

V-RayScene

This page describes the V-Ray Scene node in V-Ray for Maya.

Overview

The V-Ray Scene node is the result of importing a *.vrscene* file into your scene from the [V-Ray Scene Manager](#). Its parameters are available in the Attribute Editor after import.

For detailed information on how to export a *.vrscene* file, see the [Exporting and Using V-Ray Scene Files](#) tutorial.

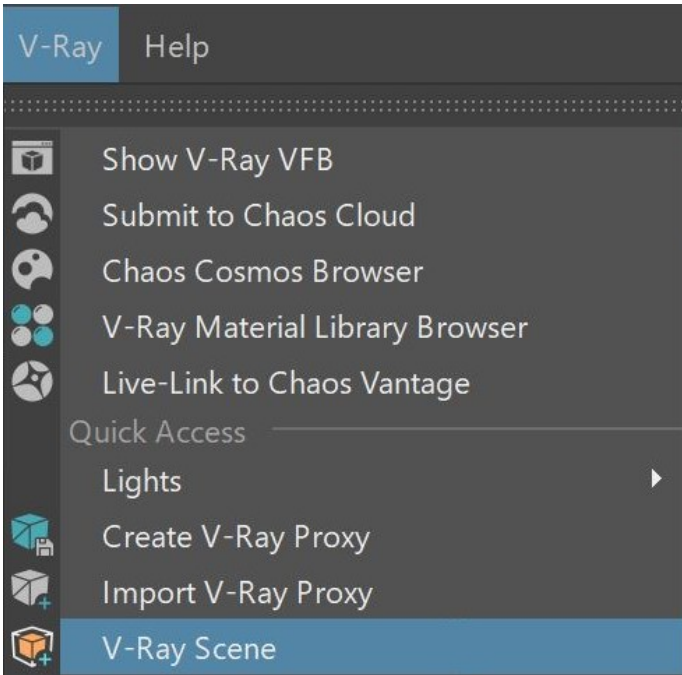
V-Ray Object Properties can be assigned to V-RayScene nodes to override properties like primary visibility, matte properties and other.
A V-RayScene object can also be loaded by dragging and dropping a *.vrscene* file directly in your viewport.



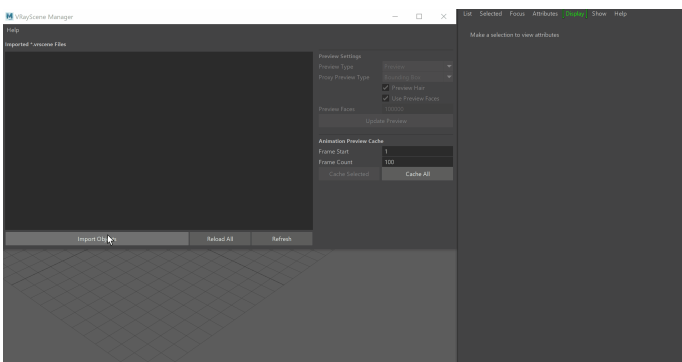
UI Path: ||V-Ray Shelf|| > Scene Manager > Import Objects > Attribute Editor > VRayScene tab
||V-Ray Shelf|| > **VRayScene Manager**



||V-Ray Menu|| > **V-Ray Scene**



VRayScene Manager > Import Objects > Attribute Editor > VRayScene_scene



Parameters

Disable – Turns the VRayScene object off in the render. The preview is still visible in the viewport to select the node, but the items in the vrsce do not appear in any renders.

File (*.vrscene) – The path and filename of the vrscene loaded into the Scene node. Animation vrscene can be stored either in one single file, or as a sequence of files with one file per frame. In the latter case, you can use the string *<frame0n>* in the file name to have it replaced with the current frame number at render time, where *n* is an integer number specifying the number of digits. For example, if you enter *my_vrscene_<frame04>.vrscene* as the file name, this will be expanded to *my_vrscene_0000.vrscene* for frame 0, *my_vrscene_0001.vrscene* for frame 1, and so on.

Load Mode – Specifies how to load the .vrscene file.

All – Loads the .vrscene file with all its geometry, lights, shading, volumes, etc.

Geometry – Loads the .vrscene file with geometry and shading only. This option allows instancing vrscenes using *MASH* or *nParticles*. The new scene can be exported as a .vrscene, too. See the Instancing vrscene with [MASH/nParticles](#) examples below.

Geometry Load Mode has several advantages:

- the instanced scene uses much less memory;
- much faster render times;
- makes possible of billions of instances of a geometry.

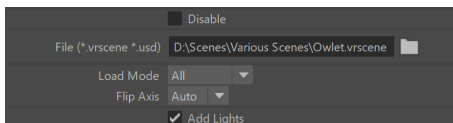
Flip Axis – Controls which axis is used as a vertical - the Y or Z axes for the loaded vrscene. You can choose between:

None – 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 Maya. Use the Auto mode when loading a USD file.

Flip – Switches the Y and Z axes.

Add Lights – When enabled, the lights from the vrscene is used in the render.

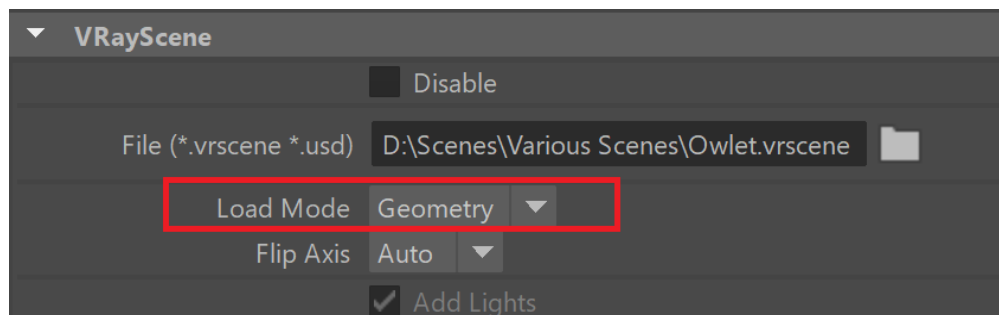


Example: Instancing vrscene with MASH and nParticles

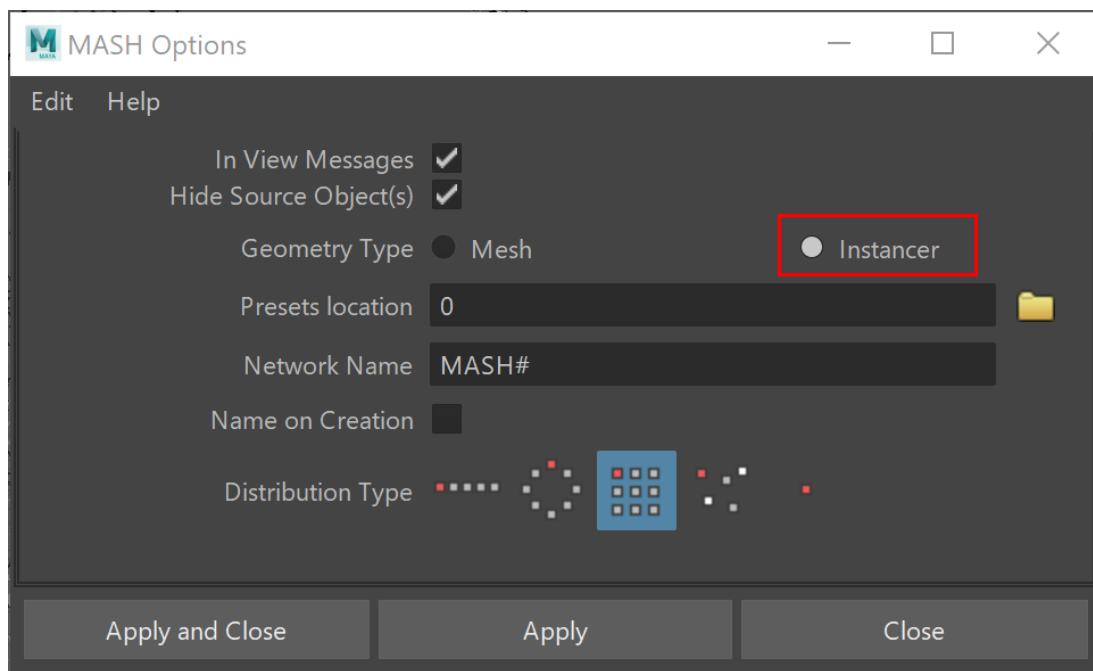
Click here to expand the MASH example...

This example shows how to instance a vrscene using MASH. A .vrscene is imported with the Scene Manager. The vrscene used in this example consists of one geometry object (an owl), which has a material applied.

In the VRayScene rollout, change the **Load Mode** to **Geometry**. This way, the scene will load only geometry and shading, but it will become available for instancing.



To instance the scene using MASH, create a MASH Network (MASH > Create MASH Network). As a **Geometry Type**, select **Instancer**.



Adjust the distribution of your MASH network. In the example shown, the original owl scene is instanced 9 times. The instances are distributed in a Grid, with Distance X and Z set to 50.0.

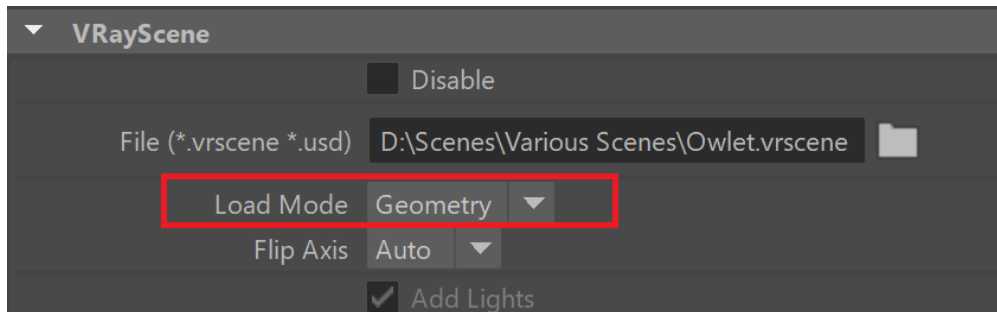


The new scene is ready to be rendered or exported as a .vrscene, allowing you multiple instancing of one vrscene.

Click [here](#) to expand the nParticles example...

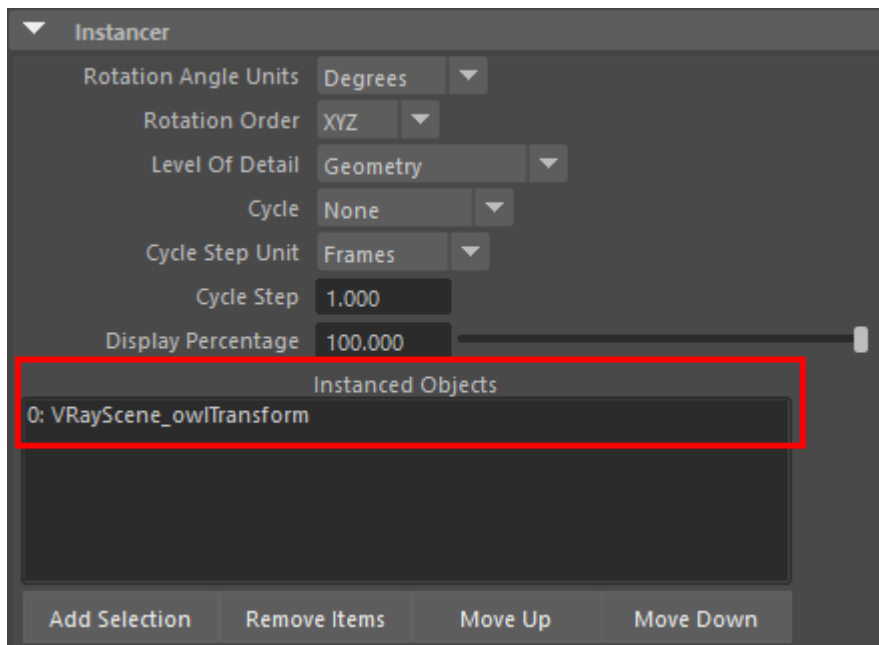
Here is how to instance a vrs scene with nParticles. Import the .vrs scene using the [Scene Manager](#). The vrs scene used in this example consists of one geometry object (an owl), which has a material applied.

In the VRayScene rollout, change the **Load Mode** to **Geometry**. This way, the scene will load only geometry and shading, but it will become available for instancing.

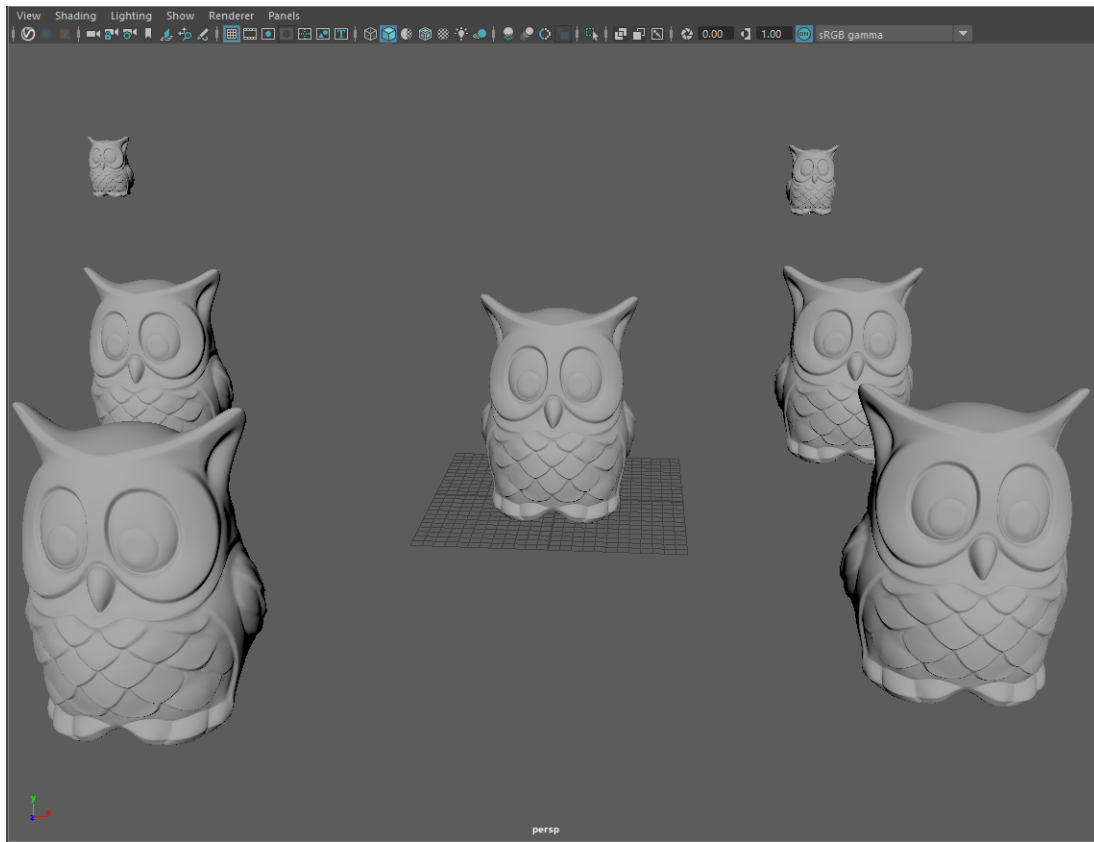


Create the nParticles using the **nParticle tool** (nParticles > nParticle tool). Select the points in the viewport that will later be instances of the vrs scene. Press **Enter** to create the nParticle node.

Go to nParticles > Instancer. Select the newly created **instancer** node and add the vrs scene as an instanced object:



Once done, the vrs scene instances load in the viewport and are ready to render. In the example below, the points of the instances are randomly selected.



Note that if you miss to select the **Geometry Load Mode** of the vrscene, the render will not include the instanced geometry, although it will be visible in the viewport!

Animation Overrides rollout

Use Animation Overrides – Enables the following parameters found in the Animation Overrides rollout.

Animation Type – Sets the way any animation in the vrscene play within your current scene.

Loop – The animation plays from the vrscene using the Anim Length setting. If the time range in your current scene is longer than the length of the animation, it repeats the beginning of the animation again.

Once – The animation in the vrscene plays just once. The end of the animation holds, if the time range is longer than the length of the animation.

Ping-Pong – The animation plays from the vrscene and if the end of the animation is reached, the animation plays in reverse towards the beginning of the animation. It continues back and forth until the end of the time range.

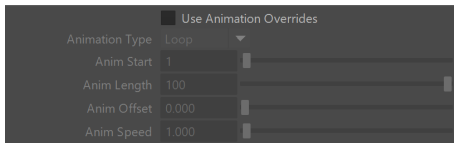
Still – The animation holds the Anim Start frame for the duration of the time range.

Anim Start – The frame used for the beginning of the animation.

Anim Length – The number of frames used to play the animation.

Anim Offset – The number of frames shifted between the animation and the time range.

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



Render Overrides

Object ID – Overrides the object ID for all objects in the imported vrs scene. If the override is not set, i.e. the value is -1 (minus one), V-Ray uses the original object IDs of the vrs scene objects.

V-Ray Object Properties can be assigned to V-RayScene nodes to override properties like primary visibility, matte properties and other.



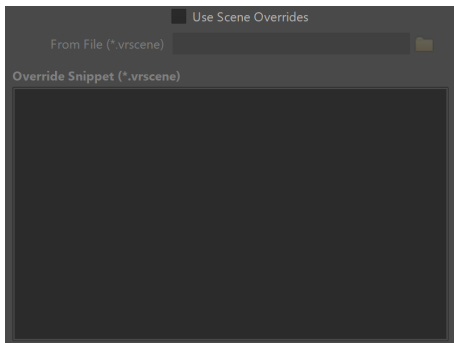
Scene Overrides

With the scene manager, a vrs scene can be imported and new instances of it can be made. Each instance can have its own Override Snippet. This allows overrides to be made independently for each instance of the same vrs scene.

Use Scene Overrides – Enables the following parameters found in the Scene Overrides rollout.

From File (*.vrs scene) – The path and filename of the vrs scene used to override the file loaded in the **File** parameter.

Override Snippet (*.vrs scene) – Editor box expects data in the vrs scene format.



Snippet Example:

Example: Material Override

```
// MATERIAL OVERRIDE EXAMPLES // // Create new shadeless material. BRDFLight shadelessBrdf { color=Color
(0.15,0.35,0.35); affect_gi=false; } MtlSingleBRDF shadelessMtl { brdf=shadelessBrdf; } MtlWrapper
shadelessMtlAlpha { base_material=shadelessMtl; alpha_contribution=-1; }
```

V-Ray Next allows overriding user attributes to 'Node' plugins.

Example: User Attributes Override

```
// USER ATTRIBUTE OVERRIDE EXAMPLES // // Override user attributes that are used to replace a string in texture
paths Node pSphereShapel@node { user_attributes="texPath=/tmp/assets/"; } // Override user attributes that
are used to pass a color Node pSphereShapel@node { user_attributes="color=1,0,0"; }
```

Notes

- *.vrscene* files can be exported when you turn on the **Export to a .vrscene file** option in the [Common tab](#) before rendering the scene or via Maya's File menu > Export All.../Export Selection option.
- Cameras and render settings are not imported from *.vrscene* files even if they are present in the files themselves.
- VRayScene supports loading sequences of vrscenes where each frame of the animation data is stored in a separate file.
- Light linking of a *.vrscene* asset and a light affects all instances of the *.vrscene*.
- When VRayObjectProperties is used on a VRayScene node, the **Override motion blur samples** option has no effect, as it is baked to the VRayScene and cannot be changed.