How Pixlee Uses Redis Labs to Serve Top Brands

Case Study, June 2014

"Redis Labs is a straightforward and reliable way for us to support top brands across the world. They have great customer support, and whenever I needed anything, they've always come back quickly and with an immediate solution. These guys are doing it right."

Jeff Chen, Co-Founder and Lead Developer at Pixlee

redislabs

About Pixlee

Pixlee's Personalized Visual Marketing SaaS platform sits at the intersection of photos and data, helping brands navigate the user-generated world of today. With the changes happening in consumer behavior, the rise of the visual web, the massive volume of social sharing, and increased sophistication in customer data, brands now have the opportunity to use the authentic voice of their customers to market and optimize content in real-time. By means of contextual information, such as hashtags, Pixlee is able to collect content that is relevant to a brand and turn the barrage of photos from various user-generated platforms into a source of high quality content. More importantly, Pixlee curates and repurposes the images, and identifies the highest performing content for each and every use case. The result is that brands can achieve authentic interactions with consumers at each and every touch point (owned and paid), increasing engagement, loyalty, and ultimately conversion.

With a large and growing base of user content, Pixlee currently works with a variety of clients, such as large E-commerce companies as well as retail brands. Today, the Pixlee platform serves companies such as Sony Playstation, 1-800-Flowers and Coca-Cola.

Why Redis Labs?

Pixlee is unique in that their widgets serve traffic across all of their customers' brand pages. As a result, they are expected to accommodate access patterns and throughput that are not only external to their own application, but also require the best-of-breed in performance upkeep. Caching is primarily used to deal with the extremely large quantities of photos that are converted into albums at every moment and as a means to keep album counts and account counts synchronized. Subsequently, the photo and album data, as with real-time analytics data, are stored in several tables in a PostgreSQL database for reporting and analytics. Because of these demands, an up-to-date and reliable in-memory database along with caching are crucial to the company's survival. In addition, using an in-memory cache database is a natural fit for Pixlee's Ruby-on-Rails applications.

Delivering top performance in a highly-available, infinitely scalable, predictable and stable manner, Redis Labs offers enterprise-class Redis and Memcached for developers. Being able to host and monitor Redis and Memcached together on the same platform is imperative for Pixlee, along with Redis Labs' highly-resilient multi-zone support, which significantly minimizes downtime.

Challenges and Solutions

1 - Challenge: The Need for a Solid Redis and Memcached Host

Deploying an in-memory database environment requires a number of extraneous resources that are generally not factored into the equation when starting a new company. Running off of a distributed system, Redis and Memcached are both used to support Pixlee's application, with Redis running on an Amazon EC2 server and Memcached on a simple Heroku as a service application add-on. This complex environment, in addition to Pixlee's constant state of growth, turned out to be more than what the, then, very young company wanted to handle alone. As a result, a number of operational challenges occurred, such as request timeouts. As a means to ensure development resources remained allocated to Pixlee's core functions, more reliable hosted Redis and Memcached solutions were needed to delegate operational efforts in order for the core focus to be brought to application development.

Solution

The rationale for moving to Redis Labs stemmed from Pixlee's need for a quality solution that could support both Redis and Memcached clouds. Pixlee uses Redis Labs-hosted Memcached to cache data for sites that receive a significant amount of traffic, while Redis is primarily used for real-time counting and queueing.

Aside from Redis Labs, most other service providers do not handle binary Memcached with SASL, which is essential to Pixlee's service authentication. Consequently, Pixlee has been able to put complete trust in Redis Labs to handle their in-memory database operations, returning Pixlee's primary focus to their core capabilities.

2 - Challenge: Keeping Up With the Fast Pace of Growth

Due to the fact that Pixlee is predominantly used on client sites, they face the challenge of serving a multitude of content climates. It was evident from the sheer magnitude of traffic on each client's website that exponential growth was on the horizon. While growth is generally a positive aspect of business, growing with confidence and control in a short period of time can be challenging, creating the need for a scalable and performant solution.

Solution

Redis Labs understands that databases require a resilient and scalable platform. By providing a platform that accommodates a constant rate of growth, they were able to provide Pixlee with smooth, seamless scaling. This succinct need for scalable caching allows Pixlee to handle Fortune 500 and Fortune 1000 company websites, resolving any performance issues accompanied by heavy traffic. Redis Labs' top-notch monitoring facilitates uninterrupted scaling and optimal caching by letting companies actually view their Redis and Memcached resources, enabling adequate analyses and appropriate planning.

3 - Challenge: Maintaining Quality Performance and High Availability

Resilience and proximity to end-users pose yet another foreseeable challenge. Not only does Pixlee have to supply traffic that comes to their own, organic site, but they also have to serve the traffic that comes to their clients' sites. While a reliable in-memory database and cache are crucial to performance, Pixlee's clientele are not all necessarily operating from the same location. While some may be using Amazon cloud, others may be using one of the number of other hosting services or even their own data centers, placing a high demand on Pixlee to provide the utmost in availability for all.

Solution

In order to keep the distance between Pixlee’s cache and clients' sites as close as possible, Redis Labs delivers multi-zone support and uptime maintenance capabilities where the Redis and Memcached data sets are located. The multi-zone support empowers Pixlee with the ability to perform failover and maintain high availability, while Redis Labs’ multi-cloud approach enables the provisioning of resources as close as possible to consumers’ applications. This approach reduces latency from Pixlee’s cache that may develop from accommodating embedded content on clients’ sites.

This crucial necessity for Pixlee, on top of Redis Labs' multi-zone approach, has eliminated performance issues and availability concerns, minimizing the risk of downtime as a result.

About Redis Cloud and Memcached Cloud

Redis Labs offers enterprise-class **Redis** and **Memcached** for developers. Our fully-managed cloud services - Redis Cloud and Memcached Cloud - deliver top performance in a highly-available, infinitely scalable, predictable and stable manner. Developers are free of dealing with nodes, clusters, scaling, data-persistence and failure recovery, while providing true auto-scalability and instant failover.

We power tens of thousands of customer apps in multiple cloud environments and enhance use cases such as real-time analytics, social app functionality, job management, and geo-search.

Redis Labs has more than 2,100 paying customers and has raised $13M in venture funding from Bain Capital Ventures, Carmel Ventures, and others.