**Unreal Engine 4 Guide for v. 4.25+**

**Quick note about this document:**

Notes highlighted in this color are lines of code

Console commands are highlighted like this

Take this stuff with a grain of salt

Super important notes

**Always remind yourself: the optimizing comes at the end of development!**

**Starting out:**

Pick the most relevant template. Grab the starter content, to use as placeholders. I have a strong preference for the Third-Person Template, but if your needs are otherwise, you can choose the appropriate template you need and just fetch the stuff from the Content Browser:

Add New (The green button) -> Add Feature or Content Pack -> Third Person (I usually prefer C++, but to each their own…)

In their respective menus, make sure you’ve enabled the following settings:

Plugins:

Volumetrics

Sun Position Calculator --- (\*Possibly)

Shallow Water --- (\*Possibly)

Project Settings:

Support Atmospheric Fog

Support Sky Atmosphere

New Level -> Time of Day Template.

Delete Platform and material ball mesh.

Add AtmosphericFog object.

Add new DirectionalLight object.

In its settings in the “Details” tab, under “Light” settings: Turn on “Atmosphere / Fog Sun Light” and set the index to 1. Also while there, set “Intensity” to 0.125 lux. Rename this directional light as “Moon” (since it will be the moon light).

Note:

If the sun and moon directional lights are flickering, set their source angle above 1.0 (I so 1.5).

Note:

To control the directional light’s location: CTRL + L

To control other directional lights that you have set up with the atmosphere: CTRL + SHIFT + L

Terrain:

Keep the components number low, like 64, if you can. To calculate the real-world size of your terrain using your heightmap in centimeters:

((resolutionX – 1) \* 100) x ((resolutionY – 1) \* 100)

A resolution of 1024 x 1024 would mean a size of 102300cm x 102300cm, or x .

**Vegetation:**

Add each kind of vegetation in the foliage list, then for each one, set the cull max to 5000 or whatever you deem suitable.

**Fire Particle System:**

Add a point light above the particle system. In the “Details” tab under “Light” turn on “Use Temperature” and set Temperature to 3000. Intensity can be 3.0 candelas.