24 hours a day, seven days a week, your IT systems have to cope with hundreds of bets per second, processing millions of daily price changes, which generate the need to manage massive amounts of data. On top of this, activity will peak around major sports events. A difficult environment at the best of times, it gets more troublesome when you add in the pressure of downtime. Even minor latency can be very expensive, for both your income and your brand perception.

Most traditional or legacy systems are based on database-centric architecture, where relational databases only allow for fixed capacity. These databases just can’t meet the requirements for massive scalability, speed, and fault tolerance required by modern online betting infrastructures. They aren’t designed to handle both the peaks and the downtimes when much of this capacity simply sits idle - costing your business dearly. Moreover, as demand gradually increases over the years, businesses grow to rely upon the addition of ever more hardware to allow systems to vertically scale. This is not a sustainable cost effective approach.

“By moving to Erlang programming language and Riak KV NoSQL data store, we can now quickly build new systems to handle the load.”
Dan Macklin Head of R&D at bet365

NoSQL DATA STORE SOLUTION FOR ONLINE GAMBLING & BETTING

CAN YOUR DATABASE KEEP UP WITH THE GROWING DEMAND?

“I’m a big advocate for the adoption of distributed architectures, including the Erlang-based NoSQL Riak database system.”
Peter Morgan Head of Development, William Hill
THE NEXT STEP IN ONLINE GAMBLING & BETTING?
DISTRIBUTED DATABASES.

Erlang-based Riak KV will enable your business to scale elastically, as and when capacity is required. Riak KV is a distributed NoSQL (non-relational) database with a key/value design and advanced local and multi-cluster replication that guarantees reads and writes even in the event of hardware failures or network partitions. In contrast to traditional relational databases and other NoSQL databases, Riak KV offers enormous availability, scalability and reliability – all in a highly distributed deployment. Part of the new evolution of databases, Riak KV from Basho Technologies, is a solution that allows Online Gambling & Betting systems to:

- Scale out, up and down predictably and linearly according to peaks in activity around major sporting events.
- Deal with unavoidable server network or data center failures without losing or corrupting data.
- Deliver low latency customer experience by enabling data operations close to end-users.
- Lower costs and add more flexibility to project delivery by replacing proprietary databases with open source technology.

SCALE NO DATA LOSS LOW LATENCY OPEN SOURCE

OUR EXPERTISE

We are global and the largest reseller of Riak KV, and we provide end-to-end services in Riak KV implementation, consulting and support. We have extensive experience in building scalable fault-tolerant systems, not only for the Online Gambling & Betting sector, but also in Telecoms, Gaming, Automotive, Web Advertising, Mobile Apps and IoT.

We have over 300 clients in our portfolio, from start-ups to Fortune 100 companies; with bet365 and William Hill being among them, plus other companies from this sector where we helped with:

+ An in-house system that pushes the live odds of hundreds of thousands of sporting events to millions of customers so they can bet on events as they happen. In production, the system connects 10 times more users than the previous Java solution and supports data changing at 4 times the previous rate.

+ A product that enables players to close bets early by taking data from constantly changing markets, and uses it to calculate what every bet is worth for every user at any point in time. For every single market change the system re-computes and offers customers a price.

+ Platforms for rapid game development designed so that a generic API provides access to all the games deployed on a particular platform; this enables adding new games without affecting uptime. New components can be easily added to a platform or it can be combined with external components to meet specific business need.

+ Redeveloping segments of the OpenBet architecture in Erlang, thus giving companies more in-house control over their systems. These segments include wallets, bet settlement functionality, in-play betting, etc.

+ Centralising data streams coming from various suppliers to betting companies.

Contact us for more information or to discuss your project general@erlang-solutions.com
ONLINE GAMBLING & BETTING SITES USE RIAK KV IN 4 KEY WAYS

1. PLAYER DATA
Riak KV provides low-latency, highly available data storage for key player data, including user and profile information, game performance, statistics and rankings, and more. Riak KV also provides many different tools for querying and indexing this data, such as a full-text search engine and secondary indexing.

2. SESSION STORAGE
Riak KV is used to store and serve session data with predictable low-latency, which is necessary for game play. Riak KV imposes no restrictions on the type of content stored (since all objects are stored on disk as binaries), so session data can be encoded in many ways and can evolve without administrative changes to schemas.

3. SOCIAL INFORMATION
Riak KV is built for very fast data storage. Due to its inherent design and its simple key/value data model, it is ideal for storing and serving social content such as social graph information, player profiles, player relationships, social authentication accounts, and other types of social gaming data.

4. GLOBAL DATA LOCALITY
While betting, customers require a low-latency experience, regardless of their physical location. Interrupted or slow user experience can lead to player abandonment.

“We picked Riak KV head of nine other alternatives. The main thing that sold it to me was that it performed best under difficult situations. When we were causing failure deliberately, Riak was the one that dealt with that the best and reacted the quickest.”

Martin Davies CIO, bet365
OTHER PRODUCTS

We specialise in the delivery of consultancy services and products for organisations who want to adopt the Erlang programming language into their technology stack. Many of our clients are already interested or invested in Erlang and are in need of our support to build their Erlang based system from the ground up or to help them to advance their current Erlang system further. We also provide code reviews to ensure their prototype systems meets best practice. Our goal is to help our clients achieve their IT goals and leave them in a state of self-sufficiency with a system that is built to last. In addition to Riak KV and our consultancy services, we have also developed a number of Erlang infused products; these include:

**RIAK TS**

Riak TS is the only enterprise-grade NoSQL database optimised for Time Series. It ingests, transforms, stores and analyses massive amounts of time series data. Riak TS is engineered to be faster than Cassandra and is chosen by companies for its high resiliency, scalable, masterless architecture and operational simplicity.

**RABBITMQ**

One of the world’s most popular open source message servers, RabbitMQ is fast, dependable and supports a wide range of use cases. In the online gambling world it is used for machine to machine comms on information such as results coming in, odds changing. We provide support for RabbitMQ users and customisation if your system goes beyond the typical requirements.

**megaload**

This powerful testing tool insures in-depth testing of your service’s operational behaviour by generating hundreds of thousands of simultaneous users.

**MONGOOSEIM**

Build high-volume scalable messaging systems for millions of online users with MongooseIM platform.

ABOUT US

We help keep our client’s businesses moving.

From startups to Fortune 100 companies our technical know-how is the backbone to their operations. We develop and build trusted, fault tolerant systems that can scale to billions of users.

Founded in 1999 soon after Erlang was released as open source. We specialise in providing businesses with truly scalable solutions through the creation, integration, delivery and lifetime support of products and services based on the Erlang programming language. Our HQ are in London and our team has worked with over 300 clients from our offices in Stockholm, Krakow, Budapest, Berlin, San Francisco, Seattle and Buenos Aires.

SERVICES End-To-End Solutions | Consulting | Support | Development | Mobile | Training | Elixir

PRODUCTS MongooseIM | Riak KV | WombatOAM | megaLOAD | RabbitMQ | Sardina | LSD | QuickCheck | Linc & Loom | Elvis

INDUSTRIES Online Gambling & Betting | Telecoms | Financial | Advertising & New Media | Gaming

EVENTS Erlang Factory | Erlang User Conference | Code Mesh | ElixirConf

COMMUNITY Development | Education | Support | Research | Recruitment