Building a cost conscious culture

Strava

The app for active people

150M+

Registered users

185

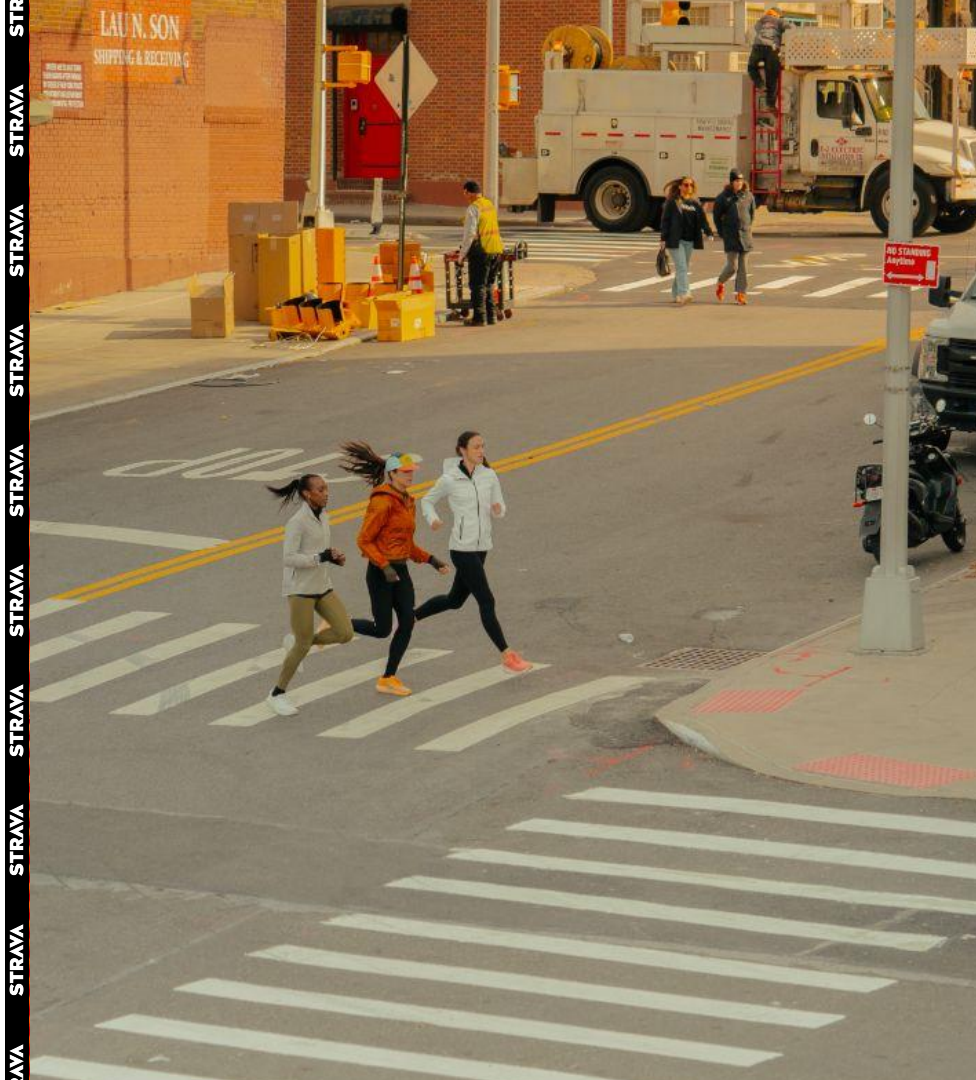
Countries with Strava users.

50M+

Weekly activity uploads

12B+

Activities shared all time



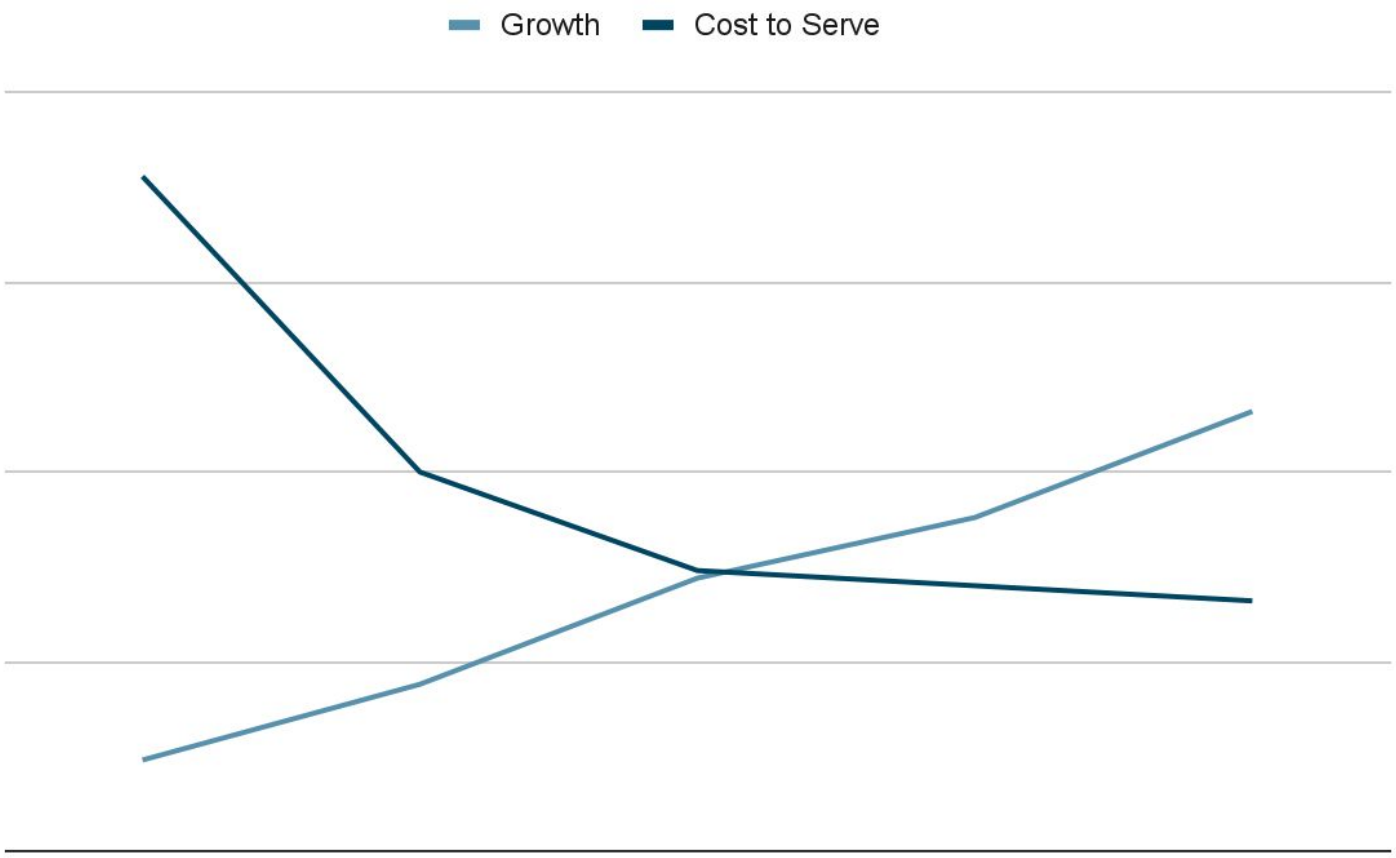
The wrong kind of hockey stick graph.

Cost is up and to the right from 2020-2023

Cloud Cost Strategy Principles

- **Simplicity:** Matching our technology strategy, reducing cost is grounded in simplifying code, architecture or technology choices to reduce the overall cost to run a product.
- **Intentional Data Storage:** Store the right data in the right place for the right length of time.
- **Team Level Accountability:** Costs are managed at the team level and we provide systems and tooling to support. Teams are empowered to make the best choice for what their services and products require.
- **Increased spending is always driven by a product or business need.**

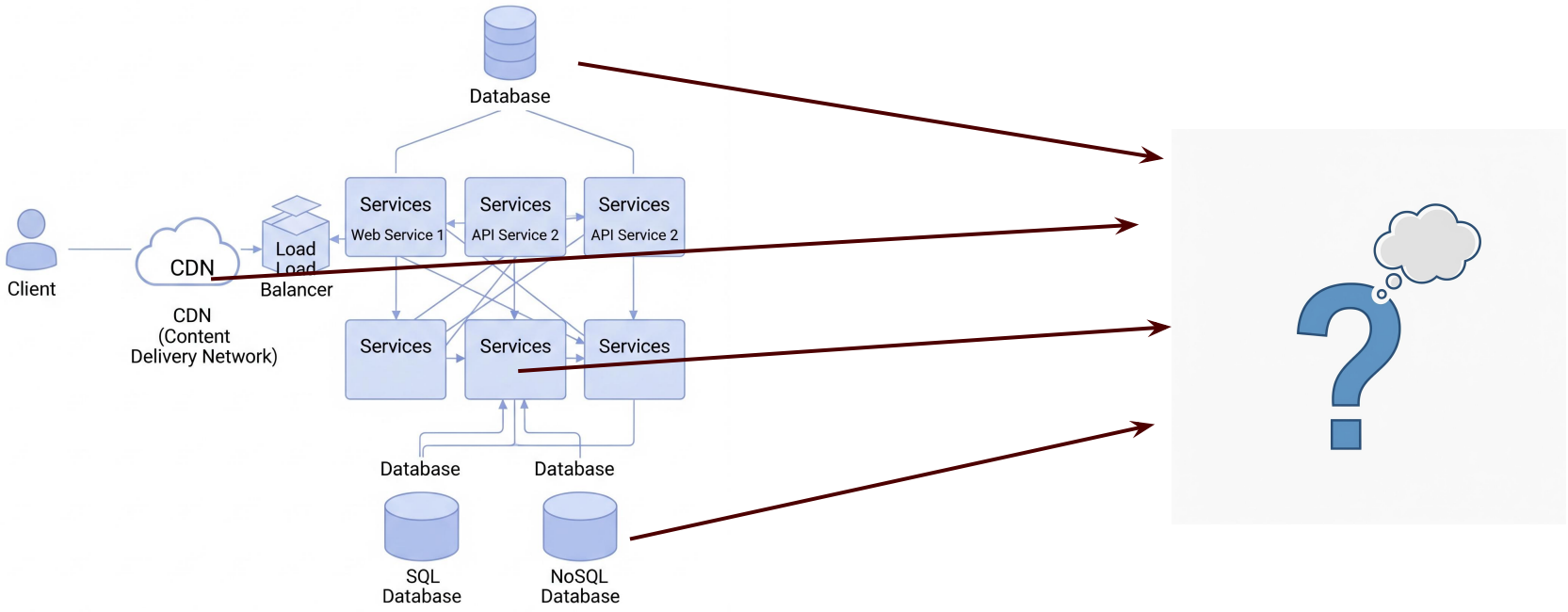
Coming soon in 2026.


Growth
Cost to Serve

It’s late 2023...

01

Q4 2023
We start looking for early wins to make a dent in our cloud costs.


Database
Client
CDN
CDN
(Content
Delivery Network)
Load
Load
Balancer
Services
Web Service 1
Services
API Service 2
Services
API Service 2
Services
Services
Services
Database
Database
SQL
Database
NoSQL
Database

Identified areas of optimization for 2024

01

Networking layer

Managed service removal opportunity
Optimizing cross zone traffic in as many use cases as possible.

02

Data Stores

Working with product to reduce unnecessary data on Strava segments.
‘

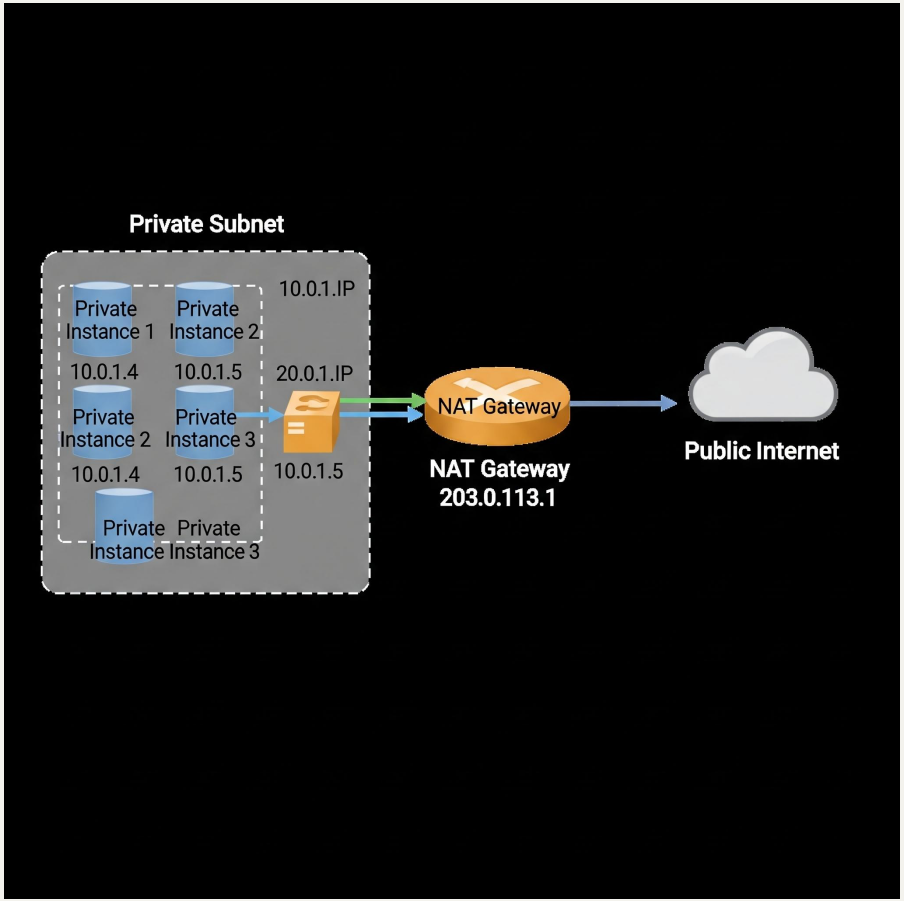
03

~~Compute~~

This wasn’t feasible at this point in time. Because we were on mesos
:ahhhh:

Case study: when your managed service is not a good ROI

- Using a managed service for our network gateway
- Identified an open source alternative
- Key learning: Managed services aren't always good ROI
- Over 90% savings



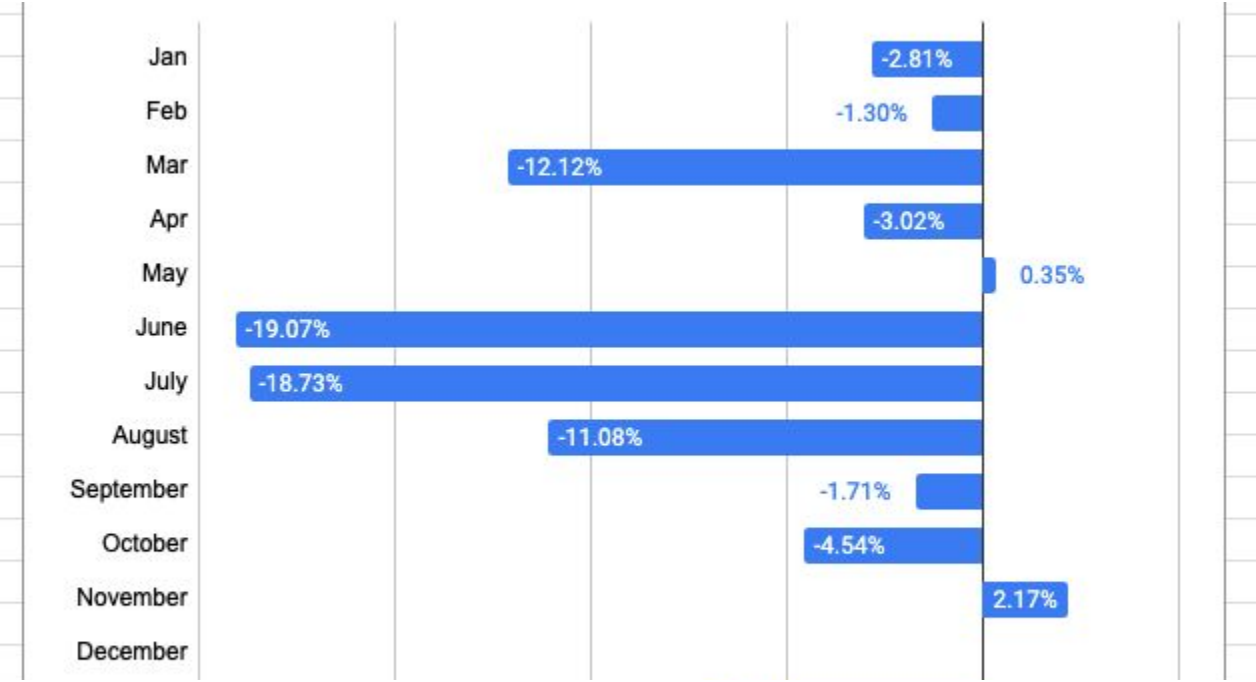
Mid 2024: we're getting wins but it feels like a side quest

Mid 2024
We've gotten a couple of big wins under our belt. But we lack any central systematic approach

01 02

Q4 2023
We start looking for early wins to make a dent in our cloud costs.

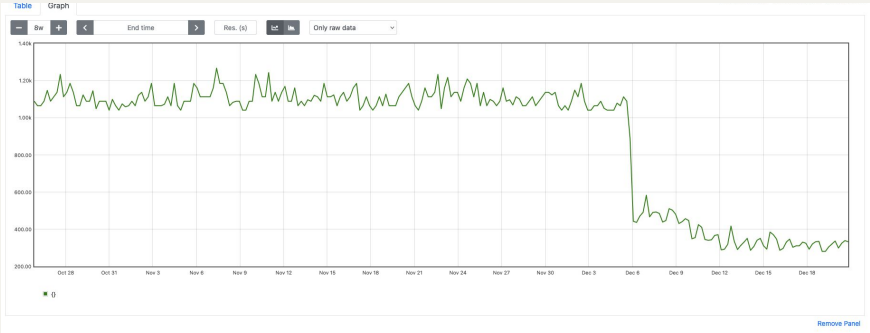
Communicating our progress

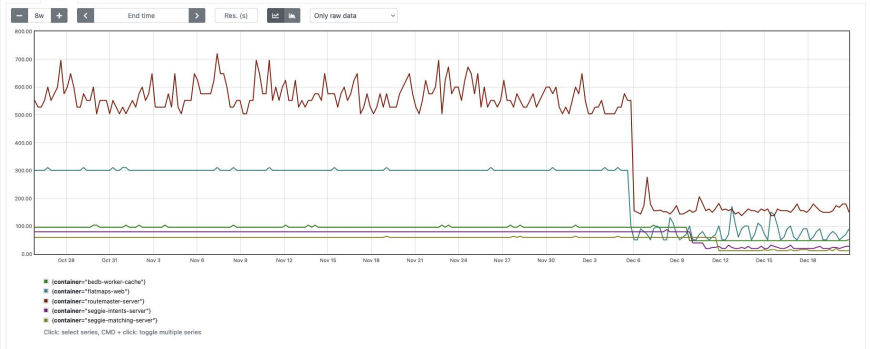

Jan
-2.81%
Feb
-1.30%
Mar
-12.12%
Apr
-3.02%
May
0.35%
June
-19.07%
July
-18.73%
August
-11.08%
September
-1.71%
October
-4.54%
November
2.17%
December

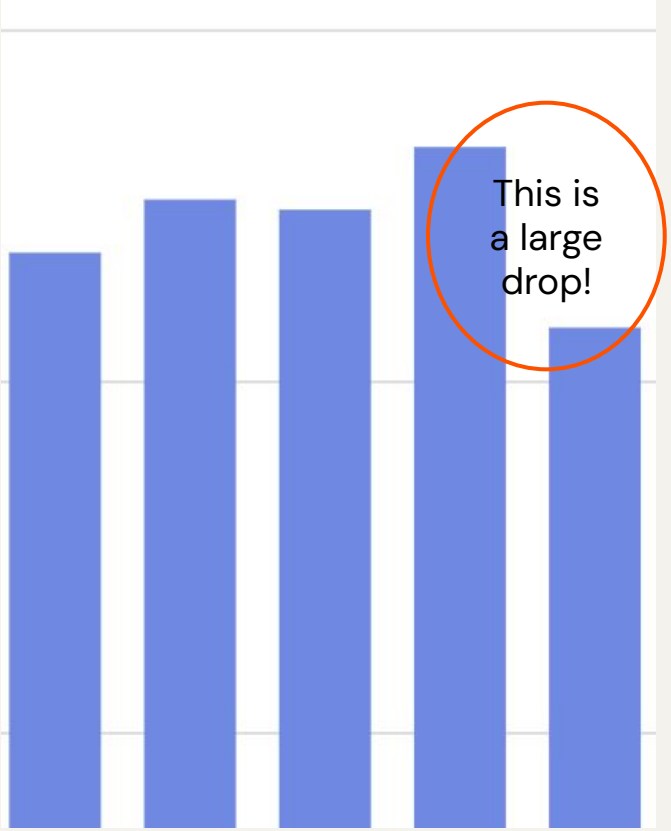
Cost	Reporting Frequency	Reporting Period	Reporting Type	Denominator
AI	Weekly	trailing 28d	Observed Cost	28d MAU
Disaster Recovery	Weekly	trailing 28d	Observed Cost	28d MAU
Security	Weekly	trailing 28d	Observed Cost	28d MAU

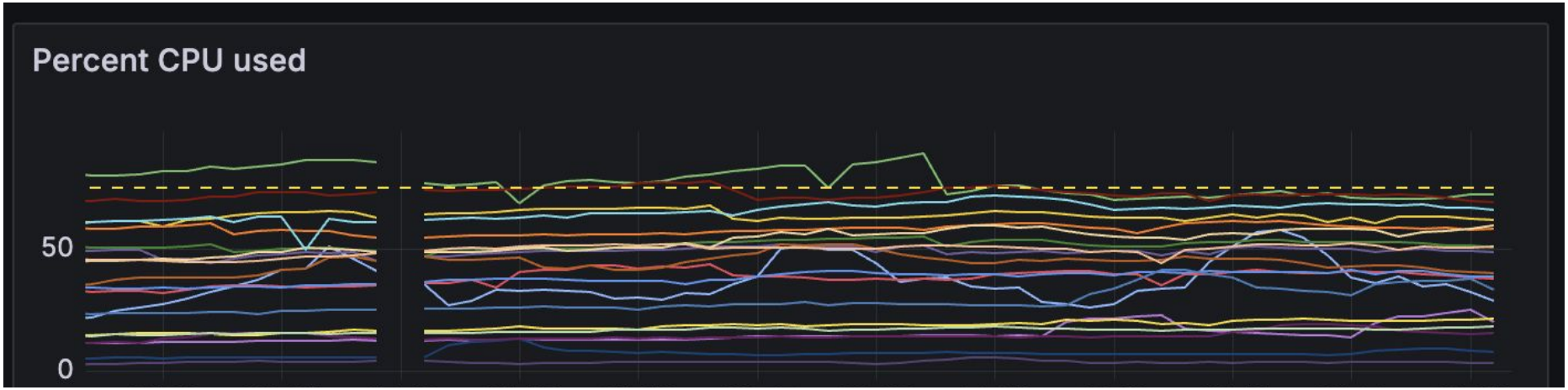
kubernetes

Case study: CPU optimizations








Percent CPU used
50
0

Case study: Segment Leaderboards

- Millions of segments
- Billions of efforts
- Most expensive service
- “Cruft”: low quality segments that aren’t delivering value to users

PROPRIETARY & CONFIDENTIAL

Q4 2024: A big step up, using process to scale and pattern matching for opportunities

01

Q4 2023
We start looking for early wins to make a dent in our cloud costs.

02

Mid 2024
We've gotten a couple of big wins under our belt. But we lack any central systematic approach

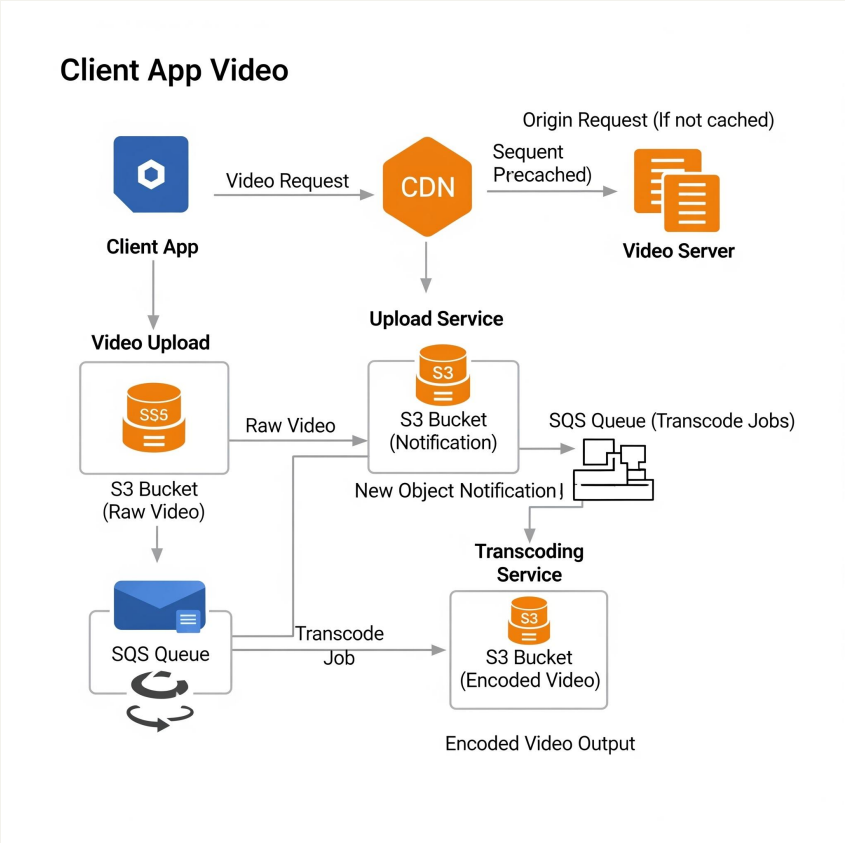
03

Q4 2024
We start using our OKR process to drive team level commitments to cost reduction. Separating the expectation of savings from the implementation of savings.

15% reduction in cloud costs

Case study: bringing a vendor service in house.

- Learned from previous managed service work
- Identified an area where bringing in house would give more cost and product levers
- Product partnership: Used data to only build out the functionality users needed
- Saved over 40%



2025: Bigger swings

01

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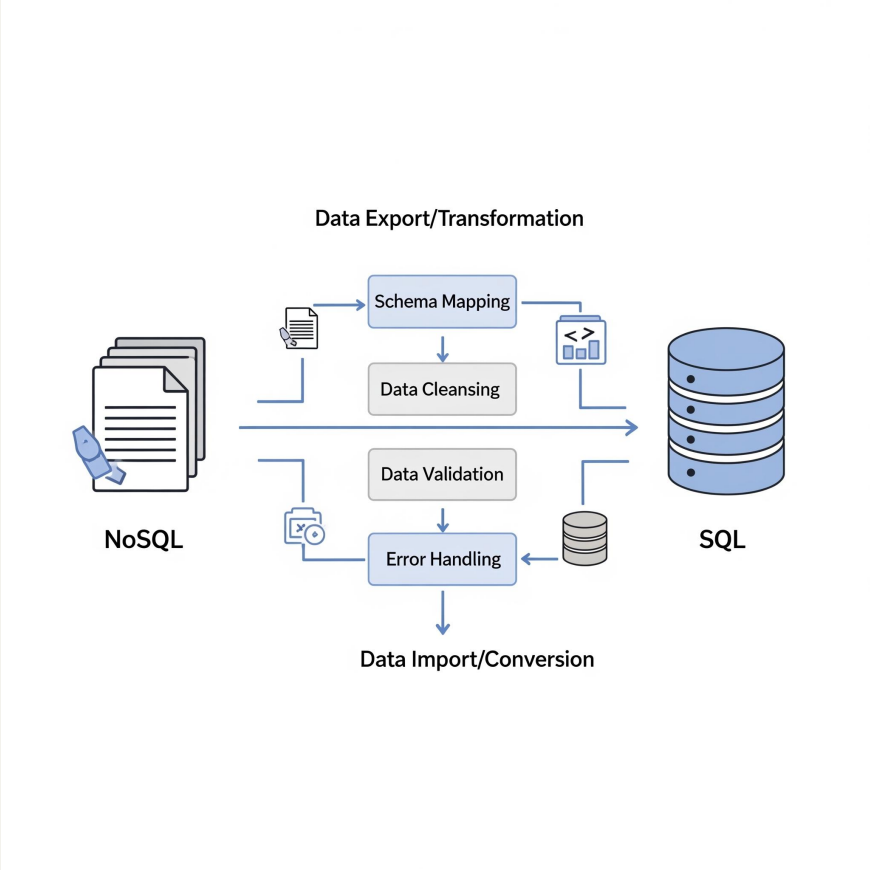
04

2025
Migrations and architecture improvements for sustained wins that scale.

Case study: Rethinking an entire service's DB approach (NoSQL to SQL)

- High investment, ROI not as big as some earlier wins
- Significant planning + backfill and validation were 50% of the project.
- Simplicity and playing to our strengths
- 75% Reduction in costs.



Looking ahead: building systems to make this easier

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02

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03

Q4 2024
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04

Q1 2024
Migrations and architecture improvements for sustained wins that scale.

05

Looking ahead
Team level budgeting
Continue to rebuild key systems that rely on old technology

Key Takeaways

01

Accountability

Relying on the motivations of individuals is limiting. Use process and team level accountability.

02

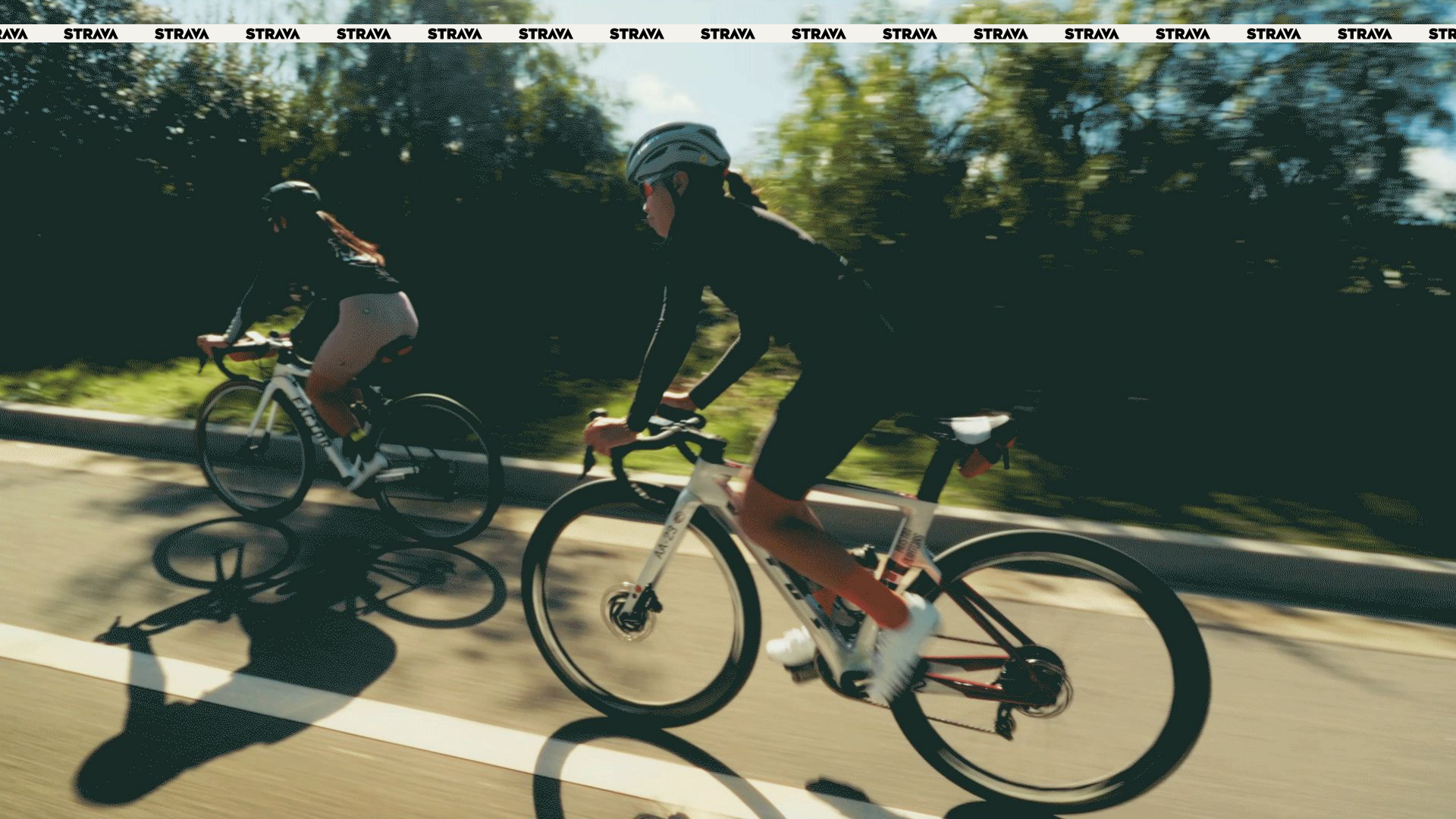
Product partnership

Some of our biggest success only came by doing work with product managers to advocate for product changes to go with the technical changes.

03

Data and tracking

Improving our attribution, data tracking, modeling and communication to stakeholders has been key.


STRAVA