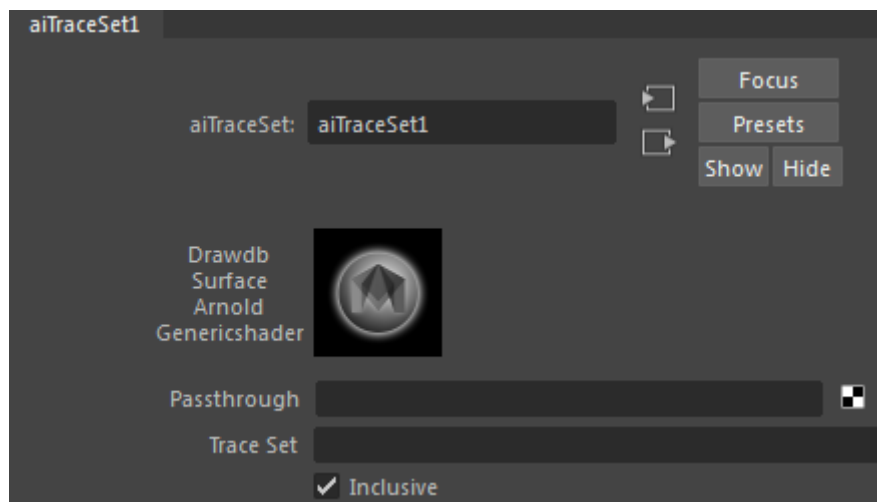


## Trace Set



It is possible to designate objects to be part of one or many trace sets. The `trace_set` shader marks specific rays with an *inclusive* or *exclusive* trace set. Both geometry and rays can be designated as trace sets:

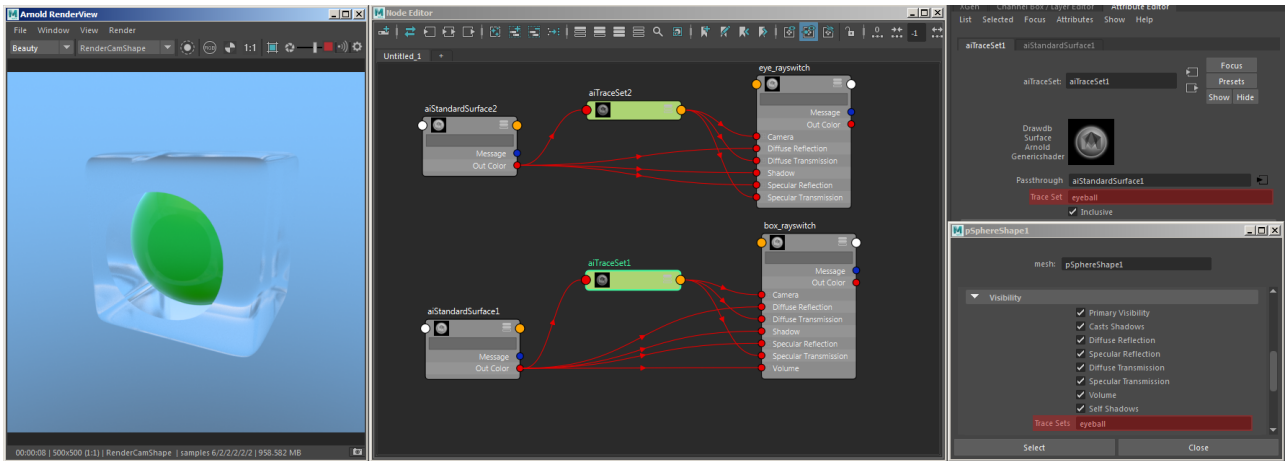
- A piece of geometry can have none or any number of trace sets.
- A ray can optionally have one `trace_set`, and it can be *exclusive* or *inclusive*.

The way those two interact makes it possible to control visibility for specific rays:

- A ray with no `trace_set` will hit all geometry.
- A ray marked with an *inclusive* trace set will only hit geometry that has that `trace_set`.
- A ray marked with an *exclusive* trace set will only see geometry that does NOT have that `trace_set`.



- An empty trace set name means that the shape belongs to all sets. So to remove objects from, say reflections, one must assign a dummy set name.
- The trace set name must be set *before* the ray is fired. For example, for "direct" reflections, the `trace_set` node must be connected to the "camera" rays in addition to the "reflection" one.



'Eyeball' set in Trace Sets of sphere and shader.

**A scene file is available here.**

**i** In the **Arnold Visibility** attributes, it is possible to tag objects to be part of one or many trace sets.

### Passthrough

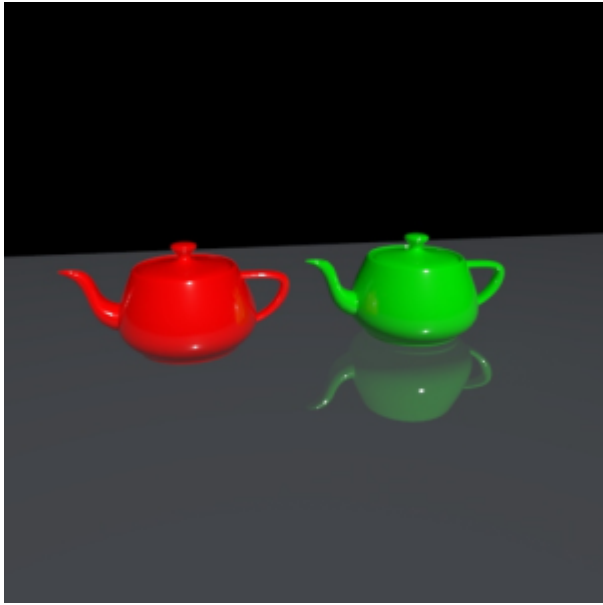
The shader that gets called after setting the label.

### Trace Set

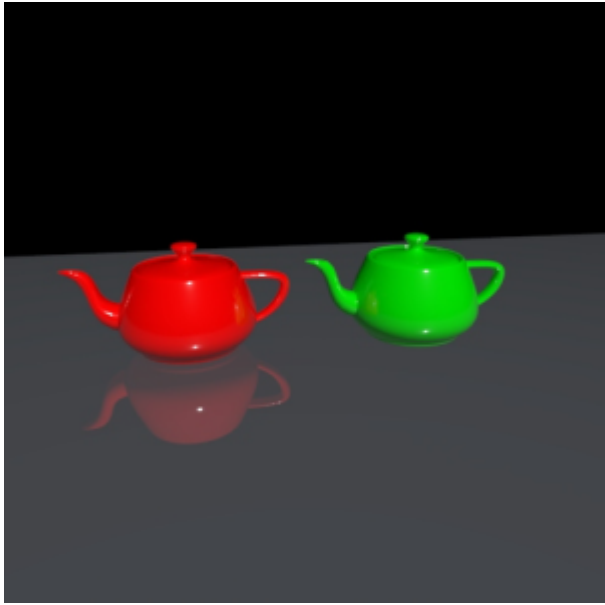
The string label defining the set of objects to be traced or avoided. Objects are labeled using the Arnold Parameters Tag property.

### Inclusive

If on, the tracing works in inclusive mode, else in exclusive, as described above.



enabled (trace\_set: green)



disabled (trace\_set: green)

*trace\_set* assigned to plane