# RenderMan For Katana 22.1


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## Welcome to RenderMan 22.0 for Katana

RenderMan for Katana (RfK) capitalizes on the changes made for newer versions of Katana and continues full support of the latest RenderMan ProServer 22.0.

We're excited to have improved Live Rendering. All manner of changes and edits can be made during a Live Rendering session. Waits are minimal and results are stunning, the renderer will continue to refine your image continuously should you take a coffee break and pick up where you left off on your return. We've worked hard to avoid making the artist restart the render to see updates and stability is improved.

This current release offers support for:

- Katana 2.6
- Katana 3.0
- RenderMan ProServer 22.0

Please see the release notes below for all the new capabilities and known issues!

## What's New

- Improvements to workflow and the Preset Browser should make scene management more intuitive.

## Additional Changes

### Miscellaneous Changes

- PrmanObjectStatements conversion script will now convert legacy "prmanStatements.attributes.shade.shadingrate" to "prmanStatements.primAttributes.dice.micropolygonlength"
- Added support for "hole" tag via "geometry.holePolyIndices" attr in "subdmesh" locations
- Change default for option trace worldorigin to "camera"
- New Preset Browser nodes are now correctly set as editable
- PrmanPresetBrowser can now directly assign assets to selected scenegraph locations. New asset nodes are now combined into a single, floating group for immediate addition to Katana recipe.
- Preset Browser : Imported assets now have a built-in MaterialAssign which can be set or modified via the enclosing Group's CEL statement
- Data window and display window are now supported for DeepEXR outputs
- The "autocrop" option is now available for raw OpenEXR outputs
- The user:maxtextureresolution and user:texturemipbias attributes are now exposed in PrmanObjectStatements
- Materials can be referenced inside procedurals via their scenegraph location
- Live render edits to the rendererProcedural attribute are now supported
- Support relativeScopedCoordinateSystems entries that don't start with '/' (the format produced by PxrUsdIn)

### Fixes

- Adding locations that are children of /root during live render now works
- Fixed bugs in legacy attribute conversion op which could lead to incorrect values
- Preset browser import no longer fails on bad parameter data. Instead a warning will be printed and the parameter will be ignored
- RfK will now correctly terminate the render on error locations
- Muting the parent of a light filter now correctly mutes all light filter references
- Single-element instance array primvars are now handled correctly
- Fix crash in Viewer and Hydra Viewer when muting a light with a light filter reference that has "Lock Size to Cone Angle" enabled
- RfK will now correctly terminate the render on error locations
- Adding and removing portal lights from a dome during a live render is now correctly handled

## Known Limitations

### Live Rendering

- Creating a mesh light from existing geometry will duplicate the geometry in-render. Restart the render to remove the duplicate.
- Cannot change a geometry primitive type during live rendering (e.g. from NURBS to polymesh)
- Edits to mesh light parameters require that the geometry location is enabled in the live render working set
- When assigning a material to a Scene Graph location, that location must be enabled in the live render working set
- Cannot create new volumes or enable existing-but-disabled volumes during live rendering.

### Katana Limitation

- When rendering to "it" from Katana, do not stop the render from "it", abort the render from Katana. Your Katana session may freeze for a time if you abort from "it". If you make this mistake you can restore Katana to operation by terminating the prman render process manually. This will be fixed in a future version. You can also avoid this entirely by rendering to the Katana Monitor.
- Light Linking volumes is not currently supported
- We do not receive live render edits from Katana for nodes added at the end of the node graph, right above the Render node. If a no-op node (e.g. Merge) is inserted above the Render node and the node is added above that then the edit is received.
- Any live updates will cause interactive motion blur to be disabled. The render must be restarted.
- PRMan error handlers are not fully supported yet.
- Instanced lights with filters using the "Light Filter" coordsys have an incorrect transform. The workaround is to promote the light filter to a shared light filter using a light filter reference.
- There are a few live render limitations in Katana 2.6 that have been resolved in Katana 3.0 based on the improvements to 3.0, typically limitations with live working sets and adding/deleting locations in 2.6