



E-Card: Scaling Online Gaming and Betting with FreeBSD

E-Card is a leading online gaming and betting provider in Sofia, Bulgaria. Since its launch in 2000, E-Card has leveraged FreeBSD to power its infrastructure, ensuring robust performance, scalability, and reliability for its diverse gaming and betting services. E-Card operates two main business verticals: producing and hosting consumer games for other websites and running its own online casino and betting platform. Their flagship platform serves thousands of customers daily, offering both games and sports betting.

CHALLENGE

E-Card needed to build a scalable, reliable infrastructure to handle vast amounts of data, ensure high-speed access for thousands of concurrent users, and meet strict regulatory requirements for data storage and integrity.

SOLUTION

E-Card chose FreeBSD for its stability, performance, and simplicity. To ensure seamless operation and scalability, they implemented 15 high-performance servers, each with up to 96 CPU cores, 3TB of RAM, and over 100TB of ZFS storage.

IMPACT

Using FreeBSD, E-Card achieved remarkable performance and scalability, handling up to 100,000 queries and 20,000 transactions per second. Combined with FreeBSD's ZFS and Galera Cluster for MariaDB, they efficiently distribute database queries and ensure high availability.

Performance and Scalability

FreeBSD's ZFS file system provides data integrity, compression, and efficient data handling capabilities to manage E-Card's large-scale data operations. At peak times, E-Card's servers can handle thousands of simultaneous players online. Its infrastructure achieves around 100,000 queries and 20,000 transactions per second, ensuring a smooth and responsive user experience. The company uses bonded 10G network interfaces and Arista switches to ensure high network throughput and reliability.

"FreeBSD has been the backbone of our infrastructure since 2000. Its stability, performance, and straightforward management have allowed us to scale our operations and meet the demanding requirements of the online gaming industry." – Rumen Palov, CTO of E-Card.

Due to regulatory requirements for the Bulgarian gaming sector, E-Card's large-scale servers must store and retain vast amounts of data for up to 5 years, necessitating a robust and efficient storage solution like ZFS.

E-Card's Community Contribution

E-Card has encountered and reported several bugs and worked on custom patches for FreeBSD and ZFS to meet its specific needs. It is an active member of the FreeBSD community and has expressed interest in writing articles and sharing its technical experiences and insights. The company's involvement helps enhance the FreeBSD ecosystem and supports other businesses interested in utilizing FreeBSD technology.

E-Card's successful utilization of FreeBSD demonstrates the operating system's ability to handle demanding, large-scale online gaming and betting applications. FreeBSD's stability, performance, and community support make it an excellent choice for businesses operating in the online gaming industry.

Contribute to the FreeBSD Project

Whether you're mentoring, promoting FreeBSD, or participating in forums and mailing lists, your efforts drive the innovation and growth of the Project. Support the FreeBSD project today by joining our vibrant community and helping build our long-standing and growing open-source ecosystem! Enhance FreeBSD by improving documentation, addressing bug reports, submitting code, and engaging in discussions. Every contribution, big or small, helps evolve FreeBSD into a more stable, secure, and performant open-source operating system.