

Celebrity Gossip Site Scales, Serves Hot Content During Traffic Spikes



The Young, Black, and Fabulous is a popular celebrity gossip website. Web traffic is highly variable, and when a hot story is published, traffic can spike dramatically as news breaks. It's impossible to predict when these events will happen, so TheYBF needs to be prepared to handle massive traffic spikes at any moment.

The Challenge

TheYBF was using Rackspace RackConnect, Cloud, and Dedicated Servers, with cloud management from RightScale. TheYBF was experiencing stability issues with Rackspace and auto-scaling through RightScale was not working at all.

During this time, a hot story in the celebrity gossip world went public, but because scaling did not work, TheYBF was unable to sustain traffic and missed out on major branding and revenue-generating opportunities.

On top of that, TheYBF was overpaying for unused dedicated servers and cloud.

The Solution

TheYBF needs to be prepared for big stories at any moment and cannot afford downtime during major news events. TheYBF reached out to ClearScale, a cloud systems integrator, to improve their architecture and prepare it for scaling events. ClearScale recommended that TheYBF migrate to AWS and put their entire infrastructure in the Amazon Cloud.

ClearScale designed, developed and executed the migration to AWS and helped TheYBF stabilize and simplify their architecture using all Amazon services.

"The migration to Amazon was the least stressful migration I have done in the 10 years I've been in business," said Natasha Eubanks, Owner, TheYBF.

ClearScale developed a complete cutover plan that would ensure the team was fully prepared for the migration and that the new deployment on AWS worked perfectly before making the final switch from Rackspace/RightScale to AWS. The cutover plan included a mock cutover to test the plan and culminated in a final cutover that would copy data, deploy the new application servers, and switch to the new production site hosted on AWS with almost no downtime.

A Simplified Architecture on AWS

TheYBF uses a PHP application as their site engine with Apache and MySQL.

“Not only was ClearScale extremely knowledgeable about our PHP application and how that interacts with a heavy content and heavy traffic website, but they were also totally efficient throughout the process of the migration,” said Eubanks, owner, TheYBF.

ClearScale architected, tested, and deployed a complete cloud solution to migrate TheYBF from Rackspace to AWS. To further reduce costs and simplify the automation system, RightScale was replaced with AWS CloudFormation and OpsWorks.

A CloudFormation template builds the production environment in VPC with tiers for application, database, caching, and storage. CloudFormation is also responsible for managing auto-scaling policy and ensuring that enough application servers are running to meet traffic demands.

OpsWorks, a simple but powerful management system for stacks and applications, is used to manage the application server and storage tiers. An OpsWorks layer is essentially a blueprint for an EC2 instance, and OpsWorks’ built-in PHP tools and Chef recipes were used to automate the setup and configuration of TheYBF’s web and storage servers.

ClearScale made additional improvements to TheYBF’s architecture:

- The physical MySQL servers were replaced with high-performance RDS instances using Provisioned IOPS, which cut costs while still meeting performance requirements.
- EBS volumes store GlusterFS data, which is used to share storage between application servers.
- Memcached instances provided by ElastiCache store data used by application servers and help decrease response time.
- Physical load balancers were replaced with ELB at a fraction of the cost.
- RackConnect and the physical firewall were no longer needed because Amazon VPC handled all networking requirements.

TheYBF wanted to roll out a new search feature but first needed to understand the impact to performance. Based on analysis of traffic patterns, ClearScale projected a certain number of search queries per minute then performed a load test of simultaneous uncached queries and then assessed the impact to CPU utilization on the application servers and RDS. Based on the load testing results, the time required to create the search index, and the processing capability of the production deployment, the team determined that there would not be an impact on performance and that the new search feature could be safely rolled out to production.

Business Benefits

TheYBF's new AWS architecture is simpler, less expensive, and more powerful than the previous solution with Rackspace and RightScale. Hosting costs were cut by 50%, and the additional expense of RightScale was eliminated.

Auto-scaling now works as expected, uptime has improved, and TheYBF's site scales to accommodate huge spikes when hot content is released.

"My site is the most stable it has been in years. I have had no problems with downtime. I can finally put the technical management of my site safely in the hands of someone else with complete peace of mind," said Eubanks, Owner, TheYBF.

Following the migration, TheYBF retained ClearScale to perform ongoing managed services and oversee the day-to-day management of TheYBF's cloud infrastructure. ClearScale has also assisted TheYBF with development and improvements to their application.