

Feature Highlights

KeyShot 8 brings usability improvements for increased workflow efficiency, new material types for more ways to visualize your products, powerful new tools that help you spend less time in other applications and more ways to share your scenes.

Feature Categories

- [Material and Volume](#)
- [Lighting and Optics](#)
- [Advanced Geometry](#)
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- [Collaboration](#)

Top Features

- Image Styles
- Cutaway
- Scattering Medium
- Geometry Shaders (**PRO**)
- KeyShot Viewer

Migration Assistant

To improve the upgrade process from KeyShot 7 to KeyShot 8 a new Migration Assistant is activated when a previous installation of KeyShot is found on the computer. The *Migration Assistant* will help you transfer your settings and resources to KeyShot 8. Learn more about the [Migration Assistant](#) in [KeyShot Installation](#).

How it Works

If you have KeyShot 7 installed, after installation of KeyShot 8, the Migration Assistant window will appear with options to migrate Settings, Resources or both. Select the preferred option and select OK, or select Cancel to bypass the migration of any settings or custom resources.

Integrated KeyShot Cloud

[KeyShot Cloud](#) now launches directly in the KeyShot user interface as a dockable window. Additionally, only resources compatible with the version of KeyShot being used are shown. With the latest release of KeyShot Cloud, there are updates that improve login, search, and download across all KeyShot versions. Learn more about all the new updates in the [KeyShot Cloud release notes](#).

How it Works

Select the KeyShot Cloud icon  from the Toolbar or select *Window, Cloud Library...* from the main menu. A new dockable window will appear. The KeyShot Cloud window may be docked to the left or right side of the KeyShot Real-time View.

Material and Volume

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Cutaway

The Cutaway feature in KeyShot 8 allows you to use geometry to cutaway other geometry by assigning the Cutaway material. The Cutaway material allows you to add and define the Cutaway Caps as a shaded color, the same material as the object being cut or a custom material. Learn more about Cutaway [here](#).

How it Works

Select the *Cutaway* as the option from the *Material Type* drop-down. Select the material and the object that should be used to cut.

In the Material Graph, a material node may be connected to the *Caps Material* input (try a Toon material for example). *Show Caps* needs to be checked for the material to be shown.

Show Caps is intended to be used together with fully closed surfaces (solids). Caps may show artifacts with non-closed geometry.

Caps may also show artifacts if two or more objects being cut have co-planar (touching) surfaces.

Scattering Medium & VDB Support

Scattering Medium is a new Material Type in KeyShot 8 that allows you to simulate particle scattering such as smoke and fog. This can be useful for visualizing beams of light. Learn more about Scattering Medium [here](#).

How it Works

Select *Scattering Medium* as the material type for an object. Textures can be assigned to the *Density Texture* in the Textures tab. OpenVDB files can be loaded by selecting *Volume Map* from the *Texture* drop-down or via the Material Graph and applying the *Volume Map* to *Density Texture* on the Scattering Medium material node.

Liquid Interfaces

The approach to rendering liquids has been completely updated to support *nested dielectrics* and make rendering liquids much faster and easier. Previously, separate surfaces for the different liquid-glass and liquid-air interfaces were needed for accurate appearance. Now, separate surfaces for liquid-glass and liquid-air interfaces are no longer required. Learn more about the liquid material [here](#).

How it Works

To take advantage of the new support for nested dielectrics import your model with a single object for the liquid and a single object for the glass. The liquid should slightly overlap the glass for the best results.

Lighting and Optics



Spotlight

Spotlight is a flexible new light source Material Type that allows you to control the *Beam Angle* and assign a *Color Stencil Texture* to simulate a gobo.

How it Works

To use Spotlight, edit a material and change the type to *Spotlight*. The direction of the beam is in the -Y and can be adjusted using the Move Tool.

IES Light Axis Selection

You can now define the IES light direction based on the local axis of the object. This provides a solution that can eliminate the need to rotate light objects in a scene to achieve the desired projection direction.

How it Works

When editing the material properties of an IES light you will now see radio button selections for the different axis.

Multi-Layer Optics

This is a new Material Type for simulating high-end optics elements. It supports an arbitrary number of thin-films on top of a dispersive dielectric or metal.

How it Works

To build a Multi-Layer Optics material from scratch select *Multi-Layer Optics* from the material drop-down menu. If the original material is a dielectric based material (i.e. glass, gem, liquid) this will be set as the substrate. If it is not a dielectric based material click the add layer icon to add a Crown Glass substrate. Click the add layer button again to add thin-film layers. With a layer selected click the add button next to the Layer Material drop-down menu to change the material of the layer and populate the drop-down menu to be able to reuse it again for other layers. The folder button will allow you to import .ior files to use materials other than dielectric as thin-film layers.

Advanced Geometry

KeyShot 8 introduces an entirely new approach to working with geometry in KeyShot. Through the Material Graph, the advance material editor in KeyShot, you now have three new types of geometry nodes (shaders) to modify the geometry of an object with displacement, bubbles or flakes.



Displace (PRO)

Displace is a geometry shader that allows you to modify the polygons of an object through the use of displacement maps (textures). Displacement maps define the topology of a material similar to a bump map but instead of simulating the height of a surface it actually modifies it.

How it Works

In the Material Graph, there is a new section of nodes called *Geometry*. Add a *Displace* node and connect this to the *Geometry* input of the base material node. Assign any texture (procedural or image-based) to the node, adjust height, resolution, offset, or triangle count. A geometry node is not executed until you click the *Execute Geometry Nodes* button on the far right of the Material Graph toolbar or in the material properties window. It may take some time to execute the geometry shaders depending on the complexity. You must press the *Execute Geometry Nodes* button again for adjustments made to the Displace parameters to update.

Flakes (PRO)

Flakes is a geometry shader that modifies the polygons of an object. Flakes allow you to turn any object into a three-dimensional volume of square or spherical flakes.

How it Works

To use Flakes, add the node, select square or spherical flakes and execute. Make adjustments if desired and execute again. The Flake node will randomly add flakes inside the volume of the geometry it is applied to. The geometry is assumed to be closed. The material of the flakes is defined by the material of the object. You will need to duplicate geometry if you want the flakes to be enclosed in an object. A texture can be used to define the density of the flakes.

Bubbles (PRO)

Bubbles is a geometry shader that modifies the polygons of an object. Bubbles will add spherical cavities within an object.

How it Works

To use Bubbles, add the node and execute. Make adjustments if desired and execute again. The bubbles node will randomly add spherical cavities inside the volume of the material of the base geometry. The geometry is assumed to be closed. A texture can be used to define the density of the bubbles.

Image and Output



Image Styles

Image Styles is a new feature that provides the ability to provide photographic adjustments to the KeyShot scene prior to or after rendering. Multiple Image Styles may be created and added to a list for a range of different styles that can be used in KeyShot Studios. The Photographic option includes adjustments for Tone-Mapping, Curve control, Color adjustments, Background color override, and the ability to apply a Frontplate. See [Image Styles](#) for more information.

How it Works

From Project > Image tab, you can find an Image Styles list similar to Cameras and Environments. You can copy an Image Style by clicking on the first button and add a new 'Basic' style. The basic style is similar to the one used in KeyShot 7 and earlier.

The Photographic style allows for additional non-destructive manipulations of the real-time image while also applying a tone-mapping procedure which more accurately emulates how light is transferred to film-cameras and is able to provide a more photographic look. Bright colors will be desaturated and colors do not burn out the same way.

The Photographic style also allows inserting a full-frame Frontplate and overriding the background color with a solid color. This is particularly useful when in need of a pure white background when using the Photographic style.

All changes are non-destructive, i.e. settings can be changed without the render resetting to a noisy image.

Hex Color Codes

When changing colors using the RGB color space, the ability to set colors using RGB Hex codes is now possible. The hex code is a six-digit hexadecimal alpha-numeric code used in HTML, CSS, SVG, and other computing applications to quickly represent colors. Along with this, whenever a Color is applied from the KeyShot Color Library, the corresponding Hex code will appear in the Color Picker. Learn more about the Hex Color Code on the [Color Picker](#) page.

How it Works

The Hex color code can be found in the Color Picker for the RGB color space below the Red, Green, Blue sliders. To apply or change color using the Hex color code, click any *Color* property to activate the *Color Picker*. Ensure *RGB* is selected from the color space drop-down menu.

gITF/GLB Export (PRO)

This new export option provides a way to share your KeyShot scenes to other platforms. Export as GLB can then be posted to your Facebook feed or added to a

PowerPoint presentation on Windows.

How it Works

The File > Export menu now has an option for GLB/GLTF. The format is selected in the native OS save dialog. Textures must be UV mapped to appear correct in the exported file. Basic materials and colors are maintained.

New Scripting Functions (PRO)

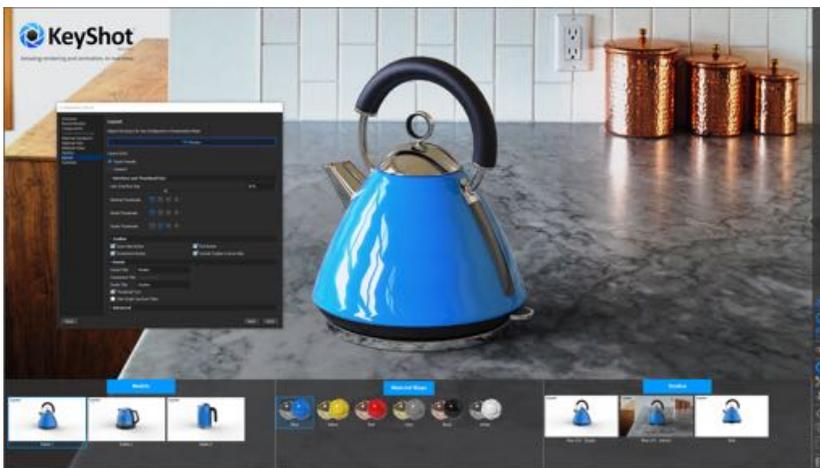
New Scripting Functions include:

- `lux.importFile()` returns a dictionary of added/updated nodes.
- `lux.renderXR()` takes `opts` argument as an instance of `lux.RenderOptions`.
- `lux.getLibraryMaterials()`, `lux.getLibraryEnvironments()`, `lux.getLibraryBackplates()`, `lux.getLibraryTextures()` have the new `filter` argument.
- `lux.getActiveEnvironment()` returns an instance of `lux.Env` that has several functions to manipulate the environment.
- `lux.getRenderLayers()` returns the list of all known render layers in the scene.
- `lux.exportFile()` makes it possible to export scenea to file.
- `lux.SceneNode.setName()`
- `lux.SceneNode.centerAndFit()`
- `lux.SceneNode.snapToGround()`

How it Works

- Get/set multiple model sets at the same time
- Support for renaming nodes via scripting
- Filtering of materials, environments, backplates, textures via scripting
- Unset node's render layer for unspecified or empty name argument
- Create/change render layer for node
- Get render layer of scene node
- Get globally defined render layers
- Scripting checks that max time and send-to-network options cannot be set simultaneously
- Get/manipulate environment: brightness, size, height, rotation, backplate, lighting environment, background color, ground shadows, occlusion ground shadows, ground reflections, flattening of ground, ground size
- Get node transform via scripting
- Fixed dark style and scripting console object name
- Yield exception if trying center-and-fit with locked active camera via scripting

Collaboration



KeyShot Viewer

KeyShot Viewer is a new, feature-rich application to compliment your design review, presentations, and collaboration. With it, you can open, view and interact with a KeyShot scene in real-time using mouse, touch, pen or stylus to explore the scene or change materials and lighting. Learn more in the manual [here](#).

How it Works

After [downloading](#) and installing, KeyShot Viewer can be used to open any KeyShot Package file (.ksp) to interact with the scene. When you move the camera view or make changes the scene will update instantly. Users of KeyShot Pro can use the Configurator to include Studio, Model, and Material variations, which will be available when KeyShot Viewer is in full-screen presentation mode.

Studio Improvements (PRO)

Studios now come with custom thumbnails and provide the ability to re-order the Studios list by drag-and-drop. Studios also have the ability to include Image Styles. See [Studios](#) for more information.

How it Works

Select *Window, Studios...* from the main menu or hit the *U-key* to show the Studios panel. Thumbnails will now be automatically generated when a Studio is created based on what is visible in the real-time view at that time. You can re-render a thumbnail and adjust thumbnail settings in the gear icon menu. To adjust the order of Studios in the list simply drag-and-drop.

Configurator Improvements (PRO)

Updates include:

- Material Ways (To "sync" sub-materials across Multi-materials for concurrent changes).
- Layout page UI update.
- Presentation Mode UI update.
- Interactive Preview mode for adjusting UI.
- Studio creation included in Configurator Wizard.

How it Works

The Configurator Wizard can be accessed from the Ribbon. Learn more about KeyShot Configurator [here](#).