

# Migrating from 20.x to 21.x

The user experience in RfK 21 is very similar to what was available in RfK 20, but there are some changes that are necessary to transition from 20 to 21.

## Reyes/RSL Removal

The Reyes architecture and RSL support have been removed from RenderMan in version 21. RSL removal results in new C++ plugins for [Light](#), [Displacement](#), and [Imager Shaders](#), replaced [Sample and Display Filter](#) plugins.

## Lights

Lights are now C++ plugins. The lights that ship with RenderMan are the same lights used by Pixar Animation Studio. The PRMan GafferThree LightPackage (Add -> PRMan Light) has been replaced with individual light packages for each new light shader. [Mesh Lights](#) also have their own GafferThree light package. Mesh lights in RenderMan 21 must use the [PxrMeshLight](#) shader, in contrast to being able to use any light shader in RenderMan 20.

## Light Filters

The two Light Filters that were shipped with RenderMan 20, PxrBlocker and PxrGobo, have been deprecated in favor of Pixar Animation Studio's Light Filters. Migrating from 20.x to 21.x there are a more powerful versions of the RenderMan 20 Light Filters. The [PrmanLightFilterCreate](#) macro has also been improved. It reads in args files for use with any light filters found on the \$RMAN\_RIXPLUGINPATH and can share light filters between lights. Because it is a macro, it will not receive these changes automatically. You will need to recreate the macro to use the updated version. In Katana 2.2 and newer, you can create light filters directly in GafferThree, so PrmanLightFilterCreate is not necessary.

## PrmanGlobalSettings and PrmanObjectSettings

PrmanGlobalSettings and PrmanObjectSettings have been superceded. This will allow future upgrades to PRMan options and attributes to happen seamlessly under the hood without breaking compatibility.



Some of the parameter types and defaults for the Prman\*Settings nodes have changed in 21, so old nodes will not be compatible with 21 scenes. Existing Prman\*Settings nodes can be converted to the new Statements nodes using the PRMan 21 shelf script: SettingsToStatements.

These new nodes show or hide certain parameters depending on the value of the Parameter Layout parameter. This makes it easier to find certain parameters that are used more frequently. PrmanGlobalStatements has a Quality Preset parameter that sets certain attributes to a non-default value depending on the level of quality selected.

## Environment Variables

The default RfK KATANA\_RESOURCES location has changed in 21. Now the default install location is (Linux): /opt/pixar/RenderManForKatana-21.0-katana2.1/plugins/Resources/PRMan21.

Additionally, it is no longer necessary to set RMAN\_SHADERPATH and/or RMAN\_RIXPLUGINPATH if you don't have any non-default plugins/shaders. RfK will search for plugins and OSL shaders on \$RMANTREE/lib/plugins and \$RMANTREE/lib/shaders by default. If additional search paths are needed then you will need to set up the RMAN\_SHADERPATH and/or RMAN\_RIXPLUGINPATH environment variables to include your specific paths.

As such, the following OSL configuration preprocessor directives are no longer supported:

```
RFK_OSL_ENABLED
RFK_OSLDUMP_RELATIVE_LOCATION
RFK_OSLDUMP_ADDITIONAL_LD_LIBRARY_PATHS
```

Debug environment variables have also been renamed to reflect current product naming:

```
RMS_KATANA_DEBUG is now RFK_DEBUG
RMS_KATANA_REDIRECT is now RFK_REDIRECT_OUTPUT
```