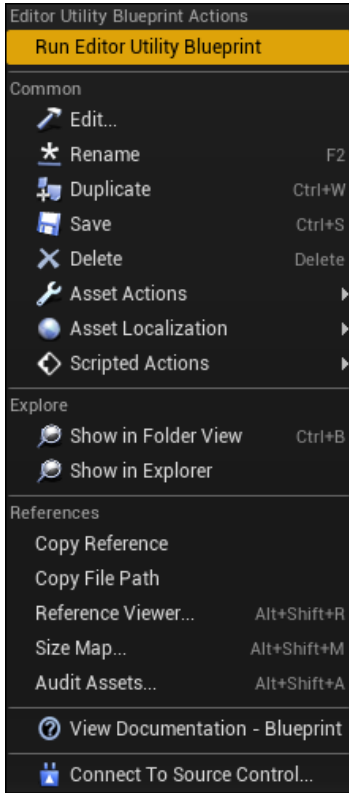


Dave's Blutilities:

Before beginning, Right Click each Blutility script and choose "Run Editor Utility Blueprint" at the top of the pop up menu:

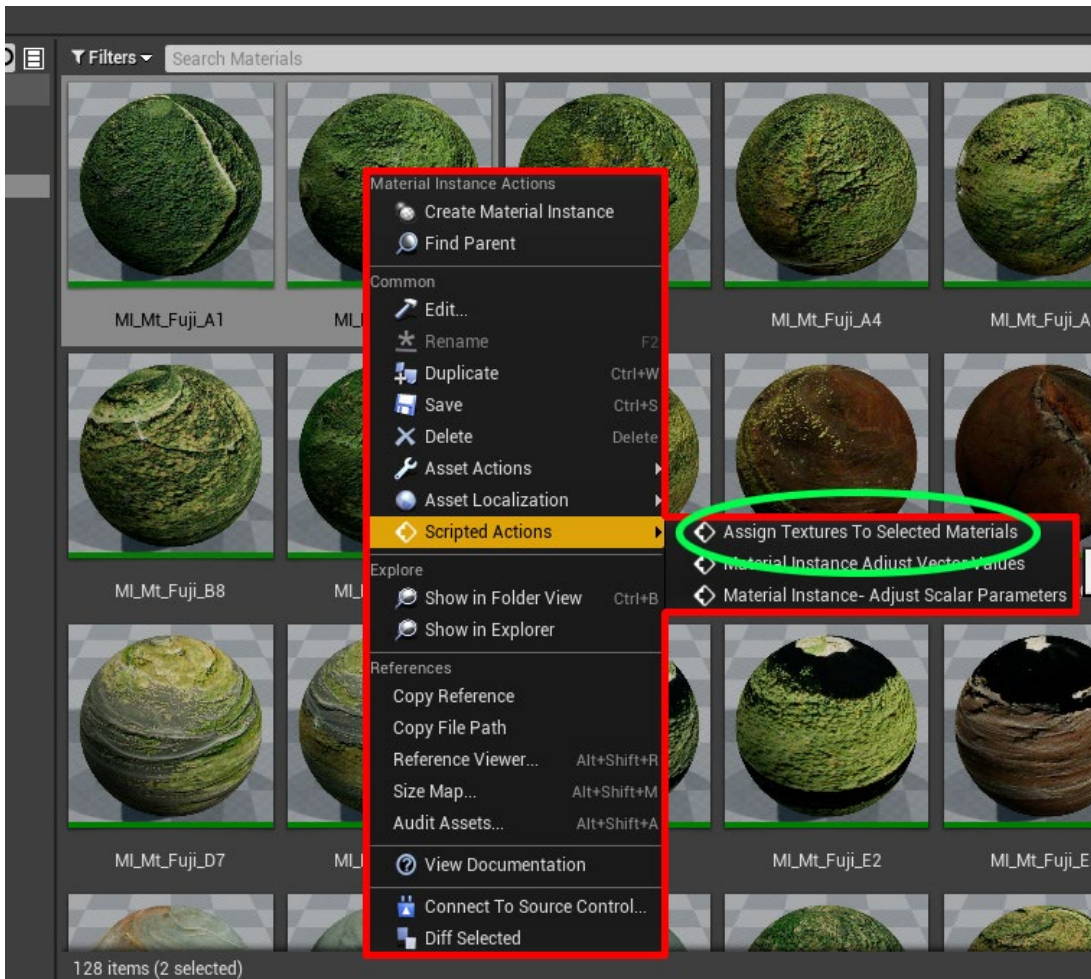


BPU_AssignTexturesToSelectedInstancedMaterials:

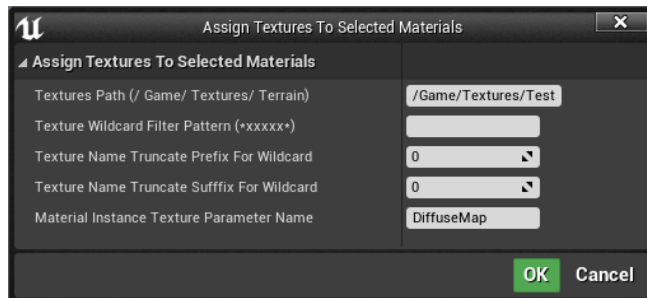
Ok, this one can seem a bit daunting at first but it's worth it.

Assigns textures from a given Editor location to selected **Material Instance Texture Parameters** based on naming convention. Can seem a bit tricky at first, but assuming your texture and your material Instance share a common element in their names, it automates the process of placing/replacing textures into a whole bunch of Material Instances. Note: You can use the renaming Blutility to create proper names for the textures (or material Instances) to work with this script.

First, Select a bunch (or one) Material Instances which need to have textures placed/replaced in a common Texture Parameter. Then Right Click on the selected material Instances and choose “Scripted Actions” from the pop up menu and then choose “Assign Textures To Selected Materials”.



For Example, you want to replace the Diffuse Texture in each material Instance with a new Texture that has been imported into an Editor Content directory. Perhaps changing the Materials to look like winter instead of summer. You created a new diffuse texture for this but you don’t want to have to open each material Instance and drag the new texture into the slot. In this case, maybe the Winter textures have the name “Winter” in them to distinguish them from the “Summer” textures currently being used. E.g. textures named “T_MtFuji_A1”, “T_MtFuji_A2”,... replaced with “T_MtFuji_Winter_A1”, “T_MtFuji_Winter_A2”,.....
When you execute the scripted utility blueprint you’ll see this box:



“Textures Path”: A local path to a Content folder that contains all the textures you want to place into the selected Material Instances. This folder might be called “Textures”. It can contain other textures as well. They can be filtered with the next option using a Wildcard Pattern. You must enter the path precisely or it won’t work. Commonly, the typical UE4 “Content” folder is typed in as: “/Game/” without the quotes as you see in the default text in the field. Subsequent sub-folders are all entered preceded by a forward slash “/”, again without quotes as in the default text. Do not enter a forward slash at the very end.

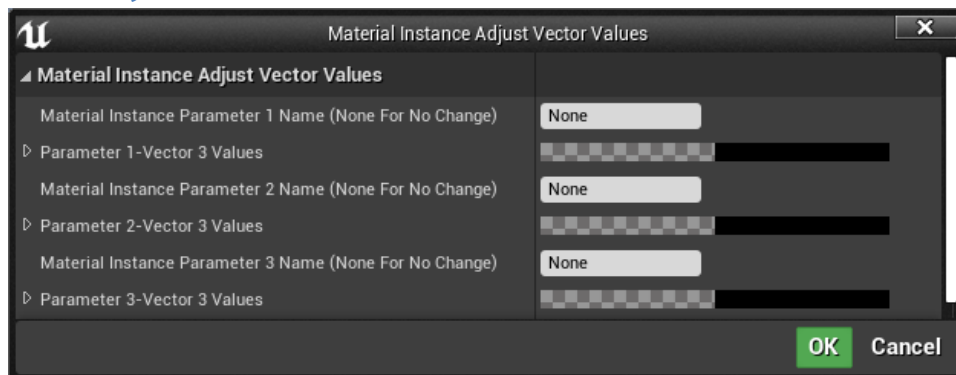
“Texture Wildcard Filter Pattern (*xxxxx*)”: This is how you distinguish the textures you are planning to use from any other textures in the same folder. They will need to have a distinguishing naming pattern. In our example it would be “Winter” as the element of the name that distinguishes the replacement textures from the originals. Otherwise, the names are identical. The proper entry to filter just these textures would be *Winter*. The asterisks are the wildcard indicator to UE4 and must be entered along with the unique name element common to all the textures you want to use.

“Texture Name Truncate Prefix For Wildcard”: Now we need to associate each texture with the proper Material Instance. This is also done by naming convention. We will take the full name of the texture and turn it into a wildcard pattern to match up with the appropriate material name. In our example, each texture has a base name of “T_MtFuji_Winter_” followed by a unique identifier “A1”, “A2”, “A3”, etc. This unique identifier is also common to the Material Instance Name e.g. “MI_MtFuji_A1”, “MI_MtFuji_A2”, etc. If we eliminate that part of the texture name that is always the same as the material’s name and leave just the unique identifier common to each, the proper texture will go with the proper material. By truncating the texture name 16 spaces, we now have a wildcard pattern. The utility will now parse through each material’s name and look for this pattern to match. So “T_MtFuji_Winter_A1” becomes “A1” as the Texture Name Wildcard. Only a selected material with “A1” in its name will get this particular texture assigned. The texture named “T_MtFuji_Winter_A2” will follow, looking for a material with “A2” in its name and that’s where the texture will be placed. This repeats for all the selected materials, searching through the filtered textures in the designated folder.

“Texture Name Truncate Suffix For Wildcard”: See the previous description, but perhaps the unique portion of the texture name is near the beginning rather than the end. Then you will need to truncate from the end. A combination of prefix and suffix truncation can be used to narrow the name down to the proper wildcard pattern in each texture.

Material Instance Texture Parameter Name: Enter in the PRECISE name of the Texture Parameter you are filling with the textures. This can be any exposed Texture Parameter like Diffuse, Roughness, Normal. Any texture parameter you have created in your Master Material and given a unique name.

BPU_AdjustMaterialInstance-VectorParameter



Select a group of Material Instances that share a common Vector Parameter you wish to adjust across all of them.

Enter the Name of the Material Instance Vector Parameter you wish to adjust, common to all the selected Material Instances.

Enter the new vector parameter.

You can adjust up to 3 different vector parameters common to each material with each run of the utility.

Note: Even parameters that are disabled by default in the Material Instance can be adjusted and will subsequently be enabled.

BPU_AdjustMaterialInstance-ScalarParameter

Material Instance- Adjust Scalar Parameters	
Material Instance Parameter 1 Name (Leave Blank For No Change)	None
Parameter 1 -Value	0.0
Material Instance Parameter 2 Name (Leave Blank For No Change)	None
Parameter 2 -Value	0.0
Material Instance Parameter 3 Name (Leave Blank For No Change)	None
Parameter 3 -Value 3 Values	0.0

OK Cancel

Similar to the Adjust Vector Parameters utility above, this will allow you to adjust Scalar values common to each selected Material Instance.

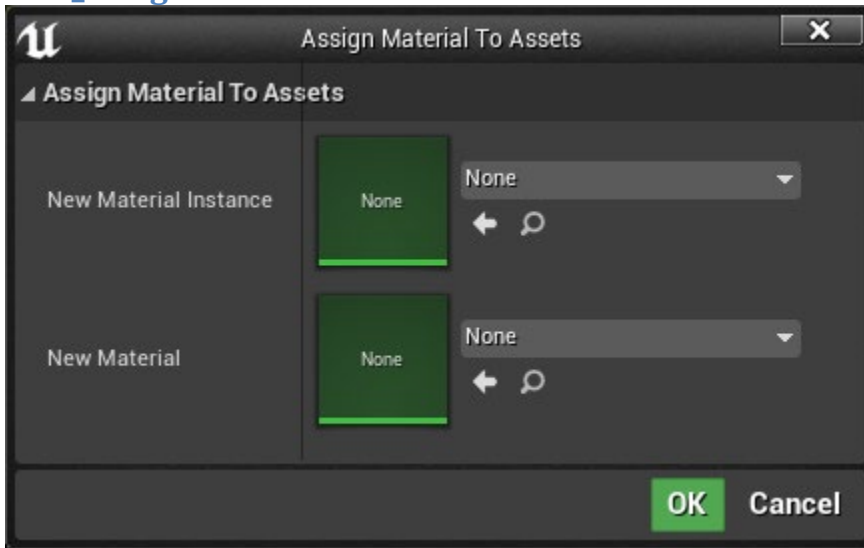
Enter the Name of the Material Instance Scalar Parameter you wish to adjust, common to all the selected Material Instances.

Enter the new scalar value.

You can adjust up to 3 different scalar parameters common to each material with each run of the utility.

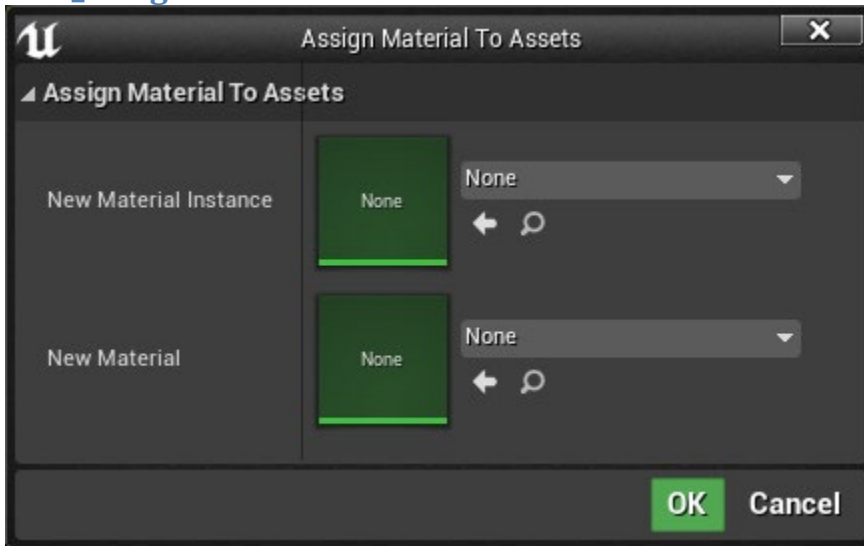
Note: Even parameters that are disabled by default in the Material Instance can be adjusted and will subsequently be enabled.

BPU_AssignMaterialToASSETS:



Assigns a common Material or Material Instance to a selection of Static Mesh **Assets** in the Content Browser. Right-Click a selection of assets in THE CONTENT BROWSER and choose this scripted action. Note the difference between this and the action below.

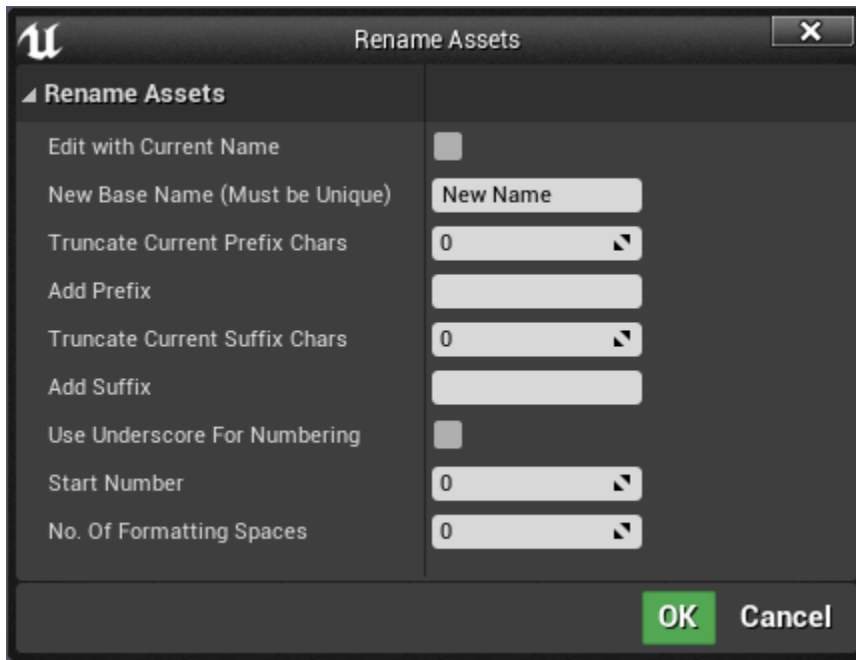
BPU_AssignMaterialToACTORS:



Assigns a common Material or Material Instance to a selection of Static Mesh **Actors** in you're the World Outliner/Viewport. Right-Click a selection of assets in the WORLD OUTLINER or VIEWPORT and choose this scripted action. Note the difference between this and the action above.

BPU_Rename Assets:

Warning – Renaming Assets can create naming conflicts that lead to instability in the Editor and your file. It's a good idea to Save Your Scene before starting to rename assets. That way, you can return to this state if something goes wrong. But be aware of Autosave, which might not be your best friend as you work on renaming since Autosave might be saving your scene when it might have already become unstable.



“Edit with Current Name”: Check this box to do simple editing of the existing name. For example, changing the prefix and/or suffix (truncate current and add new). *But be careful!* If the truncation will create names that are identical then only the first rename will work. The rest will error out saying an asset already exists with that name. For Example: Selected Assets named “XXX_A1”, “XXX_A2”, “XXX_A3” are renamed using “Truncate Current Suffix Chars” = 1. Asset “XXX_A1” will be renamed to “XXX_A” but assets “XXX_A2” and “XXX_A3” will each fail because they would be renamed also to “XXX_A” and that name is now taken. Incremental Numbering is not available when renaming with the existing name. If you wish to add a numerical suffix or prefix, then use the Prefix/Suffix options to append the existing name.

If unchecked, enter a brand new name. Note this new name must be unique. If you are renaming more than one asset and use a name that already exists, Unreal will ADD a number at the end of the name, starting with 0. For Example, with “Edit with Current Name” UNCHECKED, you select assets “XXX_A1”, “XXX_A2”, “XXX_A3” and for your new Base Name you choose “XXX_A1”. Once processed, there will be no error and you will now have the three assets named “XXX_A10”, “XXX_A11”, “XXX_A12” with Redirectors to the old names. **Warning**: Trying to rename back to the old names will typically result in instability forcing you to exit the Editor without saving the renamed assets. When you open your project back up you might find those assets are **completely gone**. But I have had luck on occasion by “Fixing Up” the new Redirectors and then trying the rename process again. However, this does not always work. You’ve been warned.

“Truncate Current Prefix Chars”: Remove this many characters from the beginning of the name of all the selected assets.

“Add Prefix”: Add a common prefix to the names of all the selected assets. Note, this occurs After any truncation in the step above.

“Truncate Current Suffix Chars”: Remove this many characters from the end of the name of all the selected assets. This includes any sequential numbering characters.

“Add Suffix”: Add a common suffix to the end of the names of all the selected assets. Note, this occurs After any truncation in the step above. Numbering will occur automatically. See the next steps for sequential numbering controls.

“Add Underscore For Numbering”: Adds an underscore (“_”) character after the name but before any sequential numbering.

“Start Number”: Works in conjunction with “No. Of Formatting Spaces” (see below). The start number for any sequential numbering you wish to add. For Example, you have assets “XXXX_001” – “XXXX_035” already in the folder but have imported new assets and you want the names to start at Number “36”. You would choose “No. Of Formatting Spaces” = 3 and “Start Number” = 36 to continue the sequence.

“No. Of Formatting Spaces”: You can include up to 4 spaces for numbering purposes. For Example, “XXXXXX_0001” would be 4 spaces starting with Number 1. Or, if “No. OF Formatting Spaces” = 1, then numbering would occupy a single space, “1” after the name (or underscore) such as “XXXXXX_1”.