Databarracks

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ANCHORFAN

Sports Social Media using Amazon Web Services and Databarracks

Anchorfan provides management for social and digital rights of clients in the sports and entertainment sector, as well as operating an online and mobile community platform **www.anchorfan.com** for social sports news.

"When visitor numbers rose, the performance of the site was really suffering and we were even experiencing periods of downtime which we just can't have.

"Additionally, we have to be able to perform globally. The sports personalities we work with are major, international stars and have fans all over the world. Our site needs to perform as well in the UK as it does on the other side of the world in Australia or Sri Lanka."

The Challenge

Anchorfan is a global social hub for sports news from professional broadcasters, brands, sports stars and fans. The service enables users to view, share and publish articles, images, videos and events on sports from all over the world.

Where traditional news-led sites are event-based, and so regularly experience traffic spikes, Anchorfan's user-published content adds an additional strain on resources during periods of high activity.

This social component presented a challenge to Anchorfan's founder, Michael Grime, to provide a consistent quality of service to a global user base throughout significantly fluctuating resource demands: "We deal with sporting stars who have millions of followers on Twitter and millions of likes on Facebook. A single tweet, like or post can drive huge volumes of traffic to the site in a very short period of time.

> " We were using traditional web hosting which just couldn't keep up with the traffic volumes and scale we needed.
>
> Michael Grime, CEO of Anchorfan

The Solution

Databarracks' first action was to redesign the architecture of Anchorfan.com to take advantage of AWS capabilities such as auto-scaling to increase the resilience of the site.

AWS has a huge amount of additional functionality compared with traditional web-hosting. The key to getting the best out of the platform is making sure that each of the constituent parts of the website can be separated to scale up and down independently.

Following the re-architecture, Databarracks set up a test & development environment using smaller instances of each of the servers. Databarracks then carried out 'performance and load testing' to identify the volume of activity the website can handle, per server instance. Databarracks were therefore able provide specific recommendations about the default number of servers for Anchorfan as well as rules for how the infrastructure should scale.

Based on the performance of the site in the test environment and Anchorfan's own traffic projections – Databarracks setup AWS "Auto Scaling" rules. These scaling rules are what allow sites to keep hosting costs low during periods of low traffic, but grow quickly to handle unpredictable peaks in interest.

For instance, when the volume of web traffic pushes the CPU utilisation up to 70%, two new servers are created to handle the additional workload. As there is a small lead time between the request for the additional sever instances and when they become live it was vital to make sure that the thresholds are correctly set to deal with rising traffic.

The Benefits

The impact to Anchorfan's resilience and scalability was instantaneous upon moving to AWS: "Firstly and most importantly – we haven't had any downtime since Databarracks migrated us over to AWS," said Grime.

"Before the move, we couldn't keep up with traffic and we really weren't delivering the high standard of service that we wanted to give our users. There have been some high profile news stories about service outages in AWS which we are desperate to avoid – but Databarracks designed the site to run across multiple Availability Zones.

"From a technical standpoint, the integration and scaling up and down is working fantastically. It's like going from driving a mini metro to a Ferrari. The login and page loads are much, much quicker. Cost wise, we're not paying for capacity we don't need any more – when traffic is low, so are our costs."

Going beyond performance, AWS functionality has been vital to Anchorfan:

"We have also been able to solve our international content delivery problems. Video is increasingly important to us, but without CloudFront cacheing the large image and video files for us in each of the global regions, a big part of our audience would really struggle to stream those videos.

"AWS gives us extra capacity when we need it and how we need it. It provides a safety-net so regardless of what's thrown at the site, we know that it will cope. From my point of view, I used to spend a lot of time worrying about how the site would cope with each big project and campaign, but since the move there has been no reason to."

The Future

As use of online social media continues to mature, only those services able to offer a consistently high quality of service to a global audience will be seriously considered by consumers.

Partnering with an experienced cloud provider such as Databarracks is the by far the quickest and most cost effective route to building a solid, globally scalable IT infrastructure.

"We had heard about AWS and really liked the idea of it, but we just didn't have the expertise to use it. Databarracks had the experience of successfully completing these projects and we've been incredibly impressed by our engineers' ability throughout. Compared with previous projects I've worked on, this has been far faster and support and communication throughout has been first-rate.

"We are working on a number of different projects in the next few months and our default choice now is to use AWS and Databarracks," adds Grime.

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Auto Scaling	When the performance of a server reaches a certain threshold – additional servers are created automatically to share the load
Elasticache	Function for scaling memory – cacheing database queries which speeds up performance
RDS	Relational Database Service – Anchorfan use MySQL databases
S3	Images and videos are stored in Amazon S3 object storage
CloudFront	CloudFront is a Content Delivery Network. Images/videos are cached locally in each geographic area to reduce latency and speed up user experience
CloudWatch	AWS monitoring service

◆ Databarracks

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