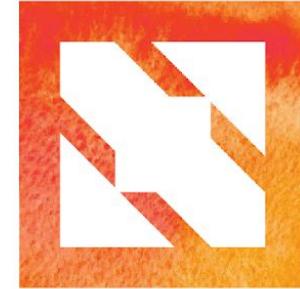


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# Metrics, Logs & Traces

What Does the Future Hold for Observability?

Frederic Branczyk  
 fredbrancz

Tom Wilkie  
 tom\_wilkie

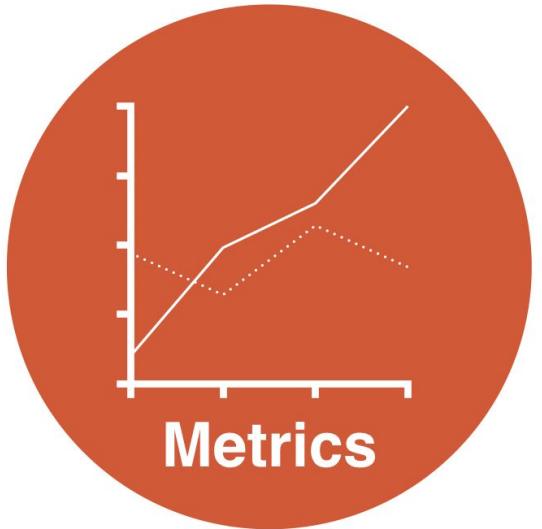
# The Three Pillars



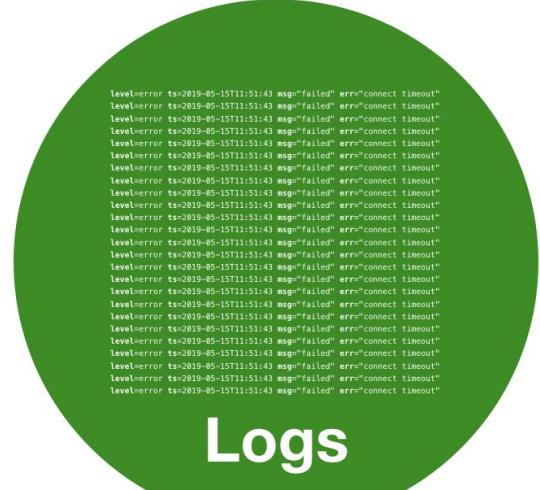
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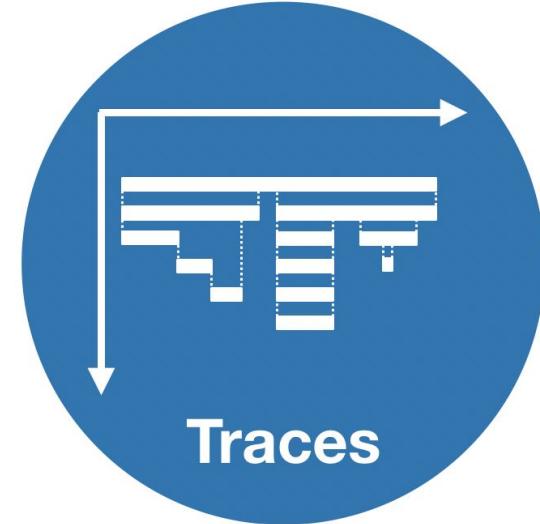
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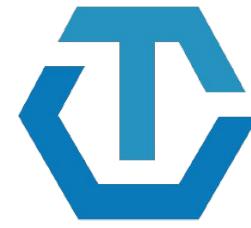
Metrics



Logs



Traces



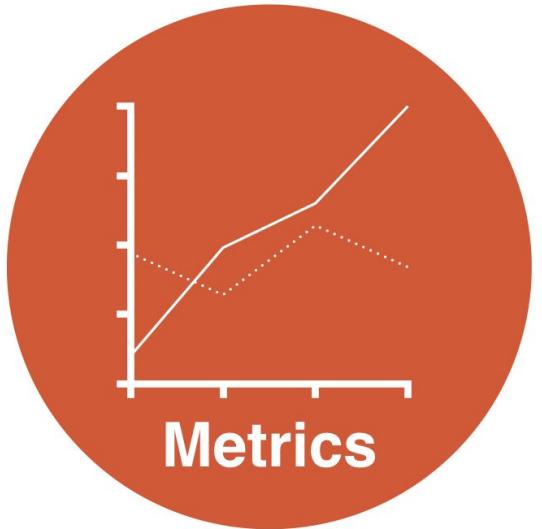
# The Three Pillars



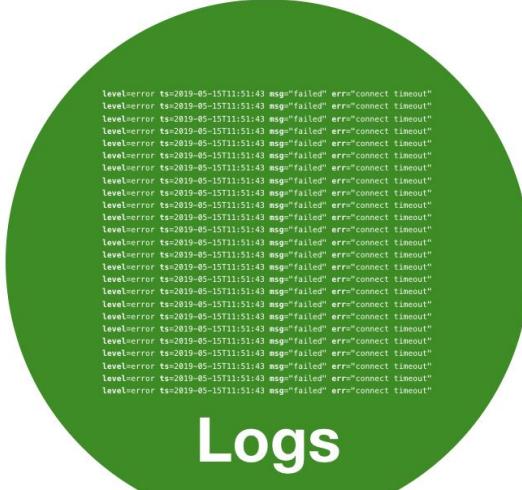
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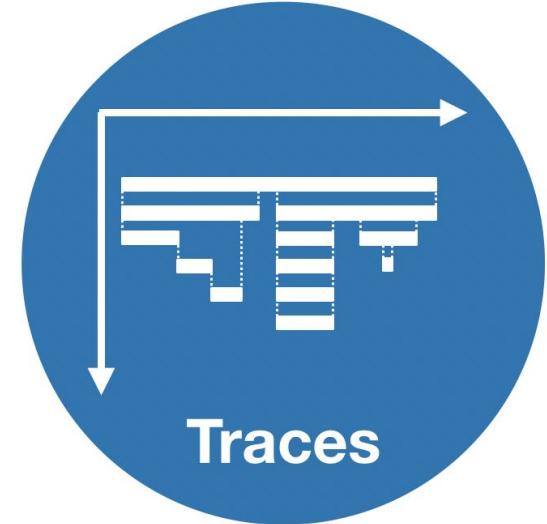
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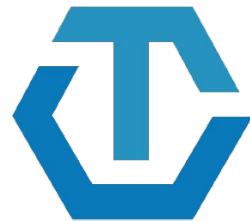
Metrics



Logs



Traces





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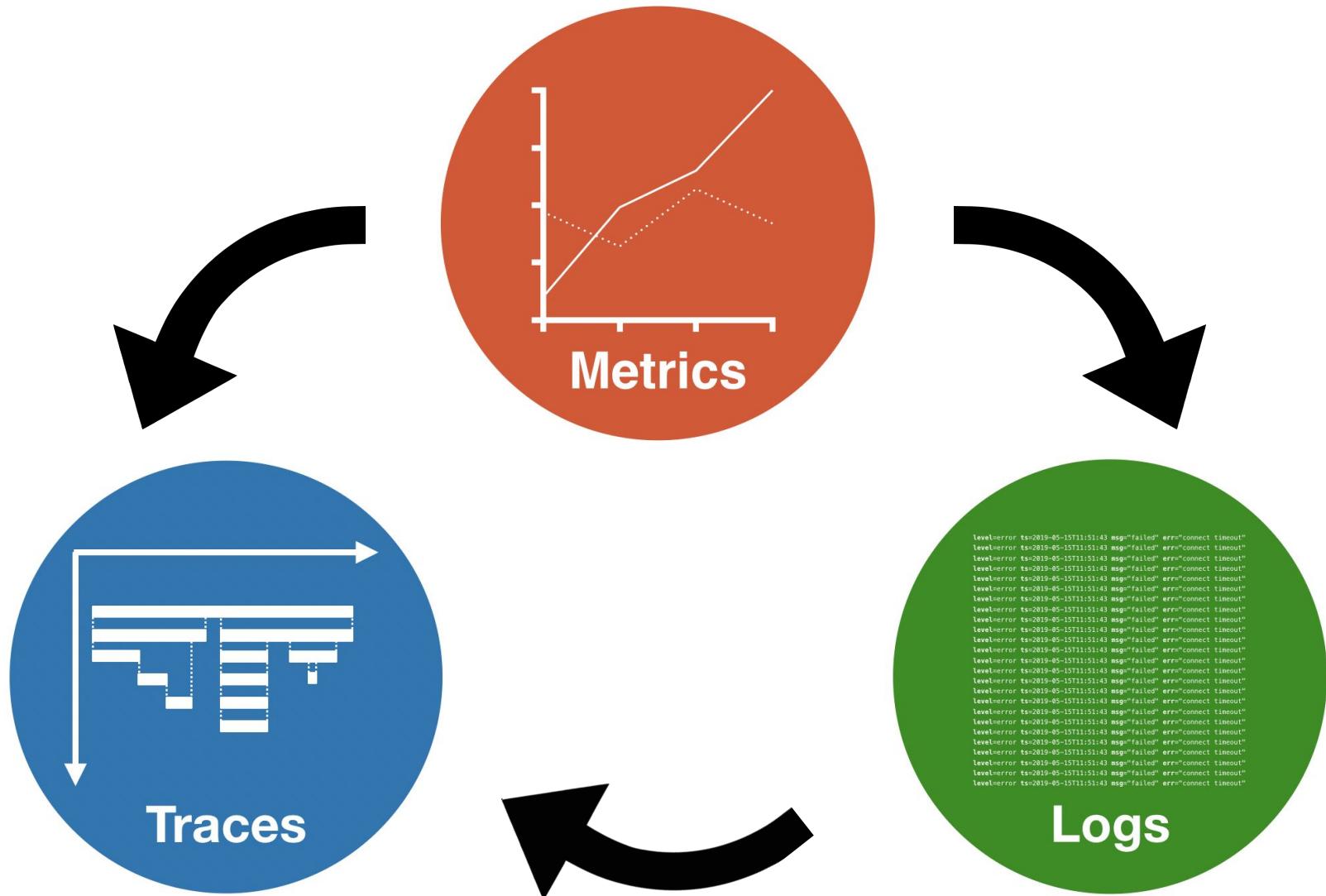
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# Prediction #1: More correlation between Pillars.

# Prediction #1: Correlation



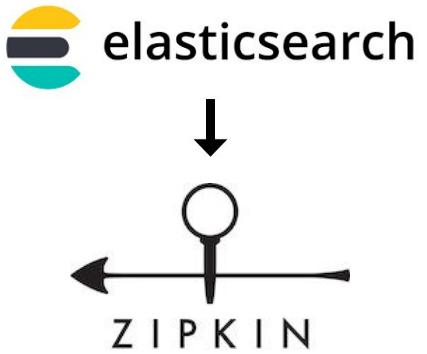
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# Prediction #1: Correlation



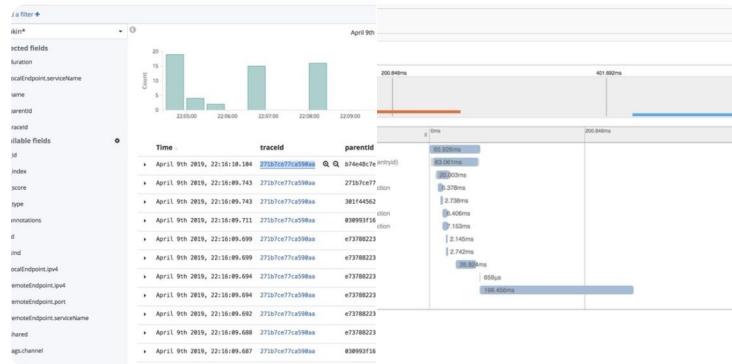
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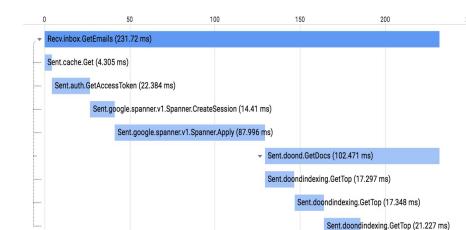
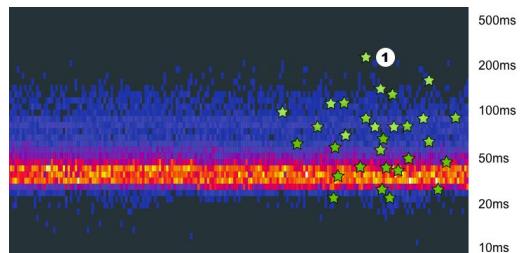
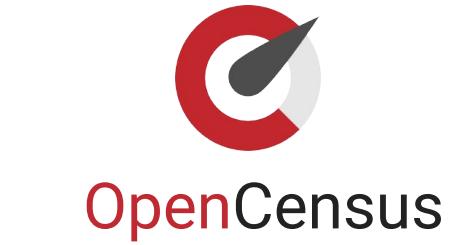
Toshiaki Maki  
@making

Follow

Put a link from Kibana to Zipkin. Handy!



2:22 PM - 9 Apr 2019



<https://medium.com/observability/want-to-debug-latency-7aa48ecbe8f7>

# Prediction #1: Correlation



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**Prediction #1: More correlation  
between Pillars.**



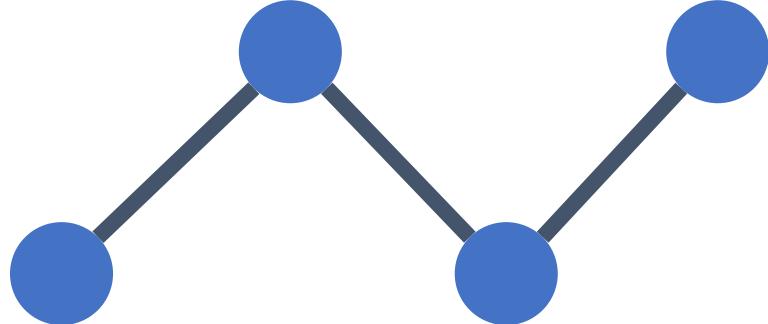
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# Prediction #2: New Signals & New Analysis



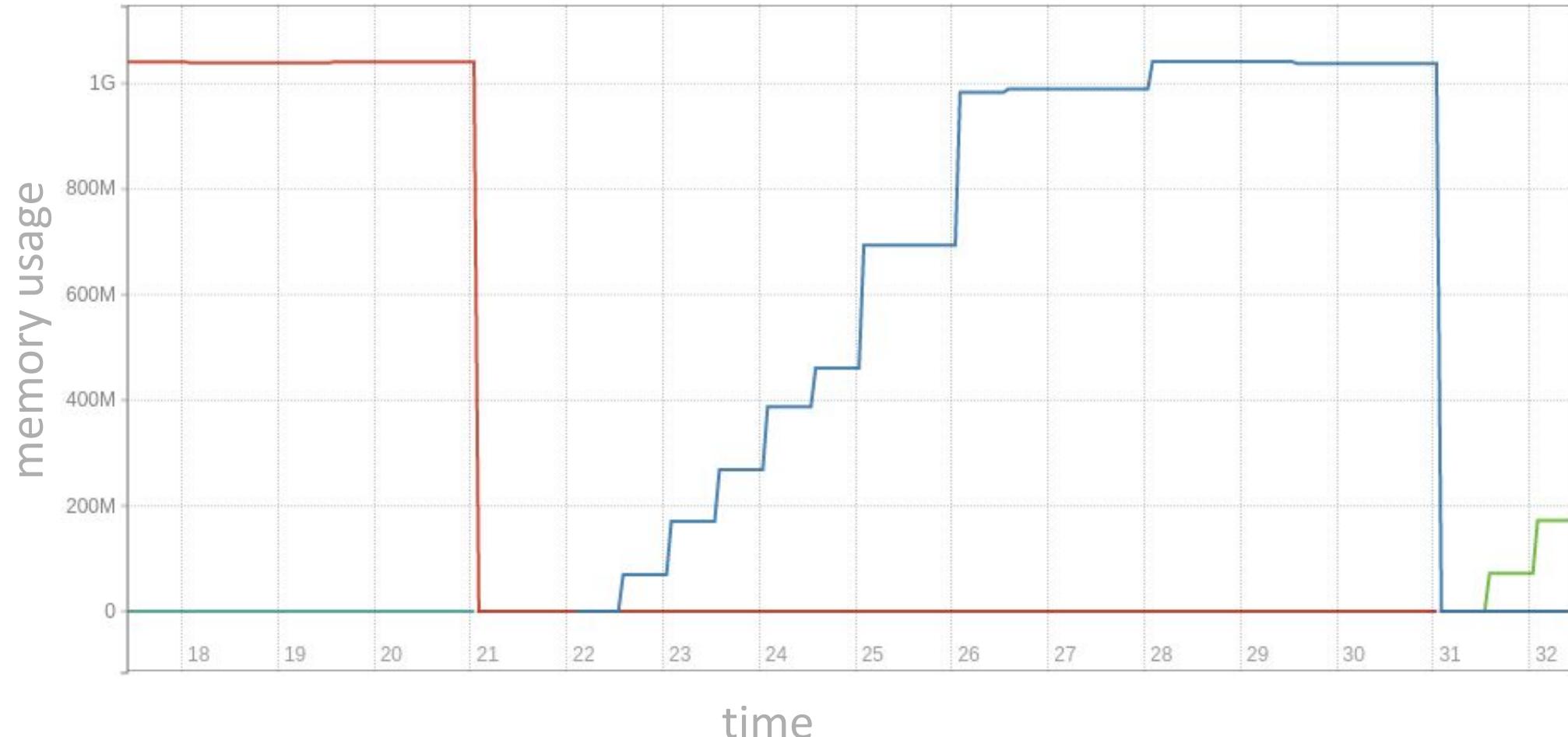
# Prediction #2: New signals



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# Prediction #2: New signals



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## Continuous Profiling of Go programs



JBD [Follow](#)

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### Google-Wide Profiling: A Continuous Profiling Infrastructure for Data Centers

<https://ai.google/research/pubs/pub36575>

<https://medium.com/google-cloud/continuous-profiling-of-go-programs-96d4416af77b>

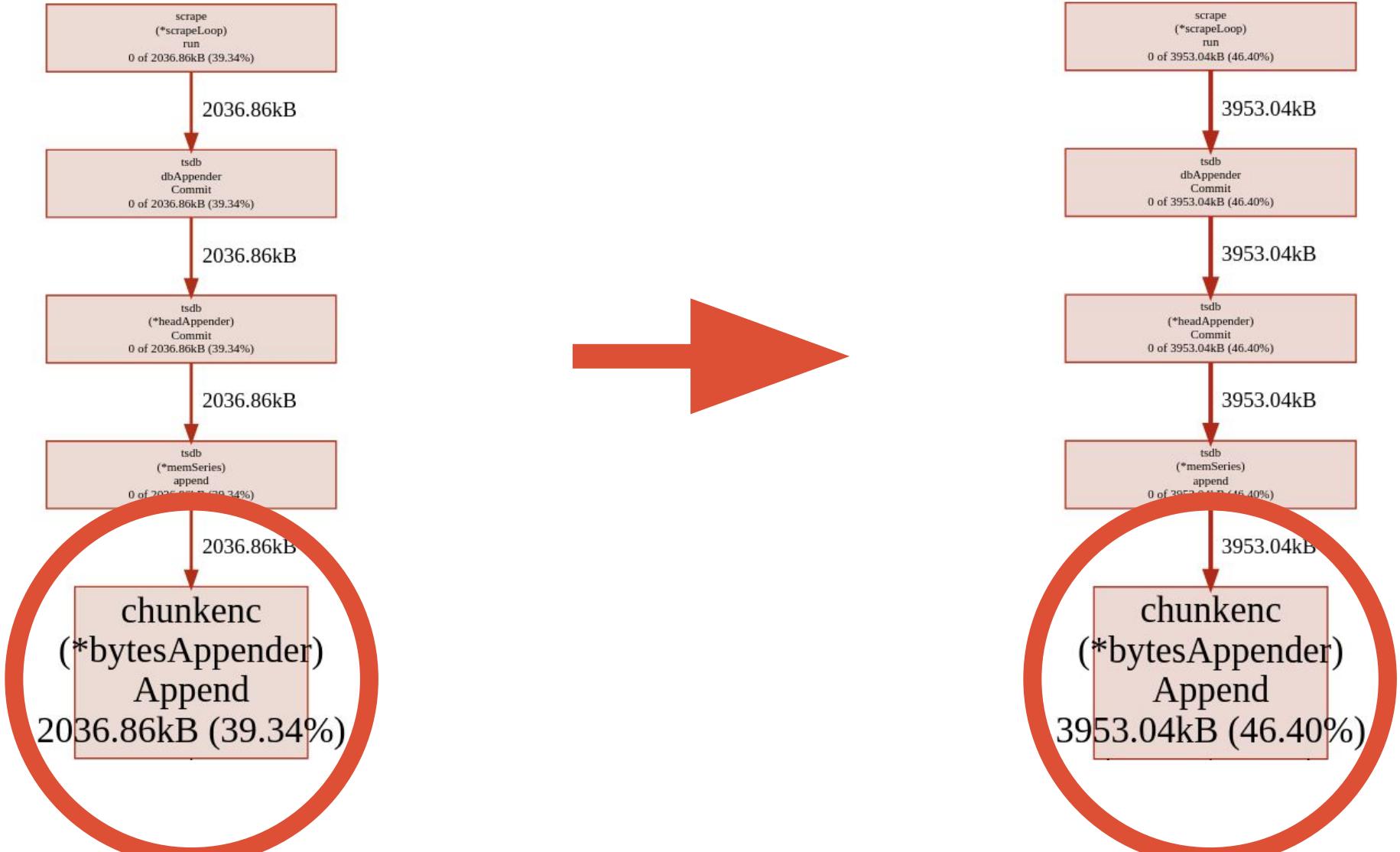
# Prediction #2: New analysis



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# Prediction #2: New Signals & New Analysis



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# Prediction #3: Rise of Index-free Log Aggregation

# Prediction #3: Index-free Logs



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**bletchley punk**

@alicegoldfuss

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just give me log files and grep, I am  
dying

6:32 PM - 5 Apr 2018

<https://twitter.com/alicegoldfuss/status/981947777256079360>

# Prediction #3: Index free logs



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## OK Log

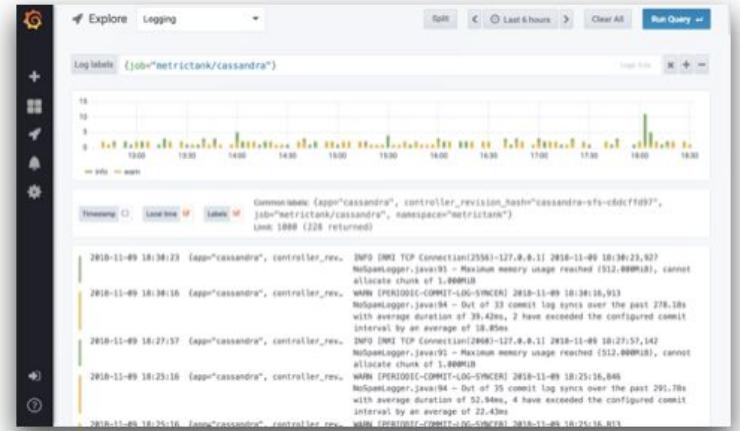
<https://github.com/oklog/oklog>



## kubectl logs

The screenshot shows a web-based log viewer titled "OK Log". It features a search bar with placeholder text "query" and dropdown menus for "Cancel", "plain text", "from 5 min", and "streaming". Below the search bar, it says "Your query could return 0 bytes reading 0 segments from 0 nodes" and "Displaying 11 records". The main area contains several lines of log output in plain text, which are mostly illegible due to the small font size.

```
$ kubectl logs -n cortex-ops -l name=ingester --since 1h | grep error | head -n 20
level=warn ts=2019-05-16T10:02:13.749440659Z caller=grpc_logging.go:54 method=/cortex.Ing
level=warn ts=2019-05-16T10:10:24.087454143Z caller=grpc_logging.go:54 method=/cortex.Ing
level=warn ts=2019-05-16T10:10:24.087453999Z caller=grpc_logging.go:54 method=/cortex.Ing
level=warn ts=2019-05-16T10:10:24.087460352Z caller=grpc_logging.go:54 method=/cortex.Ing
level=warn ts=2019-05-16T10:32:07.6623767552Z caller=grpc_logging.go:54 method=/cortex.Ing
level=warn ts=2019-05-16T10:44:23.661224562Z caller=grpc_logging.go:54 method=/cortex.Ing
level=warn ts=2019-05-16T10:51:03.669186356Z caller=grpc_logging.go:54 method=/cortex.Ing
level=error ts=2019-05-16T10:53:01.815143286Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.832955809Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.846656065Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.847223089Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.851409392Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.858588261Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.862988758Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.868386406Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.883905511Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.896651881Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.902874888Z caller=memcached.go:161 msg="Failed to get
level=error ts=2019-05-16T10:53:01.903500829Z caller=memcached.go:161 msg="Failed to get
$
```





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# Prediction #3: Rise of Index-free Log Aggregation

1. More correlation between Pillars
2. New Signals & New Analysis
3. Rise of Index-free Log Aggregation

# Future of Observability



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# Thank you!