

SPLIT/SCENES

User Documentation v1.5
1/1/2021



CONTENTS

Welcome	3
Introduction.....	4
First Steps (boring, but recommended)	5
Importing into your project	7
Features	8
How to use the GUI.....	8
Locking Scenes	9
Advanced Multiple-Component Scene Management	10
Handy Troubleshooting	10
Multi-Scene Activation	11
All source is included.....	11
Support	12
About us	13
Release Notes	14

WELCOME

Thanks for checking out **Split/Scenes**! Although there are a few other additive scene management assets on the Asset Store, we do think ours offers some unique features and usability that others do not. We like to think of this as “Photoshop Layers Workflow for Scenes”. We use it internally for our own products, and consequently are fixing bugs and adding features as they become apparent.

If you like the asset, *please* do take a moment to write a positive review or give it a ★★★★★ rating. Be sure to recommend it to your friends. Building assets for the Unity developer community takes a lot of time and effort, so be sure to support the ones that make your life easier. Otherwise we won't be able to keep doing it for you.

The URL to leave a review is right here:

<https://assetstore.unity.com/packages/tools/utilities/splitscenes-133941>

INTRODUCTION

Although the scene system in Unity is powerful, Unity does not come with a good scene management interface. Especially when considering team specializations, there are logical partitions you can make that allow artists, designers, and programmers to work independently in the same space. However, doing so in Unity's default interface is a very tedious process.

Split/Scenes makes working in multiple scenes as easy as using Photoshop layers. The two second walkthrough: Simply make a small root scene with an empty object and a *SplitScenes* component on it. Click the Plus a few times to create more empty scenes. Double-click on the scene name you want to work on (in the SplitScenes GUI Window) and the Editor switches it to be the active scene instantly. Lock the scenes you don't want to accidentally modify and save. Uncheck the Edit box and it unloads the scene you don't want loaded, so you won't have to look at it or keep it in memory, making the editor feel faster and lighter. Finally, you can control which of the scenes are loaded at runtime, so you can just check out the lighting of a level without launching the whole scene if you want to. It's very flexible. The GUI window is dockable and intended to be part of your daily workflow. As an added bonus, the bottom foldout lets you quickly add and remove subscenes to the Build Scenes list normally found in Player Settings, that can be a pain to get to.

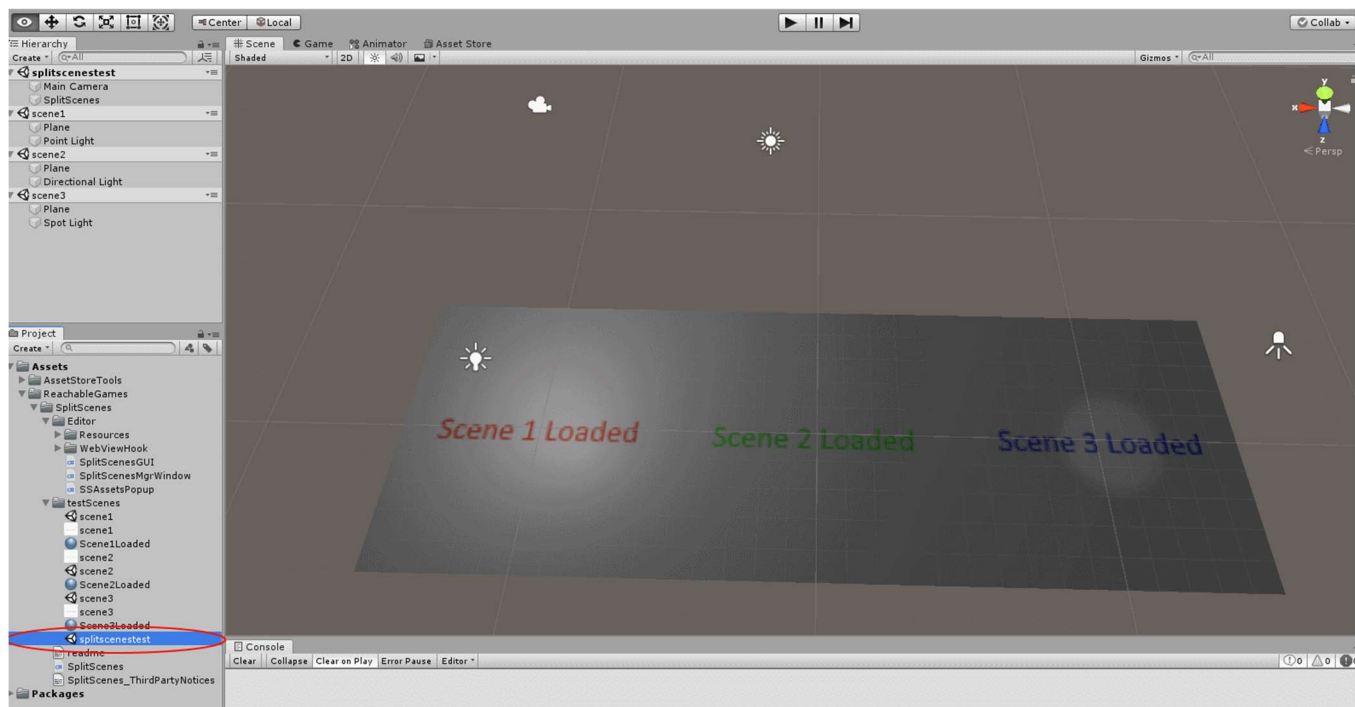
My personal suggestion for scene organization should look something like this:

1. Root Scene (with a single SplitScenes object in it, and a single light probes set)
 - a. (1 or more) Static Level Geometry, Static Props, etc
 - b. (1) Static Collision
 - c. (1) Baked Static Lights
 - d. (1 or more) Dynamic Lights
 - e. (1 or more) Dynamic Props
 - f. (1 or more) Gameplay Scripts (triggers, etc)

FIRST STEPS (BORING, BUT RECOMMENDED)

This document is the best place to learn about the features and uses about this asset. Please read it thoroughly, as we want to make sure you get the most out of your investment.

1. Create a **brand new project**. This may seem unnecessary, and while we go through great lengths to make sure there are no collisions with other assets, it is impossible to provide a guarantee for every combination of settings. Overall, this will give you the best possible experience to first figure out how to use the asset without introducing other variables.
2. Install **Split/Scenes** from the Asset Store.
3. Open the provided test scene called *splitscenetest.unity*. All our assets come with example data specifically for trying them in safe isolation. (Later, when you install it into your project, everything under the *testScenes* folder may be removed.)



4. Notice how *scene1*, *scene2*, and *scene3* are automatically loaded. This is because they are already part of the *SplitScenes* object in the *splitscenetest* scene. The functionality of the component is to make sure the **managed scenes are loaded in the editor or at runtime according to its settings**. These settings are available in a convenient editor window. (You can have multiple of these in a scene, if you want to. Building an entire streaming game world of scenes that automatically async load and unload based on triggers or distance takes only minutes to write.)
5. Open the *SplitScenes* window by one of the following methods:
 - a. Click on the *SplitScenes* object and click the button in the Inspector.

- b. Go to Window→Split Scenes.
- c. Go to Tools→ReachableGames→Split Scenes.

- 6. This window is dockable. We recommend you keep it handy.
- 7. Although not typically associated with Unity, this very convenient workflow can be thought of as analogous to Photoshop layers, but with scenes. Hiding and showing, locking and unlocking, and even soloing layers is possible with this interface. The remaining sections will help you gain a deeper understanding of the asset and teach you how to use it effectively.



IMPORTING INTO YOUR PROJECT

To set up **Split/Scenes**, do the following:

1. Import **Split/Scenes** asset package
2. Create a new scene to be the root of a set of scene layers
3. Typically, delete the default objects in the root scene unless you want them there.
4. Open Split Scenes via Tools→ReachableGames→Split Scenes
5. Click *Add SplitScenes Obj* to create a management object in the root scene
6. Click the *Plus* button or drag in existing scenes

FEATURES

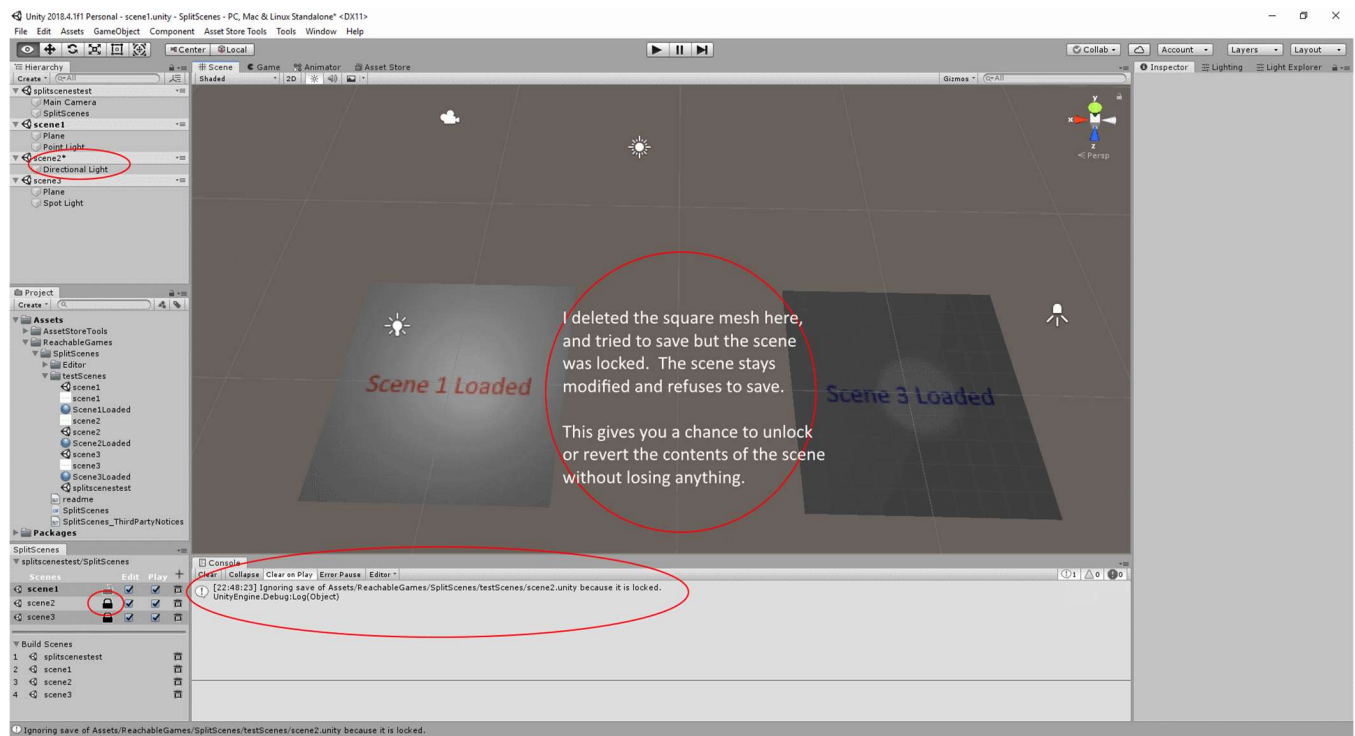
Split Scenes is a great tool for getting teams to work together without stomping each other's work. It also helps with revision control merging problems by separating out content into different files that can be organized by content type. Something similar could be built with prefab-in-a-prefab, not with the convenience or clarity of additive scenes. With a layer-focused workflow, you can easily build levels where different people can be working simultaneously and constantly sync each other's work, without worrying about conflicts—*live*.

HOW TO USE THE GUI

1. To load or unload a scene in the Editor is done by checking the box under **Edit**.
2. Similarly, to automatically load a scene when the root scene loads, check the box under **Play**.
3. Locking scenes to prevent accidental modification is just a single click on the **Lock** icon.
4. To add more scenes, you can just drag-and-drop onto the **Scenes** title text, or onto any of the scene names. Pretty much anywhere the cursor changes to a drop cursor.
5. To remove a scene, just click the **Trash Can** icon (it does *not* delete the scene, just takes it out of the management of this Split Scenes component).
6. To quickly set a scene as the "Active Scene", just **double-click** the scene name.
7. To find a scene in the Assets folder, just **single-click** the scene name.
8. To quickly add a new scene, just click the **Plus** button.

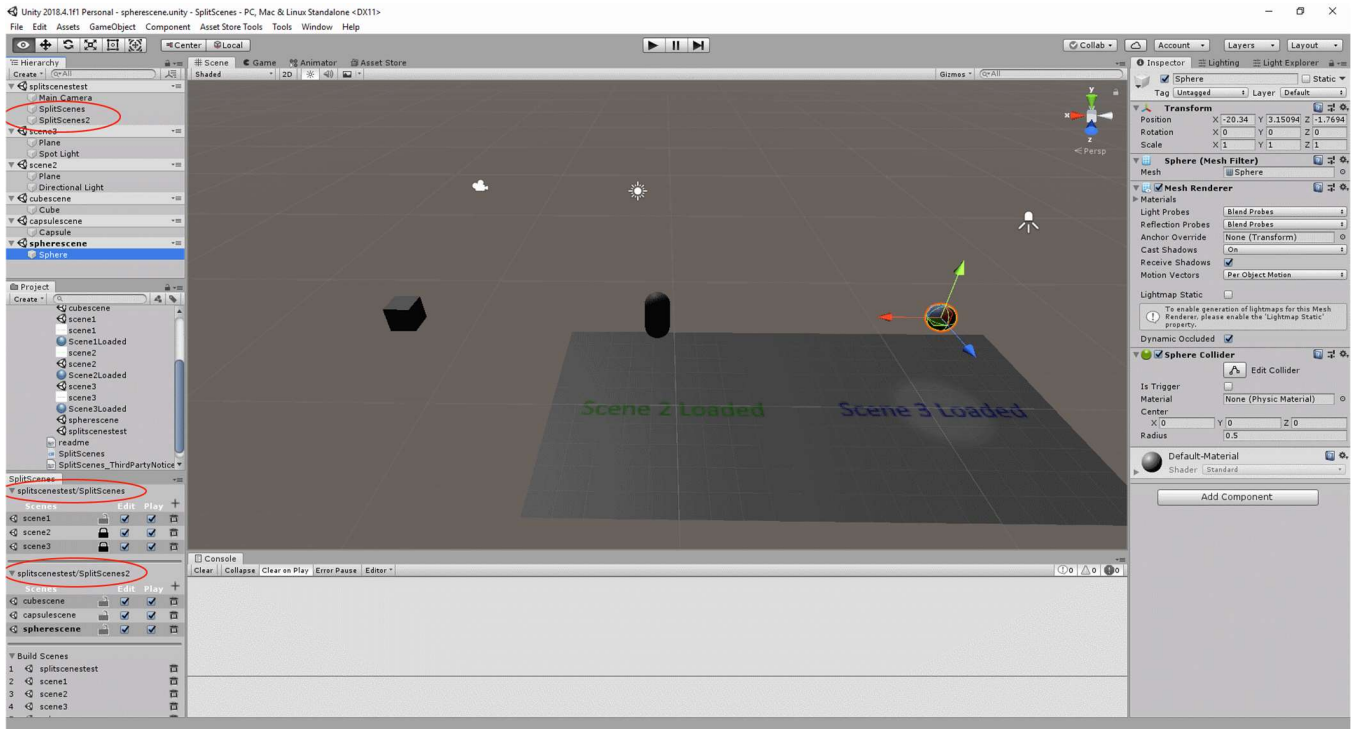


LOCKING SCENES



When a scene is locked, any changes you make to that scene will not be saved. All the modified scenes that are unlocked are saved, and any modified scenes that are locked print a warning to the console. These locked scenes stay modified (so you don't lose your work, in case you want to save it), but will refuse to save unless you unlock them. This keeps you honest without preventing you from doing work or losing time if you edited something in a locked scene.

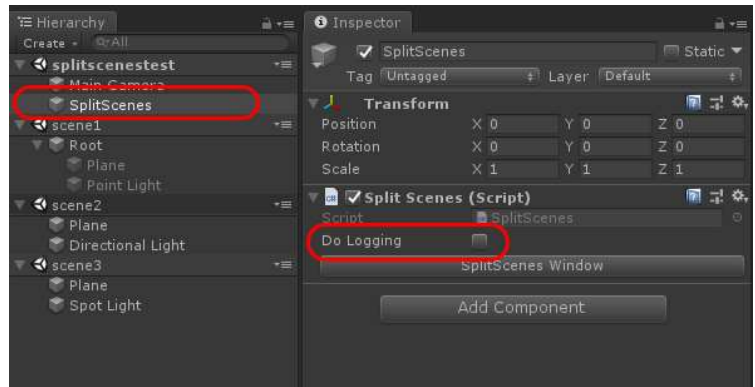
ADVANCED MULTIPLE-COMPONENT SCENE MANAGEMENT



A single *SplitScenes* component allows you to manage an entire set of scenes. If you find at some point that you want a master scene to load all the sub-scenes, you can also manage quite a few *SplitScenes* components at once with the GUI by folding them open/closed as needed. This is probably most useful in making reorganizing scenes easier, or for building a large streaming world where a single master scene controls the flow of loading by activating or deactivating *SplitScenes* objects.

HANDY TROUBLESHOOTING

A recent addition to *SplitScenes* was a flag to help quiet down the logging. By default, logging is disabled, but if you are looking for some help tracking down load order problems, just select the root object with the **SplitScenes** component on it and toggle the checkbox. Hit Play and enjoy the extra printouts in the Console.



MULTI-SCENE ACTIVATION

With *SplitScenes*, all the sub-scenes are loaded asynchronously at the same time. Unity provides a method for loading and holding the scenes in an uninitialized state, and we take advantage of this. However, it does not provide a way to force all the scenes to activate on the same frame. We do activate them in the order you see in the *SplitScenes* window, so be aware that the GameObjects in the first scene will be created before those in the next scene, etc. The way to visualize this is to go to the *SplitScenes* window and uncheck all the other scenes from the Editor, thus removing them from memory. Then hit Play. All of the scenes will be loaded and instantiated in the order specified, and even with the simple test scene, it looks like there is approximately a frame delay between each sub-scene. If Unity ever provides a better mechanism, I'll use it. For now, though, consider using a loading screen if you are likely to load scenes directly in front of the player camera.

ALL SOURCE IS INCLUDED

If you want to change the way it works, knock yourself out! It's a great starting point for building your own multi-scene workflow. There are further protections that could be added to prevent accidental selection of locked scene objects, but they come at some performance expense. I decided against including them because sometimes selection is helpful for moving around, even if you don't modify anything. Contact me if you are interested in this. Perhaps it could be another checkbox?

SUPPORT

Please read all the documentation. We put a lot of effort into it, and hope that it exceeds your expectations. In the event you have further questions, please check the following web pages for more details about this asset:

Our Website: <https://reachablegames.com/unity-assets/>

Unity Forum: <https://forum.unity.com/threads/624757/>

If you find that none of the above can answer your question, you may contact us at support@reachablegames.com, but know that we always handle support requests first that include:

1. **Invoice Number**
2. **Unity Version**
3. **Asset Version**
4. Links to screenshots or small sample projects on DropBox or similar sharing site describing the problem.
5. Kindness. If you are mean, rude, harassing, or hateful, do not expect a response.

As a matter of common sense, we do not offer support to free customers except as time permits.

Finally, if you are looking for a feature that is not currently supported, understand that we are a business and get many such requests. If you need a custom feature that is important enough to your product to pay for its development, contact us about it.

ABOUT US

Reachable Games is located in the beautiful hill country of Austin, Texas USA. It was founded by Jason Hughes, who has been a professional game developer since 1995, at Origin Systems. He has worked on many AAA games and with many recognizable companies. As a generalist, Hughes has worked on nearly every kind of game platform in every capacity—from graphics tools to AI to UI/UX to game design to shader writing to database management to networking and server development. It turns out this is the right skillset to help improve the Unity development experience for other developers.

We currently have several other assets on the Asset Store. For what it's worth, they are all built because we are working on projects of our own and both need and use them on a daily basis. If you think this one is great, chances are the others will help you out too.



RELEASE NOTES

TODO

1. Add checkbox to control moving objects to non-selectable layer.
2. Add popup for save-with-modified-locked-scene instead of console warning.
3. Draggable ordering of scenes and build scenes.

V1.5

- Revised the error handling for UnityWebRequest now that the interface changed in 2020.2.

V1.4

- Simplified version checking popup.

V1.3

- Worked around a full editor crash introduced by a bug in Unity 2019.3.

V1.2

- Added better styling for Pro skin.
- Added synchronization and ordering to scene initialization after all loads are finished.
- Added DoLogging checkbox and swept all the noisy console logs into conditionals.
- Cleaned up namespaces around the code, upgraded the web popup.
- Got SplitScenes working in 2017.4LTS.
- Updated documentation.

V1.1

- Documentation
- Fixed various bugs relating to deleting scenes, moving them in projects leaving broken path links, and so forth.
- Added the plus button for rapid new-scene creation.
- Fixed window size and layouts so the trash can button isn't hidden by default.

V1.0

- Initial Release