

Powering Next-Gen Gaming with Couchbase

ANONYMOUS CASE STUDY:

A leading gaming company in the field of real-time 3D development and game development platforms wanted to enhance security, improve performance, and maintain a cost effective solution.

The company gives developers around the world the tools to create rich, interactive 2D, 3D, VR and AR experiences and is one of the most widely used game engines in the world. They came to Couchbase and achieved all their goals plus maintained service to customers across the world.

Couchbase at a Glance

Couchbase helps our gaming customers address the growing data challenges of AI development and deployment, and streamline how they build secure, agentic AI applications at scale. By seamlessly integrating with AWS, Azure, and Google Cloud, our high-performance data platform enables generative AI-powered applications, accelerates customer innovation, and delivers exceptional value to our gaming customers. By unifying data and AI models within a single environment, we simplify data pipelines and AI workflows, enabling enterprises to maximize value and push the boundaries of generative AI.

Game On: Why Developers Choose Couchbase

Couchbase is the developer data platform for critical applications in our AI-driven world, providing gaming studios with global scalability, high availability, and robust data security. Its memory-first architecture enables low-latency, high-throughput operations, ensuring rapid read and write speeds for real-time gamer interactions. With flexible JSON data structures, developers can make updates on the fly, without disrupting applications, while seamless integration across cloud, edge, and mobile environments guarantees consistent and reliable gaming experiences. By managing traffic spikes and securely handling player data, Couchbase empowers game developers to deliver responsive, personalized experiences while reducing operational complexities.

Gaming Industry Challenges

- **Scalability and Performance:** Gaming environments frequently experience traffic spikes during new game releases or viral events. Traditional databases struggle to scale in real time, leading to latency, downtime, and reduced gamer satisfaction. Couchbase delivers on-demand scalability, allowing gaming companies to manage high traffic volumes with optimized cost efficiency and consistent performance.
- **Offline Access:** Inconsistent network connections can disrupt gameplay, leading to gamer frustration. Couchbase Lite, our embedded NoSQL database, and offline peer-to-peer sync ensure smooth data synchronization even in low-connectivity scenarios, allowing for continuous gameplay across devices.
- **Data Consistency and Gamer Personalization:** Gamers expect real-time updates for achievements, leaderboards, and game state. Inconsistent data management can disrupt gameplay and impact player engagement. Couchbase's real-time data replication offers data consistency, allowing game developers to deliver highly personalized experiences.
- **Security and Cheating Prevention:** Protecting gamer data and maintaining fair play are critical for gaming companies. Couchbase offers comprehensive data security, helping companies manage threats and ensure compliance with global data protection standards.



Key Benefits of Using Couchbase for Gaming

- **Gamer Profile Management:** Couchbase allows gaming applications to store and manage profiles, including preferences, location, and social connections. This supports personalization, seamless authentication, and consistent experiences across platforms.
- **Caching and Session Management:** Track active sessions, including in-game status, time spent, and actions performed, with real-time access supported by Couchbase, ensuring fast, consistent experiences.
- **Achievements, Rewards, and Leaderboards:** Couchbase enables gaming apps to maintain real-time data for achievements, statistics, and leaderboards, allowing for instant updates and dynamic rankings that enhance engagement.
- **Game Data Management:** Couchbase handles the complete lifecycle of game data, from marketplace transactions to match results, providing real-time updates and seamless progression.
- **In-Game Messaging and Notifications:** With Couchbase, gaming apps can power real-time communication, allowing gamers to message friends, invite others to games, and receive instant notifications, all essential for immersive social interactions within games.
- **Seamless Scalability and 24/7 Availability:** Couchbase ensures high availability and uptime, handling millions of concurrent gamers without latency, while maintaining security and continuous performance.

Couchbase Gaming Customers

We work with leading game developers and game development platforms.



PLAYGON

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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](https://www.couchbase.com) and follow us on X (formerly Twitter) @couchbase.

