Couchbase Capella Advancements Fuel Development of Adaptive Applications; Unlock Greater DBaaS Access for Developers

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Capella Columnar, Now Generally Available, Streamlines Development by Enabling JSON Operational and Analytics Processing on One Database Platform

Available Today, Couchbase Mobile With Vector Search Lets Organizations Run AI-Powered Applications From Cloud to Edge

Couchbase Empowers Developers With Free Tier on Capella, Supporting Continuous Innovation Without Time Limits

SANTA CLARA, Calif., Sept. 3, 2024 /PRNewswire/ -- Couchbase, Inc. (NASDAQ: BASE), the cloud database platform company, today officially launched Capella™Columnar on AWS, which helps organizations streamline the development of adaptive applications by enabling real-time data analysis alongside operational workloads within a single database platform. Also generally available today is Couchbase Mobile with vector search, which makes it possible for customers to offer similarity and hybrid search in their applications on mobile and at the edge. With Capella Columnar and vector search capabilities in one cloud database platform, Couchbase helps customers reduce cost and simplify operations, while enabling developers to create trustworthy adaptive applications that run from cloud to edge.

Couchbase also announced today Capella Free Tier, a free developer environment designed to empower developers to evaluate and explore products and test new features without time constraints. Couchbase simplifies learning, developing and deploying applications on Capella into production, and provides developers with the access and convenience they need to build upon applications without worrying about an end date.

"We're committed to empowering organizations to build truly adaptive applications that can respond to real-world scenarios in real time," said Matt McDonough, SVP of Product and Partners at Couchbase. "With the launch of Capella Columnar, we're solving long-standing challenges in JSON data analytics, enabling businesses to seamlessly integrate insights into their operational applications. Our vector search capabilities in Couchbase Mobile extend this adaptivity to edge and IoT devices, opening up new possibilities for hyper-personalized and context-aware applications."

Capella Columnar Converges Operational and Real-Time Analytics to Accelerate Real-Time Adaptive Applications

Many organizations, including Couchbase customers, have embraced the flexibility of JSON when building business-critical applications. However, while JSON is often the programmer's preferred data format, it can be difficult to use for traditional analytic systems that expect data to conform to more rigid structures. Without formal structures, business intelligence teams spend too much time on data hygiene, and less on including operational JSON data in their analysis. This is why so much semi-structured JSON data remains dormant. Couchbase offers key-value and columnar storage options for operational and analytic workloads on a single platform, providing customers the power and flexibility to make JSON data useful in analytics.

Capella Columnar addresses the challenge of parsing, transforming and persisting JSON data into an analysis-ready columnar format. It supports real-time, multisource ingestion of data not only from Couchbase, but also using common systems like Confluent Cloud — built by the original creators of Apache Kafka® — to draw data from other third-party JSON or SQL systems. Capella Columnar makes analysis easy by using Capella iQ, the AI-powered coding assistant that writes SQL++ for the developer, who no longer needs to wait for the BI team to run analytics for them. Once an important metric is calculated, it can immediately be written back to the operational side of Capella, which can use the metric within the application.

"This write-back problem has remained unaddressed by analytic systems for decades because it was too difficult to anticipate what a developer would do with it," added McDonough. "Capella Columnar implements the solution, and the needs of AI-powered applications provide the motive."

Capella Columnar reduces latency, complexity and cost to empower organizations to build real-time adaptive applications. For example, it can enable more personalized experiences in an e-commerce application so retailers can provide custom offers that enhance revenue, or build in customer-facing metrics in a gaming application to accelerate engagement. As AI enhances these applications, Capella Columnar positions Couchbase to meet the growing demand for high-performing, personalized and intelligent adaptive solutions.

"Couchbase already provides a highly flexible data management capability by blending its base JSON document model with the ability to manage the data in a networked way," said Carl Olofson, Research Vice President at IDC. "Now they have added blended analytic-transaction processing support that leverages the performance advantage of columnar data management together with vector search in support of applications demanding intelligent data access at the speed of business. These are capabilities that the market has been looking for but are hard to find contained in a single product."

Couchbase Mobile With Vector Search Enables Cloud-to-Edge AI

Couchbase offers vector search support from cloud to edge, and remains a leader in enabling offline-first edge AI applications for customers. Using vector search on-device with Couchbase Lite, the embedded database for mobile and IoT applications, mobile developers can now leverage vector

search at the edge for building fast, secure and reliable semantic search and retrieval-augmented generation (RAG) applications that work even without an internet connection.

"By enabling on-device vector search, we're not just speeding up applications and eliminating downtime due to internet outages; we're opening up new possibilities for secure AI development," continued McDonough. "Our solution combines the cloud's scalability to handle massive AI datasets with edge capabilities for immediate, on-device processing. This unique combination, along with our support for multiple search techniques accessible through a single SQL++ query, empowers developers to create sophisticated GenAI applications that can run entirely on-device. This means organizations can now harness the power of AI without compromising on latency, data privacy or performance, bringing adaptive intelligence to the edge."

Developers Can Build Applications With Free Access to Capella
With the introduction of Capella Free Tier, Couchbase is removing friction points for developers by allowing them to learn Capella at their own pace, retain work and continually evaluate and expand to new applications. With Capella iQ, developers leverage AI-powered code generation built into the Capella Workbench and popular IDEs like Visual Studio Code to accelerate application development. Developers also have access to numerous community-supported extensions such as cbshell 1.0, which supports vector search, a new object-relational mapping library for Ruby and plugins such as Ionic Capacitor for Couchbase Lite, which simplifies cross-platform mobile development. By unlocking free access for developers to Capella and embracing these community-based extensions, Couchbase helps accelerate both personal and professional projects.

"Developers want to kick the tires on any software they plan to use before committing, particularly when it comes to database solutions," said Kate Holterhoff, Senior Analyst at RedMonk. "By offering a free tier to Capella, Couchbase acknowledges the tinkering spirit that motivates these important builders and creators."

Capella Free Tier will be available in September.

Supporting Quotes

Confluent
"Real-time operations and analytics require easy access to data from diverse sources across an entire business," said Paul Mac Farland, SVP of Partner and Innovation Ecosystem, Confluent. "Confluent's complete data streaming platform for Apache Kafka® and Apache Flink® captures events from any system and feeds them into Couchbase Capella for real-time insights at scale. Together with Couchbase, we empower businesses with the secure, governed, high quality data and analytics needed to fuel the next generation of real-time customer experiences and operational workloads."

Couchbase Ambassador
"Pretty exciting what even a solo mobile app developer can build with vector search on Couchbase Lite: lots of neat AI capabilities, actually running locally and instantly on-device (because, believe it or not, some people care about both privacy and user experience)," said Paul Capestany, Couchbase ambassador.

Mentorius
"By enabling OLTP and OLAP workloads from one unified control plane, Couchbase Capella Columnar eliminates the need for multiple specialized databases and ETL processes, lowering complexity and decreasing time to market," said Jeff Lockhart, co-founder of Mentorious. "This unified approach makes it easier for our development team to use real-time insights to iterate on features, faster, so we can provide more personalized experiences for our users."

Additional Resources

- To learn more, read our market momentum blog here
- Join the webcast here
- Watch the video on Couchbase Mobile with vector search and learn more here

About Couchbase
Modern customer experiences need a flexible database platform that can power applications spanning from cloud to edge and everything in between. Couchbase's mission is to simplify how developers and architects develop, deploy and run modern applications wherever they are. We have reimagined the database with our fast, flexible and affordable cloud database platform Capella, allowing organizations to quickly build applications that deliver premium experiences to their customers – all with best-in-class price performance. More than 30% of the Fortune 100 trust Couchbase to power their modern applications. For more information, visit www.couchbase.com and follow us on X (formerly Twitter) @couchbase.

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