

Cost Control and Infrastructure Optimization



Overview

Forever New is a global fashion retail brand with a significant online presence. Behind their well-known brand is a dedicated team of fashion experts and designers focused on delivering a personalized and elevated style experience to a worldwide customer base. Their e-commerce platform serves as the primary touchpoint for customers, making its performance, scalability, and cost-efficiency critical to business operations and customer satisfaction. The infrastructure, built on Amazon Web Services (AWS), must support high-traffic volumes, secure transactions, and dynamic content delivery seamlessly.

Challenges

Forever New's AWS environment faced several operational and financial challenges that required immediate attention to ensure platform stability and control spending.



Storage Scalability

The e-commerce platform requires the addition of a new storage volume to an existing production EC2 instance. The procedure needed to be executed without causing downtime or impacting the performance of the live application, which was a critical concern for the operations team.



Cost Optimization

An analysis of the monthly AWS bill revealed a significant cost increase. Forever New lacked a granular breakdown of expenditures, making it difficult to identify the sources of the increased spending. A primary area of concern was the presence of unutilized Elastic IP addresses, which were incurring unnecessary charges.



Data Backup and Retention

The existing method for backing up call center records was inefficient and lacked automation. This posed a risk to data integrity and did not meet the company's standards for reliable data retention and disaster recovery.

Solution Proposed

A systematic approach was taken to address each challenge, focusing on implementing AWS best practices to enhance performance, security, and cost-efficiency.



Seamless Volume Attachment

A new Amazon Elastic Block Store (EBS) volume was provisioned with the required performance specifications (IOPS and throughput). The volume was then successfully attached to the production EC2 instance during a scheduled low-traffic maintenance window. The technical team formatted and mounted the new volume on the operating system, ensuring it was immediately available to the application without any service interruption.



Cost Management and Analysis

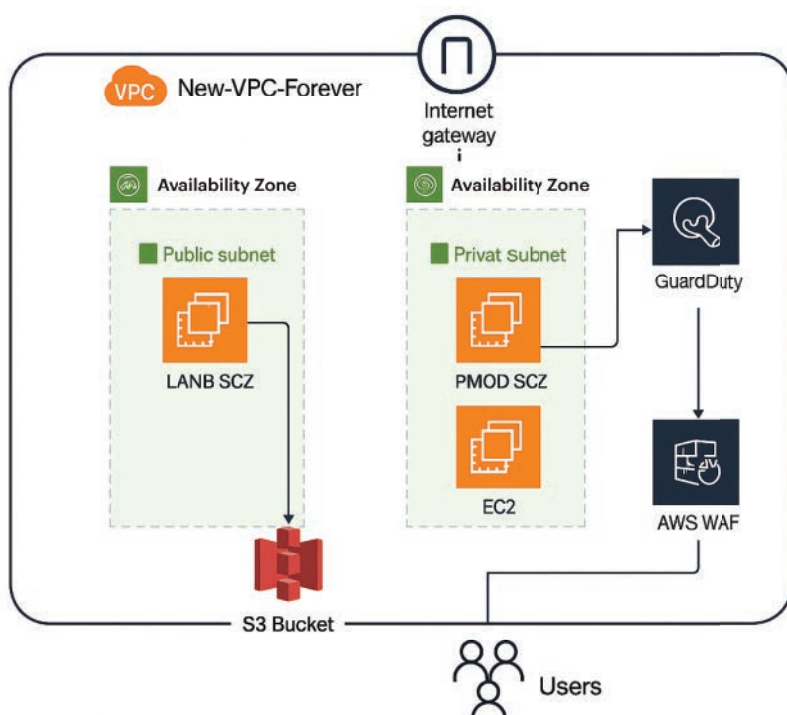
To address the rising costs, unused and unattached Elastic IP addresses were identified and removed from the account, providing an immediate reduction in monthly expenses. Furthermore, a comprehensive cost analysis report was generated using AWS Cost Explorer. This document provided a detailed breakdown of spending by service, region, and linked accounts, giving Forever New clear visibility into their AWS footprint and highlighting further opportunities for optimization.



Automated Backup to Amazon S3

A robust and automated backup solution for call records was implemented using Amazon S3. A process was configured to transfer call record data to an S3 bucket automatically. S3 Lifecycle policies were also established to transition older data to more cost-effective storage tiers like S3 Glacier Flexible Retrieval, ensuring long-term retention while minimizing storage costs.

Architectural Layout



Tech Stack



Amazon VPC



Amazon EC2



Amazon RDS



Internet Gateway



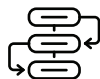
AWS WAF



Amazon S3

Business Impact

The implemented solutions delivered significant improvements across Forever New's cloud operations and provided tangible business value.



Improved Backup and Data Durability

The new S3-based backup system provides a highly durable and scalable solution for critical call records. The automation eliminates manual effort and reduces the risk of data loss, strengthening the company's disaster recovery posture.



Significant Cost Savings

By removing unused resources like Elastic IPs and providing detailed cost reporting, Forever New gained control over their cloud spending. The analysis enabled them to make informed decisions, leading to a direct reduction in their monthly AWS bill.



Enhanced Performance

The successful attachment and configuration of a new, appropriately provisioned EBS volume ensured that the application had the necessary storage resources to maintain optimal performance, supporting fast data transfer rates and low-latency access required for a smooth user experience.



Increased Security

Decommissioning unused Elastic IPs reduced the public-facing attack surface of Forever New's network, enhancing their overall security posture.

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