Dark Sky Camping: Reducing Alert Pollution with Modern Observability Practices

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@kristinintech

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Clutter
Light Trespass
Skyglow
Glare
Expectation versus Reality
Early Spring 2021

Incidents...
Observability Commitment

- Standardize tools everyone can use
- Focus on what matters
- Invest in asking better questions
Transcribed...

- Migrate from app metrics to tracing with context
- Funnel everything into Honeycomb
- All alerting goes through PagerDuty
- Aim for “good enough” customer experience (SLO’s)
Implementation
Implement

Summer 2021

Early May

Early June

Late May

Mid-June

Implement

July

August

September

Augment + Validate

November

December

Sunset

@kristinintech
1 week of half days = 20 hrs/team

Developers + 2 operations folks (+ product owner buy-in)
4 hours
Minimal setup with Java agent

docker-compose.yml

```yaml
environment:
  - HONEYCOMB_API_KEY=$HONEYCOMB_API_KEY

volumes:
  - /opentelemetry-javaagent.jar:/opentelemetry-javaagent.jar
```

build.gradle

```groovy
application {
    applicationDefaultJvmArgs = [
        "-javaagent:opentelemetry-javaagent.jar",
        "-Dotel.exporter.otlp.endpoint=https://[HONEYCOMB_API_KEY]:9090",
        "-Dotel.exporter.otlp.headers=x-honeycomb-team=${HONEYCOMB_API_KEY},x-honeycomb-dataset=${HONEYCOMB_API_KEY}",
        "-Dotel.resource.attributes=service.name=aggregator-otlp",
        "-Dotel.javaagent.exclude-classes=io.rollout.*"
    ]
}```
Automatic Cross-application Tracing

<table>
<thead>
<tr>
<th>name</th>
<th>service.name</th>
<th>0s</th>
<th>0.05s</th>
<th>0.1s</th>
<th>0.15s</th>
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</thead>
<tbody>
<tr>
<td>2 HTTP GET</td>
<td>consumer-ssr-otlp</td>
<td>186.1ms</td>
<td></td>
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<tr>
<td>1 HTTPS GET</td>
<td>aggregator-otlp</td>
<td>44.18ms</td>
<td>29.93ms</td>
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<tr>
<td>/address/auto-fill-locations</td>
<td>aggregator-otlp</td>
<td>24.32ms</td>
<td>22.95ms</td>
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<td></td>
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<tr>
<td>1 HTTP POST</td>
<td>aggregator-otlp</td>
<td>4.972ms</td>
<td>1.967ms</td>
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<td></td>
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<tr>
<td>/create-session-id</td>
<td>platform-java</td>
<td>10.83ms</td>
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<td></td>
<td></td>
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<tr>
<td>1 Session</td>
<td>platform-java</td>
<td>4.972ms</td>
<td>1.967ms</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Transaction.commit</td>
<td>platform-java</td>
<td>3.26μs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 GET</td>
<td>platform-java</td>
<td>1.26μs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Session</td>
<td>platform-java</td>
<td>0.759μs</td>
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<td></td>
<td></td>
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<tr>
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<td>platform-java</td>
<td>0.895μs</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1 Session</td>
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<td>1.118ms</td>
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<tr>
<td>1 Transaction.commit</td>
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</tr>
<tr>
<td>2 SessionIdResource.createSessionId</td>
<td>platform-java</td>
<td>1.21μs</td>
<td>1.63μs</td>
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</tbody>
</table>
First pass - custom info

```
private fun initializeOpenTelemetryAttributes(parkId: Long?, slug: String?) {
    val span = Span.current()

    span.setAttribute("client_type", RequestData.clientType.toString())
    span.setAttribute("ip_address", RequestData.ipAddress)
    span.setAttribute("session_id", RequestData.sessionId.toString())
    span.setAttribute("aggregator_session_id", RequestData.aggregatorSessionId.toString())
    span.setAttribute("park_id", parkId.toString())
    span.setAttribute("park_slug", slug.toString())
    span.setAttribute("shopping_cart_uuid", RequestData.shoppingCartUuid.toString())
}
```

- **park_id** makes communication SO MUCH easier between customers, account managers, and developers!

- **shopping_cart_uuid** helps follow multiple units of work in longer workflows

- **host/client info** facilitates isolating infra/device issues
March 7 Meghan right before getting kicked out

Kristin Smith created Mar 7, 2022
Room for Improvement
30 minutes
Uptime 99.999%
Better timeline

<table>
<thead>
<tr>
<th>Adjust</th>
<th>Early May</th>
<th>Early June</th>
<th>Implement</th>
<th>Augment + Validate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb-April</td>
<td>Late May</td>
<td>Mid-June</td>
<td>August</td>
<td>September</td>
</tr>
<tr>
<td>developers/tech leadership</td>
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sales team hears about SLO's :( @kristinintech
“We know we had a problem - we added more monitoring”

- tech team
Follow-up Links:

Connect with me:
- @kristinintech
- LI: kristinmariesmith

What we’re doing at Campspot:
software.campspot.com

Stars:
darksky.org