FamilySearch Moves to Continuous Delivery and Gains Real-Time Visibility for AWS Migration

Executive summary

Founded over 100 years ago, FamilySearch International is the largest genealogy organization in the world, hosting, maintaining and sharing genealogical records at FamilySearch.org and through over 4,600 family history centers in 132 countries. FamilySearch needed a way to move to a continuous delivery model, manage its all-in migration to Amazon Web Services (AWS) and immediately troubleshoot website errors.

Since beginning its effort, the organization has seen benefits including:

• Successful migration from monthly releases to over 900 deploys per day
• Ability to re-allocate 12 developers to more value-added tasks
• Visibility into the AWS environment to support AWS migration strategy

Why Splunk

FamilySearch planned to move to a continuous delivery model on AWS to increase business agility and more rapidly deliver features to its patrons. To do so, the company needed a monitoring service that could immediately detect changes across its website properties following the push of a new release. This service needed to support the cultural change to a DevOps deployment model. To meet this need, FamilySearch chose Splunk Cloud to help analyze logs from all components of its IT environment in real time, without additional developer effort. Leveraging Splunk Cloud, FamilySearch is now able to identify errors in real time and has successfully moved to continuous delivery with over 900 deploys per day.

FamilySearch pushes all of its log data through Splunk Cloud, including data from load balancers, routers, APM tools and the applications themselves. Then, a JIRA ticket is automatically created for bug tracking policies following any error. FamilySearch now ingests 3.5–4TB of data per day into Splunk Cloud. The organization is able to give all developers access to all production data—without necessarily granting access to the application servers—enabling staff to build dashboards to monitor the health of the site following a release and move from code check-in to deploy in under 20 minutes.

Industry

- Online services
- Nonprofit

Splunk Use Cases

- Application delivery
- DevOps
- Cloud solution
- IT operations management
- Log management
- Security

Challenges

- Wanted to increase update release frequency
- Needed to monitor and immediately detect changes to website to move to a DevOps model
- Issues with troubleshooting and keeping website stable

Business Impact

- Successful migration from monthly releases to 900 deploys per day
- Enabled developers to easily see whether or not components were healthy
- Moved to a DevOps model and achieved continuous delivery
- Gained back 12 developers who were previously focused on implementing releases and keeping website running

Data Sources

- Amazon EC2
- AWS Elastic Load Balancing (ELB)
- AWS CloudTrail
- Amazon CloudWatch
- AWS Billing
- Routers
- Applications
- On-premises servers

Splunk Products

- Splunk Cloud
- Splunk App for AWS
- Splunk Enterprise
By deploying Splunk Cloud, FamilySearch gains the inherent benefits of a cloud service: elasticity, security and scalability, without the operational effort.

**Improving developer speed, efficiency**

Splunk Cloud is critical to FamilySearch’s shift to a DevOps model and enables developers to troubleshoot errors in real time. “Previously, we were doing monthly releases and struggling to get them built. Splunk Cloud has enabled us to see whether apps are running once we drop them into production—we now have immediate operational visibility whenever there’s any deployment issue. Without Splunk Cloud, we wouldn’t have been able to go to continuous delivery,” says Gary Stokes, director of Engineering, FamilySearch.

FamilySearch now leverages Splunk Cloud in all stages of its Software Development Life Cycle (SDLC). After pushing to production, developers leverage Splunk Cloud to assess the health of a component. This allows FamilySearch developers to rapidly resolve detected issues and iterate new application releases.

After integrating Splunk Cloud into its workloads, FamilySearch was able to gain back 12 developers. With the easy-to-learn, yet powerful, Splunk search processing language (SPL), FamilySearch developers have been able to easily create dashboards.

“Splunk Cloud has been more stable than our internal implementation and has freed up two resources to work on software development instead of managing infrastructure. It has clearly proven to be cost-effective compared to managing infrastructure ourselves.”

**Gary Stokes, Director of Engineering**
**FamilySearch**

**Expanding use of Splunk Solutions**

FamilySearch is in the midst of migrating 100% of its applications to AWS. FamilySearch uses the Splunk App for AWS to gain real-time visibility into user operational and security-related activity in its AWS account allowing FamilySearch to migrate to AWS with full visibility. The Splunk App provides this visibility by analyzing all AWS CloudTrail, AWS CloudWatch, and AWS Billing data in Splunk Cloud. In the future, FamilySearch plans to expand its usage of Splunk solutions to gain business analytics on patron behavior as well as real-time AWS cost management.

“Splunk Cloud has enabled us to gain immediate operational visibility whenever we deploy code. Without Splunk Cloud, we wouldn’t have been able to move to continuous delivery on AWS with over 900 deploys per day.”

**Gary Stokes, Director of Engineering**
**FamilySearch**