

Operation Transformation Redefined with AWS for a Leading Financial Services Provider

Building a Payment Plan Model Application for Senior Citizens

Overview

Our client's customer wanted to develop a payment plan model application for the customers who are retired and of the age group of 75 and above. The client wanted to start a Greenfield implementation of a highly available Java application connecting to on-prem database. Tech Mahindra developed and supported application on AWS cloud.

Here are some of the key business requirements:


- ▶ Build and manage a Java based application that is highly available, scalable, and secure
- ▶ Connect the application to database present in primary and secondary on-prem data centers
- ▶ Cost optimized isolated development and staging environment
- ▶ Infrastructure and application management through MSP offering


Client Background and Challenge


The customer works with leading financial services brands and their aim is to help their clients become more effective through leveraging best in class business process outsourcing and operational transformation. The group creates value through partnering with clients to transform their customer journey and operations.


- ▶ Data residency in UK region
- ▶ Standard monitoring and alerting policies on various levels like infrastructure, application, network, and security to detect threats and vulnerabilities and mitigate them
- ▶ Highly trained operations team that can provide 24/7 support and ensure service availability for the applications
- ▶ Highly available, secure, and cost-effective solution


Our Approach and Solution


 Considering the customer requirement, an active-active site to site VPN connection from AWS to primary and secondary on-prem datacenters was created

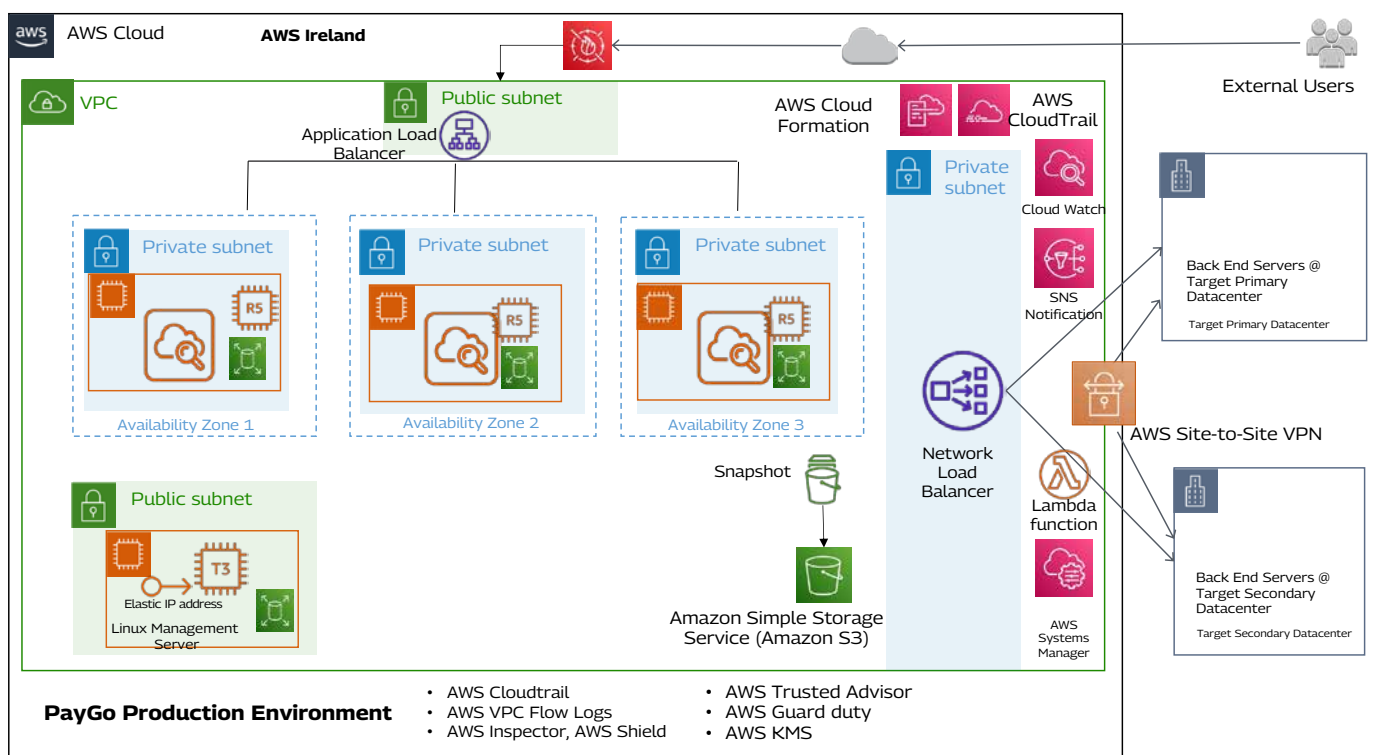
 The application was hosted on multi-AZ environment (three AZS) with application load balancer (ALB) configured to route the requests to the application on a round-robin manner

 Network load balancer was configured to route the application requests to the on-prem database

 Monitoring of the Infra and integration with client ITSM system for the alarms raised through cloud watch

 24x7 support comprising L1/CloudOps Analysts, L2/CloudOps support specialists, and L3/CloudOps subject matter experts (SMEs)

 Automation and cost optimization by using cloud formation and AWS Lambda



Based on the requirements by the client we followed the below approach.



Cloud Operations Governance

- ▶ Developed CloudFormation templates for infrastructure provisioning, including VPC, subnets, EC2 instances, ALB, and NLB
- ▶ Leveraged AWS Lambda for non-prod server stoppage during off-hours, enabling task automation
- ▶ Streamlined simple tasks, freeing up personnel for more critical responsibilities



Security and Access Management

- ▶ IAM for role-based access control
- ▶ WAF protecting the ALB from malicious attacks
- ▶ AWS Inspector is used for vulnerability management



Operations Management

- ▶ Configurable health thresholds, along with customizable and programmable alarm notifications and integration with client ITSM system help operations staff easily identify and prioritize critical issues
- ▶ Manage AWS environment and perform regular operational tasks like patching



Monitoring and Observability

- ▶ CloudTrail, VPC Logs, and CloudWatch logs are directed to CloudWatch for improved monitoring and visualization of resources health
- ▶ CloudWatch and CloudTrail logs are stored in S3, retained for 180 days, with a lifecycle configuration transitioning to standard-IA S3 storage days and Glacier
- ▶ Amazon CloudWatch events detect and respond to changes in resource status, triggering notifications, corrective measures, or rule-based actions



24 x 7 Support

- ▶ 24x7 support to ensure round-the-clock availability, with L1, L2 and L3 resources working in shifts to cater to different support needs
- ▶ Continuous monitoring, incident resolution, and escalation management at any time, offering seamless support for critical issues and maintaining optimal AWS infrastructure performance
- ▶ With dedicated team available around the clock, timely response, proactive troubleshooting, and reliable support ensures uninterrupted operations
- ▶ Application performance, monitoring to gain insights on application
- ▶ Real time monitoring of security events
- ▶ Review of security logs and audit trails

Business and Community Impact



Optimized and automated workflows



Improve operations efficiency and reduce costs



Reduction in disruption of service



Increased security, reliability, and performance efficiency



Ensuring the quality and speed that end-users expect and need



Benefit from the depth of services and agility of AWS

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