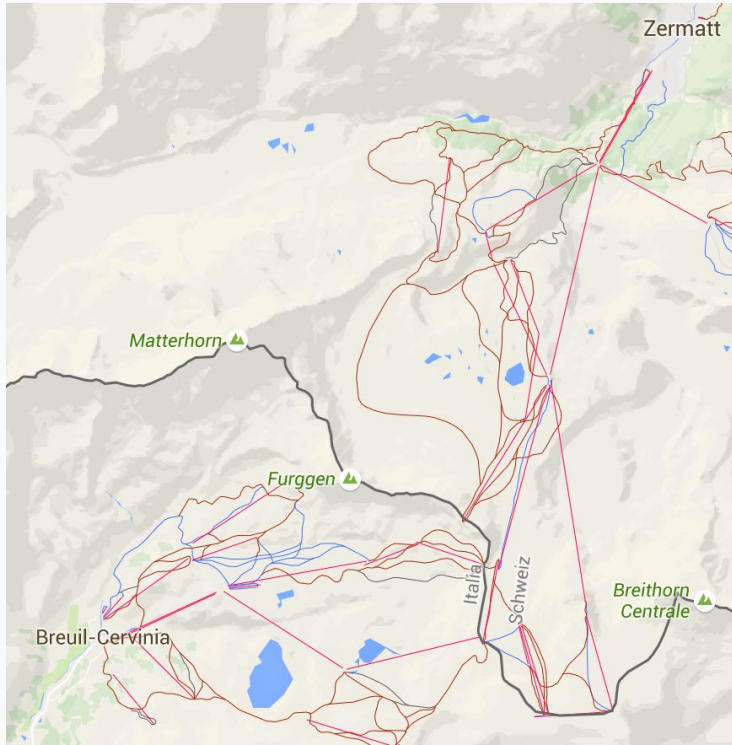


The Many Ways Your Monitoring Is Lying To You

Sebastian Kirsch <skirsch@google.com>
SRECon16 Europe, Dublin, July 11.-13. 2016



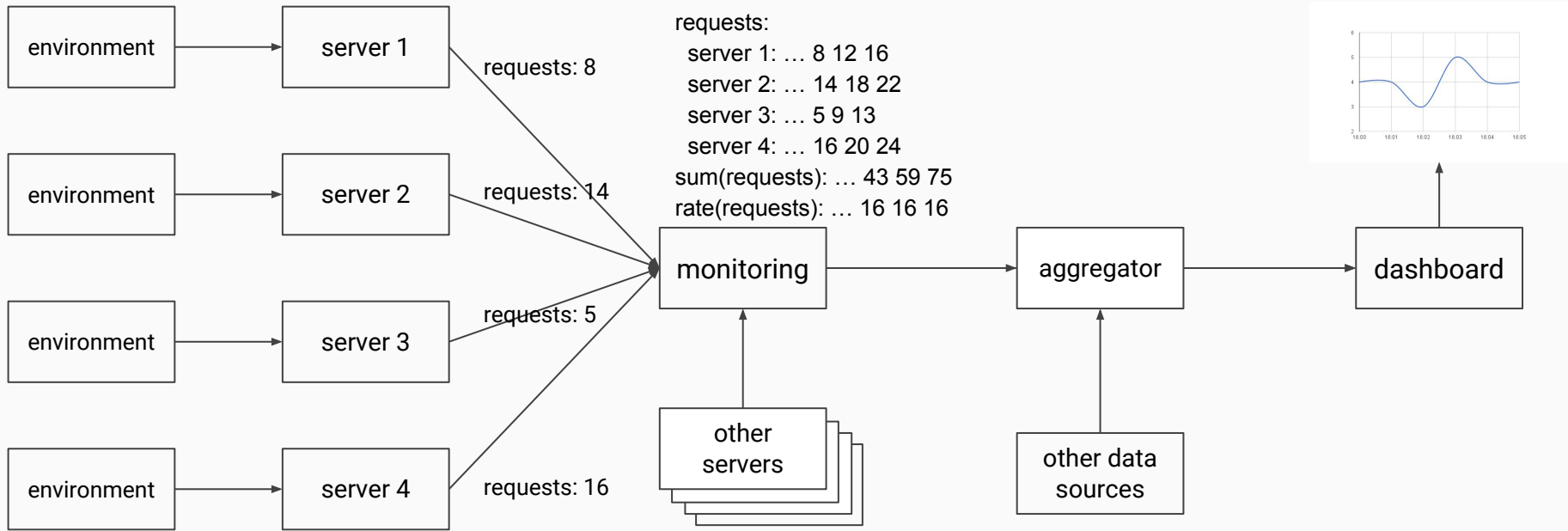
The Map Is Not The Territory



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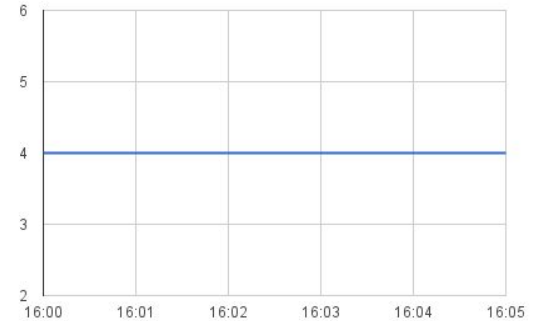
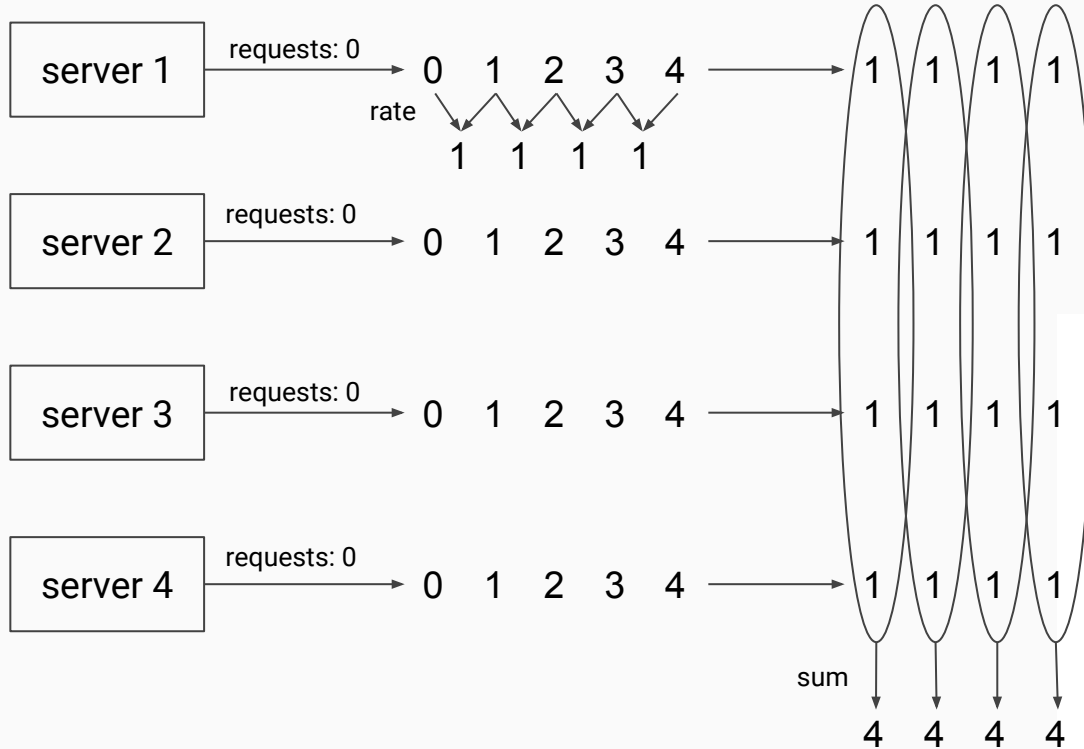


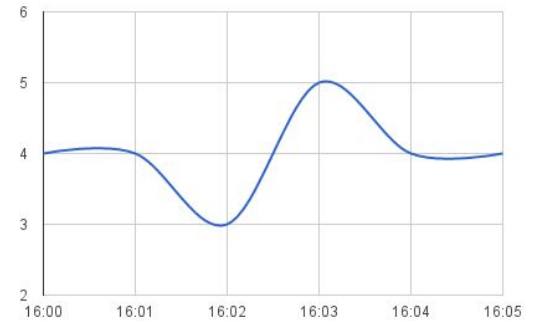
Time-Series Based Monitoring



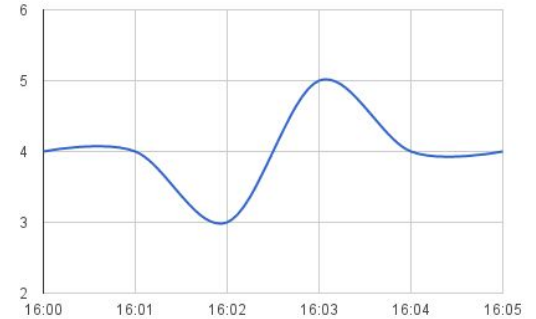
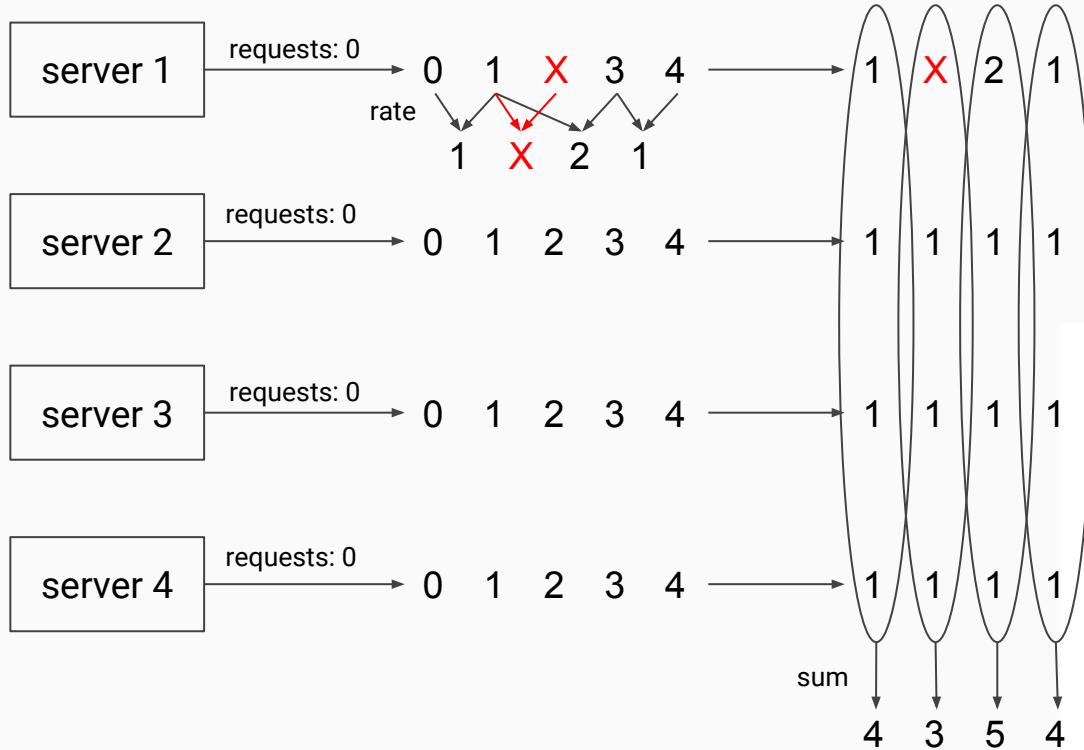
Lies of Omission

`job:request:rate = sum(rate(task:requests:total))`

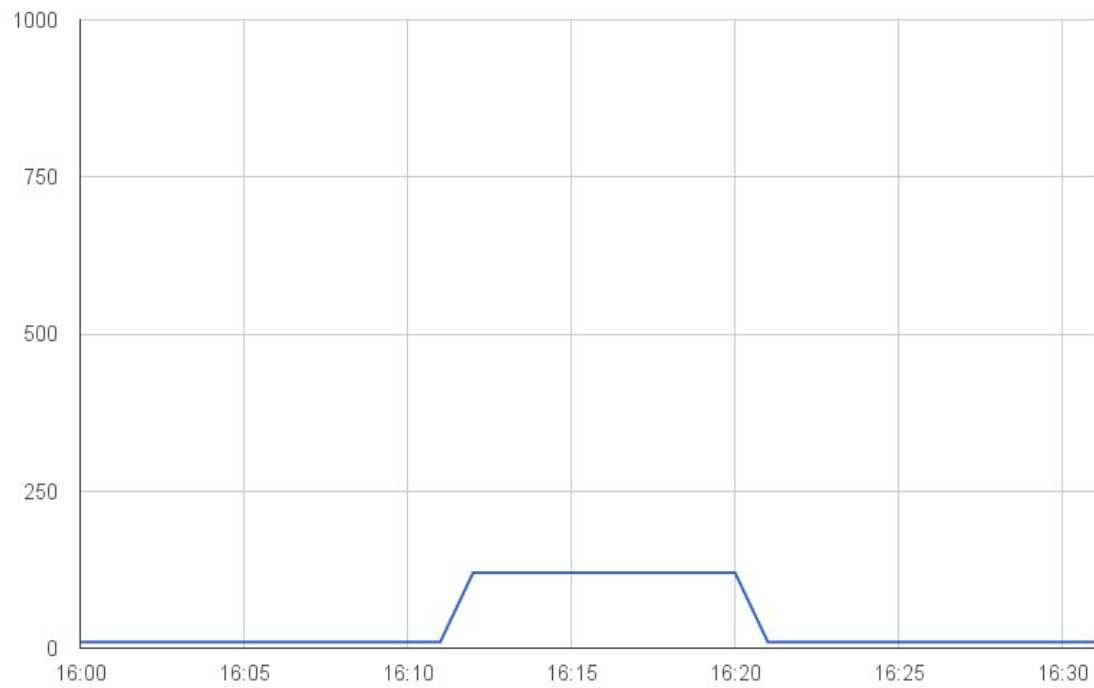


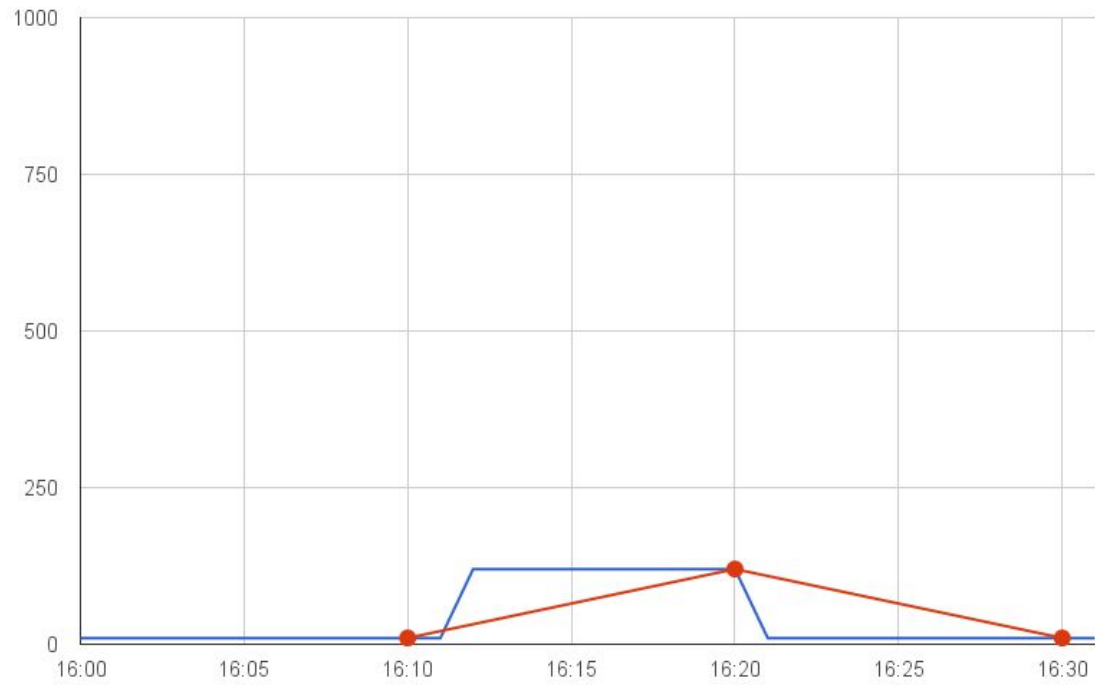


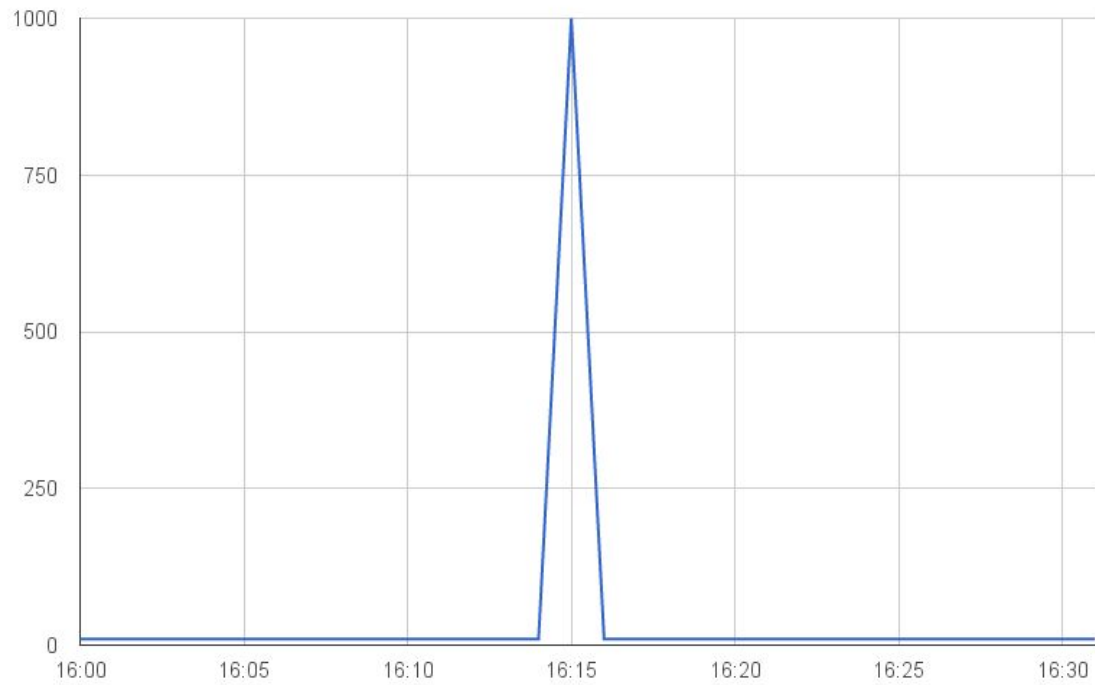
`job:request:rate = sum(rate(task:requests:total))`

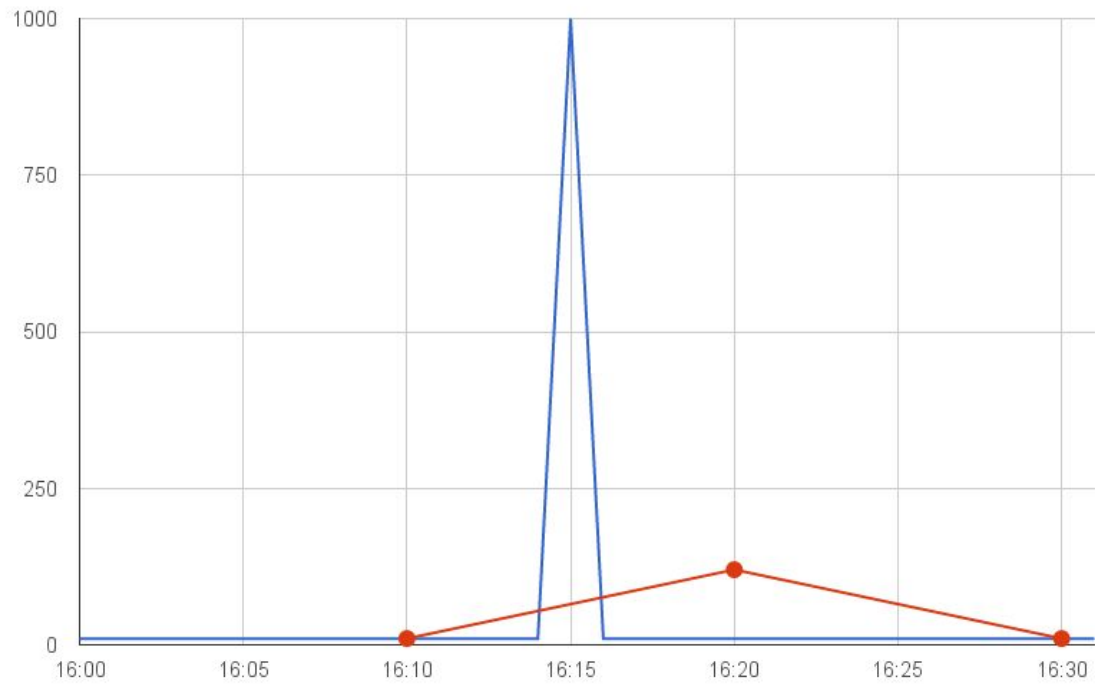


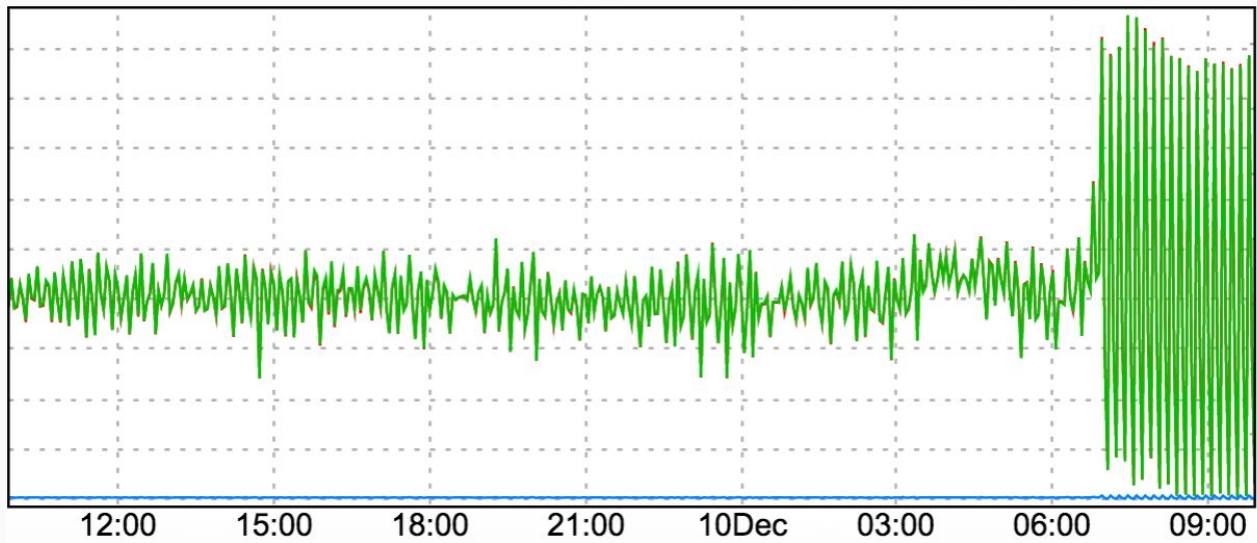
Lies of Granularity



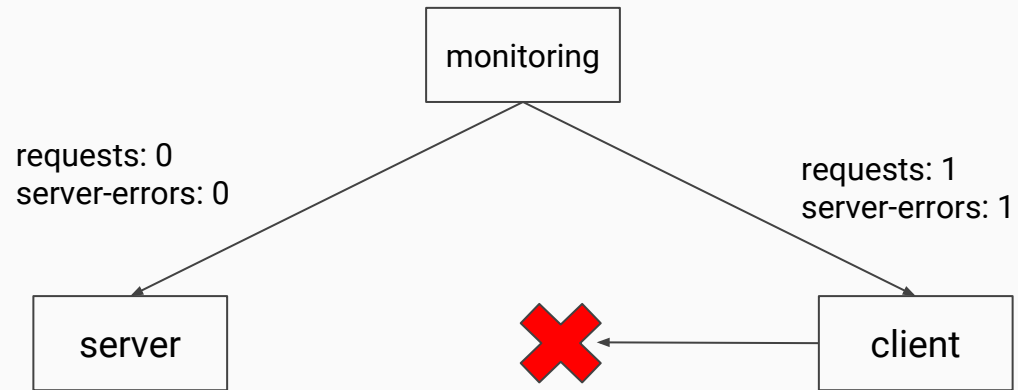


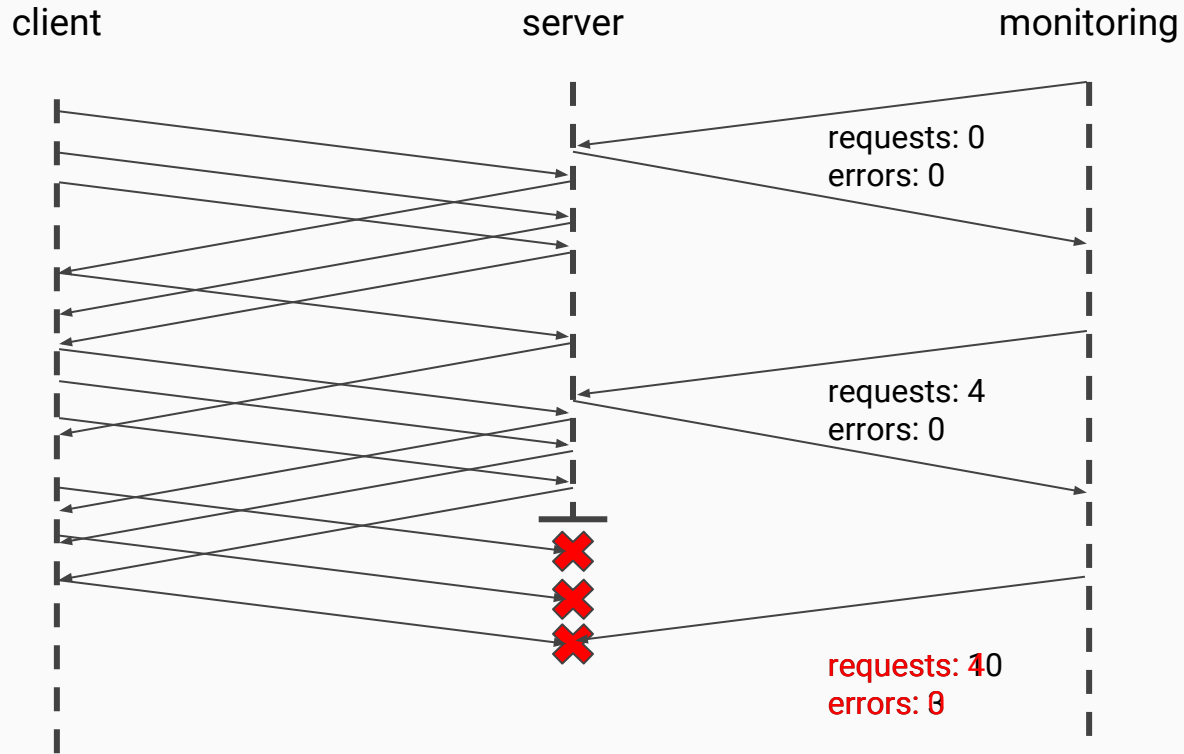






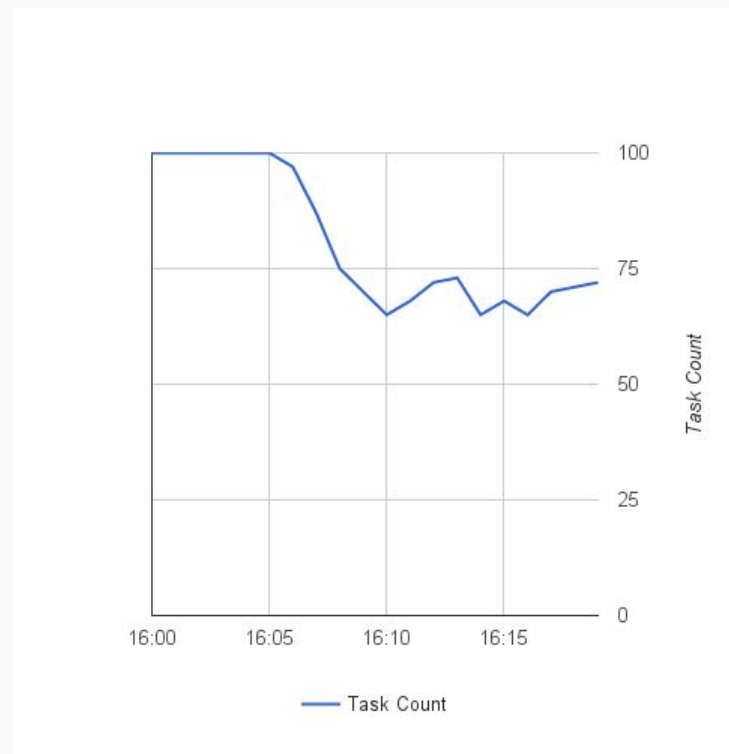
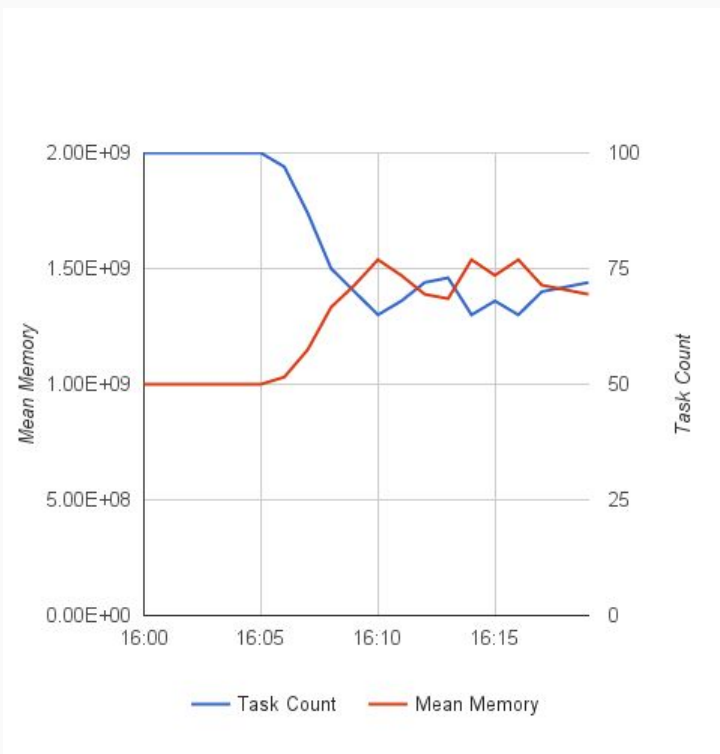
Lies of Perspective



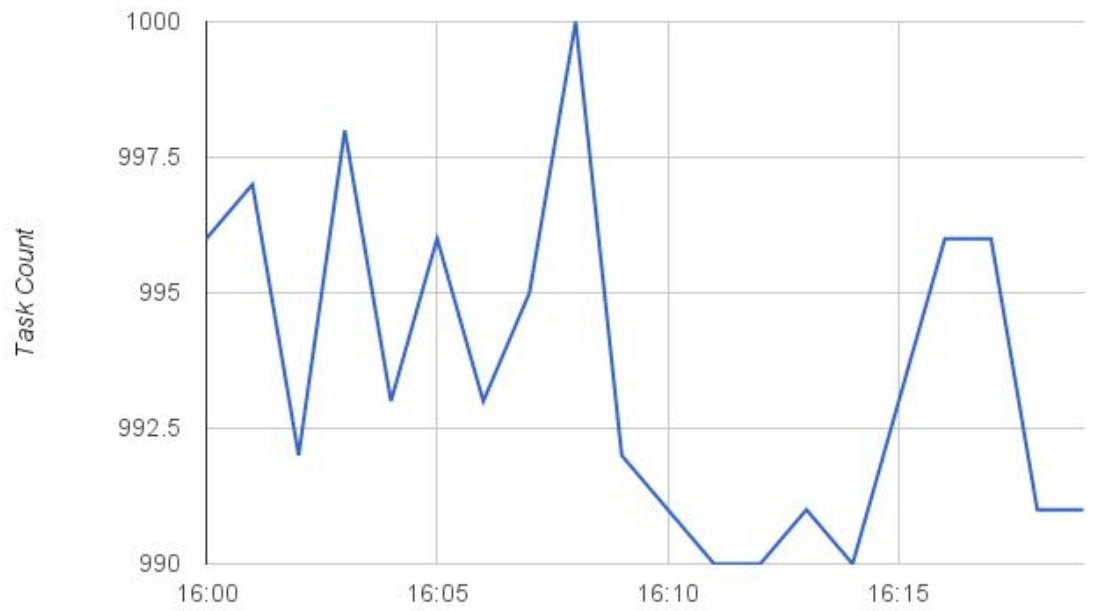


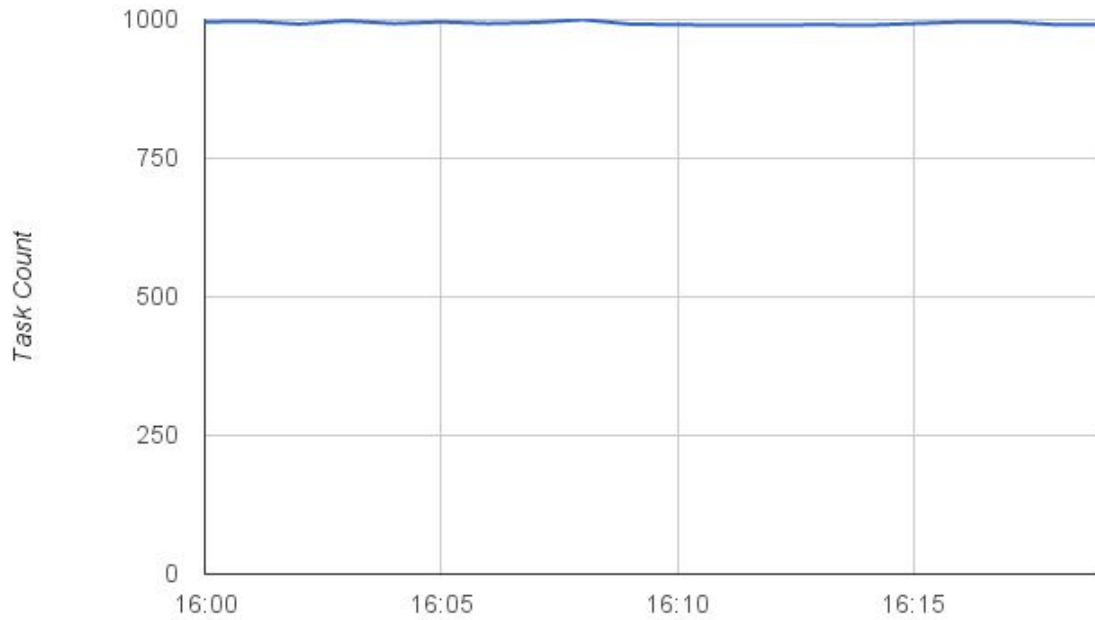
Lying through Alignment

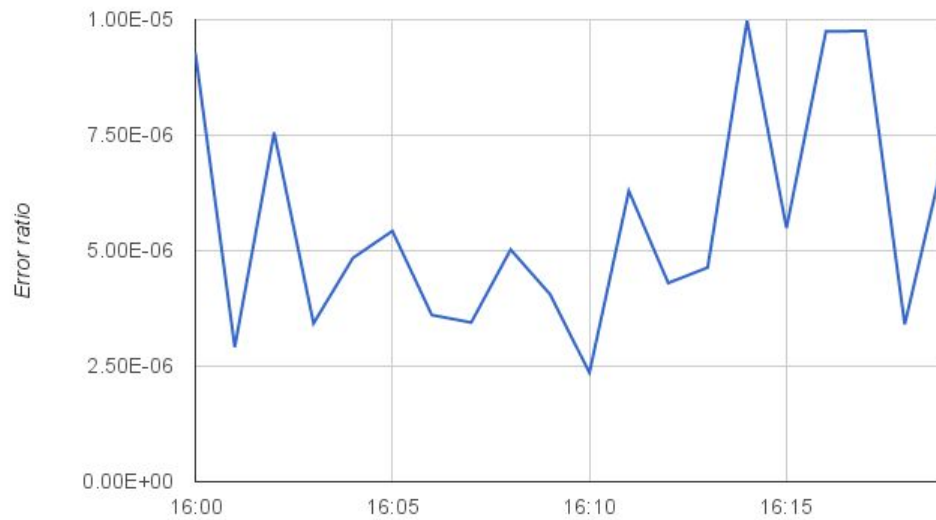
`job:memory:mean = sum(task:memory) / job:num_tasks_up`

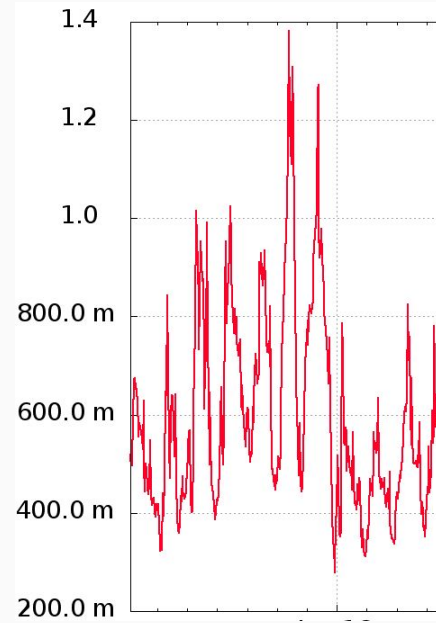
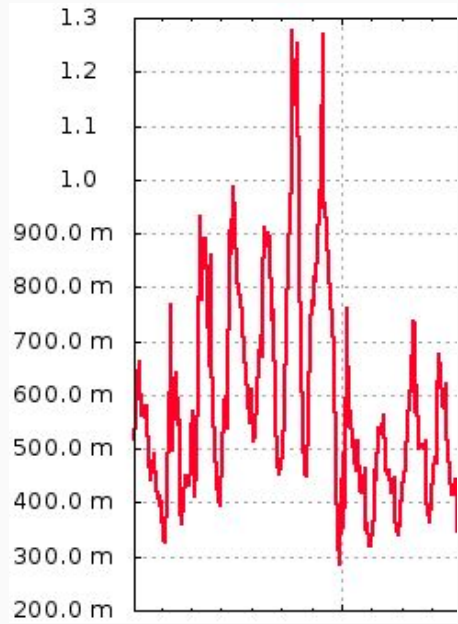


Lies of Presentation



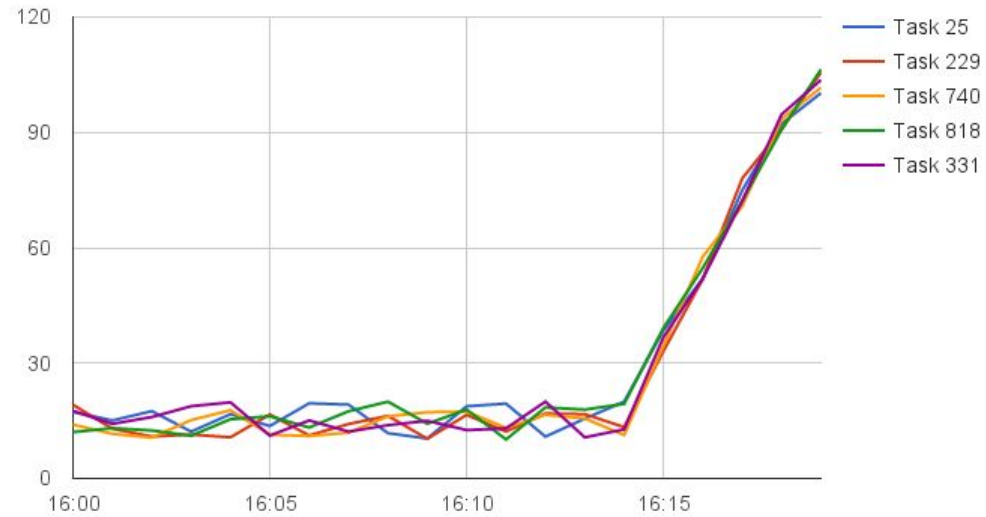






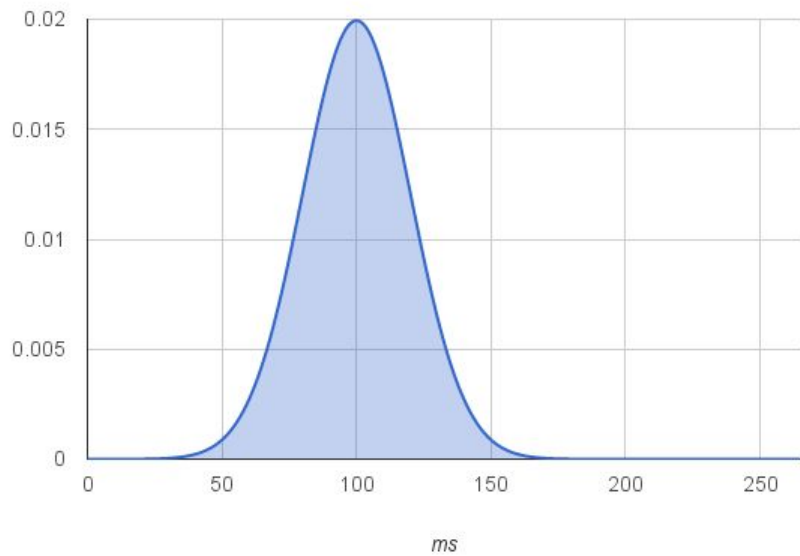
Lying through Selection

top(5, task:errors:rate)

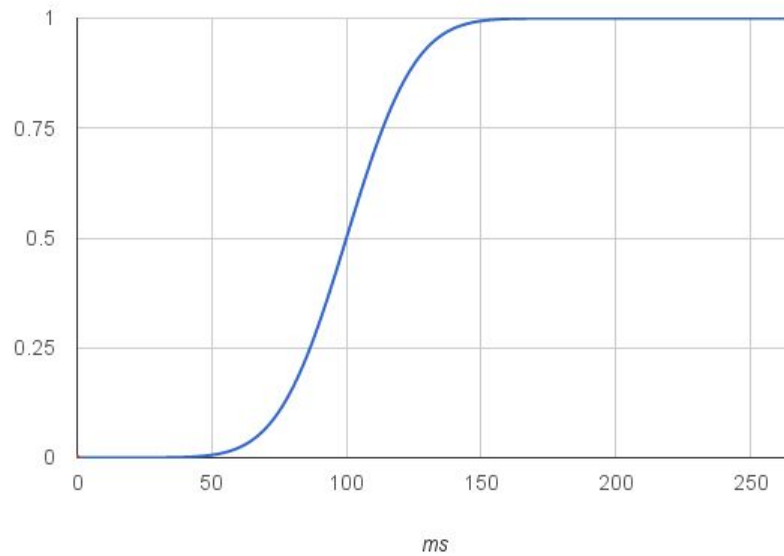


Lies, Damn Lies, and Misuse of Statistics

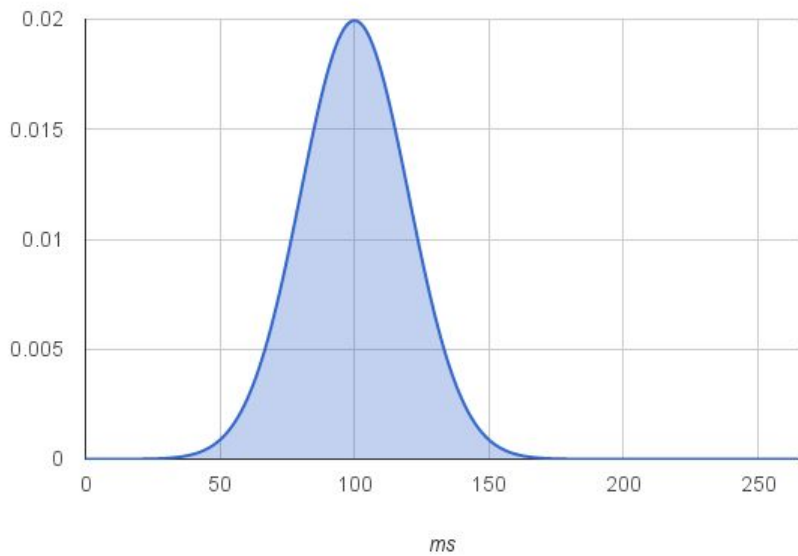
Latency



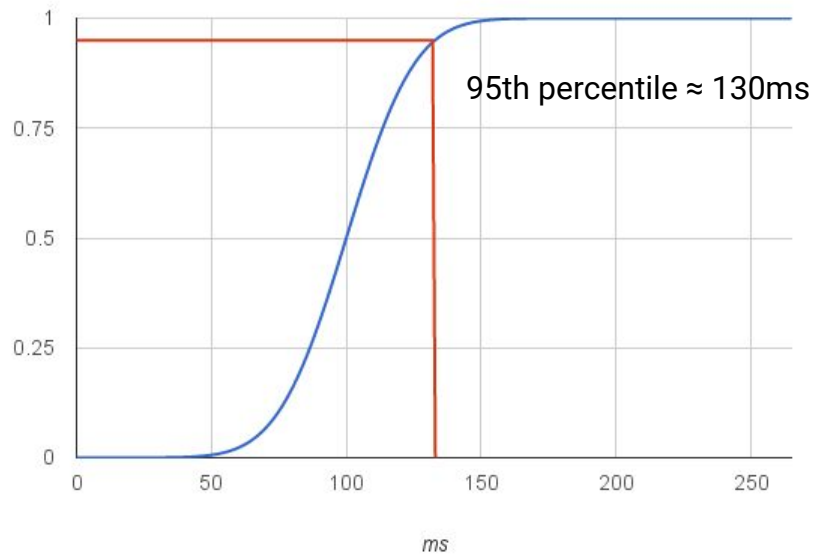
Cumulative distribution



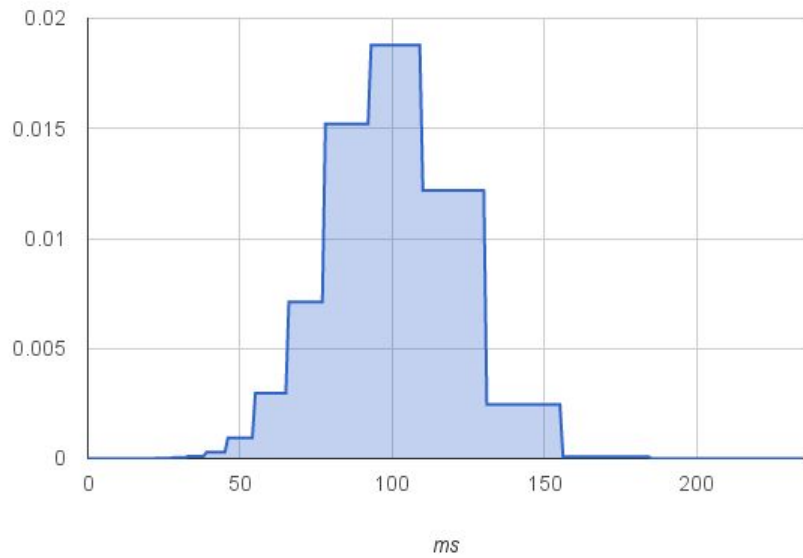
Latency



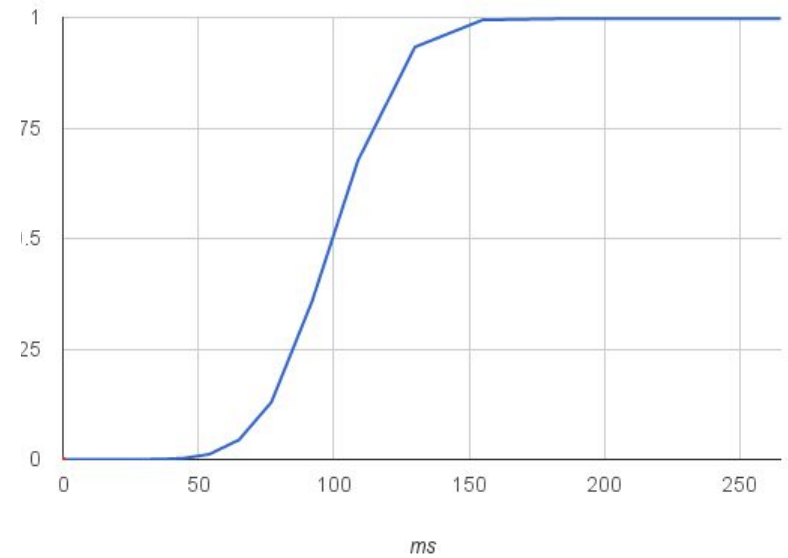
Cumulative distribution



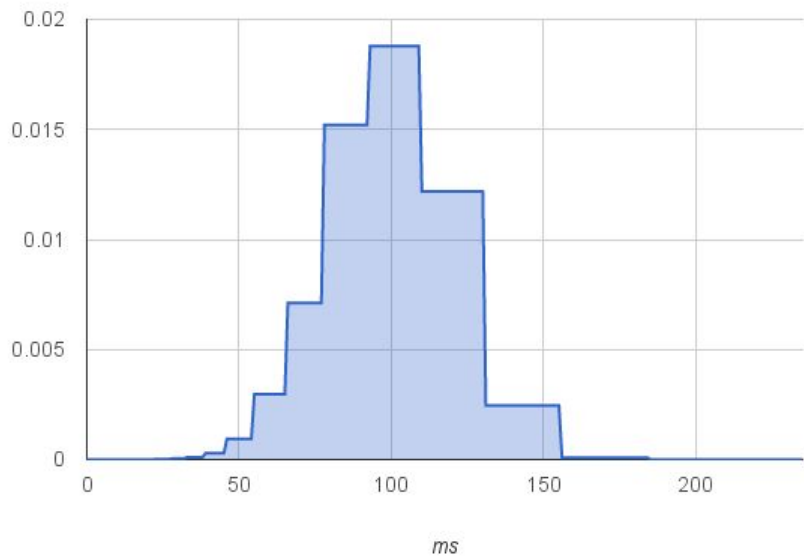
Bucketed



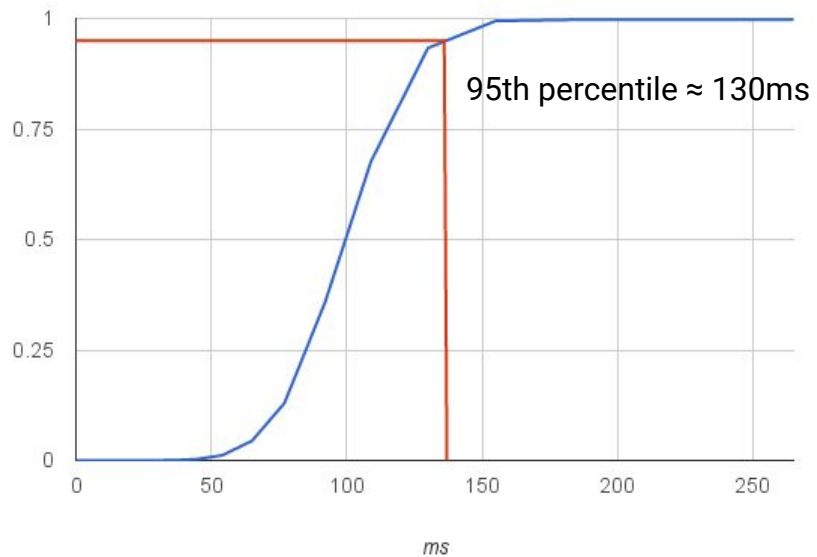
Bucketed cumulative distribution



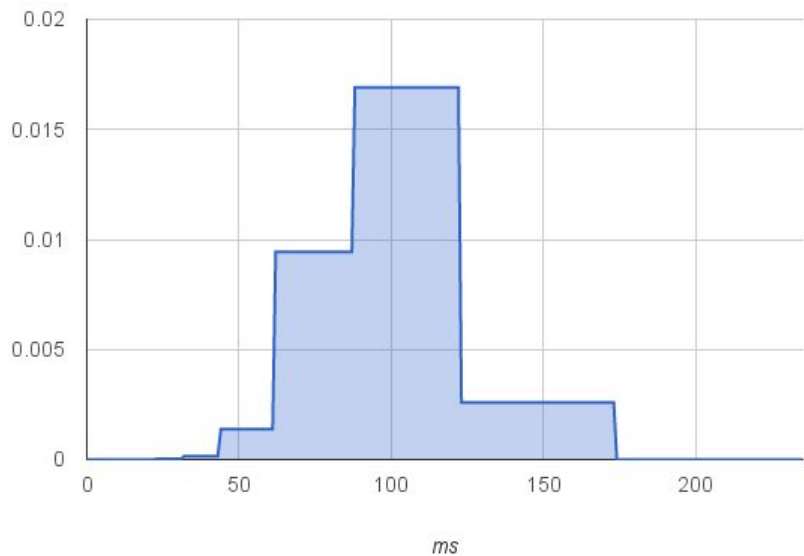
Bucketed, growth factor 1.2



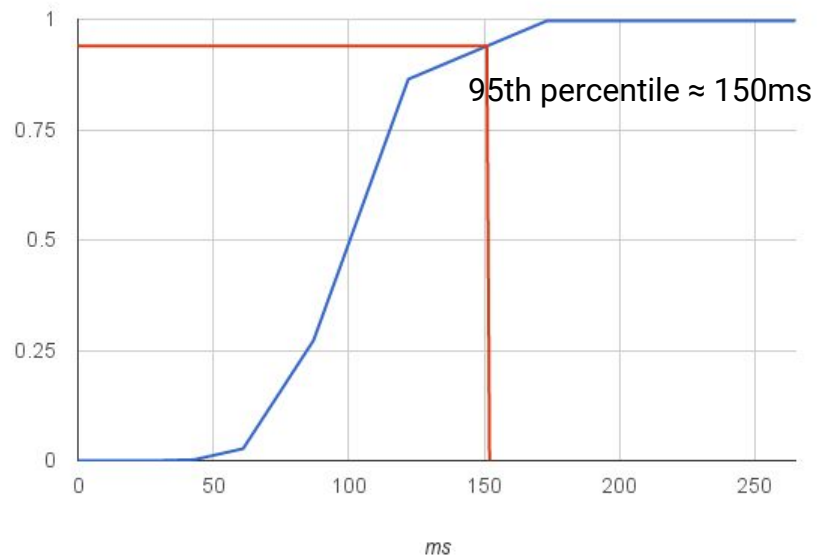
Bucketed cumulative distribution, growth factor 1.2



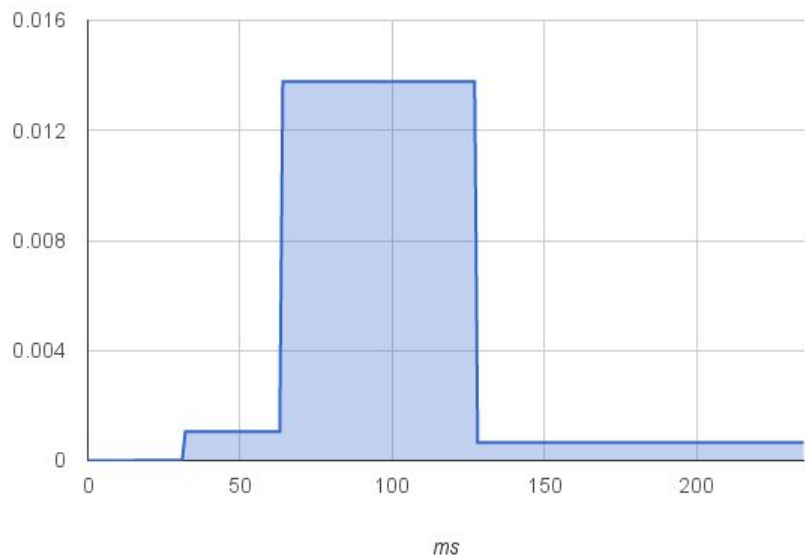
Bucketed, growth factor 1.4



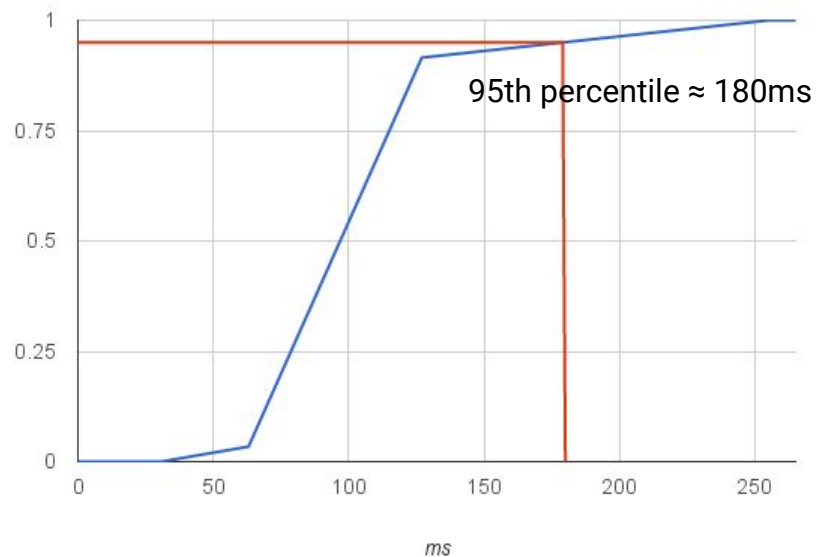
Bucketed cumulative distribution, growth factor 1.4



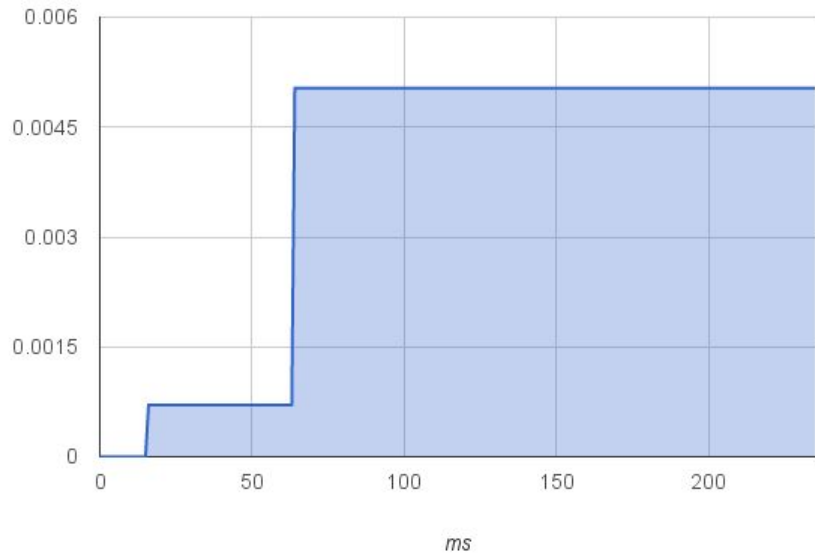
Bucketed, growth factor 2



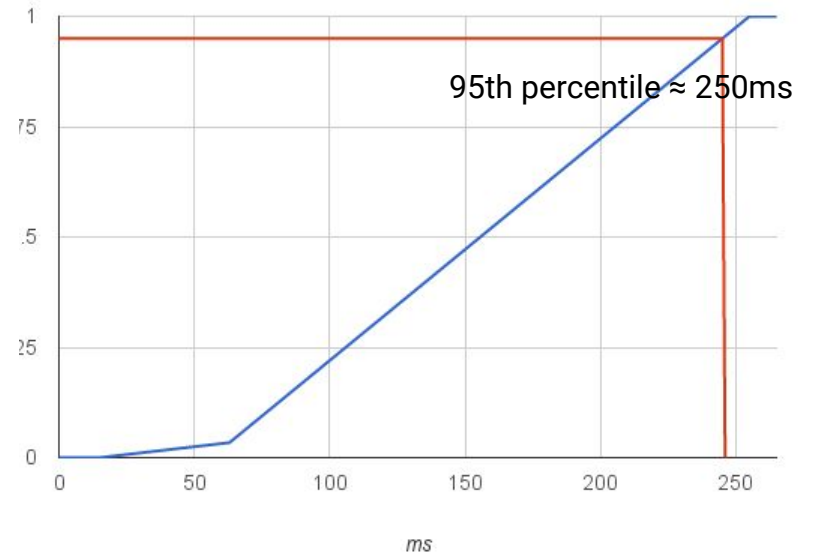
Bucketed cumulative distribution, growth factor 2



Bucketed, growth factor 4



Bucketed cumulative distribution, growth factor 4



Summary

Acknowledgments

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Mike Han, Pawel Stradomski, Ralf Wildenhues

Q&A