



edureka!
a Veranda Enterprise



MANTRA LABS

From Classroom to Cloud:

REVOLUTIONIZING E-LEARNING EXPERIENCE

with Next-Gen Solutions



edureka!

India's fastest growing e-learning platform offers live, online training in the latest technologies like AI, Big Data, & Blockchain.

Edureka has the **highest course completion rate** in the world, by enabling learners to pick courses based on guidance from experts; with 24x7 lifetime support for each individual.

#2

**Fastest Growing
e-learning platform**



THE PROBLEM

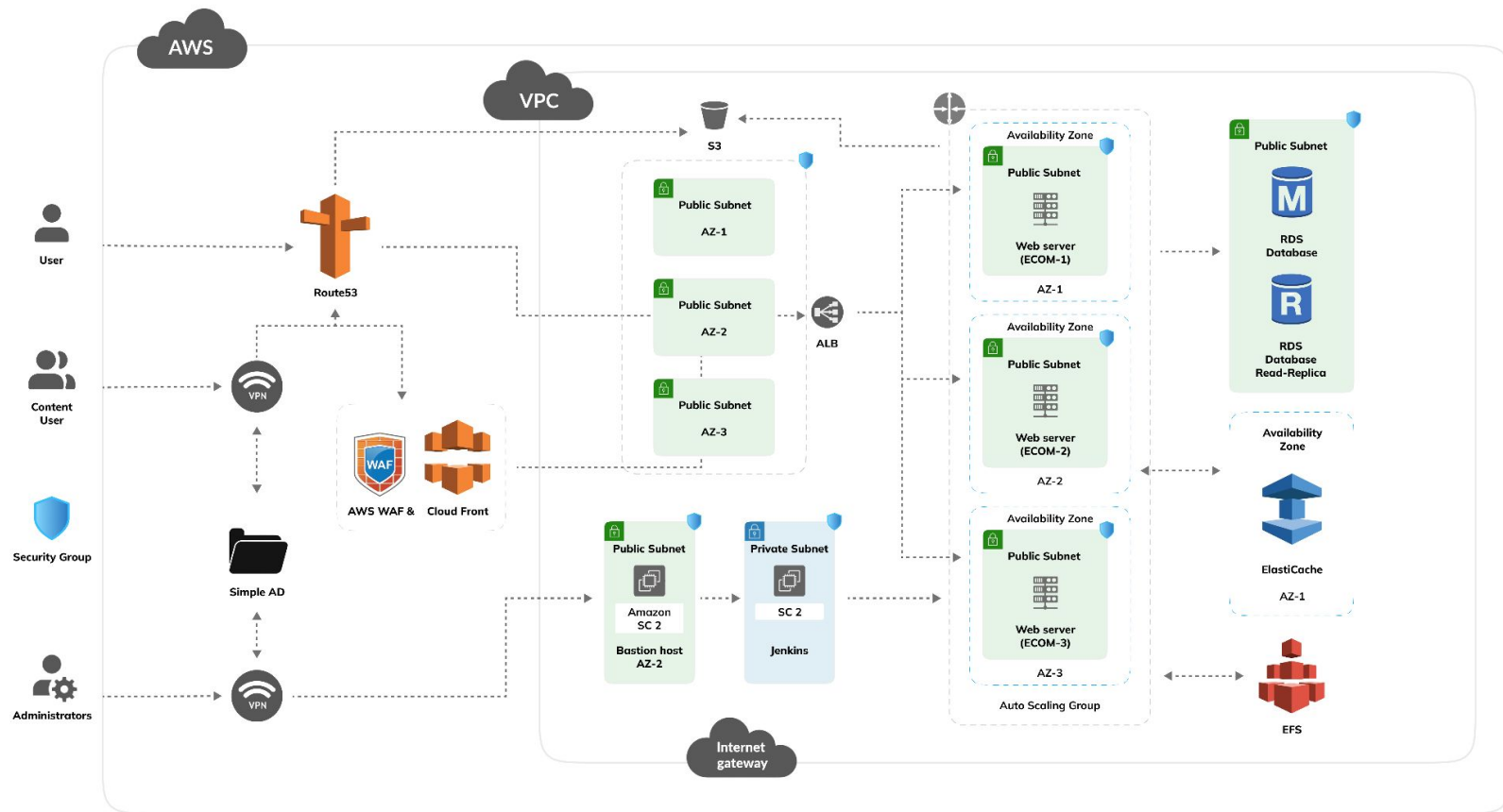
The initiative with Edureka started from the grounds-up and over the period of time, the need for improvement became evident.

The existing infrastructure had all the environmental resources operating on a single AWS account, resulting in various issues.



- **MANUAL DEPLOYMENT**
- **SCALABILITY**
- **TRACEABILITY**
- **SECURITY VULNERABILITY**

EXISTING ARCHITECTURE





THE OBJECTIVE

Edureka wanted to migrate the production environment to an independent AWS account and modernize their existing architecture.

They entrusted us to address the prevailing challenges and enhance the application's scalability and security. However, Edureka presented **2** significant constraints for the modernization process:

**CODE SHOULD NOT BE
RESTRUCTURED.**

**ARCHITECTURE SHOULD
BE COST-OPTIMIZED.**

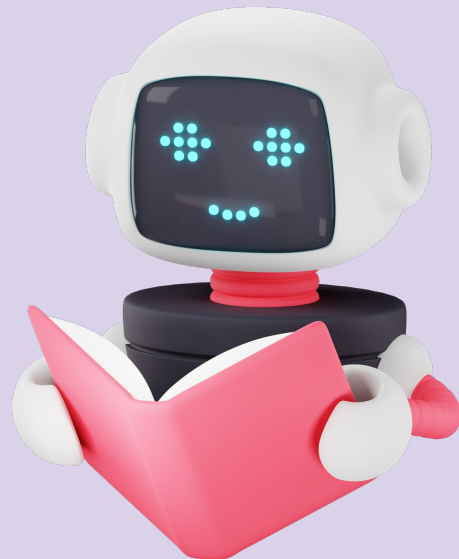
THE SOLUTION




Mantra leveraged its DevOps expertise and created a continuous delivery pipeline compatible with AWS cloud to **increase agility, reduce costs, improve security**, and **enhance the reliability** of their computing infrastructure.

While setting up the infrastructure and deploying the applications, Mantra resolved some of the critical problems and created a cloud formation template so that infrastructure can be built automatically from beginning to end.

DEV PROCESS



DEV PROCESS



1. Implemented **VPC** (Amazon Virtual Private Cloud) to provide a logically isolated area of the AWS cloud where we could launch AWS resources in a virtual network.

2. Created an **S3 bucket** to store **Lambda code** as it is a scalable, high-speed, web-based cloud storage service.

DEV PROCESS

3. Created a self-managed **Kube Cluster** using Kops for managing production-grade Kubernetes clusters. Used an S3 bucket for security to store secrets and KOPS cluster state files and implemented EC2 instances, auto-scaling, and load balancing.

4. Implemented **EFS FileSystem** for scalable, fully managed, cloud-native NFS file system for Linux workloads that could be used with AWS Cloud Services and on-premises resources.

5. Implemented **EFS FileSystem lambda functions** with event source mapping & lambda permission for code to run without provisioning or managing servers.

DEV PROCESS

6. Created **RDS DB Instances** for the database that are distributed relational databases.

7. Implemented **APIGateway** with resources & an authorizer for a fully managed service that makes it easy for developers to create, publish, maintain, monitor, and secure APIs at any scale.

8. Implemented **SNS and SES** services for sending emails and push notifications and **SQS** for queuing mechanisms.

DEV PROCESS

9. Implemented an **AWS VPN** for securely connecting on-premises network or branch office site to the VPC.

10. Implemented **CloudWatch logs** for monitoring, storing, and accessing log, and **CloudWatch alarms** for monitoring metrics over a specified time period.

11. Implemented **WAF** which protects applications and sites from common web attacks that could otherwise negatively affect application performance and availability.

DEV PROCESS

13. Implemented **CloudFront** for high performance and security and **AWS code pipe** lines for the automated deployment.

12. Implemented the **ECS service** for microservices, a fully managed container orchestration service that helps you easily deploy, manage, and scale containerized applications with ECR and task definition services.

14. Created a **manual approval stage** for production code pipelines and **CloudFormation scripts** for creating end-to-end infrastructure.

THE IMPACT



65% ↓
In code
deployment time

2X
More ROI from
continuous
delivery

3X
Faster Release
cycle

25% ↓
In functional
defects

60% ↓
In storage server
costs through custom
server architectures

67%
Cost savings
through DevOps

ABOUT US

Mantra Labs is a global technology leader with deep expertise in Digital, Data, AI, and Engineering—helping fast-evolving Enterprises to reinvent and achieve transformation growth.

With best-in-class digital product engineering, technology transformation, and AI-driven solutions, we help Fortune 500 clients in BFSI, healthcare, and consumer internet sectors optimize digital infrastructure, enhance decision-making, and maximize operational efficiency

Amongst other offerings, DevOps has been Mantra's forte which covers end-to-end delivery pipelines, continuous integration & deployments across all cloud platforms.

Our DevOps capabilities has led to **400% increase** in live deployment efficiency with fewer roll-back.

Our Work Touches The Lives of **60M+** People, Everyday.

Across BFSI, Energy, Manufacturing,
Healthcare, and Consumer Enterprises

Partner Ecosystem & Industry Certification



abbvie

CHANGE
HEALTHCARE

DIAGEO



TATA AIA
LIFE INSURANCE



ageasFEDERAL
LIFE INSURANCE



STOCKX



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