

Industry

- [Financial Services](#)

Customer application

- Sherlock fraud detection

NoSQL solutions

- [Customer 360](#)

Use case

- Fraud detection
- User profile store
- Digital communication
- [Caching](#)

Product

- [Couchbase Server](#)

Key features

- [NIQL](#)
- Multi-dimensional scaling
- Cross datacenter replication
- [In-memory database](#)

Revolut

The UK fintech company Revolut developed Sherlock, a machine learning-based fraud prevention system, to counter the growing threat of financial fraud. Sherlock continuously and autonomously monitors card users' transactions, and if it finds a suspicious transaction it sends the user a push notification for their approval. Revolut selected Couchbase because of its inherent architectural advantages – including speed, agility, and scalability – that address the ever-changing data needs of users and merchants.

CHALLENGES

- Fraudsters are evolving to beat traditional predetermined fraud detection rules
- A mission-critical application required consistent high availability and high throughput for its rapidly growing customer base
- On average, financial fraud costs institutions between 7-8 cents out of every \$100

OUTCOMES

- Sherlock's high speed caching enabled machine learning algorithms to continually learn and update rules – catching 96% of fraudulent transactions
- Sherlock evaluates transactions for signs of fraud in under 50 milliseconds for Revolut's 12+ million customers
- Within the first year in production with Couchbase, a 75% improvement over industry standards saved more than \$3M

“For our customers, the loss of \$100 can mean the difference between a pleasant holiday and an experience filled with frustration and resentment. Couchbase has never failed us or our customers.”

Dmitri Lihhatsov

Financial Crime Product Owner, Revolut

About Couchbase

Unlike other NoSQL databases, Couchbase provides an enterprise-class, multicloud to edge database that offers the robust capabilities required for business-critical applications on a highly scalable and available platform. As a distributed cloud-native database, Couchbase runs in modern dynamic environments and on any cloud, either customer-managed or fully managed as-a-service. Couchbase is built on open standards, combining the best of NoSQL with the power and familiarity of SQL, to simplify the transition from mainframe and relational databases.

Couchbase has become pervasive in our everyday lives; our customers include industry leaders Amadeus, American Express, Carrefour, Cisco, Comcast/Sky, Disney, eBay, LinkedIn, Marriott, Tesco, Tommy Hilfiger, United, Verizon, as well as hundreds of other household names. For more information, visit www.couchbase.com.

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