Grafana Labs

Business Observability

FinOps at Grafana Labs

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Disclaimer

I sustained a substantial concussion 10 days ago
This talk is less polished than it would normally be

“If I had more time, I would have written a shorter letter”

Setting the scene

- Grafana Labs has always been cost conscious
- We never bought speed with inordinate amounts of free money
- Cost effectiveness and cost efficiency have always been part of our culture
  - This creates and maintains optionality
- Our runway is more like a highway
- We never had layoffs
- We never stopped hiring

This slide is for your manager

- At most FinOps conferences, you see many more “money” than “tech” people
  - This is a strategic mistake for both sides
- It’s easier for an engineer to do FinOps successfully than for a finance person
  - If you know how to run software, it’s just another metric to optimize for
- Successful FinOps means evolving the culture, just like SRE & DevOps did

Going in strong on purpose; use these slides as external validation

Culture

- The easiest way to influence culture is through accountability, transparency, and sunshine
- People observe what behavior is rewarded
- If you heard me talk about our SLO reports in the past...

Cost Report

- Sent every Monday morning
- Goes to all engineers, company leadership, finance, and a few others
- Contents, looking back over the last 30 days
  - TODOs (transparency & sunshine...)
  - Total cost
  - Total idle %
  - Cost per cloud provider
  - Growth/decrease
  - How many % are running on committed resources
  - Cost per team
  - Unit costs per service

Cost Report, cont.

- Prices in our Cost Report are list price
  - Discounts change, sometimes substantially
  - We want reports to be forward & backward compatible
  - It can be unfair if a team has less discounted workloads
  - Everyone can still look up discounted pricing if they so choose
- Idle resources are assigned to the platform team

Cost Report, customers

- Attribute costs to customers as well
  - Don’t double-book your costs, this view is orthogonal
- Identify static provisioning which is unused
  - Culture... If a customer drops their amount of data, engineering and account team will poke each other on Slack, reconfirm, and drop provisioned resources

Working with finance

- Finance cares more about predictability than absolute amounts
  - Within reason
  - Just ask Corey Quinn
- Cover the obvious, e.g. per-team cost
  - Establish a working relationship and build trust from that
  - And work with them to figure out what they really need
  - Give finance what they need when they need it - and you will be better than most

Getting the data

- If your cloud provider offers billing metrics, use them
- We like to store the raw data in Prometheus/Mimir directly
  - Quicker to run queries
- Easier to correlate metrics with other metrics; e.g.revenue
- Currently evaluating our OpenCost usage
  - Relatively heavy in code and PromQL queries
  - Focus on K8s, can’t get e.g. object storage costs

A tale of many promtails

- When Phlare was still secret, an engineer used the hackathon to learn profiling
- Didn’t know what to profile, looked at our top 10 workloads, chose promtail
- Found inefficient string handling “outside the hot path”
- It was very much in the hot path…

A tale of many promtails, cont.

- Saved five figures per month
- Hackathon finalist
- Was featured in our internal Cloud fortnightly

Check your defaults

- A team deployed a new workload
- Other teams needed to deploy similar, and copied the template
- ...wait, we have _what_ amount of I/O guaranteed per instance?
- Easy fix once we found it: Change template, rebuild all instances
- Saved an embarrassing amount of money

Spot!

- What’s better than free chaos testing?
- Cash positive chaos testing!
- Several teams are running read instances on spot instances
  - Backed by ondemand instances where needed
- Also useful for some batch workloads
- NB: This eats into your SLO budget; you need to be well within your error budget before do this

It takes a village

- Power to the people – hackathons
- Shared understanding
  - Same as with everything else observability
- We have a platform team..
  - Rolling out $secret amount of new regions per year, and providing aaS internally
- We have a platform cost team..
  - It’s not a function you can do on the side for long
  - It needs good engineers dedicated to it

#cost-observability on https://slack.grafana.com/

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Thursday, 2023-11-09 14:55:

Where's Your Money Going? the Beginners Guide to Measuring Kubernetes Costs

Mark Poko & JuanJo Ciarlante, Grafana Labs

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Thank you