Keplerworx is helping VRD in (re)defining recruitment process with real time scalability and reliable uptime.

aws partner network

Executive Summary

Virtual Recruitment Days with its ever-evolving virtual event platform is delivering hundreds of successful events. Their virtual platform is designed for those who prefer an online experience and want an efficient, seamless, near real and user-friendly event. They need to improve the scalability and efficiency of their application, as they were struggling with the performance during the peak loads. KeplerWorx professional team ensured flawless delivery and configuration of AWS resources, upgrading VRD's entire IT infrastructure to a new level. Along with training VRD's internal IT team with good practices, which leads to the optimized performance of the application and ensuring customer satisfaction.

Customer Challenge

The traffic for VRD web application regularly spikes during events and fairs, with high number of queries from students, which was causing the need for VRD to scale its application while maintaining security and performance and direct queries in a way that would not overload the database in very high traffic. The company's existing architecture was configured in such a way that meeting these requirements would be difficult. Their architecture was deployed on a single EC2 instance having MySQL installed in it. VRD needed to improve scalability, performance, and agility to reduce the issue they are having with the unpredictable traffic which is causing outages and bad customer experiences. The platform was struggling to keep up with rapid traffic, while maintaining uptime and operational efficiency. They were looking for a reliable solution to their problems.

Why AWS

Customer chooses AWS primarily because of their need of reliable infrastructure that can scale up and down based on the growth and requirements of a business, and they need cost effective & easy to use platform to host their application.

Why KeplerWorx

Although they have deployed the application on AWS, but they were not following the AWS best practices which lead them to scalability and performance issues. They were looking for a reliable partner that can help them in architecting their AWS Environment. Keplerworx is experienced in migrating and running mission critical applications on AWS cloud. We address their problems and each issue leading to the lack of performance.

About VRD

Virtual Recruitment Days (VRD) is innovative recruitment software aimed at several areas,
– Volume Recruitment, International Recruitment and Graduate Recruitment. It has been designed with candidates experience and candidate engagement in mind. Jobseekers are drawn to the virtual fair via many marketing channels and through matching technology, building a private agenda and matching professionals exploring opportunities within an organization. Furthermore, it enables live engagement through chat and webinars. Demonstrating brand awareness through pre-recorded videos, uploaded images, and downloadable documents to matched audiences. Effectively engaging at the earliest stage of the recruitment process.

How KeplerWorx helped in enhancing the Customer Experiences on the platform

With multiple issues coupled together, the current IT framework was not reliable and resilient. Performance and agility to manage high traffic were major factors evaluated by KeplerWorx team in resolving the concerns. The Team initiated the process by examining the current state of the company's IT architecture, followed by developing use cases to support the blueprint for the desired future state, and then designing and addressing each issue leading to the lack of performance.

Their main problem was the speed & monitoring of the MySQL database and scalability of EC2 server. We shift them to Amazon RDS, as their application is read heavy application, we implemented RDS read replica for optimization, and for monitoring of the database we enabled logs and performance insights of RDS. We have launched the customer EC2 server and database in the private subnet with encryption enabled at rest using KMS. We are using AWS ElasticBeanstalk for their application deployment with high availability and scalability configurations and integrated it with AWS Code Pipeline.

We have used Elastic Cache to cache web content and improve the performance of the existing app by retrieving data from high throughput and low latency in-memory data stores. We are using Terraform to main infrastructure as code.

Solution Deployment Characteristics: We have tested the RDS performance by performing load testing with the customer using JMeter tool, after testing with multiple RDS instance types, we have decided to select the RDS sizing **db.m5.4xlarge** with one **read replica**. We have launched the read replica in the different availability zone for better performance and agility. We are taking the backup of the RDS database twice a day as per customer RTO and RPO requirements.

The RTO of customer database is 1 hour and RPO is 12 hours. The platform handles Sensitive PII (personally identifiable information), which was aligned with security compliance requirements with data encryption, alerting and monitoring. For that we have enabled AWS Config, CloudTrail and CloudWatch alarms.

Results and Benefits

Real Efficiency, Significant Savings: After completing the transformation, the new Platform is more responsive to traffic spikes and has increased response time to customer queries. Moreover, can be scaled up and down based on business needs. AWS compute costs slashed to half.

Reliable uptime and infrastructure that scales easily, with greater flexibility.

Database performance has been increased by the use of Amazon RDS and Read Replicas. With ElastiCache, **no. of queries to the database got reduced by 50%** - and performance shot up – making the whole system more resilient.

Time to Market cut by 50% Using tools such as Elastic Beanstalk and AWS Code Pipeline, VRD has accelerated development and release new applications 50

About KeplerWorx

KeplerWorx is a global consulting company with operations in Middle East, India, and Europe. Driven by technology, we focus on delivering solutions on Cloud, mobility DevOps and Big Data. Speed, innovation, and excellence are the underlaying tenets that drive our culture.

KEPLERWORX