UNI VFX: Dissolve & Teleport for Visual Effect Graph

Here you'll find details on this VFX Pack. For more information on setup etc. that is common to all UNI VFX packs, see the **Manual** in the same folder.

List of all effects and events:
Energy DM – in, out
Patterned DM – in-bottom, out-top, in-top, out-bottom
Lines DM – in, out
Smoke DM – in, out
Abrupt DM – in, out
Wormhole – create, loop, hit, end, stop
Teleport – create, loop, hit, end, stop
Gateway – create, loop, hit, end, stop

Dissolve/Materialize shader
The main shader supports: albedo, normal map, metalic and smoothness, ambient occlusion and emission. It doesn't support transparency.

The shader is made in Shader Graph so you can customize it as you need.

Properties:
- MaterializeProgress – 1 is fully materialized, 0 is fully dissolved
- MaterializeProgressFuzzyness – how wide is the materialize effect
- MaterializeGradient – controls 'direction' of the materialize effect. 100% black is materialized in first and 100% white last. You can prepare a gradient texture to make your character materialize in, for example, from her feet to her chest to her hands. Materialize gradient can be created in your 3D texturing program or by hand in Photoshop (or any other similar program) by painting over an albedo texture. Even very simple gradient can work quite well, have a look at the example below.

You can also use general patterns which can be found in:
UNI VFX\Dissolve & Teleport\Textures

First is the albedo texture | second is simple materialize gradient texture made on top of the albedo | third is showing materialize in ‘direction’.

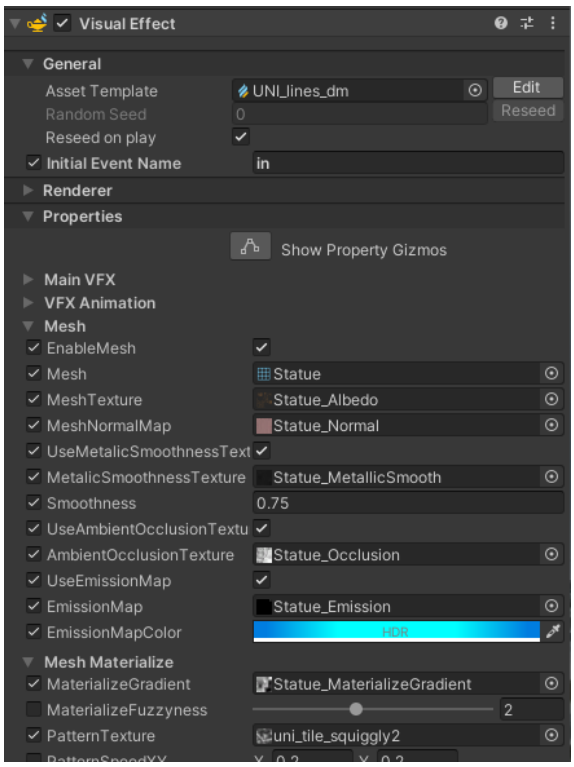
Overlay texture is displayed over the albedo. It gradually fades out as the MaterializeProgress is closer to 1 (ie. completely materialized in).
- MaterializeOverlay – texture of the overlay
- MaterializeOverlayColor – color of the overlay, use higher HDR intensity to get more noticeable effect
- MaterializeOverlayAdditive – by default overlay is additive (ie. black on the overlay texture is invisible). Disable this to use dark textures.
- MaterializeOverlayAnimationMultiplier – how fast the overlay moves

- MaterializeEdgeThickness – materialize effect edge width
- MaterializeEdgeColor – materialize effect edge color
- MaterializePattern – modifies the shape of the materialize edge
- MaterializePatternSpeed – X and Y speed of the pattern texture
- MaterializePatternOffset – X and Y offset of the pattern texture

- DisplacementMultiplier – intensity of the simple vertex noise animation
- DisplacementNoiseScale – controls how soft the vertex noise is

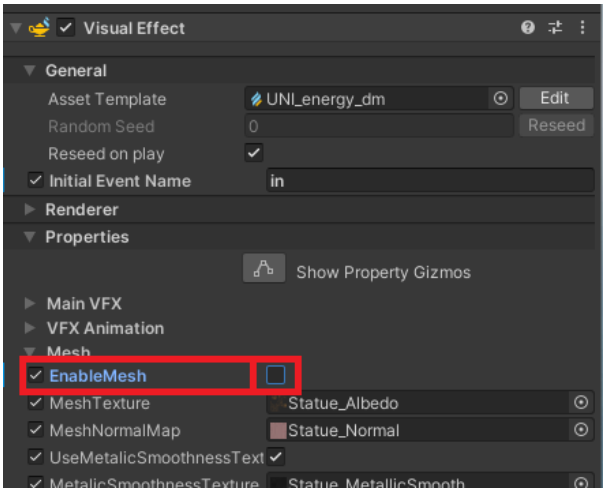
Meshes and VFX
Simple meshes can be used directly in the Visual Effect so you don’t need additional code to animate the dissolve or materialize effect and the shader is applied automatically.

When dissolving out, disable/remove your regular mesh and start the VFX. Conversely when materializing in, enable your regular mesh after the animation is over.



There are limitations on what meshes can be used directly in Visual Effects:
- only single mesh at a time, models with more meshes aren't supported
- mesh must use single texture
- animated skinned meshes and blendshapes aren't supported
- meshes under 10 000 verts recommended

If you don't want to display a mesh via Visual Effect, you can simply disable it in the Inspector. Then you don't need to set any of the following properties.

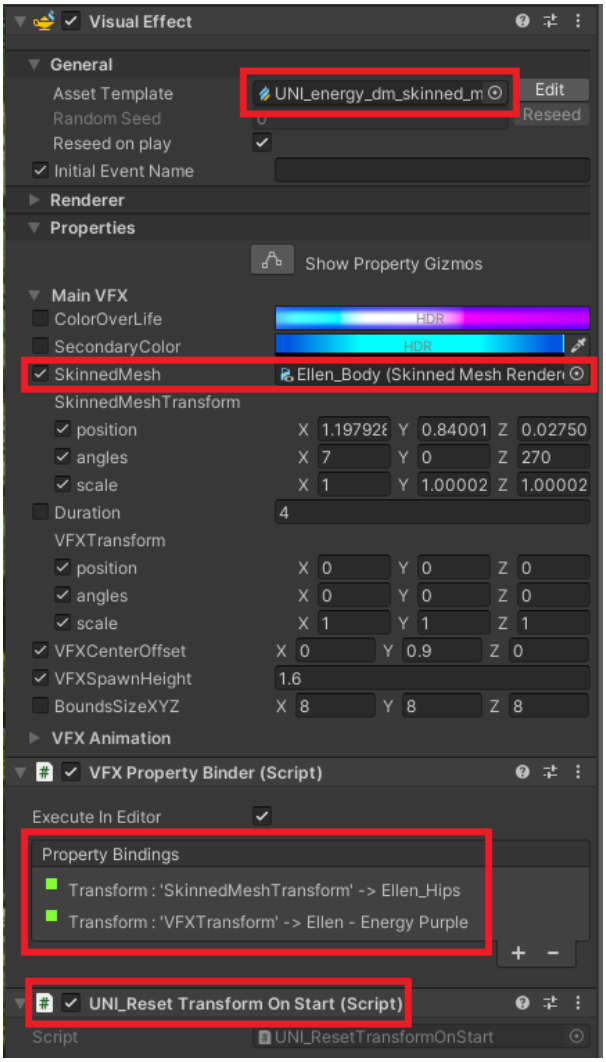


Dissolve/Materialize using code
To overcome any of the aforementioned limitations use a material with the main shader on your mesh. Then you can animate MaterializeProgress shader property (from 0 to 1 or vice versa) using code. You can have a look at simple example in the UNI_Materialize script. Examples of materials can be found in: *UNI VFX\Dissolve & Teleport\Samples\Ellen\VFX Materials*

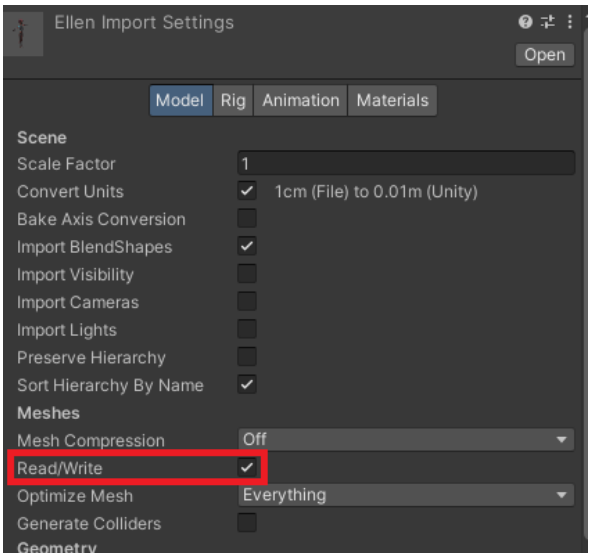
Skinned meshes and VFX
You can combine these VFX: *Abrupt DM, Lines DM, Patterned DM* with skinned meshes without additional setup.

Energy DM and ***Smoke DM*** are spawning particles on a selected mesh – ie. burning embers are spawning directly on your character's clothing and skin. There are additional steps required to get it working properly on skinned meshes. You can find examples in:
UNI VFX\Dissolve & Teleport\Prefabs\Skinned Meshes
The basic setup is explained below.

Skinned mesh setup:
1) use VFX adapted for skinned meshes
2) set your skinned mesh in Visual Effect properties
3) setup VFX property binder which continually sends transforms of the mesh (*VFXTransform*) and root bone (*SkinnedMeshTransform*) to the VFX
4) use *UNI_ResetTransformOnStart* script to get it ready at the start of the game. VFX must be unscaled and in the world origin to function properly.
5) Dissolve/Materialize using code



Note: VFX requires the source model to have Read/Write enabled.



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- Publisher page in the Asset Store.