About Rotageek Ltd

https://www.rotageek.com/

Rotageek is a workforce management software company that uses machine learning (ML) to optimise staff scheduling. By leveraging data-driven insights, Rotageek helps businesses create efficient schedules, improve employee satisfaction, and streamline operations. Their ML applications rely heavily on AWS cloud services for computing, storage, and machine learning capabilities to deliver real-time insights.

Problem Statement

Rotageek faced rising costs associated with their machine learning workloads on AWS, particularly due to inefficient resource allocation, over-provisioned compute instances and storage costs. The challenge was maintaining their applications' high performance while optimising the use of AWS resources to reduce operational costs. Additionally, the variability in demand for their ML models during peak and off-peak times required better scaling solutions to handle workloads dynamically.

Proposed Solution

CloudiQS conducted a thorough AWS Well-Architected Review to identify key areas where costs could be optimised without impacting performance. The following actions were implemented:

- **Right-Sizing Compute Resources -** We assessed the utilization of EC2 instances, focusing on rightsizing over-provisioned instances and replacing them with smaller, more cost-effective instance types. We also leveraged AWS Spot Instances for non-critical batch processing workloads.

- **Optimizing Storage -** Data storage in Amazon S3 was reviewed, and we applied lifecycle policies to automatically transition infrequently accessed data to cheaper storage classes such as S3 Infrequent Access and Glacier.

- **Auto-Scaling Implementation -** Auto-scaling was enabled across Rotageek's ML applications to automatically adjust capacity during demand spikes, ensuring optimal performance while minimizing unnecessary costs during off-peak times.

- **Utilizing AWS Savings Plan -** By analysing Rotageek's long-term usage patterns, we recommended and implemented AWS Savings Plans for consistent workloads, allowing them to lock in reduced prices for a set period.

- **Cost Monitoring and Alerts -** We set up AWS Cost Explorer and CloudWatch to provide real-time cost monitoring, anomaly detection, and alerts for unusual spending, enabling proactive management of their cloud budget.

Outcomes & results

After implementing these optimizations, Rotageek saw a significant reduction in their monthly AWS spending while maintaining the high performance and availability of their ML applications. Key results include:

- **35% Reduction in AWS Compute Costs -** By right-sizing instances and using Spot Instances, Rotageek lowered their EC2 costs by 35%.
- **20% Savings in Data Storage Costs -** Optimizing S3 storage with lifecycle policies resulted in a 20% cost reduction.
- **Improved Cost Predictability -** The introduction of AWS Savings Plans, and real-time cost monitoring provided Rotageek with more predictable cloud spending, allowing better budget planning and control.
- **Scalable and Efficient Infrastructure -** The auto-scaling configuration enabled Rotageek to handle varying demands for their ML models without over-provisioning, ensuring cost-effective scaling during peak workloads.

CloudiQS helped Rotageek achieve its cost optimization goals, ensuring it could continue innovating with machine learning while maintaining a sustainable cloud infrastructure.

Lessons Learned

It is important to make sure customers understand the importance of resiliency and to continue to invest in a DevOps pipeline to automate code deployments, ensuring infrastructure version upgrades are made promptly. If an organization maintains a healthy DevOps culture, security, scalability availability and uptime become extremely important.

About CloudiQS

CloudiQS quickly solves core business problems and drives disruptive change by applying the latest automation technologies in AWS infrastructure, Data Analytics, AWS architecture, and DevOps. We design, deploy, integrate, and manage rapid migration and transformation solutions to accelerate enterprise data platform migrations using automation. CloudiQS offers a range of services including AWS security, cost optimization, machine learning (ML/AI) managed services, and comprehensive AWS migrations. We support SMBs, startups, and corporate clients, ensuring scalable, secure, and efficient cloud environments tailored to their needs.