Grafana Labs

The Role of Observability in Cloud Native Environments

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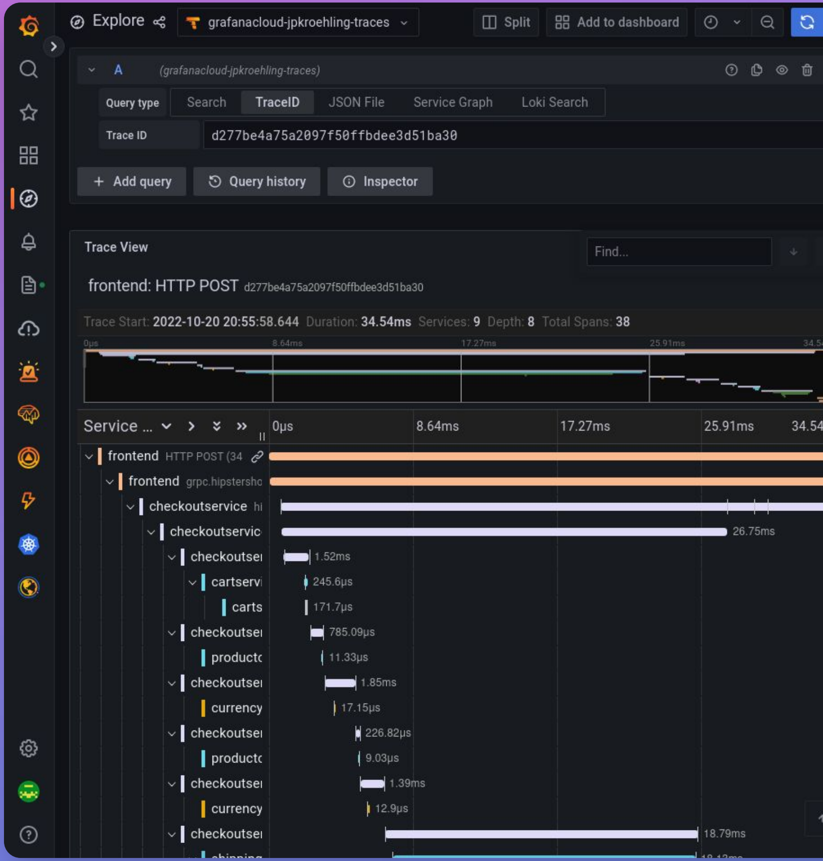

Query type: TraceID

Trace ID: d277be4a75a2097f50ffbdee3d51ba30

Trace View

frontend: HTTP POST d277be4a75a2097f50ffbdee3d51ba30

Trace Start: 2022-10-20 20:55:58.644 Duration: 34.54ms Services: 9 Depth: 8 Total Spans: 38

```
frontend HTTP POST (34
  frontend grpc.hipstersho
    checkoutservice hi
      checkoutservic                26.75ms
        checkoutsei                 1.52ms
          cartservi                 245.6µs
            carts                   171.7µs
        checkoutsei                 785.09µs
            productc                11.33µs
        checkoutsei                 1.85ms
            currency                17.15µs
        checkoutsei                 226.82µs
            productc                9.03µs
        checkoutsei                 1.39ms
            currency                12.9µs
        checkoutsei                 18.79ms
```

Speaker

Juraci Paixão Kröhling
Software Engineer

About me

- Software engineer at Grafana Labs
- Governance Committee member for the OpenTelemetry project
- Cloud Native Computing Foundation (CNCF) Ambassador
- Maintainer of modules for OpenTelemetry Collector (tail-sampling, load balancer, ...)
- Creator of ocb and OTel Operator
- Jaeger emeritus maintainer
- OpenTracing emeritus maintainer

Speaker

Juraci Paixão Kröhling

Software Engineer

Agenda

Agile movement

Microservices

DevOps

Reliability Engineering

Telemetry vs. Monitoring vs. Observability

Telemetry signals

Agile movement

Agile movement

Iterative development

Cross-functional teams

Customer feedback, deliver value

Embracing change over planning

Deliverables are functional

Microservices

Microservices

Decentralized & Independent Services

Loose Coupling & High Cohesion

Scalability & Flexibility

Faster Deployment Cycles

Resilience & Fault Isolation

DevOps Culture

DevOps Culture

Agile development

Continuous integration and delivery

Fast feedback loops

Change, evolution is constant

Reliability

Reliability Engineering

Reliability engineering

Resiliency

Automation

Error budgets, SLOs, ...

Launch at scale

Observability

Observability

O11y

> *Observability is the ability to find answers to questions we don’t have yet.*

Monitoring

> *Monitoring is the practice of obtaining quick answers to frequent questions.*

Telemetry

> *Data that is generated by our application, informing its state while it’s running.*

Telemetry data types

Logs

Metrics

Traces

Profiles

Events

Cloud native

Cloud native

Containers & Orchestration

Dynamic & Ephemeral

Horizontally scalable

API-Driven

Resilience & Self-Healing

Observability for Cloud Native

Observability for Cloud Native

- What happened, and where?
  - Which pod? Which cluster? Which region? Is it a widespread event?
- Should I proceed with the rollout?
  - Provide business metrics to determine whether the individual service is healthy
- Who am I talking to?
  - Understand the call graph for specific requests
- What's the baseline? What does "good" look like?
  - Document what's the expected behavior

> *Am I able to answer questions about my services when I’m paged at 2am?*

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Obrigado!