

VOXER DRIVES METEORIC GROWTH POWERED BY RIAK KV

Voxer is a privately held company based in San Francisco, founded with a vision to make voice communications more effective. The Voxer team contributed to the building of the Danger Sidekick and the Google Android platform.

Voxer's product is effectively a hybrid between a walkie-talkie and a group messaging application. With Voxer, a person can send instant voice messages to one or more friends. As users talk, messages are streamed live, and friends can either join live or listen to the messages later.



COMPANY

Voxer, LLC.

MARKET

Communications

CHALLENGE

Find a database solution that provides extreme scalability and continuous write availability

SOLUTION

Use Riak KV, a highly available storage system that provides extreme linear scalability

FROM THE BEGINNING

While serving in the U.S. Army Special Forces (Green Berets), Voxer founder and CEO, Tom Katis, a communications expert, saw an opportunity to improve how radios work. Tom came to the conclusion that radios just didn't work very well, from a human experience perspective.

Tom's idea originated during a firefight in Afghanistan when he needed a medical team and a way to talk to everyone simultaneously; the government-issue walkie-talkies just couldn't meet Tom's needs. It became painfully obvious to Tom that the very invention that revolutionized communication across the globe was no longer the mainstream method of preferred communication. As Matt Ranney, CTO of Voxer says, "The voice application hasn't changed since it was first invented. Your phone rings and you answer it, and while you are on the call, you're expected to pay attention 100% of the time. It's a time consuming process for which people don't have time or patience, except in particular circumstances." With the advent of data communications, and the fact that people now carry a phone on their person wherever they go, the random phone call is increasingly viewed as social behavior that people no longer prefer or expect. Voxer's mission is to develop solutions in the space between text messaging and live phone calls.

VOXER'S METEORIC GROWTH

In May 2011, when Voxer formally went live with the Apple iOS version, they realized only modest growth and success. Once the Android application hit the market, Voxer went viral. All of a sudden celebrities were talking about Voxer. Literally overnight, Voxer saw their subscribership and utilization explode by over 10,000%; growing their IT data infrastructure from 10 units to well over 100. According to Ranney, "The traffic was like a vertical wall—slowly crawling and then, suddenly all of the old values were eclipsed." And as if hardware scaling wasn't enough of a challenge, Voxer discovered that its CouchDB database hit its own vertical wall, no longer accepting writes to the database. Voxer had to move fast with a new solution.



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VOXER MAKES THE MOVE TO RIAK KV

Because Riak KV and CouchDB both utilize an HTTP interface, Voxer took a leap of faith and went into action, moving to Riak KV. Within a single week, Voxer had moved the entire database to Riak KV and was operational. Riak KV scaled to the required capacity without missing a beat. And when a node eventually went down, Riak KV kept on going, never losing a single byte of data.

“Voxer’s experience with Riak KV has been that the core promise of the available, scalable key-value store works as advertised. It works in a way that I didn’t fully appreciate until we really scaled it up,” says Ranney. “You really can add more computers and get more capacity. If a machine goes down, it actually works right. If a disk fails, it works. Yes, it really does work!”

When it comes to availability, Ranney describes it this way, “You only have to have a machine fully or partially fail to see how Riak KV works, and then you will appreciate this system. What is amazing is that all nodes are continuously write available. It’s hard to understand how profound that is until you actually

see it work. When you see it, you’re like, ‘Oh man, this is really hard,’ but somehow Basho figured it out. You can have your system write available, even when it’s partitioned, or when a bunch of nodes are down. Half of your nodes can be down and you can still write to the system.”

As for cost of operations, Voxer currently has a staff of 4 people managing a massive operation. “With so few people to manage all of the machines and process, operationally it works with no surprises,” says Ranney. “For instance, our oldest cluster has gotten to the point where I haven’t even looked at it in a few weeks. I forgot that we even had it.”

And as for customer service, Ranney puts it this way, “Basho customer service is simply the best ever.”

Voxer formally launched in May 2011. Today Voxer is ranked as one of the most downloaded apps on both Android and iPhone platforms, realizing between one and two-billion transactions per day. Powered by Riak KV, Voxer continues to scale their system up without incident.

ABOUT VOXER

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ABOUT BASHO

Basho, the creator of the world’s most resilient databases, is dedicated to developing disruptive technology that simplifies enterprises’ most critical distributed systems data management challenges. Basho has attracted one of the most talented groups of engineers and technical experts ever assembled devoted exclusively to solving some of the most complex distributed systems challenges presented by Big Data and IoT.

Basho’s database, Riak® KV, the industry leading distributed NoSQL database, is used by fast growing Web businesses and by one-third of the Fortune 50 to power their critical Web, mobile and social applications. Built on the same foundation, Basho introduced Riak TS, which is the first enterprise-ready NoSQL database specifically optimized to store, query and analyze time series data. Basho also provides Riak integrations for a variety of Big Data technologies like Apache Spark, Redis, Mesos, and Apache Solr.

For more information visit Basho.com which is full of interesting use cases, customer case studies and product detail, or docs.basho.com for technical documentation.