Quik! Sets Up Data Management Infrastructure to Evaluate User Experiences

Executive Summary

Quik! is a provider of enterprise forms automation solutions. The company's core SaaS application enables organizations to create and deploy interactive, secure, and signable forms that streamlines the customer experience and increases employee productivity.

Quik! currently offers an extensive library of more than 34,000 forms including customer's proprietary forms and a vast array of wealth management forms. Customer's empower their users to fill out repetitive forms faster and with fewer errors by integrating Quik!'s APIs directly into their existing systems and delivering a white-label experience.

Recently, Quik! wanted to upgrade its data management capabilities to understand potential client needs better. With ClearScale's help, the company built a new data platform that would serve as the foundation for future data science operations.

> "The ability to understand our customers by reviewing their successes and failures using our products is paramount to delivering a better customer experience and innovations. We turned to ClearScale to design and implement a platform to capture and understand event-driven data coming out of our applications and business intelligence tools. ClearScale designed and implemented an ideal solution for us on time and under budget."
>
> **Richard Walker,** CEO, Quik!

The Challenge

When Quik! reached out to ClearScale, the company was looking for ways to ensure customer success by understanding customer behavior with Quik!'s products. Even more broadly, Quik!'s leadership team wanted to enhance the entire organization's existing data collection, storage, and reporting capabilities.

To better understand how customers engaged with Quik!'s SaaS application, the company developed a list of milestones and events to track during trials. For example, the team wanted to monitor actions, such as how many times trial users logged in, when they first accomplished certain tasks, and whether or not they connected Quik! to their CRM. Quik! was interested in learning if users needed better guidance when it came to generating forms, creating form groups, and executing other critical functionality.

Moreover, Quik! needed to share data back with users to help them see how much value they were getting out of the platform. The team wanted to start embedding accurate and easy-to-understand dashboards directly into the QuikFormsApp solution.

Going in, Quik! knew it wanted a data management solution that was both cost-efficient and scalable. If successful, the company could also invest further in its data science operations and improve its platform's value over the long term.

Fortunately, ClearScale had the expertise to design and implement a minimum viable product on Amazon Web Services (AWS) that would give Quik! exactly what it needed.

The ClearScale Solution

ClearScale developed a three-part data management solution with the following components:
- Secure data lake
- Scalable data ingestion layer
- Flexible data warehouse and reporting layer

Fortunately, AWS has a suite of cloud-based services, tools, and features that make it easy for users to set up whatever infrastructure they need for modern analytical techniques.

Secure Data Lake

ClearScale's data experts used AWS Lake Formation to set up a secure data lake for Quik! that would become the central storage location for user actions and application event logs. AWS Lake Formation simplifies the complexities of configuring a data lake manually, enabling organizations to load data from diverse sources, run sophisticated analyses, monitor data flows, and more. The service also comes with built-in security and governance features, which drastically reduces the amount of time it takes to set up a cloud-based data lake.

With its new data lake, Quik! can store, catalog, and clean trial user data from diverse sources for further analysis. The company can also set access for different data sets and apply consistent security enforcement.

Scalable Data Ingestion Layer

For the data ingestion layer, ClearScale used AWS API Gateway and Amazon Kinesis, both of which can ingest data at any volume. With AWS API Gateway, Quik! gained a fully managed service for building, publishing, maintaining, and protecting APIs at any scale. The company can now create RESTful and WebSocket APIs to facilitate real-time communications between different applications. Furthermore, users pay for AWS API Gateway on a tiered pricing model that rewards higher utilization with greater volume discounts.

Amazon Kinesis was instrumental in setting up data streams so that Quik! can process and analyze user data as it comes in. Like AWS API Gateway, Amazon Kinesis can scale to any size, enabling organizations to collect data cost-effectively from many sources, including application logs, audio feeds, and website clickstreams. The service is also fully managed, which means the Quik! team doesn't have to spend time on cumbersome backend administration.

Flexible Data Warehouse and Reporting Layer

On the data warehouse and reporting layer front, ClearScale used AWS Data Migration Service, which enables users to move existing databases to the AWS cloud quickly and securely. The ClearScale team replicated Quik!'s transactional data from Microsoft SQL Server and moved it from Amazon Relational Database Service (RDS) to Amazon Redshift, a data warehouse that supports queries for both structured and semi-structured data. ClearScale also configured Amazon Athena, a serverless query service, and Amazon QuickSight, a business intelligence (BI) tool, so Quik! can analyze data and publish it to interactive dashboards.
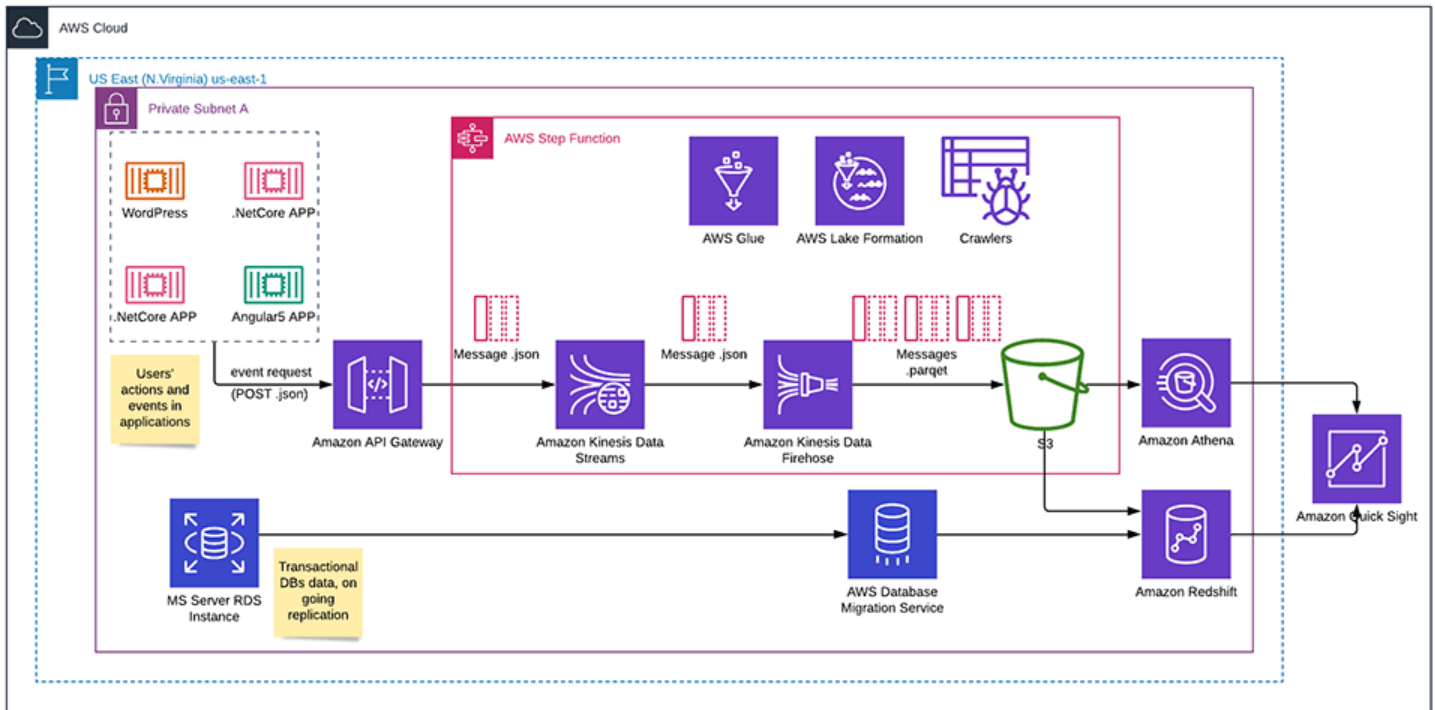
Now, Quik! can run analyses on its trial user data to determine where customers lose interest or get stuck. The company can also publish utilization data directly to clients in their frontend dashboards so they can see how much they depend on Quik!'s forms automation solution.

The Benefits

With ClearScale's help, Quik! gained a sophisticated data management capability for cost-effectively storing and analyzing user data. The company can now evaluate user behaviors to identify growth opportunities and focus on improving elements of the customer experience that matter most.

With these updates, Quik! will be able to increase customer retention and adoption, both of which are critical for long-term profitability. The SaaS company also has the cloud-based data infrastructure it needs to take advantage of new-age Big Data and predictive analytics techniques in AWS.