Take me Down to the Paradise City where the Metric is Green and Traces are Pretty

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Principal Developer Advocate, Elastic
Who am I?

- Principal Developer 🥑 at Elastic
- Community, Developer Relations
- Before Elastic: Confluent, Oracle, Red Hat
- Observability, Streaming Systems, Databases, 🤖 Java and Golang
- https://riferrei.com

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Agenda

• Observability 101, redefined
• Overview about OpenTelemetry
• Creating an observability backend
• Example of instrumented app in Java
• Example of instrumented app in Go
Current perception about observability

What
- Tools + Processes + People
- Logging

When
- Tools + Processes + People
- Metrics

Where
- Tools + Processes + People
- Tracing
“...this seems like calling 'gasoline, motor oil, and tires' the 3 pillars of F1 racing. It is not wrong, precisely, but...”

Josh Berkus
Kubernetes Community Manager, Red Hat
Observability redefined: pipes (not pillars)

- **Metrics**
  - Aggregatable
  - Request-scoped metrics

- **Logging**
  - Events
  - Request-scoped events

- **Tracing**
  - Request-scoped contextual View
  - Request-scoped metrics

- **Request-scoped events**
Overview about OpenTelemetry

OpenTelemetry

https://opentelemetry.io
• Based on the projects OpenTracing and OpenCensus
• Open source CNCF project
• Provides specification, protocols, SDK, and integration tools
• Unifying all types of telemetry data: traces, metrics, and logs
• Vibrant growing community
Different deployment topologies
Is OpenTelemetry stable enough?
OpenTelemetry Stability

- **Traces** are GA and programming languages are mostly up to speed
- **Metrics** are almost GA and programming languages are mostly up to speed
- **Instrumentation libraries** are popping up every single week. Help to accelerate this.
- **Logs** are not ready. But you can use the collector for most things log-related.

**TL;DR**: yes... start using OpenTelemetry
Time to see some hands-on stuff
Creating a observability backend

Microservice

Java

Microservice

OTel Collector

OpenTelemetry

?
Creating a observability backend

Microservice

Microservice

OTel Collector

Java

OpenTelemetry

Elastic Observability
Get started with Elastic for free today!

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Example of instrumented app in Java

https://github.com/riferrei/otel-with-java
Example of instrumented app in Go

[Diagram showing a flow from Microservice to OTel Collector to Elastic Observability]

https://github.com/riferrei/otel-with-golang
How to find me?

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Thank You