Aiming a million extra concurrent users at Myspace

Myspace launched a new music video series in New Zealand that included streaming video, favorite lists and search. Anticipating a huge increase in server load, they supplemented existing live traffic with performance-test traffic to get an idea of the impact of the new video offering.

Company at a glance:

**COMPANY**
Myspace drives social interaction by providing a highly personalized experience around entertainment and by connecting people to the music, celebrities, TV, movies and games that they love.

**CHALLENGE**
To test the performance of its application infrastructure, Myspace decided to supplement its live traffic in New Zealand by 1 million simultaneous users. Where do you get those users, and how do you get them all to hammer away at your site at the same time?

**SOLUTION**
Realizing that cloud computing would be the most sensible source for that much test traffic, Myspace turned to the SOASTA CloudTest® platform, which took less than 20 minutes to deploy 800 Amazon EC2 instances that generated more than 77,000 hits per second.
A World of Music & Video Fans
When music and entertainment fans all over the world rely on your website for high uptime and smooth audio/video playback, how can you make sure you won’t disappoint them?

Ahead of launching a new, traffic-intensive video service in New Zealand, Myspace wanted to probe its infrastructure for breaking points, define its capacity thresholds and know how to react if the load should exceed those thresholds.

Add a Million Virtual Users
Myspace decided that adding the load from one million virtual users to the existing, pre-launch load would be an adequate performance test for its infrastructure. The only source for such a huge supplement lies in the cloud, so the company turned to SOASTA CloudTest.

The Myspace operations team specified the load they wanted to impose during testing.

- 1 million concurrent virtual users
- Test cases split between searching for and watching music videos, rating videos, adding videos to favorites and viewing artists’ channel pages
- Transfer rate of 16 gigabits per second
- 6 terabytes of data transferred per hour
- Over 77,000 hits per second, in addition to live, production traffic

CloudTest made calls to the Amazon EC2 API, requesting 800 EC2 large instances in groups of 25 servers at a time. It also called 2 EC2 extra-large instances to act as the test controller and the results database. This took about 20 minutes to spin up.

Once CloudTest had instantiated the EC2 servers, it performed stability checks on them, then discarded and replaced any dead units until it had a healthy population.

While the tests ran, the load generators sent data back to a single analytics service connected to a PostgreSQL database that aggregated performance test metrics. With the volume of data generated in a test of this magnitude, it was necessary to limit access to the database to the metrics aggregators and then scale out horizontally.

Scale Tends to Break Things
It’s not easy to execute performance testing on this scale, especially with streaming content. After opening threads and sockets, each server must wait for the download or stream to finish; meanwhile, it is unavailable to generate more load. At that rate, it can take a long time to simulate 1 million users.

Stressing Myspace stressed the test platform in other ways as well. SOASTA and Myspace made three important changes.

First, Amazon’s then-current limit of 800 test instances meant that each load generator had to simulate 1300-1500 users. To reduce strain on them, SOASTA performance engineers staggered the requests from each virtual user and pared down data collection to the metrics needed for performance analysis.

Next, Akamai serves a large percentage of Myspace assets, and the tests
repeatedly maxed out specific Akamai points of presence (POP), resulting in test errors. Generating load from multiple POPs helped to spread the demand among datacenters.

Finally, because they were able to monitor capacity in real time across their entire infrastructure, the Myspace operations team quickly reallocated underutilized servers to the video site cluster as traffic spiked. The real-time addition of capacity helped the site withstand the stress testing.

About SOASTA, Inc.

SOASTA is the leader in cloud testing. Its web and mobile app test automation solution, the CloudTest Platform, enables developers, QA professionals and IT operations teams to test with unprecedented speed, scale and precision. The innovative product set streamlines test creation, automates provisioning and execution and distills analytics to deliver actionable intelligence faster. With SOASTA, companies can have confidence that their apps will perform as designed, even in peak traffic. SOASTA’s customers include American Girl, Chegg, Gilt Groupe, Hallmark, Intuit, Microsoft and Netflix. SOASTA is privately held and headquartered in Mountain View, California.