

Perfect Culling - Quick Start Guide

Thank you for purchasing Perfect Culling. This guide will walk you through your first steps using this asset.

If you'd prefer to watch a video tutorial, please have a look here:

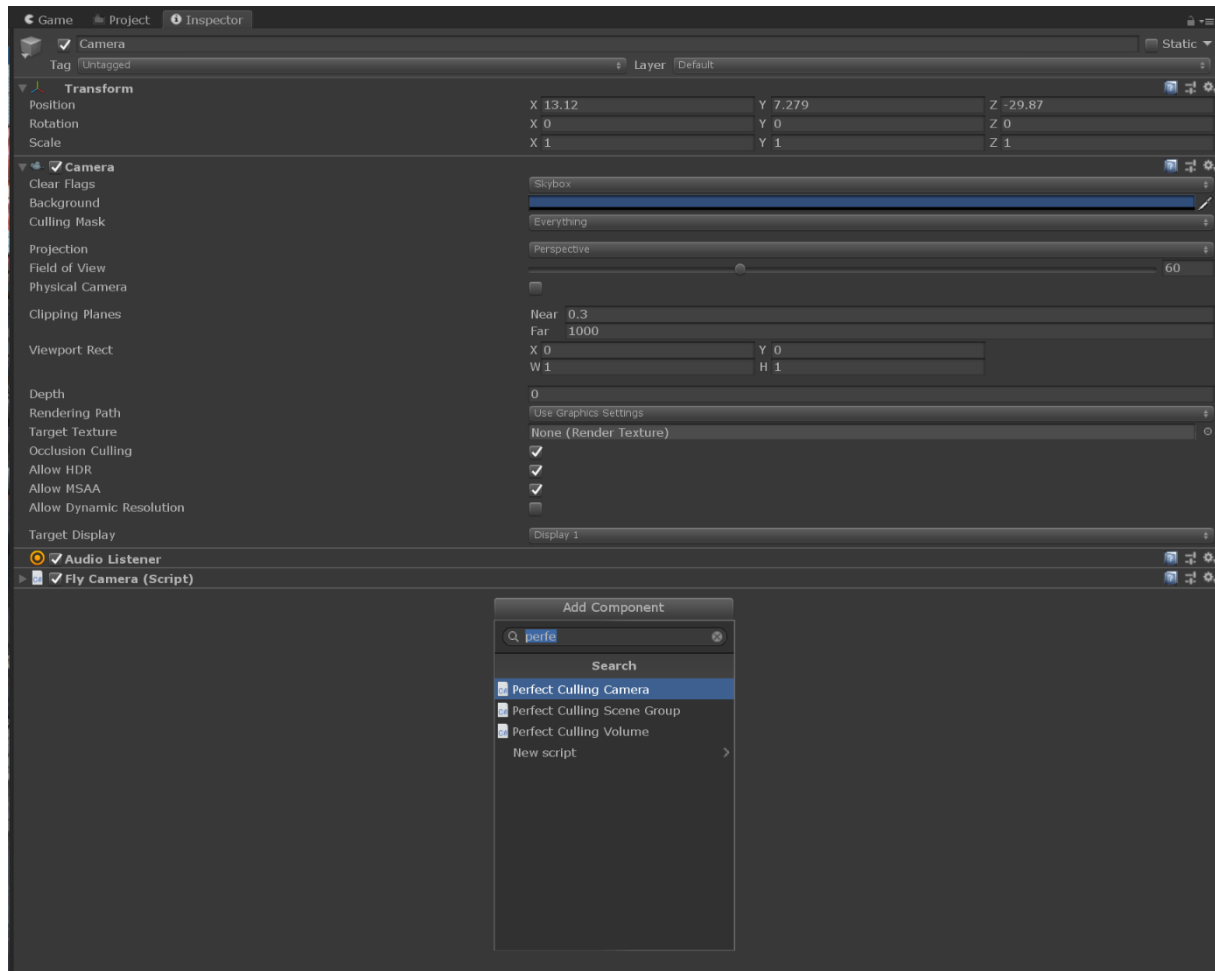
- Version 1.1: <https://www.youtube.com/watch?v=C5quB5JfG-E>
- Version 1.0: <https://www.youtube.com/watch?v=mTbGlvk2X5s>

If you got stuck and need support, please contact me via mail:

info@koenigz.com

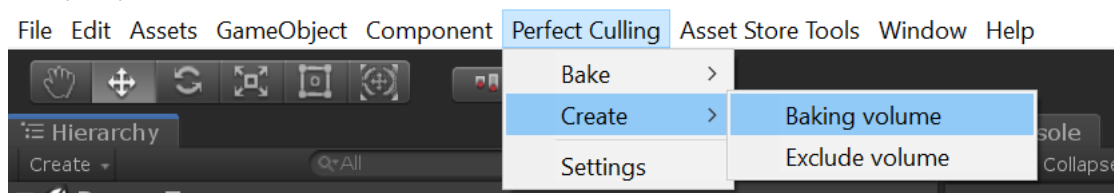
We will get started on the next page!

Step 1)



Add the **PerfectCullingCamera** script to your camera.

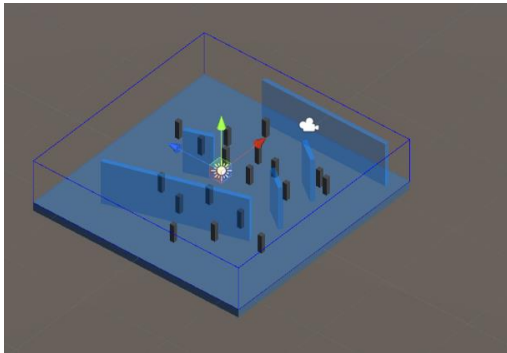
Step 2)



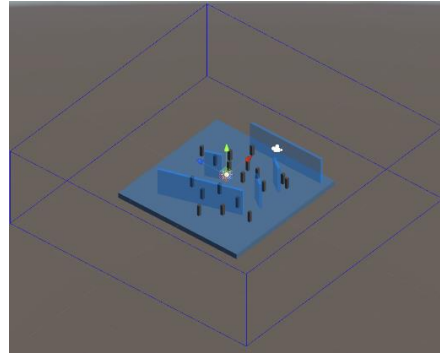
Create a new volume by selecting **Perfect Culling -> Create -> Baking volume**

Step 3)

Select the Volume in the scene and position and scale it in such a way that the **playable area** of your level is contained.



Right

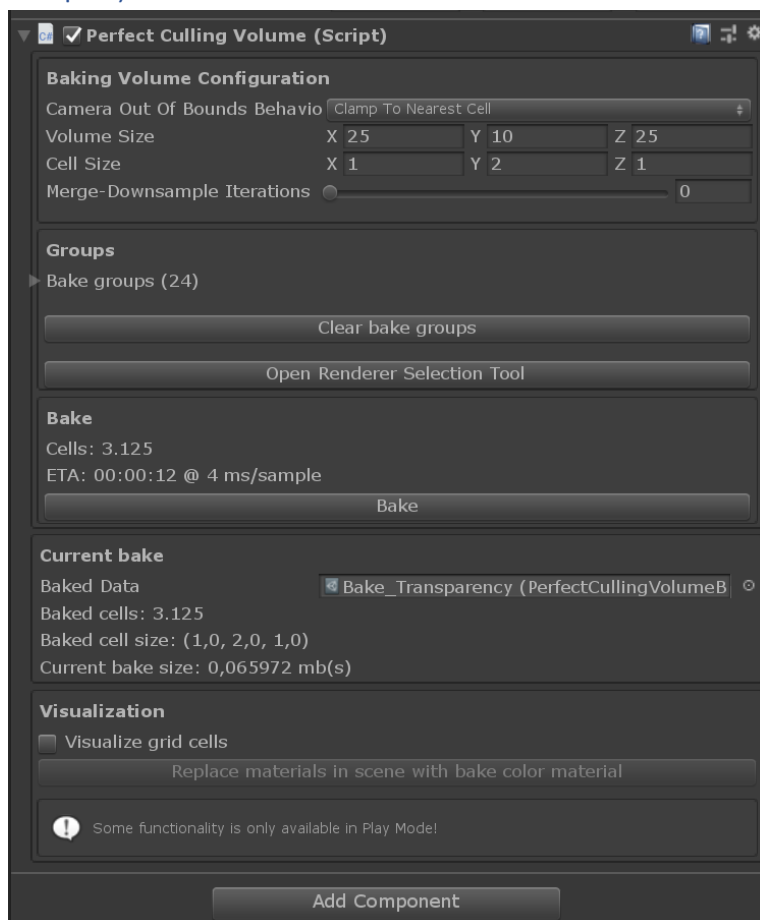


Wrong (contains too much irrelevant space)

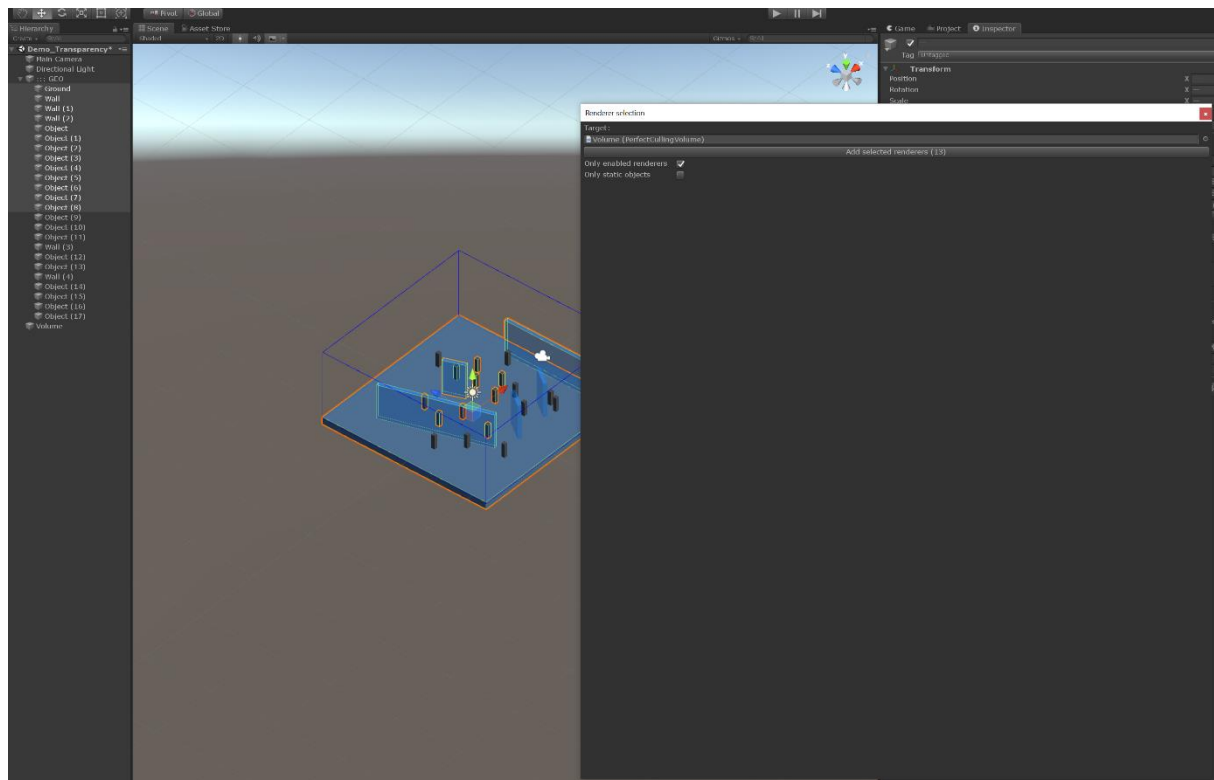
The bounds describe where the asset should sample. It does not have any other implications!!!
Make sure to restrict it to your playable area only. Sampling at locations outside of your playable area will slow down the bake unnecessarily and will waste memory.

The only exception to this rule might be baked prefabs because this allows to bake some additional perspectives that could become important when you are further away from the prefab.

Step 4)

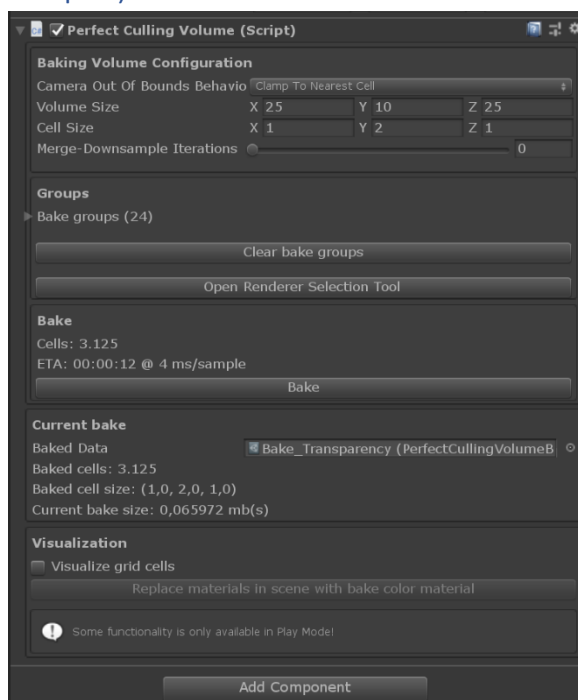


Select the volume and press **Open Renderer Selection Tool**.



In this new window select the renderers you'd like to be culled and press **Add selected renderers**. *Child renderers are included automatically.*

Step 5)



For your first steps you want to the bake to finish quickly so you can get the hang of it. You can see the number of cells and the estimated bake time above the **Bake** button. To reduce the number of cells and thus the bake time you need to increase the **Cell Size**. You can toggle **Visualize grid cells** to get an even better idea how changing the cell size impacts the bake.

Press **Bake** on your volume after you are satisfied. You will be asked to create a new asset for the occlusion data and to save your scene.

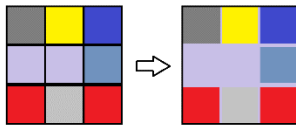
Step 6)

After your bake finished you can enter play mode and test your occlusion data. Depending on your cell size you might see assets popping in and out. That would mean that the scene was under sampled.

You got multiple options here:

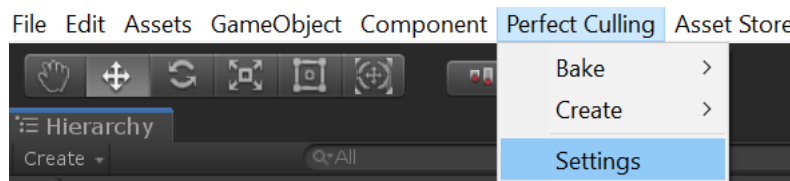
- Select the Camera and set **Include Cell Neighbor Radius** to a higher value
- Reduce the **cell size** to sample more positions and press **Bake**
- Select the Volume and set **Merge-Downsample Iterations** to a higher value and press **Bake**

Sometimes a combination of all the points might be necessary. The most efficient one is Merge-Downsample Iteration because it merges neighbor cells into a combined cell. This not only helps to prevent popping but it also reduces the memory footprint and since it happens as part of the baking process there is no overhead at run-time.



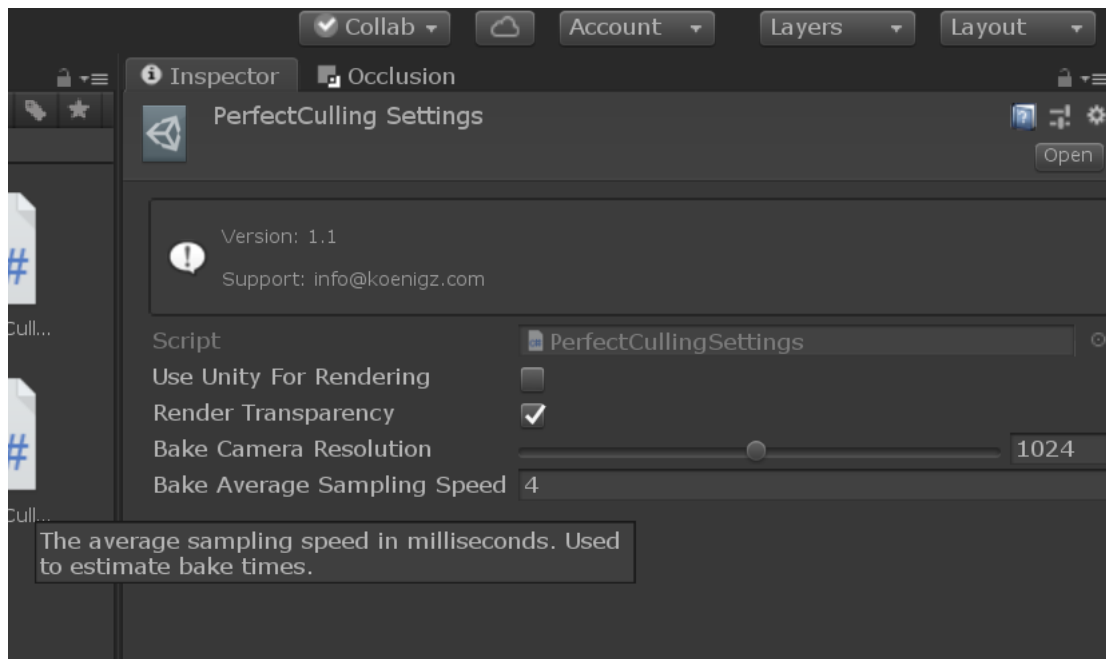
Merge-Downsample result: Left image shows 9 individual cells. Right image shows 1 merged cell.

Perfect Culling settings



You can access the global asset settings using the menu **Perfect Culling -> Settings**.

The settings can be changed using the Unity **Inspector** window.



Hover over the labels to show tooltips for additional information.

Additional guides

There is more to learn about Perfect Culling but it is split up into its own sections. So, make sure to look at the following documents if you want to dive in further:

- Troubleshooting
- Exclude cells - Sampling Providers
- API
- Custom Scene Groups
- LODs
- Light and script culling
- Terrains
- And much more (just look into the Docs folder)

Support

If you are running into issues, need assistance, got some feedback, please feel free to get in touch.

Mail: info@koenigz.com