

eTeamSponsor Migrates and Modernizes Legacy Database on AWS



Executive Summary

[eTeamSponsor](#) is a virtual fundraising platform specifically designed to help high school, collegiate, and university athletic teams raise money for their programs. The company enables users to automate digital marketing campaigns and optimize fundraising initiatives around four primary activities: outreach, gifting, payment, and reporting. As a result, program directors and stakeholders spend less time calling potential donors, writing letters, and organizing fundraising events, all while bringing in more money for their students. Overall, eTeamSponsor has helped sports programs across the country raise over \$96M.

Recently, eTeamSponsor decided it was time to upgrade its legacy Oracle database, as it was nearing the end-of-life stage. Rather than simply upgrade to the latest version, the company decided to take advantage of the opportunity and migrate to a cloud-native database engine, Amazon Aurora PostgreSQL. To ensure a smooth migration, eTeamSponsor brought in ClearScale, an expert cloud consultancy and Amazon Web Services (AWS) Premier Partner with extensive migration and modernization experience.

“When it came time to upgrade our legacy database, we recognized an opportunity to modernize in the cloud and improve the availability and scalability of our core application. But we also recognized that we needed an expert partner with significant experience in complex AWS migration and modernization projects. We found that partner in ClearScale and were rewarded with a new solution that will both save us money and support our ambitious growth plans.”

John Davis, VP of Product, eTeamSponsor

The Challenge

Previously, eTeamSponsor used a legacy version of Amazon RDS Oracle, Version 11, as its database solution. Version 11 was nearing the end-of-life stage, which motivated eTeamSponsor to pursue an upgrade. However, there were risks associated with jumping straight from Version 11 to Version 19, the latest version available at the time. Certain aspects of the core application and underlying database wouldn't work properly with the most recent Oracle update. Consequently, the project was going to be a bigger undertaking than expected.

Knowing they had to make major changes already, eTeamSponsor's leaders began exploring other ways to improve the company's database performance, availability, and scalability. One compelling option that surfaced was to migrate away from Amazon RDS Oracle entirely and adopt Amazon Aurora PostgreSQL. Along the way, eTeamSponsor would have to refactor its database schema and make changes to its application so that it could communicate with the new engine successfully.

eTeamSponsor decided to take on the work of updating the application internally but wanted support on the migration and modernization side. After evaluating several vendors, the company landed on ClearScale, with its AWS Migration Competency, as the best partner to execute a fast and successful migration.

The ClearScale Solution

ClearScale followed a thorough, multi-step approach to ensure eTeamSponsor's database migration was successful.

On the architecture design front, it didn't take much work to prepare eTeamSponsor's AWS environment. The client already had an AWS account for its legacy Oracle RDS instance. So, ClearScale was able to put two new target Aurora instances in the same environment, one for testing and one for production. The only major decision to be made was around the sizes of those instances. ClearScale also made sure that the right permissions and networking connectivity were in place to support those instances.

With the Aurora instances in place, ClearScale proceeded to perform a test migration. The team used a small dataset from a copy of the Production database to perform the test. After successfully migrating the copy to the new instance, ClearScale informed the client's developers that it was ready to use to test the updated application.

To prepare for the full production migration, ClearScale ran the [AWS Schema Conversion Tool \(SCT\)](#), a powerful solution for maximizing predictability when migrating databases. The SCT automatically converts source database schema and code objects to formats that work with the target database. ClearScale used scripts and reports generated by the SCT to build a migration plan for eTeamSponsor's unique needs.

In a few cases, SCT reports identified objects that would not be able to migrate to the new Aurora engine. As a result, ClearScale's migration engineers had to refactor those objects manually. Furthermore, ClearScale used SCT scripts to migrate data tables over and recreated any refactored views in the target database.

Next, ClearScale leveraged the [AWS Database Migration Service \(DMS\)](#) to create and launch tasks to transfer data to eTeamSponsor's data tables. Last, ClearScale's engineers created indexes and sequences, set up triggers, and performed basic validations to confirm that the new Aurora PostgreSQL database was configured correctly.

Beyond the migration, ClearScale helped eTeamSponsor's development team test the newly updated application. Occasionally, database requests would time out and become unresponsive. Upon investigation, ClearScale found a mismatch between Oracle and PostgreSQL optimizers. The team shared this information with eTeamSponsor's developers, who then created an additional index. Doing so fixed the underlying problem and dramatically improved the responsiveness of the application.

The Benefits

Thanks to ClearScale's guidance, eTeamSponsor's migration and modernization project went exactly as planned. eTeamSponsor was able to upgrade from its legacy Oracle database and improve its core application without disrupting services for existing users. Now, the company has a high performing, available, and scalable cloud-native database in Amazon Aurora PostgreSQL that integrates seamlessly with the fundraising application.

Compared to the legacy RDS Oracle engine, the new solution is also less costly overall and more than capable of supporting eTeamSponsor's ambitious growth trajectory. The company has the database infrastructure it needs to scale with demand and deliver exceptional services to high school and college sports programs across the U.S., which means more funding for more students.