Ultra Gore System

V.1.3

Changelog

V. 1.3
October 4, 2025

- Added new leg model (old one still available)
- Disabled Hit events on some meshes (bones) to stop them from spawning sounds and decals

V. 1.2
September 29, 2025

- Added spine, pelvis and liver models
- Minor blood VFX fixes

V. 1.1
**September 24, 2025**

Both versions:

- Added new setting for chunk mass influence
- Fixed blood explosion particles clipping through objects

5.3+:

- Added new version of blood explosion VFX that spawns decals (applied by default)

Getting started

The Ultra Gore System is very easy to use! You really only need to spawn the Gore Actor after your character is killed, and destroy/hide the killed character. You can see an example setup in the BP_ExplodingCharacter class, which is placed in the demo map for you to shoot at.
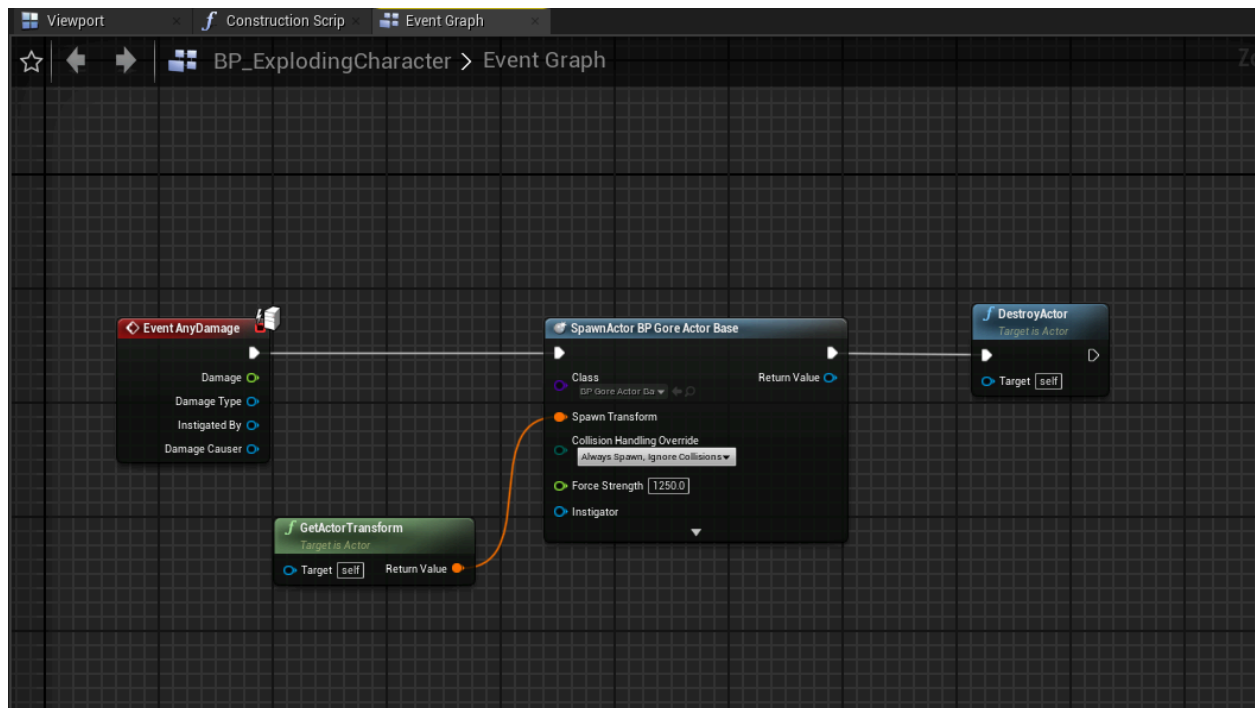
Gore settings (BP_GoreActorBase)
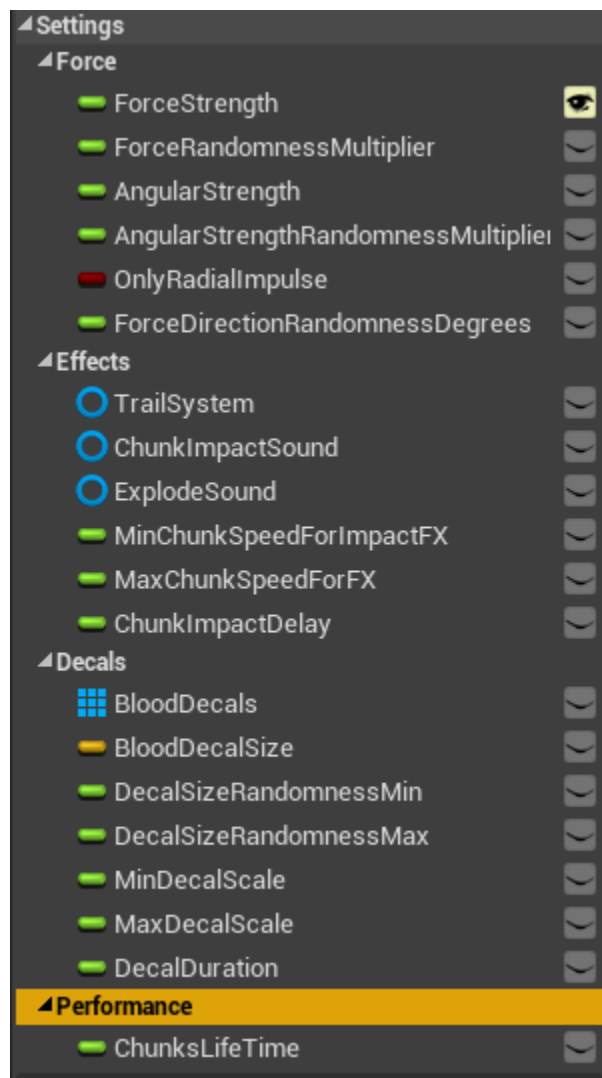
Force
ForceStrength - The force (speed) at which body parts fly away from the center of the Gore Actor.
ForceRandomnessMultiplier - Adds an additional deviation to ForceStrength for each chunk for a more natural look.
AngularStrength - Controls how fast the body parts spin around.
AngularStrengthRandomnessMultiplier - Adds rotational force deviation so chunks rotate at different speeds.
OnlyRadialImpulse - If true, applies a simple radial impulse to the chunks, bypassing the Force settings.
ForceDirectionRandomnessDegrees - Makes chunks fly away from the ForceLocation component at slightly randomized directions, rather than straight away from it.

Effects

TrailSystem - the template of the Niagara blood trail to use

ChunkImpactSound - the sound a body part makes after making contact with a surface (like a wall or floor)

ExplodeSound - the sound that the GoreActor makes when exploding

MinChunkSpeedForImpactFX - Minimum velocity of a body part for sound and decals to be spawned on collision. Prevents spawning too many sounds and decals.

MaxChunkSpeedForFX - Used to determine decal size - at this speed or greater, will use the decal's max size.

ChunkImpactDelay - delay between spawning decals and sounds on body part impacts, preventing too many of them to be spawned at once

BloodDecals - Blood decals are randomly chosen from this array. It's recommended to copy over the Opacity logic to your decal materials to prevent them from stretching.

BloodDecalSize - default size of the blood decal, multiplied by scale variables

DecalSizeRandomnessMin - used to define minimum value of decal scale variation

**DecalSizeRandomnessMax** used to define maximum value of decal scale variation

MinDecalScale - minimum scale of the decal when the velocity of the body part is very low

MaxDecalScale - maximum scale of the decal when the velocity of the body part is high

DecalDuration - time before the decal disappears for performance reasons

ChunksLifeTime - time before the GoreActor is despawned along with its body parts for performance reasons

IgnoreChunkMass - Whether or not to take chunk Mass into consideration for Impulse - useful for making chunks fly at different speeds to add realism. If you set this to false, you will need to use higher ForceStrength and AngularStrength values. (New in v1.1)
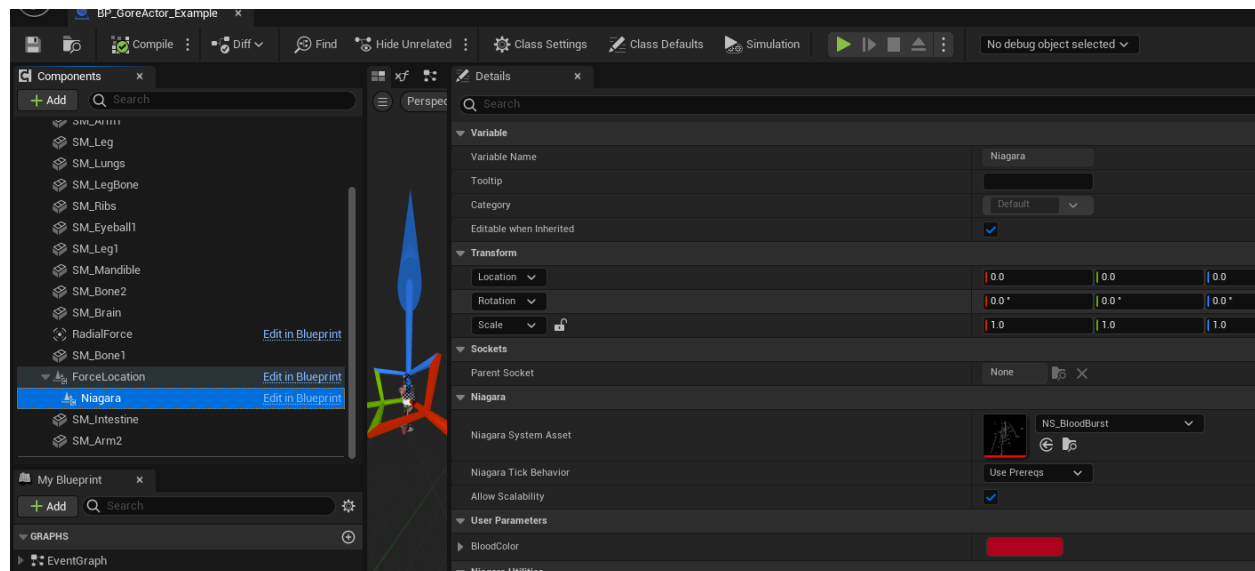
**You can also edit the initial explosion Niagara effect directly.**
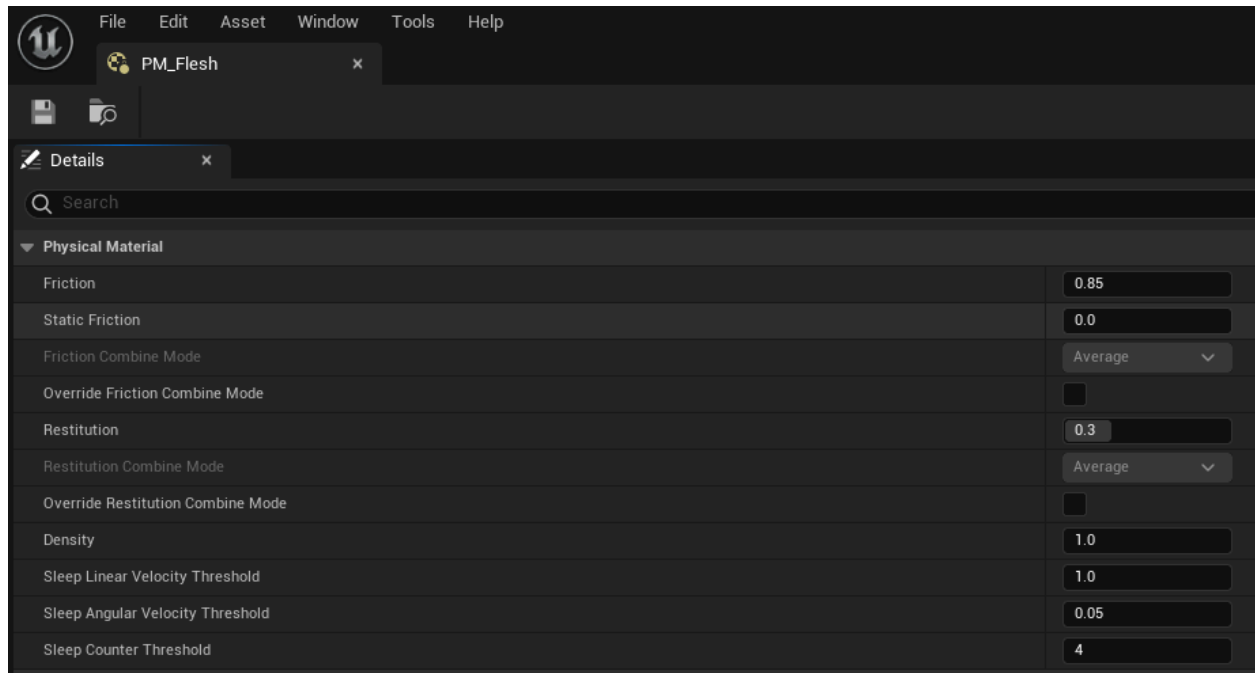
Physical Material Friction (New in v1.1) - This Physical Material is applied to all chunks by default. It was introduced to limit the sliding of chunks across the ground. Higher Friction values mean chunks decelerate faster when moving on ground.

MinChunkZVelocityForImpactFX (New in v1.1) - Used to prevent chunks from triggering OnHit effects when sliding across the ground.
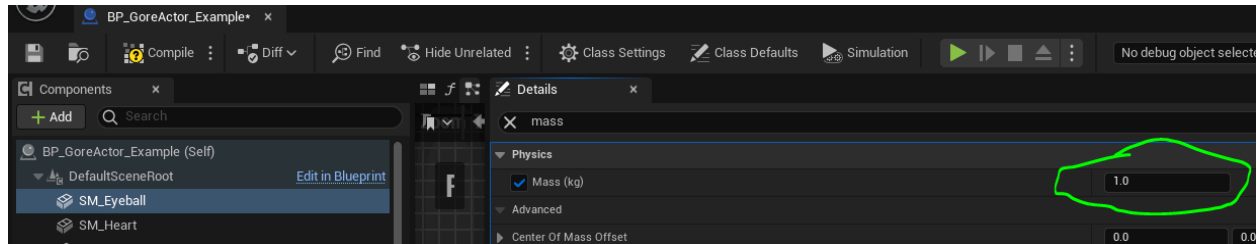
ForceLocation

This is the scene component from which Force is applied to body parts, as they fly away from it (when not using the OnlyRadialImpulse setting). By default, it's roughly in the center and slightly offset backward.
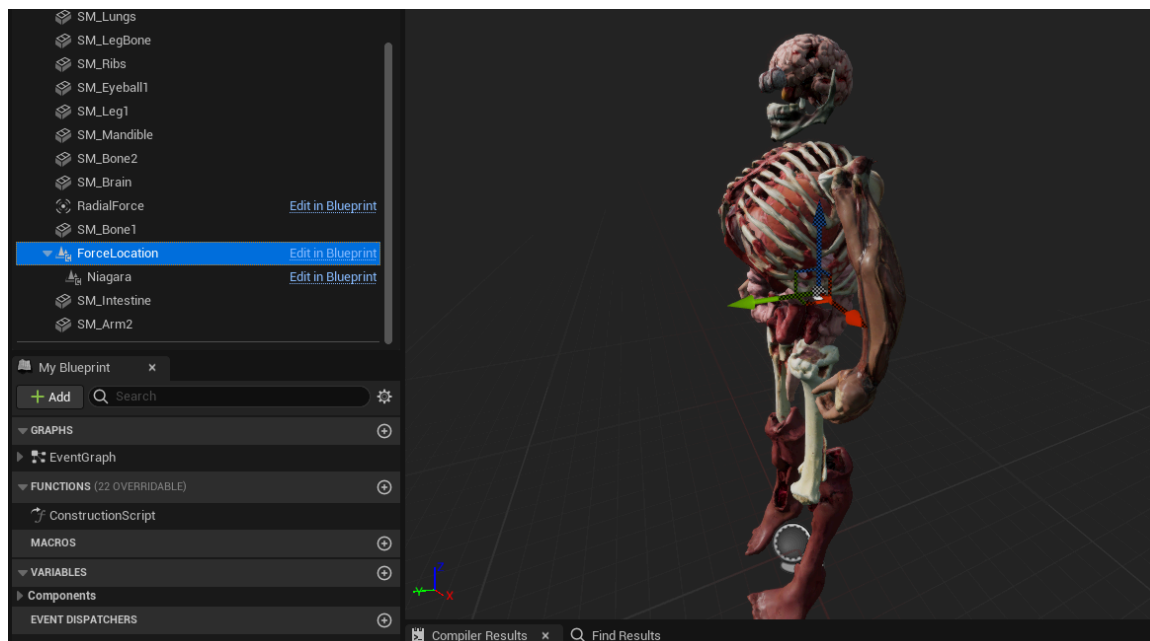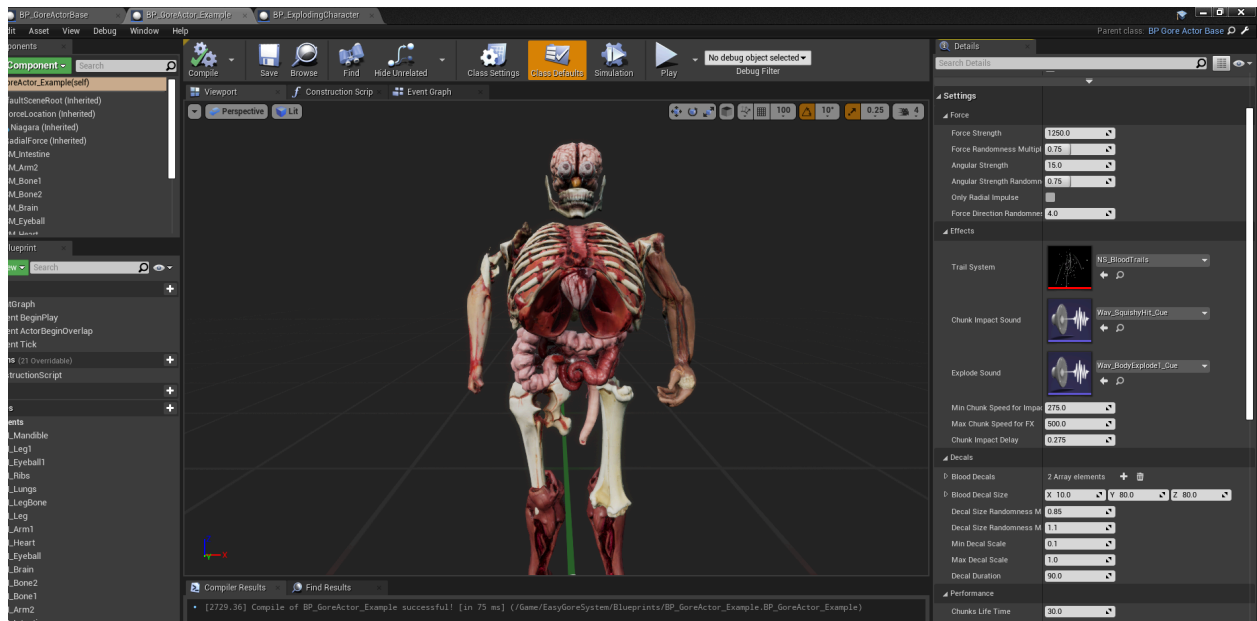
Mass settings

If you want your body parts to fly away at varied speeds, you can adjust their mass individually:

Customizing your Gore Actor

To create your own Gore Actor, right-click the BP_GoreActorBase and select "Create Child Blueprint Class". Inside your new BP, you can customize the settings referenced above, such as force, decals, sounds, etc.


If you want to use different models, you can just replace the existing ones and adjust their position. If you need to use your own hierarchy, add or copy-paste your meshes inside the new child Blueprint.

When you add a new mesh component, here are some important settings to be aware of:
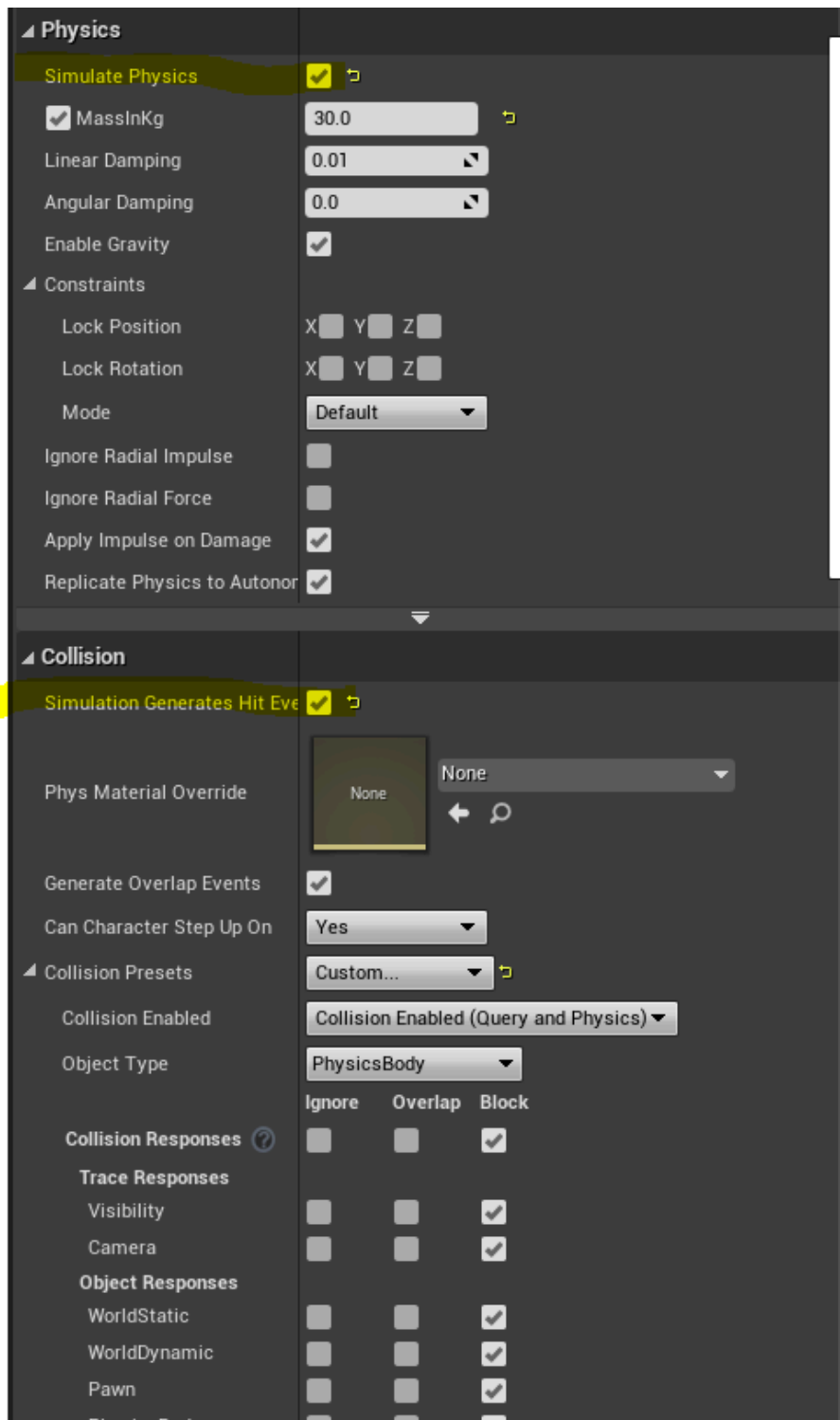
1. Simulate physics must be set to true!

2. "Enable Simulation Generates Hit Events" IF you want the body part mesh to spawn sounds and decals on impact. You can see I disabled it for the jaw (mandible), because it's small and not very squishy, so it shouldn't use the same effects as the guts.

3. ObjectType needs to be set to PhysicsBody, and the collision response to PhysicsBody should be set to Ignore, so the chunks don't affect each other's flight paths. You may want to create and assign a new Collision Object Type and apply it to the chunks, so they can collide with PhysicsBodies (Unreal uses this for the physics-simulating cubes in the demo maps): https://dev.epicgames.com/documentation/en-us/unreal-engine/add-a-custom-object-type-to-your-project-in-unreal-engine

4. Your mesh needs to have the "gore" component tag, shown below.

5. Add another component tag called "trail", if you want the body part to spawn a trail of blood when it flies away. It is recommended to only use it for the bigger body parts, both for aesthetic and performance reasons.
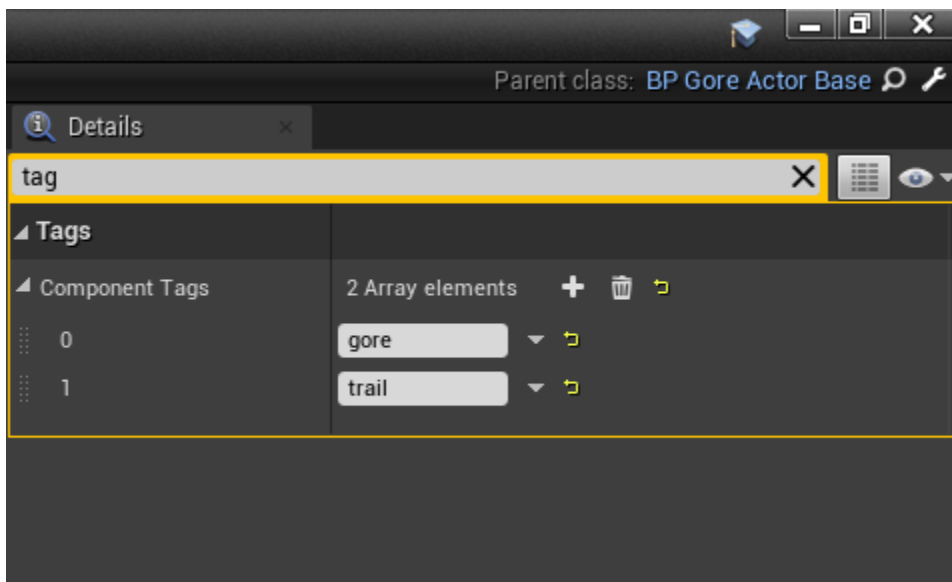
Niagara settings

Spawn per unit
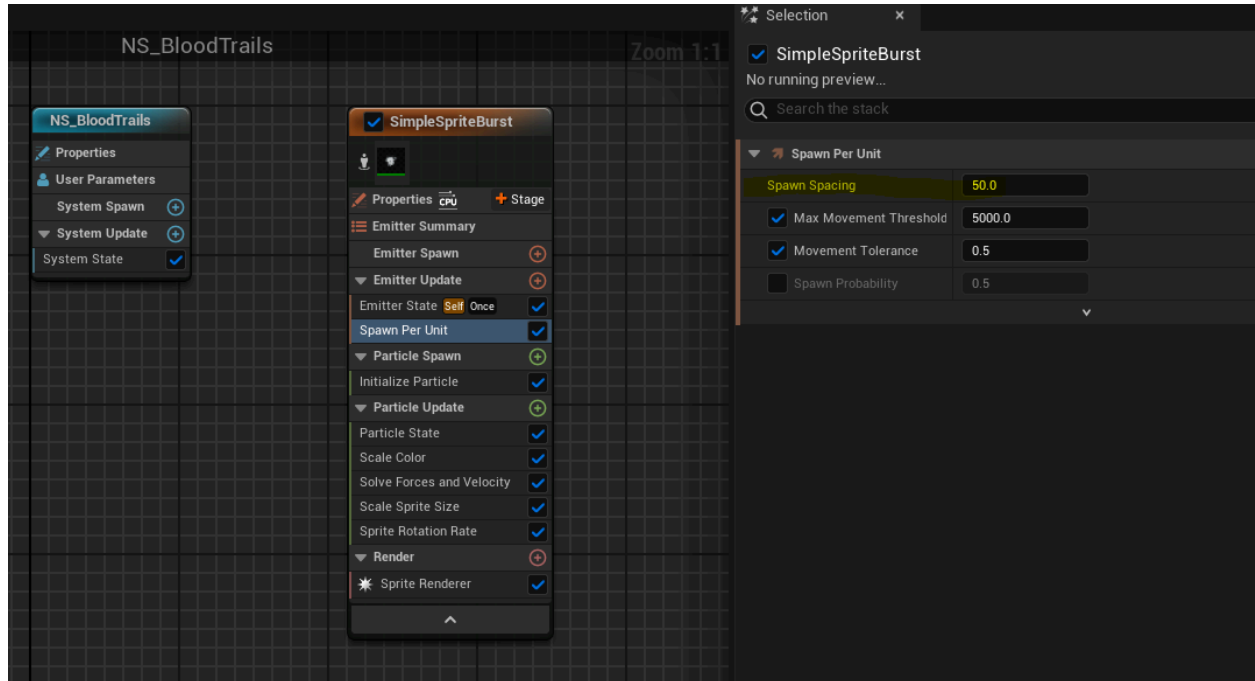
Spawn Spacing allows you to determine the density of the blood trails. The default value (50) balances performance with appropriate looks, but you might want to reduce the value to make the trails denser, or increase the value if you make the blood sprites bigger.

Using Nanite

If you wish not to use the auto-generated LODs and use Nanite instead, the easiest way to switch to Nanite is by selecting the Content/UltraGoreSystem/Models folder, applying a StaticMesh filter, and then shift-selecting all models to right-click and enable Nanite:
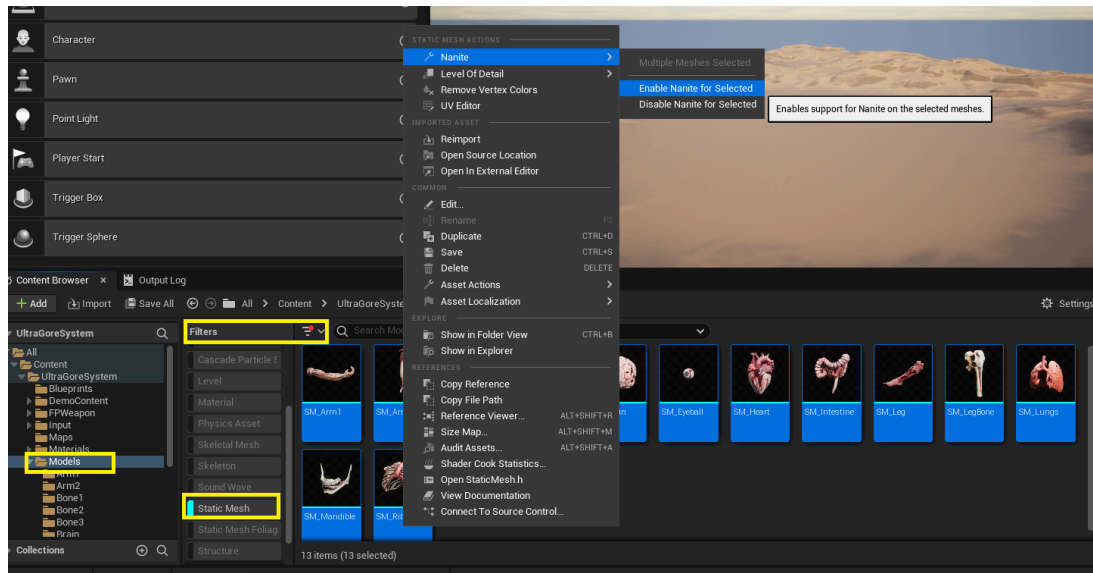
Support

For support, join the official Discord: https://discord.gg/TuTt3esk43
Or send an email to: support@gamekioskdigital.com