

# Volumetric Grid | VRayVolumeGrid

This page introduces the VRayVolumeGrid node.

## Overview

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**VRayVolumeGrid** is a special kind of volumetric effect that works with grid-based cache formats. Compare with [Environment Fog](#) which is a general purpose volumetric effect. The Volumetric Grid reads its data from an input file which supports grid-based representation of the volume.

Currently VRayVolumeGrid supports three volume formats:

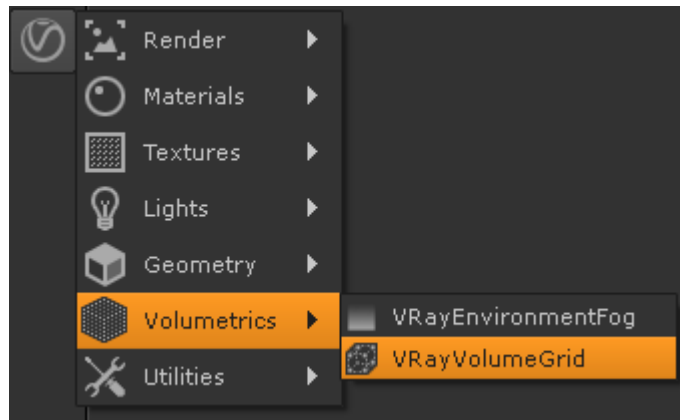
- **OpenVDB** (.vdb) - Supported by Houdini<sup>®</sup>, FumeFX<sup>®</sup> and RealFlow<sup>®</sup>
- **Field3D** (.f3d) - Supported FumeFX<sup>®</sup> and Maya<sup>®</sup> (using 3rd party plugins)
- **PhoenixFD** (.aur) - Phoenix FD<sup>®</sup> native volume format

Immediately after the VRayVolumeGrid node is created, a properties dialog appears with a field for selecting the input file. A number of options are then available to fine-tune and customize the volume.



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UI Path: ||Toolbar|| > **V-Ray Menu icon** > **Volumetrics** > **VRayVolumeGrid**



## Inputs

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**mtl** - Connection to apply a material to the V-Ray Volume Grid. It is necessary for the Volume Grid to be in [Mesh mode](#), the Surface channel needs to be set and an appropriate Isosurface Level must be chosen from this section.

**dsp** - When [Displacement](#) is enabled it will be based on the values of the connected texture map.

**tr** - The smoke opacity will be based on the values of the connected texture map if **Based on** is set to **Texture**.

**dif** - The smoke color will be based on the values of the connected texture map if **Based on** is set to **Texture**.

## Volume Grid Options

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The following options are provided for modifying the appearance and rendering of the volume grid. For more information, see the [Volumetric Grid Properties](#) page.

- [Input tab](#) - Provides controls for multiple frame input, timing of frames, and blending/smoothing of frames.
- [Preview tab](#) - Provides controls for how the volume grid effect is displayed in the viewport.
- [Rendering tab](#) - Provides controls for how the volume grid effect is rendered.
- [Fire tab](#) - Provides volumetric shader controls for the emissive color (fire) and the light emitted by the volume grid.
- [Smoke tab](#) - Provides volumetric shader controls for the diffuse (smoke) color and opacity.