

# V-Ray Scene

This page provides information on the V-Ray Scene in Cinema 4D.

## Overview

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V-Ray Scene allows for assets to be imported from all platforms that run V-Ray, as well as any CAD application with [Enscape](#) installed. It loads a previously saved `.vrscene` file into V-Ray for Cinema 4D and supports rendering geometry, lights, cameras, volumetrics, and materials. In addition, it allows you to load scene overrides from a `.vrscene` file. There are two ways to import a V-Ray Scene file - as a proxy or by importing all its assets as native components. Each Import Type has different benefits and can be used in different scenarios. *For more information on Import Types, see the [Import Types](#) section.*

Keep in mind that scenes imported using V-Ray Scene are still foreign, and not all imports can be perfect - things could look different in their original environment and inside V-Ray for Cinema 4D.



## Import Types

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### Native Objects (WIP)\*

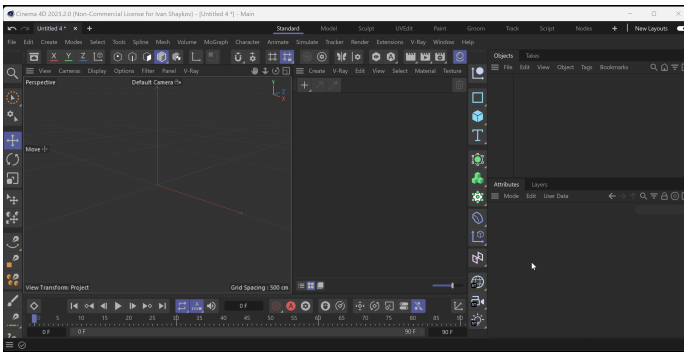
You can import a V-Ray Scene as Native Objects (WIP) only if you import through the `V-RaySceneImport` window. See the [Different ways to import](#) for more.

This option is a work in progress - not all elements can be fully imported. Expect improved support in the future.

This **Import Type** imports the scene elements separately. This allows each element to be edited individually after import. This is ideal if you are finishing a scene that was started on a different machine or was created on a different V-Ray-supported platform. You can edit individual lights, geometry, materials, and more to complete the scene without needing to re-create everything from scratch.

Large scenes will take some time to load, as V-Ray Scene is reading all the individual elements and importing them separately.

*If you are importing a V-Ray scene with Gamma corrections as Native Objects (WIP) from V-Ray for 3ds Max, please see [this section](#) for an import guide.*

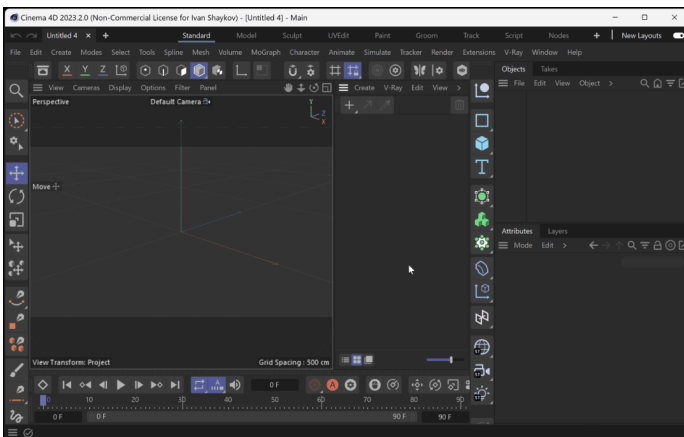


## Black Box Objects

Black box objects are imported completely, but they are closed for editing - the user cannot tweak their contents. Black Box Objects are



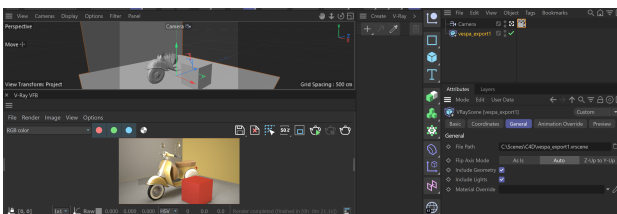
displayed with the icon. For a list of the unsupported components, see the [Limitations](#) section.



## V-Ray Scene Reference

The **V-Ray Scene Reference** Import Type imports the V-Ray Scene file as a proxy - its components cannot be individually edited, but the proxy can be edited as a whole. This Import Type is more compact and saves processing power. If no further edits need to be made to the scene, we recommend using this method for transferring V-Ray scenes.

You can [convert a Scene Reference into a Native Objects \(WIP\)](#) after importing.



## Parameters

**File Path** – Allows you to browse for and specify the *.vrscene* file.

**Flip Axis Mode** – Controls which axis is used as a vertical - the Y or Z axes for the loaded vrscene. You can choose between:

**As Is** – No changes in the axes are applied.

**Auto** – It aligns the vertical axis of the vrscene with the vertical axis in the current scene in cases where the vrscene was not exported from 3ds Max. Use the Auto mode when loading a USD file.

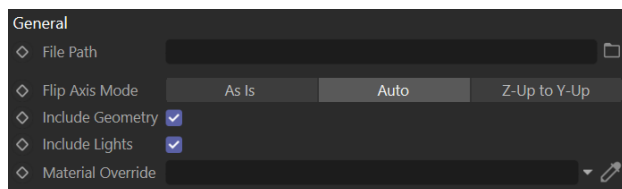
**Z-Up to Y-Up** – Switches the Z and Y axes.

**Y-Up to Z-Up** – Switches the Y and Z axes.

**Include Geometry** – When enabled, renders all the geometry in the *.vrscene* file.

**Include Lights** – When enabled, renders all the lights in the *.vrscene* file.

**Material Override** – Override all the V-Ray scene materials with the V-Ray material selected in this field.



## Animation Overrides

**Enable Animation Override** – Enables Animation overrides.

**Speed** – Speed multiplier for the animation. A value of 1 plays the animation at normal speed.

**Playback Type** – Specifies how to read the animation in the *.vrscene*.

**Loop** – Plays the entire animation, then restarts on the initial frame.

**Play once** – Plays the animation once, then displays the last frame of the animation for all further frames.

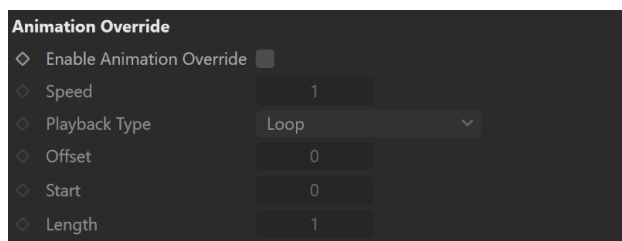
**Ping-pong** – When the end of the animation is reached, the animation is reversed.

**Still** – Displays only one frame.

**Offset** – Shifts the start frame.

**Start** – Determines which frame is considered the first frame of the animation.

**Length** – Sets the length of the animation. If this value is less than the total number of frames, the animation is clipped. If it is greater than the number of frames, the Playback Type option determines how the extra frames are interpreted.



## V-RaySceneImport

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The *V-RaySceneImport* window prompts you to select some import options for the *.vrscene* file. The **Presets** tab is a Cinema 4D tab that allows you to save and reuse settings as presets.

**Import Type** – Determines how the file is read when imported. See the [Import Types](#) section for more information.

**Native Objects (WIP)\*** – The elements in the file are read and imported individually as separate native objects as if the scene was created locally. This allows for greater editability of the imported V-Ray scene. Keep in mind that not all assets will be imported properly due to their nature - elements that are not supported by V-Ray for Cinema 4D and elements that are not supported by V-Ray Scene, currently cannot be imported natively.

**V-Ray Scene Reference** – The file is imported as a V-Ray Scene geometry. Edits to the scene are limited to the V-Ray Scene [parameters](#).

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## GENERAL

**Flip Axis Mode** – Controls which axis is used as a vertical - the Y or Z axes for the loaded *vrscene*. You can choose between:

**As Is** – No changes in the axes are applied.

**Auto** – It aligns the vertical axis of the *vrscene* with the vertical axis in the scene in cases where the *vrscene* was not exported from 3ds Max. Use the Auto mode when loading a USD file.

**Z-Up to Y-Up** – Switches the Z and Y axes.

**Y-Up to Z-Up** – Switches the Y and Z axes.

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## IMPORT TYPES

**Geometry** – Allows the import of all the geometry from the *.vrscene* file.

**Lights** – Allows the import of all the lights from the *.vrscene* file

**Instances (WIP)\*** – Allows the import of Instance Objects that were exported using Render Instance mode.

**Materials** – Allows the import of all the materials from the *.vrscene* file. Scenes exported from Maya will have their *place2dTexture* replaced with the V-Ray for Cinema 4D equivalent, which is the [UVW Place 2D node](#) and classic textures.

**Cameras** – Allows cameras to be imported from the *.vrscene* file.

**Optimize Shaders** - Optimizes the shaders and textures without altering their look. We recommend keeping this option on.

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## PREVIEW

**Preview** – Specifies one of the following modes for previewing the selected *.vrscene* in the viewport:

**Preview Geometry** – Displays a preview of the *.vrscene* using the value of the **Face Count** parameter.

**Bounding Box** – Displays a preview of the *.vrscene* using bounding boxes.

**Points** – Displays the *.vrscene* using points.

**Disabled** – Hides the *.vrscene*.

**Face Count** – Determines the number of faces that are used for previewing the *.vrscene* file.

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## ANIMATION OVERRIDE

**Enable Animation Override** – Enables the following parameters found in the Animation Overrides rollout.

**Speed** – Determines the pace at which the animation plays. The default of 1 plays at the speed for which the animation was created.

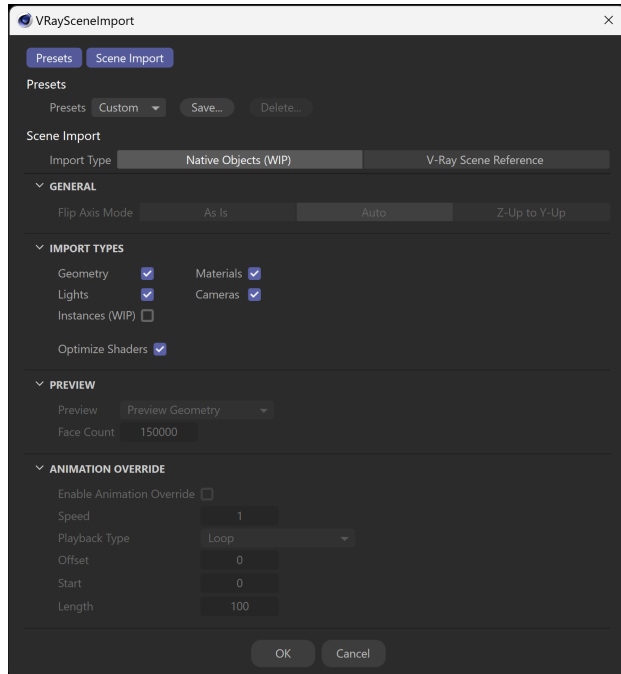
**Playback Type** – Specifies how to read the animation in the *.vrscene*.

**Loop** – Plays the entire animation, then restarts on the initial frame.  
**Once** – Plays the animation once, then displays the last frame of the animation for all further frames.  
**Ping-pong** – When the end of the animation is reached, the animation is reversed.  
**Still** – Displays only one frame.

**Offset** – Shifts the start frame.

**Start** – Determines which frame is considered the first frame of the animation.

**Length** – Sets the length of the animation. If this value is less than the total number of frames, the animation is clipped. If it is greater than the number of frames, the Playback Type option determines how the extra frames are interpreted.



## Transfer Enscape Scenes Using V-Ray Scene files

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Import geometry, shading, lights, and cameras in a Cinema 4D scene from a `.vrscene` file exported by [Enscape](#).

Use `.vrscene` files exported with Enscape version **3.5.6** or newer. Files exported with earlier Enscape versions may not contain proper descriptions of the imported data. *See the video for an example.*

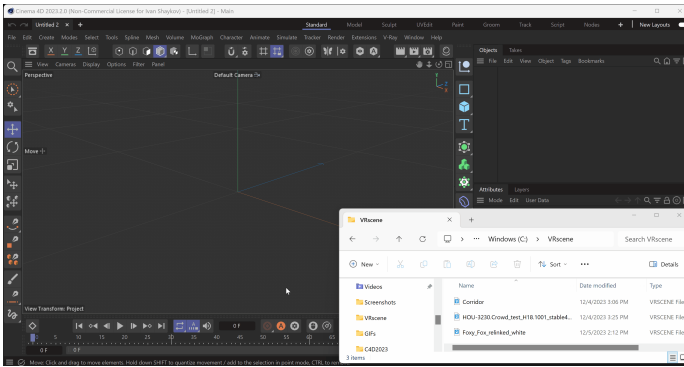
## How to Import a V-Ray Scene

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### Drag-n-drop

To import a `vrscene` file, you can use the drag-and-drop functionality.

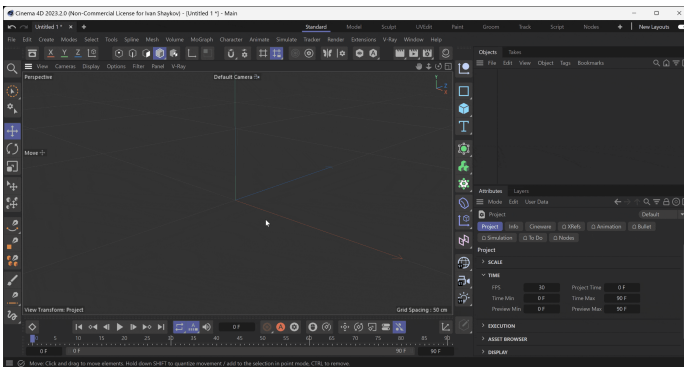
The `V-RaySceneImport` window prompts you to choose how to import the file in Cinema 4D. *See the [V-RaySceneImport](#) section of this page for descriptions of all the options.*



## File > Open Project

Go to **File > Open Project** and select a **.vrscene** file. The **V-RayScene import** window prompts you to choose how to import the V-Ray Scene into Cinema 4D.

You can also merge a V-Ray Scene into your current scene by loading it from the **File > Merge Project** option.

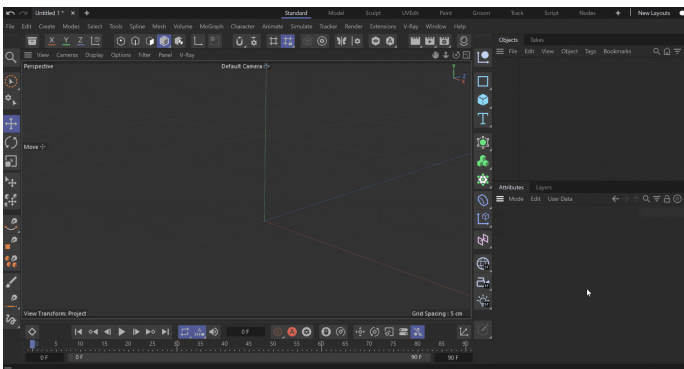


## V-Ray Toolbar

Go to the **V-Ray menu > Tools > V-Ray Toolbar**. The **V-Ray Toolbar** is a palette that can be docked anywhere in the interface.



Select V-Ray Scene ( ) and select a **.vrscene** file. The file is imported as a **V-Ray Scene Reference**.

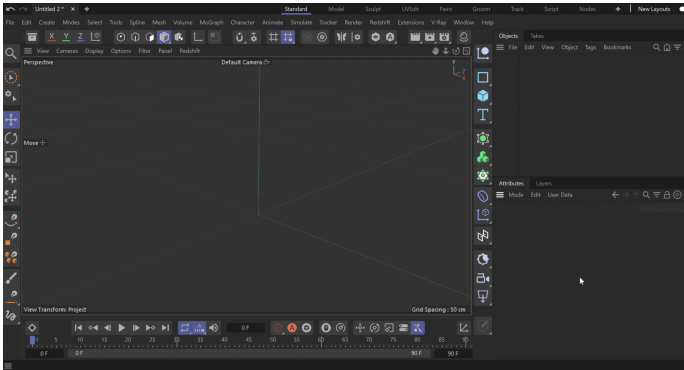


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## Through V-Ray menu

You can import a .vrscene file using the V-Ray menu. Select **Geometry > V-Ray Scene**.

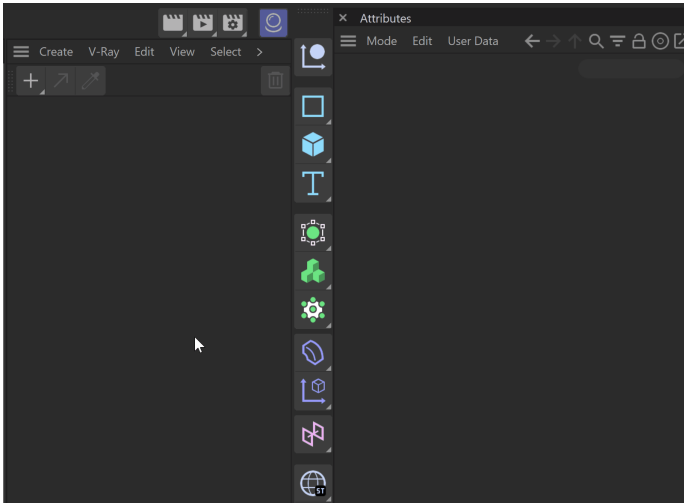
From Attributes, go to the **General** tab of the V-Ray Scene. From **File Path**, select the .vrscene file. It loads in the 0,0,0 coordinates in Cinema 4D. The file is imported as a [V-Ray Scene Reference](#).



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## VRmat material import

If you only want to import the materials from a .vrscene file, you can use the [VRmat material](#) or [material node](#) to do so. Create a VRmat material or material node and attach your .vrscene file in the **Material File** field. You can then select a specific material from the file using the **Material Name** dropdown menu.



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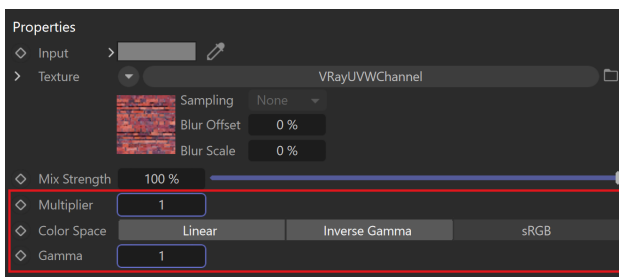
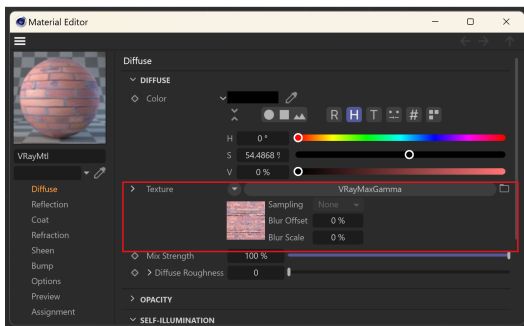
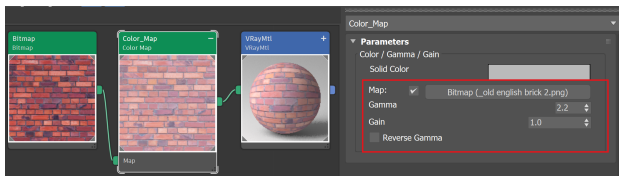
## Importing Native Objects (WIP) from V-Ray for 3ds Max with Gamma Corrections

The TexMaxGamma node is imported from older V-Ray for 3ds Max scenes only when the **Optimize Shaders** option is enabled during import in the VRaySceneImport window.

If you are importing a .vrscene file as a Native Object from an older V-Ray for 3ds Max scene, the materials in that file will import into V-Ray for Cinema 4D only as classic materials with a **VRayMaxGamma** shader attached. This texture helps properly transfer the color settings. However, the VRayMaxGamma node can prevent the imported materials from being converted to V-Ray Node materials through the Convert Materials tool.

*The exception is if the materials are exported with a Gamma of 1.* In that case, they are imported into V-Ray for Cinema 4D seamlessly without the creation of a VRayMaxGamma texture.

If that is not the case and a different Gamma value is assigned to the materials, you need to adjust the settings of the VRayMaxGamma textures of each material. Keep in mind that these alterations might change the look of your imported shaders. You can either set the **Color Space** of the VRayMaxGamma to **Linear** and set the **Multiplier** value to **1** or set the **Color Space** to **Inverse Gamma** and set both the **Multiplier** and **Gamma** values to **1**. These settings allow V-Ray to skip the VRayMaxGamma texture when converting, allowing the rest of the material to be converted into a Node material.



*This image is only for illustrative purposes; it does not correspond to the default interface.*

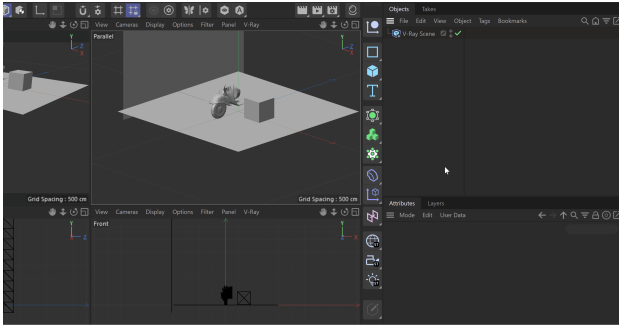
## Convert a Scene Reference to a Native Object (WIP)

To convert a V-Ray Scene Reference into a Native Object, select the V-Ray



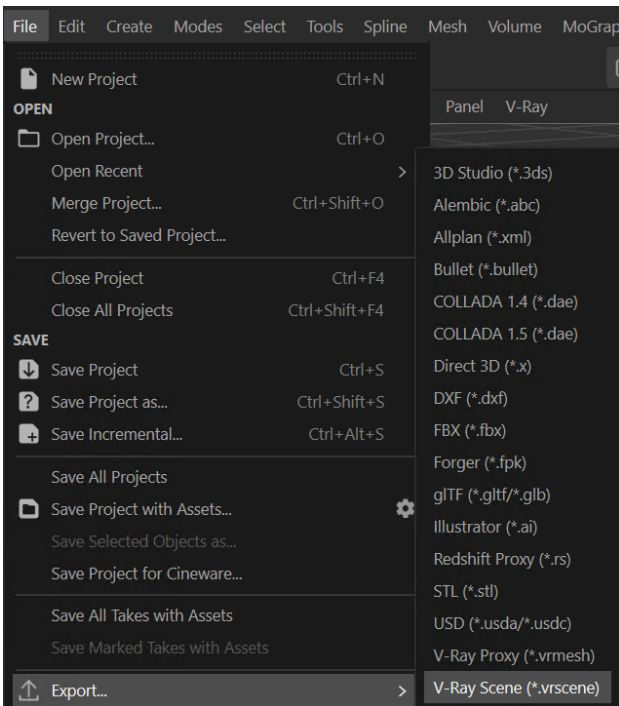
Scene Reference and click on the **Make Editable** button. You can then edit all of its components if they are supported\*.





## How to Export a V-Ray Scene

To export a `.vrscene` file from Cinema 4D, go to **File > Export...** and select the **V-Ray Scene** option.



## Settings

### Presets

The Presets option allows you to save any configuration for future use.

### Scene Export

**Separate files** – When enabled, V-Ray exports separate files for different components of the scene. This also allows you to disable export for certain types of objects: **Lights, Nodes, Geometry, Materials, Textures,** and **Bitmaps**.

**Each frame in separate file** – When enabled, V-Ray makes a separate file for each rendered frame.

**Strip paths** – When enabled, the paths for assets (bitmap textures, proxies, GI caches loaded from file, etc.) are removed from the exported file and only the file names of the assets remain.

**Write mesh data in hex format** – When enabled (the default), the mesh data is written in hexadecimal format in the *.vrscene* file. This makes the files smaller and faster for processing, but less readable to a user. When disabled, the mesh data is written in normal decimal format.

**Write transform data in hex format** – When enabled (the default), transform data is written in hexadecimal format in the *.vrscene* file. This makes the files smaller and faster for processing, but less readable to a user. When disabled, the data is written in normal decimal format.

**Compressed** – When enabled, basic compression is applied to the *.vrscene* file. This option can only be used together with **Write mesh data in hex format**.

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### Skip exporting plugins

When exporting an animation, these options select which plugin to be included.

#### Skip Exporting Objects and Lights:

**Export All** – Exports only render settings and objects, and lights.

**Skip All** – Skips the export of Objects and Lights.

**Export First Frame Only** – Exports the render settings and objects, and lights to the first frame of the animation.

#### Skip Exporting Materials

**Export All** – Exports only render settings and materials.

**Skip All** – Skips the export of Materials.

**Export First Frame Only** – Exports the render settings and materials to the first frame of the animation.

#### Skip Exporting Cameras

**Export All** – Exports only render settings and cameras.

**Skip All** – Skips the export of Cameras.

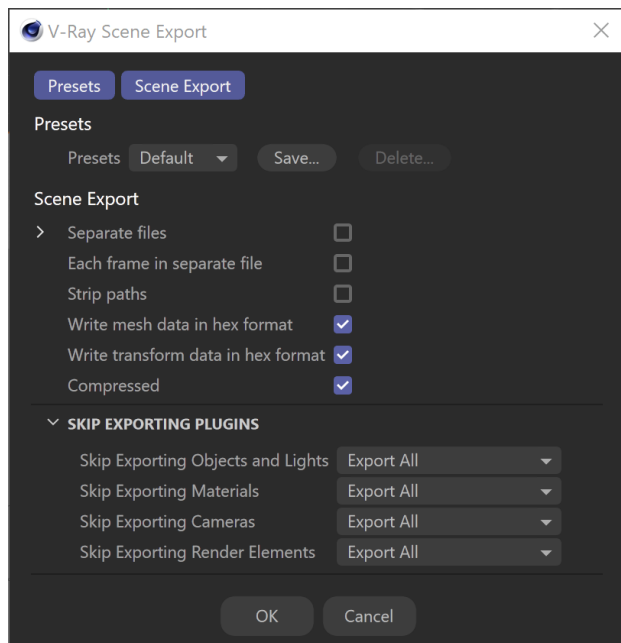
**Export First Frame Only** – Exports the render settings and cameras to the first frame of the animation.

#### Skip Exporting Render Elements

**Export All** – Exports only render settings and render elements.

**Skip All** – Skips the export of Render Elements.

**Export First Frame Only** – Exports the render settings and render elements to the first frame of the animation.



## Limitations

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- V-Ray Sky is currently not supported for import with V-Ray Scene.

### **Native Objects mode:**

- V-Ray elements that are applied only to their child components, e.g., V-Ray Clipper, V-Ray Particles, and V-Ray Renderable Spline and hairs, are imported as black box objects.
- Materials that cannot be created natively in V-Ray for Cinema 4D are currently not supported in V-Ray Scene.
- If different materials are assigned to instances, they will currently not render exactly the same as in the original scene.
- Instances of proxy files are not currently imported correctly in V-Ray Scene.
- Render Settings are currently not importable.
- Animation and animated geometry are currently not supported.
- V-Ray Mesh Light imports as a black box object.
- V-Ray Volume Grid imports as a black box object.
- Animated instances are currently not supported.
- Light and Shadow Linking is currently not supported.
- Custom User Data is currently not supported.