

Telemetry

Stream metric data to a file and/or to the console.

Description

An advanced "print" listener outputting a CSV report with optional live data streamed to the console.

Configuration

Required type for configuring the Telemetry listener from an ini file.

type "telemetry"

Options

Listener Options	Type	Description	Required?	Default
type	string	Must be "telemetry"	y	
name	string	Unique name of the listener	y	""
outputFilename	string	The filename of the final report.	y	""
streamToConsole	bool	Set true for live streaming of metric values to stdout	n	0
Metric Rules				
regexp	string	One or more metrics to be observed. If this is empty no metrics are reported.	n	""
samplingInterval	integer	Sampling interval in MS for the metrics requested in the preceding regexp param.	n	1000ms

The outputFilename setting can include environment variables which will be expanded when processed by the Listener. Standard environment variable formats are supported, as well as Linux shell variable expansion syntax:

```
$VAR
${VAR}
${VAR:-fallback}
${VAR:=fallback}
```

Configuration Example

Enable streaming telemetry output with final CSV report written to: telemetry_report.csv. Report all of the "numRays" metrics, sampling 4x per second, and report process memory and time once per second.

telemetry_stats.ini

```
[Listener]
  type "telemetry"
  name "telemetryListener"
  outputFilename "telemetry_report.csv"
  streamToConsole 1

[MetricRules]
  # Sample raytracing "numRays" metrics 4x a second
  [Rule]
    regexp "/rman/raytracing.*numRays"
    samplingInterval 250

  # Sample process memory and time once a second
  [Rule]
    regexp "/system.processMemory|/system.processTime"
    samplingInterval 1000
```

Output Example

```
prman -statsconfig telemetry_stats.ini scene.rib
```

```
METRIC {"rman/raytracing.numRays": 123280}
METRIC {"rman/raytracing/camera.numRays": 49536}
METRIC {"rman/raytracing/transmission.numRays": 47213}
METRIC {"rman/raytracing/photon.numRays": 0}
METRIC {"rman/raytracing/light.numRays": 33870}
METRIC {"rman/raytracing/indirect.numRays": 2464}
METRIC {"rman/raytracing.numRays": 3012270}
METRIC {"rman/raytracing/camera.numRays": 255488}
METRIC {"rman/raytracing/transmission.numRays": 1409183}
METRIC {"rman/raytracing/photon.numRays": 0}
METRIC {"rman/raytracing/light.numRays": 1200027}
METRIC {"rman/raytracing/indirect.numRays": 147703}
METRIC {"rman/raytracing.numRays": 9161961}
METRIC {"rman/raytracing/camera.numRays": 857448}
METRIC {"rman/raytracing/transmission.numRays": 4216917}
METRIC {"rman/raytracing/photon.numRays": 0}
METRIC {"rman/raytracing/light.numRays": 3638169}
METRIC {"rman/raytracing/indirect.numRays": 453493}
METRIC {"system.processMemory": [3003166720, 485937152, 486612992]}
METRIC {"system.processTime": [12.66, 0.71, 1331.42]}
METRIC {"rman/raytracing.numRays": 15209955}
METRIC {"rman/raytracing/camera.numRays": 1450911}
METRIC {"rman/raytracing/transmission.numRays": 6969106}
METRIC {"rman/raytracing/photon.numRays": 0}
METRIC {"rman/raytracing/light.numRays": 6035551}
METRIC {"rman/raytracing/indirect.numRays": 754633}
METRIC {"rman/raytracing.numRays": 21381282}
METRIC {"rman/raytracing/camera.numRays": 1818799}
METRIC {"rman/raytracing/transmission.numRays": 9990314}
METRIC {"rman/raytracing/photon.numRays": 0}
METRIC {"rman/raytracing/light.numRays": 8511363}
METRIC {"rman/raytracing/indirect.numRays": 1062842}
METRIC {"rman/raytracing.numRays": 27563680}
METRIC {"rman/raytracing/camera.numRays": 2144142}
METRIC {"rman/raytracing/transmission.numRays": 13056810}
METRIC {"rman/raytracing/photon.numRays": 0}
METRIC {"rman/raytracing/light.numRays": 10987975}
METRIC {"rman/raytracing/indirect.numRays": 1374753}
METRIC {"rman/raytracing.numRays": 33584953}
METRIC {"rman/raytracing/camera.numRays": 2455721}
METRIC {"rman/raytracing/transmission.numRays": 16061479}
METRIC {"rman/raytracing/photon.numRays": 0}
METRIC {"rman/raytracing/light.numRays": 13391247}
METRIC {"rman/raytracing/indirect.numRays": 1676756}
METRIC {"rman/raytracing/light.numRays": 13417487}
METRIC {"system.processTime": [12.66, 0.71, 1331.42]}
METRIC {"system.processMemory": [3003166720, 485937152, 486612992]}
METRIC {"rman/raytracing.numRays": 33623962}
METRIC {"rman/raytracing/indirect.numRays": 1681043}
METRIC {"rman/raytracing/camera.numRays": 2455721}
METRIC {"rman/raytracing/transmission.numRays": 16069711}
METRIC {"rman/raytracing/photon.numRays": 0}
```