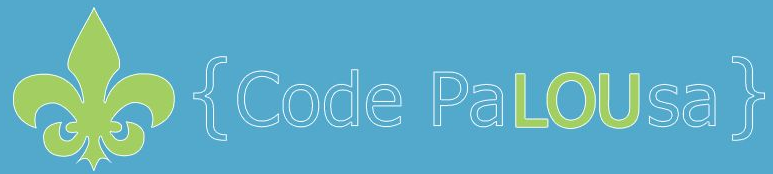


# Monitoring Kubernetes

The Open Source Way





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# What's the plan?

- Demo
  - [github.com/joe-elliott/open-source-observability](https://github.com/joe-elliott/open-source-observability)
- Open Source Observability
- Intermediate Kubernetes Level
- Loki/Prometheus/Grafana
  - No Tracing :(
  - [grafana.com/go/webinar/introduction-to-distributed-tracing/](https://grafana.com/go/webinar/introduction-to-distributed-tracing/)



# Demo!

# Grafana

- Visualization Layer
- Dashboard and Ad Hoc Exploration
- Big Tent Philosophy
  - Supports our own products as well as competitors

<https://grafana.com>



# Loki

- Index tags only
  - {app="loki", env="prod"}
  - Distributed Grep
- Clients Supported
  - Promtail, Fluentd, Fluentbit, Docker driver
- LogQL (based on PromQL)



<https://grafana.com/docs/loki/latest/logql/>

# Prometheus

- Started at SoundCloud in 2012
  - Descendant of borgmon
- Flexible and Powerful Query Language
- “Pull” based architecture
  - HTTP GET /metrics
- Operationally simple
- Extremely wide support



<https://prometheus.io/docs/prometheus/latest/querying/basics/>

# Getting involved



# Open Source

The screenshot displays the GitHub interface for the `grafana / grafana` repository. At the top, navigation links include `<> Code`, `Issues 2.7k`, `Pull requests 92`, `Actions`, `Projects 9`, `Wiki`, `Security`, and `Insights`. The repository statistics show 415 branches and 208 tags. A table of recent commits is visible, with the most recent commit by `torkelo` titled "Inspect: Fix link to error tab from panel header (#26682)".

Commit	Message	Time
<code>torkelo</code>	Inspect: Fix link to error tab from panel header (#26682)	5 hours ago
<code>eb0b9de</code>	Chore: Enable goprintffuncname and nakedret linters (#26376)	7 days ago
	Issue Template: @grafana/ui component request (#25981)	20 days ago
	Chore: fix spelling of GitHub (#26182)	7 days ago
	Chore: Update developer guide to reflect changes to go get (#26646)	16 hours ago
	docs: customMetricsNamespaces for Cloudwatch provisioning (#26457)	9 days ago
	Dashboard: Implement Duplicate DashboardLink Feature (#26600)	2 days ago
	Chore: Enable PR testing in Drone (#26189)	19 days ago
	Update getting started link (#26374)	13 days ago
	Grafana-UI: Reverse TimeRangeInput range pickers (#26652)	yesterday
	Docker: Don't upgrade packages when installing (#24132) (#26055)	yesterday

The right sidebar contains the "About" section, describing Grafana as a tool for beautiful monitoring and metric analytics, and lists various integrations like `grafana`, `monitoring`, `analytics`, `metrics`, `influxdb`, `prometheus`, `elasticsearch`, `alerting`, `data-visualization`, `go`, `dashboard`, `business-intelligence`, `mysql`, and `postgres`. It also includes links to the `Readme` and `Apache-2.0 License`.

# Questions!