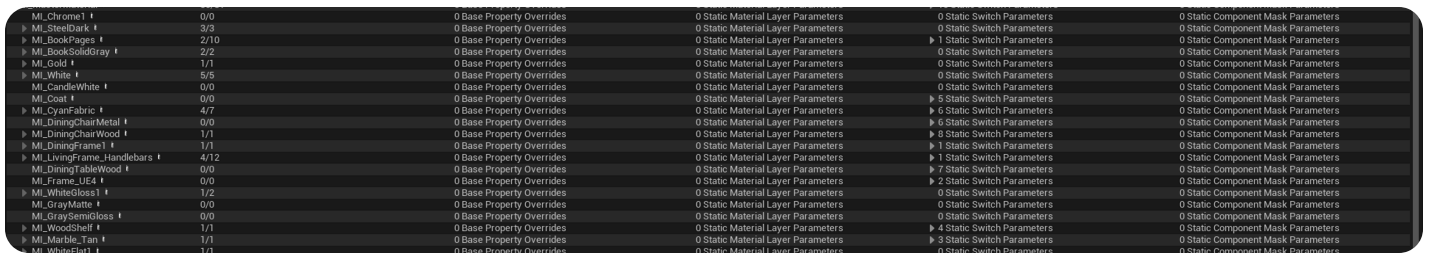


Material Analyzer

This page describes how to locate and use the Material Analyzer tool.

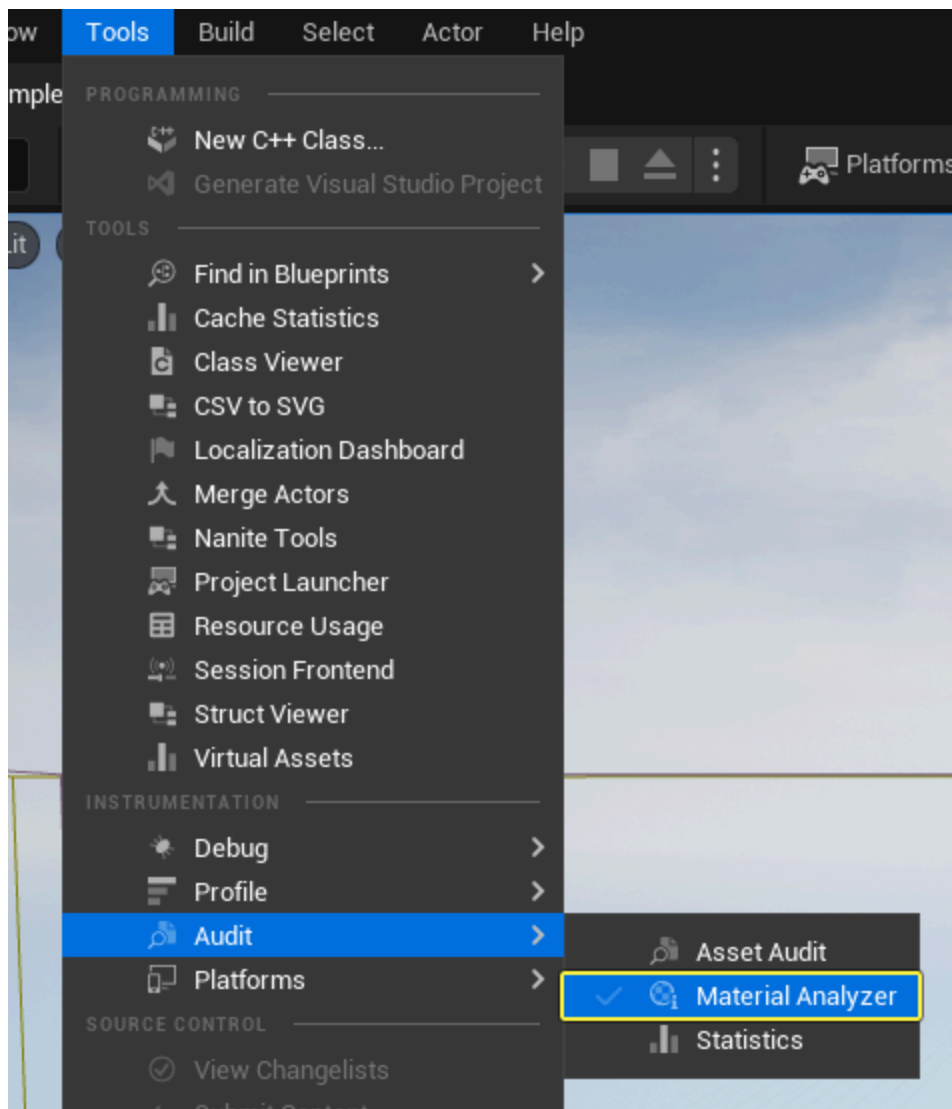


MI_Chrome1	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_SteelBlank	3/3	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_BookPages	2/10	0 Base Property Overrides	0 Static Material Layer Parameters	1 Static Switch Parameters	0 Static Component Mask Parameters
MI_BookSolidGray	2/2	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_Gold	1/1	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_White	8/5	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_CandleWhite	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_Coat	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	5 Static Switch Parameters	0 Static Component Mask Parameters
MI_CyanFabric	4/7	0 Base Property Overrides	0 Static Material Layer Parameters	6 Static Switch Parameters	0 Static Component Mask Parameters
MI_DiningChairMetal	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	6 Static Switch Parameters	0 Static Component Mask Parameters
MI_DiningChairWood	1/1	0 Base Property Overrides	0 Static Material Layer Parameters	8 Static Switch Parameters	0 Static Component Mask Parameters
MI_DiningFrame	1/1	0 Base Property Overrides	0 Static Material Layer Parameters	1 Static Switch Parameters	0 Static Component Mask Parameters
MI_LivingFrame_Handlebars	4/12	0 Base Property Overrides	0 Static Material Layer Parameters	1 Static Switch Parameters	0 Static Component Mask Parameters
MI_DiningTableWood	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	7 Static Switch Parameters	0 Static Component Mask Parameters
MI_Frame_UE4	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	2 Static Switch Parameters	0 Static Component Mask Parameters
MI_WhiteGloss1	1/2	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_GrayMatte	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_GraySemiGloss	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters
MI_WoodShelf	1/1	0 Base Property Overrides	0 Static Material Layer Parameters	4 Static Switch Parameters	0 Static Component Mask Parameters
MI_Marble_Tan	1/1	0 Base Property Overrides	0 Static Material Layer Parameters	3 Static Switch Parameters	0 Static Component Mask Parameters
MI_WhiteShelf	1/1	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters	0 Static Component Mask Parameters

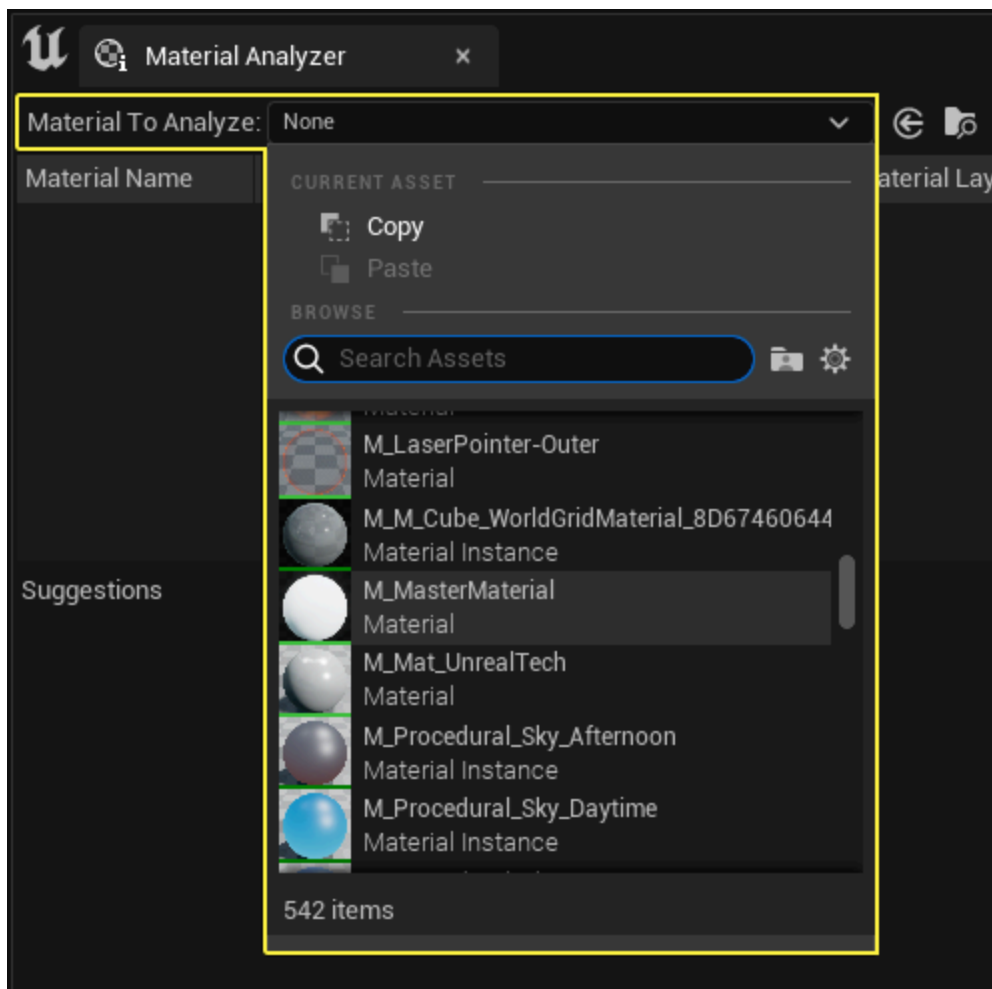
The **Material Analyzer** is a developer tool that helps you identify and analyze all Materials, or [Material instances](#), in your project. This enables you to make changes that can provide savings in shader permutations and data storage. When you select a Material or Material instance to analyze, the tool will find all descendants of that Material (or all descendants of the Material instance's parent Material). The tool also identifies all of the base property overrides, static switches, and static component mask parameters.

Opening the Material Analyzer

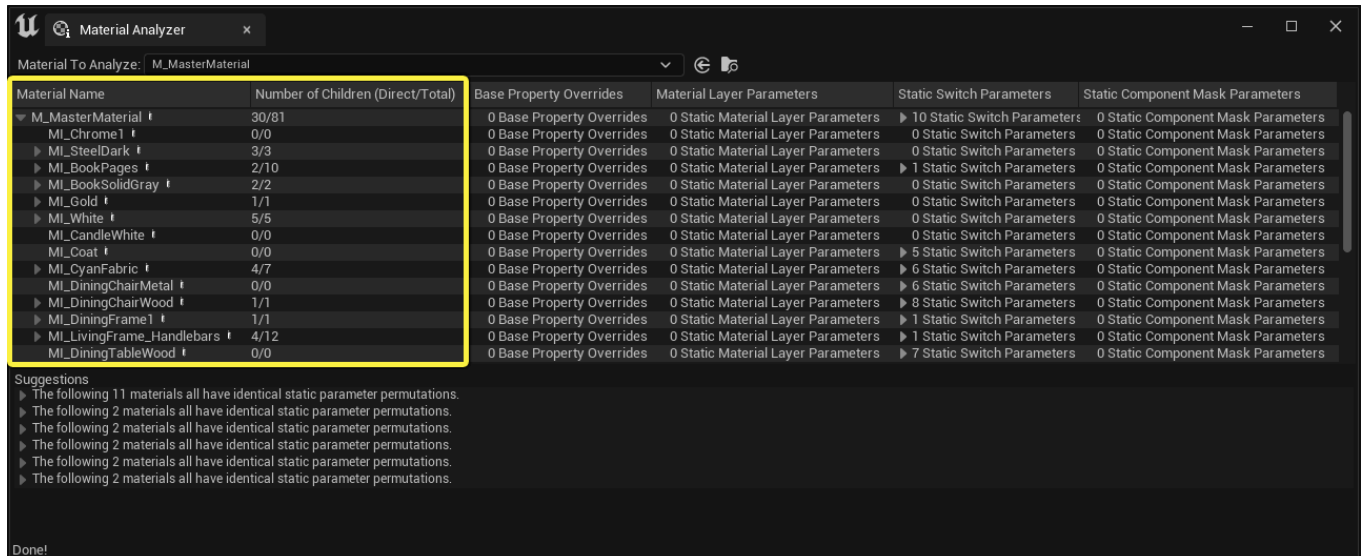
1. In the menu bar, click **Tools > Audit > Material Analyzer**. The **Material Analyzer** window opens.



2. Click the dropdown menu next to **Material to Analyze**. Use the list or search bar to select the Material or Material instance you want to analyze.



3. The Material Analyzer tool displays a list of all instances of the Material you selected.



Viewing the Suggestion List

Below the Material instance hierarchy is a suggestion list. The suggestion list groups all Material instances with the same set of static overrides. You can click the arrow next to each line to see the specific instances identified.

The screenshot shows the 'Material Analyzer' window. At the top, there's a search bar with 'M_MasterMaterial' entered. Below it is a table with the following columns: 'Material Name', 'Number of Children (Direct/Total)', 'Base Property Overrides', 'Material Layer Parameters', and 'Static Switch Parameters'. The table lists several material instances, including 'M_MasterMaterial', 'MI_Chrome1', 'MI_SteelDark', 'MI_BookPages', 'MI_BookSolidGray', 'MI_Gold', 'MI_White', and 'MI_CandleWhite'. Below the table, there is a 'Suggestions' section with a yellow border. It contains six suggestions, each starting with a right-pointing arrow and stating that a group of materials has identical static parameter permutations. The suggestions are: 'The following 11 materials all have identical static parameter permutations.', 'The following 2 materials all have identical static parameter permutations.', 'The following 2 materials all have identical static parameter permutations.', 'The following 2 materials all have identical static parameter permutations.', 'The following 2 materials all have identical static parameter permutations.', and 'The following 2 materials all have identical static parameter permutations.'

Material Name	Number of Children (Direct/Total)	Base Property Overrides	Material Layer Parameters	Static Switch Parameters
▼ M_MasterMaterial	30/81	0 Base Property Overrides	0 Static Material Layer Parameters	▶ 10 Static Switch Parameters
▶ MI_Chrome1	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters
▶ MI_SteelDark	3/3	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters
▶ MI_BookPages	2/10	0 Base Property Overrides	0 Static Material Layer Parameters	▶ 1 Static Switch Parameters
▶ MI_BookSolidGray	2/2	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters
▶ MI_Gold	1/1	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters
▶ MI_White	5/5	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters
▶ MI_CandleWhite	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	0 Static Switch Parameters

Suggestions

- ▶ The following 11 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.

Create a Local Collection

Each suggestion list has a **Create Local Collection** button. Click this button to place all the related instances into a local collection, so you can easily find them and update them to have more efficient parameter setups.

This screenshot shows a close-up of the 'Suggestions' section. It lists the same six suggestions as the previous image. At the bottom of the suggestions list, there is a text area showing the paths for the materials: '/Game/Materials/M_MasterMaterial.M_MasterMaterial' and '/Game/Materials/MI_Brass.MI_Brass'. To the right of the suggestions, there is a yellow button with a plus sign and the text 'Create Local Collection'.

Suggestions

- ▶ The following 11 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.
- ▶ The following 2 materials all have identical static parameter permutations.

It is recommended that you reparent them in a way so only dynamic parameters differ.

/Game/Materials/M_MasterMaterial.M_MasterMaterial
/Game/Materials/MI_Brass.MI_Brass

+ Create Local Collection

Viewing the Static Switch Parameters List

To see the static switch parameters for a Material instance, click the arrow next to the Static Switch Parameters column to display the full list. The columns are resizable, so you can move them if the text is cut off.

MI_Coat	0/0	0 Base Property Overrides	0 Static Material Layer Parameters	▼ 5 Static Switch Parameters UseBaseColorTexture? True UseRoughnessTexture? True UseNormalMapTexture? True UseBaseColorTint? False UseRMA? True
---------	-----	---------------------------	------------------------------------	--

Reparenting Material Instances

You can reparent these Material instances to a new instance that has those same static overrides, so that the reparented Material instances only change their unique overrides. This can provide a savings in shader permutations and data storage. Make sure to remove all the static parameter overrides from the Material instances you have reparented, or else the additional data is still stored.