



# Couchbase

## Couchbase Unveils Edge Server to Help Organizations Solve Real-World Edge Application Challenges

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*Expanded Support for Edge Workloads Allows Businesses to Effectively Operate in Any Remote, Disconnected and Resource-Constrained Environments*

SANTA CLARA, Calif., March 4, 2025 /PRNewswire/ -- [Couchbase, Inc.](#) (NASDAQ: BASE), the developer data platform for critical applications in our AI world, today launched [Couchbase Edge Server](#), an offline-first, lightweight database server and sync solution designed to provide low latency data access, consolidation, storage and processing for applications in resource-constrained edge environments. Edge applications that rely solely on cloud databases can be slowed down due to connectivity challenges, but local databases don't always offer a solution as they can be difficult to deploy within limited computing environments. From airplanes to retail stores, organizations need fast, reliable local applications that work offline and on affordable, constrained hardware. Couchbase Edge Server addresses both challenges, providing a lightweight server built for resource-constrained edge hardware while delivering performance regardless of internet connectivity.



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Couchbase Edge Server is built on the [Couchbase Lite](#) core engine, an AI-ready embedded database which customers rely on for running critical applications on hundreds of thousands of client devices. The Edge Server is deployed as a standalone server and provides support for a simple access interface for local client access. It delivers offline-first benefits through seamless synchronization – downstream with Couchbase Lite-based edge clients and upstream to [Couchbase Capella and self-managed Couchbase instances](#).

"While businesses are rapidly expanding to the edge, they're finding that relying solely on cloud or local infrastructure falls short," said Matt McDonough, SVP of product and partners at Couchbase. "Couchbase Edge Server elegantly solves this dilemma, making it ideal for edge deployments where connectivity, space, power and computing capacity are constrained. We're empowering organizations to run applications at the edge with confidence, knowing they can access their data at any time without compromising on reliability and performance."

### Edge Computing is Essential as Enterprises Deploy AI Applications Locally

Edge solutions have become a strategic imperative for modern enterprises, with 65% reporting they will be critical for GenAI applications according to Couchbase's 2025 digital modernization [study](#). Many environments, including retail shops and factory floors, struggle with application performance due to cloud dependencies hampered by low bandwidths and limited local computing resources. While moving data processing to the edge can eliminate reliance on the internet, these locations often lack the computing infrastructure needed to run traditional full-scale databases and sync solutions as a host at the edge.

"Organizations running data-intensive applications at the edge can't afford sync delays, particularly when users rely on them for real-time decisions," said Dave McCarthy, research vice president of cloud and edge services at IDC. "With Edge Server, Couchbase is expanding its comprehensive set of edge solutions to support more customer use cases and address the challenges of maintaining data consistency, availability and cost-effectiveness at the edge."

### Couchbase Edge Server Provides Flexibility and Performance for Offline-First Edge Use Cases

Couchbase Edge Server enables organizations to run edge applications efficiently on as little as one gigabyte of RAM on a single board computer, supporting from tens to hundreds of client devices. This small footprint dramatically reduces the cost barriers of edge deployments across many locations, including fast food restaurants, warehouses and retail chains, by serving communities of web and mobile clients at each location through a local database backend. Customers benefit from:

- **Real-time data synchronization across all edge servers**, enabling seamless connectivity between edge locations and Couchbase Capella, supporting both multi-edge server deployments and primary-backup configurations.
- **Uninterrupted data access through a RESTful interface**, allowing applications to operate offline and automatically update when connectivity returns.
- **Multi-layered security and authentication controls**, protecting edge data through encrypted communications, certificate-based validation and granular access management – ensuring enterprise-grade security at every endpoint.

For example, Couchbase Edge Server can power an airline's in-flight entertainment and meal ordering system by processing data locally on board the plane's minimal computing resources, delivering fast service to passengers and maintaining accurate, real-time inventory tracking even at 37,000 feet. Once connectivity is available at the airport, Couchbase Edge Server automatically syncs with Couchbase Capella in the cloud for long-term data storage and analysis.

Couchbase Edge Server is available [now](#). Learn more about how it enables enterprises to effectively operate in offline or resource-constrained environments [here](#).

### **About Couchbase**

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](http://www.couchbase.com) and following us on [LinkedIn](#) and [X](#).

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