

# 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 preceding <code>regexp</code> param.	n	6000 (1 minute)

## Configuration Example

Enable streaming telemetry output with final CSV report written to: `roz_telemetry.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 "roz_telemetry.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}
Roz: TelemetryListener: Writing to : roz_telemetry.csv
[
  {"/rman/raytracing/indirect.numRays": 1681043},
  {"/rman/raytracing.numRays": 33623962},
  {"/rman/raytracing/transmission.numRays": 16069711},
  {"/rman/raytracing/photon.numRays": 0},
  {"/system.processMemory": [3003166720, 485937152, 486612992]},
  {"/rman/raytracing/camera.numRays": 2455721},
  {"/rman/raytracing/light.numRays": 13417487},
  {"/system.processTime": [12.66, 0.71, 1331.42]}
]
```