



CASE STUDY

Kaizen Gaming bets big on distributed SQL





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INDUSTRY:

GameTech

CHALLENGES:

Expanding to new markets, accommodating spikes in scale, and maintaining high availability.

SOLUTION:

A resilient platform backed by CockroachDB, a globally scalable distributed SQL database.

About Kaizen Gaming

Headquartered in Greece, [Kaizen Gaming](#) is one of the largest GameTech companies in the world. They are currently operating across 19 markets and in 2024 the company reported that they streamed over 400K live events and had over 13M active users.

Kaizen Gaming's proprietary technology powers their brand, [Betano](#), which includes sportsbook and casino products as well as rewards, payments, and comms. The company has seen significant growth over the past few years and plans to capitalize on that momentum. For example, last year sportsbook saw an increase in members by 37% over the previous year, and casino registrations were up 118% in 2024 vs. 2023.

To continue to deliver the best possible customer experience and build loyalty with their fans, Kaizen Gaming needed a better solution to power their most popular applications. They wanted a reliable infrastructure that would allow them to enter into new markets with ease which is why they turned to CockroachDB.

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13M+
ACTIVE USERS

816K
INSERTS PER MIN

19
MARKETS



Monolithic losses

Kaizen Gaming was founded in 2012 when there were less database options available and they decided to build their platform on SQL Server. Over the years, they started to run into complications that are often associated with monolithic architectures.

For example, they were dealing with page latches, delays, and thread issues leading to performance degradation. They eventually had to [start sharding SQL Server](#) which introduced a new set of challenges such as hot shards, resource contention, and additional operational complexity.

The engineering team needed a new, modern database solution that wouldn't require them to manage shard logic and would allow them to easily scale out to a global audience. They started searching for a distributed SQL solution which is when they came across CockroachDB.

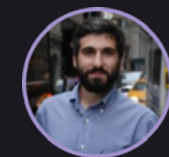
From a feature comparison standpoint what won them over was CockroachDB's:

- ✓ Strong consistency & ACID guarantees
- ✓ Effortless horizontal scale
- ✓ Guaranteed high availability
- ✓ Built-in resilience
- ✓ Simplified operations

While these features matched their requirements for a new database solution, the engineering team wanted to run CockroachDB through [stress tests for common scenarios](#) that apply to their business.

They first tested CockroachDB for [failover and restore](#) scenarios and observed a minor 1-2 minute delay, but saw that all requests processed successfully and there were no issues restoring the data. They also tested several maintenance and housekeeping operations such as version upgrades and rebalancing. They didn't observe any significant overhead and there were zero disruptions. Finally they tested performance which ended up exceeding their expectations.

"It's not a name you would expect in the tech industry. However, after working with CockroachDB, you realize where the name comes from. Even if the world is destroyed, you know CockroachDB will be there."



Nikos Roumpoutsos

Head of Payments Platform, Kaizen Gaming



Distributed SQL for the win

Following the proof of concept (POC) and stress tests, Kaizen Gaming decided to migrate a mission critical application to CockroachDB: their wallet service. This application powers all revenue generating services including sportsbook and online casino.

The team reports that they partnered closely with Cockroach Labs throughout the migration processes. Together they developed a strategy that would allow them to migrate from a legacy system to a distributed SQL system which was important to define upfront since the technology is not a 1:1 match.

They decided to self-host CockroachDB on OpenShift in a single region to start. However, they plan to expand to multiple regions in the future which will further enhance resiliency and allow them to enter more markets.

As they slowly moved workloads to CockroachDB, they were able to optimize the systems for better response times. Initially they started with 6 nodes which allowed them to handle 120k inserts/minute with 75% CockroachDB CPU usage.

They increased the node count to 12 and then to 24 where they were able to reach 480k inserts/min and see the CPU drop to 65% which improved response times. (Later on, with some additional tweaks to the system, they ultimately reached 816K inserts/min with 31ms avg response time).



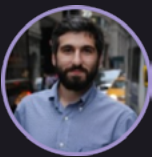
Shared nodes	Inserts / Min	Avg CPU (App)	Avg Mem (App)	Avg response time	Avg SP insert time
5	240K - 480K	30 - 40%	25 - 30%	9 - 11ms	.08ms
19	240K - 600K	20 - 38%	23 - 45%	10 - 15ms	1.2ms

CockroachDB nodes*	Inserts / Min	Avg CPU (App)	Avg Mem (App)	Avg CPU (CR)	Avg response time	Avg SP insert time
6	120K	28%	25%	75%	29ms	1.4ms
12	240K	25%	28%	78%	34ms	1.7ms
24	480K	45%	23%	65%	28ms	1.3ms

*replication factor 5

As you can see from the side by side comparison, their sharded setup hit slightly lower latencies, but they were willing to take that tradeoff for other measurable benefits. Ultimately CockroachDB delivered predictable scale, strong consistency, and a much cleaner architecture.

“During the migration, the Cockroach Labs team has been very responsive to our feature requests. They go hand in hand with us, the customer, to help us solve complex business problems that we have been facing and work to deliver the most optimal solutions.”



Nikos Roumpoutsos
Head of Payments Platform, Kaizen Gaming

May the odds be in ever in your favor

Since the team was working with a monolithic architect for years, they initially faced a learning curve to adopting a distributed SQL system. They leveraged the Cockroach Labs team for support and participated in several enablement sessions to help close the knowledge gap.

Kaizen Gaming's team emphasized that there's a lot of value in partnering closely with the Cockroach Labs team who has been helping deliver feature requests for their use case. They report that they initially made 12 feature requests and were very impressed that three of those were delivered in the first two months of their engagement.

For others that are new to distributed systems, the team says there's some tradoffs to be aware of. For example, you might have slightly slower individual inserts due to its distributed nature. You also want to rethink your models in a way that will optimize performance and it's wise to do continuous testing.



What's Next

The Kaizen Gaming team plans to complete the migration to CockroachDB in the coming months so they can fully realize all the benefits they've experienced so far including predictable scale, strong consistency, and a simplified architecture.

The company has big goals for 2025 and plans to expand Betano into more regulated markets bringing the premier Betano experience to more players around the world. To learn more about Kaizen Gaming and their technology visit: kaizengaming.com/technology

Ready to get started?

Start a free trial of CockroachDB or contact sales to learn more.

