Microservices increase troubleshooting complexity for mobile app subscription service

As the official Android apps subscription offering for many of the top mobile carriers and smartphone OEMs around the world, the Apps Club service from Bemobi reaches more than 500 million mobile subscribers and provides an avenue for monetizing apps.
in emerging markets. Apps Club makes life much simpler for consumers, enabling them to pay for apps through their carriers. But its microservices architecture makes troubleshooting more challenging for Bemobi’s development teams.

“Our hundreds of microservices running, it can be tough to manage and control all of them,” says Pedro Gomes, director of the Apps Club business unit. “The scale of our operation and different development and logging methodologies employed across development teams increase the complexity.”

The bulk of these microservices run on Amazon Web Services. Services like Amazon CloudFront, Amazon Elastic MapReduce, Amazon ElasticCache, Amazon Route 53, and Amazon Relational Database Service enables the Apps Club development team to focus on the functional aspects of software development rather than on infrastructure.

“Amazon Services allow us to focus on what’s most important for our business,” Gomes comments. “We don’t have to spend time managing infrastructure or worrying about how to scale as our business grows.”

**Why Loggly?**

The Apps Club team initially used Loggly in 2014 to increase visibility for developers by centralizing all of its logs. As its service grew from several Brazilian carriers to a global operation, its log volumes increased significantly. Concerned about the added subscription cost, Bemobi decided to build its own log management service on the Elasticsearch-Logstash-Kibana (ELK) stack. But it wasn’t long before Bemobi decided to restart its relationship with Loggly after the team discovered the true cost of deploying ELK and realized that it lacked important log management features. “Running a log management infrastructure in-house is actually not cheap,” Gomes reports. “And Loggly helps us focus on what is most important for us.”
**Solution**

Loggly collects and aggregates application logs from all of the microservices that make up Apps Club.

These logs include errors and exceptions as well as user interactions (e.g., microservices log user clicks on the download button, apps being opened, and more).

JSON formatting simplifies the process of querying and filtering this log data within Loggly. “Having your logs in a common format is a big plus,” Gomes says.

Bemobi uses syslog-ng for log transmission. According to Gomes, the company was able to send most of its logs to Loggly within the first day.

**Faster, more secure troubleshooting**

Loggly makes it much easier for the Apps Club development team to deploy new carriers and to keep the service running smoothly. For example, if someone in Bangladesh is having a problem with Bemobi’s Digital Rights Management (DRM) system that prevents an app from opening, the team can filter on the customer’s ID and see all of the server requests and responses in Loggly.

The team also finds Loggly Live Tail to be very valuable for troubleshooting. “Live Tail is awesome,” Gomes says. “With that, I was able to stop giving developers access to our production environments.”

**Monitoring with dashboards and alerts**

The team at Bemobi proactively monitors its microservices for problems using Loggly dashboards and alerts. For example, it keeps track of the top URLs returning 500 status codes and user download behavior. “We have several monitoring systems in place, but log data plays an important role,” Gomes notes. “Creating alerts from log data is very important to us.”

“Loggly is very fast. I wouldn’t be so addicted to Loggly if it wasn’t so fast.”

— Pedro Gomes Director of Apps Club Business Unit, Bemobi
Finally, the Apps Club team uses Loggly for user analytics. For example, log data shows how many users are engaging with specific marketing campaigns so that the team knows what is working best. Gomes has even begun training his business intelligence team to use Loggly. Seeing the value that he has realized, he expects this team to find new ways to improve the success of Apps Club through log analysis.