

A landscape photograph showing a vast, lush green field of tall grass or crops in the foreground. In the distance, a single, bare, leafless tree stands prominently against a bright blue sky filled with scattered white clouds. The scene is captured in a wide-angle shot, emphasizing the expanse of the field and the isolation of the tree.

Where it all begins...



it all ends...

A wireframe illustration of an apple and a pear. The apple is on the right, larger, and has a stem with a leaf. The pear is on the left, smaller. Both are rendered with a low-poly wireframe mesh. The background is light gray with faint, scattered dots and a subtle circular pattern.

REWE Digital monitoring solution

Prometheus, Alert Manager and Grafana

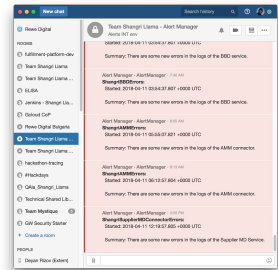
Lachezar Balev

REWE digital

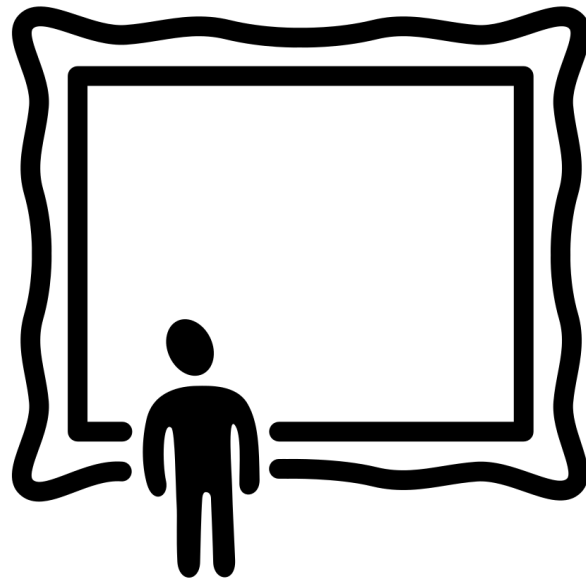
REMOVED DUE TO SOME PRIVACY ISSUES.

In between...

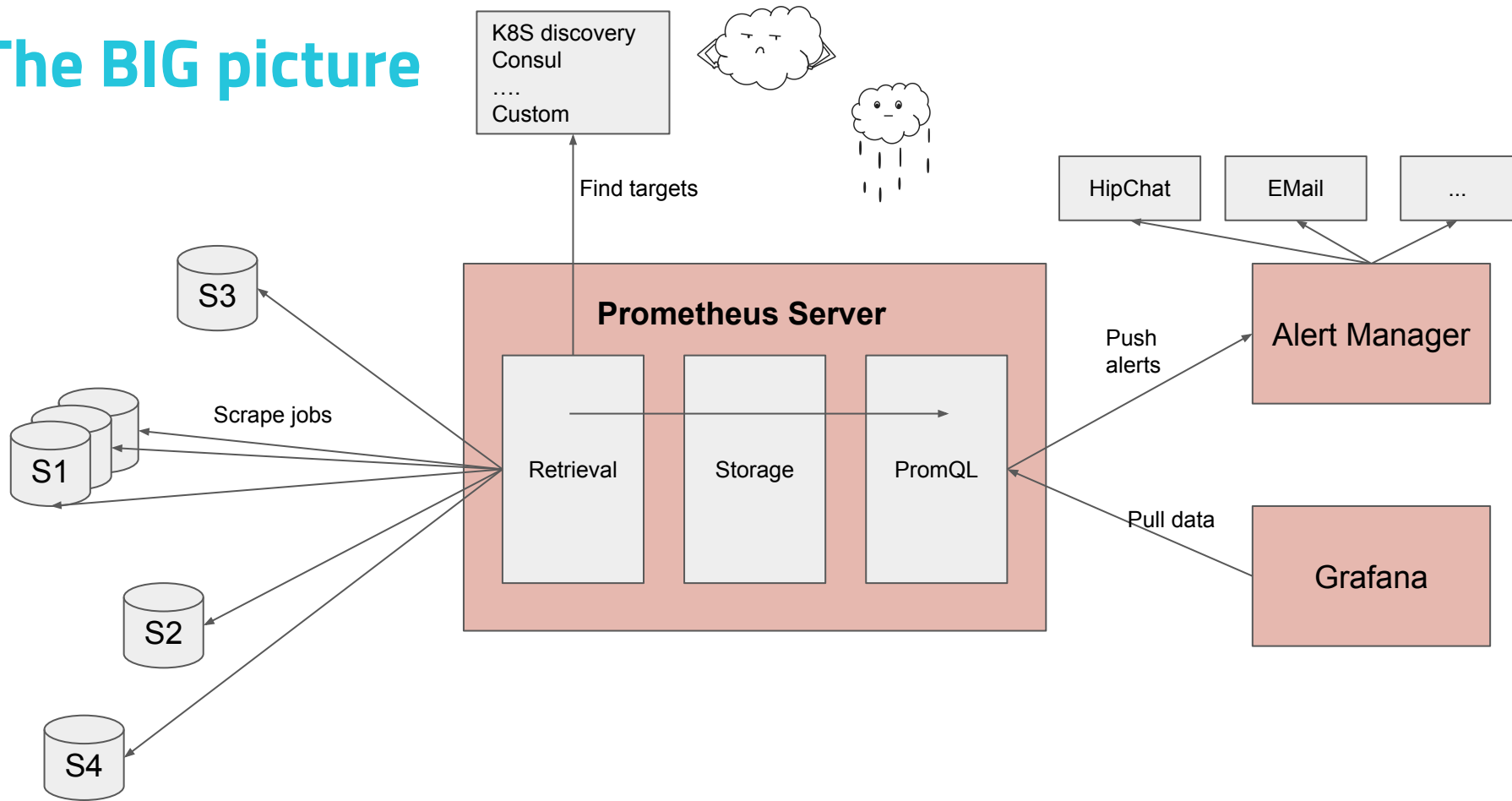
-



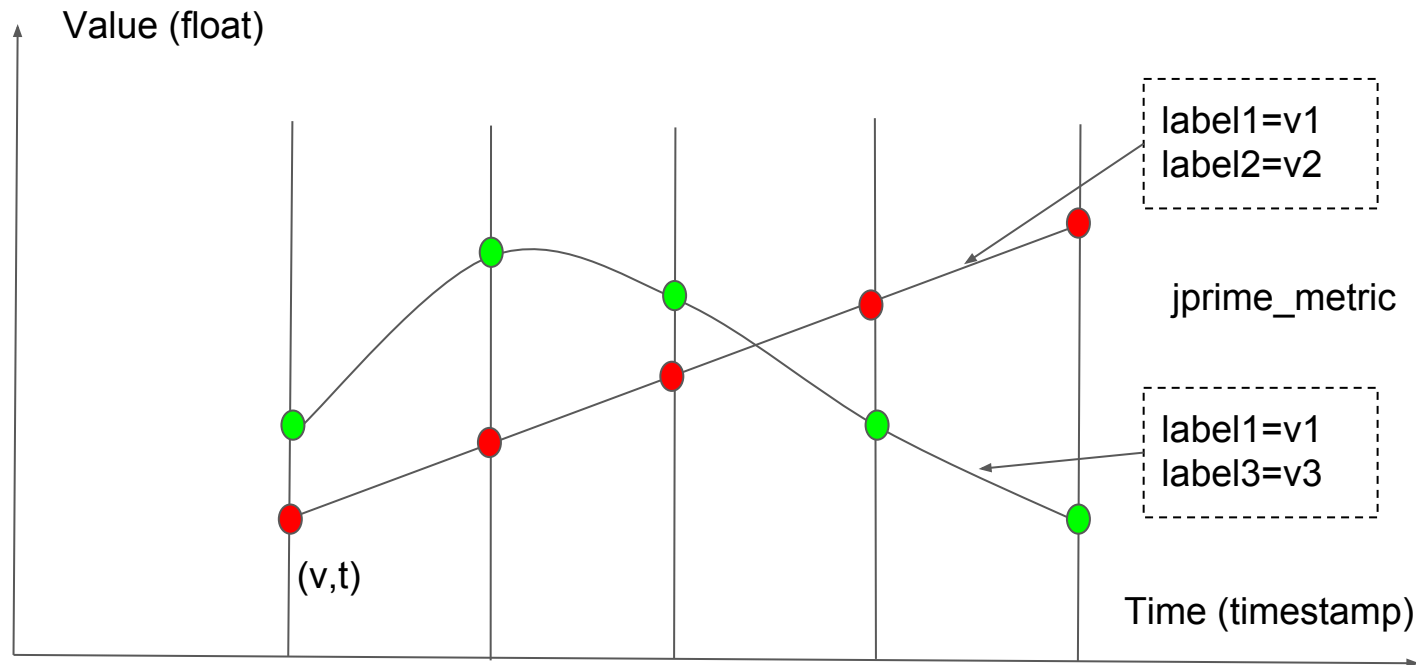
The BIG picture



The BIG picture



Down to earth - what is collected?



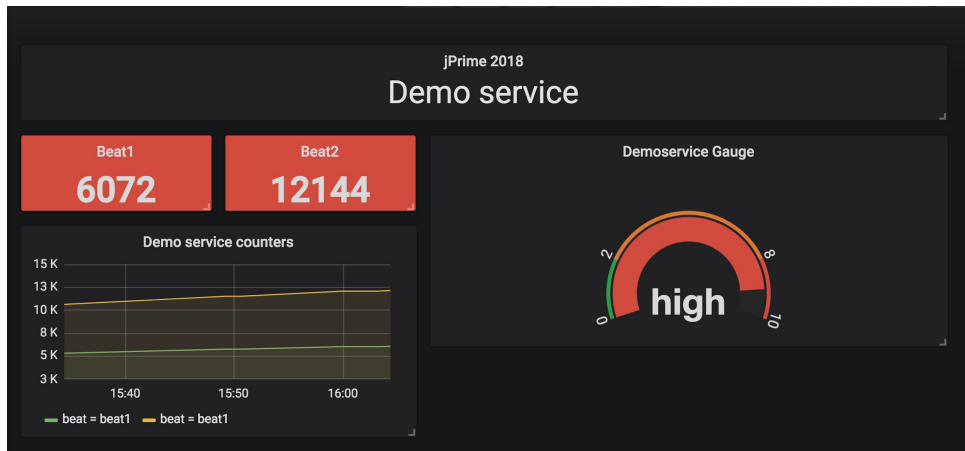
Demo 1 - "Hello, world!"

Demo project

- <https://github.com/luchob/monitoring-poc>
- Demo service - sample counters, gauge, API-s, Prometheus endpoint
- Toolbox
- Documentation

Demo

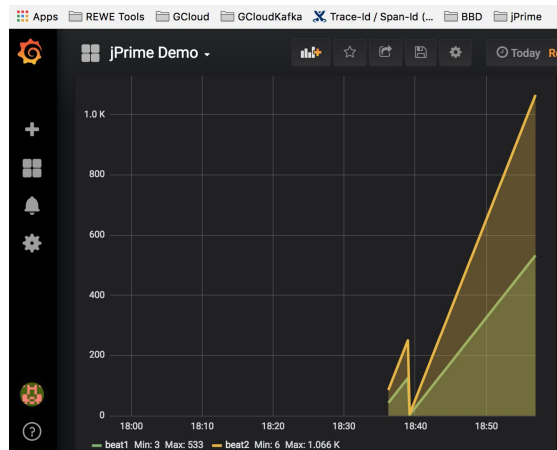
- A peek at Prometheus console
- A peek at Grafana
- First visualizations



Demo 1 - Recap

- Spring Boot 2 plus micrometer
- Metrics endpoint
- Prometheus scrape at certain interval
- Grafana dashboard with prometheus datasource

```
← → ↻ ⓘ localhost:8080/prometheus
Apps REWE Tools GCloud GCloudKafka Trace
# HELP demoservice_heart_beat_total a simple counter
# TYPE demoservice_heart_beat_total counter
demoservice_heart_beat_total{beat="beat1",} 3.5
demoservice_heart_beat_total{beat="beat2",} 7.0
# ...
```



Prometheus Alerts Graph Status ▾ Help

☐ Enable query history

demoservice_heart_beat_total

Execute - insert metric at cursor -

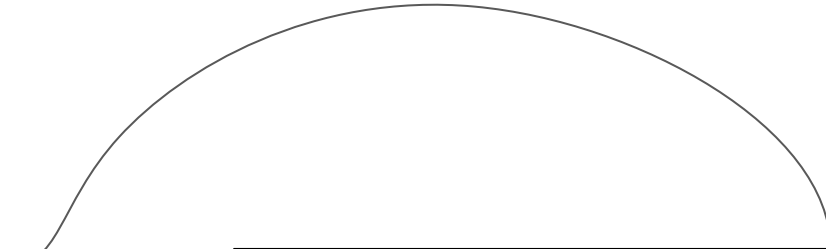
Graph Console

Element

```
demoservice_heart_beat_total[beat="beat1",instance="docker.for.mac.localhost:8080",job="quote-service"]
demoservice_heart_beat_total[beat="beat2",instance="docker.for.mac.localhost:8080",job="quote-service"]
```

Metric types

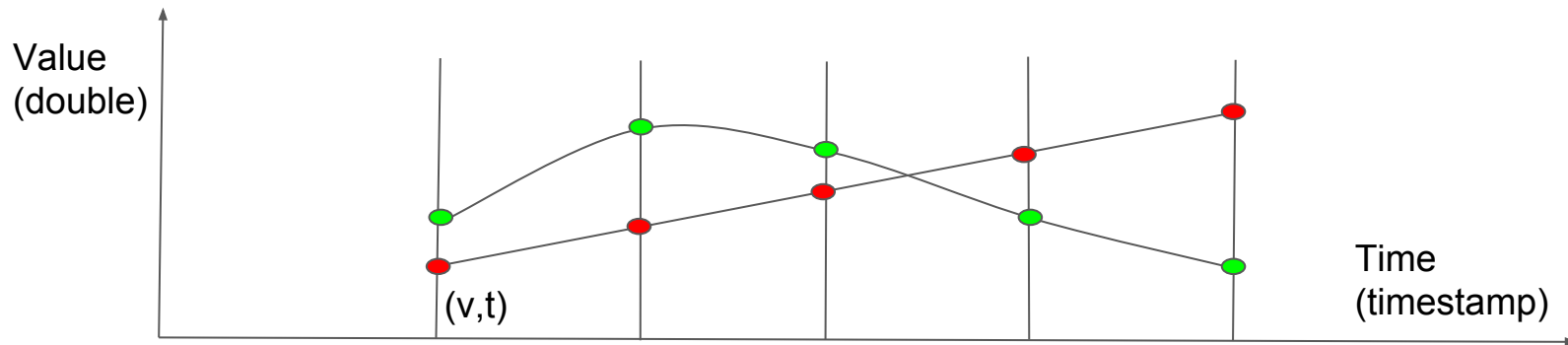
- Counter
- Gauge
- Histogram
- Summary



```
demoservice_distribution_bucket{le="1.0",} 533.0
demoservice_distribution_bucket{le="2.0",} 935.0
demoservice_distribution_bucket{le="3.0",} 1288.0
...
demoservice_distribution_bucket{le="36.0",} 7234.0
demoservice_distribution_bucket{le="40.0",} 7303.0
demoservice_distribution_count 7351.0
demoservice_distribution_sum 88913.0
demoservice_distribution_max 45.0
```

PromQL

- PromQL expressions
- PromQL expressions evaluate to:
 - scalar
 - string
 - instant vector
 - range vector



Demo 2 - "Hello world, 2!"

Demo

- Table panel
- Additional graph
- Heatmap?

Alerting - rules

Alerts

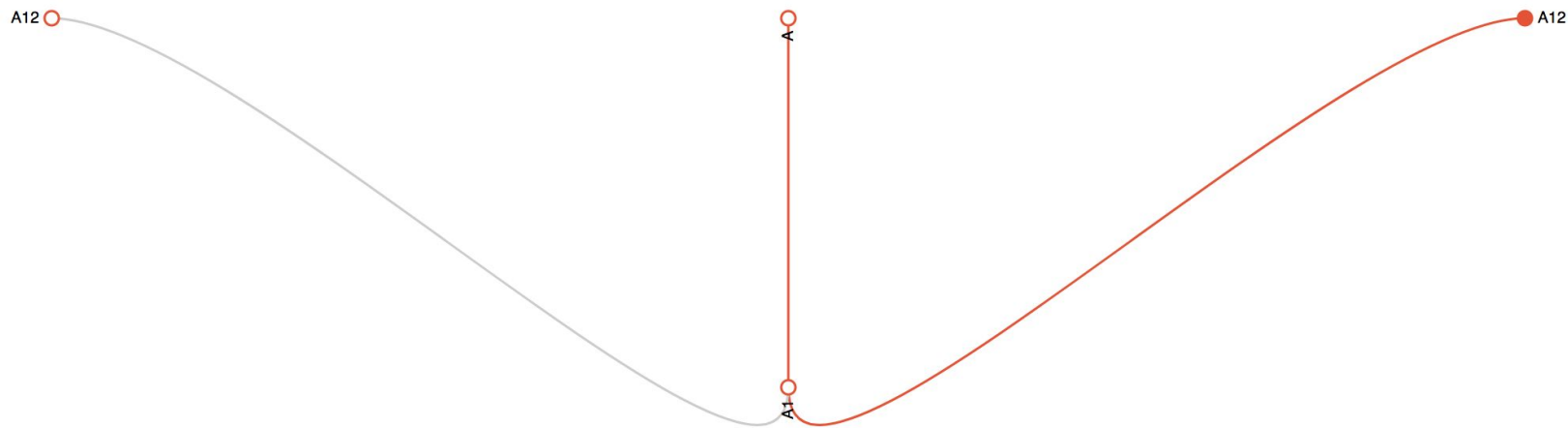
☐ Show annotations

DemoServiceErrors (1 active)

```
alert: DemoServiceErrors
expr: sum(increase(logback_events_total{level="error"}[1m]))
      > 0
labels:
  recover: "false"
  service: demo_service
annotations:
  summary: There are some new errors in the logs of the demo service!
```

Labels	State	Active Since
<code>alertname="DemoServiceErrors"</code> <code>recover="false"</code> <code>service="demo_service"</code>	FIRING	2018-05-25 05:31:35.1020253 +0000 UTC

Alerting - routes



Routing editor:

<https://prometheus.io/webtools/alerting/routing-tree-editor/>



Thank you

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