Client Cannot Communicate

🎓 **Lessons from a decade of Kafka consulting**

Simon Aubury @SimonAubury

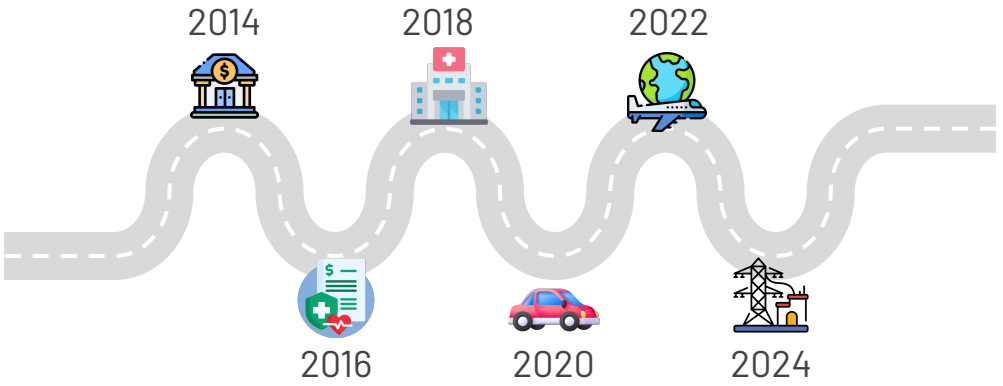
Slides

Sydney Kafka meetup

Hello!

/thoughtworks

Simple Machines



Simon Aubury

Data geek

Confluent
Community Catalyst

A decade of hit songs
Kafka
WARNING
OPINIONS AHEAD
0123A456B-789(C)
WARNING
OPINIONS AHEAD

2014

"Happy" Pharrell Williams

Apache Kafka 0.8

Staying happy

It has a steep learning curve ...

Learning - onboard quickly

In mid-size / larger-sized companies don’t be the blocker for upskilling others

- ⏩ An **easy onboarding** experience
- 😀 A **sandbox environment** for folks to try without constraints

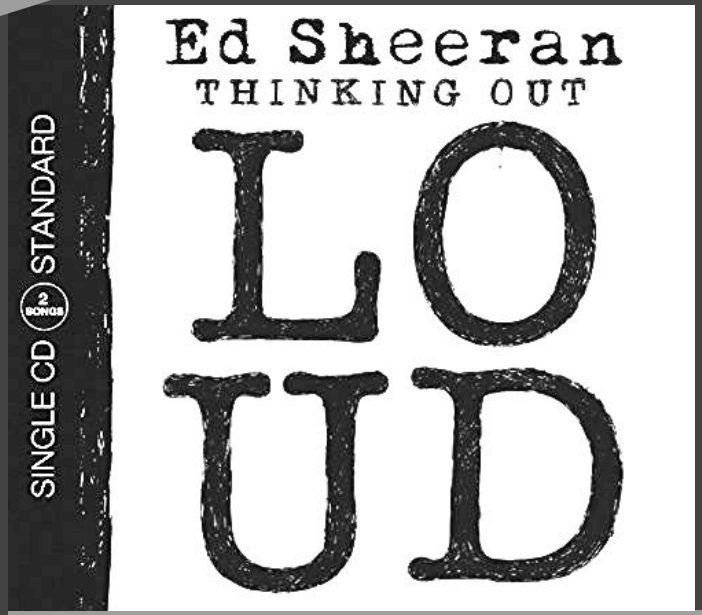
Learning - keep current

To stay happy **stay Kafka informed** ...

- 🌏 Big surface area
- 📈 Keeps growing - need to keep learning
- 📚 Great resources

https://github.com/pmoskovi/kafka-learning-resources

2015



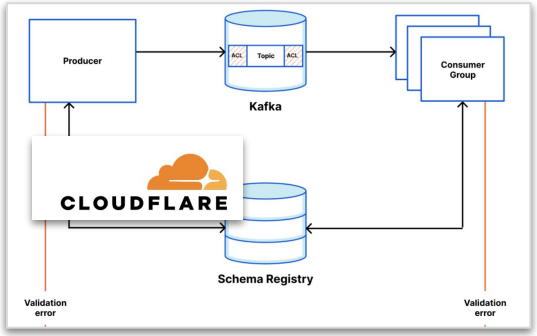
"Thinking Out Loud" Ed Sheeran

Apache Kafka 0.9

Thinking out loud

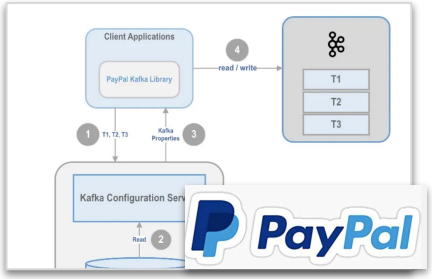
Seeing the same mistakes across different teams

Wix

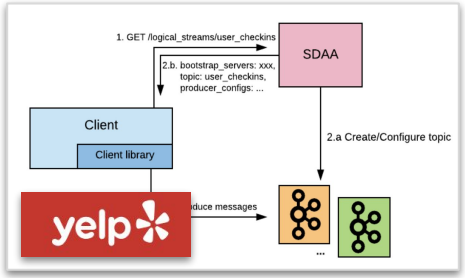


Cloudflare

Coinbase



Paypal



Yelp

Learning - sensible defaults

Codifying **best practices and principles into pre-defined approaches** for common tasks

- 🎁 Wrap the producer and consumer SDK
- 🤭 Hide the Kafka boilerplate
- 🤔 Broker location, serialization, key strategy, other properties

2016

“Sorry” - Justin Bieber

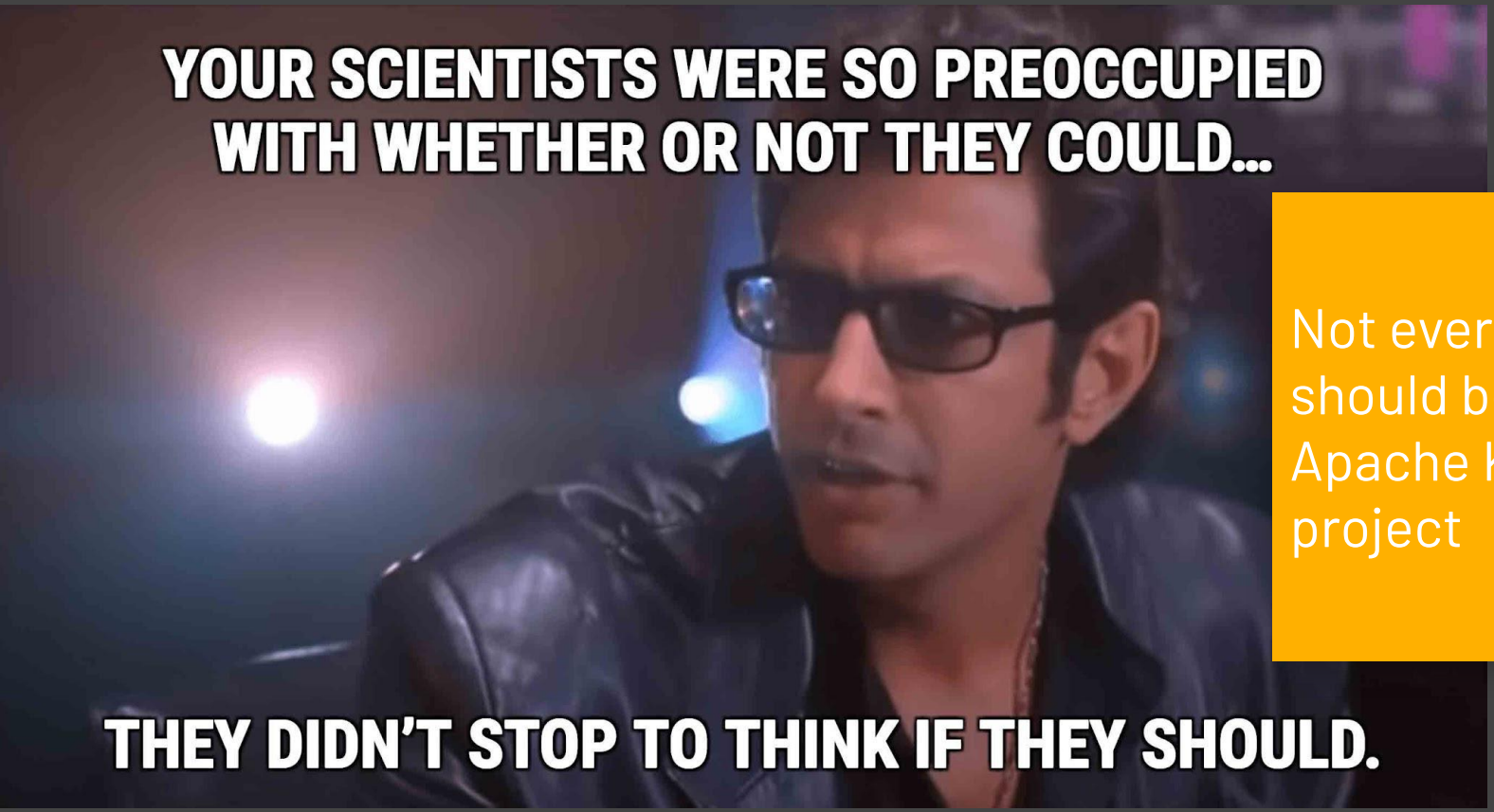
Apache Kafka 0.10

Sorry

Mistakes were made

❤️ Kafka is flexible enough to solve just about any problem!

Kafka is flexible enough to solve just about ***any*** problem?



Not everything should be an Apache Kafka project

Learning - when not to use Kafka

🛑 You **don't** want to use Kafka for

- 🛜 Unreliable networks
- 🌐 Connectivity to 1000's of client applications
- 🐘 Replacing a database or huge payloads
- 🧐 CV driven development

2017

"Shape of You" Ed Sheeran

Apache Kafka 0.11

Schemas are cool

How do we managing these shapes?

Decomposition

Moving from monolith to decoupled microservices with clear responsibilities

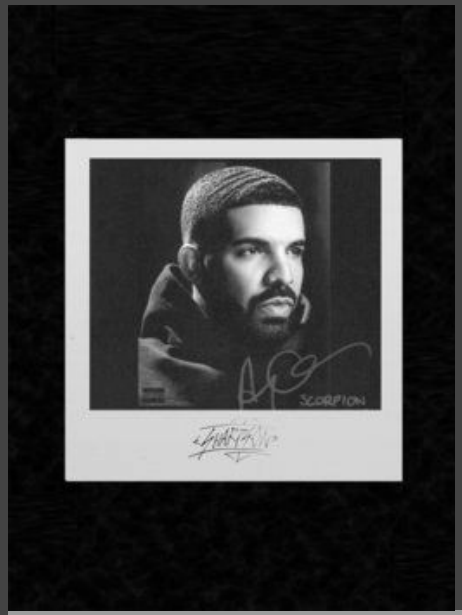
“Schemas are the APIs used by event-driven service ...so **a publisher and subscriber need to agree** on exactly how a message is formatted.”

(O’Reilly)

Learning to love schemas

- ✅ Schema registry
- 🛠️ Schema management - configuration repo
- ❤️ Schema ownership (and accountability)
- ⏩ Schema flexibility (and evolvability)
- 🤔 Choose the ~~right~~ *appropriate* compatibility mode

2018

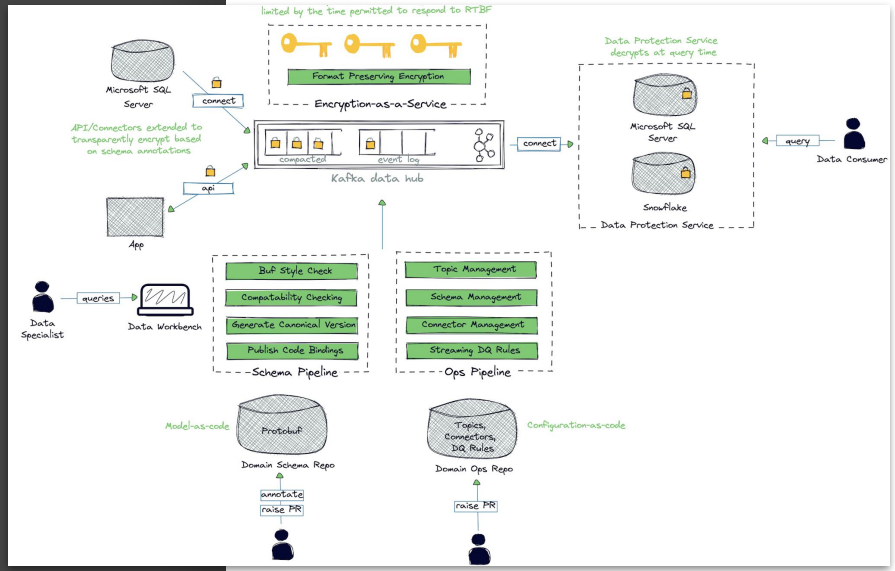


"God's Plan" Drake

Apache Kafka 1.0

Centralised Kafka

Working with the ~~god~~
“central platform team”



Introducing Apache Kafka as an enterprise backbone is not without its challenges

[Saxo Bank's Best Practices for a Distributed Architecture]

Learning - centralised team

⚖️ Balance developers ***and*** platform concerns

- 🪄 Establish appropriate abstractions
- 🔐 Non negotiables - security & access
- 👮‍♀️ Enforcing best practices by default
- ✅ Serialization, monitoring, encryption -
  - if it's important - bake it in from day one

2021

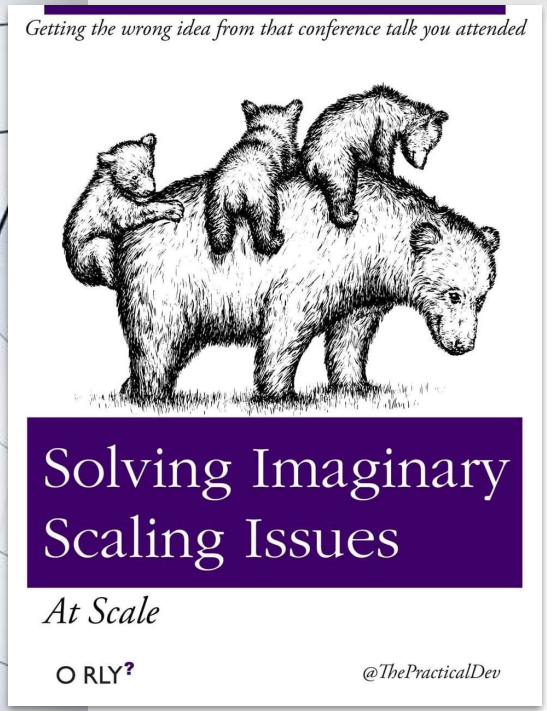
"Save Your Tears"
The Weeknd and Ariana Grande

Apache Kafka 2.8

Save your tears

Running Kafka yourself can get pretty time consuming depending how big you scale.

Learning - Building it yourself?



https://orlybooks.com/books/imaginary-scaling-issues

😱 Don't run Apache Kafka yourself *

** unless you're very small, or very big!*

Takeaways - greatest hits

✅ Codify best practices

❤️ Love schemas and manage like code

⚖️ Balance developers and platform concerns

📚 Keep learning

And now?

Today

“Beautiful Things”
by Benson Boon

Apache Kafka 3.9

Beautiful Things

The beauty of Apache Kafka lies in its ability to unify data processing, integration, and real-time analytics within a single platform.

Thanks!

@SimonAubury

❤️Presentation template by SlidesCarnival, Icons Flaticon photos Unsplash and Pixabay