

## 12.1.37 Editors - Geometry Nodes Editor - Header - Add Menu - Volume - Sample

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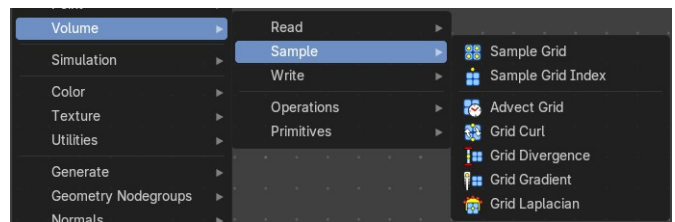
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## Add menu - Volume

Here you find nodes to modify the volume.



## Sample Grid

Retrieve values from the specified volume grid.

### Inputs

#### *Grid*

The input grid

#### *Position*

The position field.

#### *Interpolation*

How to interpolate the values between neighbouring voxels.

### Input

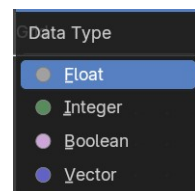
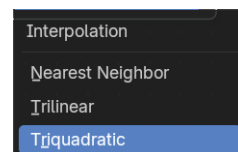
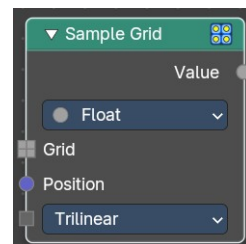
#### *Data Type*

Which data type to calculate.

### Output

#### *Value*

The output value.



## Sample Grid Index

Retrieve values from the specified volume grid.

### Inputs

#### *Grid*

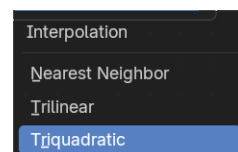
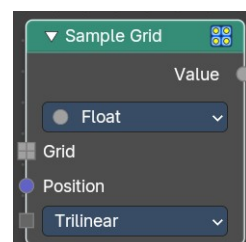
The input grid

#### *Position*

The position field.

#### *Interpolation*

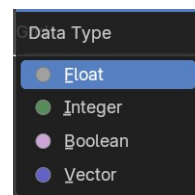
How to interpolate the values between neighbouring voxels.



## Input

### **Data Type**

Which data type to calculate.



## Output

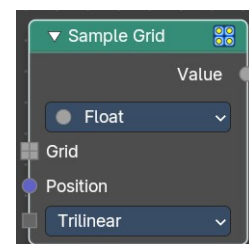
### **Value**

The output value.

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## Advect Grid

Move grid values through a velocity field using numerical integration. Supports multiple integration schemes for different accuracy and performance trade-offs.



## Inputs

### **Grid**

The input grid.

### **Velocity**

The velocity.

### **Position**

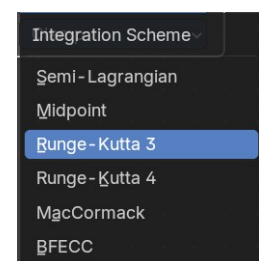
The position field.

### **Time step**

Time step for advection in seconds.

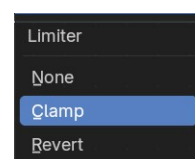
### **Integration scheme**

Numerical integration method for advection.



### **Limiter**

Limiting strategy to prevent numerical artifacts.



## Output

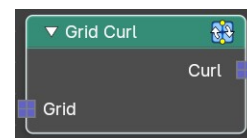
### *Grid*

The output grid.

---

## Grid Curl

Calculate the magnitude and direction of ciruclation of a directional vector grid.



## Inputs

### *Grid*

The input grid.

## Output

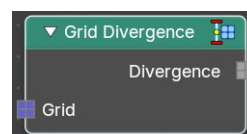
### *Curl*

The output grid.

---

## Grid Divergence

Calculate the flow into and out of each point of a directional vector grid.



## Inputs

### *Grid*

The input grid.

## Output

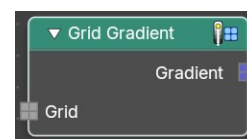
### *Divergence*

The output grid.

---

## Grid Gradient

Calculate the direction and magnitude of the change in values of a scalar grid.



## Inputs

### *Grid*

The input grid.

## Output

### *Gradient*

The output grid.

---

## Grid Laplacian

Compute the divergence of the gradient of the input grid.



## Inputs

### *Grid*

The input grid.

## Output

### *Laplacian*

The output grid.