CloudNativeCon (a CNCF event) gathers leading technologists from multiple open source cloud native communities to further the education and advancement of cloud native computing.

Featured Speakers

SAM GOHDS
Box

CHEN GOLDBERG
Google

KELSEY HIGHTOWER
Google

BEN SIGELMAN
LightStep

BRANDON PHILIPS
CoreOS

FABIAN REINARTZ
CoreOS
“Twins separated at birth.”

Matthias Rampke, SoundCloud
#GIFEE

Google Infrastructure For Everybody Else
Flow of inspiration – from 1st to 2nd systems

Borg → Borgmon

2005 → 2015
Dickerson’s hierarchy of service reliability

*Site Reliability Engineering – How Google Runs Production Systems*, B. Beyer et al. (ed.), O'Reilly 2016, p104
Monitor ALL the things!
Labels are the new hierarchies.
service
  name = public-api

Selector: 'app=api, env in (production, canary)'

pod
  app = api
  env = production
  version = 1.2

pod
  app = api
  env = production
  version = 1.3rc1

pod
  app = api
  env = test
  version = build2ae3
ampelmann.ams3.ip-10-12-11-17.api-mobile.5xx.requests

sum(ampelmann.ams3.ip-10-12-11-17.*.*.requests)

sum(ampelmann.*.*.api-mobile.5xx.requests)

ampelmann_requests_total{pool="ams3",instance="10.12.11.17:80", backend="api-mobile",code="5xx"}

sum(ampelmann_requests_total{pool="ams3",instance="10.12.11.17:80"})

sum(ampelmann_requests_total{backend="api-mobile",code="5xx"})
app_env_zone:request_duration:99perc_5m{app="api",zone="ams",env="production"} 0.243
app_env_zone:request_duration:99perc_5m{app="api",zone="ams",env="canary"} 0.219

AlertManager BOT 2:35 AM

[FIRING:1] APILatencyHigh (production api-team critical)
api app in env production has 99th percentile latency of 243ms, SLO is 240ms. Runbook
Service discovery.
Measure the right things in a reimagined infrastructure.
Apdex

tail latency

average

median

max / min

rate

“four golden signals”

slice & dice

Brendan Gregg’s USE method

Tom Wilkie’s RED method

aggregated quantile

decay

tail latency

average

rate

???

?
Bonus Sidecars.
namespace = production
svc = mysql

MySQL exporter
MySQL
Latest news!

CoreOS Prometheus Operator

Run Prometheus on Kubernetes easily.

https://github.com/coreos/prometheus-operator

https://coreos.com/blog/the-prometheus-operator.html