



ULTIMATE FOREST DOCUMENTATION

Hello,

This documentation has been created to provide you with information about the details of the Ultimate Forest package and its proper usage.

If you have any questions, requests, or needs, please don't hesitate to reach out to us. We are here to guide and assist you throughout your game development journey.

Welcome to the CropCraft Studios family, and we hope you have a successful game development experience using "Ultimate Forest"!

Best regards, CropCraft Studios Team 😊

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Package Included

Our package contains 11 Elm Tree meshes of various sizes for both young and old trees, 4 cliff meshes designed to seamlessly fit into different terrain conditions, and various rocks, tree branches, and leaves crafted to enhance the forest atmosphere. In total, there are 36 meshes, 23 materials and material instances, and 62 textures included. The material of each mesh incorporates the "Seasons" system, which we will describe in detail below.

Material System

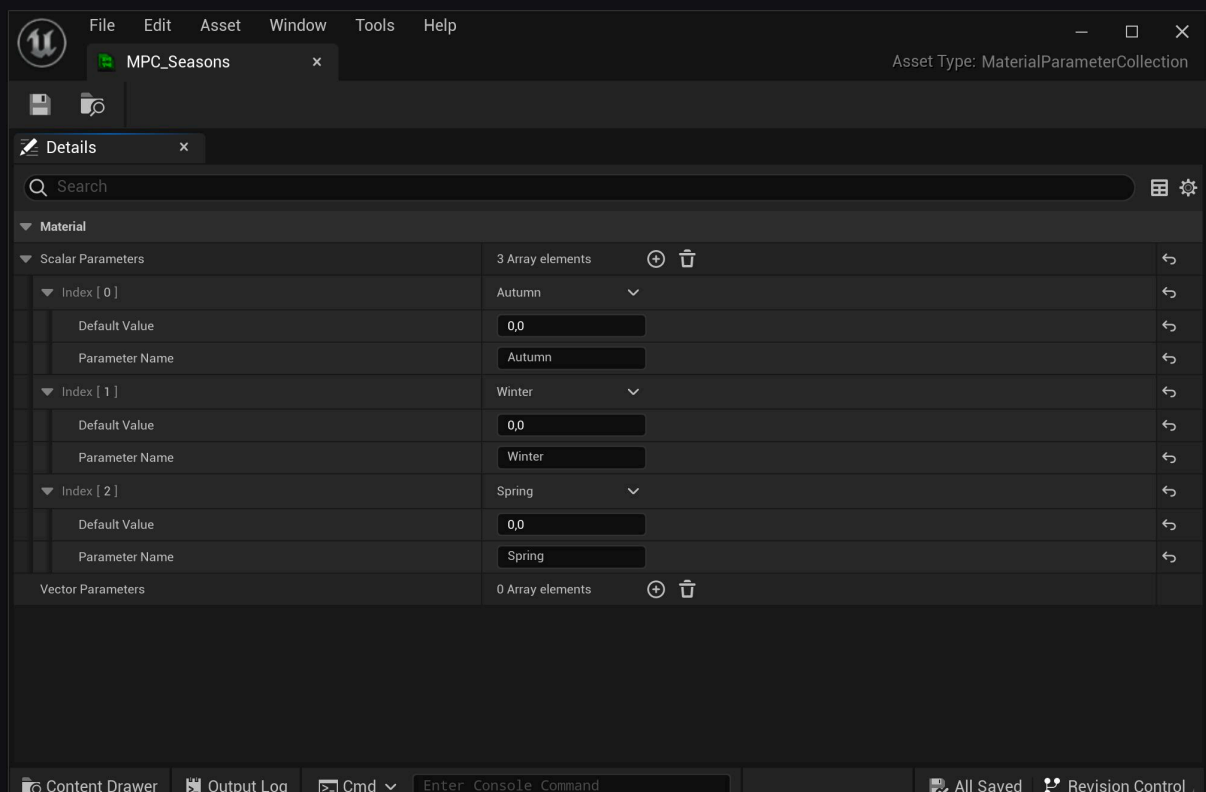
Our customizable material system provides you with the ability to adjust various settings for each instance, such as Roughness, Brightness, Desaturation, Specular, SSS (Subsurface Scattering), Normal Strength, various color adjustments, and wind reaction settings. This allows you to have full control over the appearance and behavior of the materials in your project.

Use Seasons

The Seasons system is a real-time editing system that is very simple to use and is integrated into materials. Pre-prepared textures, roughness, metallic, and subsurface values, as well as elements like snow or moss on objects if present, undergo specific changes in accordance with the

seasons. You have complete control over these changes using the Seasons Material Parameter Collection provided in the package content.

When all the season names you see on the Material Parameter Collection are set to a value of 0, you will encounter a classic green appearance. We have made the necessary adjustments in advance for the environment of the package to be seen as summer conditions when all values are specified as 0. The first image you come across when you open the package is the summer season view.



Additionally, Note: Remember to enter a value between 0 and 1 for the Seasons values in order to achieve accurate results.

In order to achieve accurate results ;

Autumn: You need to set the Autumn tab in the MPC_Seasons to 1.

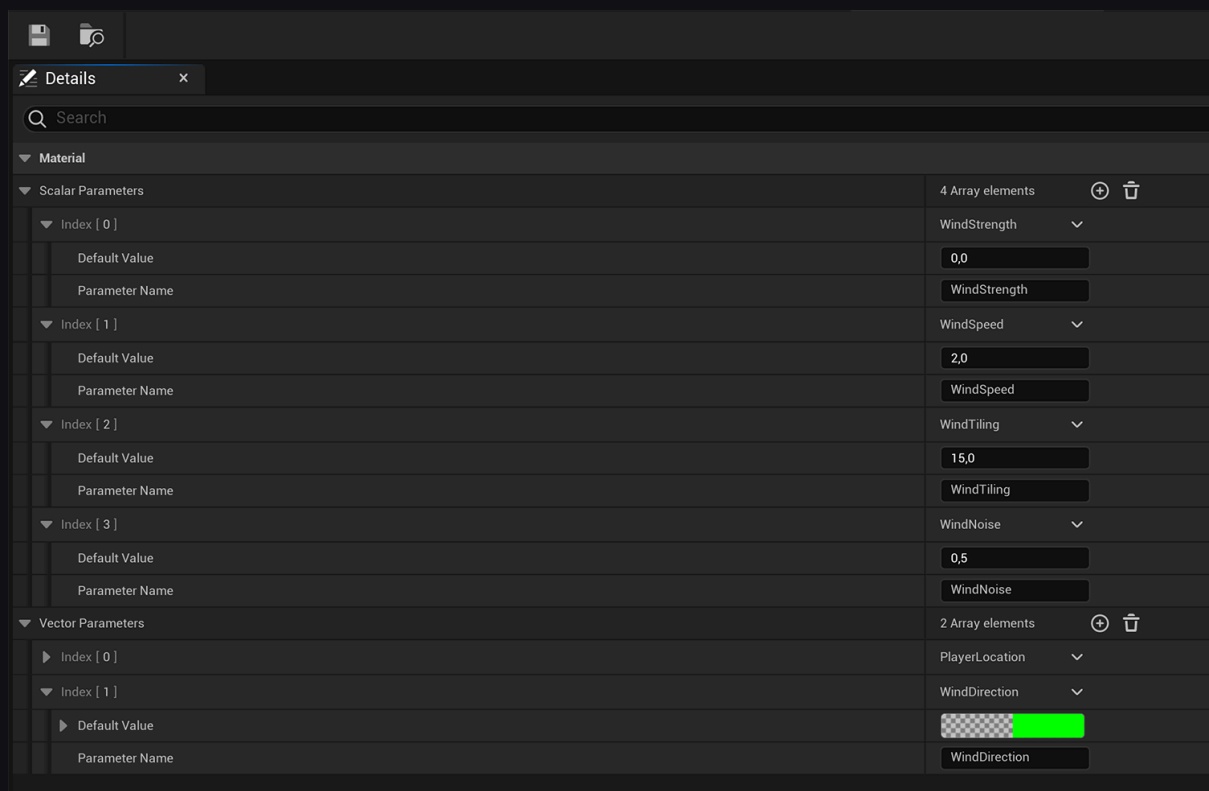
Winter: You need to set the Autumn tab to 1 first. Then, you should also set the Winter tab to 1. When both of these tabs are set to 1, you will achieve the classic winter appearance.

Spring: The Spring tab should be set to 1, and the other tabs should be set to 0.

To make sharp transitions between seasons, you can use values of 1 and 0. If you want to create smoother and time-based realistic transitions, you can add the material parameter collection to your blueprint systems and create a transition from 0 to 1 based on time.

Wind

The wind system we utilize is recommended by Unreal Engine and works in conjunction with Vertex Paint, similar to how it is employed in certain Megascans packages. This system provides you the ability to make global adjustments to the wind's direction, intensity, and various other nuanced settings. Moreover, it operates through a material parameter collection, allowing for swift integration with your software and facilitating real-time modifications.



"The "wind" tab on material instances is specifically where you adjust the plant's reactions to the wind. Resetting the settings on this tab ensures that the plant won't respond to the wind. In other words, the wind's effect on the plant will be nullified, and the plant will remain static.



Technical Details & Recommended Usage

- The package is ideal for Unreal Engine users who aim to develop realistic mini Nature-themed games.
- With the variety of 11 different Elm Trees and their material seasons system, you can provide players with a rich gaming experience.
- The wind system and Seasons create a natural and realistic look for the environment.
- The Seasons is a completely experimental system and it is recommended to be used in small scenes. FPS drops can occur during seasonal transitions in large open world maps.
- The easy customization of colors, shapes, and reactions allows players to have a personalized experience.

Note: The recommended usage can be subject to change according to your own creativity and objectives during the game development process.

Package' triangle counts

- **Lowest triangle count: 43 (Scatters)**
- **Highest triangle count: 327,680 (Cliff_03)**
- **Average triangle count: 27,000**

Note: All objects in the package utilize Nanite, When using this package with Unreal Engine 5.2 and above, it is strongly recommended to utilize the Nanite and Lumen systems.

<https://docs.unrealengine.com/5.0/en-US/lumen-global-illumination-and-reflections-in-unreal-engine/>

Performance

System : Amd Ryzen 7 5800x - 16gb Ram - Nvidia GeForce RTX 3080 - Epic Settings

Forest Map 45-75 fps

Showcase Map 90 -120 fps

to full screen Editor Mode

System : Amd Ryzen 9 7950x - 32gb Ram - Nvidia GeForce RTX 4090 - Epic Settings

Forest Map 70 - 90 fps

Showcase Map 120 fps

to full screen Editor Mode