to all materials that support bump mapping. Enable it to measure bump amount in local texture space instead of in world units. This mode was previously called Bump Texture Channel and should be selected when an Edges texture is applied for a Round Edges effect
- Special handling for rotated normal maps is implemented. Normal maps rotated manually or by the UVW Placement randomization feature no longer render inverted
- The upper limit of the Intensity parameter of Emissive materials is removed

Color Management

- ACEScsg color space management implemented. Select the ACEScsg RGB Primaries in the color management settings to ensure that V-Ray is rendering in the new color space. Most standard RGB bitmap textures should use the sRGB Primaries option in this workflow
- ACEScsg color space support is added to the Color Picker

Finite Dome Light

- Finite Dome parameters added to the Dome light source. It limits the size of the Dome shape and introduces a ground projection that can be adjusted using the Projection Height and Ground Blend parameters

Assets Preview Swatch

- Live preview for Decals implemented
- Sphere swatch preview scene added for material assets. The preview is similar to the one used in Cosmos
- The automatic texture resize is disabled for the GPU asset preview. The material swatch no longer lacks details and appears blurry
- The Environment textures' preview no longer appears incorrect when the GPU mode is enabled
- The V-Ray typography of the Generic material preview is updated to match the current company branding

VFB

- Panorama viewer implemented. Use the Panorama View toggle in the View menu to enable the new mode. Looking around in this view is done by holding the middle mouse button and moving the mouse. The field of view can be altered by scrolling
- Proportion Guides layer implemented to help you with the frame composition
- Batch image processing implemented. Use it to apply corrections to a set of pre-rendered images
- Flip buttons implemented. Use the quick flip feature to have a fresh eye on the image composition and verify it works in all settings
- Dither colors option implemented in the VFB settings / Render View rollout. Make sure it is enabled to avoid banding with low-contrast gradients
- The VFB configuration including the History state and folder location is preserved between installations

- The Exposure (display only) slider part of the Display Correction's layer parameters no longer affects images saved from the VFB

V-Ray GPU

- Improved performance and reliability
- Added support for the Lighting Analysis render element
- Improved trace depth limit handling
- Improved round edges rendering quality
- The global trace depth logic used by the GPU engine now matches the one used in Production CPU rendering. Enabling the Render Parameters /Optimizations/Max Trace Depth checkbox ensures that the value specified overrides all corresponding max depth settings in the materials
- The standalone GPU Device Selection tool is updated. The new user interface allows specific devices to be selected for Denoising (should be considered when NVIDIA AI denoising is used). This can help boost rendering performance on systems with more than one GPU
- An issue preventing spotlights from being scatter by the Environment Fog is resolved

Integration (SketchUp)

- Materials created in SketchUp are by default no longer treated as full-featured V-Ray materials. They are listed as Host Materials in the asset editor and can be promoted to V-Ray shaders at any point. This is done to help with scene organization and navigation as well as with the new Enscape compatibility
- Optimized animation export. Exporting SketchUp animations for rendering is now more than 10 times faster. In order to achieve this we re-implemented the frame interpolation logic that SU uses when evaluating camera or sun animations, on the V-Ray side
- The V-Ray scene importer is updated and can now import any V-Ray shader. 'Unsupported' shading nodes use an auto-generated UI allowing them to remain editable. Note that this feature is still in an experimental stage
- Multiple geometry modifiers can now be applied to the same scene object. Fur and Scatter, for example, can now be combined
- The VFB configuration is now kept between installations. The history folder location now persists between installations. The Reset action (V-Ray /Preferences/Reset Frame Buffer) can be performed manually when required
- An issue causing the VFB window to sink below SketchUp in specific situations is resolved
- Changing the selection of GPU devices used for rendering or denoising via the GPU Device Selection tool no longer causes various issues and crashes
- An issue causing a crash when starting a render after a scene wipe is resolved
- SketchUp no longer crashes after picking focus point and then opening the Asset Editor for the first time
- SketchUp materials with textured transparency are now rendered correctly even before converted to V-Ray materials
- A number of issues related to the VPR region are resolved
- The GPU Device Selection, V-Ray Denoiser and VRMesh Viewer standalone tools can now be started from the V-Ray menu. They are located in the V-Ray/Tools/External submenu
- The 'Always face camera' SketchUp components options now supported during animations
- The V-Ray menu is reorganized, some of the submenu and item labels are updated
- A warning regarding the fact that the bitmap aperture texture is black no longer appears when GPU rendering is initiated in projects where Depth of Field is used
- The minimum SketchUp version requirement is bumped to SketchUp 2019. SketchUp 2017 and SketchUp 2018 are no longer supported

Vision

- A new system for evaluating V-Ray textures is implemented. Most of V-Ray's procedural textures and texture corrections are now supported in Vision. This is achieved through 'baking' which leaves raytraced or camera-based procedural maps still unsupported (Dirt, Falloff, Distance, Edges, etc.)
- Measurement tool implemented. Use the toolbar button or the Z key to enable the tool, then select the two points to measure the distance between them
- Depth of field support added. Change the DOF settings in V-Ray to see an effect in Vision. Note that the defocus amount is limited in Vision
- The Orbit navigation mode hotkeys now match the ones in the host application
- A new handling for materials opacity is implemented. Visual artifacts no longer appear when multiple transparent objects overlap in the frame
- The V-Ray Infinite Plane is now supported in Vision. Note that in Vision the plane still has a finite size but will automatically resize based on the scene bounding box
- The overall stability and reliability of Vision is improved
- The parameters in the Settings panel are now organized in rollouts
- Hours can now be displayed in the timeline end label
- An issue preventing Vision from working on macOS is resolved
- The default range of the Ambient Light Intensity slider is increased to 200
- The active camera FOV (Field of View) is taken into consideration when calculating the mouse sensitivity. This improves the Vision navigation in specific situations
- Vision settings are now organized in rollouts that can be collapsed or expanded depending on the situation
- Tri-Planar textures using a plane color instead of a texture now work correctly in Vision
- Added support for the Self-illumination parameters of the VRay Mtl
- Parallax Displacement mapping implemented. Make sure that a displacement is set up in V-Ray to see the effect
- The V-Ray Decal is now supported in Vision
- Navigation shortcut keymaps implemented. The one matching the host application (SketchUp or Rhino) is automatically selected
- Bitmap texture's Automatic Transfer Function support added. The transfer function selection in Vision matches the one in V-Ray
- Flipping face normals in the host application no longer leads to incorrect texture placement in Vision
- An issues caused by materials with similar names (same name but a different number suffix) is resolved
- The Output image File path can now be typed manually
- Deleting a Mesh Light no longer requires a live link restart to take effect
- Creating a Group or Component in SketchUp during a live session no longer misplaces the object in Vision
- Vision no longer hangs when a Cosmos asset is merged during a live session
- Grass strands (V-Ray Fur with 'grass' in its name) no longer get misplaced during a live session

- There is no longer a dark or bright circle artifact under the camera when the high quality shadows are enabled
- The Ctrl + O shortcut can once again be used for opening .vrscene files
- A number of issues affecting the fly navigation mode are resolved
- UI mouse and key interactions no longer affect the view
- A fly speed exceeding 200 can now be set
- The A and D fly navigation keys no longer unintentionally change UI slider values
- CarPaint2 material support added
- Cosmos asset no longer disappears if a merged version of the same asset exists
- The trunk material of the American Beech 002 Cosmos asset is no longer rendered black
- Support for Dome lights using a plain color instead of a texture is added
- A number of issues with textures instanced in multiple materials are resolved

Other Improvements & Bug Fixes

- A number of issues related to the duplication of materials and textures in the Asset Editor are resolved
- the Refraction fog color Depth value can now be reset
- The warning that indicates that the Cryptomatte render element does not work in all rendering modes is removed since this limitation no longer exists
- A number of parameter labels and tooltips are updated to better indicate what the parameter does
- Applying Light Mix IES light edits to the scene now correctly enables the intensity override checkbox and sets the target intensity value
- The global Environment Texture no longer reappears after being deleted and the project reopened
- The VFB history images no longer appear twice when the 'Use project path' option is enabled
- A number of issues related to the .vrscene to .skp importer are resolved. The open File mode now works as expected
- An issue causing Proxy Meshes to take a long time to load and render unless the global displacement switch is disabled, is resolved
- Importing a .vrop settings file using the Ruby API no longer causes SketchUp to temporarily lose responsiveness nor does it create a duplicate Sun
- Using identical material names, that differ only in letter capitalization, no longer causes a synchronization issue between V-Ray and SketchUp
- A number of issues causing SketchUp to hang on startup, on scene activation or when a first render is initiated are resolved
- macOS: The Cap CPU Utilization toggle is no longer missing
- macOS: An issue with the viewport render regions is resolved
- macOS: An issue causing a bug splat after closing Vision and then SketchUp is resolved
- macOS: Rendering a scene with an OSL plugins present on a M1 machine no longer leads to a crash

Build 6.00.b1

Beta release

Date - 23 Aug, 2022

Enscape Compatibility

- Enscape compatibility. Scenes set up using Enscape will now render in V-Ray. Materials, lights and even the Enscape assets will be automatically handled by V-Ray providing a great starting point when transitioning from the Enscape design stage to the high-end visualization in V-Ray

Rendering

- Resumable Rendering implemented. Ensure that an output image path is specified to take advantage of the feature
- The interactive rendering workflow is updated. The Interactive UI toggle is removed and the production render settings remain visible at all times. Interactive rendering is enabled by using the Render Interactive button on the toolbar, the one in the asset editor or in the VFB
- All rendering-related icons on the toolbar and in the Asset Editor are updated

Procedural Clouds

- Procedural clouds can now be enabled in the V-Ray Sky texture. Select the Sun in the project to change the clouds parameters
- Dynamic Clouds implemented. Enable the option in the sunlight parameters and the clouds will automatically move when the time of day changes. Use the Wind Speed, Direction as well as the Phase Velocity parameters to control the movement

Enmesh

- V-Ray Enmesh Implemented. Apply the Enmesh modifier to a geometry and then pick items to cover its surface. Note that the base mesh UV texture coordinates determine the items positioning

Asset Tagging

- A new Tags system used for grouping the scene assets in the outliner is implemented. Use the tags to organize and work more efficiently in complex projects
- Outliner tags can now be assigned to multiple assets all at once via the context menu
- Right-clicking on a tag icon now shows a context menu with options for the tag to be deleted or renamed

Camera Clipping

- Camera Clipping options added to the Advanced Camera Parameters rollout. Use the feature to clip nearby objects in tight spaces

Material and Texture Improvements

- Distance Texture implemented. The texture outputs color values based on object proximity and can be utilized for restricting Fur generation or even be used as a displacement map
- Dirt texture Exclude and Affected By options implemented. Exclude objects from the dirt effect or make sure they are ignored when calculating the proximity
- GTR energy compensation is enabled for all V-Ray Materials. The option ensures more accurate reflection values for most blurry reflective materials using the Microfacet GTR (GGX) BRDF model
- Thin Film parameters added to the V-Ray Material. Toggle the advanced parameters to see the Thin Film rollout
- Car Paint 2 material implemented. It replaces the legacy Car Paint in the UI and comes with an improved flakes and coating layers
- The rendered appearance as well as the UI of V-Ray Materials using the SSS Translucency are improved
- Automatic Transfer Function mode added to the Bitmap texture. Note that the parameter previously known as Color Space is now correctly renamed to Transfer Function. It determines the gamma correction curve applied to the bitmap
- Mix Amount parameter is added to the Mix (Operator) texture. It specifies the degree to which the two input textures are blended
- The slider precision for the Reflection Glossiness and Metalness parameters of the VRay Mtl is increased

Color Management

- ACEScsg color space management implemented. Select the ACEScsg RGB Primaries in the color management settings to ensure that V-Ray is rendering in the new color space. Most standard RGB bitmap textures should use the sRGB Primaries option in this workflow
- ACEScsg color space support is added to the Color Picker

Lighting

- Finite Dome parameters added to the Dome light source

Assets Preview Swatch

- Live preview for Decals implemented
- Sphere swatch preview scene added for material assets. The preview is similar to the one used in Cosmos

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- Batch image processing implemented. Use it to apply corrections to a set of pre-rendered images
- Flip buttons implemented. Use the quick flip feature to have a fresh eye on the image composition and verify it works in all settings
- Dither colors in the frame buffer to avoid banding with low-contrast gradients

V-Ray GPU

- Added support for the Lighting Analyses render element
- Improved performance and reliability
- Improved trace depth limit handling
- Improved round edges rendering quality

Cosmos

- Cosmos is updated to its latest version
- The materials from the standard material library are now in Cosmos. The legacy material library will be phased out and Cosmos will remain the central, unified asset provider
- The import of specific Cosmos materials is improved

General

- Materials created in SketchUp are by default no longer treated as full-featured V-Ray materials. They are listed as Host Materials in the asset editor and can be promoted to V-Ray shaders at any point. This is done to help with scene organization and navigation as well as with the new Enscape compatibility
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- The Cosmos browser window now automatically reappears after an asset is placed and the active tool is changed
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