

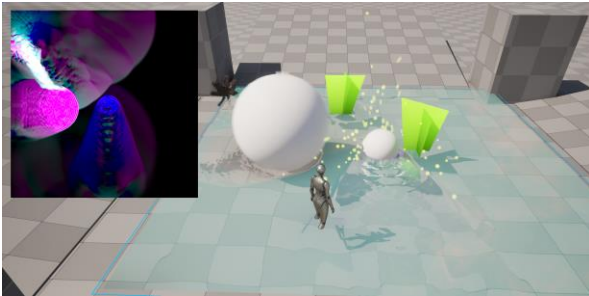
## Environmental Interaction System (EIS)

Place the Whole Folder under Root/Plugins/

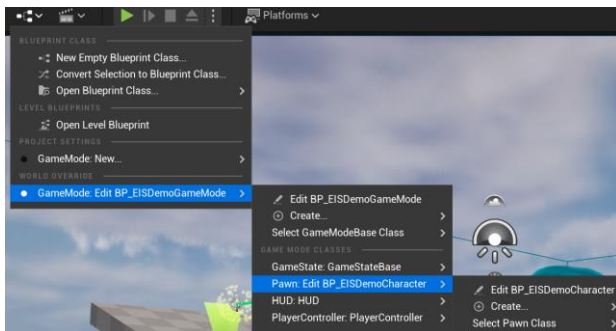
iv > ShowCase5_3 >		
Name	Date modified	Type
.vs	25/03/2024 11:26	File
Binaries	07/03/2024 14:37	File
Config	17/05/2024 14:20	File
Content	20/05/2024 15:38	File
DerivedDataCache	07/03/2024 14:38	File
Intermediate	20/05/2024 15:38	File
Plugins	21/05/2024 11:42	File
Saved	20/05/2024 15:38	File
Source	07/03/2024 14:37	File
.vsconfig	07/03/2024 14:37	VSCode
ShowCase5_3.sln	07/03/2024 14:37	Visual Studio
ShowCase5_3.uproject	15/05/2024 14:12	Unreal Project

## DemoMap

DemoMap should be able to straightly start, a default character will be seen.

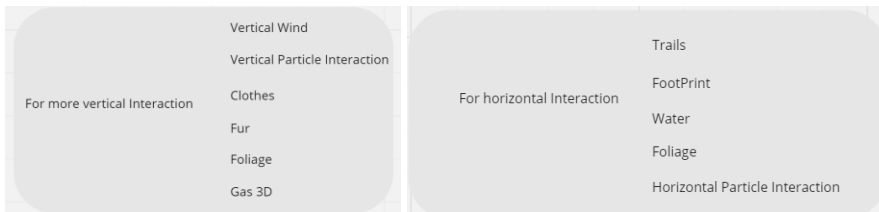


If don't, please check GameMode Override and set it to BP\_EISDemoGameMode



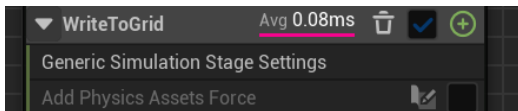
## Getting Started

EIS is separate into 2D and 3D.

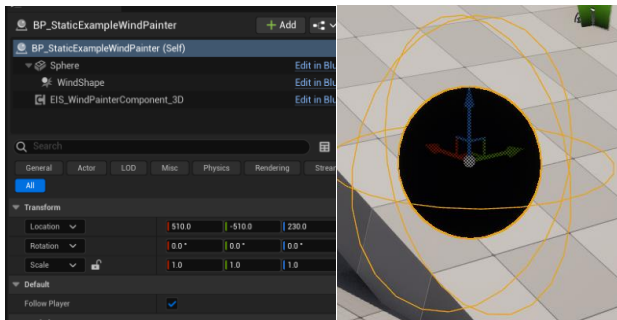


3D can have more vertical interactions || 2D can have more sophisticated horizontal interactions.

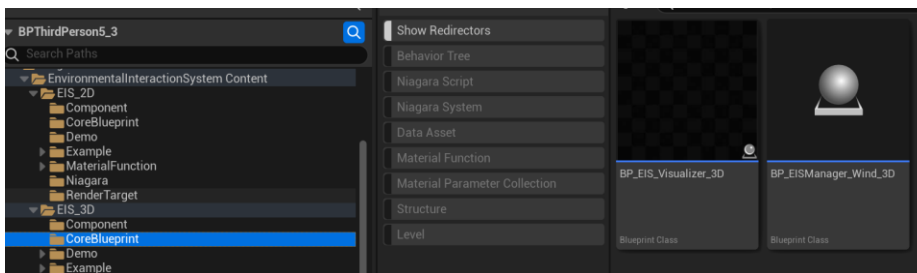
(**SkeletonMesh Interaction with PhysicAssets are turned off by default**, it can be turned on in NS\_EIS\_FluidSimulation, but make sure player has a physics asset, it will take more performance)



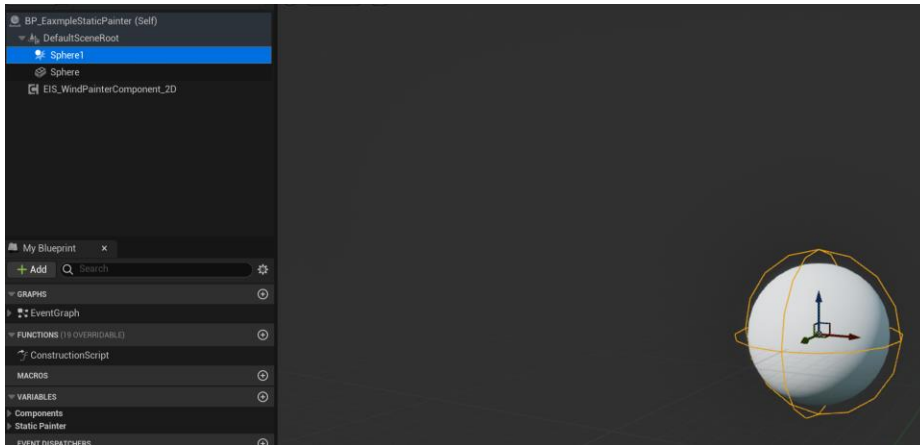
Currently **both 2D & 3D Demo** uses a StaticWindPainter that follows Player to generate interactions.



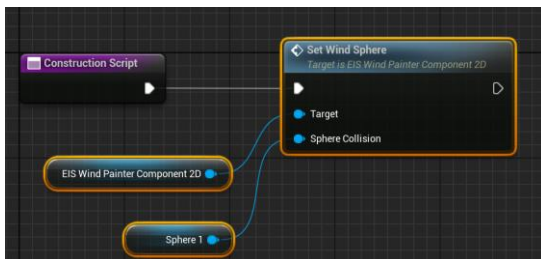
Step1 : Get a Manager into the Level, each level should only have one manager exist.



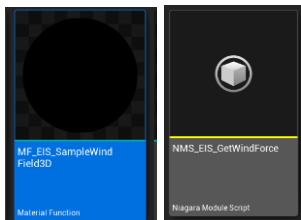
Step2: Add an EIS Component on the Object that you want to generate interaction, also add a Sphere Collision Component to view the Wind Generation Range.



Step3: Call SetWindShape function with EIS component on the Actor Construction Script all begin Event, and give it the Sphere for the wind generation.



Step4: Use Material Function to interact with Material, or NMS to interact with Niagara.



(For more detail please look at the demo setting)

PS: Sometime you can't see the interaction, usually it's the velocity is too small, try tweak the intensity or the velocityScalar on components

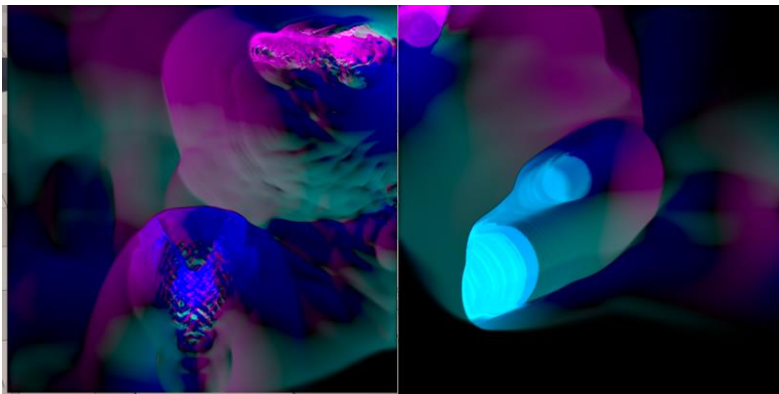
## EIS\_Manager Overview

You can choose to let the Manager follows Main Local Player or not, and also tweak all the other settings.

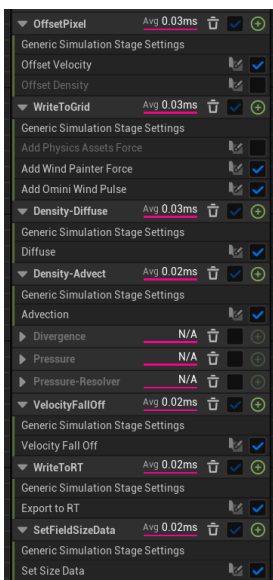
Wind Field		
Simulate Size	1024	↩
Overrelaxtion	1.9	
Wind Fall Off	0.005	
Global Strength Scalar	2.0	

Overrelaxation changes the divergence for the fluid, it reflects the spreading speed.

Usually between 0- 2



Existing Optimization:



1. **Pressure and Divergence are turned off by default** for 3D since it doesn't need to look exactly like fluid in 3D.

2. Texture size are set to **32\*32\*16** = 16384 (Can go 64 \* 64 \* 32 = 131072) by default  
EIS2D is set to 512 \* 512 = 262144 by default.

(High-res interaction looks good, but performance increases drastically in runtime)

3. For EIS\_3D. It shifts its position to fit in camera view, to cover more view range.

