clearscale

Jumio Teams with ClearScale to Migrate Its Infrastructure to AWS Realizing Immediate Performance and Scalability Gains

JUMIO

Executive Summary

Jumio is the global leader in digital identity verification using computer vision, biometrics, and human review to connect a person's online with their real-world identities. Leveraging advanced technology like biometric facial recognition, machine learning, and human review, Jumio helps customers to meet regulatory compliance including KYC and AML and tie the digital identity to the physical world. Jumio has verified more than 80 million identities issued by over 200 countries from real time web and mobile transactions. Jumio's solutions are used by leading companies in the financial services, sharing economy, higher education, retail, travel, and online gaming sectors. Based in Palo Alto, Jumio operates globally with offices in the U.S., Europe, and Asia Pacific and has been the recipient of numerous awards for innovation.

The Challenge

Jumio supports a broad range of government-issued IDs in over 200 countries, which can put a strain on any cloud-based application. The customer wanted to move to the platform to AWS with virtually no downtime, and no loss of productivity both of which could have impacted revenue and the Jumio brand.

The ClearScale Solution

After an in-depth evaluation of their needs, ClearScale, a San Francisco-based AWS Premier Consulting Partner, partnered with Jumio to migrate from Rackspace to AWS using containerization. Because Jumio code base was sound and built on a modern technology stack, much of their existing infrastructure needed only to be migrated (rather than reimplemented or rebuilt entirely).

The Technical Details

To migrate Jumio's application to the AWS Cloud environment, ClearScale and Jumio decided to base the deployment architecture on Mesos and Docker. Since Jumio's architecture was already heavily based on microservices, the migration could be split into different stages with individual scaling/updating applied to the services as needed.

Because security is extremely important to Jumio, AWS — which has a reputation for security also through its offerings — fulfilled a series of requirements out of the box. Jumio's already robust security was bolstered by the security structure of AWS. Using OSSEC, ClearScale helped to install customized security measures to better protect the PII (Personally Identifiable Information) of Jumio's users and provide Jumio with greater peace of mind.

Automation

Finally, to address Jumio's productivity concerns, improving automation was an important priority. Fortunately, Jumio was already using Jenkins, a continuous integration server that tests code as it is written and added to an application. We worked with Jumio to add compatibility for Docker Containers, expediting the testing phase of their code while increasing the speed at which critical updates can be rolled out.

Migration

In order to perform the migration, ClearScale created an architecture design focused on High Availability (HA) with HA Proxy Load Balancers. This reduces costs immediately, since fewer servers can be used during periods of low user activity while providing the granular features needed to create their own customized routing.

Before the migration was begun, ClearScale sought to understand how Jumio's previous environment had been built, how their systems worked together, and what their end goal was in order to make the migration as smooth and effective as possible. ClearScale then mapped out how each portion of the migration would take place and, if need be, what systems and components would need to be substituted.

The Benefits

By using Docker and Mesos to migrate Jumio's application to AWS, ClearScale helped to ensure compatibility across any and all Linux machines, improving performance and scalability while decreasing operational costs. With these improvements, Jumio's product has become even more reliable with increased availability of its microservices.

Jumio's verification solution security is stronger, thanks to AWS's robust native security standards. And as an added benefit, the technology stack was deployed in several AWS regions for better resilience and scalability. By combining the three core pillars of ID Verification, Identity Verification, and Document Verification, businesses now have a complete solution — Jumio's Netverify® that allows them to establish the real-world identity of the consumer.