KLOUDLE

Couchbase

Transforming Cloud Security for Developer-First Teams with Kloudle

Kloudle set out to solve a growing gap in the cloud security landscape: 80% of the public cloud market (primarily developers and small teams) remained underserved by traditional cybersecurity vendors. While legacy tools targeted mid-market and enterprise deals, Kloudle leveraged Couchbase to build a lightweight, pay-as-you-go product tailored for agile teams building on the cloud.

Challenges

- Traditional cloud security platforms were overly complex, expensive, and designed for mid-market or enterprise use cases, leaving developers and small teams underserved.
- Legacy infrastructure (Cassandra and relational databases) was too complex for low-volume, multi-cloud data and lacked the flexibility Kloudle needed.
- Real-time alerting models created noise and inefficiency, overwhelming smaller teams with limited bandwidth for managing security operations.

Outcomes

- 10x faster scan performance, reducing scan times from 30 minutes to ~4 minutes while improving accuracy and reliability.
- Significantly reduced page load times and improved query speeds for large datasets (50M+ documents, ~4000 misconfigurations) using Couchbase Capella.
- Eliminated operational overhead by moving to a fully managed NoSQL database, enabling Kloudle's developers to focus on product innovation and user experience.

Industry
- High Tech

Customer Application
- Cloud security platform

Use Case
- Real-time analytics
- AI

Product
- Couchbase Capella

Key Features
- Analytics
- In-memory/Caching
- SQL++

Cloud Provider
- GCP

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— **Akash Mahajan** CEO & Founder, Kloudle

THE CHALLENGE: MODERNIZING CLOUD SECURITY FOR AGILE TEAMS AND MULTI-CLOUD ENVIRONMENTS

Cloud environments offer incredible flexibility, but that same flexibility often leads to critical misconfigurations. Developers, particularly in smaller teams or early-stage companies, are focused on building and deploying security functions, not managing them. The traditional real-time alerting model of cloud security platforms was overwhelming and ineffective for these types of users.

THE SOLUTION: SIMPLIFYING SECURITY SCANS WITH COUCHBASE CAPELLA'S FLEXIBLE NOSQL MODEL

To address this challenge, Kloudle introduced a new model:

- No credential storage; runs one-time scans and reports misconfigurations, provides simple steps to fix any issues
- Simple outputs via downloadable PDFs or CSVs
- Pay-as-you-go pricing, eliminating the friction of subscriptions

Rather than interrupting developers with alerts, Kloudle's product integrates into their workflows, avoiding real-time alerts in favor of security hygiene education. This is much better for small teams' bandwidths, enabling actionable insights without a deep security setup. The teams can see what areas they need to focus on solving at their own pace.

Originally built for solo developers, Kloudle has since seen strong adoption by mid-market companies and even enterprise teams. A growing use case emerged among enterprises undergoing M&A, where newly acquired teams needed quick, independent security assessments. One such customer, a UK-based enterprise, discovered Kloudle via ChatGPT, searching for "cloud security for small teams."

Kloudle's early infrastructure relied on Cassandra, but was too complex for low-volume data and a relational database wasn't ideal for a multi-cloud architecture.

"Cassandra was meant for when we wanted to support a single-tenant enterprise —every customer gets their own isolated app. PostgreSQL or Relational wasn't an option because we wanted to support multi-cloud. Different cloud providers have different services, and we wanted to support all. For this reason, relational databases are a poor fit since the schema isn't clear," explained Akash Mahajan, CEO and Founder at Kloudle.

As the business scaled, Kloudle migrated to Couchbase Capella on Google Cloud Platform (GCP) for a more manageable data structure with NoSQL, faster development, and better performance. After a scan is done, everything about their cloud resources (metadata, misconfigurations) are stored, and users can filter or sort, all powered by Capella.

Running Couchbase Capella on GCP gives Kloudle the flexibility to scale effortlessly while ensuring high availability. GCP's robust infrastructure and compute resources allow the platform to handle large-scale workloads such as scans of 50M+ documents without performance degradation. Additionally, GCP Cloud Storage provides durability and accessibility for scan data, ensuring customers can rely on quick, secure reporting.

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THE RESULTS: ENHANCED USER EXPERIENCE, LOWER OVERHEAD, AND LIGHTNING-FAST SCANS

Once migrated to Capella, Kloudle was able to achieve several tangible results including:

- 10x faster scan performance (from 30 minutes to ~4 minutes), with no credential storage
- Reduced page load times: Transition to Capella improved load times, especially with large datasets (50M+ documents, ~4000 misconfigs)
- Enhanced user experience through better indexing and query speed
- Increased visibility for developers with zero friction

The transition to a managed service freed Kloudle's developer team from operational overhead, allowing them to focus entirely on product and customer experience.

"When we migrated, we were a 5-node cluster and had over 50 million documents. The indexes allowed users to feel like the product was visibly faster. Load times improved and customers thought performance was superb," said Mahajan.

AI INTEGRATION & FUTURE VISION

While not yet user-facing, Kloudle heavily uses AI internally for code generation and product development velocity. The roadmap includes:

- Exploring AI-driven UX like prompt-based asset queries
- A CLI tool to embed scanning into CI/CD workflows

- Region-specific scanning to meet data sovereignty requirements—customers want scan traffic to originate in specific geographies, and they want results available in-region with only aggregates showing on the dashboard

Kloudle plans to expand through managed service providers (MSPs) who are helping large companies adopt AI. These MSPs often need security tools that are lightweight, deployable on demand, and compliant with strict regional data requirements.

Kloudle's approach demonstrates the power of developer-first design in cybersecurity. By solving real-world problems with simplicity, speed, and empathy for small teams, they've created a product that's growing organically and serving a previously overlooked segment of the cloud security market.

As industries race to embrace AI, traditional database solutions fall short of rising demands for versatility, performance and affordability. Couchbase is seizing the opportunity to lead with Capella, the developer data platform architected for critical applications in our AI world. By uniting transactional, analytical, mobile and AI workloads into a seamless, fully managed solution, Couchbase empowers developers and enterprises to build and scale applications and AI agents with complete flexibility – delivering exceptional performance, scalability and cost-efficiency from cloud to edge and everything in between. Couchbase enables organizations to unlock innovation, accelerate AI transformation and redefine customer experiences wherever they happen. Discover why Couchbase is the foundation of critical everyday applications by visiting www.couchbase.com and following us on LinkedIn and X.