

AdvisoryCloud Migrates from Monolithic Architecture to Agile Cloud Infrastructure



Executive Summary

AdvisoryCloud is revolutionizing the traditional advisory board. The platform allows companies to establish, assemble, and manage strategic advisory boards in a completely digital format while giving professionals of all backgrounds direct access to advisory board opportunities by becoming a member.

After seven years, AdvisoryCloud decided it was time to upgrade its monolithic architecture. Fortunately, ClearScale had the cloud expertise and experience to design a new IT environment in the [Amazon Web Services \(AWS\)](#) cloud that would meet all of AdvisoryCloud's essential needs.

"Using AWS Control Tower, ClearScale quickly set up a landing zone for our organization based on best-practices. They also created several proof-of-concept architectures to give us blueprints we could use to build our solutions. This foundation allowed our engineers to very quickly develop and deploy several applications".

Jeremy Brown, CTO, AdvisoryCloud

The Challenge

AdvisoryCloud decided to hire outside help to set up a clean new environment based on AWS best practices. The organization placed a high priority on gaining efficient CI/CD processes, a reliable landing zone, and capabilities to develop serverless applications in the future. As an [AWS Premier Consulting Partner](#) with multiple AWS competencies, ClearScale had everything needed for the project.

The ClearScale Solution

ClearScale used a myriad of AWS services and cloud technologies for AdvisoryCloud's migration and modernization project. At a high level, ClearScale's solution had to include:

- Robust security features
- Efficient CI/CD processes
- Streamlined data management tools
- GDPR and CCPA compliance assurance

To meet AdvisoryCloud's timeline, the whole project had to be finished in under two months. ClearScale got it done.

Robust Security Features

ClearScale's team of solutions architects began by setting up a landing zone based on AWS best practices.

The landing zone would serve as a foundation for networking, security, management, and governance. It had to include security controls, such as identity and access management (IAM), encryption, configuration changes, secrets, and IDS/IPS.

Furthermore, the landing zone needed to enable key management and governance practices, including monitoring, logging, audit trails, notifications, and resource tagging. Several AWS services were instrumental here.

ClearScale implemented AWS Control Tower to manage multi-account AWS environments and enable single sign-on (SSO) based on a cloud-native directory. Control Tower allows users to define organization and account hierarchies to segregate applications and environments in use, which was critical for AdvisoryCloud. Sensitive information was securely stored with AWS Secrets Manager. AWS Cognito provided crucial capabilities for end-user authentication and authorization at an application level. AWS GuardDuty was used to detect violations across AdvisoryCloud's platform by analyzing various data sources including CloudTrail, Flow Logs and DNS logs.

Efficient CI/CD Processes

ClearScale built a proof-of-concept (POC) with three CI/CD use cases in mind.

First, the POC had to support the continuous delivery of a "public directory" service to the development environment. This way, AdvisoryCloud developers could test their public directory service and its feature branches in isolation.

Second, ClearScale's POC had to enable the continuous delivery of a single unit of AdvisoryCloud's "Subscription Modification" service to the deployment environment. ClearScale also had to implement an approval gate so AdvisoryCloud developers could approve code updates before sending them to production.

Third, ClearScale needed to set up a streamlined CI/CD workflow. ClearScale determined [AWS Amplify Console](#), a web hosting service that accelerates release cycles for static web applications, was the best choice for deploying AdvisoryCloud's full-stack application.

Across these use cases, the application templates and accompanying CI/CD processes that ClearScale implemented gave AdvisoryCloud what it needed to increase the velocity of future application deployments.

In addition, AWS AppSync was helpful for enhancing AdvisoryCloud's application development process, as the service enables users to build powerful APIs quickly with GraphQL. Using AWS AppSync, AdvisoryCloud developers can deploy diverse and distributed APIs across different production environments. ClearScale also laid the groundwork for AdvisoryCloud to be able to build APIs for mobile and web clients using either a serverless approach with [AWS Lambda](#) or a container-based approach using microservices.

Streamlined Data Management Tools

To connect AdvisoryCloud's applications, ClearScale implemented Amazon EventBridge, a serverless event bus that delivers real-time data from various event sources. Amazon EventBridge works in concert with Amazon Step Functions to simplify the process of ingesting data from external sources. Amazon Step Functions also makes the process of managing customer subscriptions much more reliable for the web platform.

To manage log streams, ClearScale used Amazon Kinesis Data Streams to accommodate streams from different sources. The team also implemented Amazon Kinesis Data Firehose with Amazon Elasticsearch so AdvisoryCloud could pipe, store, and analyze its log data.

Compliance Guardrails

Finally, AdvisoryCloud's new serverless environment had to comply with General Data Protection Regulation (GDPR) and California Consumer Privacy Act (CCPA) regulatory mandates. The AWS data and security services mentioned above provided everything AdvisoryCloud needed to fulfill its regulatory obligations.

The Benefits

With ClearScale's help, AdvisoryCloud replaced its monolithic, Rackspace-based IT infrastructure with agile, cloud-based architecture. AdvisoryCloud's platform can now scale with the company's ambitious growth targets, thanks to the sophisticated AWS platform and its many advanced managed cloud computing services.

AdvisoryCloud's revamped IT environment follows AWS best practices, enabling the development team to build, deploy, and scale mission-critical applications with ease. The company's new CI/CD pipeline is highly efficient, which is important for making rapid improvements to the services provided to users. Going forward, AdvisoryCloud has the cloud infrastructure and tools to provide exceptional services to advisors and companies, and to stay ahead of the competition.