

The Sierra Club Migrates Advocacy Platform and Optimizes Cloud Architecture with ClearScale



Executive Summary

The [Sierra Club](#) is a U.S.-based grassroots environmental organization with nearly 4 million supporters. Today, the Sierra Club focuses on mobilizing efforts around major issues, such as climate change and pollution. The nonprofit organizes almost 5,000 events and has retired more than 300 coal plants.

Recently, the Sierra Club decided it was time to take ownership of its public facing online advocacy platform and reassess its cloud infrastructure. With ClearScale's help, the organization was able to migrate its online advocacy platform to its own Amazon Web Services (AWS) account and set itself up for future success on a number of fronts.

"Working with ClearScale has enabled us to improve our hosting infrastructure for AddUp and has empowered us to improve our processes & support our growing community of online activists. These capabilities are more important than ever in the fight to protect our planet and our communities."

Parul Sharma, Associate Product Director - AddUp Project, Sierra Club

The Challenge

The Sierra Club wanted to move one of its online advocacy platforms, [AddUp](#), away from a 3rd party managed service provider. The provider initially set the site up in AWS. However, the Sierra Club did not have its own AWS account and, consequently, lacked control and access to its critical cloud infrastructure.

The nonprofit sought to grow beyond its reliance on its managed service partner to have direct control of the platform. The Sierra Club also wanted to increase business agility and optimize its IT cost structure going forward. Additionally, the organization hoped to acquire a managed solutions company to provide logging, monitoring, and security services for its application.

Beyond the scope of the platform migration, the leadership team felt there was an opportunity to refresh its cloud architecture to ensure everything was as secure, productive, and efficient as possible.

Given the multi-faceted nature of the project, the Sierra Club felt that its current 3rd party provider was not the right partner to perform this work efficiently and cost-effectively. As a result, the nonprofit's leaders looked for a cloud expert that specializes in AWS implementations.

ClearScale, an [AWS Premier Consulting partner](#), had both the technical expertise and experience to fulfill all of the Sierra Club's requirements. The end-to-end cloud service provider has helped hundreds of organizations migrate critical infrastructure to AWS and refactor applications to optimize cloud performance.

The ClearScale Solution

Before moving forward, ClearScale's expert architects, engineers, and designers met with the Sierra Club to define success metrics for the engagement. The Sierra Club had several objectives for ClearScale:

- Evaluate the deployment environment and recommend improvements based on AWS best practices in light of current and projected AddUp use
- Simplify the deployment environment, if appropriate, and position the Sierra Club to work with ClearScale / CloudNoc for ongoing hosting services
- Migrate the AddUp and dependencies to a new, self-managed AWS account
- Deploy production, staging, and development environments for the AddUp solution
- Achieve all of this within 3 months, before the end of the Sierra Club's contract with its 3rd party service provider

With this information, ClearScale created a roadmap that improved on the existing environment in numerous ways. The company's migration experts took a replatforming approach to the project that required a suite of AWS technologies.

For the network tier, ClearScale built the architecture using Terraform Infrastructure as Code (IaC) automation. The application tier required the implementation of [Amazon EC2](#) and load balancers. Amazon EC2 is a web service that offers resizable computing capacity without any upfront commitments. The service would decrease the Sierra Club's total cost of ownership significantly. [Amazon CloudFormation](#) was also instrumental in enabling automation as the service allows organizations to model and provision resources for the cloud in a common programming language.

The Sierra Club's databases were migrated to [Amazon Aurora](#), a MySQL-compatible relational database designed for the cloud. The AWS service enables organizations to maximize the performance and availability of large-scale databases in a cost-efficient manner. ClearScale took advantage of [Amazon RDS Multi-AZ](#) deployments to bolster the durability and availability of the Sierra Club's AddUp site.

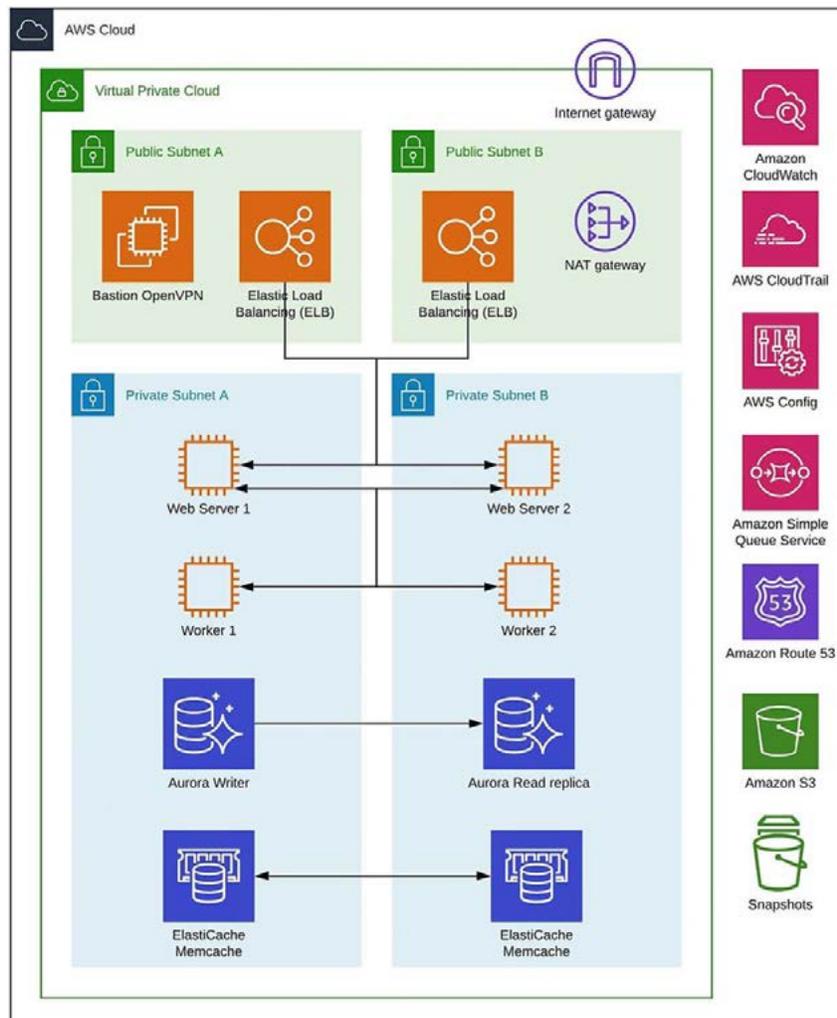
ClearScale also created a streamlined deployment runbook for the nonprofit to simplify future deployments. This runbook defines the steps needed to efficiently deploy each environment as part of their deployment process.

On the security side, ClearScale implemented [Amazon CloudWatch](#) to help Sierra Club's engineers and IT managers monitor AWS resources closely. The AWS service collects and shares operational data in many formats, which makes it easy for users to identify anomalies across their environments. The ClearScale team set up alerts that indicate potential issues across the Sierra Club's cloud architecture.

With [AWS CloudTrail](#), the nonprofit can now easily track activity related to its AWS account and infrastructure. The service is especially valuable given that the Sierra Club has not managed its own AWS account in the past. Now, the organization's IT managers can refer to a comprehensive history activity to enhance security analyses, change tracking, and more.

After successfully migrating the AddUp site over, ClearScale set the Sierra Club up with ongoing monitoring and security support through its managed service partner, CloudNoc.

Architecture Diagram



The Benefits

With ClearScale's help, the Sierra Club was able to gain control over its online advocacy platform architecture and enhance its cloud utilization dramatically. The grassroots organization now has a sophisticated cloud architecture with clearly defined environments and better access control. The AddUp site is more secure and can flex with demand, thereby enabling better cost control.

The Sierra Club also has a consistent deployment pipeline and managed database service that automatically takes care of burdensome IT administration. Overall, the nonprofit is much more agile from an IT perspective, which means it can adapt swiftly to market trends and support its grassroots members more effectively.