# Terrain Slicer Guide

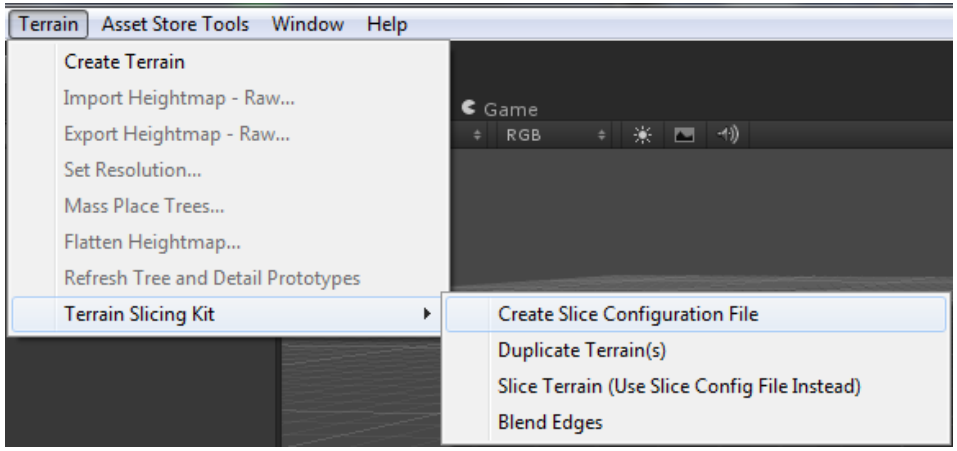
By Kyle Gillen

# New and Improved

- Ability to slice selected regions of a terrain rather than the whole thing.
- No need to open Slicing Window. All slicing done through Slice Configuration File.

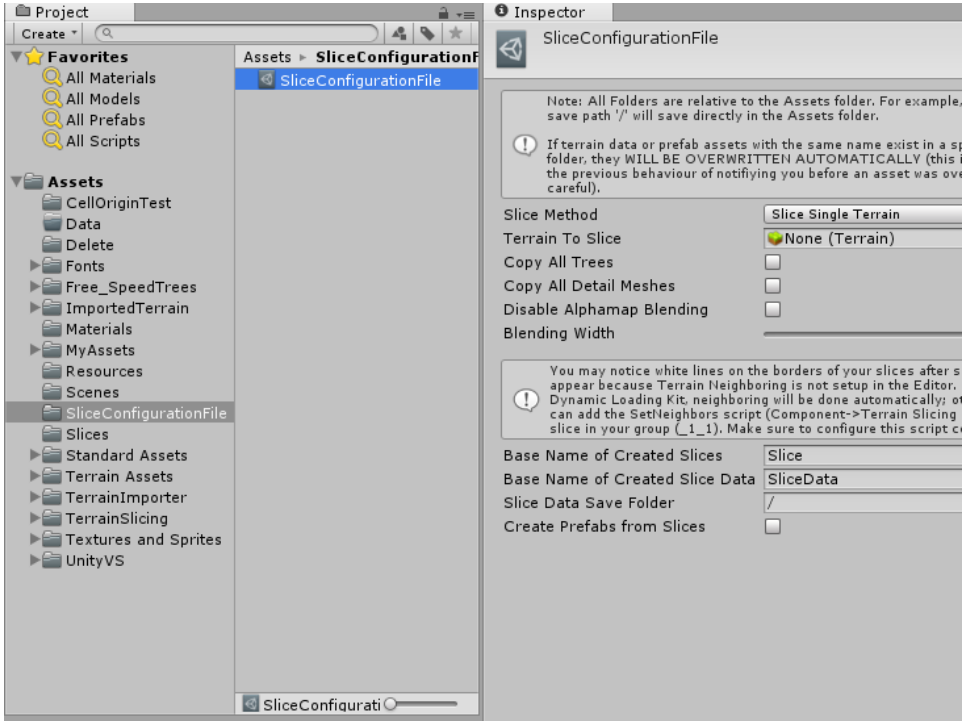
# Getting Started

- To slice a terrain or terrain group, first create a Slice Configuration File (Terrain -> Terrain Slicing Kit -> Create Slice Configuration File).



# Getting Started

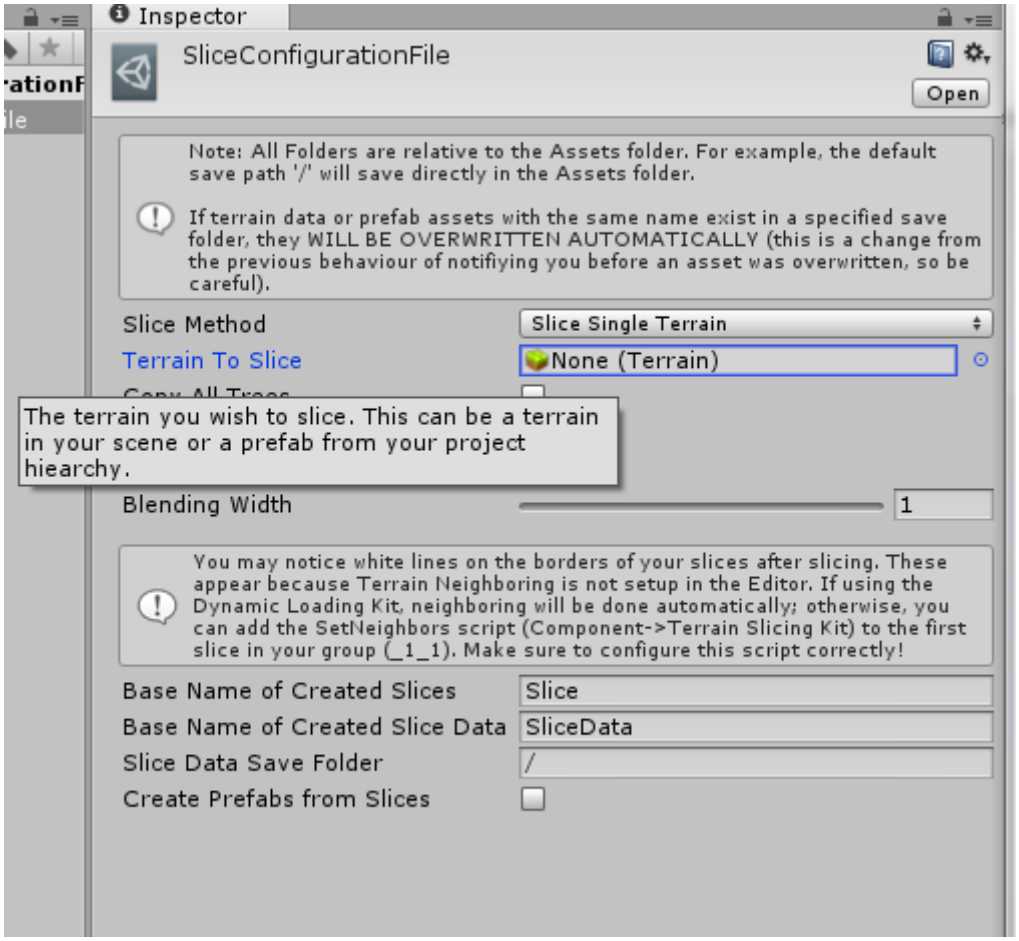
- This creates a new scriptable object asset in whatever folder you have selected (or in the Assets folder if no folder is selected).



# Slicing a Single Terrain

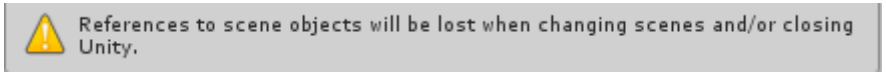
- Slicing a single terrain offers advantages over slicing a group of terrains.
- With a single terrain, you have the ability to slice a region smaller than the actual terrain.
- Start by dragging a Terrain game object into the “Terrain To Slice” field. This can either be a prefab or Terrain from the scene.

# Slicing a Single Terrain



# Slicing a Single Terrain

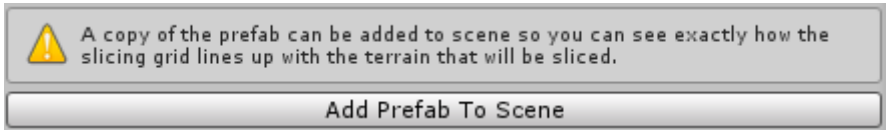
- If you drag a Terrain from the scene, you will see the following warning:




- This is just a reminder that closing Unity and/or the currently opened scene will cause the reference to the Terrain to be lost.
- This is because the Slice Configuration File is a persistent asset, whereas the Terrain in the scene lives only in the scene (though the TerrainData is also a persistent asset).

# Slicing a Single Terrain

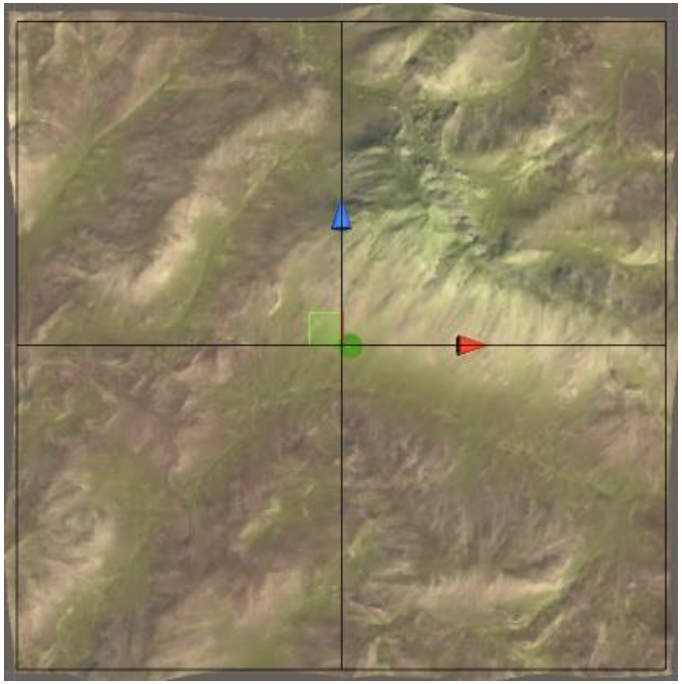
- If you drag a Terrain prefabs from the Project Hierarchy, you will see the following warning and button:




- This button can be used to add a copy of the terrain prefab to the scene, which is crucial for effectively lining up the slicing grid.

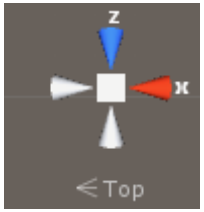
# Slicing a Single Terrain

- If your terrain is not a prefab (aka it is a scene object), or if you've added a copy to the scene via the button in the previous slice, you should see a black grid overlapping your terrain.



# Slicing a Single Terrain

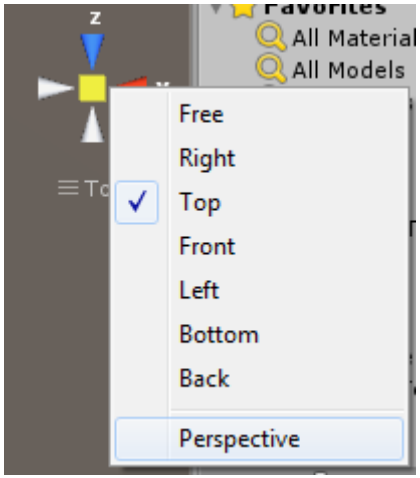
- If you don’t see this grid, you may need to change the scene camera.
- Right click the white square on the Gizmo in the top right corner of the scene view and change the view to “Top”. It should look like this after.




- This puts the scene camera into a top down view with the terrain’s origin at the bottom left.

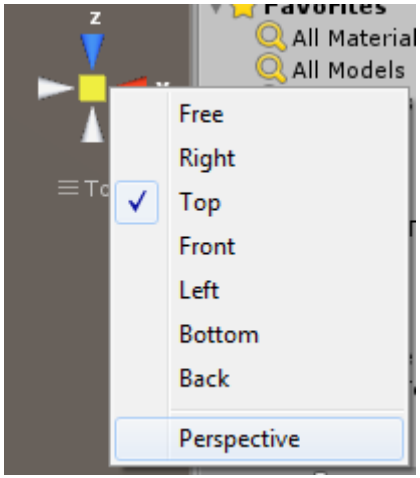
# Slicing a Single Terrain

- You should also change the camera to Orthographic mode.
- Again, right click on the white square, but this time uncheck the “Perspective” option (it may already be unchecked).



# Slicing a Single Terrain

- You should also change the camera to Orthographic mode.
- Again, right click on the white square, but this time uncheck the “Perspective” option (it may already be unchecked).

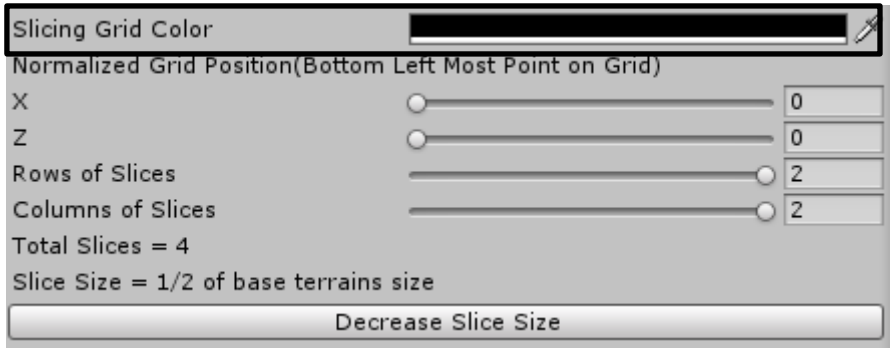


# Slicing a Single Terrain

- You've probably noticed that several new options were added when you dragged the Terrain reference into the "Terrain To Slice" field.
- These options directly control the slicing grid.

# Slicing a Single Terrain

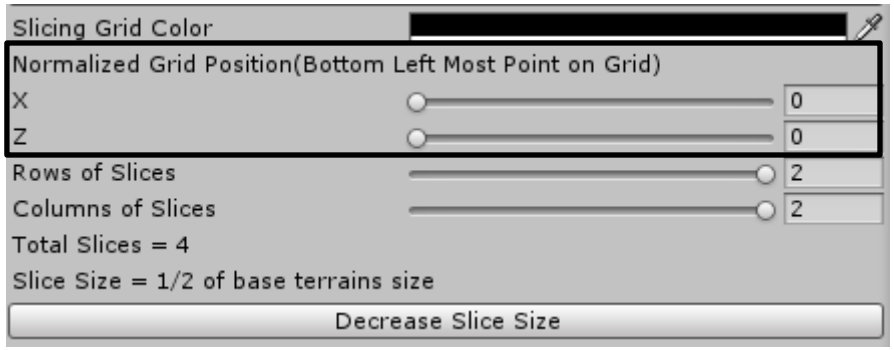
## Slicing Grid Color




Controls the color of the slicing grid within the Scene View.

# Slicing a Single Terrain

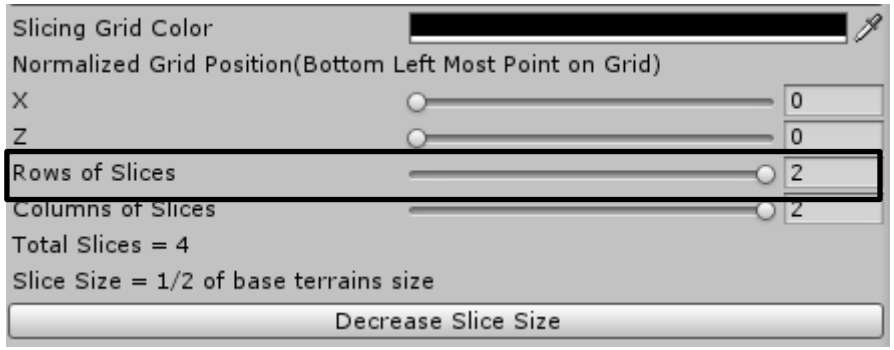
## Normalized Grid Position




The position of the slicing grid on the terrain. Initially this cannot be changed because the slicing grid encompasses the entire terrain. If you decrease the rows/columns of slices, you will be able to change the X and Z values.

# Slicing a Single Terrain

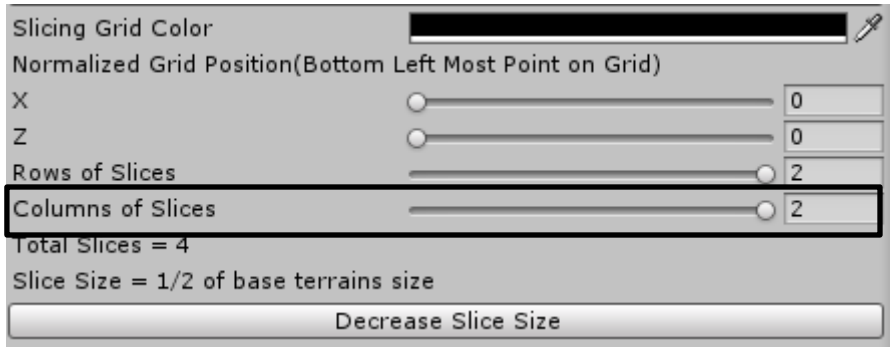
## Rows of Slices




The number of slices along the Z Axis of the terrain. The minimum value is always 1 while the maximum value depends upon the Slice Size.

# Slicing a Single Terrain

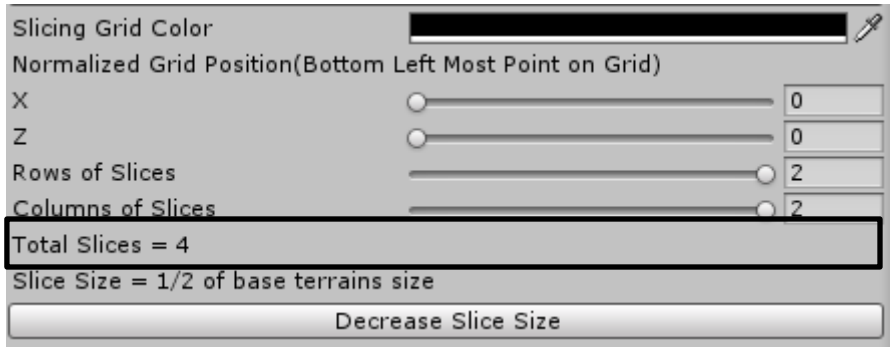
## Columns of Slices




The number of slices along the X Axis of the terrain. The minimum value is always 1 while the maximum value depends upon the Slice Size.

# Slicing a Single Terrain

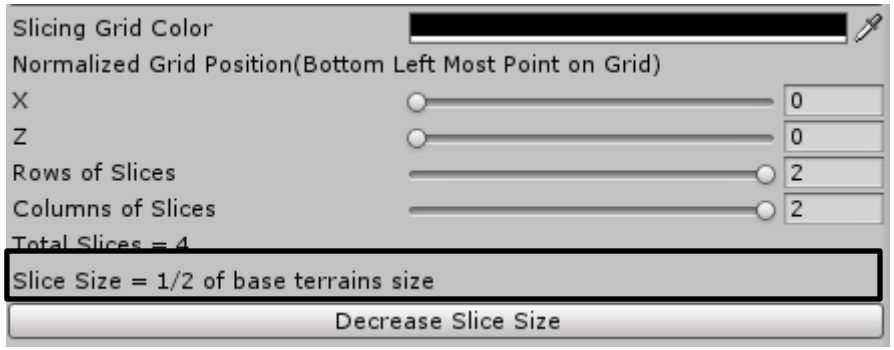
## Total Slices




The total number of slices that will be produced with the current settings.

# Slicing a Single Terrain

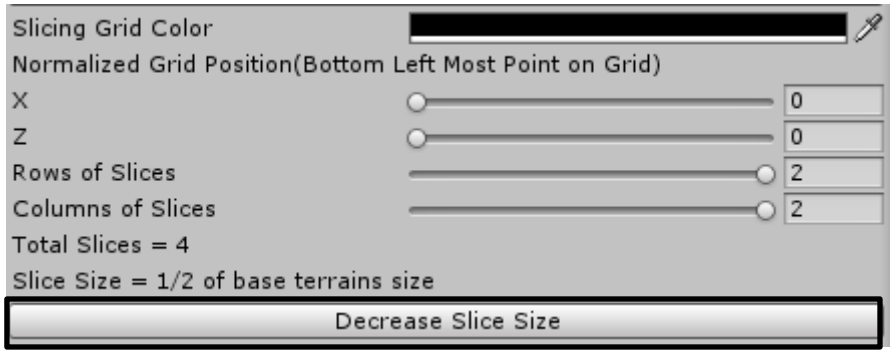
## Slice Size




The size of each slice in relation to the base terrain. The maximum slice size is always ½ the base terrain's size. The minimum size depends upon the smallest resolution of the base terrain.

# Slicing a Single Terrain

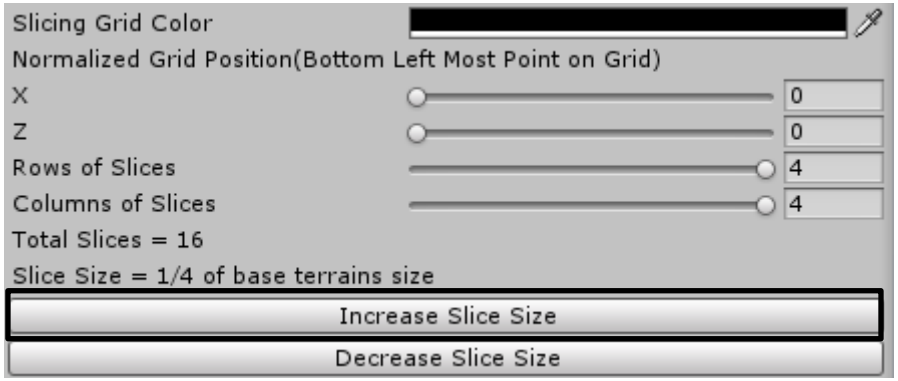
## Decrease Slice Size




Press this button to decrease the size of each slice. The number of rows/columns to slice will be increased so that the total size of the slicing region remains the same. This button will disappear when the slice size is set to it's smallest possible value.

# Slicing a Single Terrain

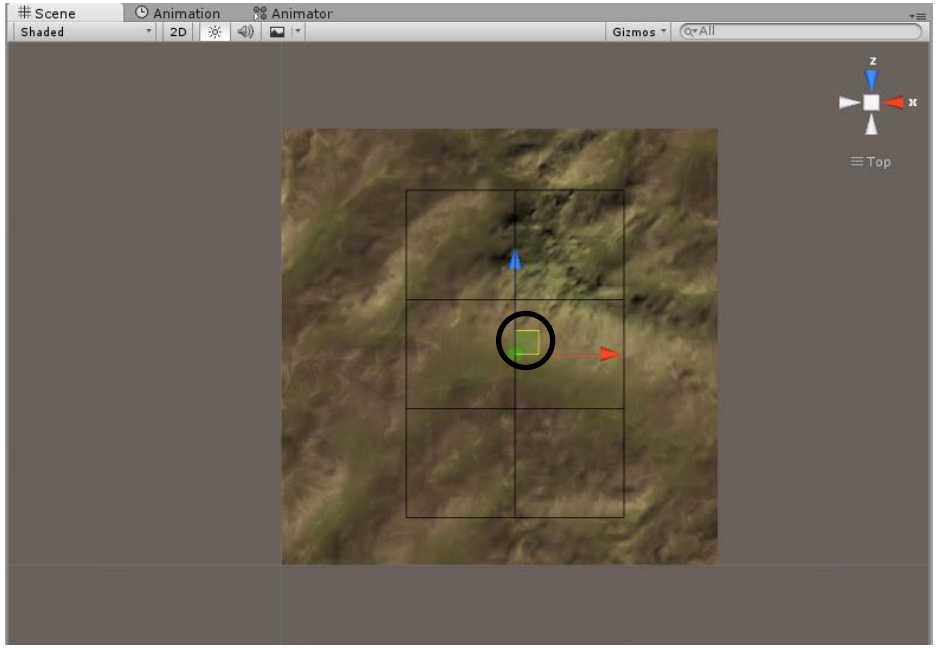
## Increase Slice Size




Appears after “Decrease Slice Size” has been pressed. Press this button to increase the size of each slice. The number of rows/columns to slice will be decreased so that the total size of the slicing region remains the same. This button will disappear when the slice size is set to it’s largest possible value.

# Slicing a Single Terrain

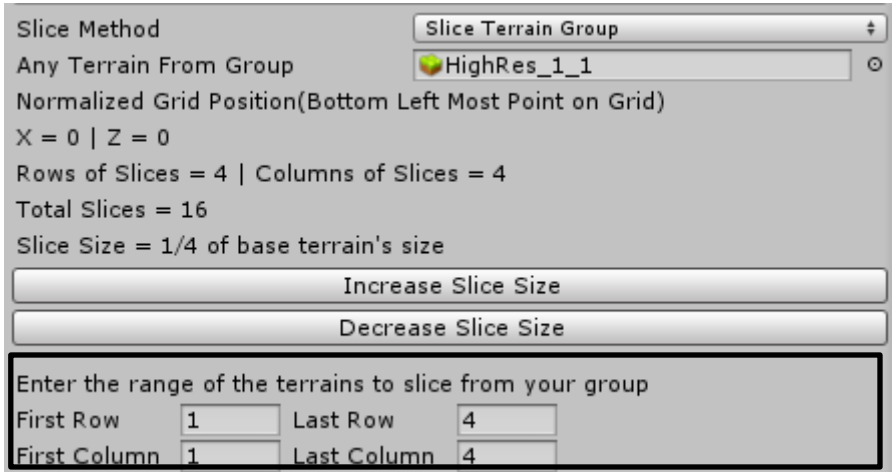
- You can also set the normalized grid position of the slicing grid directly in the scene view, by left clicking and dragging the position handlers in the center of the slicing grid.



# Slicing a Terrain Group

- You have the ability to slice a group of terrains.
- Each terrain in the group must follow the naming convention of whatever Naming Convention you provide in the “Input Naming Convention” field.
- If no naming convention asset is provided, the terrains in the group must follow the default naming convention (GroupName_Row_Column).
- Each terrain in the group is sliced according to the slicing settings.
- You can increase/decrease the size of the slices, but the number of rows/columns to slice will always be set to their maximum value (dependent upon the slice size).
- For this reason, there is no slicing grid.
- Missing terrains from the group are allowed.

# Slicing a Terrain Group



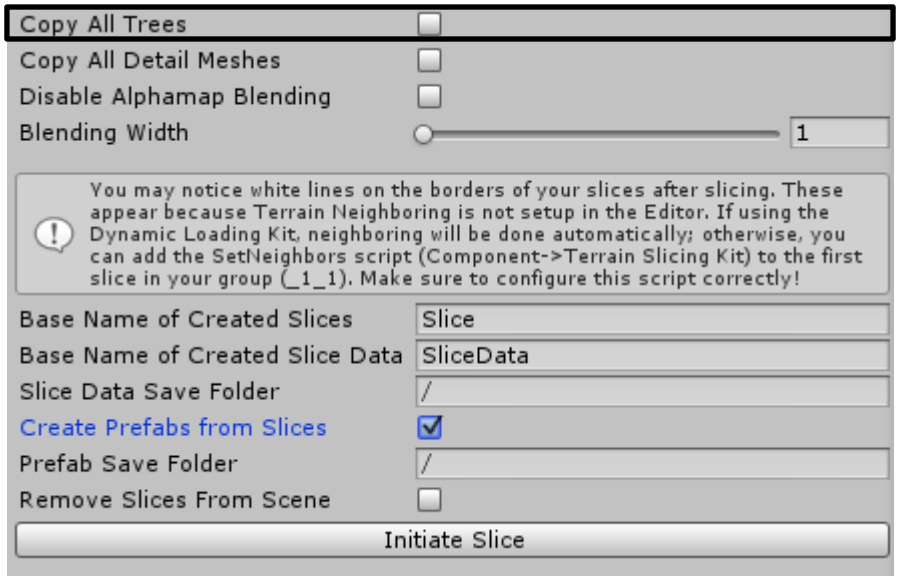

Additional options appear when slicing a group of terrain, which allow you specify a range of terrain from the group to slice.

# Additional Common Settings

- There are additional settings which you must set irrespective of whether you are slicing a single terrain or a terrain group.

# Additional Common Settings

## Copy All Trees

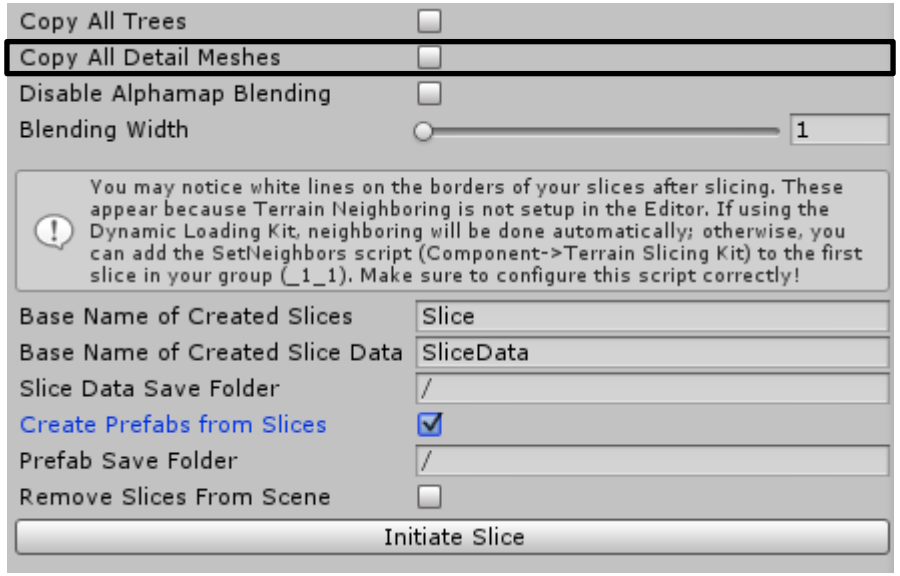



When sliced, all trees from the base terrain are transferred to the appropriate slice, irrespective of whether this option is checked or not.

If this option is checked, a tree prototype will be added to every slice that is created, regardless of whether that slice actually has that tree on it. This merely makes it so all trees from the base terrain will show up in the inspector of the slices, allowing you to easily add these trees to the slices in the future.

# Additional Common Settings

## Copy All Detail Meshes

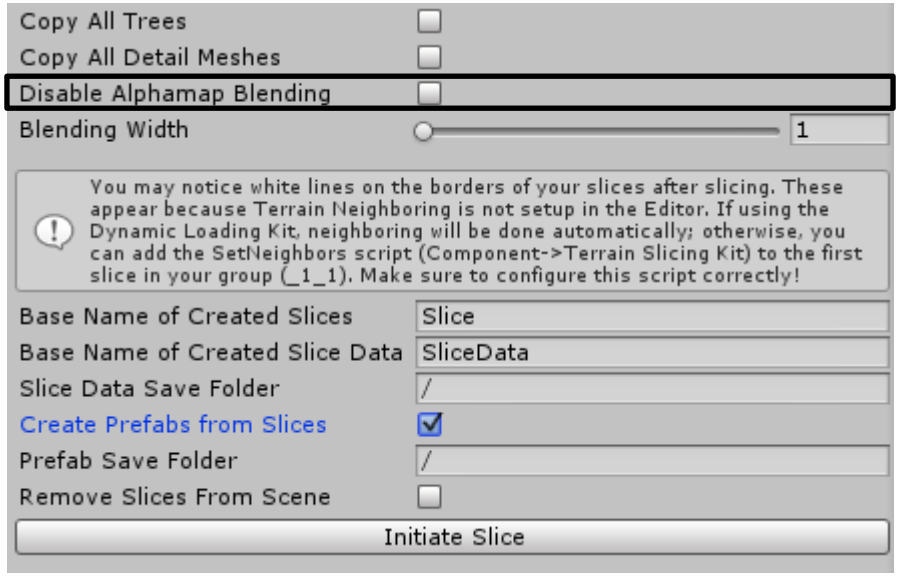



When sliced, all plants/grasses from the base terrain are transferred to the appropriate slice, irrespective of whether this option is checked or not.

If this option is checked, all detail meshes will be added to every slice that is created, regardless of whether that slice actually has that detail mesh on it. This merely makes it so all detail meshes from the base terrain will show up in the inspector of the slices, allowing you to easily add these detail meshes to the slices in the future.

# Additional Common Settings

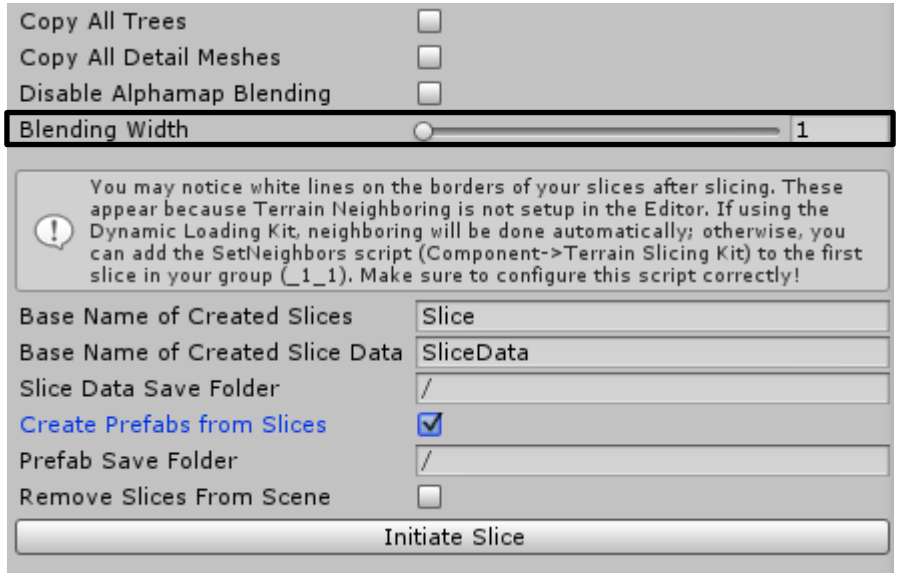
## Disable Alphamap Blending




By default the slicing tool will blend the alphamap along the edges of each slice. This is necessary because Unity does not properly blend the alphamap across neighboring terrains, even when using SetNeighbors. I recommend leaving this option disabled, and only enabling it if you can't stand the results with it disabled.

# Additional Common Settings

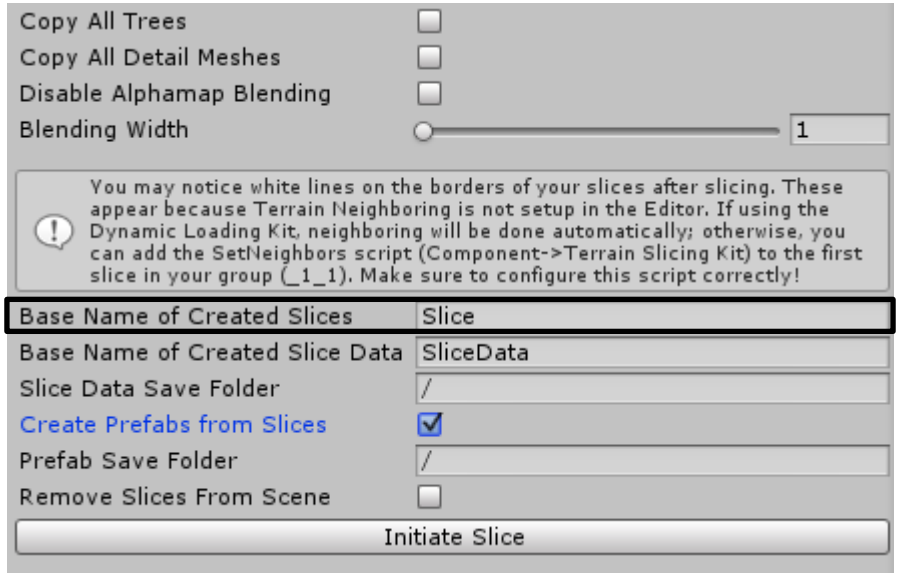
## Blending Width




The width of the region which will be blended. Usually a value of 1 is sufficient to eliminate seems between terrain slices, and is recommended in order to effect as little of the original terrain as possible.

# Additional Common Settings

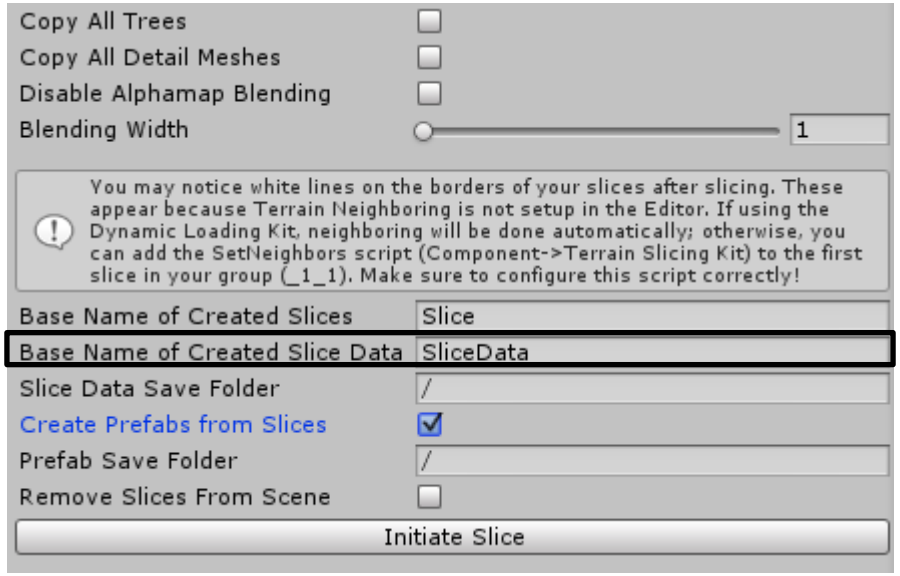
## Base Name of Created Slices




The base name of the created slices (aka the “Group Name”).

# Additional Common Settings

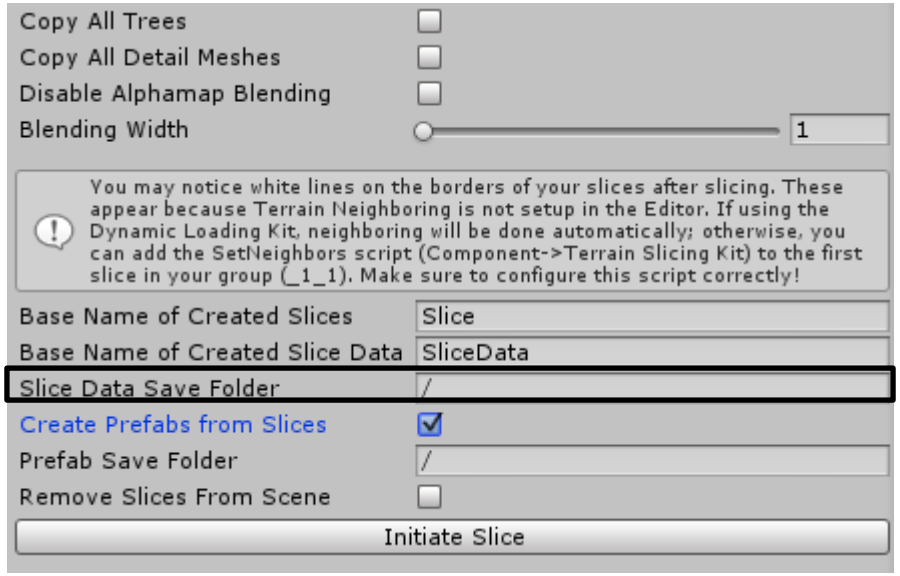
## Base Name of Created Slice Data




The base name of the created slices TerrainData.

# Additional Common Settings

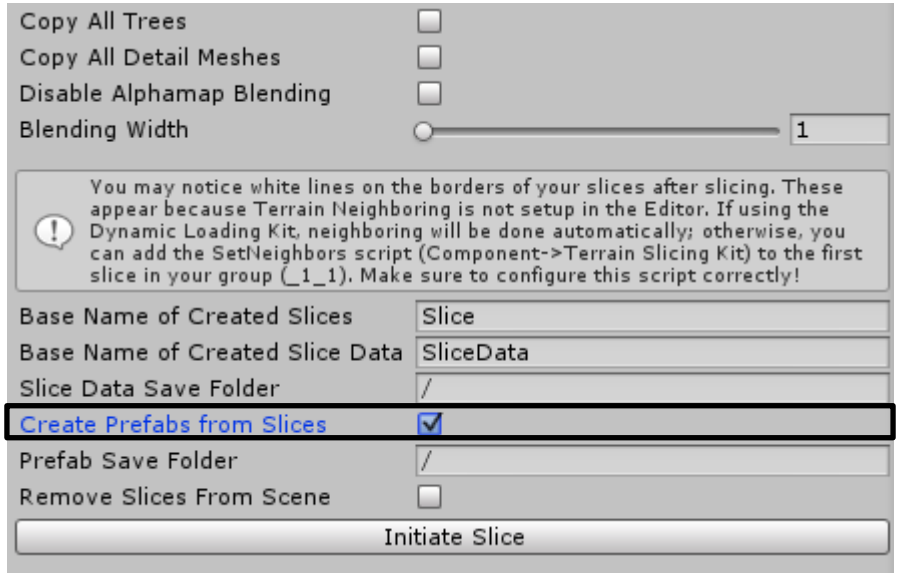
## Slice Data Save Folder




The folder, relative to the Unity Assets folder, where the TerrainData assets will be saved. For example, “/” will save directly in the Assets folder.

# Additional Common Settings

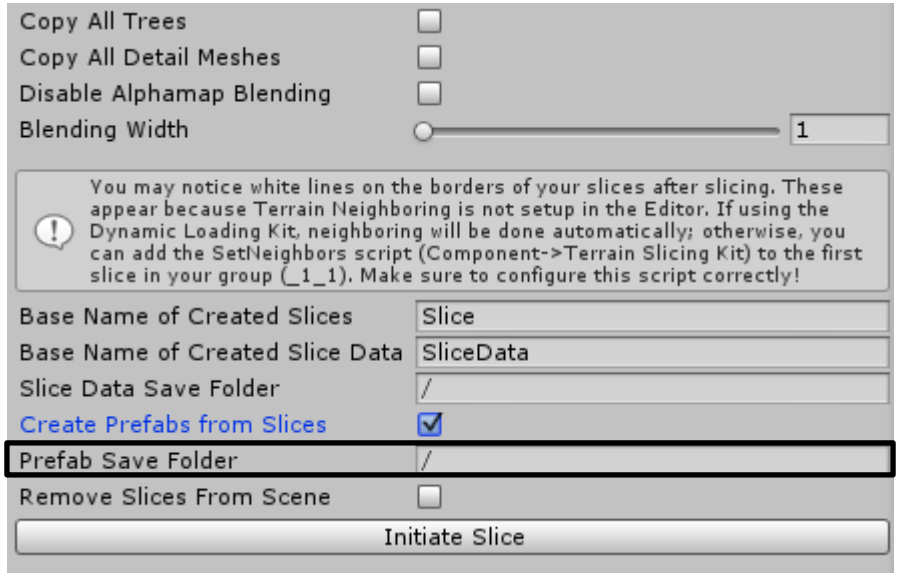
## Create Prefabs from Slices




If checked, prefabs will be automatically created for your slices.

# Additional Common Settings

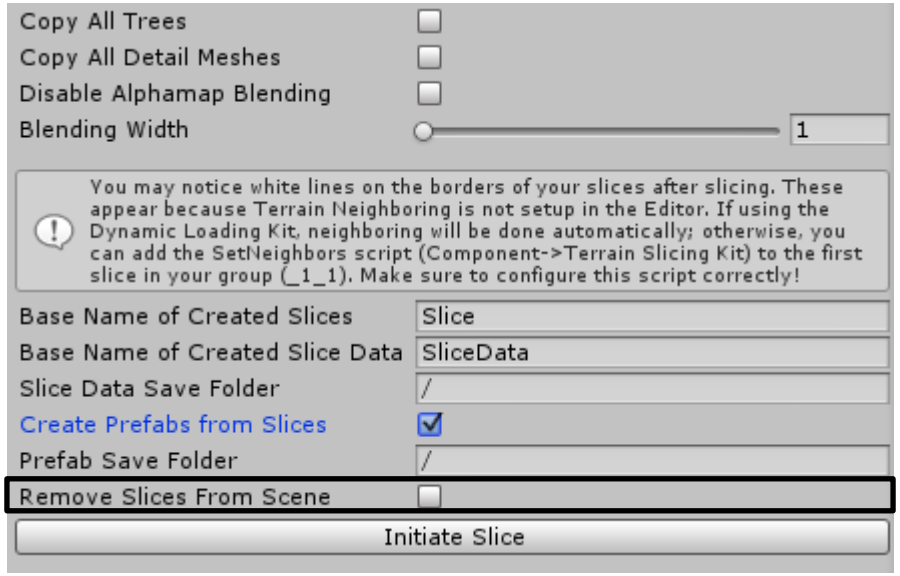
## Prefab Save Folder




The folder, relative to the Unity Assets folder, where the prefab assets will be saved. For example, “/” will save directly in the Assets folder.

# Additional Common Settings

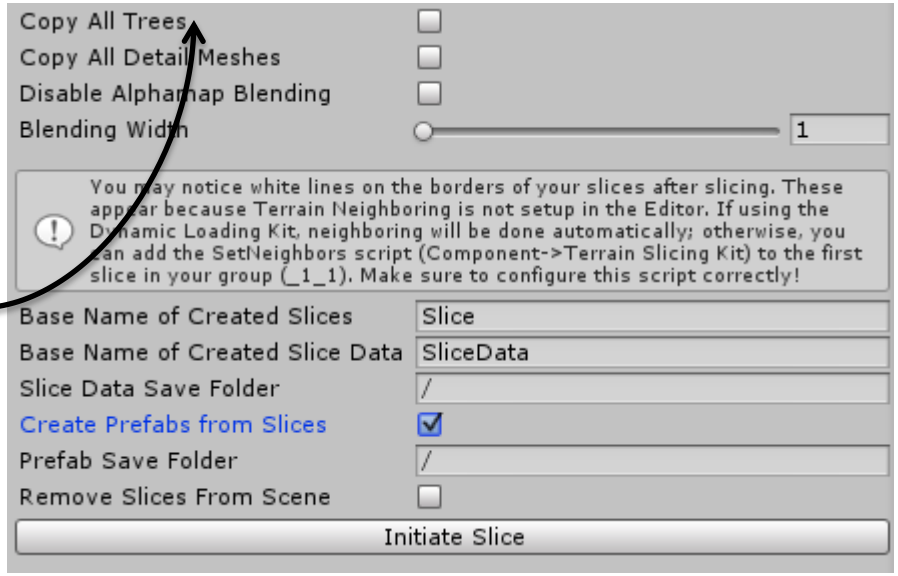
## Remove Slices from Scenes




If checked, the slices will be removed from the scene after they are created. This is strictly required in some instances when you are generating a ton of slices and are getting out of memory errors. This option is only possible when “Create Prefabs from Slices” is checked.

# Additional Common Settings

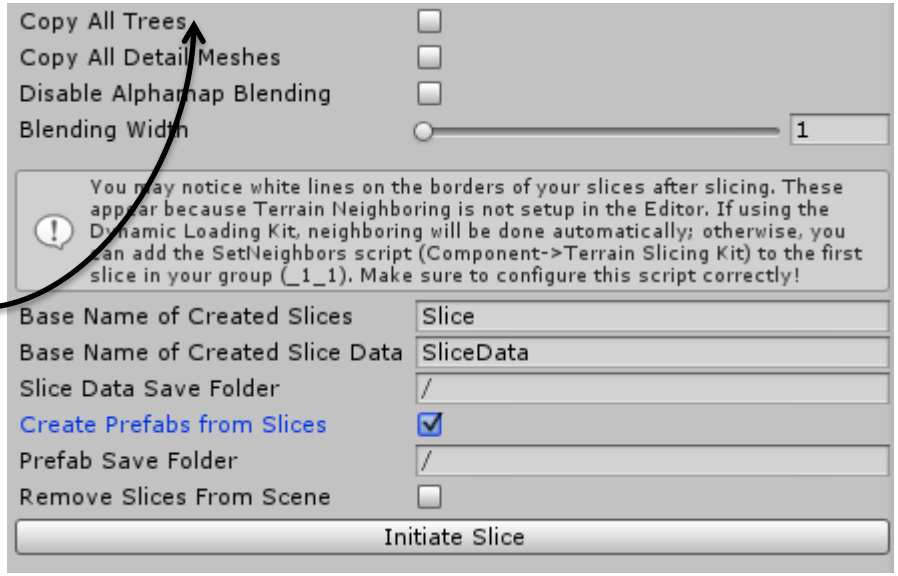
## Copy Base Tag




Not shown in this picture, you will also see a “Copy Base Tag” option above the Copy All Trees option. When checked, this option forces all slices to be set to the same tag as your base terrain.

# Additional Common Settings

## Copy Base Layer




Not shown in this picture, you will also see a “Copy Base Layer” option above the Copy Base Tag option. When checked, this option forces all slices to be set to the same layer as your base terrain.

# Additional Common Settings

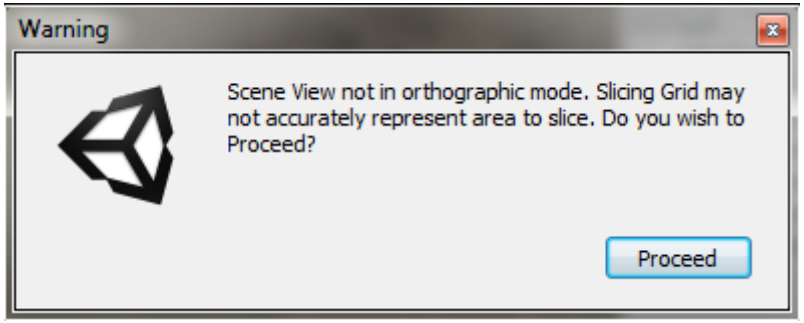
## Output  Naming Convention

There is also an Output Naming Convention field that was added with update 4.2. If left blank, the slices generated by the slicing tool will follow the default naming convention (GroupName_Row_Column).

If you wish to use an alternate naming convention, create a Naming Convention asset and drag it onto this field.

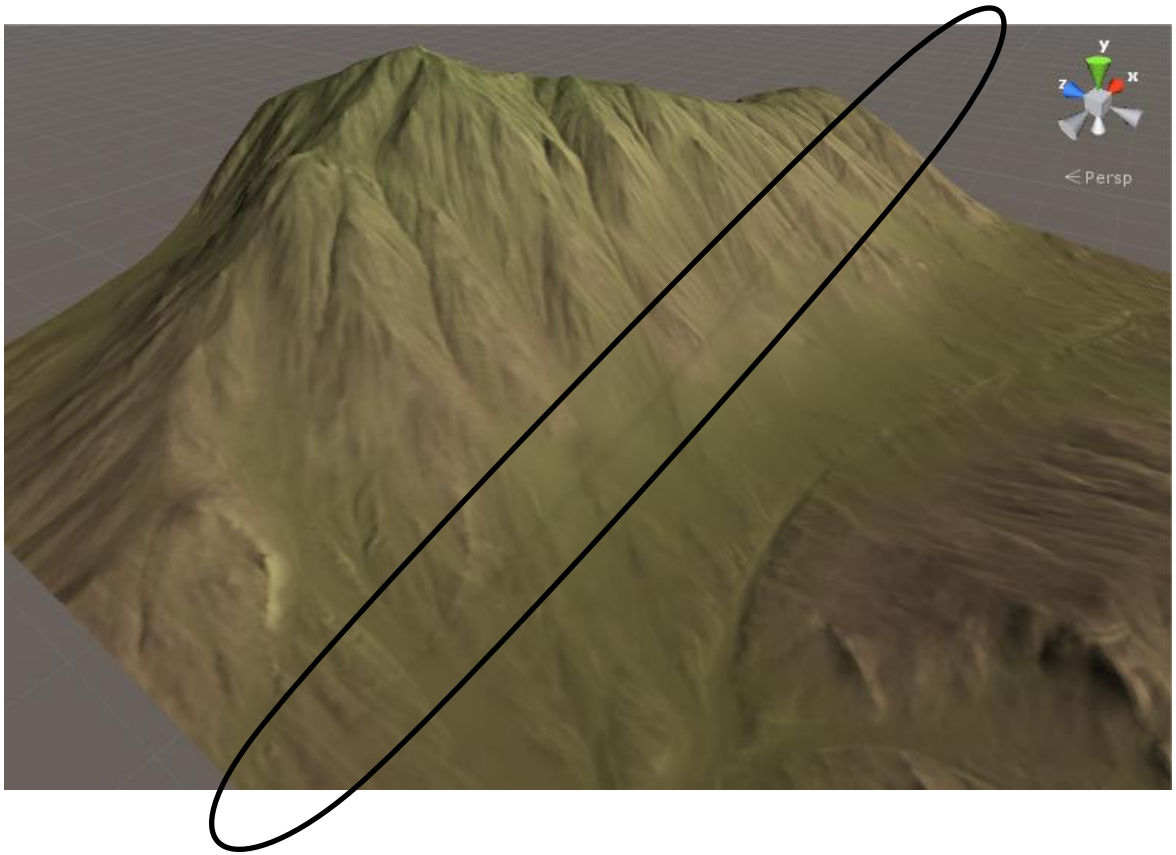
# Slicing

- You may see a warning box when you press the “Initiate Slice” button. This is just a warning that you’re camera is not in orthographic mode, since the slicing grid may not be 100% accurate in perspective mode.



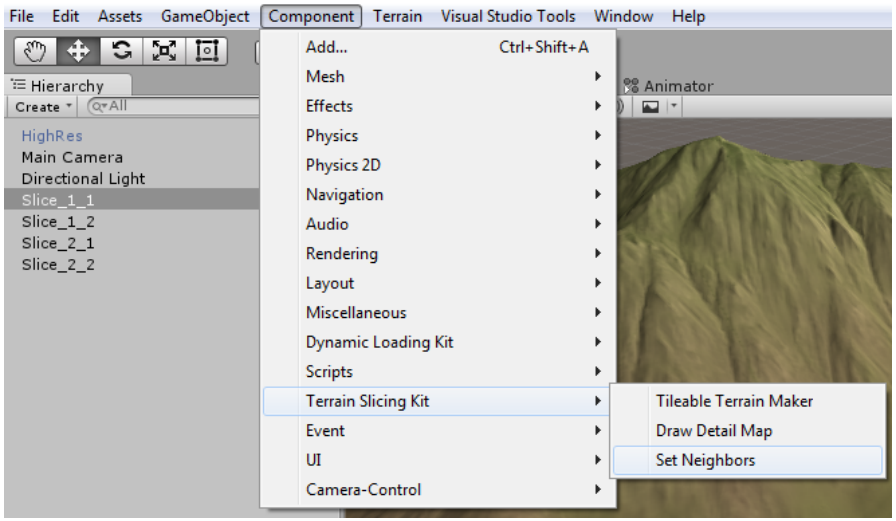
# Post Slice

- After slicing, you may notice a white or black line on the edges between your slices.



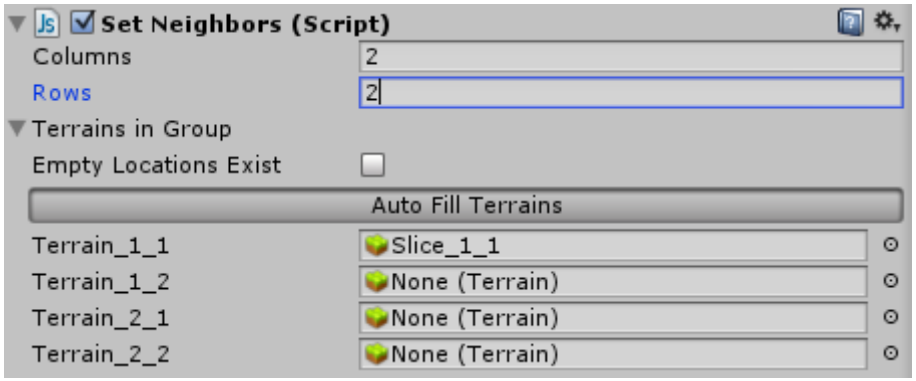
# Post Slice

- These lines exist because neighboring is not properly setup in the editor.
- To preview what the terrain slices look like with neighboring set up, add a SetNeighbors component to the first slice in the group (1_1).



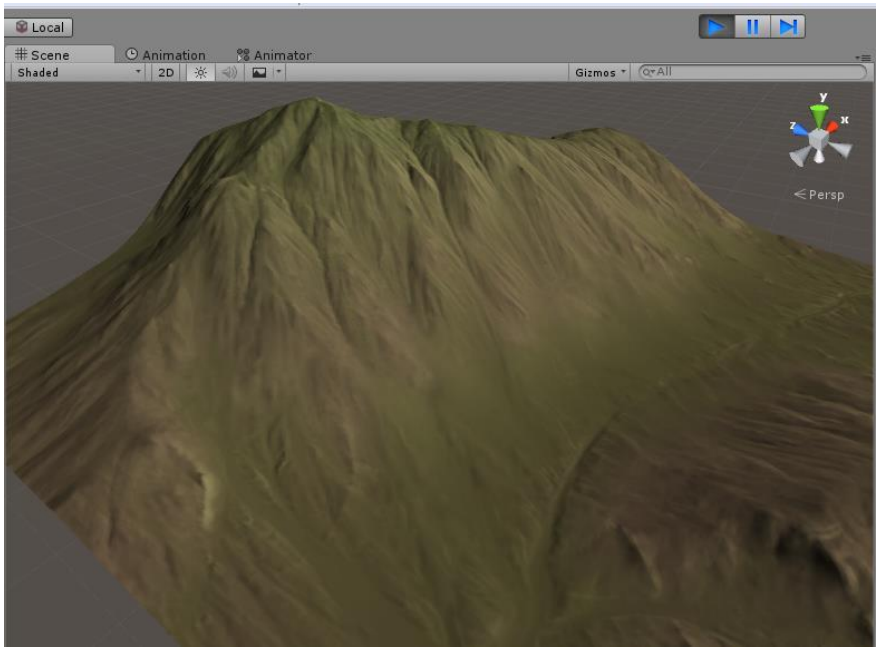
# Post Slice

- Set the rows and columns to however many you have, then press the “Auto Fill Terrains” button.



# Post Slice

- When you enter Play Mode, the black/white lines will disappear, and you shouldn’t see any seems between your terrain slices (if you do, please contact me!).



# Use with Dynamic Loading Kit

- If you are using these slices with the Dynamic Loading Kit, keep in mind that neighboring is performed automatically by the kit. There's no need for the SetNeighbors script!

- Enjoy your slices, and please consider rating the Terrain Slicing & Dynamic Loading Kit on the Asset Store. Thanks!