
What's Bad Telemetry Anyway?



Nice to meet you!



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- Telemetry Drops
 - LinkedIn and YouTube!

Agenda

- Telemetry?
- Instrumentation
- Telemetry!
- Bad Telemetry...
- Fixing it

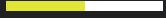


Telemetry?



“

**Data that is generated by your application,
informing its internal state.**



Telemetry

- Logs
- Metrics
- Traces (spans!)
- Events
- Profiles
- ...



Instrumentation



“

**Code that generates telemetry from our programs,
with the purpose of enabling humans and agents to
understand application behavior at runtime.**

New Log Record

```
logger.Info("Starting Gaps 🎉",
  zap.String("version", version), zap.String("commit", commit), zap.String("date", date),
)
```

New Span

```
ctx, span := dtracer.Start(ctx, "consume og.*.in.otlp.>", trace.WithSpanKind(trace.SpanKindConsumer))
defer span.End()
```

Recording a metric

```
// Record error metrics with error type
p.operationDuration.Record(ctx, duration.Seconds(), metricOpts,
    metric.WithAttributes(subjectAttr, attribute.String("error.type", "send_failed")))
```



Telemetry

However...

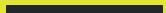
- It's tedious
- Learning curve
- Developers don't typically like instrumentation alongside "business" code
- ...

Side note

Telemetry IS business code!



Telemetry!





Telemetry!

We train our developers, they fall in love with instrumentation, and then:

- Instrument all method calls
- Use inconsistent attribute names and values for the same things
- Reinvent the semantic conventions wheel
- ...



Telemetry!

We don't train our developers and we provide them with tools like:

- Java Agents
- .NET
- eBPF
- ...



Bad Telemetry...





Bad Telemetry

- Auto-capture is dangerous
 - URL queries often contain PII (SSNs) and sensitive information (access tokens)
 - Command-line arguments might contain passwords (JVM trust store passwords!)
- Records too much
 - Do I need to know about every single lock made by my DB queries?
- Useless data
 - Health-checks, static assets, ...



Bad Telemetry

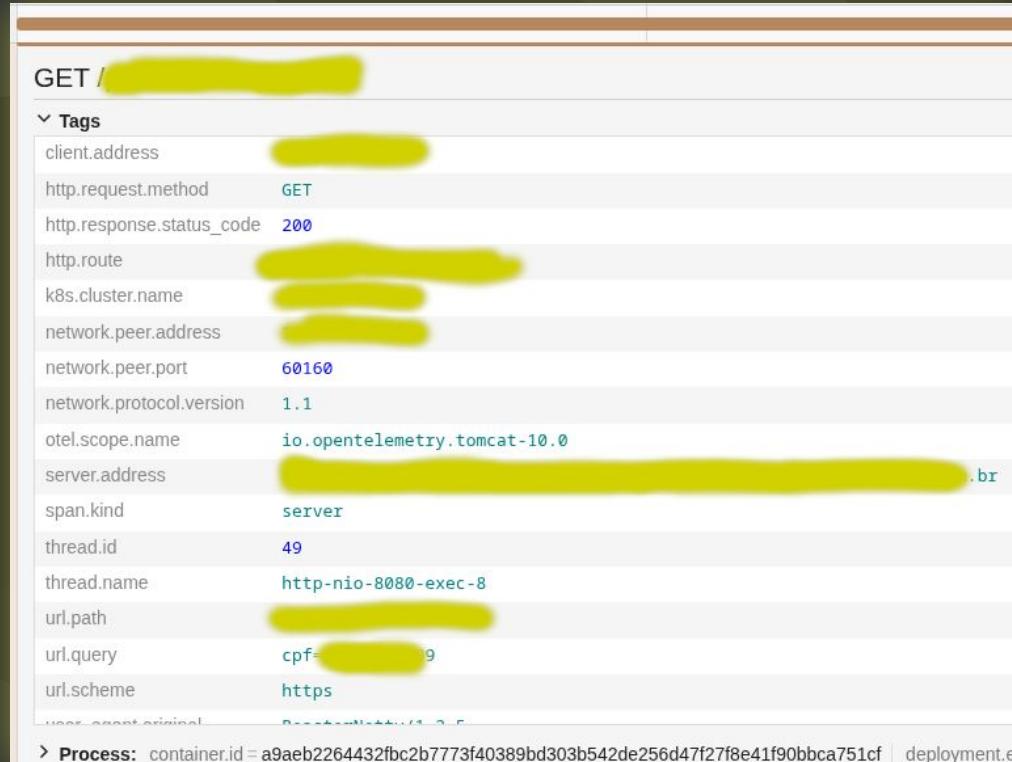
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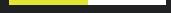
Bad Telemetry





Fixing it





Fixing it

- At the source!
- At the Collector



Takeaways





Takeaways

- Bad Telemetry is inevitable in the journey for great observability
- Train your developers, it provides the best ROI for your observability
- Use tools that can help you find bad telemetry
 - Weaver can help!
 - Instrumentation Score can guide!
 - OllyGarden can automate!
- Fix your bad telemetry, either directly at the source, or before it hits your backend



Questions and Answers



Obrigado!



Let's keep in touch!

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