

# Unreal Tips

Here are some useful notes for working with unreal.

## PIX Captures

To enable pix captures, you can either run with the commandline “-attachPIX” or, in ConsoleVariables.ini, you can set `r.D3D12.AutoAttachPIX=1`

Note that by default, the editor will stop rendering / render at a lower frame rate when it doesn’t have focus. This can be a problem when trying to do a pix capture. You can disable this.

Go to Edit->Editor Preferences and select Miscellaneous under the General heading you can uncheck the box for “Use Less CPU when in Background” option.

For information about how to see shader source in pix, check out this page on Shader Debugging Workflows in the unreal engine: <https://dev.epicgames.com/documentation/en-us/unreal-engine/shader-debugging-workflows-unreal-engine>

An easy way to recompile all shaders with the debug info is to use the console command “RecompileShaders all” and then close / reopen the editor.

When looking at the capture in pix you need to specify where the PDBs are. They are in Saved/ShaderDebugInfo, at either the engine scope, or project scope, depending on where you put the Gigi technique.

## Culled Passes

If a render pass only writes to things not read after that point, that pass will be culled and not run.

Sometimes this comes up during development, before we’ve hooked everything up but want to verify that what we have so far is working.

At runtime you can turn this off in the console with “`r.RDG.CullPasses 0`”

You can also use the pass flag `ERDGPassFlags::NeverCull` in your pass.

## DX12 GPU Validation

If you want to turn on DX12 gpu validation, to get more information about a problem, you can run with the command line “-gpuvalidation”