

# Overview

Brushes are solid objects that cannot be modified or moved dynamically during gameplay, except if they have a break-point specified in the asset file, for example, a breakable wooden shack.

Typically brushes are static objects placed in the world. They are one of the cheapest rendered objects in the world as they don't have any of the entity or physics overhead of other objects.

A large percentage of the visual structures in your worlds will probably be constructed using brushes.

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## Search Bar

The Search Bar enables you to display objects with a selected keyword in the title. To use it, simply start typing into the filter box and the browser list will only show you objects that (partly) match the current search.


## Object Preview

A preview of the selected object will be displayed in this section.

## Properties

To access the Brush properties, make sure you select the Brush Entities from the Create Object tab and drop them in your level.

Property	Description
Geometry	This option specifies the geometry that needs to be used for the object.
Ignore Visareas	When enabled, the entity ignores the use of VisAreas in the level.
Cast Shadow Maps	When this option is set, the object will cast shadows onto other geometry/terrain/etc.
Global Illumination	Enables/disables voxelization for GI (this affects indirection occlusion from this object).
Dynamic Distance Shadows	<p>Cached shadows work very well with static objects, however, dynamic objects won't get their shadows updated when moving.</p> <p>This can be more or less noticeable depending on the case. For e.g. in a large windmill, the error can be obvious at medium distance.</p> <p>To overcome this, dynamic objects can selectively be excluded from the cache and rendered to the standard cascades.</p> <p>The performance overhead of enabling the feature for a limited number of entities is generally quite low.</p>
Rain Occluder	<p>Set the brush to occlude rain, this works in conjunction with Rain Entity.</p> <p>If your level does contain rain, you should set this wisely, as there is a limit of 512 objects that can occlude at any given time.</p>
Support Second Visarea	<p>Normally, objects are considered to be in only one visarea. This option allows them to be added to multiple visareas if their bounding box overlaps them, at the cost of some performance. Without this option, some large objects may not be displayed when viewed through portals in certain situations.</p>

Hideable	When this option is set, AI will use this object as a hiding spot, using the specified hide point type.
Lod Ratio	Defines how far from the current camera position, the different Level Of Detail models for the object are used.
View Dist Ratio	Defines how far from the current camera position, the object can be seen.
Not Triangulate	Deprecated, Pre-MNM - When this option is set, this object will not be considered part of the AI triangulation system.
No Dynamic Water	Avoids boolean-merge on any surrounding static that intersects with the first vessel.
AI Radius	Deprecated, Pre-MNM - This option specifies the radius that will be used for the object by the AI triangulation system.
No Static Decals	When this option is set, decals will not project onto the object.
Recv Wind	When this option is set, the object will be affected by the level wind.
Occluder	Used for the construction of a level occlusion mesh.
DrawLast	<p>This function is exposed to give per-object control over alpha-sorting issues.</p> <p>The DrawLast checkbox gives designers per-object control over alpha-sorting issues such as particle effects in front of glass objects.</p> <p>In the example below, the background glass dome panels use 50% opacity and are incorrectly rendered in front of the particle effect.</p> <p>By activating the Draw Last checkbox for the background dome object, the engine knows that any alpha based objects</p> <p>Draw Last Off / Draw Last On</p> 
Shadow Lod Bias	When enabled, LOD levels for the shadows are chosen based on the onscreen size of an object.
CGF	Lets you reload or save the Brush entity as a *.cgf file.