

Compositing Fire and Smoke

This page provides a tutorial for compositing Chaos Phoenix Fire and Smoke inside of NUKE.

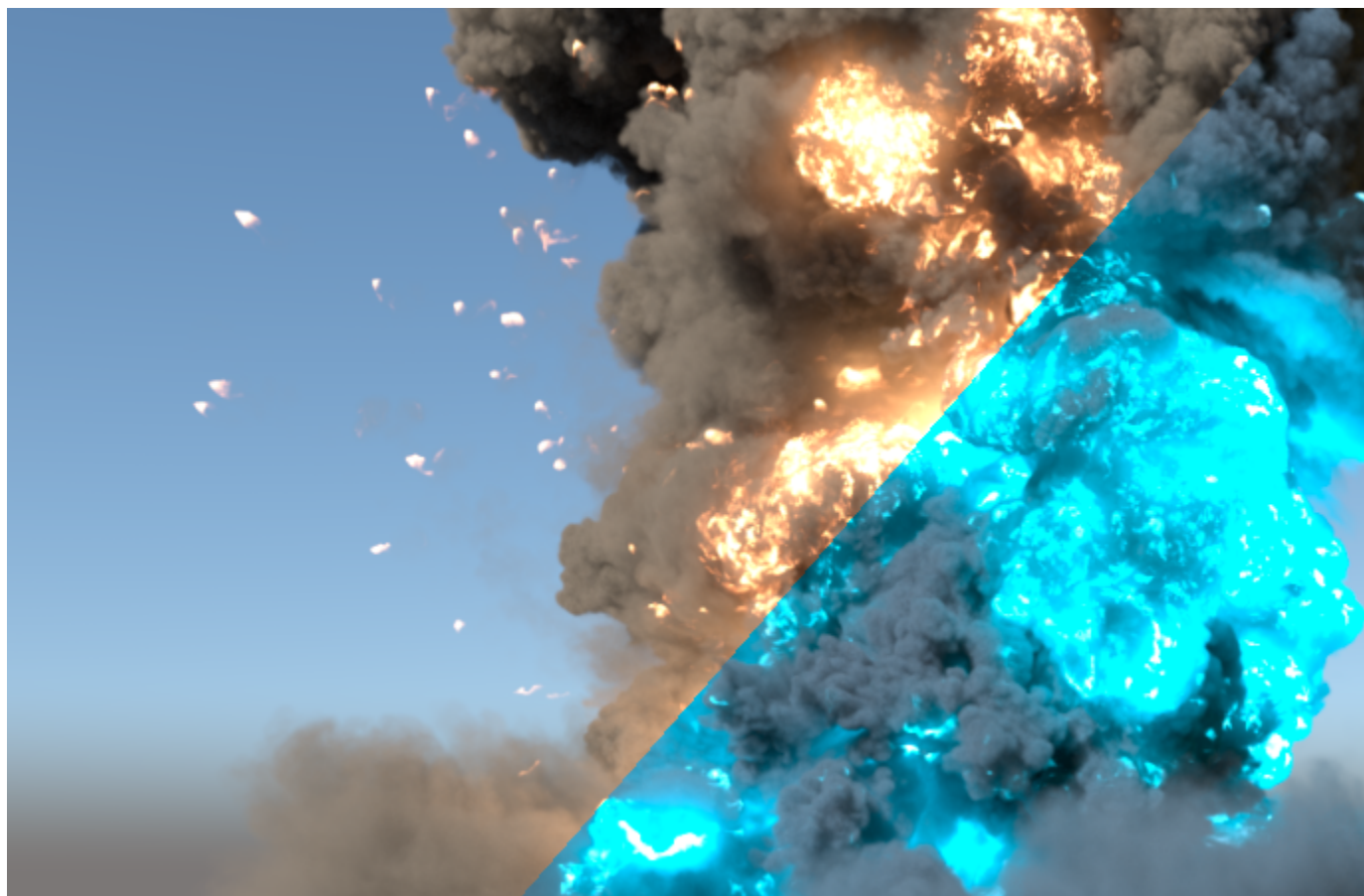
Overview

This is an Entry Level tutorial which requires no previous knowledge of Phoenix. A basic understanding of 3ds Max would be helpful but is not a prerequisite for being able to follow along.

In this tutorial we will go over splitting the Phoenix Fire and Smoke elements in order to use them in compositing.

As Phoenix has no dedicated Render Elements for Fire and Smoke, we will generate these with some compositing magic in NUKE.

[Download Project Files](#)



Render Elements Setup

We will need to use V-Ray's Atmosphere and Self-Illumination Render Elements so we will add these in the Render Elements tab.

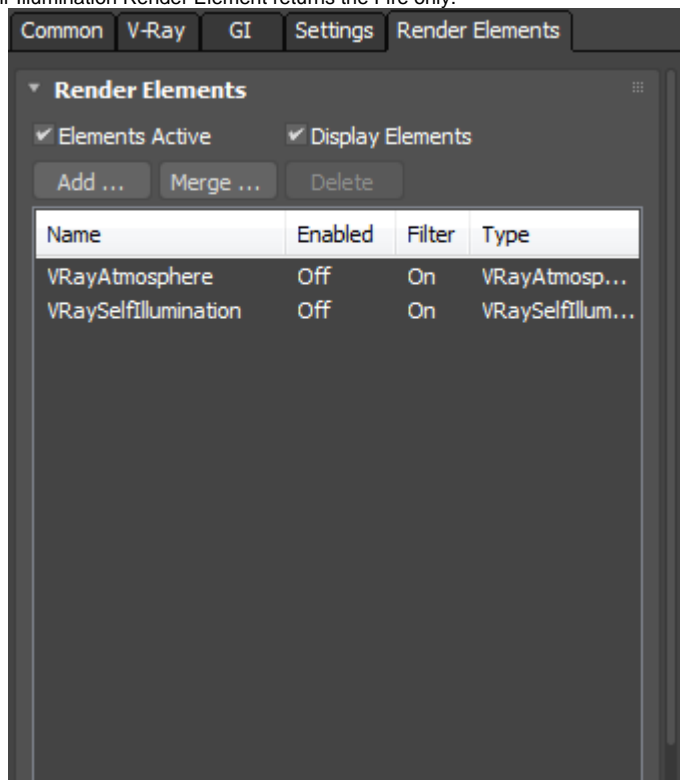
Note that you need to set the Simulator's **Render Mode** to **Volumetric** in order to get the V-Ray Atmosphere render element.

For more information about the supported Render Elements visit the [V-Ray Render Elements Support](#) page.

After rendering the image we will save it as a **multichannel EXR** so it will be easier to manage.

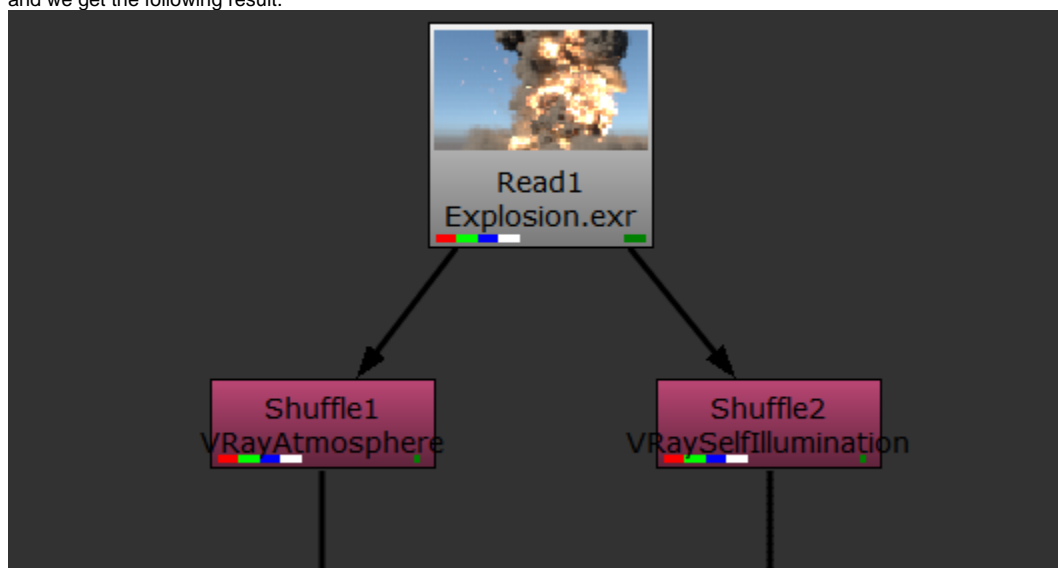
The Atmosphere Render Element will give you the Smoke + the illumination produced by the Fire.

The Self-Illumination Render Element returns the Fire only.



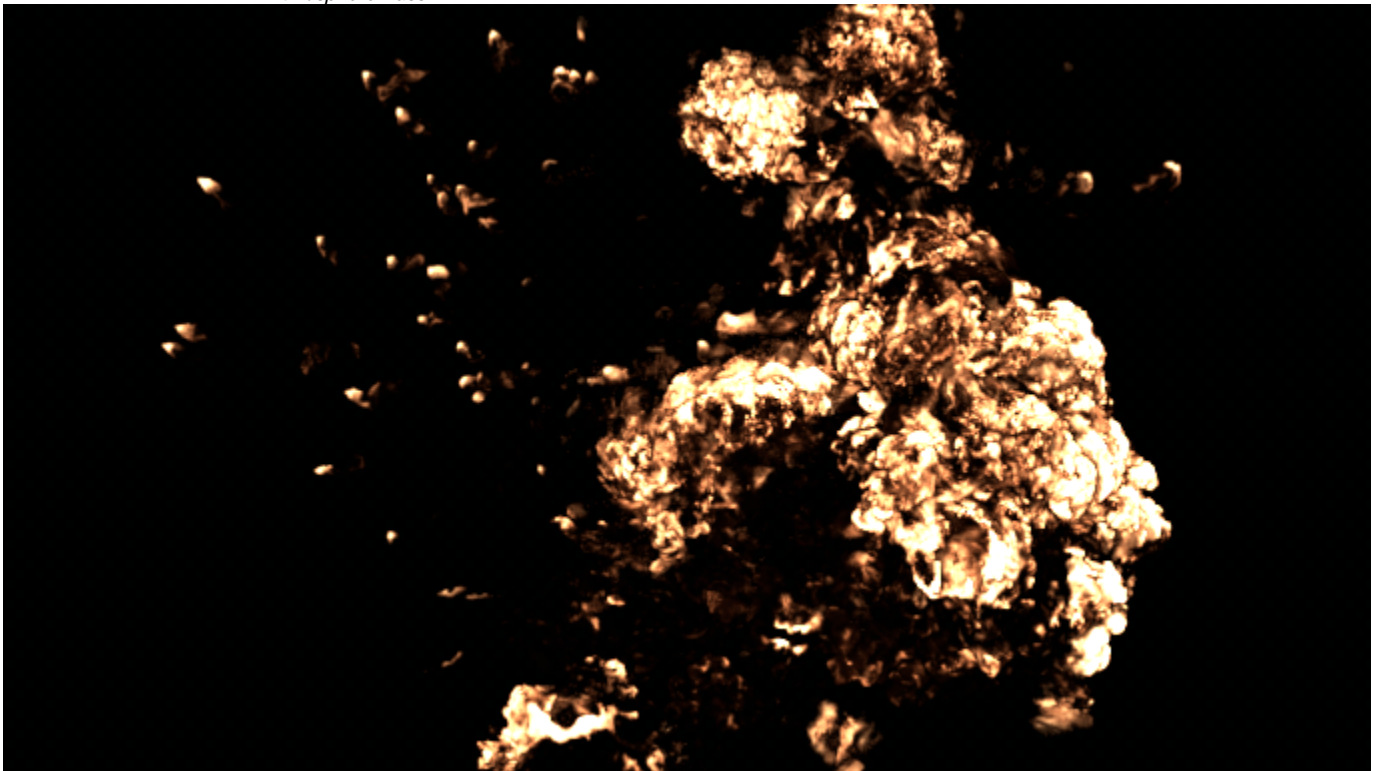
Compositing in Nuke

We import the image in NUKE. Each element is shuffled out and we get the following result.





Atmosphere Pass



Self-Illumination Pass

You can directly modify the Fire using the Self-Illumination pass.

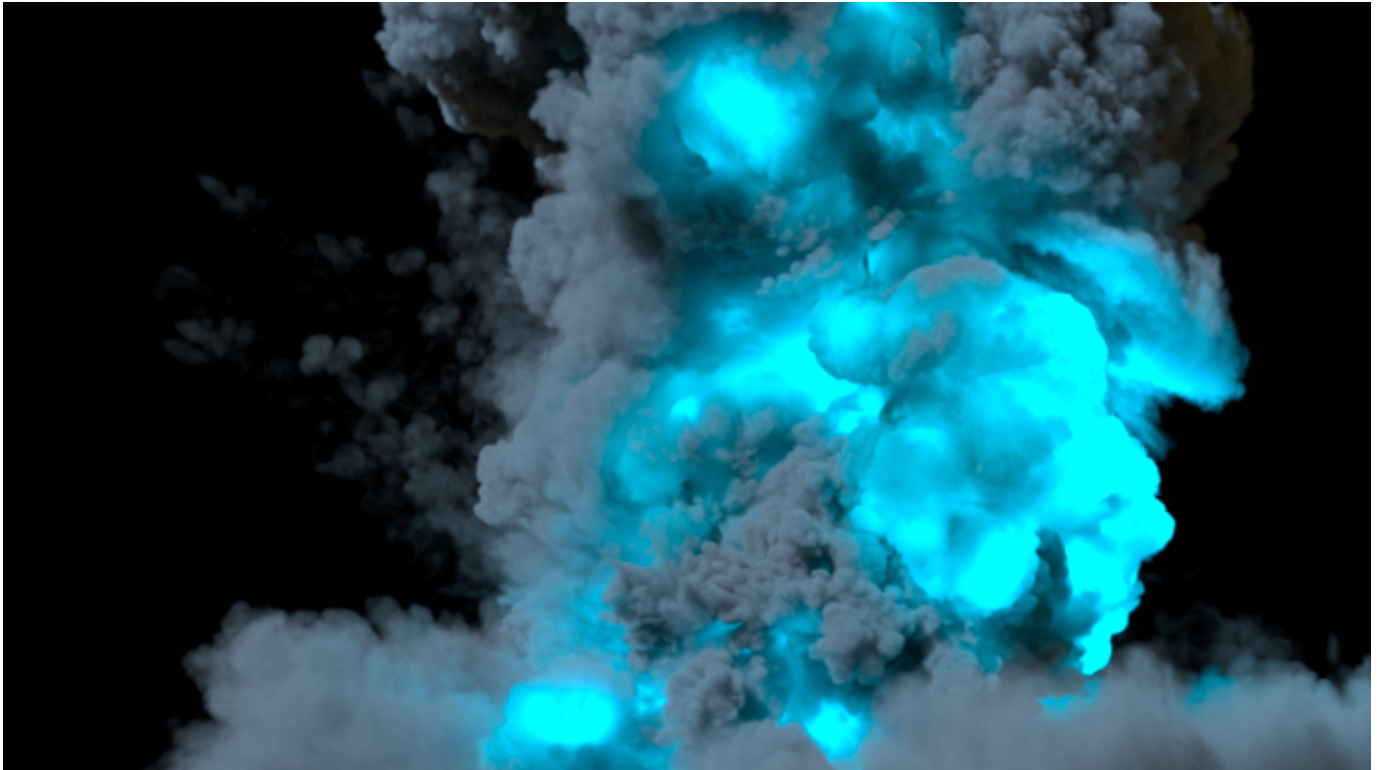
To isolate the Smoke, create a **Merge** node and connect **input A** to the **Atmosphere pass** and **input B** to the **Self-Illumination pass**.

Set the operation to **Minus** and the **Self-Illumination pass** will be subtracted thus leaving us with the illuminated Smoke only.



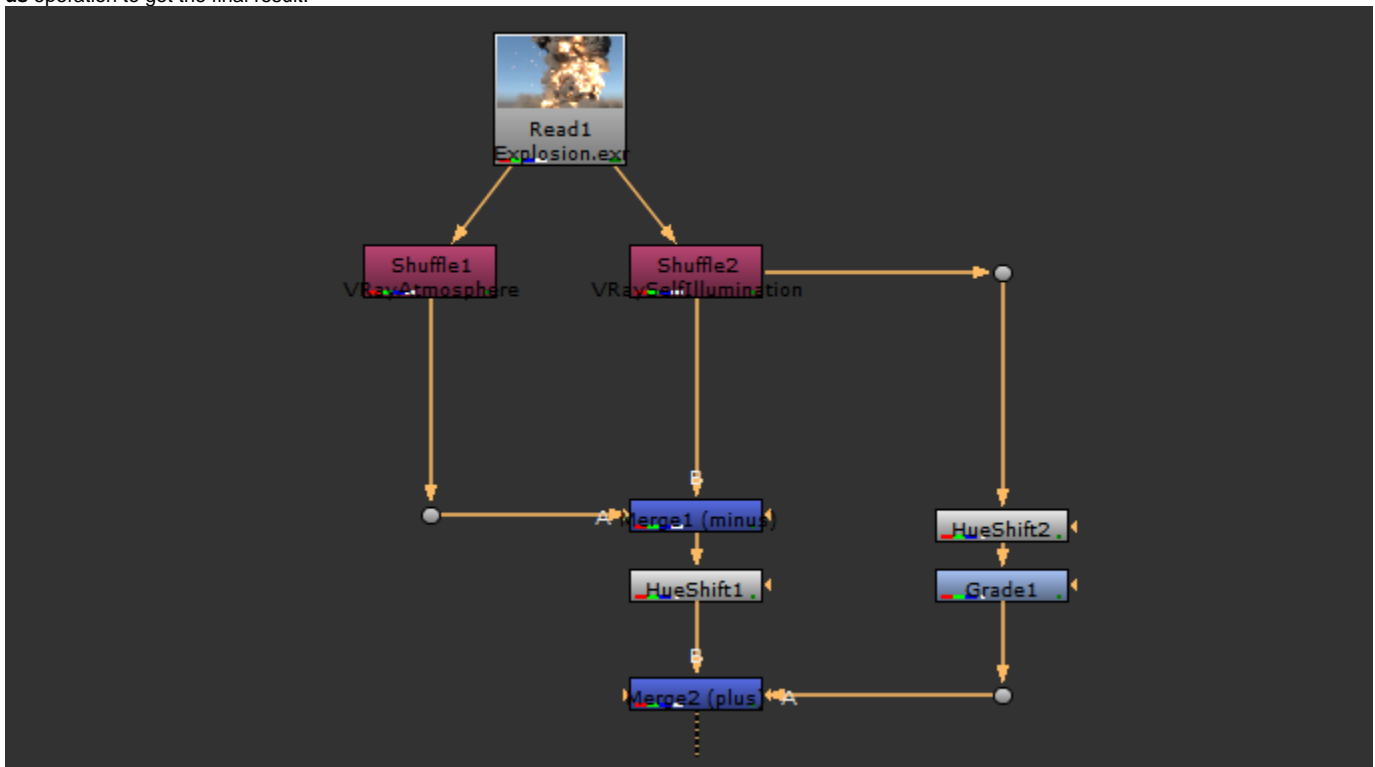
You can now **Color Correct** both the Fire and the Smoke separately for more creative control.

Add a **Hue Shift** node to both passes and change the **Hue rotation** to **180** which will give a blue tint to the pass.



To lower the **Fire Intensity**, you can add a **Grade** node in the **Self-Illumination** chain and reduce the **Gain** by **0.5**.

You can then **Merge** the Fire back over the Smoke using a **PI us** operation to get the final result.



Here is the final image:

