

Snapshot

Prints a snapshot summary of stats on demand or at the end of a render.

Description

A simple listener that writes out a summary of render stats to the console (`stderr`). By default, the summary is written at the completion of the render. The listener can be configured to emit a snapshot during the course of a render by specifying one or more "trigger" events.

Summary stats

- Number of traced rays, rays per second
- Total heap memory
- Max resident memory
- Render time: User/Sys/CPU utilization %

The metrics summarized are not configurable, however, it is possible to include additional metrics in the snapshot using the `regex` configuration rule.

Configuration

Required type for configuring the Snapshot listener from an `ini` file.

`type "snapshot"`

Options

Listener Options	Description	Required?	Default
<code>type</code>	Must be "snapshot"	y	
<code>name</code>	Unique name of the listener	y	""
<code>samplingInterval</code>	Sampling interval in MS for built-in summary stats.	n	1000 (1 second)
<code>triggerEvents</code>	Regular expression of event-based metrics that will trigger a snapshot to be written	n	""
Metric Rules			
<code>regex</code>	Additional metric to include in the snapshot summary	n	""
<code>samplingInterval</code>	Sampling interval in MS for the auxiliary snapshot stats requested in <code>regex</code> param.	n	6000 (1 minute)



To receive triggered snapshots with auxiliary metrics care must be taken to ensure the sampling interval of the auxiliary metrics is less than or equal to the reporting cadence of the trigger event(s). If the snapshot shows missing aux data, try lowering the `samplingInterval` for that metric's rule.

Configuration Example

```
[Listener]
  type "snapshot"
  name "snapshotListener"
  samplingInterval 1000
  triggerEvents "/rman@iterationComplete"
[MetricRules]
[Rule]
  regex "/rman/raytracing.*numRays"
  samplingInterval 1000
```

Output Example

```
-----
Stats Snapshot on: /rman@iterationComplete
-----
Traced 157.487 Mrays at 26.6138 Mrays/sec
Total heap mem: 9567 MB
Max resident mem: 3099 MB
```

Render time stats (hh:mm:ss.mil)

User: 00:04:23.799

System: 00:00:24.30

CPU Util: 7512.41%

/rman/raytracing/indirect.numRays : 53708503
/rman/raytracing/transmission.numRays : 61141185
/rman/raytracing/photon.numRays : 0
/rman/raytracing/camera.numRays : 1587739
/rman/raytracing/light.numRays : 54481746

Stats Snapshot on: /rman/rib@renderEnd

Traced 163.337 Mrays at 25.0636 Mrays/sec

Total heap mem: 9547 MB

Max resident mem: 3126 MB

Render time stats (hh:mm:ss.mil)

User: 00:05:42.820

System: 00:00:24.700

CPU Util: 7892.69%

/rman/raytracing/indirect.numRays : 53836319
/rman/raytracing/transmission.numRays : 61242523
/rman/raytracing/photon.numRays : 0
/rman/raytracing/camera.numRays : 1588397
/rman/raytracing/light.numRays : 54604278
