

12.1.15 Editors - Geometry Nodes Editor - Header - Add Menu - Geometry

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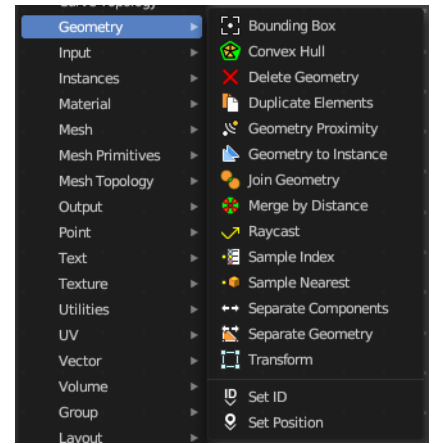
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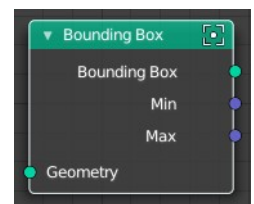
Add menu - Geometry

Here you find nodes to modify the geometry.



Bounding Box

The Bounding Box geometry node allows you to work with the values of a bounding box.



Inputs

Geometry

Standard geometry input.

Output

Bounding Box

Standard output.

Min

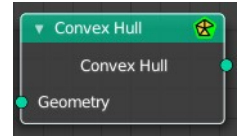
The minimum values of the bounding box.

Max

The maximum values of the bounding box.

Convex Hull

The node allows you to work with the values of a convex hull of this object.



Inputs

Geometry

Standard geometry input.

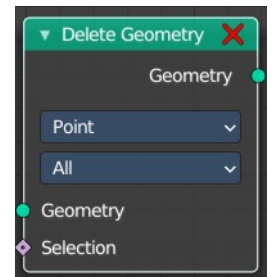
Output

Convex Hull

Standard output.

Delete Geometry

The node allows you to work with the values of a convex hull of this object.



Inputs

Geometry

Standard geometry input.

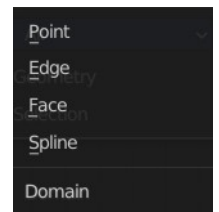
Selection

A selection of the geometry

Properties

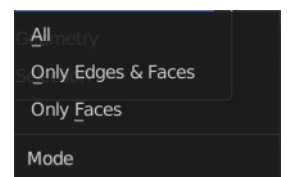
Domain

What element to delete.



Mode

Delete mode. Names should be self explaining.



Output

Geometry

Standard output.

Duplicate Elements

Duplicates a part of a geometry a dynamic number of times.

Inputs

Geometry

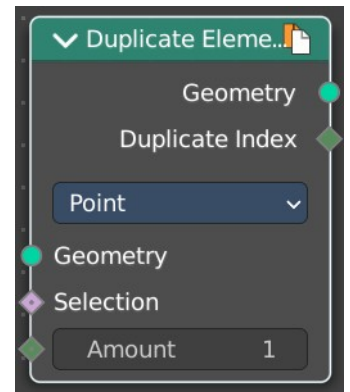
Standard geometry input.

Selection

A selection of the geometry.

Amount

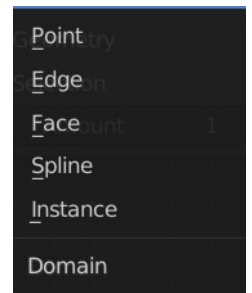
Number of times the geometry should be duplicated.



Properties

Domain

What element to duplicate.



Output

Geometry

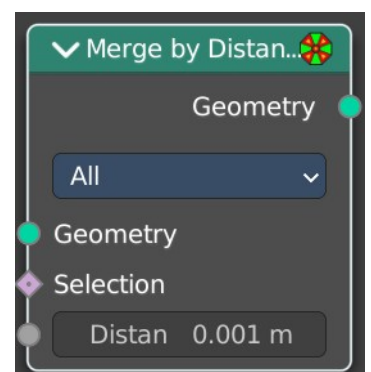
Standard output.

Duplicate Index

The index of the duplicated elements.

Merge by Distance

Welds the selected geometry below a given distance into one vertice.



Input

Geometry

The input geometry.

Selection

A selection of the input geometry.

Distance

The merge distance. Everything below this distance will be merged into one vertice.

Properties

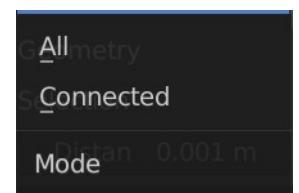
Mode

All

Merges all vertices in reach.

Connected

Merges just vertices that are connected by edges.



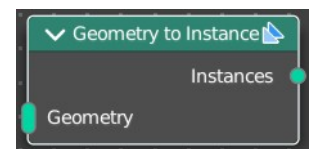
Output

Geometry

The output geometry.

Geometry to Instance

Turns every connected input geometry into an instance. These instances can then for example be used in the Instance on Points node.



Inputs

Geometry

The input geometry.

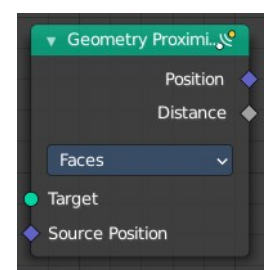
Outputs

Instances

The output instances.

Geometry Proximity

This node finds the closest position on the target for each point in the input geometry.



Inputs

Target

The target object.

Result

Name of the attribute where the output is stored. If the attribute does not exist yet, it is created.

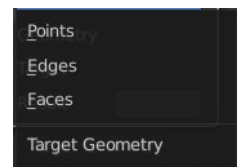
Position

The position where the computed location is stored.

Properties

Target Geometry

The element of the target geometry to calculate the distance from.



Outputs

Position

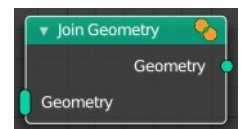
Closest location on the surface of the target mesh, or the closest point in the target point cloud in Points mode.

Distance

Distance from the source position to the closest location in the target.

Join Geometry

The Join Geometry enables you to merge separately generated pieces of geometry into a single one. In case that the inputted pieces contain different types of geometry, the output will contain multiple types of geometry.



Inputs

Geometry

Standard geometry input.

Output

Geometry

Standard geometry output.

Raycast

This node sends a raycast and retrieves data from the hit target.

Inputs

Target Geometry

This is actually the source object that sends the ray.

Attribute

Attribute input.

Source Position

Source position input.

Ray Direction

A vector 3 for the ray direction.

Ray Length

The length of the ray.

Properties

Data Type

What data to calculate on hit.

Mapping

Mapping from the target geometry to hit points. Interpolated or nearest.

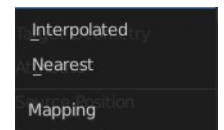
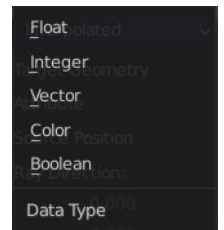
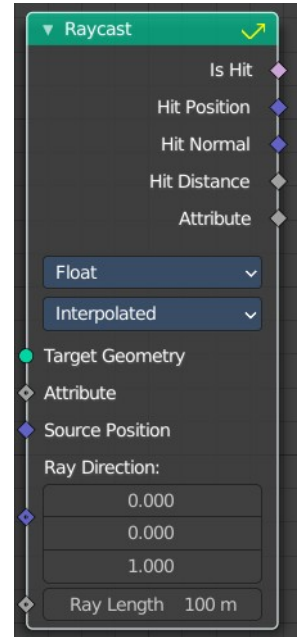
Output

Is Hit

Has the raycast hit something?

Hit Position

The hit position if any.



Hit Normal

The normal of the hit point.

Hit Distance

The distance of the hit point.

Attribute

The attribute of the hit object.

Sample Index

Retrieve values from specific geometry elements

Inputs

Geometry

The source object to take the data from.

Value

The value to retrieve.

Index

The index position of the value.

Properties

Data Type

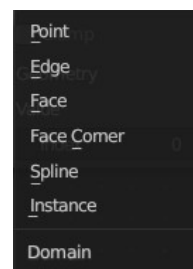
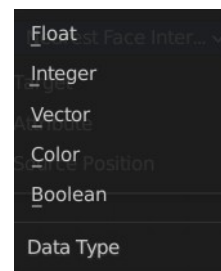
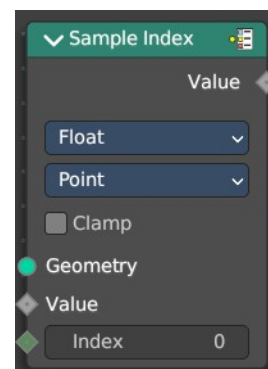
The type for the source and result data.

Domain

What kind of data to process.

Clamp

Clamp the indices to the size of the attribute domain.



Output

Value

The output value.

Sample Nearest

Retrieves the element of a geometry closest to a position.

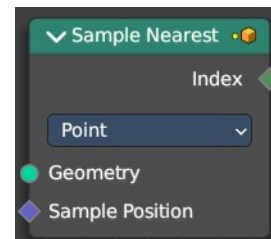
Inputs

Geometry

The source object to take the data from.

Sample Position

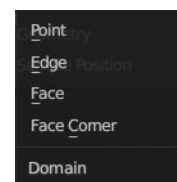
The position of the source object.



Properties

Domain

What data to process.



Output

Index

The index output.

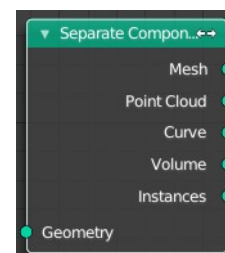
Separate Components

Splits a geometry into its components.

Inputs

Geometry

Geometry input.



Outputs

Mesh

Mesh component of the input geometry.

Point Cloud

Point cloud component of the input geometry.

Curve

Curve component of the input geometry.

Volume

Volume component of the input geometry.

In case that the input contains multiple volume instances, only the first volume component will be calculated.

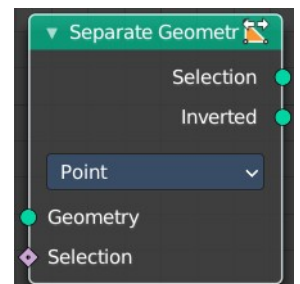
Instance

The single instances of the geometry.

Separate Geometry

Separates a selection of a geometry into its own object.

Tip: when you combine it with the Compare Floats node then you get a more precise control of which parts are separated to a given output geometry.



Inputs

Geometry

Geometry input.

Selection

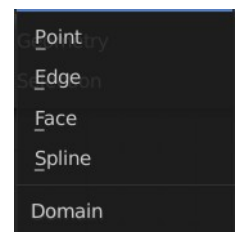
Selection input.

Properties

Domain

What kind of geometry to separate.

Note that when selecting a domain that doesn't modify all components, the unmodified components will appear in both outputs.



Outputs

Selection

Separated selection.

Inverted

The inverted separated selection.

Transform Geometry

Move, rotate or scale the geometry. The transformation is applied to the entire geometry, and not per element. For example, you can not rotate individual point cloud points with this node.

Inputs

Geometry

Standard geometry input.

Translation

Translates the geometry in local space of the modified object.

Rotation

Euler rotation in local space.

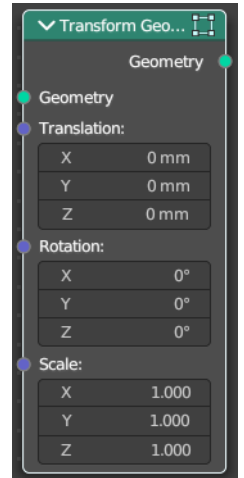
Scale

Scale to transform the geometries in local space.

Output

Geometry

Standard geometry output.



Set ID

Sets the ID of the target geometry.

Inputs

Geometry

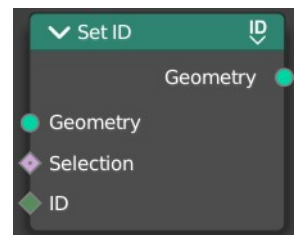
Geometry input.

Selection

Selection input.

ID

ID Input



Outputs

Geometry

Geometry output.

Set Position

The Set Position node controls the location of each point, the same way as controlling the position attribute. If the input geometry contains instances, this node will affect the location of the origin of each instance.

The input node for this data is the Position Node.

Inputs

Geometry

Geometry input.

Selection

Whether or not to change the position of each point or instance. True values mean the position will be changed, false values mean it will remain the same.

Position

The new position for selected elements. By default, this is the same as if the Position Node was connected, meaning the node will do nothing.

Offset

An optional translation for each point. This is evaluated at the same time as the Position input, meaning that fields evaluated for it will not reflect the changed position.

Outputs

Geometry

Geometry outputs.

