Highly Available Mobile Platform With Riak

Company
Velti, PLC

Industry
Mobile

Challenge
Build a highly available, scalable mobile interactive platform.

Interactive Services Launched

Velti is a global mobile marketing and advertising technology provider. In 2005, Velti's interactive subscriber services were launched to large commercial television broadcasters in the United Kingdom. Velti's interactive subscriber services provide television broadcast audiences the ability to interact with programs using their mobile phone-- voting on people or things, giving feedback, or participating in contests. At some point during a television program the viewing audience is prompted to participate. Within seconds text messages flow into the system through a mobile network gateway, received and processed by Velti to determine results.

Demand Drives New Architecture

By 2009, Velti's UK customer base had grown to include nearly all of the broadcasters in the United Kingdom as well as three of the UK's five mobile operators. With volumes of users and participation growing rapidly, the 2003 era .NET, SQLServer platform was increasingly becoming an area of concern. With an indeterminate number of people responding at any point in time, Velti needed an architecture that could gracefully handle traffic spikes. The legacy platform wasn't originally architected for the level of scale, flexibility, availability, and elasticity required to drive Velti's interactive services moving forward. The team at Velti determined it was time to build a new, scalable, fault-tolerant infrastructure that was highly available, had the ability to handle high volumes of traffic, and gave them more control. Because they had been working with Erlang, an open source programming language originally developed by Ericsson to support distributed, fault-tolerant non-stop applications, Velti brought in Erlang Solutions to help architect their next generation platform. Riak was selected as the new platform database because it was written in Erlang and was architected to be distributed, elastically scalable, highly available, and provide data durability.

To minimize potential catastrophic outages, in 2010 Velti built two geographically separated, mirrored sites and migrated all data to the new system. The two sites were synchronized using a very early version of the Multi- Data Center replication mechanism available in Riak Enterprise. When Velti experienced a synchronization problem they immediately contacted Basho. According to Marcus Kern, VP Technology at Velti, "After contacting Basho, a developer logged into the system within 15 minutes. Basho provided a high level of support and responsiveness to address issues quickly." By September 2010, Velti released their new mGageTM platform into production.

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>
> **Marcus Kern**
> **VP Technology**

High Availability, Durability, and Scalability - Delivered

Today the Velti mGageTM platform is running on 18 servers across 2 data centers (9 nodes in each data center), each server running both the Erlang applications as well as Riak. Riak is used as a hot database that is online, real time, and involved in transactions. mGageTM applications are split into 3 parts that each run over 3 nodes in each data center.

"Riak gives us the ability to meet and exceed or requirements for scale, data durability, and availability."

Marcus Kern
VP Technology

Riak is exceeding all expectations and requirements originally set by Velti. The new platform is site redundant, queue behavior has improved significantly (especially for large queue populations) , and after moving to Riak 1.2, Velti has noticed the difference in disk space utilization thanks to improvements in merge management. Marcus Kern summarizes, "We operate a 24/7 service for over 140 customers. We cannot afford a single minute of downtime. Riak gives us the ability to meet and exceed our requirements for scale, data durability, and availability."

About Velti

Velti is the leading global provider of mobile marketing and advertising technology and solutions that enable brands, advertising agencies, mobile operators and media to implement highly targeted, interactive and measurable campaigns by communicating with and engaging consumers via their mobile devices. The Veltiplatform, called Velti mGage™, allows customers to use mobile and traditional media to reach targeted consumers, engage the consumer through the mobile Internet and applications, convert them into customers and continue to actively manage the relationship through the mobile channel. Velti is a publicly-held corporation based in Jersey, and trades on the NASDAQ Global Select Market under the symbol VELT. For more information, visit www.velti.com.

About Basho

Basho Technologies is the leader in highly-available, distributed database technologies used to power scalable, data-intensive Web, mobile, and e-commerce applications and large cloud computing platforms. Basho customers, including fast-growing Web businesses and large Fortune 500 enterprises, use Riak to implement content delivery platforms and global session stores, to aggregate large amounts of data for logging, search, and analytics, to manage, store and stream unstructured data, and to build scalable cloud computing platforms.

Riak is available open source for download at http://http://basho.com/resources/downloads/. Riak EnterpriseDS is available with advanced replication, services and 24/7 support. Riak CS enables multi-tenant object storage with advanced reporting and an Amazon S3 compatible API. For more information visit www.basho.com or follow us on Twitter at www.twitter.com/basho.