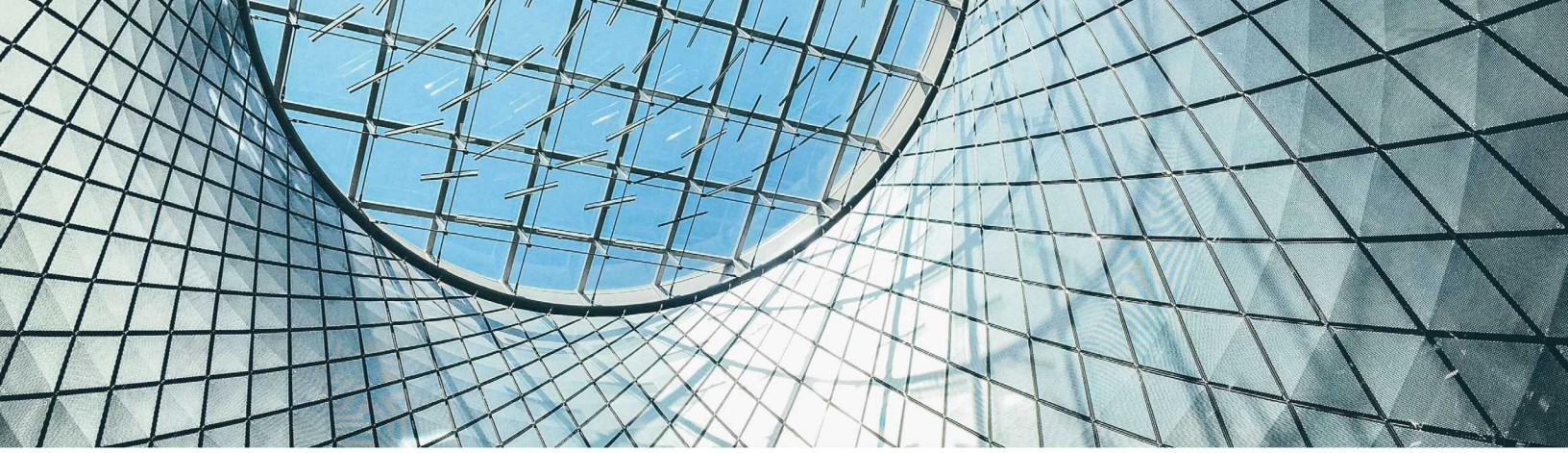

Market Insight Report Reprint

Couchbase sings a song of generative AI with developer productivity tool Capella iQ

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Jumping headlong into generative artificial intelligence, Couchbase has announced Capella iQ, an integrated development tool that provides a conversation-like prompt and response interface to assist developers in not only writing codes and applications, but also testing them.

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Introduction

Jumping headlong into generative artificial intelligence, Couchbase Inc. has announced Capella iQ, an integrated development tool that provides a conversation-like prompt and response interface to assist developers in not only writing codes and applications, but also testing them. Capella iQ is large language model (LLM)-driven. It is augmented by Capella, Couchbase's managed database-as-a-service offering.

THE TAKE

Databases and generative AI are at the edge of a precipice, and Couchbase is positioned right there. These technologies will coexist in numerous ways for the foreseeable future, and developer assistance is one of those areas where databases and generative AI complement each other well. Developer enablement is increasingly becoming a primary focus for the company, and Capella iQ is out in front with its conversation-like embedded developer assistance tool. We believe that Capella iQ could serve as a driver for increased database adoption, including as an enterprise on-ramp to generative AI. Capella iQ is the first element in a larger generative AI strategy for the company. We anticipate vector to be forthcoming, along with other AI-specific optimizations that will play to the belief that most enterprise applications will ultimately integrate generative AI. Business-wise, the company is performing well, as evidenced by its latest results. Staying the course is imperative.

Context

Couchbase is a well-known and established vendor in the broader NoSQL operational database market. A little over two years out from its IPO in June 2021, Couchbase is reporting respectable numbers. From its second-quarter 2024 results, Couchbase recorded revenue and annual recurring revenue up year over year at 8% and 23%, respectively.

Executives noted that Capella has seen strong growth, driven by a 20% uptick in new customer logos, which is reflected in net revenue retention that exceeds 115%. Customer counts are up as well, at just under 700. However, the company noted a $21.9 million loss, an increase compared with $15.2 million for the previous quarter, although it did drive healthy outperformance in operating loss guidance.

Meanwhile, the company is poised to take advantage of the expected trajectory of NoSQL — the fastest-growing segment among the database areas we track. Forecast to see total revenue at $11.3 billion for 2023, the segment represents approximately 20% of the operational database market, rising to 32% in 2027, according to the latest forecast from 451 Research's Data, AI & Analytics Market Monitor.

Strategy

Couchbase believes that the majority of enterprise applications will incorporate elements of generative AI. That means a wave of enterprise application rewriting is expected over the next several years. A leading trend driving generative AI is the adoption of LLMs, with their ability to deliver a conversation-like experience based on a trained corpus of data. The value for enterprises is significant from an application standpoint, from customer support to conversational search to generating code, to name a few use cases. Additionally, developers that are new to Capella will find it familiar, with design and navigation inspired by popular developer-centric tools like GitHub.

Given its history of innovating on a distributed NoSQL database for performance, scaling and resiliency, among other capabilities, as well as a tie-in to its mobile edge computing platform, the company maintains that its database is well positioned to ride the generative AI application wave, but that vision will take time. Therefore, Couchbase is taking a structured approach to how it plans to embrace generative AI.

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Initially, the company will look to enable developer productivity, and its release of Capella iQ is the first step. Other database updates are expected as well — for instance, optimized vector search. Couchbase Mobile, the company's mobile database platform, is also expected to play a key role, primarily because generative AI applications are likely to reside not only on mobile devices, but also other edge devices. Finally, building out a robust partner ecosystem will be a critical factor. For instance, MindsDB and Dataworkz partner with Couchbase to help enterprises adopt, build and deploy generative AI applications.

Products

In October 2021, months after its IPO, the company launched (or rather, relaunched under new branding) a cloud database-as-a-service offering called Couchbase Capella. It continues to put a lot of its development focus on Capella, for good reason. Capella adoption is up (20% rise in new logos from the first quarter), and is a growing driver behind the company's revenue. Couchbase appears to be taking a cloud-first approach in that new database capabilities are expected to hit Capella first before getting rolled into the company's other products, Couchbase Server and Couchbase Autonomous Operator.

Capella iQ is a developer productivity tool that functions as an integrated development environment (IDE) inside the Capella Workbench. It is a generative AI-embedded feature that is specific to Capella and Couchbase, and integrates with ChatGPT, although other LLMs can be integrated as well. This means that Capella iQ can generate responses, as well as function as a sort of developer adviser, assistant or "copilot."

Specifically, Capella iQ enables developers to use natural language to interact with Couchbase to build out datasets (organized in "collections" and "scopes," which are the equivalent of relational tables and schema), as well as other commands to interact directly with the database. It can also create indexes on those datasets. Capella iQ can generate application code — Python and C++, for instance — as a way to access the data, including providing proving explanations on that code, and enabling testing and analyzing the code.

Besides Capella iQ, Couchbase made some additional enhancements to Capella. There is now support for Vercel IDE and the IntelliJ family of IDEs. Capella performance has been enhanced with added dynamic scaling for disk storage and input/output operations per second, enabling Couchbase to better handle read and write operations. Couchbase also enhanced its security and governance certification, which now includes PCI DSS 4.0 and CSA STAR Level 2 compliance.

Competition

Couchbase's primary competition comes from other NoSQL database providers, including MongoDB Inc., DataStax, Redis Labs and MarkLogic (part of Progress), as well as NoSQL database cloud services from the likes of AWS, Google, Microsoft Corp. (Azure), Alibaba Cloud, IBM Corp. and Oracle Corp.

Using a foundational model such as ChatGPT to generate code is a common use case for generative AI. Couchbase's Capella iQ is embedded in the company's Capella service. Oracle provides AI-driven SQL code-generation capabilities that are tied to LLMs in Oracle Database. We expect other database vendors to follow suit by adding this developer enablement capability.

However, most of the interplay between generative AI (LLMs) and databases so far has consisted of adding vector search, along with a cadre of pure-play vector databases. Vector search is in development with Couchbase, although numerous other NoSQL and SQL-based vendors have already announced support. A sampling of vendors include AWS, Alibaba, DataStax, Google Cloud, Azure, MongoDB, Neo4j, Oracle, SingleStore and Redis. Pure-play vector database vendors include Chroma, Pinecone, Qdrant, Tencent, Weaviate and Zilliz.

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SWOT Analysis

STRENGTHS

Couchbase has a mature portfolio of products that includes a managed cloud, on-premises and mobile edge database, as well as an SQL-like query tool for those users (albeit with an SQL background) looking to transition to a NoSQL

WEAKNESSES

Although Capella iQ is currently in public preview, some capabilities are still in development, such as automated cluster sizing, load balancing and integration with its mobile suite.

OPPORTUNITIES

Using an LLM for code generation is nothing new, but with Capella iQ, the integrated nature of the offering with Couchbase means that generated code and responses are guaranteed to be specific to Couchbase, which provides confidence for developers when using the product.

THREATS

The NoSQL database sector remains crowded, with multiple vendors vying for what is nearly a quarter of the overall database market dominated by industry heavyweights. This is expected to increase even more given the heightened interest in generative AI.

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