DevOps - Immutable Infra Implementation using IAC for US E-Learning Service Provider

CASE STUDY

Tech Mahindra is the AWS Cloud Managed Services Provider (MSP) for a US based e-learning services provider. We work very closely with our customer's leadership team to help them improve the availability of their e-learning services, the reliability and cycle time of their product releases, and to reduce AWS cloud costs.

CLIENT BACKGROUND

The North America based customer has a key line of revenue critical applications that include compelling digital education products and operational back-office services that support a growing number of students and instructors.

The customer develops and maintains numerous learning platforms with a huge user base and business groups. There was a crucial need to analyze the company's data and provide insights related to the user base, sales points, e-learning platforms, web analytics, CRMs, online platforms, billing, integrations, and more

CHALLENGE

The customer needed a strategic partner to provide cost effective solutions for peak demand management to ensure high availability. The partner was expected to deliver managed cloud services for applications and cloud infrastructure hosted in AWS and usher in a new level of structured governance and reliable operations.

Tech Mahindra was chosen by the customer as their strategic partner to address on the below challenges:

01
Unstructured Release and Deployment Process
Reduce the release and rollback cycle time for deployment of major/complex application.

02
Platform Instability and Service Pillar Inconsistency
Implement the Auto Scaling group to improve availability and reliability

03
Limited governance on AWS environment
Migrate from obsolete techstack with combination of AWS native services and open-source tools

04
Lack of Predictable Controls around Operational Cost
Reduce the spend on EC2 and bring in cost optimization mechanism

SOLUTION PROVIDED

The customer's learning platform required a comprehensive solution that Tech Mahindra delivered in the form of integrated Cloud OPerationS (iCOPS) service to deliver on key challenges through:

- SLA driven cloud managed services
- DevOps enablement leveraging cloud native services
- Application and infrastructure monitoring
- Cloud automation
- Optimized cloud environment and capacity management

iCOPS (integrated Cloud OPerationS)

SLA Management: In conjunction with the customer, we established an SLA framework, operating model and organization change management plan to onboard the managed services of the AWS Cloud environment.

Automation and Process Improvement: We identified a manual intensive process in the e-commerce platform launch that jeopardized the entire delivery. A custom tool was developed to simplify and automate the effort. This freed up expensive specialized resources and expanded team capacity allowing the customer to launch their e-commerce platform on time.

High Level Deployment Model
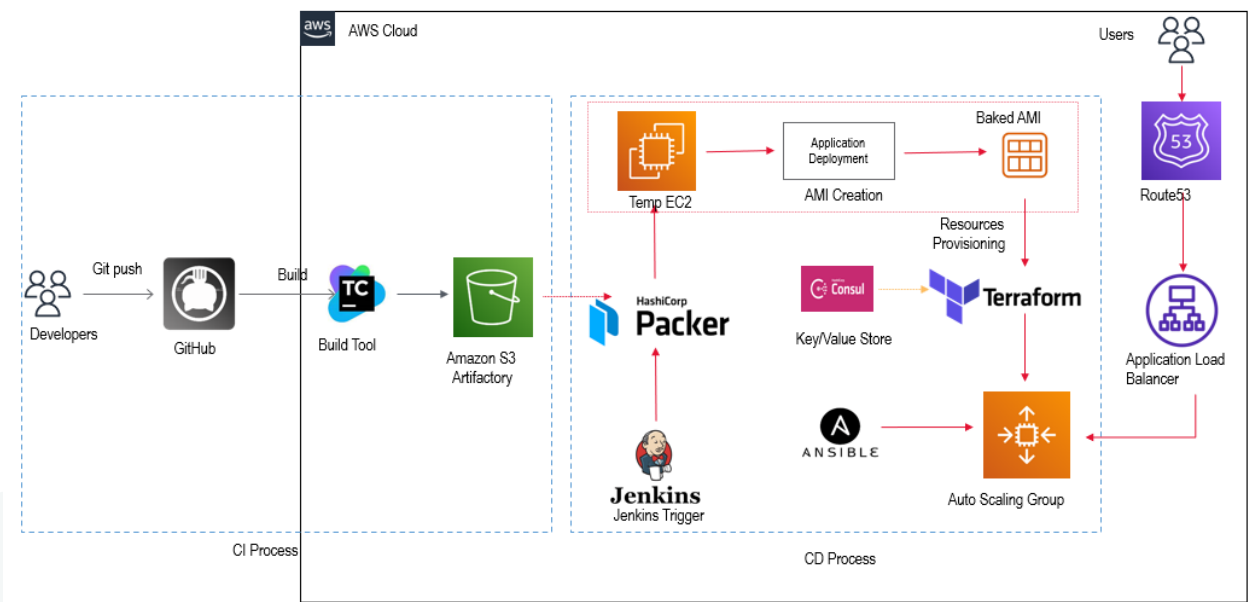
DevOps leveraging Cloud Native Services: We developed a unique CI/CD solution utilizing native cloud services to replace the existing datacenter-oriented deployment process. It is a combination of best-of-breed open-source solutions and custom scripts tailored to customer's needs.

Release Management: We worked with the customer to design release practices for their product deployment. These strategies have been extremely successful in building confidence within the customer internal teams. TechM now executes virtually every product release as a trusted partner.

Operational Runbooks: Runbooks have been created to improve the incident triage time for repeated and critical issues within AWS

Business Impact

- Improved the availability of the customer's e-learning services
- Best practices applied throughout the release management cycle
- Process streamlining and service quality enhancement
- Faster business turnaround for critical issues
- Steady state governance model (strategic, tactical, operational)
- Configuration management using automated scripts and tools
- Hassle-free process for patching the cloud services

ABOUT TECH MAHINDRA & AWS PARTNERSHIP

Tech Mahindra is an AWS Advanced Consulting Partner, AWS Managed Service Provider (MSP) Partner, and holds certified competencies like Migration Consulting, AWS Database Service Delivery, Well Architected Framework (WAF), and Service Delivery Partner on AWS Config. With over 5,500 cloud professionals, we help our customers become agile, lean and build reliable platforms and applications on AWS Cloud.

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