
AWS
re:Invent
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Optimizing price performance with feature management and observability

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What are feature flags?

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Many developers think

feature flags are just a fancy name for a simple Boolean conditional

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That’s not *entirely* accurate

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What can feature flags do?

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What if I told you…

You could move fast without breaking things

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Elite companies ship faster than the slow performers

Shrinking time between deploys
from months to minutes

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Less than an hour

To go from committed code to the same change being live in production

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Q: How do they do it?

A: Feature flags

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Deployment ! = Release

- ✓ Deploy code with no release
- ✓ Minimize scope of impact of deployments
- ✓ Rollbacks are turning off a feature flag
- ✓ Deployments no longer force branching strategies

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Build

- Progressive delivery
- Test in production
- Targeted rollouts
- Canary launches

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Operate

- Kill switches
- Serve metrics
- Dynamic configurations
- Safe migrations

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Why LaunchDarkly feature management?

- ✓ **High performance**
  Flags initialize in 25 ms, update within 200 ms
- ✓ **Flag delivery network**
  100+ global points of presence on a distributed global CDN
- ✓ **Scalability**
  Serving 20 trillion feature flags daily
- ✓ **Cross-platform**
  25+ SDKs for web, mobile, server-side, and more
- ✓ **Advanced features**
  Advanced targeting, big segments, workflow automation, experimentation...
- ✓ **Integrations**
  Connect LaunchDarkly to your favorite tools, including Honeycomb

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About LaunchDarkly

2014

year founded

4,000+

customers

600+

employees

>20%

of Fortune 100









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Ok, but what's this look like in the real world?

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What is observability?

Observability enables you to inspect cause and effect at a granular level. It begins with **rich instrumentation**, putting you in constant conversation with your code.

Without observability, your team will resort to **guessing** and iterating **blindfolded**, without evidence, and you will struggle to connect **feedback loops**, which will make deploys terrifying.

Observability **!=** monitoring.

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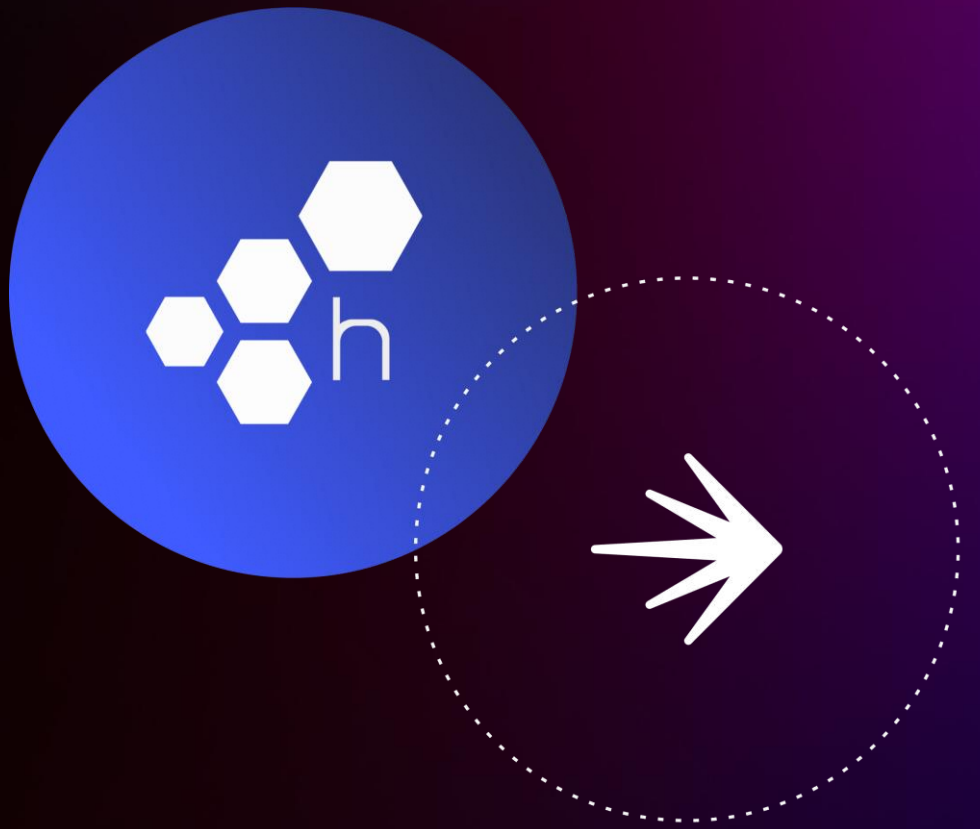
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Three ways Honeycomb uses LaunchDarkly

1. Using feature flags through the full lifecycle of ALL components

2. Using feature flags for web entitlements and feature visibility

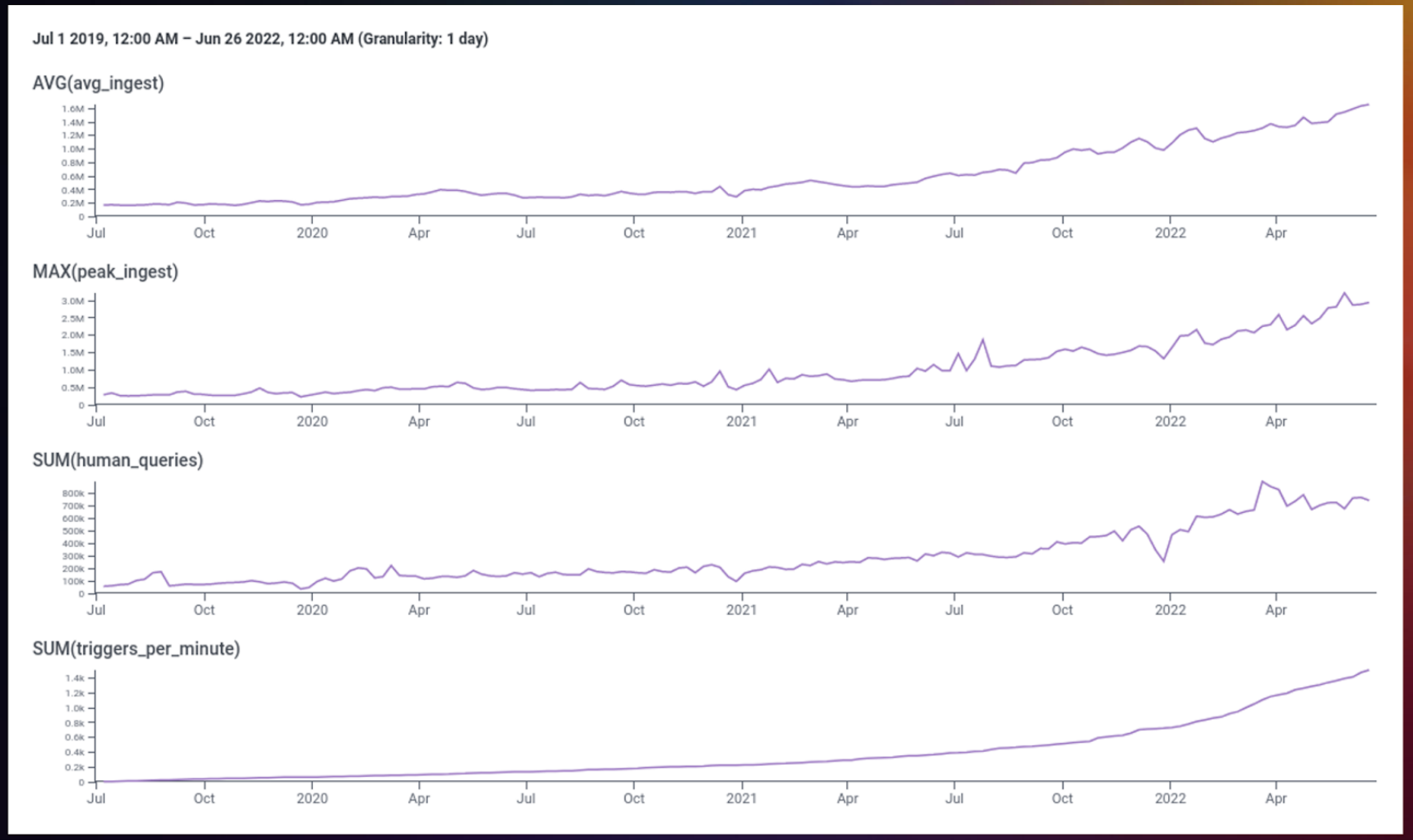
3. Using feature flags beyond customer-facing feature, testing new architectures internally



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10x growth in three years



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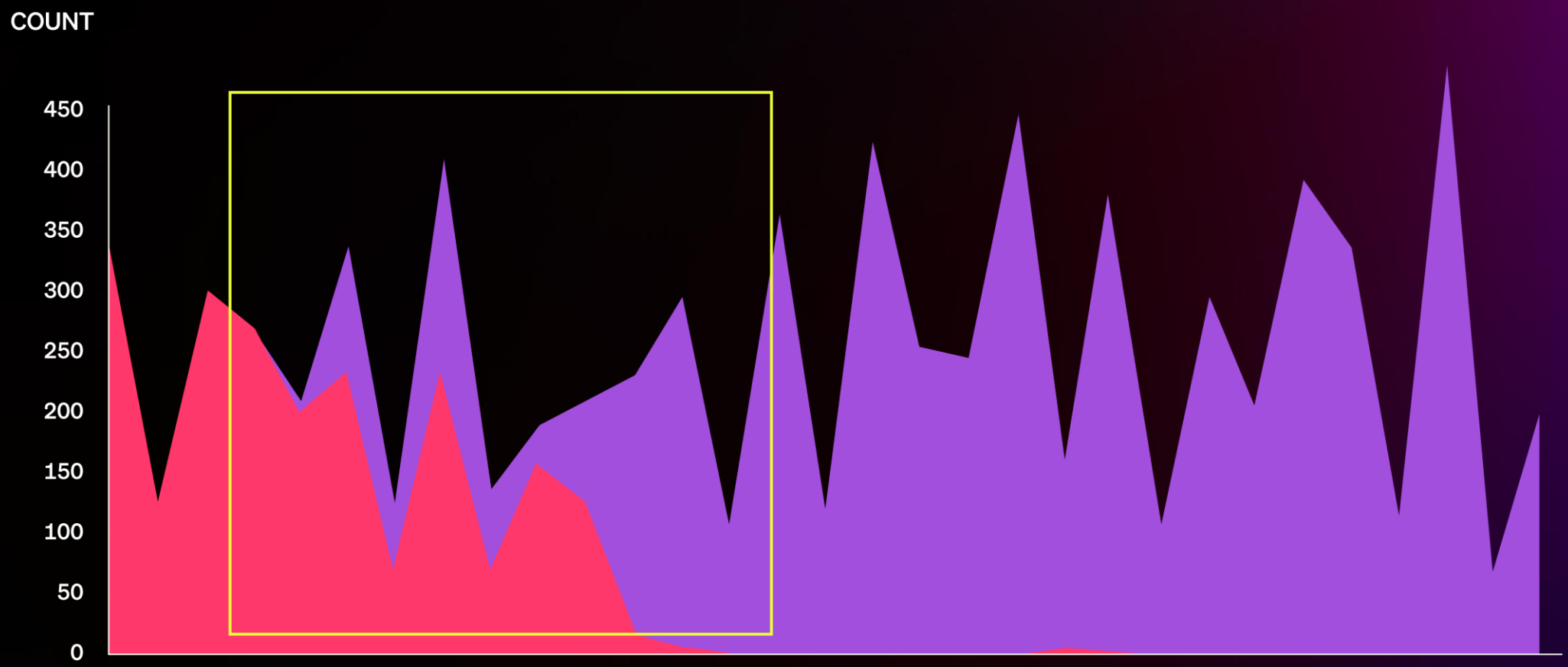
*Using LaunchDarkly's feature flags allowed us to run both the old and new **implementations of our derived column editor**, and display the new editing experience only to internal users until it had been validated in production and we were ready to formally release it — and even then, we were able to turn it on team by team.*

Jeff Balboni

Senior Product Engineer, Honeycomb

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UI feature flag case



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Using LaunchDarkly's feature flags allowed us to run both the old and new implementations of our ingest code side-by-side, slowly cutting over traffic from the old to the new. Combined with Honeycomb's own instrumentation, it allowed us to quickly identify differences in behavior and performance between the two versions on real-world customer traffic. This allowed us to iterate more quickly and with less risk of customer impact.

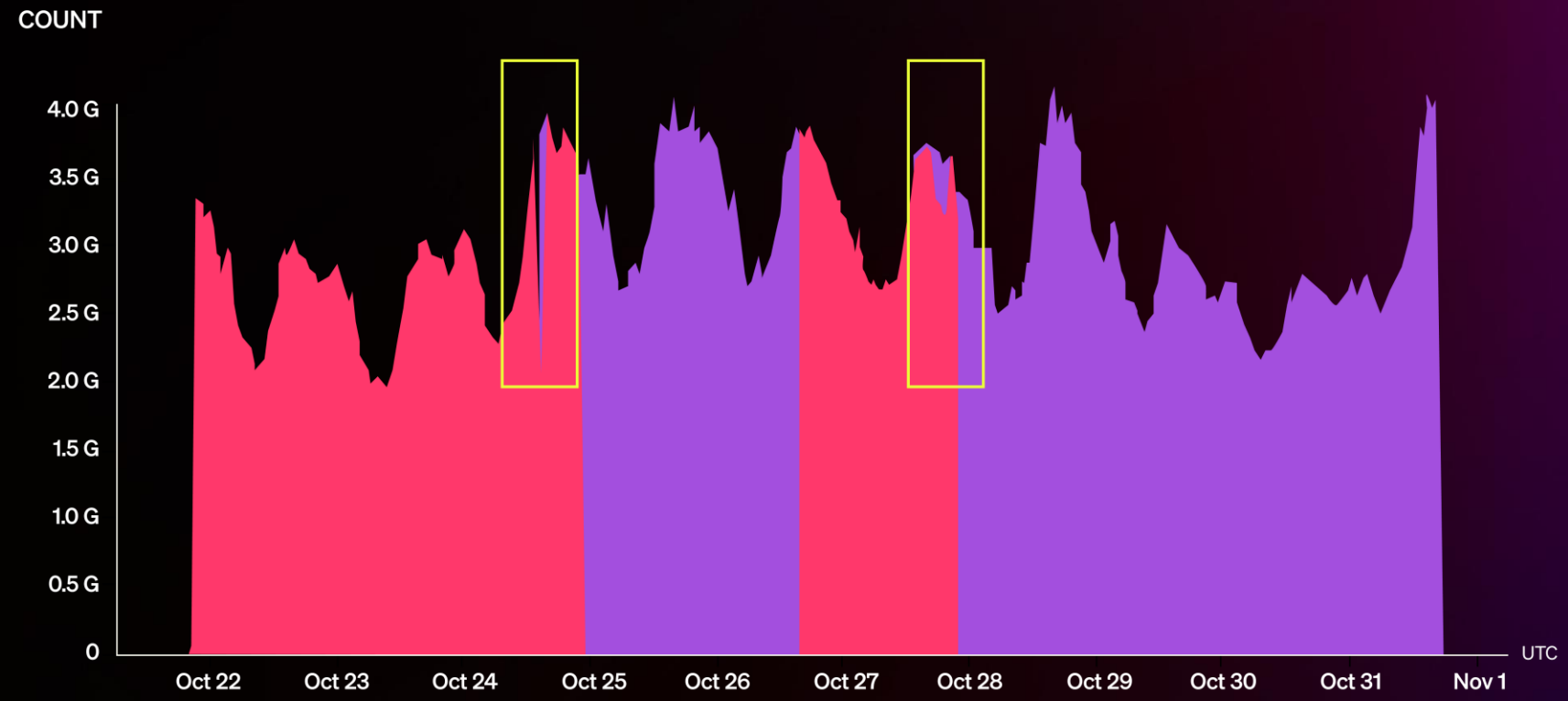
Douglas Soo

Staff Product Engineer, Honeycomb

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New ingest path case



Turned on new shepherd path for a % of traffic :point_up:

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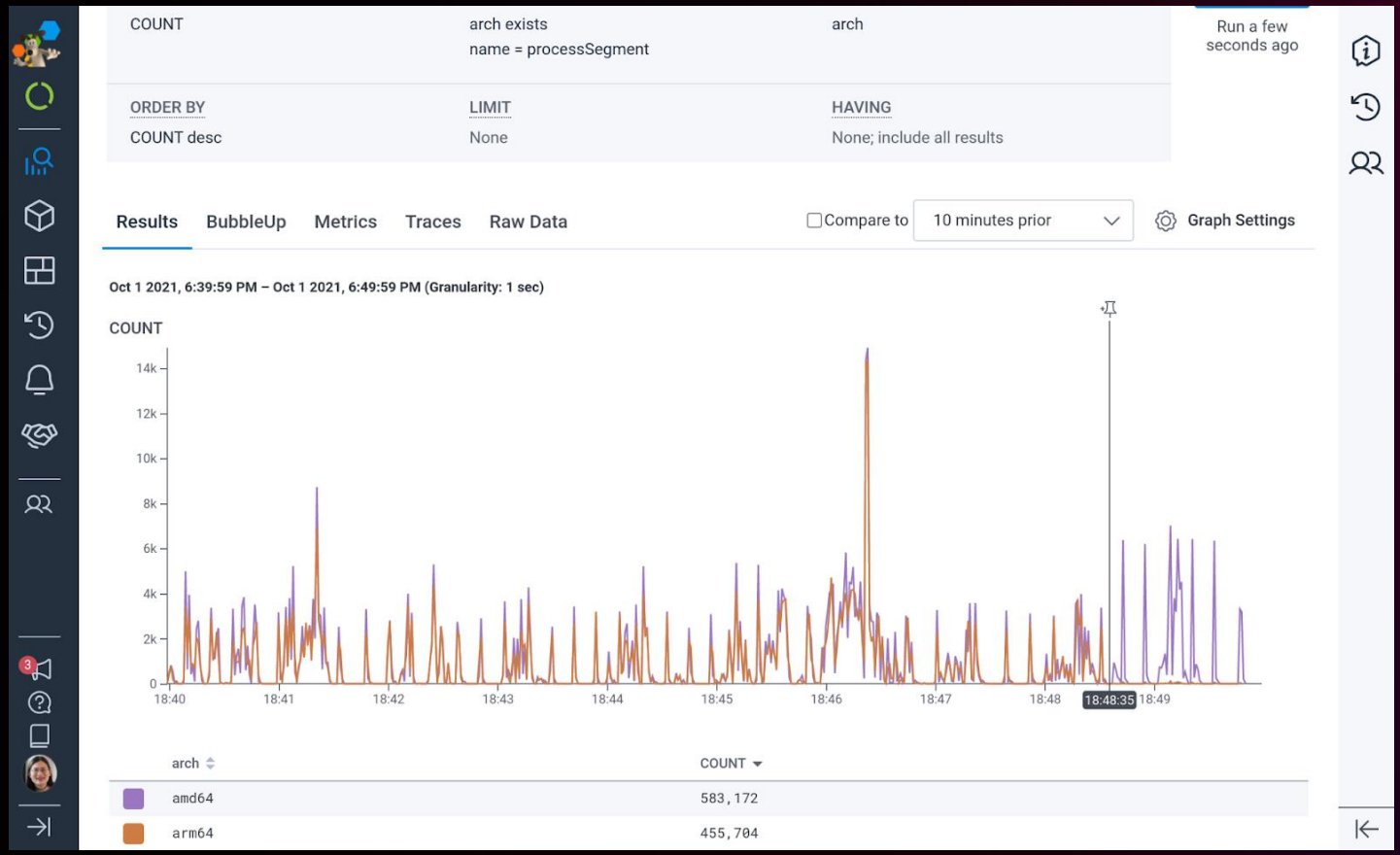
We don't just use LaunchDarkly for customer-facing features; our platform team uses it to optimize the internal workings of Honeycomb, including using feature flags for which Lambda functions to invoke so we can test new architecture choices.

Liz Fong-Jones

Field CTO, Honeycomb

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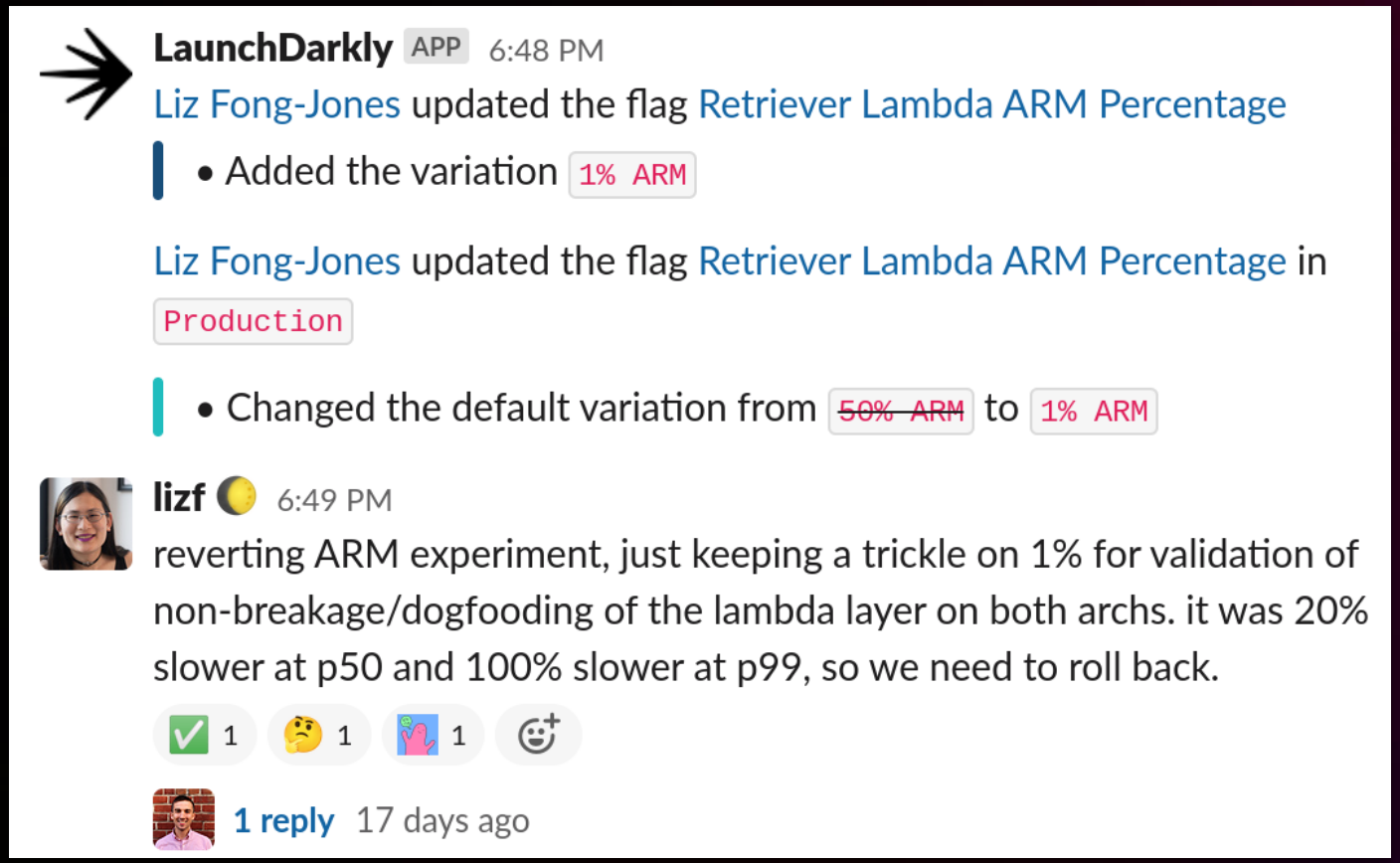
We were doing 50/50, but latencies were really high, so we reverted



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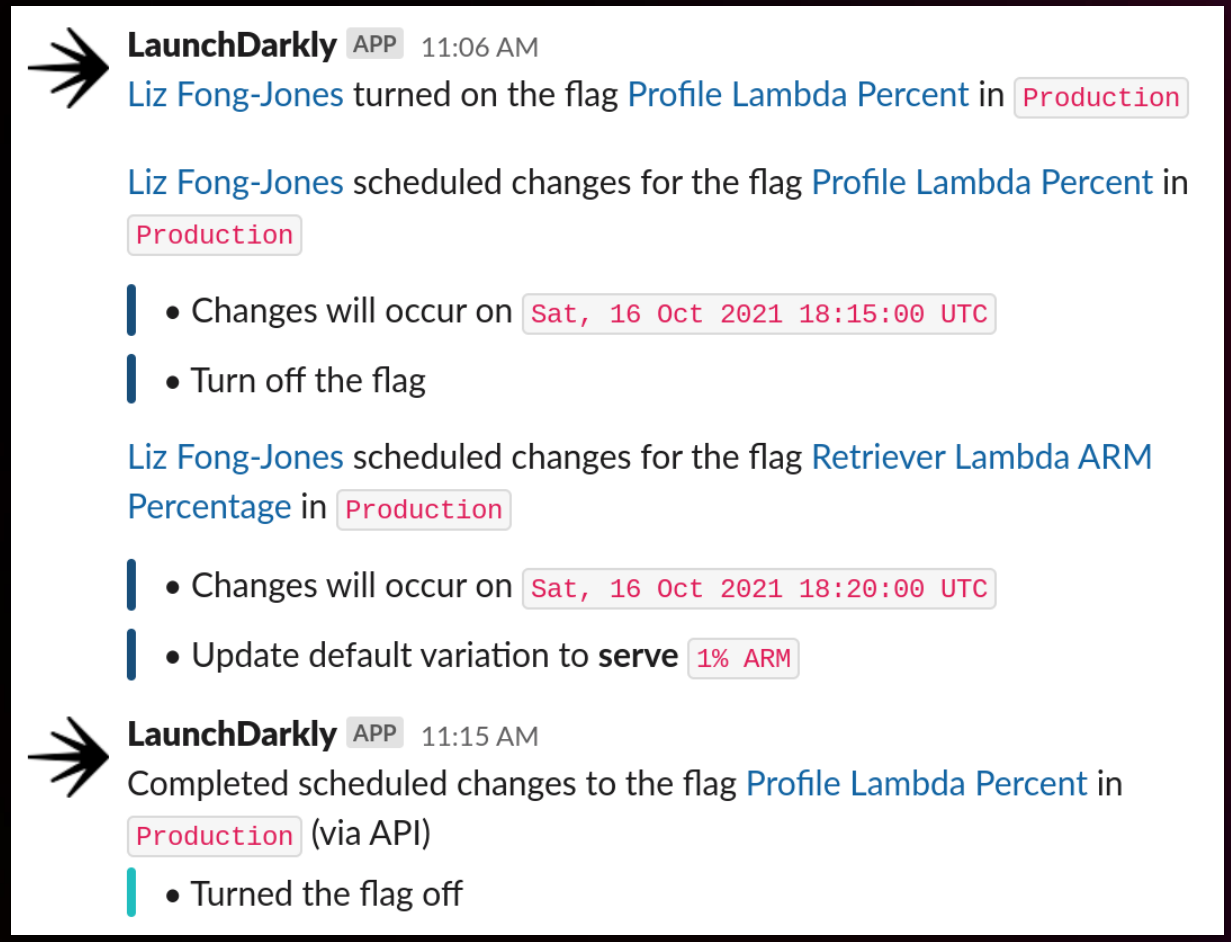
We revert instantly

(Here's what it looks like in our slack workflow)



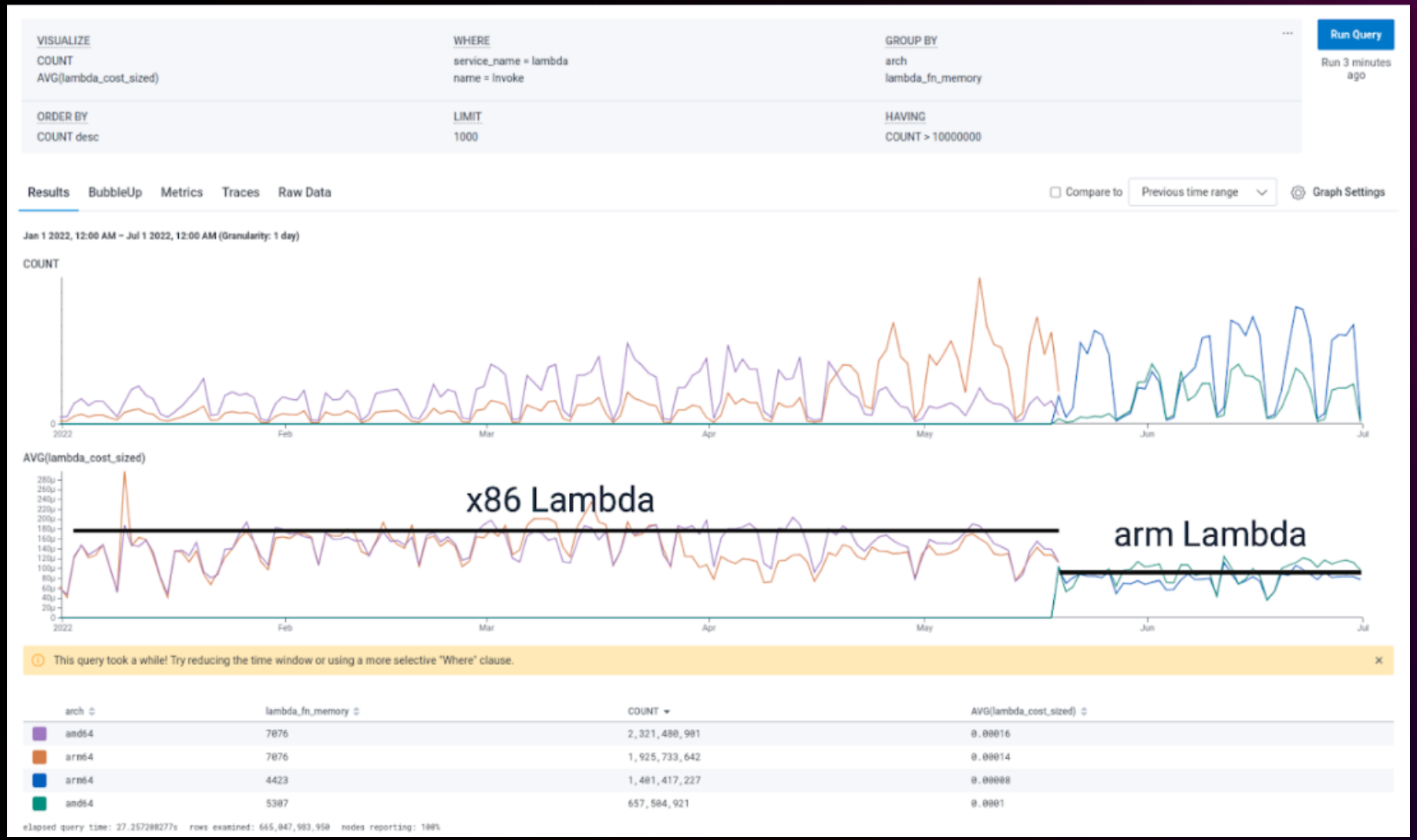
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We try again, more slowly and safely this time



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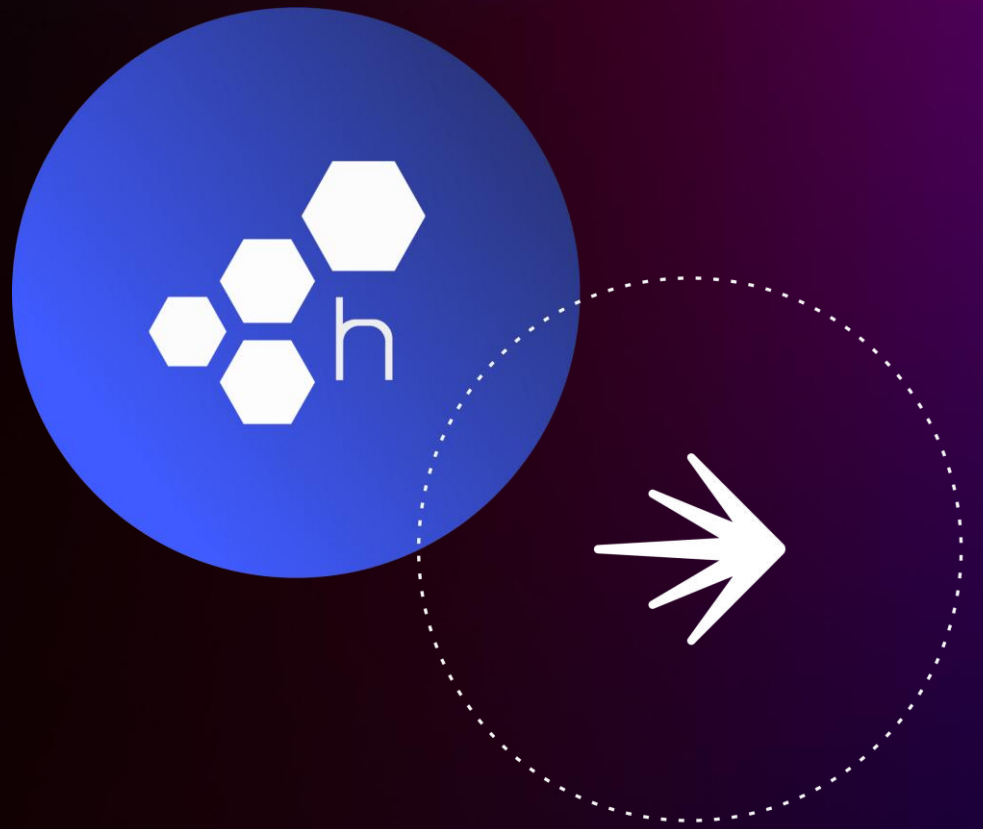
AWS Lambda on AWS Graviton lowers TCO



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There are lots of other ways we use LaunchDarkly too

- A/B testing
- Rewrites-in-place
- Forking/teeing output between known good and risky nodes
- Dark-launching scary features
- Selecting some groups of people to see things first
- Rolling out changes in waves



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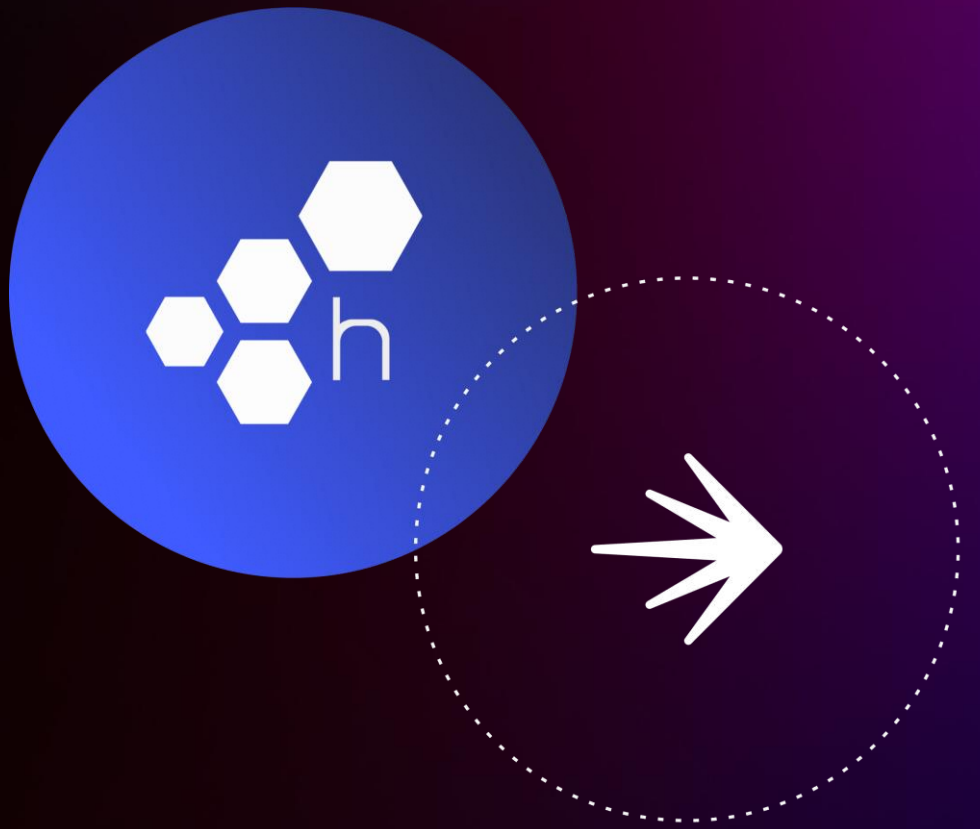
Precision gives confidence

Analyze and compare all customer experiences, good and bad

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Using feature flags to decouple deploys and releases

- Tightly-coupled deploys and releases are at the root of many, perhaps even most deploy-related pathologies in modern software systems
- Deploy your software constantly, after every set of changes is merged
- Release your software intentionally and methodically, when you want users to see each



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Visit LaunchDarkly and Honeycomb at re:Invent!





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Thank you!

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